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METEOROLOGICAL OFFICE

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THE  
OBSERVATORIES' YEAR BOOK  
1937

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

Published by the authority of the  
METEOROLOGICAL COMMITTEE

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## PREFACE

From 1908 to 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 sixteenth issue of the Observatories' Year Book. It contains geophysical data for Lerwick, Eskdalemuir, Valentia and Kew, meteorological data for Aberdeen, Eskdalemuir, Valentia and Kew, and in addition an aerological section giving the results of soundings of the upper atmosphere by means of registering balloons.

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 at the end of the Eskdalemuir section.

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

## TABLE OF CONTENTS

	PAGE
Preface .. .. .	3
Table of Contents .. .. .	4
Errata in previous volumes .. .. .	8
List of Illustrations .. .. .	9
List of Observatories, with Geographical Positions and Heights .. .. .	10
Normal Values and Monthly Summaries .. .. .	10
General Introduction to the Meteorological Tables .. .. .	11
<b>LERWICK OBSERVATORY</b>	
Introduction .. .. .	27
<b>ATMOSPHERIC ELECTRICITY</b>	
<i>Potential Gradient</i>	
1 Daily Values at 3h, 9h, 15h and 21h ; Monthly and Annual Means .. .. .	54
2 Diurnal Inequalities (0a Days only) .. .. .	56
3 Diurnal Inequalities (1a and 2a Days only) .. .. .	56
4 Electrical Characters of each day and approximate Duration of Negative Potential Gradient. .. .. .	57
<b>TERRESTRIAL MAGNETISM</b>	
5-52 Hourly Values of Horizontal Force, Declination and Vertical Force ; Hourly, Daily and Monthly Means .. .. .	58
Daily Extremes and Range ; Monthly Means .. .. .	59
Magnetic Character Figures ; Daily Values and Monthly Means .. .. .	59
Temperature in Magnet House ; Daily Observations and Monthly Means .. .. .	59
53-61 Diurnal Inequalities ; Horizontal Force, Declination and Vertical Force, Monthly, Annual and Seasonal Means for each hour .. .. .	82
62 Monthly, Annual and Seasonal Range of Mean Diurnal Inequalities .. .. .	85
63 Average Departure from Daily Mean .. .. .	85
64 Monthly Values of Non-Cyclic Change of Horizontal Force, Declination and Vertical Force .. .. .	85
65 Monthly Mean Values of $HR_H + VR_V$ .. .. .	85
66 Mean Monthly and Annual Values of Magnetic Elements .. .. .	85
<b>AURORA</b>	
67 Auroral Log .. .. .	86
68 General Auroral Table .. .. .	87
<b>ABERDEEN OBSERVATORY</b>	
Introduction .. .. .	90
<i>Pressure</i>	
<b>METEOROLOGY</b>	
69-80 Hourly Readings ; Hourly and Daily Means .. .. .	99
81 Annual Means of Hourly Values .. .. .	105
82 Monthly Means and Diurnal Inequalities .. .. .	105
83 Daily Extremes .. .. .	105
<i>Temperature</i>	
84-95 Hourly Readings ; Hourly and Daily Means .. .. .	106
96 Annual Means of Hourly Values .. .. .	112
97 Monthly Means and Diurnal Inequalities .. .. .	112
98 Daily Extremes .. .. .	112
<i>Humidity</i>	
99-110 Hourly Values of Relative Humidity ; Hourly, Daily and Monthly Means of Relative Humidity and Vapour Pressure .. .. .	113
111 Annual Means of Hourly Values of Relative Humidity and Vapour Pressure .. .. .	119
112 Monthly Means and Diurnal Inequalities of Relative Humidity .. .. .	119

ABERDEEN OBSERVATORY—*continued*

TABLE		PAGE
	<i>Rainfall</i>	
113	Annual Totals of Hourly Values of Amount and Duration .. .. .	119
114	Notes on Rainfall for the Year .. .. .	119
115-126	Hourly Amounts ; Hourly, Daily and Monthly Totals of Amount and Duration	120
	<i>Sunshine</i>	
127-138	Hourly Readings ; Hourly, Daily and Monthly Totals .. .. .	126
138	Annual Totals and Means of Hourly Readings .. .. .	131
	<i>Wind, Speed and Direction</i>	
139-150	Hourly Readings ; Hourly, Daily, Monthly and Annual Means of Wind Speed..	132
151	Highest Instantaneous Wind Speed recorded each day by the Dines Pressure Tube Anemometer .. .. .	144
152	Distribution of Wind Speed ; Extreme Velocities .. .. .	144
	<i>Ground Temperature</i>	
153	Daily Readings, Monthly and Annual Means .. .. .	145
	<i>Night Minimum Temperature on the grass</i>	
154	Daily Readings, Monthly and Annual Means .. .. .	145
	<i>Diary of Cloud, Visibility and Weather</i>	
155-166	Daily Observations .. .. .	146

ESKDALEMUIR OBSERVATORY

Introduction .. .. .	154
----------------------	-----

METEOROLOGY

	<i>Pressure</i>	
167-181	Hourly Readings ; Hourly and Daily Means ; Annual Means of Hourly Values ; Monthly Means and Diurnal Inequalities ; Daily Extremes .. .. .	193
	<i>Temperature</i>	
182-196	Hourly Readings ; Hourly and Daily Means ; Annual Means of Hourly Values ; Monthly Means and Diurnal Inequalities ; Daily Extremes .. .. .	200
	<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 .. .. .	207
	<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 .. .. .	213
	<i>Sunshine</i>	
225-236	Hourly Readings ; Hourly, Daily and Monthly Totals ; Annual Totals and Means of Hourly Readings .. .. .	220
	<i>Solar Radiation</i>	
225-236	Measurements of Radiation by Ångström Pyrheliometer .. .. .	220
	<i>Wind, Speed and Direction</i>	
237-248	Hourly Readings ; Hourly, Daily, Monthly and Annual Means of Wind Speed..	226
249	Highest Instantaneous Wind Speed recorded each day by the Dines Pressure Tube Anemometer .. .. .	238
250	Distribution of Wind Speed ; Extreme Velocities .. .. .	238

TABLE	ESKDALEMUIR OBSERVATORY— <i>continued</i>	PAGE
	<i>Ground Temperature</i>	
251	Daily Readings, Monthly and Annual Means .. .. .	239
	<i>Night Minimum Temperature on the grass</i>	
252	Daily Readings ; Monthly and Annual Means .. .. .	239
	<i>Diary of Cloud, Visibility and Weather</i>	
253-264	Daily Observations .. .. .	240
	ATMOSPHERIC ELECTRICITY	
	<i>Potential Gradient</i>	
265	Daily Values at 3h, 9h, 15h and 21h ; Monthly and Annual Means .. .. .	246
266	Diurnal Inequalities (0a Days only) .. .. .	248
267	Diurnal Inequalities (1a and 2a Days only) .. .. .	248
268	Electrical Character of each day and approximate Duration of Negative Potential Gradient .. .. .	249
	TERRESTRIAL MAGNETISM	
269-316	Hourly Values of North, West and Vertical Components ; Hourly, Daily and Monthly Means .. .. .	250
	Daily Extremes and Range ; Monthly Means .. .. .	251
	Magnetic Character Figures ; Daily Values and Monthly Means .. .. .	251
	Temperature in Magnet House ; Daily Observations and Monthly Means .. .. .	251
317-334	Diurnal Inequalities ; North, West and Vertical Components, Declination, Inclination, and Horizontal Force, Monthly, Annual and Seasonal Means for each hour .. .. .	274
335	Diurnal Inequalities ; Monthly, Annual and Seasonal Range .. .. .	280
336	Monthly Values of Non-Cyclic Change of North, West and Vertical Components .. .. .	280
337	Monthly Mean Values of $HR_H + VR_V$ .. .. .	280
338	Mean Monthly and Annual Values of Magnetic Elements .. .. .	280
339-340	Harmonic Components of the Diurnal Inequality of Magnetic Force .. .. .	281
341-342	Mean Annual Values for Magnetic Observations of the Globe .. .. .	282
	VALENTIA OBSERVATORY	
	Introduction Table of Magnetic Results .. .. .	284
	METEOROLOGY	
	<i>Pressure</i>	
343-357	Hourly Readings ; Hourly and Daily Means ; Annual Means of Hourly Values ; Monthly Means and Diurnal Inequalities ; Daily Extremes .. .. .	297
	<i>Temperature</i>	
358-372	Hourly Readings ; Hourly and Daily Means ; Annual Means of Hourly Values ; Monthly Means and Diurnal Inequalities ; Daily Extremes .. .. .	304
	<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 .. .. .	311
	<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 and Duration .. .. .	317
	<i>Sunshine</i>	
401-412	Hourly Readings ; Hourly, Daily and Monthly Totals ; Annual Totals and Means of Hourly Readings .. .. .	324
	<i>Wind, Speed and Direction</i>	
413-424	Hourly Readings ; Hourly, Daily, Monthly and Annual Means of Wind Speed .. .. .	330
425	Highest Instantaneous Wind Speed recorded each day by the Dines Pressure Tube Anemometer .. .. .	342
426	Distribution of Wind Speed ; Extreme Velocities .. .. .	342

VALENTIA OBSERVATORY—*continued*

TABLE		PAGE
	<i>Ground Temperature</i>	
427	Daily Readings, Monthly and Annual Means .. .. .	343
	<i>Night Minimum Temperature on the grass.</i>	
428	Daily Readings, Monthly and Annual Means .. .. .	343
	<i>Diary of Cloud, Visibility and Weather</i>	
429-440	Daily Observations .. .. .	344
KEW OBSERVATORY		
	Introduction .. .. .	352
METEOROLOGY		
	<i>Pressure</i>	
441-455	Hourly Readings ; Hourly and Daily Means ; Annual Means of Hourly Values ; Monthly Means and Diurnal Inequalities ; Daily Extremes .. .. .	375
	<i>Temperature</i>	
456-470	Hourly Readings ; Hourly and Daily Means ; Annual Means of Hourly Values ; Monthly Means and Diurnal Inequalities ; Daily Extremes .. .. .	382
	<i>Humidity</i>	
471-484	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 .. .. .	389
	<i>Rainfall</i>	
485-498	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 .. .. .	395
	<i>Sunshine</i>	
499-510	Hourly Readings ; Hourly, Daily and Monthly Totals ; Annual Totals and Means of Hourly Readings .. .. .	402
	<i>Solar Radiation</i>	
499-510	Daily Totals and Rate near Noon .. .. .	402
	<i>Wind, Speed and Direction</i>	
511-522	Hourly Readings ; Hourly, Daily, Monthly and Annual Means of Wind Speed ..	408
523	Highest Instantaneous Wind Speed recorded each day by the Dines Pressure Tube Anemometer .. .. .	420
524	Distribution of Wind Speed ; Extreme Velocities .. .. .	420
	<i>Ground Temperature</i>	
525	Daily Readings, Monthly and Annual Means .. .. .	421
	<i>Night Minimum Temperature on the grass</i>	
526	Daily Readings, Monthly and Annual Means .. .. .	421
	<i>Level of Underground Water</i>	
527	Daily, Monthly and Annual Means ; Extremes for each Month .. .. .	421
	<i>Diary of Cloud, Visibility and Weather</i>	
528-539	Daily Observations .. .. .	422
ATMOSPHERIC ELECTRICITY		
540	Absolute Observations of Conductivity, Air-Earth Current and of Ionic Charges ; Daily Values and Monthly Means .. .. .	428
541	Electrical Character of each day and approximate Duration of Negative Potential Gradient .. .. .	429
	<i>Potential Gradient</i>	
542	Daily Values at 3h, 9h, 15h and 21h ; Monthly and Annual Means .. .. .	430
543	Diurnal Inequalities ; Selected Quiet Days .. .. .	432
ATMOSPHERIC POLLUTION		
	<i>Results from Owens' Atmospheric Pollution Recorder.</i>	
544	Monthly, Annual and Seasonal Means for each Hour .. .. .	432
545	Diurnal Inequalities .. .. .	432



KEW OBSERVATORY—*continued*

TABLE	SEISMOLOGY	PAGE
546	Seismological Diary .. .. .	433
547	Microseisms .. .. .	441
AEROLOGICAL SECTION		
	Introduction .. .. .	444
SOUNDINGS WITH REGISTERING BALLOONS		
548	Dates of Upper Air Soundings, Particulars of Place of Fall of the Recording Instruments Wind Data, and Principal Results of each Ascent .. .. .	448
549	Notes on the Pressure Distribution and on Peculiarities of the Individual Records ..	448
550	Heights, Temperatures and Relative Humidity corresponding with Isobaric Surfaces ..	452
551	Pressures, Temperatures and Relative Humidities at given Heights .. .. .	452
552	Lapse Rate of Temperature between given Heights .. .. .	452

## ERRATA IN PREVIOUS VOLUMES

*See also lists in earlier volumes and see page 282.*

*Year Book, 1932.*

P. 108, Table 97. *For* Relative humidity in heading *read* Temperature.

*Year Book, 1933.*

P. 69, Table 31, last column. *Delete* underlinings; *insert* underlinings 600 (19th) and 575 (24th).

*Year Books, 1934-1936.*

P. 170. Table in text against the year 1922, *for* 6·81 *read* 6·61.

*Year Book, 1935.*

P. 283. Table 340α, *for* "year," N. Component. *For* 312° *read* 274°.

*Year Book, 1936.*

P. 41, last two lines. *Amend to read:*

(a) H, 14433γ; D, 12°57'·9; V, 66792γ

(b) H, 14421γ; D, 12°58'·1; V, 46788γ

P. 161. Line 3. *For* 8·1°A *read* 8·1°F.

P. 161. Line 5. *For* 66·4°A *read* 66·4°F.

P. 180. Line 6. *For* 80·4 *read* 78·2.

P. 223. The annual hourly totals and means of sunshine were omitted from Table 236. They are as follows:—

	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13
Annual Total	...	5·0	24·6	45·0	67·9	95·7	123·6	128·3	129·4	123·5
Annual Mean	...	·01	·07	·12	·19	·26	·34	·35	·35	·34
	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21		
Annual Total	120·0	103·1	80·3	65·5	48·6	25·2	7·7	0·1		
Annual Mean	·33	·28	·22	·18	·13	·07	·02	·00		
	Total for day .....1195·5									
	Mean for day ..... 3·28									
	% of Possible ..... 27									

P. 417. Table 527. Mean for November. *For* 203 *read* 210.

## LIST OF ILLUSTRATIONS

			<i>To face p.</i>
Plate I.	Lerwick Observatory.	Diurnal Variation of the Magnetic Elements on quiet and disturbed days, 1935 .. .. .	46
„ II.	„ „	Vector Diagrams illustrating Diurnal Variation of Magnetic Force on quiet and disturbed days, 1935 .. .. .	47
„ III.	Eskdalemuir Observatory.	Diurnal Variation of the Magnetic Elements on quiet and disturbed days, 1935 .. .. .	178
„ IV.	„ „	Vector Diagrams illustrating Diurnal Variation of Magnetic Force on quiet and disturbed days, 1935 .. .. .	179

## LIST OF OBSERVATORIES

	Latitude	Longitude	G.M.T. of Local Mean Noon		Height above M.S.L.
	° ' N.	° ' W.	h	m	metres
Lerwick, Shetland Isles .. .. .	60 8 N.	1 11 W.	12	5	81·7
Aberdeen .. .. .	57 10 N.	2 6 W.	12	8	24·1†
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 to a height of 11·4 metres and on 1st April 1933 to a height of 24·1 metres.

## 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, Valentia, Kew 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.

It should be noted, however, that the normal hourly values in the case of wind, rainfall and sunshine refer to periods of 60 minutes centred at exact hours G.M.T., and are therefore not directly comparable with the values printed in this volume which refer to periods of 60 minutes ended at exact hours G.M.T.

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, Valentia, Kew 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. Tables 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 are included in *Averages of humidity for the British Isles*.

Monthly average values of maximum, minimum and mean temperature for 1906–1935 in the cases of Aberdeen, Valentia and Kew, and for the period 1910–1935 in the case of Eskdalemuir are published in *Averages of Temperature for the British Isles*.

Averages of total monthly duration and daily mean duration of bright sunshine for similar periods are published in *Averages of Bright Sunshine for the British Isles*.

\*The normals of hourly values of sunshine for Aberdeen for all months except February are incorrect, owing to an error in computation. The published values except February, should be increased by one-third

## GENERAL INTRODUCTION TO THE METEOROLOGICAL TABLES

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

The positions of the Observatories and the heights of the sites are given on p.10.

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

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

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

By means of a source of light, a condenser and an objective arranged as in the ordinary optical lantern, an image of the space above the mercury in the tube, reduced to very small width by means of a diaphragm, is projected upside down upon a sheet of photographic ("bromide") paper carried upon a cylinder which is rotated by means of clockwork and makes one revolution about its vertical axis in rather more than 48 hours. The image is in the form of a vertical line of light, the upper edge of which is defined by the position of the mercury in the barometer tube, while the lower edge is defined by a plate actuated by a zinc rod. The purpose of the zinc rod is to provide an automatic compensation for temperature changes, the arrangement being such that any shortening of the line of light due to a rise of temperature and consequent expansion of mercury in the tube is balanced by an equal lengthening due to movement of the plate carried on the zinc rod.

The barogram is, therefore, a continuous photograph of a narrow illuminated 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.

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 on the record as narrow white spaces corresponding with intervals of four minutes centred at the half hours 1h 30m, 3h 30m, etc. Until 1918 these time-breaks occurred at the even hours, 2h, 4h, 6h, etc., but it was found that when the edge of the record was not critically sharp owing to various causes, a systematic error was introduced when measuring the records, whereby the values at the even hours were slightly in excess of those at the odd hours where no time-break existed. From 1918 onwards the clock was so arranged that the time-breaks should occur half an hour before the even hours; by this means both even and odd hour-values are measured at points on the trace which are unaffected by any systematic difference.

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

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

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

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

Each thermometer has a large cylindrical bulb four inches long and a very long stem. The latter is bent twice at right angles to enable the bulb to be exposed outside the building in a 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 Kew 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 Valentia, the practice is to adjust the glass scale so that the readings at the control hours on the trace are made to show general agreement with the corresponding eye-readings of the standard thermometers. The temperature equivalent of any part of the curve can then be read off. The base-line photographed on the record serves as a useful check.

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\* At Valentia and Kew the rule is to apply the same correction for the whole chart.

† At Eskdalemuir the screen stands in the open

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

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

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

**Rate of Rainfall.**—The instantaneous rate of rainfall is registered by means of the Jardi recorder a description of which is given in *British Rainfall 1930*, Part IV, p. 284. In this instrument, rainwater collected by a funnel, 1 metre in diameter, enters a chamber at the bottom of which is a hole through which passes a tapering spindle attached to a float. When water enters the chamber the float rises and thereby opens the hole in the bottom of the chamber to an extent which increases as the float rises, until a position is reached when the rate of outflow is equal to the rate of inflow. The equilibrium position of the float is therefore a measure of the rate of rainfall, and the record is obtained by recording the movements of the float on a suitably graduated chart.

**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 Pressure Tube Anemometers, a description of which will be found in the *Meteorological Observers' Handbook*. In the case of Aberdeen, hourly values from the Dines Pressure Tube Anemometer on the Glebe site were included for the first time in the volume for 1935. A description and illustration of the instrument will be found in the Aberdeen Sectional Introduction to that volume. At Eskdalemuir records of Dines Pressure Tube Anemometers have always been used, but at the older observatories the data printed in volumes previous to that of 1926 were obtained from Robinson cup anemo-

graphs. At Kew a new Dines Pressure Tube Anemometer, erected on the dome in the position formerly occupied by the Robinson cup anemograph, but with its vane 3 metres higher than the original height of the cups, was brought into use from January 1st, 1931. At Valentia Observatory a new Dines Pressure Tube Anemometer, with 1-inch connecting pipes, was brought into use as from January 1st, 1932. The new instrument was erected alongside the old instrument, and a comparison extending over the period May, 1931, to January, 1932, showed that the new instrument recorded higher velocities than the old. In hourly mean values the difference was nearly uniform and equal to 0.4 m/s or 1 mi/hr. In gust velocities the increase was approximately 12 per cent. of the velocity recorded by the old instrument. At Eskdalemuir a new Dines Pressure Tube Anemometer with 1-inch connecting pipes was brought into use as from 11th August, 1933. The diameter of the connecting pipes of the old instrument was  $\frac{1}{2}$  inch. Particulars of the exposure of the instruments at each Observatory will be found in the sectional introductions.

The relation between the values of wind speed recorded by the cup and pressure tube anemometers at the several observatories was briefly discussed in the General Introduction to the volume for 1926. The following table gives, for the various wind directions, the mean values of wind speed recorded by the pressure tube anemometers, expressed as percentages of the corresponding values recorded by the cup anemographs:—

Average values of the quantity  $100 \times \frac{\text{Speed by pressure tube anemometer}}{\text{Speed by cup anemograph}}$   
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		Valentia (to 1931)	Kew		Wind Direction in degrees from North	Aberdeen		Valentia (to 1931)	Kew	
	(to 1929)	1935		1926-30	1931		(to 1929)	1935		1926-30	1931
10	131	110	103	99	114	190	138	120	137	96	107
20	132	110	103	100	113	200	132	120	134	99	107
30	130	110	104	103	114	210	124	110	128	99	104
40	117	90	103	103	110	220	115	105	115	100	104
50	115	90	104	104	109	230	108	110	102	100	104
60	115	85	105	99	103	240	110	110	90	100	103
70	119	80	105	99	102	250	112	110	88	101	106
80	113	85	104	97	99	260	114	130	85	101	107
90	110	65	102	101	103	270	128	120	82	101	108
100	126	65	98	104	106	280	124	110	81	103	111
110	121	85	97	102	103	290	110	100	83	101	111
120	118	95	98	100	102	300	99	90	88	96	108
130	118	100	100	104	105	310	100	100	92	93	103
140	125	105	103	102	105	320	108	105	95	96	107
150	128	120	107	98	102	330	111	110	97	99	115
160	137	130	114	92	99	340	120	110	98	98	116
170	133	130	123	92	103	350	138	100	99	103	119
180	135	135	134	95	106	360	135	100	102	104	122

Details in regard to the comparison of the new and old pressure tube anemometers at Kew will be found in the sectional introduction for the year 1931.

**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.

**Earth Temperature.**—At each observatory the earth temperature is read daily at 9h at depths of 30 cm. and 122 cm. below the surface. For this purpose use is made of Symons' earth thermometers, in which the bulb is embedded in paraffin wax for the purpose of introducing sufficient "lag" to ensure that the reading will not change appreciably during the process of drawing up the thermometer in order to take the reading. The thermometers are supported at the correct depth in steel tubes sunk into the ground. At Aberdeen discontinuities have occurred on several occasions in recent years owing to changes of site. (See sectional introduction).

#### NOTES ON THE TABLES

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

**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, and relative humidity 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.

For wind speed the tabulated hourly values are means for periods of 60 minutes between the exact hours 0h and 1h, 1h and 2h, etc.\* The daily mean is therefore obtained by dividing the sum of the 24 hourly values 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.

A note on the computation of the correction for non-cyclic change will be found at the end of this Introduction.

**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:—

\* See Note, p. 19

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



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  $\lambda$  = latitude of station.

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

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

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

The factor  $(1 - 3\bar{w}/8p)$  in the above formula is practically unity except at Eskdalemuir. Its value for that observatory was discussed in the Introduction to the Eskdalemuir section for the year 1928.

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).

\* 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/m<sup>3</sup>

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 and for the other observatories as from 1st January, 1928.

The tables contain values of pressure at exact hours obtained from the photographic barograms in the manner described on p. 11; also daily, monthly and annual means of hourly values, together with the monthly and annual means of diurnal inequalities. Monthly and annual means of the hourly values after reduction to mean sea level are also given.

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

**Temperature.**—The scale on which temperatures are recorded is such that the freezing point of water under atmospheric pressure is 273°A precisely. Other temperatures differ by 273·0 from readings on the Centigrade scale.

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

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

$$5\cdot709 \times 10^{-8} (t + 0\cdot1)^4 \text{ erg/(cm.}^2 \text{ sec.)}; \text{ or } 5\cdot717 \times 10^{-8} t^4 \text{ erg/(cm.}^2 \text{ sec.)}$$

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

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

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

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

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

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

$p$  = pressure of the air.

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

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

$A$  = a constant.

The tables used in this volume for determining the hourly values of relative humidity when the wet bulb is above the freezing point are *Jelineks Psychrometer-Tafeln* (6th edition, Leipzig, 1911).§

\* 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*"

‡ Glaisher's Hygrometrical Tables, 7th edition, London, 1885

§ These tables give values which are in almost exact agreement with those given by *Hygrometric Tables* published by the Meteorological Office in 1924 (M.O. 265) for general use at second and third order stations. The latter tables are not suited to the purposes of this Year Book, because in them temperature is expressed in Fahrenheit degrees, whereas the absolute Centigrade scale of temperature is used at the observatories

No allowance for variation of pressure  $p$  is made and the standard value used in Jelinek's tables, *i.e.*, 755 mm. of mercury (1006.57 mb.), is adhered to. Similarly no allowance is made in the adopted value of the constant "A" for the speed of the air flowing past the wet bulb, though it is well known that "A" is not independent of the ventilation. "A" is regarded as fixed and equal to .0008. In view of the well-marked diurnal variation of wind-speed, the diurnal variation of humidity, derived in this manner, is subject to slight modification.

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

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

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, entries of relative humidity less than 30 per cent. seldom occurred; under the new system, such entries 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. 13). 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

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\* 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

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

remaining entries are (...), (\*), ( $\equiv$ ) or ( $\ominus$ ) 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.

**Maximum Rate of Rainfall.**—The last column of the rainfall tables shows the maximum instantaneous rate of fall as registered by the Jardi recorder. When, owing to an instrumental defect, the value has been estimated from the Beckley record or otherwise, the reading is entered within brackets. When the maximum rate exceeded 5 mm./hr. the hour in which the maximum rate occurred is shown by a dagger (†) in the appropriate column of the table.

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

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

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

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

When the record shows that the vane is sticking and is not responding to the variations of the wind the readings of both direction and velocity are regarded as untrustworthy and are not tabulated, the symbol "... " being entered instead. In such cases the velocity is usually less than 1 m/s and the symbol "... " is regarded

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

† Before 1st May, 1915, it was the practice to take the direction at the exact hour whilst wind speed referred to 60 minute intervals centred at exact hours. Thereafter until 1st January, 1932, both wind speed and direction were tabulated for periods of 60 minutes centred at the exact hours. At a meeting on 17th December, 1931, the Gassiot Committee resolved that hourly values of terrestrial magnetism, potential gradient and wind velocity and direction should be brought into accordance with the practice decided upon for Polar Year stations by the International Commission for the Polar Year 1932-1933, *viz.*, that hourly mean values should refer to periods of 60 minutes between exact hours of standard time. (See also Introduction to *Hourly Values from Autographic Records*, 1913, p. xv)

as equivalent to 0.5 m/s for the purpose of evaluating the daily mean velocity. In other cases of lost record, estimated values are entered within brackets wherever possible.

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 when any was 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.
Cirrocumulus	...	...	...	...	...	Cicu.
Cirrostratus	...	...	...	...	...	Cist.
Alto cumulus	...	...	...	...	...	Acu.
Altostratus	...	...	...	...	...	Ast.
Stratocumulus	...	...	...	...	...	Stcu.
Stratus	...	...	...	...	...	St.
Nimbostratus	...	...	...	...	...	Nbst.
Cumulus	...	...	...	...	...	Cu.
Cumulonimbus	...	...	...	...	...	Cunb.
Fracto (prefix as in fractostratus)	...	...	...	...	...	Fr.
Cumuliformis (as in stratus cumuliformis)	...	...	...	...	...	Cuf.
Lenticularis (as in altocumulus lenticularis)	...	...	...	...	...	Lent.
Mammatus (as in cumulus mammatus)	...	...	...	...	...	Mam.
Castellatus (as in altocumulus castellatus)	...	...	...	...	...	Cast.

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*, a series of selected objects, A, B, C. . . , as nearly as possible at the standard distances given in the table which follows, is used for this observation. The objects are selected so as to be readily seen and identified from specified observing points in daylight, 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.

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

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

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

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 Valentia, 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 Valentia Section.

\* Not used in this Year Book

*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, abnormal transparency 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.	g	☃ 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.

\* To indicate varying intensities of haze, mist and fog the notation shown in the last two columns of the table on p. 21 is used

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  $\bullet^0$  slight rain,  $\bullet^2$  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  $d_0$  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.

Up to 1931 the gale symbol  $\text{m}$  was used in this publication to indicate that the wind as recorded by the anemometer averaged at least 17.2 m/s for one or more "centred" hours. At Kew Observatory the symbol has been used with the word gust in brackets to indicate the occurrence of gusts reaching 17.2 m/s.

The symbol is now used to indicate occasions when the mean velocity reached or exceeded the lower limit corresponding to Beaufort Force 8 at any time in the 24 hours of the civil day. The lower limit of velocity is dependent upon the "effective height" of the anemometer (see *Meteorological Magazine* 67, 1933, p. 278). The allotted values at the several observatories are:—

Aberdeen	Eskdalemuir	Valentia	Kew
17.2	17.2	17.2	18.8 m/s

*Note on the Computation of the mean for the day, diurnal inequalities and the non-cyclic correction*

In this publication hourly tabulations are of two types (a) instantaneous readings at exact hours G.M.T. (b) means for periods of 60 minutes beginning and ending at exact hours G.M.T. Let  $x_n$  denote the value at hour  $n$  G.M.T. and let  $[x]_n$  denote the mean for 60 minutes ending at hour  $n$ . The main tables of hourly values contain entries ranging from  $n=1$  to  $n=24$  for either type of tabulations.

The mean for the day is clearly represented exactly by

$$[x]_D = \frac{1}{24} \{ [x]_1 + [x]_2 + \dots + [x]_{24} \}$$

or, in other words, for (b) type tabulations the daily mean is the simple average of the 24 hourly values. In the case of (a) type tabulations we arrive at the daily mean by writing, as an approximation,

$$[x]_n = \frac{1}{2} \{ x_{n-1} + x_n \}$$

Substituting in the above formula we obtain

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

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



The *diurnal inequality* is derived from monthly or group means of hourly values by subtracting the mean for the whole day from the mean hourly values; thus the diurnal inequality at hour  $n$  may be represented by

$$\delta x_n = \bar{x}_n - [\bar{x}]_D$$

In the case of (b) type tabulations the sum of the 24 diurnal inequalities is clearly equal to zero. For (a) type tabulations the sum of the 24 diurnal inequalities from  $n = 1$  to  $n = 24$  is  $\frac{1}{2} (\bar{x}_{24} - \bar{x}_0)$  and this is not, in general, equal to zero.

The *non-cyclic change* is defined as the average increase of the variable from one midnight to the next, and is therefore equal to  $\bar{x}_{24} - \bar{x}_0$ . For (b) type tabulations the value of the non-cyclic change is not derivable directly from the tabulations, and it is necessary to estimate its value from readings in the form  $[\bar{x}]_n$ .

The estimate is obtained by means of the approximations

$$\bar{x}_{24} = \frac{1}{2} \{ [\bar{x}]_{24} + [\bar{x}]_{25} \} \text{ and } \bar{x}_0 = \frac{1}{2} \{ [\bar{x}]_0 + [\bar{x}]_1 \}$$

$[\bar{x}]_{25}$  being the mean value for the hour following the second midnight.

The *correction for the non-cyclic change* is applied by assuming that the non-cyclic change is the result of a linear rise or fall; the correction applicable at hour  $n$  is therefore

$$\frac{12 - n}{24} \{ \bar{x}_{24} - \bar{x}_0 \}$$

It will be seen that the application of the correction brings the value of  $\bar{x}_{24}$  into equality with  $\bar{x}_0$ ; consequently the sum of the corrected diurnal inequalities for (a) type tabulations now becomes equal to zero.

For (b) type tabulations we assume that the correction appropriate to the inequality for the hour ending  $n$  h G.M.T. is the value corresponding to  $n - \frac{1}{2}$  in the above formula,

$$\text{i.e., } \frac{25 - 2n}{48} x \text{ (the non-cyclic change)}$$

$$\text{or } \frac{25 - 2n}{48} \left\{ \frac{[\bar{x}]_{24} + [\bar{x}]_{25}}{2} - \frac{[\bar{x}]_0 + [\bar{x}]_1}{2} \right\}$$

$$\text{i.e., } \frac{25 - 2n}{96} \{ [\bar{x}]_{24} + [\bar{x}]_{25} - [\bar{x}]_0 - [\bar{x}]_1 \}$$

In the volume for 1935 and in preceding volumes, all published values of diurnal inequalities and values of mean range and average departure derived from them were corrected for non-cyclic change. Following a resolution of the Commission for Terrestrial Magnetism and Atmospheric Electricity approved by the Conference of Directors at Warsaw in 1935, it has been decided as from 1st January, 1936, to print values of diurnal inequalities for magnetic elements *uncorrected* for non-cyclic change.

Attention is also drawn to the fact that in this volume the derived values of mean daily range and average departure from the mean, as well as the vector diagram printed in Sectional Introductions, are based on diurnal inequalities uncorrected for non-cyclic change. The practice in respect to meteorological and geophysical elements other than terrestrial magnetism remains unchanged.

M.O. 430.  
(Lerwick)

Air Ministry  
METEOROLOGICAL OFFICE

THE  
OBSERVATORIES' YEAR BOOK  
1937

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

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LERWICK

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Published by the authority of the  
METEOROLOGICAL COMMITTEE



LONDON  
HIS MAJESTY'S STATIONERY OFFICE  
1939



## 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. x 3 m.), and after construction several months had to elapse before the thick concrete walls and roof could be thoroughly dried and the recording instruments placed in position. These instruments, which are described below, consist of magnetographs recording magnetic declination and horizontal and vertical force. More recently subsidiary magnetographs recording the same elements have been installed in one of the adjacent non-magnetic huts; the records obtained therefrom are used to cover lacunæ in the standard traces or for special investigations.

Other instruments installed at the Observatory included barometers, barograph, hygograph, psychrometers, nephoscope, rain-gauges (ordinary and self-recording), sunshine recorder and Dines Pressure Tube Anemometer 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 to auroral observations.

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 upwards 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 Stany 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 vegetation being chiefly 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 waterlogged. Views of the station, a map of the surrounding country and the arrangement of buildings and situation of instruments are set out in the Observatories' Year Book, 1935.

## ATMOSPHERIC ELECTRICITY

Notes on the Instruments:- The records of potential gradient are obtained from a Benndorf electrograph (No. 108, by L. Castagna, Vienna) which since 1926 has been installed in the west corner of the Office Block.

Though there is distortion of the equipotential surfaces by adjacent houses etc., and though the site is a comparatively large distance (236 metres) away from the ground where absolute determinations are made, yet the values of the reduction factor suggest that these disadvantages are less serious than might be anticipated.

The collectors are of polonium deposited on a copper rod, about 4 cm. long by 0.5 cm. diameter; these are recoated periodically by arrangement with the Government Chemist, and a fresh collector is brought into use on the first day of each quarter. The collector is screwed into the end of a tube which projects about 120 cm. through a window in the north-west wall, at 190 cm. from the corner of the building and 476 cm. above ground. The inner end of the tube passes through a hole in a wooden box in which it is supported horizontally by 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 once daily, and a zero line is obtained by connecting up these earth marks; owing to the constancy of the perpendicular distances 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 24 volts per millimetre, which permits a range from + 1550 to - 1550 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 1937 being such that the instrument would lose half its potential in 35 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. An insulated wire, stretched horizontally between two stout wooden posts about 9m. apart, carries at its centre a burning fuse exactly 1 metre above the ground. A Wulf electrometer, usually No. 5225 (Gunther & Tegetmeyer, Brunswick), is connected to one end of the wire and twenty to thirty readings are obtained from the electrometer at half-minute intervals. The reduction factor is deduced from the mean of these values and the corresponding mean potential at the collector as recorded by the Benndorf electrograph. Smoothed monthly means of the factors so obtained are employed in reduction of the records. The calibration of the Wulf Electrometers is checked periodically, using a Gambrell potentiometer and standard cells. There was no change in any essential part of the apparatus or in the observational technique throughout the year 1937.

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

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
Mean value of - $\frac{d}{dt} \log_e V$	·016	·014	·014	·016	·018	·019	·019	·035	·027	·023	·020	·020	·020
No. of days used in mean	15	15	17	19	15	19	10	18	18	19	18	17	200
Highest- $\frac{d}{dt} \log_e V$	·028	·019	·020	·027	·025	·024	·024	·081	·041	·033	·027	·024	
Lowest - $\frac{d}{dt} \log_e V$	·011	·007	·011	·008	·010	·011	·009	·013	·017	·015	·015	·015	
Scale Value (v/m)	24·3	24·3	24·3	24·4	24·4	24·5	24·0	24·2	24·5	24·2	24·3	24·4	24·3
Mean Exposure Factor	1·29	1·30	1·29	1·28	1·29	1·29	1·31	1·38	1·28	1·36	1·28	1·27	1·30
Applied Exposure Factor	1·29	1·29	1·29	1·29	1·29	1·29	1·32	1·34	1·33	1·32	1·30	1·28	1·30
No. of Determinations of Exposure Factor	2	5	7	9	7	9	6	9	7	6	5	4	76

Tests of the rate of rise of potential of the Benndorf recorder with a polonium collector were made in September, 1930, and it was found that the potential rose from zero to half the final value in about 4 seconds. Sometimes when there is no wind the rate of rise of potential is very much slower and apparently nearly linear. If the instrument rises through a potential  $V$  and has a capacity  $C^*$  a quantity of electricity  $CV$  has to be given to the air in the neighbourhood of the collector, and in the absence of wind and the presence of fog this may hang about in the form of a heavily charged cloud for a considerable time before being dispersed. Fortunately these conditions are rare at Lerwick except in early summer.

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

$$\text{If } \frac{dV}{dt} = -K_1 V$$

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

where  $K_1$  measures the rate of leak,  
 $K_c$  " " charging,  
 and  $V_0$  is the potential of the air near the collector,

then the potential finally acquired by the instrument is  $V_0 K_c / (K_1 + K_c)$ .

The ratio  $K_1/K_c$  is only about 1/600 so that there is no appreciable error in the readings from this cause.

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

In the mean for the years 1927-33 the exposure factor shows a maximum of 1.33 in June and a minimum of 1.25 in January with secondary maximum of 1.32 in September and secondary minimum of 1.28 in August. In individual years however the variations are somewhat irregular. 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 a 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 1927-33 summarized according to wind direction:-

	Calm	N	NE	E	SE	S	SW	W	NW	1927-33
Mean Factor	1.32	1.31	1.31	1.26	1.26	1.33	1.31	1.30	1.27	1.30

Relatively high values of the factor are on the average associated with winds from north and north-east, south and south-west and with calms. The courtyard is open at the north-east and south-west sides and the electrograph is situated near the open south-west side. The exposure in other directions is obstructed by buildings, and the depression of the factor probably results from the higher potential of the collector when shielded from the wind.

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 1937

Bemndorf electrograph (L. Castagna, Vienna)	..	..	..	..	..	108
Wulf bifilar electrometer (Günther & Tegetmeyer, Brunswick)	..	..				5225
" " " "	"	"	"	"	"	2965

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 the 24 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 also 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 record missing 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 break.

In the year 1937 there were 53.7 hours less negative potential gradient than in 1936, and four more days on which negative gradients occurred. The daily mean duration of negative gradient was thus 1.27 hours, against 1.41 for 1936, 1.80 for 1935, 1.66 for 1934, 1.32 for 1933, 1.53 for 1932, 1.52 for 1931, 1.55 for 1930, 1.55 for 1929 and 1.63 for 1928. In each year the month-to-month variations of mean duration of negative gradient and of mean electric character figure show a close relationship to the variations in rainfall.

Curves are read by use of a mean value glass scale graduated in millimetres, the tabulated values being 60 minute means between 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 the hours ending at 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. Values prefixed by the symbols  $>$ ,  $<$ , indicate that for one or more periods during the hour potential passed beyond the range recorded by the electrograph.
2. Z is marked against hours when the potential passed beyond the recorded range in both directions.

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

In all months the general "a" mean from the four selected hours exceeds the "b" mean, except in May, when they are equal, and the difference over the year as a whole amounts to 14 v/m. In five of the eleven months in which Oa days occurred, the means from the Oa days are greater than the "a" means, while in December they are equal; over the year as a whole the Oa day mean is 8 v/m greater than the "a" mean.

The annual mean daily values derived in these three ways for the eleven years 1927-1937 during which the electrograph has been in the same position are:-

	Oa	"a"	"b"
1927 .. ..	213 v/m	179 v/m	160 v/m
1928 .. ..	166 v/m	156 v/m	134 v/m
1929 .. ..	162 v/m	161 v/m	133 v/m
1930 .. ..	181 v/m	175 v/m	158 v/m
1931 .. ..	161 v/m	163 v/m	147 v/m
1932 .. ..	159 v/m	159 v/m	141 v/m
1933 .. ..	168 v/m	170 v/m	152 v/m
1934 .. ..	188 v/m	182 v/m	159 v/m
1935 .. ..	165 v/m	165 v/m	142 v/m
1936 .. ..	171 v/m	161 v/m	142 v/m
1937 .. ..	156 v/m	148 v/m	134 v/m

It is a defect of the Benndorf recorder that even with such a high scale value as 24 v/mm the width of the sheet is frequently exceeded during oscillatory movements. In 1937 there were 97 days on which the electrometer needle went beyond the limits of registration on the positive side and 137 on the negative side; these occasions were mainly when precipitation was falling on the collector. The greatest number of extreme positive excursions were associated with snow or sleet showers and were almost invariably only momentary.

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

Positive. Feb. 22d 16h 30m-17h 30m. Feb. 27d 7-8h Dec. 10d 16h 45m-17h 45m.

Negative. Jan. 13d 3-5h Jan. 16d 20-23h Apl. 20d 1-2h Dec. 14d 18-19 h.

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

- (1) January 16d 17h 15m to 23h 45m. Negative except for 2 mins. Mean Gradient <-1346 v/m. Continuous moderate rain.
- (2) April 11d 3h 30m to 9h. Negative except for 14 mins. Mean Gradient -466 v/m. Continuous slight rain.
- (3) April 19d 22h 40m to 20d 2h 50m. Negative except for 6 mins. Mean Gradient <-1197 v/m. Slight to moderate continuous rain.
- (4) May 26d 20h 48m to 27d 14h 12m. Negative except for 2 periods totaling 30 mins. Mean Gradient <-680 v/m. Continuous heavy rain.
- (5) June 3d 20h to 4d 1h 40m. Negative except for 8 mins. Mean Gradient -414 v/m. Continuous slight rain.
- (6) December 14d 15h to 20h. Negative except for 11 mins. Mean Gradient <-1108 v/m. Continuous moderate rain.

Notable spells of high potential were:-

(1)	May 22d 12h to 23d 5h.	Mean Gradient	471 v/m	Thick fog.
(2)	" 24d 23h to 25d 18h	" "	397 v/m	Thick fog then fair.
(3)	June 7d 19h to 8d 1h	" "	562 v/m	Thick fog.
(4)	July 2d 9h to 22h	" "	480 v/m	Moderate fog.
(5)	August 12d 9h to 24h	" "	606 v/m	Thick fog.
(6)	" 14d 2h to 11h	" "	531 v/m	" "

There were 81 days on which there occurred apparent changes of potential gradient from the limit of the sheet on the positive side to the limit on the negative side, at least once within an interval of 60 minutes. If these changes were real and not due to charges given to the collector rod by precipitation, they connote a range exceeding 3100 v/m within an hour. Assuming that in Shetland the charge associated with rain may occasionally attain 10 E.S.U. per cc., it has been found that the gradient recorded may contain a contribution of not less than 50 volts arising from the charge given by the rain. In some of the hours the extreme reversal occurred at least twice within the period.

The diurnal inequalities for 0a days for the months, seasons, and year, are given in Table 2, together with mean values of the potential gradient and particulars of the non-cyclic change and the number of days used; the inequalities and other entries for the seasons and year are the means of the corresponding entries for the appropriate months. Similar data for the 1a and 2a days together are given in Table 3.

The annual mean diurnal variation for 0a days during 1937 has a well-marked minimum at 5h and a maximum at 20h with a secondary minimum at 10h. The maximum occurs at 16h in the winter, 20h at the equinoxes and 22h in the summer, while the secondary minimum is most clearly defined for the summer months at 11h. The winter range is slightly larger than that for the equinoxial months, both being considerably greater than the range in summer.

The inequalities for 1a and 2a days are much more irregular, but tend to be similar in shape to those for the 0a days

## TERRESTRIAL MAGNETISM

## Notes on the Instruments

Up to April 20th, 1934, the standard records of declination (D) and horizontal force (H) were obtained from the Munro magnetographs, which were in use at Falmouth until 1912, and those of vertical force (V) from the Watson quartz fibre instrument, which at the end of 1929 had replaced a Munro variometer.

Early in 1934 a complete magnetograph set of the La Cour type was received. This set had been used by the British Polar Year Expedition at Fort Rae, Canada, during 1932-33. It was installed in the magnetograph house and was adopted as the standard on April 20th, 1934, the former standard set becoming the auxiliary.

The La Cour set consists of H, D and V variometers. The H and D magnets are about 1 cm. in length, and each is supported by a single quartz fibre. A description of the H variometer is given in Publikationer fra det Danske Meteorologiske Institut, Communications Magnétiques, No. 11 (le Variomètre de Copenhague). The V magnet is larger; it is supported by knife edges resting on agates, and is enclosed in a sealed vessel. A description of this instrument is given in Pub. fra det Danske Met. Inst., Communications Magnétiques, No. 8 (la Balance de Godhavn).

The recording apparatus is so designed that the three elements are recorded on one sheet of photographic paper, with a single electric lamp as source of light. Time marks are made by a second lamp, the circuit of which is closed by a clock for about 10 seconds every five minutes. The width of paper is 10 cm. for each element, but the effective width is increased by a number of small prisms which reflect light from the lamp into the variometers, producing a series of light-spots at intervals of slightly less than 10 cm.

Scale values of H and V are measured by passing a current through Helmholtz-Gaugain coils placed over the variometers, the resulting deflexions being recorded on the photographic paper. The current is measured by a small milli-ammeter (Weston, No. 55896), which is periodically calibrated. It is thought that the scale values adopted are accurate within 1%; these were about  $4.2 \gamma/\text{mm}$  for H and  $5.5 \gamma/\text{mm}$  for V. The scale value of D depends only on the geometry of the system, with a small correction for torsion, and was  $0.95/\text{mm}$  until March 30, 1937, when the variometer was moved to make it  $1.00/\text{mm}$ .

The H and V variometers are capable of accurate compensation for temperature, and the temperature coefficient of both the H and V records was zero throughout the year.

In July 1935 a la Cour quick-run magnetograph set was installed; this also had been used by the British Polar Year Expedition. The variometers are similar to those of the standard set, but the time-scale is twelve times as great.

The standard 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 for 60 minutes between exact hours G.M.T.

Base values for the records are obtained from the results of absolute observations; the routine used to be two determinations of horizontal force and six of declination and dip in each week. In July 1937, however, on account of the steadiness of the base values the number of routine observations was halved, but extra observations are made when any change in the base value is suspected. Horizontal force and declination are determined with the unifilar magnetometer on the centre pillar (No.2) of the absolute hut, the azimuth of the fixed mark being taken as  $8^{\circ} 43' 2''$  east of south. 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 1937.

The values during these years are as follows:-

Year	P	Q	$\log_{10}(1 + P/25^2 + Q/25^4)$
1923 (March-December)	-2.40	-30	I.99830
1924 ... ..	-1.24	-481	99860
1925 ... ..	-1.17	-892	99820
1926 ... ..	+1.23	-1727	99893
1927 ... ..	+2.23	-2200	99910
1928 ... ..	+0.22	-1412	99858
1929 ... ..	-0.54	-969	99855
1930 ... ..	-1.21	-853	99821
1931 ... ..	-1.04	-911	99826
1932 ... ..	+1.37	-1866	99887
1933 ... ..	-0.12	-1098	99869
1934 ... ..	+2.98	-2397	99940
1935 ... ..	+0.67	-1490	99881
1936 ... ..	-1.49	-650	99824
1937 ... ..	-0.42	-1320	99828

The mean value of  $\log_{10}(1 + P/25^2 + Q/25^4)$  employed in the reduction of all observations for 1937 was the mean of the values derived up to the end of 1936, namely, I.99862. If the 1937 value is added, the mean for the total available period becomes I.99860. The adoption of this latter value would reduce all the hourly values, monthly means, etc., as given in the tables by 0.3γ in the case of H and 1.1γ in the case of V.

In April 1935, with the kind permission of the Astronomer Royal, the earth inductor which had been in use at Fort Rae during the Polar Year was borrowed again from the Royal Observatory, Greenwich and sent to Lerwick. This instrument, with the recommended correction of +11" added to the observed dip has been the standard in deriving base line values of V since 1935.

In December 1936 a Copenhagen Balance Magnetometer (BM) was received at the Observatory. A description of the instrument is given in Bulletin de

l'Institut Royal Colonial Belge Tome VII No. 3, 1936. After a series of observations in the absolute hut it was transferred to the old "Atmospheric Recorder" hut, the position of which will be seen in the Site Plan in the 1923 Observatories' Year Book.

Observations have been made with the BM about four times weekly, each observation consisting of at least two independent determinations of V. For the year the mean deviation of the calculated base value for an individual observation from the mean base value is  $3.3\gamma$ , compared with the corresponding figure of  $4.7\gamma$  for the inductor. The mean base value of the la Cour Variometer computed from the BM is  $30\gamma$  lower than the value computed from the inductor for the year.

As stated in the general remarks, the walls of the magnetograph chamber are of concrete, 76 cm. 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 day-to-day change in degrees absolute over each of the twelve months of 1937 and for the year as a whole was as follows:-

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
0.43	0.28	0.26	0.18	0.30	0.44	0.21	0.27	0.22	0.23	0.47	0.45	0.31

There were 12 occasions on which the change reached or exceeded  $1^{\circ}\text{A}$ .

The results of the absolute determinations of D, I and H are summarized in the subjoined table, and the values of m, the moment at  $0^{\circ}\text{C}$  of collimator magnet 3951A are also given. It should be noted that the values of m obtained are affected to an appreciable extent by changes of H between the vibration and deflection experiments and that no part of the H observation is actually taking place at the "mean time", which occurs in the interval between vibration and deflection. Considerations of space make it necessary to limit observations printed to about two per week, but, as indicated above, absolute observations of D and I are made more frequently. For each set of absolute observations are shown the deduced base line values of H, D and V, and, in brackets, the adopted base line values. Thus, the entry 337 (339) under H signifies: deduced base line value 14,337, adopted base line value 14,339. Apart from discontinuities when the instruments were adjusted, the base line values were very steady, and therefore the values corresponding to dates between those given in the table may be obtained by interpolation.

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

Lerwick		1937									
		Declination		Inclination		Horizontal Force			Base line values (deduced and adopted)		
Date	Mean Time	D		Mean Time	I	Mean Time	H	m	H	D	V
	h m	° ' "	h m	° ' "	h m	γ		14,000γ†	° ' "	46,000γ†	
Jan.	2	11 46	12 54 13	11 19	72 52.7	12 19	14,412	1047.9	385 (386)	12 37.9 (37.9)	628 (620)
	5	12 55	55 51	11 43	53.5	13 31	412	8.6	384 (386)	38.0 (37.9)	622 (620)
	8	12 5	51 49	-	-	12 32	404	8.2	386 (386)	37.8 (37.9)	- (620)
	12	12 18	52 53	11 59	53.4	-	-	-	(386)	37.8 (37.9)	623 (620)
	14	12 58	54 27	10 51	52.7	13 31	416	8.5	388 (386)	37.9 (37.9)	623 (620)
	15	11 36	52 48	11 19	52.5	12 37	421	7.9	386 (386)	37.8 (37.9)	627 (620)
	20	11 17	53 25	11 1	52.8	12 7	418	8.1	383 (386)	37.9 (37.9)	622 (620)
	23	11 31	52 42	11 13	53.8	12 31	406	8.0	387 (386)	37.9 (37.9)	611 (620)
27	10 58	55 39	10 41	53.8	11 59	401	7.9	385 (386)	38.1 (37.9)	617 (620)	
Feb.	1	14 26	12 55 10	12 47	72 54.3	15 0	14,406	1048.4	389 (386)	12 38.0 (37.8)	619 (621)
	3	12 11	52 26	14 46	54.3	12 39	401	8.6	388 (386)	37.7 (37.8)	625 (621)
	9	11 48	54 41	11 30	52.9	12 39	399	8.5	384 (386)	37.8 (37.8)	615 (621)
	12	11 40	53 43	15 30	53.9	12 14	407	8.0	385 (386)	38.0 (37.8)	624 (621)
	16	12 41	13 1 5	12 26	55.7	13 45	404	7.2	388 (386)	37.9 (37.8)	610 (621)
	19	-	-	11 47	54.4	12 35	394	8.7	387 (386)	- (37.8)	630 (621)
	23	12 11	12 52 3	10 45	53.8	12 38	395	8.4	385 (386)	37.8 (37.8)	620 (621)
	26	12 12	57 47	10 39	53.5	12 37	395	8.2	386 (386)	38.1 (37.8)	625 (621)
Mar.	2	12 14	12 56 40	11 55	72 55.7	12 39	14,388	1047.3	385 (386)	12 38.2 (37.8)	615 (619)
	5	11 3	13 5 7	10 45	56.1	12 13	389	5.5	389 (386)	37.9 (37.8)	608 (619)
	9	11 40	12 53 4	11 22	54.0	12 24	408	8.3	389 (386)	37.9 (37.8)	617 (618)
	12	10 53	50 17	12 41	54.8	12 1	387	8.4	387 (386)	37.9 (37.8)	631 (617)
	16	11 47	52 58	11 27	55.7	13 22	390	7.7	385 (386)	37.9 (37.8)	624 (616)
	19	12 12	56 46	10 52	54.8	12 41	391	8.1	387 (386)	37.8 (37.8)	606 (615)
	23	11 19	51 55	11 4	56.0	12 26	392	7.8	385 (386)	37.5 (37.8)	619 (615)
	26	11 59	57 15	10 52	55.4	12 27	382	7.5	383 (386)	38.5 (38.5)	623 (614)
31	11 33	52 51	11 19	55.4	12 24	357	8.6	364 (364)	31.4 (31.5)	612 (613)	
Apr.	2	12 6	12 54 33	10 59	72 56.4	12 31	14,362	1047.5	365 (364)	12 31.5 (31.5)	615 (616)
	6	10 27	49 17	10 11	54.7	11 33	397	8.1	338 (338)	32.1 (32.3)	608 (615)
	9	10 6	46 44	11 55	54.3	10 31	390	8.2	335 (338)	32.3 (32.3)	610 (615)
	13	11 43	52 1	11 27	54.1	12 34	388	7.7	341 (339)	32.2 (32.3)	613 (614)
	16	13 3	55 13	11 57	55.5	10 39	395	8.1	342 (339)	32.3 (32.2)	618 (613)
	23	10 28	48 12	9 42	53.7	10 51	390	8.3	338 (339)	32.3 (32.1)	609 (612)
	27	13 23	51 1	11 8	56.6	13 55	398	8.3	339 (339)	32.1 (32.1)	618 (611)
	30	10 45	47 33	10 30	57.7	11 26	429	7.8	340 (339)	32.1 (32.0)	615 (611)
May	4	10 59	12 49 15	10 44	72 55.1	12 41	14,405	1047.5	339 (339)	12 31.9 (32.0)	617 (613)
	7	10 31	48 12	9 55	54.5	10 57	392	8.1	339 (339)	32.0 (31.9)	607 (613)
	11	10 37	46 39	10 23	55.9	11 30	370	8.0	343 (339)	31.7 (31.9)	613 (613)
	14	11 9	48 1	13 27	51.5	11 33	396	7.8	336 (339)	31.6 (31.9)	615 (613)
	18	11 16	46 11	10 25	54.6	13 53	395	7.9	339 (339)	31.6 (31.9)	614 (613)
	21	10 38	46 55	11 54	54.8	11 1	368	7.8	336 (338)	31.8 (31.8)	609 (613)
	25	10 52	46 33	10 35	53.7	11 31	373	8.1	340 (338)	31.5 (31.8)	609 (613)
	28	-	-	-	-	11 27	386	7.7	335 (338)	- (31.8)	- (613)
29	11 13	46 23	10 58	56.6	-	-	-	(338)	31.5 (31.8)	615 (613)	
June	1	9 53	12 45 5	9 36	72 55.5	10 51	14,373	1048.2	339 (339)	12 31.7 (31.8)	607 (613)
	2	13 59	54 55	13 43	52.0	-	-	-	(339)	32.0 (31.8)	612 (613)
	8	10 26	51 5	17 25	50.5	11 5	374	8.3	337 (339)	32.1 (31.8)	608 (613)
	11	-	-	13 51	52.7	11 43	397	8.2	341 (339)	- (31.8)	612 (613)
	15	11 12	50 15	10 55	55.5	14 3	401	8.2	341 (339)	31.8 (31.8)	615 (613)
	18	10 51	47 45	13 37	52.1	11 27	386	8.3	339 (339)	31.8 (31.8)	606 (613)
	22	11 50	54 17	11 33	56.0	14 3	464	9.8	338 (338)	31.9 (31.8)	607 (613)
	25	10 45	50 11	13 33	53.9	11 15	407	8.4	337 (338)	31.9 (31.8)	615 (613)
29	11 32	50 55	11 17	54.9	14 5	454	8.0	343 (338)	31.7 (31.8)	619 (613)	

ABSOLUTE DETERMINATIONS- (Continued)

Lerwick

1937

Date	Declination		Inclination		Horizontal Force			Base line values (deduced and adopted)		
	Mean Time	D	Mean Time	I	Mean Time	H	m	H	D	V
	h m	° ' "	h m	° ' "	h m	γ		14,000γ†	° ' "	46,000γ†
July 2	14 19	12 51 23	14 0	72 53.1	14 49	14,428	1047.4	337 (339)	12 31.7 (31.7)	611 (612)
6	10 12	46 12	11 53	53.3	11 4	415	8.0	337 (339)	31.4 (31.7)	611 (612)
9	10 33	45 37	9 55	56.0	11 5	370	7.7	341 (339)	31.9 (31.7)	604 (612)
13	11 0	46 17	14 35	54.0	11 29	364	8.2	337 (339)	31.6 (31.7)	602 (611)
16	10 42	44 42	13 41	52.0	11 13	369	8.0	334 (339)	31.9 (31.7)	607 (611)
21	10 51	49 59	11 36	53.2	12 26	415	7.4	341 (339)	31.7 (31.7)	609 (610)
23	13 46	56 46	13 29	53.7	-	-	-	(339)	32.1 (31.7)	611 (610)
28	13 25	55 5	8 19	54.6	13 57	399	8.4	340 (339)	31.8 (31.7)	612 (610)
30	15 22	52 52	15 9	51.9	-	-	-	(339)	31.9 (31.7)	609 (610)
Aug. 3	8 13	12 37 58	8 27	72 55.3	-	-	-	(339)	12 31.5 (31.7)	607 (610)
4	13 51	52 2	15 3	52.5	14 26	14,436	1047.0	341 (339)	31.7 (31.7)	611 (610)
9	10 37	46 4	11 17	56.3	-	-	-	(339)	31.7 (31.7)	613 (610)
11	14 33	55 18	9 18	56.8	15 9	411	8.1	337 (339)	32.0 (31.7)	607 (610)
13	9 16	41 5	9 51	56.0	-	-	-	(339)	31.7 (31.7)	609 (610)
18	-	-	8 29	54.4	9 39	382	8.5	339 (339)	- (31.6)	610 (610)
23	9 27	42 11	10 2	58.2	-	-	-	(339)	31.6 (31.6)	612 (610)
25	9 12	42 9	10 25	57.1	9 41	365	8.5	339 (339)	31.7 (31.6)	608 (610)
30	9 37	40 9	9 55	55.7	-	-	-	(339)	31.4 (31.6)	615 (610)
Sept. 3	8 49	12 38 4	9 32	72 56.2	-	-	-	(338)	12 31.6 (31.7)	609 (610)
7	9 13	43 26	-	-	9 43	14,376	1048.2	339 (338)	31.4 (31.7)	- (610)
10	13 18	54 43	9 55	55.9	10 58	368	8.3	333 (338)	32.2 (31.7)	619 (610)
13	10 59	48 19	10 42	56.6	-	-	-	(338)	31.8 (31.7)	610 (610)
16	-	-	-	-	10 20	401	8.0	339 (338)	- (31.7)	- (610)
20	9 24	42 5	9 59	55.5	-	-	-	(338)	31.6 (31.7)	610 (610)
22	-	-	10 53	55.6	13 54	391	7.9	335 (338)	- (31.7)	613 (610)
30	9 27	38 5	9 9	54.4	9 55	387	7.8	337 (338)	31.5 (31.7)	610 (610)
Oct. 1	11 12	12 50 16	10 51	72 57.2	-	-	-	(337)	12 32.1 (31.9)	612 (612)
5	11 36	46 5	10 29	59.0	12 3	14,338	1048.2	337 (337)	32.1 (31.9)	618 (612)
9	12 6	55 23	11 39	56.7	-	-	-	(337)	31.9 (31.9)	614 (612)
13	14 28	53 17	14 57	52.6	-	-	-	(337)	32.3 (31.9)	610 (612)
15	9 25	45 35	-	-	10 1	352	8.3	335 (337)	31.7 (31.9)	- (611)
19	14 27	48 20	9 30	54.3	14 53	405	8.5	341 (337)	31.9 (31.9)	605 (611)
22	9 35	45 11	15 41	54.2	-	-	-	(337)	31.7 (31.9)	605 (610)
25	9 53	40 12	10 39	57.0	-	-	-	(337)	31.8 (31.9)	608 (610)
29	11 47	46 36	15 1	55.1	12 17	373	8.1	333 (337)	31.8 (31.9)	613 (610)
Nov. 3	12 11	12 48 32	10 35	72 54.5	12 35	14,394	1048.3	336 (336)	12 31.9 (31.9)	608 (609)
5	10 35	42 59	10 51	55.1	-	-	-	(336)	31.7 (31.9)	605 (609)
10	9 27	41 37	10 49	53.8	9 55	417	7.5	348 (336)	31.7 (31.9)	595 (609)
15	11 31	43 9	14 27	53.6	-	-	-	(336)	31.8 (31.9)	612 (608)
17	10 14	44 29	10 56	53.7	11 55	407	8.0	335 (336)	31.8 (31.9)	602 (608)
19	10 54	45 44	10 36	55.8	-	-	-	(336)	31.5 (31.9)	604 (608)
24	11 35	46 7	-	-	12 5	375	8.2	325 (336)	31.9 (31.9)	- (608)
26	12 1	44 29	12 22	54.4	-	-	-	(336)	32.0 (31.9)	603 (608)
Dec. 1	14 17	12 47 33	10 41	72 55.3	12 7	14,397	1047.9	329 (335)	12 31.7 (31.9)	615 (606)
6	12 3	46 32	12 25	54.4	-	-	-	(335)	32.0 (31.9)	612 (605)
8	11 45	44 4	10 28	53.6	12 21	397	8.0	329 (335)	32.0 (31.9)	608 (605)
10	11 43	45 30	10 59	54.5	12 13	411	8.1	337 (335)	31.9 (31.9)	613 (605)
15	11 43	44 19	14 49	53.2	12 12	402	8.0	332 (334)	31.8 (31.9)	593 (604)
17	9 54	42 29	-	-	10 28	422	7.8	336 (334)	31.9 (31.9)	- (603)
22	9 47	44 47	10 56	54.2	10 13	405	8.4	331 (334)	32.0 (31.9)	599 (602)
24	12 51	42 55	12 33	55.7	-	-	-	(334)	31.9 (31.9)	608 (602)
29	11 43	41 39	12 57	54.0	12 15	398	8.4	333 (333)	31.5 (31.9)	598 (601)



## 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 consisted in noting and making descriptions of the phenomena seen during the display. The descriptive notes are entered in a second log reserved for records of actual auroral displays. Extracts from this latter log may be obtained by anyone requiring the detailed information.

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

## Notes on the Tables

The hourly values of H, D and V, obtained as described above, appear in three of the four monthly tables. The variations in D, being expressed in minutes, may be readily converted to units of force ( $\gamma$ ) of the component perpendicular to the magnetic meridian by multiplying by a factor which for 1937 is approximately 4.19. The mean value for the day is computed as the mean of the twenty-four hourly values.

The letters "Q" and "D", affixed 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  $HR_H + VR_V$  for each day, where  $R_H$  and  $R_V$  denote the absolute ranges in force for a calendar day of the horizontal 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 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 in the present year the non-cyclic change\* has not been eliminated, but the values of the non-cyclic change are given, as in former years, in Table 64. The values of the range of the mean diurnal inequalities of the several elements in the three categories of days

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\* See General Introduction p. 23

are brought together in Table 62. The "Average Departures", or mean values of the 24 hourly constituents of the inequalities irrespective of sign, are given in Table 63.

The mean values of  $HR_H + VR_V$  are summarized in Table 65.

In earlier years Table 66 gave, for the months and year, the mean values of N, W, V, D, I, H and Total Force T on all days. Since 1934 the Table has been extended to give in addition the mean values of the primary elements H, D and V on the internationally selected groups of quiet and disturbed days. For all days the means of N, W, I and T are derived from the corresponding values of H, D and V.

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, 1937.- The mean values of the magnetic elements for the years 1936 and 1937 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	° ′	° ′	γ	γ	γ	γ
1936	14429	12 57.8	72 51.7	14061	3237	46791	48965
1937	14412	12 46.6	72 53.3	14055	3186	46812	48981

The annual rates of decrease of westerly declination for the epoch January 1st of each year during the last thirteen years are summarized as follows:-

	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937
Rate of decrease	13.8	13.0	14.9	12.9	12.8	13.7	12.4	11.6	13.6	12.1	12.1	12.4	11.7	11.2

In comparing the values of I, V and T for the two years in Table I with those given in the corresponding tables for years earlier than 1934 the discontinuity of +3' in I or +144γ in V on Jan. 1st 1934 is to be borne in mind. (See O.Y.B. 1934, p.35).

Mean values derived from (a) international quiet days and (b) international disturbed days are as follows:- (a) H, 14417γ; D, 12° 46.6; V, 46813γ (b) H, 14398γ; D, 12° 46.3; V, 46811γ.

The extreme values of H, D and V recorded during 1937 are given in Table II.

TABLE II

Element	Maximum		Minimum		Absolute Annual Range
	Value	Date 1937	Value	Date 1937	
Horizontal Force	15074 $\gamma$	d h m Dec.23 17 44	12937 $\gamma$	d h m Apr.28 15 30	2137 $\gamma$
Declination	14° 42'·3	Feb. 3 18 56	10° 42'·6	Apr.28 5 19	3° 59'·7
Vertical Force	47258 $\gamma$	Apr.27 0 0	46080 $\gamma$	Apr.28 4 27	1178 $\gamma$

The range of 3° 59'·7 in declination is equivalent to a range of 1002 $\gamma$  in the component of force perpendicular to the magnetic meridian. The range in H is the largest ever recorded at Lerwick, while those of D and V are the largest since 1926 and 1932 respectively.

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

Year	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937
Sunspot No.	5·8	16·7	44·3	63·9	69·0	77·8	65·0	35·7	21·2	11·1	5·7	8·7	36·1	78·2	114·4
Absolute daily range of D.	14'·9	15'·4	18'·1	25'·0	20'·0	21'·4	24'·3	28'·5	19'·2	21'·3	19'·6	18'·0	20'·4	20'·9	25'·9

In these fourteen years the sunspot numbers show a fairly regular rise from the minimum year 1923 to a maximum in 1928 and a fall to the second minimum in 1933 after which the rise in the new cycle is small in the first year and then more rapid in 1935 to 1937. The second minimum in the D ranges occurs one year after the sunspot minimum and the maxima occur in 1926 and 1930, the latter the larger, although its sunspot number was less than in 1935. The D ranges in 1937 are higher than in any other year except 1930.

In the next table the mean absolute daily ranges of D for individual months of the year 1937 are set out, together with their sunspot numbers.

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Sunspot number	132·5	128·5	83·9	109·3	116·7	130·3	145·1	137·7	100·7	124·9	74·4	88·8
Mean Absolute daily range of D	17'·0	28'·3	23'·6	40'·9	25'·2	24'·1	25'·0	22'·6	23'·5	37'·6	24'·1	19'·4

In addition to summarizing the local and international character figures for each month, Table III gives the annual totals of the separate characters and the annual means from 1924. Comparative data for all, Q and D days derived from the numerical index of disturbance  $(HR_H + VR_V) 10^{-4}$  are given for each month of 1937 and annual means from 1930. April was the most disturbed month of 1937. As a whole 1937 was more disturbed than any year since 1930.

TABLE III

Month	Magnetic Character Figures			Mean Character Figures		Mean Value of $\frac{HR_H + VR_V}{10,000 \gamma^2}$		
	"0" days	"1" days	"2" days	Lerwick	International	All days	Q days	D days
January	17	13	1	.48		466	101	1332
February	7	18	3	.86		741	220	1971
March	13	11	7	.81		781	169	1716
April	8	16	6	.93		1454	224	5637
May	5	21	5	1.00		1032	267	3026
June	4	24	2	.93		836	437	1931
July	8	17	6	.94		965	311	1867
August	17	10	4	.58		697	222	2447
September	9	19	2	.77		644	267	1466
October	7	16	8	1.03		1230	287	2485
November	11	17	2	.70		736	122	1986
December	13	15	3	.68		537	118	1364
Year, 1937	119	197	49	.81		843	229	2269
Year, 1936	133	206	27	.71	.65	603	173	1506
Year, 1935	100	245	20	.78	.67	564	175	1482
Year, 1934	168	173	24	.61	.56	465	155	1151
Year, 1933	157	169	39	.59	.64	563	166	1413
Year, 1932	97	230	39	.84	.71	644	182	1602
Year, 1931	121	212	32	.75	.66	589	196	1394
Year, 1930	64	235	66	1.01	.83	1063	250	2515
Year, 1929	113	214	38	.80	.67			
Year, 1928	126	211	29	.74	.63			
Year, 1927	137	206	22	.68	.63			
Year, 1926	208	134	23	.50	.65			
Year, 1925	207	130	28	.51	.56			
Year, 1924	229	114	23	.44	.55			

The values of mean absolute daily range for the months and seasons of the year are given in Table IV where, for convenience of comparison, the ranges of declination in angle have been converted to units of force of the component perpendicular to the magnetic meridian. If comparison be made with the corresponding table in the Eskdalemuir Section it will be seen that in 1937 the ratios of the annual mean ranges of H, D and V at Lerwick to those at Eskdalemuir are 1.6, 1.2 and 2.0. For the six years 1932-37 the means of these ratios are 1.4, 1.1 and 2.3. The ratios of the mean daily ranges for the six years 1926-31 of Lerwick H to Eskdalemuir N, Lerwick D to Eskdalemuir W, and Lerwick V to Eskdalemuir V, are 1.4, 1.1 and 1.9; from year to year scarcely any variation appears in the ratio of the W or D components but there are variations in the case of the H or N and V components.

TABLE IV -ABSOLUTE DAILY RANGE. MEAN MONTHLY VALUES

	Mean Absolute Daily Range 1937			Mean Daily Range expressed as Percentage of Yearly Mean 1937		
	H	D	V	H	D	V
	Y	Y	Y	%	%	%
January	74	71	77	44	65	60
February	120	119	122	71	109	95
March	149	99	121	89	91	94
April	313	171	214	186	157	166
May	209	106	156	124	97	121
June	168	101	127	100	93	98
July	215	105	140	128	96	109
August	167	95	97	99	87	75
September	123	99	100	73	91	78
October	258	158	184	154	145	143
November	126	101	119	75	93	92
December	92	81	86	55	74	67
Winter	103	93	101	61	85	79
Equinox	211	132	154	126	121	120
Summer	190	102	130	113	94	101
Year	168	109	129	-	-	-

The frequency distribution of absolute daily ranges recorded in 1937 is shown in Table V. A comparison with the corresponding figures for Eskdalemuir (Table V on page 187) indicates that ranges in excess of 200γ are as usual much more frequent at Lerwick than at Eskdalemuir, even in the case of D ranges, of which the frequency distributions at the two places usually show less divergence. The ranges of maximum frequency at Lerwick fall in the intervals 70-79γ for H, 60-69γ for D, and 20-29γ for V.

TABLE V.- FREQUENCY DISTRIBUTION OF ABSOLUTE DAILY RANGE

	Number of Cases, 1937			Percentage Distribution		
	H	D	V	H	D	V
0- 9	0	0	2	0.0	0.0	0.5
10- 19	5	3	34	1.4	0.8	9.3
20- 29	15	11	35	4.1	3.0	9.6
30- 39	20	16	32	5.5	4.4	8.8
40- 49	24	18	33	6.6	4.9	9.0
50- 59	22	30	19	6.0	8.2	5.2
60- 69	25	51	21	6.8	14.0	5.8
70- 79	36	47	13	9.9	12.9	3.6
80- 89	35	40	12	9.6	11.0	3.3
90- 99	26	31	9	7.1	8.5	2.5
100- 109	19	16	18	5.2	4.4	4.9
110- 119	19	12	11	5.2	3.3	3.0
120- 129	14	14	9	3.8	3.8	2.5
130- 139	8	9	7	2.2	2.5	1.9
140- 149	5	9	8	1.4	2.5	2.2
150- 159	6	8	12	1.6	2.2	3.3
160- 169	3	3	3	0.8	0.8	0.8
170- 179	2	6	1	0.5	1.6	0.3
180- 189	5	3	6	1.4	0.8	1.6
190- 199	5	3	7	1.4	0.8	1.9
200+	71	35	73	19.4	9.6	20.0
Days omitted	0	0	0	-	-	-

TABLE VI - PRINCIPAL MAGNETIC DISTURBANCES RECORDED AT LERWICK, 1937

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, 12°; V, 46,000γ.

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. 7 11	Jan. 8 5	890	7 19 29	176	7 19 37	714	105.8	7 19 35	28.5	7 19 27	77.3	994	7 18 30	327	7 19 32	667
2*	Feb. 2 23 5	Feb. 4 1	722	3 18 9	-60	3 18 54	782	162.3	3 18 56	-17.3	3 19 6	179.6	1174	3 18 59	390	3 18 54	784
3	Feb. 9 11	Feb. 10 2	755	9 19 59	288	9 21 26	467	73.4	9 18 51	23.5	9 22 10	49.9	982	9 19 29	688	9 22 24	294
4	Feb. 12 15	Feb. 15 2	471	14 18 50	296	12 21 37	175	64.2	12 21 25	25.4	14 23 53	38.8	911	14 19 34	689	12 21 51	222
5*	Feb. 18 19 6	Feb. 19 20	656	19 17 23	339	19 13 4	317	63.0	19 9 5	19.7	18 21 17	43.3	1031	19 17 23	712	19 0 54	319
6	Mar. 1 8	Mar. 2 24	573	1 20 34	-1	1 22 5	574	73.9	1 21 19	23.0	1 23 5	50.9	924	2 18 14	690	1 23 58	234
7*	Mar. 5 7 25	Mar. 6 4	491	5 13 55	328	5 11 35	163	74.5	5 13 55	16.0	5 22 24	58.5	912	5 18 57	727	6 2 4	185
8	Mar. 13 12	Mar. 16 2	618	15 14 3	171	13 23 40	447	63.5	15 12 56	13.7	14 2 41	49.8	973	15 13 57	493	14 0 2	480
9*	Mar. 26 20 56	Mar. 29 7	528	27 14 52	135	28 1 8	393	65.8	27 12 55	23.2	27 22 45	42.6	937	27 15 25	585	27 0 21	352
10*	Mar. 31 3 17	Apr. 4 4	601	31 17 35	-57	31 22 56	658	88.1	2 19 20	23.3	3 2 43	64.8	948	31 19 36	622	31 8 0	326
11	Apr. 12 9	Apr. 13 24	621	12 16 25	218	13 0 21	403	75.5	12 20 22	33.3	12 20 35	42.2	988	12 16 25	647	13 0 42	341
12*	Apr. 24 12 1	Apr. 28 24	820	28 15 30	-1063	28 4 37	1883	120.6	27 0 7	-77.4	28 4 27	198.0	1258	27 0 0	80	28 4 27	1178
13*	May 3 16 4	May 5 19	672	5 15 5	-235	5 0 36	907	114.3	5 0 36	-17.6	5 2 54	131.9	1022	5 15 50	277	5 3 57	745
14	May 27 12	May 30 6	831	28 14 26	-112	29 0 28	943	82.3	28 18 20	14.8	29 1 15	67.5	1027	28 14 4	481	29 0 24	546
15	June 4 14	June 7 2	713	6 15 29	-144	5 23 37	857	64.5	6 15 30	-5.5	5 23 36	70.0	1007	6 13 55	378	6 2 22	629
16	June 20 0	June 22 24	580	22 18 20	304	21 1 33	276	64.4	20 19 4	27.8	21 2 47	36.6	892	20 18 10	679	20 6 40	213
17	June 27 3	June 28 19	569	27 15 25	344	28 3 52	225	62.9	27 15 24	26.8	27 7 27	36.1	854	27 18 11	702	27 21 40	152
18	July 5 0	July 7 8	603	6 16 38	310	7 1 23	293	60.5	6 13 28	26.0	7 1 36	34.5	1018	6 16 35	694	7 0 44	324
19*	July 9 11 42	July 12 6	572	9 14 34	74	12 0 6	498	62.6	9 14 32	28.0	10 2 3	34.6	910	11 18 20	511	10 1 24	399
20	July 13 14	July 16 22	1048	14 15 37	325	15 11 57	723	76.9	14 19 45	34.7	16 7 27	42.2	1045	14 15 35	712	14 5 52	333
21	July 19 4	July 26 3	644	19 19 25	-26	25 0 23	670	76.8	24 0 43	1.7	24 2 50	75.1	941	22 16 56	461	24 2 47	480
22	Aug. 1 13	Aug. 4 8	768	2 14 53	-370	4 1 37	1138	74.3	2 3 26	-5.1	4 1 58	79.4	992	2 14 47	474	4 0 2	518
23*	Aug. 22 3 8	Aug. 23 2	457	22 3 14	30	22 9 33	427	69.5	22 10 3	5.1	22 8 25	64.4	895	22 13 19	644	22 5 23	251
24	Aug. 26 1	Aug. 29 7	569	27 15 43	295	27 23 12	274	57.6	26 14 15	33.6	26 7 54	24.0	914	27 16 45	598	27 23 23	316
25	Sept. 10 17 50	Sept. 11 17	528	11 16 36	55	11 1 34	473	60.8	11 6 10	-4.8	11 1 28	65.6	891	11 16 25	486	11 3 36	403
26*	Sept. 30 13 44	Oct. 2 2	697	30 19 31	-127	30 21 2	824	92.5	30 19 28	1.9	1 0 16	90.6	1059	30 21 6	641	30 21 52	418
27*	Oct. 3 11 20	Oct. 4 18	495	3 19 37	-324	4 3 13	819	80.4	4 6 56	-57.1	4 2 39	137.5	948	3 16 0	328	4 4 49	620
28	Oct. 7 5	Oct. 13 2	831	9 15 16	-265	8 3 33	1096	79.3	11 14 56	-12.6	8 4 2	91.9	1059	9 15 47	395	8 3 27	664
29	Oct. 23 13	Oct. 29 2	590	23 17 14	-497	24 0 26	1087	71.9	24 0 34	-42.1	23 23 50	114.0	995	23 17 13	351	24 0 59	644
30*	Nov. 7 17 4	Nov. 9 24	440	8 17 15	27	8 0 20	413	54.9	8 19 8	23.9	8 1 35	31.0	898	7 20 16	624	8 0 19	274
31	Nov. 18 0	Nov. 25 2	683	18 18 44	285	18 22 59	398	66.5	19 13 9	12.7	23 17 53	53.8	1013	19 15 27	717	18 23 14	296
32*	Nov. 29 11 4	Dec. 1 8	688	30 16 49	88	1 0 34	600	104.6	29 19 16	3.4	30 21 24	101.2	1006	30 17 54	536	30 20 36	470
33	Dec. 18 11	Dec. 20 24	713	18 17 4	316	19 0 26	397	75.2	18 16 51	13.4	20 17 52	61.8	1092	18 17 21	744	19 0 20	348
34*	Dec. 23 10 47	Dec. 24 23	1074	23 17 44	345	24 19 29	729	76.7	23 17 43	23.2	23 19 46	53.5	1005	23 17 10	783	23 1 34	222

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 53-61, and the corresponding inequality ranges in Table 62. The inequalities of H, D and V for international quiet and disturbed days are shown graphically in Plate I, whilst in Plate II are given vector diagrams illustrating the diurnal variation of magnetic force in the horizontal, the prime vertical and the meridian planes.

All Days.- The ranges of the mean inequalities of H and D for the year and for the summer are the highest yet reached at Lerwick, that is, since 1923. The range in V for the year is relatively high, but has been exceeded in 1932 and 1926 by small amounts and in 1930 very considerably. Of individual months, the ranges of the mean inequalities of H and D for July are very large, that of D exceeding any hitherto attained in any month at Lerwick. In the case of V, however, the July range, though considerable, is not outstanding; it is exceeded by the October range in the present year and has been exceeded several times in the years 1930 to 1932.

Quiet Days.- The ranges of the mean inequalities of H for the year and for every season are the highest yet attained at Lerwick; those of D for the year and for the summer are the highest yet attained in that element. The range of V for the year is the greatest since 1931. As to individual months the ranges of H and D in July are the highest in these elements so far for any month. The V range reaches a very high value in June, though not so high as the value for August 1930.

Disturbed Days.- The ranges of the mean diurnal inequalities of H for the year and in each season are the highest since 1930; the range of D for the year is the highest since 1926 and for equinox the highest yet reached at Lerwick in that season. The ranges of V are not outstanding. Of individual months April 1937 establishes a record for H; and the ranges of D in April and October have seldom been exceeded.

A comparison of the records of Eskdalemuir and Lerwick shows that in general 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 and vertical force curves, especially on disturbed days. The table below shows the ratios of the ranges of the inequalities in the various months. On the average of the eleven years 1926-36 it is found that this ratio in the case of H on quiet days rises to a maximum of about 1.15 at midsummer and falls to a minimum of about .85 at midwinter. In the case of V on quiet days the ratio behaves in the opposite way, ranging from a minimum of about .8 at midsummer to from 1.3 to 1.6 in winter months. On disturbed days the average values of the ratio in the case of V show no systematic variation with season, and remain mostly between 1.9 and 2.3. In the case of H individual months have shown wide fluctuation. On the eleven year average the factor has a minimum of 1.6 near midsummer and maxima of about 2.3 and 2.8 have been attained in October and February.

DIURNAL VARIATION OF THE MAGNETIC ELEMENTS  
LERWICK 1937

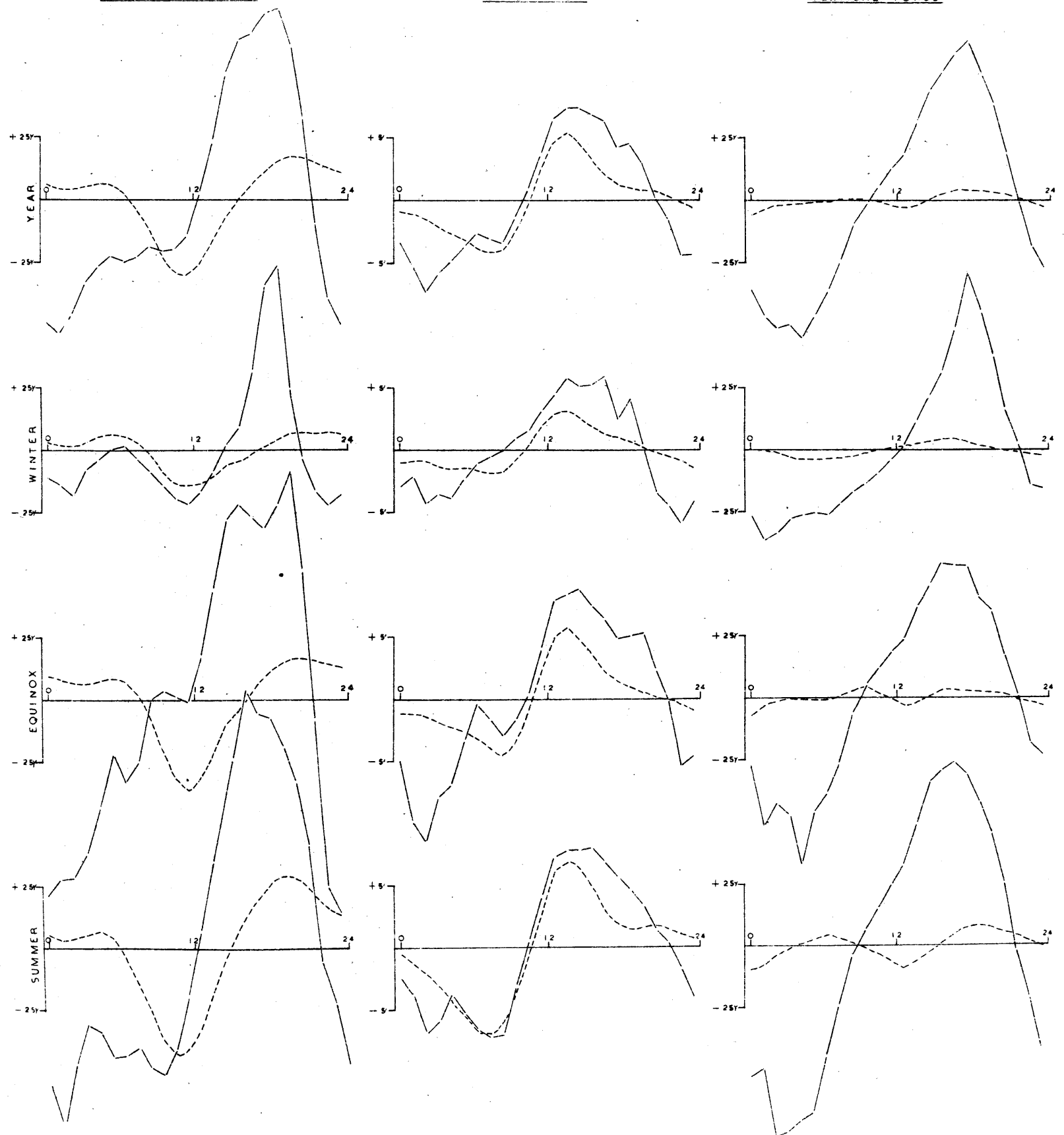
QUIET DAYS - - - - -

DISTURBED DAYS - - - - -

HORIZONTAL FORCE

DECLINATION

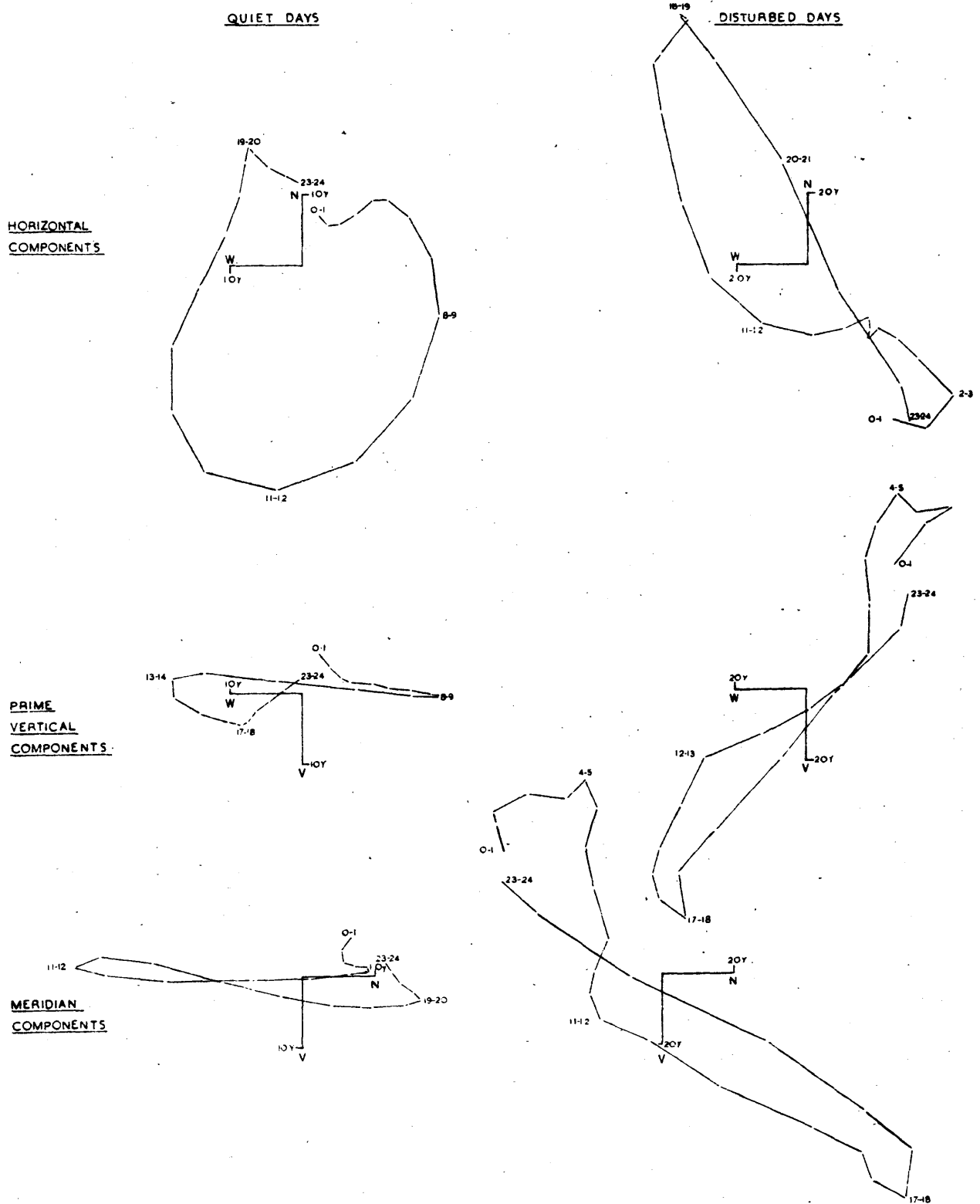
VERTICAL FORCE





VECTOR DIAGRAMS ILLUSTRATING  
DIURNAL VARIATION OF MAGNETIC FORCE

LERWICK 1937



Ratio of the Range of the Inequality at Lerwick to that at Eskdalemuir(1937)

Type of Day	Element	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
q	D	.86	1.01	.92	1.01	1.01	1.03	1.05	1.00	.95	.88	.88	.89
d	D	1.19	1.18	1.16	1.42	1.26	1.11	1.04	1.15	1.17	1.45	1.16	1.05
q	H	.96	1.07	1.15	1.20	1.26	1.08	1.10	1.06	1.12	.95	.87	.86
d	H	1.88	3.31	1.76	1.61	2.49	1.70	1.76	1.48	1.61	4.18	2.93	3.81
q	V	1.27	1.25	.64	.78	.78	1.63	.73	.58	.60	2.77	1.48	1.45
d	V	1.67	1.68	1.81	.77	1.88	1.86	1.56	1.82	1.47	1.56	2.10	1.38

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. Within the limits of accuracy of measurement and registration, "sudden commencements" appear to occur simultaneously at the two Observatories.

## Remarks on the Autographic Records, 1937

JANUARY.- (Average Character Figure 0.48)

This was a very quiet month, having no fewer than 17 days classed as "0" and only one as a "2" day.

The only disturbance of note began with steady rises in H and V shortly before 17h on the 7th. After reaching its maximum value of 14890 $\gamma$  at 19h 29m, H rapidly decreased by 714 $\gamma$  to its minimum only 8 minutes later. Almost simultaneous rapid changes of 77' and 667 $\gamma$  occurred in D and V. After further smaller oscillations conditions became quieter at 8d 7h.

From 13d to 19d there was a succession of "0" days, and the only further points of interest during the month were two "sudden commencements" 27d 8h 38m (-3 $\gamma$ , +20 $\gamma$  in H, -2'.9, +5'.8 in D) and 30d 15h 9m (-13 $\gamma$ , +31 $\gamma$  in H, -2'.0, +6'.6 in D, -5 $\gamma$ , +16 $\gamma$  in V), both of which were followed by very slight disturbance.

Aurora was seen from one or more places in Scotland on the evenings of January 2 and 5-8, the display on 7th being very bright.

FEBRUARY.- (Average Character Figure 0.86)

Though having more continual small disturbance than January, this month had very little of a violent nature.

The largest disturbance was preceded by a "sudden commencement" at 2d 23h 5m (-2 $\gamma$ , +38 $\gamma$  in H, -0'.3 +3'.5 in D, +5 $\gamma$ , -17 $\gamma$  in V). All three elements decreased irregularly until 3d 1h, when temporary sharp rises in H and V were immediately followed by falls of 517 $\gamma$  and 290 $\gamma$  respectively. D oscillated through a maximum range of 71'.3 until 7h, but disturbance was diminished considerably from then until 16h, when it recommenced with a sharp rise in H to a peak at 18h 9m. A sudden fall led to the minimum of 13940 $\gamma$  at 18h 54m. Meanwhile D oscillated rapidly again, with one remarkable swing of almost 3°

in 10 minutes ending at 19h 6m, and V had a notable change of 784 $\gamma$  in only 5 minutes at 18h 59m.

Minor disturbance continued till 9d, when there was a peak in H, giving the maximum of the month 14755 $\gamma$  at 19h 59m, accompanied by smaller oscillations of V and D. Isolated peaks occurred at 19d 17h 23m, in both the H and V traces, but after this conditions were comparatively quiet.

There were however four more "sudden commencements" at 18d 19h 6m (-1 $\gamma$ , +30 $\gamma$  in H, -0'.6 +2'.0 in D, +1 $\gamma$  -13 $\gamma$  in V), 21d 3h 26m (-1'.9, +5'.7 in D), 24d 8h 11m (+7 $\gamma$ , -17 $\gamma$  in H, +2'.9, -6'.8 in D) and 25d 11h 44m (-9 $\gamma$ , +21 $\gamma$  in H), but the slight disturbance which followed each of them quickly died down.

Aurora was seen from one or more places in Scotland on the evenings of February 3, 5, 9, 12 and 14 - 16.

#### MARCH.- (Average Character Figure 0.81)

Minor disturbance and frequency of "sudden commencements" were again the predominating features of the month.

The D and V traces showed some disturbance between 1d 20h and 2d 2h, but H was more notably affected, having a rapid fall to a minimum of 13999 $\gamma$  at 22h 5m, followed by an oscillatory recovery. A "sudden commencement" at 7h 25m (+17 $\gamma$ , -34 $\gamma$  in H, -1'.9, +5'.0 in D) led to minor activity on the 5th, after which there were six "0" days ended by a small disturbance lasting from 13d 22h till 14d 5h.

Following a small "sudden commencement" at 15d 9h 41m, humps occurred in the H and V traces at about 14h, but after this, quiet conditions persisted till the 26th. On that date another "sudden commencement" at 20h 56m (-3 $\gamma$ , +18 $\gamma$  in H) was followed by small disturbance which included double troughs in H and V.

Yet another "sudden commencement" at 31d 3h 17m (-4 $\gamma$ , +23 $\gamma$  in H, -3'.1, +8'.6 in D) preceded another similarly disturbed period, the outstanding feature of which was a sharp minimum in H of 13943 $\gamma$  at 31d 22h 56m.

Aurora was seen from one or more places in Scotland on the evenings of March 1, 5, 9 - 11, 24, 27, 29 and 31.

#### APRIL.- (Average Character Figure 0.93)

The month opened with minor disturbance, there being a rapid swing of 62' in D accompanied by smaller changes of H and V at 2d 19h. From the 4th until the 24th conditions were quiet apart from small bays in H and V at 11d 2h and a moderate disturbance on the night of 12th-13th.

A prolonged period of violent disturbance lasted from the 24th until midnight on 28th-29th and was divided into four distinct sections.

The first of these began with a "sudden commencement" at 24d 12h 1m (-9 $\gamma$ , +65 $\gamma$  in H). H was above normal for several hours after this, during which there was only minor activity. Severe disturbance set in at 21h when H began a rapid fall culminating in its minimum at 22h 18m. V rose to a peak at 22h only to fall to a deep trough. After many irregular movements the storm ceased fairly abruptly at 25d 3h. The ranges were 1161 $\gamma$ , 133' and 665 $\gamma$  in H, D and V respectively.

The second storm also began suddenly at 25d 15h 48m. H rose steeply and after executing many rapid oscillations with ranges of about 30 $\gamma$  and other

more irregular movements reached its maximum at 20h 57m. The subsequent fall was not so great as on the previous night. The outstanding feature of the D trace was a swing of 112' in 7 minutes, ending in its maximum at 22h 55m. The greatest activity was over by 26d 4h but smaller oscillations continued and had hardly died away when the third storm set in at 18h. Ranges for the second storm were 797 $\gamma$ , 112', 573 $\gamma$  in H, D and V respectively.

This time all three elements were more violently disturbed than in the previous storms. After its maximum at 21h 19m. H executed two deep bays at 22h 30m and 0h 10m approximately. V oscillated about its usual value but apart from a peak shortly after midnight D was much below normal all the time. Ranges were 1357 $\gamma$ , 167'·2 and 748 $\gamma$  in the usual order.

Conditions were again relatively quiet between 27d 6h and 19h but then the fourth and most severe of the storms began. After a low peak at 19h 44m H fell and formed a series of ever deepening bays. It eventually reached its lowest value of the year 12,937 $\gamma$  at 28d 4h 37m. D was depressed most of the time, reaching its minimum value for the year of 10° 42'·6 at 4h 27m. V began to fall at about the same time as H and followed a somewhat similar course with its minimum, also for the year, of 46,080 $\gamma$  at 4h 27m. Almost immediately after this it increased by 938  $\gamma$  in only 6 minutes but fell again at once. After final broad bays H and V began to rise shortly before 8h, and continued to do so in steps until their highest peaks at about 15h 20m. Conditions became quieter at midnight 28th-29th, after a sudden swing of 348 $\gamma$  in H in 4 minutes at 22h 30m. Ranges for this storm were 1883 $\gamma$  in H, 185'·9 in D and 1037 $\gamma$  in V.

During the remainder of the month there was only minor activity.

Aurora was seen from one or more places in Scotland on the evenings of April 4, 10, 12, 20 and 24-27, the displays on 26th and 27th, being very brilliant.

#### MAY.- (Average Character Figure 1·00)

A small "sudden commencement" at 3d 16h 4m was the first sign of activity this month, but the hours following it were fairly quiet.

A violent storm began suddenly at 4d 16h 55m. H and V increased slightly at first, but at 20h started to fall slowly and then much more rapidly after 23h. After a sharp minimum at 0h 38m H executed numerous oscillations of diminishing amplitude. V followed a fairly similar course, with its maximum of 47022 $\gamma$  at 15h 50m. Following an abrupt swing to a peak of 13° 54'·3 at 0h 36m, D oscillated irregularly for several hours, but all three elements were very quiet by 5d 18h.

Apart from periods of slight disturbance from 9th-12th, 14th-17th and for a few hours after a well marked "sudden commencement" at 21d 15h 57m (-8 $\gamma$ , +54 $\gamma$  in H), conditions remained quiet until the 24th. There were shallow bays in H and V at about 1h 30m and 4h on the 26th, and much deeper ones at 0h-4h on the 28th. After peaks in both elements at 28d 14h, considerable activity continued for several hours, the most prominent features being a deep bay in the H trace at 29d 0h 28m, when a minimum of 13888 $\gamma$  occurred.

#### JUNE.- (Average Character Figure 0·93)

The only notable disturbance began with steady rises in H and V from 5d 13h-18h. Both elements thereafter diminished and executed several bays and irregular fluctuations, the largest being a sharp fall in H to a minimum of

13856 $\gamma$  at 23h 37m. After 6d 6h H rose at an increasing rate to its maximum of 14713 $\gamma$  at 15h 29m. V increased less rapidly at the same time and after 16h the activity gradually died away.

Sudden commencements at 10d 5h 6m (+34 $\gamma$ , -34 $\gamma$  in H, -7', +12' in D), 13d 8h 42m (+17 $\gamma$ , -54 $\gamma$  in H), 22d 9h 56m and 27d 15h 19m (-11 $\gamma$ , +151 $\gamma$  in H) were all followed by slight disturbance.

#### JULY.- (Average Character Figure 0.94)

After five fairly quiet days there was a minor disturbance when H and V rose to peaks shortly after 6d 16h and then fell very uniformly to shallow bays centred at 7d 1h. Quiet conditions prevailed again until the 9th, when, following a small "sudden commencement" at 11h 42m, there was a solitary peak in H at 14h 30m. From 22h both H and V fell rapidly to very sharp troughs at 10d 1h. A quick recovery led to very quiet conditions, but a "sudden commencement" at 11d 14h 50m (-13 $\gamma$ , +44 $\gamma$  in H) heralded another disturbance similar to that of the 9th-10th. H reached its minimum at midnight and there were two troughs in V at 12d 0h and 1h.

After a succession of quiet days H and V began another rise at 14d 10h, H reaching its highest value 15048 $\gamma$  at 15h 37m. D was also disturbed, culminating in a swing of 35', having its maximum at 19h 45m. The disturbance ceased at 21h, after which fairly quiet conditions continued until the 19th. From then until the 23rd there were several minor disturbances with a double "sudden commencement" at 19d 12h 53m, but with no other outstanding features. At 23d 23h H and V began to fall and developed broad bays which lasted from 24d 1h-3h. D rose to a peak at 1h but then fell to a double trough with centres at 2h 15m and 2h 50m. On the next night there was a third disturbance similar to that of the 9th-10th. This time H reached its lowest value of the month, 14022 $\gamma$  at 0h 23m. The month ended with six quiet days.

#### AUGUST.- (Average Character Figure 0.58)

Beginning with four days of moderate disturbance, this month was thereafter very quiet, there being only one further disturbance of note.

The first disturbance was unusual in that it began with falls in H and V to troughs from 2d 4h-8h and followed with rises to maxima at about 15h. H attained its maximum of 14768 $\gamma$  at 14h 53m with a secondary maximum at 17h 28m. From 3d 4h-7h all three elements executed small rapid oscillations with an average period of about 1 $\frac{1}{2}$ m and an average amplitude in H of about 5 $\gamma$ . At 21h H started to fall and continued to do so with increasing rapidity until it eventually reached the very low value of 13630 $\gamma$  at 4d 1h 37m, after which it quickly recovered to a more normal value. D and V were also disturbed, the former executing one notable swing of 76'.7 in 10m after 1h 48m.

There was a small "sudden commencement" at 6d 23h 23m, but otherwise there was little to disturb the regular diurnal variation until the 22nd. At 3h 8m on that date, a small "sudden commencement" began a moderate disturbance which was characterised by troughs in H and V, accompanied by continuous rapid oscillatory movements of small amplitude in all three elements. Apart from a very slight disturbance on the 27th with bays in H and V at 23h 20m, the remainder of the month was very quiet.

SEPTEMBER.— (Average Character Figure 0.77)

September was characterised for the most part by the lack of major disturbance.

A "sudden commencement" at 1d 14h 50m ( $-9\gamma$ ,  $+32\gamma$  in H) was followed by quiet conditions which prevailed with only very slight disturbances until the 10th. At 17h 50m there was a movement resembling a "sudden commencement" and five hours later a moderate disturbance began. There were deep troughs in H and V from 11d 1h-4h and shallower ones in D. The storm rapidly died out however, and after 11d 18h conditions were quiet again.

Slight disturbances occurred on the nights of 13th-14th, 14th-15th, 18th-19th and in the early morning on the 21st, but until the 30th there was nothing further of note although conditions were seldom really quiet. At 30d 13h 44m a "sudden commencement" ( $-21\gamma$ ,  $+48\gamma$  in H) was followed by the largest disturbance of the month. H rose in jumps to its maximum at 19h 31m only to fall very rapidly through 824 $\gamma$  to its minimum at 21h 2m. It executed several more rapid changes but by 3h on October 1st it was fairly steady. Meanwhile V followed a very similar course, at one time falling 418 $\gamma$  in 46m, and D executed several irregular oscillations.

Aurora was seen from one or more places in Scotland on the evenings of September 1, 2, 9-11, 13, 15, 20, 22, 29 and 30, the display on 30th being very brilliant.

OCTOBER.— (Average Character Figure 1.03)

After the severe disturbance of September 30th-October 1st, conditions became gradually quieter, until at 3d 11h 20m there was a movement resembling a "sudden commencement" which was followed by 12 hours of minor disturbance. At 23h 30m more violent disturbance began with a sudden drop of 327 $\gamma$  in H followed by rapid oscillations. The minimum of 13,676 $\gamma$  was reached at 4d 3h 13m and further deep bays occurred during the next 3 hours. D also fell to a minimum of  $11^{\circ}2'.9$  at 2h 39m and continued to be very disturbed until 8h. After falling irregularly for nearly three hours V rose to a solitary peak at 3h 22m and then fell quickly through 574 $\gamma$  to its minimum at 4h 49m. By 8h the storm had practically died out, but H continued to be depressed and all three elements executed small oscillations until 19h when quieter conditions became prevalent.

Another storm occurred on the 8th which was notable for a broad bay in V accompanied by sharp minima in H and D. This was also followed by gradually diminishing rapid oscillations which had barely died away when they were suddenly renewed with more vigour at 9d 6h 37m. A more usual type of disturbance then occurred with a rise in H to its maximum at 15h 16m followed by an irregular fall to its minimum at 23h 58m, V tracing a very similar course. Minor disturbance, chiefly notable for the persistence of the small rapid oscillatory movements, continued until the 14th. After a "sudden commencement" ( $-29\gamma$ ,  $+64\gamma$  in H,  $+8'.0$ ,  $-15'.5$  in D) at 12d 9h 50m there was a solitary peak in H at 21h 0m followed by two deep bays with centres at 22h 45m and 23h 25m. Apart from a small disturbance on the night of the 15th-16th conditions were then very quiet until the 22nd. From 23d 21h - 24d 3h there was a brief recurrence of severe disturbance with large oscillatory movements in all three elements. H reached the very low minimum of 13,503 $\gamma$  at 24d 0h 26m. Minor disturbance continued until the 29th and the month closed with two quiet days.

Aurora was seen from one or more places in Scotland on the evenings of October 3-5, 7-11, 15, 23, 24, 27-29 and 31, the displays on 3rd and 4th being the brightest.

NOVEMBER.- (Average Character Figure 0.70)

This was a month with complete absence of major disturbance.

Conditions were quiet until the 7th but following on a small "sudden commencement" at 7d 17h 4m there was a slight disturbance, culminating in a deep trough in H with a sharp minimum at 8d 0h 20m. V and D were also depressed, but by 4h all three elements had assumed normal values.

There was another slight disturbance following a "sudden commencement" at 18d 14h 23m (+9 $\gamma$ , -16 $\gamma$  in H, -1'.0, + 4'.5 in D) and conditions did not become quiet again until the 25th.

After yet another "sudden commencement" at 29d 11h 4m (+3'.5, -9'.0 in D) H rose irregularly to a maximum at 19h 15m, and then fell through 569 $\gamma$  to its minimum only 5 minutes later. There were simultaneous swings of 60'.8 in D and 361 $\gamma$  in V in 9m, but apart from these the disturbance was very slight. On the following night there was a more prolonged disturbance with the usual initial rise and eventual fall in H and V and large oscillatory movements in D.

Aurora was seen from one or more places in Scotland on the evenings of November 2, 5, 8, 9, 11, 13, 18, 21-27, 29 and 30.

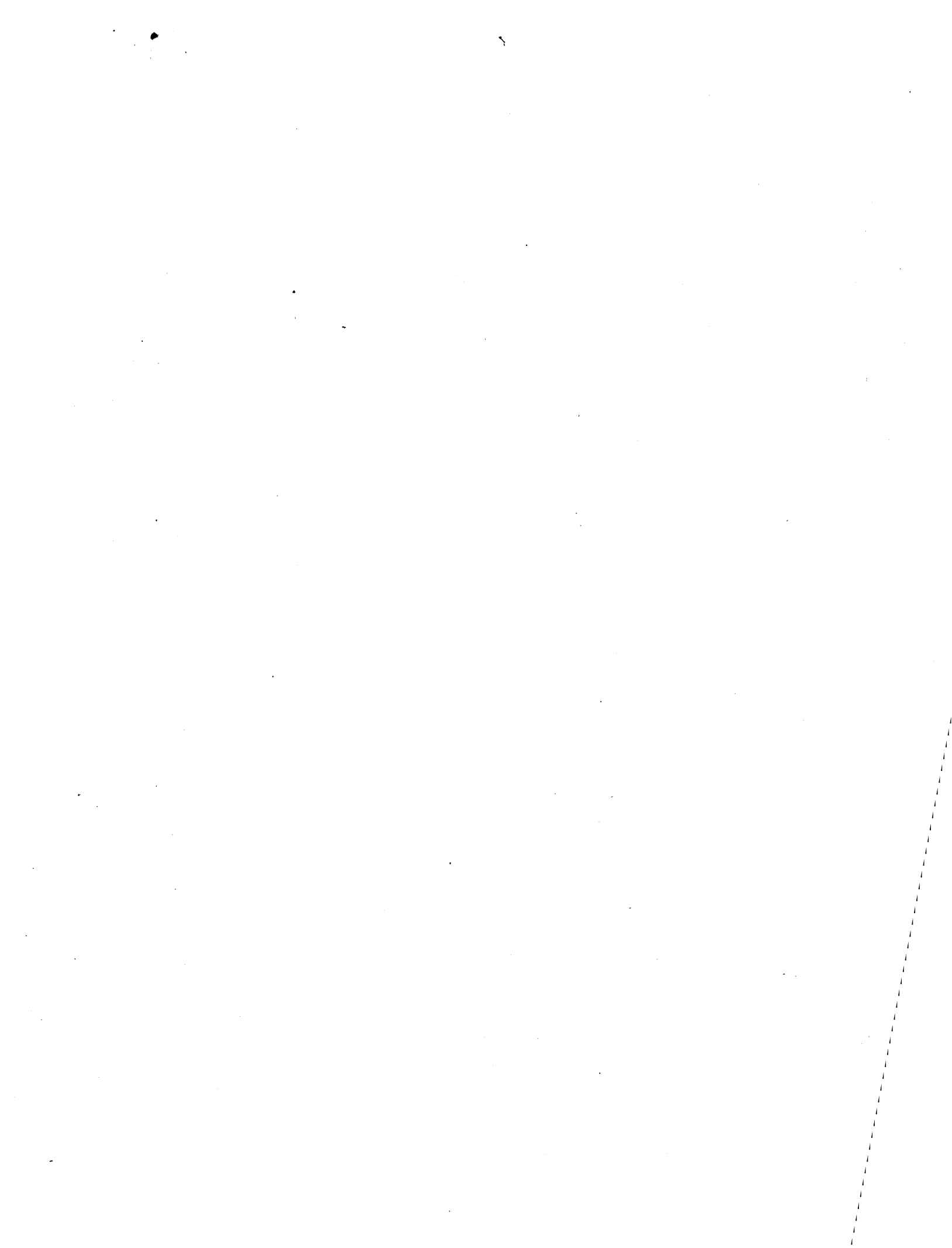
DECEMBER.- (Average Character Figure 0.68)

Apart from a very light disturbance on the night of the 7th-8th there was nothing of note until the 18th. At 13h on that day a moderate disturbance began with rises in all three elements. Maxima at about 17h were followed by shallow troughs after which activity gradually diminished. Another slight disturbance occurred on the following night chiefly in V and D.

After a "sudden commencement" at 23d 10h 47m (+7 $\gamma$ , -25 $\gamma$  in H, +4'.0, -9'.0 in D) H rose in steps to its maximum value of the year, 15,074 $\gamma$  at 17h 44m, but the disturbance ceased abruptly shortly after 20h, when all three elements had fairly normal values. D and V were not so notably affected, but executed frequent small movements.

Apart from another mild disturbance on the night of the 24th-25th the remainder of the month was very quiet.

Aurora was seen from one or more places in Scotland on the evenings of December 1, 4, 6, 7, 10, 13, 19, 20, 23-25 and 31.





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

1 LERWICK

1937

Day	JANUARY Factor 1.29				FEBRUARY Factor 1.29				MARCH Factor 1.29			
	2 - 3 h	8 - 9 h	14 - 15 h	20 - 21 h	2 - 3 h	8 - 9 h	14 - 15 h	20 - 21 h	2 - 3 h	8 - 9 h	14 - 15 h	20 - 21 h
1	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	119	157	250	128	>175	122	125	172	72	Z <sup>±</sup>	56	63
2	122	119	360	>469	91	75	125	147	-438	106	81	Z <sup>±</sup>
3	110	88	94	141	31	0	-25	407	<38	Z <sup>±</sup>	Z <sup>±</sup>	88
4	235	122	6	160	81	106	266	444	103	103	-282	75
5	169	<110	138	135	260	94	125	172	44	78	78	69
6	91	103	-344	108	157	-141	119	>626	47	113	91	216
7	141	116	141	50	Z <sup>±</sup>	Z <sup>±</sup>	219	150	63	97	125	110
8	66	94	110	313	38	103	94	78	63	88	128	135
9	203	219	103	72	<360	326	141	175	28	75	47	78
10	0	272	244	272	-	Z <sup>±</sup>	125	>501	6	63	100	235
11	160	275	282	175	-269	94	81	85	85	97	329	75
12	125	110	-157	94	113	63	128	<-16	>610	81	66	>469
13	Z <sup>±</sup>	Z <sup>±</sup>	Z <sup>±</sup>	(>1440)	Z <sup>±</sup>	(157)	160	-106	63	78	41	66
14	<-110	160	166	128	94	141	275	157	319	238	-235	219
15	157	103	125	106	<125	Z <sup>±</sup>	>423	72	28	125	Z <sup>±</sup>	Z <sup>±</sup>
16	85	94	44	<-1565	19	260	41	119	59	66	78	150
17	88	141	188	128	91	100	113	157	41	75	63	88
18	119	110	63	282	66	78	<-401	141	53	282	94	100
19	-360	-59	Z <sup>±</sup>	332	63	<-85	125	191	63	85	94	81
20	Z <sup>±</sup>	72	141	144	97	97	125	>235	-31	63	103	94
21	125	113	78	219	72	<-188	<-125	97	63	38	>423	113
22	141	128	131	250	144	125	>1409	>845	75	<-282	113	>814
23	157	235	432	197	122	0	169	Z <sup>±</sup>	66	94	100	85
24	106	160	128	116	<-22	125	163	263	22	113	94	141
25	113	122	119	125	66	110	100	116	Z <sup>±</sup>	125	100	110
26	141	157	144	63	88	97	125	119	6	110	438	Z <sup>±</sup>
27	81	97	141	113	94	219	144	Z <sup>±</sup>	153	119	131	135
28	81	110	119	113	63	78	-	>282	69	88	94	138
29	88	110	125	106					81	91	41	100
30	Z <sup>±</sup>	113	100	110					16	110	100	78
31	113	250	110	376					69	131	138	144
(a)	121	140	151	215	109	117	205	240	86	105	124	152
(b)	120	147	114	161	54	107	120	182	87	107	71	119
Mean	(a) 157 (b) 135				(a) 168 (b) 116				(a) 117 (b) 91			
Day	APRIL Factor 1.29				MAY Factor 1.29				JUNE Factor 1.29			
	2 - 3 h	8 - 9 h	14 - 15 h	20 - 21 h	2 - 3 h	8 - 9 h	14 - 15 h	20 - 21 h	2 - 3 h	8 - 9 h	14 - 15 h	20 - 21 h
1	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	142	157	183	145	76	110	157	173	111	82	-190	95
2	117	95	95	85	126	110	280	394	95	Z <sup>±</sup>	3	25
3	91	91	126	129	205	378	296	113	95	73	88	-152
4	66	101	189	271	88	117	Z <sup>±</sup>	31	76	158	193	335
5	88	145	135	129	205	148	110	72	149	221	322	174
6	139	50	91	76	82	82	95	129	177	95	186	-332
7	63	63	60	76	69	91	236	135	-57	351	237	790
8	-57	170	95	176	142	63	85	110	199	278	291	205
9	277	104	164	413	95	95	117	173	332	158	190	190
10	268	-72	233	135	129	142	107	135	411	95	98	142
11	101	-614	31	120	98	123	95	142	66	120	224	164
12	88	142	95	76	95	79	98	154	63	130	167	145
13	66	50	79	142	148	101	142	154	126	142	167	104
14	95	72	82	72	104	123	107	126	-63	-174	130	120
15	63	63	66	95	104	145	117	189	79	95	114	117
16	110	95	82	132	63	101	120	91	79	123	120	111
17	79	157	110	129	41	110	123	110	95	98	95	107
18	66	63	63	95	88	96	186	180	82	114	79	130
19	82	129	95	107	189	161	107	132	88	303	117	164
20	<-488	120	98	123	-129	98	180	154	193	136	114	120
21	63	95	110	117	142	113	157	38	145	155	79	126
22	91	123	-22	221	283	202	315	432	171	<-490	126	436
23	98	110	113	154	655	265	428	104	126	107	98	111
24	161	129	142	198	91	117	331	113	111	126	126	92
25	85	120	120	129	283	409	504	227	174	243	145	221
26	101	113	157	161	104	189	252	79	152	224	123	142
27	95	271	157	107	<-977	<-740	<-95	126	111	152	142	149
28	63	104	161	82	123	117	104	98	70	-348	142	294
29	271	287	419	157	101	189	246	189	32	142	57	88
30	107	79	236	126	129	110	129	>44	63	111	142	196
31					91	50	126	126				
(a)	112	118	131	139	143	141	184	144	131	155	142	182
(b)	106	86	126	140	130	143	186	153	117	125	136	148
Mean	(a) 125 (b) 115				(a) 153 (b) 153				(a) 153 (b) 131			

Note:- The Potential Gradient is reckoned as positive if the potential increases upwards. For indeterminate potential gradient the notation Z is used  
 (a) Mean of all positive readings (b) Mean from all complete days using both positive and negative readings

1. LERWICK

1937

Day	JULY Factor 1.32				AUGUST Factor 1.34				SEPTEMBER Factor 1.33							
	2 - 3 h	8 - 9 h	14 - 15 h	20 - 21 h	2 - 3 h	8 - 9 h	14 - 15 h	20 - 21 h	2 - 3 h	8 - 9 h	14 - 15 h	20 - 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	146	41	130	203	243	178	181	295	98	189	163	134				
2	193	428	431	390	162	198	162	237	176	16	134	179				
3	19	44	206	133	149	75	130	175	137	186	173	160				
4	165	146	79	216	130	94	45	Z <sup>+</sup>	65	104	143	170				
5	545	171	127	225	68	285	380	91	212	130	55	81				
6	336	209	285	225	165	214	224	253	65	140	81	49				
7	283	323	333	285	>551	139	191	204	91	124	130	<-33				
8	108	105	117	152	152	143	146	130	Z <sup>+</sup>	>538	59	130				
9	76	238	279	235	146	143	87	113	42	26	55	55				
10	108	130	67	105	52	91	123	143	59	81	65	114				
11	63	108	92	120	36	104	130	133	55	42	91	130				
12	95	79	139	111	159	421	373	693	65	98	98	385				
13	-22	Z <sup>+</sup>	98	168	227	100	162	175	75	111	65	114				
14	127	143	63	98	667	373	259	97	95	248	111	130				
15	235	222	92	117	256	126	91	104	137	85	277	338				
16	41	13	273	114	146	-149	113	126	215	140	104	196				
17	111	73	86	174	62	113	52	117	108	111	163	277				
18	228	101	127	117	68	146	113	186	163	179	199	303				
19	48	101	155	127	104	(81)	91	91	140	130	104	140				
20	57	89	95	171	55	97	130	113	36	52	104	134				
21	89	162	124	25	75	107	130	194	65	72	121	173				
22	206	342	120	130	110	162	168	130	166	245	111	108				
23	136	79	105	254	94	120	(97)	211	33	98	137	-33				
24	174	146	(159)	190	113	305	97	616	251	176	147	166				
25	111	120	70	108	473	117	146	159	104	114	<-179	-98				
26	95	111	60	89	130	168	107	110	-98	241	359	424				
27	-108	98	79	89	149	198	240	227	-196	277	417	52				
28	41	48	105	82	175	227	207	87	-130	127	140	179				
29	70	95	114	120	94	100	130	168	124	114	163	346				
30	79	127	67	143	68	130	100	162	163	241	450	-16				
31	130	155	269	333	71	97	113	91								
(a)	141	142	147	163	166	162	152	188	113	148	152	179				
(b)	133	142	148	163	154	154	154	167	86	136	157	166				
Mean	(a) 148				(b) 147				(a) 148				(b) 136			
	OCTOBER Factor 1.32				NOVEMBER Factor 1.30				DECEMBER Factor 1.28							
Day	2 - 3 h	8 - 9 h	14 - 15 h	20 - 21 h	2 - 3 h	8 - 9 h	14 - 15 h	20 - 21 h	2 - 3 h	8 - 9 h	14 - 15 h	20 - 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	19	242	223	147	190	Z <sup>+</sup>	228	196	175	97	128	122				
2	-19	-3	255	182	133	199	240	269	<109	78	109	103				
3	-64	(128)	185	172	281	237	288	496	69	84	181	>331				
4	99	121	89	147	360	243	307	319	90	Z <sup>+</sup>	41	218				
5	93	124	131	124	246	379	142	123	56	94	-	-				
6	63	163	134	204	95	107	139	205	-	-	>312	>356				
7	93	73	131	163	79	202	130	126	62	112	Z <sup>+</sup>	187				
8	77	150	112	144	60	111	161	174	115	122	128	125				
9	-3	64	35	89	92	133	111	123	115	144	209	172				
10	54	96	124	112	95	120	98	136	144	228	-56	125				
11	93	105	96	172	82	104	177	120	<62	178	175	431				
12	99	105	80	99	107	<-442	126	174	Z <sup>+</sup>	153	328	168				
13	61	128	89	96	111	193	<-205	130	268	153	203	197				
14	61	93	105	121	82	79	126	142	106	119	62	Z <sup>+</sup>				
15	>233	134	22	159	51	120	158	177	Z <sup>+</sup>	318	165	162				
16	86	93	124	137	70	-47	120	-63	128	<-140	206	156				
17	70	166	204	166	63	133	155	158	134	159	172	159				
18	112	118	163	159	145	158	<79	205	137	147	144	<-6				
19	124	198	159	13	Z <sup>+</sup>	142	145	174	Z <sup>+</sup>	140	265	168				
20	121	124	153	108	Z <sup>+</sup>	142	163	145	125	190	<-197	172				
21	26	105	64	159	88	126	158	190	119	144	125	156				
22	-112	99	73	236	114	130	167	246	275	412	431	290				
23	-32	-48	96	380	107	167	205	149	144	162	159	209				
24	80	-67	80	175	-6	-73	126	120	162	262	334	131				
25	102	159	182	6	111	104	158	123	144	122	203	212				
26	<-223	191	204	466	82	120	237	111	112	153	368	287				
27	89	77	124	169	88	82	142	111	203	140	187	125				
28	124	128	96	41	66	95	145	196	62	103	125	109				
29	51	236	335	220	95	<-632	190	66	119	109	187	125				
30	112	64	156	80	142	104	253	193	94	94	128	109				
31	89	93	131	284					66	100	-218	140				
(a)	89	128	134	159	120	149	169	176	126	154	195	187				
(b)	61	108	135	148	112	129	171	171	144	159	165	164				
Mean	(a) 127				(b) 113				(a) 165				(b) 158			
	Annual Means								(a)	121	138	157	177			
									(b)	107	129	140	159			
									(a)	148	(b) 134					

The Potential Gradient is reckoned as positive if the potential increases upwards. For indeterminate potential gradient the notation Z is used  
 (a) Mean of all positive readings  
 (b) Mean from all complete days using both positive and negative readings

POTENTIAL GRADIENT (reduced to level surface): DIURNAL INEQUALITIES (in volts per metre)  
 The departures from the mean of the day are adjusted for non-cyclic change †  
 \*0a DAYS ONLY

2 LERWICK

1937

Month and Season	Hour 0-1	G.M.T. 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	† Non-cyclic Change	No. of Days Used	Mean Values
Jan.	v/m -4	v/m -15	v/m -27	v/m -32	v/m -26	v/m -23	v/m +11	v/m +24	v/m +21	v/m +7	v/m +14	v/m +9	v/m +11	v/m +18	v/m +14	v/m +22	v/m +12	v/m -1	v/m -3	v/m +13	v/m -17	v/m -3	v/m -21	v/m -3	v/m -88	3	v/m 165
Feb.	-15	-25	-32	-37	-33	-31	-21	-10	-3	+3	+1	-4	-6	-8	+6	+12	+13	+21	+55	+55	+34	+30	+3	-12	-3	4	195
Apr.	+8	-11	-19	-20	-16	-22	-20	-12	-24	-26	0	+4	+9	+1	+10	+17	+9	+15	+6	+9	+9	+28	+31	+12	+13	15	141
May	-9	-13	-15	-20	-25	-6	-9	-14	-3	-18	-29	-21	-11	+14	+19	+31	+36	+17	+23	+14	+8	+11	+15	+3	+21	20	152
June	-18	-12	-21	-27	-19	+6	+9	+12	+13	+5	+1	+4	+5	+11	+9	+2	-8	+2	+4	-7	0	+25	+12	-9	-2	9	136
July	-15	-19	-9	-25	-39	-20	-2	-2	-11	-1	+19	+19	+16	+11	-5	-3	+5	-6	-16	+16	+12	+37	+41	-3	+19	15	175
Aug.	+6	-24	-14	-12	-12	-2	+17	+2	-5	-13	-23	-11	-5	-9	-4	+1	+1	-3	+9	+27	+18	+23	+18	+17	+1	12	155
Sept.	-11	-28	-25	-41	-43	-41	-31	+9	+17	+5	-7	-18	-24	-23	-12	-4	+13	+33	+45	+67	+70	+46	+12	-9	+9	8	128
Oct.	-21	-33	-29	-21	-19	-4	+4	+17	-3	-3	-17	-7	+7	-9	-4	-3	+14	+29	+31	+39	+21	+12	+3	-5	-10	8	115
Nov.	-17	-31	-42	-32	-34	-26	-36	-3	-4	-6	+8	-10	-3	+1	+15	+37	+34	+48	+49	+38	+28	+16	-7	-19	-55	7	184
Dec.	-21	-40	-12	-13	-58	-54	-43	-16	-31	-22	-14	-11	+13	+16	+41	+59	+49	+52	+51	+11	+13	+29	-5	+6	-9	6	165
Year	-11	-23	-22	-25	-29	-20	-11	+1	-3	-6	-4	-4	+1	+2	+8	+16	+16	+19	+23	+26	+18	+23	+9	-2	-9	107	156
Winter	-14	-29	-27	-26	-39	-34	-23	+2	-5	-8	+3	-4	+7	+12	+23	+39	+32	+33	+32	+21	+8	+14	-11	-5	-51	16	171
Equinox	-10	-24	-26	-30	-28	-25	-17	+1	-3	-5	-6	-6	-3	-10	0	+5	+12	+25	+34	+43	+33	+29	+12	-3	+2	35	145
Summer	-9	-17	-15	-21	-24	-5	+4	-1	-1	-7	-8	-2	+1	+7	+5	+8	+9	+3	+5	+13	+9	+24	+21	+2	+10	56	155

3 LERWICK

\*1a AND 2a DAYS ONLY

1937

Month and Season	Hour 0-1	G.M.T. 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	† Non-cyclic Change	No. of Days Used	Mean Values
Jan.	v/m -5	v/m -14	v/m -17	v/m +4	v/m +19	v/m +24	v/m +33	v/m +27	v/m +21	v/m +19	v/m -3	v/m -43	v/m -13	v/m +4	v/m -67	v/m -100	v/m -38	v/m -38	v/m -3	v/m +7	v/m +15	v/m +16	v/m +136	v/m +15	v/m +66	6	v/m 125
Feb.	-97	-75	-45	-51	-25	-113	-6	+38	-103	-92	-58	-141	+28	+36	+6	+17	+157	+99	+71	+97	+132	+94	+37	-7	-53	2	195
Mar.	-10	-5	-35	-31	-14	-10	+2	+18	+18	+14	+7	+18	+19	+17	+10	+10	-9	+6	-17	-6	+8	+2	-6	-8	+2	3	70
Apr.	+37	+15	+9	+28	-6	-15	+2	-18	+6	-27	-9	-31	+5	+7	-16	-28	-15	-9	+3	-29	0	+21	+49	+38	+41	4	103
May	-26	-44	-51	-63	-49	-28	-33	-35	-39	-34	-22	-20	+9	+39	+55	+48	+49	+53	+5	-25	-28	+83	+131	+24	-55	2	169
June	-64	-9	+6	+19	-13	+5	+36	+69	+77	+17	-16	-41	-40	-5	+1	+6	+2	+16	+9	+54	+81	+4	-80	-104	+207	7	146
July	+21	+19	-20	-12	+9	-19	-21	-11	-15	+5	+31	+31	-6	-11	+7	+9	+7	-13	+2	-30	-15	+6	+14	+14	0	9	126
Aug.	+44	+67	+46	+59	+30	+9	+29	-15	-17	-18	-35	-88	-72	-31	+2	-23	-9	+2	+2	-18	-18	+4	+22	+26	+2	10	158
Sept.	+8	-17	-45	-17	-25	-47	-22	-29	-24	-34	-30	+3	+20	+8	+2	+19	+36	+50	+47	+31	+12	+12	+33	+10	+47	8	135
Oct.	-50	-57	-47	-35	-11	0	+8	+15	+22	+14	+3	+4	+14	+25	+51	+10	+17	+32	+19	+27	+10	-8	-19	-42	+12	8	129
Nov.	-38	-32	-30	-18	-24	-41	-47	-37	-30	-6	-11	-38	-29	+20	-7	-32	+51	+74	+112	+119	+88	+7	-8	-40	+14	3	183
Dec.	-49	-43	-1	+11	-49	-87	-25	-22	+27	+51	+48	+58	+69	+42	+45	+39	-12	-84	-3	+49	-16	+2	-20	-30	+24	3	181
Year	-19	-16	-21	-9	-13	-27	-4	0	-5	-8	-8	-24	0	+13	+7	-2	+20	+16	+21	+23	+20	+20	+24	-9	+26	65	143
Winter	-47	-41	-23	-13	-20	-54	-11	+1	-21	-7	-6	-41	+14	+25	-6	-19	+39	+13	+44	+68	+55	+30	+36	-15	+13	14	171
Equinox	-4	-16	-34	-14	-14	-18	-3	-3	+5	-8	-7	-1	+15	+14	+12	+3	+7	+20	+13	+6	+7	+7	+14	-1	+25	23	109
Summer	-6	+8	-5	+1	-6	-8	+3	+2	+1	-7	-11	-29	-27	-2	+16	+10	+12	+15	+5	-5	-3	+24	+22	-10	+39	28	150

\*For explanation of 0a, 1a, 2a Days, see page 57

† See page 23



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

5 LERWICK (H)

14,000 γ (-14 C.G.S.unit) +

JANUARY, 1937

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	Mean	
Day	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
1 Q	425	424	423	422	421	422	422	420	418	412	411	411	414	417	420	421	421	422	426	428	430	429	428	428	426	421
2	426	424	423	422	423	424	425	424	421	420	423	418	413	417	420	425	429	431	431	426	422	425	423	407	423	423
3	406	410	407	398	414	417	415	420	420	416	411	397	402	409	410	411	414	422	425	428	429	428	426	420	415	415
4	416	414	415	414	419	420	418	416	412	404	403	401	402	407	414	416	417	416	418	415	426	429	429	425	425	421
5	420	418	418	417	418	421	422	424	423	417	411	406	408	414	419	419	421	420	426	430	431	432	431	428	421	421
6	424	426	423	422	425	425	430	427	422	415	411	408	411	420	423	421	423	427	431	435	436	434	434	429	424	424
7 D	423	423	425	426	428	429	429	426	424	423	419	418	419	425	428	425	433	459	586	487	382	357	347	417	427	427
8	407	365	397	404	410	414	414	412	409	406	403	402	404	407	409	409	410	409	412	414	410	409	412	414	419	413
9 D	411	409	415	419	416	417	420	415	407	392	398	400	424	426	423	420	422	424	423	434	458	450	454	454	422	422
10 D	423	415	411	414	414	411	411	403	408	401	398	401	411	396	420	423	416	408	412	420	424	444	425	422	414	414
11	414	411	407	414	417	423	411	422	425	418	416	411	411	420	417	416	411	416	416	421	429	420	427	401	416	416
12	412	417	418	420	420	423	423	422	421	419	413	410	411	413	418	415	409	414	423	424	427	424	422	422	422	419
13	423	411	412	420	424	430	424	420	419	412	409	409	405	415	412	412	416	421	423	423	419	419	420	424	418	418
14	422	423	425	428	429	430	429	424	426	417	420	416	411	415	417	420	421	421	424	425	426	423	420	422	422	422
15 Q	424	424	423	424	427	429	429	429	426	422	420	420	422	427	423	421	422	423	425	429	429	428	426	429	429	425
16 Q	429	427	425	429	430	431	429	426	423	425	420	419	418	419	419	419	423	428	431	432	432	432	431	431	426	426
17	429	429	431	431	434	433	432	432	427	419	420	418	419	420	420	424	428	429	432	434	432	430	429	431	428	428
18	428	427	425	424	426	429	434	431	425	420	418	414	417	422	426	426	425	429	433	437	436	434	425	425	427	427
19	426	426	427	428	428	429	430	429	426	421	420	420	418	420	422	422	427	429	426	426	433	434	429	420	426	426
20	426	429	430	431	433	433	432	429	425	419	416	418	423	425	426	426	412	420	420	431	418	429	429	423	425	425
21	420	414	415	420	423	423	427	429	426	420	414	409	411	414	417	422	435	428	448	431	431	422	406	413	422	422
22	414	418	424	420	420	420	420	417	412	404	400	397	400	409	418	418	420	426	426	429	430	426	425	420	417	417
23 Q	420	419	420	423	424	424	426	422	414	408	403	402	405	412	417	416	420	424	427	429	431	426	428	429	420	420
24	428	427	427	426	427	428	428	424	417	406	398	393	396	405	413	420	425	426	427	429	429	429	430	425	420	420
25 Q	423	423	425	425	428	430	431	429	422	410	399	397	402	409	417	421	421	422	427	429	431	432	432	432	422	422
26	432	432	432	433	436	437	437	433	422	410	403	406	415	424	425	421	424	428	433	436	437	437	435	434	428	428
27 D	433	433	435	437	441	442	441	438	436	431	406	397	397	400	401	427	434	435	443	443	437	446	425	426	429	429
28	407	404	405	399	409	415	415	417	407	397	387	394	392	399	404	409	417	422	416	422	418	405	399	367	405	405
29	362	347	393	409	408	403	420	428	417	403	392	387	384	387	398	407	410	412	417	420	415	415	420	424	403	403
30 D	424	426	428	427	426	429	434	431	424	416	405	393	394	410	417	428	423	426	426	427	425	422	422	424	421	421
31	422	421	422	422	420	420	421	417	414	402	397	389	397	392	399	405	414	422	426	430	430	430	429	428	415	415
Mean	419	417	420	421	423	425	425	424	420	413	408	406	408	413	417	419	421	424	431	430	428	426	423	422	422	420

MAGNETIC DECLINATION (WEST)  
Mean values for periods of sixty minutes ending at the hours of Greenwich Mean Time

6 LERWICK (D)

12° +

JANUARY, 1937

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	Mean	
Day	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
1 Q	50.0	51.1	51.0	50.7	51.1	51.3	51.6	51.2	51.1	51.3	51.4	52.9	54.7	54.9	53.8	53.2	53.2	53.1	52.9	52.4	51.5	50.9	51.0	51.2	52.0	52.0
2	50.6	50.4	50.7	50.7	50.5	50.2	50.1	50.0	50.3	51.8	52.6	53.9	54.2	55.5	54.6	54.0	54.4	55.5	55.2	52.9	48.4	51.8	47.8	40.6	51.5	51.5
3	44.6	44.3	45.7	48.4	43.4	48.2	49.7	49.5	49.8	50.2	51.0	53.8	56.3	56.9	57.6	55.8	54.7	54.0	53.2	52.2	51.2	51.2	50.2	49.4	50.9	50.9
4	50.7	48.5	43.5	45.6	46.7	48.0	51.4	50.2	50.2	51.2	52.2	53.6	53.4	54.7	54.0	54.1	54.2	52.7	49.3	52.2	52.7	52.3	51.6	50.7	51.0	51.0
5	51.6	51.1	51.3	52.3	51.2	50.6	51.4	50.2	49.5	50.0	50.4	52.8	55.0	55.8	54.4	53.9	54.0	53.0	52.8	52.4	51.5	51.2	50.9	50.7	52.0	52.0
6	50.4	50.2	48.4	49.5	48.7	48.9	49.4	50.2	50.0	50.3	51.8	52.2	55.0	55.4	54.5	54.2	54.1	53.9	53.2	52.7	52.0	50.2	51.1	51.5	51.6	51.6
7 D	51.0	50.0	51.0	51.2	51.7	50.9	49.3	49.5	50.1	50.9	51.8	53.2	54.6	56.3	56.1	56.6	62.0	63.1	62.1	58.8	44.6	44.1	34.9	44.6	52.0	52.0
8	50.2	51.9	53.6	52.2	51.5	50.8	49.4	49.0	49.1	49.4	50.2	51.7	52.2	52.3	52.1	52.1	52.2	52.2	52.2	52.0	51.1	50.9	50.2	50.2	51.2	51.2
9 D	51.0	51.5	52.2	51.9	51.1	50.1	50.2	49.4	48.3	50.1	55.9	53.6	55.4	55.3	52.7	51.8	52.2	53.3	52.2	52.3	51.9	54.2	48.4	45.5	51.7	51.7
10 D	45.7	52.2	51.0	51.9	52.1	52.4	52.5	53.7	54.5	53.6	55.5	56.8	58.0	59.4	59.5	56.6	56.9	55.4	53.4	52.7	52.8	43.2	42.7	48.0	52.9	52.9
11	49.4	50.1	47.5	50.4	50.1	49.9	53.1	55.2	52.4	51.9	52.7	53.5	54.7	56.5	57.0	56.9	55.3	53.4	52.7	53.2	50.4					



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

9 LERWICK (H)

14,000 γ (·14 C.G.S.unit) +

FEBRUARY, 1937

Table with 24 columns (0-1 to 23-24) and 24 rows (Day 1 to 28). Each cell contains a numerical value representing magnetic force. A 'Mean' row is at the bottom.

MAGNETIC DECLINATION (WEST)  
Mean values for periods of sixty minutes ending at the hours of Greenwich Mean Time

10 LERWICK (D)

12° +

FEBRUARY, 1937

Table with 24 columns (0-1 to 23-24) and 24 rows (Day 1 to 28). Each cell contains a numerical value representing magnetic declination. A 'Mean' row is at the bottom.

11 LERWICK (V)

46,000 γ (-.46 C.C.S.unit) +

FEBRUARY, 1937

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	Mean	
Day 1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
1	800	795	786	775	790	793	793	797	795	800	801	802	801	801	809	811	808	808	810	813	811	810	803	799	802	800
2	801	801	801	800	800	801	802	803	803	804	807	808	805	803	806	809	811	813	813	811	810	808	803	799	790	804
3 D	767	718	628	722	725	709	689	714	741	760	786	805	806	807	811	811	814	823	658	792	868	847	820	831	769	
4	841	833	832	828	826	824	823	823	823	823	826	830	834	827	823	830	830	829	840	873	850	844	831	815	832	
5 D	792	745	741	767	766	787	800	806	822	832	832	831	826	822	823	822	827	833	831	846	805	775	773	766	803	
6	770	786	801	807	786	783	798	807	813	817	828	828	824	825	835	838	827	826	830	832	840	828	814	805	815	
7	784	788	805	809	809	808	805	806	809	813	814	816	819	818	819	823	826	820	818	818	820	809	803	805	811	
8 Q	809	810	811	810	809	809	808	809	809	809	809	809	811	809	809	813	814	815	815	818	827	826	821	806	812	
9 D	784	795	804	809	807	805	802	808	804	803	802	802	808	808	827	869	888	941	953	949	849	855	715	735	826	
10	788	809	822	819	820	810	813	810	810	812	813	816	822	835	875	846	831	826	824	823	822	823	826	809	821	
11	803	795	781	782	779	793	794	804	809	809	811	813	815	817	827	827	821	815	813	816	819	799	802	803	806	
12	802	799	804	809	809	807	805	805	803	794	797	801	805	808	811	834	838	846	858	848	836	725	740	790	807	
13	807	815	816	817	814	812	811	808	803	798	799	803	809	815	838	845	839	828	824	836	819	812	815	782	815	
14	732	738	753	775	786	791	805	809	810	813	808	803	802	803	809	813	823	836	872	884	818	776	791	757	800	
15	779	813	818	817	819	820	816	815	813	812	814	811	813	821	826	835	845	846	838	855	834	828	818	809	821	
16	807	769	778	799	809	809	810	814	813	812	814	819	821	830	848	868	887	865	838	828	822	817	820	819	821	
17	815	814	810	799	801	809	810	810	813	814	814	814	810	818	838	842	844	850	839	831	831	828	820	818	821	
18	810	795	773	791	801	804	809	813	816	817	815	812	817	815	817	820	819	817	815	815	828	817	813	816	811	
19 D	774	741	787	802	802	803	802	805	810	799	806	812	819	832	823	832	863	992	897	834	820	813	813	806	820	
20	815	815	813	811	809	804	808	809	810	813	810	807	807	805	803	811	810	811	811	809	816	814	816	815	811	
21 D	813	811	809	805	802	800	800	799	799	801	805	808	805	805	807	822	823	814	810	827	806	810	808	807	808	
22	807	809	810	809	806	805	804	803	800	799	801	810	818	832	854	846	832	834	824	818	813	812	814	810	815	
23 Q	808	801	801	802	807	808	807	806	803	803	804	802	801	803	806	807	808	807	806	805	805	808	802	809	805	
24 Q	807	805	807	810	807	803	802	802	794	798	798	799	804	807	806	809	809	809	807	810	807	803	803	806	805	
25	807	801	790	774	766	797	797	798	798	798	799	797	795	792	797	802	805	803	804	803	803	803	803	803	798	
26 Q	804	806	805	807	807	803	802	798	795	794	798	801	810	808	812	815	814	813	814	811	807	803	803	803	806	
27 Q	804	803	802	777	775	783	794	802	802	801	802	807	810	821	826	825	827	821	813	811	809	805	803	803	805	
28	803	797	786	802	806	806	805	805	801	803	798	798	798	805	816	818	822	828	840	848	841	835	828	817	813	
Mean	798	793	791	798	799	799	801	803	804	805	808	809	811	814	818	827	829	835	829	831	823	812	804	801	810	

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

12 LERWICK

FEBRUARY, 1937

Day	Terrestrial Magnetic Elements																		HR <sub>H</sub> +VR <sub>V</sub> 10,000γ <sup>2</sup> §	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 12° +			Minimum 12° +			Range						Maximum 46,000 γ +			Minimum 46,000 γ +			Range						
1	h	m	γ	γ	h	m	γ	h	m	γ	h	m	γ	h	m	γ	h	m	γ	h	m	γ	h	m	γ	h	m	γ	h	m	γ	333	0	74-0
2	23	10	474	390	12	36	46	13	30	56-8	39-5	3	15	17-3	15	4	815	758	2	33	57	245	1	28	240	1	28	245	1	28	245	1	28	74-1
3 D	18	9	722	-60	18	54	782	18	56	162-3	-17-3	19	6	179-6	18	59	1174	390	18	54	784	4795	2	85	502	1	85	502	1	85	502	1	85	74-3
4	18	39	437	365	12	12	72	14	44	60-2	37-6	19	45	22-6	19	13	888	803	24	0	85	502	1	85	502	1	85	502	1	85	502	1	85	75-0
5 D	20	16	445	365	2	36	90	12	55	57-7	22-6	20	15	35-1	19	55	860	724	1	50	136	766	1	136	766	1	136	766	1	136	766	1	136	76-0
6	5	57	429	369	10	40	60	14	34	59-6	30-5	20	36	29-1	20	29	847	762	0	0	85	484	1	85	484	1	85	484	1	85	484	1	85	76-7
7	21	17	437	383	12	55	54	14	9	56-7	39-2	21	15	17-5	16	15	830	775	0	56	55	335	1	55	335	1	55	335	1	55	335	1	55	76-6
8 Q	23	38	450	387	12	34	63	13	56	55-1	37-9	23	35	17-2	20	28	831	794	24	0	37	264	0	37	264	0	37	264	0	37	264	0	37	76-0
9 D	19	59	755	288	21	26	467	18	51	73-4	23-5	22	10	49-9	19	29	982	688	22	24	294	2048	2	294	2048	2	294	2048	2	294	2048	2	294	75-9
10	14	24	480	377	22	28	103	13	49	61-5	35-3	22	58	26-2	14	27	891	767	0	0	124	728	1	124	728	1	124	728	1	124	728	1	124	75-3
11	5	54	436	388	10	50	48	14	3	56-0	25-8	20	16	30-2	14	55	831	769	2	57	62	359	1	62	359	1	62	359	1	62	359	1	62	74-9
12	19	22	448	296	21	37	152	21	25	64-2	27-6	21	45	36-6	18	14	876	689	21	51	187	1094	1	187	1094	1	187	1094	1	187	1094	1	187	74-7
13	24	0	445	377	23	46	68	23	43	59-3	36-9	22	44	22-4	14	48	856	735	24	0	121	664	1	121	664	1	121	664	1	121	664	1	121	74-7
14	18	50	471	306	23	47	165	18	54	57-2	25-4	23	53	31-8	19	34	911	708	24	0	203	1188	1	203	1188	1	203	1188	1	203	1188	1	203	75-0
15	16	30	439	359	0	10	80	15	32	57-7	37-3	0	0	20-4	19	25	869	704	0	2	165	887	1	165	887	1	165	887	1	165	887	1	165	75-4
16	16	7	445	371	11	48	74	16	8	62-4	34-9	0	46	27-5	16	36	893	741	1	50	152	818	1	152	818	1	152	818	1	152	818	1	152	75-8
17	16	48	452	391	11	22	61	14	15	62-2	40-6	22	11	21-6	17	54	852	789	3	44	63	383	1	63	383	1	63	383	1	63	383	1	63	76-0
18	21	19	493	383	12	20	110	14	19	58-9	19-7	21	17	39-2																				



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

13 LERWICK (H)

14,000 γ (·14 C.G.S.unit) +

MARCH, 1937

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	Mean
Day	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
1 D	392	411	418	417	422	423	423	417	417	409	399	389	395	407	418	408	429	437	432	448	471	337	161	315	400
2	361	385	354	333	389	400	401	390	384	376	371	379	386	418	440	465	451	447	437	420	409	414	411	410	401
3 Q	418	411	410	410	411	415	413	407	397	385	375	372	377	389	398	404	409	414	419	420	422	423	423	424	406
4	424	425	426	428	430	429	424	418	408	400	392	389	394	406	403	417	420	419	420	422	425	428	428	429	417
5 D	426	420	422	421	436	418	417	426	429	415	380	358	402	451	401	413	409	430	465	423	411	410	427	394	417
6	385	381	397	401	409	410	409	404	395	389	382	378	387	395	403	407	409	411	414	419	421	423	422	421	403
7 Q	422	421	420	421	423	423	420	417	412	402	394	392	397	403	410	414	416	420	423	427	427	428	428	429	416
8 Q	429	427	426	427	426	425	426	424	416	403	394	389	391	400	410	418	422	423	425	427	431	433	432	432	419
9	438	420	423	418	431	426	425	425	420	409	402	400	404	412	426	423	422	430	438	433	428	424	422	426	422
10	431	432	429	430	431	431	429	424	416	410	402	401	409	407	420	438	424	428	434	437	435	436	429	433	425
11 Q	431	432	432	432	433	433	432	427	418	407	396	390	394	406	416	429	425	429	434	440	431	430	431	432	423
12 Q	433	432	431	431	432	431	431	428	419	406	393	387	389	397	408	418	426	431	436	434	436	437	437	437	423
13	437	438	439	439	439	437	436	432	424	411	403	399	407	420	428	435	440	437	437	440	439	433	365	237	419
14	268	327	306	329	395	393	404	405	397	381	382	392	400	414	429	425	433	434	436	423	423	426	426	423	394
15 D	408	424	424	423	422	411	404	398	387	380	366	366	420	547	534	422	386	390	393	397	402	406	412	412	414
16	416	414	413	413	414	415	414	406	396	383	378	376	383	393	398	406	418	432	425	419	421	431	419	421	409
17	419	404	392	411	422	417	423	419	408	400	395	378	388	395	401	411	413	429	428	430	423	430	412	423	411
18	419	420	420	416	419	421	427	423	417	403	388	386	389	399	414	425	434	426	427	429	433	431	421	422	417
19	424	421	421	421	423	423	426	421	412	399	392	386	389	399	414	420	433	434	432	437	435	436	430	428	419
20	426	428	427	424	430	423	424	421	416	406	398	396	393	408	413	427	429	426	435	440	435	434	429	427	421
21	429	429	429	428	429	429	430	427	419	408	399	400	403	414	434	437	446	443	447	457	454	449	445	448	431
22	440	433	437	438	443	436	446	453	444	434	426	426	390	366	406	406	420	418	423	424	429	429	424	411	425
23	402	402	411	402	407	414	415	416	397	390	382	380	393	397	417	422	426	421	429	434	430	429	429	427	411
24	427	423	423	428	427	428	427	423	411	397	391	392	398	414	414	435	440	434	440	435	429	434	437	427	422
25	426	423	423	423	424	423	421	412	395	374	387	389	392	396	399	417	420	429	435	435	434	432	435	430	416
26	433	429	429	428	428	429	429	425	413	397	384	380	386	394	400	421	421	434	433	438	443	459	451	375	419
27 D	320	392	430	413	431	443	435	417	406	393	385	375	400	443	490	450	393	408	420	435	401	392	367	381	409
28	329	280	397	373	395	419	389	379	380	370	367	367	377	393	390	397	409	424	431	436	435	455	420	407	392
29	414	417	412	395	417	426	427	419	413	397	386	379	380	392	401	411	416	425	429	432	433	440	431	417	413
30	418	418	423	426	411	423	434	430	413	396	383	377	378	388	408	416	433	432	453	459	429	433	431	428	418
31 D	426	429	426	435	413	353	311	241	283	357	373	381	355	363	411	447	480	525	479	492	330	330	326	309	386
Mean	409	411	415	414	421	420	418	412	405	397	388	385	392	407	417	422	424	430	432	434	426	423	412	408	413

## MAGNETIC DECLINATION (WEST)

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

14 LERWICK (D)

12° +

MARCH, 1937

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	Mean
Day	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
1 D	44.2	46.5	47.9	48.9	47.9	47.7	47.8	47.1	47.3	48.3	51.3	54.0	56.1	54.9	56.9	56.2	56.9	54.5	55.7	57.4	56.6	53.5	36.6	39.7	50.6
2	55.6	51.2	45.2	47.6	47.3	46.2	46.3	45.8	49.5	48.6	51.2	54.9	56.5	59.9	60.2	56.2	55.6	55.9	49.4	45.7	47.1	46.5	47.5	45.9	50.7
3 Q	45.3	48.2	48.8	48.3	48.4	48.2	47.9	46.9	46.9	48.3	50.1	52.8	54.9	54.9	53.5	52.1	51.1	51.1	51.1	50.8	50.2	50.1	50.0	50.0	50.0
4	49.9	49.7	49.6	50.1	48.6	48.1	48.1	48.3	48.1	48.4	50.1	53.0	54.6	56.0	54.5	52.4	52.1	51.1	50.9	50.6	50.2	50.2	50.1	49.6	50.6
5 D	48.4	46.3	44.2	46.1	42.6	42.2	47.2	45.9	46.3	49.0	55.5	63.0	65.2	66.6	63.9	65.3	63.8	53.7	53.6	50.9	49.6	42.5	28.8	40.5	50.9
6	41.6	43.3	45.8	46.3	47.0	46.7	47.0	46.5	47.3	48.2	49.7	51.4	53.2	53.2	53.0	52.1	51.4	50.8	51.0	50.9	50.4	50.3	49.9	49.7	49.0
7 Q	49.3	49.2	48.9	48.9	48.4	48.1	47.9	47.3	46.9	47.9	48.1	51.1	53.2	53.7	52.8	52.1	51.5	51.2	50.9	50.9	50.5	50.6	50.2	50.0	50.0
8 Q	49.5	49.2	49.1	48.8	48.3	47.9	48.0	47.2	45.9	46.3	48.9	50.9	52.1	52.9	52.6	52.1	52.1	52.1	51.6	50.8	50.9	50.8	50.6	50.2	49.9
9	46.2	40.3	42.7	42.2	44.3	44.9	46.5	46.9	47.1	48.7	51.2	52.7	54.5	55.6	56.3	54.1	52.4	52.3	52.6	50.8	53.1	49.5	48.7	50.1	49.3
10	48.3	48.9	48.9	48.4	48.1	47.9	47.9	47.3	49.3	48.3	52.1	53.9	55.9	54.4	54.6	55.7	53.3	51.2	52.0	51.6	51.0	50.6	49.9	47.4	50.7
11 Q	48.3	49.3	49.5	49.2	48.9	48.3	47.4	46.1	45.2	46.6	49.5	52.7	55.2	56.4	54.6	53.4	50.8	50.9	51.2	50.6	50.1	48.9	50.5	50.3	50.2
12 Q	50.2	50.0	49.2	48.9	48.3	48.0	47.8	46.7	45.5	46.3	49.0	52.0	53.9	54.6	54.0	52.5	51.6	51.6	50.8	50.8	50.8	50.8	50.4	49.5	50.1
13	50.0	49.9	49.5	49.2	48.7	48.3	47.6	46.2	45.4	46.4	49.7	52.7	54.4	55.3	54.5	52.8	51.5	51.6	50.8	50.4	50.1	50.1	37.1	30.4	48.9
14	46.9	36.7	27.3	27.3	43.5	47.1	47.5	46.0	45.6	48.3	52.1	55.3	55.3	55.6	55.0	54.5	53.2	47.4	50.9	51.4	51.2	49.7	49.9	44.5	47.6
15 D	45.1	47.0	46.9	44.8	43.6	44.6	53.0	58.0	56.4	53.9	52.4	56.4	59.3	56.0	55.9	52.8	51.4	50.8	50.3	49.9	49.1	48.7	48.9	48.3	51.0
16	48.3	48.3	48.3	48.0	47.6	47.3	47.1	46.6	47.4	48.3	50.1	52.1	54.2	55.9	54.9	53.6	52.7	52.1	53.5	52.1	51.1	43.0	47.9	49.3	50.0
17	48.5	50.3	50.2	47.5	44.3	45.6	45.3	45.9	46.3	46.3	48.0	50.9	54.5	54.7	54.9	54.0	52.1	51.9	48.2	46.2	48.7	45.7	44.6	50.5	49.0
18	48.0	48.7	48.2	48.7	48.3	48.5	49.9	46.4	44.5	45.2	48.5	51.3	54.2	56.3	56.3	53.8	50.6	50.7	51.0	50.0	44.5	44.5	47.1	49.6	49.6
19	45.6	45.5	4																						

TERRESTRIAL MAGNETIC FORCE: VERTICAL COMPONENT  
Mean values for periods of sixty minutes ending at the hours of Greenwich Mean Time

15 LERWICK (V)

46,000 γ (·46 C.G.S.unit) +

MARCH, 1937

Table with 24 columns (0-1 to 23-24) and 25 rows (Hour G. M. T. to Mean). Each cell contains a numerical value representing magnetic force.

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

16 LERWICK

MARCH, 1937

Table with 13 main columns: Day, Horizontal Force (Maximum, Minimum, Range), Declination (Maximum, Minimum, Range), Vertical Force (Maximum, Minimum, Range), HRH + VRV, Magnetic Character of Day, and Temperature in Magnet House. Each cell contains numerical data.

§ For explanation see page 40. Q denotes an "International Quiet Day," while D denotes a disturbed day used for the computation of Tables 58-61

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

17 LERWICK

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

APRIL, 1937

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	Mean	
Day	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
1	381	394	390	398	403	402	403	403	394	380	371	370	372	384	405	417	422	433	433	431	434	426	405	411	392	403
2	399	385	390	396	406	418	413	405	394	401	389	368	361	376	386	396	419	453	500	479	439	428	411	392	409	409
3	398	384	348	324	306	383	402	382	364	361	379	396	398	398	450	468	433	446	458	433	420	397	384	395	395	412
4	407	403	402	410	413	413	409	401	397	389	381	374	386	405	433	443	438	447	448	433	419	406	418	419	419	412
5	416	420	418	416	414	419	416	409	394	376	368	367	370	391	410	414	413	431	426	432	427	429	429	429	429	410
6	428	430	430	427	430	435	436	428	412	395	387	396	383	398	411	424	428	439	444	441	441	441	440	437	423	423
7	436	434	435	436	439	437	435	427	415	404	394	390	393	393	407	421	424	433	439	445	447	447	447	444	448	426
8 Q	445	444	442	438	436	436	433	427	417	407	397	390	393	401	410	419	428	436	444	447	447	447	447	444	443	428
9 Q	441	440	436	432	431	433	433	427	416	404	393	390	390	399	410	422	429	436	440	441	440	440	440	439	425	425
10 Q	437	436	436	436	436	436	436	430	416	403	388	384	390	403	413	421	430	438	439	445	445	440	440	440	440	426
11	428	392	407	430	434	439	435	428	411	394	382	379	391	408	420	433	437	440	440	444	441	441	441	441	441	422
12	439	438	436	433	436	441	442	434	418	412	405	406	429	450	446	533	604	576	548	474	418	395	422	411	411	452
13	326	412	418	418	416	416	410	396	392	393	392	391	385	399	414	424	421	440	443	450	424	418	414	421	421	410
14 Q	421	420	420	417	415	412	414	416	416	409	399	394	397	408	418	428	437	441	450	444	428	423	417	418	418	419
15	426	424	423	422	420	425	429	422	418	415	405	399	401	410	425	430	437	452	451	441	437	437	440	437	437	426
16 Q	434	433	431	430	431	434	434	428	418	406	394	376	376	387	400	408	434	451	447	442	446	444	443	441	424	424
17	439	438	436	434	428	431	434	439	424	408	395	386	388	392	405	419	430	439	448	452	451	442	438	437	426	426
18	443	437	417	432	446	445	435	427	415	400	389	387	371	391	409	422	439	444	444	442	442	437	444	447	425	425
19	430	433	430	436	436	430	431	422	411	400	389	377	388	408	416	429	442	454	457	460	447	429	425	434	426	426
20	433	431	428	422	431	439	435	425	413	405	393	389	399	414	423	428	445	443	447	448	445	442	437	438	427	427
21	438	424	403	427	430	423	424	397	379	370	376	385	386	403	420	413	431	448	448	440	437	434	434	432	417	417
22	431	429	429	427	425	422	415	403	392	379	373	373	393	404	420	438	431	438	436	443	440	440	442	444	429	428
23	436	429	428	431	436	433	431	423	415	403	393	390	397	413	433	435	426	443	457	478	442	438	437	429	428	428
24 D	425	428	424	427	430	428	425	419	415	399	390	382	411	427	414	450	488	497	509	524	488	215	-132	-115	382	382
25 D	-41	269	458	422	407	403	394	392	394	387	387	376	365	371	380	411	503	435	467	582	637	561	319	147	393	393
26 D	269	275	294	380	362	391	404	403	401	399	394	396	403	405	421	415	424	446	505	569	497	346	-232	-96	353	353
27 D	-174	-93	-136	-141	281	358	373	391	383	371	372	375	376	391	401	398	404	405	451	505	388	243	169	-111	266	266
28 D	-57	-161	-313	82	-276	-174	-306	-367	140	339	411	431	456	652	646	650	522	465	497	431	417	382	271	353	229	229
29	389	398	393	391	388	365	351	343	371	386	391	381	411	441	491	446	468	489	486	459	430	419	391	356	410	410
30	341	356	365	368	346	349	353	348	362	354	356	429	420	441	517	503	493	492	486	469	434	396	357	355	403	403
Mean	362	373	371	387	388	397	392	384	394	392	388	387	393	412	428	439	446	451	460	461	445	416	368	359	404	404

## MAGNETIC DECLINATION (WEST)

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

18 LERWICK (D)

12° +

APRIL, 1937

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	Mean	
Day	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
1	45.7	47.2	48.0	47.4	47.5	46.8	44.9	42.6	42.3	45.0	48.8	53.0	55.6	56.8	56.5	53.5	52.0	51.0	50.3	50.1	47.3	45.8	39.7	44.3	48.4	48.4
2	45.2	39.3	40.4	43.2	45.1	44.7	43.6	41.3	42.7	43.5	48.5	54.6	55.7	57.1	56.4	54.3	52.7	51.3	48.2	50.7	45.6	43.6	47.0	39.4	47.3	47.3
3	40.7	35.5	27.1	39.7	38.7	44.4	42.8	45.2	49.8	50.7	53.1	54.3	57.6	57.4	57.5	57.1	55.0	53.5	49.2	49.4	42.4	43.7	44.7	42.5	47.2	47.2
4	44.6	48.4	45.9	44.2	45.0	44.4	44.5	43.7	44.8	45.7	47.8	49.6	55.1	58.1	56.4	55.9	53.9	52.5	51.0	49.8	48.8	48.4	48.3	49.2	49.0	49.0
5	48.6	48.1	46.4	46.5	45.2	44.8	44.3	43.3	43.1	46.5	49.5	52.7	55.8	57.2	57.2	53.4	50.2	50.0	48.7	49.6	49.4	49.2	49.4	49.3	49.1	49.1
6	48.9	48.6	48.0	47.4	47.3	47.3	45.8	44.1	43.7	45.6	49.3	54.6	56.4	58.4	58.5	56.2	53.3	52.3	51.7	50.4	50.4	50.2	49.5	49.2	50.3	50.3
7	48.5	47.9	47.5	47.1	47.0	46.9	46.0	44.8	43.9	44.4	47.1	50.0	52.9	54.4	54.3	53.8	52.2	51.5	50.0	49.6	49.4	50.1	50.3	49.6	49.1	49.1
8 Q	48.7	48.2	47.6	47.3	47.0	46.4	45.1	44.0	44.1	45.9	48.0	50.8	54.2	56.3	55.8	54.2	52.4	51.1	51.1	51.3	51.1	50.4	49.6	49.1	49.6	49.6
9 Q	48.4	48.0	47.2	47.2	47.0	46.9	46.2	44.8	44.6	46.0	47.4	50.0	53.5	55.2	54.8	53.9	53.1	52.5	51.8	51.3	50.3	50.0	49.5	49.0	49.5	49.5
10 Q	48.5	48.2	47.8	47.4	47.0	46.6	45.5	44.4	43.3	44.2	46.9	50.9	54.6	56.3	55.6	54.5	52.9	51.5	50.4	50.2	50.0	50.1	48.0	43.9	49.1	49.1
11	46.0	51.1	42.6	39.2	45.3	45.1	45.1	44.6	44.7	46.3	49.8	54.1	57.5	58.2	56.6	54.7	53.3	50.9	48.8	50.9	50.3	50.0	49.4	49.2	49.3	49.3
12	48.9	48.5	48.0	48.4	48.2	47.6	46.0	44.3	43.3	44.1	49.3	53.3	60.3	63.5	62.2	68.3	68.5	63.3	55.0	56.5	50.2	43.6				

19 LERWICK (V)

46,000 γ (+.46 C.G.S.unit) +

APRIL, 1937

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	Mean
Day 1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
1	760	792	808	813	820	825	825	824	822	822	819	818	817	814	815	826	825	826	830	831	816	804	796	791	814
2	758	715	747	767	778	786	813	815	815	813	822	822	813	809	811	816	816	826	855	818	860	863	842	796	807
3	758	729	689	675	678	714	780	801	811	822	822	829	844	850	863	867	859	854	872	842	828	797	698	746	793
4	784	767	764	782	803	810	813	814	815	822	817	813	810	817	828	836	838	840	848	849	837	823	819	816	815
5	814	811	800	806	810	811	816	819	821	819	814	811	809	808	813	822	817	813	817	814	815	814	813	813	813
6	812	811	808	808	808	805	806	807	808	808	807	802	803	797	800	796	801	801	804	807	808	808	808	809	805
7	810	812	809	807	805	805	806	809	811	809	808	804	799	800	800	800	803	802	804	804	807	805	803	803	805
8 Q	806	807	807	807	806	805	804	803	803	807	808	804	797	796	800	801	803	805	803	803	802	802	805	807	804
9 Q	807	807	808	807	805	803	803	804	801	800	800	796	790	793	797	798	798	798	800	801	802	803	805	807	801
10 Q	809	810	810	810	807	805	802	802	802	800	799	795	792	791	795	796	798	802	804	803	802	801	802	790	801
11	779	716	703	742	778	789	794	796	799	802	800	796	796	799	801	805	812	821	825	811	806	801	800	801	791
12	804	806	808	809	805	801	802	801	799	791	787	781	778	795	833	907	976	981	954	895	798	767	799	810	829
13	690	742	803	814	817	817	812	808	803	804	808	806	806	807	809	819	828	833	843	839	836	801	791	795	805
14 Q	803	807	811	811	807	806	800	801	802	801	803	803	800	804	811	816	819	821	824	831	831	825	822	817	811
15	807	808	811	811	811	806	804	802	795	794	793	789	789	794	802	808	817	828	843	837	827	816	808	804	809
16 Q	804	805	806	807	809	807	809	810	810	810	807	810	802	797	801	805	812	824	834	831	817	810	806	803	810
17	802	799	801	804	805	800	794	791	794	795	795	794	790	792	790	791	796	801	805	805	811	819	810	804	799
18	802	806	724	772	781	789	792	795	799	801	805	803	803	799	805	810	819	829	829	821	814	812	790	767	799
19	757	775	795	799	801	802	800	798	798	798	802	801	795	795	802	811	821	824	822	823	814	794	798	770	800
20	763	792	797	790	789	793	794	795	793	797	805	805	803	802	808	811	816	823	820	812	808	805	805	802	801
21	802	784	711	706	717	765	778	789	793	796	794	793	801	802	806	815	813	813	811	810	806	804	803	804	788
22	806	808	809	809	809	805	804	804	804	805	804	796	787	790	793	804	813	814	805	800	803	802	800	781	802
23	790	800	805	806	804	802	799	797	792	793	796	796	793	796	801	805	814	810	809	805	806	804	800	798	801
24 D	798	793	789	787	800	800	800	797	793	800	802	799	791	797	805	805	825	850	861	848	765	923	957	1047	826
25 D	1036	714	791	843	841	843	832	830	831	830	823	827	832	840	842	839	845	864	855	839	736	823	702	650	821
26 D	687	749	752	800	804	793	806	810	811	810	807	800	796	801	808	821	824	821	809	827	846	699	814	882	799
27 D	994	854	738	812	705	772	797	826	838	848	844	842	847	847	850	853	858	859	856	849	770	696	682	645	811
28 D	586	614	902	587	453	569	563	597	735	804	861	938	916	954	959	988	929	920	831	844	850	812	724	696	776
29	791	822	836	841	842	842	836	832	830	826	833	817	825	842	847	856	854	858	849	830	837	819	809	776	831
30	739	745	722	721	733	744	748	774	793	815	820	839	853	855	876	888	882	873	855	844	843	827	782	769	806
Mean	792	780	785	785	781	790	794	798	804	808	810	811	809	813	819	827	831	834	833	826	813	806	796	793	806

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

20 LERWICK

APRIL, 1937

Day	Terrestrial Magnetic Elements																	HR <sub>H</sub> + VR <sub>V</sub> 10,000γ <sup>2</sup>	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 12° +		Minimum 12° +		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	γ	h	m	γ	646	1	76.9	
2	20	10	444	356	0	14	88	13	40	57.5	37.0	22	11	20.5	20	1	834	723	0	4	111	1197	1	77.0
3	18	56	594	351	11	55	243	19	20	88.1	26.8	18	59	61.3	18	55	876	695	1	15	181	1494	1	77.0
4	18	0	491	250	4	29	241	12	57	59.9	23.3	2	43	36.6	18	26	888	643	4	7	245	592	1	76.9
5	17	35	437	371	11	43	86	14	13	59.0	42.1	7	46	16.9	19	5	852	752	1	42	100	229	1	77.6
6	17	42	449	377	12	43	72	13	54	60.3	43.2	8	13	17.1	0	10	813	794	15	28	19	193	0	77.9
7	21	8	457	389	11	8	68	13	19	55.0	43.3	9	11	11.7	1	57	812	797	15	25	15	168	0	78.0
8 Q	19	44	449	389	11	46	60	13	25	56.8	43.6	8	0	13.2	10	10	809	796	13	16	13	147	0	78.0
9 Q	19	41	444	387	11	36	57	13	43	55.6	43.6	7	48	12.0	3	8	809	788	12	41	21	180	0	78.0
10 Q	21	33	454	381	11	22	73	13	32	57.2	42.2	23	42	15.0	2	32	810	787	23	42	23	213	0	78.6
11	17	27	448	364	1	43	84	1	25	60.1	35.4	3	24	24.7	18	4	834	665	1	50	169	912	1	78.7
12	16	25	621	333	20	56	288	20	22	75.5	33.3	20	35	42.2	16	25	988	726	20	55	262	1641	2	78.8
13	19	8	455	218	0	21	237	0	10	68.3	37.3	21	17	31.0	18	24	847	647	0	42	200	1277	1	79.1
14 Q	18	32	453	393	11	7	60	13	24	54.2	42.8	4	48	11.4	20	19	834	799	6	41	35	250	0	79.1
15	18	32	463	397	11	57	66	14	29	57.5	39.3	6	48	18.2	18	57	845	786	12	18	59	371	1	79.2
16 Q	17	34	454	365	11	35	89	14	14	56.7	42.5	8	0	14.2	18	44	838	795	13	29	43	329	0	79.7
17 Q	20	7	472	382	11	56	90	13	36	56.9	43.4	8	16	13.5	21	18	824	788	12	40	36	298	0	79.8
18	22	13	462	365	12	15	97	13	20	58.1	36.6	2	38	21.5	17	53	833	694	2	25	139	791	1	80.1
19	17	37	468	369	11	6	99	13	17	57.7	35.7	19	56	22.0	19	51	831	748	24	0	83	531	1	80.1
20	19	58	454	384	11	15	70	13	17	56.1	42.9	7	34	13.2	17	30	825	747	0	7	78	466	1	80.0
21	17	15	456	366	8	57	90	12	9	56.8	34.2	2	24	22.6	15	14	818	696	2	50	122	701	1	80.2
22	23	2	457	369	11	10	88	13	0	56.3	42.1	6	44	14.2	17	15	817	779	23	35	38	305	1	80.3
23	19	34	512	387	1																			

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

21 LERWICK (H)

14,000 γ (·14 C.G.S.unit) +

MAY, 1937

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	Mean
Day 1	335	262	275	294	301	374	366	373	369	366	365	373	407	417	432	425	421	452	456	442	432	429	404	405	382
2	406	414	405	395	406	411	404	398	393	387	387	394	401	416	424	420	427	433	441	443	434	421	423	416	412
3	419	416	418	413	412	412	409	395	390	390	385	387	394	408	413	434	465	467	496	464	445	436	430	452	423
4 D	421	410	419	430	427	422	417	408	397	384	382	392	406	416	421	428	445	480	505	511	503	432	384	318	423
5 D	42	-60	37	180	84	31	112	256	299	340	348	394	515	546	544	583	431	401	403	401	406	406	406	407	313
6 Q	407	410	407	406	410	404	399	394	386	376	375	377	384	393	396	404	415	418	423	422	421	421	421	420	404
7 Q	420	417	415	412	418	416	414	407	398	395	390	393	397	408	422	430	420	423	438	448	446	440	431	431	418
8	427	422	422	422	421	419	412	404	396	388	384	393	406	416	421	419	421	435	438	442	444	448	448	449	421
9	437	433	419	417	432	430	424	423	418	398	390	410	431	403	414	458	435	444	445	454	451	429	426	391	425
10	371	412	424	412	397	405	407	402	393	390	390	390	401	427	468	454	463	471	475	466	440	428	428	429	423
11	403	338	322	382	405	384	409	408	399	382	368	384	384	398	421	428	450	482	480	433	429	429	426	421	405
12	420	423	420	418	416	411	417	416	407	402	391	386	394	400	415	426	441	444	446	449	452	450	444	440	422
13	437	436	438	439	438	435	424	418	407	396	394	396	393	403	425	444	452	460	452	444	443	447	441	439	429
14	438	436	437	435	437	442	438	414	416	407	396	399	390	416	400	424	480	523	500	461	455	451	443	436	436
15	428	424	421	412	422	428	423	407	395	384	381	381	382	389	416	434	467	450	459	454	448	442	436	442	422
16	419	385	427	440	435	435	420	408	403	395	388	391	401	401	415	462	443	451	471	455	445	439	449	436	426
17	428	423	422	420	423	424	419	413	406	396	389	386	391	397	421	429	442	467	466	452	440	435	433	434	423
18 Q	431	432	432	434	434	432	425	421	415	400	386	374	376	385	404	434	451	453	449	455	463	448	438	437	425
19	433	430	427	429	429	412	401	395	384	375	374	355	393	377	392	427	450	452	458	449	438	431	426	425	415
20 Q	426	426	426	428	427	424	415	404	395	382	386	381	390	408	425	433	437	445	449	447	445	436	431	431	421
21	426	423	424	426	429	424	415	404	394	380	370	377	395	414	423	417	466	481	489	488	468	445	436	430	426
22	430	431	430	431	432	431	423	414	407	396	400	388	385	397	417	431	445	453	468	458	446	437	432	431	426
23 Q	434	437	438	433	432	427	417	414	408	391	381	381	395	414	439	446	469	477	476	460	443	431	430	431	429
24	426	423	420	422	422	424	420	411	397	381	375	377	388	403	422	419	440	455	462	471	455	456	440	426	422
25	428	428	423	388	410	413	407	380	353	359	386	371	389	420	415	428	453	459	485	479	458	440	428	407	417
26	388	311	375	373	382	389	379	376	364	373	379	379	381	384	389	406	426	440	461	471	471	443	422	419	399
27 D	419	417	420	425	417	411	411	402	377	371	383	388	414	412	418	474	452	511	514	475	430	370	265	211	408
28 D	290	386	388	240	352	355	353	382	386	380	351	392	457	578	767	648	543	521	478	409	358	238	159	249	403
29 D	125	198	255	336	257	314	383	394	366	331	369	382	392	404	429	452	480	456	471	454	443	410	376	390	369
30	390	409	409	377	405	410	402	403	393	379	369	372	397	415	418	428	473	473	473	456	458	437	434	422	417
31	387	322	365	391	411	417	415	412	400	386	381	390	400	406	411	420	430	432	438	454	454	446	419	384	407
Mean	390	363	392	395	398	399	399	399	391	383	380	384	401	415	433	444	449	458	462	454	444	427	413	408	413

## MAGNETIC DECLINATION (WEST)

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

22 LERWICK (D)

12° +

MAY, 1937

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	Mean
Day 1	35.8	31.8	28.9	40.0	44.6	43.2	45.0	46.3	44.9	46.2	48.8	50.6	52.9	52.8	52.2	52.2	51.9	52.1	46.2	47.3	49.0	47.0	43.2	46.4	45.8
2	46.8	46.0	47.0	46.8	46.5	44.3	41.9	42.7	43.1	44.9	48.0	50.7	52.1	53.1	53.3	52.3	51.5	50.8	50.1	48.9	47.7	47.7	48.6	45.6	47.9
3	44.6	44.9	44.7	44.3	44.7	44.5	45.1	46.5	47.7	47.6	48.4	49.5	51.5	53.3	52.8	52.8	51.8	52.3	53.4	51.3	50.2	50.1	50.7	45.6	48.7
4 D	42.6	41.4	40.4	38.2	38.2	40.0	41.7	43.7	46.0	47.5	48.6	50.7	52.9	53.8	52.7	51.9	51.9	53.0	48.6	51.6	46.5	37.1	34.7	35.2	45.4
5 D	48.5	34.5	5.5	34.8	47.5	44.0	31.0	45.2	45.7	47.5	50.9	53.2	53.4	51.1	48.7	57.1	50.5	49.1	47.8	47.5	47.6	48.1	48.6	48.7	45.3
6 Q	47.5	47.9	47.4	46.2	43.3	41.8	40.3	41.0	42.3	45.3	48.2	50.2	51.5	52.4	52.0	50.9	49.6	48.6	48.0	47.9	48.0	47.9	47.5	47.3	47.2
7 Q	47.1	46.3	45.7	45.2	43.7	42.7	41.2	41.4	43.2	46.0	48.1	49.9	52.5	53.3	52.4	52.3	51.7	50.9	49.9	49.8	50.1	49.2	48.4	48.2	47.9
8	46.7	46.0	46.0	45.1	43.6	41.9	41.3	40.7	42.2	46.1	50.2	51.6	52.4	53.1	53.3	53.0	52.6	51.7	51.5	51.4	50.3	50.3	48.7	42.8	48.0
9	43.5	44.7	43.8	42.3	42.4	42.7	41.9	41.5	42.5	44.9	50.9	54.5	56.2	56.3	57.5	56.0	51.6	51.6	49.8	48.6	46.5	47.9	49.1	52.9	48.3
10	48.6	45.5	40.7	39.8	43.9	43.7	41.7	41.8	43.9	47.2	49.7	52.7	54.9	56.3	56.4	54.7	54.0	53.0	52.1	46.4	49.3	49.1	49.9	47.5	48.5
11	37.2	28.9	39.0	45.7	42.9	43.1	41.8	42.1	41.4	42.1	46.0	51.8	55.5	56.9	57.6	57.0	53.7	46.2	49.1	49.5	49.2	48.8	48.0	48.4	46.7
12	49.8	48.0	48.1	46.6	45.1	47.8	45.7	44.4	43.5	44.8	47.8	51.0	55.1	57.1	57.9	55.8	53.3	50.6	48.7	48.8	48.9	48.9	48.6	48.6	49.4
13	47.9	46.9	46.7	45.8	42.9	40.1	36.8	39.1	40.6	42.0	45.2	49.7	53.1	55.8	56.2	55.0	53.0	49.9	49.1	49.5	49.5	47.9	47.4	47.5	47.5
14	47.0	46.1	46.6	46.1	45.3	43.6	43.8	45.9	45.5	44.0	45.7	51.1	55.6	57.9	58.1	55.4	55.9	56.1	50.1	49.1	49.9	50.9	50.7	48.7	49.5
15	47.9	49.2	49.5	50.7	43.5	42.0	40.2	40.7	42.7	44.5	46.8	51.0	53.5	54.6	54.2	53.7	54.0	50.7	50.8	49.9	49.8	50.7	49.6	51.1	48.8
16	46.7	40.6	43.5	43.6	40.5	40.1	40.8	42.7	43.1	45.4	49.5	51.3	54.2	55.0	54.5	53.8	51.4	49.8	49.6	50.2	49.0	49.5	49.2	48.6	47.6
17	47.9	47.5	46.1	45.4	43.8	42.5	43.3	44.1	43.4	46.2	49.1	52.2	55.0	56.6	54.8	53.3	51.7	49.0	47.2	50.2	51.0	50.5	49.3	48.6	48.7
18 Q	47.4	47.1	46.5	45.6	44.6	43.2	43.5	41.9	40.2	41.7	44.3	47.7	51.9	55.1	56.3	55.8	52.7	49.4	47.5	48.0	51.2	48.9	49.7	49.4	47.9
19	49.0	49.5	47.7	45.9	45.2	45.6	48.1	41.1	42.5	43.0	44.9	51.5	54.6	55.0	54.6	53.0	50.9	48.0	46.8	46.9	47.0	47.8	48.3	47.9	48.1
20 Q	47.9	47.6	46.8	45.5	44.0	41.7	40.6	41.1	41.5	42.															

23 LERWICK (V)

46,000 γ (.46 C.G.S.unit) +

MAY, 1937

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	Mean	
Day 1	742	708	686	652	686	774	798	787	801	813	816	815	818	834	833	830	826	826	848	845	829	812	792	797	790	
2	791	803	811	799	807	812	816	815	816	812	809	804	801	801	810	819	821	822	823	826	828	824	807	790	811	
3	804	808	813	818	819	818	817	820	816	809	806	799	796	799	807	807	817	826	832	838	829	826	819	769	813	
4 D	763	782	773	757	787	802	805	804	805	805	803	798	794	794	799	806	808	813	841	880	896	854	777	759	804	
5 D	700	677	547	442	473	527	663	740	756	793	831	865	919	937	931	970	974	879	843	831	824	821	820	819	774	
6 Q	822	825	824	822	826	829	827	824	821	818	812	805	802	808	818	815	815	816	815	816	815	816	819	820	821	818
7 Q	821	822	822	821	817	820	820	821	819	816	816	813	813	808	809	811	817	815	816	816	818	820	824	820	817	817
8	820	822	821	820	820	819	818	812	811	811	810	806	808	813	820	825	823	819	816	812	812	813	814	799	815	
9	797	810	818	819	811	809	806	799	796	799	799	794	803	830	835	864	876	853	843	836	827	818	801	725	815	
10	707	736	775	783	797	792	799	808	806	804	808	807	808	830	820	843	852	855	850	835	836	822	822	815	793	806
11	719	670	691	713	726	755	770	783	792	802	802	799	803	820	833	847	855	864	840	821	815	811	810	808	790	
12	798	792	801	802	805	805	806	808	800	792	792	795	796	802	806	812	816	819	820	816	813	811	812	811	805	
13	811	813	815	817	821	824	826	822	814	808	803	799	800	798	803	815	827	839	838	827	817	812	811	809	815	
14	809	810	811	814	814	815	820	821	812	807	803	796	797	802	807	809	816	849	885	867	837	820	811	806	818	
15	811	810	808	793	792	807	816	821	814	806	806	805	810	813	813	824	829	847	835	832	827	819	815	808	815	
16	766	728	754	793	816	815	813	813	810	807	809	812	816	822	821	823	849	839	829	832	826	816	793	773	807	
17	793	803	807	811	812	812	811	810	808	805	803	797	794	796	798	808	815	819	830	826	821	816	815	813	809	
18 Q	815	814	813	814	815	817	815	808	807	806	806	803	798	796	797	802	817	829	833	825	820	821	815	809	812	
19	809	808	810	815	815	816	800	808	810	816	817	817	814	827	821	821	835	835	827	820	820	820	819	819	817	
20 Q	819	819	818	818	817	816	817	819	824	824	817	815	811	811	813	815	816	818	824	825	824	820	819	817	818	
21	818	819	819	818	817	816	815	812	807	802	799	792	791	796	804	809	799	816	824	824	832	825	818	816	812	
22	816	817	817	816	813	813	810	807	801	791	791	788	792	798	805	813	816	817	820	817	813	812	813	809	809	
23 Q	813	813	813	811	797	790	791	789	795	795	793	793	792	799	805	826	836	840	840	833	828	820	813	807	810	
24	807	810	810	814	816	816	818	810	804	800	800	798	796	797	801	813	814	818	819	816	817	809	806	807	809	
25	799	796	766	717	696	767	794	803	789	783	791	811	812	815	829	834	841	844	833	835	825	815	733	742	795	
26	709	651	704	740	701	771	793	798	804	803	812	810	810	822	825	819	822	822	826	831	827	806	803	809	788	
27 D	808	792	763	785	789	797	807	815	813	807	802	799	788	816	829	835	862	857	858	798	742	731	715	638	794	
28 D	807	719	742	662	661	717	718	747	789	806	845	867	847	887	949	921	905	876	827	783	747	731	564	611	772	
29 D	574	594	584	626	637	694	778	815	834	858	839	828	813	819	825	830	830	835	835	831	818	787	756	717	765	
30	755	779	793	784	788	801	814	819	824	823	821	221	829	839	852	849	849	858	847	831	830	828	821	801	819	
31	749	669	658	695	761	802	816	823	826	824	822	809	803	807	808	812	817	824	825	820	824	813	794	753	790	
Mean	773	772	771	767	773	789	801	806	807	808	809	808	809	816	823	830	835	835	834	827	820	812	795	783	804	

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

24 LERWICK

MAY, 1937

Day	Terrestrial Magnetic Elements															HR <sub>H</sub> + VR <sub>V</sub> 10,000 <sup>γ</sup>	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 12° +			Minimum 12° +			Range	Maximum 46,000 γ +				Minimum 46,000 γ +			Range									
1	h	m	γ	h	m	γ	h	m	γ	h	m	γ	h	m	γ	h	m	γ	h	m	γ	h	m	γ	h	m	γ	1678	1	82.0	
2	18	52	477	163	1	59	314	13	0	54.7	25.2	2	16	29.5	18	40	859	597	3	57	262	18	40	859	597	3	57	262	301	1	82.4
3	18	8	509	379	11	3	130	18	8	54.8	43.5	1	50	11.3	19	25	846	737	23	50	109	19	25	846	737	23	50	109	697	1	82.5
4 D	20	23	534	124	23	59	410	17	14	54.7	29.0	22	48	25.7	20	23	913	643	23	35	270	20	23	913	643	23	35	270	1854	2	82.1
5 D	15	5	672	-235	0	38	907	0	36	114.3	-17.6	2	54	131.9	15	50	1022	277	3	57	745	15	50	1022	277	3	57	745	4793	2	82.0
6 Q	18	41	428	372	9	43	56	13	57	53.0	39.7	6	46	13.3	4	56	830	801	12	18	29	4	56	830	801	12	18	29	217	0	82.1
7 Q	19	31	451	386	10	56	65	13	23	53.9	40.6	6	59	13.3	22	14	825	807	13	47	18	22	14	825	807	13	47	18	178	0	82.0
8	23	36	458	382	10	26	76	14	16	53.5	40.1	23	25	13.4	16	6	826	785	23	57	41	16	6	826	785	23	57	41	301	0	82.4
9	15	10	476	345	23	57	131	15	8	59.5	40.6	7	38	18.9	16	0	883	644	23	56	239	16	0	883	644	23	56	239	1308	1	82.8
10	19	27	483	349	0	18	134	13	55	58.0	38.9	3	16	19.1	17	43	859	644	0	0	215	17	43	859	644	0	0	215	1199	1	82.4
11	17	36	489	292	2	27	197	14	52	58.1	22.7	1	27	35.4	17	16	870	652	1	58	218	17	16	870	652	1	58	218	1304	1	82.0
12	20	13	458	384	11	40	74	14	38	58.2	42.8	8	4	15.4	18	7	822	789	1	10	33	18	7	822	789	1	10	33	261	0	82.0
13	16	0	471	387	12	24	84	14	32	57.1	34.9	6	50	22.2	17	42	844	794	13	25	50	17	42	844	794	13	25	50	355	1	82.1
14	17	21	533	376	12	14	157	14	26	58.9	42.4	5	29	16.5	18	13	899	790	11	34	109	18	13	899	790	11	34	109	736	1	82.1
15	16	28	489	370	12	5	119	2	56	56.1	37.7	6	26	18.4	17	10	848	782	3	57	66	17	10	848	782	3	57	66	480	1	82.2
16	18	25	486	359	1	14	127	14	30	55.8	38.8	6	34	17.0	16	32	852	709	1	13	143	16	32	852	709	1	13	143	852	1	82.7
17	17	57	481	381	11	11	100	13	17	55.9	41.5	5	37	14.4	18	24	833	780	0	0	53	18	24	833	780	0	0	53	392	1	82.3
18 Q	20	28	466	372	11	34	94	15	14	56.9	39.7	8	29	17.2	18	5	837														

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

25 LERWICK (H)

14,000 γ (·14 C.G.S.unit) +

JUNE, 1937

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	Mean
Day	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
1	412	414	393	406	414	394	400	413	398	379	373	374	398	421	409	415	423	437	466	465	459	437	429	429	415
2	431	430	413	418	429	425	418	413	401	382	376	380	400	420	414	440	428	432	440	452	456	452	440	432	422
3	431	410	430	435	432	425	416	407	401	397	396	406	409	423	435	441	441	448	453	452	445	440	436	437	427
4	436	440	442	441	438	431	424	412	403	393	393	398	410	429	455	445	452	467	478	472	457	460	455	452	437
5 D	430	422	437	440	424	429	424	414	410	407	415	413	419	407	444	482	516	544	547	508	432	269	308	118	419
6 D	263	233	139	307	325	248	235	270	307	306	294	392	473	580	651	660	617	500	447	432	444	410	401	370	387
7	353	398	406	409	409	411	406	392	380	388	401	418	432	454	463	472	461	452	469	469	454	444	427	414	424
8	396	411	399	407	422	415	396	376	364	360	366	382	392	410	422	420	440	455	455	474	458	446	424	415	413
9 Q	411	417	421	422	428	424	413	404	390	375	373	378	391	405	421	423	429	436	436	440	445	443	442	440	417
10	442	440	441	440	437	449	435	409	384	391	405	408	406	411	412	423	441	447	458	462	459	452	444	440	431
11 Q	435	416	418	439	442	435	431	410	404	399	394	395	400	419	413	426	441	447	452	452	445	435	430	427	425
12 Q	427	428	431	432	434	430	421	411	402	393	381	383	387	399	411	416	428	437	451	455	455	451	439	440	423
13 D	443	443	448	451	456	452	439	423	406	376	364	367	376	424	374	441	468	493	481	475	455	438	438	435	432
14	431	427	424	430	427	419	399	404	401	391	385	390	398	416	424	422	447	452	472	468	458	446	432	436	425
15	428	427	432	433	431	430	397	396	399	389	376	366	377	400	426	425	443	453	449	449	449	453	460	448	421
16	433	394	432	429	424	406	430	430	417	401	394	391	401	407	418	430	455	451	470	474	474	461	452	435	430
17	416	348	410	429	418	423	426	411	392	367	359	364	391	413	436	458	453	463	490	489	474	455	441	438	423
18	437	418	426	421	418	423	410	398	383	380	385	387	411	428	435	427	464	468	463	466	463	455	439	437	427
19 Q	429	426	431	430	424	428	423	412	396	378	373	374	384	397	411	429	447	471	474	467	452	442	439	441	424
20 D	443	438	436	440	422	387	405	410	403	395	389	385	391	400	436	495	525	544	545	525	451	413	388	367	435
21	363	342	354	358	361	379	402	391	381	378	372	369	373	383	387	407	423	443	466	489	491	449	426	415	400
22	410	415	403	416	427	426	417	400	385	365	346	373	411	467	460	475	509	522	545	502	482	443	422	409	435
23	411	411	409	416	420	413	402	383	370	368	374	374	398	395	397	408	422	429	442	452	450	442	436	431	411
24	432	428	426	416	425	437	424	409	390	401	400	403	403	415	437	497	446	467	495	478	447	441	426	420	432
25	412	396	396	407	413	409	403	392	383	384	395	415	423	414	441	455	452	451	462	454	445	439	440	421	421
26 Q	419	412	415	421	421	422	417	403	388	381	390	397	403	414	418	426	441	452	456	454	443	435	431	431	420
27 D	429	421	425	419	423	442	447	446	437	415	402	415	393	407	437	465	451	506	534	518	482	423	421	414	441
28	377	401	401	359	384	392	373	386	394	372	385	396	395	415	440	458	453	437	450	441	437	433	437	429	410
29	422	400	369	394	413	415	409	409	403	389	378	388	397	428	456	449	443	435	437	438	440	445	440	440	418
30	431	423	411	413	417	420	419	408	393	388	386	386	400	420	432	438	449	460	472	467	454	439	432	433	425
Mean	414	408	407	416	419	415	409	401	392	383	381	389	401	420	433	449	457	464	472	468	455	436	429	416	422

MAGNETIC DECLINATION (WEST)

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

26 LERWICK (D)

12° +

JUNE, 1937

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	Mean
Day	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
1	45.8	45.7	44.3	42.8	41.8	44.3	46.2	41.6	41.1	43.2	48.4	53.0	55.7	58.1	56.6	53.4	50.8	49.6	49.4	45.4	46.8	48.8	49.4	49.0	48.0
2	48.0	47.1	50.1	43.7	42.5	40.2	38.5	38.4	40.8	43.5	47.5	51.9	54.6	54.6	54.0	54.5	52.4	51.0	48.7	49.5	49.9	47.7	43.6	46.9	47.5
3	48.6	49.7	42.1	42.7	42.6	41.5	39.0	39.8	42.2	44.0	46.6	50.4	54.2	56.1	54.3	52.8	50.4	49.4	47.5	49.0	48.8	48.6	47.8	47.7	47.3
4	46.5	46.0	45.1	44.1	43.2	41.3	39.4	38.4	39.1	43.4	48.3	51.7	55.1	56.3	57.9	57.3	53.9	50.2	47.9	50.8	48.9	50.4	49.4	50.0	48.1
5 D	58.3	48.5	43.3	43.7	44.6	41.6	41.3	40.8	44.9	46.1	48.3	51.6	54.9	55.6	56.4	57.9	57.5	56.9	57.0	52.1	49.4	50.1	28.5	19.3	47.9
6 D	33.5	46.1	41.9	28.0	32.7	47.8	45.4	37.8	44.5	45.4	52.8	51.8	53.0	52.1	53.7	59.6	55.4	49.3	50.8	51.5	44.8	46.4	46.9	49.0	46.7
7	47.6	44.7	41.9	41.8	40.0	38.7	38.1	37.3	40.4	44.3	46.9	51.3	54.2	55.6	55.8	53.9	52.8	51.2	51.5	52.2	49.9	49.5	46.0	44.8	47.1
8	48.9	50.0	43.8	41.3	42.8	42.8	40.9	40.6	42.4	46.8	51.0	54.8	58.2	58.8	57.4	53.7	52.3	51.1	51.0	48.4	50.5	49.6	46.0	43.9	48.6
9 Q	42.8	40.8	42.2	40.8	39.6	40.4	38.6	39.0	40.1	42.1	46.3	50.8	53.3	53.9	55.2	53.1	50.9	49.7	48.8	48.7	48.9	48.6	48.0	47.1	46.2
10	46.7	45.8	44.7	43.2	41.5	37.8	36.8	40.5	43.2	49.5	51.8	54.0	55.1	55.6	54.3	53.8	51.9	50.0	49.2	48.5	48.8	49.8	49.8	47.6	47.9
11 Q	48.1	48.1	42.3	41.7	38.9	38.6	40.3	42.8	43.0	44.6	47.4	51.5	54.4	54.1	53.3	52.6	50.2	49.4	50.5	50.1	49.0	48.4	47.1	45.9	47.2
12 Q	44.8	44.2	43.8	43.5	43.1	42.1	41.0	41.9	42.8	43.9	45.1	46.4	50.9	51.5	52.8	51.0	48.8	46.7	45.8	47.4	47.8	49.3	49.0	48.8	46.4
13 D	48.7	48.7	49.6	49.9	46.2	41.7	39.1	38.2	39.1	43.5	43.4	48.2	59.0	58.5	58.5	56.7	53.4	48.9	49.1	49.8	50.4	51.2	51.1	50.5	48.9
14	47.2	48.8	46.6	43.0	39.9	35.6	39.8	43.4	41.3	43.5	45.9	49.5	52.4	52.9	51.2	48.3	49.2	48.9	50.0	49.1	49.1	49.7	46.9	46.9	46.6
15	45.2	44.0	44.3	42.1	41.3	40.5	39.5	48.1	43.9	44.3	48.1	52.7	55.0	55.2	54.8	54.3	52.4	50.9	50.6	49.7	49.0	48.3	49.9	47.6	48.0
16	51.7	45.3	35.8	39.1	43.8	46.8	39.8	37.8	38.6	40.8	44.2	47.7	50.1	51.2	50.7	52.2	53.8	51.5	51.1	50.5	50.5	47.1	46.2	50.5	46.5
17	49.5	50.8	42.4	44.8	47.9	41.4	41.8	37.8	37.4	42.0	45.8	50.9	55.8	55.4	54.1	52.8	50.4	50.7	49.6	47.2	50.0	50.0	48.8	46.7	47.7
18	47.3	44.8	43.4	40.2	38.3	35.8	36.2	39.8	39.2	43.2	45.7	49.8	52.3	52.6	51.1	50.2	49.7	47.4	45.6	45.1	49.8	51.1	50.6	50.1	

27 LERWICK (V)

46,000 γ (·46 C.G.S. unit) +

JUNE, 1937

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	Mean
Day 1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
2	746	775	763	774	787	785	771	789	803	803	805	797	794	804	816	824	836	833	826	830	827	820	814	811	801
3	807	803	780	764	787	805	815	816	819	820	817	815	812	811	815	807	824	819	820	815	813	807	796	802	808
4	798	736	764	795	803	809	808	803	803	803	798	791	791	786	786	796	812	819	822	820	815	812	813	810	800
5 D	810	808	809	811	813	815	815	816	810	805	796	791	787	787	793	814	828	834	839	836	835	822	817	810	813
6 D	791	773	791	799	803	785	787	789	788	786	783	794	809	831	849	867	880	890	887	863	774	704	690	626	797
7	623	631	456	554	603	657	685	747	810	830	866	903	912	950	967	949	962	928	872	844	817	791	802	788	789
8	736	770	792	802	804	809	813	820	824	817	818	830	839	861	866	917	914	892	854	840	830	823	800	782	828
9 Q	767	746	773	792	801	808	818	820	815	808	805	803	803	810	820	830	829	829	828	829	830	821	810	742	806
10	728	773	794	792	798	809	819	822	820	817	816	815	811	814	812	817	822	820	820	819	811	811	811	811	808
11 C	813	817	819	821	824	817	817	809	808	793	796	799	804	809	817	824	832	834	833	831	825	822	817	817	817
12 Q	809	775	786	796	815	820	816	817	815	808	810	815	816	811	824	820	816	819	816	818	819	815	813	814	812
13 D	815	815	816	817	818	822	825	822	819	817	810	802	798	796	798	805	809	813	815	818	818	816	815	813	813
14	811	813	810	810	810	818	821	824	819	811	816	824	827	838	839	822	827	863	878	861	836	824	819	812	826
15	816	817	810	817	825	827	829	816	818	824	820	819	816	813	818	827	822	821	819	822	820	818	819	815	819
16	816	814	811	813	817	821	825	806	802	807	803	808	799	796	799	805	811	814	816	815	815	816	813	813	811
17	787	709	749	784	784	783	787	806	815	813	806	802	793	790	802	813	817	826	830	835	829	829	821	802	802
18	796	708	750	794	796	799	799	813	823	822	823	811	814	814	817	821	833	827	830	847	835	833	824	812	810
19 Q	803	790	794	805	811	811	816	811	811	815	803	791	785	795	821	834	829	830	827	831	822	815	811	796	811
20 D	796	809	813	813	806	803	811	813	817	815	807	805	802	808	809	806	806	810	821	827	825	820	816	813	811
21	808	806	817	817	811	732	688	731	759	790	798	788	795	813	829	854	889	878	871	860	824	777	770	760	802
22	763	745	741	750	734	742	775	803	813	815	805	802	800	805	812	811	813	815	818	822	834	821	818	819	795
23	817	806	797	804	819	823	828	829	829	830	828	815	807	829	863	872	866	872	840	823	829	815	810	779	826
24	764	769	796	808	813	817	813	813	807	798	796	796	798	806	815	815	813	813	815	812	809	810	811	813	805
25	813	815	816	805	793	786	796	800	807	789	801	803	802	820	830	883	875	832	822	839	839	820	810	807	817
26 Q	801	765	761	783	795	776	762	771	785	787	796	807	832	845	852	877	888	860	835	833	823	811	792	759	808
27 D	759	765	788	808	816	819	819	816	807	804	806	802	798	801	813	816	817	821	823	821	820	815	813	811	807
28	810	812	810	793	762	761	773	777	779	775	774	765	785	788	802	806	831	834	843	827	818	753	797	795	795
29	780	768	753	735	727	756	774	775	800	815	831	845	821	807	816	830	850	839	826	825	817	815	808	806	801
30	803	784	722	740	767	792	802	808	813	815	807	798	791	786	793	813	820	813	809	811	812	811	810	802	797
Mean	801	803	801	803	797	804	809	817	819	813	807	802	799	796	799	805	807	812	816	826	833	827	820	814	810

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

28 LERWICK

JUNE, 1937

Day	Terrestrial Magnetic Elements																		HR <sub>H</sub> +VR <sub>V</sub> 10,000γ <sup>2</sup>	Magnetic Character of Day (0-2)	Temperature in Magnet House 200 +			
	Horizontal Force						Declination						Vertical Force											
	Maximum 14,000 γ +		Minimum 14,000 γ +		Range		Maximum 12° +		Minimum 12° +		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	γ	h	m	γ	687	1	84.1	
2	19	57	481	368	11	20	113	13	23	58.7	39.3	3	2	19.4	16	50	840	728	0	0	112	463	1	83.1
3	15	52	465	371	10	44	94	15	33	55.6	36.8	6	7	18.8	16	26	827	757	3	18	70	583	1	82.0
4	19	0	457	393	10	20	84	13	18	56.8	37.9	6	37	18.9	18	40	824	719	1	37	105	434	1	81.7
5 D	18	52	496	390	10	24	106	14	50	59.8	37.1	7	16	22.7	18	17	843	783	13	8	60	271.3	2	81.3
6 D	15	5	567	-144	23	37	711	0	22	62.8	-5.5	23	36	68.3	17	39	897	536	23	26	361	3998	2	82.0
7	15	29	713	-19	2	16	732	15	30	64.5	16.9	3	38	47.6	13	55	1007	378	2	22	629	1206	1	82.5
8	14	58	496	318	0	14	178	14	38	57.6	36.3	7	15	21.3	15	43	925	722	0	24	203	774	1	83.9
9 Q	19	36	486	358	9	16	128	13	44	59.5	39.5	6	53	20.0	20	5	835	709	23	52	126	643	1	84.9
10	20	43	448	369	10	5	79	14	34	55.8	37.3	6	34	18.5	7	50	824	711	0	10	113	355	1	85.1
11 Q	5	6	466	366	8	13	100	13	18	56.5	33.0	6	3	23.5	17	2	836	791	9	48	45	426	1	85.1
12 Q	19	25	455	390	11	9	65	13	15	55.2	37.3	5	25	17.9	14	40	830	759	1	37	71	278	0	85.2
13 D	18	54	465	376	10	51	89	14	29	52.8	40.7	6	25	12.1	6	57	826	794	13	30	32	636	1	85.7
14	16	51	523	341	10	38	182	13	4	62.1	34.7	8	48	27.4	18	25	806	806	4	25	80	352	1	86.1
15	19	0	483	372	6	25	111	1	54	53.8	27.4	6	19	26.4	6	27	848	807	2	12	41	351	1	86.0
16	22	25	466	349	11	37	117	12	4	56.4	36.8	6	14	19.6	6	59	830	791	13	2	39	820	1	85.8
17	19	46	486	375	1	27	111	0	38	56.4	31.7	2	3	24.7	22	6	838	697	1	37	141	1074	1	85.3
18	18	37	505	318	1	34	187	1	16	62.2	35.1	8	15	27.1	19	38	851	679	1	37	172	414	0	84.7
19 Q	17	44	473	377	9	19	96	13	50	53.6	33.4	6	12	20.2	15	2	842	783	12	42	59	367	0	84.2
20 D	18	50	483	371	10	10	112	14	35	52.7	34.8	6	35	17.9	19	17	831	787	0	1	44	1305	1	84.5
21	18	45	562	348	23	55	214	19	4	64.4	30.6	7	15	33.8	18	10	892	679	6	40	213	858	1	85.3
22	20	46	500	304	1	33	196	14	17	51.3	27.8	2	47	23.5	20	35	842	719	1	27	123	932	1	86.0
23	18	20	580	313	10	28	267	18	24	63.4	37.0	6	38	26.4	15	5	888	771	23	33	117	448	1	85.4
24	19	9	455	362	8	45	93	12	38	57.4	35.5	5	22	19.9	5	23	820	753	0	42	67	777	1	85.0
25	15	20	542</																					



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

29 LERWICK (H)

14,000 γ (·14 C.G.S.unit) +

JULY, 1937

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	Mean
Day	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
1	431	432	423	412	421	418	410	402	392	378	377	391	409	435	415	421	438	445	459	467	468	446	433	422	423
2	414	414	412	418	426	422	412	400	389	374	374	377	388	402	420	451	463	459	483	492	465	441	428	414	422
3 Q	412	414	406	414	432	431	422	394	378	377	374	375	377	393	411	427	437	447	456	457	450	439	437	430	416
4	432	430	424	426	429	424	417	409	399	396	398	399	407	424	423	439	441	448	457	459	456	448	449	452	429
5	458	457	449	444	436	436	433	422	409	386	383	388	399	429	429	461	484	486	471	482	474	472	469	468	443
6	457	446	432	433	433	430	424	413	405	405	410	419	435	454	489	487	574	532	503	495	463	430	397	379	448
7	343	323	378	424	413	409	395	395	386	373	370	383	388	415	420	426	432	444	451	476	466	450	437	429	410
8 Q	426	428	429	430	429	427	420	410	395	382	377	387	392	403	419	441	447	446	462	474	471	458	445	441	427
9	437	435	436	438	435	435	432	417	398	376	364	377	394	422	500	439	454	462	472	480	474	471	424	368	431
10	290	208	373	377	376	405	419	421	404	377	363	363	371	389	413	427	436	447	457	458	454	444	438	435	398
11	435	433	435	437	434	426	420	411	398	386	383	386	399	414	432	491	467	502	512	536	495	457	409	324	434
12	248	375	412	443	449	443	433	419	401	388	375	371	375	388	405	424	443	452	462	456	445	435	432	432	413
13	432	432	431	435	435	429	419	414	402	388	378	387	373	389	395	435	457	473	478	474	468	466	453	419	426
14 D	438	441	446	434	406	411	411	385	368	364	385	412	453	524	608	889	840	720	622	519	458	439	421	415	492
15	411	398	394	418	426	419	410	408	393	357	340	335	349	378	419	448	501	467	489	483	456	431	423	415	415
16	410	412	410	414	423	422	417	403	390	378	372	377	394	417	443	449	437	482	454	459	466	447	436	435	423
17	430	431	418	422	430	423	407	410	395	377	371	373	388	406	408	420	438	448	455	462	461	454	441	430	421
18	424	423	428	430	434	430	418	407	394	381	376	377	388	407	427	442	448	454	462	493	468	460	452	447	429
19 D	443	441	443	442	439	433	416	398	393	389	386	383	389	435	420	461	515	563	558	612	508	466	456	432	451
20 D	414	419	445	411	390	415	415	410	395	376	379	388	386	398	411	431	437	440	444	443	440	438	436	438	416
21	440	438	438	438	434	427	423	417	402	387	395	410	410	419	421	437	449	463	484	486	474	464	439	427	434
22 D	409	389	395	254	336	311	306	308	335	368	337	388	445	464	523	548	564	534	478	471	461	326	340	403	401
23	408	384	393	394	406	384	385	373	371	387	383	392	401	410	424	470	457	476	551	479	447	420	419	424	418
24 D	195	77	117	284	365	364	350	363	366	349	342	345	386	391	410	423	417	438	519	508	472	424	415	393	363
25	197	371	412	392	333	381	406	401	383	354	356	360	366	399	477	466	507	508	495	485	436	426	415	397	405
26	394	381	407	388	370	381	389	371	359	369	366	366	383	419	432	468	471	449	448	446	438	432	429	424	407
27 Q	421	419	427	424	423	421	414	404	400	390	377	372	391	405	431	441	455	454	457	440	432	432	434	429	421
28 Q	423	423	424	422	419	413	402	397	393	384	374	375	373	389	406	427	429	432	440	442	449	445	431	424	414
29 Q	422	423	425	429	428	423	413	401	390	388	381	380	389	404	409	418	435	452	452	461	460	443	430	426	420
30	424	423	424	427	433	430	416	402	392	390	383	385	394	419	429	437	432	433	446	450	454	449	435	433	423
31	432	434	435	438	440	435	425	417	407	402	397	395	399	407	427	435	460	488	475	465	457	449	450	454	434
Mean	398	399	408	413	415	415	409	400	390	380	375	380	393	414	435	461	473	476	480	478	461	442	431	421	423

## MAGNETIC DECLINATION (WEST)

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

30 LERWICK (D)

12° +

JULY, 1937

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	Mean
Day	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
1	49.8	44.9	39.7	39.3	39.5	40.3	42.1	42.8	44.3	42.7	43.3	45.6	49.7	54.6	50.9	50.8	50.5	50.0	50.6	49.3	44.9	48.9	46.9	47.1	46.2
2	46.2	46.7	45.8	44.2	42.2	41.0	39.7	39.5	39.9	41.9	44.0	47.4	50.4	51.8	51.4	51.1	49.4	49.3	51.4	46.7	48.0	49.1	48.4	43.8	46.2
3 Q	42.2	40.8	39.3	36.9	36.6	38.4	38.7	40.2	43.6	46.9	46.7	48.8	51.7	53.1	52.4	51.3	50.3	49.5	48.6	48.1	48.4	47.9	45.6	45.5	45.5
4	45.4	44.5	42.8	42.1	40.3	39.1	38.1	37.5	38.4	40.4	43.3	47.0	49.8	53.0	53.4	52.2	51.2	51.0	51.2	50.7	49.5	48.3	46.5	45.7	45.9
5	45.7	45.4	45.7	45.2	46.0	46.2	40.1	38.4	40.3	43.2	47.3	50.3	55.2	58.2	57.5	54.5	53.3	53.2	53.1	52.9	51.4	50.9	49.0	47.6	48.8
6	46.5	45.3	44.2	42.7	41.5	41.0	41.1	41.4	42.7	43.6	47.0	51.5	54.9	58.6	56.7	54.5	52.7	49.5	52.3	53.8	54.5	51.8	47.2	41.5	48.2
7	40.3	32.7	34.2	34.8	34.5	31.9	33.0	38.9	40.8	45.3	48.9	52.9	55.1	57.7	55.7	52.9	51.7	51.1	48.4	48.7	49.8	44.7	48.3	47.9	45.0
8 Q	45.7	44.4	43.6	42.8	41.5	40.9	41.5	40.6	39.6	42.4	46.5	49.5	51.8	54.2	55.2	54.6	52.8	51.7	50.8	49.8	47.0	47.4	47.5	48.1	47.1
9	46.8	45.2	44.6	43.6	43.9	42.7	41.4	38.9	38.5	39.9	44.8	49.1	52.7	56.7	60.0	58.3	55.4	52.2	50.6	51.0	51.4	52.7	51.4	49.1	48.4
10	42.9	46.0	41.9	42.7	45.2	37.1	36.2	35.9	38.0	41.0	45.4	49.1	50.7	51.7	51.9	51.8	50.4	48.5	47.5	47.5	47.5	47.3	46.9	46.3	45.4
11	45.7	45.8	44.0	42.2	40.2	39.0	37.4	38.5	39.8	43.9	47.9	51.9	55.6	58.6	59.5	59.2	55.3	53.9	50.9	48.7	47.5	50.0	47.3	45.2	47.8
12	50.4	44.5	39.7	36.4	37.6	38.0	37.2	37.3	38.8	42.3	46.4	50.3	53.7	56.0	56.5	54.6	51.5	48.2	46.9	46.5	46.0	46.1	46.3	45.6	45.7
13	45.1	45.2	43.5	42.2	39.8	37.6	35.7	36.7	37.5	41.0	44.7	49.1	53.6	55.9	55.0	52.8	51.0	49.5	49.6	49.8	50.6	51.2	50.6	46.7	46.4
14 D	47.3	46.4	47.2	47.5	48.7	42.9	40.5	37.9	39.7	43.8	48.4	49.2	54.2	56.5	55.0	56.7	58.7	54.7	54.2	54.5	50.9	53.5	51.7	50.0	49.6
15	51.4	49.9	44.7	41.8	38.3	37.9	40.4	39.2	38.0	41.3	46.3	50.0	53.0	55.4	55.6	52.7	48.5	46.9	48.8	49.4	49.5	48.3	51.1	48.7	47.0
16	47.4	46.8	45.9	44.2	40.7	38.2	36.0	35.7	36.9	40.1	43.7	48.3	53.4	54.7	52.1	50.7	50.7	51.6	48.4	49.0	49.0	47.1	48.7	49.7	46.2
17	48.5	48.4	45.6	41.2	38.2	38.5	40.2	39.0	38.6	41.4	44.7	48.7	52.4	53.6	52.9	52.5	52.1	50.5	48.7	48.6	48.8	48.7	47.3	46.5	46.5
18	44.7	43.3	42.2	41.2	40.3	38.2	36.9	37.5	39.5	42.2	46.7	50.5	53.6	55.4	56.6	55.9	53.5	50.9	49.9	49.7	47.6	49.2	49.6	47.9	46.8
19 D	46.6	45.4	44.2</																						

TERRESTRIAL MAGNETIC FORCE: VERTICAL COMPONENT  
Mean values for periods of sixty minutes ending at the hours of Greenwich Mean Time

31 LERWICK (V)

46,000 γ (-46 C.G.S.unit) +

JULY, 1937

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	Mean
Day 1	800	785	780	786	792	796	799	800	799	794	789	785	792	801	831	826	816	808	806	811	818	813	811	807	801
2	806	796	786	783	797	802	807	810	811	806	800	799	797	797	799	815	834	842	833	828	810	810	800	774	806
3 Q	779	778	774	769	783	800	806	808	803	797	796	795	789	786	790	799	804	808	810	813	813	813	811	813	797
4	811	810	809	807	808	813	811	813	811	806	801	796	792	793	795	799	802	805	804	804	805	807	807	807	805
5	805	807	809	808	806	794	797	804	802	796	796	797	797	801	818	817	815	826	825	815	811	807	807	807	807
6	811	815	818	816	818	814	810	811	805	797	798	808	820	840	879	934	976	963	916	882	858	826	790	758	840
7	716	724	714	762	795	799	797	816	799	805	806	802	805	806	812	819	820	816	819	821	824	828	823	823	797
8 Q	820	820	820	819	819	820	818	814	814	820	818	811	814	816	818	824	836	835	828	824	830	832	827	816	821
9	814	818	818	818	814	808	804	813	812	806	807	802	806	811	814	852	847	852	850	843	839	828	799	727	817
10	650	657	640	655	662	697	787	794	807	821	829	824	816	813	813	816	820	823	821	819	818	816	814	813	771
11	812	812	814	815	815	814	809	810	813	809	803	803	804	808	817	837	891	895	902	891	885	851	799	725	826
12	653	693	745	786	808	819	824	828	830	824	815	804	801	807	810	813	814	820	822	821	818	816	812	810	800
13	810	810	813	814	817	818	819	817	818	818	817	810	804	802	795	797	815	827	830	833	832	825	817	803	815
14 D	809	814	813	809	784	719	726	760	774	783	805	828	851	878	954	998	928	963	909	845	872	856	838	824	838
15	812	770	755	789	815	817	823	827	833	835	833	836	824	824	830	853	878	885	864	864	845	830	820	817	828
16	822	820	820	820	825	829	832	833	828	829	834	825	819	823	833	847	835	827	837	832	827	833	824	818	828
17	817	810	805	798	810	809	799	792	798	804	803	799	800	796	799	805	808	807	805	809	813	815	818	818	806
18	817	817	813	814	815	817	815	817	821	819	814	808	803	795	796	796	799	803	810	820	833	828	815	815	813
19 D	815	814	813	814	815	817	817	817	810	798	797	789	784	783	789	790	794	808	840	878	845	849	862	835	816
20 D	777	755	798	779	757	774	805	810	817	811	810	809	814	818	815	812	817	819	813	810	807	807	809	810	802
21	811	812	811	813	814	815	811	811	809	806	810	813	813	817	827	833	832	835	831	826	829	824	814	811	818
22 D	774	681	626	629	678	656	676	723	777	817	834	850	866	890	921	926	930	926	895	865	829	733	700	766	790
23	801	791	756	779	807	808	796	792	790	792	800	809	815	827	821	819	851	867	848	867	850	823	812	777	812
24 D	677	567	513	641	759	789	790	799	826	843	851	850	856	872	872	877	870	853	866	894	871	838	823	793	799
25	671	625	793	793	772	761	793	816	824	830	817	811	812	810	840	888	888	870	861	799	763	775	792	758	802
26	755	758	788	805	806	800	814	822	823	808	807	807	804	818	848	866	853	834	822	819	822	816	811	812	813
27 Q	811	809	811	817	821	820	220	817	811	808	812	811	805	806	804	814	815	822	828	835	826	819	813	808	815
28 Q	791	794	808	813	817	820	816	811	811	808	811	808	801	794	794	798	812	818	816	814	809	808	807	807	808
29 Q	807	807	809	811	814	816	816	816	809	802	805	800	795	803	811	812	813	817	824	822	820	821	814	811	811
30	806	800	800	809	812	817	819	820	812	811	815	811	798	787	791	802	815	816	812	813	814	815	813	811	809
31	809	808	809	809	810	812	815	816	814	804	800	798	795	802	802	812	826	844	848	843	837	827	818	806	815
Mean	783	773	777	786	795	796	802	807	810	810	811	810	809	814	824	835	840	843	838	834	828	819	810	799	811

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

32 LERWICK

JULY, 1937

Day	Terrestrial Magnetic Elements																		HR <sub>H</sub> +VR <sub>V</sub> 10,000 <sup>a</sup>	Magnetic Character of Day (0-2)	Temperature in Magnet House 200° +			
	Horizontal Force						Declination						Vertical Force											
	Maximum 14,000 γ +		Minimum 14,000 γ +		Range		Maximum 12° +		Minimum 12° +		Range		Maximum 46,000 γ +		Minimum 46,000 γ +		Range							
1	h	m	γ	h	m	γ	h	m	γ	h	m	γ	h	m	γ	h	m	γ	548	1	84.7			
2	19	46	508	368	9	41	140	13	35	52.5	38.2	6	11	14.3	17	26	846	766	23	14	80	576	1	85.0
3 Q	19	2	460	370	10	34	90	13	40	53.7	35.4	3	59	18.3	19	33	814	765	3	9	49	359	1	85.1
4	19	38	464	395	9	31	69	13	59	54.3	36.8	7	13	17.5	7	20	814	788	13	12	26	221	0	85.2
5	16	47	507	369	9	48	138	13	58	60.1	36.5	7	20	23.6	18	2	834	791	5	47	43	400	1	85.1
6	16	38	603	353	24	0	250	13	28	60.5	34.9	23	58	25.6	16	35	1018	735	23	59	283	1684	1	85.2
7	20	20	480	310	1	23	170	13	47	58.6	26.0	1	36	32.6	21	12	834	694	0	44	140	900	1	85.4
8 Q	19	52	479	375	10	20	104	14	23	55.5	38.7	8	2	16.8	16	47	841	811	11	49	30	290	0	85.6
9	14	34	572	325	23	57	247	14	32	62.6	37.4	7	55	25.2	15	10	860	701	23	48	159	1100	1	86.0
10	18	37	460	99	1	15	361	1	2	59.2	28.0	2	3	31.2	10	41	833	511	1	24	322	2027	2	86.3
11	19	26	559	112	24	0	447	15	0	61.2	36.6	6	34	24.6	18	20	910	560	23	57	350	2282	2	86.1
12	19	4	465	74	0	6	391	14	17	57.0	35.0	3	11	22.0	8	16	832	561	0	1	271	1831	1	86.0
13	18	5	487	364	13	43	123	13	40	56.3	34.6	6	27	21.7	18	56	834	789	15	1	45	388	0	86.1
14 D	15	37	1048	344	9	48	704	19	45	76.9	35.9	7	27	41.0	15	35	1045	712	5	52	333	2572	2	86.0
15	16	29	517	325	11	57	192	14	4	56.6	36.7	4	16	19.9	17	23	892	734	1	58	158	1015	1	86.0
16	15	16	490	369	10	17	121	12	58	55.4	34.7	7	27	20.7	15	43	854	817	2	47	37	347	1	86.7
17	20	58	467	369	10	15	98	12	53	54.0	37.3	7	21	16.7	23	0	822	784	7	3	38	319	0	86.9
18	19	24	503	373	10	55	130	14	33	57.1	36.3	7	5	20.8	21	5	835	794	13	58	41	379	0	87.1
19 D	19	25	644	376	11	54	268	18	54	63.5	34.7	6	0	28.8	19	41	913	773	13	13	140	1041	1	87.4
20 D	2	53	459	357	4	8	102	14	24	57.5	31.5	6	54	26.0	8	25	826	726	1	18	100	615	1	87.9
21	19	27	499	376	9	27	123	14	15	57.4	38.8	4	28	18.6	17	57	839	800	9	43	39	360	1	87.8
22 D	16	57	577	202	21	43	375	16	0	60.5	27.0	1	40	33.5	16	56	941	581	2	57	360	2225	2	87.1
23	18	27	571	363	5	49	208	19	12	60.7	28.9	5	58	31.8	19	41	886	745	23	59				

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

33 LERWICK (H)

14,000 γ (·14 C.G.S.unit) +

AUGUST, 1937

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	Mean
Day	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
1	432	431	433	433	436	434	427	418	408	391	382	386	399	412	434	429	449	496	486	486	472	457	463	457	435
2 D	427	431	446	373	325	149	119	128	191	314	396	409	446	516	660	586	523	583	447	403	408	399	396	398	395
3 D	402	400	397	394	396	396	389	388	383	371	368	365	357	388	432	411	421	423	433	463	482	441	412	246	398
4 D	68	143	240	338	365	407	393	349	353	366	367	357	359	386	434	414	412	431	434	432	443	438	438	435	365
5	431	397	419	423	425	418	413	405	397	386	371	366	375	391	411	431	440	474	469	471	447	434	423	409	418
6	416	419	411	417	421	417	408	392	386	375	373	374	369	390	385	411	450	487	499	492	459	432	420	423	418
7	422	414	429	428	418	389	385	389	377	359	360	372	362	383	394	406	419	429	443	461	450	440	438	435	408
8	427	422	421	425	419	428	420	406	392	376	369	369	378	386	402	421	431	448	452	449	448	438	430	424	416
9	420	420	421	421	419	416	412	402	386	367	366	371	388	394	414	424	463	460	441	436	435	435	437	437	416
10	432	426	425	429	424	423	412	406	390	369	363	364	383	396	410	437	448	459	468	451	441	432	428	427	418
11	425	427	424	425	425	421	413	395	375	357	356	364	376	387	402	421	437	445	453	456	461	448	438	441	415
12	438	436	438	440	437	429	418	404	388	369	358	355	359	371	397	413	433	441	446	447	454	452	448	447	417
13 Q	443	433	432	428	430	429	417	401	384	372	366	369	378	401	419	433	437	434	437	434	439	443	445	445	419
14	443	443	438	438	437	435	425	412	396	379	374	372	375	392	408	421	431	437	452	457	460	457	454	444	424
15	444	453	429	434	432	398	391	399	401	399	395	397	388	412	423	427	431	434	438	446	443	439	435	436	422
16 Q	429	425	424	426	430	427	416	402	387	373	365	370	392	408	418	426	432	438	444	448	445	441	438	428	418
17	430	425	419	420	423	423	419	408	396	387	385	377	385	408	422	432	443	455	459	452	451	439	433	425	421
18	421	427	429	432	432	430	422	409	396	382	377	390	393	410	431	437	446	452	447	449	446	441	445	444	425
19	441	438	436	440	438	435	428	419	407	400	402	411	415	427	438	454	454	440	449	453	452	449	427	428	433
20	429	432	431	431	430	425	419	416	413	407	403	402	411	423	433	431	431	443	454	459	449	435	427	423	427
21	427	422	427	425	426	427	426	412	397	390	385	389	397	406	422	441	444	441	438	441	441	447	440	442	423
22 D	442	438	437	445	383	399	371	328	144	77	240	352	395	346	352	364	376	402	404	421	410	396	393	382	362
23	382	380	384	390	386	379	369	361	353	344	346	346	359	373	388	395	397	399	399	408	414	413	415	413	383
24 Q	409	407	406	405	403	398	393	384	372	355	347	349	362	380	386	398	403	416	419	427	428	424	421	419	396
25 Q	416	415	414	410	410	400	396	392	380	365	355	355	360	385	410	413	412	413	420	428	430	433	435	436	404
26	435	433	430	419	417	421	417	413	396	375	364	363	375	400	412	404	422	438	456	454	441	435	432	432	416
27 D	431	427	427	431	423	419	420	425	410	389	377	372	370	388	440	451	539	448	441	446	423	399	395	340	421
28	396	407	412	413	418	414	414	415	409	385	360	367	375	373	397	429	431	428	437	440	434	431	432	428	410
29	425	406	395	401	397	405	406	397	381	364	369	378	386	395	409	406	419	428	432	435	437	436	436	425	407
30 Q	426	422	421	421	425	421	412	398	382	377	383	392	392	399	407	411	417	427	434	435	435	430	428	428	415
31	432	432	431	427	427	425	422	412	395	377	368	369	376	396	413	425	422	426	432	435	435	432	432	436	416
Mean	414	405	420	419	415	405	400	390	376	365	367	373	382	397	419	428	436	444	444	446	442	434	430	420	411

MAGNETIC DECLINATION (WEST)

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

34 LERWICK (D)

12° +

AUGUST, 1937

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	Mean
Day	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
1	47.6	42.8	42.3	41.5	40.4	37.4	37.7	37.4	40.1	43.8	46.9	50.0	51.7	52.3	51.8	50.2	47.5	46.5	47.4	47.3	46.2	48.6	51.7	51.8	45.9
2 D	42.7	39.7	47.8	52.7	52.7	45.2	40.5	49.3	43.7	42.5	49.2	52.8	53.4	53.3	56.7	55.4	54.8	54.9	52.5	51.4	51.8	50.2	46.8	44.5	49.4
3 D	43.6	44.4	41.9	41.7	38.9	37.9	36.8	36.0	43.8	45.8	48.2	49.7	49.7	51.5	52.7	51.5	51.3	49.7	48.2	49.2	50.3	41.5	40.2	35.2	44.5
4 D	9.5	40.7	19.2	30.7	34.9	33.6	37.7	37.9	40.6	42.3	44.0	47.7	50.1	51.2	51.5	49.6	47.2	44.0	44.5	45.4	47.2	47.4	47.4	47.5	41.3
5	49.0	43.9	41.5	40.8	40.1	39.3	38.6	37.7	38.0	40.1	43.0	48.0	51.4	53.8	52.2	50.0	48.2	46.9	44.5	43.6	46.0	47.2	45.3	44.1	44.7
6	43.7	45.4	46.7	41.9	39.0	36.7	37.1	38.5	40.9	42.0	46.8	48.1	52.4	52.9	51.0	48.3	46.7	43.4	43.1	43.6	46.6	48.0	47.8	47.2	44.9
7	43.8	41.2	39.8	39.9	38.5	40.8	43.2	38.9	39.7	43.5	47.7	50.9	52.7	53.7	55.7	52.5	48.8	45.9	43.1	45.5	46.6	45.3	46.3	47.4	45.5
8	47.3	44.7	44.9	43.6	45.0	39.8	38.6	38.7	39.8	43.2	45.9	49.2	51.5	52.9	52.7	50.0	47.1	44.8	44.4	45.2	46.1	46.7	45.9	45.6	45.4
9	45.4	44.4	43.2	41.8	38.8	37.4	35.0	34.5	35.7	40.7	45.2	49.8	53.4	54.5	54.1	50.4	48.5	44.7	43.2	44.4	45.7	46.4	46.9	46.4	44.6
10	46.8	46.6	46.3	45.2	44.4	40.2	39.7	38.3	39.5	43.7	48.4	53.7	57.1	56.8	56.6	52.1	47.0	43.6	43.9	44.7	45.9	47.1	47.0	46.9	46.7
11	46.8	46.5	45.5	43.3	41.5	38.9	37.5	36.5	37.7	43.5	48.6	52.7	55.7	56.2	54.9	52.2	49.8	47.5	45.5	45.7	46.9	47.3	46.1	46.4	46.4
12	45.0	44.2	43.5	42.4	40.0	37.8	37.0	36.7	38.2	42.0	45.9	50.2	52.9	55.5	54.4	50.6	48.9	47.2	47.0	47.6	48.9	47.9	46.7	47.3	45.7
13 Q	46.2	45.2	43.2	41.5	40.9	38.5	37.1	36.5	38.6	41.9	45.7	50.5	55.2	57.4	55.5	51.7	48.2	47.0	48.4	48.4	47.7	47.5	46.7	46.1	46.1
14	45.3	45.9	45.5	43.6	41.5	38.5	36.6	37.6	39.6	42.6	45.6	49.5	52.5	52.7	51.7	49.4	47.6	47.5	48.6	49.6	49.8	48.5	48.3	46.4	46.0
15	45.5	43.7	40.8	37.6	38.1	38.8	46.8	44.0	43.1	43.4	45.7	48.8	51.1	50.5	50.0	48.7	46.6	46.1	45.2	45.8	45.9	45.5	46.6	44.7	45.1
16 Q	44.2	43.8	43.0	41.6	40.6	39.9	38.5	37.6	37.8	39.9	45.4	49.8	51.9	51.6	49.2	47.5	45.7	45.5	46.4	47.6	48.3	48.3	45.7	46.1	44.8
17	45.2	43.8	41.4	40.0	40.1	39.1	37.6	39.4	38.9	41.1	45.6	50.0	52.6	52.3	50.1	47.3	45.1	45.5	46.8	48.1	48.5	48.6	48.0	45.5	45.0
18																									

35 LERWICK (V)

46,000 γ (·46 C.G.S.unit) +

AUGUST, 1937

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	Mean
Day 1	783	794	807	812	809	811	812	814	813	804	805	799	801	809	813	824	827	829	843	842	842	833	819	811	815
2 D	769	795	794	698	569	602	681	667	706	783	809	859	870	895	965	907	941	930	898	864	837	825	822	825	804
3 D	816	809	809	814	812	816	822	826	827	826	819	823	828	833	838	837	821	814	814	816	828	795	780	666	812
4 D	573	733	561	647	660	710	765	800	813	833	838	834	830	832	856	877	861	853	843	833	822	822	822	821	785
5	798	771	814	822	824	821	820	818	820	814	813	811	807	806	810	817	822	829	838	844	838	824	817	807	817
6	795	799	794	807	815	822	822	821	816	816	814	816	818	826	827	819	816	835	850	844	832	826	820	814	819
7	813	804	811	817	818	818	797	796	801	805	797	802	811	809	806	808	819	834	838	831	827	821	813	813	813
8	802	803	807	806	802	800	817	817	817	811	810	812	816	824	826	830	832	831	832	827	822	819	816	816	816
9	816	816	819	822	828	822	819	816	809	816	809	806	807	814	807	808	813	834	842	831	821	813	810	807	817
10	807	810	812	814	817	814	816	813	811	816	806	801	803	817	824	837	838	851	850	846	838	828	821	816	820
11	811	806	810	816	822	822	823	827	824	819	812	803	803	802	799	799	808	818	824	821	816	810	812	809	813
12	811	811	811	813	815	816	816	815	816	811	805	802	799	803	804	809	807	809	809	811	809	810	812	806	810
13 Q	799	804	806	810	804	801	807	812	811	808	802	794	793	797	803	804	812	815	808	808	809	809	809	808	806
14	809	807	807	806	809	812	815	816	816	808	803	797	795	798	804	811	811	811	804	806	805	806	807	809	807
15	805	788	775	776	784	794	775	767	783	794	798	798	799	800	809	813	819	820	818	816	819	815	812	808	799
16 Q	806	806	808	811	811	811	814	815	815	812	808	805	804	812	817	817	816	816	813	811	811	810	810	808	811
17	805	804	806	806	806	804	805	808	805	805	802	805	803	807	815	817	824	827	827	823	821	819	812	804	811
18	799	798	805	809	811	809	807	811	812	809	804	799	803	803	809	819	817	810	807	806	809	811	809	809	808
19	811	809	805	803	806	809	807	806	805	799	793	790	795	803	812	817	828	833	821	815	813	788	784	803	806
20	811	811	812	811	811	812	811	804	802	803	805	806	802	804	807	813	814	812	809	813	819	822	817	809	810
21	797	801	800	803	805	799	795	795	795	795	795	797	795	799	811	816	821	819	814	808	805	808	808	803	803
22 D	810	811	811	806	797	667	677	705	777	734	738	780	816	863	832	836	848	847	839	845	841	836	827	820	798
23	818	825	816	830	841	843	841	834	829	827	827	829	833	837	834	836	835	831	828	825	821	822	821	822	829
24 Q	826	827	828	831	833	832	828	827	823	824	819	815	820	827	831	829	832	830	832	827	821	818	818	817	826
25 Q	818	820	822	826	827	828	823	819	817	817	819	821	821	820	821	824	826	822	817	816	816	812	811	810	820
26	810	809	809	814	815	816	814	809	811	811	801	792	790	799	809	813	812	821	838	846	839	827	813	807	814
27 D	807	803	802	803	809	800	798	795	804	808	807	808	811	809	826	866	905	895	860	866	834	799	773	652	814
28	734	758	779	798	817	820	816	812	814	817	827	837	858	838	821	823	838	838	825	817	817	797	814	805	814
29	800	798	748	729	766	795	814	823	823	823	822	821	819	816	822	827	823	824	826	825	821	820	812	809	809
30 Q	811	805	805	809	811	812	816	818	817	814	813	808	806	809	812	814	816	815	812	813	814	816	816	815	812
31	814	809	811	811	813	816	817	819	822	822	813	805	804	805	811	815	817	811	808	809	812	813	814	812	813
Mean	796	801	797	799	799	799	803	804	808	809	808	809	812	817	822	825	830	831	828	826	822	816	811	801	811

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

36 LERWICK

AUGUST, 1937

Day	Terrestrial Magnetic Elements															HR <sub>H</sub> + VR <sub>V</sub> 10,000γ <sup>2</sup>	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 12° +		Minimum 12° +		Range	Maximum 46,000 γ+		Minimum 46,000 γ+		Range						
1	h	m	γ	γ	h	m	γ	h	m	γ	h	m	γ	γ	h	m	γ	525	1	86·1	
2 D	18	7	510	373	10	43	137	23	54	54·5	35·7	7	38	18·8	18	45	848	778	0	46	70
3 D	14	53	768	43	5	34	725	3	26	74·3	26·2	5	56	48·1	14	47	992	543	4	34	449
4 D	20	52	501	89	24	0	412	20	53	56·2	19·2	24	0	37·0	14	39	843	476	24	0	367
5	20	27	469	-370	1	37	839	1	48	71·6	-5·1	1	58	78·7	15	27	882	474	0	2	408
6	17	45	488	361	11	6	127	13	37	54·5	36·8	8	0	17·7	19	48	848	744	1	9	104
7	19	45	509	360	12	37	149	12	31	53·7	35·5	6	10	18·2	18	23	853	788	2	18	65
8	19	20	466	340	12	10	126	14	24	56·6	36·2	5	3	20·4	18	7	842	793	10	58	49
9	18	33	454	366	10	23	88	14	6	53·7	38·1	7	10	15·6	18	25	833	793	4	58	40
10	16	35	474	358	9	59	116	13	21	55·4	33·7	7	48	21·7	18	10	844	803	14	54	41
11	16	15	478	358	11	15	118	12	23	57·7	37·7	7	44	20·0	17	4	854	799	12	11	55
12	20	38	466	352	10	15	114	13	21	56·6	36·1	7	37	20·5	7	45	828	797	14	59	31
13 Q	20	42	460	353	11	28	107	13	29	56·4	36·0	7	53	20·4	6	5	819	799	12	7	20
14	0	1	449	364	10	28	85	13	25	57·7	35·1	7	13	22·6	17	38	816	789	12	24	27
15	20	50	472	369	11	13	103	13	22	53·3	35·5	6	27	17·8	6	42	816	794	12	13	22
16 Q	1	14	459	378	6	0	81	11	59	51·8	36·5	5	27	15·3	16	45	821	762	7	10	59
17	19	55	451	362	10	57	89	12	45	52·6	37·1	7	12	15·5	14	55	819	803	12	11	16
18	18	32	461	373	11	39	88	12	56	52·7	36·8	6	50	15·9	17	55	829	800	10	41	29
19	19	57	461	374	10	18	87	12	7	53·3	36·8	7	0	16·5	16	2	821	795	1	7	26
20	16	16	476	398	10	15	78	12	25	50·8	38·8	7	18	12·0	17	4	843	777	22	6	66
21	19	20	464	399	11	17	65	13	44	51·8	39·6	6	55	12·2	21	13	826	801	9	24	25
22 D	21	20	460	379	11	7	81	12	35	53·7	33·9	5	58	19·8	16	47	822	790	0	20	32
23	3	14	457	30	9	33	427	10	3	69·5	5·1	8	25	64·4	13	19	895	644	5	23	251
24 Q	22	42	420	339	10	0	81	13	26	50·8	35·4	7	5	15·4	5	25	845	811	2	23	34
25 Q	20	12	432	343	10	28	89	12	37	52·5	38·5	6	54	14·0	4	41	833	813	11	33	20
26	23	42	438																		

TERRESTRIAL MAGNETIC FORCE: HORIZONTAL COMPONENT

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

37 LERWICK (H)

14,000 γ (.14 C.G.S.unit) +

SEPTEMBER, 1937

Table with 24 columns (0-1 to 23-24) and 25 rows (Hour G. M. T. 1 D to 30 D). Includes a 'Mean' row at the bottom. Values range from approximately 366 to 444.

MAGNETIC DECLINATION (WEST)

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

38 LERWICK (D)

12° +

SEPTEMBER, 1937

Table with 24 columns (0-1 to 23-24) and 31 rows (Hour G. M. T. 1 D to 30 D). Includes a 'Mean' row at the bottom. Values range from approximately 37.7 to 55.4.

TERRESTRIAL MAGNETIC FORCE: VERTICAL COMPONENT  
 Mean values for periods of sixty minutes ending at the hours of Greenwich Mean Time

39 LERWICK (V)

46,000 γ (·46 C.G.S.unit) +

SEPTEMBER, 1937

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	Mean	
Day	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
1 D	810	811	813	813	814	818	819	816	815	814	805	799	800	805	815	823	832	829	818	826	826	816	794	784	813	
2	766	781	802	804	806	814	816	815	814	810	810	804	802	803	810	814	813	809	807	807	808	809	810	810	806	
3 Q	812	813	807	805	803	800	800	804	804	801	792	786	793	803	809	814	815	809	807	807	805	804	804	806	804	
4	807	809	810	814	803	782	775	792	806	808	804	797	793	799	813	828	835	833	824	826	826	813	811	807	809	
5	798	743	736	766	794	809	807	811	811	807	802	800	807	805	806	812	818	818	815	815	812	806	805	802	800	
6	804	809	810	807	807	809	809	805	803	804	804	798	792	798	811	825	822	843	840	831	814	798	796	796	810	
7	798	804	807	806	812	811	808	807	804	799	795	791	792	802	816	829	828	822	818	815	816	813	812	809	809	
8	804	804	811	813	815	815	815	815	814	809	802	799	798	800	804	816	821	813	815	820	814	811	814	809	810	
9	807	807	808	806	800	806	812	814	811	805	800	791	786	791	795	802	812	815	815	811	808	809	785	795	804	
10 D	798	802	804	806	805	803	804	804	805	804	800	793	786	787	790	794	802	810	801	809	835	810	792	791	801	
11 D	671	557	580	555	656	702	721	780	811	827	842	847	860	853	853	865	875	865	843	831	825	815	804	810	777	
12 Q	814	814	814	815	819	821	825	825	825	822	822	823	818	820	826	830	828	827	826	821	821	821	816	816	808	821
13	802	805	795	796	803	809	809	814	812	809	817	826	824	828	841	846	833	818	820	827	828	790	736	764	811	
14 D	783	781	785	799	803	794	791	795	806	815	823	830	822	815	819	822	817	818	820	821	826	827	822	792	809	
15	742	710	781	791	797	798	804	805	809	810	812	815	811	805	809	811	812	812	811	811	811	811	812	814	800	
16	815	815	815	814	812	813	812	811	801	795	803	809	810	816	825	829	841	856	856	832	828	817	814	812	819	
17	796	795	776	749	769	751	757	784	799	811	811	807	804	804	808	818	820	813	812	827	817	812	811	812	798	
18	813	811	798	778	788	801	807	810	812	812	810	805	802	804	806	816	843	872	867	846	822	783	752	733	808	
19	729	748	792	800	800	808	814	818	821	823	822	822	825	834	837	826	820	816	813	815	815	814	810	814	810	
20	815	815	817	817	817	817	817	817	817	816	818	811	806	806	807	810	810	809	808	809	810	809	809	796	812	
21	736	716	755	771	791	801	809	812	811	810	809	807	807	807	810	814	815	816	815	812	809	811	776	792	796	
22	804	809	813	814	815	814	812	809	804	807	804	799	807	808	813	827	841	848	848	833	820	814	809	802	816	
23	802	802	788	796	809	813	809	807	809	809	802	804	804	812	823	822	833	837	832	831	830	781	754	738	806	
24	726	699	677	703	702	727	753	782	790	807	819	820	816	826	838	843	842	841	831	825	820	814	812	806	788	
25 Q	790	805	809	812	813	819	821	822	824	823	817	807	802	802	805	809	811	814	814	814	815	817	912	812	812	
26	808	802	797	805	810	813	815	822	818	816	816	816	813	813	819	835	851	840	829	820	816	813	812	805	817	
27	796	770	785	802	807	808	811	802	802	814	816	815	816	817	827	841	847	838	827	828	828	820	816	814	814	
28 Q	814	811	809	806	806	803	808	816	822	821	822	820	818	820	833	840	832	826	820	820	826	822	813	806	818	
29 Q	804	805	806	804	808	812	815	820	825	825	817	813	800	798	800	806	806	806	808	809	810	811	811	811	810	
30 D	813	813	811	811	810	810	814	816	819	817	815	805	799	798	798	807	821	884	874	813	857	761	728	747	811	
Mean	789	782	787	789	796	800	803	808	811	812	811	809	807	809	816	822	827	829	824	820	820	809	798	797	807	

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

40 LERWICK

SEPTEMBER, 1937

Day	Terrestrial Magnetic Elements															HR <sub>H</sub> + VR <sub>V</sub> 10,000γ <sup>2</sup>	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 12° +		Minimum 12° +		Range	Maximum 46,000 γ +		Minimum 46,000 γ +		Range									
1 D	h	m	Y	Y	h	m	Y	h	m	Y	h	m	Y	h	m	Y	h	m	Y	512	1	86-0		
2	15	18	499	364	10	16	135	12	57	54-8	31-6	22	24	23-2	16	15	842	774	24	0	68	407	0	86-0
3 Q	18	35	437	359	10	35	78	13	22	52-5	36-2	0	16	16-3	6	34	817	754	0	51	63	279	0	86-0
4	22	20	446	359	10	55	87	13	10	55-7	35-7	7	15	20-0	16	9	818	785	11	30	33	460	1	86-2
5	18	46	451	359	10	44	92	12	50	54-6	36-9	7	24	17-7	17	10	839	769	6	14	70	460	1	86-0
6	0	22	447	368	11	21	79	12	55	54-9	32-8	2	28	22-1	17	37	819	719	2	0	100	582	1	86-0
7	16	35	457	378	10	19	79	13	13	53-2	38-4	6	28	14-8	17	28	847	792	12	40	55	371	1	86-0
8	19	46	449	368	10	37	81	13	1	54-9	36-3	7	27	18-6	15	25	831	790	11	15	41	309	0	85-7
9	19	44	460	367	11	0	93	14	46	53-2	35-5	19	35	17-7	15	56	826	797	11	44	29	270	1	85-4
10 D	22	3	458	372	10	52	86	13	9	53-3	35-7	7	5	17-6	18	6	818	781	22	16	37	297	1	85-0
11 D	19	46	490	368	11	20	122	19	56	54-9	24-5	23	9	30-4	20	12	851	748	22	27	103	658	1	84-1
12 Q	16	36	528	55	1	34	473	6	10	60-8	4-8	1	28	65-6	16	25	891	488	3	36	403	2567	2	83-7
13	20	37	437	367	11	35	70	12	48	52-1	37-6	7	59	14-5	15	80	830	811	1	23	19	190	0	83-0
14 D	19	25	445	358	10	46	87	13	18	53-7	24-2	22	0	29-5	15	22	848	715	22	14	133	747	1	83-1
15	5	15	448	363	10	11	95	14	5	52-7	36-1	2	36	16-6	11	45	832	765	24	0	67	451	1	83-2
16	4	54	431	363	0	44	68	0	56	52-3	35-4	1	41	16-9	11	46	816	675	1	10	141	758	1	83-5
17	18	35	471	380	11	54	91	13	24	51-5	25-9	18	30	25-6	18	14	880	793	9	5	87	538	1	83-5
18	18	37	455																					

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

OCTOBER, 1937

41 LERWICK (H)

14,000 γ (·14 C.G.S.unit) +

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	Mean
Day	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
1	162	202	371	411	401	379	344	361	356	350	352	365	354	365	365	393	429	489	486	388	394	405	393	358	370
2	369	396	391	396	402	409	395	395	394	385	373	365	363	372	383	393	401	404	411	415	415	415	417	417	395
3	416	416	400	411	415	424	424	415	399	382	374	381	407	425	455	417	394	417	430	476	462	434	424	424	413
4 D	76	-29	-118	-101	-12	-59	-55	308	369	336	320	318	325	352	371	365	373	394	402	402	398	402	399	385	247
5	392	385	383	387	390	394	390	381	366	351	340	339	346	377	393	387	390	401	405	408	411	416	406	396	385
6	409	407	403	403	408	404	401	392	379	364	348	342	368	387	392	410	429	423	422	417	422	421	419	420	400
7	414	412	399	404	413	418	428	412	386	364	359	366	376	366	398	414	432	415	417	436	417	433	380	387	401
8 D	282	246	223	9	118	343	333	356	359	357	350	353	367	379	400	409	468	422	409	404	405	404	407	406	342
9 D	403	401	402	403	405	405	404	405	399	381	376	374	416	472	642	682	496	425	433	428	406	395	358	270	424
10 D	299	373	371	382	392	404	358	305	348	368	379	380	413	398	367	379	380	394	402	404	406	348	362	377	375
11 D	401	404	405	411	412	402	398	404	397	382	374	376	392	412	522	558	489	435	424	473	418	400	402	392	420
12	364	400	403	403	401	403	406	405	371	379	384	368	377	380	387	396	460	407	413	440	493	449	268	274	390
13	379	392	394	396	397	396	390	390	375	370	371	370	373	393	429	430	394	401	402	409	415	417	414	414	397
14	414	413	412	388	385	412	411	404	378	380	375	365	377	390	385	400	405	418	421	419	425	425	427	423	402
15	420	420	421	420	416	418	424	414	382	356	350	358	401	405	409	422	428	440	470	415	350	409	409	401	407
16	398	404	407	409	410	412	413	409	379	382	385	374	381	386	397	417	418	414	424	413	412	412	413	414	403
17 Q	413	412	411	410	409	409	410	409	400	392	388	388	390	398	404	412	417	414	413	416	420	428	415	409	408
18 Q	416	413	417	420	419	410	412	412	410	397	390	384	388	398	404	409	414	417	421	424	428	428	432	428	412
19	428	427	425	422	422	422	418	416	409	400	396	393	390	385	398	407	414	416	425	419	420	425	422	422	413
20 Q	420	419	420	419	420	417	417	416	409	396	388	385	393	394	401	404	409	415	420	423	424	426	426	425	412
21	425	425	426	426	427	427	428	420	413	400	393	387	387	398	404	411	418	400	411	414	413	407	410	405	411
22	409	416	416	418	420	417	422	419	406	397	383	383	374	402	388	408	413	419	425	419	412	392	405	417	407
23	398	347	395	418	420	410	422	415	383	358	361	362	374	424	403	422	431	472	407	412	400	274	-29	-118	357
24	-278	185	403	402	399	407	409	399	396	375	356	380	402	418	389	442	427	400	410	411	407	420	405	388	365
25	373	358	369	407	410	408	412	409	389	372	368	367	371	401	410	424	404	407	402	403	409	410	413	414	396
26	410	401	371	366	364	406	397	341	367	354	372	368	366	371	386	409	409	422	426	411	398	409	394	388	388
27	375	392	382	397	385	404	411	412	371	361	355	390	408	406	457	471	413	390	396	402	414	411	372	354	397
28	398	390	381	401	412	412	401	403	391	380	378	356	369	381	390	390	409	415	421	420	414	380	377	406	395
29 Q	412	408	408	409	417	427	422	413	404	396	385	376	377	386	398	401	406	416	413	418	418	417	417	412	407
30 Q	414	410	411	414	416	417	415	408	402	385	378	378	383	388	396	400	408	415	419	421	423	419	414	412	406
31	409	413	417	421	425	428	425	420	406	390	380	378	386	392	398	404	412	419	420	421	417	418	416	420	410
Mean	355	370	378	377	385	393	390	396	387	375	370	370	380	394	410	422	417	417	419	419	415	408	387	375	392

MAGNETIC DECLINATION (WEST)

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

42 LERWICK (D)

12° +

OCTOBER, 1937

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	Mean
Day	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
1	18.6	34.4	38.8	41.4	39.5	42.4	52.3	44.6	39.9	43.6	48.0	50.6	50.5	51.0	49.4	45.8	45.2	48.3	44.1	34.2	38.2	42.2	42.9	39.9	42.7
2	38.4	40.8	40.5	42.6	41.5	39.6	38.3	38.4	40.3	38.2	41.6	44.7	46.6	48.8	48.9	46.6	44.0	43.6	44.4	44.7	44.6	44.1	43.8	43.5	42.9
3	43.5	43.4	45.2	41.4	41.4	41.6	42.1	41.8	40.6	40.5	44.6	48.2	51.6	56.9	55.2	54.9	52.9	49.9	50.1	53.8	48.9	49.3	42.6	46.7	47.0
4 D	25.9	11.9	-26.1	13.9	24.9	28.9	51.9	52.9	38.2	41.1	41.8	44.0	44.7	44.1	45.2	43.8	43.8	45.4	46.1	46.5	44.9	44.5	42.5	38.5	36.6
5	40.0	40.1	40.1	39.9	39.8	39.0	38.6	38.2	38.4	39.9	42.8	45.6	48.5	50.9	49.1	46.9	46.9	47.1	46.7	45.8	45.7	44.5	44.5	44.7	43.5
6	42.0	39.9	39.7	41.4	41.5	40.2	39.9	38.1	37.3	40.5	44.9	48.6	53.0	53.7	52.6	49.6	45.5	45.1	47.4	45.2	43.9	43.3	44.5	44.6	44.3
7	43.9	44.0	45.5	43.1	41.4	41.2	40.7	39.7	42.0	41.6	44.1	49.5	53.4	53.0	52.3	49.0	47.7	44.4	43.0	47.9	42.6	38.4	40.3	37.8	44.4
8 D	38.2	31.6	18.4	24.4	33.9	48.4	50.4	38.7	40.1	41.7	43.1	45.3	47.1	47.6	47.9	46.3	36.5	36.6	44.7	46.0	45.1	44.3	42.2	42.6	40.9
9 D	42.9	42.9	42.3	42.0	41.6	41.2	40.3	40.2	39.7	41.4	43.8	48.3	52.7	48.0	56.7	47.0	55.9	48.1	44.9	47.7	46.1	45.2	38.6	29.9	44.5
10 D	36.1	35.9	37.7	42.0	43.6	42.9	47.2	57.9	48.1	38.0	44.9	47.6	51.0	49.9	47.3	46.5	45.0	44.8	42.7	40.6	37.5	40.3	38.2	37.6	43.5
11 D	39.9	42.9	43.7	42.2	42.2	43.9	46.3	45.4	42.1	40.2	42.3	45.6	51.0	54.9	63.6	66.4	50.4	53.1	47.6	48.0	43.2	43.7	42.6	43.5	46.9
12	44.7	41.4	41.7	40.7	40.2	39.9	39.8	38.7	41.1	43.9	47.6	44.7	49.5	50.6	49.7	47.7	45.7	45.6	45.6	49.9	48.9	27.4	39.7	32.7	43.2
13	33.6	38.9	40.4	41.9	40.9	40.6	39.0	37.9	36.6	37.6	40.9	46.2	48.4	53.1	51.2	49.1	47.6	44.6	43.6	43.1	43.5	43.0	42.9	42.9	42.8
14	42.7	42.2	41.1	41.1	33.7	39.9	40.0	38.5	37.6	38.1	42.2	44.3	47.0	49.7	47.7	46.1	44.8	44.3	44.7	44.6	44.8	45.1	44.4	43.8	42.9
15	42.7	42.9	42.2	42.1	41.7	41.2	41.3	39.9	37.9	45.9	45.8	47.6	47.7	51.6	53.1	50.7	48.4	49.4	50.3	43.6	39.9	39.9	40.7	41.1	44.5
16	42.5	42.6	42.3	42.6	41.9	40.9	40.0	38.9	40.4	42.9	45.0	45.2	47.2	47.9	48.6	48.8	47.7	43.6	46.3	44.9	41.0	41.0	40.4	40.4	43.7
17 Q	41.3	42.4	40.5	40.4	41.4	40.8	40.4	40.7	39.5	39.7	42.5	45.7	47.7	48.2	47.6	47.5	45.6	44.7	44.7	43.6	43.8	42.9	40.9	41.9	43.1
18 Q																									

43 LERWICK (V)

46,000 γ (.46 C.G.S.unit) +

OCTOBER, 1937

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	Mean
Day 1	723	813	775	825	824	824	811	781	807	815	827	855	862	859	856	858	859	883	923	832	806	833	810	721	824
2	748	788	800	818	825	821	827	825	825	829	836	837	836	834	834	834	832	831	825	820	820	819	820	820	821
3	821	816	798	755	784	793	797	802	809	815	820	823	837	853	899	937	927	890	879	888	907	878	855	805	841
4 D	755	656	589	695	456	591	661	742	823	849	851	855	853	847	852	854	851	861	848	842	838	833	825	824	777
5	829	832	839	841	841	839	836	838	840	843	845	840	836	842	867	872	849	834	831	829	827	827	834	822	839
6	813	810	809	818	824	831	834	836	837	841	840	837	828	826	829	835	849	847	841	840	828	819	819	818	830
7	821	821	816	802	813	818	812	815	821	822	818	817	830	841	860	871	880	891	880	867	830	839	771	770	830
8 D	706	650	549	503	568	625	707	781	813	828	837	834	835	834	837	841	876	883	847	834	829	827	822	816	770
9 D	822	826	829	831	831	832	831	829	826	827	824	822	840	909	974	995	1023	961	903	856	834	831	829	841	864
10 D	769	768	807	818	807	819	807	758	757	810	838	867	881	880	867	853	845	851	856	845	799	722	757	818	818
11 D	792	818	824	825	821	822	815	819	828	837	840	836	833	835	846	937	920	883	879	887	892	856	839	825	846
12	802	817	828	829	830	829	825	822	829	823	830	828	828	825	826	827	827	825	824	821	857	826	783	746	821
13	773	798	815	824	829	832	832	837	843	852	852	849	854	850	858	869	848	831	830	828	827	827	827	828	834
14	828	827	824	800	740	757	792	812	831	834	834	836	835	834	832	831	829	827	828	832	831	830	827	826	820
15	826	825	824	821	819	819	817	820	835	840	839	842	874	875	871	877	886	901	915	866	767	835	840	832	844
16	817	813	825	826	828	828	827	827	831	829	831	836	838	837	837	844	857	873	869	858	846	840	830	823	836
17 Q	827	830	830	825	818	818	820	821	824	826	826	824	825	824	825	825	828	830	827	825	822	806	808	801	822
18 Q	776	793	813	818	818	818	814	814	814	819	823	825	824	823	825	824	822	819	817	816	817	818	818	820	816
19	821	822	825	824	823	820	819	819	821	824	821	823	828	827	824	825	828	827	826	829	824	818	819	820	823
20 Q	823	824	820	823	822	823	820	819	821	823	820	819	819	824	825	825	825	822	819	818	817	816	817	818	821
21	818	819	820	820	819	818	818	817	818	817	813	816	822	829	840	846	855	861	842	834	834	842	825	809	827
22	794	808	818	822	822	822	808	804	806	809	816	819	830	840	859	859	839	829	834	843	844	814	802	792	822
23	778	733	728	774	791	792	800	813	825	831	832	841	862	880	884	883	900	928	885	882	848	756	824	722	825
24	751	589	766	805	826	834	835	843	839	841	844	841	869	886	867	896	931	887	872	862	854	782	787	796	829
25	777	739	745	792	810	820	827	831	838	843	841	842	851	868	876	882	891	871	857	848	843	828	814	804	831
26	804	794	777	683	683	769	792	766	776	828	855	855	854	866	867	871	879	866	842	840	835	792	777	785	811
27	756	786	787	794	797	791	810	820	838	853	866	885	914	914	923	926	898	852	841	837	835	819	800	775	838
28	791	815	807	814	820	822	829	830	839	843	843	847	839	842	844	852	848	837	830	832	828	817	725	768	823
29 Q	799	812	812	817	818	817	819	824	832	837	840	844	844	844	848	855	839	832	838	835	832	829	828	824	830
30 Q	800	801	816	822	823	823	824	828	830	834	835	834	840	830	829	828	825	824	824	826	825	827	826	825	825
31	821	809	813	817	818	817	817	819	824	827	828	828	830	838	834	831	830	829	830	833	818	817	826	827	824
Mean	793	789	791	796	792	803	809	813	823	831	834	837	843	849	855	863	864	857	850	842	834	823	811	802	825

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

44 LERWICK

OCTOBER, 1937

Day	Terrestrial Magnetic Elements										HR <sub>H</sub> +VR <sub>V</sub> 10,000γ <sup>2</sup>	Magnetic Character of Day (0-2)	Temperature in Magnet House 200 +
	Horizontal Force			Declination			Vertical Force						
	Maximum 14,000 γ+	Minimum 14,000 γ+	Range	Maximum 12° +	Minimum 12° +	Range	Maximum 46,000 γ+	Minimum 46,000 γ+	Range				
1	h m γ	h m γ	h m γ	h m γ	h m γ	h m γ	h m γ	h m γ	h m γ	h m γ			
2	18 34 552	80	0 25 472	6 32 55.6	1.9	0 16 53.7	18 28 947	665	0 15 282	2200	2	83.8	
3	23 33 418	324	0 6 94	13 26 49.7	35.2	0 21 14.5	11 2 840	721	0 4 119	492	1	83.7	
4 D	19 37 495	21	24 0 474	13 44 59.7	39.2	9 34 20.5	16 0 948	711	23 52 237	1792	1	83.6	
5	22 44 420	-324	3 13 744	6 56 80.4	-57.1	2 39 137.5	3 22 902	328	4 49 574	3757	2	83.6	
6	21 22 420	335	10 53 85	13 16 53.6	36.9	7 14 16.7	15 14 881	824	0 39 57	389	1	83.7	
7	16 57 443	337	11 32 106	12 2 56.9	35.4	7 33 21.5	16 50 851	806	0 0 45	364	1	83.7	
8 D	21 48 443	332	23 41 111	12 53 55.9	29.3	21 48 26.6	17 17 895	705	22 22 190	1049	1	83.7	
9 D	16 46 497	-265	3 33 762	5 49 63.1	-12.6	4 2 75.7	17 11 901	395	3 27 506	3465	2	83.6	
10 D	15 16 831	153	23 58 678	14 44 75.9	24.9	23 39 51.0	15 47 1059	772	20 55 287	2319	2	83.6	
11 D	12 46 443	177	0 0 266	7 33 72.1	14.1	22 7 58.0	12 26 892	663	22 27 229	1455	1	83.1	
12	14 45 613	350	24 0 263	14 56 79.3	36.9	19 53 42.4	15 56 1003	769	0 0 234	1427	2	83.0	
13	21 0 628	68	22 45 560	22 40 60.4	10.2	21 12 50.2	20 33 878	690	22 39 188	1686	2	83.0	
14	14 57 445	354	10 57 91	13 33 55.3	26.4	0 6 28.9	15 12 874	759	0 6 115	669	1	82.7	
15	18 50 431	353	3 56 78	13 30 51.4	29.6	4 20 21.8	11 27 839	729	4 17 110	627	1	82.2	
16	19 45 537	297	20 37 240	18 55 63.3	2.9	19 51 60.4	19 42 942	715	20 23 227	1408	1	82.0	
17 Q	17 52 430	367	11 32 63	19 7 50.5	37.7	7 50 12.8	17 26 879	802	0 57 77	451	1	82.0	
18 Q	21 5 438	385	10 37 53	13 18 48.8	37.3	2 57 11.5	2 9 833	796	24 0 37	249	0	82.0	
19	22 59 433	375	12 0 58	11 30 48.4	39.1	1 24 9.3	12 2 826	769	0 37 57	351	0	82.3	
20 Q	1 45 430	377	13 0 53	12 7 51.2	36.2	18 58 16.0	18 56 833	818	21 42 15	146	0	82.8	
21	21 15 427	383	11 28 44	12 47 50.6	39.4	8 36 11.2	15 13 825	816	21 29 2	105	0	82.9	
22	16 22 432	381	11 54 51	12 51 55.7	38.0	23 10 19.7	17 8 867	798	24 0 69	396	1	83.0	
23	18 5 434	380	12 23 74	12 58 56.1	21.2	21 57 34.9	15 14 866	787	23 59 79	477	1	82.3	
24	17 14 590	-324	24 0 914	22 32 67.5	-42.1	23 50 109.6	17 13 995	622	23 35 373	3062	2	81.8	
25	15 59 476	-427	0 28 973	0 34 71.9	-33.1	0 5 105.0	16 0 962	351	0 59 611	4280	2	81.7	
26	15 20 438	330	2 2 108	12 28 52.4	35.5	1 6 16.9	16 33 898	704	1 53 194	1064	1	81.3	
27	18 22 453	303	3 58 150	7 28 67.8	19.0	21 48 48.8	16 50 901	657	4 25 244	1358	1	81.1	
28	15 29 497	341	23 35 156	14 2 53.3	31.6	22 58 21.7	15 40 947	743	0 10 204	1180	1	81.3	
29 Q	18 37 432	334	21 57 98	12 55 52.4	25.7	21 15 26.7							



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

45 LERWICK (H)

14,000 γ (·14 C.G.S.unit) +

NOVEMBER, 1937

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	Mean
Day	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
1	419	419	420	420	423	424	424	419	410	397	391	389	394	398	407	414	418	419	419	422	420	422	413	414	413
2	413	409	406	416	420	420	420	418	405	391	388	384	386	387	390	398	405	415	428	413	410	410	405	400	406
3	406	408	414	416	418	422	416	414	405	401	395	394	395	397	400	404	410	416	420	421	418	420	421	421	411
4 Q	420	421	421	424	425	425	420	419	412	400	392	392	389	399	403	408	408	416	423	424	425	425	425	425	414
5 Q	424	422	422	424	428	428	434	429	413	401	389	389	390	395	404	408	413	416	420	425	424	424	422	423	415
6 Q	422	421	420	422	422	425	424	419	412	402	397	392	389	395	404	408	411	414	418	424	421	421	419	418	413
7	420	416	416	424	414	427	427	422	413	406	406	403	403	401	409	411	405	423	430	421	420	408	363	323	409
8	222	363	398	403	418	414	413	410	405	401	395	397	403	405	410	415	419	429	419	412	414	420	399	409	399
9	410	409	419	413	415	403	413	392	385	394	392	395	389	388	406	416	412	417	415	417	419	421	423	419	408
10	416	415	413	413	415	415	411	408	407	406	405	403	406	408	411	404	413	414	416	419	420	421	424	422	413
11	422	417	416	416	415	419	422	421	418	412	398	393	392	403	407	412	420	427	429	441	440	412	402	403	415
12	409	405	396	410	414	414	413	411	410	404	397	394	391	399	406	411	418	419	412	415	413	412	425	414	409
13	414	414	416	419	420	425	418	418	413	403	397	396	399	405	409	414	422	424	413	419	424	424	422	421	415
14	420	418	417	418	424	424	423	420	416	411	403	397	404	405	408	414	416	421	424	424	424	423	421	421	417
15 Q	421	420	420	421	422	424	422	421	417	410	406	403	405	408	412	416	420	421	424	424	424	423	424	425	418
16 Q	424	421	423	423	424	424	422	421	419	416	411	408	408	412	416	420	424	428	429	429	429	428	428	427	421
17	426	423	423	424	427	432	431	426	415	411	408	407	409	416	423	419	414	420	426	422	422	419	411	405	419
18 D	395	385	400	400	401	400	415	411	408	402	392	389	392	408	422	430	426	453	593	525	431	398	341	363	416
19 D	391	395	403	413	413	414	411	404	390	379	379	396	412	492	452	470	413	409	406	403	400	401	399	387	410
20	394	402	403	404	410	410	414	397	384	358	366	388	398	403	402	435	413	402	409	409	409	406	427	412	402
21	405	400	403	396	400	408	414	409	397	398	397	389	384	400	398	403	412	417	422	408	414	414	406	395	404
22	409	412	410	404	404	420	419	408	410	400	343	361	383	397	412	410	425	409	408	408	406	411	393	383	402
23 D	359	373	405	415	410	409	409	390	390	392	386	371	384	389	410	408	410	432	430	414	427	408	414	406	402
24	405	407	409	397	406	419	421	394	388	382	379	385	386	403	395	400	408	415	406	426	418	419	411	408	404
25	401	413	412	415	416	416	412	408	409	404	397	394	393	399	403	403	409	416	414	419	410	410	415	415	408
26	411	412	410	413	414	419	420	414	408	401	400	399	400	403	405	407	416	419	424	423	423	421	434	422	413
27	416	418	418	419	420	422	424	420	413	407	403	403	404	406	405	410	417	419	413	416	418	394	371	397	411
28	405	399	395	410	410	427	416	403	388	382	390	393	397	426	439	440	412	411	411	412	405	402	393	391	406
29 D	377	387	414	418	416	421	418	418	416	397	393	395	392	419	416	415	439	480	442	332	411	401	408	391	409
30 D	392	394	383	381	389	403	408	397	387	382	376	371	381	396	428	484	582	532	547	530	389	281	335	306	410
Mean	402	407	411	413	415	418	418	412	405	398	392	392	395	405	410	416	421	425	430	423	418	410	406	402	410

MAGNETIC DECLINATION (WEST)  
Mean values for periods of sixty minutes ending at the hours of Greenwich Mean Time

46 LERWICK (D)

12° +

NOVEMBER, 1937

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	Mean
Day	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
1	41.1	41.2	41.3	41.3	40.8	40.9	40.5	40.5	40.7	42.2	44.7	46.7	48.3	49.1	49.0	48.5	51.4	51.2	48.8	47.3	45.1	41.9	40.5	40.2	44.3
2	39.1	39.7	32.4	32.0	35.4	38.5	42.2	42.1	41.8	40.2	43.9	47.2	48.0	48.0	45.8	44.8	45.0	45.0	46.6	43.5	42.6	39.9	34.4	33.1	41.3
3	39.3	42.3	42.6	42.4	42.0	41.2	40.6	39.9	40.7	42.3	45.3	47.7	48.4	48.4	47.9	45.9	44.8	44.1	43.9	43.9	43.0	42.6	42.9	43.0	43.5
4 Q	43.0	42.8	42.4	42.3	41.9	41.6	41.2	41.6	40.8	41.4	43.7	46.2	46.8	47.0	47.0	46.7	45.2	44.9	44.0	43.8	43.6	43.4	42.9	42.9	43.6
5 Q	43.0	42.8	42.8	43.1	43.5	43.1	41.0	40.5	40.0	41.0	42.8	45.6	45.7	46.1	46.0	45.5	44.9	44.8	44.5	44.5	43.7	42.5	41.9	41.9	43.4
6 Q	42.2	41.9	41.9	42.1	42.0	41.9	41.7	40.9	40.2	40.5	43.2	45.5	46.8	46.6	47.1	45.7	45.2	45.2	44.9	44.4	44.3	42.9	41.6	40.0	43.3
7	40.2	40.7	42.4	38.4	38.7	40.8	40.8	40.9	40.2	42.1	45.5	47.0	47.8	48.2	48.9	48.1	46.6	45.5	47.2	43.5	40.9	41.6	33.0	34.1	42.6
8	33.7	29.9	35.4	35.9	40.4	39.9	40.0	41.3	41.7	42.8	43.3	44.8	45.7	45.6	46.1	45.3	45.1	47.8	45.4	48.0	43.6	35.9	34.9	37.0	41.2
9	39.6	39.0	37.9	38.6	38.5	41.0	43.1	44.0	43.9	44.2	45.9	46.0	50.6	50.0	45.2	45.8	45.0	44.3	43.2	42.9	42.9	39.7	40.9	43.3	43.3
10	41.0	42.1	41.2	40.5	41.7	41.3	41.1	41.0	41.1	41.9	44.5	44.2	47.1	48.0	50.1	46.7	45.3	44.1	43.7	42.5	42.0	42.0	41.6	41.1	43.2
11	40.3	39.9	40.4	40.3	39.5	40.0	39.9	40.3	40.8	41.7	42.9	46.1	47.5	47.6	47.0	45.5	46.0	46.8	47.2	36.6	36.4	37.9	36.9	33.7	41.7
12	36.5	37.6	38.9	34.9	37.0	38.2	39.5	40.9	40.7	41.9	44.5	44.7	46.4	46.2	45.4	44.9	44.6	44.6	40.6	38.0	35.6	41.2	40.9	42.4	41.1
13	42.9	42.2	41.8	41.0	41.0	41.0	41.7	41.9	41.5	41.1	42.7	44.1	45.4	46.8	45.8	45.7	45.0	45.2	36.2	44.0	44.0	43.6	42.9	43.4	43.0
14	43.5	41.8	41.2	43.0	40.8	41.7	41.4	41.4	41.1	42.0	43.6	44.5	46.0	47.2	45.2	44.9	44.8	43.8	43.4	43.4	43.0	42.6	42.6	42.7	43.1
15 Q	42.7	42.6	42.0	41.9	41.8	41.7	41.5	41.3	41.7	41.5	42.5	43.3	44.3	45.1	44.8	44.5	43.7	43.0	43.0	42.2	42.6	42.1	42.2	42.3	42.7
16 Q	42.3	42.3	42.4	42.0	41.8	41.6	41.3	41.4	41.4	41.9	43.1	44.0	45.2	45.6	44.9	44.5	44.0	43.6	43.2	43.0	42.7	42.7	42.7	42.4	42.9
17	41.5	41.0	42.0	42.2	42.2	42.0	41.6	41.7	42.1	43.5	45.1	47.2	49.3	51.2	52.6	53.7	54.9	46.5	45.7	43.0	41.9	40.9	39.0	37.0	44.5
18 D	30.5	34.2	24.5	28.4	36.7	38.0	45.4	46.5	46.6	49.1	45.0	45.5	51.6	53.7	56.6	59.0	53.9	50.2	51.9	44.3	42.6	40.1	35.1	38.5	43.7
19 D	41																								

TERRESTRIAL MAGNETIC FORCE: VERTICAL COMPONENT  
Mean values for periods of sixty minutes ending at the hours of Greenwich Mean Time

47 LERWICK (V)

46,000 γ (·46 C.G.S.unit) +

NOVEMBER, 1937

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	Mean
Day 1	824	823	822	822	821	819	818	819	822	822	821	821	824	826	826	832	841	851	855	860	861	855	853	840	832
2	835	828	788	780	788	798	802	803	809	817	823	824	828	830	832	829	824	821	823	847	839	820	811	800	816
3	808	813	815	823	824	821	818	817	817	817	819	825	828	829	831	834	830	825	823	823	828	823	819	819	822
4 Q	822	823	824	824	823	821	820	816	818	823	823	826	832	833	833	833	834	829	823	822	821	818	817	817	824
5 Q	818	819	821	820	816	811	806	806	812	816	820	822	832	822	822	821	821	820	819	818	818	818	818	818	818
6 Q	817	818	818	818	818	817	818	821	823	823	819	820	821	820	823	826	828	827	824	823	823	822	820	816	821
7	812	813	809	801	812	809	811	814	817	814	812	816	818	823	827	838	837	828	833	870	878	828	774	769	819
8	682	757	813	800	813	823	823	823	823	825	826	826	823	822	824	826	825	831	870	872	854	849	821	826	820
9	815	814	806	807	802	799	797	797	810	816	825	828	836	849	871	868	834	827	826	825	823	825	830	827	823
10	824	822	821	819	819	819	822	823	824	825	824	826	826	828	833	839	828	825	824	823	823	822	821	822	824
11	818	820	819	817	817	815	815	814	814	816	820	819	821	818	822	823	822	822	826	834	820	830	823	809	820
12	788	813	771	778	803	813	820	822	822	822	824	824	821	818	822	822	820	824	833	833	831	823	796	808	815
13	815	818	820	818	817	815	817	816	817	822	825	822	822	822	820	817	821	835	823	820	820	822	823	823	820
14	823	823	818	810	811	815	816	817	820	822	823	826	826	828	833	827	824	821	819	820	821	821	823	823	821
15 Q	823	822	822	821	817	816	816	816	817	822	825	827	826	822	821	821	820	818	817	817	817	818	820	820	820
16 Q	818	821	818	818	817	816	815	815	815	817	817	818	818	820	820	820	818	816	816	815	816	815	817	818	817
17	818	820	820	819	816	814	812	813	816	816	818	819	822	824	827	842	861	864	857	848	838	836	837	824	828
18 D	802	766	763	777	780	787	775	782	785	788	801	821	841	842	863	874	883	893	949	962	905	858	820	758	828
19 D	808	783	784	809	821	823	823	823	825	823	829	864	876	928	932	979	949	900	868	853	838	830	815	799	849
20	792	815	828	832	812	820	826	824	827	838	841	834	832	850	888	905	874	860	847	843	840	831	799	811	836
21	816	820	815	812	811	814	817	820	824	824	824	827	838	839	833	832	832	835	855	869	854	834	811	798	827
22	794	804	807	803	816	810	815	821	826	827	846	845	838	856	874	867	894	864	864	873	831	786	788	794	831
23 D	746	737	786	804	815	819	819	826	833	835	836	847	864	856	863	857	846	852	831	848	821	778	794	797	821
24	786	795	806	813	802	811	812	826	832	832	835	840	858	889	873	850	839	841	850	841	828	824	820	814	830
25	799	803	819	822	824	826	827	831	832	835	836	835	832	835	835	835	835	833	836	838	839	835	832	827	829
26	827	826	827	824	823	824	825	827	831	834	833	831	831	831	831	831	832	829	826	826	827	827	815	809	827
27	817	821	821	820	820	820	820	822	825	827	828	828	828	830	831	827	826	829	831	829	838	821	761	785	821
28	800	800	782	782	776	787	800	802	821	821	837	843	854	881	889	932	946	908	892	871	853	851	844	795	839
29 D	795	769	782	817	822	820	821	816	820	829	829	831	846	852	875	871	883	977	945	818	847	845	842	848	842
30 D	821	821	828	762	775	796	804	814	813	807	812	826	842	871	896	899	937	983	980	984	763	645	742	755	832
Mean	805	808	809	808	811	813	814	816	820	822	825	829	833	840	845	849	849	849	849	848	834	820	813	809	826

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

48 LERWICK

NOVEMBER, 1937

Day	Terrestrial Magnetic Elements															HR <sub>H</sub> + VR <sub>V</sub> 10,000 γ <sup>2</sup>	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 12° +			Minimum 12° +		Range	Maximum 46,000 γ+						Minimum 46,000 γ+		Range							
1	h	m	γ	γ	h	m	γ	h	m	γ	h	m	γ	h	m	γ	h	m	γ	h	m	γ	h	m	γ			
2	21	54	428	386	11	25	42	16	59	52.1	38.4	24	0	13.7	20	0	867	817	7	0	50	294	0		81.2			
3	18	20	442	383	23	3	59	13	15	48.7	25.7	2	47	23.0	19	52	853	754	2	35	99	548	1		81.7			
4 Q	5	53	424	391	11	22	33	12	16	48.8	35.4	0	0	13.4	15	21	835	802	0	0	33	202	0		82.0			
5 Q	5	56	427	386	12	34	41	12	45	47.6	40.0	8	6	7.6	16	32	836	815	7	19	21	157	0		82.3			
6 Q	6	37	436	386	11	50	50	11	33	47.8	39.5	7	0	8.3	12	5	824	803	6	30	21	170	0		82.4			
7	5	42	427	388	12	37	39	14	22	47.6	39.6	8	43	8.0	16	24	828	812	24	0	16	131	0		82.6			
8	18	52	437	222	24	0	215	13	55	49.9	28.6	23	6	21.3	20	16	898	682	24	0	216	1321	1		82.7			
9	17	15	440	27	0	20	413	19	8	54.9	33.9	1	35	31.0	19	15	882	624	0	19	258	1802	1		82.3			
10	22	52	439	355	13	0	74	13	32	53.9	33.8	22	47	20.1	14	49	893	791	7	5	102	584	1		81.7			
11	22	48	426	395	15	14	31	14	53	51.9	39.9	3	25	12.0	15	20	843	818	3	10	25	162	0		80.2			
12	19	55	477	378	23	54	99	13	50	50.1	23.6	19	50	26.5	22	3	837	802	20	27	35	307	1		79.2			
13	22	26	437	384	2	44	53	11	4	47.4	31.7	1	55	15.7	18	46	841	759	2	38	82	460	1		78.7			
14	17	5	433	395	11	37	38	13	33	47.5	32.5	18	31	15.0	18	30	842	813	5	48	29	191	0		77.7			
15 Q	5	13	428	391	11	12	37	13	35	47.8	39.9	2	39	7.9	14	17	836	806	3	52	30	193	0		76.7			
16 Q	23	41	429	403	11	23	26	13	4	45.7	41.0	9	37	4.7	11	24	828	816	7	36	12	93	0		76.3			
17	18	34	430	407	11	56	23	13	6	45.7	41.2	7	55	4.5	1	44	821	815	8	0	6	61	0		76.2			
18 D	5	30	432	403	23	56	29	16	9	57.9	32.1	23	55	25.8	17	0	869	813	23	55	56	304	1		76.1			
19 D	18	44	683	285	22	59	398	16	0	63.9	20.8	2	42	43.1	19	23	963	717	23	14	266	1818	1		76.6			
20	13	24	547	387	10	8	180	13	9	66.5	32.3	21	55	34.2	15	27	1013	775	1	39	238	1373	1		76.9			
21	15	31	472	354	9	50	118	10	32	52.3	30.2	22	17	22.1	15	31	935	782	22	25	153	886	1		76.7			
22	18	40	428	373	12	14	55	12	26	47.9	33.1	22	18	14.8	19	35	875	785	23	42	90	500	1		76.7			
23 D	16	54	470																									

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

49 LERWICK (H)

14,000 γ (·14 C.G.S.unit) +

DECEMBER, 1937

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	Mean
Day 1	229	287	340	334	356	365	365	365	365	371	393	397	409	422	413	418	405	403	406	405	406	406	404	401	378
2	398	384	368	380	408	384	394	387	395	405	404	398	392	392	391	396	402	404	409	413	415	411	404	401	397
3	414	407	408	410	413	415	417	417	405	405	402	401	401	406	404	410	413	417	418	412	403	402	406	409	409
4 Q	408	406	406	413	420	422	422	422	420	412	407	406	403	404	408	412	416	414	413	418	418	417	419	418	413
5	416	416	416	419	423	423	423	422	419	415	412	412	414	420	426	434	432	429	421	417	420	420	422	418	420
6	418	421	415	408	413	418	420	420	420	422	418	408	402	414	409	415	417	421	425	423	429	423	417	424	417
7	417	412	412	410	417	421	423	423	409	403	415	413	409	410	420	420	423	449	437	414	414	406	409	405	416
8	396	409	408	412	411	414	413	413	414	417	412	403	404	409	412	406	410	414	418	415	417	413	413	414	411
9	414	409	411	414	409	412	415	415	416	412	405	404	405	409	408	409	412	416	422	421	425	418	416	414	413
10	412	417	416	413	412	418	420	418	414	409	409	409	410	398	402	412	415	417	412	413	409	416	414	417	413
11	415	410	416	417	426	423	416	426	421	416	412	398	382	404	413	412	415	419	420	424	420	419	418	417	415
12	415	411	409	412	412	416	417	414	411	409	406	404	407	413	417	417	420	421	420	420	422	422	420	419	415
13 Q	417	417	418	419	421	423	422	420	414	400	403	408	411	414	418	420	423	421	422	423	422	424	425	423	418
14 Q	422	422	423	425	425	423	419	420	416	414	414	416	417	419	419	419	416	419	423	424	422	422	422	423	420
15	422	422	422	423	425	427	429	427	423	424	411	405	404	410	412	415	419	421	426	429	430	430	428	426	421
16	425	426	425	423	423	426	427	423	419	417	415	412	413	416	418	419	421	424	427	429	430	430	429	428	423
17	428	428	428	427	427	428	428	427	425	423	421	421	425	425	425	421	414	415	417	419	422	423	427	427	424
18 D	428	430	428	433	438	433	430	424	427	422	410	397	414	415	429	469	607	645	571	448	411	433	362	364	445
19 D	352	389	401	402	408	420	416	399	378	389	379	395	403	392	401	395	386	384	387	378	393	391	403	393	393
20 D	404	396	393	393	392	413	423	412	409	390	390	392	396	397	402	403	404	417	408	411	410	413	411	406	404
21	407	407	404	407	414	419	416	413	412	409	405	402	403	406	409	412	417	413	404	418	421	425	413	414	411
22	407	409	410	413	418	425	425	411	396	412	406	398	399	396	400	406	411	407	409	411	411	411	408	405	409
23 D	403	419	414	412	420	424	422	400	387	386	392	395	405	499	436	548	850	710	545	388	383	384	386	451	451
24 D	388	392	394	395	396	395	395	398	397	395	393	389	386	390	393	403	405	438	461	392	380	361	386	391	396
25	395	394	395	399	401	402	392	396	401	404	402	389	383	395	395	397	397	400	404	407	407	405	395	373	397
26	385	395	402	405	410	422	403	397	403	396	394	378	380	394	398	401	400	405	407	406	404	405	405	405	400
27 Q	407	407	402	407	412	418	413	414	409	405	404	400	402	405	405	408	411	411	411	413	413	414	413	413	409
28 Q	414	414	415	416	417	418	418	416	413	411	408	407	409	413	407	402	408	410	415	417	418	417	415	413	413
29	415	399	406	411	416	415	417	415	412	406	402	398	400	408	410	410	412	417	419	419	418	413	414	418	411
30	415	416	413	413	414	419	421	421	421	416	406	394	402	411	405	400	407	417	424	424	424	423	419	415	414
31	415	411	410	414	418	421	424	423	421	418	413	411	416	425	415	426	419	421	453	475	433	413	403	435	422
Mean	403	406	407	409	413	416	416	414	410	407	405	401	403	408	412	414	423	437	433	422	414	413	410	410	413

412 at 0-1h. Jan 1st 1938

MAGNETIC DECLINATION

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

50 LERWICK (D)

12° +

DECEMBER, 1937

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	Mean
Day 1	29.9	29.4	34.6	29.1	40.2	45.9	46.6	45.5	42.5	43.8	45.2	48.2	48.0	49.2	47.5	45.6	45.5	45.3	40.3	41.5	40.7	40.8	40.8	41.0	42.0
2	38.9	34.5	34.6	39.5	43.6	41.6	44.3	42.2	44.8	42.9	45.1	45.3	47.5	50.1	48.0	45.1	43.9	41.9	41.2	41.0	41.1	36.6	37.9	42.2	
3	41.4	40.1	38.9	36.8	38.9	39.9	40.3	40.7	41.4	41.8	43.4	44.8	44.7	46.6	45.2	44.1	43.5	43.0	42.8	40.3	37.3	38.5	38.4	39.0	41.3
4 Q	39.4	39.5	40.2	40.6	41.2	41.7	41.1	41.3	42.5	42.4	42.5	43.6	44.1	44.9	44.3	43.6	42.6	42.8	43.0	42.8	41.9	41.5	40.9	40.4	42.0
5	40.3	40.8	41.0	41.4	41.3	41.2	41.3	41.4	41.6	41.7	42.1	43.5	45.2	45.5	46.7	48.3	50.0	46.9	48.9	43.9	43.6	43.0	41.0	41.1	43.4
6	40.6	41.7	39.4	43.9	42.9	40.4	40.9	41.0	41.4	42.6	44.0	44.6	47.3	48.9	47.5	47.1	44.8	44.4	45.6	44.9	43.2	37.9	38.4	38.4	43.0
7	40.4	39.6	39.1	41.1	40.5	40.3	40.9	41.0	42.1	42.2	43.2	46.0	45.9	44.3	46.3	47.1	48.4	48.9	49.5	43.2	36.3	40.8	40.7	39.9	42.8
8	38.9	38.0	34.8	36.4	40.2	39.1	42.9	42.5	42.0	42.7	43.5	43.3	46.2	46.0	47.2	47.3	48.1	41.0	45.0	44.5	37.5	37.2	39.9	40.5	41.9
9	40.9	40.3	40.4	39.3	38.3	40.5	41.0	40.9	41.0	41.1	42.3	44.1	44.5	44.6	45.0	45.9	44.9	43.9	42.8	38.5	37.2	40.2	38.8	39.4	41.5
10	39.3	39.3	38.5	38.0	39.3	40.1	40.3	41.5	42.4	42.3	42.7	44.3	47.4	46.4	45.2	44.2	46.3	44.4	41.3	37.4	39.6	41.2	44.4	40.0	41.9
11	37.9	40.5	41.4	40.1	39.0	40.5	42.5	41.0	40.6	41.9	44.9	46.3	49.1	49.1	45.4	45.2	45.4	43.2	39.9	39.5	40.5	41.3	41.5	40.2	42.4
12	44.3	39.5	39.9	40.0	40.6	40.9	40.9	41.0	41.3	41.7	42.9	44.4	45.9	44.6	45.2	43.6	43.2	43.3	43.7	41.9	41.9	41.6	41.6	42.3	42.3
13 Q	42.0	41.7	41.6	40.9	40.5	40.2	40.5	40.5	41.3	42.9	44.4	45.1	46.2	45.1	44.0	43.0	42.9	42.7	41.9	41.6	41.2	41.1	42.6	42.4	42.4
14 Q	42.7	42.5	42.1	41.9	41.7	41.4	41.7	41.3	41.1	42.0	43.5	44.0	44.2	44.1	43.1	43.8	43.7	43.4	43.4	42.7	41.9	41.7	41.8	41.9	42.6
15	41.8	42.0	42.5	41.9	42.3	42.4	42.1	41.6	41.3	41.7	42.7	44.0	46.6	45.3	43.8	43.4	43.0	42.6	42.3	42.1	42.0	42.2	41.9	42.4	42.7
16	43.0	42.7	43.0	42.2	41.3	40.7	40.8	40.8	40.8	41.5	42.1	43.0	44.0	43.8	43.5	43.6	43.3	42.9	43.0	42.7	42.2	42.3	42.1	42.0	42.4
17	42.0	42.4	42.3	42.1	41.6	42.1	41.7	41.3	41.0	41.9	43.0	44.3	45.1	45.0	45.4	46.0	44.6	43.2	43.5	43.2	42.6	42.4	42.5	42.1	43.0
18 D	42.3	42.8	42.9	42.3	38.5	40.2	41.3	44.1	45.9	45.2	44.1	46.5	51.3	51.9	53.0	63.5	66.3	58.6	45.0	36.0	38.3	40.4	30.6	32.9	45.1
19 D	39.9	42.4	42.6	42.3	41.7	42.3	43.5	45.1	46.3	47.4	43.6	46.6	49.4	51.4	48.6	45.5	42.8	28.6	42						

**TERRESTRIAL MAGNETIC FORCE: VERTICAL COMPONENT**  
 Mean values for periods of sixty minutes ending at the hours of Greenwich Mean Time

51 LERWICK (V)

46,000 γ (.46 C.G.S.unit) +

DECEMBER, 1937

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	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	
1	727	705	711	695	690	686	721	778	818	834	853	865	882	901	913	906	902	895	887	853	839	833	833	833	833	815
2	820	806	777	780	756	779	782	812	806	815	824	831	834	838	844	844	848	848	847	841	835	835	838	838	836	820
3	820	814	806	804	812	818	822	823	825	827	831	832	834	837	833	833	833	832	832	838	836	836	829	827	827	826
4 Q	822	820	820	814	812	815	818	819	822	824	828	827	828	834	836	835	834	835	835	831	828	827	825	825	825	826
5	826	826	827	827	825	825	824	823	822	823	820	817	820	824	824	826	832	837	849	854	843	835	832	832	832	829
6	830	826	824	810	787	795	811	816	818	819	821	823	825	828	835	840	850	842	837	842	850	862	849	828	828	828
7	824	826	826	819	809	818	822	821	824	830	832	828	828	830	831	837	851	928	977	912	861	858	847	841	841	846
8	832	805	794	803	814	816	820	826	831	830	829	832	833	834	846	865	864	847	850	855	850	836	832	832	834	834
9	828	826	805	788	795	813	819	824	826	827	830	830	826	824	828	831	832	831	831	837	835	828	828	826	824	824
10	821	818	797	798	808	814	818	823	823	827	829	828	829	838	842	833	834	837	847	849	847	835	812	806	826	826
11	821	825	824	825	819	812	809	812	818	823	823	829	836	835	836	836	836	836	838	836	836	833	830	829	821	827
12	814	807	821	826	827	826	827	827	829	831	832	834	832	830	826	828	827	826	829	833	833	831	831	830	830	827
13 Q	829	826	824	821	820	818	819	821	823	831	833	832	831	831	829	826	825	825	825	824	825	822	817	819	825	825
14 Q	821	823	821	821	820	820	820	820	823	825	825	826	827	828	827	827	828	825	823	824	826	826	826	825	825	824
15	825	824	823	820	820	817	815	817	821	824	829	831	830	831	829	827	824	822	820	819	818	819	820	822	822	823
16	821	820	820	820	819	816	816	817	820	821	823	824	825	826	824	823	824	818	815	815	815	815	815	817	817	819
17	819	819	819	819	818	815	814	814	815	817	820	818	820	821	822	825	830	832	831	828	824	822	818	818	821	821
18 D	817	814	814	800	797	802	805	807	803	807	812	820	822	842	848	917	1061	1043	1011	932	891	880	819	822	858	858
19 D	753	790	826	832	830	826	826	828	837	838	839	845	860	861	877	881	916	928	884	931	830	838	825	822	843	843
20 D	832	822	813	794	787	790	805	822	828	837	836	835	835	841	856	852	853	863	856	840	834	828	804	806	828	828
21	815	822	823	827	829	829	829	830	830	828	825	825	825	825	827	828	829	834	851	838	824	804	802	811	825	825
22	818	819	821	820	823	823	825	828	824	818	824	829	836	844	858	869	872	878	874	860	848	834	825	820	837	837
23 D	811	788	804	807	804	808	812	815	825	838	838	831	835	899	952	897	942	923	939	953	907	857	839	833	857	857
24 D	831	833	834	834	834	835	835	836	839	839	840	842	839	839	836	834	858	915	923	883	866	860	864	847	850	850
25	842	843	842	838	835	830	831	834	837	837	840	847	851	845	843	839	837	834	833	832	832	833	841	841	838	838
26	826	820	830	825	815	783	793	807	820	829	836	850	861	866	866	866	850	839	836	834	833	832	832	831	833	833
27 Q	828	826	822	819	822	821	824	824	825	825	828	827	825	827	828	828	827	826	825	826	825	825	827	827	827	825
28 Q	827	826	824	822	820	821	821	821	822	823	823	823	826	827	828	831	828	826	824	824	824	823	821	821	820	824
29	809	814	812	815	816	818	819	821	822	824	826	828	825	822	824	822	822	820	820	820	821	824	824	820	820	820
30	821	817	819	820	818	817	817	816	817	817	820	822	820	821	827	832	831	823	820	820	819	819	821	823	821	821
31	823	822	822	821	820	818	816	815	817	818	820	818	817	822	829	833	872	863	895	955	915	861	830	794	838	838
Mean	818	815	814	812	810	810	814	819	823	826	829	831	833	838	843	844	854	856	857	850	842	835	828	824	830	830

791 at 0-1h. January 1st 1938

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

52 LERWICK

DECEMBER, 1937

Day	Terrestrial Magnetic Elements															HR <sub>H</sub> +VR <sub>V</sub> 10,000γ <sup>2</sup>	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 12° +		Minimum 12° +		Range	Maximum 46,000 γ+		Minimum 46,000 γ+		Range									
1	h	m	γ	γ	h	m	γ	h	m	γ	h	m	γ	γ	h	m	γ	1777	2	78.2				
2	13	44	432	388	0	34	344	13	48	51.2	14.4	1	34	36.8	14	28	919	645	0	44	274	1	78.5	
3	4	31	420	359	2	5	61	13	29	50.7	32.7	2	10	18.0	17	31	850	747	4	27	103	0	78.0	
4 Q	6	14	422	391	20	40	31	13	14	48.7	34.1	19	57	14.6	19	57	844	800	2	59	44	251	0	77.2
5	7	7	425	402	12	39	23	13	31	45.4	38.0	1	49	7.4	13	56	837	810	3	44	27	159	0	76.4
6	16	1	440	411	11	34	29	16	45	51.5	39.8	24	0	11.7	18	50	856	817	11	33	39	225	0	76.2
7	23	4	440	399	12	14	41	14	4	50.8	34.7	23	3	16.1	21	25	868	784	4	55	84	452	1	76.0
8	17	47	487	396	8	59	91	17	35	59.5	31.0	20	36	28.5	18	30	998	806	4	20	192	1030	1	75.7
9	20	58	426	385	0	43	41	16	35	51.3	29.5	20	38	21.8	17	23	878	787	2	1	91	485	1	75.6
10	20	58	435	401	12	0	34	15	15	46.7	32.3	20	40	14.4	20	35	842	785	4	1	57	316	1	75.1
11	16	4	427	391	13	52	36	12	50	48.8	35.4	1	35	13.4	18	49	856	789	2	41	67	366	1	74.6
12	7	4	433	374	12	12	59	12	46	50.7	34.9	0	52	15.8	19	5	841	803	5	50	38	263	1	74.1
13 Q	20	36	425	403	2	3	22	0	39	48.5	38.7	1	20	9.8	20	14	836	794	0	54	42	229	0	73.7
14 Q	21	24	430	395	9	50	35	12	11	46.6	39.9	5	20	6.7	10	43	835	815	22	44	20	144	0	73.1
15	3	39	426	413	9	50	13	11	57	44.7	40.8	8	10	3.9	12</									

Departure from mean of the 24 hourly values (uncorrected for non-cyclic change)

MONTH AND SEASON	Hour	G.M.T	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	
	0-1	1-2	53 LERWICK HORIZONTAL FORCE (ALL DAYS) 1937																						
January	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
February	-0.8	-3.4	-0.5	+0.8	+3.2	+4.7	+5.0	+3.7	-0.1	-7.0	-11.8	-14.3	-12.1	-7.4	-3.5	-1.1	+0.7	+3.8	+10.8	+9.6	+8.0	+6.2	+3.2	+2.3	
March	+1.7	-2.9	-8.1	-2.1	+1.5	+5.6	+5.6	+4.0	+0.2	-6.7	-12.2	-16.1	-16.6	-12.0	-5.2	-0.7	+7.7	+17.5	+21.7	+12.5	+3.4	+0.2	-0.2	+1.2	
April	-4.8	-2.3	+1.8	+0.5	+7.9	+6.7	+5.0	-1.4	-7.9	-16.6	-25.3	-28.4	-22.0	-6.7	+4.0	+8.7	+10.5	+16.1	+19.0	+20.5	+12.6	+9.8	-1.8	-5.9	
May	-41.7	-31.1	-33.2	-17.1	-15.9	-6.4	-11.8	-19.5	-10.2	-12.2	-16.1	-16.9	-11.2	+8.3	+24.7	+34.8	+42.2	+47.2	+55.8	+57.0	+41.1	+12.6	-35.7	-44.7	
June	-22.7	-29.6	-20.5	-17.1	-15.2	-13.7	-13.3	-14.0	-22.0	-30.0	-32.3	-28.3	-11.8	+2.6	+20.8	+31.4	+36.8	+45.8	+49.4	+41.2	+31.3	+14.9	+0.6	-4.3	
July	-7.8	-14.7	-14.9	-6.4	-3.7	-7.5	-13.6	-20.9	-30.0	-39.4	-41.5	-33.4	-20.8	-2.3	+11.0	+26.3	+34.6	+41.4	+49.5	+45.7	+33.0	+14.1	+7.1	-5.8	
August	-24.3	-24.3	-14.3	-10.2	-7.4	-8.0	-13.7	-22.7	-33.0	-42.9	-47.7	-42.6	-29.4	-9.0	+12.7	+37.8	+50.4	+52.8	+57.0	+54.9	+38.0	+19.3	+8.0	-1.4	
September	+2.9	-6.7	+8.9	+7.4	+3.8	-6.6	-11.4	-21.1	-35.8	-46.8	-44.1	-38.4	-29.2	-13.9	+8.2	+16.5	+24.5	+33.1	+32.6	+34.2	+31.1	+23.0	+18.8	+9.0	
October	+7.0	+0.1	+0.8	+0.4	+5.4	+10.8	+8.6	-2.7	-14.8	-28.7	-37.5	-38.4	-28.4	-15.6	-0.5	+8.9	+13.6	+19.5	+27.5	+32.6	+16.0	+1.9	+8.1	+5.4	
November	-36.5	-22.5	-14.1	-15.2	-7.6	+1.0	-2.0	+3.6	-5.2	-16.5	-21.7	-22.1	-11.5	+1.5	+18.3	+30.1	+25.0	+25.2	+27.4	+26.6	+22.9	+16.0	-5.4	-17.3	
December	-8.0	-3.0	+0.3	+2.7	+4.8	+8.1	+7.8	+1.7	-5.5	-12.0	-17.9	-18.0	-15.0	-4.9	+0.1	+5.9	+10.7	+14.8	+19.4	+12.9	+7.3	-0.3	-3.8	-8.1	
Year	-9.6	-6.9	-5.5	-3.8	+0.6	+3.3	+2.8	+0.7	-3.1	-5.4	-7.8	-11.5	-10.1	-4.8	-0.8	+1.0	+10.1	+24.6	+20.0	+9.5	+1.3	+0.5	-2.8	-2.3	
Winter	-12.1	-12.3	-8.3	-5.0	-1.9	-0.2	-2.6	-7.4	-13.9	-22.0	-26.3	-25.7	-18.2	-5.4	+7.5	+16.6	+22.2	+28.5	+32.5	+29.8	+20.5	+9.9	-0.3	-6.0	
Equinox	-4.2	-4.1	-3.5	-0.6	+2.5	+5.4	+5.3	+2.5	-2.1	-7.8	-12.4	-15.0	-13.5	-7.3	-2.3	+1.3	+7.3	+15.2	+18.0	+11.1	+5.0	+1.7	-0.9	-1.7	
Summer	-19.0	-13.9	-11.2	-7.9	-2.5	+3.0	-0.1	-5.0	-9.5	-18.5	-25.1	-26.5	-18.3	-3.1	+11.6	+20.6	+22.8	+27.0	+32.4	+34.2	+23.1	+10.1	-8.7	-15.6	
Year	-13.0	-18.8	-10.2	-6.6	-5.6	-8.9	-13.0	-19.7	-30.2	-39.8	-41.4	-35.7	-22.8	-5.7	+13.2	+28.0	+36.6	+43.3	+47.1	+44.0	+33.3	+17.8	+8.6	-0.6	

54 LERWICK

DECLINATION (ALL DAYS)

1937

January	-2.36	-2.04	-1.58	-1.08	-1.32	-1.24	-1.23	-1.58	-1.89	-1.39	-0.09	+1.62	+2.85	+3.53	+3.08	+2.89	+3.12	+3.11	+2.22	+0.91	-0.62	-1.67	-2.53	-2.71
February	-1.72	-1.44	-3.20	-3.21	-3.19	-2.60	-1.96	-1.62	-0.68	+0.70	+1.52	+3.10	+4.48	+4.95	+4.78	+3.54	+2.96	+2.15	+2.19	-0.29	-2.42	-2.84	-2.93	-2.27
March	-2.46	-3.10	-3.01	-2.92	-3.13	-2.66	-1.65	-2.51	-3.87	-2.30	+0.13	+3.46	+6.07	+7.13	+6.41	+4.88	+3.52	+1.96	+0.99	+0.55	+0.11	-1.48	-3.33	-2.79
April	-2.50	-4.81	-6.02	-5.36	-5.36	-3.88	-4.31	-5.17	-4.23	-2.70	-0.63	+2.77	+6.63	+8.04	+7.62	+6.15	+5.35	+3.92	+3.12	+2.69	+1.69	-0.19	-1.26	-1.56
May	-1.87	-3.71	-4.23	-2.98	-3.71	-5.22	-6.15	-5.47	-5.25	-3.44	-0.44	+3.08	+6.23	+7.13	+6.69	+6.14	+4.70	+3.45	+2.22	+1.95	+1.40	+0.61	+0.08	-1.21
June	-0.50	-1.17	-3.49	-4.66	-5.34	-5.96	-6.81	-7.28	-6.36	-3.35	-0.44	+3.52	+6.66	+7.41	+7.19	+6.19	+4.71	+3.21	+2.74	+1.95	+1.48	+1.41	-0.30	-0.81
July	-0.67	-2.47	-4.58	-5.51	-5.76	-7.06	-7.88	-8.24	-7.07	-4.16	-0.65	+2.83	+6.05	+8.33	+8.20	+6.92	+5.60	+3.98	+3.47	+3.05	+1.96	+2.29	+1.37	0.00
August	-1.79	-1.55	-2.48	-3.17	-4.18	-5.99	-6.58	-6.21	-2.75	+0.94	+4.61	+7.19	+7.47	+6.71	+4.41	+2.53	+1.32	+1.11	+1.19	+1.56	+1.16	+0.68	+0.08	+0.08
September	-1.52	-2.73	-3.37	-3.17	-2.87	-2.68	-3.48	-4.59	-4.06	-2.43	+0.36	+3.89	+6.52	+7.41	+6.37	+4.28	+2.08	+1.35	+1.21	+1.61	+0.20	-0.30	-1.71	-2.37
October	-3.88	-3.33	-4.24	-2.91	-2.96	-2.14	-0.97	-0.97	-2.40	+1.72	+1.20	+3.97	+6.11	+6.92	+6.76	+4.96	+2.79	+1.58	+1.26	+0.61	-0.79	-2.90	-2.80	-4.15
November	-2.38	-2.29	-2.88	-3.22	-2.41	-1.92	-1.16	-0.91	-0.52	+0.39	+1.87	+3.25	+4.41	+5.46	+4.74	+4.25	+3.26	+1.48	+1.27	+0.25	-2.44	-2.54	-4.46	-3.52
December	-2.36	-2.29	-2.09	-2.16	-1.85	-1.13	-0.52	-0.66	-0.30	+0.06	+0.92	+2.25	+3.83	+4.32	+3.30	+3.18	+3.09	+1.11	+1.37	-1.14	-2.10	-2.15	-2.29	-2.39
Year	-2.00	-2.58	-3.43	-3.36	-3.51	-3.54	-3.53	-3.80	-3.57	-1.92	+0.39	+3.19	+5.59	+6.51	+5.99	+4.82	+3.64	+2.39	+1.93	+1.11	0.00	-0.72	-1.62	-1.97
Winter	-2.21	-2.01	-2.44	-2.42	-2.19	-1.72	-1.22	-1.19	-0.85	-0.06	+1.05	+2.55	+3.89	+4.57	+3.97	+3.47	+3.11	+1.96	+1.76	-0.07	-1.89	-2.30	-3.05	-2.72
Equinox	-2.59	-3.49	-4.16	-3.59	-3.58	-2.84	-2.60	-3.31	-3.64	-2.29	+0.27	+3.52	+6.33	+7.37	+6.79	+5.07	+3.43	+2.20	+1.65	+1.37	+0.30	-1.22	-2.27	-2.72
Summer	-1.21	-2.23	-3.69	-4.08	-4.75	-6.06	-6.77	-6.89	-6.22	-3.43	-0.15	+3.51	+6.53	+7.59	+7.20	+5.91	+4.39	+2.99	+2.39	+2.03	+1.60	+1.37	+0.46	-0.49

55 LERWICK

VERTICAL FORCE (ALL DAYS)

1937

January	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
February	-1.3	-4.0	-4.7	-8.1	-9.3	-7.8	-7.4	-7.2	-5.2	-2.7	-1.5	-1.9	-2.5	-2.6	-0.2	+2.9	+5.7	+10.4	+15.9	+11.3	+12.3	+8.2	-0.5	+0.2	
March	-12.4	-16.9	-18.8	-12.5	-11.3	-10.5	-9.5	-7.1	-5.7	-4.6	-2.5	-0.7	+1.3	+4.0	+7.9	+16.5	+18.7	+24.6	+19.0	+20.7	+12.6	+1.7	-5.8	-8.7	
April	-25.3	-17.0	-16.3	-14.9	-12.4	-10.6	-9.8	-5.8	-1.8	+0.4	+1.4	+1.5	+4.6	+11.6	+16.8	+19.8	+20.4	+17.7	+18.8	+17.3	+12.2	+3.1	-8.5	-24.0	
May	-14.2	-25.9	-20.3	-20.8	-24.9	-15.3	-11.5	-7.5	-1.8	+2.2	+4.1	+5.1	+3.4	+6.9	+13.2	+21.2	+25.1	+28.7	+26.7	+19.9	+7.6	+0.1	-9.4	-12.6	
June	-31.1	-32.7	-33.8	-36.9	-31.7	-15.0	-3.8	+1.6	+3.1	+3.8	+4.8	+4.2	+4.3	+12.0	+18.9	+25.2	+30.9	+30.8	+29.1	+23.1	+16.0	+7.6	-9.3	-21.1	
July	-21.9	-30.8	-32.1	-21.5	-16.8	-14.5	-10.9	-4.8	+0.4	+0.1	+0.3	-0.3	-0.1	+5.9	+15.5	+24.6	+30.5	+28.8	+24.3	+21.9	+13.6	+1.7	-1.8	-12.1	
August	-27.6	-37.8	-33.8	-24.0	-15.6	-14.8	-8.9	-3.6	-0.6	-0.6	+0.1	-0.9	-1.2	+3.2	+13.2	+24.8	+29.9	+32.4	+27.6	+23.7	+17.6	+8.4	-0.2	-11.3	
September	-15.1	-9.9	-14.5	-12.3	-12.4	-12.9	-8.4	-7.3	-3.2	-2.1	-3.9	-2.4	+0.2	+5.3	+10.6	+13.9	+18.8	+19.7	+17.2	+14.4	+10.2	+4.2	-0.2	-9.9	
October	-18.2	-25.1	-20.3	-18.1	-10.8	-7.3	-4.4	+1.0	+3.5	+4.3	+3.7	+1.3	-0.3	+2.0	+8.2	+15.1	+19.2	+21.3	+31.9	+31.9	+25.1	+17.2	+9.0	-2.8	-13.9
November	-32.3	-36.5	-34.0	-29.1	-33.3	-22.6	-16.1	-12.0	-2.6	+5.3	+9.2	+12.0	+18.1	+23.6	+29.8	+38.1	+39.3	+31.9	+25.1	+17.2	+9.0	-2.8	-13.9	-23.4	
December	-20.4	-18.2	-17.0	-17.3	-14.8	-12.5	-11.5	-9.6	-6.1	-4.0	-0.9	+3.1	+7.4	+14.0	+19.6	+23.5	+22.9	+23.3	+23.4	+21.9	+8.0	-5.5	-12.4	-16.9	
Year	-12.3	-15.0	-15.8	-18.4	-20.5	-19.7	-16.1	-10.9	-7.3	-4.1	-1.5	+0.4	+2.7	+7.6	+12.5	+14.1	+23.7	+26.2	+26.7	+19.9	+11.4	+4.7	-2.5	-5.8	
Winter	-19.3	-22.5	-21.8	-19.5	-17.8	-13.6	-9.9	-6.1	-2.3	-0.2	+1.1	+1.8	+3.2	+7.8	+13.8	+20.0	+23.8	+24.7	+22.7	+18.7	+11.9	+2.8	-6.1	-13.0	
Equinox	-11.6	-13.5	-14.1	-14.1	-14.0	-12.6	-11.1	-8.7	-6.1	-3.9	-1.6	+0.2	+2.2	+5.7	+9.9	+14.3	+17.7	+21.1	+21.3	+18.5	+11.1	+2.3	-5.3	-7.8	
Summer	-22.5	-28.1	-22.7	-20.7	-20.3	-13.9	-10.5	-6.1	-0.7	+3.1	+4.6	+5.0	+6.5	+11.0	+17.0	+23.5	+26.0	+24.9	+22.2	+16.9	+10.3	-0.5	-10.2	-17.7	
Year	-23.9	-27.8	-28.5	-23.7	-19.1	-14.3	-8.0	-3.5	-0.1	+0.3	+0.3	+0.1	+0.8	+6.6	+14.5	+22.1	+27.5	+27.9	+24.5	+20.8	+14.3	+5.5	-2.9	-13.6	

Departures from the mean of the 24 hourly values  
(uncorrected for non-cyclic change)

MONTH AND SEASON	Hour	G.M.T.	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																								
	0-1	1-2																																														
	56 LERWICK																							HORIZONTAL FORCE (QUIET DAYS)																							1937	
January	+1.4	+0.7	+0.5	+1.8	+3.3	+4.5	+4.6	+2.5	-2.1	-7.4	-12.1	-12.9	-10.6	-5.9	-3.5	-3.2	-1.3	+1.1	+4.4	+6.7	+7.9	+6.8	+3	+6.7																								
February	+6.4	+4.5	+3.0	+3.5	+6.1	+6.0	+4.5	+2.7	+0.2	-8.5	-13.4	-15.5	-16.8	-16.3	-11.6	-7.9	-2.3	+0.2	+5.3	+7.5	+8.8	+10.3	+12.2	+11.1																								
March	+9.1	+7.2	+6.4	+6.7	+7.6	+8.0	+6.9	+3.2	-5.0	-16.9	-27.0	-31.4	-27.9	-18.4	-9.0	-0.9	+2.2	+6.0	+9.9	+12.2	+12.0	+12.7	+13.0	+13.4																								
April	+11.1	+10.2	+8.5	+6.1	+5.3	+5.8	+5.5	+1.1	-7.9	-18.6	-30.3	-37.7	-35.3	-24.8	-14.3	-4.9	+7.1	+16.0	+19.5	+19.3	+16.7	+16.4	+13.5	+11.7																								
May	+4.2	+5.0	+4.1	+3.2	+4.8	+1.2	-5.4	-11.4	-19.1	-30.6	-35.8	-38.2	-31.0	-17.8	-2.3	+10.0	+19.0	+23.8	+27.6	+27.0	+24.1	+15.8	+11.2	+10.6																								
June	+2.4	-2.1	+1.4	+6.9	+8.0	+5.9	-0.8	-13.9	-25.8	-36.7	-39.6	-36.5	-28.8	-15.1	-7.0	+2.1	+15.4	+26.7	+32.0	+31.7	+26.2	+19.3	+14.4	+13.9																								
July	+1.3	+1.9	+2.7	+4.3	+6.7	+3.5	-5.3	-18.3	-28.3	-35.3	-42.9	-41.7	-35.1	-20.7	-4.3	+11.3	+21.1	+26.7	+33.9	+35.3	+32.9	+23.9	+15.9	+10.5																								
August	+14.3	+10.1	+9.1	+7.7	+8.5	+5.5	-1.7	-12.1	-26.1	-40.9	-48.3	-45.1	-31.7	-15.7	-2.3	+5.9	+9.9	+15.3	+20.5	+24.1	+25.1	+23.9	+23.1	+20.9																								
September	+13.0	+10.8	+9.6	+8.0	+10.4	+12.7	+10.2	+0.4	-14.2	-32.6	-43.8	-46.8	-37.6	-22.8	-8.0	-1.6	+3.2	+11.1	+16.4	+21.0	+22.0	+18.4	+20.0	+19.2																								
October	+6.1	+3.5	+4.6	+5.5	+7.3	+7.1	+6.3	+2.7	-3.8	-15.7	-23.1	-26.7	-22.7	-16.1	-8.2	-3.7	+1.9	+6.5	+8.3	+11.5	+13.8	+14.7	+11.9	+8.3																								
November	+5.8	+4.5	+4.7	+6.4	+7.7	+8.7	+8.0	+5.3	-1.9	-10.6	-17.5	-19.7	-20.2	-14.7	-8.7	-4.4	-1.3	+2.5	+6.4	+8.7	+8.3	+7.8	+7.1	+7.1																								
December	-1.1	-1.4	-1.9	+1.4	+4.3	+6.2	+4.1	+3.8	-0.3	-6.2	-7.5	-7.2	-6.3	-3.6	-3.3	-3.0	-0.5	+0.4	+2.1	+4.4	+4.1	+4.0	+4.1	+3.4																								
Year	+6.2	+4.6	+4.4	+5.2	+6.7	+6.3	+3.1	-2.8	-11.2	-21.7	-28.4	-29.9	-25.3	-16.0	-6.9	0.0	+6.2	+11.4	+15.5	+17.5	+16.8	+14.5	+12.7	+11.4																								
Winter	+3.1	+2.1	+1.6	+3.3	+5.3	+6.3	+5.3	+3.6	-1.0	-8.2	-12.6	-13.8	-13.5	-10.1	-6.8	-4.6	-1.3	+1.1	+4.5	+6.8	+7.3	+7.2	+7.4	+7.1																								
Equinox	+9.8	+7.9	+7.3	+6.8	+7.7	+8.4	+7.2	+1.9	-7.7	-20.9	-31.1	-35.7	-30.9	-20.5	-9.9	-2.8	+3.6	+9.9	+13.5	+16.0	+16.1	+15.5	+14.6	+13.1																								
Summer	+5.5	+3.7	+4.3	+5.5	+7.0	+4.0	-3.3	-13.9	-24.8	-35.9	-41.7	-40.4	-31.7	-17.3	-4.0	+7.3	+16.3	+23.1	+28.5	+29.5	+27.1	+20.7	+16.1	+14.0																								

MONTH AND SEASON	57 LERWICK																							DECLINATION (QUIET DAYS)																							1937	
	Hour	G.M.T.	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																								
January	-1.45	-0.94	-0.73	-0.63	-0.97	-0.86	-1.13	-1.45	-1.55	-1.00	-0.15	+1.41	+2.53	+2.66	+1.97	+1.33	+1.27	+1.28	+0.81	+0.29	-0.65	-0.64	-0.79	-0.61																								
February	-1.08	-1.03	-1.32	-2.45	-2.83	-2.52	-2.51	-2.41	-2.10	-0.81	+0.64	+2.51	+4.14	+4.49	+4.44	+2.75	+1.61	+1.12	+0.93	+0.59	+0.24	-0.39	-1.24	-2.77																								
March	-1.53	-0.87	-0.96	-1.23	-1.59	-1.95	-2.25	-3.21	-3.98	-2.97	-0.73	+1.85	+3.81	+4.45	+3.44	+2.39	+1.37	+1.33	+1.07	+0.73	+0.40	+0.19	+0.29	-0.05																								
April	-1.04	-1.47	-1.84	-2.27	-3.09	-3.04	-3.41	-4.93	-5.20	-3.79	-1.68	-1.43	+4.86	+6.35	+5.88	+4.87	+3.69	+2.58	+1.59	+1.03	+1.00	+0.81	-0.26	-2.07																								
May	-0.45	-0.70	-1.07	-1.37	-2.43	-4.04	-5.79	-6.41	-6.39	-4.62	-1.99	+1.49	+4.55	+5.94	+5.97	+4.61	+3.09	+1.86	+1.21	+1.27	+1.87	+1.38	+1.13	+0.89																								
June	-0.68	-1.68	-2.78	-3.84	-5.14	-6.17	-7.30	-6.78	-5.88	-3.06	-0.08	+3.70	+6.24	+6.62	+6.86	+5.50	+3.48	+1.99	+1.44	+1.72	+1.68	+1.90	+1.40	+0.86																								
July	-0.73	-2.17	-3.29	-4.51	-5.93	-6.61	-7.23	-7.19	-5.91	-2.55	-0.07	+3.47	+6.27	+7.79	+7.47	+6.09	+4.21	+2.83	+2.19	+1.95	+1.63	+0.97	+0.73	+0.59																								
August	-0.29	-0.57	-1.68	-2.83	-3.97	-5.33	-6.51	-6.87	-5.62	-3.05	+0.59	+4.27	+6.97	+7.19	+5.40	+3.19	+1.05	+0.49	+1.15	+1.61	+1.84	+1.69	+0.79	+0.49																								
September	-1.47	-0.66	-0.88	-1.29	-2.02	-3.32	-4.57	-5.78	-5.82	-4.21	-0.98	+3.18	+6.51	+7.74	+6.50	+4.11	+1.62	+0.68	+0.73	+0.62	+0.32	-0.07	-0.66	-0.28																								
October	-0.59	-1.99	-1.92	-2.37	-2.23	-2.15	-2.15	-1.97	-2.96	-2.77	-0.03	+2.97	+4.35	+4.39	+4.16	+3.41	+2.25	+1.45	+0.81	-0.15	+0.16	-0.37	-1.21	-1.09																								
November	-0.54	-0.69	-0.88	-0.90	-0.98	-1.19	-1.84	-2.04	-2.36	-1.91	-0.12	+1.74	+2.58	+2.91	+2.78	+2.20	+1.42	+1.13	+0.74	+0.40	+0.20	-0.45	-0.92	-1.28																								
December	-0.93	-0.95	-0.63	-1.11	-1.23	-1.25	-1.11	-1.21	-0.69	+0.13	+0.89	+1.69	+2.29	+2.47	+1.55	+1.01	+0.85	+0.65	+0.33	-0.03	-0.57	-0.65	-0.57	-0.93																								
Year	-0.90	-1.14	-1.50	-2.07	-2.70	-3.20	-3.82	-4.19	-4.04	-2.55	-0.31	+2.47	+4.59	+5.25	+4.70	+3.45	+2.16	+1.45	+1.09	+0.84	+0.68	+0.36	-0.11	-0.52																								
Winter	-1.00	-0.90	-0.89	-1.27	-1.50	-1.45	-1.65	-1.78	-1.67	-0.90	+0.31	+1.84	+2.89	+3.13	+2.69	+1.82	+1.29	+1.05	+0.70	+0.31	-0.19	-0.53	-0.88	-1.40																								
Equinox	-1.16	-1.25	-1.40	-1.79	-2.23	-2.61	-3.09	-3.97	-4.49	-3.43	-0.85	+2.36	+4.88	+5.73	+4.99	+3.69	+2.23	+1.51	+1.05	+0.56	+0.47	+0.14	-0.46	-0.87																								
Summer	-0.54	-1.28	-2.21	-3.14	-4.37	-5.54	-6.71	-6.81	-5.95	-3.32	-0.39	+3.23	+6.01	+6.89	+6.43	+4.85	+2.96	+1.79	+1.50	+1.64	+1.75	+1.49	+1.01	+0.71																								

MONTH AND SEASON	58 LERWICK																							VERTICAL FORCE (QUIET DAYS)																							1937	
	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y																								
January	+0.6	+0.7	+0.8	-0.1	0.0	-0.3	-1.0	-0.1	+0.4	+0.5	+0.2	-0.1	+0.8	-0.7	+0.2	+1.7	+1.8	+1.3	+1.0	+0.3	-0.8	-2.1	-2.2	-2.9																								
February	-0.2	-1.5	-1.4	-5.3	-5.5	-5.4	-3.9	-3.1	-6.0	-5.5	-4.4	-2.9	+0.6	+3.1	+5.2	+7.3	+7.9	+6.4	+4.5	+4.5	+4.4	+2.5	-0.2	-1.1																								
March	-4.4	-1.2	+0.2	+1.8	+2.0	+1.9	+1.4	+3.0	+4.4	+4.4	+2.6	+0.6	-0.8	-1.6	-1.6	-1.8	-0.4	-0.5	-1.8	-1.2	-0.6	-1.2	-3.0	-2.2																								
April	+0.3	+1.7	+2.8	+2.9	+1.3	-0.3	-1.9	-1.5	-2.0	-1.9	-2.1	-3.9	-9.3	-9.3	-9.3	-4.8	-2.5	+0.5	+4.5	+7.5	+8.3	+5.2	+2.7	+2.5																								
May	+2.9	+3.5	+2.9	+2.1	-0.7	-0.8	-1.1	-2.9	-1.9	-3.3	-6.3	-9.3	-11.9	-10.7	-6.7	-1.3	+5.1	+8.4	+10.5	+7.7	+6.1	+4.9	+3.1	-0.3																								
June	-28.8	-22.8	-10.9	-5.0	+0.4	+4.4	+7.8	+7.8	+5.3	+2.0	-0.4	-2.4	-5.2	-4.2	+0.9	+2.6	+3.8	+6.4	+8.8	+10.4	+8.3	+5.2	+3.4	+2.2																								
July	-9.0	-9.0	-6.3	-4.8	+0.2	+4.6	+4.6	+2.6	-1.1	-3.6	-2.2	-5.6	-9.8	-9.6	-7.3	-1.2	+5.4	+9.4	+10.6	+11.0	+8.9	+8.0	+3.8	+0.4																								
August	-2.9	-2.4	-1.1	+2.5	+2.3	+2.0	+2.7	+3.3	+1.7	+0.2	-2.7	-6.3	-6.1	-1.8	+1.9	+2.7	+5.5	+4.8	+1.5	+0.1	-0.7	-1.8	-2.1	-3.3																								
September	-6.2	-3.3	-4.0	-4.6	-3.2	-1.9	+0.8	+4.4	+7.0	+5.5	+1.0	-3.2	-6.8	-4.3	+1.6	+6.8	+5.4	+3.5	+2.0	+1.2	+2.4	+2.1	-1.8	-4.4																								
October	-17.9	-10.8	-4.6	-1.9	-3.0	-3.0	-3.5	-1.6	+1.4	+4.9	+6.0	+6.4	+5.5	+6.2	+7.6	+8.7	+5.4	+3.2	+2.5	+1.4	-0.4	-3.9	-3.4	-5.2																								
November	-0.3	+0.6	+0.6	+0.3	-1.8	-3.8	-5.1	-5.2	-3.0	+0.3	+0.8	+2.6	+4.1	+3.4	+3.8	+4.3	+4.2	+2.0	-0.1	-1.0	-1.0	-1.7	-1.6	-2.4																								
December	+0.7	-0.5	-2.6	-5.3	-5.9	-5.7	-4.3	-3.7	-1.8	+0.9	+2.7	+2.3	+2.7	+4.7	+4.8	+4.7	+3.7	+2.7	+1.7	+1.1	+0.6	-0.5	-1.5	-1.5																								
Year	-5.4	-3.7	-2.0	-1.5	-1.2	-0.7	-0.3	+0.3	+0.4	-0.4	-0.4	-1.8	-3.0	-2.1	+0.5	+2.7	+4.0	+4.3	+4.1	+3.7	+2.7	+1.2	-0.3	-1.8																								
Winter	+0.2	-0.2	-0.7	-2.6	-3.3	-3.8	-3.6	-3.0	-2.6	-0.9	-0.2	+0.5	+2.1	+2.6	+3.5	+4.5	+4.4	+3.1	+1.8	+1.2	+0.8	-0.5	-1.4	-2.0																								
Equinox	-7.1	-3.4	-1.4	-0.5	-0.7	-0.8	-0.8	+1.1	+2.7	+3.2	+1.9	0.0	-2.9	-2.3	+0.7	+2.8	+2.7	+2.7	+2.5	+2.4	+1.7	-0.1	-1.4	-3.1																								
Summer	-9.5	-7.7	-3.9	-1.3	+0.5	+2.5	+3.5	+2.7	+1.0	-1.2	-2.9	-5.9	-8.3	-6.8	-2.8	+0.7	+4.9	+7.3	+7.9	+7.3	+5.7	+4.1	+2.1	-0.3																								

Departure from mean of the 24 hourly values (uncorrected for non-cyclic change)

Table for 59 LERWICK showing HORIZONTAL FORCE (DISTURBED DAYS) with columns for months and seasons (January to December, Year, Winter, Equinox, Summer) and 24 hourly intervals (0-1 to 23-24).

Table for 60 LERWICK showing DECLINATION (DISTURBED DAYS) with columns for months and seasons (January to December, Year, Winter, Equinox, Summer) and 24 hourly intervals (0-1 to 23-24).

Table for 61 LERWICK showing VERTICAL FORCE (DISTURBED DAYS) with columns for months and seasons (January to December, Year, Winter, Equinox, Summer) and 24 hourly intervals (0-1 to 23-24).

RANGE OF MEAN DIURNAL INEQUALITIES FOR THE MONTHS, YEAR AND SEASONS OF 1937										AVERAGE DEPARTURE								
NOTE.- The ranges are derived from the diurnal inequalities printed in Tables 53 to 61										Arithmetical averages of diurnal inequalities in Tables 53-61 taken regardless of sign								
62 LERWICK 1937										63 LERWICK 1937								
	All Days			Quiet Days			Disturbed Days			All Days			Quiet Days			Disturbed Days		
	H	D	V	H	D	V	H	D	V	H	D	V	H	D	V	H	D	V
January	25.1	6.24	25.2	20.8	4.21	4.7	56.2	12.99	66.8	5.2	1.94	5.6	4.9	1.13	0.9	7.7	2.97	16.2
February	38.3	8.16	43.4	29.0	7.32	13.9	131.7	14.78	126.9	6.9	2.53	10.6	7.7	1.95	3.9	18.4	3.71	23.8
March	48.9	11.00	45.7	44.8	8.43	8.8	112.2	21.06	113.2	10.3	2.94	12.2	11.4	1.78	1.9	24.0	4.59	33.9
April	101.7	14.06	54.6	57.2	11.55	17.6	466.6	28.29	142.1	27.0	4.00	13.7	14.5	2.84	3.3	122.9	7.81	35.4
May	81.7	13.28	67.8	65.8	12.38	22.4	257.6	17.94	221.4	22.9	3.64	17.9	16.0	2.94	4.8	66.2	5.04	60.9
June	91.0	14.69	62.6	71.6	14.16	39.2	176.5	20.24	141.9	21.9	3.87	14.0	17.2	3.62	6.6	43.6	4.98	39.5
July	104.7	16.57	70.2	78.2	15.02	20.8	201.2	18.40	167.9	27.6	4.50	15.1	19.3	3.85	5.8	55.5	5.37	41.4
August	81.0	14.05	34.8	73.4	14.06	11.8	167.4	16.50	156.2	21.2	3.41	9.5	18.7	3.06	2.6	42.4	4.20	40.3
September	71.0	12.00	46.4	68.8	13.56	13.8	132.1	16.78	88.4	13.9	2.94	10.3	17.3	2.67	3.6	28.0	4.78	21.1
October	66.6	11.16	75.8	41.4	7.35	26.6	257.8	28.94	206.4	16.5	3.01	21.5	10.0	2.00	4.9	53.5	4.94	48.6
November	37.4	9.94	43.9	28.9	5.27	9.5	113.0	14.94	145.8	8.0	2.55	13.9	8.3	1.34	2.3	22.1	4.25	38.1
December	36.1	6.71	47.2	13.7	3.72	10.7	160.4	12.74	125.6	6.2	1.95	12.5	3.5	0.99	2.8	25.2	3.11	31.3
Year	58.8	10.31	47.2	47.4	9.44	9.7	129.2	14.76	119.4	14.0	29.6	12.3	11.9	2.25	2.0	37.4	4.23	33.3
Winter	33.0	7.62	35.4	21.2	4.91	8.3	91.8	11.76	107.5	6.3	21.9	10.4	6.0	1.33	2.1	17.1	3.24	24.8
Equinox	60.7	11.53	52.1	51.8	10.22	10.3	178.0	20.37	121.1	15.4	31.9	14.3	13.3	2.30	2.0	48.1	5.07	33.0
Summer	88.5	14.48	56.4	71.2	13.70	17.4	177.1	15.19	151.6	22.7	38.3	13.8	17.7	3.35	4.2	50.0	4.78	44.4

64 LERWICK 1937 NON-CYCLIC CHANGE										65 LERWICK 1937 MEAN VALUES OF HR <sub>H</sub> + VR <sub>V</sub> (Unit 10,000γ <sup>2</sup> )			
	All Days			Quiet Days			Disturbed Days			HR <sub>H</sub>	VR <sub>V</sub>	Sum	Mean Character Figure
	H	D	V	H	D	V	H	D	V				
January	+0.1	+0.01	-0.2	+5.2	+0.95	-4.4	-5.2	-1.97	+20.0	107	359	466	0.48
February	-0.9	-0.18	+0.2	+3.7	-1.49	-3.0	-18.5	+0.30	-0.6	172	568	740	0.86
March	-1.8	+0.06	-1.8	+5.7	+0.99	+2.4	-35.6	-1.86	-13.8	215	566	781	0.81
April	0.0	-0.33	+0.2	-1.4	-1.27	-1.7	-1.2	+1.18	-10.9	451	1003	1454	0.93
May	+1.7	+0.23	-0.2	+4.7	+0.49	-2.6	-11.7	+0.04	-3.6	300	732	1032	1.00
June	+1.1	+0.14	+1.9	+10.2	+0.84	+28.4	-39.9	-3.20	-22.4	242	594	836	0.93
July	+0.4	-0.02	-0.4	+6.4	+0.69	+5.4	-9.7	-2.60	+0.7	309	656	965	0.94
August	-0.2	-0.06	+0.5	+4.9	+0.44	-0.8	-26.5	0.00	-16.9	241	456	697	0.58
September	-9.4	-0.77	-2.5	+5.4	+0.14	-0.3	-67.2	-4.55	-20.8	177	467	644	0.77
October	+8.6	+0.58	+2.9	+4.0	+1.33	+6.3	+48.4	+1.81	+24.4	371	858	1229	1.03
November	-5.1	-0.39	-2.8	+0.8	-0.73	-2.3	-18.3	+0.92	-10.0	181	555	736	0.70
December	+5.0	+0.25	+1.7	+4.2	-0.42	-3.7	-6.4	-0.11	+4.4	133	404	537	0.68
Year 1937	0.0	-0.04	0.0	+4.5	+0.16	+2.0	-16.0	-0.84	-4.1	242	601	943	0.81
Winter	-0.2	-0.08	-0.3	+3.5	-0.42	-3.3	-12.1	-0.21	+3.5	148	471	620	0.68
Equinox	-0.7	-0.11	-0.3	+3.4	+0.30	+1.7	-13.9	-0.85	-5.3	303	723	1027	0.89
Summer	+0.7	+0.07	-0.5	+6.5	+0.61	+7.6	-21.9	-1.44	-10.5	273	609	883	0.86

66 LERWICK 1937 MEAN MONTHLY AND ANNUAL VALUES OF TERRESTRIAL MAGNETIC ELEMENTS														
For all (a), quiet (q) and disturbed (d) days for H, D and V and for all days for N, W, I and T														
	Horizontal Force			Declination (West)			Vertical Force			North Component All days	West Component All days	Inclination (North) All days		Total Force All days
	a	q	d	a	q	d	a	q	d			°	'	
January	420	423	423	51.7	51.8	52.6	805	802	814	14058	3210	72	52.6	48976
February	415	418	412	50.4	50.7	49.6	810	807	805	14054	3203	72	53.0	48979
March	413	417	405	49.9	50.1	50.4	804	807	808	14054	3201	72	53.0	48973
April	404	424	324	48.2	49.1	45.0	806	806	807	14046	3192	72	53.7	48972
May	413	419	383	47.4	47.7	45.8	804	815	782	14055	3191	72	53.0	48973
June	422	422	423	47.1	46.6	47.6	808	810	802	14065	3192	72	52.5	48979
July	423	419	425	46.4	45.7	47.1	811	811	809	14066	3189	72	52.5	48983
August	411	410	386	45.2	44.8	45.5	811	815	803	14055	3181	72	53.3	48979
September	412	411	405	44.3	44.5	44.3	807	813	802	14057	3178	72	53.2	48975
October	392	409	362	43.3	43.2	42.5	825	823	815	14039	3169	72	54.9	48987
November	410	416	409	42.7	43.2	43.3	826	820	834	14057	3171	72	53.7	48993
December	413	415	418	42.2	42.0	42.5	830	825	847	14060	3169	72	53.6	48998
Year	412	417	398	46.6	46.6	46.3	812	813	811	14055	3186	72	53.3	48981



Night commencing	Month	Night commencing	Month	Night commencing	Month	Night commencing	Month
	JANUARY		MARCH (Contd.)		SEPTEMBER (Contd.)		NOVEMBER (Contd.)
1 c-cb ..	Cloudy	16 a-c-a ..	Variable cloud	26 c ..	Becoming misty after 20h	21 b (W)	Fine. Glow after 18h killed by moonlight. Small arc with rays 21h 50m. Glow again later
2 (W)	Variable cloud. Moderate glow 19h onwards.	17 a-c ..	Fine. Cloudy after 20h	27 c ..	Mainly overcast and misty		
4 c ..	Cloudy	18 c-b ..	Variable cloud. Moonlight	28 c ..	Cloud increasing		
5 a (W)	Very faint glow after 21h 45m. Fine after 19h	19 a-b ..	" " "	29 c ..	Cloudy. Overcast after 21h		
6 (W)	Overcast till 21h 30m when faint glow seen in breaks	20 b-c ..	" " "			22 (W)	Mainly fine. Moderate glow all evening. Some activity but hidden by cloud in N
7 (W)	Moderate aurora after 18h. Rays and arc with considerable activity. Diminishing after 22h 30m	21 c-b ..	Overcast. Clearing 20h-22h Moonlight			23 (W)	Variable cloud. Weak glow seen through breaks in cloud. Tips of bright rays seen above cloud bank in N at 17h 55m
8 (W)	Variable cloud. Feeble suggestion of glow at times	22 c-b ..	Overcast until 21h. Bright moonlight	3 a (W)	Very fine. Moderate glow after dusk. Milky appearance at times. After 21h tendency to form diffuse arc. Few short rays in NNE.	24 c ..	Mainly overcast
9 c ..	Very cloudy. Overcast after 21h	23 cb ..	Cloudy. Bright moonlight	4 a (W)	Very fine. Weak glow all evening, rays at times	25 (W)	Cloud decreasing. Weak glow after 20h 45m
13 a ..	Fine	24 b ..	Fine	5 a (W)	Fine. Very weak glow	26 ca ..	Variable cloud
14 a ..	Very fine	25 b-c ..	Fine. Cloudy after 21h	6 c ..	Cloudy, Overcast after 20h	27 c ..	Overcast after 19h
15 c ..	Cloudy. Overcast after 21h	26 c ..	Very cloudy	7 (W)	Moderate glow through gaps in layer of Sc		
20 cb ..	Cloudy, moonlight	27 b (W)	Fine. Glow after dark, becoming arc with slight activity 21h-22h. Killed by moonlight	8 cb ..	Cloudy	1 (W)	Moderate aurora seen through small breaks in cloud after 21h 30m
21 bc-c ..	Cloudy, becoming very cloudy Moonlight	28 a-c-a ..	Variable cloud	9 c ..	Very cloudy	3 c ..	Mainly overcast
22 c-bc ..	Very cloudy, overcast at times. Moonlight	29 c ..	Very cloudy	11 (W)	Weak to moderate glow through gaps in cloud	4 c (W)	Weak glow after 21h 30m. Very cloudy
27 c ..	Mainly overcast	30 c ..	" "	12 c ..	Mainly overcast	7 (W)	Moderate glow through breaks in cloud
28 c ..	" "			13 (W)	Weak to moderate glow seen in clear intervals	9 ca ..	Variable cloud
	FEBRUARY		APRIL	15 b (W)	Moderate glow becoming homogeneous arc. Some rays killed by moonlight and increasing Ci	10 b (W)	Moderate glow after 21h 40m. Few rays in NW at 22h 15m. Bright moonlight. Cloud decreasing
5 (W)	Fine from 18h-20h. Weak glow 19h-20h. Overcast after 21h	4 a (W)	Fine. Faint glow 20h 45m becoming moderate 21h 45m	16 b-c ..	Variable cloud. Moonlight	11 b ..	Cloudy. Bright moonlight
6 c ..	Very cloudy	5 c ..	Overcast, clearing after 21h	17 c ..	Very cloudy	12 b ..	Very fine. Bright moonlight and snow
7 a ..	Variable cloud. Moderate glow in clear intervals	11 a ..	Very fine	18 cb ..	" "	13 cb ..	Overcast at 21h. Cloudy otherwise. Moonlight
10 (W)	Variable cloud. Moderate glow in clear intervals	15 b ..	Fine. Moonlight	19 c ..	Cloudy	15 b ..	Cloudy. Bright moonlight
11 (W)	Variable cloud. Moderate glow in clear intervals	16 c ..	Cloudy. Moonlight	20 b ..	" "	16 b ..	Fine. Bright moonlight
12 (W)	Moderate glow. Weak rays at times above cloud bank	17 b ..	Very fine	21 cb ..	" "	17 cb ..	Variable cloud. Bright moonlight.
14 (W)	Cloud increasing. Low arc 18h 20m. Some rays 18h 40m-19h obscured by cloud 20h	18 c ..	Cloudy	22 c ..	Very cloudy	18 cb ..	Variable cloud. Bright moonlight
15 a-c ..	Fine. Cloudy after 20h	19 c ..	Very cloudy	23 (W)	Moderate aurora after 22h 30m. Moonlight	19 b (W)	Bright arc 19h 00m - 19h 35m with numerous rays. Fading at 19h 40m. Cloudy. Moonlight
16 a-b ..	Moonlight. Mainly fine	20 c ..	Variable cloud	24 b (W)	Cloud decreasing. Diffuse glow after 21h. Moonlight	20 (W)	Moderate glow through breaks in cloud
17 c-a-b ..	Cloudy, clearing after 19h. Moonlight	21 c ..	" "	26 cb ..	Variable cloud. Moonlight	22 c ..	Mainly overcast
18 a-b ..	Mainly fine. Moonlight	22 c ..	" "	27 a (W)	Fine. Weak homogeneous arc 10' above horizon 19h 50m-20h 10m weak glow. 23h 30m-23h 50m double arc	23 a (W)	Bright aurora. Mainly fine. Greatest activity 19h-20h 30m. Arc first seen 16h 40m
19 b ..	Fine. Moonlight	23 c ..	" "	28 c ..	Very cloudy	24 a (W)	Faint glow and arc after 19h 45m. Becoming fine
20 b ..	Variable cloud. Moonlight	24 (W)	Moderate glow and some rays after dusk	29 c ..	Becoming overcast 20h	25 a (W)	Fine. Faint glow all evening
21 c-b-c ..	Variable cloud. Moonlight	25 c ..	Cloudy	27 a (W)	Fine. Glow after 18h 15m. Low arc 18h 50m. Bright arc persisting 22h 30m. Few rays	26 c-a ..	Cloudy, becoming fine
22 b-c ..	Fine. Very cloudy after 20h. Moonlight	26 (W)	Diffuse patches in NW & W. Some rays mainly after 22h	28 a ..	Cloudy	27 a ..	Mainly fine
23 b ..	Fine. Moonlight	27 c ..	Cloudy	28 a (W)	Cloud decreasing. Faint glow between clouds 18h-19h	28 a ..	Slight cloud
24 b ..	" "	28 b ..	Cs	29 ca ..	Cloud decreasing. Faint glow between clouds 18h-19h	29 ca ..	Variable cloud
25 c-b-c ..	Very cloudy. Moonlight			30 a-ca ..	Fine. Becoming overcast 20h Moonlight	30 a-ca ..	Fine, becoming very cloudy
28 c-a-c ..	Cloudy 19h-21h. Overcast otherwise						
	MARCH		SEPTEMBER		NOVEMBER		
1 (W)	Very cloudy. Moderate glow occasionally	1 (W)	Cloudy. Moderate glow 21h 45m-22h 30m with few faint rays	2 c ..	Very cloudy		
5 (W)	Cloudy. Weak glow all evening	2 c ..	Cloudy	3 c ..	" "		
6 c-a ..	Cloudy. Fine after 20h	3 ca ..	" "	4 ca ..	Variable cloud		
7 a ..	Very fine	4 ca ..	" "	5 (W)	Moderate to weak glow during clear intervals		
8 a ..	" "	5 ca ..	" "	6 c ..	Becoming overcast 20h		
9 a (W)	Very fine. Faint glow after 19h 45m	6 ca-c ..	Cloud increasing	8 (W)	Fine. Glow after 18h 15m. Low arc 18h 50m. Bright arc persisting 22h 30m. Few rays		
10 a (W)	Very fine. Weak glow 20h becoming moderate 22h	7 ca-c ..	" "	9 (W)	Cloud decreasing. Faint glow between clouds 18h-19h		
11 a (W)	Mainly fine. Moderate glow after 20h 45m. Few faint rays 21h 30m	8 ca ..	Variable cloud	10 a-c ..	Fine. Becoming overcast 20h Moonlight		
12 a ..	Mainly fine	9 c ..	Cloud increasing	11 (W)	Moderate glow at 22h 30m. Obscured by cloud		
15 ca ..	Variable cloud	10 c ..	Variable cloud	12 cb ..	Very Cloudy, becoming overcast. Moonlight.		
		11 c ..	Mainly overcast	13 c ..	Very cloudy. Overcast after 20h		
		12 c-b ..	Cloudy	14 c ..	Mainly overcast		
		13 (W)	Cloud decreasing. Glow after dark. Arc and rays and moderate glow at times from 21h 30m	15 b ..	Mainly fine. Bright moonlight		
		14 b ..	Fine. Moonlight	17 c ..	Mainly overcast		
		15 b-c ..	Cloudy. Moonlight	18 cb ..	Cloudy. Bright Moonlight		
		16 b ..	Very fine. Bright moonlight	19 b ..	Cloudy. Moonlight		
		17 b ..	Fine. Bright moonlight	20 b ..	" "		
		18 c-b ..	Mainly fine. Moonlight				
		19 c-b ..	Cloudy. Moonlight				
		20 b (W)	Slight glow after 22h. Cloud decreasing				
		21 c ..	Mainly overcast				
		22 (W)	Very cloudy. Glow through breaks at 22h				
		24 ca ..	Variable cloud				
		25 c ..	Mainly overcast				

In the interests of brevity there have been omitted from the table above all dates on which the sky throughout the evening remained completely overcast and on which, therefore, no opportunity arose of determining whether or not aurora occurred. The nights on which aurora was actually seen are indicated by the symbol (W).

The nights on which aurora was not seen despite at least an occasional interval of more or less clear sky, are indicated by the symbol ..; in the latter case also, remarks on the weather are added to assist the reader in judging how far the fact of no observation of aurora may be taken as indicating that there was not actual aurora.

The letters a, b, c, have the following significance.

a = Conditions favourable for seeing aurora.

b = Unfavourable for faint aurora (moonlight, mist, Cs, etc.)

but not such as to mask bright aurora.

c = Cloudy, but aurora not seen in clear intervals

ca, cb = have been used for "cloudy, with conditions a or b in the intervals."

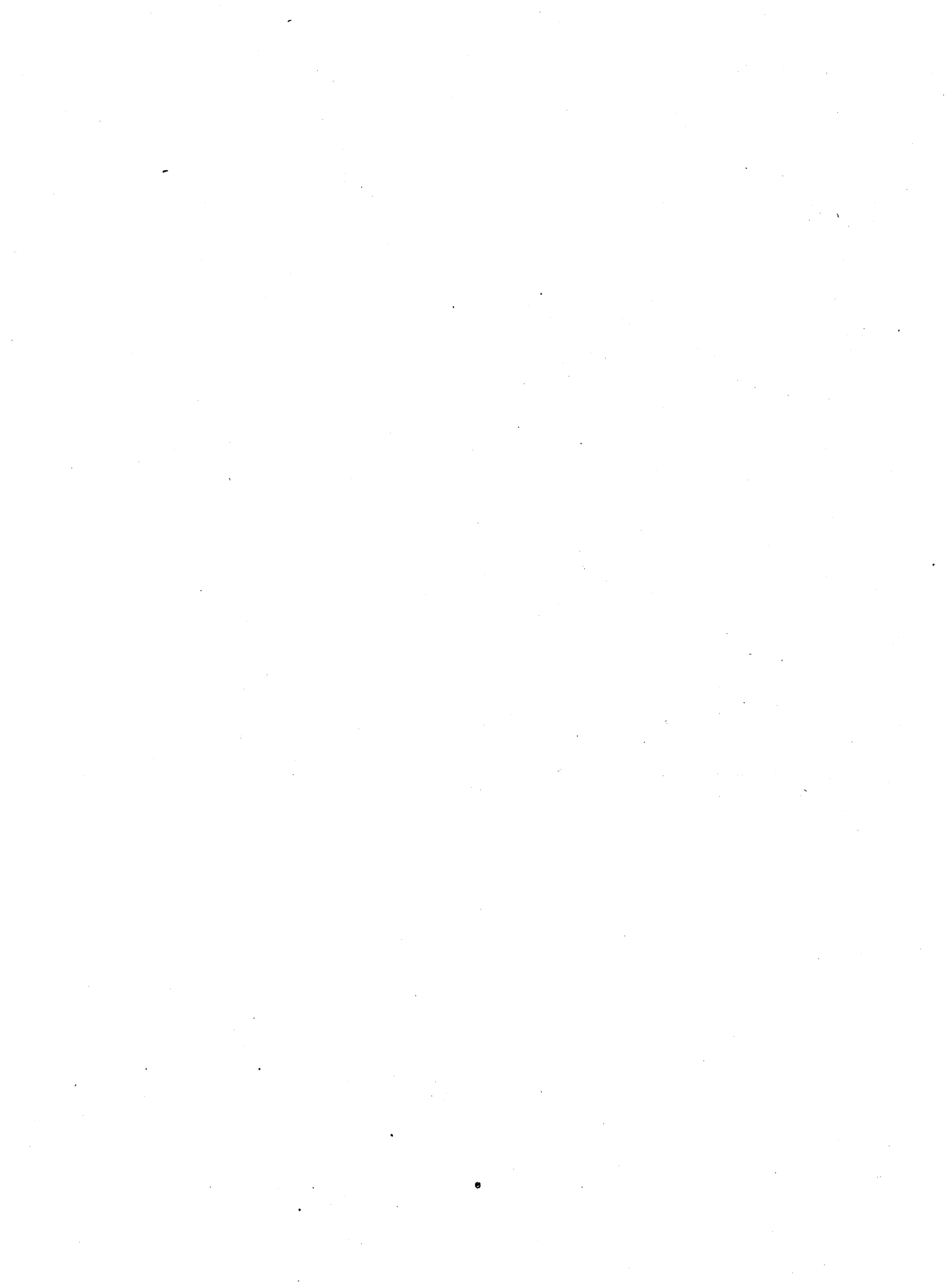
Changing conditions have been indicated by a hyphen,

e.g., a-c.

A full description is available of the auroral phenomena observed.

Night commencing	Month	Night commencing	Month	Night commencing	Month	Night commencing	Month
	<b>JANUARY</b>		<b>MARCH (Contd.)</b>		<b>SEPTEMBER</b>		<b>NOVEMBER</b>
6	Fortrose	27	G.C.	1	Duntuil.	2	Wick 21.35; G.C.; Duntuil;
7	B; K. bright; D.; G.C. very bright; Fort Augustus large arc 19.30-20.00 with streamers; Forres 18.30; A; Braemar, single arch NW-ESE; Montrose 19.30-20.00; Arbroath, brilliant NE; N and NW 19.00-21.00; Kettins 18.00-21.00; Dunfermline 19.00-20.00; Paisley 21.00; Edinburgh 18.00-21.00; Balerno; N. Berwick, 18.45; Marchmont 18.00-20.00; Swinton; St. Abbs Head bright 18.30-20.00; Dungavel; E; Whalsay 20.00; Start Point, brilliant 22.15; Copinsay 21.00-24.00; Sule Skerry 19.00-23.30; Duncansby Head 19.00-24.00; Tiump Head 18.30-23.30; Ushenish 18.30-20.00; Isle of May 18.30-22.30.	29	G.C.	2	Wick 00.30.	8	Stour Head 01.30-02.30 from NE to NW.
		31	G.C.	9	Montrose; Ailsa Craig 21.00-22.00.	9	B.; Paisley; Rothesay.
			<b>APRIL</b>	10	A.; Edinburgh 22.00-23.00; E.; Ailsa Craig 02.00-03.00; Holy Is. 23.00-03.00 (11th).	13	G.C.; A.
		10	Tiump Head 23.45-02.40 (11th)	11	Abbotsinch 00.30-dawn; Glenlee, early morning; Ushenish 01.30-03.45.	18	A.
		12	G.C.	13	B.; E.	21	D.; A
		20	G.C.	15	Berwick-on-Tweed.	22	A.
		24	K, bright; D. brilliant; Wick; A; Duncansby Head 21.45-24.00; Tiump Head 23.30-02.00 (25th); Bell Rock.	29	Edinburgh	23	D.
		25	Barra 23.30; G.C.; Kettins; Edinburgh 22.30-23.30 very bright; Rothesay; E.; Tiump Head 22.00-01.30 (26th).	30	Duntuil., very brilliant display 22.30-23.00. Tisee, strong, coloured, reaching S. of zenith 23.00; Tiump Head 24.00-02.30 (1st Oct.); Ushenish 24.00-02.00 (1st Oct.)	24	Stour Head.
		26	Wick; Fortrose 23.00; A.; Braemar, NW; Kettins; Edinburgh 22.00; Rothesay; Start Point, brilliant display stretching to S. at 01.30; Copinsay; Duncansby Head 22.00-24.00 Buchanness; Bell Rock.			26	Duntuil.
8	Wick, WNW-NE, 01.15-02.20; Colonsay 17.30-20.00 NW and N.	27	Wick; Fort Augustus 23.30-24.00; Forres 23.00; Edinburgh 22.30-24.00; E; Dunnet Head, brilliant display, 23.00-03.00 (28th); Duncansby Head 22.00-03.00 (28th).	3	K.; Wick; G.C.; A.; Duntuil.; Auchincruive; E.; Copinsay; Duncansby Head 23.00-05.00 (4th) very bright; Stour Head 24.00-03.00; Isle of May 23.00-05.00 (4th); Holy Is. 22.00-05.00 (4th), faint to bright display; Turnberry 23.00-04.45 (4th) from W to NW; Ailsa Craig 21.00-24.00.	27	Duntuil.; Ailsa Craig 20.45.
	<b>FEBRUARY</b>		<b>MAY</b>		<b>OCTOBER</b>	29	A.
3	Barness 01.30-02.00, bright display; Tiump Head 01.00-04.00.			4	K.; D.; Wick; A; Barra 23.00; E.; Start Point, N to W and SE, 02.00; Copinsay; Duncansby Head 22.30-02.00 (5th); Rudh Re 24.00-04.30 (5th); Ushenish 00.30-04.00 very bright; Girdleness 01.00-04.45 very bright from N to E.	30	Duntuil.; Fort Augustus 20.15-20.45, streamers NW to NE; A.; Stour Head 19.30 W to N; Lismore 19.30-20.30.
5	Duntuil.	1	A.	5	Barra 23.30.		<b>DECEMBER</b>
9	G.C.; A.; Kettins 22.00; Arbroath 21.00; Paisley 19.30-21.00; Edinburgh, faint arch 21.00; St. Abbs Head, NW to EME; Eskdalemuir; Tiump Head 12.45-23.30; Rudh Re 21.00-23.00	4	Wick 22.30; A; Edinburgh 22.30; E; Duncansby Head from W and N to NE, 22.30-00.45 (5th); Ailsa Craig 23.00-24.00.	8	Wick; G.C.	1	Rothesay 01.00.
10	A.; Colonsay.	5	A.; Tisee; Rothesay.	9	A.; Tisee 21.00-22.00; E.	6	G.C.; Duntuil.
14	A.	6	G.C.	10	E.	13	A.
15	A.	13	Rothesay, clear red.	11	E.	23	K.; D.; Sumburgh Head 18.00-20.00.
16	A.			15	K.	24	K.; D.; Fortrose; G.C.; A.; Duntuil.; E.
	<b>MARCH</b>		<b>JUNE</b>	24	Wick; A.; Edinburgh 21.00.	25	Wick 00.10; G.C.;
1	Barra; Colonsay; Paisley 20.00-24.00; E; Ailsa Craig 21.00-24.00.		Nil.	27	Ailsa Craig 23.40-24.00	31	D.; E.; Holy Is. 20.00-24.00.
5	Wick 22.30; E.			28	Wick; A.		
9	Wick 03.30.		<b>JULY</b>	29	Duntuil.		
10	B.		Nil.	31	K.; Stornoway 20.15; Duntuil.		
24	Paisley 21.00.		<b>AUGUST</b>				
			Nil.				

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, K- Kirkwall, E- Eskdalemuir.



M.O. 430.  
(Aberdeen)

Air Ministry  
METEOROLOGICAL OFFICE

THE  
OBSERVATORIES' YEAR BOOK  
1937

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

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ABERDEEN

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Published by the authority of the  
METEOROLOGICAL COMMITTEE



LONDON  
HIS MAJESTY'S STATIONERY OFFICE

1939

## 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	..	..	..	..	24.1
Robinson Cup Anemograph	..	..	..	..	36
Dines Pressure Tube Anemometer	..	..	..	..	37

## Heights in metres above ground

Thermometer Bulbs, North Wall Screen					12.5
Sunshine Recorder	..	..	..	..	20.7
Robinson Cup Anemograph	..	..	..	..	23
Dines Pressure Tube Anemometer	..	..	..	..	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, but during the last seven years the town has been gradually expanding to the north-eastward of the Observatory; this growth was very rapid during 1933 and 1934 with the result that there now exists an inhabited area stretching almost half a mile (1 km.) between the Observatory and the sea in the north-east quadrant. Westwards is the High Street of the Old Town and beyond this is another street. Further west grass pasture extends for about 1 km. To the southward and south-westward lies the main area of the City of Aberdeen.

Because of the aforementioned developments and of their possible further extension under new town-planning schemes, it became necessary in 1933 to seek another site for the Dines Pressure Tube Anemometer situated at Ladyhill, east of the Observatory. This instrument was therefore dismantled, and a new pressure tube instrument, with one-inch pipes, was erected at a new site on the Glebe situated to the north-west of the Observatory, and at a distance of about 350 metres therefrom. To this site were also removed the Stevenson screen, rain-gauges, etc. from the Athletic Ground site north-east of the Observatory, because the surroundings of this latter site were likewise becoming unsatisfactory. All the outdoor instruments are therefore now grouped together. The change of site was made on 31st March 1933.

New plans and photographs appear in the volume for 1935. The changes that have occurred in the site and in the disposition of the instruments since 1928 can be ascertained by comparing these with the corresponding details in the 1928 volume.

Change of value adopted for height of Station above Mean Sea Level.- The numerous changes of late years call for some remarks upon the adopted values for the heights of station and instruments above M.S.L. Prior to 1st January, 1925, the value for the station level was 14.0m., and that for the height of the barometer cistern was 26.8 m. As from 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 m. for the height of the barometer cistern. The change of site of the rain-gauge enclosure in June 1928 altered the value for the station level to 11.4 m. at which figure it remained until 31st March 1933, when the removal of instruments to the Glebe site again altered it to 24.1 m. as from 1st April 1933. The actual heights of the barometer cistern, of the north-wall screen thermometer bulbs, and of the Robinson Cup Anemograph and the Campbell-Stokes Sunshine recorder have remained unaltered throughout.

### 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 was 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 photo-thermograms is done by means of glass measuring scales, the records being standardized by control readings from Standard Thermometers M.O. 1698 (dry bulb) and M.O. 1697 (wet bulb). These thermometers have corrections, varying at different parts of the scale, of between -0.1° A and +0.2°A; these corrections have been applied to the control readings. The heights of the barometer cisterns and of the bulbs of the thermometers are given at the top of the appropriate tables.

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

Rainfall.— The recording instrument in use is Beckley Rain-gauge No. 2 with an area of 101.1 square inches (653 cm.<sup>2</sup>). The procedure adopted in tabulating the records is similar to that described in the General Introduction and calls for no comment. Control was by check gauge M.O.266 during the year 1937.

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. The instrument is accommodated in the North-Wall Screen beside the bulbs of the photo-thermograph and the standard thermometers. Prior to 16th September 1934 this had not been the case. Until 31st March 1933 the hair hygograph was placed in the Stevenson screen at the Athletic Ground site, where its height was 13.2m. below that of the thermometer bulbs in the North-wall screen, and from 1st April 1933 to 15th September 1934 the hygograph was accommodated in the Stevenson screen at the Glebe site, and was at a height 0.5m. below the level of the thermometer bulbs in the North-wall screen.

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 ± .01 inches, focal length 2.95 ± .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 records. In computing the percentage duration of sunshine the actual possible values for each day of the year 1937 have been employed, a procedure similar to that adopted from 1926 onwards.

Wind Speed and Direction.— It was decided that as from 1st January 1935, the values for all the tables dealing with wind speed and direction should be tabulated from the records of the Dines Pressure Tube Anemometer which is installed on the Glebe site, instead of, as formerly, from the records of the Cup Anemometer situated on the Observatory Tower. No adjustments have been made to the values recorded by the Pressure Tube Anemometer to allow for the effect of the unsatisfactory exposure of the instrument to winds coming from directions between 35° and 115°. In this sector the "effective height" of the anemometer vane above ground is only 8 feet as compared with the standard "effective height" of 33 feet.

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\* 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

In consequence of this new procedure the values of wind speed shown in the Tables for 1935 to 1937 are not directly comparable with those shown in previous volumes of the Year Book and derived in the manner described on p.90 of the volume for 1934.

On the very few occasions when records from the Dines Pressure Tube Anemometer have been defective, the required values have been taken directly from the records of the Cup Anemometer without any adjustment for exposure.

Earth Temperature.- Readings have been made at 9h. G.M.T. of earth temperature at nominal depths of one foot and four feet below the surface of the grass.

The thermometers and the method of exposure are of the standard type described in the "Meteorological Observer's Handbook". The depths of the thermometer bulbs below the grass-covered surface of the ground are 30 and 122 cm.

The continuity of the earth temperature readings was somewhat seriously affected by a change of instruments and several changes of site between 1928 and 1933. Details of the changes are given in the Year Books for 1931 pp. 86-87, and for 1933 p. 91.

Minimum Temperature on the Grass.- The grass minimum thermometer is exposed in the enclosure on two wire pegs about 4 cm. above the grass. It is set at 18h and read at 7h, the reading being entered to the day of observation. The instrument in use is the Glycol-ether Minimum thermometer M.O. 60385/35 which has a correction of  $-0.2^{\circ}\text{F}$  at  $12^{\circ}\text{F}$ ,  $-0.1^{\circ}\text{F}$  at  $32^{\circ}\text{F}$ , and  $0.0^{\circ}\text{F}$ . at  $52^{\circ}\text{F}$ .

Cloud.- From the 1st January, 1931, the recording of cloud-forms at Aberdeen has been in conformity with the definitions laid down in "Instructions for Meteorological Telegraphy" M.O. 191/1 (1930.)

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 (8.5km.), rises above the nearer ridges. To the N.N.E. however there is a clear view of the coastline 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. The 21h observations of weather and visibility are made as a rule not actually at the Observatory, but in the neighbourhood within a radius of one or two miles. Apart from that it has to be remarked that, during darkness when the usual fixed objects cannot be seen, 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	55 "	E.S.E.
C	Tree near Gate in North Wall of Athletic Ground	110 "	E.N.E.
D	East wall of Athletic Ground and trees along it	218 "	E.
E	Ventilator tops on Sunnybank School ..	550 "	S.W.
F	Gasometer .. .. .	1,100 "	S.E.
G	(i) Turret of Salvation Army Citadel	1 $\frac{1}{2}$ miles	S.S.E.
	(ii) Coastguard watch-tower .. .. .	1 $\frac{1}{3}$ "	N.E.
H	(i) Girdleness Lighthouse top .. .. .	2 "	S.E.
	(ii) Springhill House .. .. .	2 $\frac{1}{2}$ "	W.
I (i)	No object. Estimate between Strabathie Hill (3 $\frac{1}{2}$ miles) and Primmond 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 Primmond 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 $\frac{2}{3}$ "	N.N.E.
M (m)	Cannot see so far. Used when "L" object shows clear detail and colour-differences.		

IDENTIFICATION NUMBERS OF INSTRUMENTS USED IN 1937

The following were the instruments actually in use during the year 1937:-

Standard Fortin Barometer	.. ..	M.O. 1149
" Dry Bulb Thermometer	.. ..	M.O. 1698
" Wet " "	.. ..	M.O. 1697
Recording Beckley Rain-gauge	.. ..	2
Jardi Rate of Rainfall Recorder	.. ..	M.O. 4
Hellmann-Fuess Snow-gauge	.. ..	100532
Control Rain-gauge	.. ..	M.O. 266
Glass for "	.. ..	M.O. 1739/34
Hair Hygograph	.. ..	M.O. 51/33
Campbell-Stokes Sunshine Recorder	.. ..	M.O. 32
Robinson Cup Anemograph	.. ..	M.O. 50
Dines Pressure Tube Anemometer	.. ..	M.O. 1040
Earth Thermometers	.. ..	M.O. 6, M.O.11
Grass Minimum Thermometer	.. ..	M.O. 60385/35

REVIEW OF METEOROLOGICAL RESULTS

**Pressure.**- The mean pressure, at Mean Sea Level, for the year 1937, was 1010.7 mb., a value 1.1 mb. below the normal. Pressure was much below normal in the earlier months of the year, deficits of about 8 mb. in January and 14 mb. in February being recorded. The largest excesses were 7 mb. in November and 6 mb. in December. The absolute extremes of pressure at Mean Sea Level were 1040.9 mb. on 28th December, and 975.5 on 27th February, the annual range of pressure thus being 65.4 mb. The greatest monthly pressure range, 60 mb., was shown by October, followed by 59 mb. in December; the lowest value was 25 mb. in July. The month with highest mean pressure was August, whose value of 1016.9 mb. at Mean Sea Level was 20.6 mb. above that of February whose mean pressure of 996.3 mb. was the lowest monthly mean value during the year.

In the accompanying Table there are set out the results of the harmonic analysis of the diurnal inequalities of pressure for the various months and seasons, and for the year. The unit employed is .01 mb., and the phase angles are reduced to Local Mean Time and rounded off to the nearest degree. For comparison with the values for 1937 there are given the average values of the various coefficients computed for the period 1871-1926 by Dr. A. Crichton Mitchell.\* In all volumes of the Observatories' Year Book prior to 1935 the phase angles were given in Local Apparent Time, as computed by Dr. Mitchell, but, since 1935, the angles published are those computed by Dr. Mitchell, but converted to Local Mean Time and the amplitudes have been rounded off to .01mb.

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

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

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

Month and Season	$c_1$		$\alpha_1$		$c_2$		$\alpha_2$		$c_3$		$\alpha_3$		$c_4$		$\alpha_4$	
	1937	1871-1926	1937	1871-1926	1937	1871-1926	1937	1871-1926	1937	1871-1926	1937	1871-1926	1937	1871-1926	1937	1871-1926
January	mb. .33	mb. .09	° 131	° 169	mb. .20	mb. .23	° 144	° 146	mb. .14	mb. .13	° 344	° 348	mb. .04	mb. .05	° 230	° 211
February	.34	.16	276	173	.18	.27	164	143	.10	.10	336	346	.00	.03	-	84
March	.34	.16	186	156	.27	.29	142	147	.03	.05	285	330	.05	.03	40	27
April	.15	.15	101	155	.22	.28	152	151	.02	.02	203	188	.06	.04	352	359
May	.16	.10	50	136	.22	.24	143	145	.07	.06	159	166	.01	.02	42	333
June	.09	.06	112	104	.24	.22	147	141	.06	.07	135	155	.03	.01	295	331
July	.14	.09	173	135	.20	.21	124	142	.07	.07	161	155	.02	.01	270	339
August	.26	.11	240	161	.24	.23	139	144	.05	.04	169	165	.03	.03	319	333
September	.28	.12	177	147	.27	.29	150	151	.02	.03	31	346	.04	.05	352	345
October	.18	.15	357	187	.34	.27	161	156	.08	.07	20	0	.01	.03	331	34
November	.14	.13	121	201	.23	.23	153	159	.10	.10	8	4	.01	.01	143	186
December	.09	.16	5	169	.21	.21	163	147	.12	.12	7	357	.06	.05	224	205
Arithmetic Mean	.21				.23				.07				.03			
Year	.07	.12	171	162	.23	.25	149	148	.02	.03	8	359	.01	.01	312	338
Winter	.04	.13	175	178	.20	.23	156	149	.11	.11	353	353	.03	.03	220	194
Equinox	.12	.14	166	162	.27	.28	152	151	.02	.03	360	345	.04	.04	5	6
Summer	.05	.09	179	139	.22	.22	139	143	.06	.06	157	159	.02	.02	305	334

NOTE.-"Winter" comprises the four months January, February, November, December, "Equinox" the months, March, April, September, October; and "Summer" May to August

In this year's analysis the 24-hour term shows the usual considerable departures from the average in both phase angle and amplitude in the various months, but the individual values of amplitude are not so markedly different as was the case last year.

The 12-hour term departs somewhat from the average in the first half of the year, the spring maximum being less marked than usual, while the autumnal maximum is considerably strengthened but occurs a month late. The phase angles show considerable departures from the normal in February, July and December.

The 8-hour term is in very good agreement with the average both in phase angle and in amplitude.

The 6-hour term is in fair agreement with the average in respect of amplitude, the spring maximum being very decided, though the summer minimum is not so definite. The phase angles likewise show fair agreement with the average, except in summer.

Temperature.- The mean temperature for the year was 281.2°A, the same value as last year and very slightly in excess of the normal. Departures from the normal values in the various months did not exceed 1°A except in March which had a departure of -2.1°A, and December one of -1.2°A, while October and June showed excesses of +1.1°A and +1.0°A respectively. Only the three months February, March and December were colder than normal, March being actually as well as relatively the coldest month of the year. The highest recorded temperature was 296.3°A on 25th June and the lowest 263.7°A on

13th December, a total annual range of  $32.6^{\circ}\text{A}$ . The greatest monthly ranges of temperature were shown by December ( $20.2^{\circ}\text{A}$ ) and June ( $19.3^{\circ}\text{A}$ ) and the smallest by February ( $10.6^{\circ}\text{A}$ ) and March ( $11.1^{\circ}\text{A}$ ). The mean daily range was highest in June ( $6.7^{\circ}\text{A}$ ) and lowest in January and November (both  $3.9^{\circ}\text{A}$ ); while over the whole year the mean daily range was  $5.1^{\circ}\text{A}$ .

Relative Humidity.- The mean relative humidity for the year exceeded the normal by 1.3 per cent. Only the three months February, June and September had values below the normal, February only slightly but June and September by about 4 per cent and 3 per cent respectively. On the other hand excesses were shown of about 6 per cent in April, 4 per cent in July and 5 per cent in August. The high value of 84.5 per cent in April coincided however with a marked deficiency of rainfall, - April, as mentioned below being the driest month of the year -, while a similar relative humidity value in August occurred also with a sub-normal rainfall. June, with a relative humidity of 74.5 per cent showed the lowest value for the year.

The day of driest air was 31st May, with 52.0 per cent mean relative humidity and that of the dampest was 7th April, with 98.9 per cent.

Rainfall.- The total rainfall for the year amounted to 795 mm., an excess of 47 mm. over the normal value. January, July and December had falls of 125 mm., 100 mm., and 110 mm. respectively, these amounts being 70 mm., 29 mm. and 28 mm. above the normal values, while April, May and November with 27 mm., 39 mm., and 44 mm. respectively were 21 mm., 20 mm. and 31 mm. below their normal amounts. The outstanding feature of the year's rainfall was the excessive precipitation of the first three months, January to March, which yielded 151 per cent of the normal and the dryness of the following three months April to June, in which period only 65 per cent of the normal quantity was recorded.

Sunshine.- 1937 was a duller year than normal to the extent of 2 per cent of the possible duration of sunshine, the percentage over the whole year being 28 as against a normal value of 30. A considerable excess of sunshine was recorded in February whose value of 39 per cent of the possible was 13 per cent above the normal, and also in September, in which month the recorded amount of 42 per cent of the possible was 9 per cent above normal. June was practically normal in its duration of sunshine but all other months showed deficits, large in the case of April, whose value of 19 per cent of the possible was 15 per cent below the normal, while October and November both showed deficits of 6 per cent.

Throughout the year the number of days having a percentage of the possible sunshine of 80 or over was 17, the highest value of 90 per cent being recorded on 10th February. The longest recorded duration was 14.9 hours, and occurred on two dates, 21st June, and 17th July; on the former date the value corresponded to 84 per cent of the possible and on the latter date to 87 per cent of the possible. Only five days in the year received 14 hours or more of sunshine.

Wind Speed.- The mean wind speed for the year was 3.8 m/s., an increase on the previous year's value. Individual monthly means ranged from 6.6 m/s in January to 2.6 m/s. in August.

The windiest hour in any month was 10h to 11h in January when the mean wind speed was 6.9 m/s; the quietest was 3h to 4h in both May and August, when

the mean windspeed was only 1.6 m/s. Taking the year as a whole, the hours of greatest and least windspeed were 13h to 14h and 3h to 4h respectively; the corresponding values were 4.7 m/s. and 3.2 m/s.

No gales were recorded during the year; the highest gust reached 30 m/s. and occurred on 21st January.

Minimum Temperature "on the Grass".— During the year ground frost (temperature below 272.2°A) was recorded on 69 occasions. The month of greatest frequency was March; in this month 18 occasions of ground frost were recorded. The lowest temperature on the grass occurred on 13th December, the value being 261.9°A. The highest value was 286.7°A on 24th September. No ground frost occurred in the months May to August inclusive.

Temperature in the Ground.— The annual mean values of temperature in the ground at depths of 1 foot (30 cm.) and 4 feet (122 cm.) were 281.3°A in both cases. At the depth of 1 foot the highest monthly mean value was 287.6°A in August and the lowest 275.6°A in February. Corresponding values at the depth of 4 feet were 286.1°A in August and 276.6°A in March respectively. Extreme values at the depth of 1 foot were 289.0°A on 19th July and 275.0°A on several dates in both late February and late December. At the depth of 4 feet corresponding extremes were 286.3°A on 10th and 11th August and 276.4°A on several dates in early March.

Cloud and Weather.— The mean cloud amount for the year was 7.0; April with a mean amount of 8.1 was the cloudiest month and February with a mean amount of 5.9 was the least cloudy.

Aurora.— During the year there were 28 occasions when aurora was observed, 14 of these occurred between January and May, and 14 between September and December. Dates of occurrence are given in the General Auroral Table.

General Remarks.— On the whole the year was rather more rainy and cloudy than usual and had a somewhat high relative humidity. Conspicuous features were a very wet January, a very cold March, a dry but very dull April, a bright and dry September and a cold, wet and dull December.

Readings in millibars at exact hours, Greenwich Mean Time

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

JANUARY, 1937

Table with columns for Hour G.M.T., Station Level (1-31), and Mean (Station Level/Sea Level). Rows show hourly pressure readings in millibars for each day of the month.

70 ABERDEEN: H<sub>b</sub> = 26.0 metres

FEBRUARY, 1937

Table with columns for Day, Station Level (1-31), and Mean (Station Level/Sea Level). Rows show hourly pressure readings in millibars for each day of the month.

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

Readings in millibars at exact hours, Greenwich Mean Time

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

MARCH, 1937

Table for Aberdeen March 1937. Columns: Hour G.M.T., Station Level (1-31), Mean (Station Level), Mean (Sea Level). Rows: 1-31 hours.

72 ABERDEEN: H<sub>b</sub> = 26.0 metres

APRIL, 1937

Table for Aberdeen April 1937. Columns: Day, Station Level (1-30), Mean (Station Level), Mean (Sea Level), Hour G.M.T. Rows: 1-30 days.

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

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

MAY, 1937

Hour G. M. T.	1	2	3	4	5	6	7	8	9	10	11	Noon	13	14	15	16	17	18	19	20	21	22	23	24	Mean	
Day	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb
1	024.4	024.5	024.5	024.6	024.8	025.5	025.7	025.8	025.7	025.9	025.8	025.3	024.9	024.6	024.0	023.4	023.2	023.0	023.0	022.6	022.5	022.4	022.2	022.4	022.4	024.4
2	021.7	021.0	020.4	020.0	019.6	019.3	019.0	018.9	018.4	018.4	018.0	017.8	017.3	016.7	016.5	015.7	015.1	014.8	014.4	014.4	013.6	013.4	013.0	013.0	017.3	
3	012.4	011.9	011.5	011.0	010.5	010.3	010.4	009.6	009.5	009.9	009.7	009.3	008.9	008.6	008.1	007.6	007.4	007.2	007.0	007.3	007.2	007.2	007.3	007.3	009.1	
4	007.2	007.1	007.1	006.9	007.0	007.6	008.1	008.4	007.8	007.8	007.5	007.5	007.8	008.0	008.0	007.7	007.7	007.5	007.6	007.6	007.6	006.8	006.2	006.8	007.5	
5	005.8	005.3	005.1	005.0	005.3	006.0	006.4	007.1	007.7	008.8	009.4	010.6	011.5	012.1	013.4	014.5	015.2	016.4	017.2	018.2	018.9	019.3	019.8	020.0	011.4	
6	020.0	020.1	020.0	019.9	020.1	020.3	020.3	020.3	020.1	020.0	019.9	019.6	019.3	019.1	018.8	018.8	018.7	018.7	018.9	019.0	018.9	018.8	018.7	018.4	019.5	
7	018.4	018.2	018.2	018.3	018.6	018.7	018.9	019.4	019.5	019.8	019.8	019.9	020.2	020.1	020.2	020.2	020.4	020.6	020.8	020.9	021.1	021.0	021.0	020.9	019.7	
8	020.7	020.5	020.3	020.2	020.2	020.1	020.1	020.2	020.0	019.8	019.8	019.5	019.2	018.8	018.5	018.2	017.9	017.8	017.7	017.5	017.3	017.3	016.9	016.9	019.2	
9	016.6	016.2	015.6	015.3	015.1	014.9	01.7	014.4	014.3	014.1	013.7	013.4	013.3	012.9	012.5	012.1	011.7	011.6	011.4	011.6	011.6	011.4	011.2	013.5		
10	011.0	011.1	010.8	010.6	010.7	011.0	011.1	011.4	011.3	011.2	011.3	011.4	011.6	011.6	011.6	011.5	011.6	011.5	011.8	012.0	012.1	012.4	012.5	012.3	011.5	
11	012.2	012.2	011.8	011.9	012.0	012.1	012.2	012.1	012.1	012.1	012.3	012.4	012.2	012.2	012.1	012.0	012.0	012.0	012.1	012.5	012.6	012.7	012.5	012.2	012.2	
12	012.3	012.2	012.0	012.0	012.1	012.4	012.5	012.7	012.8	012.7	012.5	012.3	012.2	012.2	012.1	012.1	011.9	012.0	011.8	011.8	011.8	011.4	011.1	012.1	012.1	
13	010.8	010.6	010.4	010.1	009.9	009.8	009.6	009.4	009.3	009.6	009.2	009.1	008.5	008.2	007.9	007.6	007.4	007.5	007.2	007.2	007.3	007.2	007.2	007.1	008.1	
14	006.9	006.8	006.5	006.5	006.8	007.1	007.4	007.7	007.9	008.3	008.4	008.9	009.1	009.3	009.4	009.6	009.7	009.9	010.2	010.7	011.4	011.5	011.9	012.0	008.8	
15	012.2	012.2	012.4	012.4	012.7	013.2	013.4	013.7	013.6	013.9	014.1	014.2	014.3	014.5	014.5	014.7	014.8	015.2	015.6	016.2	016.6	016.6	016.5	016.5	014.3	
16	016.4	016.4	016.2	016.0	016.1	016.3	016.2	016.2	015.9	015.7	015.4	015.2	015.0	014.5	014.4	014.3	013.8	013.6	013.5	013.6	013.5	013.3	013.0	012.6	015.0	
17	012.3	011.9	011.6	011.5	011.5	011.6	011.6	011.6	011.7	012.0	011.9	011.9	012.0	012.1	012.4	012.4	012.8	012.8	013.3	013.5	013.6	013.5	013.5	013.5	012.3	
18	013.6	013.6	013.4	013.2	013.3	013.4	013.2	013.2	012.9	012.6	012.2	011.8	011.5	011.0	010.4	010.0	009.6	009.4	009.3	009.1	009.1	008.8	008.4	007.7	011.4	
19	007.2	007.1	007.0	006.9	006.6	006.4	006.2	005.8	005.8	005.5	005.5	005.2	004.8	004.5	004.3	004.2	004.3	004.4	004.4	004.3	004.3	004.3	004.1	005.5		
20	004.0	003.8	003.7	003.7	003.8	004.1	004.4	004.8	005.1	005.3	005.6	005.6	005.7	005.7	006.1	006.2	006.3	006.4	006.6	007.0	007.6	007.5	007.5	007.2	005.5	
21	006.7	006.2	005.5	005.6	004.8	004.0	003.1	000.7	998.9	998.5	997.2	996.4	995.2	994.9	994.6	994.3	994.3	994.5	994.7	996.1	997.2	998.2	000.1	001.7	999.4	
22	002.7	003.7	004.3	005.8	006.4	007.7	008.1	008.8	009.3	010.1	010.3	010.8	011.3	011.9	012.1	012.0	011.8	011.7	011.3	011.2	010.8	010.4	010.2	010.1	009.1	
23	009.8	009.2	008.8	008.7	008.3	008.2	008.0	007.9	007.9	008.1	008.3	008.5	008.1	008.1	009.0	010.0	010.5	011.3	011.3	011.8	012.2	012.6	012.8	012.9	009.7	
24	012.7	012.7	012.7	012.6	012.5	012.4	012.5	012.7	012.5	012.2	011.9	011.8	011.5	011.4	011.0	010.8	010.5	010.3	010.4	010.5	010.7	011.0	011.6	011.8	011.8	
25	011.8	011.8	011.8	011.7	011.8	011.9	012.3	012.3	011.9	012.3	012.3	011.8	011.4	010.8	010.9	010.5	010.7	010.9	011.8	012.1	012.9	013.4	013.7	013.9	011.9	
26	013.8	013.7	013.8	014.3	014.6	014.8	014.8	014.9	014.6	014.4	014.2	014.2	013.8	013.0	013.8	012.9	012.4	011.7	011.1	010.9	010.4	009.9	009.3	009.0	013.0	
27	008.9	008.8	008.7	009.2	009.3	009.6	010.2	011.0	011.6	012.5	013.0	013.4	013.6	013.8	013.9	014.5	015.1	016.2	016.9	017.6	018.6	019.2	020.5	013.3		
28	020.4	020.5	020.6	020.9	021.0	021.1	021.4	021.3	021.1	021.1	020.9	020.9	020.8	020.5	020.4	020.3	020.0	019.9	019.9	019.9	019.9	019.8	020.0	019.9	020.5	
29	019.7	019.2	018.9	018.4	018.1	017.8	017.7	017.4	016.7	016.8	016.5	016.4	016.1	015.6	015.5	015.4	014.9	014.6	014.7	014.7	015.1	015.2	015.1	015.2	016.6	
30	015.3	015.0	014.8	014.7	014.5	014.4	014.3	013.9	013.4	013.1	012.5	011.9	011.4	010.9	010.7	010.5	010.4	010.3	010.5	010.6	010.7	010.4	010.3	010.2	012.4	
31	010.1	009.5	009.2	009.0	008.7	008.2	008.2	007.8	007.8	008.0	007.7	007.4	007.2	007.0	006.8	006.7	006.4	006.8	006.9	007.0	007.3	007.3	007.4	007.4	007.8	
Mean (Station Level)	1012 -84	1012 -68	1012 -50	1012 -48	1012 -47	1012 -59	1012 -65	1012 -64	1012 -49	1012 -61	1012 -48	1012 -43	1012 -27	1012 -15	1012 -12	1012 -00	1011 -88	1011 -97	1012 -03	1012 -26	1012 -44	1012 -46	1012 -50	1012 -43	1012 -40	
Mean (Sea Level)	1016 -05	1015 -89	1015 -71	1015 -69	1015 -68	1015 -79	1015 -84	1015 -83	1015 -67	1015 -79	1015 -65	1015 -60	1015 -45	1015 -33	1015 -29	1015 -17	1015 -05	1015 -14	1015 -21	1015 -45	1015 -63	1015 -66	1015 -70	1015 -63	1015 -59	

74 ABERDEEN:  $H_b$  = 26.0 metres

JUNE, 1937

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean
1	007.2	006.9	006.6	006.8	006.9	006.9	007.1	007.6	008.1	008.3	008.7	008.6	008.6	009.0	009.1	009.1	009.5	010.0	010.5	010.9	011.3	011.8	012.3	012.8	008.6
2	013.3	013.6	014.0	014.5	014.9	015.5	015.7	015.8	016.0	015.8	015.5	015.3	014.7	014.6	014.4	014.4	014.6	014.7	014.8	014.9	014.8	014.7	014.6	014.6	014.8
3	014.1	013.4	012.9	012.5	011.8	011.6	011.3	010.8	009.7	008.8	007.8	007.1	006.3	005.5	004.6	003.7	003.3	002.8	002.5	002.2	002.3	002.2	002.1	001.9	007.4
4	002.0	002.4	002.4	002.6	003.0	003.6	003.9	004.2	004.3	004.6	004.4	004.4	004.4	004.4	004.5	004.6	004.6	004.5	004.7	004.8	004.7	004.8	004.5	004.4	004.0
5	004.0	004.0	004.1	004.2	004.3	004.5	004.6	004.6	004.6	004.6	005.1	005.2	005.3	005.6	005.6	005.8	005.9	006.6	007.1	007.6	007.6	007.9	008.2	007.8	005.5
6	008.0	007.8	007.8	007.9	008.3	009.0	008.9	009.4	009.7	010.0	009.8	009.9	009.6	009.4	009.3	009.3	008.9	008.6	008.2	008.0	007.7	007.4	007.1	006.5	008.6
7	005.9	005.3	005.0	004.8	004.8	005.0	005.2	005.8	005.9	005.9	006.0	006.2	006.3	006.5	006.5	006.5	006.5	006.5	006.5	007.0	007.2	007.5	007.5	007.5	006.1
8	007.4	007.3	007.0	007.1	006.9	007.0	007.2	007.2	007.2	007.4	007.3	007.2	007.2	007.3	007.2	006.9	006.7	006.4	006.5	006.7	007.0	007.3	007.6	008.1	007.2
9	008.6	008.6	008.8	008.1	008.3	008.4	010.0	010.6	010.5	010.5	010.4	010.5	010.4	010.4	010.4	010.4	010.1	010.0	010.0	010.4	010.7	010.8	010.8	010.6	010.0
10	010.5	010.4	010.2	010.0	009.6	009.3	009.3	009.8																	



PRESSURE  
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, 1937

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 ↑ Day 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	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	
	005-1	005-1	004-8	004-7	004-7	004-9	004-8	005-0	005-1	005-4	005-5	005-9	006-2	006-4	006-6	006-6	006-9	006-9	006-9	006-9	007-2	007-4	007-3	007-3	007-2	
	007-1	007-0	006-7	006-5	006-3	006-3	006-4	006-3	006-0	006-0	006-2	006-3	006-1	006-5	006-3	006-2	006-0	006-3	006-0	006-4	006-6	006-8	006-8	006-9	006-7	
	006-7	006-3	006-1	005-9	005-8	006-0	006-2	006-6	007-1	008-0	009-2	009-5	010-1	011-2	011-6	011-6	011-6	011-7	012-2	012-2	012-2	012-9	012-9	013-0	013-0	013-1
	013-0	013-0	012-8	012-8	012-7	013-2	012-8	012-7	012-7	012-4	012-4	012-3	011-7	011-4	011-1	011-0	010-9	010-2	010-3	010-2	010-2	010-2	010-7	010-9	011-0	011-8
	011-1	011-0	011-0	011-6	011-6	011-5	011-1	011-1	011-0	010-7	010-5	010-3	010-5	010-8	010-3	010-3	010-3	010-0	009-9	009-7	009-8	009-6	009-4	009-0	008-6	010-5
	008-0	007-4	007-1	006-4	006-1	005-8	005-5	005-4	005-0	005-1	005-0	004-9	004-8	004-7	004-5	004-3	004-2	004-3	004-6	005-1	005-6	005-8	006-0	006-2	006-2	005-5
	006-4	006-4	006-9	007-2	007-3	007-5	007-7	008-0	008-3	008-8	009-0	009-2	009-4	009-8	010-0	010-1	010-3	010-8	010-8	011-2	011-8	012-3	012-7	012-8	013-1	009-3
	013-4	013-3	013-6	013-8	013-9	014-3	014-6	014-8	015-0	015-1	015-2	015-4	015-4	015-0	014-8	014-8	014-3	014-2	013-9	013-6	013-3	013-0	012-5	012-3	012-3	014-2
	011-8	011-2	010-7	010-1	009-7	009-2	009-0	008-7	008-3	008-0	007-6	007-2	006-8	006-3	005-9	005-5	004-9	004-4	004-4	004-2	004-1	004-1	004-0	003-7	003-7	007-3
	003-4	003-3	003-4	003-8	004-1	005-0	006-0	007-1	007-9	008-8	009-5	010-0	010-3	010-6	011-2	012-0	012-1	012-2	012-2	012-6	012-9	013-4	013-6	013-6	013-6	009-0
	013-6	013-2	013-2	013-0	013-0	012-8	013-0	012-9	012-8	012-9	012-7	012-6	012-4	012-5	012-3	012-3	012-3	012-2	012-0	012-0	012-2	012-3	012-6	012-4	012-3	012-7
	012-2	012-2	012-0	012-1	011-7	011-6	011-7	011-8	011-7	011-7	011-7	011-5	011-2	011-0	010-8	010-5	009-9	009-5	009-0	008-5	008-2	007-6	007-0	006-2	006-2	010-6
	005-2	004-8	004-1	003-6	003-3	003-4	003-6	003-9	004-4	005-0	005-6	005-8	006-4	006-9	007-6	007-8	008-1	008-2	007-9	008-0	007-7	007-3	007-1	007-0	007-0	005-9
	006-1	006-2	005-1	005-1	004-7	005-1	005-3	005-2	005-0	005-1	005-0	005-1	005-0	004-9	004-7	004-7	004-4	004-4	004-3	004-0	004-3	004-0	004-1	003-0	003-0	004-9
	003-0	002-7	003-1	003-5	003-6	004-1	004-6	005-0	005-3	005-7	006-0	006-3	006-6	006-6	006-4	006-7	006-7	006-4	006-4	006-7	006-7	006-6	006-8	006-5	006-5	005-5
	006-7	006-8	006-6	007-2	006-9	007-3	007-3	007-3	008-0	008-3	008-7	009-1	009-9	010-0	009-8	010-1	010-8	011-6	012-1	012-8	013-5	014-1	014-3	014-6	009-6	
	014-9	015-6	015-7	016-1	016-5	017-2	017-6	018-1	018-3	018-5	018-9	019-3	019-5	019-6	019-7	019-5	019-4	019-3	019-2	019-5	019-7	019-7	019-7	019-4	018-3	
	018-9	018-8	018-2	017-7	017-6	017-4	017-2	016-8	016-8	016-3	016-5	016-3	016-2	016-0	015-3	015-0	014-5	014-3	014-3	014-3	014-3	014-0	014-4	015-1	016-2	
	015-2	015-4	015-1	015-0	015-0	015-1	015-2	015-0	014-5	014-2	013-8	013-7	013-4	013-4	013-4	013-3	013-3	013-4	013-7	013-9	013-5	014-8	015-2	015-8	016-0	
	016-5	016-4	016-3	016-6	017-1	017-2	017-1	017-0	017-1	017-1	017-0	016-7	016-2	015-8	015-0	014-4	013-7	013-1	012-9	012-8	012-4	011-9	010-8	010-0	015-2	
	009-4	008-5	007-2	006-5	005-3	004-4	003-5	002-6	001-6	001-1	000-2	999-4	998-5	998-1	997-6	996-5	996-2	995-2	995-2	995-5	995-8	995-9	995-8	995-5	000-5	
	995-4	995-2	995-3	995-6	995-7	996-0	996-6	996-8	996-9	997-0	997-2	997-4	997-7	997-8	998-1	998-1	998-2	998-2	998-3	998-7	998-9	999-5	999-9	999-8	997-3	
	999-6	999-8	999-0	000-1	000-1	000-1	000-1	000-0	000-4	000-7	000-8	000-8	000-5	000-6	000-6	000-8	000-7	000-7	000-8	000-8	001-0	001-1	001-1	001-0	000-5	
	000-7	000-6	000-1	000-3	000-4	000-4	000-3	000-5	000-4	000-3	000-2	000-4	000-4	000-5	000-8	000-8	000-8	001-1	001-3	001-3	001-4	001-7	002-2	002-3	000-8	
	002-6	002-9	003-2	002-7	002-5	002-7	003-3	003-6	003-9	004-4	004-1	004-5	004-8	005-0	005-6	006-0	006-3	006-9	007-6	007-7	008-1	008-2	008-5	008-7	005-0	
	008-6	008-8	008-7	009-1	009-4	009-7	009-9	010-4	010-6	010-9	010-8	010-9	011-0	011-2	011-3	011-3	011-3	011-1	011-4	011-8	012-1	012-4	012-5	012-7	012-5	
	012-4	012-5	012-4	012-4	012-6	012-6	012-9	012-8	012-8	012-9	013-5	013-5	013-5	013-5	013-3	013-3	013-4	013-4	013-4	013-4	013-9	014-3	014-3	014-5	013-2	
	014-4	014-3	014-3	014-2	014-5	014-4	014-4	014-6	014-5	014-4	014-3	014-3	014-3	014-3	014-3	014-3	014-3	014-0	014-2	014-5	014-6	014-7	015-0	014-9	014-4	
	014-7	014-6	014-4	014-5	014-6	014-6	014-8	014-8	014-8	015-0	014-8	014-8	014-7	014-5	014-4	014-5	014-2	014-1	014-3	014-6	014-6	014-5	014-4	014-3	014-6	
	014-1	014-0	013-7	013-7	013-7	013-8	013-8	013-8	013-9	013-9	013-8	013-8	013-7	013-3	013-2	013-1	013-0	013-0	013-2	013-7	013-9	014-0	014-0	014-1	013-7	
013-9	013-9	013-9	014-1	014-3	014-5	015-0	015-4	015-4	015-5	015-5	015-7	015-8	016-0	016-3	016-4	016-4	016-4	016-8	017-5	018-0	018-4	019-0	019-3	019-4	016-0	
Mean (Station Level)	1009 .16	1009 -07	1008 .90	1008 -90	1008 -86	1008 .97	1009 .07	1009 .16	1009 .21	1009 .34	1009 .40	1009 .45	1009 .46	1009 .48	1009 .45	1009 .41	1009 -30	1009 .32	1009 .42	1009 .59	1009 .78	1009 -85	1009 .85	1009 .76	1009 -33	
Mean (Sea Level)	1012 -31	1012 -22	1012 .05	1012 -05	1012 -01	1012 -12	1012 .21	1012 -29	1012 .34	1012 -46	1012 -52	1012 .56	1012 -58	1012 -59	1012 -57	1012 -53	1012 .42	1012 .45	1012 .55	1012 .73	1012 .92	1013 -00	1013 -00	1012 .91	1012 .47	

76 ABERDEEN:  $H_b$  = 26.0 metres

AUGUST, 1937

Day	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb
1	019-5	019-7	019-8	020-1	020-8	021-3	021-7	022-0	022-1	022-3	022-5	022-6	022-8	022-8	023-1	023-2	023-2	023-2	023-1	023-5	023-6	023-4	023-3	023-1	022-1
2	023-0	022-9	022-4	022-0	022-0	021-6	021-5	021-4	021-2	021-1	020-9	020-9	020-6	020-1	019-6	019-1	018-7	018-3	018-2	018-4	018-6	018-4	018-0	018-1	020-4
3	017-9	017-8	017-7	017-6	017-7	017-9	018-2	018-3	018-4	018-4	018-2	018-4	018-2	018-2	018-1	018-0	017-9	017-6	017-7	017-8	018-1	017-8	017-7	017-6	018-0
4	017-1	016-8	016-3	015-9	015-6	015-4	015-3	015-3	015-2	015-1	014-9	014-6	014-5	014-1	014-0	013-4	013-6	012-5	013-0	013-1	013-1	012-8	012-7	012-8	014-6
5	012-6	012-4	012-1	012-4	012-5	013-0	013-5	014-0	014-1	014-2	014-4	014-4	014-4	014-5	014-5	014-4	014-5	014-4	014-5	014-6	014-9	014-8	014-7	014-4	013-9
6	014-3	013-9	013-7	013-5	013-3	012-9	012-8	012-7	012-3	011-8	011-6	011-1	010-5	009-7	009-7	009-0	008-4	007-6	006-8	006-4	006-0	005-9	005-9	005-7	010-5
7	005-8	006-5	007-0	007-7	008-3	008-7	009-0	009-4	009-6	009-9	010-0	009-7	009-7	009-6	009-8	009-7	009-0	010-0	010-0	010-9	011-4	011-4	011-3	011-2	009-3
8	010-8	010-9	010-9	010-6	010-6	010-7	011-1	011-3	011-3	011-5	011-4	011-3	011-4	011-7	012-2	012-7	013-3	013-9	014-4	014-9	015-3	015-3	015-3	012-1	
9	015-4	015-4	015-2	015-2	015-1	015-3	015-2	015-4	015-4	015-3	015-1	014-8	014-6	014-2	014-0	013-8	013-5	013-6	013-7	013-7	013-7	013-7	013-6	013-6	014-6
10	013-3	013-2	013-4	013-4	013-5	013-7	014-0	014-2	014-3	014-5	014-6	014-													

77 ABERDEEN:  $H_b$  (height of barometer cistern above M.S.L.) = 26.0 metres

SEPTEMBER, 1937

Hour G. M. T.	1	2	3	4	5	6	7	8	9	10	11	Noon	13	14	15	16	17	18	19	20	21	22	23	24	Mean	
Day 1	004.4	003.5	002.6	002.0	001.3	000.7	999.6	999.2	998.9	999.0	999.3	999.7	999.8	999.7	000.0	000.1	000.2	000.7	001.0	001.5	001.6	001.6	001.6	001.6	001.3	000.9
2	001.2	000.4	999.9	999.9	999.3	999.0	998.6	998.8	999.4	999.5	999.6	999.9	000.5	001.0	001.0	001.5	002.4	003.1	003.7	003.9	004.0	004.6	004.9	004.8	004.2	005.3
3	004.7	004.4	004.5	004.4	004.3	004.3	004.3	004.3	004.4	004.6	004.7	004.6	004.4	004.5	004.8	005.1	005.6	006.1	006.8	007.2	007.2	007.3	007.4	007.2	007.2	007.2
4	007.6	007.7	008.1	008.8	009.2	010.0	010.6	011.4	011.5	012.0	011.8	011.9	011.9	012.0	011.9	011.8	011.7	011.6	011.5	011.3	010.7	010.0	008.6	007.7	010.5	010.5
5	006.2	004.9	004.0	003.3	002.9	002.7	002.9	003.2	003.3	003.5	004.1	004.5	005.0	005.5	005.7	006.3	006.5	006.5	007.0	007.1	006.8	006.8	006.6	006.2	005.1	005.1
6	005.9	005.2	004.5	004.0	003.2	002.7	002.9	001.9	001.1	001.0	000.6	999.3	999.9	999.0	998.5	998.2	997.7	997.3	997.3	997.1	997.8	998.5	998.6	999.5	000.5	000.5
7	999.9	001.0	001.5	002.0	002.8	003.7	004.6	005.4	005.2	005.2	005.6	006.1	006.9	008.0	008.5	009.5	010.8	011.7	012.4	012.8	013.4	013.8	014.5	014.3	014.2	009.4
8	003.0	003.6	003.9	004.5	005.0	005.2	005.5	006.1	006.9	008.0	008.5	009.5	010.8	011.7	012.4	012.8	013.4	013.8	014.5	014.7	014.5	014.3	014.2	013.9	013.9	009.4
9	013.2	012.8	012.6	012.3	012.0	011.9	011.7	011.5	011.7	011.5	011.3	011.5	011.2	011.3	011.8	012.1	012.5	012.8	013.1	013.8	014.1	014.8	015.2	015.4	012.6	012.6
10	015.5	015.6	015.7	016.1	016.6	016.8	017.0	017.4	017.8	017.9	018.1	018.2	018.2	018.2	018.5	018.8	019.2	019.2	019.6	019.9	020.1	020.1	020.3	020.3	018.0	018.0
11	020.6	020.7	020.7	020.7	020.9	021.1	021.2	021.6	022.0	022.2	022.3	022.2	022.3	022.2	022.1	021.7	021.9	021.9	021.5	021.5	021.0	020.8	020.2	019.7	021.4	021.4
12	019.2	018.3	018.0	017.2	016.6	016.4	015.9	015.4	015.2	014.8	014.2	013.5	012.8	012.2	011.6	010.8	010.1	009.5	009.1	008.7	008.1	007.7	007.2	006.6	013.2	013.2
13	006.0	005.2	004.9	004.6	004.5	004.8	004.9	005.2	005.4	005.4	005.4	005.5	005.4	005.2	005.2	005.2	005.2	005.1	005.0	004.7	004.6	004.3	004.0	003.3	005.0	005.0
14	003.0	002.2	001.6	001.1	000.6	999.8	999.3	999.0	998.0	997.5	996.8	995.2	994.2	993.5	992.6	991.6	990.6	989.3	988.5	988.8	989.0	988.0	987.5	986.4	995.5	995.5
15	985.6	984.4	983.7	982.5	981.9	981.5	981.0	980.8	980.7	980.4	980.4	980.1	979.7	979.5	979.1	978.7	978.1	977.9	978.3	978.6	978.9	979.3	979.6	979.9	981.2	981.2
16	982.0	982.3	982.5	982.8	982.9	983.6	984.3	985.0	985.6	986.1	986.0	986.2	986.6	987.2	987.3	987.6	987.3	988.5	988.9	989.4	989.5	989.8	989.7	989.9	986.1	986.1
17	990.0	990.0	990.0	990.0	990.2	990.3	990.5	990.9	991.3	991.5	991.7	992.0	992.0	992.3	992.4	992.4	992.3	992.8	993.1	993.6	993.6	993.7	993.6	993.7	991.7	991.7
18	993.5	993.3	993.4	993.4	993.4	993.6	994.0	994.2	994.2	994.3	994.2	994.4	994.5	994.6	994.6	994.9	995.3	995.8	996.6	997.3	997.6	998.0	998.3	998.4	995.0	995.0
19	998.8	999.0	999.2	999.5	999.9	000.4	000.9	001.5	001.8	002.1	002.1	002.3	002.4	002.7	002.8	003.0	003.3	003.9	004.5	004.9	005.1	005.4	005.7	006.0	002.2	002.2
20	006.3	006.7	006.9	007.3	007.9	008.4	009.1	009.7	009.9	010.3	010.2	010.3	010.4	010.6	010.5	010.5	010.7	010.9	010.9	011.1	011.0	010.9	010.6	010.4	009.6	009.6
21	010.3	010.2	010.2	010.2	010.0	010.0	010.0	009.9	009.7	009.3	008.8	008.4	008.1	007.4	006.9	006.6	006.3	006.0	005.9	005.6	005.3	005.0	004.8	008.0	008.0	008.0
22	004.8	004.7	004.7	004.7	004.5	005.1	005.3	006.0	006.5	007.3	007.3	007.3	007.6	007.8	007.9	008.4	009.2	010.5	011.2	011.7	012.2	012.5	012.9	012.9	007.7	007.7
23	013.4	013.4	013.5	013.1	013.7	013.6	013.7	013.7	013.7	013.5	013.5	013.4	013.2	012.9	012.4	012.0	011.7	011.2	011.1	010.7	010.5	009.6	008.6	007.7	012.1	012.1
24	005.8	004.8	003.1	002.8	002.1	002.8	003.0	003.8	004.3	005.9	006.6	007.3	007.5	008.1	008.0	008.4	008.4	009.2	009.6	010.1	010.7	011.2	011.4	011.4	006.8	006.8
25	012.0	012.6	013.0	013.5	013.7	014.2	014.5	015.0	015.6	015.7	015.5	015.5	015.5	015.1	014.8	014.0	014.1	014.4	014.8	014.7	015.0	014.8	014.7	014.4	014.4	014.4
26	014.5	014.3	014.1	014.0	013.9	014.0	014.3	014.7	014.9	014.9	014.7	014.5	014.3	014.1	014.0	013.6	013.7	013.9	013.6	013.7	013.6	013.7	013.5	013.1	014.1	014.1
27	012.6	012.1	011.3	010.8	010.4	010.3	010.1	010.2	009.9	009.3	008.9	008.2	007.3	007.0	006.8	005.2	004.5	004.5	004.5	004.3	004.1	004.4	004.3	004.7	007.9	007.9
28	004.7	004.5	004.8	005.4	005.9	006.9	007.8	009.0	009.8	010.3	011.0	011.7	012.4	012.7	013.4	013.8	014.4	014.7	015.1	015.1	015.1	015.1	014.9	014.6	010.6	010.6
29	014.3	013.6	013.0	012.6	012.4	012.6	013.0	013.1	012.8	012.4	011.6	010.9	010.6	010.1	009.8	009.8	010.0	010.3	010.6	011.1	011.0	010.8	010.5	010.6	011.6	011.6
30	010.1	009.6	009.2	008.5	008.5	008.1	007.6	007.7	007.4	007.1	006.7	006.4	005.9	005.6	005.4	005.3	005.2	005.2	005.2	005.2	005.3	005.4	005.6	006.8	006.8	006.8
Mean (Station Level)	1005.64	1005.37	1005.17	1005.07	1005.02	1005.16	1005.24	1005.48	1005.63	1005.74	1005.66	1005.68	1005.62	1005.62	1005.58	1005.50	1005.56	1005.75	1005.88	1006.03	1005.94	1005.99	1005.89	1005.76	1005.58	1005.58
Mean (Sea Level)	1008.80	1008.53	1008.33	1008.23	1008.18	1008.32	1008.40	1008.63	1008.77	1008.87	1008.78	1008.80	1008.74	1008.74	1008.70	1008.61	1008.68	1008.89	1009.02	1009.17	1009.09	1009.14	1009.05	1008.92	1008.72	1008.72

78 ABERDEEN:  $H_b$  = 26.0 metres

OCTOBER, 1937

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean	
1	006.0	006.8	007.3	007.7	008.2	009.1	009.8	010.6	010.7	011.1	011.7	011.9	012.2	012.3	012.3	012.7	013.1	013.4	013.6	014.2	014.6	014.6	014.5	011.1	011.1	
2	014.2	014.0	013.7	013.6	013.4	013.5	013.5	013.5	013.3	013.3	013.1	013.0	012.6	012.1	011.9	011.7	011.8	012.0	012.0	012.0	012.1	012.1	012.5	012.9	012.9	
3	012.5	012.5	012.8	012.9	013.3	013.6	014.4	014.9	015.4	016.0	016.4	016.7	017.2	017.3	017.6	018.2	018.9	019.4	020.1	020.5	021.2	021.9	022.4	016.5	016.5	
4	022.7	023.1	024.0	024.9	025.8	026.4	027.5	028.2	029.1	029.9	030.3	030.7	031.4	031.9	032.5	032.9	033.4	034.0	034.0	034.2	034.2	034.2	034.2	034.2	029.8	029.8
5	034.3	034.1	033.9	034.0	033.5	033.7	034.2	034.2	034.1	033.8	033.5	033.4	032.9	032.6	032.3	032.0	031.8	031.8	031.9	031.9	031.7	031.6	031.6	033.0	033.0	
6	031.4	031.1	030.6	030.2	029.8	029.8	029.8	029.5	029.0	028.7	028.2	027.7	027.2	026.8	026.2	025.8	025.5	025.5	025.2	025.2	024.8	024.6	024.4	024.1	027.7	027.7
7	023.7	023.2	022.9	022.7	022.5	022.7	022.8	023.0	023.0	022.8	022.5	022.3	021.9	021.7	021.3	021.2	021.2	021.4	021.6	021.3	021.0	020.8	020.5	022.1	022.1	
8	020.3	020.3	020.2	020.1	020.2	020.2	020.5	021.0	021.4	021.5	021.7	021.5	021.2	021.5	021.6	021.9	022.2	022.6	022.9	023.3	023.4	023.6	023.7	024.0	021.6	021.6
9	024.2	024.1	024.1	024.3	024.7	025.3	026.0	026.8	027.2	027.7	027.9	027.8	027.7	027.8	028.3	028.6	029.2	029.7	030.0	029.9	030.1	030.2	030.1	029.9	027.4	027.4
10	029.6	029.2	028.9	027.9	028.0	027.8	027.6	027.4	027.5	026.6	026.4	026.4	026.4	026.4	026.5	026.6	026.8	026.9	027.1	027.0	027.0	027.1	027.1	026.9	027.4	027.4
11	026.8	02																								

PRESSURE
Readings in millibars at exact hours, Greenwich Mean Time

NOVEMBER, 1937

79 ABERDEEN: H0 (height of barometer cistern above M.S.L.)

Table with 25 columns (1-25) and 30 rows (Day 1-30). Includes 'Station Level' and 'Mean (Sea Level)' rows. Values are in millibars.

80 ABERDEEN: H0 = 26.0 metres

DECEMBER, 1937

Table with 25 columns (1-25) and 31 rows (Day 1-31). Includes 'Station Level' and 'Mean (Sea Level)' rows. Values are in millibars.

NOTE. - When pressure exceeds 1000 mb. the leading figure 1 is not printed, i.e., 1005.6 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<sub>b</sub> = 26.0 metres

1937

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 007.54	mb 007.43	mb 007.31	mb 007.23	mb 007.21	mb 007.30	mb 007.39	mb 007.59	mb 007.66	mb 007.77	mb 007.69	mb 007.66	mb 007.53	mb 007.46	mb 007.40	mb 007.38	mb 007.40	mb 007.52	mb 007.61	mb 007.77	mb 007.81	mb 007.82	mb 007.79	mb 007.73	mb 007.54
Sea Level	010.74	010.64	010.51	010.43	010.41	010.51	010.59	010.78	010.85	010.96	010.87	010.84	010.71	010.63	010.58	010.56	010.58	010.70	010.80	010.96	011.00	011.02	010.99	010.93	010.73

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<sub>b</sub> = 26.0 metres

1937

Month	Mean	Hour 1	G.M.T. 2	3	4	5	6	7	8	9	10	11	Noon	13	14	15	16	17	18	19	20	21	22	23	24
Jan.	1000.08	mb +0.19	mb +0.22	mb +0.05	mb -0.23	mb -0.32	mb -0.44	mb -0.53	mb -0.29	mb -0.15	mb +0.12	mb +0.01	mb -0.09	mb -0.31	mb -0.29	mb -0.25	mb -0.18	mb +0.01	mb +0.19	mb +0.31	mb +0.46	mb +0.43	mb +0.42	mb +0.37	mb +0.33
Feb.	993.09	-0.36	-0.35	-0.27	-0.27	-0.25	-0.13	+0.01	+0.36	+0.42	+0.58	+0.53	+0.54	+0.30	+0.05	-0.02	-0.06	-0.04	+0.04	-0.01	-0.07	-0.11	-0.22	-0.31	-0.35
Mar.	1002.75	-0.02	-0.23	-0.47	-0.60	-0.59	-0.47	-0.38	-0.19	-0.09	+0.12	+0.15	+0.28	+0.23	+0.13	0.00	-0.03	+0.01	+0.17	+0.37	+0.43	+0.39	+0.36	+0.27	+0.18
Apr.	1007.40	+0.15	+0.08	-0.10	-0.22	-0.22	-0.09	-0.05	+0.06	+0.02	+0.08	-0.08	-0.01	-0.09	-0.14	-0.24	-0.31	-0.29	-0.13	+0.05	+0.29	+0.38	+0.31	+0.29	+0.26
May	1012.40	+0.19	+0.05	-0.10	-0.19	-0.09	+0.05	+0.13	+0.15	+0.02	+0.17	+0.05	+0.03	-0.11	-0.20	-0.22	-0.31	-0.41	-0.30	-0.21	+0.04	+0.23	+0.28	+0.35	+0.30
June	1011.15	+0.08	-0.04	-0.19	-0.23	-0.28	-0.16	-0.05	+0.12	+0.13	+0.13	+0.02	0.00	-0.06	-0.09	-0.18	-0.19	-0.25	-0.15	-0.06	+0.15	+0.30	+0.36	+0.36	+0.26
July	1009.33	+0.04	-0.07	-0.26	-0.28	-0.34	-0.25	-0.16	-0.09	-0.06	+0.04	+0.09	+0.11	+0.11	+0.11	+0.06	+0.01	-0.12	-0.12	-0.05	+0.11	+0.27	+0.33	+0.31	+0.20
Aug.	1013.71	-0.18	-0.33	-0.45	-0.48	-0.43	-0.29	-0.09	+0.11	+0.22	+0.30	+0.34	+0.34	+0.36	+0.26	+0.13	+0.01	-0.06	-0.13	-0.06	+0.13	+0.16	+0.16	+0.05	-0.07
Sept.	1005.58	+0.06	-0.21	-0.41	-0.51	-0.56	-0.42	-0.34	-0.10	+0.05	+0.16	+0.08	+0.10	+0.04	+0.04	0.00	-0.09	-0.03	+0.17	+0.29	+0.44	+0.35	+0.40	+0.30	+0.17
Oct.	1011.04	+0.06	-0.05	-0.15	-0.21	-0.18	-0.05	+0.19	+0.43	+0.50	+0.54	+0.37	+0.13	-0.17	-0.32	-0.47	-0.47	-0.41	-0.21	-0.12	+0.07	+0.10	+0.15	+0.15	+0.14
Nov.	1013.50	+0.16	+0.05	-0.11	-0.23	-0.29	-0.23	-0.23	+0.01	+0.12	+0.22	+0.12	+0.01	-0.21	-0.25	-0.30	-0.24	-0.09	+0.06	+0.14	+0.25	+0.24	+0.25	+0.26	+0.28
Dec.	1009.23	-0.01	-0.01	+0.01	-0.07	-0.15	-0.11	-0.07	+0.22	+0.37	+0.45	+0.22	+0.08	-0.20	-0.33	-0.32	-0.20	-0.16	-0.06	-0.06	+0.06	+0.07	+0.10	+0.11	+0.06
Year	1007.54	+0.03	-0.07	-0.20	-0.29	-0.31	-0.21	-0.13	+0.06	+0.13	+0.24	+0.16	+0.13	-0.01	-0.08	-0.15	-0.17	-0.15	-0.04	+0.05	+0.20	+0.23	+0.24	+0.21	+0.14

† See page 23

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<sub>b</sub> = 26.0 metres

1937

Day	Jan.		Feb.		Mar.		Apr.		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	999.1	995.5	992.0	988.1	997.4	990.3	013.2	007.7	026.0	022.2	012.8	006.6	007.4	004.5	023.7	019.4	005.2	998.1	014.7	005.6	006.5	003.6	000.5	996.5
2	000.9	992.2	995.3	991.9	997.5	007.7	000.5	022.2	013.0	016.0	012.8	007.3	005.9	023.2	017.9	004.9	998.4	014.5	011.7	009.6	006.3	001.4	995.4	
3	006.5	000.8	990.9	985.3	001.2	007.6	000.0	013.0	006.9	014.6	001.8	003.2	005.7	018.5	017.5	007.4	004.3	022.4	012.4	012.2	008.5	008.6	001.4	
4	004.1	988.8	986.8	976.2	004.4	001.2	012.0	007.6	008.4	006.2	004.9	001.9	013.4	010.1	017.6	012.1	012.1	007.2	034.4	022.4	013.5	011.7	007.5	986.9
5	001.5	990.7	982.2	973.7	010.4	004.2	011.5	009.9	020.0	004.9	008.3	004.0	011.7	008.6	014.9	012.0	007.8	002.6	034.4	031.5	025.1	013.4	992.6	986.8
6	993.9	984.9	999.2	982.2	011.8	010.2	010.4	009.0	020.4	018.4	010.0	006.5	008.6	004.1	014.4	005.7	006.2	996.5	031.6	024.1	025.2	018.3	999.2	992.6
7	020.8	987.5	000.1	995.6	010.9	009.5	009.0	999.1	021.2	018.1	007.6	004.7	013.1	006.2	011.4	005.3	005.7	999.5	024.1	020.5	018.3	015.8	000.8	999.1
8	024.0	019.4	995.6	987.2	010.5	003.8	001.2	998.1	020.9	016.9	008.4	006.4	015.4	012.3	015.4	010.5	014.7	002.0	024.0	020.0	021.3	016.7	008.8	000.4
9	020.1	017.1	987.2	984.6	003.8	000.3	002.4	993.1	016.9	011.2	010.9	008.4	012.3	003.7	015.5	013.3	015.4	011.1	030.3	024.0	024.0	020.7	010.2	008.2
10	018.0	012.5	992.1	986.9	002.4	999.3	993.1	986.4	012.5	010.5	012.3	009.0	013.7	003.2	014.7	013.1	020.4	015.4	029.9	026.2	021.9	019.0	008.2	990.9
11	015.4	009.3	006.5	992.0	001.9	991.2	003.7	991.8	012.7	011.7	018.9	011.6	013.7	011.9	013.1	009.0	022.4	019.7	026.9	025.4	020.0	017.3	998.8	990.9
12	009.3	003.3	007.3	999.7	991.2	985.2	006.7	003.7	012.8	011.1	020.6	018.2	012.3	006.2	010.2	009.0	019.7	006.6	025.5	023.0	012.1	006.1	021.7	018.7
13	016.8	999.6	002.6	999.2	985.2	982.7	006.2	001.5	011.1	007.1	020.1	018.0	008.3	003.2	010.1	007.2	006.6	003.3	023.1	010.5	020.5	016.5	992.1	979.7
14	017.7	013.9	008.4	001.6	991.0	984.1	008.4	001.9	012.0	006.4	021.3	017.6	007.0	002.9	007.2	005.6	003.3	986.4	013.4	010.6	016.5	010.3	985.4	979.0
15	013.9	000.2	010.3	996.7	010.4	991.0	008.1	996.6	016.7	012.0	022.6	021.1	007.2	002.6	006.9	005.2	986.4	978.5	019.5	012.6	017.2	011.5	005.3	985.4
16	000.6	994.3	996.7	986.6	011.5	001.0	997.2	992.4	016.5	012.6	022.1	020.6	014.6	006.5	005.2	993.8	989.9	981.7	020.4	016.6	017.0	012.1	018.3	005.3
17	001.5	986.6	010.0	986.8	001.0	997.9	004.4	997.2	013.8	011.4	021.1	017.7	019.8	014.6	008.3	990.3	993.7	989.9	023.0	020.2	012.1	006.1	021.7	018.7
18	982.2	975.8	009.6	991.5	997.9	993.7	006.0	004.1	013.7	007.7	017.7	011.4	019.4	013.4	008.9	999.7	998.4	993.3	024.2	021.7	006.1	995.5	018.7	015.0
19	989.7	985.2	993.3	986.9	000.7	995.6	005.5	994.8	007.7	004.1	012.5	011.2	016.0	013.2	015.4	000.0	006.0	998.4	021.7	012.8	998.6	994.1	016.5	014.4
20	997.0	985.8	993.3	987.6	006.4	000.7	996.2	992.6	007.6	003.6	017.4	012.4	017.2	010.0	020.8	015.1	011.1	006.0	012.8	009.4	999.6	997.8	016.4	008.4
21	994.0	982.9	995.9	991.2	006.4	001.0	006.1	996.2	007.2	994.2	017.4	012.3	010.0	995.0	021.3	020.3	010.4	004.8	009.7	998.9	003.2	999.4	008.4	999.6
22	000.3	985.0	993.0	988.1	004.3	996.6	008.8	001.1	012.1	001.7	012.3	006.1	999.8	995.2	020.3	016.0	012.9	004.5	998.9	981.7	013.7	003.2	002.9	999.9
23	008.4	995.7	001.8	988.9	008.9	004.3	021.2	008.7	012.9	007.8	014.2	006.5	001.1	999.5	016.7	014.1	013.9	006.1	981.7	976.1	018.9	013.7	017.2	002.3
24	995.7	984.8	002.7	000.9	007.2	995.7	021.9	020.3	012.9	010.2	014.2	011.4	002.3	000.0	014.1	011.6	011.6	001.8	980.1	974.3				

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

84 ABERDEEN: North Wall Screen on Tower:  $h_t$  (height of thermometer bulb above ground) = 12.5 metres

JANUARY, 1937

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	80.0	79.3	79.7	80.0	79.7	79.3	78.3	77.8	78.3	78.0	78.7	79.0	79.1	78.9	78.5	78.4	77.7	76.9	76.2	75.4	75.2	75.3	76.3	75.9	78.1
2	75.6	75.0	75.0	75.4	76.0	76.1	76.7	76.4	77.0	77.9	78.9	79.5	81.0	82.1	82.1	80.6	81.7	81.9	81.8	81.3	81.2	81.0	80.5	80.2	78.9
3	80.0	79.8	80.0	80.6	80.1	79.9	80.5	79.1	83.8	83.7	83.8	83.8	84.3	85.1	84.7	83.8	83.2	82.3	83.1	83.1	82.6	81.6	82.0	82.2	
4	81.4	81.5	81.6	81.8	81.9	82.3	81.6	80.7	80.5	80.2	80.5	79.7	79.1	78.5	78.0	77.9	77.7	76.8	76.0	75.5	75.8	76.0	76.3	76.0	79.2
5	76.8	76.4	75.9	76.5	76.5	76.6	76.9	77.3	76.9	77.2	77.2	77.1	76.9	77.0	76.6	76.2	76.0	76.1	75.5	75.2	76.0	76.4	76.1	76.8	76.5
6	77.5	77.8	77.4	77.2	77.7	77.8	77.8	78.0	78.2	78.8	79.1	78.9	78.9	79.0	79.9	79.0	78.2	78.2	77.9	76.9	76.1	75.4	76.9	76.9	77.9
7	77.0	77.1	77.8	78.0	77.9	77.7	78.1	78.1	78.0	78.0	78.5	78.0	79.1	79.5	79.4	79.3	79.3	79.0	78.8	78.4	78.1	77.6	77.6	77.0	78.2
8	76.4	75.9	75.8	75.0	74.4	75.2	75.3	75.5	74.9	75.3	76.0	76.1	76.8	77.2	77.0	77.2	77.8	78.1	79.1	79.8	79.8	79.8	79.9	80.0	76.9
9	80.0	80.1	80.5	80.3	80.6	80.5	80.4	80.8	80.9	81.3	81.6	81.6	81.5	81.4	81.2	81.0	80.8	80.5	80.5	80.3	80.3	80.1	80.1	80.0	80.7
10	80.0	80.1	80.0	79.7	79.8	79.8	79.8	79.7	80.0	80.2	80.6	80.7	80.8	80.5	81.0	80.6	80.5	80.3	80.2	79.9	80.0	79.7	79.8	80.0	80.2
11	80.3	80.2	80.0	80.0	79.9	79.6	79.7	80.0	79.8	79.7	80.3	80.9	80.6	80.5	80.2	80.3	80.0	80.4	80.5	80.7	81.0	80.9	80.9	81.1	80.3
12	81.0	81.1	81.1	81.0	81.0	81.0	81.0	80.9	80.7	80.5	80.2	80.0	80.0	80.3	80.4	80.7	80.8	80.8	80.9	80.9	81.0	81.0	81.0	81.0	80.8
13	80.9	80.8	80.8	80.8	80.9	81.2	81.7	76.5	75.8	75.1	75.2	76.1	77.1	78.0	78.3	77.6	76.7	76.5	75.0	74.6	74.9	74.4	74.1	73.7	74.3
14	75.5	74.2	74.1	73.9	73.9	73.0	72.9	72.4	72.9	72.9	74.1	75.0	75.9	76.1	76.2	75.0	74.6	74.9	74.9	74.4	74.1	73.7	73.7	73.5	74.3
15	74.2	74.7	75.4	75.9	76.2	76.4	76.3	76.2	76.4	76.5	77.1	77.7	78.4	78.4	78.3	78.0	77.9	77.8	77.7	77.6	77.5	77.7	77.9	78.0	76.9
16	78.1	78.3	78.5	78.7	78.8	79.0	79.1	79.1	78.0	78.1	77.9	77.3	77.1	76.6	76.1	76.1	76.2	76.1	75.4	75.5	74.7	74.5	74.6	75.0	77.1
17	74.5	74.5	74.3	74.1	74.1	74.3	74.0	76.8	77.9	78.3	78.9	79.3	79.3	79.4	79.5	79.7	79.6	79.4	79.5	79.3	79.6	79.5	79.5	79.3	77.6
18	79.3	79.2	79.0	79.1	79.0	79.1	79.4	79.6	79.2	78.5	78.0	78.5	78.8	79.0	78.7	78.1	77.7	77.4	77.3	76.8	76.0	76.0	75.7	75.1	78.2
19	75.0	75.6	75.6	75.5	75.1	74.9	74.7	74.7	75.0	74.9	75.2	75.5	75.9	76.5	76.8	76.4	75.7	75.6	75.5	74.5	74.1	74.6	74.8	74.2	75.3
20	73.8	73.2	73.0	73.4	73.1	72.9	72.5	72.6	73.2	73.5	73.7	74.7	76.0	76.9	77.3	77.7	77.8	78.1	78.5	78.9	78.6	79.0	79.2	79.1	75.6
21	79.0	79.1	79.5	79.6	79.5	79.4	79.4	79.3	79.2	79.5	79.8	79.9	79.6	79.9	79.9	79.3	79.0	78.9	79.0	79.4	79.5	79.6	79.8	80.2	79.5
22	80.6	80.7	80.8	81.1	81.1	81.2	81.3	81.8	81.6	81.8	82.3	82.4	82.5	82.3	82.5	81.9	81.5	81.0	80.2	79.9	79.9	79.5	79.4	79.3	81.2
23	79.0	78.8	78.3	78.7	78.7	79.0	79.3	79.4	79.7	79.6	80.0	80.1	80.2	80.1	80.1	80.0	79.6	79.5	79.6	80.1	80.3	80.3	80.3	80.4	79.6
24	80.3	80.5	80.7	80.9	81.0	81.1	81.1	80.7	80.8	80.4	80.5	80.5	80.5	80.2	80.2	80.1	80.0	79.9	80.1	80.4	80.3	80.0	80.0	80.4	79.6
25	79.6	79.4	79.0	78.8	78.5	78.4	78.3	77.8	77.7	77.0	76.7	76.4	76.9	77.1	77.2	77.5	77.8	77.8	77.7	77.6	77.0	76.6	76.1	75.9	77.6
26	75.3	75.7	75.6	75.2	75.0	74.9	74.7	74.8	74.9	74.8	74.8	74.8	74.6	74.2	75.0	74.8	74.7	74.9	74.7	73.8	73.9	73.8	74.2	74.2	74.7
27	74.5	75.0	75.0	75.1	75.5	75.2	75.0	74.7	75.0	75.0	75.5	74.7	75.0	75.3	75.4	75.5	75.9	75.9	76.5	76.7	76.3	77.3	77.4	77.1	75.5
28	75.9	75.8	76.0	76.3	75.9	75.7	75.5	75.7	75.7	75.7	75.7	75.8	75.6	75.5	75.4	75.3	75.2	74.9	74.9	74.8	74.7	74.7	74.9	74.9	75.5
29	74.8	74.6	74.3	74.2	74.4	74.3	73.5	73.5	72.8	73.8	74.3	74.3	74.2	74.3	74.2	74.1	73.5	73.2	73.4	72.8	73.0	72.1	73.8	73.6	73.8
30	73.7	73.7	74.0	74.0	73.2	72.9	72.5	73.2	73.0	72.5	74.0	73.2	74.0	73.9	74.4	74.6	73.6	73.6	73.3	73.3	73.5	74.3	74.5	74.6	73.6
31	74.7	74.5	74.3	74.3	74.5	75.0	76.2	76.8	77.6	77.6	77.9	78.0	78.1	77.9	78.3	78.7	78.9	78.9	79.1	79.3	79.4	79.4	79.4	79.5	77.3
Mean	77.6	77.5	77.5	77.6	77.5	77.5	77.5	77.4	77.6	77.6	78.0	78.1	78.3	78.5	78.5	78.3	78.1	77.9	77.9	77.6	77.6	77.6	77.7	77.6	77.8

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

FEBRUARY, 1937

Day	1	2	3	4	5	6	7	8	9	10	11	Noon	13	14	15	16	17	18	19	20	21	22	23	24	Mean
1	79.4	78.7	78.5	78.1	78.0	77.8	77.6	77.3	76.9	76.3	76.0	76.1	76.4	76.2	75.9	75.9	75.6	75.5	75.6	75.4	75.5	75.0	74.8	74.8	76.7
2	74.7	74.2	74.0	74.0	74.1	74.1	74.9	74.8	75.2	76.1	77.0	77.8	78.1	78.5	78.0	77.2	77.5	78.1	78.4	78.3	78.5	78.9	79.1	79.0	76.6
3	78.6	78.3	78.0	77.5	77.3	77.9	76.6	76.6	78.1	78.7	79.8	80.1	80.2	80.7	81.1	80.2	80.6	80.5	80.4	80.5	80.4	80.0	79.2	78.9	79.2
4	78.6	78.6	79.1	79.5	80.2	79.6	79.8	79.9	80.2	80.3	80.4	81.3	81.1	81.1	80.6	80.2	80.0	80.0	80.4	80.0	80.0	79.9	79.9	79.5	80.0
5	79.2	78.6	78.2	78.1	77.8	77.7	77.5	77.3	77.8	78.3	78.7	79.7	80.7	80.6	80.1	80.1	79.5	79.1	78.9	79.1	78.9	78.6	78.6	78.4	78.8
6	78.1	77.9	77.6	77.5	77.0	76.9	76.6	76.8	76.4	77.8	78.6	79.2	79.7	79.9	78.9	78.5	77.7	77.3	76.4	76.0	75.8	76.1	76.0	75.7	77.5
7	75.1	74.6	75.0	75.0	74.8	74.4	73.9	74.2	74.1	75.5	76.5	77.5	78.0	78.1	77.9	76.9	76.5	75.4	76.1	76.6	76.5	76.6	76.8	77.0	75.9
8	77.1	77.2	77.4	77.3	77.4	77.6	77.9	77.7	75.7	77.7	77.3	76.9	76.5	77.1	76.4	75.8	75.9	76.0	75.9	76.0	76.0	75.9	75.9	75.8	76.7
9	75.6	75.5	74.0	73.5	73.6	73.8	73.8	74.1	74.3	74.8	75.0	75.7	75.6	76.6	76.5	76.6	75.9	75.4	75.2	75.2	75.0	75.1	75.6	75.6	75.1
10	75.4	75.2	75.0	75.2	75.2	75.2	75.1	75.2	75.4	75.8	76.5	76.9	77.3	77.6	77.6	76.9	75.8	75.2	75.3	75.1	75.1	75.1	75.1	75.0	75.7
11	74.9	74.5	74.6	74.5	74.4	74.8	74.9	75.0	75.1	74.9	76.0	76.0	76.7	77.1	77.0	76.3	75.4	75.5	75.5	75.3	75.0	75.0	74.8	74.8	75.3
12	74.5	74.0	74.0	73.7	73.7	73.7	73.3	73.0	73.6	74.6	75.3	76.5	77.1	77.2	77.2	77.2	77.0	76.9	75.6	75.5	75.5	75.2	75.4	75.4	75.2
13	75.3	75.6	75.4	75.4	75.3	75.4	75.5	75.7	76.0	76.3	76.9	77.5	77.3	77.1	77.1	77.4	77.2	77.2	77.5	77.5	77.6	77.9	78.1	78.2	76.6
14	78.2	78.0	77.2	77.1	77.3	77.0	76.8	77.4	78.4	78.9	79.9	80.5	81.0	80.9	80.9	79.8	79.1	78.2	78.0	78.1	78.8	78.4	78.7	78.9	78.6
15	78.5	78.3	78.1	78.0	78.0	78.4	77.3	77.7	77.8	78.8	79.7	80.0	80.3	80.2	80.1	80.0	79.0	79.0	78.6	78.7	78.5	77.4	77.3	77.7	78.7
16	79.3	79.4	79.2	78.7	78.2	78.2	78.4	77.9	78.5	78.9	78.1	78.													

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, 1937

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	75.1	74.7	74.8	74.9	75.1	75.3	75.2	75.1	75.5	75.4	75.4	76.0	76.3	77.7	77.5	77.0	76.7	76.1	76.0	76.0	75.7	75.9	76.0	75.9	75.8	75.8
2	75.8	76.2	76.1	76.1	76.2	76.2	76.3	76.7	76.7	77.0	76.9	77.9	77.8	77.5	77.6	77.5	77.4	77.0	77.0	77.0	77.3	77.0	76.5	76.8	76.4	76.8
3	76.8	76.2	76.0	76.5	75.8	75.3	75.5	76.3	77.1	77.8	78.2	78.6	78.7	78.6	78.6	78.5	78.3	78.0	78.1	78.1	78.3	77.6	76.7	77.1	77.3	77.3
4	76.8	77.2	77.7	77.8	77.9	77.8	77.6	77.1	75.3	78.3	78.7	78.5	78.6	78.1	77.4	77.5	76.7	76.0	75.1	76.0	75.3	75.4	75.9	75.9	77.1	77.1
5	76.0	76.2	76.1	76.0	76.0	75.8	75.1	75.6	75.7	75.1	75.9	75.4	76.0	75.2	75.5	75.4	74.9	75.0	75.1	75.1	74.3	74.3	74.3	74.3	74.0	75.4
6	74.3	74.2	74.0	74.3	74.3	73.6	74.5	74.5	75.0	74.8	73.4	75.2	75.0	75.4	75.0	74.8	74.9	74.8	74.6	74.7	74.3	73.9	74.4	74.9	74.5	74.5
7	75.0	74.9	74.7	74.9	74.7	74.7	74.5	74.9	74.9	75.0	75.7	75.3	76.0	75.9	75.9	75.6	75.4	74.5	74.0	72.7	72.3	72.7	72.1	72.1	71.4	74.5
8	71.3	71.4	71.4	71.5	71.2	71.6	71.7	72.1	73.9	74.9	75.7	76.3	75.4	76.2	76.7	76.8	75.8	74.7	74.3	74.1	73.5	73.3	73.5	73.2	73.2	73.7
9	73.1	73.1	73.0	73.0	72.8	72.3	72.2	72.8	73.4	74.3	75.4	76.2	76.1	76.3	76.4	76.2	75.3	75.2	75.0	74.6	73.9	74.1	73.5	73.8	74.2	74.2
10	73.3	72.4	72.4	72.3	72.2	73.0	73.4	74.0	75.1	75.7	75.0	75.9	75.3	75.9	73.9	74.5	74.3	74.5	73.6	74.5	73.5	73.5	73.3	73.3	74.3	74.0
11	74.5	74.3	74.4	74.4	74.4	74.6	74.3	74.8	75.2	75.3	74.2	75.3	75.1	74.7	74.3	74.1	74.0	73.6	72.4	73.2	73.5	73.5	73.5	73.5	73.4	74.2
12	73.4	73.3	73.3	73.2	73.3	73.3	73.5	73.2	73.3	73.8	74.0	74.6	74.7	74.0	73.0	73.4	73.4	73.5	73.2	73.1	72.7	73.1	72.7	72.7	72.7	73.4
13	72.7	72.7	72.4	72.7	72.9	72.1	72.0	72.3	72.1	72.5	72.9	73.5	73.7	74.1	74.2	74.2	74.2	74.2	74.4	74.5	74.3	74.1	74.3	74.5	74.5	73.4
14	74.3	74.1	73.9	74.1	74.1	74.0	73.8	73.9	74.7	75.3	75.9	76.0	76.1	76.4	76.2	75.9	75.5	74.6	74.6	74.6	74.6	74.3	74.3	74.3	74.3	74.0
15	73.6	74.1	74.1	74.1	74.9	74.9	75.0	75.0	75.2	75.5	75.4	76.2	76.8	77.1	77.0	77.0	76.6	75.6	74.7	74.3	73.9	73.7	73.5	73.1	75.1	75.1
16	72.7	72.7	72.9	72.5	72.0	71.3	71.9	72.7	74.0	75.9	77.4	77.4	87.0	77.9	77.7	77.7	77.5	77.5	77.5	76.4	75.7	75.5	75.0	75.1	75.2	75.2
17	75.3	75.7	76.0	76.0	76.1	76.3	76.6	76.6	76.9	77.0	77.0	77.0	77.0	77.1	77.0	76.7	76.4	76.6	76.8	76.9	77.0	77.0	77.0	77.0	77.0	76.6
18	76.9	76.9	76.5	76.4	76.1	76.4	77.0	77.2	77.3	77.5	77.6	77.8	78.0	78.0	77.5	78.0	78.1	78.1	78.1	78.1	78.1	78.1	77.3	77.2	77.2	77.4
19	77.0	76.9	77.2	77.5	77.5	77.6	77.1	77.0	77.3	77.7	77.9	78.3	78.5	78.1	78.3	78.0	78.5	78.2	78.0	78.0	78.0	78.0	78.0	77.9	77.8	77.7
20	77.5	77.1	76.8	76.6	76.6	76.6	76.7	77.0	77.1	77.2	77.1	77.2	77.4	78.1	78.6	78.8	78.8	78.5	77.7	77.5	77.4	77.3	76.6	75.5	77.4	77.4
21	75.3	75.7	75.7	75.7	76.0	74.9	74.9	75.5	75.5	75.9	76.5	76.9	76.4	76.0	75.7	74.4	74.7	73.6	72.7	72.4	72.1	72.0	72.0	72.2	74.8	74.8
22	72.5	71.3	72.5	72.9	72.9	73.0	73.0	73.2	74.1	74.0	75.9	76.3	74.0	73.2	73.0	73.7	73.7	74.1	73.7	73.0	73.4	73.0	73.0	72.3	73.4	73.4
23	71.3	71.0	71.0	70.0	70.0	69.8	70.6	73.1	74.7	75.3	76.6	78.0	78.3	77.9	77.3	76.9	77.1	77.0	75.7	75.1	74.5	74.3	73.9	74.0	74.0	74.3
24	73.9	74.2	74.1	74.4	75.4	75.7	76.3	77.4	78.1	78.3	79.5	78.6	79.6	80.1	80.1	79.9	79.0	77.8	77.1	76.7	76.5	76.0	75.0	75.7	77.0	77.0
25	74.6	75.3	75.6	75.5	75.3	75.3	75.0	75.4	75.0	75.6	75.7	73.5	74.6	75.9	75.5	75.5	75.6	73.4	73.7	73.4	73.2	71.7	71.7	71.5	74.6	74.6
26	71.5	71.5	71.2	71.4	71.2	71.3	71.6	72.5	73.3	73.7	74.5	75.2	75.7	76.3	77.0	75.5	76.0	76.2	76.0	75.8	74.3	75.2	75.7	74.8	74.0	74.0
27	75.0	74.5	75.3	75.3	75.1	75.1	75.2	75.3	77.1	76.8	75.0	75.3	78.0	78.7	78.0	78.5	78.3	77.0	75.7	74.4	74.7	74.4	74.4	74.3	75.9	75.9
28	74.5	74.5	74.4	74.2	74.3	74.0	74.3	74.5	75.6	76.7	75.8	77.5	78.2	78.5	78.7	78.5	78.3	78.0	76.5	76.2	76.3	76.0	76.0	75.9	76.1	76.1
29	75.4	75.0	75.4	74.6	74.9	75.5	75.8	76.9	78.0	78.5	79.4	79.7	79.8	80.2	80.1	80.2	79.7	79.5	79.1	78.4	76.2	75.1	74.7	74.1	77.4	77.4
30	74.0	73.6	73.1	72.5	72.6	73.4	74.0	76.0	78.5	79.2	79.3	79.3	79.8	79.9	79.4	78.8	78.3	78.0	77.6	77.3	77.1	76.5	76.1	76.2	76.2	76.6
31	76.9	77.1	77.0	76.9	76.5	76.1	76.7	77.3	77.9	78.5	78.6	78.7	78.7	78.9	78.7	78.5	78.2	78.0	77.7	77.6	77.5	77.5	77.4	77.4	77.4	77.7
Mean	74.5	74.5	74.5	74.5	74.5	74.4	74.6	75.0	75.6	76.1	76.3	76.7	76.9	77.0	76.8	76.7	76.5	76.1	75.7	75.5	75.1	74.9	74.8	74.7	75.5	75.5

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

APRIL, 1937

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	Mean
1	77.5	77.5	77.5	77.5	77.5	77.7	77.9	78.4	79.2	79.1	79.2	78.8	79.0	78.8	78.4	78.2	78.0	78.0	77.9	77.9	77.9	77.9	77.7	77.4	77.4	78.2
2	77.6	77.5	77.5	77.5	77.5	77.5	77.7	77.7	77.7	77.8	77.7	77.9	78.1	78.4	78.3	78.2	78.0	78.0	77.9	77.9	77.9	77.9	77.9	77.9	77.9	77.8
3	78.1	78.0	78.0	77.8	77.9	78.0	78.1	78.1	78.3	78.6	78.7	78.8	78.7	78.6	78.8	78.9	78.7	78.4	78.4	78.4	78.4	78.3	78.3	78.3	78.3	78.4
4	78.3	78.2	78.3	78.3	78.2	78.2	78.3	78.4	78.3	78.4	78.3	78.4	78.7	78.7	78.5	78.4	78.3	78.3	78.3	78.2	78.1	78.1	78.0	78.0	77.9	78.3
5	77.9	77.8	77.7	77.7	77.8	77.9	77.9	78.1	78.2	78.3	78.4	78.4	78.5	78.5	78.5	78.5	78.5	78.4	78.2	78.2	78.2	78.0	78.0	78.0	78.0	78.1
6	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.1	78.3	78.3	78.4	78.3	78.5	78.6	78.5	78.5	78.4	78.2	78.2	78.3	78.1	78.0	78.0	78.0	78.0	78.2
7	78.1	78.2	78.2	78.2	78.3	78.4	78.5	78.6	78.9	79.0	79.2	79.5	79.8	79.8	79.7	79.5	79.5	79.3	79.0	79.1	79.1	79.3	79.3	79.1	79.0	79.0
8	79.0	77.8	78.7	78.6	78.5	79.2	79.5	80.4	81.9	82.1	82.9	84.2	84.3	84.0	85.3	86.0	85.4	84.9	84.1	83.2	83.7	83.4	83.0	82.9	82.1	82.1
9	82.4	82.0	81.6	80.5	80.5	81.5	82.8	82.3	82.5	83.5	83.0	83.1	83.5	83.4	82.3	82.1	80.8	81.2	80.9	80.7	80.3	80.5	80.3	80.5	80.3	81.8
10	80.3	80.2	80																							

TEMPERATURE  
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, 1937

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	83.0	82.3	81.9	82.0	81.9	82.3	82.6	83.1	82.9	83.1	82.7	83.6	83.6	84.5	84.5	84.3	84.1	84.0	83.5	82.6	82.1	81.9	81.9	81.9	83.0
2	81.8	81.2	80.9	80.4	80.2	80.2	80.9	81.1	82.1	82.2	83.1	82.7	81.8	82.0	81.1	81.3	81.9	80.2	80.0	79.6	79.3	79.1	79.2	79.1	80.9
3	79.0	79.0	79.0	78.8	78.9	79.0	79.2	79.9	80.5	80.7	81.6	83.1	82.6	81.3	80.5	81.1	81.3	81.0	80.8	81.0	80.5	80.4	79.6	79.5	80.3
4	78.9	78.0	78.0	77.7	78.1	79.9	81.4	81.9	82.3	83.2	84.5	86.2	84.9	83.0	83.0	82.0	81.3	82.0	81.0	80.9	80.8	80.9	80.5	79.8	81.3
5	79.5	79.4	78.9	79.2	79.3	79.9	80.0	80.6	81.2	81.7	81.3	81.2	81.7	81.7	81.3	81.0	81.6	81.5	82.3	80.9	80.6	80.4	80.3	80.0	80.6
6	79.1	78.3	77.8	76.7	77.7	79.1	80.3	81.1	81.9	82.0	81.4	81.6	81.2	81.3	81.1	81.0	81.1	80.8	80.1	79.9	79.6	79.3	79.1	78.7	80.0
7	78.4	78.3	78.1	78.3	79.7	80.2	80.6	81.2	81.0	81.5	83.0	82.5	83.1	82.7	82.5	82.4	81.5	81.9	82.1	82.0	81.4	81.0	80.7	80.3	81.0
8	80.3	80.2	80.4	80.7	80.7	80.4	80.0	79.9	80.2	80.5	80.9	80.7	81.2	81.3	81.4	81.2	81.2	80.4	80.2	79.9	79.9	79.5	79.6	79.4	80.4
9	79.2	79.1	79.0	79.0	78.8	79.0	79.4	79.7	80.0	80.0	80.9	80.3	80.4	80.3	80.2	80.1	80.0	79.9	79.7	79.8	79.7	79.7	79.5	79.1	79.7
10	79.0	78.7	78.6	78.4	78.7	78.9	79.0	79.7	79.9	81.0	81.5	81.1	81.4	81.2	81.0	80.9	80.8	80.9	80.6	80.5	80.3	80.1	80.2	80.0	80.1
11	80.0	80.0	80.0	80.1	80.1	81.2	81.8	81.7	81.8	81.9	82.5	82.4	82.4	82.3	82.0	81.6	81.4	81.9	81.7	80.6	80.1	80.4	80.3	80.2	81.2
12	79.9	80.0	80.0	80.2	80.3	80.4	80.5	80.4	80.8	81.1	81.0	81.5	81.9	81.4	81.0	81.1	81.1	81.0	80.9	80.9	80.7	80.6	80.4	80.3	80.7
13	80.1	79.9	79.8	79.9	80.0	80.3	80.8	81.3	82.5	83.1	83.5	82.2	83.8	83.8	83.1	82.8	82.7	81.8	81.6	81.2	81.1	81.0	81.0	81.0	81.6
14	81.1	81.2	81.2	81.4	81.2	81.3	81.6	81.7	81.9	82.0	82.0	82.0	82.5	82.9	83.1	83.0	83.1	83.0	82.7	82.2	80.8	80.4	81.0	81.0	81.8
15	81.0	81.0	81.0	80.2	79.9	80.2	81.5	82.3	83.2	83.5	83.6	83.9	84.1	82.8	81.6	81.9	81.9	81.6	81.2	80.8	80.2	79.6	79.3	79.2	81.5
16	79.5	79.5	79.7	79.9	80.3	80.4	80.5	80.9	81.4	81.8	82.0	82.0	82.2	82.3	82.3	82.0	82.1	82.4	81.7	81.5	81.1	81.0	80.9	80.9	81.1
17	80.7	80.7	80.6	80.1	80.1	80.4	82.3	83.7	84.4	84.9	85.0	85.9	86.6	87.0	83.3	83.9	84.0	84.6	83.1	82.2	81.9	81.8	81.7	81.5	82.9
18	81.0	81.2	81.6	81.1	81.0	80.5	81.4	82.1	81.9	82.3	83.3	83.0	84.2	83.9	84.1	82.2	82.7	84.9	83.5	82.1	81.5	81.6	81.4	81.0	82.2
19	81.1	81.0	80.8	80.3	80.4	80.5	80.4	80.8	81.0	81.1	81.5	81.9	81.9	82.4	82.7	82.3	82.1	81.5	81.4	81.2	81.2	81.2	81.2	81.1	81.3
20	81.2	81.0	81.0	80.9	80.8	80.5	80.7	80.7	80.7	80.8	81.2	81.4	81.9	82.7	82.7	82.3	82.1	81.7	81.4	81.2	81.0	80.8	80.9	80.9	81.2
21	80.8	80.8	80.9	80.7	81.0	81.1	81.4	82.1	81.7	81.9	81.9	82.0	82.2	82.0	82.0	82.0	81.8	81.4	81.7	82.1	83.1	82.8	81.9	81.9	81.7
22	81.4	80.5	80.7	80.1	81.0	82.0	82.8	83.9	85.0	85.3	86.9	85.9	86.0	85.9	85.0	84.3	83.9	84.1	83.0	82.4	82.3	82.7	82.2	82.2	83.3
23	82.4	82.2	82.3	81.7	82.9	82.7	84.1	85.4	86.4	87.1	87.2	88.8	89.5	90.0	90.0	89.3	89.8	89.0	88.1	86.9	86.3	86.1	85.7	85.1	86.2
24	84.2	83.0	82.5	81.9	83.4	85.0	85.4	85.8	85.9	85.3	86.0	85.8	84.1	83.4	83.2	85.1	87.8	87.2	87.4	87.2	86.9	85.7	84.9	84.2	85.0
25	84.0	84.4	84.3	84.0	84.6	84.6	84.6	86.9	87.0	87.2	85.2	84.9	84.6	86.4	86.3	88.6	89.7	89.1	88.8	87.6	86.8	86.7	85.8	85.4	86.1
26	84.0	83.0	83.1	82.9	84.2	85.8	86.9	87.6	88.5	89.0	88.0	88.2	87.0	86.4	84.1	84.5	84.9	85.3	84.4	84.7	84.9	84.9	84.6	84.6	85.5
27	84.1	83.8	83.7	83.7	83.8	83.8	85.2	86.5	87.2	86.6	87.5	88.0	88.9	88.4	90.0	90.1	89.5	88.0	87.9	87.2	85.5	85.0	84.6	84.0	86.4
28	83.1	81.5	80.7	81.0	81.6	85.1	86.0	86.6	87.4	87.5	87.6	88.0	88.9	89.0	89.3	88.4	88.7	87.8	86.9	87.6	88.0	87.9	87.2	87.3	86.7
29	86.6	84.7	85.4	84.3	84.9	84.9	85.8	87.1	87.2	87.1	86.9	89.9	89.7	89.2	89.9	89.0	88.3	87.9	88.9	89.4	89.1	87.9	87.3	86.3	87.5
30	86.1	85.2	84.3	84.0	85.1	86.1	86.3	87.5	88.7	88.4	88.9	89.7	90.7	90.4	90.2	90.0	89.9	90.0	89.0	87.6	86.0	84.9	84.2	83.8	87.4
31	83.0	82.9	82.3	82.1	83.0	84.6	85.9	86.5	87.2	87.9	88.8	88.9	89.0	89.7	89.0	89.6	89.3	87.8	86.5	86.0	84.9	83.9	83.4	83.0	86.1
Mean	81.4	81.0	80.9	80.7	81.1	81.6	82.2	82.9	83.3	83.6	84.0	84.1	84.3	84.2	83.9	83.9	83.9	83.7	83.3	82.9	82.5	82.2	82.0	81.7	82.7

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

JUNE, 1937

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean
1	82.7	83.2	83.1	83.0	83.2	84.1	84.4	84.4	83.9	83.9	83.5	84.4	84.5	84.1	83.6	84.7	84.0	82.8	81.3	80.9	79.8	79.0	78.9	78.1	82.8
2	77.9	78.0	77.7	77.6	78.2	77.0	79.9	80.4	80.9	81.9	82.3	83.7	84.1	84.7	84.9	84.2	82.5	82.1	80.8	80.4	80.0	79.0	78.1	77.3	80.6
3	77.1	78.3	79.1	79.4	80.1	80.2	80.4	80.5	80.8	81.3	81.6	82.1	82.3	82.3	82.1	82.4	82.7	83.0	83.3	83.3	83.3	83.3	82.9	83.0	81.3
4	83.1	83.8	83.9	84.1	84.2	85.0	86.0	86.8	88.2	88.5	88.9	89.9	89.9	90.1	89.4	89.0	88.1	87.9	87.4	86.9	87.0	86.9	87.0	86.5	86.9
5	87.7	87.7	87.8	87.5	87.4	87.3	87.5	89.1	89.5	89.8	90.9	91.0	91.0	92.8	91.1	91.3	92.0	90.9	89.0	88.9	88.6	89.1	86.6	86.0	89.2
6	86.1	86.7	86.3	86.5	86.7	86.0	85.6	87.8	89.1	89.5	87.6	88.9	88.5	89.6	88.9	88.4	88.3	88.3	87.9	87.6	87.7	86.3	85.9	85.7	87.5
7	85.7	85.9	85.9	86.0	86.1	86.2	86.9	88.0	89.9	90.0	90.0	90.5	90.3	80.2	90.4	89.1	89.5	88.9	88.6	87.5	86.0	86.1	86.0	85.4	87.9
8	84.5	84.1	83.2	83.6	84.2	85.3	86.1	86.8	87.4	87.5	88.3	88.5	86.9	87.0	88.0	88.4	88.8	87.3	87.4	86.4	86.0	85.8	86.1	84.3	86.3
9	83.4	83.6	83.7	82.9	84.4	85.9	86.4	87.2	88.5	89.0	89.4	89.5	89.3	88.5	89.2	89.1	89.8	88.6	88.5	87.4	86.9	86.3	86.0	84.9	87.0
10	84.3	83.9	83.9	84.9	85.1	85.3	87.0	88.0	90.0	89.4	90.3	91.8	93.1	93.3	94.0	93.0	93.8	92.1	90.8	89.2	87.9	87.5	87.4	87.0	88.8
11	87.0	86.0	85.0	84.9	84.7	85.2	85.1	85.1	84.8	84.9	84.6	84.8	84.6	84.4	84.4	84.1	84.3	84.2	84.1	84.0	84.0	83.8	83.5	83.5	84.7
12	83.3	83.3	83.1	83.1	83.3	83.4	83.5	83.7	84.3	84.4	85.1	85.1	84.8	85.2	85.5	85.7	85.3	85.3	84.9	84.6	84.7	84.5	84.4	84.4	84.4
13	84.4	84.5	84.7	84.7	84.6	84.7	85.1	85.9	86.1	86.5	87.7	87.6	87.7	88.1	88.7	89.3	88.1	88.1	88.3	86.7	86.3	85.9	85.8	85.4	86.4
14	86.1	86.0	85.7	85.7	85.1	85.5	86.0	86.0	86.5	86.6	86.4	86.9	86.7	86.4	85.7	85.2	85.1	85.2	85.0	85.2	84.9	84.6	84.3	84.0	85.7
15	83.6	83.1	83.2	83.1	83.7	84.2	84.4	84.6	85.6	86.1	86.6	87.1	87.3	87.5	88.5	88.6	89.0	87.8	86.9	86.2	85.6	84.8	84.3	84.0	85.7
16	84.0	83.9	83.5	83.3	83.2	83.7	84.1	84.6	84.3																

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

JULY, 1937

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	83.4	83.3	82.6	83.0	83.2	84.1	84.8	85.2	86.0	87.2	88.3	88.3	87.2	88.0	88.5	88.5	87.6	86.2	86.2	86.1	85.8	85.9	85.3	85.2	85.8
2	85.7	86.0	86.0	86.1	86.9	87.0	89.0	90.0	90.2	92.1	92.2	92.7	92.5	92.0	90.7	91.2	91.2	89.0	90.9	89.6	88.5	88.0	87.9	87.7	89.2
3	87.2	87.2	87.1	87.3	87.6	88.9	89.1	89.0	88.6	88.3	86.0	84.8	84.2	84.4	84.5	84.8	85.0	84.5	84.1	83.6	83.0	83.0	83.1	83.1	85.9
4	82.9	83.0	83.0	83.0	83.0	83.2	83.8	83.9	84.6	84.6	84.5	84.5	84.6	84.2	84.3	84.1	84.0	83.9	83.9	84.0	84.0	84.0	84.1	84.1	83.9
5	84.2	84.5	84.4	84.4	84.6	85.0	86.6	87.3	88.9	90.0	90.3	91.0	90.4	90.2	89.2	88.1	87.3	87.3	87.9	87.6	86.1	85.6	85.4	85.6	87.1
6	85.7	85.3	85.4	85.0	85.2	85.3	86.0	86.9	87.1	86.7	87.0	87.3	87.8	89.0	88.9	89.6	90.4	90.1	90.0	88.5	88.0	88.0	87.9	87.6	87.4
7	87.7	87.7	87.6	87.5	87.4	87.4	87.5	87.1	87.0	87.3	87.5	87.3	86.0	85.4	85.9	85.9	86.4	86.3	85.5	85.0	84.7	84.1	84.1	84.1	86.4
8	83.9	83.6	83.5	83.7	83.8	84.1	84.4	85.0	86.0	85.5	86.1	85.9	86.2	86.5	86.7	86.0	85.5	85.1	85.1	85.0	85.0	84.8	84.3	84.0	85.0
9	83.9	83.7	83.4	83.3	83.8	84.1	85.3	85.7	85.3	86.0	86.5	86.1	86.4	85.5	85.9	85.3	85.2	85.0	85.2	85.2	85.1	85.0	84.9	84.6	85.0
10	84.8	84.6	84.4	84.4	84.1	84.3	84.0	84.1	84.7	84.9	84.9	86.0	86.5	87.1	87.1	86.5	85.9	86.2	85.6	85.4	84.2	83.3	82.2	82.1	84.9
11	82.2	82.4	81.7	81.1	81.0	82.2	84.9	85.5	86.2	87.3	87.1	87.0	87.3	86.9	86.5	86.3	86.5	86.2	85.8	85.6	84.9	84.5	84.2	83.9	84.8
12	83.5	82.9	82.5	82.4	84.3	85.0	85.4	85.5	85.9	86.5	86.8	86.7	87.3	87.4	87.8	87.5	87.9	86.5	86.3	86.1	85.9	85.8	85.8	86.6	85.8
13	85.5	85.6	85.8	86.9	87.3	88.7	89.4	91.3	93.1	93.8	94.1	94.3	93.9	93.4	93.2	93.0	92.8	88.2	88.5	89.0	88.4	89.5	89.2	88.6	90.1
14	89.2	88.3	87.7	87.1	87.0	88.7	88.9	89.2	90.6	91.3	92.5	93.0	94.3	93.0	94.0	93.3	93.5	90.8	90.0	90.6	89.0	89.4	89.2	88.9	90.4
15	88.3	88.1	88.7	88.4	87.6	88.7	88.7	88.2	87.6	88.6	88.3	88.3	88.2	88.7	88.7	88.3	88.4	87.9	87.6	87.5	87.3	86.9	86.9	86.7	88.1
16	86.2	86.4	86.5	86.5	86.6	86.4	86.4	87.3	88.3	88.8	89.6	90.3	90.5	91.2	91.6	91.7	88.9	88.0	87.1	86.9	86.9	87.1	86.6	86.5	88.0
17	85.6	85.7	84.8	83.3	84.4	86.4	88.0	90.0	89.2	89.3	90.3	90.2	89.7	89.5	89.4	88.7	89.3	89.9	89.7	89.1	88.0	87.5	87.9	88.1	88.1
18	87.8	87.5	87.5	87.3	87.3	89.0	89.8	90.8	91.2	92.4	91.0	94.0	94.0	94.0	93.2	91.8	93.3	92.0	91.0	91.0	91.4	90.5	90.2	88.7	90.7
19	87.7	87.1	86.9	86.0	85.9	87.8	88.4	88.9	90.4	91.4	92.2	93.1	91.9	92.1	91.1	92.9	92.7	91.8	91.1	90.1	89.4	88.9	88.2	87.3	89.7
20	85.9	85.3	84.9	85.0	85.3	85.9	87.1	88.1	88.2	88.4	88.9	88.8	89.0	89.1	89.1	89.0	88.6	88.5	88.3	87.5	86.8	86.5	86.8	86.7	87.4
21	86.7	86.2	86.1	86.0	85.3	86.1	86.6	86.4	86.0	85.9	85.9	85.7	85.7	86.2	86.9	87.4	87.0	88.2	88.6	87.8	87.0	86.3	85.2	84.8	86.5
22	85.1	84.7	84.2	84.1	84.6	85.2	86.3	87.0	88.0	87.4	87.0	87.1	87.0	87.9	87.2	87.1	88.0	87.6	87.1	86.9	86.3	86.0	86.0	86.1	86.4
23	86.1	86.1	86.0	86.0	86.0	86.1	86.7	87.4	88.1	89.0	89.1	89.2	89.5	90.0	89.0	88.3	88.1	87.6	87.0	86.7	86.3	86.2	86.2	86.2	87.4
24	86.1	86.0	86.0	85.6	85.1	85.0	85.1	85.5	85.6	85.6	86.0	86.1	86.2	86.2	86.2	86.3	86.2	85.9	86.0	85.9	85.9	85.9	85.4	85.4	85.8
25	85.5	85.0	85.1	84.9	85.0	85.5	85.3	85.6	86.3	86.9	87.7	87.9	87.9	88.4	88.4	87.9	87.9	86.2	86.9	86.0	86.0	85.5	85.1	84.9	86.2
26	84.9	84.9	84.5	84.2	84.5	84.7	85.1	85.5	85.3	86.0	87.1	88.1	88.6	88.5	89.3	89.4	88.6	88.1	87.1	86.6	86.1	85.3	85.4	84.9	86.3
27	84.8	84.2	84.1	84.1	84.1	84.4	84.9	86.3	86.0	85.6	85.7	85.9	85.8	85.0	85.1	85.1	85.8	86.2	85.4	85.0	84.7	84.6	84.3	84.2	85.1
28	84.0	83.9	83.8	83.7	83.6	83.5	84.1	84.5	84.7	84.9	85.4	86.8	86.1	86.2	86.3	86.2	87.1	86.4	86.1	85.0	83.1	81.4	81.8	82.2	84.6
29	82.7	82.8	83.0	83.1	83.3	83.4	83.4	84.1	84.4	84.5	85.5	86.4	86.3	86.3	86.5	85.7	86.0	86.0	86.3	85.1	85.0	85.1	85.1	85.0	84.7
30	84.9	84.9	84.9	84.8	84.6	84.9	85.0	85.3	86.5	87.3	87.9	88.0	88.1	88.7	88.6	88.1	88.4	87.4	86.5	86.1	85.7	85.3	85.4	85.2	86.3
31	84.9	84.3	84.0	82.1	82.1	83.2	85.5	87.6	88.2	90.5	92.4	93.9	94.9	95.8	95.3	96.0	94.9	89.0	88.8	88.9	89.1	89.1	89.0	88.3	89.0
Mean	85.4	85.2	85.0	84.9	85.0	85.6	86.3	86.9	87.4	87.9	88.2	88.5	88.5	88.6	88.6	88.4	88.3	87.6	87.2	86.9	86.4	86.1	85.9	85.7	86.8

91 ABERDEEN: North Wall Screen on Tower:  $h_t$  = 12.5 metres

AUGUST, 1937

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	88.1	87.7	86.8	87.2	87.0	87.8	88.2	89.4	90.9	91.0	90.9	89.8	89.2	89.0	88.2	87.4	86.8	86.2	85.7	85.0	85.1	85.3	84.9	84.9	87.7
2	84.6	84.3	84.1	84.1	84.3	84.4	85.0	85.7	85.7	85.6	86.1	86.6	86.5	87.4	87.0	87.1	86.5	86.0	86.0	85.5	85.6	85.7	85.9	85.9	85.6
3	85.6	85.8	85.8	85.5	85.6	85.7	85.9	86.1	86.5	86.3	86.3	86.9	87.6	88.5	88.0	87.1	86.8	86.7	86.7	86.7	86.7	86.8	86.7	86.6	86.5
4	86.3	86.1	86.2	86.4	86.3	86.7	87.3	87.5	87.7	88.0	88.7	88.4	88.1	88.1	87.9	87.9	87.9	87.3	87.5	87.1	87.1	87.2	87.4	87.3	87.3
5	87.1	87.2	87.1	87.0	86.3	86.7	87.7	87.5	89.0	89.3	89.3	89.8	90.2	89.8	89.3	88.9	89.1	88.7	88.3	87.7	87.4	87.3	87.0	86.9	88.1
6	86.7	86.4	86.4	86.8	87.1	86.8	87.3	88.6	90.9	91.7	92.4	91.7	91.2	91.8	91.0	91.3	90.3	89.9	89.3	89.0	88.7	88.6	89.3	88.7	89.2
7	88.3	87.2	86.0	85.2	84.5	85.6	86.5	87.4	88.4	88.9	89.5	90.2	91.2	90.8	91.4	90.8	91.1	89.7	88.9	88.5	87.7	87.4	87.1	86.9	88.3
8	86.4	86.1	85.9	85.6	85.5	85.4	85.9	86.5	86.9	87.8	88.5	89.8	88.0	88.7	88.4	88.1	88.1	87.9	87.5	87.1	86.9	86.9	86.8	86.8	88.2
9	83.5	82.8	82.2	80.7	81.3	82.7	84.5	86.1	87.1	86.8	87.8	87.9	88.5	87.8	87.9	88.0	87.6	87.8	87.7	87.2	86.7	86.2	86.2	86.0	85.8
10	85.9	85.8	85.4	85.5	85.8	85.9	86.0	86.6	87.4	88.1	87.6	87.4	87.1	86.9	86.9	87.0	86.6	86.5	86.2	86.1	86.3	85.9	86.3	86.4	86.5
11	85.8	85.5	85.7	85.8	86.2	86.7	87.2	87.3	88.5	88.4	89.4	88.1	90.1	90.3	90.1	89.8	89.7	89.0	88.1	87.9	87.3	87.4	87.3	88.1	87.9
12	88.7	88.5	87.9	87.7	87.4	87.4	87.8	88.2	89.6	89.3	89.0	90.5	89.3	89.6	89.8	88.6	89.3	88.3	87.9	87.5	87.3	87.3	87.3	87.1	86.9
13	87.0	87.1	87.0	87.0	87.0	87.1	87.8	87.6	87.6	87.9	88.2	87.9	88.2	88.8	88.6	88.6	88.3	88.0	87.6	87.3	87.0	86.9	87.1	87.1	87.6
14	87.1	87.0	86.7	86.8	86.6	87.1	87.3	86.9	87.0	87.7	88.5	88.4	87.5	87.7	88.0	87.3	86.8	86.2	85.9	85.6	85.3	84.7	84.3	83.9	86.7
15	83.8	83.4	83.3	83.3	83.4	83.5	83.8	84.1	84.9	85.3	85.7	86.1	85.2	86.8	87.0	87.2	87.6	87.1	86.6	85.0	84.1	82.9	82.2	81.9	84.8
16	81.3	80.9	80.2	80.																					



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

92 ABERDEEN: North Wall Screen on Tower: h<sub>t</sub> (height of thermometer bulb above ground) = 12.5 metres

SEPTEMBER, 1937

Table with 25 columns (1-24) and 25 rows (Day 1-25). Columns 1-12 are labeled 1-12, 13-24 are labeled 13-24, and the last column is Mean. Each cell contains two temperature readings in degrees absolute.

93 ABERDEEN: North Wall Screen on Tower: h<sub>t</sub> = 12.5 metres

OCTOBER, 1937

Table with 25 columns (1-24) and 31 rows (Day 1-31). Columns 1-12 are labeled 1-12, 13-24 are labeled 13-24, and the last column is Mean. Each cell contains two temperature readings in degrees absolute.

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

TEMPERATURE

Readings in degrees absolute at exact hours, Greenwich Mean Time

94 ABERDEEN: North Wall Screen on Tower: h<sub>t</sub> (height of thermometer bulb above ground) = 12.5 metres

NOVEMBER, 1937

Table with 25 columns (1-24 hours + Mean) and 31 rows (Day 1-30 + Mean). Contains temperature readings in degrees absolute for November 1937.

95 ABERDEEN: North Wall Screen on Tower: h<sub>t</sub> = 12.5 metres

DECEMBER, 1937

Table with 25 columns (1-24 hours + Mean) and 31 rows (Day 1-30 + Mean). Contains temperature readings in degrees absolute for December 1937.

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

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

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

1937

Hour	G.M.T.	3	4	5	6	7	8	9	10	11	Noon	13	14	15	16	17	18	19	20	21	22	23	24	Mean
1	2	3	4	5	6	7	8	9	10	11	Noon	13	14	15	16	17	18	19	20	21	22	23	24	Mean
80.25	80.10	79.99	79.89	79.89	80.06	80.40	80.84	81.36	81.80	82.22	82.55	82.76	82.83	82.70	82.45	82.26	81.93	81.59	81.27	80.95	80.73	80.57	80.39	81.24

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

1937

Month	Mean	1	2	3	4	5	6	7	8	9	10	11	Noon	13	14	15	16	17	18	19	20	21	22	23	24
Jan.	277.79	-0.23	-0.30	-0.28	-0.22	-0.27	-0.29	-0.26	-0.40	-0.19	-0.16	+0.16	+0.26	+0.53	+0.66	+0.70	+0.46	+0.27	+0.17	+0.10	-0.13	-0.20	-0.21	-0.09	-0.17
Feb.	276.47	-0.38	-0.57	-0.76	-0.85	-0.88	-0.86	-0.90	-0.85	-0.50	+0.13	+0.63	+1.10	+1.26	+1.44	+1.35	+0.91	+0.54	+0.25	+0.02	-0.06	-0.17	-0.29	-0.26	-0.36
Mar.	275.49	-0.92	-1.01	-0.98	-1.00	-1.01	-1.06	-0.91	-0.45	+0.12	+0.60	+0.85	+1.21	+1.40	+1.53	+1.35	+1.21	+0.99	+0.58	+0.16	-0.01	-0.40	-0.60	-0.74	-0.83
Apr.	279.92	-1.22	-1.49	-1.48	-1.61	-1.76	-1.45	-0.83	-0.15	+0.42	+0.80	+1.20	+1.35	+1.63	+1.61	+1.50	+1.45	+1.22	+0.96	+0.41	+0.09	-0.25	-0.51	-0.75	-1.10
May	282.73	-1.35	-1.72	-1.83	-2.05	-1.66	-1.12	-0.50	+0.15	+0.61	+0.87	+1.22	+1.42	+1.59	+1.52	+1.19	+1.15	+1.21	+0.97	+0.54	+0.18	+0.21	-0.48	-0.76	-1.01
June	285.61	-1.90	-1.92	-2.04	-2.05	-1.75	-1.37	-0.67	-0.06	+0.57	+0.91	+1.42	+1.86	+1.91	+2.28	+2.11	+1.58	+1.69	+1.44	+0.83	+0.07	-0.59	-1.05	-1.46	-1.75
July	286.84	-1.39	-1.58	-1.75	-1.93	-1.82	-1.19	-0.50	+0.09	+0.54	+1.06	+1.36	+1.66	+1.67	+1.76	+1.69	+1.49	+1.43	+0.68	+0.34	0.00	-0.53	-0.81	-0.98	-1.24
Aug.	286.72	-1.36	-1.58	-1.78	-2.00	-2.13	-1.82	-1.13	-0.33	+0.55	+1.03	+1.43	+1.61	+1.69	+1.81	+1.83	+1.59	+1.57	+1.29	+0.75	+0.15	-0.34	-0.71	-1.00	-1.21
Sept.	285.05	-1.70	-1.75	-2.00	-2.03	-2.14	-2.11	-1.59	-0.72	+0.43	+1.21	+1.89	+2.36	+2.53	+2.62	+2.34	+2.14	+1.58	+0.87	+0.30	-0.16	-0.56	-0.99	-1.19	-1.30
Oct.	282.82	-0.91	-1.09	-1.16	-1.28	-1.46	-1.50	-1.33	-0.91	-0.21	+0.47	+0.94	+1.43	+1.86	+1.91	+1.79	+1.46	+1.04	+0.63	+0.38	+0.05	-0.20	-0.40	-0.63	-0.77
Nov.	279.00	-0.44	-0.49	-0.61	-0.72	-0.74	-0.76	-0.70	-0.62	-0.45	+0.05	+0.50	+0.96	+1.26	+1.19	+1.02	+0.67	+0.42	+0.19	+0.04	-0.02	-0.07	-0.06	-0.27	-0.40
Dec.	276.15	-0.08	-0.22	-0.41	-0.53	-0.59	-0.67	-0.78	-0.59	-0.60	-0.28	+0.11	+0.47	+0.89	+0.79	+0.72	+0.43	+0.25	+0.25	+0.33	+0.20	+0.04	+0.02	+0.15	+0.10
Year	281.24	-0.99	-1.14	-1.26	-1.36	-1.35	-1.18	-0.84	-0.40	+0.11	+0.56	+0.98	+1.31	+1.52	+1.59	+1.47	+1.21	+1.02	+0.69	+0.35	+0.03	-0.25	-0.51	-0.67	-0.84

† See page 23.

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

1937

Month	Jan.		Feb.		Mar.		Apr.		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	80.5	77.3	79.5	74.8	77.9	74.4	79.3	77.4	84.8	81.3	85.0	78.0	88.9	82.5	91.2	84.8	92.0	85.9	86.5	81.6	84.3	81.2	81.5	77.5
2	82.6	74.7	79.1	73.7	78.1	75.5	78.4	77.4	83.4	79.0	85.2	77.0	93.3	85.0	87.7	84.0	91.3	85.3	85.9	82.2	85.3	83.2	78.5	75.5
3	85.1	78.7	81.1	76.2	79.2	75.2	78.9	77.8	83.1	78.7	83.5	77.0	89.2	82.9	88.5	85.4	90.3	84.8	87.1	81.9	84.9	81.8	77.3	75.0
4	82.4	75.5	81.5	78.0	78.9	74.8	78.7	77.9	86.6	77.4	90.2	83.0	84.8	82.9	89.0	86.1	90.1	84.1	86.7	78.6	83.6	81.4	76.0	74.2
5	77.5	75.2	80.9	77.2	76.3	73.7	78.6	77.7	82.3	78.9	92.8	86.5	91.0	84.1	90.2	86.3	89.6	83.4	85.5	76.4	86.5	81.5	77.7	70.8
6	80.0	75.4	79.9	75.7	75.5	73.1	78.7	77.9	82.3	76.6	90.0	85.6	90.5	85.0	93.1	86.3	91.1	85.5	86.0	81.2	84.1	80.4	77.7	72.3
7	79.7	76.3	78.2	73.5	76.1	71.4	79.9	78.0	83.5	78.1	91.1	85.4	87.8	84.0	92.1	84.3	90.1	83.8	85.7	81.4	84.3	81.6	78.1	70.8
8	80.1	74.3	78.0	75.1	76.9	71.0	86.1	77.7	81.5	79.3	88.9	82.9	86.9	83.4	93.3	84.3	89.5	82.0	85.4	81.9	82.1	77.6	78.6	76.1
9	81.9	79.9	76.7	73.4	76.5	72.0	84.2	80.3	80.6	78.7	89.9	82.6	87.0	83.2	88.7	80.7	87.1	81.5	86.1	80.1	78.9	76.6	77.0	71.7
10	81.1	79.6	77.7	74.9	76.0	72.1	83.0	79.5	82.2	78.3	94.5	83.8	87.4	82.1	88.3	85.3	85.9	81.3	84.9	80.7	80.6	76.7	76.9	69.0
11	81.1	79.6	77.4	74.3	75.3	72.3	83.7	76.7	83.3	79.9	87.1	83.4	87.9	80.9	90.9	85.3	84.4	80.8	87.8	82.4	81.8	77.2	77.4	73.3
12	81.4	79.9	77.5	72.5	74.8	72.5	83.3	75.5	82.0	79.9	86.0	83.0	88.4	82.2	90.6	86.9	84.3	79.9	82.4	81.4	77.9	74.5	75.1	67.3
13	81.8	74.6	81.3	75.3	74.5	71.9	79.6	78.0	84.0	79.7	89.4	84.3	94.7	85.4	88.9	86.8	85.4	81.3	84.2	80.5	76.0	77.1	63.7	63.7
14	76.3	72.3	81.1	76.5	76.7	73.7	79.7	78.0	83.3	80.3	87.0	84.0	94.6	86.6	89.1	83.9	87.5	78.1	86.0	81.4	79.1	75.3	77.4	74.3
15	78.5	73.4	80.4	76.9	77.3	73.1	80.1	77.5	84.4	79.0	89.2	83.0	89.4	86.6	87.8	81.7	87.8	79.9	88.0	80.9	79.8	76.5	79.8	74.0
16	79.2	74.1	79.7	75.8	78.1	71.0	80.0	77.9	82.7	79.2	87.1	81.2	92.1	86.1	88.0	79.8	86.2	75.9	88.4	83.4	80.0	75.2	79.2	74.9
17	79.7	73.3	79.4	73.2	77.2	75.0	82.8	78.5	87.2	80.0	85.2	80.9	90.6	83.3	88.7	81.9	86.3	79.4	88.5	81.4	81.0	79.1	77.0	73.9
18	79.8	75.1	81.3	72.7	78.2	76.0	82.3	78.6	85.1	80.5	84.9	81.1	94.7	86.9	87.5	80.5	86.9	79.7	88.5	80.1	80.3	77.3	74.0	70.2
19	76.9	74.0	76.9	74.2	78.5	76.9	83.6	75.4	82.9	80.2	85.5	81.3	93.5	85.4	89.5	84.0	86.7	79.9	87.4	78.7	79.2	73.5	75.2	70.4
20	79.3	72.0	78.5	74.5	78.9	75.5	82.5	77.0	82.7	80.5	85.8	80.9	90.0	84.8	89.3	82.9	85.1	79.8	84.6	81.5	76.3	72.9	77.1	71.8
21	80.3	78.8	77.9	74.1	77.1	71.9	84.5	76.3	83.2	80.7	89.1	80.2	88.6	84.7	87.9	81.3	85.1	77.5	82.4	80.5	76.5	72.6	79.1	76.4
22	82.6	79.3	77.1	73.4	76.7	71.3	87.5	75.3	87.0	80.1	89.1	82.0	88.6	84.0	91.3	83.1	91.3	83.0	84.5	81.0	76.9	72.5	81.5	78.5
23	80.4	78.2	78.4	73.3	78.5	69.3	83.3	78.9	90.9	81.7	88.0	80.9	90.1	85.9	93.0	84.8	91.2	85.6	84.1	80.2	76.8	73.0	81.0	75.4
24	81.2	79.7	77.9	70.9	80.4	73.7	81.9	76.1	88.1	81.6	88.7	80.1	86.6	85.0	90.7	86.0	91.2	83.2	81.2	76.4	79.9	72.2	83.9	78.6
25	80.0	75.3	77.1	74.0	76.5	71.4	81.3	75.0	90.0	83.4	96.3	85.5	89.0	84.2	89.5	83.6	87.9	81.4	84.8	75.7	83.4	77.3	81.0	77.4
26	75.8	73.2	76.7	74.6	77.0	71.1	83.0	75.5	90.0	82.3	95.9	85.7	89.7	84.1	88.3	82.3	86.7	80.6	84.6	79.2	82.1	78.9	81.7	79.1
27	77.5	74.0	76.9	73.3	79.2	74.1	83.4	74.0	90.3	83.2	95.3	84.4	86.3	84.0	91.1	79.3	89.3	84.9	80.3	72.3	78.9	76.2	80.6	78.5
28	77.1	74.6	75.4	71.8	78.9	74.0	84.9	76.0	90.2	80.														

RELATIVE HUMIDITY  
Percentages at exact hours, Greenwich Mean Time

99 ABERDEEN: North Wall Screen on Tower:

h<sub>t</sub> (height of thermometer bulbs above the ground) = 12.5 metres

JANUARY, 1937

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	74	79	76	74	76	79	82	79	71	74	66	63	68	65	65	65	73	75	80	84	80	80	63	68	73.5	6.5
2	69	69	71	74	71	74	82	85	90	90	91	90	78	71	68	82	73	76	64	65	61	60	61	64	74.2	6.9
3	65	64	66	61	68	72	70	84	56	58	62	62	60	62	63	65	68	74	68	62	65	69	74	72	66.1	7.7
4	77	76	76	77	80	78	83	91	93	89	86	93	90	85	89	84	78	72	71	74	74	76	76	79	81.0	7.7
5	65	70	76	69	69	73	67	60	59	59	62	65	69	59	63	66	68	68	74	79	76	80	88	90	69.5	5.5
6	90	89	92	92	86	86	86	84	83	78	79	78	81	85	73	76	71	68	69	78	79	80	72	72	80.7	7.0
7	72	74	70	71	71	73	71	69	72	74	76	84	83	77	76	74	71	74	73	77	75	76	74	75	74.2	6.6
8	78	80	79	82	85	77	75	74	78	79	83	81	75	79	78	84	84	89	88	87	88	88	87	88	81.6	6.6
9	88	91	89	90	88	90	93	89	89	87	83	86	86	86	88	88	89	93	91	93	91	91	90	90	89.1	9.4
10	90	88	90	93	90	91	91	94	91	90	90	90	89	90	85	86	83	82	74	72	72	80	87	85	86.3	8.8
11	86	87	91	90	88	91	91	90	88	85	88	85	90	89	93	94	94	93	91	90	89	90	92	93	90.0	9.2
12	94	93	92	92	88	88	86	88	89	86	84	88	93	94	90	90	92	93	94	94	96	96	94	94	91.1	9.6
13	94	96	94	96	96	96	89	90	89	94	93	90	87	78	75	76	82	85	85	82	81	75	78	84	87.1	7.5
14	82	87	87	85	87	85	83	90	85	85	79	75	68	69	75	82	87	84	88	87	89	87	90	90	83.4	5.6
15	87	88	85	85	81	82	80	75	76	72	69	65	59	57	57	61	64	65	67	70	66	65	67	69	71.8	5.8
16	72	74	72	73	73	74	75	78	86	86	86	89	88	88	90	90	87	88	87	82	85	83	82	80	81.8	6.7
17	82	82	85	90	90	89	92	85	82	85	83	81	81	79	78	76	78	84	83	86	80	80	81	84	83.1	7.1
18	84	87	90	91	90	90	90	84	86	81	79	79	81	80	85	87	87	87	85	88	83	82	84	84	85.4	7.6
19	84	82	89	91	91	91	93	93	85	90	87	84	79	77	72	73	75	72	70	74	77	69	66	72	80.9	5.8
20	77	83	81	80	81	81	85	83	81	82	83	82	76	75	68	65	67	69	72	75	85	84	84	88	78.3	5.8
21	88	93	90	88	91	91	93	93	93	87	86	77	77	83	83	83	85	84	85	88	91	88	91	91	87.4	8.5
22	90	89	89	91	92	91	92	89	92	92	92	91	91	92	89	84	78	79	73	74	76	77	73	76	85.8	9.3
23	76	76	80	79	83	85	87	86	81	88	90	90	91	91	93	90	90	93	93	94	96	96	94	94	87.9	8.6
24	96	96	93	92	92	89	89	91	92	90	93	93	91	93	91	93	94	94	94	94	94	94	94	94	92.6	9.5
25	96	94	94	96	91	89	91	92	88	88	93	88	92	92	92	89	90	92	90	90	88	87	85	87	90.9	7.7
26	84	72	69	72	64	65	68	67	77	85	84	75	78	83	66	73	69	77	78	85	89	90	91	94	77.1	5.3
27	91	82	82	82	75	80	82	88	84	85	75	85	80	82	82	85	86	83	87	90	74	71	80	80	82.6	6.0
28	88	77	74	70	66	69	74	69	67	70	69	72	75	72	75	68	68	67	66	66	65	65	65	65	70.9	5.2
29	66	68	72	72	69	80	76	88	73	60	62	67	59	63	63	70	83	75	75	78	70	79	64	65	70.7	4.6
30	55	58	59	66	81	88	94	87	92	98	83	95	85	84	78	76	94	89	94	89	89	80	83	87	82.2	5.2
31	88	91	94	94	96	93	92	93	96	96	96	94	95	97	96	96	94	94	93	94	94	94	96	96	94.1	7.8
Mean	81.5	81.8	82.2	82.5	82.2	83.2	83.9	84.3	82.8	83.0	81.7	81.8	80.6	79.9	78.6	79.7	80.6	81.3	80.6	81.8	81.9	81.3	80.5	82.2	81.7	77.1
Vapour Pressure*	mb 6.9	mb 6.9	mb 6.9	mb 7.0	mb 6.9	mb 7.1	mb 7.1	mb 7.1	mb 7.0	mb 7.1	mb 7.1	mb 7.2	mb 7.2	mb 7.1	mb 7.1	mb 7.1	mb 7.1	mb 7.0	mb 6.9	mb 6.9	mb 6.9	mb 6.9	mb 7.0	mb 7.0	mb 7.0	

100 ABERDEEN: North Wall Screen on Tower: h<sub>t</sub> = 12.5 metres

FEBRUARY, 1937

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean	Vapour* Pressure
1	96	97	96	95	94	90	90	87	87	87	87	88	88	92	93	94	93	94	96	94	93	89	87	82	91.5	7.3
2	80	87	87	89	89	89	84	84	77	74	72	71	75	76	78	82	87	83	86	94	93	94	97	99	84.1	6.7
3	93	96	90	92	89	84	90	88	83	80	83	86	90	89	86	90	90	93	94	93	94	98	94	88	89.9	8.5
4	89	91	96	96	91	91	90	94	94	93	93	89	89	88	85	82	83	85	84	79	72	71	73	74	86.6	8.7
5	75	75	77	77	74	74	76	79	78	78	77	76	59	59	59	59	58	56	56	52	56	55	55	56	66.9	6.2
6	54	55	57	57	58	56	58	58	66	56	54	52	49	49	60	61	60	62	66	71	69	66	68	70	59.4	5.0
7	75	78	71	69	69	74	73	77	79	69	67	62	60	61	65	77	80	85	85	82	82	80	77	75	73.7	5.5
8	74	73	71	73	74	74	76	76	91	78	74	84	82	80	87	89	88	88	90	88	87	86	86	88	81.3	6.5
9	89	91	94	94	96	94	92	92	88	85	84	84	73	73	72	69	74	72	72	73	73	69	65	68	82.1	5.8
10	68	70	73	72	74	75	78	75	75	70	67	65	63	60	59	62	70	79	75	71	73	77	77	75	70.7	5.2
11	73	74	71	72	85	84	84	85	85	91	83	83	80	76	78	80	84	84	80	82	84	80	80	78	80.6	5.8
12	80	81	81	82	80	78	80	81	80	76	70	67	61	65	70	66	67	73	85	89	89	91	91	91	77.8	5.6
13	94	94	94	93	94	94	93	91	91	92	90	87	87	87	88	85	89	90	92	96	94	94	94	94	91.5	7.2
14	94	94	96	88	79	78	78	76	71	74	72	76	76	76	73	76	76	80	80	83	76	78	80	81	79.9	7.3
15	85	83	83	78	80	71	76	68	65	63	56	56	50	54	55	56	69	62	77	79	71	80	84	92	70.3	6.4
16	90	84	86	86	83	80	77	78	77	78	77	70	67	62	67	75	78	79	78	78	78	79	82	82	78.1	6.8
17	81	84	89	89	90	90	92	91	89	87	84	80	82	82	82	82	82	82	81	83	85	87	85	95	85.5	6.5
18	93	90	87	87	88	84	87	87	87	86	87	89	90	84	62	64	66	68	71	68	68	73	65	65	79.6	6.6
19	63	63	66	63	65	61	69	63	62	66	73	85	89	83	80	82	70	72	75	68	69	68	71	66	70.5	5.2
20	66	74	75	80	69	69	69	72	71	65	61	63	60	63	59	69	67	70	71	71	77	75	82	82	69.7	5.4
21	80	75	79	78	80	83	80	78	77	73	69	65	64	64	62	70	71	80	87	82	78	78	78	76	75.4	5.6
22	81	79	80	82	80	81	82	85	85	80	80	76	81	73	74	79	84	82	84	80	85	87	82	83	80.9	5.7
23	78	78	80	89	87	85	87	85	84	83	80	77	72	80	87	77	81	80	87	87	85	89	87	89	83.1	6.0
24	92	94	94	92	92	92	92	90	88	87	80	70	65	62	63	66	67	60	57	55	54	60	57	61	75.2	5.3
25	61	59	58	59	60	62	59	58	60	62	64	61	63	64	67	62	63	64	68	65	63	68	66	87	62.9	4.9
26	82	80	74	79	7																					

RELATIVE HUMIDITY  
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, 1937

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	91	90	87	87	84	82	82	84	91	87	85	73	76	75	77	85	88	87	87	85	88	88	84.7	6.3
2	89	90	90	91	90	88	87	78	80	82	87	78	82	84	84	81	79	84	85	82	84	90	87	92	85.1	6.8
3	92	92	87	87	89	93	91	90	82	79	80	77	77	80	80	80	80	83	83	88	87	87	88	88	85.1	7.1
4	90	92	92	90	90	87	90	87	94	80	79	76	73	75	80	76	77	87	89	85	89	87	86	90	85.0	7.0
5	88	87	85	85	88	88	89	87	84	85	76	80	71	75	63	65	69	66	59	62	78	82	78	83	78.2	5.7
6	80	78	75	67	63	76	62	62	60	65	87	75	71	68	68	71	63	59	64	64	74	82	78	65	70.3	4.8
7	62	63	63	60	59	56	57	60	63	62	54	56	51	56	59	65	68	66	73	82	85	83	83	86	65.1	4.4
8	86	86	82	78	80	78	82	83	85	69	72	73	82	76	72	70	74	80	82	83	85	89	90	91	80.2	5.2
9	90	90	88	88	86	85	85	82	80	82	82	76	81	78	80	78	84	77	82	87	90	92	96	94	84.6	5.7
10	94	92	94	94	93	90	91	90	84	65	73	68	77	68	84	74	85	74	82	74	89	89	91	78	83.4	5.5
11	74	67	67	67	60	68	70	65	70	70	82	74	68	68	69	77	79	84	92	81	70	67	67	65	72.0	4.8
12	61	66	68	70	70	61	61	66	68	62	63	64	57	70	86	78	67	66	62	65	62	61	61	61	66.5	4.2
13	61	65	76	69	65	81	92	91	93	90	88	85	89	90	92	91	94	87	78	85	91	89	85	82	83.3	5.2
14	85	89	92	87	89	90	90	92	93	85	82	83	83	80	83	82	84	91	89	84	82	85	87	87	86.3	6.0
15	89	85	85	89	71	69	77	65	59	53	57	54	49	49	52	52	51	55	61	65	66	66	67	68	65.1	4.6
16	69	71	73	74	75	71	73	75	66	58	53	60	54	56	57	59	59	62	63	58	84	77	87	87	67.1	4.8
17	91	87	88	90	93	92	92	93	90	88	88	92	90	92	93	95	93	90	88	87	87	88	87	88	90.0	7.1
18	87	87	90	92	91	93	93	93	96	92	94	94	95	95	98	98	98	98	98	100	100	100	98	98	94.7	7.9
19	100	98	100	98	98	98	100	100	100	98	100	99	100	98	99	100	97	98	100	100	98	94	94	94	98.5	8.4
20	97	98	97	97	97	97	97	97	96	98	98	97	98	95	93	90	94	96	92	87	87	83	89	89	94.4	7.9
21	85	87	89	87	74	75	82	82	82	80	63	51	56	61	72	80	57	65	65	70	69	67	61	64	72.4	5.0
22	66	86	82	82	80	81	77	81	79	81	71	65	89	96	100	87	87	79	69	69	77	76	73	76	79.3	5.0
23	71	75	75	82	84	90	87	90	82	82	82	75	71	75	80	82	80	67	74	80	78	78	77	75	78.9	5.3
24	75	78	79	74	74	74	76	74	72	72	65	71	50	47	51	52	63	71	77	80	78	88	87	84	71.1	5.8
25	91	87	87	85	85	82	84	77	82	72	65	89	80	61	61	63	62	76	73	72	74	93	80	86	78.0	5.4
26	80	78	80	82	82	80	80	76	72	68	69	72	82	87	82	89	85	85	85	94	94	93	85	91	81.6	5.4
27	91	91	89	87	89	87	87	85	80	82	87	93	69	66	64	61	63	64	79	87	88	89	89	89	81.5	6.1
28	89	89	91	92	91	92	87	91	93	80	86	73	61	59	58	54	54	63	66	66	71	74	76	75.8	5.8	
29	84	85	82	85	82	74	74	69	71	76	69	66	67	62	61	61	61	63	69	66	76	80	80	85	72.6	6.1
30	83	85	87	90	89	87	83	83	72	60	55	59	59	63	69	72	71	72	70	71	69	73	81	81	74.4	5.9
31	69	72	72	69	73	76	73	71	64	61	62	66	66	67	73	72	71	74	71	74	76	76	76	77	71.0	6.1
Mean	82.5	83.4	83.7	83.2	81.8	82.1	82.4	81.2	79.9	76.3	76.1	75.1	73.6	73.2	75.5	75.2	75.3	76.0	77.8	78.3	81.4	82.7	82.0	82.5	79.2	† 5.8
Vapour Pressure*	mb 5.6	mb 5.7	mb 5.7	mb 5.6	mb 5.6	mb 5.6	mb 5.6	mb 5.7	mb 5.9	mb 5.8	mb 5.9	mb 6.0	mb 5.9	mb 6.0	mb 6.1	mb 6.0	mb 5.9	mb 5.8	mb 5.8	mb 5.7	mb 5.8	mb 5.8	mb 5.7	mb 5.7	mb 5.8	

102 ABERDEEN: North Wall Screen on Tower:  $h_t$  = 12.5 metres

APRIL, 1937

Day	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	mb
1	81	82	82	81	82	79	78	75	78	81	82	84	84	85	85	86	87	86	89	89	86	86	88	89	83.2	7.4
2	87	89	92	92	94	94	90	89	90	90	94	92	94	92	94	94	97	95	96	96	97	94	95	95	92.9	8.0
3	95	98	98	100	98	98	98	100	99	99	97	97	97	99	96	94	96	99	97	97	97	97	97	97	97.5	8.7
4	97	98	96	96	95	97	96	96	96	96	94	94	96	94	96	94	96	96	97	97	97	97	97	97	96.1	8.6
5	97	96	97	97	98	98	100	98	98	96	96	96	97	97	96	94	94	94	92	90	90	89	92	92	95.3	8.4
6	92	92	92	94	95	97	95	97	96	96	97	97	97	99	99	100	99	100	98	97	98	98	98	98	96.6	8.5
7	98	98	98	100	100	100	100	100	99	99	99	96	96	98	98	100	99	100	99	100	98	98	99	99	98.9	9.2
8	99	96	97	99	97	96	96	94	92	92	94	88	88	92	87	76	82	81	81	87	85	87	88	82	90.2	10.4
9	82	84	81	85	85	86	83	84	89	87	81	83	82	81	78	83	84	89	88	89	90	91	91	91	85.1	9.6
10	91	93	93	93	94	94	94	91	91	92	89	88	87	87	87	89	91	92	94	94	96	96	89	88	91.4	9.7
11	88	84	86	78	75	74	72	67	60	53	53	54	55	69	71	70	70	72	76	86	85	89	88	72.9	7.6	
12	90	92	92	88	86	87	84	83	78	65	58	83	84	71	73	62	65	71	82	89	94	97	97	96	81.8	8.0
13	99	100	100	100	99	99	100	99	97	93	94	97	96	97	91	91	91	90	91	97	97	96	94	96	96.0	8.8
14	94	93	90	96	97	99	99	94	94	96	96	99	97	96	93	94	97	96	93	93	96	97	98	100	95.6	8.8
15	100	100	98	97	98	98	97	97	96	91	88	90	86	88	87	90	90	90	93	96	97	97	99	98	94.3	8.6
16	97	94	94	94	92	90	92	91	88	90	90	97	90	88	87	91	88	91	94	99	96	96	96	96	92.6	8.5
17	94	94	94	96	94	94	94	90	84	83	85	86	81	79	84	73	73	74	79	86	86	88	91	91	86.5	8.7
18	90	88	87	86	87	88	87	85	77	77	75	70	68	67	66	65	63	62	77	78	80	81	81	87	78.1	8.1
19	86	89	88	92	93	94	89	83	84	74	73	74	66	72	65	79	79	81	88	91	93	88	88	90	83.2	8.1
20	87	87	82	83	86	81	83	73	67	61	73	68	67	69	87	84	86	90	84	83	81	82	83	81	79.7	7.7
21	82	82	80	80	80	76	71	63	57	56	50	46	51	60	54	57	61	68	67	76	80	78	77	77	66.8	6.7
22	80	78	79	78	79	73	69	72	85	85	80	71	57	58	54	53	59	73	72	72	71	73	73	71	71.6	8.0
23	69	74	74	75	87	88	81	73	66	57	54	67	63	72	69	72	72	72	74	73	78	77	84	83	72.8	7.9
24	83	83	84	84	82	79	80	82	79	71	65	69	66	77	72	76	80	76	80	81	82	84	85	88	78.6	7.8
25	88	89	89	91	87	87	85	80	68																	

RELATIVE HUMIDITY
Percentages at exact hours, Greenwich Mean Time

103 ABERDEEN: North Wall Screen on Tower: h\_t (height of thermometer bulbs above the ground) = 12.5 metres

MAY, 1937

Table with 25 columns (1-24) and 31 rows (Day 1-31). Columns 1-24 contain percentage values. Column 25 is 'Mean'. Column 26 is 'Vapour\* Pressure' with units 'mb'.

104 ABERDEEN: North Wall Screen on Tower: h\_t = 12.5 metres

JUNE, 1937

Table with 25 columns (1-24) and 31 rows (Day 1-31). Columns 1-24 contain percentage values. Column 25 is 'Mean'. Column 26 is 'Vapour\* Pressure' with units 'mb'. Includes a 'Hour G. M. T.' row at the bottom.

\*Computed from the mean temperature and mean relative humidity

†Mean of the column

‡Mean of the row

RELATIVE HUMIDITY Percentages at exact hours, Greenwich Mean Time

105 ABERDEEN: North Wall Screen on Tower: ht (height of thermometer bulbs above the ground) = 12.5 metres

JULY, 1937

Table with 25 columns (1-24) and 25 rows (Day 1-31, Mean, Vapour Pressure). Columns 1-24 contain percentage values for hours 1-24. Columns 25 and 26 contain Mean and Vapour Pressure values. Includes a blank space below the table.

106 ABERDEEN: North Wall Screen on Tower: ht = 12.5 metres

AUGUST, 1937

Table with 25 columns (1-24) and 25 rows (Day 1-31, Mean, Vapour Pressure). Columns 1-24 contain percentage values for hours 1-24. Columns 25 and 26 contain Mean and Vapour Pressure values.

\* Computed from the mean temperature and mean relative humidity

† Mean of the column

‡ Mean of the row

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

SEPTEMBER, 1937

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	98	98	97	98	94	93	94	94	93	92	83	64	64	55	55	56	56	69	73	66	69	72	76	85	79.2	13.9	
2	85	85	85	83	87	88	84	79	74	79	76	47	50	50	49	49	56	67	69	74	81	80	82	82	71.2	12.0	
3	84	79	84	79	84	85	80	79	72	65	57	60	60	60	64	61	58	57	68	62	77	78	79	77	71.3	11.5	
4	78	71	73	82	81	79	80	81	75	69	70	71	68	63	65	62	62	70	70	79	77	77	83	83	73.6	11.6	
5	86	81	83	91	94	93	92	88	89	89	82	78	75	67	85	82	84	85	88	91	92	93	91	75	85.7	13.7	
6	85	88	87	88	87	94	95	93	89	81	79	76	77	76	89	93	91	92	91	63	69	59	65	60	82.3	14.2	
7	73	59	59	58	58	63	63	55	64	58	51	48	50	61	71	71	87	88	90	93	95	95	89	81	69.6	10.8	
8	74	74	72	64	66	71	63	61	53	51	49	48	45	45	45	46	48	54	60	63	63	64	68	72	59.3	8.6	
9	66	70	70	70	71	73	65	64	60	54	56	59	55	60	62	64	74	70	71	70	74	83	91	83	67.9	9.0	
10	78	81	83	79	76	74	70	62	61	59	55	53	52	55	51	55	65	74	74	73	84	76	71	70	68.2	8.3	
11	81	77	73	79	88	88	86	79	72	63	65	72	69	73	65	71	70	75	78	76	75	76	76	78	75.0	8.9	
12	76	79	85	86	85	88	88	80	74	81	84	83	87	87	89	90	89	87	87	89	92	91	95	91	85.7	10.0	
13	95	95	95	93	92	89	87	80	75	76	73	70	69	74	75	76	75	83	85	87	94	94	92	94	84.8	10.8	
14	93	93	93	93	91	96	93	88	79	71	51	62	68	69	66	64	80	83	86	84	79	77	81	85	80.4	10.2	
15	92	90	93	94	94	91	89	88	87	80	75	72	75	78	88	78	68	76	85	87	84	86	81	83	84.0	11.6	
16	84	85	90	90	93	92	90	86	74	62	60	64	67	67	66	68	74	76	84	83	88	88	90	78.5	8.8		
17	90	89	89	86	86	86	86	85	85	82	83	78	76	76	77	83	83	83	82	83	89	91	89	93	84.5	11.2	
18	94	93	94	94	93	94	94	95	84	77	73	65	65	67	61	64	68	74	80	87	89	91	90	90	82.4	10.0	
19	91	88	86	86	86	88	85	89	80	74	67	68	63	62	63	64	73	79	81	87	91	83	78	79	79.0	9.8	
20	80	83	87	90	88	91	91	86	74	75	64	61	61	59	60	71	79	84	88	88	88	89	88	83	79.4	9.4	
21	86	84	86	86	87	86	81	77	70	61	62	58	61	64	68	73	76	81	82	80	83	85	81	82	76.7	9.1	
22	83	84	84	86	87	86	83	84	85	79	75	72	69	68	69	69	76	81	82	82	85	87	86	86	80.3	12.8	
23	87	87	87	88	89	88	86	82	78	73	72	69	72	70	75	79	79	83	85	86	86	85	86	85	81.6	14.4	
24	85	86	84	85	85	84	84	85	81	60	51	51	43	49	44	47	53	54	53	55	57	60	65	71	65.8	11.5	
25	71	74	78	75	79	77	79	70	62	54	51	51	51	51	62	68	69	75	70	82	82	83	81	83	69.7	9.5	
26	83	84	87	88	90	88	89	86	77	70	67	71	79	85	88	90	93	94	97	98	98	97	96	96	86.9	11.8	
27	98	97	97	98	98	97	96	97	97	92	90	80	83	82	80	83	86	82	78	81	78	88	86	77	88.8	14.2	
28	71	76	73	76	81	79	79	78	67	57	56	59	55	54	54	62	66	67	75	76	86	82	83	85	70.5	9.4	
29	82	87	87	83	87	88	86	86	80	75	70	65	64	65	67	60	72	78	80	85	85	84	85	87	78.6	10.2	
30	86	85	82	80	81	87	86	89	86	80	78	76	75	73	78	81	84	88	87	93	94	93	93	95	84.4	13.0	
Mean	83.8	83.4	84.1	84.3	85.3	85.9	84.1	81.5	76.6	71.3	67.5	65.0	64.2	65.5	67.7	69.3	73.0	76.6	79.0	80.2	82.4	82.9	83.1	82.7	77.5	†11.0	
Vapour Pressure*	mb 10.5	mb 10.4	mb 10.4	mb 10.4	mb 10.4	mb 10.5	mb 10.7	mb 10.9	mb 11.1	mb 10.9	mb 10.7	mb 10.7	mb 10.8	mb 10.9	mb 11.1	mb 11.2	mb 11.4	mb 11.4	mb 11.3	mb 11.2	mb 11.2	mb 10.9	mb 10.8	mb 10.6	mb †10.9		

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

OCTOBER, 1937

Day	1	2	3	4	5	6	7	8	9	10	11	Noon	13	14	15	16	17	18	19	20	21	22	23	24	Mean	Vapour* Pressure
Day	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	mb
1	96	94	97	94	95	94	91	92	95	94	93	87	92	92	93	95	95	94	95	95	96	95	93	95	93.8	11.9
2	95	96	96	97	99	100	100	99	98	96	96	97	96	96	98	100	99	99	99	99	99	99	98	98	97.9	13.5
3	98	97	97	97	100	98	97	96	90	80	75	68	70	72	73	74	78	88	89	92	82	81	74	78	85.6	11.8
4	73	74	74	72	79	77	80	74	72	69	63	61	62	58	58	65	73	84	88	91	92	94	96	94	75.6	9.3
5	91	90	90	87	87	93	90	85	83	84	80	78	74	72	73	75	78	81	83	85	87	90	88	91	84.0	9.6
6	94	91	89	91	95	93	92	89	89	90	88	83	82	81	80	83	86	91	92	93	95	95	95	96	89.6	11.6
7	95	91	89	92	93	98	99	99	94	82	86	86	83	85	87	85	86	85	87	88	88	86	81	89.1	12.0	
8	78	79	83	83	84	87	85	87	77	81	75	74	82	86	87	84	93	95	96	95	95	95	96	86.1	11.1	
9	95	96	95	96	98	96	94	92	92	87	84	79	75	83	87	86	82	84	88	92	91	91	90	86	89.3	10.6
10	83	79	77	79	73	73	70	71	74	72	76	76	79	81	86	82	84	87	91	90	90	89	89	88	80.7	10.0
11	86	86	84	84	84	80	79	79	77	78	76	73	70	68	73	79	85	89	91	88	87	88	88	89	81.7	10.8
12	88	87	87	86	87	88	86	86	83	86	84	84	81	80	80	82	83	84	83	79	84	84	79	80	84.1	9.6
13	81	84	84	83	84	83	86	87	83	82	78	76	75	76	76	78	81	77	84	72	74	69	78	76	79.5	9.3
14	75	76	75	79	78	77	76	75	67	64	62	63	66	67	68	76	80	87	87	85	76	80	76	75	74.6	9.5
15	77	81	76	78	79	75	73	75	74	72	69	66	60	59	60	62	64	67	75	73	68	77	67	65	71.1	9.5
16	65	69	64	65	67	70	67	71	66	68	70	68	68	65	58	59	61	60	60	72	76	74	75	75	67.0	9.8
17	77	80	83	83	83	86	87	82	78	73	73	71	57	59	57	62	65	69	73	74	77	78	77	78	74.1	10.4
18	77	78	83	80	84	88	86	84	80	71	71	64	84	56	57	63	72	75	76	80	83	82	80	75.6	9.9	
19	83	85	88	89	91	89	91	89	87	79	74	68	63	63	71	70	77	74	70	70	75	77	75	78	78.2	10.1
20	79	79	85	85	85	87	85	85	82	81	86	79	79	78	78	82	82	83	82	88	89	92	91	91	83.6	10.3
21	84	86	85	81	78	78	80	82	81	77	76	75	79	83	84	88	89	92	95	98	96	98	94	85.6	9.4	
22	96	94	95	93	93	87	84	91	89	91	91	85	75	74	70	74	79	82	82	79	81	81	81	81	84.8	10.6
23	79	79	80	81	80	82	84	89	89	82	76	73	77	82	77	76	71	78	77	78	89	93	93	91	81.3	9.7
24	93	94	93	91	90	88	90	86	84	77	74	69	63	63	59	58	57	62	67	68	66	60	64	73	74.9	7.2
25	69	69	81	80	82	78	78	84	86	82	85	96														



RELATIVE HUMIDITY  
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, 1937

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	98	96	96	98	98	96	98	97	98	98	96	98	98	97	97	98	98	98	98	98	99	98	98	98	98	97.5	mb 11.9
2	98	96	97	97	98	97	97	97	98	96	95	93	89	85	83	87	90	95	94	93	90	92	90	92	89	93.6	12.3
3	89	89	89	85	87	89	91	91	89	84	85	87	86	83	84	89	81	89	87	83	80	83	89	93	87.1	11.2	
4	92	91	93	91	92	91	91	88	88	88	84	80	79	79	83	84	88	91	91	91	92	90	89	90	88.3	10.6	
5	90	87	87	87	89	87	91	89	85	85	79	77	69	70	71	74	86	88	89	91	92	91	93	92	84.9	11.0	
6	93	92	93	94	94	94	94	95	98	89	84	74	79	79	73	74	74	79	74	80	87	79	86	87	85.3	10.1	
7	91	91	96	95	98	99	98	98	97	97	98	95	92	92	92	92	92	92	94	92	94	95	96	96	94.5	11.5	
8	93	93	93	94	94	93	91	90	89	89	92	92	85	86	83	83	86	84	83	81	80	77	82	87.9	9.1		
9	82	84	85	82	80	82	74	60	70	71	82	79	78	74	74	76	77	74	85	84	85	88	87	82	79.0	6.6	
10	82	84	81	82	76	86	86	86	80	81	70	69	68	66	75	71	79	79	75	74	72	75	76	86	77.4	7.1	
11	89	93	92	91	93	90	87	84	83	83	79	76	74	82	79	80	81	76	81	79	82	83	89	85	83.8	8.0	
12	84	78	80	80	77	62	64	68	73	77	77	77	87	93	87	88	72	82	80	88	88	85	88	88	79.2	6.0	
13	87	89	85	85	87	91	92	91	86	91	89	96	89	87	93	90	93	88	82	77	85	75	80	77	87.1	6.1	
14	82	75	74	74	75	84	85	84	83	82	79	71	76	88	87	87	86	82	86	86	89	96	93	94	82.9	6.8	
15	90	90	92	90	92	92	93	93	83	86	86	84	76	76	77	81	79	82	85	86	86	90	87	90	86.6	7.7	
16	89	93	93	92	87	89	90	93	91	88	88	87	78	77	77	82	87	92	89	90	87	76	69	58	85.7	7.4	
17	69	70	73	73	67	77	82	79	68	58	57	61	59	59	69	73	56	67	67	60	61	61	58	58	65.9	6.6	
18	64	57	58	53	60	57	69	64	57	61	53	49	46	60	55	60	64	76	77	77	77	75	80	67	63.0	6.1	
19	74	74	69	72	67	55	53	59	68	60	76	59	71	65	66	64	59	73	66	78	89	86	96	96	70.0	5.9	
20	98	92	96	96	96	98	92	90	85	78	75	77	70	76	78	78	79	76	77	82	78	81	80	80	84.1	5.9	
21	79	79	84	80	82	83	82	82	82	80	83	74	79	73	76	79	80	84	87	85	89	85	85	85	81.4	5.7	
22	87	87	87	89	87	89	90	89	89	85	85	83	80	78	78	80	83	87	89	89	87	85	86	87	85.6	5.8	
23	89	89	90	92	91	91	93	91	91	89	88	85	85	85	87	89	89	87	89	89	85	87	89	89	88.7	6.2	
24	85	85	85	81	78	81	83	78	73	77	75	68	65	74	76	77	78	81	84	87	91	90	88	88	80.4	6.2	
25	90	90	91	96	94	92	88	91	88	78	80	82	69	72	69	74	76	78	81	83	92	91	86	79	83.9	8.8	
26	82	88	85	82	83	89	82	82	83	80	70	71	69	62	67	66	73	82	85	82	82	80	83	87	78.8	8.3	
27	85	80	72	73	71	73	63	76	72	66	59	57	66	70	79	77	80	75	81	80	77	75	76	73	73.5	6.2	
28	73	75	68	75	79	83	86	81	79	83	66	66	64	63	68	72	71	74	74	72	72	74	77	73	5.2	8.6	
29	82	84	85	90	90	90	91	92	91	92	91	94	87	86	89	90	92	93	94	94	92	91	93	91	89.9	8.6	
30	88	84	80	85	88	91	86	87	91	89	91	94	95	95	99	98	98	96	96	95	95	92	95	96	91.7	9.6	
Mean	85.8	85.2	85.0	85.2	85.0	85.7	85.4	84.8	84.0	82.0	80.4	78.3	77.1	77.8	79.2	79.8	81.2	83.4	84.1	84.3	85.3	84.2	85.3	84.6	83.0	†7.9	
Vapour Pressure *	mb 7.8	mb 7.7	mb 7.6	mb 7.6	mb 7.6	mb 7.6	mb 7.6	mb 7.6	mb 7.6	mb 7.7	mb 7.8	mb 7.8	mb 7.9	mb 7.9	mb 7.9	mb 7.8	mb 7.9	mb 7.9	mb 7.9	mb 7.9	mb 7.9	mb 7.8	mb 7.8	mb 7.7	mb 7.8	†7.8	

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

DECEMBER, 1937

Day	1	2	3	4	5	6	7	8	9	10	11	Noon	13	14	15	16	17	18	19	20	21	22	23	24	Mean	Vapour * Pressure
1	89	84	89	86	85	83	87	85	87	85	81	78	79	80	80	83	81	79	76	78	80	79	81	82.5	mb 8.0	
2	83	92	96	95	90	90	85	84	82	75	80	71	70	65	66	75	65	64	75	73	76	80	73	62	78.2	6.5
3	70	76	70	65	60	67	70	75	76	73	66	73	73	80	80	83	85	76	72	73	78	79	76	79	73.6	5.8
4	80	80	82	82	85	74	69	72	77	77	76	77	93	94	94	96	94	95	98	96	96	96	93	85.5	6.1	
5	92	92	90	87	88	90	94	92	90	88	86	80	84	79	82	87	94	93	70	62	63	59	57	60	82.3	5.4
6	57	59	50	57	52	55	51	55	55	51	60	57	68	63	55	58	56	58	61	61	70	71	75	58.6	4.5	
7	76	77	79	81	79	78	79	79	80	91	94	94	93	93	91	93	93	91	93	91	93	85	76	81	85.7	5.5
8	87	85	90	84	80	83	87	88	90	85	87	87	72	75	77	85	66	68	61	59	64	70	67	59	77.8	6.4
9	59	54	55	79	82	60	54	54	68	57	55	69	61	79	72	85	84	77	81	85	93	94	94	92	71.9	5.1
10	86	88	93	88	86	90	90	79	73	76	92	77	75	66	80	73	78	93	87	94	85	94	82	72	83.6	5.5
11	78	75	74	94	83	96	96	90	83	80	80	72	66	69	66	64	65	68	61	84	85	83	85	82	78.1	5.9
12	73	84	88	88	88	90	88	91	95	93	97	95	88	85	83	82	84	82	83	84	83	84	85	87	86.6	4.8
13	87	88	88	90	89	89	92	89	93	93	90	78	63	57	64	58	62	89	82	85	94	90	93	93	82.2	4.2
14	93	85	92	95	98	98	93	92	93	92	92	96	93	96	94	95	93	89	93	89	89	89	87	91	92.3	6.9
15	91	91	91	89	87	87	88	82	84	76	71	68	66	66	66	75	79	82	84	87	95	70	74	81.2	6.1	
16	78	84	91	94	89	81	89	89	89	89	90	91	91	88	88	88	88	91	91	87	86	86	87	90	87.8	6.7
17	87	87	93	85	81	85	87	84	88	84	84	78	87	87	87	88	90	90	84	87	83	82	81	85.6	6.2	
18	87	85	85	82	83	85	85	84	83	82	80	77	74	75	77	82	78	81	81	80	83	83	85	81.6	4.8	
19	85	83	84	84	86	85	83	83	85	86	86	76	68	71	76	79	84	81	80	81	89	85	94	90	82.6	4.9
20	91	95	90	89	92	93	90	93	96	88	88	88	89	87	81	75	73	68	69	73	73	75	77	78	84.2	5.9
21	72	72	72	72	75	78	83	85	87	90	90	92	92	92	95	94	96	95	92	94	94	96	94	94	87.0	7.3
22	94	96	94	93	93	94	94	91	93	93	93	93	98	94	96	94	94	93	92	92	93	91	94	88	93.5	9.4
23	82	85	83	85	87	93	88	90	87	83	66	65	66	70	72	80	85	87	89	88	89	88	90	91	82.8	7.5
24	91	88	88	88	89	89	90	93	93	93	88	88	88	89	91	90	88	87	77	63	60	66	65	74	84.4	9.2
25	84	65	71	78	83	85	81	79	77	80	77	80	77	80	80	71	76	81	80	80	84	84	87	82	78.8	7.3
26	86	87	86	86	88	90	91	91	93	90	92	92	93	9												

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

1937

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	84.6	84.8	85.2	85.4	85.1	84.9	84.0	82.5	80.6	78.5	77.2	75.9	75.1	74.2	75.7	76.6	77.5	79.2	80.6	81.9	83.3	83.7	84.2	84.6	81.1
Vapour Pressure in millibars*	mb 8.6	mb 8.6	mb 8.5	mb 8.5	mb 8.5	mb 8.5	mb 8.6	mb 8.8	mb 8.9	mb 8.9	mb 9.0	mb 9.0	mb 9.1	mb 9.1	mb 9.1	mb 9.1	mb 9.1	mb 9.0	mb 9.0	mb 9.0	mb 8.9	mb 8.8	mb 8.8	mb 8.7	mb 8.8

\*Computed from the mean temperature and mean relative humidity

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

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

1937

Month	Mean	Hour 1	G.M.T. 2	3	4	5	6	7	8	9	10	11	Noon	13	14	15	16	17	18	19	20	21	22	23	24
Jan.	81.7	+0.1	+0.3	+0.7	+1.0	+0.7	+1.7	+2.4	+2.7	+1.3	+1.4	+0.1	+0.2	-0.1	-1.8	-3.1	-2.0	-1.2	-0.5	-1.2	-0.1	0.0	-0.6	-1.4	+0.3
Feb.	78.4	+1.9	+2.7	+3.2	+2.7	+1.8	+0.8	+1.3	+0.8	+0.8	-0.8	-2.3	-3.6	-4.9	-5.6	-5.0	-2.9	-1.5	0.0	+2.1	+1.7	+1.1	+1.5	+1.8	+2.6
Mar.	79.2	+3.0	+4.0	+4.4	+3.8	+2.5	+2.8	+3.0	+1.9	+0.6	-2.9	-3.1	-4.1	-5.6	-6.0	-3.7	-3.9	-3.1	-0.8	-1.3	-0.8	+2.3	+3.6	+2.9	+3.4
Apr.	84.5	+4.3	+4.5	+4.1	+4.1	+4.2	+3.4	+2.5	+0.4	-1.9	-4.1	-5.0	-3.4	-5.3	-4.7	-5.5	-5.2	-3.8	-2.7	-0.3	+0.8	+2.1	+2.8	+3.7	+4.1
May	80.7	+4.0	+4.9	+5.6	+6.6	+5.4	+4.1	+1.4	+1.1	-2.1	-3.7	-4.1	-5.8	-6.1	-5.5	-3.3	-3.8	-3.4	-3.2	-1.1	+0.6	+1.9	+2.0	+2.9	+3.8
June	74.5	+6.1	+5.7	+6.5	+7.0	+6.3	+5.6	+3.4	+1.0	-2.2	-3.1	-4.2	-6.5	-5.7	-8.6	-8.0	-5.7	-6.7	-5.9	-3.7	0.0	+2.6	+4.0	+5.8	+6.4
July	81.9	+5.9	+6.3	+6.9	+6.6	+6.5	+4.9	+1.9	-0.4	-2.5	-5.0	-6.8	-7.7	-7.6	-7.2	-7.1	-5.9	-5.4	-1.8	-0.9	+0.6	+3.2	+4.0	+5.3	+6.2
Aug.	84.5	+5.9	+6.1	+6.1	+6.5	+7.0	+6.9	+5.2	+2.4	-1.9	-4.1	-5.1	-6.8	-7.2	-7.8	-8.3	-7.5	-7.3	-5.5	-2.6	+1.0	+3.0	+3.7	+4.9	+5.5
Sept.	77.5	+6.3	+5.9	+6.5	+6.7	+7.7	+8.3	+6.6	+4.0	+0.9	-6.2	-10.0	-12.5	-12.6	-12.0	-9.8	-8.2	-4.5	-0.9	+1.5	+2.7	+4.9	+5.5	+5.6	+5.2
Oct.	82.8	+1.9	+2.1	+2.5	+2.8	+3.5	+3.3	+2.8	+2.4	+0.1	-2.7	-3.6	-5.5	-6.7	-6.7	-6.1	-4.5	-2.1	+0.5	+2.1	+2.7	+2.6	+3.2	+2.9	+2.8
Nov.	83.0	+2.8	+2.1	+1.9	+2.2	+2.0	+2.7	+2.3	+1.8	+1.0	-1.0	-2.6	-4.8	-5.9	-5.2	-3.9	-3.2	-1.9	+0.4	+1.0	+1.3	+2.2	+1.2	+2.3	+1.6
Dec.	83.7	-0.1	+0.2	+1.1	+2.0	+1.0	+1.9	+1.7	+0.9	+1.7	+1.0	+0.1	-1.8	-3.3	-2.9	-2.4	-1.0	-0.8	+0.1	-1.4	-0.5	+1.1	+0.9	+0.3	0.0
Year	81.1	+3.5	+3.7	+4.1	+4.3	+4.1	+3.9	+2.9	+1.6	-0.3	-2.6	-3.9	-5.2	-5.9	-6.2	-5.5	-4.5	-3.5	-1.9	-0.5	+0.8	+2.3	+2.7	+3.1	+3.5

† See page 23

RAINFALL: ANNUAL TOTALS OF HOURLY VALUES

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

113 ABERDEEN:  $H_t$  = 24.1 metres + 0.6 metres

1937

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	35.9	40.2	36.9	31.2	30.8	27.7	35.1	40.6	35.3	16.7	32.2	35.9	38.1	34.9	37.1	30.2	18.8	24.5	21.1	25.4	42.9	36.7	46.2	41.0	795.4
Duration	hr 35.5	hr 40.9	hr 41.4	hr 37.2	hr 27.4	hr 30.8	hr 33.6	hr 34.6	hr 26.7	hr 21.3	hr 26.5	hr 27.7	hr 30.6	hr 33.2	hr 32.1	hr 28.1	hr 22.0	hr 32.0	hr 31.1	hr 34.2	hr 35.4	hr 36.1	hr 38.6	hr 41.4	hr 778.4

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

114 ABERDEEN

NOTES ON RAINFALL

1937

Dry Periods

The following definitions are adopted by "The British Rainfall Organization":-

An "absolute drought" is a period of at least 15 consecutive days to none of which is credited 0.2 mm of rain or more.

A "partial drought" is a period of at least 29 consecutive days, the mean daily rainfall of which does not exceed 0.2 mm.

A "dry spell" is a period of at least 15 consecutive days to none of which is credited 1.0 mm or more.

"Absolute drought"

No occasions

"Partial drought"

No occasions

"Dry Spells"

July 28th-Aug. 13th; Sept. 14th-29th.

Wet Periods

The following definitions are adopted by "The British Rainfall Organisation":-

A "rain spell" is a period of at least 15 consecutive days to each of which is credited 0.2 mm of rain or more.

A "wet spell" is a period of at least 15 consecutive days to each of which is credited 1.0 mm of rain or more.

"Rain Spells"

Jan. 16th-Feb. 4th.

"Wet Spells"

No occasions

Rainfall Duration

Hours	0.1-1.0	1.1-2.0	2.1-6.0	6.1-12	>12
Number of Days	73	33	73	35	9

Continuous or Heavy Falls. The heaviest fall was 34 mm in 24 hours on Dec. 13th-14th.

Heavy Falls in short periods. On Sept. 1st 5 mm fell in 18 min. and 10 mm in 60 min.

Rate of Rainfall (Jardi Recorder). The highest instantaneous rate of rainfall was 110 mm/hr on July 22nd.





RAINFALL

Amounts in millimetres, for periods of sixty minutes, between the exact hours, Greenwich Mean Time  
119 ABERDEEN: H<sub>r</sub> (height of receiving surface above M.S.L.) = H (height of station above M.S.L.) + h<sub>r</sub> (height of receiving surface above ground) = 24.1 metres + 0.6 metres

MAY, 1937

Table with 25 columns (Hour G.M.T. 0-1 to 23-24) and 31 rows (Day 1 to 31). Includes sub-totals for 'Sum' and 'Total Duration'.

† Hour of occurrence of the maximum rate of fall ( 5 mm/hr or more )

120 ABERDEEN: H<sub>r</sub> = 24.1 metres + 0.6 metres

JUNE, 1937

Table with 25 columns (Hour G.M.T. 0-1 to 23-24) and 31 rows (Day 1 to 30). Includes sub-totals for 'Sum' and 'Total Duration'.

† Hour of occurrence of the maximum rate of fall ( 5 mm/hr or more )

RAINFALL

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) = 24.1 metres + 0.6 metres

JULY, 1937

Table with 24 columns for hourly rainfall (0-1 to 23-24) and 3 summary columns (Amount 0-24, Duration 0-24, Max Rate). Rows include Day (1-31), Sum, and Total Duration.

122 ABERDEEN: H\_r = 24.1 metres + 0.6 metres

AUGUST, 1937

Table with 24 columns for hourly rainfall (0-1 to 23-24) and 3 summary columns (Amount 0-24, Duration 0-24, Max Rate). Rows include Day (1-31), Sum, and Total Duration.

† Hour of occurrence of the maximum rate of fall ( 5 mm/hr or more )

Amounts in millimetres, for periods of sixty minutes, between the exact hours, Greenwich Mean Time  
 123 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) = 24.1 metres + 0.6 metres

SEPTEMBER, 1937

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	Amount 0-24	Duration 0-24	Max Rate
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	mm/hr
1	-1	-7	-4	-1	(...)	-3	10.0†	2.2	-2	(...)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	14.0	5.1	57
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5	...	...	...	...	-1	...	...	...	(...)	-9	-6†	...	...	...	...	...	...	...	...	...	...	...	...	...	1.6	0.8	36
6	-1	-1	(...)	...	...	(...)	-2	1.4†	-3	...	...	...	...	(...)	(...)	...	...	(...)	-9	-7	2.7	4.7†	-6	...	2.1	1.6	17
7	...	...	...	...	...	...	...	...	...	...	...	...	...	(...)	-2	(...)	(...)	-2	-9	-7	2.7	4.7†	-6	...	10.0	4.1	26
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(...)	(...)	(...)	-1	...	(...)	-3	...	...	...	0.4	0.9	...
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	...	...	...	...	...	...	...	...	...	(...)	(...)	(...)	-1	-6	2.2†	0.2	(...)	-2	(...)	(...)	-8	-1	1.2	2.0	7.4	6.1	10
13	(...)	-4	-8	1.3	1.2	2.2†	1.3	-4	...	...	...	...	...	...	...	...	...	...	...	...	(...)	(...)	(...)	-2	7.6	7.0	12(0)
14	(...)	(...)	...	...	(-)	(-)	(-)	...	...	...	...	...	...	...	...	...	...	...	...	...	(...)	(...)	(...)	-2	0.2	0.2	...
15	(...)	(...)	-2	-1	...	...	...	...	...	...	...	...	...	...	-1	...	...	...	...	...	...	...	...	...	0.4	0.8	...
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20	...	...	...	...	...	-1	-1	...	...	(...)	...	...	...	...	...	...	...	-1	...	...	...	...	...	...	0.3	0.5	...
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	0.1	...
24	...	...	...	-1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(...)	(...)	...	...	...	...	...	0.1	0.3	...
27	...	...	...	...	...	(...)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.3	0.5	...
28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
30	...	...	...	...	...	(...)	...	...	...	...	...	...	...	...	(...)	(...)	...	...	...	-1	-6	-1	-1	-2	1.1	2.1	...
31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sum	0.2	1.2	1.4	1.6	1.3	2.6	11.6	4.0	0.5	0.9	0.6	...	0.1	0.6	2.5	0.2	...	0.6	0.9	0.8	4.4	5.0	2.2	2.4	45.6	30.1	
Total Duration	hr 0.4	hr 2.2	hr 2.1	hr 1.5	hr 1.2	hr 1.4	hr 2.4	hr 2.6	hr 1.1	hr 0.4	hr 0.2	hr ...	hr 0.2	hr 1.0	hr 1.6	hr 0.4	hr ...	hr 1.5	hr 0.6	hr 0.7	hr 3.0	hr 1.9	hr 2.2	hr 1.5	hr 30.1		

124 ABERDEEN:  $H_r$  = 24.1 metres + 0.6 metres

OCTOBER, 1937

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	mm/hr		
1	-4	1.8	-7	-9	-7	-4	(...)	-1	-4	(...)	-2	...	...	...	-7	-7	-8	-9	1.5†	-9	1.1	1.1	1.1	-3	14.7	16.8	8		
2	-2	1.0	(...)	-2	(...)	-1	-3	-1	...	(...)	...	...	...	...	(...)	...	...	...	...	...	...	...	...	...	...	2.7	3.9	...	
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(...)	-3†	-1	...	0.4	1.0	6		
8	...	...	...	...	...	(...)	(...)	-3	(...)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.1	2.2	19	
9	...	...	...	...	...	(...)	-3	...	...	...	...	...	...	...	(...)	-1	...	(...)	(...)	...	...	...	...	...	...	0.4	0.7	...	
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	-1	...	(...)	(...)	(...)	...	...	...	...	...	...	0.1	0.2	...	
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
20	...	...	...	...	...	...	...	...	...	(...)	...	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	-1	-1	-2	1.8†	1.0	3.2	4.1	7	
21	(...)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
22	-3	...	-1	...	...	...	-1	(...)	(...)	-2	-7†	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9.6	8.6	17	
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.4	2.0	5	
24	1.5	3.4†	1.0	(...)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.6	3.6	6	
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.9	3.0	9
26	...	...	...	(...)	4.9†	(...)	...	...	...	...	...	...	...	...	(...)	(...)	-2	...	-3	...	...	...	...	...	...	...	17.0	4.6	32
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
28	...	...	...	...	...	(...)	...	(...)	(...)	-1	-8	2.4	4.7	4.4†	-8	-1	-1	...	...	...	...	...	...	...	...	...	13.4	6.8	25
29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	-3	-7	-6	-3	-2	...	(...)	(...)	...	(...)	(...)	...	2.2	3.8	...
30	...	-1	-4	-2	-1	-2	-1	(...)	(...)	...	(...)	-1	...	...	-1	-7†	...	...	...	...	-1	...	...	...	...	...	2.1	5.8	23
31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(...)	-1	-7	-4	1.0†	2.2	3.7	5	
Sum	2.4	6.3	2.2	1.3	5.7	0.7	0.8	0.5	0.4	0.3	2.7	8.5	9.0	9.5	6.4	2.0	1.1	1.4	1.9	5.2	4.6	4.2	6.2	5.1	88.4	72.8			
Total Duration	hr 2.6	hr 3.2	hr 2.6	hr 1.6	hr 2.4	hr 2.1	hr 1.5	hr 2.1	hr 1.0	hr 1.3	hr 1.5	hr 3.4	hr 3.5	hr 4.5	hr 4.7	hr 3.3	hr 2.2	hr 3.1	hr 1.7	hr 4.2	hr 5.1	hr 5.5	hr 5.5	hr 4.2	hr 72.8				
Hour G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24				

† Hour of occurrence of the maximum rate of fall

RAINFALL

Amounts in millimetres, for periods of sixty minutes, between the exact hours, Greenwich Mean Time  
 125 ABERDEEN:  $R_r$  (height of receiving surface above M.S.L.) = H (height of station above M.S.L.) +  $h_r$  (height of receiving surface above ground) = 24.1 metres + 0.6 metres

NOVEMBER, 1937

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	Amount 0-24	Duration 0-24	Max Rate	
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	mm/hr
1	1.3	0.3†	...	...	...	0.2	0.3	(...)	0.4	...	...	0.8	0.2	0.2	0.2	0.1	0.2	0.1	0.1	(...)	...	...	...	...	4.4	7.2	16	
2	...	...	...	...	...	(...)	...	0.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	1.0	...	
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7	0.1	...	0.2	0.1	0.1	0.9	1.0	1.2†	...	0.5	2.6	0.1	...	...	...	...	...	(...)	...	...	0.1	...	...	...	...	6.9	6.0	26
8	...	...	...	...	...	...	...	(...)	(...)	(...)	(...)	(...)	(...)	0.1	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	0.1	0.2	0.9	...
9	...	(...)	0.5	0.1	0.1	(...)	0.1	(...)	(...)	(...)	0.2	0.2	0.2	0.2†	(...)	(...)	(...)	0.1	(...)	(...)	0.1	0.1	0.2	(...)	2.1	3.1	7	
10	0.2	0.2	(...)	0.1	(...)	0.1	0.7†	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	0.3	(...)	(...)	(...)	(...)	(...)	1.6	2.4	6	
11	...	...	...	0.1	0.1	0.1	...	(...)	(...)	...	...	...	...	...	...	...	...	(...)	0.1	0.2	0.1	0.2	1.2†	0.1	2.2	2.8	(12)	
12	0.2	...	...	...	...	...	...	...	...	...	...	(...)	0.1	0.6	0.2	(...)	(...)	0.1	(...)	0.1	0.2	0.5	...	...	2.0	1.8	...	
13	0.2	0.1	...	...	...	...	...	0.2	0.1	(...)	0.1	2.0	0.4	0.3	0.5†	(...)	1.1	0.1	(...)	...	...	...	...	...	5.7	4.4	10	
14	...	...	...	...	...	(...)	(...)	...	...	(...)	...	(...)	0.3	...	...	...	...	...	0.1	0.2	0.1	0.2	0.1	0.1	1.1	2.2	...	
15	...	...	...	0.3	0.1	0.2	0.1	...	(...)	...	0.2	...	...	...	...	...	...	...	...	...	...	...	...	...	0.9	1.5	...	
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	...	...	0.2	0.2	0.2	...
17	...	0.2†	...	0.1	...	...	...	0.1	(...)	0.6	(...)	...	...	(...)	(...)	(...)	(...)	0.1	(...)	(...)	...	...	...	...	1.8	1.9	5	
18	...	...	...	...	...	...	...	0.1	(...)	(...)	(...)	...	...	...	(...)	(...)	(...)	(...)	0.2	0.3	0.3	0.2	0.1	0.4†	1.6	2.0	12	
19	...	0.3†	(...)	0.4	...	...	...	0.4	(...)	...	0.1	...	(...)	(...)	(...)	0.2	(...)	0.6	...	...	0.9	0.6	2.2	0.9	6.6	3.0	13	
20	0.5	0.4	...	...	...	0.8	...	...	0.1	...	...	(...)	...	...	...	...	...	...	...	...	...	...	...	...	1.8	1.1	?	
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
24	...	...	...	...	...	...	...	...	...	(...)	...	...	...	(...)	...	...	...	...	...	...	0.1	0.2	(...)	...	0.3	0.7	...	
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.6†	...	...	0.6	0.2	18	
26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.3	0.3	0.2	...
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
29	...	...	...	...	...	...	...	...	...	1.2	0.3†	...	...	...	...	...	...	...	...	...	...	...	...	...	1.5	1.5	6	
30	...	...	...	...	...	...	...	...	...	...	0.3	...	0.8	0.9	(...)	...	...	...	...	...	...	...	...	...	2.0	1.9	...	
Sum	2.5	1.5	0.7	1.2	0.4	2.6	3.3	2.0	1.2	1.7	3.5	3.4	1.7	2.6	0.9	0.3	1.3	1.4	0.5	1.1	2.7	1.9	3.6	1.9	43.9	46.0		
Total Duration	hr 1.7	hr 2.1	hr 1.1	hr 1.9	hr 1.0	hr 3.0	hr 4.5	hr 2.8	hr 0.9	hr 1.1	hr 1.9	hr 2.1	hr 2.3	hr 3.1	hr 0.9	hr 1.0	hr 1.2	hr 1.4	hr 1.3	hr 2.5	hr 1.9	hr 2.4	hr 1.8	hr 2.1	hr 46.0			

† Hour of occurrence of the maximum rate of fall ( 5 mm/hr or more )

126 ABERDEEN:  $R_r$  = 24.1 metres + 0.6 metres

DECEMBER, 1937

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	mm/hr
1	...	...	...	...	...	0.1	...	...	...	...	...	...	...	(...)	...	(...)	...	...	...	...	...	...	...	...	0.1	0.2	...	
2	...	0.4†	1.3	0.2	0.2	...	(...)	(...)	...	...	0.1	...	(...)	(...)	(*)	...	...	...	...	...	...	0.2	(*)	...	2.4	2.2	7	
3	0.1	...	...	...	...	(...)	...	(...)	...	(*)	...	(...)	(Δ)	...	1.0†	(Δ)	...	...	...	(*)	...	...	...	...	1.1	0.4	10	
4	...	...	...	...	...	...	...	...	...	...	...	...	0.1	0.3	0.8	0.3	0.2	0.1	0.1	...	...	...	...	...	1.9	5.1	...	
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.0	3.6	3.6†	2.4	0.2	...	...	...	...	...	10.8	3.8	(15)	
6	...	...	...	...	...	...	...	...	(Δ)	(Δ)	0.1	(Δ)	(Δ)	...	(...)	...	...	...	...	...	...	...	...	...	0.1	0.2	...	
7	...	...	...	...	...	...	...	(*)	0.6	0.7	1.1	0.1	0.1	...	0.7	0.4	0.8†	(...)	0.1	1.4	0.3	0.3	...	6.6	4.7	7		
8	0.1	0.3	1.3	1.0	0.5	...	1.7	0.9	2.2†	0.3	0.8	0.8	0.4	...	0.1	...	(...)	(Δ)	...	...	...	...	...	0.1	10.6	6.6	23	
9	...	...	...	0.2	...	0.1	...	...	...	(...)	0.1	...	0.7†	0.1	...	...	...	...	0.1	...	1.5	0.2	0.6	0.4	4.0	2.6	(12)	
10	0.1	...	...	...	...	...	0.2	(*)	(*)	...	1.2	...	0.2	(*)	...	(...)	0.9†	...	...	0.1	0.1	1.5†	0.2	0.1	4.6	3.8	6	
11	0.1	0.2	0.4	0.6	0.4	3.0†	1.8	3.7	1.7	0.3	(...)	0.1	0.3	(Δ)	0.1	0.1	(Δ)	0.1	(*)	...	...	...	...	...	12.9	6.8	14	
12	...	...	...	...	...	...	...	...	0.2	0.3	0.3	(...)	...	...	...	...	...	...	...	...	...	...	...	...	0.8	1.5	...	
13	...	...	...	...	...	0.3	(Δ)	(Δ)	0.1	0.1	...	...	0.1	...	(*)	...	...	0.3	0.7	0.4	...	...	...	0.1	4.5	6.3	...	
14	0.6	1.1	0.6	2.0	3.5	3.7	2.8	0.2	0.7	0.8	0.8	4.8†	2.2	3.2	1.0	1.5	0.2	0.1	...	...	...	...	...	...	29.8	15.6	16	
15	1.1	0.5	1.2	0.6	(...)	0.2	0.2	(...)	...	...	...	...	...	...	...	...	...	(...)	0.1	0.1	1.0†	0.1	(...)	(...)	5.1	6.6	9	
16	...	(...)	0.9	...	(...)	...	0.1	0.5	0.7†	...	0.2	0.4	0.7	...	0.1	...	0.1	0.6	...	...	...	...	...	...	4.9	3.4	8	
17	0.3	0.6	2.3†	1.0	...	...	...	...	...	...	...	...	0.5	0.2	(...)	...	(...)	0.9	...	...	...	...	...	...	5.8	2.9	17	
18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20	...	...	...	...	...	...	...	0.1	0.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	0.6	...	
21	...	...	...	...	...	...	...	(...)	(...)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.4	0.4	8	
22	...	...	...	...	...	...	...	...	...	...	0.1	0.4	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	0.5	1.2	...	
23	(...)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.0	1.6	6	
24	...	0.1	0.1†	(...)	...	...	...	(...)	(...)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	0.2	5	
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	(...)	(...)	0.2	0.2	...	
29	...	...	...	...	...	...	(...)	(...)	...	...	...	...	...	...	...	...	...	...	...	...	...	(...)	(...)	(...)	0.1	0.1	...	
30	0.1	...	...	...	...	...	(...)	(...)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	0.2	...	
31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sum	2.5	3.2	8.1	5.6	4.6	7.4	6.8	5.4	5.6	2.4	4.2	7.5	4.9	4.3	1.7	5.2	4.6	7.5	3.4	1.0	4.9	3.9	2.8	2.2	109.7	77.1		
Total Duration	hr 2.8	hr 3.5	hr 5.8	hr 3.6	hr 2.0	hr 3.5	hr 3.7	hr 2.2	hr 3.6	hr 3.1	hr 3.8	hr 3.1	hr 4.2	hr 1.9	hr 3.													



DURATION OF BRIGHT SUNSHINE  
For periods of sixty minutes, between the exact hours of Local Apparent Time

127 ABERDEEN: H<sub>s</sub> (height of recorder above ground) = 20.7 metres

JANUARY, 1937

Hour L. A. T.	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	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	---	---	---	---	---	...	.7	1.0	.7	.9	.2	.9	...	---	---	---	---	---	---	4.4	66
2	---	---	---	---	---	...	...	...	...	...	.8	.9	...	---	---	---	---	---	---	1.7	25
3	---	---	---	---	---	...	.7	1.0	.1	.3	.9	.5	...	---	---	---	---	---	---	3.5	52
4	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...
5	---	---	---	---	---	...	.6	.8	1.0	1.0	.1	...	...	---	---	---	---	---	---	3.5	51
6	---	---	---	---	---	...	...	.4	.1	...	.2	.5	...	---	---	---	---	---	---	1.2	17
7	---	---	---	---	---	...	.5	1.0	.3	1.0	1.0	.6	...	---	---	---	---	---	---	4.4	64
8	---	---	---	---	---	...	.4	1.0	1.0	1.0	.7	...	...	---	---	---	---	---	---	4.1	59
9	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...
10	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...
11	---	---	---	---	---	...	...	1.0	.1	.3	.1	...	...	---	---	---	---	---	---	1.5	21
12	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...
13	---	---	---	---	---	...	...	...	...	.5	1.0	.7	...	---	---	---	---	---	---	2.2	31
14	---	---	---	---	---	...	.3	.9	.9	1.0	1.0	.2	...	---	---	---	---	---	---	4.3	60
15	---	---	---	---	---	...	.7	.7	.2	.7	.6	...	...	---	---	---	---	---	---	2.9	40
16	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...
17	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...
18	---	---	---	---	---	...	...	.5	...	.1	...	...	...	---	---	---	---	---	---	0.6	8
19	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...
20	---	---	---	---	---	...	.9	1.0	1.0	1.0	.7	.2	...	---	---	---	---	---	---	4.8	63
21	---	---	---	---	---	...	.3	1.0	1.0	.3	...	...	...	---	---	---	---	---	---	2.6	34
22	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...
23	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...
24	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...
25	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...
26	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...
27	---	---	---	---	---	...	...	...	...	.1	...	...	...	---	---	---	---	---	---	0.1	1
28	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...
29	---	---	---	---	...	...	...	...	...	...	...	.1	...	---	---	---	---	---	---	0.6	7
30	---	---	---	---	...	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...
31	---	---	---	---	...	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...
Sum	---	---	---	---	...	...	5.1	10.7	6.5	8.2	7.3	4.6	...	...	---	---	---	---	---	42.4	---
Mean	---	---	---	---	...	...	.16	.35	.21	.26	.24	.15	...	...	---	---	---	---	---	1.37	19

128 ABERDEEN: H<sub>s</sub> = 20.7 metres

FEBRUARY, 1937

Day	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	%	
1	---	---	---	---	...	...	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	
2	---	---	---	---	...	.5	1.0	1.0	.2	.4	.8	...	...	---	---	---	---	---	---	---	3.9	46
3	---	---	---	---	...	...	...	.2	...	...	...	...	...	---	---	---	---	---	---	---	0.2	2
4	---	---	---	---	...	...	...	...	.7	.9	1.0	.7	...	---	---	---	---	---	---	---	3.3	38
5	---	---	---	---	...	.4	...	.4	1.0	1.0	.3	...	.3	...	---	---	---	---	---	---	3.4	39
6	---	---	---	---	...	.5	1.0	1.0	1.0	1.0	1.0	1.0	.9	...	---	---	---	---	---	---	7.4	85
7	---	---	---	---	...	.9	1.0	1.0	1.0	1.0	1.0	1.0	.2	...	---	---	---	---	---	---	7.1	81
8	---	---	---	---	...	...	...	...	...	...	...	...	...	---	---	---	---	---	---	---	...	...
9	---	---	---	---	...	...	...	...	...	...	...	...	...	---	---	---	---	---	---	---	...	...
10	---	---	---	---	...	.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.2	...	---	---	---	---	---	2.5	28
11	---	---	---	---	...	.3	.7	.8	.5	.8	1.0	1.0	.2	...	---	---	---	---	---	---	5.3	58
12	---	---	---	---	...	.5	...	.1	1.0	.4	.4	.3	...	---	---	---	---	---	---	---	2.7	29
13	---	---	---	---	...	...	...	...	...	...	...	...	...	---	---	---	---	---	---	---	...	...
14	---	---	---	---	...	...	...	...	...	.3	.2	...	.1	.1	---	---	---	---	---	---	0.7	8
15	---	---	---	---	...	.1	1.0	1.0	1.0	1.0	1.0	.1	...	...	---	---	---	---	---	---	5.2	55
16	---	---	---	---	...	...	1.0	.8	1.0	...	.6	.1	...	...	---	---	---	---	---	---	3.5	37
17	---	---	---	---	...	.7	1.0	.5	.4	.4	.8	.8	.7	.3	---	---	---	---	---	---	5.6	58
18	---	---	---	---	...	...	...	...	...	...	.9	.2	.2	...	---	---	---	---	---	---	1.3	14
19	---	---	---	---	...	...	...	...	...	...	.7	.2	.9	.3	---	---	---	---	---	---	2.1	22
20	---	---	---	---	...	.2	.3	1.0	1.0	1.0	1.0	1.0	.1	.4	---	---	---	---	---	---	6.1	62
21	---	---	---	---	...	.3	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.3	---	---	---	---	---	---	8.6	87
22	---	---	---	---	...	.2	.8	.7	1.0	1.0	1.0	.8	.3	...	---	---	---	---	---	---	5.8	58
23	---	---	---	---	...	1.0	1.0	1.0	.8	1.0	.4	.5	.6	...	---	---	---	---	---	---	6.3	62
24	---	---	---	---	...	.2	.5	...	.7	1.0	.5	.9	.6	.4	...	---	---	---	---	---	4.8	48
25	---	---	---	---	...	...	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...
26	---	---	---	---	...	...	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...
27	---	---	---	---	...	...	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...
28	---	---	---	---	...	.5	.9	1.0	.8	1.0	.9	.9	.8	.8	...	---	---	---	---	---	7.6	72
Sum	---	---	---	...	0.9	9.3	12.4	13.2	14.4	13.8	15.6	10.8	8.7	2.4	...	---	---	---	---	---	101.5	---
Mean	---	---	---	...	.03	.33	.44	.47	.51	.49	.56	.39	.31	.09	...	---	---	---	---	---	3.63	39
Hour L. A. T.	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	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, 1937

Hour L. A. T.	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	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	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	3.6	34
2	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	1.4	13
3	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	2.6	24
4	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	3.2	30
5	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	...	...
6	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	2.2	20
7	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	5.5	50
8	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	7.1	64
9	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	4.4	39
10	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	2.1	19
11	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	2.8	25
12	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	1.0	9
13	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	...	...
14	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	4.0	34
15	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	8.4	72
16	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	5.2	44
17	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	...	...
18	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	...	...
19	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	...	...
20	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	...	...
21	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	2.8	23
22	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	3.3	27
23	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	5.5	45
24	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	6.8	55
25	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	5.3	42
26	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	2.8	22
27	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	6.8	54
28	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	1.8	14
29	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	2.3	18
30	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	4.6	36
31	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	3.2	25
Sum	---	---	...	1.5	6.0	10.6	10.6	10.6	13.0	10.3	10.3	9.7	7.4	6.6	2.1	...	---	---	98.7	---	
Mean	---	---	...	.05	.19	.34	.34	.34	.42	.33	.33	.31	.24	.21	.07	...	---	---	3.18	27	

130 ABERDEEN:  $H_s$  = 20.7 metres

APRIL, 1937

Day	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	%
1	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	1.3	10
2	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	...	...
3	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	...	...
4	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	...	...
5	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	...	...
6	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	...	...
7	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	...	...
8	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	0.6	4
9	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	1.0	7
10	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	1.2	9
11	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	1.0	7
12	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	6.7	48
13	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	...	...
14	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	...	...
15	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	1.0	7
16	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	...	...
17	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	...	...
18	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	0.5	3
19	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	3.6	25
20	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	1.6	11
21	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	9.9	67
22	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	5.4	37
23	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	6.3	43
24	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	2.1	14
25	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	3.8	25
26	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	8.4	56
27	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	...	...
28	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	10.9	72
29	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	4.2	27
30	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	11.5	75
Sum	---	...	2.4	4.1	7.0	6.2	5.0	7.7	8.1	7.1	6.1	7.1	7.6	5.6	4.9	2.1	...	---	81.0	---	
Mean	---	...	.08	.14	.23	.21	.17	.26	.27	.24	.20	.24	.25	.19	.16	.07	...	---	2.70	19	
Hour L. A. T.	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	Total for Day	Per Cent of Possible	

DURATION OF BRIGHT SUNSHINE  
For periods of sixty minutes, between the exact hours of Local Apparent Time

131 ABERDEEN: H<sub>s</sub> (height of recorder above ground) = 20.7 metres

MAY, 1937

Hour L. A. T.	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	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	...	...	9	9	1.0	1.0	1.0	3	6	3	...	---	6.1	40
2	---	...	...	...	...	...	9	...	1.0	1	...	...	...	6	5	...	...	---	4.0	26
3	---	...	...	...	...	1	...	5	1.0	1.0	4	...	...	4	...	...	...	---	3.4	22
4	---	...	...	...	...	...	...	...	7	2	...	...	...	...	...	...	...	---	0.9	6
5	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	2	---	0.6	4
6	---	2	1.0	1.0	1.0	1.0	6	6	8	1.0	1.0	1.0	1.0	1.0	1.0	6	...	---	12.8	81
7	---	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	---	0.1	1
8	---	...	...	...	...	...	...	...	...	...	4	1.0	1.0	8	...	...	---	3.2	20	
9	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	---	...	...	...
10	---	...	...	...	...	...	...	1	...	...	...	...	2	2	3	3	...	...	1.1	7
11	...	...	8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	8	1.0	7	7	1.0	2	...	13.2	81
12	...	...	...	...	...	1	1	8	1.0	1.0	...	...	1	...	...	...	...	...	4.0	25
13	...	...	...	...	1	7	1.0	1.0	8	1.0	7	...	...	...	...	...	...	...	5.3	33
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15	...	...	...	...	3	4	5	...	...	1	...	5	1.0	1.0	8	8	3	...	5.7	35
16	...	...	...	...	...	...	2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	4	...	...	8.6	52
17	...	...	2	8	6	7	1.0	1.0	1.0	4	3	1.0	1.0	1.0	1	...	...	9.5	58	
18	...	...	...	...	...	...	...	2	9	1.0	1.0	6	2	4	1.0	7	...	...	6.0	36
19	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	0.1	1
20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
22	...	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	7	...	...	14.2	84
23	...	...	...	1	7	9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	3	...	...	...	...	9.0	53
24	...	4	9	1.0	1.0	8	...	2	1	...	...	...	3	8	4	...	...	...	5.9	35
25	...	...	...	...	...	...	...	...	...	...	5	9	1.0	1.0	1.0	1.0	8	...	6.2	36
26	...	6	1.0	1.0	1.0	4	1	8	4	...	...	...	...	...	...	...	...	...	5.3	31
27	...	...	...	4	1	...	...	6	5	5	4	6	9	5	3	...	5	...	5.3	31
28	...	6	9	7	4	2	4	...	...	3	6	1.0	5	...	...	...	...	...	5.6	33
29	...	...	...	2	4	...	...	3	1.0	1.0	9	4	1	4	2	1	...	...	5.0	29
30	...	...	...	...	2	8	8	9	7	1.0	9	1.0	8	6	9	1.0	1.0	1	10.7	62
31	...	7	1.0	1.0	1.0	1.0	1.0	1.0	8	1.0	1.0	9	1.0	4	3	...	1	...	12.2	71
Sum	...	3.0	6.9	8.2	8.8	9.2	10.3	13.1	15.6	15.1	12.8	12.6	13.4	12.6	11.8	7.4	3.1	0.1	164.0	--
Mean	...	.10	.22	.26	.28	.30	.33	.42	.50	.49	.41	.41	.43	.41	.38	.24	.10	.00	5.29	32

132 ABERDEEN: H<sub>s</sub> = 20.7 metres

JUNE, 1937

Day	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	%
1	...	...	5	6	6	...	...	...	...	1	...	1	8	1.0	9	5	6	...	5.7	33
2	...	5	5	4	8	6	9	9	1.0	1.0	4	...	...	...	...	...	...	...	7.0	40
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	0.1	1
5	...	...	...	...	1	...	...	2	6	7	9	5	3	1.0	7	2	...	...	5.2	30
6	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	0.2	1
7	...	...	...	1	4	6	9	9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	6	...	11.5	65
8	...	7	1.0	8	9	7	6	7	3	...	...	5	1	5	1	...	...	...	6.9	39
9	...	7	1.0	7	8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	6	9	7	...	14.4	81
10	...	5	6	1.0	1.0	1.0	1.0	9	7	1.0	1.0	1.0	4	1.0	2	...	1	...	11.4	64
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	0.2	1
13	...	...	...	...	...	...	...	2	7	2	4	1.0	7	5	7	7	...	...	5.1	29
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	0.1	1
15	...	3	6	...	...	...	...	5	3	...	2	8	8	...	...	...	...	...	3.5	20
16	...	...	...	...	...	...	...	...	1	1	1.0	5	2	1	4	4	...	...	2.8	16
17	...	...	...	5	4	6	6	8	5	4	6	1	1	8	4	7	...	...	6.5	37
18	...	...	...	...	...	1	...	...	...	...	...	...	...	...	4	7	9	...	2.1	12
19	...	...	...	...	...	...	...	...	...	...	1	...	1	5	...	...	...	...	0.8	4
20	...	...	4	3	5	...	2	...	4	1.0	1.0	9	1.0	1.0	1.0	1.0	9	...	9.6	54
21	...	...	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	...	14.9	84
22	...	...	1	8	8	1.0	8	7	9	1	4	2	...	...	...	...	...	...	5.8	33
23	...	...	...	...	...	...	7	6	5	...	4	2	9	3	2	3	...	...	4.1	23
24	...	4	1.0	1.0	1.0	1.0	1.0	1.0	1.0	8	1.0	1.0	9	3	3	5	...	...	12.2	69
25	...	...	...	...	...	9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2	12.1	68
26	...	8	8	7	9	1.0	1.0	8	1.0	1.0	1.0	4	6	1.0	1.0	1.0	1.0	2	14.2	80
27	...	...	6	1.0	1.0	6	2	8	5	8	9	1.0	1.0	8	9	5	1	...	10.7	60
28	...	...	...	...	...	...	...	...	...	1	8	9	8	1.0	1.0	1.0	5	...	6.1	34
29	...	5	2	3	...	2	7	8	1.0	9	8	5	9	8	8	6	...	...	9.0	51
30	...	1	7	3	...	...	...	...	...	...	...	7	4	8	1.0	1.0	2	...	5.2	29
Sum	...	4.5	8.9	9.5	10.2	10.4	11.6	12.9	13.7	12.2	14.9	14.3	14.1	15.0	14.2	13.0	7.6	0.4	187.4	--
Mean	...	.15	.30	.32	.34	.35	.39	.43	.46	.41	.50	.48	.47	.50	.47	.43	.25	.01	6.25	35
Hour L. A. T.	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	Total for Day	Per Cent of Possible

DURATION OF BRIGHT SUNSHINE

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

133 ABERDEEN: H<sub>s</sub> (height of recorder above ground) = 20.7 metres

JULY, 1937

Hour L. A. T.	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	Total for Day	Per Cent of Possible	
Day 1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.3	13
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.1	23
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.9	34
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	1
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.4	2
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.1	18
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9.3	53
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.6	21
13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.6	21
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.7	4
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9.3	54
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8.0	47
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	14.9	87
18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.5	38
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9.0	53
20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.7	28
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.5	3
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.8	11
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.0	18
24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.5	39
26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.9	36
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.0	6
28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.5	27
29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.4	2
30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9.0	55
31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8.6	53
Sum	...	2.3	6.6	5.6	7.8	8.9	10.7	11.7	11.4	10.1	11.7	11.0	10.9	5.5	6.0	3.8	2.8	...	126.8	--	
Mean	...	.07	.21	.18	.25	.29	.35	.38	.37	.33	.38	.35	.35	.17	.19	.12	.09	...	4.09	24	

134 ABERDEEN: H<sub>s</sub> = 20.7 metres

AUGUST, 1937

Day	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	%	
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.1	38
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	1
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.9	43
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.9	25
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11.3	72
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.2	33
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.8	5
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.5	3
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7.8	50
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	1
13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.3	9
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.6	37
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.5	36
18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	1
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7.2	48
20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9.3	63
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8.1	55
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7.3	50
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.2	42
24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.6	4
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	12.8	89
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10.9	76
28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8.5	60
29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	1
31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sum	...	0.5	3.5	4.1	6.1	9.7	10.3	10.5	11.7	12.6	12.0	10.6	11.4	10.2	7.9	4.6	0.8	...	126.5	--		
Mean	...	.02	.11	.13	.20	.31	.33	.34	.38	.41	.39	.34	.37	.33	.25	.15	.03	...	4.08	27		
Hour L. A. T.	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	Total for Day	Per Cent of Possible		

DURATION OF BRIGHT SUNSHINE  
For periods of sixty minutes, between the exact hours of Local Apparent Time

SEPTEMBER, 1937

135 ABERDEEN: H<sub>s</sub> (height of recorder above ground) = 20.7 metres

Hour L. A. T.	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	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	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.6	33
2	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7.7	56
3	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8.5	62
4	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.6	4
5	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	1
6	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	1
7	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.8	13
8	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11.4	86
9	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8.0	60
10	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8.2	62
11	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.6	12
12	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.4	42
14	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7.2	56
15	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.8	30
16	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9.7	76
17	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7.6	60
18	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8.5	68
19	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.8	30
20	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.1	25
21	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7.9	64
22	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7.6	62
23	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.8	15
24	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.8	23
25	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10.2	85
26	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.9	41
27	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.0	8
28	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7.2	62
29	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10.4	89
30	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.3	37
Sum	---	---	0.3	4.2	10.0	14.3	16.8	17.5	19.0	18.6	18.0	13.3	12.7	11.4	3.3	0.5	---	---	159.9	---	
Mean	---	---	.01	.14	.33	.48	.56	.58	.63	.62	.60	.44	.42	.38	.11	.02	---	---	5.33	42	

136 ABERDEEN: H<sub>s</sub> = 20.7 metres

OCTOBER, 1937

Day	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	%
1	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	...	...
2	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	...	...
3	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	1.2	11
4	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	9.2	81
5	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	8.7	78
6	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	3.4	31
7	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	...	...
8	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	...	...
9	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	1.1	10
10	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	1.9	18
11	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	5.5	51
12	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	...	...
13	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	0.3	3
14	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	2.1	20
15	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	3.0	29
16	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	...	...
17	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	5.1	50
18	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	8.7	86
19	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	6.9	68
20	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	...	...
21	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	...	...
22	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	1.3	13
23	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	3.0	31
24	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	4.9	51
25	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	...	...
26	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	0.1	1
27	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	6.2	66
28	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	...	...
29	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	...	...
30	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	...	...
31	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	3.5	38
Sum	---	---	---	...	2.9	5.9	7.9	9.3	9.7	10.2	9.7	9.3	7.2	4.0	...	---	---	---	76.1	---	
Mean	---	---	---	...	.09	.19	.25	.30	.31	.33	.31	.30	.23	.13	...	---	---	---	2.45	24	
Hour L. A. T.	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	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<sub>g</sub> (height of recorder above ground) = 20.7 metres

NOVEMBER, 1937

Hour L. A. T.	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	Total for Day	Per Cent of Possible	
Day 1	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr
2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sum	---	---	---	---	---	0.3	3.8	6.9	8.1	9.6	7.5	7.2	0.7	---	---	---	---	---	44.1	---	---
Mean	---	---	---	---	---	.01	.13	.23	.27	.32	.25	.24	.02	---	---	---	---	---	1.47	---	18

138 ABERDEEN: H<sub>g</sub> = 20.7 metres

DECEMBER, 1937

Day	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	%	
1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sum	---	---	---	---	---	---	1.9	8.3	6.0	6.6	5.0	1.2	---	---	---	---	---	---	---	29.0	---	---
Mean	---	---	---	---	---	---	.06	.27	.19	.21	.16	.04	---	---	---	---	---	---	---	0.94	---	14
Annual Total	---	10.3	28.6	37.2	59.7	84.8	106.4	132.4	137.2	134.4	130.9	111.7	94.1	73.3	50.2	31.4	14.3	0.5	1237.4	---	---	
Annual Mean	---	.03	.08	.10	.18	.23	.29	.36	.38	.37	.36	.31	.26	.20	.14	.09	.04	.00	3.39	---	---	28
Hour L. A. T.	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	Total for Day	Per Cent of Possible		

139 ABERDEEN: Dines Pressure Tube Anemometer

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

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	
	°	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	8.8	190	6.6	210	5.3	240	9.0	230	7.5	220	4.7	220	3.5	210	1.4	240	2.0	210	4.5	230	5.5	230	3.5
2	260	5.1	250	4.6	240	2.7	210	2.5	210	4.6	210	4.5	220	6.1	210	6.0	190	4.9	190	5.3	180	4.9	210	4.7
3	280	7.6	270	4.5	270	4.8	220	2.3	250	3.7	240	3.3	220	2.3	220	2.0	270	5.9	270	9.0	260	5.7	240	4.8
4	210	6.1	220	6.6	210	6.5	220	5.4	220	5.2	210	5.0	200	4.9	280	1.4	250	1.7	220	1.5	200	1.4	240	2.2
5	260	8.3	260	8.4	260	7.2	270	7.2	270	7.4	270	9.6	290	9.7	290	9.0	290	11.2	270	9.4	260	7.6	260	6.1
6	190	2.8	180	3.4	190	2.4	210	2.4	210	2.5	220	2.6	220	2.1	240	1.7	250	2.9	250	2.9	280	2.5	310	1.0
7	240	2.9	250	4.1	270	4.8	270	6.5	270	8.5	270	9.0	280	8.0	290	9.1	290	9.4	290	9.1	290	10.0	300	8.8
8	290	4.1	300	3.5	260	2.0	240	1.5	220	1.4	220	2.0	220	1.5	200	2.3	190	3.8	180	4.4	180	5.9	180	7.1
9	190	6.6	190	6.9	180	6.7	180	6.7	180	7.5	190	6.4	180	7.0	180	7.3	180	5.5	200	1.3	230	2.0	200	1.7
10	190	4.5	200	4.4	(200)	5.0	(190)	6.5	190	6.8	190	6.8	190	7.0	180	7.4	190	6.9	190	4.4	180	7.0	160	5.2
11	190	3.3	190	3.6	200	2.6	190	3.3	200	3.5	190	4.3	210	3.9	190	5.9	190	4.9	190	5.1	170	3.5	180	5.3
12	170	9.5	170	10.3	160	10.5	160	10.8	160	10.7	160	11.4	160	10.6	160	11.6	170	10.5	170	10.3	160	10.2	160	10.0
13	170	3.0	180	2.9	190	1.8	180	1.6	170	3.0	190	3.6	200	3.6	310	6.0	300	5.3	300	5.2	310	6.5	310	6.9
14	300	1.9	280	0.9	240	1.1	280	0.6	260	0.3	280	0.3	240	1.1	270	0.4	300	0.6	240	0.4	230	0.6	190	0.5
15	200	2.0	180	3.0	190	3.3	180	4.1	180	6.0	180	6.0	180	6.4	190	6.0	180	6.8	180	7.0	180	7.1	170	6.8
16	160	9.9	160	9.4	160	8.8	160	9.8	160	9.7	160	9.3	160	9.9	160	9.5	170	9.8	170	8.0	180	6.5	180	5.2
17	220	1.4	220	1.6	190	1.5	200	2.5	200	2.0	180	1.8	200	0.9	200	1.4	160	4.7	160	6.4	160	8.4	150	8.2
18	140	11.9	140	11.9	140	12.6	140	12.0	140	11.3	140	11.2	140	11.2	140	10.8	150	8.5	170	7.3	200	6.9	210	6.8
19	310	2.9	310	3.9	320	2.8	310	3.4	310	4.5	310	4.6	310	3.2	310	3.0	330	2.3	330	1.5	350	1.5	320	3.0
20	210	2.1	210	1.4	190	1.0	220	1.3	220	0.1	220	1.2	240	0.8	210	1.0	210	1.5	200	2.2	180	3.6	200	3.1
21	150	14.1	150	13.0	150	13.0	160	13.0	160	11.2	170	9.6	170	8.2	180	6.6	180	5.4	180	5.3	170	7.0	180	6.8
22	140	9.5	150	9.5	150	9.0	150	12.0	150	11.8	150	12.1	150	13.3	150	13.4	150	13.0	150	11.0	160	12.2	150	11.7
23	220	4.5	240	4.7	230	3.9	210	4.1	200	4.5	190	5.0	180	5.2	180	4.1	170	4.6	170	5.1	180	5.8	180	6.9
24	150	8.0	150	8.0	150	7.4	150	7.5	150	7.6	150	7.2	150	8.1	140	8.3	140	6.9	140	9.0	130	10.5	130	10.1
25	140	13.0	140	11.2	140	12.0	130	12.0	130	11.6	140	11.6	140	11.3	130	11.1	130	11.1	130	11.8	130	11.6	130	11.4
26	130	10.5	130	11.1	130	11.5	120	11.4	120	11.1	120	9.9	120	10.1	120	9.5	120	9.3	110	8.2	110	8.3	100	8.6
27	120	7.9	120	7.6	120	7.6	110	7.6	110	7.5	110	8.2	110	7.5	110	8.0	110	7.0	110	7.3	110	7.5	120	8.0
28	130	10.8	120	11.5	130	10.7	130	11.3	130	11.4	130	10.9	130	11.0	130	10.2	120	10.6	120	10.5	120	10.7	120	10.0
29	100	8.6	90	9.0	90	8.5	100	8.0	100	8.6	100	8.0	90	8.4	100	8.5	100	8.5	110	8.5	110	9.1	110	8.2
30	110	8.0	100	7.2	90	7.1	90	7.2	100	7.0	110	8.5	100	8.7	100	9.5	110	10.1	110	10.7	110	11.0	110	10.9
31	120	10.6	120	10.8	120	11.0	120	12.1	120	11.8	120	11.2	120	13.0	120	13.6	130	13.5	140	12.0	140	12.0	140	12.5
Mean	---	6.8	---	6.6	---	6.3	---	6.6	---	6.8	---	6.8	---	6.7	---	6.6	---	6.7	---	6.6	---	6.9	---	6.6

140 ABERDEEN: H<sub>a</sub> = 24 metres + 13 metres

Day	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s
	1	150	5.9	150	7.5	140	7.1	140	7.7	130	7.4	130	7.9	120	7.8	120	7.9	120	7.4	110	6.7	100	5.4	90
2	290	2.6	300	1.1	190	0.6	210	0.7	200	0.6	200	0.4	240	2.9	270	1.5	230	2.2	230	2.5	230	2.3	210	1.5
3	240	3.0	230	1.6	250	2.1	270	1.1	250	1.9	280	2.5	220	1.6	220	2.3	220	3.2	210	3.1	210	3.4	190	3.0
4	210	1.1	40	0.2	200	1.9	220	0.6	190	3.8	190	3.8	180	3.8	180	3.5	180	3.5	180	5.0	190	3.9	190	4.7
5	200	6.4	200	4.7	200	5.6	210	4.5	200	6.5	200	5.9	210	7.0	190	4.5	140	3.3	200	3.7	200	6.0	200	5.7
6	270	7.8	260	6.1	270	4.7	270	6.1	270	5.1	270	5.8	270	5.0	260	5.2	270	4.5	250	4.3	270	7.4	280	8.1
7	220	1.8	210	1.5	230	2.6	250	3.8	250	4.0	240	2.0	290	2.5	280	3.2	290	1.6	300	2.4	280	2.1	300	1.9
8	110	3.1	110	3.6	110	4.0	110	4.1	120	4.4	110	4.4	110	4.3	110	5.2	100	4.4	120	3.0	140	5.2	110	5.2
9	50	4.4	40	2.8	350	2.3	320	2.6	310	3.6	310	4.6	310	6.0	310	6.6	310	7.1	310	7.0	310	7.1	300	8.0
10	300	9.6	300	8.4	300	7.4	300	7.8	310	6.5	300	8.5	300	8.5	300	7.0	290	7.9	270	7.5	280	7.6	280	7.7
11	290	4.7	290	4.1	280	4.9	270	5.4	290	8.1	290	7.8	300	7.7	310	7.1	300	6.8	310	8.2	310	8.5	310	9.0
12	300	5.0	300	4.4	310	3.5	310	3.0	310	4.1	290	3.1	290	2.6	300	1.3	230	1.1	250	0.5	240	1.4	210	1.6
13	180	4.9	190	3.0	210	2.5	200	1.6	210	1.5	210	0.7	210	0.6	200	0.9	190	1.2	180	2.2	180	2.9	180	4.0
14	190	6.5	200	5.8	220	4.2	250	3.8	240	3.3	250	2.2	240	0.7	260	2.0	240	1.4	210	1.3	210	2.3	230	2.9
15	210	2.5	210	2.9	230	4.5	210	4.2	210	4.3	230	4.3	230	2.9	240	4.3	250	4.1	250	3.9	260	3.1	260	2.3
16	160	6.9	210	5.1	210	2.5	200	2.8	200	5.1	190	4.1	200	5.7	190	4.9	190	5.9	200	4.7	200	6.1	210	7.0
17	190	2.4	200	0.6	310	0.2	300	1.5	300	2.6	300	3.0	310	3.1	310	3.4	320	4.3	320	4.1	310	5.7	320	6.1
18	230	0.2	210	0.5	190	1.0	180	1.4	190	1.8	180	4.4	180	5.4	180	5.1	180	5.6	180	6.6	190	7.9	200	7.9
19	280	7.9	280	7.6	280	6.1	260	4.1	270	4.9	260	3.7	250	3.5	250	4.5	250	5.0	250	4.4	240	4.2	220	2.4
20	280	6.4	290	7.3	300	7.5	290	6.6	290	6.4	290	6.1	290	7.0	290	8.0	300	7.0	290	9.1	300	11.0	300	11.0
21	280	6.0	290	6.6	300	5.8	300	5.6	300	5.3	290	4.0	280	4.1	280	3.4	290	4.4	290	5.3	300	6.2	300	6.1
22	280	4.5	280	4.1	300	4.5	290	3.8	290	3.9	300	5.3	310	5.2	310	5.3	300	5.6	310	6.9	310	7.0	310	7.6
23	300	6.8	310	8.8	310	8.7	310	8.0	310	7.1	320	7.2	310	5.7	310	5.1	310	5.7	310	6.6	310	6.5	320	6.9
24	310	2.1	310	1.6	310	2.0	310	1.4	310	1.1	310	1.5	300	1.9	310	1.1	310	0.3	320	0.8	100	3.5	100	3.5

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

M.S.L. + h<sub>a</sub> (height of anemometer above ground) = 24 metres + 13 metres

JANUARY, 1937

Table with columns for time periods (12-13 to 23-24), wind speed (m/s), and day. Contains data for January 1937.

FEBRUARY, 1937

Table with columns for time periods (12-13 to 23-24), wind speed (m/s), and day. Contains data for February 1937.



141 ABERDEEN: Dines Pressure Tube Anemometer  $H_a$  (height of anemometer above M.S.L.) = height of ground above

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	
	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s
1	330	6.4	330	6.6	330	6.9	320	6.1	340	6.7	340	7.3	360	5.8	360	5.5	360	6.0	380	5.7	380	6.3	20	6.2
2	340	9.4	340	8.8	350	7.8	340	6.7	340	6.0	340	5.5	340	6.0	340	6.9	340	6.7	340	7.6	360	7.7	360	6.0
3	70	5.5	80	5.1	70	3.2	90	2.1	150	2.1	180	1.4	170	1.3	180	2.8	170	4.3	170	5.9	170	6.2	180	5.5
4	150	3.2	140	2.6	130	1.4	150	3.0	160	3.0	130	4.5	130	4.6	110	5.2	120	3.9	120	4.2	120	5.1	110	4.5
5	100	5.5	110	5.5	110	5.5	110	5.6	110	5.5	110	5.5	110	6.1	110	6.0	110	7.5	100	7.0	90	6.0	90	6.1
6	120	3.3	80	4.6	110	3.6	80	3.0	80	3.2	40	2.9	60	2.6	60	3.1	50	3.1	70	3.2	80	2.7	80	1.4
7	70	2.9	80	2.7	70	2.5	60	2.3	60	2.7	90	2.9	60	2.6	50	1.8	40	3.0	40	2.9	60	3.1	50	3.4
8	310	3.2	310	3.2	310	4.0	300	4.6	300	3.8	300	4.4	300	4.0	300	3.6	310	4.0	310	5.3	310	6.9	310	6.1
9	300	3.1	300	2.6	300	3.0	300	2.5	310	2.6	300	2.5	310	1.9	300	1.9	310	2.2	300	1.8	300	1.7	360	1.5
10	200	1.1	310	1.4	300	1.9	310	1.7	300	2.4	310	1.5	120	3.7	120	1.9	150	4.0	130	4.5	130	5.8	130	5.7
11	100	6.3	90	5.6	90	5.5	90	5.5	90	5.6	90	5.5	90	5.4	80	5.4	80	4.8	70	5.5	70	5.1	90	5.0
12	80	7.5	70	6.6	70	6.5	60	6.6	60	6.4	60	6.4	50	6.1	40	6.8	60	5.6	50	6.0	50	5.4	40	5.9
13	350	4.6	350	4.4	360	4.0	340	4.0	360	3.8	350	4.6	340	4.6	330	5.4	330	5.4	330	6.4	330	6.5	330	6.9
14	320	5.7	320	4.5	320	4.7	320	6.5	320	6.0	310	5.7	310	5.3	300	4.9	300	5.6	310	6.6	320	7.7	320	7.5
15	310	10.0	310	9.3	310	8.4	310	8.5	330	8.1	320	7.0	320	6.9	310	7.3	310	8.0	310	8.2	310	8.5	310	9.0
16	230	2.4	240	2.0	250	1.9	240	2.3	250	1.1	270	1.2	220	0.2	240	0.4	---	0.0	210	0.3	150	2.0	140	3.5
17	120	10.5	120	10.9	110	9.7	120	9.6	110	9.5	110	9.4	110	8.9	110	8.6	120	8.7	120	8.5	110	8.1	110	7.6
18	80	5.9	80	7.1	80	7.5	80	7.5	80	7.6	80	6.7	80	6.1	80	6.6	80	6.8	80	6.0	80	6.6	80	6.5
19	320	1.6	310	1.4	320	0.7	60	0.2	350	0.6	50	0.1	40	0.5	30	1.5	20	0.7	360	1.0	40	0.6	40	1.0
20	320	1.5	310	2.3	310	2.8	310	3.0	300	2.7	310	2.0	310	2.0	320	2.8	320	2.6	340	2.1	320	3.0	320	3.5
21	320	3.0	320	3.9	320	4.0	340	4.5	340	4.7	340	4.4	310	4.1	320	4.8	340	4.9	350	5.8	330	7.0	340	7.0
22	290	10.3	290	10.9	290	10.5	300	10.4	300	8.0	300	6.8	300	6.6	300	6.5	320	5.3	320	5.5	330	6.4	340	6.5
23	320	2.6	310	2.0	310	2.2	310	2.7	310	2.3	310	1.7	290	0.3	290	0.9	290	1.4	310	3.3	310	4.2	330	4.3
24	200	0.6	250	0.2	220	0.2	180	0.3	220	1.1	200	1.3	240	1.7	230	2.0	220	2.1	260	3.7	300	3.2	280	5.2
25	300	7.5	320	7.6	310	8.1	310	10.0	310	11.1	320	9.6	320	8.9	330	10.4	330	11.4	330	11.5	330	9.8	330	9.1
26	290	4.9	290	5.4	300	6.6	300	6.4	300	6.0	300	6.1	300	6.4	300	6.6	300	6.7	300	7.9	310	8.7	310	9.5
27	320	5.4	320	5.3	320	4.4	320	4.1	330	5.5	320	4.9	320	5.5	330	6.3	340	5.2	340	6.6	340	6.8	340	6.7
28	310	3.9	310	3.9	310	2.6	300	3.2	300	3.1	300	3.3	310	3.9	310	3.4	310	4.0	320	4.5	330	6.0	350	5.2
29	300	2.5	290	2.4	290	2.6	300	1.5	290	1.6	290	3.0	290	3.0	290	3.0	310	5.0	300	4.4	300	3.8	310	3.4
30	...	...	...	...	...	...	...	...	---	0.0	...	...	210	0.5	190	1.2	170	3.5	170	5.5	170	6.5	170	7.1
31	170	8.0	170	8.5	180	6.8	170	6.8	170	6.9	180	7.0	180	8.5	170	9.1	160	11.4	170	10.5	170	10.5	180	8.7
Mean	---	4.8	---	4.8	---	4.5	---	4.6	---	4.5	---	4.4	---	4.3	---	4.6	---	5.0	---	5.4	---	5.7	---	5.7

142 ABERDEEN:  $H_a = 24$  metres + 13 metres

Day	0 - 1		1 - 2		2 - 3		3 - 4		4 - 5		5 - 6		6 - 7		7 - 8		8 - 9		9 - 10		10 - 11		11 - 12	
	°	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	6.9	160	6.0	160	6.2	160	5.3	160	5.4	150	5.2	150	5.2	150	5.0	160	4.8	150	5.4	140	5.2	130	5.4
2	110	4.6	110	4.4	110	4.0	120	3.9	110	4.1	110	4.4	100	4.6	110	5.4	110	5.4	110	5.1	110	5.5	110	5.5
3	70	2.3	70	2.8	50	2.5	50	2.9	40	3.1	40	2.8	40	2.5	30	2.1	20	1.6	50	0.9	70	1.5	70	1.9
4	110	3.5	110	2.7	110	2.3	110	3.0	100	2.4	100	2.0	100	1.2	90	0.8	90	1.8	100	2.1	90	1.8	80	1.9
5	90	1.9	100	2.7	100	2.5	100	2.4	100	2.1	100	1.3	90	1.1	100	1.8	90	1.4	110	1.9	110	2.5	110	2.3
6	120	2.4	130	2.5	130	2.3	130	3.2	140	3.2	150	3.1	150	3.7	150	3.7	150	3.5	150	4.1	160	4.5	160	4.9
7	160	2.9	160	2.3	160	4.5	150	3.9	150	2.3	160	1.9	160	3.6	160	3.4	160	4.0	160	3.3	170	5.0	180	3.5
8	190	0.6	100	0.5	160	0.6	170	0.5	120	0.6	130	0.9	170	1.7	170	2.9	180	1.9	180	4.0	180	3.6	180	3.6
9	220	2.1	240	1.4	210	1.3	200	1.5	180	2.5	210	2.2	200	1.5	200	1.9	180	3.0	180	2.5	180	2.7	180	4.7
10	160	5.4	150	4.9	150	5.9	150	6.3	140	6.5	150	6.4	150	7.2	170	6.4	160	5.2	160	4.5	180	5.8	170	6.2
11	320	6.2	320	5.7	330	5.0	320	4.3	310	4.4	310	4.9	310	4.2	310	4.2	310	4.6	320	5.8	320	5.6	320	4.1
12	310	1.0	310	1.5	310	2.0	310	2.1	310	2.5	300	2.6	310	3.4	320	3.1	330	4.5	350	4.7	360	4.8	360	4.5
13	50	2.5	120	2.3	120	1.8	120	1.3	...	...	40	0.8	50	0.8	70	1.6	80	2.0	80	1.6	80	1.9	90	2.1
14	110	3.0	120	3.2	120	3.0	110	2.7	100	1.8	110	1.9	110	2.7	110	3.0	120	3.1	120	3.1	110	2.0	120	2.6
15	...	...	...	...	---	0.0	---	0.0	...	...	90	0.5	90	0.4	120	0.8	110	0.8	100	1.0	110	1.8	110	1.9
16	120	5.5	120	4.8	110	4.6	110	4.0	110	3.3	100	2.7	90	2.3	80	1.6	70	2.1	60	1.4	60	1.1	100	0.9
17	350	1.5	360	1.9	360	1.0	350	1.4	340	1.4	350	0.9	350	1.0	330	1.9	330	2.0	320	2.5	330	2.6	330	2.9
18	320	4.4	330	5.5	330	4.8	330	5.6	330	4.5	330	3.9	330	3.6	330	4.1	340	4.0	340	4.5	340	4.3	350	4.7
19	310	0.2	310	0.6	310	0.9	310	0.5	320	0.1	---	0.0	---	0.0	130	1.0	160	2.0	160	3.8	160	4.4	160	5.0
20	240	0.4	280	0.7	280	1.9	290	1.5	310	1.6	290	2.5	300	1.5	300	2.0	290	2.0	320	1.5	120	1.9	130	2.1
21	300	4.1	300	3.7	290	3.7	280	2.8	280	3.5	280	1.6	290	3.2	290	4.4	310	5.9	300	5.3	300	5.3	290	4.9
22	220	0.2	270	0.2	290	0.3	---	0.0	---	0.0	210	0.2	190	0.6	200	2.6	190	3.9	190	5.5	200	5.9	220	5.8
23	300	2.7	330	6.5	320	6.0	320	5.8	320	5.0	350	2.9	330	2.1	340	3.6	340	4.4	340	4.0	340	3.3	350	2.0
24	320	0.2	320	0.5	330	0.2	330	0.1	330	0.1	---	0.0	50	0.1	60	0.6	60	1.1	60	1.1	50	1.6	70	2.1
25	310	2.5	310	2.2	310	2.5	310	2.7	310	3.0	310	2.1	320	2.6										



143 ABERDEEN: Dines Pressure Tube Anemometer

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

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	
	°	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	320	1.0	310	1.4	310	1.2	320	1.0	320	0.6	320	1.5	10	1.1	10	0.8	70	1.2	90	1.0	70	1.5	110	1.9
2	210	1.0	210	2.8	220	1.5	170	2.6	180	2.5	180	2.4	180	1.8	170	2.7	180	4.2	180	4.9	180	5.3	180	5.2
3	180	4.5	180	3.9	180	3.8	180	4.4	180	4.3	190	3.6	190	2.6	190	4.6	190	4.8	170	5.5	180	4.1	160	5.1
4	---	0.0	310	0.4	300	1.4	310	1.1	310	1.2	320	0.4	250	1.1	300	1.0	330	0.1	310	2.6	320	3.6	330	2.6
5	170	0.3	180	1.6	180	0.9	200	0.5	220	1.1	300	2.7	290	3.3	310	3.5	320	4.6	320	6.5	330	6.3	330	5.8
6	330	4.8	320	3.9	310	2.4	320	2.5	310	2.5	310	2.3	320	2.1	320	1.4	70	1.4	80	1.7	100	2.6	90	3.0
7	180	0.8	170	0.5	150	0.5	160	0.6	150	0.6	160	1.3	170	1.5	160	1.1	110	2.1	110	2.7	100	2.5	110	3.0
8	170	1.3	190	1.4	210	0.1	---	0.0	---	0.0	190	0.3	170	1.7	170	3.4	170	2.9	170	2.2	160	2.5	140	3.1
9	190	2.5	170	2.3	150	2.0	140	1.9	160	1.7	160	1.6	140	0.8	120	1.0	120	1.5	110	1.6	90	1.7	80	1.5
10	100	0.8	120	0.9	120	1.1	110	0.6	120	0.8	150	0.7	190	1.0	200	0.5	180	1.0	100	0.7	130	2.5	110	3.1
11	170	1.8	180	1.7	170	1.4	150	1.3	130	1.5	130	1.8	120	2.1	120	4.0	120	4.4	110	4.5	120	4.4	130	4.1
12	120	1.1	100	0.5	100	0.1	70	0.2	80	1.1	90	1.5	80	1.4	80	2.1	50	2.0	50	2.4	60	3.7	60	4.2
13	20	1.4	360	1.2	350	1.5	340	1.6	350	2.1	360	2.7	360	3.0	360	3.6	10	3.6	360	4.0	10	4.5	30	4.9
14	340	4.3	350	4.1	340	4.0	340	3.8	350	3.9	360	4.1	360	4.1	360	4.3	360	4.2	350	4.8	350	4.9	350	4.7
15	340	2.3	360	2.5	340	2.5	340	2.8	330	1.6	330	1.9	330	3.5	350	4.3	360	4.3	350	4.5	360	3.7	360	3.5
16	330	0.3	330	0.4	330	0.5	320	0.1	350	0.2	350	0.5	340	0.9	70	0.5	70	1.0	80	2.3	100	2.9	110	2.8
17	180	2.0	180	0.4	180	0.2	170	0.7	200	0.4	210	0.2	290	0.1	330	0.1	100	0.6	110	1.8	130	2.1	120	2.5
18	...	...	---	0.0	---	0.0	320	0.3	330	0.4	310	1.5	310	1.2	60	1.1	60	1.4	50	1.4	50	1.4	80	2.4
19	160	6.0	160	7.0	160	6.7	160	5.0	160	5.6	160	5.9	160	6.0	160	4.5	160	4.6	150	5.2	160	5.7	150	6.2
20	160	2.1	150	1.4	120	1.6	130	2.0	130	2.1	120	2.7	120	2.6	110	2.1	110	2.0	120	2.6	120	3.1	130	3.0
21	100	1.7	80	1.8	70	1.8	50	2.0	30	2.0	30	2.7	20	3.1	20	4.8	20	6.7	30	6.7	70	6.8	70	7.4
22	210	4.4	200	3.0	210	2.0	170	2.0	180	2.7	180	2.5	190	5.3	180	5.7	180	5.8	170	5.3	170	5.5	160	5.4
23	160	2.0	180	3.0	180	2.3	120	1.0	170	1.9	160	2.8	170	2.2	170	5.0	180	5.9	180	5.3	180	8.1	180	8.4
24	180	1.6	180	1.8	210	1.0	230	0.7	210	0.2	180	1.5	180	2.7	150	3.2	150	3.6	150	3.8	160	3.0	130	2.9
25	210	1.2	210	1.1	170	3.0	160	2.1	180	1.8	180	3.0	160	2.4	170	1.6	180	4.0	170	5.0	170	4.9	180	6.1
26	---	0.0	---	0.0	180	0.4	190	0.8	190	0.8	190	2.1	200	3.3	210	3.0	180	2.9	170	2.5	140	2.4	120	3.7
27	290	1.8	280	4.0	280	4.3	220	1.9	270	2.1	280	2.0	260	1.2	270	2.0	260	2.9	270	5.4	260	6.1	280	5.5
28	280	1.9	300	1.7	300	1.1	310	0.5	---	0.0	340	0.2	170	0.3	190	1.0	180	2.4	180	4.0	190	4.5	180	5.0
29	190	1.2	180	1.5	180	1.4	160	2.5	160	3.0	190	3.4	180	4.6	180	5.0	180	4.5	180	5.3	180	4.4	180	5.0
30	220	1.9	230	1.5	230	0.7	210	0.1	230	1.5	230	1.6	230	1.7	220	2.3	200	2.5	210	5.1	220	4.2	230	5.0
31	230	2.9	220	3.4	210	2.6	220	2.6	220	2.8	230	2.9	250	3.4	270	6.0	270	7.1	270	6.6	270	6.3	270	5.7
Mean	---	1.9	---	2.0	---	1.7	---	1.6	---	1.7	---	2.1	---	2.3	---	2.8	---	3.2	---	3.8	---	4.0	---	4.3

144 ABERDEEN: H<sub>a</sub> = 24 metres + 13 metres

Day	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s
	1	250	1.7	280	2.7	280	3.7	280	4.7	260	2.8	260	3.8	300	5.9	310	5.7	320	4.5	320	4.4	310	4.9	310
2	310	5.1	310	4.0	320	4.1	320	3.5	310	3.2	320	6.0	310	3.5	310	6.0	320	6.4	330	6.3	320	6.3	310	6.0
3	240	0.4	320	0.1	220	0.6	240	0.3	190	0.7	190	2.0	190	2.9	170	3.7	160	4.5	150	5.0	150	6.1	160	6.0
4	---	0.0	280	0.1	---	0.0	250	0.1	60	0.1	---	0.0	170	0.1	200	0.2	180	0.4	180	1.9	100	2.0	200	2.4
5	230	2.0	230	3.0	220	2.2	220	3.7	220	1.8	210	1.9	190	1.8	190	2.6	210	3.1	220	3.7	220	4.1	210	3.9
6	180	2.5	190	2.1	200	2.7	210	3.0	210	2.9	210	3.5	290	1.0	190	1.5	220	1.1	210	2.2	200	2.6	180	2.6
7	160	1.7	180	2.4	180	1.2	190	1.1	190	1.5	180	1.5	210	1.5	210	2.6	210	2.7	200	2.6	170	5.0	170	5.4
8	190	1.1	210	1.3	190	0.4	190	0.5	180	1.5	200	2.3	220	3.0	210	3.7	180	4.2	180	5.6	180	5.5	170	4.9
9	220	0.5	180	1.1	190	1.8	240	0.9	300	0.7	210	2.0	220	3.2	240	2.4	160	2.5	160	4.9	170	5.1	170	5.7
10	240	2.5	230	1.9	210	1.7	220	2.8	160	2.6	170	3.4	180	5.9	210	5.9	190	5.3	210	7.1	200	6.6	200	5.9
11	20	0.1	30	0.4	30	1.5	20	2.5	20	2.4	20	2.2	30	2.6	50	2.3	40	2.4	40	4.5	40	3.9	40	4.0
12	20	0.9	40	0.5	30	0.4	20	0.1	20	0.1	60	0.1	80	0.3	100	0.5	110	0.9	110	1.8	120	2.5	110	3.1
13	160	2.6	170	2.7	170	2.5	170	2.1	170	2.1	170	3.0	170	3.4	170	3.1	170	4.1	170	4.3	170	3.6	160	4.7
14	190	0.5	190	0.1	---	0.0	---	0.0	320	0.2	160	0.1	300	0.3	310	2.4	340	4.0	350	3.0	340	4.0	350	4.1
15	340	1.9	330	2.5	330	2.6	320	2.2	330	2.8	340	3.9	340	4.2	330	4.9	340	4.6	330	5.9	340	5.4	340	4.3
16	310	3.1	310	3.3	310	2.3	320	2.7	330	3.6	320	4.0	320	4.9	320	4.8	330	4.7	350	4.5	340	5.1	340	5.4
17	340	4.3	350	5.6	350	6.6	330	5.0	320	4.3	340	6.4	330	6.8	340	5.8	350	7.1	350	6.9	350	7.2	350	6.8
18	330	7.6	340	6.9	340	6.9	340	6.9	340	7.1	340	6.9	350	7.0	340	7.0	350	7.5	350	7.1	340	6.0	340	6.4
19	320	3.8	330	3.1	340	3.1	340	3.1	330	3.6	340	3.6	340	3.2	350	4.0	350	4.1	350	3.3	360	3.5	10	3.1
20	10	2.0	20	2.3	10	1.6	20	2.5	20	2.1	10	1.7	30	2.6	30	3.5	40	3.8	40	4.0	40	4.1	50	4.0
21	330	1.5	340	2.8	330	2.0	320	2.5	310	3.7	300	4.5	300	5.1	320	4.9	330	4.9	350	4.4	350	4.5	340	5.5
22	320	5.3	330	3.6	320	3.9	310	5.4	320	6.1	320	7.1	320	8.3	320	9.0	320	9.7	320	8.5	330	8.4	320	8.1
23	320	7.7	320	7.7	320	7.8	320	6.5	320	7.5	320	9.4	320	8.9	320	7.3	330	7.6	330	9.1	330	8.6	320	7.9
24	330	2.5	300	2.4	300	1.6	280	1.8	280	1.9	300	2.3	320	4.4	320	4.3	320	3.4	330	3.8	330	3.1	340	2.7
25	280	0.9	250	2.1	250	1.0	220	1.0	240	0.5	230	0.5	220	0.7	23									

WIND: DIRECTION AND SPEED

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

M.S.L. + h<sub>a</sub> (height of anemometer above ground) = 24 metres + 13 metres

MAY, 1937

12 - 13		13 - 14		14 - 15		15 - 16		16 - 17		17 - 18		18 - 19		19 - 20		20 - 21		21 - 22		22 - 23		23 - 24		Mean	Day		
o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	m/s	
110	2.6	120	3.2	150	4.5	160	5.0	160	5.9	160	4.5	170	4.6	170	4.9	180	4.6	180	3.5	190	2.8	200	2.8	2.6	1		
180	6.9	190	6.5	190	6.2	190	2.2	190	3.8	190	3.4	190	4.8	180	5.0	180	5.1	180	4.8	180	3.2	180	2.9	3.8	2		
170	4.6	170	4.7	180	4.4	180	5.1	160	3.4	160	4.0	160	3.8	170	1.9	170	1.9	170	1.3	170	0.1	---	0.0	3.6	3		
340	2.1	100	3.1	120	2.5	50	1.4	50	0.6	60	0.7	80	1.5	70	1.3	50	0.2	---	0.0	180	0.2	---	0.0	1.2	4		
350	5.5	350	6.5	350	6.1	350	6.0	360	5.6	360	4.9	340	4.8	340	3.9	330	3.7	330	4.2	320	4.2	310	4.0	4.0	5		
90	3.2	100	3.3	100	3.4	100	3.5	100	3.0	100	2.6	110	2.4	120	2.0	150	1.7	140	1.9	160	1.6	170	0.6	2.5	6		
130	2.9	130	3.0	150	2.9	170	2.3	140	2.1	170	1.5	170	0.5	100	0.2	120	0.5	160	1.0	170	1.1	170	1.6	1.5	7		
150	3.3	160	3.4	150	3.0	150	3.4	150	4.6	160	3.5	150	3.7	150	4.0	150	3.7	170	3.4	160	3.0	170	3.1	2.5	8		
90	2.7	90	2.6	90	2.5	90	2.4	80	2.1	100	2.0	80	1.6	90	1.1	110	0.7	120	0.3	120	0.5	100	0.5	1.6	9		
120	3.5	120	4.3	120	4.2	120	4.0	120	4.2	140	3.8	140	3.1	150	2.5	160	2.6	150	2.4	150	1.7	150	1.9	2.2	10		
110	4.1	110	3.9	120	4.0	120	4.4	120	3.7	120	3.3	140	2.8	120	2.0	120	1.9	130	2.1	120	2.4	120	1.4	2.9	11		
60	4.0	70	3.7	60	3.5	60	3.5	60	3.1	50	2.3	40	1.9	30	1.3	40	1.7	50	1.7	60	1.8	50	1.7	2.1	12		
10	5.0	20	5.0	10	4.9	360	4.7	360	4.7	360	5.0	350	5.2	350	5.0	350	5.0	340	4.6	350	4.6	350	4.6	3.9	13		
350	4.1	340	4.8	350	4.1	340	4.6	340	3.6	340	4.0	340	3.8	350	2.6	340	2.1	330	2.1	320	3.4	330	2.4	3.9	14		
10	3.3	10	3.2	60	3.7	50	3.9	50	4.0	50	4.1	50	3.0	40	2.1	30	0.4	320	0.1	320	0.4	330	0.6	2.7	15		
110	3.1	110	3.2	110	3.6	110	3.2	110	2.6	120	2.5	140	1.9	160	2.4	170	2.6	170	2.5	160	2.4	170	2.9	1.9	16		
120	2.3	130	2.3	110	2.5	90	1.8	100	1.8	120	1.6	110	1.1	60	0.9	70	0.8	80	0.5	70	0.1	...	...	1.1	17		
120	2.9	120	3.4	160	3.5	160	5.7	180	5.8	180	6.7	180	4.6	170	5.8	170	6.5	170	5.4	170	5.0	170	5.5	3.0	18		
160	5.5	140	5.4	140	5.7	140	5.3	130	3.6	110	2.7	120	3.5	130	3.1	130	2.3	130	2.6	140	2.7	160	2.9	4.7	19		
120	3.2	150	3.5	140	3.4	140	3.0	120	3.5	120	3.1	120	2.7	120	3.4	120	3.6	110	2.2	110	2.5	100	2.2	2.7	20		
70	6.8	80	5.8	80	3.9	110	4.0	120	3.0	120	3.0	160	2.9	230	1.6	210	2.2	220	4.4	210	4.5	210	5.1	3.9	21		
160	6.0	150	5.1	140	5.0	130	4.2	120	4.5	140	4.3	140	3.3	140	3.1	150	2.8	150	3.0	150	3.4	160	4.0	4.1	22		
190	9.2	210	8.2	220	8.1	220	7.5	220	6.1	210	4.0	180	1.4	190	2.9	210	2.0	210	1.9	210	1.9	180	1.8	4.3	23		
120	2.8	90	1.9	110	2.7	110	2.1	160	2.2	180	3.4	180	2.8	210	2.1	160	1.2	170	1.5	180	2.0	190	1.5	2.2	24		
160	5.8	160	6.7	170	7.1	180	2.1	180	4.0	180	4.7	180	3.5	170	3.6	170	1.9	210	1.9	250	1.2	240	0.1	3.4	25		
160	2.6	50	1.4	160	3.6	180	2.5	220	1.0	---	0.0	---	0.0	---	0.0	210	0.2	---	0.0	---	0.0	250	0.1	1.4	26		
280	5.5	290	4.8	260	4.2	280	6.0	290	6.4	290	5.4	290	5.1	280	4.5	300	3.7	290	1.5	290	1.5	290	1.7	3.7	27		
180	3.5	160	3.9	190	5.5	180	5.5	190	4.5	190	4.4	180	2.0	170	2.0	200	2.0	220	2.5	200	2.6	210	3.2	2.7	28		
160	5.6	180	5.6	180	6.2	170	6.5	190	5.0	170	3.6	180	1.0	190	0.2	200	0.8	200	1.0	200	2.0	220	2.2	3.4	29		
220	6.0	240	5.6	240	5.4	250	5.9	250	6.0	250	6.1	270	4.9	260	3.9	240	3.3	230	3.6	250	3.4	250	3.7	3.6	30		
280	6.7	280	7.0	280	6.1	270	5.5	280	5.1	280	6.0	290	4.9	290	5.9	290	5.8	280	4.8	270	4.0	230	1.9	4.8	31		
---	4.4	---	4.4	---	4.4	---	4.2	---	3.9	---	3.6	---	3.0	---	2.7	---	2.5	---	2.3	---	2.3	---	2.2	3.0			

JUNE, 1937

12 - 13		13 - 14		14 - 15		15 - 16		16 - 17		17 - 18		18 - 19		19 - 20		20 - 21		21 - 22		22 - 23		23 - 24		Mean	Day		
o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	m/s	
330	6.2	330	6.0	320	5.8	330	6.9	330	7.5	330	7.4	330	6.5	320	5.7	320	6.4	310	6.5	320	5.5	330	7.0	5.3	1		
320	4.9	320	5.0	320	4.9	330	5.5	340	5.4	340	5.5	340	4.7	330	3.0	320	2.7	320	1.1	340	1.2	250	0.5	4.4	2		
160	6.5	170	7.0	160	6.5	170	4.4	180	4.0	180	3.0	190	2.4	180	1.9	150	0.7	150	0.1	---	0.0	---	0.0	2.9	3		
210	3.3	210	4.0	210	4.4	210	3.7	210	3.2	200	3.0	180	2.0	190	3.4	190	2.7	180	2.5	190	1.8	180	3.3	1.9	4		
190	4.0	190	5.3	180	5.1	190	4.5	180	2.2	170	2.7	200	3.7	220	1.9	200	2.4	220	3.9	190	3.0	200	1.6	3.1	5		
170	3.2	180	4.0	180	5.4	180	5.3	180	5.1	180	4.0	180	3.1	180	3.0	190	2.9	170	1.9	170	1.5	170	1.8	2.9	6		
180	5.9	160	5.8	170	5.9	170	6.5	180	5.7	170	4.1	180	4.0	180	3.1	190	2.0	210	1.0	210	1.2	220	0.6	3.1	7		
180	5.4	170	5.7	160	6.4	180	5.3	180	6.0	180	5.9	190	3.7	200	4.0	190	2.4	200	1.0	190	1.9	200	1.4	3.5	8		
160	6.1	170	6.6	180	6.5	180	6.6	180	6.1	180	5.0	180	5.0	180	4.5	200	3.2	210	2.1	220	1.6	230	2.0	3.6	9		
210	6.6	220	6.3	220	5.4	220	5.9	240	5.0	250	4.0	290	2.8	320	1.6	20	0.6	---	0.0	---	0.0	---	0.0	3.7	10		
40	3.9	40	4.1	30	3.7	30	3.1	30	2.9	30	3.1	30	2.5	30	1.9	10	1.6	20	1.5	20	1.0	20	1.2	2.5	11		
110	2.7	120	3.0	140	3.0	140	3.5	160	4.0	170	3.0	150	2.8	150	2.8	170	2.1	170	2.5	170	2.2	170	2.3	1.9	12		
160	5.0	170	4.6	160	5.5	160	5.4	170	5.5	180	4.3	170	3.8	170	3.3	170	2.4	170	2.0	170	1.3	170	2.4	3.5	13		
350	3.7	350	2.5	350	3.5	350	1.9	10	1.6	20	1.3	30	0.9	30	0.5	350	2.4	330	1.8	320	2.1	330	1.7	1.8	14		
330	5.5	350	4.6	340	4.9	340	5.8	330	5.2	350	3.4	340	3.1	340	2.2	340	2.7	320	3.2	300	2.0	310	1.9	3.7	15		
340	5.7	340	6.5	340	6.4	340	6.0	340	6.6	340	6.4	330	4.9	330	3.5	340	2.5	320	2.5	320	3.6	330	3.9	4.5	16		
350	7.8	350	8.5	360	7.6	350	7.7	350	8.1	350	6.9	350	7.5	350	6.9	350	5.3	340	4.9	340	5.2	330	6.7	6.5	17		
340	6.5	340	6.5	350	4.9	10	4.0	360	3.9	350	3.4	10	3.6	350	3.1	340	3.4	320	3.8	320	4.1	320	4.2	5.6	18		
40	2.5	40	2.3	30	2.0	50	2.0	40	3.2	40	3.1	30	2.6	10	2.5	360	2.2	350	2.8	350	2.8	350	2.5	3.0	19		
50	3.9	60	4.1	50	3.9	60	3.1	50	3.8	80	2.6	80	1.0	40	0.2	---	0.0	---	0.0	330	0.5	320	1.1	2.4	20		
330	6.0	320	6.8	330	6.6	340	6.5	340	6.6	340	6.6	330	6.4	340	5.1	340	3.9	330	3.4	320	4.2	320	5.1	4.7	21		
320	9.1	320	8.0	330	7.9	320	8.0	330	6.6	320	8.1	320	6.9	310	8.5	310	5.8	320	7.5	320	8.1	3					

145 ABERDEEN: Dines Pressure Tube Anemometer

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

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	
	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s
1	330	0.2	330	0.5	---	0.0	200	0.2	---	0.0	---	0.0	---	0.0	200	0.3	260	1.1	270	0.8	260	1.0	170	2.5
2	210	0.5	210	0.6	190	1.1	180	2.9	190	1.8	190	2.9	190	2.2	110	2.3	190	4.7	200	4.9	180	6.1	190	5.4
3	190	4.7	190	5.0	190	4.9	190	3.5	190	2.6	200	3.1	190	4.5	200	4.5	190	3.6	180	2.7	320	2.0	340	2.0
4	360	3.7	350	3.6	360	3.7	360	4.4	360	4.4	340	3.0	350	4.5	350	4.2	350	4.9	360	4.7	350	5.6	350	6.1
5	310	2.8	300	1.6	290	1.0	220	2.0	200	1.9	200	2.2	180	1.0	240	0.8	190	0.5	180	2.5	180	4.5	210	5.6
6	170	3.1	170	3.0	180	3.4	180	3.4	180	3.8	170	3.4	180	3.4	180	3.5	170	3.7	180	3.4	170	2.9	170	2.9
7	---	0.0	---	0.0	---	0.0	---	0.0	350	0.1	350	0.2	350	0.5	350	0.4	320	1.0	350	0.5	60	0.5	70	1.0
8	330	2.1	330	2.2	320	1.6	320	0.9	320	1.2	310	0.7	310	1.7	310	1.5	300	0.7	120	0.6	120	1.9	170	2.6
9	210	1.5	200	2.0	180	2.4	190	2.8	190	2.4	200	2.5	200	2.4	180	3.0	190	4.3	180	3.7	170	3.5	150	2.6
10	330	2.3	20	3.1	20	4.0	20	3.1	20	3.0	20	3.3	360	4.8	360	4.7	360	4.9	360	5.0	360	5.0	360	4.5
11	310	1.2	310	0.5	300	0.5	310	1.0	300	1.4	320	1.4	310	1.3	310	2.5	330	1.6	330	1.3	40	1.7	140	1.9
12	170	0.3	---	0.0	---	0.0	---	0.0	160	0.1	160	1.5	160	2.1	180	3.1	180	3.8	170	4.5	170	4.0	160	4.9
13	180	3.0	180	2.0	150	1.8	190	1.1	210	2.1	220	0.5	200	1.2	180	1.3	260	2.5	300	5.0	280	4.1	300	2.9
14	210	3.5	180	2.0	180	3.0	180	2.4	100	1.2	200	1.8	200	2.5	180	2.6	190	2.6	200	2.2	190	2.1	220	1.1
15	180	3.5	180	4.5	190	4.5	200	3.3	320	2.1	330	0.4	330	0.3	100	0.4	90	0.6	100	1.9	110	2.1	110	2.9
16	320	0.4	340	1.2	330	2.1	340	2.6	340	4.8	330	4.5	330	5.3	330	6.1	330	7.5	340	6.2	340	6.0	340	5.5
17	---	0.0	330	0.1	330	0.2	320	0.4	330	0.4	330	0.5	320	0.5	320	0.1	110	1.7	120	2.5	140	3.5	160	3.5
18	180	4.4	190	3.0	180	3.6	180	2.7	180	1.5	200	0.5	160	0.9	180	3.8	180	3.1	180	3.3	160	4.4	180	5.0
19	---	0.0	190	0.1	---	0.0	220	0.4	320	0.2	230	1.0	230	1.0	220	0.8	210	2.4	160	4.5	200	4.6	210	4.7
20	310	1.1	320	1.0	310	0.9	320	0.8	320	0.4	310	0.1	---	0.0	100	0.1	120	1.2	120	2.4	170	2.5	150	3.9
21	180	4.3	180	4.4	170	4.5	170	5.1	170	6.0	170	4.7	160	6.1	170	7.3	170	5.5	160	6.7	160	5.5	160	6.5
22	---	0.0	320	0.1	300	0.9	300	1.9	300	1.7	300	1.1	300	1.6	300	2.4	330	2.6	280	1.4	310	0.8	140	1.6
23	300	6.1	310	5.9	310	4.9	310	5.1	310	5.2	320	5.2	320	6.5	320	6.5	320	6.5	320	6.5	320	4.8	330	4.3
24	330	0.2	330	1.2	320	1.4	350	2.0	350	2.1	330	2.9	330	2.6	330	3.2	330	2.6	330	3.6	340	5.2	340	4.7
25	330	6.4	330	6.9	340	5.6	340	6.5	320	9.8	320	9.2	320	8.9	320	8.0	320	8.9	330	9.0	330	9.4	330	10.0
26	320	5.9	320	6.0	320	7.7	320	8.5	320	7.3	320	5.5	320	6.4	320	8.1	310	7.7	310	7.5	320	8.2	320	8.1
27	320	3.4	310	3.9	310	3.7	320	2.8	310	2.0	300	2.5	310	4.2	310	4.0	310	4.4	320	4.1	330	5.0	330	4.9
28	330	3.0	330	3.3	330	3.1	340	2.5	330	2.1	340	3.0	340	3.4	340	4.6	340	4.4	340	4.6	340	4.1	340	4.5
29	320	0.9	320	1.0	320	1.6	320	1.9	330	2.0	340	2.0	350	2.6	350	2.6	360	2.5	360	2.3	330	2.4	330	1.9
30	100	0.1	---	0.0	130	0.1	170	0.3	150	0.8	170	1.0	170	1.9	170	2.0	160	2.5	170	3.3	170	3.5	160	4.1
31	190	2.1	200	1.1	---	0.0	320	0.4	310	0.9	310	0.9	310	0.5	---	0.0	80	0.7	70	0.5	70	0.9	80	1.6
Mean	---	2.3	---	2.3	---	2.3	---	2.4	---	2.4	---	2.3	---	2.7	---	3.1	---	3.4	---	3.6	---	3.8	---	4.0

146 ABERDEEN: H<sub>a</sub> = 24 metres + 13 metres

Day	0 - 1		1 - 2		2 - 3		3 - 4		4 - 5		5 - 6		6 - 7		7 - 8		8 - 9		9 - 10		10 - 11		11 - 12	
	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s
1	330	0.6	330	0.4	330	0.9	320	0.6	330	0.5	320	0.5	330	0.1	320	0.1	60	0.5	70	1.3	90	1.2	70	2.6
2	---	0.0	80	0.1	110	0.1	110	0.1	110	0.2	140	0.7	140	0.9	150	0.6	110	2.1	120	1.9	150	2.1	140	2.3
3	---	0.0	---	0.0	---	0.0	300	0.1	320	0.7	340	0.3	20	0.5	10	0.6	30	0.7	90	0.8	90	1.1	100	1.1
4	150	1.9	160	1.2	160	1.3	160	1.7	160	1.3	160	2.4	160	3.1	160	4.1	160	4.4	170	4.1	170	5.9	170	5.9
5	160	1.4	190	1.0	230	0.4	---	0.0	330	0.8	320	0.2	320	0.5	110	0.2	---	0.0	80	0.6	110	0.8	120	2.1
6	---	0.0	110	0.6	120	0.1	---	0.0	170	0.2	110	0.1	110	0.2	160	0.6	190	1.6	200	1.6	170	2.1	170	3.1
7	200	4.1	230	2.1	220	0.2	280	1.8	260	2.1	240	2.0	210	1.9	220	2.9	230	4.3	250	5.0	230	3.5	230	4.2
8	220	3.1	200	3.6	210	4.5	200	4.7	210	5.3	210	4.3	210	4.0	210	4.0	220	4.5	220	4.0	220	3.3	230	4.9
9	220	0.2	---	0.0	230	0.1	320	0.4	320	1.5	320	1.0	330	0.4	120	0.2	120	0.5	120	1.5	170	0.8	190	0.2
10	320	0.1	---	0.0	320	0.3	320	0.3	330	0.5	310	1.1	310	2.0	330	1.3	330	2.5	360	1.7	60	1.5	60	1.9
11	180	0.2	120	0.1	120	0.1	---	0.0	120	0.2	150	1.2	160	1.2	160	2.1	160	1.4	150	1.1	170	2.7	160	3.3
12	220	0.4	220	0.2	---	0.0	---	0.0	140	0.2	170	0.6	180	1.1	170	0.9	170	2.5	170	2.5	170	2.4	180	2.0
13	170	2.1	170	2.0	160	1.7	150	1.8	150	2.0	140	2.1	150	2.5	140	2.8	150	2.6	150	4.0	150	4.8	150	4.1
14	150	2.0	150	1.6	140	1.5	150	1.5	130	1.5	140	0.4	140	0.5	120	0.7	130	1.6	130	1.0	160	0.8	90	0.2
15	330	3.4	320	4.0	310	5.4	320	4.5	320	3.6	320	3.1	320	3.0	320	2.7	320	3.4	330	4.6	330	5.0	330	5.8
16	310	1.4	300	0.9	290	0.5	310	0.9	320	1.6	310	1.6	320	0.8	310	2.4	310	3.1	320	1.8	340	0.7	110	3.0
17	130	5.2	130	5.1	150	2.6	250	0.2	240	1.0	240	1.1	270	1.4	280	1.3	290	3.9	300	5.7	330	7.0	340	7.7
18	300	1.0	320	1.6	310	1.4	310	1.5	320	1.5	320	1.4	320	0.1	---	0.0	190	1.1	180	3.1	180	3.8	160	4.1
19	290	5.5	280	5.5	280	6.0	290	7.5	280	7.1	290	8.5	310	8.4	340	6.0	340	5.7	340	6.1	340	8.4	330	9.5
20	320	8.8	320	7.7	320	8.2	330	6.9	330	5.8	330	5.5	330	6.3	340	8.2	340	8.0	340	7.6	340	8.0	330	7.8
21	310	2.5	310	3.0	320	2.4	320	2.8	310	2.5	320	2.2	320	2.2	320	1.4	330	0.4	100	0.5	120	2.0	120	1.4
22	160	2.1	160	1.3	200	0.4	180	1.0	180	1.5	180	2.2	190	1.9	180	1.5	160	2.1	170	3.5	170	4.5	180	5.3
23	310	0.1	---	0.0	330	0.1	330	0.2	320	0.3	330	0.5	330	0.6	330	0.1	40	0.8	60	1.0	80	1.3	100	1.6
24	190	0.8	210	1.5	200	1.5	220	1.1	190	2.1	180	1.3	200	4.0	190	3.6	200	3.7	210	4.0	2			



147 ABERDEEN: Dines Pressure Tube Anemometer

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

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	
	°	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	180	4.8	180	6.2	170	6.2	180	5.9	180	6.4	180	7.2	180	5.8	190	6.6	190	6.5	180	6.1	190	4.2	240	3.5
2	180	3.5	180	3.0	190	3.3	190	1.3	200	1.4	210	1.5	200	3.1	210	4.0	200	2.9	180	3.5	190	3.4	250	4.1
3	200	3.1	220	4.5	220	4.4	210	2.6	190	3.3	210	4.6	210	6.6	210	6.4	220	5.8	210	5.6	210	6.2	190	6.1
4	220	5.1	220	4.2	230	6.2	220	4.4	220	5.0	210	3.5	210	4.0	200	3.1	190	3.4	200	5.3	220	5.4	210	5.0
5	170	5.9	180	6.4	190	7.3	190	8.1	180	7.3	190	4.6	180	4.4	200	3.9	210	4.9	190	2.8	220	1.7	350	1.1
6	180	1.6	200	1.9	210	3.0	220	2.1	220	3.5	190	2.9	180	2.9	190	4.2	180	3.5	210	5.9	220	7.6	220	7.9
7	240	3.4	220	3.3	230	4.0	230	2.1	230	2.6	250	2.7	180	1.1	220	3.2	190	2.6	210	3.9	170	2.7	240	5.3
8	230	4.7	270	3.9	260	3.1	260	5.1	260	5.3	250	4.0	250	6.1	260	4.8	280	7.6	290	11.9	290	11.5	290	12.6
9	260	2.5	270	3.5	250	1.6	240	1.8	240	2.3	260	2.2	270	4.1	270	5.3	280	6.3	300	7.1	300	8.4	300	7.2
10	310	8.3	330	9.1	330	8.5	320	7.7	320	8.0	320	7.5	320	8.0	320	6.9	330	8.5	330	10.1	340	10.0	340	10.6
11	340	6.4	330	4.9	330	6.0	320	6.1	320	5.7	330	5.1	340	5.5	340	6.0	340	6.5	340	7.0	340	6.5	330	6.4
12	300	2.5	310	1.6	300	0.8	320	0.7	320	0.6	320	0.4	330	0.5	---	0.0	170	0.2	180	0.5	180	1.6	190	2.5
13	150	2.9	140	3.2	130	4.1	130	4.6	120	4.5	120	5.2	120	5.0	110	3.5	120	2.1	60	2.0	60	2.2	70	3.1
14	320	2.1	320	2.0	310	1.9	320	2.1	320	1.0	320	0.6	320	0.5	330	1.0	200	1.9	200	1.9	220	3.0	190	3.5
15	190	3.6	190	6.0	200	5.0	190	3.6	200	3.0	210	3.0	210	2.1	210	3.3	220	2.7	220	3.0	210	5.0	210	3.9
16	290	0.9	300	1.6	300	0.8	310	0.7	310	1.3	310	1.0	310	1.7	310	1.7	320	1.0	320	0.5	180	1.7	180	4.0
17	320	2.1	330	0.6	120	2.9	120	3.5	120	2.6	110	2.0	110	2.0	100	2.0	110	3.2	110	3.0	100	3.1	80	3.0
18	310	2.6	320	2.7	320	2.9	330	2.6	320	3.0	320	2.8	320	3.2	320	2.6	330	3.0	340	4.4	350	3.6	360	3.3
19	320	1.0	300	0.5	310	2.1	310	2.3	300	2.2	290	1.2	300	1.7	310	1.4	310	3.4	310	3.0	320	3.1	330	4.1
20	330	2.0	330	2.4	320	3.0	320	3.0	330	3.5	330	4.0	330	4.2	340	4.1	340	5.1	340	5.6	340	6.0	340	7.0
21	330	4.1	330	3.9	320	3.2	300	3.0	290	2.3	300	2.0	300	2.1	310	2.0	290	2.5	300	2.1	240	1.0	150	1.9
22	170	3.0	180	2.5	210	1.5	200	2.6	200	2.7	210	3.3	210	3.9	210	4.4	210	4.8	210	4.3	210	3.4	190	3.1
23	300	0.1	---	0.0	---	0.0	190	0.1	240	0.2	---	0.0	---	0.0	200	1.0	180	1.4	180	1.7	210	1.9	200	2.4
24	210	4.6	180	5.3	220	7.2	220	7.0	220	7.6	210	9.0	210	5.6	220	6.0	220	2.9	260	2.5	280	4.7	260	3.9
25	250	1.5	270	0.2	280	0.2	210	0.2	180	0.3	260	1.6	230	0.9	250	1.1	240	2.0	240	2.5	240	2.0	190	3.9
26	200	1.3	210	1.3	200	0.3	200	0.1	210	0.1	230	1.1	220	1.6	230	0.6	200	1.9	180	2.6	170	3.0	160	3.2
27	---	0.0	90	0.2	100	0.9	180	1.4	190	2.2	190	2.5	180	2.6	170	2.6	170	2.0	190	1.9	170	3.0	180	2.9
28	290	1.8	280	1.5	260	2.5	260	1.1	280	1.5	290	3.5	310	4.5	310	5.0	320	5.1	310	8.1	310	8.7	310	7.5
29	320	0.7	320	0.6	320	0.2	350	0.1	310	0.9	320	0.6	320	1.7	320	0.6	190	0.3	180	1.5	170	1.8	200	2.7
30	200	4.0	190	4.4	210	3.0	200	4.7	190	5.0	210	3.1	190	5.2	180	6.9	190	5.2	190	4.1	190	5.7	200	5.8
Mean	---	3.0	---	3.0	---	3.2	---	3.0	---	3.2	---	3.1	---	3.4	---	3.5	---	3.6	---	4.1	---	4.4	---	4.7

148 ABERDEEN: H<sub>a</sub> = 24 metres + 13 metres

Day	0 - 1		1 - 2		2 - 3		3 - 4		4 - 5		5 - 6		6 - 7		7 - 8		8 - 9		9 - 10		10 - 11		11 - 12	
	°	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	2.9	320	3.1	330	2.8	330	4.1	330	3.6	320	4.0	320	4.7	320	5.0	330	4.4	340	3.2	340	3.3	340	3.7
2	360	4.6	360	4.1	360	3.1	360	2.1	310	2.2	310	2.3	320	1.0	---	0.0	---	0.0	150	0.9	140	3.6	150	3.3
3	190	2.6	180	2.6	200	1.3	200	0.2	200	1.0	210	0.6	310	0.1	310	1.3	320	1.4	310	1.7	320	1.8	340	1.3
4	290	3.6	300	4.1	290	4.1	300	4.4	290	1.9	300	4.6	280	3.0	300	3.1	310	4.5	320	5.6	330	5.0	340	4.4
5	220	0.1	210	0.1	210	0.1	300	0.5	300	0.6	210	0.2	190	0.7	210	0.6	210	1.3	190	1.3	170	3.5	160	4.8
6	220	1.1	190	1.6	200	2.0	220	2.0	200	2.0	210	0.9	190	1.6	200	2.3	210	2.0	200	0.9	180	2.0	180	2.9
7	140	1.9	150	2.5	150	2.1	150	1.4	150	0.5	300	0.5	310	0.9	310	1.1	320	0.3	120	1.2	120	1.6	110	2.0
8	100	2.6	100	1.6	80	1.5	80	1.9	60	0.1	350	0.5	90	1.8	80	2.1	110	2.9	120	0.6	90	1.5	90	2.1
9	310	1.0	...	...	290	0.5	290	0.5	300	0.7	300	1.2	300	2.5	300	3.2	300	2.0	300	2.5	310	3.9	310	3.9
10	310	2.7	300	1.9	300	2.4	270	2.3	280	1.6	290	2.4	290	3.9	290	4.1	300	4.4	310	6.5	310	8.3	320	8.9
11	320	5.2	310	5.5	310	6.0	310	6.0	310	5.7	310	5.7	310	6.5	320	5.8	320	5.1	320	4.6	320	4.2	330	4.5
12	340	4.0	340	5.0	340	5.3	330	4.0	340	3.7	340	3.4	340	3.0	330	2.7	320	3.1	340	3.6	330	3.6	340	3.5
13	310	0.8	310	0.8	300	0.1	290	0.4	20	0.1	---	0.0	---	0.0	---	0.0	200	0.4	220	1.7	320	3.7	320	1.4
14	270	4.1	270	3.9	270	3.8	290	2.8	290	2.6	290	3.7	280	3.4	290	2.6	280	2.9	280	4.1	290	3.7	270	2.3
15	250	3.8	250	2.1	280	1.4	260	3.4	240	2.5	240	2.4	240	2.6	230	2.5	220	2.9	210	2.2	200	3.4	230	2.4
16	260	2.5	220	1.1	200	1.5	250	1.5	130	0.9	200	2.5	240	3.3	220	4.1	240	4.0	240	5.9	230	5.6	240	4.9
17	260	1.4	150	1.5	220	1.2	230	2.0	210	2.3	230	1.7	230	0.3	220	1.6	220	2.5	220	2.4	220	2.8	220	2.5
18	210	2.6	240	2.4	230	2.3	250	0.9	230	0.3	210	1.0	200	0.5	220	1.2	220	0.2	200	0.9	220	1.6	260	2.1
19	---	0.0	220	0.4	220	1.7	220	3.2	220	2.2	190	4.1	210	2.7	200	3.8	230	1.8	210	4.4	210	3.5	220	8.2
20	220	1.1	230	2.0	190	1.1	200	1.7	190	1.0	200	0.7	220	0.2	340	1.6	330	3.6	330	5.0	330	4.2	320	2.4
21	300	0.6	310	1.5	310	1.9	310	2.0	310	1.9	310	2.0	310	2.2	320	1.9	320	2.1	320	1.9	310	1.5	310	1.0
22	40	1.1	60	2.1	190	0.5	190	1.0	190	0.8	170	1.9	160	3.2	160	5.2	170	5.7	180	5.5	170	5.6	180	5.8
23	160	3.2	160	3.3	150	2.9	160	3.0	160	2.9	170	1.8	210	0.6	210	0.2	300	0.2	250	1.0	250	1.0	210	1.1
24	330	4.8	320	3.9	320	5.5	320	5.7	320	5.0	320	5.0	320	5.4	320	6.1	320	6.3	310	7.0	320	8.0	320	7.7
25	220	4.3	210	3.3	210	5.0	230	4.5	230	1.5	200	2.9	210	3.9	230	1								

WIND: DIRECTION AND SPEED

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

M.S.L. + h<sub>a</sub> (height of anemometer above ground) = 24 metres + 13 metres

SEPTEMBER, 1937

12 - 13		13 - 14		14 - 15		15 - 16		16 - 17		17 - 18		18 - 19		19 - 20		20 - 21		21 - 22		22 - 23		23 - 24		Mean	Day
o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	m/s	
200	3.6	210	5.6	230	4.1	210	3.9	210	3.5	250	2.8	240	2.5	220	2.2	210	0.5	220	2.1	210	1.9	200	1.9	4.3	1
260	4.5	260	4.4	250	4.3	240	5.5	250	5.0	230	4.1	220	3.1	220	3.6	220	4.4	220	3.0	210	3.0	230	2.6	3.4	2
210	6.7	220	5.7	210	6.0	220	6.1	220	4.9	230	3.4	220	3.6	220	2.5	170	0.5	210	1.9	220	4.4	220	5.5	4.6	3
210	4.2	210	4.2	220	4.6	220	3.0	200	2.1	180	2.2	190	1.0	190	3.0	170	3.6	170	4.1	170	4.3	170	4.6	4.0	4
330	1.5	340	1.5	90	0.6	120	1.0	150	1.4	170	1.3	180	0.4	---	0.0	240	0.1	---	0.0	220	0.1	200	0.6	2.8	5
210	8.0	220	9.4	210	6.4	200	5.6	200	6.2	190	4.4	180	3.1	230	6.0	240	4.1	150	1.2	150	1.6	250	2.0	4.4	6
250	4.5	220	3.4	220	4.0	210	3.5	190	3.6	190	2.0	180	2.6	200	0.6	180	0.6	310	1.1	300	3.5	310	4.1	2.9	7
300	10.8	290	8.5	300	7.9	300	8.1	290	7.5	280	2.7	270	2.5	260	2.0	260	2.7	260	2.9	250	3.6	260	2.4	5.9	8
310	9.9	310	11.1	320	9.9	320	9.5	330	8.3	320	6.9	330	8.9	320	8.8	320	9.5	320	8.8	320	7.4	310	7.8	6.6	9
340	10.2	340	10.3	340	9.3	340	8.3	330	9.0	330	8.3	340	6.3	340	5.0	350	5.8	340	5.8	340	5.5	340	6.1	8.0	10
340	6.2	330	6.5	340	4.8	340	5.1	330	5.0	330	3.8	330	3.0	320	2.6	320	1.9	310	2.0	300	1.8	300	2.0	4.9	11
180	3.0	170	2.9	170	2.0	170	1.8	140	2.2	180	1.1	200	1.9	210	1.8	160	2.6	170	2.0	180	1.4	150	2.9	1.6	12
60	3.2	50	3.3	40	3.0	60	2.5	50	2.1	40	1.5	360	1.7	340	0.8	320	1.0	320	1.5	310	1.9	320	1.9	2.8	13
210	3.3	180	4.9	180	5.8	210	4.9	190	4.0	200	2.9	190	3.1	190	4.5	200	5.3	200	4.4	200	4.1	200	2.5	3.0	14
190	5.4	170	5.7	160	4.9	170	5.0	220	4.0	220	3.6	220	1.4	...	...	240	1.1	230	0.5	230	1.6	220	2.1	3.3	15
170	5.1	170	5.5	180	5.6	180	5.0	170	4.9	160	3.9	170	4.1	180	1.7	180	1.5	320	1.1	320	1.9	330	2.1	2.5	16
80	2.8	80	2.9	70	3.0	70	2.4	70	2.8	70	2.0	60	1.5	40	1.3	330	1.5	330	1.8	320	2.3	320	2.7	2.4	17
340	3.0	360	3.5	360	3.6	350	2.9	350	2.9	350	1.0	---	0.0	340	0.2	330	1.6	330	1.2	310	1.4	310	1.4	2.5	18
330	4.5	330	3.7	340	3.6	340	4.0	350	2.2	340	2.0	340	2.0	330	1.7	330	1.9	350	2.5	350	2.1	340	2.7	2.5	19
340	6.9	340	7.0	330	6.1	340	5.9	330	6.2	320	4.4	320	3.8	310	3.2	320	3.5	330	3.1	320	3.1	330	4.0	4.5	20
180	3.9	170	5.1	170	5.5	180	5.2	180	4.5	190	2.5	180	2.5	170	3.0	170	2.7	170	2.4	180	2.4	190	1.9	3.0	21
210	3.3	200	2.6	190	2.4	200	2.7	220	2.4	220	0.9	340	0.6	330	0.1	330	0.1	330	0.3	310	1.5	310	1.4	2.4	22
220	2.9	210	2.6	220	3.9	220	4.6	220	4.5	220	3.7	210	3.4	210	2.9	210	3.4	210	3.9	210	3.9	170	2.8	2.1	23
270	2.6	280	5.1	290	4.4	270	4.5	270	2.4	290	5.5	280	3.5	290	3.0	250	3.0	250	2.6	250	2.2	220	0.9	4.4	24
180	4.1	170	5.0	160	3.5	160	4.4	180	4.9	190	3.1	210	2.1	220	2.8	220	3.1	220	3.1	230	1.4	230	0.7	2.3	25
120	3.0	160	3.7	170	5.0	160	3.9	170	4.5	160	2.6	160	2.9	160	2.1	170	2.5	190	1.4	180	0.5	180	0.2	2.1	26
170	4.1	180	3.5	170	2.9	180	6.0	190	4.5	190	3.1	210	3.0	220	2.6	230	3.4	250	3.0	310	1.7	320	2.7	2.6	27
310	7.1	320	8.3	310	5.5	310	3.7	310	2.0	280	0.9	270	0.2	250	0.3	320	0.5	320	0.1	320	0.7	---	0.0	3.3	28
190	4.1	200	4.2	210	2.7	280	2.3	190	2.6	210	3.6	230	2.2	270	0.6	270	0.3	210	0.4	210	3.1	210	3.0	1.7	29
190	5.9	190	5.8	190	4.6	190	3.2	190	3.0	190	2.9	190	4.0	190	5.5	190	4.9	190	4.7	190	4.1	200	4.0	4.6	30
---	4.9	---	5.2	---	4.7	---	4.5	---	4.1	---	3.1	---	2.7	---	2.5	---	2.6	---	2.4	---	2.6	---	2.7	3.5	

OCTOBER, 1937

340	4.1	340	3.7	350	4.0	350	3.2	350	3.5	340	4.0	340	3.9	350	5.1	350	4.6	350	4.3	350	5.6	350	5.5	4.0	1
150	3.0	150	3.1	150	2.8	140	2.8	150	3.3	150	3.1	150	2.9	160	3.5	170	4.0	180	3.9	180	3.1	190	3.0	2.7	2
340	0.2	320	0.7	100	0.5	120	1.4	170	1.6	180	0.5	190	0.1	230	0.1	290	2.1	300	2.4	290	3.0	290	2.4	1.3	3
330	3.2	340	2.5	30	1.5	30	1.8	50	0.8	170	0.2	140	0.1	---	0.0	---	0.0	---	0.0	---	0.0	---	0.0	2.4	4
160	5.4	170	4.9	180	5.2	170	4.9	170	4.1	170	3.5	180	2.6	190	1.5	190	1.8	190	2.4	200	1.5	220	1.4	2.2	5
160	3.9	170	3.5	170	4.1	170	3.2	170	2.4	180	1.5	180	0.3	160	1.0	140	0.5	150	1.9	150	1.1	150	1.3	1.9	6
110	1.9	120	1.8	110	1.7	120	2.1	120	2.0	110	1.6	110	1.6	100	1.1	100	0.6	80	1.0	80	0.3	100	1.2	1.4	7
130	2.0	70	1.1	100	2.1	150	0.6	310	0.3	310	1.1	310	1.6	310	1.0	310	1.0	310	1.5	310	0.8	310	0.8	1.4	8
310	2.5	340	3.4	330	3.4	330	1.5	360	2.0	350	1.5	330	1.9	320	1.5	320	1.9	320	1.5	320	1.5	310	1.7	1.9	9
320	8.1	320	7.2	320	6.0	330	5.0	330	4.9	330	5.3	330	4.5	330	3.8	330	3.9	320	4.6	320	4.9	320	4.8	4.7	10
320	3.9	330	3.5	330	2.4	360	3.0	340	3.4	340	2.0	330	1.6	340	3.8	340	4.9	340	3.5	350	4.2	340	4.0	4.4	11
330	3.6	330	4.3	340	3.1	340	2.5	320	2.5	320	2.4	300	1.1	310	1.4	320	0.8	320	0.6	330	1.4	330	1.6	2.9	12
120	0.3	180	2.7	180	3.5	190	3.1	200	2.4	210	3.2	220	3.7	230	2.7	260	1.1	250	2.3	260	2.3	270	3.4	1.7	13
240	1.1	220	0.9	220	0.8	200	0.6	200	0.9	230	1.0	240	0.3	230	0.7	260	2.1	240	2.5	250	3.1	250	3.4	2.4	14
250	3.9	280	3.9	270	4.4	250	3.3	250	2.9	240	2.5	190	1.8	180	2.4	240	2.9	250	2.2	220	1.3	210	2.5	2.7	15
230	3.0	250	5.0	260	5.0	270	4.8	270	2.7	270	3.0	270	3.9	260	1.6	220	1.1	230	1.7	230	1.6	240	2.6	3.1	16
260	3.0	250	4.9	260	4.2	260	2.8	220	1.9	220	2.3	220	2.7	200	2.5	220	2.4	220	2.5	220	3.7	220	3.7	2.5	17
240	2.1	250	4.0	260	4.4	250	4.1	230	2.4	230	1.6	230	2.1	230	2.0	230	2.1	240	1.6	250	1.2	260	1.0	1.9	18
210	9.4	210	8.0	190	3.9	200	4.1	200	4.6	200	5.6	210	4.9	260	3.9	240	1.6	280	0.4	220	1.3	220	1.0	3.5	19
350	1.5	340	1.5	350	0.4	330	0.2	330	0.1	---	0.0	320	0.1	320	0.2	320	1.2	320	1.4	300	1.2	---	0.0	1.3	20
320	0.2	---	0.0	320	0.1	350	0.2	350	0.4	330	0.6	80	0.8	340	0.4	30	0.2	40	1.1	30	1.7	40	1.7	1.2	21
180	5.2	180	6.0	190	5.7	180	3.5	170	2.9	160	5.0	160	5.5	160	5.3	160	4.2	160	3.9	160	4.5	150	4.0	3.9	22
180	1.0	110	0.1	330	0.1	350	1.4	350	1.8	320	1.4	320	1.6	320	2.0	320	3.0	330	4.1	340	5.4	340	5.0	2.0	23
320	6.9	310	7.1	310	6.3	280	4.1	270	3.4	250	2.8	240	3.1	240	4.3	230	3.3	230	3.2	220	2.3	220	4.6	5.1	24
150	5.1	140	4.5	140	7.7	160	6.7	160	6.0	160	6.0														



149 ABERDEEN: Dines Pressure Tube Anemometer

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

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			
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
1	330	1.3	320	1.5	320	1.6	310	2.0	320	1.5	310	0.3	310	1.4	320	1.1	310	0.1	320	0.4	---	0.0	---	0.0	---	0.0
2	---	0.0	---	0.0	160	0.3	160	2.0	170	1.5	170	1.3	180	0.9	170	2.0	180	2.3	170	2.8	180	3.6	170	4.4	4.4	
3	180	5.8	180	5.2	180	3.5	170	5.0	170	6.4	170	6.0	170	6.9	180	7.9	180	7.2	180	7.3	190	6.1	190	5.6	5.6	
4	190	2.5	190	3.8	180	4.5	180	4.5	180	4.9	180	6.3	190	6.9	170	6.4	180	5.9	180	5.6	180	6.4	180	6.6	6.6	
5	170	7.2	170	6.2	180	6.4	180	6.5	180	5.6	180	3.9	170	3.1	180	4.0	190	3.2	210	4.0	200	3.0	200	3.2	3.2	
6	320	1.5	320	0.7	---	0.0	320	0.5	---	0.0	320	1.2	320	0.6	320	0.3	---	0.0	190	1.0	190	2.0	170	3.1	3.1	
7	200	0.5	200	0.5	210	0.2	190	0.1	---	0.0	130	0.6	180	2.2	180	2.8	180	3.0	180	2.5	170	3.1	170	2.0	2.0	
8	300	0.2	290	1.0	---	0.0	320	0.2	---	0.0	310	0.5	310	1.1	310	2.6	310	3.2	310	3.5	310	4.6	320	3.6	3.6	
9	310	4.2	320	5.4	330	6.6	330	5.1	330	4.2	310	3.4	330	4.5	340	6.7	340	6.5	340	7.3	340	7.4	340	7.8	7.8	
10	340	5.4	340	6.2	340	7.3	350	7.2	350	6.6	350	6.5	350	6.5	340	6.0	340	6.5	350	4.7	350	6.0	340	6.7	6.7	
11	320	3.3	320	3.0	320	4.6	300	4.1	310	3.9	320	4.9	310	4.0	310	3.5	300	3.0	290	3.4	320	5.3	320	6.6	6.6	
12	310	3.6	320	4.0	320	4.4	300	4.1	300	3.2	310	3.0	320	5.1	320	3.9	310	4.2	300	5.5	310	5.0	300	4.3	4.3	
13	300	6.1	300	6.4	300	6.4	300	5.5	300	5.5	300	5.0	310	6.9	300	6.1	300	6.4	310	6.1	320	4.8	330	4.5	4.5	
14	310	4.6	310	4.5	300	3.9	290	3.1	290	3.8	290	4.4	290	4.1	290	5.8	290	5.2	290	4.2	300	4.5	300	5.5	5.5	
15	310	2.3	300	2.0	310	1.9	210	3.2	300	3.1	320	3.6	320	2.3	320	0.5	330	1.9	320	2.6	310	2.5	310	1.8	1.8	
16	200	0.1	---	0.0	220	0.3	---	---	---	0.0	310	0.2	300	0.5	310	0.2	---	0.0	310	0.5	320	0.4	330	0.1	0.1	
17	160	6.7	160	6.6	160	6.9	160	7.1	160	7.1	160	7.0	170	7.5	150	7.4	160	9.6	160	9.3	160	9.6	160	9.7	9.7	
18	160	8.4	150	9.0	150	8.5	150	8.4	160	7.3	150	7.3	150	8.0	150	8.0	150	7.5	130	8.6	130	8.6	130	8.2	8.2	
19	140	7.2	120	7.3	120	8.1	120	9.1	110	8.5	100	7.2	100	6.7	100	6.9	120	7.2	90	6.8	120	9.5	80	8.5	8.5	
20	310	3.8	320	4.3	320	4.4	320	4.7	310	3.9	310	4.3	310	4.0	310	5.0	290	5.0	300	4.6	310	5.1	310	6.6	6.6	
21	280	3.0	280	3.3	280	1.1	270	3.0	260	1.4	230	2.0	240	2.0	280	1.0	300	0.7	...	...	310	1.5	330	0.9	0.9	
22	320	1.0	310	1.4	300	1.0	310	2.3	320	1.9	310	1.7	310	1.2	310	1.3	310	1.0	320	2.7	310	3.0	320	3.0	3.0	
23	310	3.6	310	4.0	310	4.6	310	2.9	310	3.6	300	4.0	310	3.9	300	3.6	310	4.1	310	3.5	310	3.3	310	4.0	4.0	
24	300	1.7	250	0.4	---	0.0	230	1.1	320	1.1	310	0.6	...	...	240	0.6	280	2.3	240	0.8	230	1.9	220	2.5	2.5	
25	230	1.0	270	0.9	260	0.6	190	0.5	...	...	240	0.7	240	2.0	210	1.9	220	1.8	250	2.3	260	2.6	280	0.6	0.6	
26	300	3.2	300	1.7	280	2.9	290	2.0	290	1.0	290	1.8	310	1.1	300	2.0	220	0.8	230	1.0	300	4.4	290	3.6	3.6	
27	330	2.6	340	3.5	340	3.1	350	3.5	340	3.4	350	4.4	350	3.5	340	3.3	340	2.9	340	2.4	350	2.7	360	2.5	2.5	
28	310	2.0	290	2.5	310	2.3	300	1.6	320	0.8	---	0.0	---	0.0	310	0.1	310	1.0	320	0.5	250	0.9	240	2.5	2.5	
29	230	0.5	...	...	---	0.0	...	...	210	0.5	200	0.2	200	0.1	220	1.8	200	1.6	210	1.1	210	1.2	200	2.1	2.1	
30	260	0.4	190	0.5	330	0.7	220	1.8	60	0.4	240	0.2	220	0.9	220	1.8	180	0.4	210	2.2	190	1.9	190	1.9	1.9	
Mean	---	3.1	---	3.2	---	3.2	---	3.4	---	3.1	---	3.1	---	3.3	---	3.5	---	3.5	---	3.6	---	4.0	---	4.1	4.1	

150 ABERDEEN: H<sub>a</sub> = 24 metres + 13 metres

Day	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s
1	290	1.8	300	2.8	310	1.7	300	0.4	300	0.9	300	2.4	310	2.3	300	2.5	310	2.4	300	1.8	300	2.0	300	2.7	2.7			
2	300	2.5	310	3.1	320	4.1	330	2.5	350	3.1	340	2.5	340	3.3	350	4.2	350	4.4	350	5.0	360	5.0	360	5.1	5.1			
3	360	6.3	350	7.2	360	7.0	350	5.6	350	5.6	360	5.0	360	4.6	360	6.3	360	5.8	340	5.1	340	5.3	350	4.7	4.7			
4	310	0.4	310	1.5	310	0.2	240	0.2	250	0.3	---	0.0	230	0.6	220	1.5	220	1.6	210	2.1	220	3.0	220	3.2	3.2			
5	240	0.7	240	1.0	240	1.0	240	0.5	280	0.5	...	...	240	0.3	300	1.1	300	1.0	280	0.3	290	0.3	250	0.1	0.1			
6	140	7.3	140	8.2	140	7.5	140	6.2	130	6.9	130	6.1	130	6.4	130	5.5	130	5.9	110	5.0	120	4.9	120	5.6	5.6			
7	310	2.3	310	2.9	320	2.9	330	2.9	330	3.2	330	3.5	330	4.5	330	5.3	330	5.3	340	5.0	340	4.5	340	4.8	4.8			
8	90	5.2	80	4.3	120	6.1	120	5.3	130	5.4	120	6.9	130	4.9	150	3.2	120	4.7	130	5.1	120	8.1	130	6.8	6.8			
9	80	3.1	70	2.9	60	2.5	40	1.1	100	4.6	90	4.5	80	5.5	70	4.5	70	4.8	70	3.0	70	3.4	70	2.7	2.7			
10	230	1.3	290	0.6	280	0.8	310	1.5	310	1.3	230	0.6	230	0.3	160	3.6	160	5.1	140	5.0	160	5.4	140	5.6	5.6			
11	80	8.2	80	7.5	80	7.6	70	6.7	70	6.6	40	5.0	10	4.4	360	6.1	80	9.1	80	8.3	70	8.1	70	7.1	7.1			
12	340	5.3	320	6.2	320	6.5	320	7.0	330	6.7	320	5.4	320	6.3	320	5.5	320	4.8	310	5.5	320	4.9	310	5.9	5.9			
13	300	3.3	310	2.6	310	2.9	300	4.0	300	4.0	310	3.3	320	3.3	310	3.0	320	2.8	330	1.2	320	3.6	330	2.6	2.6			
14	360	4.4	10	4.6	360	5.9	360	5.9	360	6.1	10	6.9	360	6.4	360	7.0	360	7.3	350	8.3	350	8.0	360	8.6	8.6			
15	330	6.1	320	5.0	330	6.6	320	7.9	320	8.4	310	8.6	310	9.1	310	8.4	300	8.4	310	6.4	310	8.4	310	6.9	6.9			
16	50	4.9	30	4.0	360	2.5	340	4.6	340	3.3	330	3.3	320	5.0	330	5.6	320	5.2	320	4.3	330	5.5	320	5.2	5.2			
17	360	5.1	360	5.0	360	5.4	350	6.3	340	4.5	340	4.5	330	4.1	320	5.0	330	5.6	320	4.7	320	6.1	320	5.5	5.5			
18	310	5.1	310	4.8	310	3.9	300	3.9	300	3.6	300	3.9	300	3.4	300	3.2	300	2.9	300	2.1	290	0.9	270	0.5	0.5			
19	310	0.1	---	0.0	---	0.0	320	0.7	320	0.3	300	0.5	---	0.0	250	0.6	...	...	---	0.0	---	0.0	---	...	...			
20	...	...	...	...	230	1.4	220	1.4	210	1.1	230	1.4	240	1.0	230	1.5	210	1.1	220	0.4	210	1.3	200	1.5	1.5			
21	180	9.5	180	8.3	180	8.3	180	9.0	170	8.9	170	9.5	180	9.0	180	9.0	180	8.6	180	9.0	180	8.5	180	8.0	8.0			
22	190	4.3	190	5.5	200	5.4	200	3.4	180	2.5	170	2.0	180	4.1	170	3.4	180	3.3	170	2.9	170	3.5	170	3.5	3.5			
23	220	2.4	250	1.5	240	2.0	240	2.3	250	2.8	230	0.4	240	2.5	220	2.0	240	0.3	250	0.6	240	2.9	240	2.0	2.0			
24	170	3.5	180	4.1	180	5.2	190	6.5	190	6.6	180	3.5	190	6.9	190	5.8	190	4.5	180	3.8	190	2.6	180	4.7	4.7			
25</																												

WIND: DIRECTION AND SPEED

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

M.S.L. + h<sub>a</sub> (height of anemometer above ground) = 24 metres + 13 metres

NOVEMBER, 1937

12 - 13		13 - 14		14 - 15		15 - 16		16 - 17		17 - 18		18 - 19		19 - 20		20 - 21		21 - 22		22 - 23		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			
180	0.0	180	0.0	180	0.0	180	0.0	180	0.0	180	0.0	180	0.0	180	0.0	180	0.0	180	0.0	180	0.0	180	0.0	180	0.0	0.5	1
180	4.5	180	4.5	200	4.5	180	3.9	180	2.6	180	1.9	180	3.0	190	3.8	180	4.6	180	4.6	180	4.0	180	4.9	180	4.9	2.8	2
190	5.3	180	3.5	170	3.1	200	3.7	190	3.9	200	2.5	210	2.9	200	3.5	210	2.5	190	4.2	190	4.4	190	2.3	190	2.3	4.8	3
180	6.8	180	7.2	180	6.3	180	5.1	190	3.1	180	5.5	180	4.7	170	6.0	170	6.4	170	6.7	180	7.2	180	8.0	180	8.0	5.7	4
230	3.0	240	2.1	330	1.5	340	1.9	360	1.1	10	0.1	---	0.0	320	0.2	320	1.3	320	1.2	330	1.0	320	1.6	320	1.6	3.0	5
170	3.5	180	3.0	180	2.7	180	2.8	170	2.7	160	2.8	180	2.6	170	3.4	180	2.5	180	3.0	180	1.6	210	0.6	210	0.6	1.8	6
190	1.5	180	1.9	180	1.4	180	1.0	180	1.9	190	1.9	190	1.6	200	1.6	230	0.1	220	0.1	200	0.2	190	0.4	190	0.4	1.3	7
340	4.0	340	4.3	330	3.9	320	3.9	320	3.6	320	4.6	320	3.0	320	4.0	310	3.5	320	5.3	310	4.3	320	5.4	320	5.4	2.9	8
340	7.5	350	5.6	340	7.0	340	7.6	340	7.2	340	6.9	340	7.9	340	6.9	340	6.9	340	5.0	340	6.0	340	6.4	340	6.4	6.3	9
350	7.8	350	6.9	340	6.5	340	5.1	350	5.4	350	4.4	350	3.6	350	3.2	350	3.6	340	3.4	330	2.5	330	3.5	330	3.5	5.5	10
310	6.5	310	7.1	310	4.8	310	3.5	310	3.7	290	3.0	310	4.4	300	5.6	300	4.4	310	4.5	310	4.7	300	4.4	300	4.4	4.4	11
310	5.0	330	5.2	320	4.4	330	4.9	330	3.7	330	4.2	330	5.1	340	5.1	310	4.1	310	4.4	300	5.6	310	5.1	310	5.1	4.5	12
330	5.0	310	4.3	330	5.2	320	3.7	330	3.1	310	4.9	330	3.4	340	4.8	330	5.0	310	4.0	310	3.5	320	2.5	320	2.5	5.0	13
300	6.0	310	5.5	320	4.7	320	5.1	320	4.5	310	5.9	310	5.1	310	4.8	310	5.4	320	4.3	320	3.8	320	3.0	320	3.0	4.7	14
330	2.4	330	1.9	330	0.8	320	0.5	300	0.6	310	0.5	300	0.7	...	...	320	1.2	---	0.0	---	0.0	...	...	...	...	1.6	15
200	0.6	230	0.7	220	1.8	230	1.3	250	0.1	---	0.0	320	0.3	...	...	150	3.0	160	3.0	170	6.1	170	7.5	170	7.5	1.2	16
160	9.6	160	9.4	150	9.5	150	9.1	160	9.9	160	9.1	150	9.2	150	9.5	150	9.4	150	9.1	150	9.1	150	8.6	150	8.6	8.6	17
130	7.6	140	7.0	140	6.9	140	6.8	140	7.3	140	7.5	130	7.1	150	6.0	150	5.0	140	5.9	130	6.0	130	7.4	130	7.4	7.4	18
80	6.4	70	5.6	90	5.9	80	5.0	70	5.5	50	4.3	50	5.0	350	3.6	340	3.0	40	1.9	320	1.6	310	2.3	310	2.3	6.0	19
310	7.1	290	5.4	300	5.5	290	4.9	310	5.1	310	6.1	290	4.5	280	4.9	300	5.2	300	5.4	310	6.3	300	2.4	300	2.4	4.9	20
310	0.1	210	1.3	240	1.5	---	0.0	270	0.3	270	0.1	320	0.7	320	0.1	320	0.1	310	1.1	320	1.4	310	1.1	310	1.1	1.2	21
310	2.4	310	2.6	310	2.7	310	2.4	310	2.4	310	3.1	310	2.4	300	1.4	310	2.1	310	3.2	310	3.6	310	3.5	310	3.5	2.2	22
310	3.6	310	4.0	310	3.6	310	3.4	310	3.0	310	3.2	310	3.4	310	2.9	310	3.1	310	2.7	300	1.9	300	2.0	300	2.0	3.4	23
210	2.4	190	1.8	200	1.5	230	1.6	240	1.5	240	2.2	230	1.8	230	1.0	200	1.1	210	1.9	230	2.1	230	1.4	230	1.4	1.4	24
290	5.6	270	2.5	280	5.0	280	4.2	290	3.6	290	4.5	280	3.1	280	3.6	310	3.9	280	2.3	300	1.8	320	3.4	320	3.4	2.5	25
260	2.0	300	4.7	290	3.6	300	5.2	300	3.6	310	3.9	320	5.0	330	5.4	330	5.9	330	5.6	330	3.2	350	3.8	350	3.8	3.2	26
340	2.4	340	2.1	340	3.0	340	2.4	340	2.0	330	2.0	330	1.9	310	1.7	310	2.2	310	2.0	310	2.0	310	2.3	310	2.3	2.7	27
230	2.2	220	2.9	220	3.5	230	2.9	230	2.1	230	2.1	230	2.0	230	2.5	230	3.6	220	4.0	220	4.1	220	2.8	220	2.8	2.0	28
220	3.1	210	4.2	200	3.3	190	3.4	210	3.1	200	1.9	210	2.4	200	1.9	200	0.7	180	3.1	170	2.5	150	0.9	150	0.9	1.7	29
190	2.0	190	2.0	170	1.9	200	2.6	200	2.5	190	1.4	200	1.1	200	1.0	220	1.6	230	1.5	310	0.1	280	0.5	280	0.5	1.3	30
---	4.2	---	4.0	---	3.9	---	3.6	---	3.3	---	3.3	---	3.3	---	3.3	---	3.4	---	3.4	---	3.4	---	3.3	---	3.5		

DECEMBER, 1937

310	2.9	310	3.0	310	3.0	310	2.9	300	1.1	280	0.8	290	1.6	300	1.5	300	1.9	300	2.4	300	2.4	300	2.3	300	2.3	2.1	1
360	6.8	360	6.0	10	5.3	360	5.6	360	6.0	360	6.1	350	6.7	360	6.2	360	6.7	360	6.5	350	6.7	350	7.2	350	7.2	5.0	2
10	4.9	360	4.0	360	3.7	20	5.0	340	2.0	330	1.8	340	3.0	360	2.5	320	2.0	310	2.5	310	2.0	310	1.9	310	1.9	4.3	3
220	2.7	210	2.3	200	1.4	210	0.8	220	1.2	260	0.2	310	0.1	310	0.5	310	0.9	290	1.4	290	1.9	280	2.0	280	2.0	1.3	4
290	0.3	270	0.6	---	0.0	320	0.6	230	1.1	190	0.9	200	3.0	140	9.5	140	8.3	140	9.0	140	7.4	140	7.2	140	7.2	2.3	5
110	6.6	110	6.1	110	4.3	100	4.0	100	4.0	100	3.1	110	2.6	100	1.0	70	0.5	320	1.0	330	1.4	320	1.8	320	1.8	4.7	6
340	3.9	330	4.8	330	5.2	340	3.9	330	4.6	330	4.9	340	4.9	340	4.4	310	2.0	310	2.0	110	4.2	110	5.6	110	5.6	4.1	7
120	6.7	110	6.6	120	7.0	110	8.0	110	7.4	110	6.9	100	5.9	100	5.5	100	4.0	90	3.8	90	2.1	90	2.0	90	2.0	5.5	8
80	3.1	310	2.1	350	2.0	330	2.0	310	3.0	70	1.6	310	0.9	320	1.0	320	1.0	310	0.9	150	3.4	220	1.6	220	1.6	2.7	9
130	5.4	130	6.0	130	6.6	120	7.3	120	7.9	120	8.9	110	7.1	100	6.6	100	7.1	100	7.5	110	8.7	100	8.6	100	8.6	4.9	10
70	6.4	50	5.8	40	5.0	10	5.5	360	4.8	360	4.9	360	5.5	340	6.9	350	6.9	340	5.5	340	4.9	340	6.0	340	6.0	6.4	11
310	6.0	310	5.6	310	5.3	310	4.6	310	4.5	290	4.4	300	4.5	310	2.6	310	2.6	310	3.1	310	2.0	310	1.6	310	1.6	4.9	12
60	3.9	70	5.4	60	5.6	60	6.6	60	6.8	50	6.7	40	7.1	30	8.5	20	7.8	10	6.1	10	6.0	360	5.9	360	5.9	4.7	13
20	3.6	350	3.0	350	3.5	350	3.6	340	4.6	340	6.4	330	6.5	330	7.0	320	7.0	320	6.2	330	5.4	330	6.3	330	6.3	5.9	14
310	6.0	310	5.8	310	5.2	300	2.3	310	3.9	320	3.9	330	3.4	340	3.3	350											

151 ABERDEEN: H<sub>a</sub> = 24 metres + 13 metres

Day	Jan.		Feb.		Mar.		Apr.		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	19.8	3 5	15.6	1 40	21.7	23 0	13.4	2 15	11.0	19 40	16.7	18 20	6.9	16 20	5.9	12 10	17.1	8 40	11.5	23 15	4.2	1 20	6.0	14 5
2	21.0	22 25	11.5	19 40	18.6	2 5	11.9	17 25	13.5	13 10	13.8	10 45	16.8	15 45	7.0	17 20	14.1	15 5	12.4	0 25	10.7	13 30	17.1	12 40
3	19.8	9 5	8.7	16 50	14.1	1 5	7.4	18 30	10.4	8 45	15.5	13 45	12.9	1 45	4.2	20 40	16.4	13 20	6.7	0 45	15.7	7 15	17.4	0 45
4	19.0	21 15	16.4	17 55	12.9	8 10	7.9	0 10	7.5	13 50	9.1	15 00	14.0	10 10	11.1	11 5	14.1	2 10	10.2	9 35	15.8	21 20	7.7	10 40
5	20.0	5 40	20.2	20 35	16.0	9 10	8.0	22 15	13.6	15 0	11.5	11 25	15.4	12 45	5.8	13 25	16.7	3 5	10.6	12 55	14.1	0 15	18.5	19 10
6	12.0	15 45	17.7	12 50	10.4	1 50	12.2	18 35	8.9	0 1	12.0	14 30	9.3	4 20	10.5	16 10	19.8	13 20	8.8	12 20	9.1	21 15	15.6	0 35
7	23.4	17 10	7.0	4 35	8.6	5 15	10.8	8 25	6.5	11 20	14.2	15 20	8.7	18 55	14.2	15 25	12.1	11 5	6.0	1 5	7.3	10 10	13.2	23 5
8	15.6	22 45	16.9	10 5	11.3	12 50	8.5	12 15	8.6	16 40	14.4	15 45	8.4	18 15	12.1	11 5	24.2	9 55	8.1	0 35	12.4	23 35	18.1	10 30
9	16.5	2 30	19.1	16 10	7.6	20 50	14.8	12 45	6.9	0 15	13.8	15 00	8.2	8 40	6.1	15 55	19.1	14 25	7.5	13 45	19.8	11 15	12.0	5 0
10	16.7	14 15	18.9	1 5	14.2	21 15	16.2	11 5	8.2	16 55	16.7	9 20	12.9	9 45	6.6	14 30	22.3	12 55	16.5	11 25	17.7	3 50	19.4	23 15
11	18.6	23 55	18.9	13 40	14.7	23 30	12.5	0 55	8.3	10 40	9.9	9 10	6.7	13 45	13.1	17 5	15.5	8 15	13.1	6 15	14.9	13 20	20.4	8 25
12	24.1	7 30	13.0	17 40	15.6	1 15	10.5	17 25	8.1	11 0	7.6	16 30	12.6	19 30	8.4	17 40	7.0	23 40	11.2	2 45	12.4	15 50	11.8	4 20
13	13.0	11 40	17.9	21 10	15.3	21 35	9.5	15 35	12.8	15 30	11.1	15 0	11.3	13 20	12.6	12 25	11.1	5 30	8.9	23 50	14.8	1 5	17.9	19 10
14	10.8	17 55	12.6	0 20	19.1	23 0	6.9	3 0	11.2	9 30	9.0	10 50	13.6	16 40	12.4	17 40	12.5	20 30	9.1	1 10	11.9	12 50	22.0	11 40
15	23.9	17 50	19.4	23 30	20.2	0 40	9.9	23 45	10.2	17 5	13.1	9 55	10.2	2 45	11.3	10 20	13.5	1 30	11.8	14 35	10.6	5 45	16.7	8 0
16	21.1	4 20	15.2	10 50	21.5	19 10	11.1	0 1	6.7	14 10	13.9	15 20	14.2	8 10	10.7	22 5	11.1	14 45	15.5	9 40	13.6	23 10	14.8	21 20
17	27.5	17 25	13.1	12 50	21.9	1 15	8.1	17 30	5.8	0 15	18.1	8 35	11.0	18 35	15.1	12 25	6.8	3 25	10.8	12 50	21.8	18 30	16.0	3 10
18	26.1	2 30	16.5	11 15	16.5	3 40	11.1	3 20	13.5	17 35	17.4	8 45	11.3	12 50	11.6	22 0	9.5	11 45	9.4	14 55	21.2	1 5	8.9	1 45
19	8.9	21 30	15.9	0 35	5.4	15 45	14.1	13 45	12.9	1 30	11.0	7 15	11.7	12 0	20.3	15 20	10.4	12 30	19.5	12 35	19.1	2 25	4.6	19 30
20	26.8	21 55	21.4	11 0	10.3	18 30	7.0	23 55	7.6	14 0	9.4	10 20	11.8	15 55	16.6	0 15	14.6	10 45	9.6	9 25	14.5	11 25	18.4	18 15
21	29.9	0 55	14.9	13 10	16.4	9 30	13.2	16 50	16.5	11 15	13.5	17 35	14.9	7 20	6.2	13 45	11.8	14 15	6.0	21 55	7.1	0 25	19.0	7 20
22	29.2	6 50	16.6	11 40	19.6	0 20	14.0	13 50	11.9	8 20	18.6	8 35	12.7	20 25	10.8	12 15	10.6	8 10	14.6	13 15	6.1	23 55	17.4	13 45
23	16.4	21 10	17.4	1 35	7.9	16 0	13.0	1 30	19.9	13 0	18.4	9 30	13.1	6 20	8.9	17 40	14.0	24 0	10.0	23 55	7.3	12 30	10.8	15 25
24	26.4	18 25	18.9	22 40	22.1	18 25	6.6	17 15	8.0	19 30	10.8	16 20	14.9	23 45	13.2	11 55	19.0	5 0	15.0	11 0	5.9	8 45	15.9	11 50
25	24.5	18 40	21.0	15 50	22.4	9 35	15.1	13 40	14.5	14 15	9.1	23 15	19.3	12 40	10.6	10 20	10.1	13 30	16.5	14 35	14.0	12 50	8.9	16 50
26	22.4	0 15	17.3	2 20	18.1	12 35	14.3	10 55	12.1	14 45	10.8	8 15	17.0	2 45	8.6	10 30	10.2	14 0	18.0	19 50	13.0	21 55	10.8	4 30
27	20.0	21 20	20.1	15 35	20.8	9 30	10.6	11 45	13.5	18 0	12.1	8 30	10.6	9 50	12.3	17 55	11.7	15 55	10.6	5 35	9.1	6 0	8.0	4 10
28	22.4	15 30	25.0	2 0	11.4	10 40	9.2	18 20	11.8	16 0	20.4	15 35	10.6	7 40	10.5	15 35	17.9	10 20	14.6	13 5	8.9	21 45	4.9	3 10
29	20.0	20 45	-	-	10.1	8 50	5.6	15 15	13.5	14 20	19.2	12 30	8.0	7 5	10.9	7 40	9.7	17 35	10.9	21 50	8.9	13 15	4.9	13 50
30	24.2	16 15	-	-	18.3	19 0	14.0	14 30	15.2	13 40	13.4	8 45	10.3	15 35	6.4	23 55	14.3	7 10	11.7	13 5	7.3	7 5	6.9	14 10
31	24.6	8 20	-	-	21.8	8 55	-	-	15.4	13 10	-	-	6.3	0 1	13.5	21 45	-	-	8.4	1 5	-	-	8.9	19 20

DISTRIBUTION OF WIND SPEED: EXTREME VELOCITIES AS RECORDED BY THE DINES PRESSURE TUBE ANEMOMETER

152 ABERDEEN: H<sub>a</sub> = 24 metres + 13 metres Tube Anemometer

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	Year From N	Speed	Hour ended	Speed	Date	
Jan. ...	-	0	16	120	323	246	55	0	150	14	21 1	30	21 0 55	
Feb. ...	-	0	2	4	286	322	60	0	300	11	20 14	25	28 2 0	
Mar. ...	-	0	5	8	306	349	81	0	120	12	16 23	22	25 9 35	
Apr. ...	-	0	-	0	73	458	189	0	340	8	26 10	16	10 11 5	
May ...	-	0	-	0	70	455	219	0	190	9	23 13	20	23 13 0	
June ...	-	0	-	0	179	418	123	0	320	10	29 13	20	28 15 35	
July ...	-	0	-	0	113	436	195	0	330	10	25 12	19	25 12 40	
Aug. ...	-	0	1	1	72	389	282	0	330	11	19 16	20	19 15 20	
Sept. ...	-	0	2	5	127	455	133	0	290	13	8 12	24	8 9 55	
Oct. ...	-	0	-	0	61	455	228	0	210	9	19 13	19	19 12 35	
Nov. ...	-	0	-	0	153	389	178	0	160	10	17 17	22	17 18 30	
Dec. ...	-	0	-	0	181	416	147	0	( 140 ( 180	9	( 5 20 ( 21 1	22	14 11 40	
Year. ...	-	0	26	138	1944	4788	1890	0	150	14	Jan. 21 1	30	Jan. 21 0 55	

TEMPERATURE IN THE GROUND AT DEPTHS OF 30CM. (1 Foot) AND 122CM. (4 feet)  
Readings, in degrees absolute, at 9h Greenwich Mean Time

Day	Jan.		Feb.		Mar.		Apr.		May		June		July		Aug.		Sept.		Oct.		Nov.		Dec.	
	30cm	122cm	30cm	122cm	30cm	122cm	30cm	122cm	30cm	122cm	30cm	122cm	30cm	122cm	30cm	122cm	30cm	122cm	30cm	122cm	30cm	122cm	30cm	122cm
1	77.4	78.0	76.0	77.3	75.1	76.5	76.8	76.9	82.3	79.8	85.2	82.5	85.9	84.5	88.0	85.9	87.0	86.1	85.0	84.9	81.6	82.7	78.0	79.9
2	76.8	78.0	76.0	77.2	75.3	76.5	77.0	76.9	82.6	80.0	84.5	82.7	86.1	84.4	88.3	85.9	87.1	86.1	84.8	84.9	82.0	82.6	78.1	79.8
3	76.7	78.0	76.0	77.1	75.6	76.5	77.1	77.0	82.3	80.0	84.0	82.8	86.8	84.5	88.1	85.9	87.0	86.1	85.0	84.9	82.2	82.6	78.0	79.8
4	77.0	78.0	76.4	77.2	76.0	76.4	77.4	77.0	82.2	80.1	83.9	82.9	86.1	84.6	88.2	86.0	86.8	86.1	84.9	84.9	82.0	82.6	77.8	79.7
5	77.0	78.0	76.7	77.2	76.1	76.4	77.5	77.0	82.1	80.2	84.6	82.9	85.9	84.7	88.0	86.0	86.7	86.0	84.2	84.8	82.0	82.6	77.4	79.7
6	76.5	78.0	76.5	77.3	76.0	76.5	77.6	77.1	81.7	80.5	85.8	82.9	86.3	84.6	88.6	86.1	86.7	86.0	83.9	84.8	82.0	82.6	76.8	79.6
7	76.3	78.0	76.0	77.2	75.9	76.6	77.8	77.1	82.1	80.5	86.0	83.0	86.9	84.6	88.6	86.1	86.7	86.0	84.0	84.7	82.0	82.5	76.5	79.5
8	76.2	78.0	75.6	77.3	75.6	76.6	78.0	77.4	82.3	80.5	86.3	83.0	86.8	84.7	88.3	86.2	86.2	86.0	84.0	84.5	82.1	82.5	76.3	79.3
9	76.3	77.9	75.6	77.2	75.3	76.6	78.9	77.5	82.2	80.5	86.1	83.1	86.5	84.8	87.8	86.2	86.0	86.0	84.1	84.5	81.6	82.5	76.2	79.0
10	77.0	77.8	75.5	77.1	75.4	76.6	79.3	77.5	82.1	80.6	86.3	83.2	86.3	84.8	87.5	86.3	85.5	85.9	84.0	84.5	80.9	82.5	76.1	79.0
11	77.2	77.8	75.3	77.0	75.2	76.6	79.5	77.7	82.1	80.8	86.7	83.2	86.2	84.9	87.7	86.3	85.1	85.9	83.9	84.3	80.4	82.4	76.0	78.9
12	77.6	77.8	75.1	77.0	75.1	76.4	79.5	77.9	82.5	80.8	86.1	83.5	86.6	84.9	88.0	86.2	85.0	85.7	84.0	84.3	80.2	82.2	75.8	78.6
13	78.0	77.9	75.0	76.9	75.1	76.4	79.9	78.0	82.9	80.9	86.0	83.6	86.8	84.9	88.1	86.1	84.9	85.6	83.7	84.2	79.8	82.1	75.6	78.6
14	77.4	78.0	75.5	76.9	75.0	76.5	79.8	78.1	83.1	80.9	86.2	83.7	87.2	84.9	88.0	86.1	85.0	85.5	83.3	84.2	79.1	82.0	75.2	78.3
15	76.5	78.0	75.9	76.9	75.3	76.4	79.7	78.2	82.8	81.0	86.0	83.9	87.9	85.0	87.4	86.2	85.2	85.4	83.2	84.2	79.1	81.9	75.1	78.0
16	76.1	78.0	76.1	76.9	75.3	76.4	80.0	78.3	82.9	81.1	86.0	83.9	88.4	85.0	87.0	86.1	85.0	85.2	83.2	84.1	79.1	81.7	75.1	78.0
17	76.0	77.9	76.0	76.9	75.2	76.4	80.0	78.4	83.3	81.1	85.7	83.9	88.4	85.1	87.0	86.2	84.9	85.2	83.1	84.0	79.1	81.5	75.3	77.9
18	76.3	77.8	75.8	76.9	75.5	76.5	80.0	78.6	83.9	81.1	85.4	84.0	88.7	85.2	86.9	86.1	84.9	85.1	83.1	84.0	79.0	81.3	75.3	77.8
19	76.5	77.7	75.7	76.9	76.0	76.4	80.0	78.7	84.0	81.2	85.1	83.9	89.0	85.3	86.7	86.1	84.7	85.2	82.9	83.9	79.0	81.1	75.0	77.6
20	76.1	77.7	75.4	76.9	76.7	76.5	80.0	78.9	83.5	81.3	85.2	84.0	88.8	85.4	86.7	86.1	84.7	85.0	82.9	83.9	78.8	81.1	75.0	77.6
21	75.9	77.6	75.3	76.9	76.8	76.5	80.0	79.0	83.2	81.5	85.9	83.9	88.2	85.6	86.7	86.1	84.3	85.0	82.9	83.9	78.3	81.0	75.0	77.5
22	76.3	77.5	75.1	76.9	76.4	76.6	79.9	79.0	82.9	81.7	86.1	84.0	87.6	85.8	87.2	86.0	84.4	85.0	82.9	83.8	77.9	81.0	75.0	77.3
23	77.0	77.4	75.0	76.8	75.9	76.7	80.7	79.0	83.5	81.8	86.0	84.0	87.8	85.8	87.7	86.0	85.1	85.0	82.9	83.7	77.5	80.8	75.0	77.2
24	77.3	77.5	75.0	76.7	75.9	76.7	80.9	79.1	84.0	81.9	85.7	84.1	87.8	85.8	87.9	86.0	85.8	84.9	82.7	83.6	77.2	80.6	75.2	77.2
25	77.9	77.5	75.0	76.7	76.2	76.8	80.9	79.2	84.2	81.9	86.2	84.1	87.5	85.9	87.7	86.0	85.7	85.0	81.9	83.5	77.1	80.3	76.0	77.3
26	77.5	77.5	75.0	76.6	76.1	76.7	80.6	79.2	84.2	82.0	87.0	84.1	87.2	85.9	87.4	86.1	85.2	85.0	81.8	83.5	77.7	80.2	75.9	77.3
27	76.7	77.7	75.2	76.6	76.0	76.7	80.5	79.4	84.5	82.0	87.2	84.1	87.2	84.1	86.9	85.9	87.1	86.1	85.2	85.0	80.9	83.1	78.0	77.3
28	76.5	77.6	75.2	76.6	76.1	76.8	80.4	79.5	84.7	82.2	87.2	84.1	86.9	85.9	87.1	86.1	85.2	85.0	80.9	83.1	78.0	80.0	76.5	77.3
29	76.1	77.6	--	--	76.4	76.8	81.0	79.5	85.0	82.2	86.8	84.5	86.9	85.9	87.5	86.1	84.8	85.0	80.7	83.0	77.2	80.0	76.4	77.4
30	75.7	77.5	--	--	76.5	76.8	81.9	79.6	85.3	82.4	86.1	84.5	86.9	85.9	87.0	86.1	84.8	85.0	81.0	82.9	77.5	80.0	76.0	77.3
31	75.4	77.4	--	--	76.7	76.8	--	--	85.2	82.4	--	--	87.1	85.9	86.9	86.1	--	--	81.6	82.8	--	--	76.0	77.4
Mean	76.7	77.8	75.6	77.0	75.8	76.6	79.4	78.2	83.2	81.1	85.8	83.6	87.2	85.2	87.6	86.1	85.5	85.5	83.2	84.1	79.6	81.6	76.1	78.3
																						Year	81.3	81.3

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

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	76.1	76.7	69.2	75.9	77.8	79.6	76.8	84.1	86.3	81.7	78.0	75.3
2	69.1	69.7	74.3	76.6	76.5	74.7	81.4	83.7	81.9	80.7	82.1	75.0
3	72.3	72.9	73.5	77.4	78.1	72.2	85.9	84.9	81.0	79.2	80.9	74.0
4	79.3	73.2	74.7	77.5	73.6	81.3	81.9	85.4	81.9	76.4	78.3	71.7
5	72.9	75.4	74.1	77.2	73.6	85.8	83.1	84.1	83.7	71.8	81.7	66.3
6	72.9	73.1	72.4	77.2	73.4	84.5	83.9	83.8	79.1	76.9	75.2	73.3
7	70.4	69.1	71.1	77.4	73.3	84.5	85.4	79.4	81.4	76.9	80.7	69.5
8	69.4	69.9	67.6	75.6	79.6	77.7	82.4	83.6	78.8	81.7	75.2	73.6
9	77.4	72.9	69.4	76.5	78.1	78.3	81.8	75.2	78.3	79.2	73.3	72.6
10	78.6	72.9	68.0	79.4	77.7	79.4	83.3	83.4	79.3	76.2	73.9	64.9
11	77.4	71.4	71.7	77.4	77.9	82.4	76.1	79.8	79.0	80.9	74.7	73.1
12	79.6	70.2	71.9	72.4	77.5	81.9	75.4	83.3	77.5	78.6	73.7	70.4
13	79.8	74.6	70.6	77.8	77.9	83.5	84.6	86.1	80.4	79.9	71.9	61.9
14	68.5	70.4	77.7	80.4	83.6	85.8	85.8	85.7	74.9	76.8	72.4	73.0
15	70.3	74.4	72.9	77.4	76.8	81.7	85.4	82.2	82.4	73.6	74.6	73.8
16	75.7	75.8	64.6	77.4	74.6	81.3	84.6	74.2	72.7	79.0	72.8	72.3
17	68.3	69.2	73.8	78.0	76.9	78.5	78.7	83.3	76.8	75.3	73.4	72.7
18	77.8	68.2	75.1	76.7	79.2	79.6	84.8	76.6	76.8	74.1	77.0	71.2
19	73.4	71.9	76.4	71.1	79.6	79.7	78.9	82.1	75.2	71.6	75.2	67.3
20	87.5	71.3	76.2	73.7	80.3	82.2	82.3	82.5	76.9	77.9	71.1	66.8
21	76.8	71.5	72.1	72.9	80.4	77.4	83.7	78.9	73.0	78.5	68.3	74.7
22	76.3	70.5	69.6	69.7	76.7	80.3	79.2	82.4	81.4	79.7	69.6	77.1
23	75.7	72.3	63.1	78.6	80.7	82.0	84.9	80.8	82.1	81.0	69.4	71.7
24	78.6	87.3	69.2	74.5	76.8	75.3	84.2	82.2	86.7	77.1	67.6	75.2
25	77.7	74.1	72.9	72.9	78.8	83.5	83.5	82.4	76.8	70.7	71.9	73.4
26	73.5	72.9	66.9	75.8	76.3	81.6	83.1	79.5	75.3	81.4	77.2	73.6
27	72.6	73.8	72.6	69.4	81.1	79.8	82.4	74.6	81.3	72.7	74.1	75.7
28	74.3	71.3	71.3	72.9	74.6	84.8	82.4	77.9	77.6	68.6	68.3	72.9
29	71.9	--	69.7	80.1	81.6	80.7	75.9	84.2	71.9	71.5	70.7	

155 ABERDEEN

Table for January 1937, Aberdeen. 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 of the table.

156 ABERDEEN

Table for February 1937, Aberdeen. 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 of the table.



159 ABERDEEN

Table for May 1937 with columns for 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 weather observations.

160 ABERDEEN

JUNE, 1937

Table for June 1937 with columns for 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 weather observations.

161 ABERDEEN

JULY, 1937

Table for July 1937 with columns for Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h-21h), Visibility (7h-21h), Precipitation (7h-21h), and Remarks on the Weather of the Day. Includes mean cloud amount at the bottom.

162 ABERDEEN

AUGUST, 1937

Table for August 1937 with columns for Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h-21h), Visibility (7h-21h), Precipitation (7h-21h), and Remarks on the Weather of the Day. Includes mean cloud amount at the bottom.



163 ABERDEEN

Table for September 1-30, Aberdeen. 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.

164 ABERDEEN

OCTOBER, 1937

Table for October 1-31, Aberdeen. 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.

165 ABERDEEN

NOVEMBER, 1937

Table for November 1937 with columns for Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h-21h), Visibility (7h-21h), Precipitation (7h-21h), and Remarks on the Weather of the Day. Includes mean cloud amount and annual cloud amount.

166 ABERDEEN

DECEMBER, 1937

Table for December 1937 with columns for Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h-21h), Visibility (7h-21h), Precipitation (7h-21h), and Remarks on the Weather of the Day. Includes mean cloud amount and annual cloud amount.



M.O. 430.  
(Eskdalemuir)

Air Ministry  
METEOROLOGICAL OFFICE

THE  
OBSERVATORIES' YEAR BOOK  
1937

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

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ESKDALEMUIR

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Published by the authority of the  
METEOROLOGICAL COMMITTEE



LONDON  
HIS MAJESTY'S STATIONERY OFFICE

1939

## 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 Pressure Tube Anemometer				..	250

## Heights in metres above ground

Thermometer Bulbs	..	..	..	..	0.9
Sunshine Recorder	..	..	..	..	1.5
Dines Pressure Tube Anemometer				..	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 number of years, by electric power or traction system. A committee of the Royal Society of London selected a site in the parish of Eskdalemuir, Dumfries-shire, for the new observatory. The nearest towns or industrial centres are Langholm and Lockerbie, distant approximately 16 and 18 miles (26 and 29 km) by road, and there is no point of railroad within 9 miles (14 km) of the Observatory. Installation of the instrumental apparatus commenced in the summer of 1908, the Observatory at that time forming a part of the then recently established National Physical Laboratory.

Although the Observatory was established primarily in the interests of the study of terrestrial magnetism the field of geophysical work undertaken has been considerably wider and has included, almost from the beginning, meteorology, atmospheric electricity (mainly atmospheric potential gradient), and seismology. In the earliest years Milne, Wiechert, Omori, and Galitzin seismographs were in operation, but seismological observations ceased in October, 1925, when the three-component installation of Galitzin seismographs was transferred to Kew Observatory. In 1910 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, 1909-1910. 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 ( $5\frac{1}{2}$  km) north-north-west of Eskdalemuir Parish Church occupies a site of about 10 acres on a rising shoulder of moorland which is bounded on the east by the road leading north to Ettrick and Selkirk, on the west by the small Davington Burn, and at the southern extremity by the small hamlet of Davington.

The hillside in the immediate vicinity of the Observatory slopes generally from the north-west to south-east. The mean height above sea level of the Observatory site is about 800 feet (244 m). Cassock Hill, slightly more than a mile distant to the north-west is 1,205 feet (367 m), while the bench mark at Davington School,  $\frac{1}{4}$  mile (0.4 km) to south east, is 699 feet (213m) 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 m). 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 m) 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) 2,269 feet (698 m) 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 (317m), 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 mainly open grass-covered hills and moorland.

Within the Observatory grounds the surface soil is peaty and in places is more or less boggy at all seasons. Some two feet, or less, below the surface a clay-like formation containing soft rock is encountered. The Local geological formation is described as "rock of the Tarannon Llandoverly 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", 1935. The chief change during 1937 was the topping of trees in the south and south-west parts of the grounds to a height of 20 feet to preserve the general character of the exposure.

## 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, visibility 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 ampli-

fying the information contained therein. References to full accounts of other instruments used at Eskdalemuir appear below.

**Pressure.**- The Fortin Barometer which, after repair, was re-introduced as standard in January 1933 and superseded the standard Kew pattern barometer, was used throughout the year. The two barometers are close together in the north-west ground floor room, which has a small daily range of temperature.

The photographic mercury barograph is situated in the east room of the underground magnet house. The daily range of temperature there is normally less than  $0.05^{\circ}\text{C}$ , the annual range being about  $4^{\circ}\text{C}$ . 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, daily records of pressure were also obtained from a Dines float barograph<sup>1</sup>, and weekly records from an aneroid barograph.

**Temperature.**- The photographic thermograph and the standard mercury 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.12, except that a special enclosure is provided inside the hut to accommodate the optical and photographic arrangements.

The scale values of the thermograph records are  $1^{\circ}\text{A} = 3.064$  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 a weekly psychograph of the bimetallic type. This instrument is situated in the hut which contains the photographic thermograph.

**Humidity.**- In addition to the dry and wet bulb thermographs described above there is a Richard hair hygograph which is also 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  $273^{\circ}\text{A}$ . On the records obtained in 1937 a change of 10 per cent in relative humidity is represented by about  $0.8$  centimetres, the time scale being 1 hour =  $11.4$  mm.

**Rainfall.**- The chief autographic instrument is a Beckley self-registering rain-gauge, which is described on page 13. 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 original instrument which had been in use at Eskdalemuir since 1908 and was originally installed at Fort William in July, 1890 has been replaced by one of later date.

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). The gauge is now heated as

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<sup>1</sup>London, Quart. J. R. Met. Soc., Vol. LV, pp. 37-53, 1929

occasion demands by means of an oil lamp, to melt snow which may be collected.

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

A standard 8-inch (20.3 cm) rain-gauge is situated some 24.5 feet (7.5m) 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.

Auxiliary autographic records of precipitation are obtained by means of a Hellman-Fuess snow-gauge which is situated in a pit 8 feet (2.4 m) wide and almost due north of the 8-inch standard gauge. The pit is 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.

Records of rate of rainfall are obtained by means of a "Jardi" rate of rainfall recorder situated in a pit similar to that containing the Hellman-Fuess snow gauge and situated to the east of it. Until May 8th 1936 the rim of the gauge was approximately 2.5 feet (0.8 m) above the surrounding low wall of earth and turf, and subsequently 0.5 feet (0.1 m) above it.

Sunshine.- The record of sunshine is obtained from a Campbell-Stokes recorder described on p.11. On 15th April 1936 the recorder, which is fixed on a stone pillar, was moved to the top of the underground chambers. It 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, the loss of record occasioned by the neighbouring high ground is relatively small and is confined mainly to the beginning of the day during a few weeks centred about the equinoxes.

Solar Radiation.- As last year, measurements of the intensity of radiation by the Ångström compensating pyrheliometer are not published for 1937.

Wind.- A Dines Pressure Tube Anemometer, furnished with direction recorder, is situated in the main building. The 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.

In August 1933, the anemometer was replaced by one in which the suction and pressure effects are transmitted to the speed recorder by means of copper pipes of 2.5 cm internal diameter, instead of by "compo" tube of 1.3 cm internal diameter.

Apart from the surrounding hills, the exposure of the head is free in all directions save to the west where at a distance of some 130 feet (40 m) is a rather large building, the height of which 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 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 cm (1 foot) and 122 cm (4 feet). In December, 1930, two thermometers graduated in degrees absolute were installed at 1 foot and 4 feet respectively alongside the thermometers graduated in degrees Fahrenheit, the former being retained as spares. The Fahrenheit pair were replaced as standards by the Absolute pair at the beginning of 1931. Comparative readings are available up to April 1937.

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 (4cm) 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 points of observation, are given in the subjoined table. The distances and bearings of objects up to D, excepting A(ii) are with reference to certain of the windows on the upper floor of the main building. Other objects are viewed from the thermometer hut.

The situation of the Observatory allows of only a 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, 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 Finglandsheil, and Cauldkine Hill, the objects more distant than D are below the level of the Observatory. There are no objects at distances which approximate sufficiently closely to the standard distances for objects H, J and K. When it is estimated that the range of visibility is such that objects at these standard distances would be visible the corresponding small letter entries are made in the Diary of Cloud and Weather. The estimates of visibility in the dark depend largely on the judgment of the observer; there are no lights other than those in the Observatory buildings and in two cottages within a radius of one mile.

VISIBILITY OBJECTS AT ESKDALEMUIR

Object		Distance	Bearing
A	(i) Twigs on trees nearest boundary wall in front of main building .. .. .	25 yards	S
	(ii) Small thermometer screen viewed from steps facing back entrance to main building ..	26 "	NNE
	(i) Theodolite pillar .. .. .	55 "	N
B	(ii) Chimney (or cowl) on thermometer hut ..	60 "	NE
C	Posts and shafts on underground magnetograph house	107 "	N
D	Standards on Observatory reservoir .. ..	217 "	NNW
E	(i) Church and Manse, Davington .. .. .	550 "	SE
	(ii) (Davington Farm House) .. .. .	470 "	SSE
F	(i) Chimneys at Purncleuch .. .. .	1180 "	SSE
	(ii) (Cottage at Finglandshiel) .. .. .	1550 "	NE
G	Trees at Garwaldwaterfoot .. .. .	2160 "	SSE
H (h)	(Lower slope of Raeburn Hill) .. .. .	2 miles	SSE
I	Hart Manor .. .. .	4 miles	SSE
J (j)	(Cauldkine Hill, 1,478 feet, near Westerkirk, not clearly visible) .. .. .	10½ "	SSE
K (k)	(Cauldkine Hill, plainly visible) .. .. .		
L (l)	No objects available .. .. .		
M (m)	No objects available .. .. .		

Note:- The descriptions of auxiliary objects and guiding criteria are given in brackets.

IDENTIFICATION NUMBERS OF INSTRUMENTS IN USE IN 1937

Standard Fortin Barometer .. .. .	M.O.	1716/27
Standard Dry Bulb Thermometer .. .. .	M.O.	19123
Standard Wet Bulb Thermometer .. .. .	M.O.	1695
Maximum Thermometer .. .. .	M.O.	50156/34
Minimum Thermometer .. .. .	M.O.	60248/33
Hair Hygograph .. .. .	M.O.	59
Recording Beckley Rain-gauge .. .. .	M.O.	4
Jardi Rate of Rainfall Recorder .. .. .	M.O.	1
Control Rain-gauge .. .. .	M.O.	336/30
Control Rain-gauge, glass for .. .. .	M.O.	1558
Campbell-Stokes Sunshine Recorder .. .. .	M.O.	99
Ångström compensating Pyrheliometer .. .. .		116
Dines Pressure Tube Anemometer .. .. .		1019, 1081
Grass Minimum Thermometer .. .. .	M.O.	7
Earth Thermometer, 1 Ft. .. .. .	M.O.	24009
" " 4 Ft. .. .. .	M.O.	4

CORRECTIONS OF INSTRUMENTS IN USE IN 1937

The corrections which have been applied to the observations during 1937 are given below. In all cases the corrections are those given in the certificate of examination issued by the National Physical Laboratory. The date on which each of the instruments mentioned was brought into use is also given.

Fortin Barometer, M.O. 1716/27, Jan. 15, 1932

at	880	910	940	970	1000	1030	1050	mb
	-0.10	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	

Attached thermometer, No. 5592, Jan. 15, 1932

at	273	278	283	288	293	298	303	°A
	-0.1	-0.2	-0.2	-0.4	-0.3	-0.2	-0.2	

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

at	263	268	273	278	283	288	293	298	303°A
	+0.2	+0.1	0.0	0.0	0.0	-0.1	-0.1	-0.1	-0.1

Wet Bulb Thermometer, M.O. 1695. May 17th, 1930

at	253	263	273	283	293	303	313 °A
	0.0	0.0	-0.1	0.0	0.0	0.0	0.0

Grass Minimum Thermometers, M.O. 23002 to May 31st, 1936

at	253	263	273	283	293	303	° A
	-0.1	-0.1	0.0	0.0	0.0	-0.1	

and M.O. 7. from June 1st, 1936

at	263	273	283	293	303	°A
	-0.2	0.0	-0.1	+0.1	0.0	

Earth Thermometer 1 Ft. M.O. 24009 - No corrections

4 Ft. M.O. 4, from 260 to 310°A, + 0.1.

#### 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 except during the period July 14, 1931 to January 14, 1933 when it was under repair. Before this date from 16th December 1913 and during the absence of the Fortin, a Kew pattern barometer M.O. 1320 by J. Hicks, London, was the standard instrument.

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. certificates are reproduced above. The corrections for temperature for the barometer are those given in the "International Meteorological Tables" for a Fortin barometer.

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

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

where  $\lambda$  = latitude

$z$  = height of the station

$E$  = earth's radius

are as follows:-

at reading of	900	920	940	960	980	1000	1020	1040	mb
	+·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 "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 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 1930, unless otherwise stated.

Pressure (Mean Values).-- The mean pressure for the year was below normal, the deficiency being 0.8 mb. The monthly means were below normal in each of the months January, February, March, April, July and September, that for February being lower than for any previous February. The extreme instantaneous values recorded were 1010.0 mb on December 27 and 946.5 mb on February 27. The greatest and least mean daily values were 1009.4 mb on December 28, and 948.4 mb on February 27. The largest range during a calendar day was 28.4 mb on January 7. The mean value of the absolute daily range varied between 9.8 mb in January and 4.4 mb in May. The annual mean daily range was below normal.

Pressure (Diurnal Variation).-- The normal diurnal inequality for each month has two maxima: in the late forenoon and (usually) an hour or two before midnight; the two minima occur in the early morning and afternoon. In all months, except January, February and November, the night maximum of the mean inequalities of the period 1911-20 is the larger. During 1937 the larger maximum occurred in the forenoon in February, August, September, November and December. The principal minimum in the means for 1911-20 is the afternoon one except in February, March, August and November, but during 1937 it occurred in the early mornings of January, February, July and September. Compared with the mean diurnal inequality for 1911-20<sup>(1)</sup>, in 1937 the late forenoon

(1) "On the Diurnal Variation of Atmospheric Pressure at Eskdalemuir and Castle O'er, Dumfries-shire," by A. Crichton Mitchell, D.Sc., London, Quart. J.R. Met. Soc. Vol. L, No. 210, April, 1924

crest is enhanced, while the night crest is diminished.

The results of the harmonic analysis of the monthly and seasonal mean diurnal inequalities for 1937 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 coefficients for 1937 the unit employed was .001 mb. Although for 1937, 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 for the months and seasons of a single year. The phase angles  $\alpha_1$  etc., given in the table below refer to Local 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. The value of  $c_1$  is noticeably high for February, while that of  $c_2$  for the equinox, summer, winter and year differ little from normal. The variations in the 8-hour term from month to month are fairly normal, the amplitude being largest in winter months and least at the time of equinoctial phase transition.

HARMONIC COEFFICIENTS OF THE DIURNAL INEQUALITY OF ATMOSPHERIC PRESSURE

ESKDALEMUIR, LONGITUDE 3° 12' W.

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

Month and Season	$c_1$		$\alpha_1$		$c_2$		$\alpha_2$		$c_3$		$\alpha_3$		$c_4$		$\alpha_4$	
	1937	1911-20	1937	1911-20	1937	1911-20	1937	1911-20	1937	1911-20	1937	1911-20	1937	1911-20	1937	1911-20
	mb.	mb.	°	°	mb.	mb.	°	°	mb.	mb.	°	°	mb.	mb.	°	°
Jan.	.23	.09	165	346	.25	.23	173	152	.14	.13	360	345	.08	.05	244	214
Feb.	.34	.12	279	215	.25	.27	163	138	.11	.08	5	341	.06	.04	74	68
Mar.	.10	.13	111	185	.27	.30	148	145	.05	.05	328	335	.05	.05	20	25
Apr.	.18	.21	50	92	.30	.30	163	155	.02	.02	235	156	.05	.05	7	356
May	.32	.23	84	53	.26	.27	160	147	.09	.07	173	160	.01	.03	280	330
June	.15	.15	57	54	.21	.23	143	146	.09	.08	163	161	.01	.02	206	326
July	.14	.17	158	69	.19	.21	146	141	.08	.08	163	156	.02	.02	337	300
Aug.	.15	.11	342	115	.27	.24	143	148	.10	.06	161	157	.04	.05	331	331
Sept.	.13	.12	230	88	.29	.31	142	152	.03	.01	70	111	.07	.05	351	345
Oct.	.20	.11	57	76	.31	.31	169	159	.07	.06	5	8	.04	.04	46	33
Nov.	.14	.13	63	183	.34	.24	156	168	.13	.10	359	9	.00	.01	322	146
Dec.	.25	.14	33	97	.22	.21	161	147	.12	.12	1	4	.05	.07	230	213
Arithmetic Mean	.19	.14	...	...	.26	.26	...	...	.09	.07	...	...	.04	.04	...	...
Year	.07	.09	68	91	.26	.26	156	150	.03	.02	13	42	.02	.02	340	342
Winter	.02	.04	3	165	.26	.24	163	151	.13	.11	1	355	.02	.02	229	189
Equinox	.08	.11	72	104	.29	.31	156	153	.03	.02	353	4	.05	.04	12	9
Summer	.12	.15	74	67	.23	.24	148	146	.08	.07	165	159	.02	.03	315	324

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

(1) A. Crichton Mitchell, loc. cit.

**Temperature.**- The mean temperature,  $280.10^{\circ}\text{A}$  ( $44.8^{\circ}\text{F}$ ), for the year 1937 is slightly above the normal value. The extreme temperatures recorded during the year were  $298.4^{\circ}\text{A}$  ( $77.7^{\circ}\text{F}$ ) on August 1 and  $260.2^{\circ}\text{A}$  ( $9.0^{\circ}\text{F}$ ) on December 12. December 18 with a mean temperature of  $265.3^{\circ}\text{A}$  ( $18.1^{\circ}\text{F}$ ) was the coldest day of the year, and August 1 with  $290.8^{\circ}\text{A}$  ( $64.0^{\circ}\text{F}$ ) was the hottest. The mean monthly temperatures in February, March and December were below normal, the mean in each of the other months being above normal. The greatest excess occurred in April ( $1.7^{\circ}\text{A}$ ) and the greatest deficiency in March ( $2.5^{\circ}\text{A}$ ). The minimum temperature was  $273.0^{\circ}\text{A}$  ( $32.0^{\circ}\text{F}$ ), or less, on 91 days 57 being in the first four months of the year. There were seven "ice-days", i.e. days with maximum temperature below  $273^{\circ}\text{A}$ . Of these, four were in December.

The values of the absolute range of temperature within a calendar month varied between  $24.5^{\circ}\text{A}$  ( $44.1^{\circ}\text{F}$ ) in August and  $17.0^{\circ}\text{A}$  ( $30.6^{\circ}\text{F}$ ) in January.

**Humidity.**- As is mentioned in the General Introduction, owing to a change in the hygrometric tables used, the results from 1926 onwards are not strictly comparable with those of earlier years. The mean relative humidity was 84.9 per cent for the year 1937, and the mean vapour pressure 8.6 mb. The extreme daily mean values of relative humidity and vapour pressure were respectively 99.4% on December 26, 62.2% on May 18, 16.7 mb on July 18 and 2.9 mb on December 18. The lowest hourly relative humidity was 21% on April 26.

In tables 201-203 the figures for the hourly variation of relative humidity in May, June and July show an irregularity at 10h, and this is perceptible also in the figures for some other months and the year. It is attributed to adding water to the wet bulb container 10 to 15 minutes before the hour, and in future water will be added at 9h 15m.

**Precipitation.**- 1937 was drier than normal, the total amount of rainfall  $1301.7$  mm ( $51.25$  inches), being 16.9% less than the mean for the period 1911-30. The wettest month was January with  $232.1$  mm ( $9.14$  inches). November with  $30.7$  mm ( $1.21$  inches) had only about one fifth of its normal amount. The greatest fall recorded during a day was  $41.7$  mm ( $1.64$  inches) on August 14. There were 157 days on which precipitation was nil or amounted to less than 0.2 mm. Precipitation of 0.2 mm or more was recorded on 208 days, 1.0 mm or more on 170 days and 20.0 mm or more on 9 days.

Snow or sleet fell on 71 days, but on no day from March 27 to October 24 inclusive. Days of "snow lying" at 7h number 43. Of these 14 were in March, and 18 in December. Storms of drifting snow occurred on February 28 and March 11 to 12, and there were moderate falls in December, in particular on 11th.

**Sunshine.**- The year's total duration of bright sunshine, 1104.5 hours, is 25% of the theoretically "possible" duration; the average percentage of "possible" for the years 1911-30 is 26.9. As regards the percentage of "possible" June was the sunniest and January the least sunny month of 1937. In all, 98 days were without sunshine, 19 of these being in January, 12 in October and 11 in December. There were 77 days with 50% or more of the "possible" sunshine. The day with the most and also the highest % of "possible" sunshine was June 10, with 15.3 hours and 89%. April (with 64.2 hours) was the least sunny April recorded during the period 1911 to date, by a margin of over 20 hours.

Wind.- The mean wind speed for the year, 4.4 m/s (9.8 mi/hr) was 0.7 m/s below normal. Of the individual monthly values all were deficient except those for January and February, the mean speed for November exhibiting the greatest relative deficiency, and that for February the greatest excess. There were 13 hours of gale force (mean speed greater than 17.1 m/s), occurring almost equally in January and February. The highest gust of the year, over 30 m/s (67 mi/hr), occurred in a snowstorm which partly blocked the anemometer on February 28; the highest hourly speed, over 23 m/s (52 mi/hr), also the highest mean daily speed, 13.4 m/s (30 mi/hr), occurred on the same day, and the lowest mean daily speed, 0.4 m/s (1 mi/hr) on December 18.

Wind direction was on the average of the whole year much more northerly than usual, and markedly similar to that of 1936, winds from NW through N to SE inclusive (and especially between NW and NE) being exceptionally frequent. Winds from between W and S (chiefly those from W) were deficient. Nevertheless the predominant direction was between SW and S, as is normally the case. Winds from N and NE were specially prominent in March, April, October and December, while January, July, August and September had predominantly SW to S winds.

Grass Minimum Temperature.- There were 104 occasions of ground frost (i.e. grass minimum temperature not greater than 272.1°A or 30.4°F), but none of these occurred between July 1 and August 26. The lowest grass minimum temperature was 257.1°A (3.4°F) on December 13. The mean grass minimum temperature for each of the months February, March, November and December was less than 273.0°A (32.0°F).

Cloud, Visibility and Weather.- The annual mean amount of cloud observed at the six daily hours of observation was 7.6 tenths, which was slightly below the normal. April with 8.6, had the largest monthly mean amount, and February with 6.8 the smallest. The largest monthly mean amount for one observational hour was 8.9 at 2lh in January; the least was 5.4 at 2lh in March. There were no days without cloud at the normal hours of observation. On 49 days the amount 10 was recorded at every hour of observation.

Thunder was heard on 14 days. There were observations of solar halo on 17 days, of lunar halo on 8 days, and of aurora or auroral glow on 18 days.

The numbers of occasions on which visibility was estimated to be not greater than 500 m (550 yards), corresponding with the entries X to E, and at least 20 km (12½ mi), corresponding with the entries k, l, m, are summarized in the following table. The limitations to which the estimates of visibility are subject are mentioned on p. 154. The table covers occasions of "fog, moderate, thick, or dense", and occasions of "very good or excellent visibility".

There were more occasions of fog and fewer estimates k, l, and m than in 1936. Fog was most frequent in February and December and least frequent in August and September. There were 52 estimates of m, visibility 50 km (31 mi) or more, distributed among 32 days, 40 of the occasions were associated with increasing barometric pressure, and 40 with winds from WSW through N to NE.

NUMBER OF OCCASIONS OF-

1937	VISIBILITY X to E							VISIBILITY k, l, m.						
	7h	9h	13h	15h	18h	21h	Total	7h	9h	13h	15h	18h	21h	Total
Jan.	1	1	1	1	1	0	5	4	8	6	5	5	3	31
Feb.	4	2	2	1	1	1	11	13	11	10	12	8	7	61
Mar.	1	0	0	1	4	2	8	16	17	12	12	11	12	80
Apr.	2	0	0	0	1	0	3	6	9	12	8	7	8	50
May	2	0	0	0	0	2	4	4	11	13	11	13	10	62
June	1	1	0	2	2	1	7	15	17	13	18	19	16	98
July	3	0	0	0	0	0	3	9	13	15	14	15	11	77
Aug.	2	0	0	0	0	0	2	8	9	13	15	14	10	69
Sept.	1	0	0	0	0	0	1	11	10	19	18	17	14	89
Oct.	4	2	0	0	0	0	6	9	10	12	7	4	4	46
Nov.	2	0	0	2	1	1	6	10	12	15	15	11	7	70
Dec.	6	3	2	2	3	4	20	7	11	10	11	9	9	57
Year	29	9	5	9	13	11	76	112	138	150	146	133	111	790

ATMOSPHERIC ELECTRICITY

Notes on the Instruments

Photographic records of atmospheric electrical potential gradient have been obtained by means of an electrograph in which, since February 1, 1936, a polonium collector has been used, the potential being registered by a Dolezalek quadrant electrometer. The collector is screwed to a boom projecting through a pipe in the north wall of the main building about 4 feet above the position of the water-dropper previously in use. The boom is supported on sulphur insulators in a box inside the building. When making scale tests the collector is screwed off the boom; otherwise in all essential details the electrograph arrangements, the method of making scale tests and the method of reducing the curve readings to potential gradient in the open are as described in "The Observatories' Year Book," 1928, pp. 160-161. Insulation tests are made each day, using an eye-reading method. The system is charged and the fall in potential during a two minutes interval is measured by noting the change in position of the spot of light on a scale placed in front of the recording drum. The insulation gave trouble from time to time during the year.

The scale value of the record remained at about 2.0 to 2.1 volts per mm. throughout the year. The number of determinations of the reduction factor (i.e., the ratio of the potential at one metre above the ground in the open to the potential at the collector) was about six per month, each determination being based on fifteen or more readings (at intervals of half a minute) of the potential in the open. The monthly reduction factors finally adopted 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.



All determinations of scale value and reduction factor were obtained with the same Wulf quartz-thread electrometer (No.3040). This instrument was calibrated in January and September by means of a high tension battery, the potentials of which were measured by a potentiometer and standard cell. The decrease in sensitivity of the Wulf electrometer indicated in the calibration of December 1936 and referred in the Year Book for that year was found again in the calibration of January 1937, but the calibration of September 1937 gave results agreeing with previously accepted values. Investigation in 1938 showed that the change was spurious, due to leakage through the bottom of the battery and the table top. The small correction introduced in the 1936 Year Book should therefore be eliminated. To do this it would be necessary to reduce values published in 1936 by amounts ranging from 1% in April and May to 4% in December.

#### 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 tabulated for 2-3h, 8-9h, 14-15h, and 20-21h G.M.T. of all days, while values for all hours are tabulated on days classified as 0a, 1a, or 2a. The character figures are given in Table 268. The significance of the symbols is as follows:-

- 0, denotes a day during which from midnight to midnight no negative potential was recorded.
- 1, denotes the existence of negative potential at one or more times during the same period, but with a total duration of less than three hours.
- 2, denotes negative potential extending in the aggregate over three hours or more during the same period.
- a, denotes that within the 24 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 a range of 1,000 volts or more per metre was reached in one hour at least but in fewer than six individual hours.
- c, denotes that a range of 1,000 volts or more per metre was reached in at least six individual hours.

Table 265 contains the values of electrical potential gradient at 2-3h, 8-9h, 14-15h, and 20-21h G.M.T.; the value for a given hour represents the mean for the period of 60 minutes between exact hours, instead of centering at the exact hour, as it did in years prior to 1932. Planks 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 collector to potential gradient in volts per metre in the open, are also given.

In Table 266 are given, for 0a days, (1) the mean diurnal inequalities for the months, seasons and year, (2) particulars of the number of such days and of the non-cyclic changes, and (3) the corresponding mean values of potential gradient. The inequalities, and the mean values, for the year and seasons are the means of the inequalities and means respectively, for the constituent months.

Similar data for 1a and 2a days combined appear in Table 267.

It should be noted, that in these tables, "Winter" denotes the four months January, February, November, December; "Equinox" the four months March, April, September, October; and "Summer" the four months May to August.

In addition to the electrical character for each day, Table 268 contains the daily, monthly and annual values of duration (in hours and tenths) of negative potential gradient. On one day of defective record when negative potential may have occurred dashes are entered; the sign of the gradient has been assumed positive during periods of defective record 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 change of sign, half of the total duration of doubtful sign is 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 364 days of assignable duration of negative gradient the total number of hours is 675.1 as compared with 835.1 in 1936; an average of 1.85 hours per day, as against 2.40 hours per day in 1936.

The mean values of potential gradient given at the foot of the columns in Table 265 are of two kinds, viz., (a) the mean of all the positive values in the column and (b) the algebraic mean derived from the 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 2-3h, 8-9h, 14-15h, 20-21h, on a sufficiently large number of days, will approximate closely to the mean derived from all hourly values of all days.

The (a) mean exceeds or is equal to the (b) mean in every month except February, July, September and December, and is exceeded by the mean value on 0a days in all months except March, May, June and October. The general tendency is for 1937 values to be higher than those of 1936, this being the case in eight months for both the (a) mean and 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 0a days are as follows:-

					Oa v/m	(a) v/m	(b) v/m
1922	..	..	..	..	257	225	182
1923	..	..	..	..	278	235	159
1924	..	..	..	..	236	214	157
1925	..	..	..	..	284	243	209
1926	..	..	..	..	249	201	177
1927	..	..	..	..	259	223	193
1928	..	..	..	..	237	219	150
1929	..	..	..	..	276	240	216
1930	..	..	..	..	247	211	194
1931	..	..	..	..	243	205	197
1932	..	..	..	..	223	198	190
1933	..	..	..	..	237	218	218
1934	..	..	..	..	233	201	190
1935	..	..	..	..	231	203	200
1936	..	..	..	..	223	190	182
1937	..	..	..	..	225	201	198

The highest values both of the (a) mean and of the (b) mean occur in December. The mean value on 0a days is highest in January, being 314 volts per metre.

Noteworthy occasions of high potential gradient were as follows:-

- (1) January 14d 15h 12m to 15d 2h 0m. During this period of fog the potential gradient remained above 500 v/m, except for two very brief drops to values a little below 500 v/m, and exceeded the upper limit of registration (+740 v/m) during more than three hours.
- (2) March 11d 23h 52m to 12d 15h 47m. A storm of mainly drifting snow prevailed throughout the period. Potential gradient was above 600 v/m continuously and exceeded the upper limit of registration (+800 v/m) during almost the whole period.
- (3) October 19d 2h 12m to 8h 19m. There was fog throughout the period. Potential gradient exceeded the upper limit of registration (+880 v/m) at times and remained above 500 v/m throughout.
- (4) December 4d 14h 31m to 21h 3m. Snow, which was continuous at first, later fell intermittently and was associated at times with fog. The upper limit of registration (+780 v/m) was exceeded during a large part of the period, and potential gradient only fell slightly below 500 v/m on two occasions for a few minutes.
- (5) December 22d 2h 20m to 8h 8m. During fog, potential gradient remained above 600 v/m throughout the period and frequently exceeded the upper limit of registration (+860 v/m).
- (6) December 26d 1h 53m to 9h 45m. There was fog throughout the period, together with slight drizzle at times. Potential gradient exceeded 500 v/m, except on two occasions when it momentarily fell slightly below this value, and exceeded the upper limit of registration (+830 v/m) shortly before the end of the period.

The following were the noteworthy occasions of continuous negative potential gradient:-

- (1) February 15d 16h 22m to 21h 17m. Rain fell continuously and became heavy towards the end of the period. During nearly the whole period potential gradient exceeded the lower limit of registration (-720 v/m).
- (2) February 27d 16h 44m to 22h 4m. Slight snow (which had been sleet earlier in the afternoon) fell continuously. Potential gradient exceeded the lower limit of registration (-730 v/m) at times early in the period.
- (3) March 17d 13h 32m to 17h 38m. Continuous slight rain fell throughout. Potential gradient remained negative and exceeded the lower limit of registration (-740 v/m) at times.
- (4) April 19d 13h 40m to 20h 25m. During continuous rain the potential gradient remained negative and exceeded the lower limit of registration (-600 v/m) for an aggregate of more than five hours.
- (5) October 26d 11h 57m to 16h 39m. Early in the period there was continuous rain, which later became intermittent and was followed by heavy showers. Potential gradient remained negative throughout and frequently exceeded the lower limit of registration (-610 v/m).

On the following occasions long periods of negative potential gradient were broken by short excursions to the positive side:-

- (1) January 5d 16h 7m to 6d 5h 1m. Sleet was followed by rain which fell throughout the period. Potential gradient remained negative apart from a few short excursions to the positive side, the highest of which reached +105 v/m. The lower limit of registration (-730 v/m) was exceeded for long periods.
- (2) January 12d 12h 10m to 17h 51m. Apart from a single excursion of two minutes duration to the positive side when a potential gradient of +518 v/m was reached, the gradient remained negative and frequently exceeded the lower limit of registration (-740 v/m). Rain fell throughout.
- (3) January 16d 2h 40m to 10h 7m. Sleet or snow fell throughout. Potential gradient remained negative, apart from two short excursions to the positive side lasting 9 and 4 minutes, in one of which +402 v/m was reached, and the lower limit of registration (-730 v/m) was exceeded for a considerable period.
- (4) January 20d 16h 59m to 21d 1h 40m. Potential gradient remained negative apart from one excursion lasting 1 minute to +334 v/m and frequently exceeded the lower limit of registration (-740 v/m). Rain which was heavy at times fell throughout.
- (5) April 16d 19h 27m to 17d 8h 33m. Apart from one excursion to the positive side lasting 20 minutes, in which the potential gradient reached + 43 v/m, potential gradient remained negative throughout the period, exceeding the lower limit of registration (-600 v/m) for over four hours at the end of the period. Rain fell intermittently at the beginning of the period when the gradient was not very low and became continuous later.

There are considerable irregularities in the mean diurnal inequalities of potential gradient on 0a days for individual months, although in all months except February, May and July the principal maximum occurs in the late evening. When compared with the normal values for 1913-32 the mean diurnal inequalities for the seasons show some differences. The principal maximum is less marked at all seasons, while the principal minimum is less marked in equinox and summer, but more marked in winter. The secondary minimum is intensified in equinox. These features are also prominent in the mean diurnal inequalities for the year.

## TERRESTRIAL MAGNETISM

### Notes on Instruments

In December 1935 a La Cour magnetograph set of standard type was installed in the west chamber of the underground magnet house alongside the La Cour set of the quick run type. The new set was adopted as the standard as from January 1st 1936; the former standard magnetographs of Adie type situated in the east chamber (recording changes in H, D and V) were continued in operation as the auxiliary set.

The La Cour set consists of H, D and V variometers. The H and D magnets are about 1 cm. in length, and each is supported by a single quartz fibre.

A description of the H variometer is given in Publikationer fra det Danske Meteorologiske Institut, Communications Magnétiques, No.11 (le Variomètre de Copenhague). The V magnet is larger; it is supported by knife edges resting on agates, and is enclosed in a sealed vessel under reduced pressure. A description of this instrument is given in Communications Magnétiques, No.8 (la Balance de Godhavn).

The three elements are recorded on one sheet of photographic paper, with a single electric lamp as source of light. Time marks are made by a second lamp, the circuit of which is closed by a clock for about 2 seconds every five minutes. The width of paper allows 10 cm. for each element, but the effective width is increased by a number of small prisms which reflect light from the lamp into the variometers, producing a series of light-spots at intervals of slightly less than 10 cm.

Scale values of H and V are measured by passing a current through Helmholtz-Gaugain coils placed over the variometers, the resulting deflexions being recorded on the photographic paper. The scale value of H is about  $4.1 \gamma/\text{mm}$  and of V about  $5.9 \gamma/\text{mm}$ . The scale value of D is computed from the distance between the mirror and the recording drum and is about  $0.9'$  per mm.

The diurnal range of temperature in the chambers of the magnet house is normally negligible. Temperature is ascertained daily at 10h by the thermometers within the instrument cases. The daily values for the west chamber appear in Tables 272, 276, etc.; the monthly means of the readings during 1937 were as follows:-

Excess of Mean Temperature Above  $280^{\circ}\text{A}$ .

Month	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Mean 1937	3.6	2.9	2.7	2.8	4.2	6.2	7.0	7.0	7.0	6.3	4.8	3.7

The annual range of temperature in the west chamber during 1937 was  $4.7^{\circ}\text{C}$ ., the mean range for the twenty-five years 1911-35 in the east chamber being  $4.3^{\circ}\text{C}$ . Heating by electric radiators, thermostatically controlled, was introduced on 27th November, 1936.

The constants of the La Cour magnetographs were as follows:-

	Horizontal Force	Declination	Vertical Force
Time scale .. 1 hour equivalent to	15 mm	15 mm	15 mm
Time marks .. .. .	Every five minutes and the minute before and after the hour.		
Error of time mark .. .. .	Not more than $\pm 30$ seconds.		
Angular equivalent of 1 mm on paper, radians .. .. .	0.0050	0.0054	0.0056
Temperature coefficient .. .. .	Nil	Nil	Nil
Mean Azimuth of magnet	76	346	346
Scale Values, $\gamma$ per mm on the paper	4.07	4.51 ( $0.94'$ )	5.87(Jan.-Sept.) 5.89(Oct.-Dec.)

A description of the auxiliary instruments in the east chamber is given in the Observatories' Year Book for 1935 and previous years. The records are used only to fill in gaps in the standard records. Determinations of the scale value are made once a month.

Since November 1936 the illumination for the auxiliary set has been obtained from the public electricity supply through a small transformer. The illumination for the La Cour sets is provided from the large storage battery formerly in use; those sets can be maintained in operation even in the event of breakdown of the transmission lines which connect the observatory to the public electricity supply.

The La Cour magnetograph of the quick run type, recording H, D, and V, installed in the west chamber of the underground magnet house in connection with the second International Polar Year 1932/33 has continued in use since then. It gives a time-scale of 3 mm per minute.

The routine absolute observations of the magnetic elements are made in the east magnetic hut; as a rule two complete sets of observations are obtained every week, and determinations of declination and horizontal force every week-day. Declination is determined by means of the Kew 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 horizontal force are in general made daily with a Schuster-Smith Coil magnetometer placed on a pillar erected specially for it, and also about twice each month throughout the year with the Kew pattern unifilar magnetometer mentioned above. Inclination (dip) is measured by means of the Schulze inductor on Pier No. 6.

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  $8^{\circ} 12' 30''$  west of south.

The procedure of determining horizontal intensity with the Kew magnetometer is outlined in the Observatories' Year Books for 1936 and earlier years. Though bi-monthly observations of horizontal force with this magnetometer have been continued, the standard as from 1st January, 1934 has been the Schuster-Smith Coil. This instrument was installed at the observatory in February 1931 and a first series of comparative observations extended from October 1931 until June 1933 when the potentiometer was returned to the makers in order that certain alterations might be made. After recalibration at the National Physical Laboratory the potentiometer was returned to the Observatory and the Coil was brought into daily use.

A complete description of the Schuster-Smith Coil and of the method of observing with it is given in the Philosophical Transactions of the Royal Society, A.Vol.223 (1922), pp.175-200. Essentially the instrument consists of a Helmholtz-Gaugain system of two coils of wire accurately wound on a hollow marble cylinder, and a small magnet suspended at the centre of the coil system. Current from a 100-volt storage battery (kept solely for this purpose) can be passed through the coils and can be very accurately adjusted and measured by means of a potentiometer and a Weston cell. The basis of the method is that a horizontal magnetic field slightly greater than the earth's field and approximately opposed to it is set up through the Coil. The Coil is then

rotated in azimuth until the resultant field, as indicated by the alignment of the small magnet at the centre, is found to be exactly at right angles to the earth's field. In this position if  $\alpha$  is the angle between the direction of the earth's field and that set up by the coils, if  $F$  is the constant of the coil system (i.e. the field due to unit current through the coil) and  $i$  is the current, then

$$H = Fi \cos \alpha$$

The replacement of the Elliott No.60 Kew magnetometer by the Schuster-Smith coil as standard has involved a discontinuity of  $-14\gamma$  in  $H$  and correspondingly  $-38\gamma$  in  $V$  from 1st January 1934. This decrease in  $H$  has been established by a long series of intercomparisons between the old and new standards. Of the total amount of  $14\gamma$  it has been estimated that  $10\gamma$  is accounted for by departure of the moment of inertia of the magnet system of the Elliott magnetometer from the value as originally determined and as used up to and including the year 1933 in the reduction of the results of absolute observations. When the most recent determinations of the moment of inertia are incorporated the values of  $H$  determined by the Elliott magnetometer are lowered by  $10\gamma$ . If this change came in gradually throughout a period of about twenty-five years it will have affected the calculated secular changes to the extent of less than  $\frac{1}{2}\gamma$  per annum.

The remaining  $4\gamma$  of fall between the Elliott determinations, corrected as described above, and the determinations made by the Schuster-Smith Coil is to be regarded as the net change arising from instrumental differences.

On the basis of a short series of observations made at Eskdalemuir in January 1933 by an officer from the Royal Observatory, Greenwich, using Kew magnetometer Casella No. 181 as a travelling standard, it was deduced that the Eskdalemuir Schuster-Smith Coil reads about  $5\gamma$  lower than the Abinger Coil; this means that the Elliott No. 60 determinations, corrected for the revised moment of inertia of magnet, apparently read only  $1\gamma$  different from the Abinger Coil. These results are, however, subject to some uncertainty and it was decided that the Eskdalemuir Coil, without any correction, should be used from 1st January 1934 as the absolute standard for Eskdalemuir. Thus, as already indicated, changes of  $-14\gamma$  in  $H$  and  $-38\gamma$  in  $V$  must be kept in mind in comparing the published results for 1933 and earlier years with the results for 1934 and later years.

The Schulze inductor<sup>1</sup> consists essentially of a coil of insulated wire which can be rotated continuously and rapidly about an axis which coincides with a diameter of the coil. This axis is capable of rotation about a horizontal and vertical axis. The inclination and azimuth of the coil axis are read off on a vertical and horizontal scale respectively. The windings of the coil are connected through a commutator to a Proca galvanometer. To determine magnetic inclination, the coil is set with its axis in the magnetic

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For description of, and discussion of method of observation with earth inductors see papers by:-

H. Wild. Met. Zeit., 1895, p.41

O. Venske. Ber. uber die Tat. des Preuss. Met. Inst. in 1924, p.91  
(and references given therein)

N.E. Dorsey. Terr. Mag., Vol. 18, p. 1, 1913

meridian, rotated steadily at the rate of about 360 revolutions per minute and the inclination of the axis of rotation 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.

In the case of horizontal force,  $H$ , and declination,  $D$ , the equivalent of the mean curve ordinate at the time of the absolute observation is subtracted from the result of the absolute observation to give the base line value. In the case of vertical force,  $V$ , the value of  $H$  at the time of the absolute observation of inclination,  $I$ , is computed from the record of  $H$  variometer. The absolute value of  $V$  is  $H \cot I$ , and from this the base line value for  $V$  is determined. The values for  $H$ ,  $D$  and  $V$  thus obtained are the "deduced" base line values: The base line values finally "adopted" are obtained from a curve drawn smoothly through points plotted from the "deduced" values, due allowance being made for discontinuities in the records.

Some of the absolute determinations of  $D$ ,  $I$  and  $H$  are summarized in the subjoined table. Considerations of space make it necessary to limit the observations printed to about two per week, but, as indicated above, absolute observations of some of the elements are made more frequently. For each set of absolute observations are shown the deduced base line values, of  $H$ ,  $D$ , and  $V$  and, in brackets, the adopted base line values. Thus, an entry 16210 (11) signifies:- deduced base line value 16210, adopted base line value 16211. The base line values corresponding to dates between those given in the table may be obtained by interpolation.



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

Eskdalemuir

1937

Date	Declination		Inclination		Horizontal Force		Base line values (deduced and adopted)		
	Mean Time	D	Mean Time	I	Mean Time	H	H	D	V
	h m	° ' "	h m	° ' "	h m	γ	16,000γ†	° ' "	44,000γ†
Jan. 5	10 3	13 29 42	9 21	69 49.6	9 53	16502	461 (62)	12 58.7 (58.9)	613 (10)
8	-	-	11 20	69 51.0	-	-	-	-	607 (10)
13	10 1	13 30 40	9 19	69 49.5	9 47	16503	462 (61)	58.8 (58.9)	612 (10)
15	10 9	13 30 30	9 19	69 48.7	9 57	16519	460 (61)	58.7 (58.9)	616 (10)
19	9 19	13 30 18	9 19	69 48.4	9 45	16516	459 (61)	59.0 (58.9)	614 (10)
22	10 5	13 31 5	9 27	69 50.8	9 55	16490	462 (60)	58.9 (58.9)	613 (10)
28	11 55	13 34 59	11 21	69 50.9	11 43	16488	460 (60)	58.9 (58.8)	610 (10)
Feb. 2	9 55	13 31 35	9 18	69 49.5	9 43	16506	457 (59)	12 58.8 (58.8)	619 (11)
9	10 15	13 29 46	9 31	69 48.9	9 59	16509	461 (58)	58.5 (58.7)	600 (11)
12	10 3	13 33 10	9 17	69 49.3	9 49	16518	459 (58)	58.9 (58.7)	645 (11)
18	9 32	13 29 52	15 43	69 49.8	9 59	16496	458 (57)	58.7 (58.7)	632 (12)
20	9 20	13 28 34	12 29	69 50.1	9 57	16497	455 (57)	58.2 (58.7)	616 (12)
22	9 31	13 33 8	16 43	69 50.6	10 1	16517	457 (57)	58.7 (58.7)	627 (12)
23	9 16	13 27 42	10 33	69 50.0	9 54	16504	458 (57)	58.5 (58.7)	619 (12)
25	9 9	13 28 28	9 16	69 49.3	9 35	16504	456 (57)	58.9 (58.7)	613 (12)
Mar. 2	9 11	13 28 25	9 32	69 52.7	9 59	16465	456 (56)	12 58.7 (58.7)	629 (12)
5	9 57	13 26 24	9 15	69 48.6	9 46	16510	457 (56)	58.8 (58.7)	626 (12)
9	9 33	13 28 4	10 37	69 49.9	11 9	16490	455 (56)	58.5 (58.6)	628 (12)
12	10 49	13 29 17	9 51	69 49.8	14 23	16506	458 (55)	58.5 (58.6)	612 (12)
16	10 21	13 30 3	9 33	69 51.2	10 7	16478	458 (55)	58.5 (58.6)	612 (12)
19	9 17	13 27 17	10 12	69 50.5	10 39	16485	454 (55)	58.6 (58.6)	624 (13)
25	7 53	13 23 17	17 31	69 48.9	8 25	16494	458 (54)	57.6 (58.6)	632 (13)
29	9 35	13 21 20	15 19	69 50.1	10 11	16477	453 (54)	57.4 (58.6)	634 (13)
Apr. 2	10 21	13 27 16	9 23	69 50.8	10 1	16496	453 (54)	12 58.6 (58.6)	616 (13)
6	9 14	13 23 30	10 18	69 50.9	10 50	16485	453 (54)	58.2 (58.4)	623 (13)
9	9 23	13 25 16	9 45	69 49.8	10 17	16498	454 (53)	58.3 (58.4)	621 (13)
13	9 9	13 28 0	9 31	69 50.6	10 5	16491	455 (53)	58.3 (58.3)	619 (13)
16	9 19	13 23 27	10 11	69 50.1	10 43	16485	454 (53)	58.1 (58.3)	605 (13)
20	8 5	13 24 16	8 28	69 48.8	9 15	16505	454 (53)	58.4 (58.4)	614 (14)
23	8 21	13 23 34	8 43	69 48.5	9 17	16507	452 (53)	58.4 (58.4)	612 (14)
27	8 9	13 27 48	8 30	69 54.3	8 59	16450	455 (53)	58.5 (58.4)	630 (14)
30	4 55	13 22 28	5 35	69 51.0	8 27	16466	452 (53)	58.4 (58.4)	625 (14)
May 7	8 9	13 22 46	8 30	69 50.5	8 59	16493	456 (53)	12 58.3 (58.3)	600 (14)
11	8 3	13 20 47	9 10	69 50.8	9 37	16468	452 (53)	58.0 (58.2)	600 (14)
14	9 33	13 22 55	8 57	69 49.5	9 24	16507	455 (53)	58.2 (58.2)	625 (14)
18	7 59	13 20 9	8 20	69 48.7	8 43	16515	454 (53)	58.1 (58.1)	607 (14)
21	-	-	14 39	69 49.1	9 57	16476	454 (53)	-	635 (14)
25	8 15	13 20 10	8 37	69 51.6	9 13	16471	452 (53)	58.3 (58.2)	614 (14)
28	8 1	13 20 53	8 23	69 52.0	8 51	16463	451 (53)	58.2 (58.2)	611 (14)
June 1	8 7	13 20 59	8 29	69 50.4	9 18	16479	451 (53)	12 58.1 (58.2)	608 (14)
4	8 8	13 20 15	8 45	69 50.0	9 20	16496	452 (52)	58.2 (58.2)	605 (14)
8	8 11	13 19 38	9 3	69 52.7	8 43	16463	453 (52)	57.0 (58.2)	619 (14)
11	8 7	13 22 47	8 28	69 50.7	9 15	16495	454 (52)	58.2 (58.2)	613 (14)
16	8 6	13 19 24	9 6	69 50.2	8 46	16498	450 (51)	58.1 (58.2)	598 (614)
19	8 51	13 21 7	8 12	69 50.7	8 41	16483	451 (51)	58.6 (58.2)	622 (14)
23	8 7	13 19 23	9 0	69 50.8	8 37	16479	450 (50)	58.1 (58.2)	601 (14)
25	9 11	13 24 58	8 6	69 50.7	8 56	16483	452 (50)	58.3 (58.2)	619 (14)
30	8 26	13 18 27	8 7	69 50.6	8 57	16490	450 (50)	58.0 (58.2)	614 (14)
July 8	8 53	13 19 4	8 6	69 49.7	8 41	16484	449 (49)	12 57.7 (58.1)	591 (614)
12	9 9	13 20 30	8 13	69 50.8	8 58	16477	449 (49)	58.1 (58.1)	603 (14)
15	8 1	13 18 0	9 5	69 53.1	9 31	16439	448 (48)	58.0 (58.1)	619 (14)
20	8 53	13 19 2	8 9	69 50.2	8 39	16479	446 (48)	58.1 (58.1)	601 (14)
24	8 53	13 20 39	8 5	69 53.8	8 41	16431	443 (47)	58.0 (58.1)	619 (14)

ESKDALEMUIR OBSERVATORY

175

ABSOLUTE DETERMINATIONS-Continued

Eskdalemuir

1937

Date	Declination		Inclination		Horizontal Force		Base line values (deduced and adopted)		
	Mean Time	D	Mean Time	I	Mean Time	H	H	D	V
	h m	° ' "	h m	° ' "	h m	γ	16,000γ+	° ' "	44,000γ+
July 27	8 55	13 19 41	8 9	69 50.7	8 41	16491	447 (47)	12 58.1 (58.1)	624 (14)
30	8 37	13 19 0	10 3	69 52.3	9 18	16483	447 (47)	58.0 (58.1)	633 (14)
Aug. 4	7 7	13 16 18	9 10	69 54.6	7 35	16433	447 (46)	12 57.4 (58.0)	604 (14)
6	6 59	13 16 30	9 8	69 52.5	7 27	16476	445 (46)	57.2 (58.0)	614 (14)
10	8 23	13 18 26	9 45	69 53.3	8 59	16466	444 (45)	57.2 (58.0)	616 (14)
13	8 25	13 17 38	9 28	69 52.2	8 57	16473	444 (45)	57.1 (58.0)	613 (14)
17	8 20	13 18 18	9 41	69 50.9	9 10	16483	444 (45)	56.9 (58.0)	609 (14)
20	9 17	13 23 2	8 43	69 49.4	8 13	16507	445 (44)	58.0 (58.0)	597 (614)
23	8 23	13 19 10	14 45	69 52.6	9 13	16436	444 (44)	57.7 (58.0)	623 (14)
27	8 17	13 21 43	8 38	69 50.3	9 11	16491	444 (44)	58.1 (58.0)	635 (14)
31	9 11	13 17 49	8 22	69 50.9	8 55	16474	441 (44)	58.0 (57.9)	602 (14)
Sept. 2	9 13	13 20 5	8 21	69 51.5	8 58	16467	445 (43)	12 57.8 (57.9)	599 (614)
9	9 9	13 19 2	8 15	69 50.4	8 54	16490	445 (43)	58.0 (58.0)	605 (14)
10	8 3	13 17 27	8 57	69 51.0	8 35	16493	445 (42)	58.0 (58.0)	621 (14)
14	9 23	13 23 43	8 33	69 50.5	9 11	16468	442 (42)	58.0 (58.0)	614 (14)
18	8 7	13 20 0	10 54	69 51.9	8 37	16491	442 (42)	58.0 (58.0)	634 (14)
24	8 7	13 22 23	8 27	69 50.4	9 37	16477	442 (41)	58.7 (58.0)	614 (14)
28	9 11	13 19 43	8 23	69 50.3	8 55	16485	441 (41)	57.9 (58.0)	609 (14)
Oct. 1	9 9	13 22 20	8 21	69 53.7	8 55	16457	442 (40)	12 58.0 (58.0)	619 (14)
6	9 8	13 18 36	11 14	69 55.8	9 47	16437	439 (39)	58.1 (58.0)	625 (14)
8	9 11	13 21 16	9 45	69 55.1	10 23	16428	438 (39)	58.0 (58.0)	634 (14)
13	10 34	13 22 23	10 3	69 54.0	9 23	16454	438 (39)	58.0 (58.0)	619 (14)
15	10 49	13 24 57	10 20	69 53.9	9 29	16457	436 (39)	58.0 (58.0)	617 (14)
20	11 3	13 24 7	10 31	69 51.6	9 48	16484	439 (38)	58.6 (58.0)	605 (14)
22	11 17	13 27 15	11 1	69 52.5	10 22	16475	438 (38)	58.8 (58.0)	608 (14)
26	10 21	13 28 43	9 21	69 53.5	10 1	16448	435 (38)	58.6 (58.1)	594 (614)
29	9 23	13 19 41	9 57	69 52.6	10 43	16464	436 (37)	58.0 (58.1)	624 (14)
Nov. 1	9 17	13 20 44	9 53	69 51.4	10 42	16482	436 (37)	12 58.3 (58.1)	618 (14)
3	10 41	13 25 15	9 42	69 51.7	10 26	16489	440 (37)	58.1 (58.1)	647 (14)
4	9 59	13 21 24	9 30	69 51.3	10 39	16481	439 (37)	58.4 (58.1)	616 (14)
5	9 59	13 21 14	9 31	69 51.0	-	-	-	58.6 (58.1)	611 (14)
8	10 7	13 23 45	9 21	69 50.9	9 51	16486	437 (36)	58.6 (58.2)	607 (14)
9	10 7	13 25 47	9 38	69 50.8	11 45	16482	432 (36)	58.6 (58.2)	602 (14)
12	10 44	13 24 17	10 13	69 50.5	11 44	16490	434 (36)	58.6 (58.2)	616 (14)
15	10 47	13 23 24	11 47	69 51.0	12 15	16492	435 (36)	59.2 (58.3)	620 (14)
16	10 3	13 21 33	9 35	69 49.6	10 45	16505	436 (36)	58.7 (58.3)	616 (14)
18	10 47	13 24 17	10 7	69 50.7	11 23	16480	433 (36)	59.4 (58.3)	638 (14)
19	-	-	9 47	69 52.1	10 26	16480	440 (35)	-	620 (14)
22	10 11	13 24 49	9 19	69 50.8	9 55	16476	437 (35)	58.2 (58.4)	624 (14)
25	10 13	13 23 15	9 42	69 51.1	10 47	16481	434 (35)	59.2 (58.4)	617 (14)
26	10 45	13 22 37	9 54	69 51.4	10 31	16492	435 (35)	58.2 (58.4)	620 (14)
29	10 53	13 24 38	9 34	69 51.5	10 7	16490	435 (35)	58.4 (58.5)	624 (14)
Dec. 3	10 27	13 22 57	9 39	69 50.7	10 13	16498	435 (35)	12 58.5 (58.5)	623 (14)
6	10 11	13 24 4	9 21	69 49.7	9 57	16512	435 (34)	58.9 (58.5)	626 (14)
7	10 57	13 23 41	9 55	69 51.1	10 39	16501	435 (34)	58.7 (58.5)	617 (14)
13	10 13	13 25 9	9 18	69 51.4	10 2	16485	432 (34)	58.7 (58.7)	626 (14)
14	9 31	13 22 25	10 15	69 50.0	11 5	16507	434 (34)	59.2 (58.7)	611 (14)
17	12 29	13 25 15	11 27	69 49.3	12 13	16516	435 (34)	58.7 (58.7)	615 (14)
20	10 11	13 21 42	9 16	69 51.7	9 44	16469	428 (34)	58.7 (58.7)	619 (14)
21	10 53	13 22 12	9 51	69 50.4	10 34	16497	432 (34)	58.7 (58.7)	615 (14)
24	9 53	13 21 37	15 14	69 51.6	10 27	16487	441 (34)	58.7 (58.7)	617 (14)
27	10 53	13 22 32	9 52	69 50.7	10 37	16497	435 (34)	58.7 (58.7)	618 (14)
28	11 7	13 23 25	9 43	69 50.1	10 48	16505	435 (34)	59.0 (58.7)	619 (14)
31	10 53	13 22 20	9 44	69 49.6	10 36	16507	431 (34)	58.7 (58.7)	614 (14)

The hourly readings are obtained from the magnetograms, 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 between exact hours. 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 1937

Unifilar Magnetometer, Kew pattern ..	Elliott, No.60.
(with collimator magnets 60a and "no number", and mirror magnet, 60c).	
Schuster-Smith Coil Magnetometer, Cambridge Inst.Co. No.37629.	
(with Standard Cell No. L34635 and Potentiometer No. L35968)	
Dip Inductor .. .. .	Schulze, No.103.

#### Notes on Tables

The hourly values of H, D and V, obtained as described above, appear in three of the four tables for each month. The mean value for the day is computed as the mean of the twenty-four hourly values. 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 elements H, D and V.
- (b) the value of  $HR_H + VR_V$  for each day, where  $R_H, R_V$  denote the absolute ranges for a calendar day of the horizontal and vertical components. (This measure of magnetic activity was adopted in 1932 by the International Commission for Terrestrial Magnetism and Atmospheric Electricity. In volumes of the Observatories' Year Book prior to that of 1932 the values of the quantity  $R_N^2 + R_W^2 + R_V^2$  were used).
- (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.

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. Prior to 1936 the non-cyclic change\* was eliminated from the diurnal inequalities. The figures are now published without this correction. The inequalities of N, W, and I have been computed from those of H, D, and V, by means of the formulae:

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\* See General Introduction p. 21

$$\delta N = \cos D. \delta H - \frac{\pi}{180 \times 60} H \sin D. \delta D$$

$$\delta W = \sin D. \delta H + \frac{\pi}{180 \times 60} H \cos D. \delta D$$

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

in which D and I are expressed in minutes of arc, and H, D, and I for any given month are the respective mean values for that month as published in Table 338. The ranges 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 H, D, and V are given as in former years in Table 336, though the inequalities, as stated above, are published without adjustment for non-cyclic change.

The results of harmonic analysis of the mean diurnal inequalities of N, W, and V for the months, seasons<sup>1</sup> and year are to be found in Tables 339 and 340, in which are given the values of  $a_n$ ,  $b_n$ ,  $c_n$ , and  $\alpha_n$ , in the two equivalent series  $\sum (a_n \cos 15nt^\circ + b_n \sin 15nt^\circ)$  and  $\sum c_n \sin (15nt^\circ + \alpha_n)$ . In the former series t is reckoned in hours from midnight G.M.T., whilst the published values of  $\alpha_n$  refer to Local Mean Time. The harmonic coefficients have been computed from the inequalities as given in Tables 317-334 but for this purpose the non-cyclic change has been eliminated. A correction has been applied where necessary, on account of the fact that the hourly values are not instantaneous but 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  $a_4$ ,  $b_4$ ,  $c_4$ . The values were obtained to two decimal places and finally were rounded off to 0.1γ.

The mean values of  $HR_H + VR_V$  are summarized in Table 337.

In years prior to 1934 Table 338 supplied for the separate months and year the mean values of N, W, V, T, D, I and H derived from all days. Since 1934 the table has included also the mean values of the primary elements H, D, and V on the internationally selected groups of quiet and disturbed days.

Tables 341 and 342 contain mean values of the magnetic elements for 1937 and recent years at a number of observatories;

#### REVIEW OF RESULTS OF MAGNETIC OBSERVATIONS

"Mean and Extreme Values of the Magnetic Elements", 1937.- The mean values† are given below in Table I along with the corresponding values for the previous year. The values of H, D, and V have been computed from the hourly values derived from the autographic records of all days, standardized by

<sup>1</sup>The seasons are defined for this purpose as follows:- "Winter", Jan., Feb., Nov., Dec; "Equinox", Mar., Apr., Sept., Oct; "Summer", May, June, July, Aug.  
†See remarks on p. 174

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	°	'	°	'	γ	γ	γ	γ
1936	.. 16517	13	37.4	69	48.4	16052	3890	44908	47849
1937	.. 16506	13	26.9	69	49.8	16054	3839	44934	47870

The annual rates of decrease of westerly declination for the epoch January 1st of each year during the last fourteen years are summarized as follows:-

	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937
Rate of decrease	12.6	12.8	13.1	12.6	12.2	11.6	11.8	12.3	11.1	11.6	11.5	11.8	11.4	10.5

The rate of decrease in the last year is lower than in any year since 1921. Between 1913 and 1920 the average decrease was only 9.3.

The fall of 11γ in H between 1936 and 1937 is to be compared with an average of 10γ over the last dozen years. The slight increase of 2γ in N and the decrease of 51γ in W are similar to the changes in those components in former years. I and V continue to increase slightly.

Annual mean values derived from (a) international quiet days and (b) international disturbed days are as follows:-

- (a) H, 16511γ; D, 13° 26.8; N, 16058γ; W, 3840γ; V, 44933γ  
 (b) H, 16495γ; D, 13° 26.9; N, 16042γ; W, 3836γ; V, 44935γ

In comparing these with the values for the years before 1934 the discontinuities introduced on January 1, 1934 in H and V and the components derived from them must be kept in mind.

The differences between the mean annual values of N, W, and V, derived from all, international quiet, and international disturbed days in the year 1937, are given below, together with the mean differences for the years 1915-36. 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 corresponding differences in the case of V have been almost as frequently negative as positive.

Quiet day mean-All day mean			Quiet day mean-Disturbed day mean			
	N	W	V	N	W	V
	γ	γ	γ	γ	γ	γ
1937 ..	+3.9	+1.0	-1.2	+15.5	+3.7	-1.9
1915-36	+3.2	+1.3	+0.3	+9.3	+3.3	+0.4

DIURNAL VARIATION OF THE MAGNETIC ELEMENTS  
ESKDALEMUIR 1937

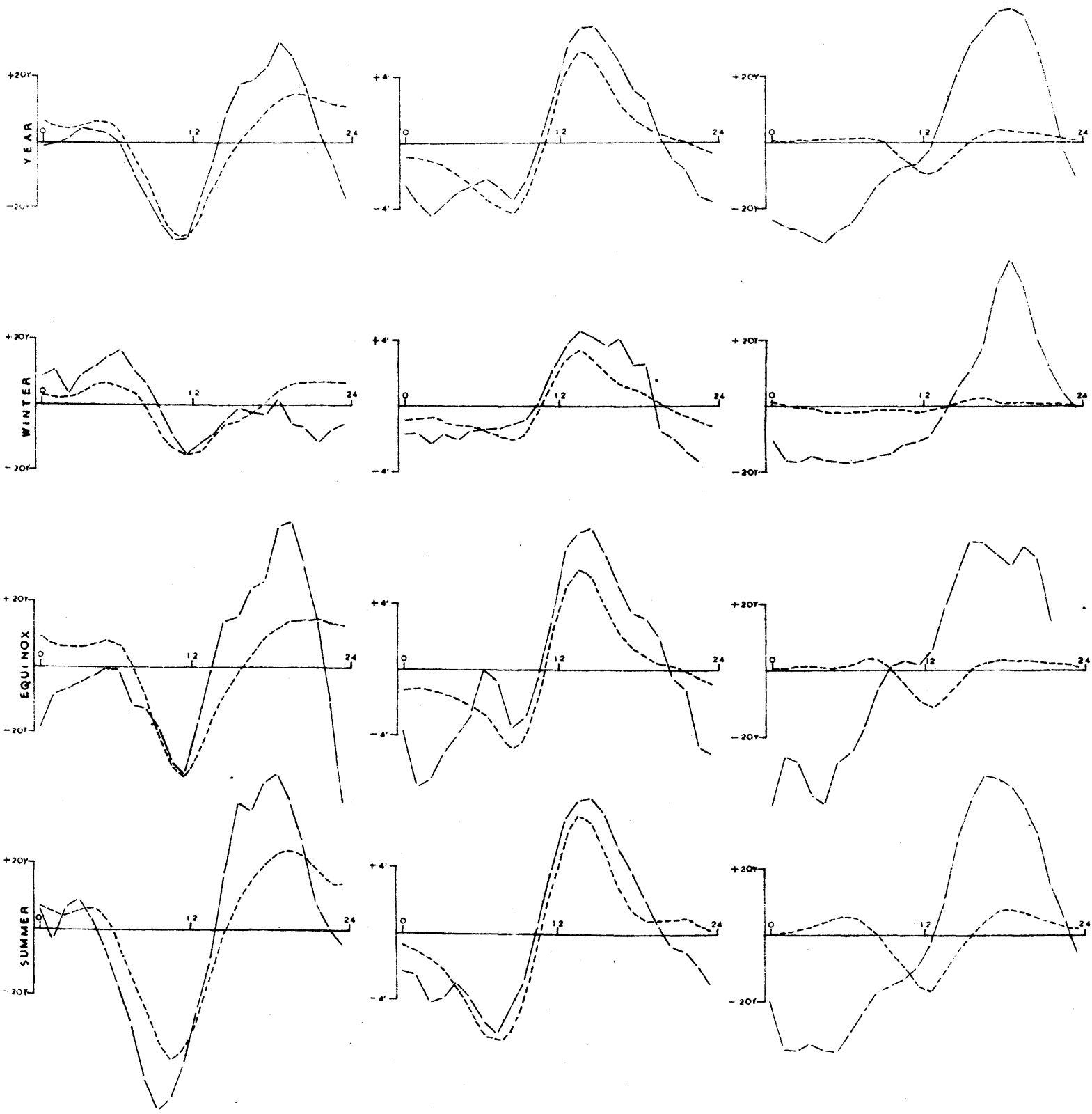
QUIET DAYS ---

DISTURBED DAYS —

HORIZONTAL FORCE

DECLINATION

VERTICAL FORCE



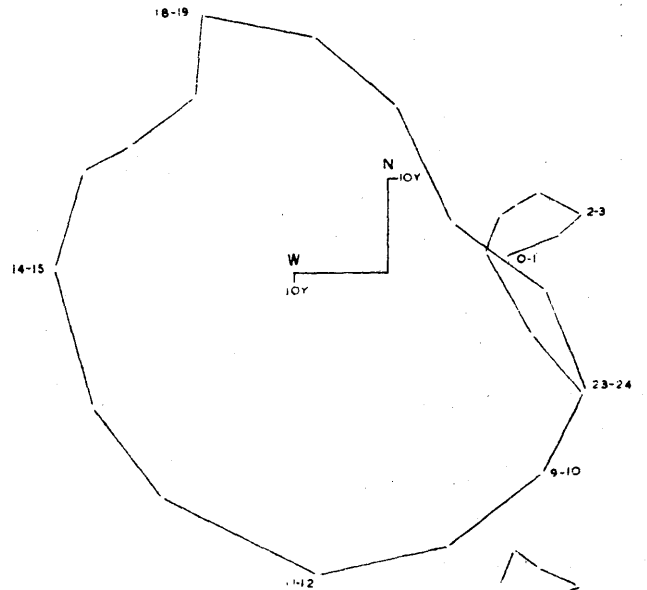
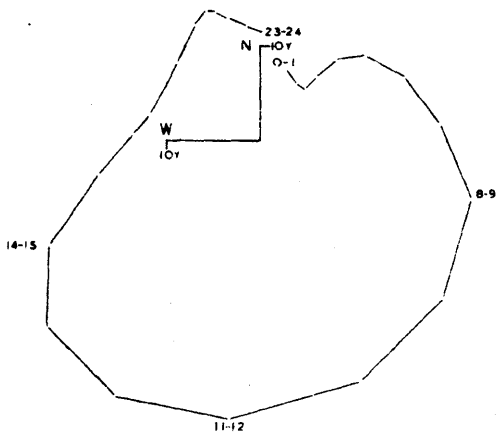
VECTOR DIAGRAMS ILLUSTRATING  
DIURNAL VARIATION OF MAGNETIC FORCE

ESKDALEMUIR 1937

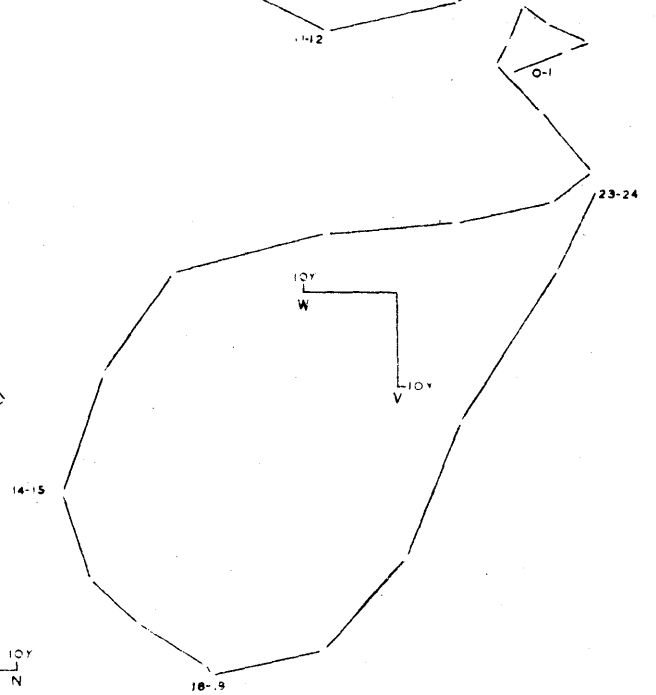
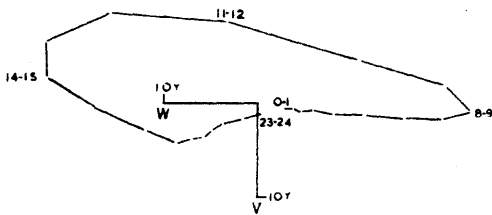
QUIET DAYS

DISTURBED DAYS

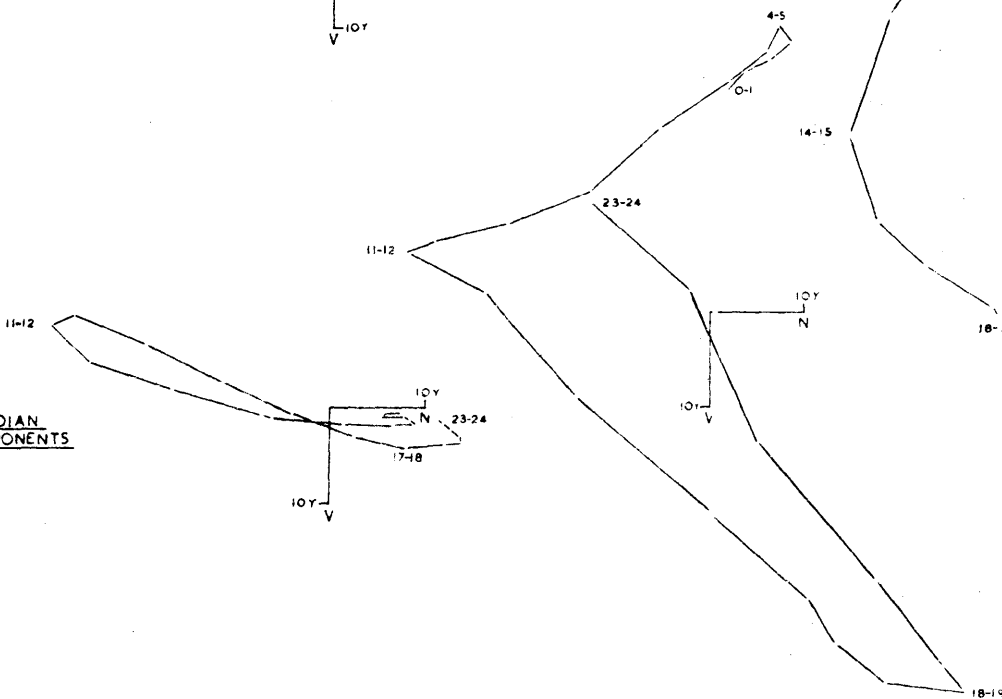
HORIZONTAL  
COMPONENTS



PRIME  
VERTICAL  
COMPONENTS



MERIDIAN  
COMPONENTS



The resultant vector representing the average excess of the mean values on quiet days over the mean values on all days, for the years 1915-1936, has a magnitude of  $3.5\gamma$ ; its azimuth is  $338^\circ$ , measured from true north through east, and it is inclined at about  $85^\circ$  to the downwardly directed vertical. The vertical plane which contains this vector approximates very closely in azimuth to the vertical plane passing through Eskdalemuir and the pole (taken as  $78^\circ$  N  $68^\circ$  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 resultant vector for quiet minus disturbed days has a magnitude of about  $10\gamma$ , azimuth of  $340^\circ$  and is virtually in the horizontal plane.

The extreme values of H, D, and V actually recorded during 1937 are given in Table II.

TABLE II

Component	Maximum		Minimum		Absolute Annual Range
	Value	Date, 1937	Value	Date, 1937	
Horizontal Force	$16791\gamma$	d h m April 25 19 30	$15612\gamma$	d h m April 26 23 45	$1179\gamma$
Declination	$14^\circ 19.5$	Feb. 3 18 57	$12^\circ 46.3$	Oct. 4 2 32	$1^\circ 33.2$
Vertical Force	$45179\gamma$	Feb. 3 18 31	$44485\gamma$	Apr. 25 0 0	$694\gamma$

The range of  $1^\circ 33.2$  in declination is equivalent to a range of about  $440\gamma$  in the component of force perpendicular to the magnetic meridian.

Magnetic Character of the Year.- The magnetic character figures on the scale 0, 1, 2 which were assigned at Eskdalemuir in accordance with the international scheme are summarized in Table III. This table contains also the monthly mean values of the international character figures, which for 1937 are based on the estimates made at about 50 observatories, and the mean monthly values of  $HR_H + VR_V$  for all, international quiet (Q), and international disturbed (D) days.

The Eskdalemuir mean value of  $HR_H + VR_V$  for the year is the highest since 1930. The mean sunspot numbers for the years 1923-37, are, in order, 5.8, 16.7, 44.3, 63.9, 69.0, 77.8, 65.0, 35.7, 21.2, 11.1, 5.7, 8.7, 36.1, 78.2, and 114.4, the figure for 1937 being higher than for any year since 1870.

The mean values of  $HR_H + VR_V$  for all days and also the international mean character figures suggest that April was the most disturbed month.



In Table III the annual mean values are the means of the monthly values entered in the corresponding columns.

TABLE III

Month	Magnetic Character Figures Number of			Mean Character Figure		Mean Value of $\frac{HR_H + VR_V^*}{10,000\gamma^2}$		
	"0" days	"1" days	"2" days	Eskdale-muir	Inter-national	All days	Q days	D days
1937								
January	16	14	1	.52	.55	251	94	624
February	5	20	3	.93	.89	362	177	911
March	10	15	6	.87	.78	377	151	803
April	6	18	6	1.00	.83	887	227	3457
May	5	21	5	1.00	.74	512	266	1186
June	4	24	2	.93	.74	469	274	923
July	9	18	4	.84	.78	519	289	987
August	16	12	3	.58	.53	458	247	1220
September	10	18	2	.73	.61	379	260	805
October	9	15	7	.94	.98	612	189	1233
November	13	15	2	.63	.73	324	114	744
December	13	15	3	.68	.63	299	90	753
Year, 1937	116	205	44	.81	.73	454	198	1137
Year, 1936	144	198	24	.67	.65	335	177	698
Year, 1935	130	212	23	.71	.67	298	150	624
Year, 1934	167	178	20	.60	.56	261	138	542
Year, 1933	156	175	34	.67	.64	300	135	658
Year, 1932	126	208	32	.74	.71	327	139	701
Year, 1931	137	208	20	.68	.66	345	185	679
Year, 1930	94	230	41	.85	.83	556	195	1246
Year, 1929	118	213	34	.75	.67	-	-	-
Year, 1928	96	246	24	.80	.63	-	-	-
Year, 1927	95	231	39	.85	.63	-	-	-
Year, 1926	90	227	48	.89	.65	-	-	-
Year, 1925	145	191	29	.69	.56	-	-	-
Year, 1924	191	153	22	.54	.55	-	-	-
Year, 1923	235	111	19	.41	.48	-	-	-
Year, 1922	174	145	46	.65	.65	-	-	-

Diurnal Inequalities.- The mean diurnal inequalities for all days, and 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 H, D and V for international quiet and disturbed days are shown graphically in Plate III, while in Plate IV are given vector diagrams illustrating the diurnal variation of magnetic force in the horizontal, the prime vertical and the meridian planes.

\*  $\frac{NR_N + WR_W + VR_V}{10,000\gamma^2}$  in 1930 and 1931

All days.- The ranges of the mean diurnal inequalities of H and D for the year and for the summer are the highest yet reached at Eskdalemuir, that is, since 1913. The range in V for the year is relatively high but has been exceeded in 1930, 1929, 1926, 1919 and 1918. The range of V in the summer of 1937, however, has hitherto been exceeded only in 1930. Of individual months, the ranges of the mean inequalities of H and D in July are most outstanding, the value in the case of H having been exceeded hitherto only in May 1928 and the value in the case of D never having been exceeded. The range of D for June is also higher than any recorded hitherto. In the case of V the greatest ranges in 1937 are in April and October, but the values have been exceeded on occasions in some earlier years.

Quiet days.- The ranges of the mean diurnal inequalities of H for the year and for the summer are the highest yet attained; in the case of D the ranges for the year and for the summer have hitherto been exceeded only in 1917. The range in V for the year is not unusually high, but for the summer it is the highest yet attained at Eskdalemuir.

The individual summer months also have unusually high ranges in all three elements.

Disturbed days.- The ranges of the mean inequalities in H and V for the year and for each season are the highest since 1930. The ranges in D for the year and in the equinox and summer are only slightly above the average level, but the range in winter is below the average. Of ranges in individual months, April 1937 establishes a new record for H in any month and the range in V in the same month has been exceeded on only a few occasions in any month.

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 1937 values expressed as a percentage of the average values. The units employed are  $\gamma$  for force and  $l'$  for declination. The mean sun spot number for 1916-26 is 46.7; that for 1937 is 114.4. With but few exceptions the 1937 ranges are above the average. The important exceptions are those which have been noted in the paragraph above dealing with the disturbed day inequalities, namely that the range of the mean inequality of D (and correspondingly of W) in winter is below normal. The only other exception relates to the range of V on quiet days in winter; it is only slightly below the average.

		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	33.7	37.5	12.0	33.4	8.10	46.1	54.4	64.5	47.5	11.28
	1937 %	130	125	112	132	124	130	120	114	129	120	129	102	110	128	102
Winter	1916-26	22.1	27.7	15.9	18.3	6.31	18.4	19.7	5.0	15.3	4.48	31.5	51.1	53.9	28.9	10.82
	1937 %	126	108	127	131	111	138	119	96	143	121	112	72	117	110	74
Equinox	1916-26	41.5	44.2	27.2	39.0	9.57	39.0	42.3	13.0	38.4	9.10	53.9	65.6	81.0	53.3	13.82
	1937 %	130	119	103	135	119	125	114	112	123	118	141	120	98	161	114
Summer	1916-26	54.0	55.6	28.5	56.1	11.33	46.6	53.7	19.9	47.7	11.18	75.4	67.2	68.1	82.6	12.66
	1937 %	131	126	129	132	125	133	120	125	133	120	126	121	123	124	114

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. The declination ranges, measured in minutes of arc, have been multiplied by 4.80 to convert them approximately to units of force of the component perpendicular to the magnetic meridian. The slight error which may be introduced by using a constant factor rarely exceeds  $\gamma$ .

Table IV - Absolute Daily Range. Mean Monthly Values

	Mean Absolute Daily Range						Mean Daily Range expressed as Percentage of Yearly mean					
	1937			Mean 1916-26			1937			Mean 1916-26		
	H	D	V	N	W	V	H	D	V	N	W	V
	Y	Y	Y	Y	Y	Y	%	%	%	%	%	%
January ..	63	59	33	69	73	39	60	65	53	80	88	81
February ..	86	96	49	69	76	38	82	106	78	80	92	80
March .. ..	87	91	52	95	94	57	83	100	83	110	113	119
April .. ..	197	116	125	98	88	54	189	128	199	114	106	113
May .. ..	111	85	73	102	88	59	106	94	116	119	106	123
June .. ..	119	96	61	92	85	46	114	106	97	107	102	96
July .. ..	126	97	69	86	82	43	121	107	110	100	99	90
August ..	115	90	60	98	88	55	110	99	96	114	106	115
September ..	89	88	52	100	92	63	85	97	83	116	111	131
October ..	127	119	90	94	93	57	122	131	144	109	112	119
November ..	73	82	45	62	66	34	70	91	72	72	80	71
December ..	60	68	44	60	64	33	58	75	70	70	77	69
Winter ..	71	76	43	65	70	36	68	84	69	76	84	75
Equinox ..	125	103	80	97	92	58	120	114	128	113	111	121
Summer ..	118	92	66	95	86	51	113	102	105	110	104	106
Year .. ..	104	91	63	86	83	48	-	-	-	-	-	-

The annual and seasonal mean daily ranges of H, D and V are all rather greater than the corresponding means for 1936. The mean values for the year are the greatest since 1930.

The frequency distribution of absolute daily ranges recorded in 1937 is shown in Table V, which also contains the percentage distribution for 1937 and for period 1916-1926.

Table V - Frequency Distribution of Absolute Daily Range

Range	Number of Cases 1937			Percentage Distribution					
				H	N	D	W	V	
Y	H	D	V	1937	1916-26	1937	1916-26	1937	1916-26
0-9	0	0	6	0.0	0.0	0.0	0.0	1.6	6.3
10-19	2	1	49	0.5	1.7	0.3	0.9	13.4	20.2
20-29	9	9	59	2.5	4.9	2.5	4.5	16.2	24.8
30-39	18	17	73	4.9	7.8	4.7	7.5	20.0	14.3
40-49	32	18	51	8.8	9.9	4.9	10.6	14.0	8.1
50-59	36	40	27	9.9	12.2	11.0	12.0	7.4	4.8
60-69	33	38	17	9.0	12.9	10.4	13.1	4.7	4.2
70-79	43	44	16	11.8	10.3	12.1	12.4	4.4	3.1
80-89	34	51	10	9.3	8.1	14.0	8.6	2.7	2.3
90-99	35	47	7	9.6	6.5	12.9	7.5	1.9	2.1
100-109	29	27	6	7.9	5.3	7.4	4.7	1.6	1.1
110-119	24	11	6	6.6	4.0	3.0	3.5	1.6	1.2
120-129	4	15	4	1.1	3.5	4.1	2.7	1.1	0.8
130-139	13	8	3	3.6	2.6	2.2	2.2	0.8	0.8
140-149	4	4	2	1.1	1.7	1.1	2.2	0.5	0.3
150-159	5	9	1	1.4	1.3	2.5	1.2	0.3	0.7
160-169	2	4	2	0.5	1.2	1.1	0.9	0.5	0.5
170-179	6	2	1	1.6	0.8	0.5	1.0	0.3	0.4
180-189	7	4	2	1.9	0.6	1.1	0.7	0.5	0.5
190-199	4	5	2	1.1	0.5	1.4	0.6	0.5	0.3
200+	25	11	21	6.8	4.4	3.0	3.1	5.8	3.1
Days Omitted	0	0	0	...	...	...	...	...	...

TABLE VI PRINCIPAL MAGNETIC DISTURBANCES RECORDED AT ESKDALEMUIR, 1937

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, 16000γ; D, 13°; V, 44000γ.

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	h m	γ	d h m	γ	'	d h m	'	d h m	'	γ	d h m	γ	d h m	γ
1	Jan. 7 11	Jan. 8 5	738	7 19 32	319	7 19 41	419	44.9	7 18 8	12.3	7 19 29	32.6	1129	7 19 34	915	7 13 0	214
2*	Feb. 2 23 5	Feb. 4 1	740	3 18 55	287	3 18 57	453	79.5	3 18 57	-8.9	3 19 10	88.4	1179	3 18 31	846	3 2 20	333
3	Feb. 9 11	Feb. 10 2	544	9 19 59	385	9 20 53	159	48.4	9 18 50	11.7	9 22 6	36.7	1052	9 20 6	910	9 11 38	142
4	Feb. 12 15	Feb. 15 2	548	13 24 0	454	12 21 40	94	38.0	13 12 43	15.4	14 20 9	22.6	969	14 19 37	904	12 21 27	65
5*	Feb. 18 19 6	Feb. 19 20	602	19 0 50	421	19 13 0	181	40.9	19 12 32	12.1	18 21 20	28.8	1016	19 17 23	900	19 1 10	116
6	Mar. 1 8	Mar. 2 24	554	1 19 46	398	1 22 12	156	41.1	2 13 46	14.5	1 22 4	26.6	983	1 21 25	899	2 3 33	84
7*	Mar. 5 7 25	Mar. 6 4	539	5 13 53	423	5 11 33	116	53.8	5 13 56	6.9	5 22 17	46.9	970	5 19 0	901	5 11 18	69
8	Mar. 13 12	Mar. 16 2	544	13 21 48	441	15 11 12	103	44.8	15 12 58	8.8	14 3 3	36.0	1019	15 14 22	842	14 2 42	177
9*	Mar. 26 20 56	Mar. 29 7	585	26 21 3	441	28 10 9	144	45.7	27 13 0	13.1	27 22 44	32.6	984	27 15 24	847	28 1 18	137
10*	Mar. 31 3 17	Apr. 4 4	654	2 19 3	347	31 8 45	307	58.0	31 7 18	12.5	3 2 13	45.5	1018	31 17 39	814	31 7 40	204
11	Apr. 12 9	Apr. 13 24	595	12 20 6	473	13 12 20	122	48.7	12 15 47	17.2	12 20 50	31.5	1023	12 17 38	883	13 0 48	140
12*	Apr. 24 12 1	Apr. 28 24	791	25 19 30	-388	26 23 45	1179	60.3	24 22 30	-7.1	27 2 30	67.4	1136	25 20 56	485	25 0 0	651
13*	May 3 16 4	May 5 19	628	5 15 3	261	5 1 29	367	42.2	5 15 7	3.1	5 1 43	39.1	1049	5 15 46	725	5 4 28	324
14	May 27 12	May 30 6	656	28 14 26	391	29 0 26	265	41.3	28 13 23	13.3	27 23 40	28.0	1054	28 14 48	795	29 0 26	259
15	June 4 14	June 7 2	619	6 15 27	358	6 10 0	261	39.6	6 13 12	5.5	5 23 51	34.1	1061	6 17 2	784	6 2 22	277
16	June 20 0	June 22 24	650	22 18 18	403	22 10 27	247	40.3	22 14 28	12.3	20 7 15	28.0	979	20 19 35	878	20 6 32	101
17	June 27 3	June 28 19	729	27 15 25	441	28 10 12	288	43.4	27 15 26	9.9	27 7 28	33.5	971	27 19 12	889	28 4 11	82
18	July 5 0	July 7 22	612	6 16 16	449	7 10 3	163	41.4	6 13 18	10.3	7 6 48	31.1	1018	6 16 44	906	5 12 17	112
19*	July 9 11 42	July 12 6	644	9 14 33	438	10 10 53	206	42.4	9 14 32	15.0	10 7 11	27.4	995	11 19 46	819	10 1 26	176
20	July 13 14	July 16 22	719	14 15 36	420	15 11 58	299	40.2	14 15 8	16.1	16 7 28	24.1	1138	14 16 50	896	14 6 20	242
21	July 19 4	July 26 3	707	19 18 47	399	22 10 15	308	43.1	24 0 44	3.6	24 2 9	39.5	1019	22 16 57	800	24 1 40	219
22	Aug. 1 13	Aug. 4 8	636	2 14 29	334	2 6 25	302	48.7	2 14 30	1.8	4 0 5	46.9	1080	2 15 10	710	4 1 40	370
23*	Aug. 22 3 7	Aug. 23 2	594	22 5 4	176	22 9 29	418	46.9	22 10 4	-0.3	22 8 25	47.2	977	22 20 17	809	22 10 16	168
24	Aug. 26 1	Aug. 29 7	597	27 15 44	419	28 12 1	178	37.2	26 14 10	14.5	26 7 51	22.7	995	27 16 52	879	27 23 27	116
25*	Sept. 10 17 50	Sept. 11 17	583	10 18 53	413	11 1 28	170	34.8	11 6 2	-2.7	11 1 42	37.5	984	11 16 40	788	11 3 30	196
26*	Sept. 30 13 44	Oct. 2 2	636	30 16 57	347	30 21 10	289	39.5	30 13 57	3.3	1 0 13	36.2	1112	30 19 46	812	30 21 9	300
27*	Oct. 3 11 20	Oct. 4 18	554	3 19 6	213	4 6 20	341	53.5	4 6 53	-13.7	4 2 32	67.2	985	3 20 4	679	4 3 29	306
28	Oct. 7 5	Oct. 13 2	659	11 14 25	292	8 4 1	367	51.6	9 14 38	-4.4	8 2 12	56.0	1133	9 15 28	731	8 3 57	402
29	Oct. 23 13	Oct. 29 2	591	24 0 59	218	23 22 47	373	41.4	26 7 28	-13.6	23 23 48	55.0	1026	27 15 46	702	24 0 26	324
30*	Nov. 7 17 4	Nov. 9 24	534	8 17 14	441	9 13 0	93	32.8	9 13 31	7.6	8 0 20	25.2	979	9 15 3	886	8 0 21	93
31	Nov. 18 0	Nov. 25 2	596	23 17 55	414	22 10 30	182	41.4	19 13 10	3.2	23 17 49	38.2	1056	18 19 7	910	23 1 30	146
32*	Nov. 29 11 4	Dec. 1 8	596	30 20 39	382	29 19 29	214	39.3	29 19 28	-2.6	30 20 30	41.9	1054	30 19 52	875	1 5 21	179
33	Dec. 18 11	Dec. 20 24	545	20 18 1	418	19 17 2	127	48.5	18 16 54	2.9	20 17 52	45.6	1108	18 17 40	925	20 5 19	183
34*	Dec. 23 10 47	Dec. 24 23	597	24 18 42	401	24 19 32	196	40.1	23 17 45	7.1	23 19 39	33.0	1157	23 18 7	930	23 1 32	227

The intervals of maximum frequency in 1937 lie between 70 and 79 $\gamma$  for H, 80-89 $\gamma$  for D, and 30-39 $\gamma$  for V. These intervals are all 10 $\gamma$  higher than in 1936.

On 47 days in 1937 the absolute range in either H or D was 160 $\gamma$  or more. The numbers of such days for N and W in the years 1915 to 1931 and for H and D from 1932 to 1937 are shown in the accompanying table.

Year 1900+	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
No. of days	30	47	35	56	58	36	27	32	11	10	24	46	41	48	50	88	17	31	17	13	22	29	47

The number of days in each year from 1926 on which the range in each of H, D and V was 200 $\gamma$  or more has been as follows:-

Year 1900+	26	27	28	29	30	31	32	33	34	35	36	37
No. of days	18	7	5	9	16	1	2	1	2	0	3	9

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 1937, and the actual frequencies of occurrence of hourly ranges in the last three of the four divisions mentioned are set out below. A range of 30' is equivalent to a change of 144 $\gamma$  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'	44	93	110	88	74	82	75	45	67	157	100	75	1010
15' to 30'	3	8	12	20	8	0	3	9	5	27	6	10	111
>30'	1	2	1	12	1	0	1	0	1	5	1	0	25

Hourly Distribution. 1937  
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'	52	55	43	42	34	29	31	30	31	35	40	62	43	29	35	31	39	35	36	52	60	58	56	52
15' to 30'	8	9	5	8	2	5	5	6	1	1	2	1	0	0	3	3	2	8	9	6	7	9	8	3
>30'	3	2	0	0	2	1	0	1	0	0	0	0	0	0	0	0	0	0	1	4	2	3	3	3

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 results in the hourly range exceeding 5', whereas the occurrence of the same degree of irregularity at another hour of the day would not cause the hourly range to exceed 5'. Thus the figures given above for the range interval 5' -15' tend to exaggerate somewhat the incidence of irregular changes between 9h and 13h. The hourly distributions of the frequency of occurrence of ranges between 5' and 15' and between 15' and 30' exhibit the well known tendency for irregular changes to occur predominantly during the "night" hours - at least in Europe.

Principal Magnetic Disturbances during 1937.- 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, 1937

**GENERAL.-** Magnetic storms were more frequent and more intense than in any year since 1930. In the notes which follow, the sunspot data have been extracted from an article in the "Observatory" for February 1938, and from the Mount Wilson Observatory Bulletins, published quarterly in "Terrestrial Magnetism and Atmospheric Electricity."

The abbreviation C.M.P. is used for Central Meridian Passage, and areas are given in millionths of the sun's hemisphere.

#### JANUARY.- (Average Character Figure 0.52)

January experienced several very quiet periods, no less than sixteen days being classified as "0", and only one day being very disturbed. The year opened with very quiet conditions prevailing, which lasted for the first week, the only interruption being on the night of 2nd-3rd. On 7th a short but violent storm occurred. H rose suddenly to a sharp peak at 19h 32m and fell immediately through 419 $\gamma$  in the next 9 minutes. D had a bay 30' deep and V a peak of 140 $\gamma$  at the same time. Conditions were again very quiet from 8d 5h until 9d 5h, when minor activity began rather abruptly and continued for several days. The period 13th to 19th was very quiet and, except for slight disturbance on the next three days, when a large sunspot was near C.M.P., and from 27th to 30th, the remainder of the month was quiet.

#### FEBRUARY.- (Average Character Figure 0.93)

After a few hours of slight disturbance early on 1st, conditions became quiet until a sudden commencement (-2 $\gamma$ , +57 $\gamma$  in H; +4.0' in D; -7 $\gamma$  in V) at 2d 23h 5m initiated a great magnetic storm. The only large movement in the first few hours was an oscillation of H through 285 $\gamma$  between 2d 1h and 2h 30m, and D and V were both rather below normal until 9h. There were only a few small rapid oscillations during the daylight hours and the most disturbed period followed, from 18h to 20h. The H and V oscillations, through more than 450 $\gamma$  and 287 $\gamma$  respectively, were parallel and the reverse of those of D which had a range of 88.4'. The H range was completed in one swing of the magnet, the minimum being reached at 18h 55m, and other large oscillations of decreasing amplitude followed, but conditions had returned to normal by 20h. This storm was possibly associated with a large sunspot which had C.M.P. at January 31.2d, and Mount Wilson Observatory reported chromospheric eruptions on February 3rd.

Only slight activity was recorded during the next few days, although conditions were never very quiet for more than a few hours and on 9th a small storm occurred. After moderate disturbance on 10th there was a prominent bay of 16' in D at 11d 20h, and some activity continued until 16th, although ranges never approached storm values. The 17th and 18th were quiet until a sudden commencement (-2 $\gamma$ , +43 $\gamma$  in H; -0.7' +2.2' in D; -5 $\gamma$  in V) occurred at 18d 19h 6m. The only notable features of the storm were a bay in D of 20'

at 21h 20m, and a peak in H of  $100\gamma$  at 19d 0h 50m. After 19d 20h conditions were quiet, until a small movement of sudden commencement type at 21d 3h 30m preceded a day of slight disturbance.

The remainder of the month was quiet, especially from 22d 22h to 23d 8h, although there were further small oscillations similar to sudden commencements at 24d 8h 12m and 25d 11h 44m.

#### MARCH.- (Average Character Figure 0.87)

A short storm occurred on the night 1st-2nd but the rapidity of the movements was more striking than their ranges.

From 2d 20h to 4d 23h was quiet and another small storm commenced suddenly with an oscillation ( $+20\gamma$ ,  $-32\gamma$  in H;  $-2.0'$ ,  $+4.5'$  in D) at 5d 7h 25m and small rapid movements followed, the only large movement being a bay in D at 22h 20m. The ranges in H and V were comparatively small, but D varied through  $46.9'$ . A solar eruption was reported on 5th.

Conditions again became quiet, especially from 6d 13h to 9d 0h and 11d 22h to 13d 4h, until a small disturbance began at 13d 22h. All three elements were below their normal values until 5h and slight disturbance continued until another small oscillatory movement occurred at 15d 9h 42m. During the next few hours the H and D traces showed only small serrations but V rose to a high maximum at 14h 22m.

From 15d 17h to 16d 12h was very quiet and only slight activity occurred on subsequent days. Activity increased on 22nd and H rose abruptly through  $142\gamma$  to a very high peak at 22h 24m,  $214\gamma$  above its afternoon minimum. Conditions then became quiet until 26th when another storm began with a sudden commencement ( $-5\gamma$ ,  $+56\gamma$  in H;  $-0.5'$ ,  $+2.6'$  in D;  $-5\gamma$  in V) at 20h 57m. 27th and 28th were disturbed throughout, although individual movements were never large. After a short quieter interval disturbance was renewed abruptly at 30d 14h 14m but the storm did not really begin until after a sudden commencement ( $-7\gamma$ ,  $+37\gamma$  in H;  $-2.8'$ ,  $+8.2'$  in D;  $-2\gamma$  in V) at 31d 3h 17m. The magnets were continually agitated during the daylight hours when H and V both remained below normal but the largest fluctuations were just after sunrise and just before sunset, the later being the more noteworthy, H oscillating through  $157\gamma$ . The total ranges for the storm were H  $277\gamma$ , D  $43.0'$ , and V  $204\gamma$ . A sunspot had C.M.P. 29.5d and a solar eruption occurred on 31st.

#### APRIL.- (Average Character Figure 1.00)

Slight activity persisted for the first three days and there were large oscillations at 2d 19h, the ranges being H  $195\gamma$ , D  $27.7'$ , and V  $24\gamma$ .

4th to 11th were quiet, especially from 8d 2h to 10d 21h, and a rapid movement at 12d 8h 44m was associated with only a small disturbance which abated on 13th, only V having a large range,  $135\gamma$ .

Conditions were then quiet until 18th, especially from 13d 22h to 15d 14h and 15d 23h to 17d 12h, and after four days of minor activity 21d 19h to 23d 13h was also quiet.

From 24th to 29th were very disturbed, but the period from 4h to 15h on 25th, 26th and 27th was comparatively quiet. Although listed in Table VI as

one storm there was really a succession of storms, probably associated with a stream of large and active sunspot groups. The largest spot had an area of 1500 millionths and had C.M.P. at April 24.6d.

The storm began with an unusual sudden commencement, ( $-19\gamma$ ,  $+72\gamma$  in H;  $-4.4'$ ,  $+1.4'$ ,  $-2.3'$ ,  $+5.5'$  in D;  $-7\gamma$  in V) at 24d 12h 1m and all three elements rose slowly and unsteadily. H and V began to fall after 19h and the more violent disturbance began when H and V both dropped suddenly through  $180\gamma$  just before 22h.

After partial recoveries they fell even lower (H through  $530\gamma$  in 18m) simultaneously with D's rise to maximum at 22h 30m, and from 23h to 25d 2h all the elements were fluctuating violently at much below normal. V reached its lowest value for the year, at midnight.

The next phase of the storm began abruptly at 25d 15h 47m and H and V tended to be above normal until 23h, but D decreased unsteadily. Ranges were smaller than on the previous night, but movements were still large and rapid. H reached its maximum for the year in a sharp peak at 19h 30m and V had a high peak at 20h 56m.

The renewal of disturbance at 26d 17h was less sharp and the disturbance more prolonged than on the previous two days. The minima of H and V were more striking than the maxima, H reaching its lowest value for the year, after a series of violent falls, at 23h 45m.

The 27th to 28th storm was even later than its predecessors, not beginning until 19h, and continuing for twenty-nine hours, but disturbance was slightly less intense. Ranges for the individual storms were:

<u>Storm</u>	<u>H</u> $\gamma$	<u>D</u> '	<u>V</u> $\gamma$
24d 12h - 25d 2h	638	66.6	476
25d 15h - 25d 23h	360	49.3	337
26d 17h - 27d 6h	1106	62.9	419
27d 19h - 29d 0h	569	61.3	556
<hr/>			
24d 12h - 29d 0h	1179	67.4	651

29th and 30th were also disturbed, but much less so than the preceding days.

#### MAY.- (Average Character Figure 1.00)

The magnetic character figure for May is as high as that for April, but the disturbance was much less intense though it persisted for longer periods.

The disturbance of the end of April continued on a decreasing scale into 1st May but 2nd was quiet, as was 3rd until 16h 4m when a sudden commencement ( $-4\gamma$ ,  $+49\gamma$  in H;  $-0.5'$ ,  $+2.0'$  in D) occurred. Only slight activity developed which soon abated but a large storm began at 4d 17h. Movements were not large until after midnight when H and V began to fall rapidly, while D oscillated about its normal value. H reached a low minimum at 1h 29m and both H and V remained low for several hours, H not recovering until noon. After a



considerable decrease in activity there was a temporary renewal from 15h to 17h. Ranges for the storm were H 367 $\gamma$ , D 39.1', V 324 $\gamma$ . A sunspot, area 200, had C.M.P. at May 5.0d.

A long period followed in which there was only slight activity and conditions were often very quiet, especially from 5d 17h to 8d 20h, 11d 19h to 14d 6h and 19d 17h to 21d 5h.

A large sudden commencement (-18 $\gamma$ , +71 $\gamma$  in H; -1.3', +3.9' in D; -5 $\gamma$  in V) at 21d 15h 56m preceded only slight activity but conditions did not become quiet and disturbance increased on 25th. After a slight lull a further increase occurred and a storm lasted from 27d 12h to 30d 1h. At first disturbance consisted of fairly regular oscillations, period 45m, amplitude for H and D about 40 $\gamma$ , superposed on the regular diurnal variation, but these ceased after a rapid movement (-3 $\gamma$ , +43 $\gamma$  in H) at 28d 1h 53m, and activity again decreased. H and V both increased rapidly to high afternoon maxima but ranges remained small until another series of regular fluctuations occurred between 28d 21h and 29d 4. The period was about 90m and approximate amplitudes H 120 $\gamma$ , D 25', V 70 $\gamma$ .

A sunspot, area 600, had C.M.P. 27.3d.

Disturbance continued on a decreasing scale to the end of the month.

#### JUNE.- (Average Character Figure 0.93)

After minor activity on 1st and 2nd, 3rd was quiet but the minor activity was renewed rather suddenly at 4d 14h 22m, and disturbance reached storm range on the afternoon of 5th. V fell unsteadily and reached a low minimum at 6d 2h 22m, but the movements of H and D were less noteworthy, although ranges on 5th and 6th were H 261 $\gamma$ , D 34.1', V 277 $\gamma$ . A sunspot, area 900, had C.M.P. June 4.9d.

Conditions did not become quiet until 9d 1h, but the next night was very quiet and a sudden commencement (-3 $\gamma$ , +39 $\gamma$  in H; -5.4', +11.5' in D) at 10d 5h 5m introduced only a few hours of small rapid oscillations. 11th and 12th were quiet but another rapid movement at 13d 8h 40m preceded a long period of disturbance, at times only slight, which developed into a storm early on 20th. V dropped suddenly just after 5h and H and D fluctuated rapidly through small ranges. H was rather high during the afternoon but ranges did not become large. Disturbance was renewed during the afternoon of the next three days, ranges for the period being H 247 $\gamma$ , D 28.0' and V 101 $\gamma$ . A sunspot, area 700, had C.M.P. 21.2d.

26th was quiet but another storm began at 27d 3h, but only H showed any large fluctuations, the outstanding movement being its rapid rise through 215 $\gamma$  in 6 minutes to a high maximum at 27d 15h 25m.

Minor activity continued for the remainder of the month.

#### JULY. - (Average Character Figure 0.84)

Except for the period 3d 11h to 4d 13h slight disturbance persisted for the first 7 days, 6th being the most disturbed. After a quiet day disturbance was renewed suddenly (-10 $\gamma$ , +19 $\gamma$  in H; +1.1', -2.9' in D) at 9d 11h 42m. For several hours the variations of H were regular with a period of about one hour

and amplitude 40γ.

After 10d 12h conditions were quiet until another sudden commencement, (-19γ, +64γ in H; -1.1', +2.7' in D) at 11d 14h 50m, but the ensuing disturbance showed no noteworthy features. Ranges for 9th to 12th were H, 206γ; D 27.4' and V 176γ.

After small fluctuations H and V both rose to high maxima, 200γ above their normal values, on the evening of 14th, and only slowly returned to normal. Conditions never became quiet; on 19th the magnets were continually agitated and activity increased suddenly at 19d 13h 55m. H reached a high maximum at 19d 18h 47m, as did V at 19h 58m, and the minima for the storm of D and V occurred during a temporary increase of activity on 23rd and 24th. Ranges for the storm were H 308γ, D 39.5' and V 219γ. Large sunspots had C.M.P. at July 18.5d and 23.6d, the former having an area of 800.

Disturbance died away late on 26th and three quiet days followed but minor activity was renewed at the end of the month.

#### AUGUST.- (Average Character Figure 0.58)

The month opened with minor activity which increased after a movement of sudden commencement type at 1d 21h 49m. V fell sharply just after 2d 3h and remained very low until 10h. H was also much below normal from 5h to 10h but D varied irregularly. H and D reached maximum simultaneously in sharp peaks at 14h 30m and V's maximum at 15h 10m was also a high peak.

Disturbance decreased during the evening but in the early hours of 3rd the traces showed continual small serrations of period about 1½m. H and V both fell very low between 4d 1h and 2h, when D was at its maximum after a low minimum at 0h 5m. The storm then abated and a quiet period followed. Ranges for the storm were H 302γ, D 46.9' and V 370γ. It was possibly associated with a sunspot having C.M.P. at 5.8d, and of area 1000.

A sudden commencement (-3γ, +44γ in H; -1.5', +5.7' in D) at 6d 23h 23m preceded only a short spell of minor disturbance, and, except for slight activity on 11th, 12th, 14th and 15th, conditions remained quiet until another storm began on 22nd. The quietest periods were 8d 10h to 9d 8h and 15d 14h to 18d 7h.

After a rapid movement at 21d 21h 11m there was a sudden commencement, (-4γ, +45γ in H; -2.8', +8.4' in D) at 22d 3h 7m and a short but violent storm followed. At first the magnets oscillated irregularly, but H and V were very low between 8h and 11h; D had a low minimum at 8h 25m and then rose rapidly, reaching maximum at 10h 4m; H and V were never appreciably above normal but ranges for 22nd-23rd were H 418γ, D 47.2' and V 168γ.

Conditions became very quiet during 23rd and remained so until 25d 20h. Activity then increased slowly and 27th was disturbed, H rising sharply between 15h and 16h and V having a low minimum just before midnight. Minor activity continued for a few days but from 29d 18h to the end of the month was very quiet.

#### SEPTEMBER.- (Average Character Figure 0.73)

Slight disturbance followed a rapid movement (-13γ, +44γ in H; -1.6', +3.5' in D) at 1d 14h 50m but did not persist and conditions were quiet from

2nd to 9th.

A sudden commencement ( $-3\gamma$ ,  $+53\gamma$  in H;  $-0.4'$ ,  $+3.5'$  in D) at 10d 17h 50m was followed by a short disturbance in which individual movements were never large, although all three elements were very low just after 11d 1h and V fell still lower to minimum at 3h 30m. Ranges for 10th-11th were H 170 $\gamma$ , D 37.5' and V 196 $\gamma$ . A sunspot of area 1500 had C.M.P. at 10.9d.

Except for 30th, during the remainder of the month only minor activity was experienced and several periods were quiet, particularly 11d 18h to 13d 7h, 19d 16h to 20d 23h, 25d 2h to 26d 7h and 27d 3h to 30d 10h.

The last hours of the month were very disturbed after a large sudden commencement ( $-35\gamma$ ,  $+98\gamma$  in H;  $-2.9'$ ,  $+9.3'$  in D;  $-1\gamma$ ,  $+6\gamma$  in V) at 30d 13h 44m. Until 20h H fluctuated irregularly at a rather high level while V rose steadily to a high maximum at 19h 46m. Both elements then fell rapidly, reaching sharp minima almost simultaneously at 21h 10m, and remained low to the end of the month. D was below normal throughout but did not reach minimum until October 1d 0h 13m. Ranges for the storm were H 289 $\gamma$ , D 36.2' and V 300 $\gamma$ .

#### OCTOBER.- (Average Character Figure 0.94)

The disturbance of September 30th continued with diminishing intensity throughout 1st and a quiet interval followed which ceased when another violent storm commenced abruptly at 3d 11h 20m. Disturbance was only moderate until just before 24h when all three elements fell rapidly. D was the first to reach minimum, its lowest of the year, at 4d 2h 32m, and H and V continued to fall until after 3h. V rose slowly after 5h but H varied rapidly at a low level, and eventually reached a very low minimum at 6h 20m. Ranges then decreased but small fluctuations continued throughout 4th.

Ranges for the storm were H 341 $\gamma$ , D 67.2' and V 306 $\gamma$ . A large sunspot, with which were associated solar prominences, had C.M.P. at 4.6d.

Conditions did not become really quiet and disturbance was renewed on 7th, H, D and V all having very low minima between 8d 2h and 4h. Small rapid oscillations followed which recommenced after a quiet interval from 8d 20h to 9d 7h and were a prominent feature of the traces during the daylight hours of the next five days. The variations on 9th and 11th were strikingly similar; ranges increased suddenly just before 14h and all three elements rose spasmodically with very rapid oscillations, which decreased in amplitude as values returned to normal. On 12th activity increased suddenly at 19h 29m but soon abated.

Ranges for 7th to 13th were H 367 $\gamma$ , D 56.0' and V 402 $\gamma$ . Large sunspots had C.M.P. at 7.0d and 12.7d.

There was a temporary renewal of activity late on 15th, D having a sharp bay, 30' deep, and conditions then became quiet until 22nd, especially from 18d 2h to 21d 6h.

Slight disturbance began late on 22nd and slowly developed into a storm. H fell suddenly through 196 $\gamma$  to minimum at 23d 22h 47m and rapid fluctuations of all three elements followed but died away after H's maximum, reached after a rapid rise of 280 $\gamma$ , at 24d 0h 59m. Ranges for the storm were H 373 $\gamma$ , D 55.0' and V 324 $\gamma$ . A sunspot of area 900 had C.M.P. at 26.6d.

Conditions remained disturbed until 29th but from 30d 1h to the end of the month was very quiet.

NOVEMBER.- (Average Character Figure 0.63)

The first week was quiet, especially from 3d 12h to 7d 9h, and a small sudden commencement ( $-4\gamma$ ,  $+14\gamma$  in H) at 7d 17h 4m introduced two days of only moderate disturbance. 10th was quiet and after further slight activity conditions were very quiet from 13d 20h to 17d 16h.

A prolonged disturbed period followed, although ranges never became very large. The largest range in V was on 18th, due to a high maximum at 19h 7m. H and D did not experience large variations until 22nd and 23rd when D had rather low minima.

From 25d 2h to 27d 20h was quiet and minor activity then commenced which continued until another storm developed after a rapid oscillatory movement ( $-4\gamma$ ,  $+13\gamma$ ,  $-25\gamma$ ,  $+53\gamma$  in H) at 29d 11h 4m. The largest fluctuations occurred between 19h and 20h, H rising sharply through  $114\gamma$ , falling immediately through  $191\gamma$  and recovering more slowly to normal. V varied similarly through  $82\gamma$  and D through  $21'$ . There were more large oscillations on the evening of 30th, those in D and V being larger than on the previous night, and ranges for the storm were H  $214\gamma$ , D  $41.9'$  and V  $179\gamma$ . A small sunspot had C.M.P. at 30.9d.

DECEMBER.- (Average Character Figure 0.68)

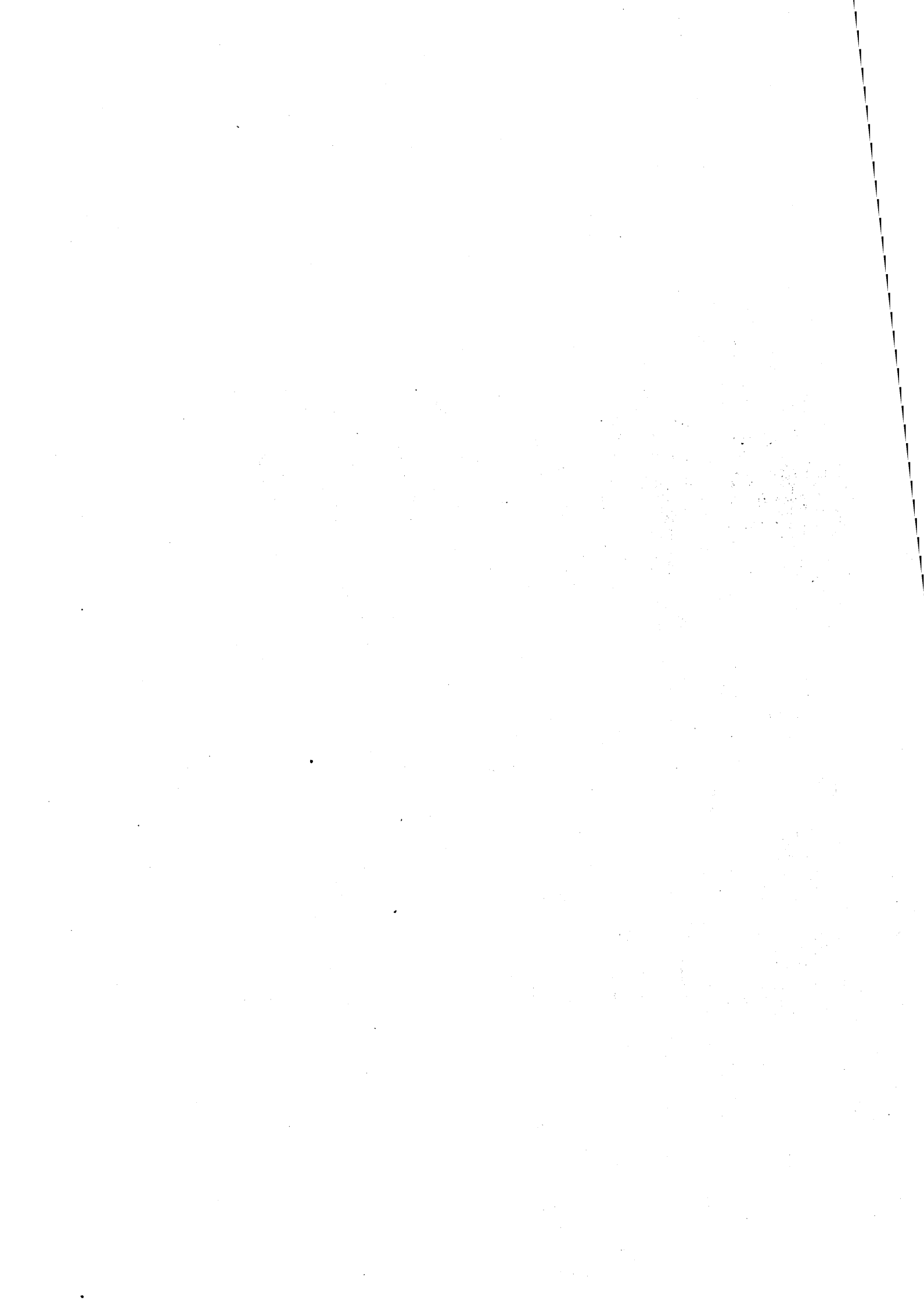
The storm of November 29-30th continued into December, V being rather low early on 1st, but conditions slowly became quiet, especially from 3d 22h to 5d 13h. After minor activity from 7th to 11th another very quiet spell followed from 12d 7h to 18d 3h. On 18th disturbance developed, D and V both rising slowly to high maxima, reached at 16h 54m and 17h 40m respectively, but H did not vary widely. There were a succession of bays in D on the evening of 19th and a more prominent one,  $21'$  deep, on 20th.

Conditions did not become quiet and a larger storm developed after a movement similar to that of November 29th, but smaller, at 23d 10h 47m. Only in V was the range exceptionally large, the maximum value of  $45157\gamma$  at 18h 7m being the highest recorded since February.

From 23d 21h to 24d 16h was quiet and disturbance was temporarily renewed from 18 to 20h, H varying rapidly through  $196\gamma$  while D and V had much smaller ranges.

Total ranges for 23rd to 24th were H  $196\gamma$ , D  $33.0'$  and V  $215\gamma$ . A large sunspot had C.M.P. at 20.9d.

Minor activity continued until 26th, but conditions became very quiet from 25d 16h to 31d 12h when moderate disturbance developed which continued to the end of the year.



167 ESKDALEMUIR:  $H_b$  (height of barometer cistern above M.S.L.) = 237.3 metres

JANUARY, 1937

Hour G. M. T.	1	2	3	4	5	6	7	8	9	10	11	Noon	13	14	15	16	17	18	19	20	21	22	23	24	Mean
Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Station Level	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb
Sea Level	978.8	978.6	978.6	978.4	978.2	978.2	978.2	978.7	978.6	978.9	978.7	977.9	977.0	976.5	976.0	975.9	975.6	976.5	976.9	977.1	977.1	977.9	978.2	978.6	977.7
Mean (Station Level)	975	975	975	974	974	974	974	975	975	975	975	974	974	974	974	975	975	975	975	975	975	975	975	974	975
Mean (Sea Level)	1004	1004	1003	1003	1003	1003	1003	1004	1004	1004	1004	1003	1003	1003	1003	1003	1003	1004	1004	1004	1004	1004	1003	1003	1003

168 ESKDALEMUIR:  $H_b$  = 237.3 metres

FEBRUARY, 1937

Hour G. M. T.	1	2	3	4	5	6	7	8	9	10	11	Noon	13	14	15	16	17	18	19	20	21	22	23	24	Mean
Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Station Level	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb
Sea Level	964.4	964.4	963.6	963.0	962.4	962.2	962.3	961.8	961.6	961.7	961.6	961.6	961.8	961.8	962.3	962.8	963.3	964.0	965.3	966.0	967.1	967.9	968.4	968.7	963.7
Mean (Station Level)	968	968	968	968	968	968	969	969	969	969	969	969	969	969	968	968	968	969	969	969	969	968	968	968	969
Mean (Sea Level)	997	997	997	997	997	998	998	998	998	998	998	997	997	997	997	997	997	997	997	997	997	997	997	997	997

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  
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, 1937

Hour G. M. T.	1	2	3	4	5	6	7	8	9	10	11	Noon	13	14	15	16	17	18	19	20	21	22	23	24	Mean
Day	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb
1	967.1	967.2	967.4	967.6	968.0	968.3	968.5	968.3	968.4	968.8	968.8	968.9	967.9	968.2	969.1	969.9	970.8	971.0	971.3	971.1	970.5	969.5	969.4	968.6	968.9
2	968.4	967.5	966.6	965.8	965.3	965.2	965.4	965.4	965.2	965.4	965.3	965.0	964.8	964.5	964.1	964.1	964.2	964.6	964.5	964.5	964.5	964.6	964.6	964.6	965.3
3	965.0	965.0	965.0	965.3	965.5	965.8	966.3	966.8	967.3	967.7	968.1	968.5	969.1	969.5	969.7	970.0	970.5	971.2	971.8	972.3	972.8	973.2	973.6	973.7	968.7
4	974.0	974.1	974.1	974.3	974.6	974.7	975.2	975.4	975.6	975.7	975.9	975.8	975.3	975.3	974.9	974.5	974.8	975.0	975.0	975.1	975.1	974.8	974.6	974.9	974.9
5	974.9	974.9	974.9	975.2	975.4	975.4	975.8	976.5	976.6	977.1	977.3	977.5	977.6	977.8	977.9	978.1	978.6	979.4	979.8	980.1	980.3	980.6	981.1	981.5	977.5
6	981.6	981.6	981.3	981.2	981.4	981.6	982.0	982.4	982.5	982.6	982.9	982.7	982.5	982.4	982.3	982.0	981.9	982.1	982.0	982.0	981.9	981.6	981.5	981.0	981.9
7	980.8	980.6	980.1	979.7	979.5	979.8	980.2	980.5	980.7	980.9	981.1	981.5	981.7	981.6	981.6	981.6	981.6	982.1	982.6	982.9	983.2	983.4	983.5	983.3	981.4
8	983.1	983.0	982.4	982.4	982.3	982.6	982.5	982.1	981.7	981.8	981.5	981.2	980.8	980.3	979.8	979.2	979.3	979.3	979.3	979.0	978.9	978.5	978.2	978.0	980.8
9	977.7	977.3	976.9	976.5	976.2	976.0	975.9	975.6	975.6	975.6	975.5	975.1	974.6	974.3	973.9	973.8	973.6	973.6	973.7	973.9	973.6	973.3	973.2	973.0	975.0
10	973.0	972.6	972.4	972.0	972.2	972.0	972.0	972.3	972.4	972.5	972.7	972.6	972.4	972.3	972.3	972.4	972.4	972.3	972.6	972.7	972.8	972.8	972.4	972.2	972.4
11	971.9	971.4	970.6	969.7	968.5	967.6	967.2	966.5	966.2	965.4	964.9	964.6	964.0	962.9	962.1	961.5	961.0	960.8	960.6	959.8	959.9	959.1	958.3	958.4	964.6
12	957.6	956.6	956.7	956.8	956.8	956.3	956.2	956.1	956.1	956.0	956.1	956.2	956.1	955.9	955.3	955.5	955.7	956.2	956.1	956.0	955.0	955.0	955.0	954.9	956.1
13	954.7	954.5	954.3	954.0	954.0	954.1	954.1	954.6	954.9	955.1	955.3	955.7	955.9	955.6	956.7	957.3	957.7	958.0	958.3	959.1	959.2	959.1	959.2	959.2	956.1
14	959.9	959.9	959.4	959.0	959.3	959.5	959.8	960.2	960.4	960.4	960.6	961.3	961.4	961.4	962.0	962.3	962.5	962.5	963.9	964.8	965.4	966.2	966.8	967.5	961.8
15	968.2	968.7	969.4	969.6	970.4	971.7	972.9	974.2	975.4	976.6	977.6	979.1	980.2	980.7	981.7	982.3	983.0	984.0	984.9	985.4	985.8	986.2	986.6	986.7	978.0
16	986.6	986.5	986.4	986.0	985.8	985.7	984.8	984.1	983.6	982.8	981.9	981.1	979.1	977.9	976.5	974.3	973.0	972.0	971.0	970.2	969.7	969.8	969.7	969.3	979.0
17	969.3	969.0	968.8	968.5	968.2	968.3	968.4	968.6	968.9	968.8	968.8	968.7	968.7	968.7	968.8	968.3	968.3	968.4	968.5	968.4	968.5	968.1	967.9	967.7	968.8
18	967.3	966.9	966.6	966.1	966.1	966.2	966.2	966.2	966.4	966.8	967.2	967.3	967.2	967.1	967.1	966.9	966.9	967.3	967.5	967.5	967.8	968.2	968.1	968.2	967.0
19	968.2	968.4	968.5	968.6	968.9	969.3	969.7	970.1	970.7	970.9	971.0	971.2	971.2	971.2	971.4	971.4	971.7	971.9	972.3	972.5	972.7	972.9	973.0	973.1	970.8
20	973.1	973.0	972.9	973.1	973.2	973.3	973.4	974.0	974.3	974.6	975.1	975.3	975.6	975.6	975.7	976.0	976.3	976.9	977.6	978.2	978.4	979.0	979.1	978.9	975.4
21	978.8	979.0	979.0	979.1	979.1	979.3	979.1	979.4	979.6	979.8	980.0	979.9	979.6	979.4	979.1	979.0	978.8	978.8	978.8	978.6	978.9	979.2	978.9	978.7	979.2
22	978.6	978.3	977.8	977.0	976.4	976.0	975.9	976.0	975.9	975.2	974.2	973.3	973.4	973.5	973.1	972.6	972.4	972.5	973.1	974.2	974.8	975.3	975.9	976.1	975.1
23	976.3	976.9	977.4	978.0	978.7	979.4	979.9	980.4	980.9	981.2	981.7	982.0	982.0	982.2	982.5	982.6	983.2	983.5	984.1	984.4	984.7	984.7	984.5	984.3	981.3
24	984.0	983.6	983.1	982.8	982.6	982.3	982.0	981.6	981.4	980.7	980.2	979.2	979.1	978.5	978.6	978.5	978.3	978.4	978.4	978.4	978.4	978.6	978.8	978.8	980.4
25	979.5	979.7	980.0	979.9	979.9	979.8	980.4	981.4	981.4	981.5	981.8	981.6	981.5	981.1	981.0	980.6	980.6	980.5	980.5	980.3	980.2	979.6	979.3	980.5	
26	979.1	978.7	978.2	977.4	977.1	976.9	976.9	976.6	976.9	977.0	977.1	976.9	976.9	976.8	977.1	977.5	977.9	978.3	978.9	979.6	980.1	980.3	980.5	980.8	978.0
27	981.0	981.1	981.3	981.5	982.1	982.4	983.0	983.7	984.1	984.8	984.8	985.0	985.3	985.6	986.0	986.3	986.7	987.1	987.3	987.9	988.2	988.3	988.5	988.7	984.9
28	988.6	988.8	988.8	989.1	989.6	989.9	990.3	990.5	990.8	991.1	991.6	991.8	992.3	992.6	992.6	993.0	993.3	994.0	994.5	994.9	995.1	995.6	995.9	995.9	991.9
29	995.8	996.3	996.3	996.6	996.8	997.2	997.4	997.7	997.6	997.9	997.7	997.7	997.7	997.6	997.6	997.5	997.5	998.2	998.8	999.1	999.5	999.6	999.6	999.8	997.7
30	000.0	000.1	000.2	000.3	000.3	000.2	000.2	000.2	000.2	000.2	000.2	000.2	000.2	000.2	000.2	000.2	000.2	000.2	000.2	000.2	000.2	000.2	000.2	000.2	000.2
31	992.3	991.9	991.4	991.3	991.2	990.8	990.6	990.3	989.6	989.3	989.0	988.5	987.9	987.1	986.7	986.8	986.4	986.3	986.5	986.7	986.4	986.4	986.3	986.2	988.7
Mean (Station Level)	976.01	975.91	975.75	975.63	975.66	975.72	975.87	976.03	976.15	976.22	976.25	976.23	976.11	975.98	975.89	975.83	975.94	976.19	976.40	976.55	976.66	976.65	976.65	976.65	976.11
Mean (Sea Level)	1005.42	1005.35	1005.19	1005.07	1005.11	1005.15	1005.27	1005.33	1005.34	1005.33	1005.30	1005.23	1005.07	1004.93	1004.86	1004.82	1004.99	1005.35	1005.63	1005.85	1005.99	1006.01	1006.02	1006.05	1005.34

170 ESKDALEMUIR:  $H_b$  = 237.3 metres

APRIL, 1937

Day	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb
1	985.7	985.5	985.4	985.0	984.9	984.9	984.6	984.9	984.9	984.3	983.9	983.3	982.5	981.8	980.9	980.5	980.5	980.1	980.3	979.8	978.8	978.9	977.4	978.6	
2	976.5	976.4	975.8	975.0	974.9	974.3	973.8	973.6	973.0	972.2	971.8	971.4	971.0	970.7	970.7	970.2	970.2	970.3	970.6	970.5	970.6	969.9	970.2	972.5	
3	969.8	969.6	969.4	969.3	969.7	970.0	970.3	970.5	970.6	971.0	971.0	971.7	972.2	972.7	973.1	973.9	974.5	975.2	976.1	977.0	977.4	978.1	978.3	978.7	
4	979.2	979.4	979.7	979.7	979.9	980.0	981.0	981.4	981.6	981.9	981.9	981.9	982.1	981.8	981.7	981.7	981.9	982.1	982.4	982.6	982.4	982.5	982.4	981.3	
5	982.2	982.1	982.1	982.0	982.0	981.9	981.9	982.0	981.8	982.0	981.6	981.7	981.1	981.1	981.1	981.0	981.2	981.4	981.8	982.0	981.9	981.9	982.1	981.8	
6	982.0	982.0	982.0	982.0	982.2	982.4	982.6	982.6	982.8	982.7	982.7	982.7	983.1	982.8	982.6	982.4	982.3	982.4	982.6	982.9	982.7	982.3	982.3	981.9	
7	981.3	981.0	980.4	980.0	979.5	979.1	979.0	978.4	978.0	977.7	977.2	976.7	976.2	975.9	975.4	975.0	975.3	975.3	975.1	975.0	974.8	974.6	974.4	973.9	
8	973.9	974.0	973.9	974.0	974.1	974.3	974.9	975.3	975.5	976.1	976.3	976.6	976.8	977.0	977.0	977.0	977.0	977.3	977.6	978.0	979.2	979.3	979.5	979.8	
9	979.8	979.8	979.2	979.0	978.8	978.7	978.8	978.5	978.7	977.0	976.6	975.9	975.0	974.3	973.9	972.0	971.4	970.6	969.4	969.1	968.1	967.3	966.2	964.9	
10	983.8	982.3	981.7	981.0	980.9	980.8	980.9	981.1	981.6	982.4	983.2	983.6	983.7	984.0	984.1	984.1	984.6	984.8	985.4	986.1	986.4	986.5	986.8	963.6	
11	967.8	968.4	968.5	968.9	968.4	97																			

PRESSURE  
Readings in millibars at exact hours, Greenwich Mean Time

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

MAY, 1937

Table for station 171 ESKDALEUIR, May 1937. Columns: Hour G. M. T., Station Level (1-31), Mean (Station Level), Mean (Sea Level). Rows: Day 1-31. Data: Millibar readings for each hour.

172 ESKDALEUIR: H<sub>b</sub> = 237.3 metres

JUNE, 1937

Table for station 172 ESKDALEUIR, June 1937. Columns: Hour G. M. T., Station Level (1-31), Mean (Station Level), Mean (Sea Level). Rows: Day 1-31. Data: Millibar readings for each hour.

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



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

JULY, 1937

Table with 25 columns (Hour G.M.T. 1-24, Mean) and 31 rows (Day 1-31). Includes 'Station Level' and 'Sea Level' data. Values are in millibars.

174 ESKDALEMUIR: H<sub>b</sub> = 237.3 metres

AUGUST, 1937

Table with 25 columns (Hour G.M.T. 1-24, Mean) and 31 rows (Day 1-31). Includes 'Station Level' and 'Sea Level' 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

PRESSURE  
Readings in millibars at exact hours, Greenwich Mean Time

175 ESKDALEUIR:  $H_b$  (height of barometer cistern above M.S.L.) = 237.3 metres

SEPTEMBER, 1937

Hour G. M. T.	1	2	3	4	5	6	7	8	9	10	11	Noon	13	14	15	16	17	18	19	20	21	22	23	24	Mean
Day	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb
1	980.1	979.9	978.3	977.4	976.8	976.3	976.7	977.0	977.5	977.6	978.2	978.3	978.4	978.5	978.4	978.4	978.6	978.9	978.9	979.0	979.1	979.0	978.8	978.3	978.3
2	978.0	977.3	976.6	975.7	975.1	974.6	975.5	976.8	977.4	977.8	978.5	979.1	979.6	979.9	980.3	980.7	981.2	981.4	981.5	981.7	981.7	981.8	982.2	982.7	982.7
3	982.5	982.4	982.3	982.3	982.3	982.3	982.3	982.8	982.9	983.0	983.1	983.3	983.6	983.7	984.2	985.1	985.2	986.0	986.4	986.6	986.6	987.0	987.3	987.6	984.0
4	988.0	988.5	988.4	988.7	988.8	989.4	990.0	990.1	990.3	990.5	990.4	990.3	990.4	990.3	990.1	989.7	989.6	989.5	989.3	988.6	987.9	987.4	986.4	985.6	989.1
5	985.0	984.2	983.5	983.1	982.1	982.1	982.2	982.1	982.0	981.9	981.9	982.2	982.7	983.1	983.4	983.5	983.5	983.7	983.9	984.1	983.9	983.7	983.7	983.5	983.2
6	983.8	983.2	983.3	983.0	982.3	982.5	983.0	982.4	982.2	981.8	981.4	980.8	980.8	979.7	978.4	977.8	977.3	976.9	976.5	977.3	978.2	978.9	979.5	980.1	980.5
7	980.7	981.1	981.9	982.5	982.8	983.8	984.2	985.0	985.3	985.1	984.6	984.5	983.9	982.5	981.1	980.2	978.7	978.0	977.6	978.6	978.6	980.2	982.0	983.2	982.1
8	984.8	985.3	986.0	986.6	987.0	987.6	988.3	989.0	989.9	990.6	990.2	990.4	991.0	991.9	993.0	993.2	994.0	993.8	994.4	994.5	994.1	994.2	993.8	993.3	990.5
9	992.6	992.3	991.7	991.3	991.1	990.8	990.4	990.4	990.4	989.8	989.5	989.4	989.2	988.9	988.8	988.9	989.0	989.5	990.1	990.8	991.0	991.5	991.8	992.2	990.5
10	992.4	992.4	992.3	992.4	992.1	991.8	993.6	994.2	994.3	994.5	994.9	994.7	994.3	994.5	994.4	994.4	994.5	994.9	995.3	995.6	995.7	996.3	996.1	995.9	994.3
11	996.2	996.2	996.1	996.0	996.3	996.7	996.8	997.2	997.3	997.3	997.5	997.4	997.2	996.6	996.2	996.2	996.1	996.0	996.0	996.1	996.0	995.6	995.5	995.0	996.4
12	994.2	993.6	992.9	992.0	991.7	991.5	991.0	990.9	990.5	990.3	989.5	988.5	987.7	987.2	986.4	985.8	984.7	983.8	983.4	982.8	982.1	981.3	980.6	979.9	987.9
13	979.1	978.1	977.5	976.9	976.5	976.5	976.5	976.5	976.8	977.1	977.0	977.2	977.3	977.4	977.7	978.2	978.3	978.7	978.9	979.0	978.7	978.5	978.4	978.3	977.7
14	978.1	977.7	976.9	976.6	976.3	975.9	975.7	975.2	974.9	974.2	973.6	973.0	972.5	971.7	970.7	969.6	968.9	968.2	967.4	966.8	966.5	966.3	966.3	966.3	972.0
15	961.6	961.2	960.9	960.3	959.6	959.1	959.0	958.7	958.3	957.5	956.5	956.7	956.8	956.7	956.8	956.7	956.7	957.0	957.2	957.4	957.4	957.7	957.9	957.9	958.2
16	958.2	958.5	958.4	958.4	958.7	959.6	960.2	960.5	961.0	961.4	961.5	961.7	961.7	961.6	961.7	961.9	962.0	962.4	963.0	963.2	963.4	963.3	963.3	963.3	961.1
17	963.2	963.2	963.4	963.3	963.0	963.1	963.2	963.7	963.8	963.8	963.9	963.8	963.7	963.5	963.6	963.8	964.3	964.6	965.2	965.3	965.5	965.2	965.9	965.9	964.0
18	966.1	966.2	966.4	966.8	967.3	967.8	968.3	969.0	969.3	969.5	969.6	970.0	969.8	969.8	969.9	970.2	970.2	970.8	971.6	972.4	972.5	973.1	973.2	973.5	969.6
19	974.0	974.2	974.3	974.4	975.0	975.5	976.1	976.5	976.8	977.0	977.0	977.2	977.3	977.7	977.4	977.6	977.6	977.8	978.3	978.4	978.7	978.8	979.1	979.2	976.8
20	979.4	979.8	980.2	980.7	981.6	982.2	982.7	983.4	984.0	984.3	984.9	985.2	985.6	985.8	985.7	985.6	985.7	985.9	986.2	986.4	986.3	986.4	986.1	985.8	984.0
21	985.7	985.6	985.5	985.6	985.5	985.2	985.2	985.1	985.0	984.6	984.6	984.2	983.8	983.4	982.7	982.1	981.6	981.2	980.9	980.4	980.1	979.9	979.8	979.7	983.4
22	979.7	979.9	980.0	980.1	980.3	981.0	981.6	982.5	983.1	983.2	983.9	984.0	984.2	984.7	984.9	985.2	985.7	986.7	987.7	988.4	988.4	989.2	989.5	989.9	984.1
23	990.0	989.9	990.3	990.3	990.2	990.7	991.0	991.0	990.9	991.2	991.1	991.2	990.9	990.5	990.1	989.9	989.7	989.4	989.0	988.7	988.4	988.7	988.3	987.2	989.9
24	986.6	985.7	985.2	984.8	984.9	984.5	984.5	984.4	984.6	985.0	985.8	986.1	986.4	986.5	986.7	987.2	987.3	988.4	988.7	988.8	988.8	988.6	988.9	988.9	986.4
25	989.1	989.5	990.1	990.3	990.5	990.8	991.4	991.8	991.8	991.9	991.8	991.7	991.4	991.2	990.8	990.1	990.1	990.3	990.4	990.5	990.4	990.4	990.1	989.8	990.7
26	989.6	989.4	989.1	988.4	988.5	988.5	988.7	988.8	988.9	988.7	988.4	988.3	988.0	987.7	987.8	987.6	987.6	987.8	987.8	988.2	988.3	988.4	988.2	987.9	988.4
27	987.4	987.0	986.6	986.2	985.7	985.6	985.6	985.6	985.4	985.2	984.8	984.5	984.1	983.6	983.1	982.5	982.3	982.3	982.2	982.5	982.4	982.6	982.4	982.9	984.0
28	983.2	983.2	983.6	984.0	984.2	984.9	985.6	986.4	986.8	987.2	987.6	988.6	989.1	989.2	989.6	990.1	990.5	991.1	991.4	992.0	992.2	992.2	992.2	992.1	988.0
29	991.9	991.4	990.8	990.7	990.4	990.6	990.9	991.0	991.0	990.6	990.4	990.3	990.0	989.7	989.5	989.5	989.6	989.6	989.6	989.7	989.3	989.1	988.7	988.0	990.2
30	987.7	987.1	986.3	986.3	985.7	985.4	985.1	984.6	984.1	983.3	983.0	982.8	982.6	982.5	981.8	981.3	981.5	981.4	981.5	981.9	981.7	981.4	981.2	981.1	985.5
Mean (Station Level)	982.29	982.14	981.96	981.84	981.76	981.94	982.20	982.42	982.55	982.56	982.53	982.53	982.49	982.40	982.22	982.08	982.09	982.15	982.30	982.45	982.43	982.49	982.43	982.38	982.28
Mean (Sea Level)	1010.82	1010.68	1010.49	1010.37	1010.27	1010.45	1010.69	1010.81	1010.80	1010.71	1010.61	1010.59	1010.54	1010.42	1010.26	1010.12	1010.18	1010.36	1010.62	1010.83	1010.86	1010.97	1010.94	1010.59	1010.59

176 ESKDALEUIR:  $H_b$  = 237.3 metres

OCTOBER, 1937

Day	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb
1	981.2	981.4	981.6	981.9	982.2	983.1	983.4	983.7	984.3	984.3	984.4	984.4	984.7	984.7	984.5	984.5	984.6	984.8	985.3	985.4	985.7	986.0	986.0	986.1	984.0
2	986.1	985.9	985.6	985.7	985.6	986.2	986.4	986.4	986.3	986.4	986.4	986.3	986.1	985.7	985.4	985.5	985.3	986.0	986.3	986.4	986.6	986.6	987.2	987.3	986.1
3	987.5	987.7	988.0	988.4	988.9	989.7	990.5	991.0	991.4	991.9	992.2	992.6	993.0	993.3	993.9	994.5	995.5	996.3	997.2	997.6	998.4	998.9	999.7	999.7	992.9
4	999.7	999.2	999.0	999.3	999.8	1000.1	1000.6	1001.4	1002.1	1002.9	1003.5	1004.2	1004.9	1005.2	1005.4	1005.8	1006.3	1006.5	1007.1	1007.8	1008.0	1008.2	1008.3	1008.3	1004.9
5	1008.4	1008.2	1007.7	1007.7	1007.8	1007.6	1007.7	1007.8	1007.6	1007.4	1007.0	1006.7	1006.4	1005.9	1005.8	1005.7	1005.8	1005.9	1006.2	1006.2	1006.2	1006.0	1005.8	1005.7	1006.9
6	1005.6	1005.2	1004.8	1004.0	1003.9	1003.9	1003.8	1003.4	1003.1	1002.5	1001.8	1001.2	1000.7	1000.3	999.5	999.1	998.7	998.6	998.4	998.2	997.7	997.8	997.4	997.2	1001.3
7	996.5	995.7	995.3	995.0	994.9	994.9	994.9	994.9	995.1	994.5	994.2	994.2	993.6	993.2	992.9	992.6	992.7	992.9	993.2	993.2	992.9	992.6	992.4	992.3	994.0
8	992.0	992.1	991.9	992.0	992.3	993.1	993.3	993.7	994.0	993.9	993.9	994.0	994.2	994.2	994.5	994.9	995.6	996.3	996.6	997.0	997.2	997.5	997.6	994.2	
9	998.1	998.1	998.2	998.5	999.0	999.4	1000.2	1001.1	1001.5	1002.0	1002.2	1002.5	1002.3	1002.1	1002.0	1002.2	1002.7	1003.6	1004.0	1004.2	1004.4	1004.6	1004.7	1005.0	1001.6
10	1004.8	1004.6	1004.0	1004.1	1003.9	1003.7	1003.3	1003.3	1002.7	1002.6	1002.3	1001.4	1001.7	1001.5	1001.3	1001.2	1001.3	1001.7	1001.9	1002.1	1002.0	1002.0	1001.9	1001.9	1002.6
11	1001.8	1001.8	1001.5	1001.3	1001.1	1001.1	1001.0	1001.0	1000.7																

PRESSURE
Readings in millibars at exact hours, Greenwich Mean Time

177 ESKDALEMUIR: Hb (height of barometer cistern above M.S.L.) = 237.3 metres

NOVEMBER, 1937

Table with 25 columns (Hour G.M.T., 1-24, Mean) and 31 rows (Day 1-30, Mean Station Level, Mean Sea Level). Data represents pressure readings in millibars for station 177.

178 ESKDALEMUIR: Hb = 237.3 metres

DECEMBER, 1937

Table with 25 columns (Hour G.M.T., 1-24, Mean) and 31 rows (Day 1-30, Mean Station Level, Mean Sea Level). Data represents pressure readings in millibars for station 178.

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

179 ESKDALEMUIR:  $h_p = 237.3$  metres

1937

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 982.63	mb 982.53	mb 982.40	mb 982.33	mb 982.33	mb 982.41	mb 982.56	mb 982.70	mb 982.77	mb 982.82	mb 982.74	mb 982.63	mb 982.48	mb 982.37	mb 982.26	mb 982.26	mb 982.31	mb 982.44	mb 982.59	mb 982.74	mb 982.83	mb 982.87	mb 982.83	mb 982.78	mb 982.57
Sea Level	011.51	011.42	011.29	011.23	011.22	011.28	011.38	011.45	011.43	011.41	011.26	011.10	010.92	010.79	010.71	010.72	010.82	011.02	011.24	011.46	011.60	011.68	011.67	011.64	011.28

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:  $h_p = 237.3$  metres

1937

Month	Mean	Hour 1	G.M.T. 2	3	4	5	6	7	8	9	10	11	Noon	13	14	15	16	17	18	19	20	21	22	23	24
Jan.	975.05	mb -0.08	mb -0.09	-0.16	-0.31	-0.47	-0.45	-0.33	-0.06	+0.10	+0.31	+0.23	-0.09	-0.29	-0.26	-0.15	-0.04	-0.09	+0.25	+0.40	+0.42	+0.39	+0.39	+0.22	+0.09
Feb.	989.02	-0.22	-0.28	-0.45	-0.46	-0.28	-0.17	+0.13	+0.34	+0.54	+0.58	+0.61	+0.56	+0.25	0.00	-0.12	-0.04	+0.02	+0.02	+0.05	-0.09	-0.13	-0.19	-0.26	-0.21
Mar.	976.11	+0.19	+0.05	-0.13	-0.28	-0.27	-0.24	-0.11	+0.02	+0.12	+0.16	+0.17	+0.12	-0.03	-0.18	-0.29	-0.38	-0.30	-0.07	+0.11	+0.24	+0.32	+0.29	+0.26	+0.23
Apr.	981.29	+0.13	+0.02	-0.07	-0.17	-0.14	+0.02	+0.19	+0.25	+0.21	+0.23	+0.10	0.00	-0.12	-0.30	-0.45	-0.51	-0.44	-0.30	-0.04	+0.28	+0.29	+0.29	+0.31	+0.24
May	986.91	+0.25	+0.11	-0.04	-0.12	-0.03	+0.02	+0.08	+0.07	-0.04	-0.02	-0.13	-0.27	-0.31	-0.33	-0.42	-0.40	-0.41	-0.27	-0.06	+0.27	+0.46	+0.62	+0.57	+0.43
June	987.37	+0.19	0.00	-0.10	-0.06	-0.08	+0.03	+0.10	+0.11	+0.07	+0.08	+0.02	+0.01	-0.10	-0.14	-0.21	-0.29	-0.24	-0.30	-0.22	-0.03	+0.24	+0.38	+0.36	+0.29
July	985.15	+0.06	-0.11	-0.30	-0.30	-0.30	-0.15	-0.09	-0.04	-0.01	+0.02	-0.02	+0.02	0.00	+0.07	+0.01	-0.07	-0.12	-0.08	+0.03	+0.19	+0.36	+0.34	+0.29	+0.22
Aug.	989.06	+0.06	-0.05	-0.21	-0.21	-0.16	0.00	+0.14	+0.27	+0.34	+0.33	+0.26	+0.18	+0.12	-0.04	-0.17	-0.33	-0.43	-0.42	-0.28	-0.02	+0.08	+0.21	+0.16	+0.14
Sept.	982.28	+0.01	-0.14	-0.32	-0.44	-0.51	-0.34	-0.08	+0.15	+0.27	+0.28	+0.25	+0.24	+0.22	+0.12	-0.05	-0.20	-0.19	-0.13	+0.03	+0.18	+0.16	+0.21	+0.15	+0.10
Oct.	986.21	+0.21	+0.12	-0.09	-0.15	-0.11	-0.06	+0.13	+0.25	+0.27	+0.25	+0.15	-0.04	-0.26	-0.43	-0.58	-0.53	-0.36	-0.07	+0.08	+0.16	+0.28	+0.27	+0.27	+0.24
Nov.	988.45	+0.21	+0.10	-0.05	-0.19	-0.27	-0.25	-0.07	+0.15	+0.32	+0.45	+0.31	+0.05	-0.21	-0.40	-0.57	-0.49	-0.32	-0.11	+0.07	+0.21	+0.23	+0.27	+0.29	+0.27
Dec.	982.90	+0.15	+0.19	+0.18	+0.11	-0.02	-0.03	+0.05	+0.22	+0.33	+0.41	+0.24	-0.04	-0.32	-0.49	-0.49	-0.41	-0.35	-0.22	-0.10	+0.01	+0.08	+0.14	+0.17	+0.19
Year	982.57	+0.10	0.00	-0.14	-0.21	-0.22	-0.13	+0.01	+0.14	+0.21	+0.26	+0.18	+0.06	-0.09	-0.20	-0.29	-0.32	-0.27	-0.14	+0.01	+0.15	+0.23	+0.27	+0.24	+0.18

↑ See page 23

ABSOLUTE EXTREMES OF PRESSURE AT STATION LEVEL FOR EACH DAY  
Maximum and Minimum for the interval 0h to 24h Greenwich Mean Time

181 ESKDALEMUIR:  $h_p = 237.3$  metres

1937

Month	Day	Jan.		Feb.		Mar.		Apr.		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.	
1937	1	mb 979.0	mb 975.5	mb 988.8	mb 961.4	mb 971.2	mb 967.0	mb 986.2	mb 977.4	mb 980.3	mb 996.4	mb 988.1	mb 984.9	mb 985.7	mb 981.2	mb 997.1	mb 994.7	mb 991.2	mb 976.0	mb 986.1	mb 981.1	mb 980.3	mb 976.2	mb 976.8	mb 969.3	
	2	982.4	975.9	972.4	962.0	968.8	963.8	977.4	969.9	986.4	987.5	992.4	988.1	985.6	983.5	996.9	993.2	982.7	974.6	987.3	985.2	985.6	980.3	973.5	967.8	967.8
	3	987.7	982.4	987.6	982.1	973.7	984.9	978.7	969.0	987.5	980.4	989.5	979.8	983.9	982.0	993.5	991.0	987.6	982.2	999.7	987.3	988.5	984.6	983.0	973.2	973.2
	4	985.9	986.7	983.6	986.9	975.9	973.7	982.7	978.7	984.4	982.3	982.8	979.9	985.4	982.1	991.3	987.2	990.6	985.6	988.4	999.5	989.9	987.3	982.2	962.8	962.8
	5	982.5	971.4	984.6	983.9	981.5	974.8	982.5	980.9	995.0	982.3	984.8	981.8	989.2	982.4	990.0	988.1	985.6	981.7	988.4	995.7	988.2	989.9	984.3	961.8	961.8
	6	971.4	983.1	977.6	984.6	983.0	981.0	983.1	981.9	995.4	992.2	985.7	982.1	982.6	980.1	989.9	983.2	983.8	978.5	985.7	997.2	998.4	991.8	971.0	964.2	964.2
	7	997.6	989.2	977.5	985.4	983.5	979.4	981.9	973.9	994.5	992.2	983.8	981.0	982.3	989.5	983.4	985.5	977.4	997.2	992.3	991.8	989.4	983.1	971.0	971.0	
	8	001.5	997.3	985.4	989.4	983.3	978.0	979.8	973.8	994.3	989.4	984.3	982.4	991.0	987.7	982.5	988.6	994.8	983.2	997.6	991.8	995.8	990.6	979.7	973.0	973.0
	9	997.4	993.2	988.3	981.2	978.1	973.0	979.9	984.9	989.4	982.2	988.0	984.2	987.7	980.6	992.2	988.0	993.3	988.7	988.7	997.6	998.6	995.8	982.3	979.6	979.6
	10	993.4	990.2	971.3	985.8	973.1	971.9	987.3	980.7	985.1	981.7	988.2	986.6	989.2	980.2	989.4	987.3	996.5	992.2	995.0	991.2	997.5	993.0	981.7	980.2	980.2
	11	990.7	984.4	982.7	970.1	972.2	958.2	977.5	987.3	985.3	984.0	991.2	984.1	988.8	986.0	987.4	984.5	997.6	995.0	991.9	999.5	975.5	993.9	969.7	959.4	959.4
	12	984.5	976.8	983.3	973.0	958.4	954.9	980.3	977.5	984.5	983.3	993.8	991.0	986.6	982.9	985.5	984.0	995.0	979.9	999.5	997.3	997.0	994.3	972.4	966.4	966.4
	13	992.9	976.2	979.2	973.4	959.2	953.8	979.6	973.5	983.5	980.6	993.7	991.5	985.8	982.4	984.0	980.6	979.9	976.4	997.3	999.0	996.8	992.1	966.4	948.9	948.9
	14	993.9	989.4	985.5	979.2	987.5	959.2	981.2	974.4	986.6	981.1	995.9	992.8	984.6	979.1	982.3	979.5	978.3	982.3	991.1	989.5	992.5	986.9	981.8	949.6	949.6
	15	989.4	972.1	987.3	973.9	986.8	967.5	981.4	986.5	990.6	986.6	998.3	995.8	981.7	979.5	983.2	981.5	982.3	956.3	999.0	991.1	992.3	988.4	976.9	961.8	961.8
	16	976.5	988.2	973.9	961.6	986.7	969.2	971.4	982.1	990.4	987.0	997.9	993.9	990.5	980.9	981.7	986.2	983.7	957.9	999.5	997.9	992.3	984.5	992.5	976.9	976.9
	17	976.7	986.6	985.2	988.7	988.4	967.2	979.5	971.4	988.6	986.3	996.1	993.9	994.8	990.5	983.5	987.3	985.9	983.0	991.8	999.1	984.5	977.1	995.9	992.3	992.3
	18	983.0	981.1	985.0	972.8	988.3	986.0	981.0	979.1	988.3	982.2	994.2	985.2	994.6	991.5	984.0	978.4	973.5	985.9	992.0	998.3	977.2	985.9	993.7	988.7	988.7
	19	988.0	982.1	974.6	984.5	973.2	986.1	980.7	971.2	982.2	976.4	986.5	985.5	992.7	980.8	992.9	980.9	979.2	973.5	998.3	998.8	971.2	963.8	990.9	987.9	987.9
	20	972.6	987.5	974.2	988.3	979.2	972.8	973.0	967.8	979.7	976.4	991.7	986.3	992.8	986.3	995.2	992.4	988.4	979.2	989.8	983.2	977.4	971.2	990.5	981.0	981.0
	21	987.1	987.1	975.0	988.5	980.0	978.6	982.8	973.0	978.8	988.0	981.8	988.2	986.3	972.9	995.4	994.1	985.8	979.7	983.2	973.6	979.0	977.1	981.0	974.7	974.7
	22	977.4	989.8	970.7	985.0	978.7	972.0	987.2	980.6	983.9	978.8	988.2	983.8	977.8	972.6	995.0	993.0	989.9	979.6	973.6	984.4	986.8	979.0	980.3	977.0	977.0
	23	981.8	987.4	975.9	970.7	984.8	976.1	984.8	987.1	988.2	982.7	987.6	984.5	977.8	975.3	993.0	991.5	991.3	987.2	984.4	982.9	982.9	986.8	993.3	980.3	980.3
	24	987.4	984.7	976.1	971.4	984.																				

TEMPERATURE

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, 1937

Hour G. M. T.	1	2	3	4	5	6	7	8	9	10	11	Noon	13	14	15	16	17	18	19	20	21	22	23	24	Mean
Day 1	80.2	79.7	79.2	79.0	78.8	78.3	78.1	77.8	77.3	77.4	77.4	77.6	78.3	77.0	77.3	76.9	76.5	76.1	75.5	75.3	75.0	74.4	74.8	74.3	77.3
2	74.4	74.6	74.9	75.9	76.3	76.7	77.4	77.8	78.2	78.7	79.3	79.6	80.1	80.5	81.5	81.6	81.7	81.7	81.7	81.3	81.3	81.2	80.8	81.0	78.9
3	80.5	81.3	81.6	80.6	81.4	82.5	82.6	82.5	82.5	82.5	82.0	82.0	82.0	81.4	81.1	80.5	80.4	80.6	80.6	80.6	80.6	80.6	80.6	80.6	81.4
4	80.8	80.9	80.9	80.6	80.1	80.3	80.3	80.4	80.6	80.6	80.6	80.5	80.4	75.4	75.2	75.2	74.6	74.5	74.1	74.6	74.7	74.1	73.7	74.6	77.9
5	75.0	75.3	75.8	75.3	75.0	75.2	74.6	74.7	75.0	74.0	74.6	74.7	75.1	75.0	74.4	75.0	75.3	75.6	75.9	76.3	76.6	77.6	78.6	79.3	75.5
6	79.8	79.6	79.5	79.2	79.1	79.9	81.4	81.7	81.3	80.7	80.4	80.5	80.3	79.4	78.7	78.1	77.3	77.0	77.0	76.3	76.6	77.2	76.6	76.4	79.0
7	77.5	76.9	76.9	77.3	76.6	76.4	77.2	77.1	77.1	77.6	78.6	79.2	79.5	79.6	79.1	78.4	77.9	77.3	76.7	76.5	76.1	75.9	75.8	74.9	77.4
8	74.9	73.0	70.9	70.0	69.2	68.8	67.6	68.8	70.2	72.6	74.9	76.3	76.7	76.8	77.3	77.2	77.1	77.3	77.5	78.1	77.4	78.6	78.9	78.6	74.5
9	79.4	79.4	79.6	79.6	79.8	80.0	80.1	80.0	79.7	79.4	79.4	79.2	79.0	78.9	79.0	78.9	78.1	78.3	77.7	77.6	77.7	77.6	77.7	77.7	78.9
10	77.8	78.0	78.3	78.1	78.0	77.9	77.4	77.7	77.7	78.0	78.3	79.3	78.7	78.9	78.6	78.6	79.2	79.3	79.3	79.4	79.2	78.9	79.0	79.0	78.5
11	79.0	78.9	79.0	79.0	78.9	78.5	78.2	78.1	78.4	78.6	79.1	79.7	80.6	80.2	80.0	80.0	81.0	80.6	81.1	81.5	81.7	81.4	81.5	81.4	79.8
12	81.1	81.0	81.0	81.0	80.5	80.4	80.3	79.8	79.6	80.0	80.1	80.8	81.0	81.2	81.2	81.4	81.6	81.4	81.3	81.1	81.2	81.1	81.0	80.9	80.8
13	81.6	81.2	80.6	80.8	80.9	80.7	80.2	79.1	75.6	76.0	77.1	78.3	77.6	77.4	77.4	76.4	76.0	75.6	75.7	75.0	74.7	74.6	74.3	73.9	77.6
14	73.3	72.7	72.0	70.3	69.6	68.6	67.4	67.9	68.4	69.0	69.6	70.6	71.6	72.4	73.2	73.3	73.2	73.1	73.0	72.3	72.0	72.4	72.4	72.6	71.3
15	71.6	71.6	71.8	71.3	70.5	70.6	70.2	70.2	70.4	71.7	73.0	73.6	74.3	74.6	74.2	74.0	73.6	73.7	73.8	74.1	74.2	74.0	74.1	74.5	72.7
16	74.8	74.3	74.4	74.1	74.2	74.5	74.2	74.1	74.4	75.0	75.1	75.6	75.1	75.6	75.2	74.1	74.4	73.5	72.6	72.0	72.5	73.8	73.3	73.3	74.2
17	73.7	73.6	72.8	72.6	73.2	73.6	74.6	75.2	75.2	75.3	75.6	75.6	76.0	76.2	76.1	76.6	77.0	77.0	77.3	76.8	76.7	76.3	75.9	76.1	75.3
18	77.0	78.0	78.3	77.1	76.9	76.6	76.5	76.1	76.1	75.6	75.9	76.4	76.4	76.5	76.1	75.6	74.9	74.6	73.7	72.9	73.3	74.2	73.9	73.2	75.7
19	73.6	72.8	72.7	71.0	70.6	70.3	72.6	71.8	73.2	72.6	75.6	75.4	76.3	75.3	75.4	73.5	72.3	71.4	71.0	71.0	72.6	72.1	72.9	72.8	72.9
20	72.7	73.0	71.6	71.8	71.7	70.8	69.8	70.3	70.9	72.4	73.6	74.3	74.6	74.2	74.8	75.3	75.5	75.5	76.0	76.6	77.1	76.4	77.3	77.9	73.8
21	78.3	78.3	77.9	77.8	77.4	78.0	77.1	76.0	75.8	76.4	77.6	76.0	76.4	76.6	76.7	76.2	74.5	76.2	76.7	77.8	78.2	78.7	79.7	80.4	77.2
22	80.9	81.4	81.4	81.6	81.7	82.5	83.2	83.4	84.2	84.0	83.8	83.5	82.9	80.6	80.5	80.2	79.6	79.0	78.3	78.4	78.4	78.2	78.0	77.8	81.0
23	77.5	77.6	78.3	77.6	77.7	77.6	77.4	77.2	76.4	77.8	78.6	79.4	79.5	79.0	78.4	78.3	78.3	78.4	79.1	79.7	80.3	80.8	80.9	80.9	78.5
24	81.0	81.2	81.0	80.6	81.1	81.2	80.7	80.2	81.1	81.1	81.5	81.6	81.6	81.4	81.6	81.2	81.6	81.4	80.0	81.1	81.2	81.0	80.6	79.4	81.1
25	78.9	78.0	77.2	76.3	76.1	75.4	75.6	75.2	75.7	76.0	77.5	78.2	77.2	77.0	77.4	77.4	75.9	75.0	75.6	75.7	74.9	75.1	76.0	75.6	76.5
26	74.8	74.6	74.0	73.4	72.6	72.4	72.3	72.0	71.7	71.7	71.8	71.7	71.8	72.0	71.8	71.7	71.6	71.5	71.5	71.6	71.6	71.7	71.8	71.8	72.3
27	71.8	71.1	71.3	71.8	71.9	72.2	72.3	72.6	72.9	72.9	73.0	73.1	73.2	73.2	73.3	73.3	73.2	73.2	73.2	73.5	73.7	74.6	74.7	74.5	72.9
28	74.9	74.8	74.6	74.3	74.2	73.9	73.6	73.4	72.8	72.6	72.5	72.6	72.8	73.2	73.3	72.9	73.2	73.1	72.6	72.4	72.3	72.3	72.0	72.2	73.2
29	71.8	71.6	71.5	71.4	71.2	71.2	71.3	71.2	71.1	71.5	72.0	72.0	71.9	71.7	71.5	71.1	70.8	70.7	70.7	70.7	70.7	70.8	70.6	70.2	71.3
30	70.1	70.1	70.4	70.4	71.0	71.6	71.7	71.3	71.5	71.3	71.8	71.8	71.7	70.6	70.9	71.0	71.0	71.2	71.6	72.3	72.7	72.6	72.7	73.0	71.4
31	73.0	73.1	73.1	73.2	73.6	73.6	73.7	74.3	75.0	74.8	75.2	75.6	76.1	76.2	76.6	76.4	76.2	76.1	76.5	76.3	76.5	76.2	76.0	75.9	75.1
Mean	76.5	76.4	76.2	75.9	75.8	75.8	75.8	75.7	75.8	76.1	76.6	76.9	77.1	76.7	76.7	76.5	76.2	76.1	76.0	76.1	76.2	76.3	76.3	76.3	76.3

183 ESKDALEMUIR: Louvred Hut:  $h_t$  = 0.9 metres

FEBRUARY, 1937

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	Mean
1	75.7	75.3	75.3	75.2	75.5	75.7	74.4	74.2	74.2	74.0	74.2	74.5	74.7	74.9	75.0	74.6	74.2	74.5	74.2	73.5	74.2	74.5	73.3	73.4	74.6				
2	73.9	73.8	75.3	75.4	75.1	74.5	73.4	72.5	73.5	74.1	75.4	76.4	76.8	77.1	77.4	77.6	77.8	78.2	78.6	79.3	80.0	80.4	80.3	80.2	76.4				
3	81.0	80.5	79.0	79.3	79.4	79.0	79.3	79.4	79.5	79.5	79.8	80.1	80.6	80.9	81.0	80.6	80.5	80.3	80.2	79.7	79.6	79.6	80.0	80.2	80.0				
4	80.1	80.0	80.1	80.1	80.2	80.2	79.7	80.2	80.2	80.1	80.0	80.3	80.2	80.0	79.7	79.3	79.0	78.7	78.7	78.1	78.3	77.8	77.6	77.3	79.5				
5	76.8	76.4	76.3	75.7	75.1	75.0	74.0	74.1	74.2	75.1	75.6	77.1	77.0	78.0	77.5	77.2	75.4	75.8	75.6	75.3	75.8	76.0	75.7	75.6	75.9				
6	75.5	75.1	75.6	75.6	75.7	75.2	75.5	75.3	75.2	75.2	77.0	78.1	78.3	78.3	76.7	76.0	75.0	75.0	75.2	75.0	73.5	74.0	73.7	74.6	75.6				
7	73.4	72.6	71.6	71.6	71.0	71.6	71.6	71.0	70.1	71.7	76.3	76.8	77.0	76.9	76.1	75.4	75.1	75.0	74.9	74.9	75.0	74.8	75.0	75.1	73.9				
8	74.7	74.3	73.6	73.6	73.7	73.8	73.8	74.0	74.3	74.5	74.6	74.7	74.7	74.7	74.8	74.4	74.1	74.2	74.1	74.0	74.2	74.0	73.8	73.6	74.2				
9	73.8	73.8	73.8	73.7	73.3	73.6	73.6	73.8	74.1	74.5	75.2	75.8	76.3	74.7	75.4	75.1	74.3	74.4	73.4	73.5	73.6	73.7	73.7	74.0	74.2				
10	73.6	73.9	73.6	74.6	74.0	73.3	73.6	73.8	74.3	74.6	75.0	75.6	76.1	75.9	75.8	75.1	75.0	74.5	74.6	74.3	74.0	74.0	74.1	74.0	74.5				
11	73.4	73.8	73.7	73.6	73.4	73.3	73.3	73.2	74.0	75.1	76.0	76.4	76.8	76.5	76.9	76.2	74.5	74.4	73.7	73.2	73.6	72.7	73.2	73.1	74.4				
12	72.3	74.0	71.2	69.4	68.4	67.6	66.8	66.2	67.8	71.1	74.0	74.2	74.7	74.9	74.5	74.0	73.9	73.8	73.5	73.3	73.2	73.2	73.3	73.3	72.0				
13	73.3	73.3	73.4	73.4	73.6	73.4	73.4	73.5	73.6	73.8	74.1	74.3	74.6	74.7	74.7	74.6	74.4	74.5	74.6	75.2	75.5	75.9	76.0	76.0	74.3				
14	76.6	77.0	77.1	76.9	76.5	75.8	76.3	76.2	76.6	80.1	80.8	81.1	82.7	82.3	81.2	80.8	79.9	78.5	78.3	76.1	76.2	76.5	77.5	78.3	78.3				
15	78.0	77.9	77.9	77.9	77.9	77.5	77.4	77.2	76.9	77.7	78.1	79.5	79.0	78.9	78.3	78.1	77.6	76.6	76.4	78.4	78.4	79.8	79.7	79.5	78.2				
16	78.9	79.1	78.8	78.8	76.6	76.3	76.7	75.7	76.5	76.9	76.6	76.7	77.4	76.1	76.0	76.0	75.0	74.8	74.0	74.0	74.7	74.3	73.3	73.8	76.2				
17	74.5	74.7	74.9	76.0	75.3	74.9	74.9	75.1	75.8	76.4	77.3	77.9	79.1	79.4	78.9	78.6													

**TEMPERATURE**  
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, 1937

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	0A	0A	0A	0A	0A	0A	0A	0A	0A	0A	0A	0A	0A	0A	0A	0A	0A	0A	0A	0A	0A	0A	0A	0A	0A
1	70.6	71.6	72.3	73.3	72.8	73.0	73.5	73.8	74.6	73.7	74.2	75.4	75.5	75.5	73.8	74.3	74.4	73.7	73.6	73.2	72.9	73.6	74.0	74.2	73.6
2	74.1	73.9	73.7	73.7	74.1	74.1	74.3	74.3	75.1	75.2	75.6	75.4	75.4	75.2	76.2	77.0	75.6	74.9	74.5	74.9	74.6	75.3	74.0	73.6	74.8
3	73.3	73.0	73.2	73.0	72.9	72.5	72.2	72.6	73.1	74.0	74.3	76.0	74.4	73.6	73.9	74.1	74.0	74.4	73.8	73.6	73.9	73.9	73.6	73.3	73.6
4	73.6	73.5	73.7	73.4	73.2	73.0	73.2	73.3	74.8	74.6	75.6	76.9	77.4	77.0	76.3	76.4	74.8	74.2	73.8	73.9	73.7	73.7	73.7	73.7	74.5
5	73.7	73.8	73.6	73.6	73.7	73.5	73.4	73.5	73.7	74.6	75.0	75.6	75.8	75.7	74.9	74.7	74.0	73.3	73.0	72.6	72.2	72.3	72.2	72.0	73.8
6	72.0	71.9	71.6	71.6	71.5	71.1	71.5	71.6	72.0	72.5	72.5	73.7	74.6	74.0	73.6	73.5	72.4	71.9	72.0	71.6	71.6	71.6	71.6	71.5	72.2
7	71.3	69.7	70.6	70.7	71.0	70.8	70.2	70.8	72.0	72.5	72.6	72.7	74.0	74.7	73.3	72.6	72.3	71.6	71.1	70.7	71.1	71.4	71.4	71.1	71.7
8	70.8	70.6	69.7	69.0	69.6	69.0	68.6	70.6	71.1	72.6	73.6	73.6	74.7	75.7	75.6	75.6	73.7	72.0	71.3	70.2	69.6	70.4	70.3	71.0	71.6
9	71.0	71.1	70.6	69.3	69.2	68.6	68.6	70.7	73.7	74.1	74.5	75.1	75.2	75.3	75.2	74.6	73.7	72.7	72.3	72.4	72.4	72.1	72.3	71.7	72.3
10	72.2	71.8	71.8	71.8	71.3	71.3	71.0	72.0	73.5	72.9	73.6	74.4	75.0	74.6	74.3	73.4	72.6	72.0	71.4	70.4	70.1	69.7	69.4	69.5	72.1
11	70.0	69.8	69.4	69.4	69.5	69.6	70.0	70.6	71.6	71.6	71.8	72.4	71.6	71.8	71.6	71.3	71.0	70.7	70.6	70.6	70.6	70.8	70.9	71.0	70.7
12	71.2	71.5	71.8	71.8	71.7	71.6	71.6	71.7	72.4	72.9	73.0	73.1	73.0	72.5	72.3	71.6	71.6	71.6	71.2	71.2	71.4	71.4	71.5	71.7	71.9
13	71.7	71.7	71.7	71.7	71.3	70.9	70.7	70.6	70.8	71.3	71.6	72.3	72.6	73.0	73.0	72.8	72.8	72.5	72.3	72.3	72.3	72.4	72.4	72.3	71.9
14	72.3	72.6	72.2	72.2	72.0	72.1	72.1	73.1	73.2	73.9	74.1	74.1	74.5	74.6	74.5	74.7	74.6	73.6	73.8	73.6	73.4	73.0	72.7	72.4	73.3
15	72.2	70.6	70.9	71.2	71.2	71.5	71.2	71.9	72.9	74.3	74.7	74.8	75.9	75.8	76.3	76.1	75.6	74.4	72.1	71.3	69.4	67.5	66.6	65.3	72.4
16	64.6	63.9	63.3	63.2	62.6	63.7	67.7	69.4	71.8	72.2	72.7	74.3	74.7	73.6	73.0	73.1	73.1	73.3	73.6	73.9	74.4	74.6	74.9	75.4	70.5
17	75.5	75.4	75.8	76.1	75.7	75.1	75.1	75.2	74.6	75.4	75.6	76.5	76.6	76.6	76.5	76.0	75.6	75.2	75.2	74.8	75.1	75.3	75.4	75.0	75.8
18	74.8	74.6	74.7	74.5	74.4	74.2	74.4	75.0	75.3	75.7	75.5	76.0	76.9	77.9	77.9	77.7	76.8	76.3	75.9	76.1	76.2	76.6	76.7	76.6	75.8
19	77.1	76.9	76.3	76.2	76.3	75.9	76.1	76.2	76.7	77.1	77.7	78.9	79.0	78.5	78.9	78.4	78.6	78.4	78.1	78.0	77.5	77.3	77.1	77.6	77.4
20	77.4	77.0	76.5	76.4	76.2	76.2	75.9	76.0	77.3	78.1	78.3	78.4	79.0	79.6	78.6	77.8	77.4	77.0	76.7	76.6	76.1	76.2	76.2	76.0	77.2
21	75.8	75.6	75.1	74.6	74.7	74.7	74.6	74.5	74.7	75.1	76.0	76.7	76.6	76.7	75.8	74.6	76.0	74.2	72.9	72.3	72.3	72.2	71.3	71.2	70.1
22	67.5	65.5	65.1	64.0	64.2	68.9	69.6	70.7	71.9	73.1	74.0	74.9	73.5	74.0	75.7	75.0	74.1	72.3	72.3	72.3	72.5	71.8	71.6	71.8	71.1
23	71.5	71.6	71.5	71.4	71.0	70.6	70.5	72.4	73.9	74.7	75.6	77.0	77.6	78.4	78.3	77.8	76.4	75.3	74.5	73.5	72.3	70.8	70.3	69.5	73.7
24	69.1	69.4	72.0	72.6	72.4	72.5	72.8	73.3	74.1	74.6	76.7	78.6	77.9	78.4	78.3	78.3	76.6	76.0	75.4	75.6	75.3	74.7	74.3	74.0	74.6
25	73.4	73.3	72.9	72.9	72.6	72.6	73.2	74.2	75.2	76.3	77.4	73.8	73.6	74.9	75.0	74.2	74.6	73.6	71.9	70.6	68.8	68.2	70.4	69.1	73.1
26	69.1	69.1	68.7	69.3	70.0	70.4	71.4	72.5	73.6	74.4	73.9	75.8	76.9	77.1	76.1	75.9	76.0	74.6	74.0	73.9	73.8	73.6	74.4	74.1	73.2
27	74.3	74.0	73.5	73.8	73.0	74.0	74.4	75.6	76.2	77.0	77.7	78.2	78.3	78.2	79.2	77.6	75.9	74.9	72.8	71.8	70.5	70.0	69.3	68.8	74.7
28	68.2	67.4	66.9	66.3	67.6	68.0	69.3	74.0	76.3	77.6	77.6	78.1	77.6	77.4	77.5	77.1	77.0	76.2	73.9	72.6	72.3	72.0	70.2	69.3	72.9
29	67.6	68.3	68.6	67.6	67.7	68.0	68.8	70.2	72.7	77.1	78.6	78.3	79.8	79.6	79.3	80.3	79.7	76.6	74.4	71.7	70.9	71.1	70.1	69.4	73.2
30	69.3	68.0	67.6	67.4	67.3	68.0	69.9	74.3	77.0	77.8	78.9	78.3	78.4	77.8	78.5	78.3	77.5	76.4	75.6	75.1	74.4	74.0	73.6	72.6	73.9
31	72.4	71.8	72.6	73.5	73.6	73.1	73.4	74.1	75.8	76.6	77.3	78.4	79.7	79.7	80.3	79.9	80.0	77.6	75.5	73.9	72.4	72.2	72.6	72.6	75.4
Mean	71.9	71.6	71.5	71.5	71.4	71.6	71.9	72.9	73.9	74.6	75.2	75.7	76.0	76.0	75.9	75.6	75.1	74.2	73.5	73.1	72.7	72.5	72.4	72.1	73.5

185 ESKDALEMUIR: Louvred Hut:  $h_t$  = 0.9 metres

APRIL, 1937

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean
1	73.3	72.6	72.5	72.6	72.8	73.0	73.7	74.6	76.2	78.8	78.6	79.9	80.7	81.3	81.0	81.3	79.6	77.9	77.1	76.6	76.2	76.0	75.9	75.8	76.5
2	75.6	75.5	75.3	75.3	75.3	75.7	75.9	76.4	76.9	77.4	78.4	79.2	79.3	77.2	77.2	77.2	77.8	77.4	76.8	76.5	76.2	75.9	76.0	76.1	76.7
3	76.1	76.3	76.8	76.7	76.9	77.0	77.4	77.6	77.8	78.2	79.4	79.1	79.4	79.0	79.1	79.6	79.7	79.4	79.0	78.7	78.6	78.6	78.8	78.6	78.2
4	78.5	78.3	78.3	78.0	77.9	77.6	77.4	77.6	77.6	77.6	77.7	78.5	77.7	77.7	77.7	77.6	77.4	77.4	77.6	77.4	77.2	77.2	77.1	77.0	77.7
5	76.9	76.7	76.7	76.8	76.9	76.9	76.9	77.4	77.8	78.6	79.3	79.9	80.4	80.5	80.7	81.0	80.4	79.6	79.1	78.6	78.4	78.3	78.3	77.8	78.5
6	77.8	77.6	77.4	77.6	77.7	77.7	77.8	78.6	79.3	81.2	81.2	82.3	82.6	83.7	84.2	83.9	83.6	83.4	82.8	82.3	81.9	81.7	81.8	81.6	80.7
7	81.6	81.5	81.4	81.4	81.6	81.6	81.8	82.0	82.5	83.0	83.1	83.4	83.6	82.6	82.6	82.3	82.2	81.4	80.9	81.2	81.3	80.9	81.1	80.9	81.9
8	80.5	80.1	79.9	79.6	79.8	79.8	80.0	80.4	80.5	80.9	82.1	82.5	82.6	82.8	82.3	82.1	81.5	81.3	80.8	80.9	80.6	80.4	79.8	79.9	80.9
9	79.7	79.6	79.5	79.6	79.6	79.5	79.7	80.2	81.3	84.0	84.3	85.0	85.0	85.2	86.3	86.3	85.9	85.5	85.0	84.2	83.2	82.7	82.6	82.4	82.7
10	82.3	83.0	83.2	83.6	83.3	83.4	83.4	82.8	82.5	81.6	81.3	81.6	81.4	82.2	82.2	82.0	81.6	81.5	80.6	79.9	79.8	79.5	78.6	77.7	81.7
11	76.9	77.1	77.0	76.6	76.4	75.0	75.3	78.5	79.4	80.6	81.6	82.8	82.6	82.5	82.3	82.2	81.8	79.8	78.3	78.5	77.6	76.9	76.3	76.0	78.9
12	75.6	77.5	77.6	76.6	76.8	76.4	77.5	79.1	80.8	81.1	81.6	82.0	81.8	82.1	82.3	82.4	82.0	81.3	80.2	79.2	78.9	78.6	78.3	77.9	79.5
13	78.2	78.2	78.3	78.3	78.3	77.8	77.7	77.8	78.2	78.8	80.6	82.1	80.6	80.3	79.8	79.7	79.6	79.3	79.1	78.8	78.5	78.2	77.6	77.6	78.9
14	77.6	77.3	77.0	76.9	76.8	76.8	77.0	76.9	77.7	78.3	78.9	80.4	81.0	82.0	82.2	81.5	80.1	78.6	77.6	77.6	77.5	77.2	77.2	77.1	78.4
15	77.2	77.3	77.4	77.3	77.3	77.4	77.8	78.1	78.8	78.9	79.5	80.3	83.0	84.9	85.0	84.7	83.8	82.3	81.2	80.7	80.2	79.9	79.2	79.3	80.0
16	79.3	79.3	79.2	79.0	78.8	78.6	78.7	79.0	79.1	79.2	79.8	79.8	79.1	79.0</											

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

186 ESKDALEMUIR: Louvred Hut:  $h_t$  (height of thermometer bulb above ground) = 0.9 metres

MAY, 1937

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	76.2	75.3	75.1	76.0	76.1	76.0	78.2	84.3	86.2	87.2	88.0	88.3	89.6	90.3	90.1	89.8	90.3	88.4	87.9	84.9	82.0	79.9	78.8	78.6	83.2
2	78.0	77.8	76.8	76.1	75.6	76.9	79.4	82.5	85.4	87.4	88.8	89.6	89.9	90.5	91.0	90.6	90.7	87.9	87.9	83.6	81.2	79.6	78.2	77.3	83.6
3	76.9	77.2	76.6	76.5	77.3	79.0	83.3	85.3	86.6	89.6	89.4	89.6	90.4	91.3	91.3	89.9	90.4	89.2	87.2	86.3	82.0	80.2	81.4	81.6	84.4
4	81.5	81.4	81.5	81.5	81.4	81.6	81.9	82.2	83.5	83.9	83.6	84.4	86.2	81.6	83.1	83.6	85.0	84.2	82.2	80.3	78.0	78.4	78.1	80.0	82.1
5	76.3	76.6	74.9	75.6	76.2	77.0	78.3	78.8	80.8	81.6	82.0	79.4	80.0	81.2	81.9	83.3	83.2	82.9	81.1	79.7	80.7	80.3	79.4	78.0	79.6
6	76.6	75.6	76.1	76.4	77.2	77.3	79.1	79.5	83.0	84.4	85.2	85.8	85.8	84.8	84.9	83.2	82.8	82.2	81.9	81.8	81.8	81.8	81.9	81.9	81.2
7	82.0	82.0	82.0	81.9	81.8	82.5	83.3	84.0	84.5	84.4	84.4	85.2	85.1	84.8	85.2	85.8	85.8	86.1	85.2	83.6	82.6	82.0	81.5	83.8	
8	80.9	80.3	80.0	79.8	79.8	80.2	80.3	80.8	80.3	82.0	84.1	86.1	87.2	88.7	88.7	87.3	86.4	85.2	83.0	81.1	77.6	77.9	76.6	78.0	82.3
9	80.8	77.0	75.9	76.5	76.7	77.9	79.0	80.1	80.5	81.4	80.1	81.0	81.3	81.5	81.9	81.8	82.8	81.7	80.3	79.7	79.7	79.6	79.1	79.1	79.7
10	78.9	78.8	78.5	78.4	78.7	78.5	78.2	78.3	78.4	78.7	79.2	79.6	81.8	79.8	79.7	79.6	79.5	79.3	79.3	79.0	78.9	78.8	78.8	78.8	79.0
11	78.7	78.7	78.6	78.6	78.6	78.5	78.8	79.8	80.2	80.9	80.6	81.3	81.9	81.8	81.7	83.2	81.8	80.8	79.9	79.3	78.7	78.7	78.4	78.2	79.9
12	78.2	78.1	77.8	77.7	78.2	78.6	79.3	80.3	81.3	82.5	82.3	81.0	81.7	83.0	81.8	81.5	81.2	80.3	79.8	79.7	79.5	79.3	79.2	79.2	80.0
13	79.0	78.9	79.1	79.0	78.2	78.2	78.9	80.3	81.4	81.3	82.3	82.8	83.8	84.9	85.7	86.4	86.2	85.0	84.1	81.0	79.5	78.7	80.2	79.9	81.4
14	79.6	79.9	79.6	78.9	79.5	81.3	84.0	85.2	85.6	86.5	84.7	83.2	82.8	82.4	82.3	83.3	83.2	82.7	81.9	81.7	81.2	80.9	80.3	79.7	82.1
15	79.2	79.1	78.0	77.0	75.6	79.0	79.7	80.3	82.9	85.2	87.1	86.2	86.6	85.9	88.0	86.8	86.5	86.0	85.0	83.1	82.1	81.0	80.8	80.7	82.6
16	80.5	80.2	79.9	79.3	78.9	80.0	80.6	81.6	82.6	82.7	84.0	86.0	87.2	87.2	86.3	85.8	86.7	85.8	85.7	83.5	81.8	80.5	80.3	79.8	82.8
17	79.2	79.0	78.7	79.0	78.8	79.3	80.1	81.9	86.6	88.5	88.8	90.0	90.7	90.2	90.1	90.4	90.1	88.5	86.2	85.2	81.9	81.6	78.8	78.2	84.3
18	77.3	76.6	75.2	74.6	75.2	77.8	82.8	86.6	88.6	89.6	90.4	91.0	91.5	92.0	92.0	92.3	91.2	90.4	87.9	85.0	81.6	79.8	78.8	84.4	
19	78.1	78.6	78.9	80.5	81.3	81.8	82.3	83.6	85.5	86.0	87.6	86.5	88.6	88.5	86.7	86.4	86.0	84.7	84.5	83.1	82.1	81.5	81.3	77.8	83.5
20	77.7	78.9	80.4	80.3	81.2	81.6	83.2	84.7	84.7	84.9	87.1	87.3	86.7	86.2	88.0	88.1	86.9	85.6	84.9	83.4	81.1	80.0	81.0	81.2	83.6
21	81.7	81.4	80.8	80.1	79.8	79.5	79.7	80.2	80.7	81.4	82.3	83.2	82.4	82.1	83.5	83.9	82.3	81.8	81.6	81.2	81.7	80.8	80.9	80.6	81.4
22	80.5	80.6	80.6	80.4	80.6	81.2	83.0	83.6	85.1	85.7	86.6	87.0	87.2	87.1	86.5	84.1	83.7	83.6	83.9	84.1	81.7	82.2	82.7	83.0	83.5
23	83.1	83.3	83.2	83.3	83.5	83.3	83.6	83.8	84.5	84.6	86.0	86.6	86.9	86.0	85.6	85.2	84.7	84.0	83.4	82.8	82.3	81.5	81.4	80.7	83.9
24	80.3	81.0	81.4	81.5	81.9	83.2	83.2	83.6	87.6	87.2	86.7	88.9	90.1	87.6	86.1	86.6	85.6	85.0	84.9	84.4	84.1	83.9	83.9	83.9	84.6
25	84.1	84.0	84.5	84.6	84.4	84.7	85.2	86.0	87.1	87.6	88.2	87.4	86.6	87.3	86.1	87.4	86.6	87.0	86.2	84.2	83.6	82.9	81.3	80.1	85.4
26	78.8	77.3	77.6	77.2	78.2	79.3	81.2	84.3	85.7	87.0	87.6	87.7	85.1	85.0	85.0	84.9	84.2	86.0	85.3	82.5	81.3	79.7	77.6	78.5	82.4
27	79.2	81.4	81.4	81.4	81.3	81.6	82.3	83.2	84.1	86.1	86.0	85.9	86.3	87.3	87.3	87.0	87.0	86.0	85.1	83.3	83.0	79.9	80.5	81.3	83.6
28	82.3	82.9	83.2	82.8	82.7	83.1	83.3	83.8	84.5	84.8	84.6	85.2	86.7	87.8	87.9	87.8	88.2	87.8	87.6	87.0	85.5	85.0	86.0	85.6	85.2
29	84.6	85.4	85.2	85.0	85.0	86.5	87.6	88.2	88.7	91.6	91.5	90.6	89.7	90.3	89.2	88.4	87.2	87.7	87.3	86.8	84.0	83.1	82.3	81.3	87.1
30	80.9	80.8	81.0	81.1	81.6	82.3	83.7	85.3	86.0	87.3	87.5	88.4	87.3	87.1	87.9	86.2	85.1	84.9	84.3	84.1	82.3	82.1	82.1	80.7	84.2
31	81.2	79.2	78.5	76.5	79.4	81.3	82.3	82.7	84.2	85.2	83.5	83.0	84.6	85.3	85.1	84.3	85.4	85.1	83.3	82.0	80.6	80.2	80.3	80.2	82.2
Mean	79.7	79.6	79.4	79.3	79.5	80.3	81.5	82.7	84.1	85.1	85.5	85.8	86.1	86.2	86.1	86.0	85.7	85.1	84.1	82.8	81.4	80.7	80.4	80.1	82.3

187 ESKDALEMUIR: Louvred Hut:  $h_t$  = 0.9 metres

JUNE, 1937

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
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	80.3	80.3	80.2	80.2	80.2	81.3	81.8	83.1	84.0	83.3	84.3	85.2	83.5	85.0	84.5	84.9	84.8	82.3	82.3	82.0	81.3	80.5	79.3	78.2	82.2
2	77.2	75.8	75.0	75.1	76.8	77.8	79.0	79.5	80.2	81.3	82.2	82.9	84.1	84.2	85.0	84.9	85.6	84.6	83.3	81.7	80.7	80.6	80.5	80.3	80.7
3	80.3	80.4	80.4	80.3	80.6	81.1	81.6	81.7	82.6	82.3	82.6	83.0	83.1	83.6	84.1	84.2	84.3	84.6	84.5	84.7	84.8	84.7	85.2	85.3	82.8
4	85.2	85.1	85.1	85.3	85.3	85.3	85.2	85.3	85.0	85.5	86.1	86.6	87.5	87.4	86.2	85.8	86.3	84.9	84.7	84.5	84.3	84.2	84.3	84.3	85.4
5	84.3	84.3	84.3	84.2	84.1	84.3	84.6	84.6	85.1	85.1	85.2	85.1	86.5	85.2	84.9	85.3	84.9	84.4	84.3	84.8	85.0	85.1	85.1	85.2	84.8
6	85.1	85.0	84.7	84.2	84.2	84.3	84.6	84.9	84.8	85.0	85.2	85.4	86.0	85.8	85.9	85.8	85.9	85.5	84.0	84.1	84.3	84.2	84.7	84.6	84.9
7	84.5	84.3	84.2	83.8	83.8	83.9	84.3	84.7	85.5	87.2	88.2	88.6	89.0	89.0	88.6	88.4	87.8	87.2	86.2	83.8	83.4	82.7	82.8	82.5	85.6
8	82.8	82.7	82.5	82.7	83.0	83.4	83.9	84.1	83.8	84.0	85.4	85.3	85.1	85.6	85.1	84.9	85.3	85.5	84.8	84.1	83.7	83.5	83.3	83.2	84.1
9	83.3	82.9	82.7	82.8	82.9	83.3	84.6	85.4	86.3	87.0	87.3	88.4	89.2	89.9	89.6	89.8	89.0	88.9	87.6	85.5	83.1	80.8	79.1	77.4	85.4
10	76.2	76.1	75.3	74.9	76.0	79.6	85.0	86.1	87.7	88.6	90.0	90.8	90.8	91.3	91.8	92.1	92.3	92.2	92.1	89.6	86.0	84.4	82.6	84.6	85.5
11	84.7	85.2	84.7	84.3	84.6	84.3	84.3	83.8	84.2	84.8	84.8	85.5	86.1	85.5	85.1	84.3	84.2	84.3	84.4	84.6	84.4	83.8	83.7	83.3	84.6
12	83.2	83.3	83.5	83.5	83.7	84.3	84.4	85.5	86.6	87.1	87.2	87.2	87.7	88.6	88.4	88.3	89.0	88.8	88.3	87.5	86.7	86.2	85.7	85.4	86.2
13	85.1	84.8	84.6	84.6	85.0	85.1	85.2	85.3	86.2	87.7	87.3	88.0	89.0	89.4	89.5	90.4	90.3	89.2	88.0	87.8	87.2	86.0	85.4	87.2	87.2
14	85.2	85.1	84.9	84.9	85.3	86.8	87.5	87.2	87.7	87.7	87.7	87.3	89.0	90.0	90.8	90.8	91.4	89.3	87.5	85.3	84.0	83.6	83.3	83.5	86.9
15	83.8	83.3	82.5	81.2	82.1	83.8	85.9	86.4	86.0	86.8	87.9	89.0	90.1	91.4	91.3	91.0	90.2	88.8	86.6	85.2	84.1	83.4	82.7	82.4	86.1
16	82.5	81.9	81.8	82.0	82.8	83.4	84.1	84.9	85.7	86.9	87.5	88.1	89.4	90.0	89.3	91.0									

TEMPERATURE

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, 1937

Hour G. M. T.	1	2	3	4	5	6	7	8	9	10	11	Noon	13	14	15	16	17	18	19	20	21	22	23	24	Mean
Day 1	82.0	82.1	82.3	82.9	84.3	85.2	85.3	85.8	86.4	86.9	87.1	87.8	88.1	88.0	88.5	90.1	88.4	87.6	87.6	87.6	87.2	87.2	87.3	87.2	86.3
2	86.8	86.8	86.7	87.0	87.0	87.0	87.1	87.3	87.4	87.2	87.3	87.0	87.5	87.8	88.0	87.7	87.5	87.6	87.2	86.8	86.9	87.3	87.1	87.1	87.2
3	87.3	86.9	86.8	86.6	86.5	86.4	86.8	87.3	87.3	87.4	89.0	89.8	90.9	92.0	91.6	90.8	90.7	89.5	89.1	88.0	85.8	84.3	83.9	83.8	87.9
4	83.7	83.3	83.2	83.5	83.3	83.0	83.1	82.8	82.4	82.7	83.3	83.6	83.8	83.9	84.1	84.2	84.1	84.7	84.9	84.8	84.6	84.0	83.5	83.3	83.7
5	82.3	80.1	78.3	78.8	79.9	81.7	82.8	83.3	84.6	85.3	85.7	87.2	87.2	87.3	86.9	85.1	84.3	84.5	84.2	84.2	84.2	84.2	84.1	84.0	83.7
6	84.0	84.1	84.2	84.3	84.5	84.6	85.2	86.0	86.7	86.6	87.1	86.6	87.3	87.2	88.8	88.8	87.8	87.4	87.0	86.8	86.2	85.4	85.3	85.2	86.1
7	85.1	85.1	85.1	85.1	85.1	85.3	85.3	85.6	86.3	87.7	89.0	88.2	90.3	88.0	88.1	87.0	86.7	86.7	85.9	85.1	84.5	83.9	83.6	82.9	86.1
8	82.1	81.2	79.6	78.3	77.6	80.3	84.6	84.4	85.6	86.3	85.6	85.8	85.3	85.3	85.5	84.1	83.0	82.7	82.8	82.0	82.0	81.8	81.7	81.5	82.9
9	81.8	81.9	82.0	81.8	82.1	82.3	82.7	83.2	83.6	84.0	84.6	84.9	85.5	86.4	87.0	87.0	86.6	86.2	85.3	84.1	83.5	82.9	82.6	82.6	84.0
10	82.5	82.5	82.2	82.3	83.0	83.3	82.9	83.8	84.6	85.2	85.5	86.6	87.0	87.2	85.9	86.4	86.9	86.8	86.2	85.5	84.8	84.8	84.3	83.9	84.7
11	83.4	82.9	81.3	81.5	81.3	81.3	81.9	84.0	86.7	86.6	88.4	89.8	89.3	89.7	90.5	90.4	90.6	89.9	88.7	88.5	86.2	85.9	85.3	85.3	86.1
12	85.1	85.1	85.2	85.2	85.2	85.4	86.2	87.5	88.4	89.2	91.4	91.9	92.0	92.3	91.6	92.0	91.5	90.9	90.6	89.2	88.1	87.7	87.6	88.0	88.6
13	87.7	87.3	87.6	88.0	88.1	88.1	87.4	87.8	87.5	88.2	89.1	89.6	90.6	91.2	91.5	92.2	90.3	90.1	89.2	87.7	87.3	87.3	87.3	87.3	88.7
14	86.9	86.7	86.6	86.6	86.4	86.6	86.7	86.6	87.0	87.3	87.6	87.6	87.6	88.1	89.6	89.3	88.7	89.0	88.7	88.7	88.3	87.9	87.9	88.0	87.7
15	87.3	86.7	86.3	85.9	85.2	86.0	87.9	89.4	89.4	90.5	90.6	91.2	91.1	91.2	91.6	91.3	90.8	90.3	88.9	87.3	86.8	86.3	85.9	84.7	88.5
16	84.3	84.0	83.8	83.9	84.3	85.1	85.3	87.2	88.6	89.7	90.3	89.7	90.7	90.5	91.2	90.6	89.9	88.7	88.5	86.3	85.7	83.3	82.2	81.8	87.0
17	81.3	80.8	80.8	81.0	81.5	82.5	85.0	88.5	89.5	91.5	92.2	92.4	92.0	92.9	92.2	92.9	92.9	92.3	91.1	90.3	89.6	88.9	88.7	88.4	88.2
18	88.2	88.2	88.1	88.3	88.4	88.8	89.4	90.5	91.4	91.5	91.6	90.3	90.2	90.6	90.2	90.0	89.2	89.0	88.8	88.1	87.8	87.6	87.1	86.6	89.2
19	86.3	85.9	85.9	85.6	85.4	86.7	86.3	87.2	89.2	89.7	90.3	90.6	91.2	90.6	90.4	89.2	88.9	89.3	87.5	85.2	84.7	83.6	84.6	84.2	87.5
20	82.6	81.2	80.0	79.7	80.3	81.8	84.0	85.9	86.3	86.3	85.9	87.7	88.1	88.6	89.6	88.6	88.5	87.1	86.4	85.9	85.2	85.2	85.1	85.2	85.2
21	85.0	84.8	84.7	85.1	85.3	85.3	84.2	84.3	84.3	85.6	86.1	86.9	88.9	89.0	87.7	87.6	87.7	85.6	85.4	85.2	84.5	84.3	84.2	83.9	85.7
22	83.8	83.7	83.6	83.4	84.1	84.0	84.8	84.1	84.8	85.0	85.3	85.8	85.8	86.3	88.1	88.0	87.1	86.9	86.2	85.2	84.7	83.9	83.4	83.1	85.1
23	83.6	83.4	82.9	83.1	83.4	84.4	85.4	86.4	88.2	87.5	88.1	87.8	87.4	87.4	87.2	86.4	86.2	85.2	84.4	84.3	84.4	84.3	84.3	84.1	85.5
24	84.0	83.6	83.4	83.3	83.3	83.7	84.2	84.7	85.0	85.0	85.6	86.5	86.5	87.1	86.8	86.3	86.2	86.0	85.7	85.8	85.9	85.6	85.6	85.6	85.2
25	85.8	85.8	85.6	85.2	84.3	85.4	88.2	90.1	90.6	90.7	91.6	92.4	93.4	93.0	93.9	93.2	91.6	91.2	89.3	86.9	85.4	84.4	83.7	82.3	88.6
26	81.0	79.8	78.8	79.8	81.3	82.5	84.1	84.5	85.7	87.3	88.7	90.0	90.3	90.7	91.3	91.2	90.3	89.0	87.5	85.6	83.9	84.1	84.0	82.3	85.6
27	81.3	81.2	80.6	78.9	79.6	83.2	83.5	85.3	86.2	87.2	88.6	88.9	87.6	87.4	88.7	88.0	88.5	87.3	86.9	85.6	84.8	83.2	83.0	83.5	84.9
28	81.0	80.9	81.0	81.3	81.9	83.3	84.2	84.8	85.4	86.1	86.9	88.6	90.0	90.1	90.4	92.2	90.3	89.6	89.2	87.6	86.0	82.9	82.3	81.7	85.8
29	80.8	79.5	80.3	80.3	79.9	81.6	83.2	84.1	85.5	86.2	87.3	88.0	89.1	90.3	90.4	89.6	89.7	88.7	87.5	86.4	84.2	83.5	82.3	82.3	85.0
30	82.2	82.8	82.8	82.3	82.3	82.7	83.5	84.3	85.0	85.3	86.8	89.6	90.6	92.3	93.1	93.3	92.8	92.7	90.6	89.0	86.0	85.6	85.0	83.8	86.8
31	82.2	81.3	80.7	80.7	81.7	82.6	84.2	86.3	91.1	94.8	95.1	96.5	95.6	95.5	95.2	95.2	94.6	93.8	92.7	91.1	90.4	87.3	86.3	84.9	89.1
Mean	83.9	83.5	83.2	83.2	83.4	84.2	85.0	85.9	86.8	87.4	88.1	88.7	89.1	89.4	89.5	89.3	88.8	88.3	87.6	86.6	85.8	85.1	84.8	84.5	86.3

189 ESKDALEMUIR: Louvred Hut:  $h_t$  = 0.9 metres

AUGUST, 1937

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	84.2	83.6	83.1	82.6	83.2	84.4	87.6	91.1	94.2	95.3	96.6	97.0	97.2	97.8	97.6	97.7	94.3	92.2	90.4	89.0	88.1	87.5	86.8	86.8	90.8
2	85.8	85.1	85.2	85.6	84.9	85.9	87.8	90.1	92.6	95.1	95.4	96.3	96.7	96.7	96.6	96.4	95.3	95.2	92.2	90.3	88.2	86.3	85.2	84.0	90.6
3	83.2	82.3	81.4	81.1	80.9	82.3	83.4	88.2	91.4	94.0	95.6	96.6	97.0	97.4	97.0	96.9	96.2	93.9	92.1	88.6	87.1	85.6	86.3	86.4	89.3
4	86.1	85.7	84.2	84.2	84.0	85.2	87.1	89.2	90.4	91.0	92.4	93.2	93.3	93.3	93.1	92.9	92.3	90.8	89.9	88.8	88.0	87.7	87.7	87.8	89.1
5	87.3	87.5	87.5	87.5	87.5	87.6	88.1	88.6	88.4	89.1	90.4	91.3	92.0	92.2	92.3	92.9	92.2	91.6	90.5	88.2	86.9	85.9	85.5	85.5	89.1
6	85.3	85.5	85.1	85.3	85.4	85.6	86.2	88.3	89.1	89.2	89.6	91.0	91.8	92.8	92.9	92.8	92.0	90.7	88.5	87.9	87.6	87.2	87.5	87.3	88.5
7	84.7	84.0	82.1	80.8	80.2	82.0	84.0	84.9	86.0	86.4	87.1	87.8	88.9	89.0	89.2	88.3	88.4	87.1	86.0	85.1	83.8	83.2	82.3	82.3	85.3
8	81.6	81.1	80.6	81.3	81.8	81.6	83.5	85.3	86.5	88.1	88.7	89.1	89.2	90.0	90.7	90.6	89.2	89.9	88.2	86.7	85.7	84.9	84.1	83.4	85.9
9	83.5	83.8	83.9	83.9	84.0	84.5	85.1	86.1	86.4	86.7	87.0	87.1	87.0	86.4	86.3	86.8	87.2	87.5	87.9	87.9	87.9	87.7	87.3	87.2	86.1
10	86.9	86.3	86.0	84.3	85.3	85.8	86.6	87.3	88.4	89.8	90.8	90.6	91.4	91.6	91.3	90.8	91.1	88.3	85.7	83.2	82.2	81.5	82.6	82.6	87.5
11	82.2	82.6	82.1	82.3	82.3	83.2	84.0	85.0	87.9	89.5	89.8	91.1	91.0	92.4	92.6	92.4	93.2	92.1	91.3	87.7	87.0	86.6	87.4	86.5	87.5
12	85.7	84.6	84.5	84.6	85.6	86.1	87.2	88.6	89.4	90.2	90.9	92.1	91.7	92.7	93.0	93.0	92.6	91.9	91.3	89.5	88.9	88.6	88.1	87.8	89.1
13	88.3	88.2	88.1	87.6	87.9	87.8	88.6	89.0	89.9	90.5	90.8	90.4	91.8	92.3	92.3	91.3	91.5	90.7	90.3	89.0	88.6	88.2	87.8	87.3	89.5
14	87.0	86.9	87.0	86.9	87.0	87.0	87.3	87.7	87.2	87.1	86.9	88.1	88.3	89.0	87.9	87.9	86.6	86.0	85.6	85.3	85.2	84.9	84.8	84.1	86.8
15	83.7	83.8	83.7	83.3	83.3	83.3	84.2	86.1	86.2	87.2	87.9	88.6	87.5	89.0	88.3	85.8	87.9	87.4	85.3	83.2	80.8	80.5	80.2	81.0	85.0
16	81.0	79.6	80.4	81.0	80.2	80.8	82.2	84.4	85.3	85.6	86.8	86.2	85.7	85.2	84.6	85.1	83.7	83.3	83.8	84.5	85.1	85.3	86.7	86.6	83.8
17	86.0	85.9	85.6	85.7	85.8	85.8	85.9	86.1	85.5	85.1	85.8	86.5	87.4	89.5	87.2	88.0	88.1	87.6	85.8	85.7	85.4	85.3	85.		







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

194 ESKDALEMUIR: Louvred Hut: h<sub>t</sub> = 0.9 metres

1937

Table with 24 columns (Hour 1-24) and 2 rows (°A, °A) showing hourly temperature means for 194 ESKDALEMUIR.

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

195 ESKDALEMUIR: Louvred Hut: h<sub>t</sub> = 0.9 metres

1937

Table with 25 columns (Month, Mean, Hour 1-24) and 12 rows (Jan-Dec, Year) showing monthly means and diurnal inequalities for 195 ESKDALEMUIR.

† See page 23

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

196 ESKDALEMUIR: Louvred Hut: h<sub>t</sub> = 0.9 metres

1937

Table with 23 columns (Month, Day, Max., Min.) and 31 rows (Days 1-31) showing absolute extremes of temperature for each day in 196 ESKDALEMUIR.

Note.- The initial 2 or 3 of the readings is omitted, i.e., 275.0 degrees is printed 75.0

RELATIVE HUMIDITY  
Percentages at exact hours, Greenwich Mean Time

197 ESKDALEUIR: Louvred Hut:  $h_t$  (height of thermometer bulbs above ground) = 0.9 metres

JANUARY, 1937

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	94	87	85	88	87	89	90	89	90	89	96	85	86	80	85	85	87	87	85	89	88	88	92	87.7	7.3	
2	93	93	93	90	93	93	87	89	90	92	94	96	94	94	89	84	84	83	76	75	87	70	75	72	86.9	8.1	
3	69	73	74	85	86	82	83	86	87	86	86	86	87	74	82	79	88	89	86	88	89	91	94	96	83.9	9.3	
4	94	96	94	96	99	99	100	100	96	98	98	96	92	91	93	84	83	79	78	82	89	92	89	92	89	92.4	8.0
5	84	85	79	82	85	80	89	88	82	92	89	88	91	93	94	89	91	93	93	95	95	97	96	96	89.3	6.5	
6	93	93	93	91	93	94	92	89	86	90	82	77	76	72	74	75	79	82	77	83	85	82	83	87	84.7	7.9	
7	78	82	85	80	78	85	77	82	82	79	75	74	74	71	71	72	78	76	75	75	78	73	75	76	77.4	6.5	
8	71	83	86	88	92	94	92	97	99	100	91	88	87	82	83	92	95	97	98	98	99	99	99	99	91.5	6.2	
9	96	96	94	96	96	96	96	93	94	94	93	93	94	94	97	97	94	96	94	96	96	96	96	96	97	95.3	8.8
10	97	97	96	98	98	96	96	96	96	94	97	99	99	91	93	97	97	96	98	98	97	99	97	100	96.7	8.7	
11	100	99	99	99	97	97	95	97	94	96	97	94	88	91	96	98	94	96	94	94	93	93	89	86	95.1	9.4	
12	86	86	85	82	80	80	83	90	93	90	94	93	96	94	96	94	96	94	96	96	96	98	98	96	91.1	9.6	
13	98	99	100	98	96	96	91	93	85	85	74	66	76	79	79	83	88	89	89	93	94	98	100	89.2	7.6		
14	97	97	97	100	96	94	98	97	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	97	98.9	5.3	
15	93	94	94	91	89	91	90	90	88	88	86	82	78	73	73	74	73	72	73	74	77	81	83	83	83.2	5.0	
16	85	89	93	98	96	94	98	98	98	94	96	91	94	91	93	96	93	94	95	95	97	98	98	98	94.3	6.3	
17	98	97	95	94	94	89	88	85	82	80	79	82	83	87	88	87	84	85	82	87	83	87	90	88	87.5	6.3	
18	88	87	89	98	97	95	95	93	91	81	88	88	87	87	91	91	93	91	94	90	80	83	76	78	89.8	6.7	
19	73	78	79	83	84	84	89	89	89	87	84	80	75	82	85	86	87	90	92	93	95	97	97	96	88.0	5.2	
20	96	95	93	95	98	97	94	96	98	98	85	86	78	78	82	79	84	89	91	90	90	93	92	92	90.5	5.9	
21	89	89	92	96	90	94	93	95	94	93	92	91	90	92	90	93	96	90	93	89	84	85	90	85	91.2	7.5	
22	88	89	93	96	96	94	90	91	83	87	90	93	92	83	88	89	87	89	86	89	90	90	90	90	89.6	9.6	
23	90	89	87	89	86	86	89	89	92	92	86	86	86	85	86	86	86	85	87	90	90	89	89	89	88.0	8.0	
24	89	87	85	86	79	77	79	83	85	83	81	79	78	82	83	89	86	91	93	88	91	89	91	93	85.2	9.2	
25	96	94	93	95	96	98	98	94	89	100	92	87	92	93	92	93	94	93	91	85	93	91	93	96	93.2	7.3	
26	93	89	85	89	91	92	90	90	87	87	89	90	90	88	85	85	86	88	90	91	91	92	93	94	89.4	5.2	
27	94	90	90	93	93	93	94	96	93	96	98	98	98	98	96	91	89	85	85	87	87	81	82	83	91.5	5.5	
28	84	84	85	87	85	86	85	84	82	81	79	78	80	83	84	87	85	79	81	80	79	81	84	82	82.6	5.1	
29	84	85	88	87	90	92	84	85	85	87	82	75	76	77	78	85	90	91	91	91	91	90	90	88	85.7	4.6	
30	91	93	93	94	93	84	85	90	84	84	79	78	77	87	84	87	90	91	93	92	90	93	96	97	88.4	4.8	
31	98	98	98	98	97	97	97	94	94	98	96	96	93	97	92	93	97	98	93	95	97	95	93	91	95.7	6.8	
Mean	89.5	90.3	90.1	91.6	91.3	90.8	90.6	91.3	90.0	90.8	88.5	87.3	86.8	86.3	86.9	88.0	88.8	89.1	88.8	89.1	89.4	89.8	90.5	90.5	89.4	† 7.0	
Vapour Pressure*	mb 7.0	mb 7.0	mb 6.9	mb 6.9	mb 6.8	mb 6.8	mb 6.8	mb 6.8	mb 6.7	mb 6.9	mb 7.0	mb 7.1	mb 7.1	mb 6.9	mb 6.9	mb 6.9	mb 6.9	mb 6.8	mb 6.7	mb 6.8	mb 6.8	mb 6.9	mb 7.0	mb 7.0	mb 6.9	† 6.9	

198 ESKDALEUIR: Louvred Hut:  $h_t$  = 0.9 metres

FEBRUARY, 1937

Day	1	2	3	4	5	6	7	8	9	10	11	Noon	13	14	15	16	17	18	19	20	21	22	23	24	Mean	Vapour Pressure*
1	91	93	94	96	96	94	93	94	94	98	96	96	96	95	93	93	87	83	89	94	92	87	94	94	93.0	6.4
2	92	96	96	98	98	94	96	95	94	90	94	97	88	93	96	96	98	97	100	99	99	99	99	99	95.9	7.5
3	100	94	96	99	99	100	99	99	99	99	100	99	100	100	98	99	98	99	98	99	100	100	100	100	98.8	9.9
4	100	100	100	100	99	99	99	96	98	99	99	94	91	90	90	91	87	88	83	83	89	78	79	82	92.8	9.0
5	87	87	83	85	87	84	92	92	92	85	89	87	77	72	71	77	82	72	74	79	75	74	79	79	81.8	6.2
6	84	91	82	79	74	77	70	70	79	96	80	69	74	68	78	83	93	87	87	89	94	92	94	89	82.3	6.1
7	96	97	97	99	100	100	99	99	97	98	87	85	82	80	81	80	82	82	84	88	91	91	93	80	90.5	5.9
8	90	94	94	94	92	92	92	91	94	96	94	96	96	96	94	96	96	96	96	94	91	92	90	92	93.3	6.2
9	90	90	87	84	83	84	86	82	84	75	79	73	88	79	77	83	80	90	90	90	87	87	89	84.3	5.6	
10	92	87	92	87	85	85	82	81	82	76	73	79	74	78	80	82	84	85	84	87	87	85	83	82	83.1	5.7
11	85	83	82	81	82	82	81	81	81	79	64	70	70	73	67	73	76	76	79	82	81	81	82	80	78.0	5.3
12	80	80	76	83	87	88	88	88	91	88	87	80	73	75	85	94	96	96	98	98	98	98	98	98	88.1	5.0
13	98	98	98	98	98	100	100	98	98	98	96	96	96	98	98	96	98	98	100	98	98	98	98	98	98.0	6.6
14	98	98	98	100	100	100	100	100	99	92	88	74	69	71	76	76	83	86	95	97	92	97	96	91.0	8.1	
15	94	94	92	92	94	89	80	80	88	89	86	78	76	81	83	86	81	90	97	99	99	100	100	99	89.4	7.9
16	94	99	97	94	90	90	82	84	83	82	78	77	71	81	79	81	85	87	87	85	91	96	98	98	86.4	6.6
17	93	94	96	90	91	91	84	85	80	83	73	73	63	64	62	65	73	71	81	89	90	91	92	91	82.3	5.9
18	91	93	93	94	96	96	98	94	98	97	97	97	88	74	69	83	78	78	79	76	72	74	74	77	86.4	6.4
19	82	73	78	80	82	89	91	93	94	93	91	90	83	74	78	84	77	80	85	85	78	87	80	84.0	6.1	
20	84	80	84	84	79	85	82	77	80	80	67	67	84	73	78	80	87	80	79	97	85	81	80	82	80.6	5.7
21	81	79	78	78	79	78	81	80	73	62	62	66	73	73	73	66	74	78	79	83	85	86	87	87	76.6	5.3
22	87	88	90	88	79	84	86	85	77	74	70	69	67	66	63	69	75	79	83	84	84	84	84	84	79.1	5.0
23	85	87	85	82	83	81	84	78	74	62	59	54	51	50	56	62	75	81	87	90	91	92	91	90	76.1	5.0
24	88	89	89	90																						

RELATIVE HUMIDITY
Percentages at exact hours, Greenwich Mean Time

199 ESKDALEMUIR: Louvred Hut: ht (height of thermometer bulbs above ground) = 0.9 metres

MARCH, 1937

Table with 25 columns (Hour G. M. T. to Vapour Pressure\*) and 31 rows (Day 1 to 31). Data includes relative humidity percentages and vapour pressure values.

200 ESKDALEMUIR: Louvred Hut: ht = 0.9 metres

APRIL, 1937

Table with 25 columns (Day 1 to Mean) and 31 rows (Day 1 to 31). Data includes relative humidity percentages and vapour pressure values.

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

†Mean of the column

‡Mean of the row

RELATIVE HUMIDITY  
Percentages at exact hours, Greenwich Mean Time

201 ESKDALEMUIR: Louvred Hut:  $h_t$  (height of thermometer bulbs above ground) = 0.9 metres

MAY, 1937

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	94	91	91	98	95	84	73	63	63	56	57	55	52	52	53	51	63	64	69	84	86	88	91	73.6	9.2	
2	89	90	93	91	93	93	88	86	78	72	64	60	58	51	55	49	52	52	63	73	87	86	86	90	75.0	9.6	
3	90	85	88	95	85	91	73	64	63	55	53	49	51	47	45	50	39	51	59	66	80	84	93	79	68.3	9.2	
4	94	94	96	96	98	95	92	88	84	89	89	75	60	86	86	80	53	63	70	68	87	86	88	88	83.3	9.6	
5	85	82	88	87	85	80	89	76	73	73	65	87	75	73	78	60	73	79	88	79	86	85	93	89	79.6	7.8	
6	95	96	95	97	97	97	88	88	62	63	60	56	68	71	71	84	91	96	100	100	99	100	99	99	86.1	9.4	
7	99	99	99	98	98	96	92	90	87	91	88	83	87	87	84	83	83	83	89	93	94	96	95	94	91.3	11.8	
8	96	99	98	98	96	98	93	92	90	86	74	69	64	58	50	54	60	63	74	83	87	90	95	89	81.6	9.6	
9	95	97	96	93	93	96	88	84	86	81	93	82	79	71	71	71	65	72	80	80	78	76	84	84	83.3	8.2	
10	84	82	85	86	82	85	89	89	89	97	91	84	86	87	86	90	93	93	93	90	91	91	91	91	88.4	8.3	
11	91	91	91	91	86	86	81	78	79	79	82	75	70	73	76	66	71	75	74	75	76	77	80	80	79.5	7.9	
12	81	80	81	81	80	79	78	76	69	65	66	69	69	64	66	74	79	83	88	93	93	94	96	96	80.1	8.0	
13	88	86	88	90	84	81	77	70	63	77	70	59	54	48	44	43	53	53	72	75	79	82	87	87	70.0	7.7	
14	87	86	84	86	84	75	65	59	56	61	70	72	74	78	86	74	75	80	83	83	87	89	89	91	78.0	9.0	
15	91	93	92	100	96	94	93	94	76	71	60	59	59	62	56	59	60	69	67	75	75	79	81	80	77.0	9.2	
16	82	83	83	90	91	85	85	79	76	79	74	68	61	59	68	76	68	74	68	80	81	79	80	83	77.1	9.3	
17	84	85	85	85	87	86	84	80	73	63	60	56	49	42	47	39	47	59	65	56	77	81	84	84	69.1	9.2	
18	85	87	91	87	85	74	66	57	43	53	40	36	32	36	36	38	48	51	59	67	78	76	84	82	62.2	8.4	
19	86	89	94	93	78	71	71	62	59	68	54	54	57	56	61	64	58	66	64	78	87	89	91	90	72.3	9.2	
20	94	88	88	90	88	92	87	73	73	69	59	58	61	57	59	65	69	72	73	81	86	88	86	92	77.0	9.8	
21	95	98	96	98	93	94	94	94	91	91	86	81	86	74	81	76	87	84	83	88	90	89	88	89	88.6	9.8	
22	88	94	91	91	91	88	78	83	64	73	60	54	55	55	56	86	90	91	92	90	95	96	98	98	81.3	10.3	
23	96	97	97	96	96	96	93	87	80	80	52	56	61	55	58	63	68	77	84	89	89	92	93	93	81.3	10.6	
24	94	90	92	91	91	93	97	94	84	87	83	72	70	78	91	90	90	88	87	89	90	92	93	94	88.3	12.1	
25	93	89	87	89	93	95	91	89	86	84	76	80	78	78	83	74	76	78	78	85	92	89	91	91	85.3	12.3	
26	94	93	96	96	97	96	98	83	80	76	71	72	87	86	83	93	93	80	78	87	91	93	96	96	88.1	10.4	
27	99	98	94	92	88	87	82	78	68	65	57	63	60	58	65	67	65	67	74	83	78	91	94	96	77.9	10.0	
28	96	94	93	92	94	95	96	94	96	95	97	93	88	78	80	83	81	84	90	92	91	93	91	93	90.9	12.9	
29	94	94	94	94	93	88	74	66	66	57	60	63	70	72	79	81	86	82	79	77	94	96	96	94	81.2	13.1	
30	93	96	94	98	98	98	89	74	64	54	55	49	63	54	58	64	75	79	82	79	79	76	77	83	76.5	10.2	
31	81	82	91	93	88	84	79	70	71	56	75	87	59	58	62	61	53	55	61	67	77	79	80	80	73.0	8.5	
Mean	90.7	90.7	91.3	92.1	90.5	89.1	85.0	79.7	73.9	73.3	69.0	67.0	66.0	64.9	67.3	68.3	69.2	72.9	76.1	80.5	85.4	87.1	89.2	89.1	79.5	† 9.7	
Vapour Pressure*	mb 8.9	mb 8.8	mb 8.8	mb 8.8	mb 8.8	mb 9.1	mb 9.4	mb 9.6	mb 9.8	mb 10.3	mb 10.0	mb 9.9	mb 10.0	mb 9.8	mb 10.2	mb 10.2	mb 10.2	mb 10.3	mb 10.1	mb 9.7	mb 9.4	mb 9.2	mb 9.2	mb 9.0	mb 8.9		

202 ESKDALEMUIR: Louvred Hut:  $h_t$  = 0.9 metres

JUNE, 1937

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean	Vapour Pressure*	
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	mb	
1	82	85	87	83	84	75	78	67	61	66	60	60	72	62	70	60	62	84	82	77	79	76	76	74	73.5	8.6	
2	77	82	84	84	80	74	67	64	62	70	56	53	49	52	43	43	38	42	59	72	88	91	93	94	67.0	7.0	
3	93	94	94	93	93	93	91	92	92	95	95	94	94	95	94	95	98	97	98	98	98	98	98	99	94.8	11.5	
4	98	97	96	91	91	95	98	97	98	97	94	95	91	93	96	98	95	96	96	97	99	99	98	99	96.0	13.8	
5	98	96	97	98	98	97	95	96	94	96	98	96	96	97	98	99	98	99	99	100	96	96	97	99	97.2	13.5	
6	98	96	99	100	100	99	98	99	99	100	100	99	96	97	98	98	97	97	92	94	96	98	96	95	97.7	13.6	
7	95	96	94	92	92	92	87	83	73	76	58	59	61	56	55	56	52	63	71	82	87	88	89	87	77.0	11.2	
8	87	88	91	92	89	92	87	90	93	92	88	88	90	89	89	91	87	83	88	89	90	91	92	93	89.4	11.8	
9	93	94	95	94	92	90	85	79	77	66	64	59	55	56	54	59	59	59	59	73	78	89	93	93	75.7	10.9	
10	97	98	94	100	96	88	80	78	69	64	61	62	61	60	64	54	54	58	58	72	75	81	89	70	74.7	10.8	
11	73	68	70	73	73	76	82	90	89	91	91	94	88	81	94	92	93	93	93	94	95	98	94	94	86.5	11.8	
12	96	95	94	96	97	94	96	93	88	88	88	87	90	83	85	88	80	81	87	91	92	94	92	95	90.4	13.7	
13	90	90	92	94	90	90	87	90	81	78	77	74	75	76	75	72	76	78	78	71	72	78	81	78	75	80.5	12.8
14	97	97	99	98	97	91	88	91	85	91	78	70	67	63	59	60	64	71	71	72	78	81	78	75	80.5	12.8	
15	71	74	80	83	73	72	66	62	64	67	57	52	49	44	50	53	58	60	65	72	75	76	82	82	66.0	10.0	
16	78	83	86	83	79	78	75	72	68	68	53	53	50	47	53	46	46	60	59	70	79	85	78	84	68.0	9.9	
17	89	91	90	84	76	76	65	65	64	60	47	48	47	55	54	61	62	69	72	84	87	91	92	94	70.6	8.5	
18	95	95	83	90	93	85	73	68	62	67	54	54	54	54	53	56	60	85	74	84	91	92	89	94	75.2	8.6	
19	94	93	90	92	87	82	78	75	72	72	63	66	67	65	63	80	85	89	84	90	92	92	95	93	81.7	9.9	
20	96	88	93	87	81	89	84	79	66	65	69	64	60	58	57	50	58	59	65	72	87	86	96	96	75.5	9.8	
21	90	95	97	98	95	87	82	80	70	68	54	51	52	55	52	53	56	57	61	72	66	74	70	74	71.7	10.0	
22	75	87	91	94	80	80	72	68	76	68	65	75	67	76	71	63	66	65	72	79	81	86	87	88	76.0	10.5	
23	86	88	89	88	87	89	91	75	75	74	58	57	58	55	71	63	72	74	62	81	83	89	89	81	76.6	10.8	
24	84	88	88	82	79	80	74	71	67	73</																	

RELATIVE HUMIDITY  
Percentages at exact hours, Greenwich Mean Time

203 ESKDALEMUIR: Louvred Hut:  $h_t$  (height of thermometer bulbs above ground) = 0.9 metres

JULY, 1937

Hour G. M. T.	1	2	3	4	5	6	7	8	9	10	11	Noon	13	14	15	16	17	18	19	20	21	22	23	24	Mean	Vapour Pressure*	
Day	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	mb
1	97	100	100	100	100	97	99	97	95	95	92	84	84	84	81	72	87	93	93	93	97	98	97	98	92.8	14.2	
2	97	97	97	96	97	93	97	96	96	96	95	98	98	94	97	97	98	97	99	99	99	98	99	100	97.0	15.7	
3	99	99	96	96	95	95	93	90	94	97	89	84	81	74	77	85	85	85	87	91	95	93	94	93	92.0	11.8	
4	92	92	94	94	93	91	89	92	95	92	90	91	90	90	93	94	97	95	91	90	91	89	91	89	92.0	11.8	
5	91	91	94	94	94	91	86	94	88	87	82	74	72	73	70	89	89	92	94	93	95	97	94	89	88.2	11.4	
6	98	98	99	98	97	97	100	98	97	93	90	96	93	95	88	87	90	95	93	95	97	99	100	99	95.4	14.4	
7	99	100	100	100	100	100	100	99	100	91	84	89	84	91	87	92	91	85	85	83	81	81	83	82	91.5	13.6	
8	81	83	91	91	94	88	67	75	68	80	74	72	75	77	71	89	87	89	95	92	95	93	96	98	83.9	10.2	
9	98	98	99	98	99	99	96	97	97	97	97	97	89	68	65	66	70	69	75	78	85	87	83	86	87.3	11.5	
10	84	84	87	84	78	76	79	77	80	84	83	71	73	69	80	76	75	76	82	90	91	93	93	93	81.4	11.2	
11	96	95	96	96	96	98	95	89	75	75	64	51	59	63	62	54	61	67	70	79	87	89	91	89	79.1	11.9	
12	94	95	94	94	96	95	91	83	79	80	71	67	72	67	70	73	78	80	80	86	88	94	96	96	84.0	14.9	
13	96	99	98	94	87	83	81	80	84	87	80	84	77	74	75	74	86	80	87	92	97	94	96	97	86.7	15.5	
14	97	97	97	97	98	97	96	97	98	99	97	97	97	93	86	89	89	88	93	92	97	98	98	98	95.2	15.9	
15	95	95	95	95	95	93	76	68	70	68	64	61	61	63	59	62	65	71	77	78	76	73	74	74	75.3	13.3	
16	77	79	81	81	82	76	77	66	62	75	63	72	61	61	58	57	63	64	65	74	71	88	91	93	72.0	11.5	
17	89	98	94	96	98	98	94	78	71	62	48	51	57	57	63	58	61	63	74	77	80	85	87	88	76.2	13.2	
18	90	90	91	90	91	89	88	85	83	80	85	90	93	92	90	93	96	95	94	96	94	94	93	95	90.6	16.7	
19	94	94	94	93	95	88	85	79	66	65	57	53	54	55	59	66	68	67	76	88	87	93	85	85	77.1	12.7	
20	94	96	94	91	96	91	87	76	71	72	70	61	61	65	61	63	64	69	78	86	89	89	90	90	79.2	11.3	
21	91	91	91	91	88	86	93	96	97	99	99	98	91	74	77	78	72	86	86	88	91	92	89	93	89.0	13.1	
22	93	92	91	94	87	83	81	90	87	89	85	86	83	81	72	74	78	73	77	84	93	89	87	86	84.5	11.9	
23	87	91	91	89	93	87	85	74	69	75	66	67	76	86	82	79	91	90	90	92	92	91	92	90	84.3	12.2	
24	92	95	95	95	94	90	86	83	84	84	83	81	86	81	88	89	89	92	93	93	95	95	95	95	89.3	12.7	
25	91	91	90	93	96	90	80	73	73	70	69	62	61	62	60	77	83	84	86	91	89	87	90	89	80.8	14.3	
26	90	93	96	88	92	86	80	78	75	73	67	63	65	61	62	62	67	70	69	71	82	78	74	83	76.2	11.1	
27	86	88	86	91	86	83	81	73	68	68	57	60	63	66	60	68	66	75	75	85	88	93	91	94	76.9	10.7	
28	90	90	94	98	93	96	88	87	83	83	80	70	64	67	71	63	71	75	79	82	89	87	98	91	82.9	12.3	
29	93	93	96	96	94	95	96	93	88	86	82	78	74	70	74	73	74	80	84	87	86	87	88	89	85.7	12.0	
30	89	91	92	96	95	95	95	92	91	93	86	75	74	72	67	65	65	71	84	82	93	95	97	93	85.3	13.5	
31	99	78	98	99	100	99	100	98	85	54	59	56	61	60	63	65	69	74	75	81	78	87	89	94	80.8	14.8	
Mean	92.3	93.3	93.3	93.8	93.5	91.1	88.4	85.6	82.9	82.2	77.7	75.5	75.1	73.7	73.2	75.1	78.1	80.0	83.2	86.7	89.0	90.6	91.0	91.5	84.9	†13.1	
Vapour Pressure*	mb 12.0	mb 11.9	mb 11.7	mb 11.7	mb 11.8	mb 12.1	mb 12.4	mb 12.7	mb 13.1	mb 13.5	mb 13.3	mb 13.5	mb 13.7	mb 13.7	mb 13.8	mb 13.9	mb 14.0	mb 13.9	mb 13.8	mb 13.5	mb 13.1	mb 12.8	mb 12.6	mb 12.4	mb 13.0		

204 ESKDALEMUIR: Louvred Hut:  $h_t$  = 0.9 metres

AUGUST, 1937

Day	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	mb
1	90	93	94	95	95	93	88	77	61	64	56	54	50	48	53	53	54	75	77	78	82	86	87	92	74.8	15.2	
2	94	95	96	95	95	90	86	79	69	59	65	62	61	62	61	63	64	67	77	80	87	90	94	100	78.6	15.8	
3	96	96	98	98	99	100	98	90	81	73	72	65	64	63	59	62	63	75	75	86	90	93	96	97	83.0	15.4	
4	97	94	93	94	93	90	91	79	78	77	66	62	60	62	60	66	68	77	84	89	91	93	93	93	81.3	14.9	
5	97	97	97	97	97	97	94	90	93	91	86	80	75	73	74	68	75	77	87	92	93	94	94	96	88.0	16.1	
6	97	97	97	97	98	97	97	85	84	85	84	78	76	74	72	70	64	81	90	92	93	92	94	94	87.0	15.3	
7	79	81	81	89	90	86	81	79	69	70	56	63	54	56	55	58	60	68	69	80	87	89	93	95	74.5	10.7	
8	92	96	96	93	91	93	94	85	81	70	74	61	59	60	56	56	66	63	69	86	86	91	92	95	79.4	11.8	
9	95	93	94	94	97	96	93	89	82	83	80	83	87	96	97	94	96	97	94	92	94	94	97	93	92.1	13.9	
10	93	95	95	97	97	97	95	88	84	76	73	70	67	69	76	74	76	68	79	87	94	96	95	95	84.8	14.0	
11	99	96	99	99	99	100	100	96	83	76	72	70	70	68	69	71	69	75	80	92	92	94	92	97	85.7	14.2	
12	95	95	97	97	97	96	95	93	93	90	89	80	82	77	76	77	80	84	89	93	92	94	94	93	89.6	16.4	
13	92	93	93	94	93	93	94	92	87	87	83	84	76	78	76	80	80	85	87	90	92	92	92	95	87.7	16.5	
14	93	94	93	94	94	95	96	93	97	97	91	87	90	83	83	80	81	78	81	85	84	86	87	86	88.8	14.0	
15	91	90	91	89	92	86	86	74	72	59	53	55	62	59	64	83	66	70	72	79	89	93	89	86	77.1	10.8	
16	86	91	91	88	91	89	87	79	73	89	66	67	70	78	84	74	92	95	94	97	97	99	95	90	85.8	11.1	
17	96	94	96	95	94	94	94	90	93	95	93	88	84	90	85	84	85	91	90	91	91	91	91	95	91.1	13.9	
18	97	96	96	97	97	96	93	88	89	96	91	81	82	83	81	90	88	92	96	84	87	86	87	86	90.0	13.1	
19	84	86	86	83	86	88	96	88	82	79	73	73	69	61	70	72	74	79	85	84	84	89	92	88	81.3	11.3	
20	93	95	88	87	86	90	87	80	62	64	54	54	50	47	59	57	56	59	74	85	87	87	93	89	74.2	11.5	
21	93	91	89	89	86	86	74	64	76	72	72	71	68	63	59	61	69	77	84	87	91	95	97	97	79.5	12.0	
22	96	92	92	93	94	93	92	83	78	72	76	73	72	69	69	74	72	85	86	84	90	94	94	94	84.1	12.9	
23	94	94	94	96	97	98	99	97	96	94	93	92	89	76	79	80	82	84	90	94	93	91	89	97	91.1	14.5	
24	97	96	99	98	95	96	94	91	81	81	80	71	72	69	74	81	79	77	94	95	95	96	97	87.0	13.7		
25	97	98	96	98	97	96																					

RELATIVE HUMIDITY  
Percentages at exact hours, Greenwich Mean Time

205 ESKDALEMUIR: Louvred Hut;  $h_t$  (height of thermometer bulbs above ground) = 0.9 metres

SEPTEMBER, 1937

Table with 24 columns for hours (1-24) and 2 additional columns for Mean and Vapour Pressure. Rows represent days from 1 to 30. Data includes relative humidity percentages and vapour pressure in mb.

206 ESKDALEMUIR: Louvred Hut;  $h_t$  = 0.9 metres

OCTOBER, 1937

Table with 24 columns for hours (1-24) and 2 additional columns for Mean and Vapour Pressure. Rows represent days from 1 to 31. Data includes relative humidity percentages and vapour pressure in mb.

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

† Mean of the column

‡ Mean of the row





209 ESKDALEMUIR: (louvred Hut)  $h_t = 0.9$  metres

1937

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	90.3	90.5	90.8	91.1	90.9	90.3	89.0	86.8	84.0	82.6	79.1	77.0	76.0	75.5	76.0	77.6	79.5	82.0	84.4	86.4	87.8	89.0	89.8	89.8	84.9
Vapour Pressure (in millibars)*	mb 8.1	mb 8.1	mb 8.0	mb 8.0	mb 8.0	mb 8.1	mb 8.3	mb 8.4	mb 8.7	mb 8.9	mb 8.9	mb 9.0	mb 9.0	mb 9.0	mb 9.0	mb 9.0	mb 9.0	mb 8.9	mb 8.7	mb 8.6	mb 8.5	mb 8.3	mb 8.3	mb 8.2	mb 8.6

\*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 changes

210 ESKDALEMUIR: (Louvred Hut)  $h_t = 0.9$  metres

1937

Month	Mean	Hour 1	G.M.T. 2	3	4	5	6	7	8	9	10	11	Noon	13	14	15	16	17	18	19	20	21	22	23	24
January	89.4	+0.1	+0.9	+0.7	+2.2	+1.9	+1.4	+1.2	+1.9	+0.5	+1.3	-0.9	-2.1	-2.7	-3.1	-2.5	-1.4	-0.7	-0.4	-0.6	-0.3	-0.1	+0.3	+1.1	+1.1
February	86.9	+3.4	+3.7	+3.5	+3.3	+2.9	+3.4	+2.7	+2.0	+2.0	+1.1	-2.7	-4.5	-6.7	-6.7	-7.0	-4.8	-2.2	-2.7	-0.4	+1.8	+1.8	+1.3	+2.5	+2.2
March	83.4	+4.4	+5.0	+5.8	+5.8	+5.7	+5.4	+5.2	+4.3	-1.3	-4.9	-6.4	-9.3	-10.6	-9.6	-9.9	-6.3	-3.9	-1.0	+0.9	+2.7	+3.6	+4.5	+5.0	+4.9
April	84.1	+6.8	+7.1	+7.1	+7.8	+8.5	+8.4	+6.9	+2.3	-0.6	-2.9	-6.6	-10.6	-10.2	-10.5	-11.0	-9.8	-6.9	-4.1	-0.5	+0.9	+2.6	+4.5	+5.0	+5.8
May	79.5	+11.0	+11.0	+11.7	+12.5	+10.9	+9.5	+5.4	+0.1	-5.6	-6.2	-10.5	-12.5	-13.5	-14.6	-12.2	-11.2	-10.2	-6.5	-3.3	+1.1	+6.1	+7.7	+9.8	+9.8
June	79.3	+8.1	+8.5	+9.1	+9.0	+7.6	+6.1	+3.1	+0.9	-2.3	-1.3	-6.8	-7.7	-8.7	-10.0	-9.6	-10.7	-10.7	-6.9	-4.7	+0.2	+4.4	+7.6	+7.8	+7.3
July	84.9	+7.5	+8.5	+9.0	+9.0	+8.7	+6.3	+3.6	+0.7	-2.0	-2.6	-7.2	-9.4	-9.8	-11.2	-11.7	-9.9	-6.8	-4.9	-1.7	+1.7	+4.0	+5.6	+6.0	+6.5
August	84.5	+8.9	+9.2	+9.4	+9.6	+9.7	+9.1	+7.5	+1.9	-3.1	-4.9	-8.4	-11.5	-13.2	-14.9	-14.5	-12.8	-10.6	-5.6	-0.5	+3.5	+6.1	+7.5	+8.4	+9.2
September	84.9	+6.9	+6.5	+6.8	+7.7	+7.3	+7.4	+5.5	+1.9	-1.7	-4.6	-8.8	-11.6	-12.0	-12.3	-10.9	-11.9	-6.6	-1.0	+3.0	+4.6	+4.5	+6.5	+6.5	+6.1
October	88.1	+4.9	+4.7	+4.7	+3.9	+4.2	+4.3	+4.3	+2.2	+0.7	-3.8	-8.1	-9.1	-9.2	-9.1	-7.4	-5.0	-2.5	+0.1	+2.1	+2.6	+2.9	+3.7	+4.4	+4.5
November	84.8	+3.0	+3.1	+3.6	+3.6	+3.7	+3.8	+3.6	+2.5	+1.6	-1.6	-5.3	-8.6	-8.6	-10.0	-8.2	-2.9	-1.8	-0.6	+0.6	+0.7	+0.6	+1.3	+2.0	+1.9
December	88.5	+0.4	-0.4	0.0	0.0	+0.9	+0.4	+0.6	+1.5	+1.2	+0.6	-0.2	-0.4	-1.1	-0.7	-0.9	+0.4	-0.6	-0.5	+0.2	-1.2	-0.8	-0.4	+0.7	+0.1
Year	84.9	+5.5	+5.7	+6.0	+6.2	+6.0	+5.5	+4.1	+1.9	-0.8	-2.3	-5.7	-7.8	-8.9	-9.4	-8.8	-7.2	-5.3	-2.8	-0.4	+1.5	+3.0	+4.2	+5.0	+5.0

† See page 23

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

1937

Hour G. M. T.	0 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 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	55.6	43.0	42.2	47.8	57.8	58.2	64.6	65.6	74.5	66.2	46.8	40.8	64.9	52.2	57.1	51.8	46.4	54.4	41.7	41.0	57.9	57.6	60.3	53.5	1301.7
Duration	46.7	39.7	44.4	38.9	49.1	50.7	52.2	48.6	52.3	34.4	43.1	43.8	44.2	47.2	43.7	44.6	42.0	46.7	35.7	35.4	44.2	45.6	51.2	47.2	1071.6

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

212 ESKDALEMUIR

NOTES ON RAINFALL

1937

**Rainfall Duration** There were 157 days on which no duration of rainfall was registered. There were 31 days on which the duration of rainfall was registered as 0.1 to 1.0 hour, 23 days with 1.1 to 2.0 hours, 81 days with 2.1 to 6.0 hours, 57 days with 6.1 to 12.0 hours and 16 days with more than 12 hours. The day with the greatest duration was December 22nd (19.5 hours), the amount being 30.7 mm.

**Notable Falls of the Year**

- (a) The greatest amount in a 60-minute period was 18.6 mm between 9h. and 10h on August 14.
- (b) Details of the greatest continuous fall are as follows:-  
40.1 mm fell within 5.7 hours on August 14; of this, 35 mm fell in 128 minutes.

**Wet Periods**

- (a) There was one "rain spell" (i.e. period of 15 or more consecutive days on each of which 0.2 mm or more of rain fell) viz. 1936 December 29 - 1937 January 14.
- (b) There was one "wet spell" (i.e. period of 15 or more consecutive days on each of which 1.0 mm or more of rain fell) viz. 1936 December 29 - 1937 January 13.

**Dry Periods**

- (a) There was no period of "absolute drought" (i.e. fifteen or more consecutive days to none of which is credited 0.2 mm of rain or more). There were no "partial droughts" (i.e. twenty-nine or more consecutive days, the mean daily rainfall of which does not exceed 0.2 mm).
- (b) There was no "dry spell" (i.e. period of at least 15 consecutive days, to none of which is credited 1 mm of rain or more).

**Rate of Rainfall**  
(Jardi Recorder)

The highest instantaneous rate of rainfall was 84 mm/hr at 9h 10m on August 14. The maximum rate exceeded 50 mm/hr on January 22, 24, August 14, and September 1.

RAINFALL

Amounts in millimetres, for periods of sixty minutes, between the exact hours, Greenwich Mean Time
213 ESKDALEMUIR: H\_T (height of receiving surface above M.S.L.) = H (height of station above M.S.L.) + h\_T (height of receiving surface above ground) = 242.0 metres + 0.4 metres
JANUARY, 1937

Table with 24 columns for hours (0-1 to 23-24) and 4 columns for totals (Amount, Duration, Max Rate). Rows represent days from 1 to 31. Includes a 'Total Duration' row at the bottom.

For international symbols see p. 22

† Hour of occurrence of the maximum rate of the fall ( 5 mm/hr or more)

214 ESKDALEMUIR: H\_T = 242.0 metres + 0.4 metres

FEBRUARY, 1937

Table with 24 columns for hours (0-1 to 23-24) and 4 columns for totals (Amount, Duration, Max Rate). Rows represent days from 1 to 28. Includes a 'Total Duration' row at the bottom.

For international symbols see p. 22

† Hour of occurrence of the maximum rate of the fall ( 5 mm/hr or more)

RAINFALL

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

215 ESKDALEMUIR: H<sub>r</sub> (height of receiving surface above M.S.L.) = H (height of station above M.S.L.) + h<sub>r</sub> (height of receiving surface above ground) = 242.0 metres + 0.4 metres

MARCH, 1937

Table with 33 columns (Hour G.M.T., 0-1 to 23-24, Amount 0-24, Duration 0-24, Max Rate) and 31 rows (Day 1 to 31). Contains rainfall data for March 1937.

For international symbols see p. 22

† Hour of occurrence of the maximum rate of the fall ( 5 mm/hr or more)

216 ESKDALEMUIR: H<sub>r</sub> = 242.0 metres + 0.4 metres

APRIL, 1937

Table with 33 columns (Day, Hour G.M.T., 0-1 to 23-24, Amount 0-24, Duration 0-24, Max Rate) and 31 rows (Day 1 to 31). Contains rainfall data for April 1937.

For international symbols see p. 22

† Hour of occurrence of the maximum rate of the fall ( 5 mm/hr or more)

RAINFALL

Amounts in millimetres, for periods of sixty minutes, between the exact hours, Greenwich Mean Time
217 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

MAY, 1937

Table with columns: 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, Amount 0-24, Duration 0-24, Max Rate. Rows include days 1-31 and a Sum row.

For international symbols see p. 22

† Hour of occurrence of the maximum rate of the fall ( 5 mm/hr or more)

218 ESKDALEMUIR: H\_r = 242.0 metres + 0.4 metres

JUNE, 1937

Table with columns: Day, 0-1, 1-2, 2-3, 3-4, 4-5, 5-6, 6-7, 7-8, 8-9, 9-10, 10-11, 11-12, 12-13, 13-14, 14-15, 15-16, 16-17, 17-18, 18-19, 19-20, 20-21, 21-22, 22-23, 23-24, Amount 0-24, Duration 0-24, Max Rate. Rows include days 1-30 and a Sum row.

For international symbols see p. 22

† Hour of occurrence of the maximum rate of the fall ( 5 mm/hr or more)

RAINFALL

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

219 ESKDALEMUIR:

H<sub>r</sub> (height of receiving surface above M.S.L.) = H (height of station above M.S.L.) + h<sub>r</sub> (height of receiving surface above ground) = 242.0 metres + 0.4 metres

JULY, 1937

Table with 25 columns for hourly rainfall (0-1 to 23-24) and 3 columns for Amount (0-24), Duration (0-24), and Max Rate. Rows include Day 1-31 and a Sum row.

For international symbols see p. 22

† Hour of occurrence of the maximum rate of the fall ( 5 mm/hr or more)

220 ESKDALEMUIR:

H<sub>r</sub> = 242.0 metres + 0.4 metres

AUGUST, 1937

Table with 25 columns for hourly rainfall (0-1 to 23-24) and 3 columns for Amount (0-24), Duration (0-24), and Max Rate. Rows include Day 1-31 and a Sum row.

For international symbols see p. 22

† Hour of occurrence of the maximum rate of the fall ( 5 mm/hr or more)

RAINFALL

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

221 ESKDALEMUIR:  $H_r$  (height of receiving surface above M.S.L.) = H (height of station above M.S.L.) +  $h_r$  (height of receiving surface above ground) = 242.0 metres + 0.4 metres

SEPTEMBER, 1937

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	Amount 0-24	Duration 0-24	Max Rate	
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	mm/hr	
1	..2	(...)	..2	3.6	..3	2.7†	5.3	5.1	1.2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	18.6	4.8	72	
2	...	..1	..7	6.0†	7.9	3.1	..4	..1	...	...	...	...	..1	...	...	...	...	...	..2	...	...	..5	...	...	19.1	4.4	47	
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.8†	...	...	...	...	...	...	...	...	...	1.8	0.2	26	
4	...	...	...	...	...	...	...	...	..1	...	...	...	...	...	...	...	...	...	...	...	1.7†	..2	...	...	2.0	1.0	18	
5	1.3	1.7	3.3	3.4	1.8	1.8	3.4	3.0	..8	..2	1.4	..3	2.0†	..2	..8	..2	..1	(...)	...	...	...	...	(...)	..2	25.9	13.8	28	
6	(...)	..1	..1	...	...	...	..2	..1	...	...	...	...	..7	..2	...	..1	2.0	1.3	..1	..6†	1.6	...	...	...	7.1	5.8	12	
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..2	1.0	3.6†	2.0	2.0	..6	...	..3	..1	9.8	5.5	11	
8	...	...	...	...	...	...	...	(...)	...	...	...	...	...	(...)	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	...	...	...	...	...	..7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.7	0.2	3
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	...	...	...	...	...	...	(...)	...	..7	..2	..2	...	...	...	...	..1	1.0	..1	..1	..6	...	..2	...	...	3.2	5.2	3	
13	...	...	..1	(...)	..1	..2	(...)	(...)	...	...	...	...	(...)	(..1)	(...)	...	...	...	(...)	...	...	(...)	...	...	0.8	2.4	...	
14	...	...	...	...	...	...	...	...	(...)	...	...	...	...	...	(...)	...	...	(...)	...	...	...	..7	2.2	3.8†	2.3	9.0	3.4	9
15	(...)	...	...	...	...	..1	...	...	...	..6	..7	...	...	...	...	...	2.0†	(...)	...	...	...	..2	...	...	3.6	2.0	20	
16	...	...	...	...	...	...	...	...	...	...	...	...	..7†	...	...	1.0	...	..4	..2	...	...	..2	..5	...	0.7	0.4	3	
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.3	1.1	11	
18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
19	...	...	...	...	...	...	...	...	...	...	...	...	..6	..1	(...)	..4	...	...	..2	..3	...	...	...	...	1.6	2.1	1	
20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
22	...	...	...	(...)	(...)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
23	...	...	...	...	...	...	...	...	...	...	...	...	..1	..2	...	...	...	...	...	...	...	...	...	...	...	0.3	0.7	...
24	...	...	(...)	(...)	..5	2.2†	1.5	..8	..4	..1	...	...	(...)	...	...	...	...	...	...	..6	..1	..1	...	...	6.3	6.7	12	
25	...	...	...	...	...	...	...	...	...	...	...	...	(...)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
26	...	...	...	...	...	...	...	...	...	...	...	...	...	..2	..2	..1	..1	...	...	...	...	...	...	...	0.6	2.1	1	
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..4	..7	(...)	1.1	0.9	1	
28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
30	...	...	...	...	...	...	..1	...	...	...	...	...	...	...	...	...	...	..4	(...)	1.5	2.8	1.8	..5	..4	7.5	5.5	4	
Sum	1.5	1.9	4.4	13.0	10.6	10.8	11.2	9.1	3.2	1.1	2.3	0.9	3.7	0.9	3.2	1.7	4.2	8.0	2.9	5.3	7.7	5.4	6.0	3.0	122.0	68.2		
Total Duration	hr 0.9	hr 1.4	hr 2.7	hr 3.0	hr 3.7	hr 5.0	hr 4.5	hr 3.4	hr 2.7	hr 1.0	hr 2.2	hr 1.2	hr 2.4	hr 2.7	hr 2.3	hr 1.6	hr 3.3	hr 3.6	hr 2.3	hr 4.1	hr 4.6	hr 3.4	hr 3.4	hr 2.8	hr 68.2			

For international symbols see p. 22

† Hour of occurrence of the maximum rate of the fall ( 5 mm/hr or more)

222 ESKDALEMUIR:  $H_r$  = 242.0 metres + 0.4 metres

OCTOBER, 1937

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	hr	mm/hr		
1	..4	..1	..2	1.1	1.0	..3	..6	...	...	...	...	...	..9	..2	...	...	..4	2.7	1.4	2.4	2.1	..2	..1	14.1	11.2	3		
2	...	...	...	...	...	...	...	...	..8	..3	1.1	..4	(...)	...	...	...	...	...	...	...	...	...	...	...	2.6	2.2	1	
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(...)	...	...	...	...	...	...	...	...	...	...	...	...
7	...	...	...	...	...	...	...	...	1.1†	...	...	...	...	...	...	...	...	(...)	(..1)	(...)	...	...	...	...	1.2	0.3	12	
8	...	...	...	...	...	...	...	...	...	...	...	...	(...)	(...)	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	...	...	...	...	...	...	...	...	...	...	...	...	(...)	(...)	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(...)	(...)	...	...	...	...
13	(...)	(..1)	(...)	...	...	...	...	...	...	...	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	0.1	...	...	
14	...	...	..3	..1	...	...	...	(..1)	(...)	...	...	...	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	0.5	1.0	...	
15	..9	...	...	...	...	..1	..2	(...)	...	...	...	...	...	...	...	...	...	(...)	(...)	(...)	(...)	(...)	(...)	(...)	1.2	1.2	3	
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(...)	...	...	...	...	...	...	...	...	...	...	...	...
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
18	...	...	...	...	(≡)	(..1)	(≡)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	...	...	
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..3	...	...	...	..7	..7	..5	2.2	3.2	...	
21	..4	..6	..3	..1	(...)	(...)	..2	..2	..2	..1	..3	..7	..5	..4	..1	...	...	..2	...	..4	..4	..3	...	...	5.4	12.1	...	
22	...	...	...	...	...	..3	1.3†	1.5	(...)	...	...	...	..4	...	...	...	..9	1.2	..2	(...)	...	...	...	3	6.1	5.6	9	
23	2.6	..2	...	...	...	...	...	...	...	...	...	...	...	...	...	2.0	1.8	1.6	2.6	3.7	6.1†	2.6	..3	23.5	8.7	7		
24	(...)	...	..2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	0.5	...	
25	..1	...	..2	...	...	...	...	..4	1.8	1.5	3.2	1.0	...	..6†	...	...	...	...	...	...	...	...	(...)	8.8	5.6	5		
26	..1	..1	...	..3	..7	..1	...	...	..2	..2	...	..2	..5	2.1	..9	2.1†	..8	...	...	...	...	...	...	...	8.3	7.2	17	
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
28	..1	..9	2.5	..4	...	2.4†	2.0	1.3	2.4	..9	..1	(...)	(...)	(...)	..4	..6	..4	..1	...	...	...	...	(≡)	13.0	7.3	7		
29	(≡)	(..1)	(≡)	(≡)	...	...	...	...	...	...	(...)	(...)	(...)	(...)	..4	..6	..4	..1	...	...	...	...	...	...	1.6	2.5	1	
30	...	...	...	...	...	...	...	...	(...)	..1	5.5†	..7	..9	..2	...	...	...	..7	..8	..2	..1	...	...	...	9.3	5.6	9	
31	...	...	...	...	...	(≡)	(≡)	(..1)	(≡)	(≡)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	...	...	
Sum	4.6	2.1	3.7	2.1	1.7	3.3	4.3	3.6	6.5	3.1	10.2	3.0	3.2	3.9	1.6	2.5	3.8	3.9	5.3	5.2	6.7	9.3	3.5	1.2	98.3	74.2		
Total Duration	hr 4.1	hr 2.3	hr 3.8	hr 2.3	hr 1.7	hr 1.8	hr 3.7	hr 3.9	hr 3.9	hr 3.4	hr 4.1	hr 2.7	hr 3.8	hr 3.5	hr 2.1	hr 1.8	hr 2.8	hr 3.3	hr 3.7	hr 3.2	hr 3.5	hr 3.8	hr 2.7	hr 2.3	hr 74.2			
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																	





DURATION OF BRIGHT SUNSHINE  
For periods of sixty minutes, between the exact hours of Local Apparent Time

225 ESKDALEMUIR:  $h_s$  (height of recorder above ground) = 1.5 metres

JANUARY, 1937

Hour L. A. T.	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	Total for Day	Per Cent of Possible	SOLAR RADIATION received on surface perpendicular to solar beam			
																					Rate near noon†	Sec Z	Sky	
Day	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	%	mw/cm <sup>2</sup>		
1	---	---	---	---	---	...	...	...	...	3	...	...	...	---	---	---	---	---	---	0.3	4	...	...	...
2	---	---	---	---	---	...	...	...	...	...	...	...	---	---	---	---	---	---	---	...	...	...	...	...
3	---	---	---	---	---	...	...	...	...	...	...	...	---	---	---	---	---	---	---	0.1	1	...	...	...
4	---	---	---	---	---	...	...	...	...	...	...	...	---	---	---	---	---	---	---	...	...	...	...	...
5	---	---	---	---	---	...	...	...	...	...	...	...	---	---	---	---	---	---	---	...	...	...	...	...
6	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	1.9	26	...	...	...
7	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	5.2	71	...	...	...
8	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	1.2	16	...	...	...
9	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...	...	...	...
10	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...	...	...	...
11	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...	...	...	...
12	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...	...	...	...
13	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	2.9	38	...	...	...
14	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...	...	...	...
15	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	2.3	30	...	...	...
16	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	0.1	1	...	...	...
17	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...	...	...	...
18	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...	...	...	...
19	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	5.2	66	...	...	...
20	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	3.9	49	...	...	...
21	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...	...	...	...
22	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...	...	...	...
23	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...	...	...	...
24	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...	...	...	...
25	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	0.7	9	...	...	...
26	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...	...	...	...
27	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...	...	...	...
28	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...	...	...	...
29	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	0.5	6	...	...	...
30	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...	...	...	...
31	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...	...	...	...
Sum	---	---	---	---	...	0.4	2.5	5.2	5.7	5.4	2.9	2.2	...	...	---	---	---	---	24.3	---	---	---	---	---
Mean	---	---	---	---	...	.01	.08	.17	.18	.17	.09	.07	...	...	---	---	---	---	0.78	10	---	---	---	---

226 ESKDALEMUIR:  $h_s$  = 1.5 metres

FEBRUARY, 1937

Day	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	%	mw/cm <sup>2</sup>		
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	---	---	---	---	...	2.3	7.2	9.7	11.1	11.4	10.2	10.5	9.4	5.6	1.3	...	---	---	---	78.7	---	---	---	---
Mean	---	---	---	---	...	.08	.26	.35	.39	.41	.36	.37	.34	.20	.05	...	---	---	---	2.61	29	---	---	---

\* Hoar Frost on Sunshine ball: values estimated

† Angström Pyrheliometer

DURATION OF BRIGHT SUNSHINE  
For periods of sixty minutes, between the exact hours of Local Apparent Time

227 ESKDALEMUIR:  $h_s$  (height of recorder above ground) = 1.5 metres

MARCH, 1937

Hour L. A. T.	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	Total for Day	Per cent of Possible	SOLAR RADIATION received on surface perpendicular to solar beam			
																					Rate near noon†	Sec Z	Sky	
Day	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	%	mw/cm <sup>2</sup>		
1	---	---	---	---	---	1	1	1	7	1.0	3	---	---	---	---	---	---	---	---	2.3	22	---	---	
2	---	---	---	---	---	---	---	1	---	---	---	---	5	---	---	---	---	---	---	0.6	6	---	---	
3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
4	---	---	---	---	---	1	---	4	1.0	7	3	4	5	---	---	---	---	---	---	3.4	31	---	---	
5	---	---	---	---	---	---	---	3	3	6	4	3	---	---	---	---	---	---	---	1.9	17	---	---	
6	---	---	---	---	---	---	---	---	1	7	---	---	---	---	---	---	---	---	---	0.8	7	---	---	
7	---	---	---	---	---	5	5	---	1	5	8	1	1	---	---	---	---	---	---	2.6	23	---	---	
8	---	---	---	---	7	7	9	1.0	2	4	9	1.0	1.0	9	---	---	---	---	---	7.7	69	---	---	
9	---	---	---	---	2	1.0	1.0	7	9	8	---	1	---	---	---	---	---	---	---	4.7	42	---	---	
10	---	---	---	---	---	5	---	---	---	---	---	---	---	---	---	---	---	---	---	0.5	4	---	---	
11	---	---	---	---	---	1	2	---	---	---	---	---	---	---	---	---	---	---	---	0.3	3	---	---	
12	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
13	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
14	---	---	---	---	3	1.0	6	1.0	1.0	1.0	1.0	3	---	---	---	---	---	---	---	6.2	53	---	---	
15	---	---	---	---	---	1	1.0	5	---	1.0	1.0	1.0	1.0	1.0	1	---	---	---	---	6.7	57	---	---	
16	---	---	---	---	1	2	---	---	---	---	---	---	---	---	---	---	---	---	---	0.3	3	---	---	
17	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
18	---	---	---	---	---	---	---	---	---	---	2	---	5	---	---	---	---	---	---	0.7	6	---	---	
19	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
20	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
21	---	---	---	---	---	---	---	---	---	---	---	---	5	3	---	---	---	---	---	0.8	7	---	---	
22	---	---	---	---	3	3	8	4	---	---	2	9	6	---	---	---	---	---	---	3.5	29	---	---	
23	---	---	---	---	2	1.0	1.0	1.0	1.0	1.0	1.0	7	8	2	---	---	---	---	---	8.9	72	---	---	
24	---	---	---	---	---	---	---	---	---	---	1	5	7	1.0	2	---	---	---	---	2.7	22	---	---	
25	---	---	---	---	5	1.0	1.0	9	2	3	2	5	---	1	6	---	---	---	---	6.3	51	---	---	
26	---	---	---	1	4	1.0	1.0	3	1.0	1.0	9	4	5	2	1	---	---	---	---	6.9	55	---	---	
27	---	---	---	---	4	9	7	8	9	1.0	5	1.0	5	3	3	---	---	---	---	8.1	64	---	---	
28	---	---	---	---	6	1.0	1.0	1.0	8	6	3	3	3	3	5	---	---	---	---	6.7	53	---	---	
29	---	---	---	---	---	2	1	1.0	1.0	---	5	6	5	1.0	1	---	---	---	---	5.0	39	---	---	
30	---	---	---	---	5	1.0	1.0	1.0	4	---	4	---	5	8	---	---	---	---	---	6.6	51	---	---	
31	---	---	---	---	---	5	---	---	---	1	1	5	---	---	---	---	---	---	---	1.2	9	---	---	
Sum	---	---	---	2.3	7.1	10.6	11.4	10.7	9.0	11.4	9.2	9.2	8.8	3.8	1.9	---	---	---	95.4	---	---	---	---	
Mean	---	---	---	.07	.23	.34	.37	.35	.29	.37	.30	.30	.28	.12	.06	---	---	---	3.08	26	---	---	---	

228 ESKDALEMUIR:  $h_s$  = 1.5 metres

APRIL, 1937

Day	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	%	mw/cm <sup>2</sup>		
1	---	---	---	---	---	4	9	9	9	1.0	1.0	8	7	---	---	---	---	---	---	---	8.6	51	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	2	---	---	---	---	---	---	---	---	0.2	1	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	4	1	---	---	---	---	---	---	---	---	---	---	---	---	0.5	4	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	3	1	4	7	8	8	2	---	---	---	---	---	---	---	---	---	3.3	24	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---	1	---	---	---	---	---	---	---	0.1	1	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.2	1	---	---
14	---	---	---	---	---	---	---	---	---	---	5	4	1	---	1	---	---	---	---	---	1.1	8	---	---
15	---	---	---	---	---	---	---	---	---	---	3	5	5	5	---	---	---	---	---	---	1.8	13	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	2	---	---	---	---	---	---	---	---	---	0.2	1	---	---
18	---	---	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---	---	---	---	0.1	1	---	---
19	---	---	---	---	---	2	9	6	5	---	---	---	---	---	---	---	---	---	---	---	2.2	15	---	---
20	---	---	---	---	---	---	2	1	1	---	2	3	---	---	---	---	---	---	---	---	0.9	6	---	---
21	---	---	2	---	---	4	5	7	7	2	2	6	7	1	---	---	---	---	---	---	4.3	30	---	---
22	---	---	---	---	---	---	---	3	5	8	9	1.0	1.0	2	5	---	---	---	---	---	5.2	36	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	2	---	---	---	---	---	---	---	---	0.4	3	---	---
25	---	---	---	---	9	1.0	3	9	1	---	1	---	5	1.0	7	1	---	---	---	---	5.6	38	---	---
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	---	---	---	13.0	88	---	---	
27	---	---	---	---	---	---	---	---	---	---	---	---	---	---	8	2	---	---	---	---	1.0	7	---	---
28	---	---	---	---	---	9	1.0	9	9	---	7	8	3	9	2	1	---	---	---	---	6.9	46	---	---
29	---	---	---	---	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---	---	0.1	1	---	---
30	---	---	---	---	---	6	1.0	1.0	1.0	---	9	1.0	1.0	1.0	1.0	---	---	---	---	---	10.5	69	---	---
Sum	---	---	1.1	1.2	3.7	5.4	6.2	6.6	6.3	6.1	6.6	6.0	6.5	3.5	4.5	0.5	---	---	---	64.2	---	---	---	---
Mean	---	---	.04	.04	.12	.18	.21	.22	.21	.20	.22	.20	.22	.12	.15	.02	---	---	---	2.14	15	---	---	---
Hour L. A. T.	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	Total for Day	Per cent of Possible	Rate near noon†	Sec Z	Sky	
																						SOLAR RADIATION received on surface perpendicular to solar beam		

DURATION OF BRIGHT SUNSHINE  
For periods of sixty minutes, between the exact hours of Local Apparent Time

229 ESKDALEMUIR:  $h_s$  (height of recorder above ground) = 1.5 metres

MAY, 1937

Hour L. A. T.	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	Total for Day	Per cent of Possible	SOLAR RADIATION received on surface perpendicular to solar beam			
																					Rate near noon†	Sec 2	Sky	
Day	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	%	mw/cm <sup>2</sup>		
1	...	...	...	...	1.0	0.9	1.0	1.0	1.0	1.0	0.9	0.3	...	0.5	0.7	0.5	...	...	9.2	61	...	...	...	
2	...	...	...	...	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.5	...	...	11.8	77	...	...	...	
3	...	...	...	...	0.8	0.4	1.0	0.9	0.6	0.8	1.0	0.4	1.0	1.0	0.6	...	...	10.8	70	...	...	...		
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.8	12	...	...	...	
5	...	...	...	...	0.2	0.2	0.8	0.6	1.0	0.9	0.3	0.6	0.8	0.6	0.4	0.1	...	...	7.1	46	...	...	...	
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.8	37	...	...	...	
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7.6	49	...	...	...	
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.0	6	...	...	...	
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.5	3	...	...	...	
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.8	18	...	...	...	
13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10.4	65	...	...	...	
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.0	19	...	...	...	
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.8	24	...	...	...	
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.8	17	...	...	...	
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8.0	49	...	...	...	
18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	13.6	84	...	...	...	
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.6	22	...	...	...	
20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.4	21	...	...	...	
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.7	41	...	...	...	
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.8	29	...	...	...	
24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.0	12	...	...	...	
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.2	19	...	...	...	
26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.9	11	...	...	...	
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.8	41	...	...	...	
28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.9	41	...	...	...	
30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.3	37	...	...	...	
31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8.6	51	...	...	...	
Sum	...	0.4	2.9	6.6	8.2	12.2	15.3	16.9	16.0	14.9	13.2	10.1	8.6	11.0	10.8	6.6	0.5	...	154.2	--	--	--	--	
Mean	...	0.01	0.09	0.21	0.26	0.39	0.49	0.55	0.52	0.48	0.43	0.33	0.28	0.35	0.35	0.21	0.02	...	4.97	31	--	--	--	

230 ESKDALEMUIR:  $h_s$  = 1.5 metres

JUNE, 1937

Day	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	%	mw/cm <sup>2</sup>		
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sum	...	3.1	6.8	8.7	8.8	8.1	7.7	8.2	9.3	11.3	11.0	12.7	13.9	13.8	12.7	11.1	5.3	...	152.5	--	--	--	--	--
Mean	...	0.10	0.23	0.29	0.29	0.27	0.26	0.27	0.31	0.38	0.37	0.42	0.46	0.46	0.42	0.37	0.18	...	5.08	34	--	--	--	--

DURATION OF BRIGHT SUNSHINE  
For periods of sixty minutes, between the exact hours of Local Apparent Time

231 ESKDALEMUIR:  $h_s$  (height of recorder above ground) = 1.5 metres

JULY, 1937

Hour L. A. T.	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	Total for Day	Per cent of Possible	SOLAR RADIATION received on surface perpendicular to solar beam				
																					Rate near noon†	Sec Z	Sky		
Day	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	%	mw/cm <sup>2</sup>			
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1-1	6	...	...	...	
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0-1	1	...	...	...
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0-6	3	...	...	...
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0-1	1	...	...	...
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0-6	4	...	...	...
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2-8	16	...	...	...
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1-6	9	...	...	...
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2-4	14	...	...	...
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4-2	25	...	...	...
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3-4	20	...	...	...
13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0-5	3	...	...	...
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1-1	7	...	...	...
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3-4	20	...	...	...
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	12-6	75	...	...	...
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5-1	30	...	...	...
18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8-6	52	...	...	...
20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2-8	17	...	...	...
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1-2	7	...	...	...
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2-8	17	...	...	...
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1-2	7	...	...	...
24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	13-0	80	...	...	...
26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8-9	55	...	...	...
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5-1	31	...	...	...
28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2-8	17	...	...	...
29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1-6	10	...	...	...
30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5-2	32	...	...	...
31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5-6	35	...	...	...
Sum	...	1-0	3-8	5-6	6-7	7-0	6-7	8-9	9-8	8-2	8-3	9-4	8-2	6-1	4-7	3-5	0-5	...	...	98-4	--	--	--	--	
Mean	...	0-3	1-2	1-8	2-2	2-3	2-2	2-9	3-2	2-8	2-7	3-0	2-6	2-0	1-5	1-2	0-2	...	...	3-17	19	--	--	--	

232 ESKDALEMUIR:  $h_s$  = 1.5 metres

AUGUST, 1937

Day	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	%	mw/cm <sup>2</sup>			
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10-7	67	...	...	...
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11-4	72	...	...	...
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9-7	61	...	...	...
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0-4	3	...	...	...
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2-1	13	...	...	...
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6-0	38	...	...	...
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9-5	61	...	...	...
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6-9	45	...	...	...
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5-0	33	...	...	...
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0-1	1	...	...	...
13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0-3	2	...	...	...
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0-1	1	...	...	...
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9-7	65	...	...	...
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4-1	27	...	...	...
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1-8	12	...	...	...
18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0-4	3	...	...	...
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3-4	23	...	...	...
20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	12-4	85	...	...	...
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	12-7	87	...	...	...
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5-8	40	...	...	...
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1-8	12	...	...	...
24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1-0	7	...	...	...
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0-2	1	...	...	...
26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11-5	81	...	...	...
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	12-5	88	...	...	...
28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4-0	28	...	...	...
29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1-3	9	...	...	...
Sum	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	147-1	--	--	--	--
Mean	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4-75	32	--	--	--
Hour L. A. T.	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	Total for Day	Per cent of Possible	Rate near noon†	Sec Z	Sky	SOLAR RADIATION received on surface perpendicular to solar beam	

\* Sunshine ball displaced by bird; values estimated.

† Ångström Pyrheliometer

DURATION OF BRIGHT SUNSHINE  
For periods of sixty minutes, between the exact hours of Local Apparent Time

233 ESKDALEMUIR:  $h_s$  (height of recorder above ground) = 1.5 metres

SEPTEMBER, 1937

Hour L. A. T.	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	Total for Day	Per cent of Possible	SOLAR RADIATION received on surface perpendicular to solar beam			
																					Rate near noon†	Sec 2	Sky	
Day	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	%	mw/cm <sup>2</sup>		
1	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.9	28	...	...	...
2	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.6	48	...	...	...
3	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.3	46	...	...	...
4	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.1	23	...	...	...
5	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.5	4	...	...	...
8	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10.0	75	...	...	...
9	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8.7	66	...	...	...
10	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7.5	57	...	...	...
11	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10.7	82	...	...	...
12	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.5	4	...	...	...
14	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.3	10	...	...	...
15	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.3	34	...	...	...
16	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.3	26	...	...	...
17	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.7	6	...	...	...
18	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.3	42	...	...	...
19	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.3	35	...	...	...
20	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8.1	66	...	...	...
21	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.8	15	...	...	...
22	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.9	32	...	...	...
23	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
24	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.1	26	...	...	...
25	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.4	37	...	...	...
26	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
27	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.4	54	...	...	...
28	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.9	59	...	...	...
29	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	2	...	...	...
30	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.7	23	...	...	...
Sum	---	---	...	1.7	7.0	12.2	13.3	12.0	11.1	10.9	11.8	10.6	11.3	10.1	2.5	...	---	---	114.5	--	--	--	--	--
Mean	---	---	...	.06	.23	.41	.44	.40	.37	.38	.39	.35	.38	.34	.08	...	---	---	3.82	30	--	--	--	--

234 ESKDALEMUIR:  $h_s$  = 1.5 metres

OCTOBER, 1937

Day	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	%	mw/cm <sup>2</sup>			
1	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
2	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	1	...	...	...
3	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.3	29	...	...	...
4	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9.5	84	...	...	...
5	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8.3	74	...	...	...
6	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.6	5	...	...	...
7	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
8	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
9	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.3	12	...	...	...
10	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.5	32	...	...	...
11	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	2	...	...	...
12	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9.4	88	...	...	...
13	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
14	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	2	...	...	...
15	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.0	10	...	...	...
16	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.3	3	...	...	...
17	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
18	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.8	18	...	...	...
19	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8.4	82	...	...	...
20	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
21	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
22	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.3	3	...	...	...
23	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
24	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.4	65	...	...	...
25	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
26	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
27	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.7	70	...	...	...
28	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.3	3	...	...	...
29	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
30	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
31	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Sum	---	---	---	...	2.9	5.1	6.2	8.2	8.4	8.1	7.4	7.8	7.5	3.7	0.1	---	---	---	---	65.4	--	--	--	--	
Mean	---	---	---	...	.09	.16	.20	.26	.27	.26	.24	.25	.24	.12	.00	---	---	---	---	2.11	20	--	--	--	
Hour L. A. T.	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	Total for Day	Per cent of Possible	SOLAR RADIATION received on surface perpendicular to solar beam				
																					Rate near noon†	Sec 2	Sky		

235 ESKDALEMUIR:  $h_s$  (height of recorder above ground) = 1.5 metres

NOVEMBER, 1937

Hour L. A. T.	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	Total for Day	Per cent of Possible	SOLAR RADIATION received on surface perpendicular to solar beam		
	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr			Rate near noon†	Sec Z	Sky
Day	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	%	mw/cm <sup>2</sup>		
1	---	---	---	---	...	...	...	...	...	...	...	...	...	...	---	---	---	---	---	1.8	19	...	...
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	---	---	---	---	...	5.0	8.9	8.3	8.4	9.4	9.5	9.1	2.6	...	---	---	---	---	61.2	---	---	---	
Mean	---	---	---	---	...	.17	.30	.28	.28	.31	.32	.30	.09	...	---	---	---	---	2.04	25	---	---	

236 ESKDALEMUIR:  $h_s$  = 1.5 metres

DECEMBER, 1937

Day	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	%	mw/cm <sup>2</sup>		
	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr
1	---	---	---	---	...	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...	...	...	
2	---	---	---	---	...	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...	...	...	
3	---	---	---	---	...	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...	...	...	
4	---	---	---	---	...	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...	...	...	
5	---	---	---	---	...	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...	...	...	
6	---	---	---	---	...	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...	...	...	
7	---	---	---	---	...	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...	...	...	
8	---	---	---	---	...	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...	...	...	
9	---	---	---	---	...	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...	...	...	
10	---	---	---	---	...	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...	...	...	
11	---	---	---	---	...	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...	...	...	
12	---	---	---	---	...	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...	...	...	
13	---	---	---	---	...	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...	...	...	
14	---	---	---	---	...	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...	...	...	
15	---	---	---	---	...	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...	...	...	
16	---	---	---	---	...	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...	...	...	
17	---	---	---	---	...	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...	...	...	
18	---	---	---	---	...	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...	...	...	
19	---	---	---	---	...	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...	...	...	
20	---	---	---	---	...	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...	...	...	
21	---	---	---	---	...	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...	...	...	
22	---	---	---	---	...	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...	...	...	
23	---	---	---	---	...	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...	...	...	
24	---	---	---	---	...	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...	...	...	
25	---	---	---	---	...	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...	...	...	
26	---	---	---	---	...	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...	...	...	
27	---	---	---	---	...	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...	...	...	
28	---	---	---	---	...	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...	...	...	
29	---	---	---	---	...	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...	...	...	
30	---	---	---	---	...	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...	...	...	
31	---	---	---	---	...	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...	...	...	
Sum	---	---	---	---	...	0.3	6.0	8.4	8.9	7.7	9.0	8.3	...	---	---	---	---	---	---	48.6	---	---	---	
Mean	---	---	---	---	...	.01	.19	.27	.29	.25	.29	.27	...	---	---	---	---	---	---	1.57	22	---	---	
Annual Total	...	4.5	18.9	34.0	57.3	85.1	105.5	116.8	115.2	115.0	113.7	106.6	85.0	66.7	48.7	25.2	6.3	...	1104.5	---	---	---		
Annual Mean	...	.01	.05	.09	.16	.23	.29	.32	.32	.32	.31	.29	.23	.18	.13	.07	.02	...	3.03	25	---	---		
Hour L. A. T.	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	Total for Day	Per cent of Possible	Rate near noon†	Sec Z	Sky	
																						SOLAR RADIATION received on surface perpendicular to solar beam		

\* Hour Frost on Sunshine ball: value estimated.

† Angström Pyrheliometer

237 ESKDALEUIR

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

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	
	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s
1	220	12.1	210	10.4	210	10.4	200	9.4	220	10.1	230	9.6	220	7.9	230	7.5	230	7.6	230	6.3	230	6.6	240	5.7
2	230	7.2	230	6.4	210	6.5	230	7.7	220	8.1	220	9.0	220	9.8	230	10.4	230	8.8	230	11.4	240	14.3	220	12.8
3	270	11.3	260	10.2	260	10.7	230	8.7	240	9.6	250	10.7	250	12.6	250	13.1	250	12.2	250	12.4	240	13.2	250	13.1
4	230	13.2	230	12.9	230	12.5	230	13.7	220	12.7	210	12.8	210	14.4	210	14.6	210	14.9	200	16.5	200	18.3	200	19.0
5	250	10.1	240	9.5	250	7.7	260	7.8	270	8.3	270	8.3	270	8.2	270	8.0	270	5.8	210	4.7	220	5.2	230	5.3
6	240	10.5	250	9.6	240	9.4	240	10.2	250	6.9	230	6.8	240	8.1	260	10.2	270	12.1	270	12.5	270	11.1	280	12.3
7	260	8.3	260	10.0	270	9.3	270	8.7	270	10.6	280	8.3	280	9.3	270	11.3	290	11.0	290	11.4	300	12.7	300	14.4
8	250	1.9	230	1.7	310	0.4	280	1.1	300	0.5	350	0.7	20	0.1	30	0.1	210	0.2	170	0.7	190	2.5	200	4.8
9	200	10.4	200	13.9	200	14.3	210	14.5	210	12.5	210	13.7	200	14.0	200	14.9	200	13.5	200	13.4	210	12.8	210	11.7
10	180	5.3	180	4.6	190	5.9	190	4.3	180	4.8	180	3.4	170	4.6	180	5.5	180	4.9	190	5.2	190	6.8	190	8.4
11	200	8.1	210	8.4	200	6.5	200	6.4	200	6.1	190	3.8	190	3.0	180	3.2	180	4.8	180	5.5	180	5.5	170	4.2
12	170	8.0	160	5.8	170	8.2	170	6.1	180	7.5	170	8.1	170	9.7	170	9.1	170	10.4	160	10.5	170	10.8	170	10.0
13	210	3.0	210	11.3	200	11.0	200	13.0	200	14.5	200	16.0	200	15.8	210	14.4	250	10.1	270	8.9	290	5.0	310	5.0
14	---	0.0	160	0.3	180	0.6	220	0.7	270	0.1	---	0.0	---	0.0	310	0.3	---	0.0	---	0.0	---	0.0	---	0.0
15	190	3.4	180	2.4	180	2.4	210	3.1	210	2.4	210	1.7	200	2.7	200	2.5	210	2.9	200	2.6	180	3.5	170	5.3
16	170	6.5	170	7.4	170	7.1	170	5.9	160	6.5	160	6.9	160	5.5	170	4.8	170	5.6	260	4.0	250	5.1	250	4.8
17	200	3.5	190	2.2	190	1.1	260	0.8	230	1.1	320	0.8	170	1.4	160	3.6	140	4.3	140	6.1	140	8.0	140	8.8
18	140	11.3	130	10.0	150	11.7	170	10.6	190	12.0	230	11.3	230	10.8	220	10.8	230	8.9	230	5.2	240	5.8	230	3.8
19	310	4.5	320	2.0	300	4.2	310	3.7	320	2.3	220	0.7	270	2.3	280	4.6	280	3.5	220	1.8	190	2.2	260	2.8
20	190	2.3	230	3.0	200	2.5	200	2.7	210	2.4	210	3.7	210	3.0	200	1.0	200	0.1	220	0.4	180	4.6	170	4.7
21	170	9.1	180	10.6	180	9.2	180	8.0	200	8.4	190	6.5	210	8.2	200	5.1	190	4.2	210	2.7	190	5.9	180	9.5
22	160	10.2	160	11.4	150	11.1	150	12.1	160	9.6	160	7.0	170	7.8	170	8.7	170	9.4	180	10.6	180	9.8	200	9.5
23	190	8.1	200	5.8	190	6.2	170	4.4	160	5.2	170	5.1	160	5.3	170	4.9	200	1.5	170	1.1	160	5.2	150	5.7
24	150	9.1	150	8.1	160	7.0	160	7.3	160	8.6	140	7.6	130	6.8	120	7.2	140	10.8	140	10.6	140	11.0	140	13.6
25	200	4.3	190	2.0	340	0.8	320	0.9	210	0.4	320	0.8	300	0.5	300	0.4	320	1.2	330	0.7	320	0.9	130	0.1
26	100	6.4	100	5.0	90	6.7	90	5.8	90	7.5	90	6.9	80	6.8	90	8.1	90	8.5	90	7.6	90	6.3	70	6.2
27	60	5.0	60	5.0	40	4.6	40	4.9	60	4.9	60	4.8	60	4.6	60	4.8	90	4.2	80	4.0	60	4.8	70	4.7
28	90	7.5	90	8.4	100	7.4	90	9.8	90	11.8	90	12.6	90	10.9	80	10.7	80	12.3	90	13.4	80	11.9	80	10.9
29	70	10.9	70	11.6	70	10.2	60	11.1	60	10.9	60	10.0	70	10.0	70	9.1	70	9.6	60	9.3	70	9.9	70	11.0
30	60	9.2	60	*(8.0)	60	(7.5)	60	(7.5)	60	(7.5)	60	(9.0)	60	(9.5)	60	(9.5)	100	(8.5)	100	9.5	110	10.2	110	8.1
31	60	(6.5)	60	(5.5)	60	(4.5)	70	(3.5)	130	(2.0)	170	2.8	170	2.2	180	4.2	160	3.3	160	3.5	150	5.5	160	5.4
Mean	---	7.3	---	7.2	---	7.0	---	6.9	---	7.0	---	6.8	---	7.0	---	7.2	---	6.9	---	6.9	---	7.6	---	7.8

\* Estimated, pressure tube partly blocked with snow

238 ESKDALEUIR: H<sub>a</sub> = 235 metres + 15 metres

Day	0 - 1		1 - 2		2 - 3		3 - 4		4 - 5		5 - 6		6 - 7		7 - 8		8 - 9		9 - 10		10 - 11		11 - 12	
	°	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	3.6	20	3.2	350	2.6	30	3.4	20	5.2	30	4.9	40	5.0	30	4.7	20	5.3	20	5.6	10	4.3	10	3.8
2	210	2.2	180	2.2	220	3.4	240	5.3	250	3.8	240	3.3	250	2.1	240	1.2	---	0.0	---	0.0	170	0.5	180	2.9
3	220	6.7	250	4.0	240	3.0	210	2.2	220	2.6	210	3.5	210	4.3	220	5.3	210	5.3	190	4.3	190	5.7	200	6.6
4	210	10.8	210	9.6	210	9.2	210	9.5	210	12.7	200	14.7	200	12.4	200	13.3	210	13.7	200	13.9	210	13.3	210	11.6
5	240	10.2	250	12.1	250	12.3	250	12.6	250	7.6	240	8.7	240	4.4	160	3.7	170	4.1	†(180)	5.0	(180)	5.6	(190)	6.2
6	260	6.8	250	6.4	260	7.6	270	11.3	270	11.1	270	8.2	270	7.4	250	4.0	250	5.0	250	5.0	240	6.2	250	8.5
7	220	3.0	170	4.2	220	3.0	140	0.5	260	1.2	310	0.8	330	2.0	360	0.4	340	0.7	360	0.5	350	0.9	70	3.6
8	80	7.2	70	7.0	70	7.9	70	8.4	70	7.5	70	7.7	80	8.6	70	8.4	80	7.4	70	8.2	80	7.6	80	6.2
9	310	8.6	310	7.5	300	10.1	300	12.6	300	11.5	290	9.5	290	6.1	290	6.0	290	8.8	280	8.7	280	8.7	280	8.2
10	260	7.9	260	6.7	250	4.9	290	8.6	310	11.3	310	12.5	310	11.8	300	12.6	300	12.1	290	(10.4)	290	9.2	290	9.8
11	300	9.7	300	10.1	300	9.5	290	7.3	290	5.6	300	10.9	300	10.2	310	13.2	300	12.4	300	11.3	310	8.3	310	5.0
12	90	1.6	10	1.7	170	1.8	190	1.3	310	0.7	360	0.2	340	1.1	10	0.2	340	0.6	140	0.1	160	0.1	180	0.4
13	260	0.1	230	0.1	210	0.4	140	0.6	150	1.1	160	0.9	180	1.1	---	0.0	150	0.1	140	0.1	150	0.2	---	0.0
14	290	0.5	240	1.8	230	0.4	180	2.5	200	1.7	220	0.7	330	0.5	---	0.0	220	0.5	240	5.0	240	6.8	230	7.0
15	230	5.6	240	7.0	240	6.8	240	7.0	240	6.2	260	6.4	270	3.8	260	4.4	200	3.0	220	2.9	230	3.7	230	2.4
16	210	11.5	210	11.0	210	11.3	200	11.2	210	13.3	200	7.4	190	6.7	200	8.4	220	10.6	220	8.9	230	9.6	240	9.9
17	210	4.2	180	2.5	200	0.8	350	1.1	350	6.7	360	7.0	350	7.4	360	7.0	350	4.9	350	6.4	340	6.7	350	7.2
18	---	0.0	---	0.0	---	0.0	---	0.0	---	0.0	---	0.0	---	0.0	---	0.0	---	0.0	---	0.0	---	0.0	---	0.0
19	290	8.2	290	8.0	280	6.7	270	6.2	270	7.5	260	6.6	240	6.8	240	8.0	240	8.1	230	8.7	230	10.1	240	9.4
20	290	10.6	280	10.2	290	10.3	290	11.2	290	12.4	290	11.5	290	11.7	300	13.8	300	14.2	300	13.3	300	11.8	300	12.8
21	300	12.2	300	14.4	300	15.1	300	15.0	300	13.4	300	11.3	300	9.2	290	8.2	300	9.8	290	7.3	280	7.7	280	8.4
22	290	4.9	280	5.2	280	2.6	230	2.4	250	2.2	320	3.7	330	2.5	250	1.1	20	1.7	320	6.6	320	8.4	310	9.5
23	310	7.6	330	4.2	300	6.0	320	7.0	300	7.9	310	5.6	310	9.2	320	6.5	320	5.9	350	4.8	340	5.3	330	5.1
24	360	1.9	10	1.4	360	0.7	90	0.4	40	0.7</														

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

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

JANUARY, 1937

Table with columns for time intervals (12-13 to 23-24), wind speed in m/s, and a 'Day' column. Data is organized in a grid format with multiple rows per interval.

\* Estimated, pressure tube partly blocked with snow

FEBRUARY, 1937

Table with columns for time intervals (12-13 to 23-24), wind speed in m/s, and a 'Day' column. Data is organized in a grid format with multiple rows per interval.

\*Estimated, pressure tube partly blocked with snow



WIND: DIRECTION AND SPEED

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

239 ESKDALEMUIR

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

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			
	°	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	5.9	350	8.6	350	9.5	350	10.6	340	9.2	330	8.6	330	7.9	330	7.6	340	9.3	350	8.2	360	6.0	360	7.0		
2	350	10.1	340	9.5	340	11.3	330	11.6	330	12.3	330	10.7	330	9.9	340	9.2	350	7.6	350	5.9	350	4.8	300	3.6		
3	180	0.2	20	0.1	200	0.1	160	0.2	140	0.4	---	0.0	---	0.0	---	0.0	---	0.0	---	0.0	---	0.0	180	4.9		
4	30	0.2	130	0.1	80	0.3	80	0.4	20	0.4	40	1.1	70	1.0	70	3.9	90	1.9	100	3.2	70	2.5	80	4.0		
5	30	3.5	40	3.7	70	3.6	70	4.2	50	3.0	60	4.0	70	5.2	70	5.1	60	4.1	70	6.0	60	5.7	70	6.2		
6	10	1.6	30	2.5	10	2.2	60	6.0	40	4.9	20	2.5	330	1.9	30	2.6	30	2.8	40	4.3	60	5.0	70	5.0		
7	50	4.6	40	4.8	60	3.1	40	5.2	50	5.4	60	7.0	50	6.3	60	4.5	50	5.2	40	5.8	50	7.1	50	7.9		
8	20	3.2	20	3.4	10	3.6	10	3.1	10	2.4	20	2.4	360	2.8	360	1.8	10	3.8	10	3.2	10	4.4	360	3.4		
9	10	2.1	360	2.1	360	2.3	360	1.6	360	1.4	350	0.6	360	0.3	350	0.8	30	0.4	30	1.4	40	2.2	40	3.3		
10	40	2.6	30	1.8	60	0.9	40	2.1	40	1.2	10	1.0	30	0.2	60	1.5	60	1.5	50	3.1	70	3.0	60	4.4		
11	60	4.5	40	4.1	40	2.7	50	4.0	50	6.8	40	5.9	40	7.7	50	8.2	60	9.7	60	12.5	60	11.7	60	11.9		
12	40	(10.4)	40	(10.6)	40	(10.6)	40	(9.1)	40	(9.7)	40	(12.0)	40	(12.7)	40	(12.6)	40	(12.4)	40	(12.3)	40	12.3	40	11.6		
13	30	(12.3)	30	(12.5)	30	(9.7)	30	(10.6)	20	(9.7)	20	(9.1)	20	(11.6)	20	(11.4)	20	9.6	20	9.3	20	10.1	20	9.3		
14	20	3.0	30	3.7	20	4.9	20	5.0	20	4.6	20	5.9	20	6.3	20	6.1	20	7.0	30	4.9	20	5.5	20	5.0		
15	340	7.0	330	6.8	320	6.5	330	7.2	330	9.9	330	9.5	330	9.8	330	7.8	330	6.6	330	7.5	340	8.1	340	6.1		
16	...	...	...	...	---	0.0	---	0.0	---	0.0	...	...	...	...	360	2.9	10	1.4	50	3.0	60	4.9	90	4.8		
17	170	0.6	230	0.1	360	1.1	10	1.7	30	1.0	10	3.7	10	2.5	10	2.0	10	1.9	360	2.5	360	2.1	30	2.4		
18	50	2.8	60	6.6	50	5.9	60	5.7	60	5.8	60	5.8	50	1.3	360	1.3	10	1.7	360	2.3	20	2.0	360	2.7		
19	30	0.5	180	0.4	10	0.3	320	0.4	360	1.2	340	1.0	360	1.8	10	2.9	360	2.4	20	0.5	360	2.6	50	1.8		
20	10	2.0	10	3.3	360	2.8	10	2.9	360	1.9	10	3.9	20	4.2	40	3.7	50	3.0	60	3.4	60	6.2	60	3.2		
21	30	3.8	20	6.4	20	5.4	20	5.5	20	5.0	20	5.1	20	4.8	20	5.9	20	7.0	20	6.4	20	6.9	20	5.5		
22	360	2.7	350	1.1	330	0.3	170	1.1	150	1.2	230	1.5	300	7.4	310	7.3	310	4.3	300	7.7	310	7.8	310	10.5		
23	10	6.9	10	7.1	20	8.1	20	7.0	10	6.2	10	5.0	20	4.3	10	4.7	360	4.5	360	3.8	10	5.0	20	3.3		
24	---	0.0	40	0.1	180	0.5	240	4.8	210	3.4	170	1.5	170	4.4	170	3.5	210	4.9	210	3.6	220	6.1	250	6.0		
25	300	10.2	300	11.1	300	11.0	300	9.1	300	9.9	300	10.5	310	11.2	310	6.5	320	6.9	310	7.4	320	6.5	350	4.6		
26	310	3.9	330	1.6	320	3.6	300	3.4	300	8.0	310	5.8	320	5.4	320	5.9	320	7.3	350	5.8	340	4.8	360	5.1		
27	340	6.9	340	7.5	340	6.5	340	6.0	350	5.2	360	3.5	360	6.4	360	6.2	360	6.5	10	6.6	10	6.6	10	8.4		
28	---	0.0	---	0.0	---	0.0	---	0.0	50	0.1	360	0.9	---	0.0	10	0.3	10	2.9	20	5.1	30	5.2	20	5.0		
29	...	...	...	...	...	...	...	...	0.0	0.0	---	0.0	---	0.0	---	0.0	---	0.0	---	0.0	130	0.2	130	1.3	340	1.3
30	350	0.7	40	1.0	350	0.6	350	0.4	---	0.0	360	0.8	350	0.9	360	0.3	160	1.4	160	6.6	160	8.0	150	7.6		
31	180	3.7	190	2.9	190	2.7	170	4.4	180	6.1	170	4.5	170	5.0	160	4.1	160	7.0	150	7.6	160	5.5	160	6.7		
Mean	---	3.8	---	4.0	---	3.9	---	4.3	---	4.4	---	4.3	---	4.6	---	4.5	---	4.7	---	5.2	---	5.5	---	5.6		

\* Estimated, pressure tube partly blocked with snow

240 ESKDALEMUIR: H<sub>a</sub> = 235 metres + 15 metres

Day	0 - 1		1 - 2		2 - 3		3 - 4		4 - 5		5 - 6		6 - 7		7 - 8		8 - 9		9 - 10		10 - 11		11 - 12	
	°	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	2.3	360	3.2	360	3.8	360	3.3	10	3.1	360	3.8	10	2.8	20	1.9	40	4.1	50	6.0	70	6.1	70	5.6
2	70	7.2	80	7.5	90	7.4	90	6.9	90	5.9	80	4.9	70	6.4	60	6.0	70	5.4	90	6.5	70	7.8	80	9.3
3	20	6.0	40	8.3	40	8.5	30	7.8	30	8.1	20	5.5	30	5.9	30	6.2	30	6.5	40	6.0	40	6.0	50	5.8
4	20	3.1	20	3.3	20	3.2	10	2.7	10	3.1	20	4.1	30	4.6	20	3.8	20	4.2	30	4.5	40	5.9	20	4.2
5	60	6.2	60	6.4	50	5.5	30	5.0	40	4.0	30	2.8	20	3.1	40	5.8	50	6.6	50	5.0	60	5.0	80	4.4
6	30	2.7	50	1.9	30	2.0	20	0.9	360	0.7	10	0.6	360	1.8	360	1.5	360	1.0	160	2.5	160	5.5	160	5.5
7	160	3.1	160	4.2	170	3.4	170	3.6	180	3.6	200	4.1	190	4.9	190	5.4	180	4.9	160	4.0	160	3.8	160	5.1
8	200	5.9	200	4.5	200	3.2	190	2.9	190	3.0	200	4.8	200	5.1	200	5.3	200	6.6	210	6.4	220	7.7	220	9.7
9	200	5.1	200	3.9	200	4.5	210	5.1	200	5.6	200	5.9	200	5.5	180	5.1	180	4.6	190	7.0	200	6.2	180	6.5
10	150	5.5	160	6.8	160	6.8	160	6.7	160	5.6	160	6.2	170	5.8	200	7.1	210	11.3	190	12.6	190	9.1	190	8.9
11	320	4.6	360	1.4	50	1.0	50	1.0	160	0.8	180	0.7	130	0.7	140	1.2	320	3.5	310	5.3	300	2.9	300	2.5
12	330	0.2	350	1.8	340	2.5	10	0.5	30	0.9	30	0.6	20	0.8	50	0.7	60	1.6	70	2.4	40	4.0	30	4.7
13	360	2.5	360	3.5	350	4.2	360	4.5	360	3.6	40	1.0	60	3.2	50	2.9	70	3.1	60	3.2	40	3.9	60	6.3
14	30	1.3	50	4.9	40	4.2	40	3.8	30	3.4	350	4.1	360	3.8	50	5.8	20	4.0	20	3.4	360	4.6	30	4.1
15	20	4.8	20	2.3	30	2.7	30	2.2	10	3.5	20	3.0	40	3.4	50	4.4	70	3.7	60	3.6	50	3.2	50	3.1
16	100	5.9	100	5.8	90	8.2	90	8.4	80	7.3	70	5.4	60	6.0	60	6.2	60	5.9	60	5.5	50	5.0	40	5.0
17	350	2.7	350	1.5	320	0.4	300	1.2	---	0.0	---	0.0	150	0.2	150	0.2	360	1.8	350	3.0	360	3.1	10	2.5
18	350	0.2	20	1.6	360	2.8	360	3.5	350	2.8	350	0.6	10	0.3	140	0.4	30	3.1	30	3.2	30	3.5	50	2.4
19	---	0.0	---	0.0	310	0.1	130	0.1	150	0.5	230	0.1	140	1.0	190	4.1	210	6.5	210	9.2	210	10.2	210	11.0
20	240	2.2	250	2.3	240	2.7	270	1.9	160	0.2	210	1.6	240	2.6	270	3.4	270	2.2	240	2.6	240	3.5	220	3.9
21	300	8.4	300	7.6	310	8.4	310	6.2	300	6.8	290	5.5	290	4.4	290	6.1	290	7.2	270	6.6	270	6.4	270	7.4
22	220	1.0	200	2.0	200	2.2	200	1.7	200	2.1	190	2.0	180	2.5	200	3.5	210	5.3	220	5.6	270	9.3	270	11.3
23	290	5.8	290	8.1	280	6.9	280	5.2	310	3.0	310	2.2	90	1.0	180	1.6	150	2.3	140	2.0	310	3.4	320	2.4
24	30	2.2	30	0.9	360	1.8	20	1.2	40	1.1	50	2.5	40	2.0	30	2.1	20	1.5	50	1.3	60	2.3	60	2.4
25	20	2.1	40	2.9	30	2.8	30	3.5	30	4.1	30	3.8	30	4.1	30	4.5	20	4.5	30	3.6	50	3.5	40	3.5
26	360	0.5	340	0.2	10	3.3																		

WIND: DIRECTION AND SPEED

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

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

MARCH, 1937

Table with 24 columns for time intervals (12-13 to 23-24), Mean, and Day. Each interval has two sub-columns for wind speed in degrees and m/s. Data rows include values for various heights (360, 290, 180, 80, 70, 50, 40, 60, 20, 10, 350, 120, 360, 260, 330, 10, 20, 160, 160, ---) and wind speeds in m/s.

\* Estimated, pressure tube partly blocked with snow

APRIL, 1937

Table with 24 columns for time intervals (12-13 to 23-24), Mean, and Day. Each interval has two sub-columns for wind speed in degrees and m/s. Data rows include values for various heights (120, 80, 60, 30, 90, 160, 220, 180, 190, 300, 50, 80, 40, 30, 70, 210, 240, 270, 260, 300, 40, 30, 10, 190, 100, 120, ---) and wind speeds in m/s.

241 ESKDALEMUIR

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

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	
	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s
1	340	0.3	330	0.1	30	0.2	---	0.0	---	0.0	330	0.1	90	0.1	150	0.3	60	2.1	80	1.3	170	1.4	170	1.4
2	360	2.6	350	2.1	350	2.7	340	2.8	360	0.6	10	0.1	---	0.0	---	0.0	140	0.9	150	2.1	180	3.4	210	5.0
3	360	0.3	350	0.4	340	0.4	330	0.5	340	0.8	340	0.7	20	0.6	110	0.7	160	4.1	150	6.3	150	6.8	150	6.6
4	190	0.7	180	0.6	170	0.2	160	0.7	170	0.9	190	2.2	220	2.2	240	2.4	210	1.5	180	3.6	200	4.8	270	3.6
5	270	6.9	260	4.0	220	3.1	230	4.5	240	7.1	240	7.5	270	7.9	280	8.1	280	8.5	280	10.9	290	14.8	290	14.2
6	350	0.5	350	0.3	---	0.0	340	0.3	330	0.1	220	0.2	170	1.6	210	4.3	200	3.4	210	5.1	220	6.7	220	7.4
7	230	0.7	230	0.1	230	0.7	150	0.5	180	0.8	130	0.3	110	0.2	160	0.1	150	0.3	130	0.2	310	2.7	320	2.0
8	60	2.6	70	3.1	40	2.4	40	2.1	30	2.9	30	2.6	30	3.2	50	3.8	50	4.1	50	3.5	60	3.6	60	3.0
9	60	3.3	90	3.4	50	2.3	40	1.6	40	2.1	70	4.6	100	4.9	100	4.8	90	5.0	90	6.9	80	6.4	80	6.4
10	90	6.8	90	7.4	90	7.0	70	5.3	80	4.9	90	5.6	90	5.4	90	5.6	90	4.3	90	4.9	90	4.5	90	4.7
11	50	3.9	40	4.0	30	3.9	40	3.4	60	4.3	60	3.5	50	4.0	40	3.9	50	5.5	70	6.7	60	6.4	60	5.3
12	40	6.5	30	6.4	40	6.0	30	6.5	30	6.3	40	5.6	40	6.9	40	7.5	50	7.3	50	8.1	60	8.6	50	7.9
13	40	4.1	30	5.1	20	3.8	30	4.1	30	5.7	30	5.7	30	5.3	30	5.8	30	6.1	30	6.4	40	6.2	30	6.0
14	---	0.0	360	1.7	360	2.0	350	1.8	30	0.5	50	0.5	140	1.0	360	4.5	360	4.6	30	5.0	30	5.6	20	5.2
15	360	1.3	330	1.0	330	0.1	---	0.0	340	0.9	340	0.7	40	2.5	50	3.1	40	3.0	40	2.6	80	3.4	80	3.1
16	20	2.9	20	3.2	20	3.2	20	2.8	30	3.0	30	2.6	30	2.7	60	3.3	60	3.0	60	2.5	60	2.8	70	2.2
17	320	0.2	190	0.2	360	0.2	310	0.4	360	0.4	280	0.1	60	0.1	170	0.2	90	1.0	220	3.6	240	5.0	240	4.1
18	340	1.1	---	0.0	---	0.0	310	0.2	360	0.1	320	0.2	---	0.0	160	0.8	190	0.9	110	1.6	140	2.2	160	2.4
19	350	0.9	350	0.7	360	0.2	360	0.2	260	0.2	200	1.9	240	0.3	---	0.0	170	3.2	160	4.5	150	4.6	160	5.5
20	340	1.0	340	2.1	360	2.5	360	2.0	10	1.1	40	1.5	70	1.4	160	4.4	160	5.0	160	4.0	160	4.4	160	5.0
21	10	3.6	10	2.7	30	4.8	40	4.6	50	6.7	40	5.4	30	4.6	360	4.5	360	6.8	350	3.8	350	5.0	310	7.1
22	190	6.7	190	5.9	210	7.6	210	8.5	200	5.4	190	5.5	180	7.3	180	6.4	170	6.4	160	6.8	170	7.0	160	7.0
23	170	1.2	180	3.3	170	3.3	180	7.2	210	10.0	190	8.9	200	12.1	210	13.4	200	12.6	200	13.8	210	12.5	220	11.1
24	350	1.4	360	1.4	350	1.4	360	2.1	360	2.1	10	1.6	50	1.2	50	1.6	180	6.2	200	7.6	220	8.4	210	8.5
25	180	2.6	180	1.4	200	2.6	180	4.9	170	4.0	180	3.4	170	3.5	170	4.8	170	4.1	170	6.1	200	8.3	210	11.5
26	320	0.8	320	1.1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	140	0.3	150	0.7	---	---
27	130	0.2	210	4.8	230	6.1	240	6.9	240	5.4	240	5.5	240	6.9	250	7.1	250	7.6	250	9.0	250	7.7	240	7.5
28	230	0.8	220	3.1	200	1.8	190	4.2	180	2.9	200	2.6	170	2.1	170	2.4	180	4.4	180	4.6	200	4.8	220	6.3
29	310	0.2	220	1.7	230	0.3	200	0.5	230	0.6	190	2.3	180	4.7	190	6.5	190	6.2	200	7.9	220	9.3	220	9.1
30	310	0.2	150	0.1	180	0.6	---	0.0	---	0.0	180	2.8	200	5.0	220	5.7	220	5.2	230	7.6	230	9.7	230	10.2
31	270	2.0	260	2.6	260	2.9	260	3.1	240	2.9	210	4.6	200	5.1	240	4.8	240	6.6	240	7.6	240	7.1	260	5.7
Mean	---	2.1	---	2.4	---	2.3	---	2.7	---	2.7	---	2.9	---	3.3	---	3.9	---	4.5	---	5.3	---	6.0	---	6.0

242 ESKDALEMUIR: H<sub>a</sub> = 235 metres + 15 metres

Day	o		o		o		o		o		o		o		o		o		o		o		o		o	
	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s
1	220	4.1	240	5.0	230	4.8	240	5.1	250	5.5	260	5.0	270	6.0	270	6.4	270	6.4	270	6.1	280	5.8	270	6.9	270	6.9
2	300	6.8	150	0.8	320	4.4	360	3.9	350	4.4	360	3.5	10	3.4	20	3.2	360	1.4	270	1.2	250	2.6	250	3.9	250	3.9
3	150	0.2	180	0.6	200	1.5	190	0.8	170	1.6	190	3.1	210	5.1	200	7.1	200	7.4	200	8.4	210	10.0	210	10.7	210	10.7
4	220	6.5	220	0.6	230	6.2	250	5.0	240	4.4	250	5.0	250	5.5	250	5.5	240	6.6	230	7.9	230	8.5	220	8.2	220	8.2
5	200	6.6	210	7.6	210	6.9	220	7.3	210	7.9	210	7.9	210	8.1	210	10.0	210	9.5	210	9.3	210	9.3	210	8.8	210	8.8
6	200	8.6	210	8.0	210	8.3	220	7.0	220	5.1	200	4.0	200	4.3	190	5.1	190	6.1	210	7.1	210	7.1	200	7.3	200	7.3
7	200	6.0	200	6.1	210	6.1	230	4.1	220	4.2	230	5.1	230	5.1	230	5.6	230	5.7	210	6.1	210	7.6	210	9.1	210	9.1
8	200	5.9	200	7.3	200	5.2	200	5.6	200	5.5	200	7.6	200	8.2	200	9.5	200	8.2	190	8.8	200	9.0	200	9.5	200	9.5
9	200	5.0	200	5.1	200	2.3	200	2.0	200	3.1	200	2.8	190	3.5	200	3.6	200	4.7	200	5.5	190	5.0	190	5.5	190	5.5
10	---	0.0	350	0.2	60	0.1	50	0.2	---	0.0	---	0.0	150	1.6	190	4.9	210	7.0	230	6.9	220	7.0	210	7.4	210	7.4
11	360	3.9	360	4.7	360	5.6	10	4.5	20	2.4	30	2.9	30	5.0	20	5.0	30	4.9	50	5.1	50	5.3	50	5.6	50	5.6
12	40	2.5	40	2.8	40	2.1	40	2.5	40	2.6	40	2.6	40	2.6	30	2.8	40	3.4	50	4.4	50	5.0	50	5.2	50	5.2
13	10	2.4	20	3.3	40	2.5	30	2.0	30	0.9	40	1.6	50	2.7	70	2.7	60	2.6	60	3.0	100	3.7	110	3.3	110	3.3
14	330	0.3	---	(0.0)	---	(0.0)	---	(0.0)	---	(0.0)	---	(0.0)	---	(0.0)	340	(1.9)	290	2.8	300	2.7	300	4.8	310	4.5	300	6.4
15	300	2.8	180	1.8	350	1.5	230	2.3	330	1.9	310	4.4	350	4.6	10	4.2	350	4.6	350	2.6	320	3.7	310	3.5	310	3.5
16	310	6.6	320	7.6	290	5.1	290	4.6	290	2.9	300	3.0	300	4.4	300	3.1	310	2.7	310	2.5	330	1.7	360	1.7	360	1.7
17	10	2.1	360	1.0	10	0.5	10	1.9	20	1.6	20	1.3	360	3.6	360	4.6	350	5.0	20	7.2	40	6.6	360	6.1	360	6.1
18	340	0.8	350	1.8	30	2.2	40	1.3	150	0.6	170	0.6	340	3.4	310	5.2	300	6.0	320	4.6	320	4.3	290	4.7	290	4.7
19	50	0.1	340	0.4	10	1.9	30	1.3	20	1.8	10	1.9	20	2.4	30	3.6	30	4.6	20	5.0	30	4.9	30	3.4	30	3.4
20	360	0.8	360	2.1	20	1.2	20	1.7	360	1.3	10	3.2	10	3.2	30	4.6	20	4.1	20	4.9	20	5.0	20	5.3	20	5.3
21	330	0.7	330	0.6	330	0.8	30	0.4	---	0.0	160	0.4	140	0.8	140	1.0	210	1.4	320	2.8	320	3.4	320	2.4	320	2.4
22	210	1.0	200	1.4	310	0.4	180	0.4	300	0.2	---	0.0	110	0.2	200	1.3	290	6.1	290	6.0	300	7.1	300	7.3	300	7.3
23	300	8.3	310	2.2	300	2.2	310	1.5	180	0.7	250	0.6	260	0.9	240	1.3	300	2.8	300	1.7	30	1.6	300	1.5	300	1.5
24	10	3.0	20	1.9	20	2.5																				



WIND: DIRECTION AND SPEED

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

243 ESKDALEMUIR

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

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	
	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s
1	170	2.7	180	2.4	180	2.6	210	3.8	220	4.5	230	6.2	230	6.7	230	6.4	230	6.4	230	8.2	240	7.2	260	5.4
2	190	5.0	200	5.7	210	6.2	210	6.4	210	6.5	210	6.5	210	6.9	200	7.3	200	8.4	200	10.0	200	9.8	210	10.6
3	200	9.5	210	9.4	210	10.0	210	10.6	210	10.5	210	9.3	200	6.2	190	5.0	200	6.6	210	6.5	210	4.4	210	3.8
4	30	5.6	30	5.8	20	6.1	20	7.2	30	7.4	30	9.7	40	9.6	30	8.0	30	6.7	30	5.7	40	5.0	30	3.5
5	230	3.8	*(310)	1.4	(120)	2.3	(150)	2.8	150	0.8	190	0.9	210	3.2	200	4.5	210	5.9	210	7.2	210	9.8	210	10.1
6	170	5.0	170	3.7	170	4.5	170	4.6	170	4.8	180	4.9	170	5.0	220	5.2	220	6.1	220	7.6	230	7.3	230	7.0
7	180	1.4	150	1.0	180	1.0	170	0.2	---	0.0	180	1.3	210	1.8	180	1.3	200	2.4	220	2.4	220	2.8	210	4.1
8	330	3.8	310	3.1	320	2.1	180	1.1	90	0.4	160	0.9	140	1.1	290	4.6	270	4.3	260	3.2	220	3.8	230	3.7
9	180	4.3	180	3.2	180	3.6	170	3.3	160	2.7	170	4.0	170	4.9	170	4.2	170	3.6	170	3.5	160	3.1	180	3.6
10	270	3.4	270	2.4	290	2.5	300	3.6	290	2.9	320	2.3	330	5.3	310	5.2	320	6.4	350	8.0	360	7.6	20	7.0
11	170	0.6	180	0.9	360	1.0	280	0.6	---	0.0	70	0.2	290	0.1	170	0.2	180	3.6	210	2.1	220	2.1	230	3.4
12	---	0.0	---	0.0	---	0.0	---	0.0	---	0.0	---	0.0	---	0.0	110	0.2	150	0.3	160	2.0	190	2.6	190	3.5
13	220	6.0	230	5.0	210	5.0	220	5.2	250	5.4	240	4.5	260	4.0	260	3.3	270	4.0	250	4.0	250	6.6	220	6.6
14	200	6.7	200	4.6	210	6.1	200	6.5	200	5.2	200	6.3	200	6.6	200	7.6	200	6.9	200	5.1	190	5.0	200	5.0
15	220	5.1	230	5.6	250	4.4	270	2.6	240	0.7	180	0.3	270	0.5	220	0.8	110	1.2	140	1.9	270	2.0	280	2.0
16	320	6.0	330	7.1	360	2.8	360	5.0	360	3.1	100	1.4	310	5.6	320	7.9	300	5.1	310	4.9	310	4.8	290	5.1
17	170	0.2	360	0.2	320	0.7	340	0.1	150	0.1	---	0.0	---	0.0	140	0.3	150	1.0	160	2.8	160	4.5	150	4.0
18	180	1.5	180	0.8	170	0.7	190	2.5	200	2.6	210	3.8	200	4.1	200	3.4	210	4.4	210	5.1	210	6.4	230	6.7
19	220	3.3	220	2.5	200	3.2	180	1.8	180	2.1	200	2.6	230	3.2	250	1.7	230	3.1	240	5.4	240	6.6	250	5.6
20	280	1.1	250	1.0	150	0.5	60	0.2	---	0.0	---	0.0	140	0.1	160	0.9	250	2.2	250	2.2	230	3.4	230	3.0
21	200	6.1	180	5.9	180	5.4	190	7.7	200	7.2	190	8.7	190	9.1	180	7.1	180	6.1	190	6.5	180	7.8	180	8.8
22	230	7.9	240	8.1	240	6.5	240	5.2	260	3.6	280	5.1	270	4.7	250	3.9	270	4.2	270	4.8	270	5.2	270	5.3
23	290	5.1	280	2.6	270	1.5	260	2.0	260	1.7	240	2.2	220	2.2	170	1.3	170	1.4	170	2.1	150	0.9	40	0.2
24	300	0.3	40	0.2	150	0.2	150	0.2	280	0.6	290	1.2	280	1.0	280	1.3	300	3.2	280	3.8	290	3.1	270	3.0
25	220	0.2	250	0.2	290	2.8	320	2.3	180	0.5	180	0.2	100	0.5	140	1.4	230	1.4	140	0.7	300	4.0	310	4.8
26	260	0.7	130	0.5	70	0.0	50	0.4	210	0.8	300	2.2	300	3.2	290	3.9	290	3.9	280	1.9	300	3.2	290	3.1
27	360	0.9	170	0.6	10	1.0	180	0.9	190	0.9	280	0.7	300	4.4	360	2.4	320	3.2	320	3.8	330	3.4	330	2.8
28	360	1.1	330	0.6	---	0.0	40	0.4	320	0.4	50	1.1	50	2.4	60	2.9	70	2.1	70	1.7	60	2.0	40	0.7
29	360	1.3	360	1.1	360	1.8	360	2.5	360	2.8	10	1.8	360	2.5	30	2.1	40	2.8	70	2.7	80	1.7	60	1.9
30	350	2.9	360	2.4	40	0.5	50	1.5	50	1.8	30	0.8	50	1.1	90	0.2	170	0.1	150	0.2	150	0.9	190	1.1
31	---	0.0	---	0.0	---	0.0	---	0.0	---	0.0	---	0.0	---	0.0	---	0.0	150	0.3	140	0.8	150	1.5	170	1.3
Mean	---	3.3	---	2.8	---	2.7	---	2.9	---	2.6	---	2.9	---	3.4	---	3.4	---	3.8	---	4.1	---	4.5	---	4.4

\*Interpolated, direction pen not working.

244 ESKDALEMUIR: H<sub>a</sub> = 235 metres + 15 metres

Day	0 - 1		1 - 2		2 - 3		3 - 4		4 - 5		5 - 6		6 - 7		7 - 8		8 - 9		9 - 10		10 - 11		11 - 12	
	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s
1	340	1.2	360	0.4	360	0.3	360	0.1	350	0.7	350	0.1	---	0.0	---	0.0	140	0.3	150	1.2	180	1.6	180	1.2
2	10	1.7	40	0.4	10	1.0	360	1.2	360	1.4	350	2.1	10	0.2	20	0.2	---	0.0	150	0.3	170	1.6	190	2.8
3	---	0.0	---	0.0	330	0.1	---	0.0	---	0.0	---	0.0	---	0.0	---	0.0	---	0.0	150	0.5	150	2.2	180	2.7
4	---	0.0	---	0.0	350	0.4	10	0.4	360	1.5	20	0.1	---	0.0	---	0.0	160	1.2	150	1.8	150	1.6	150	0.9
5	160	0.8	170	0.7	200	1.0	190	0.6	180	0.6	190	1.8	190	2.0	220	3.2	220	3.1	220	2.6	240	2.4	230	3.2
6	320	0.6	320	0.4	---	0.0	220	0.1	---	0.0	170	0.6	---	0.0	170	0.6	200	3.3	200	4.9	210	4.6	200	5.5
7	270	5.0	290	3.1	290	2.8	260	2.5	240	1.4	240	1.2	230	3.2	220	3.9	210	3.2	230	5.1	230	6.2	240	7.0
8	210	0.3	180	0.1	---	0.0	210	0.9	230	2.6	200	3.3	200	1.9	210	4.7	230	6.1	240	5.8	250	6.1	250	6.4
9	---	0.0	---	0.0	---	0.0	---	0.0	---	0.0	140	0.1	170	0.7	170	1.5	200	5.0	200	4.2	200	4.2	200	5.3
10	290	0.6	330	1.4	170	0.2	150	0.2	310	0.6	---	0.0	50	0.5	40	0.9	30	0.4	80	0.5	120	0.9	130	0.7
11	---	0.0	---	0.0	---	0.0	---	0.0	---	0.0	340	0.6	320	0.2	---	0.0	140	0.5	160	2.1	220	3.1	230	1.5
12	---	0.0	---	0.0	---	0.0	320	0.1	330	0.1	---	0.0	---	0.0	150	0.1	---	0.0	210	2.7	210	4.2	210	3.2
13	360	1.5	10	0.9	10	1.9	350	2.2	10	0.5	160	0.7	200	1.1	180	0.3	---	0.0	150	0.9	150	2.3	150	3.1
14	350	1.9	360	2.1	10	0.5	360	1.7	350	1.9	360	1.3	10	0.1	350	0.2	300	0.2	260	0.1	330	1.9	10	0.8
15	320	3.5	340	3.6	340	3.4	350	1.5	310	1.3	90	0.6	210	1.0	280	2.9	300	5.1	310	3.0	310	5.4	310	5.8
16	300	3.2	290	4.0	290	3.1	290	4.7	290	4.1	280	1.8	170	1.1	250	1.6	250	2.5	230	3.5	220	4.6	210	5.1
17	220	4.0	200	3.3	210	6.3	210	6.5	230	7.7	220	6.7	230	6.1	230	5.5	240	5.5	240	7.0	240	7.0	260	5.7
18	330	0.2	40	0.1	---	0.0	---	0.0	100	0.1	190	1.5	190	2.7	190	2.6	190	3.8	190	4.1	180	4.6	180	5.9
19	250	3.1	270	4.6	270	4.6	260	5.0	240	4.1	250	5.1	230	5.2	260	4.9	290	5.0	290	4.9	290	5.6	300	5.7
20	310	6.9	310	8.3	360	3.1	320	5.4	310	6.5	310	2.2	180	3.1	320	5.7	360	6.4	360	5.2	350	4.8	330	5.1
21	320	0.8	340	0.4	330	1.7	20	1.0	340	2.7	340	2.4	30	0.9	30	2.7	70	2.8	60	3.5	50	4.6	60	4.8
22	340	0.5	350	0.5	320	0.8	320	0.6	330	0.3	---	0.0	---	0.0	120	0.3	150	1.9	210	3.0	220	4.1	250	3.5
23	180	1.1	---	0.0	240	0.1	---	0.0	180	0.9	170	0.4	160	0.6	180	0.7	220	2.9	220	3.1	210	4.2	210	4.3
24	210	2.9	210	2.7	180	1.2	210	3.5	210	6.2	210	5.2	210	5.7	210	6.5	210	6.8	210	7.5	210	8.2	200	8.3
25	150	2.5	160	2.0	170	2.5	190	2.9	180	2.5	210</													



245 ESKDALEMUIR

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

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	
	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s
1	200	9.5	190	8.8	190	7.8	180	7.3	180	12.4	190	11.9	200	13.2	230	8.7	220	6.4	210	7.7	230	8.7	220	8.3
2	200	8.1	210	9.1	200	9.6	210	8.6	200	6.5	220	6.2	230	5.0	260	2.4	240	7.6	240	9.5	250	11.0	230	10.9
3	200	3.4	210	5.5	220	6.5	210	6.7	200	5.6	210	7.2	220	8.2	220	10.0	220	10.2	220	11.5	220	11.6	230	10.9
4	210	5.7	190	3.8	190	5.0	200	5.4	180	4.8	200	5.0	210	6.1	200	7.0	220	6.8	220	6.9	230	7.2	220	8.9
5	220	12.3	220	13.8	210	14.9	210	14.3	210	14.6	220	14.0	210	14.2	210	13.0	220	13.3	230	14.0	230	12.6	230	13.0
6	230	8.5	220	8.5	220	9.3	220	9.0	220	10.9	220	11.7	200	10.1	210	11.0	210	10.2	210	11.6	210	11.5	210	12.8
7	240	7.3	230	6.3	240	7.6	220	5.9	220	6.0	230	6.6	220	6.4	210	6.0	220	7.4	230	10.0	220	8.4	220	8.8
8	270	7.3	270	7.5	260	7.7	260	7.9	260	7.9	250	8.4	260	9.8	270	9.9	270	10.0	270	9.9	270	9.8	270	10.8
9	230	3.4	240	3.8	230	3.1	230	3.5	220	3.6	230	3.7	240	3.5	240	3.4	240	2.9	280	4.4	290	5.3	280	5.5
10	330	0.3	340	1.0	340	1.9	290	1.1	360	2.4	350	2.8	360	3.4	240	3.6	20	6.5	10	6.0	360	5.0	340	5.3
11	340	4.1	340	4.6	340	3.9	330	4.1	330	4.1	350	3.6	60	1.1	360	1.7	10	3.9	20	4.8	20	5.9	30	6.0
12	---	0.0	---	0.0	---	0.0	260	0.1	330	0.2	230	0.3	170	0.7	160	2.1	190	2.5	210	3.1	190	2.3	180	2.4
13	---	0.0	---	0.0	340	0.7	360	0.8	50	0.9	30	1.6	30	2.4	40	3.3	40	4.5	50	4.6	60	3.9	60	4.6
14	360	0.8	330	0.6	340	0.6	---	0.0	---	0.0	---	0.0	---	0.0	---	0.0	140	1.3	170	2.7	230	4.4	230	5.0
15	230	7.4	250	6.0	250	4.9	230	6.2	240	7.9	230	7.5	230	6.9	220	5.4	220	7.0	200	7.0	200	10.3	220	9.0
16	10	0.2	310	0.2	360	0.7	330	0.6	320	0.6	320	1.0	360	0.8	350	0.4	130	0.8	170	0.2	170	0.2	150	0.9
17	360	2.7	360	3.5	10	3.0	10	1.9	10	1.3	30	1.6	20	1.7	70	4.0	60	3.0	60	5.0	60	5.3	50	5.0
18	20	5.2	20	5.1	20	5.8	20	5.4	20	5.0	10	4.4	10	3.8	20	4.0	10	4.0	20	4.0	40	4.5	30	3.3
19	350	0.8	350	1.0	350	1.0	350	0.2	30	0.1	---	0.0	10	0.2	10	0.1	---	0.0	150	0.2	160	1.8	70	2.8
20	340	2.6	340	2.8	10	3.9	10	4.2	20	4.4	20	4.0	10	4.2	10	5.0	20	6.3	20	7.4	20	6.6	20	6.6
21	200	0.1	330	0.3	320	0.5	180	0.1	---	0.0	10	0.1	---	0.0	160	0.2	150	0.7	180	1.3	240	4.1	230	5.1
22	190	2.6	200	2.4	190	3.2	190	2.3	180	2.3	170	1.0	170	1.4	170	1.4	200	0.7	130	0.6	100	0.9	170	1.9
23	---	0.0	170	0.1	200	0.6	170	1.1	180	1.9	190	3.0	180	2.3	180	2.8	200	3.1	220	4.2	220	4.7	220	5.4
24	210	7.7	200	8.6	210	10.9	210	10.7	220	10.6	210	8.0	210	7.1	210	7.3	220	8.5	220	7.6	260	4.6	250	4.8
25	290	2.2	280	1.7	190	1.0	280	1.1	170	1.2	160	1.0	360	0.6	---	0.0	150	0.7	270	2.8	230	3.6	220	3.5
26	---	---	---	---	---	---	360	0.1	---	---	350	1.5	340	1.2	360	1.0	360	1.1	---	0.0	170	0.1	90	2.3
27	360	2.7	340	2.6	350	2.7	350	1.5	340	1.4	340	1.1	---	---	---	---	---	---	160	1.9	190	3.1	210	4.4
28	290	1.5	260	1.4	210	0.6	240	1.9	260	3.1	250	2.8	280	3.9	280	4.5	300	4.9	310	6.5	310	7.0	300	5.6
29	---	0.0	190	0.7	180	2.2	210	2.8	220	3.7	220	4.9	230	6.4	220	5.5	230	5.7	220	6.5	230	7.2	230	9.1
30	180	3.1	180	2.9	170	2.8	170	2.3	210	1.1	310	0.1	320	0.8	330	0.2	310	0.5	80	0.8	180	5.6	180	6.5
Mean	---	3.7	---	3.8	---	4.1	---	3.9	---	4.2	---	4.2	---	4.2	---	4.1	---	4.7	---	5.4	---	5.9	---	6.3

246 ESKDALEMUIR: H<sub>a</sub> = 235 metres + 15 metres

Day	0 - 1		1 - 2		2 - 3		3 - 4		4 - 5		5 - 6		6 - 7		7 - 8		8 - 9		9 - 10		10 - 11		11 - 12	
	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s
1	210	7.6	240	4.0	320	1.2	360	0.5	10	2.1	10	2.2	10	2.3	10	2.6	10	2.8	30	3.6	30	3.9	30	4.0
2	20	3.4	20	4.0	30	2.5	40	3.3	60	4.5	60	3.3	70	2.0	100	2.6	110	3.0	100	2.9	100	2.2	120	3.7
3	---	0.0	---	0.0	240	0.6	280	2.8	300	2.8	320	1.2	340	0.3	---	0.0	130	0.1	160	0.7	240	2.1	240	2.8
4	170	2.5	230	2.1	310	2.0	320	5.1	320	5.0	320	5.1	170	0.6	320	4.1	320	4.3	20	1.4	360	2.6	10	3.0
5	350	1.2	350	1.6	340	1.5	350	1.2	350	1.1	340	1.0	340	0.7	360	0.8	40	1.5	60	2.5	60	2.1	110	2.3
6	340	1.6	360	2.4	360	2.5	350	3.2	350	2.6	360	2.4	30	0.7	10	1.6	40	1.6	40	1.8	100	3.2	120	4.6
7	20	2.6	40	4.1	50	4.5	40	3.6	50	4.5	50	5.0	40	5.2	40	4.8	40	5.0	40	5.5	60	7.1	60	6.6
8	50	4.3	60	4.3	70	3.9	60	4.1	40	4.8	40	4.6	40	4.3	40	4.2	50	5.0	50	5.0	60	5.5	60	5.6
9	30	1.6	30	1.3	30	0.2	360	2.0	360	1.7	10	1.5	10	2.5	360	1.4	10	1.0	30	1.6	30	1.4	100	0.2
10	340	0.2	20	0.1	20	0.1	---	0.0	---	0.0	30	0.1	---	0.0	360	0.1	120	0.3	230	4.0	180	3.2	310	5.2
11	---	---	---	0.0	---	0.0	---	0.0	---	0.0	---	0.0	---	0.0	300	0.1	---	0.0	360	2.2	20	2.6	30	4.1
12	---	0.0	---	0.0	---	0.0	---	0.0	---	0.0	---	0.0	---	0.0	350	0.5	340	0.8	---	0.0	160	0.6	140	1.2
13	180	0.1	190	1.1	230	0.6	250	1.9	260	2.2	240	4.4	240	4.2	260	2.8	240	2.6	230	3.4	240	4.8	230	6.3
14	280	3.4	280	2.8	240	2.9	260	1.9	270	2.1	270	3.1	280	2.9	280	2.8	290	4.6	300	6.4	270	3.4	250	3.0
15	220	5.1	280	3.1	280	3.4	290	4.1	290	5.5	250	3.3	250	2.8	210	4.3	210	3.5	220	5.2	240	3.1	240	3.3
16	230	5.4	230	4.5	270	3.7	260	3.9	240	3.9	240	4.6	240	4.6	240	6.2	230	7.1	240	9.4	240	7.8	220	7.4
17	240	6.5	230	5.0	230	5.4	230	5.6	250	3.1	240	3.2	230	3.3	220	2.3	210	5.9	220	6.6	220	5.7	230	6.5
18	220	4.3	220	4.1	230	4.2	240	4.0	250	3.2	230	3.1	220	3.2	240	3.9	240	3.3	210	3.5	230	5.7	230	6.6
19	170	1.6	170	0.2	330	0.3	---	0.0	330	0.2	360	0.1	340	0.1	---	0.0	---	0.0	---	0.0	160	2.7	210	6.5
20	160	1.3	160	2.3	180	2.0	190	3.7	200	4.2	220	1.6	170	0.5	190	1.1	180	1.1	180	2.1	190	2.4	190	2.3
21	360	0.2	360	1.8	10	2.6	40	2.8	40	3.0	40	2.8	350	1.6	360	1.4	20	0.2	60	1.8	60	1.8	50	0.2
22	170	1.9	190	1.5	230	0.1	170	2.8	170	4.2	170	4.5	170	7.4	190	6.4	200	5.4	210	7.4	210	7.2	210	7.3
23	170	3.8	190	3.7	190	1.3	320	1.5	360	0.7	360	1.1	10	2.6	20	3.1	10	3.8	10	3.5	20	3.5	20	4.0
24	360	6.0	360	6.5	360	5.0	350	5.4	360	4.9	350	5.3	330	5.6	310	4.4	290	4.1	280	4.7	300	9.6	300	8.7
25	170	0.2	190	0.1	340	0.5	20	0.5	360	2.6	360	2.5	50	4.6	40	5.4	50	5.8	50	6.3	60	6.1	40	3.5
26	160	0.5	160	2.1	150	2.9	160	4.1	160	3.1	150	4.9	150	7.0	160	6.8	160	7.6	160	7.3				

WIND: DIRECTION AND SPEED

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

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

SEPTEMBER, 1937

Table with columns for time intervals (12-13 to 23-24), wind speed in degrees and m/s, and a 'Day' column. Data is organized in a grid format for each hour.

OCTOBER, 1937

Table with columns for time intervals (12-13 to 23-24), wind speed in degrees and m/s, and a 'Day' column. Data is organized in a grid format for each hour.



247 ESKDALEMUIR

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

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			
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
1	20	1.8	20	1.6	30	3.2	30	3.4	20	3.4	40	2.9	30	3.3	30	3.7	60	4.3	50	2.3	50	2.7	60	2.8		
2	360	0.3	60	0.3	40	1.2	360	1.8	10	1.2	10	1.2	10	0.2	300	0.1	---	0.0	170	0.1	160	2.0	160	2.4		
3	210	2.5	200	2.9	210	3.3	210	3.1	180	0.8	170	1.7	190	3.6	190	3.5	190	3.0	190	4.2	200	6.7	200	8.6		
4	340	0.3	320	0.2	---	0.0	---	0.0	220	0.2	180	2.3	190	2.8	210	0.9	230	1.6	190	2.3	160	4.1	160	5.5		
5	180	3.1	200	3.0	210	4.9	190	4.7	200	4.4	210	3.2	200	2.3	210	2.0	200	1.8	200	1.8	150	1.7	160	1.3		
6	10	2.0	80	1.7	50	1.4	60	0.9	50	1.6	20	0.8	60	2.8	60	3.3	60	3.4	70	3.2	60	2.5	60	1.8		
7	150	1.4	150	0.2	---	0.0	---	0.0	---	0.0	310	0.1	310	0.1	---	0.0	---	0.0	10	0.2	40	0.4	30	0.2		
8	10	1.4	10	1.6	20	1.9	10	2.2	10	2.3	10	2.2	360	1.4	10	1.6	360	2.4	20	2.5	30	3.6	40	3.6		
9	350	4.8	350	3.8	350	2.5	20	1.5	130	0.6	20	1.1	40	0.8	30	1.2	20	2.0	10	5.4	10	4.8	10	6.0		
10	310	1.2	170	0.9	350	4.5	350	8.0	350	8.6	350	7.6	350	7.2	350	7.4	350	7.4	350	6.7	350	7.5	350	8.2		
11	360	4.7	350	5.0	350	3.2	360	1.8	30	0.9	340	2.8	330	3.2	330	3.5	330	2.7	320	3.0	320	4.8	310	5.2		
12	330	3.9	340	3.7	330	5.0	310	3.2	340	2.5	10	1.9	360	0.7	330	0.2	20	0.1	40	0.2	330	1.9	330	3.9		
13	360	0.9	230	0.3	270	0.5	180	0.9	180	0.6	180	0.2	190	1.1	320	3.9	310	5.3	310	5.8	310	5.3	320	5.1		
14	360	0.9	320	0.8	140	0.6	250	0.7	130	0.7	310	2.1	270	0.2	270	3.5	270	3.3	280	5.0	280	5.0	280	3.4		
15	360	0.2	310	0.2	40	0.1	360	0.8	360	1.7	340	0.6	280	0.9	360	2.9	150	0.3	300	0.2	330	1.3	310	3.3		
16	---	0.0	---	0.0	---	0.0	340	0.2	---	0.0	---	0.0	330	0.2	330	0.1	---	0.0	---	0.0	---	0.0	150	0.1		
17	120	5.0	90	1.8	90	4.5	120	8.0	130	6.7	120	7.5	120	4.4	120	3.7	120	5.3	120	6.0	120	9.4	110	10.2		
18	120	7.2	120	8.9	120	8.2	110	8.1	110	7.9	120	8.6	120	7.7	120	7.9	110	8.2	130	7.4	120	9.5	120	9.9		
19	90	5.1	90	5.4	90	7.1	90	6.1	80	5.6	70	3.9	60	4.1	80	5.0	60	5.1	60	5.5	50	5.9	50	5.9		
20	360	5.0	360	3.5	10	3.8	360	4.9	20	5.5	20	4.9	350	3.4	340	2.6	330	1.2	250	0.5	150	1.0	300	4.8		
21	210	0.6	50	0.3	*(50)	0.2	(50)	0.2	230	0.4	160	0.5	220	1.9	230	2.5	190	1.5	200	2.5	200	2.8	220	3.9		
22	330	0.1	---	0.0	320	0.1	40	0.1	360	0.1	320	0.2	30	0.2	340	0.5	240	0.1	320	0.9	10	1.8	360	2.8		
23	10	4.7	30	2.1	70	0.4	360	2.8	340	1.8	40	3.4	40	3.9	30	3.8	40	1.8	30	2.8	40	2.8	30	4.3		
24	350	2.9	360	3.4	20	1.4	340	1.5	350	1.3	360	0.7	350	0.6	330	0.2	---	0.0	---	0.0	190	0.1	150	0.3		
25	180	3.0	190	3.8	200	3.2	180	3.3	180	2.4	260	4.8	180	3.2	260	4.8	250	4.2	230	4.1	240	5.0	240	6.0		
26	200	3.0	200	4.1	270	1.9	290	1.5	300	2.3	290	2.5	280	0.7	140	2.2	230	0.5	200	0.1	280	1.4	280	2.3		
27	40	1.1	30	1.0	20	2.6	20	1.3	20	3.4	10	2.4	30	0.9	30	4.0	30	3.1	20	3.4	30	4.9	20	5.0		
28	190	0.5	210	0.2	---	0.0	360	0.2	340	0.2	10	0.2	320	0.2	330	0.1	---	0.0	---	0.0	---	0.0	170	0.5		
29	170	1.4	170	1.2	170	0.3	150	0.7	210	7.7	210	8.9	200	7.5	200	6.5	200	8.1	210	6.8	220	7.3	200	6.1		
30	210	3.4	220	4.8	220	6.2	220	6.4	210	6.1	190	4.3	170	2.5	180	3.1	190	4.5	†(200)	6.4	200	8.2	200	9.6		
Mean	---	2.4	---	2.2	---	2.4	---	2.6	---	2.7	---	2.8	---	2.4	---	2.8	---	2.7	---	3.0	---	3.8	---	4.4		

\* Vane sticking † Direction pen not marking

248 ESKDALEMUIR: H<sub>a</sub> = 235 metres + 15 metres

Day	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s
1	270	2.7	280	2.1	290	1.8	310	1.5	40	0.2	30	0.3	210	0.6	20	0.1	350	0.1	---	0.0	50	0.1	---	0.0		
2	50	5.2	40	5.2	30	6.0	30	6.5	20	6.4	20	6.1	20	6.0	20	7.2	20	7.0	20	8.1	30	9.5	30	8.9		
3	20	9.2	20	9.5	20	7.9	20	8.9	20	7.8	10	8.9	10	9.2	20	9.9	20	10.0	10	9.5	10	9.5	10	8.6		
4	330	1.0	310	0.2	---	0.0	---	0.0	---	0.0	---	0.0	---	0.0	330	0.1	200	0.1	160	1.8	170	3.8	160	4.4		
5	10	0.3	---	0.0	160	0.2	160	0.3	240	0.2	190	0.1	---	0.0	20	0.2	360	1.4	10	1.2	20	1.4	30	1.3		
6	50	2.7	50	2.8	70	2.7	60	3.7	70	3.5	50	2.5	60	3.2	50	2.4	50	3.2	60	5.1	50	7.4	60	4.7		
7	40	4.2	30	5.0	30	5.3	30	6.4	30	5.9	20	6.4	20	7.0	20	6.8	20	7.0	20	6.4	20	7.7	20	10.0		
8	20	4.9	20	3.9	20	3.7	30	3.2	50	3.1	40	4.4	50	3.0	40	3.9	60	5.7	40	3.5	20	3.5	10	1.2		
9	30	4.6	30	5.0	40	5.0	40	5.1	30	4.9	40	4.0	30	3.9	30	4.1	30	4.0	30	3.2	30	3.8	30	4.0		
10	360	1.0	360	1.5	360	1.3	320	1.0	340	0.2	---	0.0	...	...	---	0.0	...	...	170	1.8	180	1.4	150	5.4		
11	20	1.0	10	0.8	10	1.6	360	2.0	20	0.8	20	2.1	360	0.7	20	1.9	20	6.0	40	5.2	30	6.3	20	8.5		
12	360	12.2	350	12.4	350	11.4	350	8.8	340	8.2	340	8.4	330	8.3	340	7.8	330	10.2	320	4.6	270	3.1	20	2.2		
13	-	(0.5)	-	(0.5)	-	(0.5)	60	2.5	60	5.7	60	9.0	50	(8.3)	60	(7.5)	60	(7.5)	60	(7.0)	60	(7.1)	60	(7.5)		
14	70	0.9	30	3.1	30	4.0	30	3.5	60	2.2	40	4.7	20	6.7	20	7.9	20	9.1	20	6.6	20	8.3	20	10.1		
15	330	11.0	330	10.6	320	8.6	320	7.2	330	10.2	330	8.7	330	9.0	320	6.6	310	8.8	310	9.7	310	8.1	310	7.6		
16	20	6.0	20	7.1	20	6.5	20	8.1	20	6.8	20	6.9	20	8.0	20	7.6	20	5.6	10	5.3	360	3.2	10	3.0		
17	10	6.6	10	6.5	10	7.8	10	7.0	10	5.9	10	6.0	10	5.7	10	3.9	10	3.8	360	4.8	20	7.1	20	7.0		
18	-	*(0.5)	---	0.0	-	(0.5)	-	(0.5)	-	(0.5)	-	(0.5)	-	(0.5)	---	0.0	-	(0.5)	---	0.0	---	0.0	---	0.0		
19	-	(0.5)	---	(0.5)	-	(0.5)	-	(0.5)	-	(0.5)	-	(0.5)	-	(0.5)	---	0.0	-	(0.5)	---	0.0	---	0.0	---	0.0		
20	350	1.3	350	1.5	360	1.1	350	1.1	350	2.4	340	2.1	340	2.5	340	1.8	340	1.5	340	1.5	340	1.2	210	1.6		
21	150	5.1	150	3.8	150	4.2	140	1.8	130	0.8	150	4.9	160	6.0	170	5.1	170	3.1	160	2.2	160	4.1	160	4.5		
22	170	3.1	180	0.8	170	1.2	200	3.3	190	2.6	200	3.5	210	3.0	180	2.6	200	3.9	200	3.1	200	5.3	200	6.6		
23	310	1.4	220	1.6	230	3.1	200	2.6	230	2.2	240	2.5	250	2.4	220	1.4	210	1.0	160	3.6	180	3.0	230	4.3		
24	200	6.0	200	7.1	200	6.9	210	8.2	210	10.4	210	10.9	210	10.0	210	10.9	200	11.2	200	12.7	200	13.2	210	13.7		
25	220	3.6	170	3.8	200	2.0	220	2.9	230	3.0	240	3.7	180	2.2	200	2.5	220	2.4	220	3.3	220	4.0	200	3.3		
26	---	0.0	210	0.9	230	3.0	230	2.5	190	1.7	170	0.6	170	0.4	---	0.0	---	0.0	---	0.0	---	0.0	210	3.8		
27	220	3.8	210	4.1	210	3.3	210	3.5	210	2.9	200	2.4	210	1.2	200	0.7	-	(0.2)	160	0.5	160	1.1	190	1.7		
28	---	0.0	360	3.4	360	3.0	20	2.7</																		

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

M.S.L. + h\_a (height of anemometer above ground) = 235 metres + 15 metres

NOVEMBER, 1937

Table with columns for time periods (12-13 to 23-24), wind speed (m/s), and day numbers. Includes a summary row at the bottom with values like 4.6, 4.5, 4.4, etc.

DECEMBER, 1937

Table with columns for time periods (12-13 to 23-24), wind speed (m/s), and day numbers. Includes a summary row at the bottom with values like 5.0, 5.2, 5.2, etc.

\* Direction vane frozen

† Pressure tube partly blocked with snow

249 ESKDALEMUIR:  $h_a = 235$  metres + 15 metres

1937

Day	Jan.		Feb.		Mar.		Apr.		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 21.2	h m 0 15	m/s 10.0	h m 9 20	m/s 20.3	h m 13 5	m/s 15.5	h m 21 55	m/s 7.7	h m 15 10	m/s 18.6	h m 14 55	m/s 15.1	h m 11 10	m/s 8.4	h m 17 40	m/s 24.0	h m 6 35	m/s 13.7	h m 13 40	m/s 8.4	h m 8 20	m/s 10.3	h m 19 45
2	30.4	21 0	13.8	22 40	21.1	4 25	16.3	12 40	10.0	12 45	15.2	0 10	18.9	18 55	7.4	16 00	21.4	14 2	8.1	13 50	7.5	22 25	21.0	20 10
3	26.1	16 10	18.7	23 50	8.6	11 40	14.9	4 15	15.1	13 10	17.3	11 25	18.4	3 50	8.4	14 5	20.6	13 40	8.2	15 50	14.5	11 40	21.6	1 20
4	29.3	10 35	26.2	14 30	9.5	18 50	11.8	9 40	15.5	14 00	15.1	10 50	19.1	5 0	10.0	17 10	17.9	13 2	9.2	3 55	11.4	12 15	8.4	10 50
5	22.6	5 55	23.6	3 20	11.1	6 15	10.6	2 0	25.2	11 20	17.2	19 40	18.8	14 25	8.0	14 30	23.3	2 58	9.9	12 35	8.3	4 35	5.3	16 20
6	24.5	10 40	22.9	4 0	11.3	13 15	9.9	11 45	13.9	11 25	14.2	0 25	11.7	9 15	14.2	16 35	25.3	18 50	8.7	20 40	7.8	16 20	15.3	13 10
7	27.7	8 5	16.5	23 55	15.6	11 45	14.4	15 45	7.9	21 55	14.8	15 35	16.4	19 35	15.4	14 45	25.1	20 40	11.6	10 15	4.9	22 25	18.7	10 50
8	17.5	21 55	15.2	8 10	8.6	14 5	16.2	14 20	9.1	15 30	15.9	16 45	10.7	8 5	14.8	13 40	24.5	11 30	9.6	11 25	11.0	21 10	10.1	23 35
9	22.5	7 45	20.8	3 40	7.1	15 35	13.4	16 15	13.5	16 55	11.6	13 55	12.1	13 20	9.8	8 50	14.4	13 25	4.1	1 35	14.4	12 35	10.6	3 25
10	19.9	12 40	20.5	8 20	11.6	20 35	20.2	9 10	12.3	2 0	13.2	13 35	15.2	9 45	7.9	15 25	12.9	12 45	11.6	11 40	16.2	8 35	15.6	14 20
11	15.2	20 35	21.9	8 25	(25.0)	*- --	9.6	13 0	13.8	16 20	12.6	15 25	9.4	13 15	6.9	14 40	11.9	11 40	8.4	11 30	12.6	12 45	23.7	17 15
12	18.2	10 20	8.7	1 45	*- --	*- --	11.6	14 25	15.1	10 35	9.3	14 0	8.5	18 50	7.9	12 30	5.9	9 15	6.2	14 25	10.7	2 15	21.2	0 5
13	24.1	6 25	6.1	19 5	*- --	*- --	9.2	11 40	12.7	12 55	8.3	10 5	13.7	14 10	6.6	13 20	9.6	11 50	20.3	21 40	12.6	8 55	14.2	5 40
14	6.8	22 15	14.7	12 15	14.2	21 5	12.3	7 45	10.5	17 50	17.0	18 20	16.3	15 20	15.3	19 0	14.1	21 15	16.1	9 35	14.9	17 25	20.7	19 45
15	15.7	20 5	21.2	21 30	15.7	5 25	11.1	23 55	7.8	19 25	19.2	21 30	11.0	23 50	12.8	14 20	17.6	10 25	14.7	16 25	7.2	13 0	17.8	1 30
16	14.9	1 25	24.8	4 40	25.1	17 50	14.6	2 55	7.1	2 35	14.3	1 5	14.8	7 25	13.0	17 25	8.0	17 30	17.9	9 40	10.4	23 5	14.2	7 5
17	24.5	14 5	16.3	6 55	9.2	23 50	6.0	0 20	11.6	12 55	13.7	9 25	8.7	13 45	14.8	9 25	12.4	20 10	14.8	14 30	20.9	12 50	14.9	2 45
18	21.5	5 5	24.1	13 5	10.7	1 30	6.8	10 0	10.6	16 55	10.5	8 40	13.4	16 50	17.3	19 25	12.0	2 50	13.1	13 35	18.2	14 20	2.5	14 50
19	10.1	7 10	22.6	14 45	5.9	18 55	19.5	13 50	14.1	13 45	8.6	9 30	12.5	9 55	14.8	20 15	6.2	12 5	11.5	12 15	16.1	2 35	4.5	8 25
20	25.8	20 40	26.0	16 35	11.4	14 25	16.1	23 40	10.8	11 50	10.8	12 25	13.6	23 35	13.6	1 40	13.6	10 50	6.7	3 50	12.6	13 35	13.1	23 50
21	20.1	23 45	26.7	4 0	13.1	9 5	18.0	15 10	16.4	18 15	15.1	21 35	17.1	6 50	8.8	11 15	8.7	11 25	7.2	3 50	9.4	15 15	13.2	6 15
22	31.4	16 5	15.0	13 55	18.8	19 0	24.1	14 30	14.0	5 55	17.4	15 45	16.6	1 5	7.7	11 50	7.5	2 15	15.0	12 10	12.0	17 25	20.8	18 45
23	18.6	17 30	13.5	6 5	14.9	0 15	17.1	1 55	20.9	8 40	16.0	0 5	12.2	0 10	10.5	16 10	14.2	22 50	16.3	22 35	10.0	11 25	10.8	13 40
24	24.8	11 15	19.2	21 10	22.5	18 40	9.8	18 30	17.1	16 50	11.6	3 20	10.8	18 00	18.2	14 20	18.3	4 10	17.3	11 25	7.5	20 50	23.6	12 10
25	14.5	23 50	25.4	20 0	17.2	0 45	12.6	18 35	17.9	12 5	14.2	15 10	14.5	16 55	9.2	23 15	9.0	9 30	11.8	12 25	19.1	12 50	10.5	12 55
26	16.0	8 30	11.0	12 15	13.9	14 0	12.1	16 35	7.6	19 5	16.1	7 40	12.1	16 40	11.3	12 20	5.6	11 25	20.5	11 5	7.2	2 45	9.9	14 25
27	13.7	23 20	(22.0)	*- --	15.1	12 45	13.6	18 40	17.1	10 5	13.6	23 45	8.5	10 40	7.3	15 35	11.4	22 30	14.4	2 40	9.5	12 20	7.5	1 30
28	22.9	8 50	(30.0)	5 10	11.1	11 45	10.7	16 45	11.9	12 50	24.2	3 15	9.6	15 55	11.9	14 50	13.9	9 55	18.2	6 10	7.1	13 25	9.9	14 15
29	19.3	0.5		5.3	14 40	8.4	17 45	16.1	15 25	20.4	7 50	6.2	14 25	12.1	17 5	14.1	12 20	9.7	16 45	15.9	5 0	9.1	10 40	
30	18.5	20 20		14.5	15 45	9.9	14 50	18.0	14 15	18.4	15 40	5.7	14 30	7.4	0 10	12.6	15 5	11.7	18 50	16.9	10 35	10.3	12 15	
31	*- --	*- --		13.7	9 40			17.5	16 35			5.9	16 30	18.8	23 15			9.2	17 45				10.3	17 50

\* Anemometer head partly blocked with snow

DISTRIBUTION OF WIND SPEED: EXTREME VELOCITIES AS RECORDED BY THE DINES PRESSURE TUBE ANEMOMETER

250 ESKDALEMUIR:  $h_a = 235$  metres + 15 metres

1937

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	Hour Ended	Speed	Date		
Jan. ...	4,22	hr 6	19	hr 142	hr 330	hr 184	hr 82	hr 0	210	m/s 20	day 4 hr 13	m/s 31	day 22 hr 16 m 5		
Feb. ...	28	7	17	100	286	199	80	0	20	*( 23)	28 5	*(>30)	28 5 10		
Mar. ...	-	0	8	55	222	311	156	0	50	*( 15)	11 19	*(>25)	11 *- *		
Apr. ...	-	0	3	12	185	379	144	0	270	13	22 15	24	22 14 30		
May ...	-	0	4	18	203	345	178	0	290	15	5 11	26	5 11 20		
June ...	-	0	2	14	266	346	94	0	230	15	28 14	24	28 3 15		
July ...	-	0	2	9	166	396	173	0	210	12	5 14	19	4 5 0		
Aug. ...	-	0	1	1	112	371	260	0	200	11	24 15	19	31 23 15		
Sept. ...	-	0	9	49	217	287	187	0	230	16	6 20	26	6 18 50		
Oct. ...	-	0	1	4	123	422	195	0	180	13	26 12	21	26 11 5		
Nov. ...	-	0	-	0	131	374	215	0	110	10	17 12	21	17 12 50		
Dec. ...	-	0	7	42	163	369	170	0	210	14	24 13	24	11 17 15		
Year	3	13	73	446	2404	3963	1934	0	20	*( 23)	Feb. 28 5	*(>30)	Feb. 28 5 10		

\*Anemometer head partly blocked with snow

TEMPERATURE IN THE GROUND AT DEPTHS OF 30 CM. (1 foot) AND 122 CM (4 feet)  
Readings in degrees absolute, at 9h Greenwich Mean Time

251 ESKDALEMUIR

1937

Day	Jan.		Feb.		Mar.		Apr.		May		June		July		Aug.		Sept.		Oct.		Nov.		Dec.	
	30cm	122cm	30cm	122cm	30cm	122cm	30cm	122cm	30cm	122cm	30cm	122cm	30cm	122cm	30cm	122cm	30cm	122cm	30cm	122cm	30cm	122cm	30cm	122cm
	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A
1	78.4	80.0	76.2	79.3	75.8	78.5	76.4	78.0	82.3	79.7	84.9	81.9	85.5	83.4	88.6	84.8	87.6	85.4	85.2	84.7	81.9	83.4	77.3	81.2
2	78.4	80.1	76.2	79.2	75.8	78.3	76.9	78.0	82.9	79.7	84.6	82.0	85.7	83.4	89.1	84.8	87.7	85.4	85.2	84.7	82.1	83.3	79.3	81.2
3	78.6	80.1	76.5	79.1	75.8	78.3	77.1	78.0	83.0	79.9	84.4	82.1	85.9	83.4	89.4	84.8	87.3	85.4	85.1	84.7	82.3	83.3	79.0	81.1
4	79.0	80.1	77.1	79.1	75.8	78.2	77.4	78.0	83.3	79.9	84.3	82.0	86.2	83.5	89.7	84.8	87.1	85.4	85.0	84.7	82.2	83.3	78.6	81.0
5	79.0	80.1	77.7	79.1	76.0	78.2	77.6	78.0	83.1	80.1	84.5	82.1	85.9	83.4	89.7	84.9	87.0	85.4	84.7	84.7	82.0	83.3	78.1	81.0
6	78.1	80.1	77.4	79.1	76.1	78.2	77.8	78.0	82.8	80.1	84.6	82.1	85.8	83.5	89.4	84.9	87.0	85.4	84.7	84.7	82.0	83.2	78.0	81.0
7	78.3	80.1	77.1	79.1	76.0	78.2	78.3	78.1	82.9	80.1	84.7	82.2	86.1	83.6	89.3	85.1	86.8	85.4	84.4	84.7	82.0	83.2	77.8	81.0
8	79.0	80.1	77.0	79.1	76.0	78.2	79.0	78.1	83.0	80.3	85.2	82.2	86.2	83.7	88.9	85.1	86.6	85.5	84.3	84.7	82.2	83.2	77.6	81.0
9	77.7	79.8	76.8	79.1	76.0	78.1	79.2	78.1	83.2	80.1	85.2	82.3	86.1	83.6	88.6	85.2	86.4	85.4	84.3	84.6	82.0	83.1	77.3	80.9
10	78.0	79.8	76.7	79.0	76.0	78.1	79.8	78.3	82.7	80.4	85.5	82.3	85.8	83.6	88.4	85.2	86.2	85.3	84.2	84.5	81.2	83.1	77.2	80.8
11	78.3	79.8	76.3	79.0	76.0	78.1	79.4	78.3	82.2	80.4	85.8	82.3	85.9	83.7	88.5	85.3	85.8	85.4	83.9	84.4	80.6	83.1	77.5	80.8
12	78.6	79.7	76.2	78.9	75.9	78.1	79.8	78.3	82.3	80.7	85.8	82.4	86.3	83.7	88.7	85.3	85.5	85.2	83.6	84.4	80.3	83.1	77.2	80.7
13	79.0	79.7	76.1	78.8	75.6	78.0	79.7	78.3	82.0	80.6	85.8	82.4	87.0	83.7	89.0	85.3	85.3	85.3	83.6	84.3	80.0	83.1	77.0	80.6
14	78.8	79.7	75.9	78.8	75.6	78.0	79.6	78.6	82.5	80.7	86.0	82.5	87.3	83.7	89.1	85.3	85.1	85.3	83.6	84.3	79.1	83.1	76.9	80.6
15	78.0	79.7	76.4	78.8	75.7	78.0	79.6	78.6	82.7	80.8	86.1	82.6	87.3	83.8	88.7	85.4	85.1	85.2	83.5	84.2	78.9	83.0	76.7	80.5
16	77.5	79.7	76.8	78.7	75.7	78.0	79.9	78.7	82.9	80.8	86.3	82.6	87.5	83.9	88.2	85.4	85.0	85.1	83.5	84.2	79.1	82.9	76.7	80.4
17	77.1	79.8	77.0	78.7	75.5	78.0	79.6	78.7	83.2	80.8	86.3	82.7	87.8	83.9	87.8	85.4	85.2	85.2	83.6	84.1	78.9	82.6	76.6	80.3
18	77.1	79.9	76.8	78.7	75.3	78.0	79.8	78.8	83.6	80.8	86.0	82.9	88.2	84.0	87.9	85.4	85.0	85.1	83.7	84.1	78.8	82.4	76.5	80.3
19	77.0	79.7	76.7	78.7	75.6	78.0	79.9	78.8	84.1	80.9	86.0	83.0	88.2	84.0	87.6	85.4	85.0	85.1	83.7	84.1	78.8	82.1	76.2	80.2
20	76.7	79.7	76.7	78.7	76.4	77.8	79.8	79.0	84.2	81.0	85.6	83.1	88.2	84.1	87.4	85.4	84.8	85.1	83.5	84.1	78.5	82.3	76.2	80.1
21	76.6	79.5	76.6	78.7	76.8	77.8	79.8	79.0	84.1	81.1	85.7	83.1	88.1	84.2	87.5	85.5	84.6	84.9	83.3	84.1	78.1	82.2	76.1	80.1
22	76.8	79.5	76.4	78.7	76.8	77.9	79.8	79.0	83.7	81.2	86.0	83.1	87.7	84.3	87.8	85.5	84.7	85.0	83.2	84.1	77.8	82.1	76.0	80.1
23	77.7	79.4	76.2	78.6	76.6	77.9	80.1	79.0	83.8	81.2	85.8	83.2	87.5	84.4	88.0	85.4	85.0	84.9	83.2	84.0	77.6	81.9	75.8	80.0
24	77.9	79.4	76.1	78.6	76.6	77.9	80.3	79.1	84.0	81.2	86.0	83.1	87.3	84.4	88.0	85.4	85.2	84.8	82.8	83.9	77.8	81.8	76.0	79.9
25	78.2	79.4	76.0	78.8	76.6	78.0	80.8	79.3	84.3	81.3	86.3	83.2	87.9	84.5	87.9	85.4	85.2	84.9	82.4	83.9	77.8	81.8	76.4	79.7
26	77.9	79.4	75.9	78.6	76.4	77.9	81.0	79.3	84.5	81.3	86.6	83.2	87.5	84.6	87.9	85.3	85.0	84.8	82.2	83.9	78.3	81.9	76.7	79.5
27	77.4	79.5	75.9	78.6	76.3	78.0	81.1	79.3	84.3	81.3	86.6	83.2	87.5	84.5	87.8	85.4	84.8	84.8	81.8	83.8	78.6	81.4	77.3	79.4
28	77.0	79.4	76.0	78.4	76.3	78.0	80.8	79.3	84.3	81.3	86.6	83.2	87.6	84.5	87.7	85.4	85.1	84.7	81.6	83.7	78.5	81.4	77.8	79.4
29	76.9	79.3	-	-	76.2	78.0	81.2	79.5	84.6	81.6	85.9	83.3	87.7	84.6	87.6	85.4	85.1	84.7	81.6	83.7	78.4	81.2	77.7	79.4
30	76.6	79.4	-	-	76.3	78.0	81.7	79.5	84.9	81.7	85.5	83.3	87.7	84.7	87.3	85.4	84.9	84.7	81.7	83.7	78.8	81.2	77.4	79.4
31	76.3	79.3	-	-	76.3	78.0	-	-	85.0	81.8	-	-	88.1	84.7	87.2	85.4	-	-	81.8	83.5	-	-	77.3	79.4
Mean	77.8	79.7	76.5	78.9	76.1	78.1	79.4	78.6	83.4	80.7	85.6	82.7	87.0	84.0	88.3	85.3	85.7	85.1	83.5	84.2	79.8	82.6	77.2	80.4
																					Year		81.7	81.7

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

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

252 ESKDALEMUIR

1937

Month	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A
1	77.0	74.1	66.5	69.5	72.1	76.5	78.9	79.2	86.8	83.5	77.9	72.1
2	73.2	71.0	71.1	75.1	72.5	71.0	86.4	82.0	85.2	82.1	77.6	75.0
3	78.1	75.6	71.9	75.7	72.8	79.3	86.2	79.1	79.6	75.0	76.0	72.6
4	79.6	79.0	72.5	77.2	75.9	84.3	82.7	-	79.4	72.3	69.7	65.9
5	72.5	72.4	72.0	76.3	71.4	84.1	73.2	86.8	84.7	69.4	78.5	65.1
6	75.0	73.4	70.4	76.9	71.7	83.3	83.7	81.1	86.5	72.2	74.9	71.2
7	74.5	68.9	67.8	80.5	81.4	83.3	84.1	75.2	80.2	81.0	79.7	63.4
8	64.9	73.0	64.8	79.5	79.6	79.6	73.8	76.7	79.4	81.0	79.7	71.3
9	76.9	71.9	66.2	78.9	72.0	80.7	81.1	80.4	79.6	74.0	68.4	70.3
10	77.1	71.1	69.2	81.1	77.8	72.2	78.9	81.1	71.7	71.3	67.8	65.6
11	77.6	71.7	67.8	72.2	77.9	79.1	77.5	76.8	72.5	71.7	71.6	61.2
12	79.4	65.0	70.6	73.4	75.8	83.2	83.9	81.5	74.3	68.4	69.1	65.8
13	79.5	72.9	71.2	76.6	77.2	83.7	86.8	84.7	80.8	73.8	62.8	57.1
14	65.3	73.6	70.9	76.3	75.2	84.4	86.7	86.0	74.8	78.2	63.1	72.8
15	68.1	73.6	67.8	77.0	72.9	77.8	82.5	81.7	81.8	77.9	65.7	71.3
16	71.4	75.2	61.0	78.2	78.0	79.9	80.4	75.3	72.8	79.1	74.0	66.2
17	69.5	72.2	73.0	76.6	76.2	76.2	77.9	83.0	76.7	76.6	73.2	70.1
18	74.9	68.1	73.9	74.0	70.9	71.2	87.7	83.8	80.8	78.4	-	59.9
19	67.3	72.9	74.3	73.1	74.2	75.3	83.5	79.7	71.0	71.4	72.7	64.3
20	67.0	73.0	75.8	74.0	74.8	77.1	76.1	79.0	73.3	72.0	69.6	63.7
21	74.7	71.6	73.9	73.5	76.9	72.2	84.2	75.5	72.9	79.9	66.1	68.6
22	73.6	69.9	59.7	77.0	78.7	76.0	83.1	76.9	74.8	79.7	66.6	73.1
23	75.3	69.1	68.6	78.1	78.9	76.9	80.5	80.9	76.0	72.2	70.7	73.4
24	78.0	67.1	66.5	78.6	78.1	76.5	83.0	82.2	85.1	76.6	65.3	76.9
25	73.2	73.2	71.3	76.3	82.0	78.9	81.6	81.3	74.1	71.3	73.3	72.7
26	71.7	73.0	64.7	67.8	73.7	79.2	75.7	80.9	72.4	78.0	75.7	74.0
27	69.5	72.2	70.7	68.1	73.2	82.4	75.1	70.9	76.8	71.2	69.3	78.4
28	72.5	70.2	63.3	71.1	76.7	83.8	77.9	74.6	75.3	75.0	72.3	77.2
29	70.4	64.5	73.3	73.3	81.2	78.9	76.6	80.7	74.8	72.2	73.5	71.8
30	68.1	64.0	72.9	78.3	78.3	72.0	79.3	82.7	79.2	77.6	81.2	72.9
31	71.0	-	69.6	-	73.5	-	78.2	65.2	-	74.6	-	73.2
Mean	73.1	72.0	68.2	75.3								



Table with 21 columns (Day, Cloud Forms, Cloud Amount, Visibility, Precipitation, Remarks) for March 1-31, 1937. Includes cloud codes like St:Sc, Sc, Cb:Sc:Ancl and weather remarks such as '1 cm. bc, l, p\*0 a: bc\*0, p\*0 p: bc, b W n.'

Table with 21 columns (Day, Cloud Forms, Cloud Amount, Visibility, Precipitation, Remarks) for April 1-30, 1937. Includes cloud codes like St:Cs:Cl, Frst:Sc:Cs:Cl and weather remarks such as '1 cm, cz0 a: cz0 p: cm0, om0 n.'

Summary table for the month with columns: Day, Cloud Forms, Cloud Amount, Visibility, Precipitation, Remarks on the Weather of the Day.

For international symbols of cloud and weather see p.20,22. For visibility see p.21. ... no precipitation at time of observation

Table with 21 columns: Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h-21h), Visibility (7h-21h), Precipitation (7h-21h), and Remarks on the Weather of the Day. Contains data for days 1 through 31.

Table with 21 columns: Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h-21h), Visibility (7h-21h), Precipitation (7h-21h), and Remarks on the Weather of the Day. Contains data for days 1 through 30.

For international symbols of cloud and weather see pp.20,22. For visibility see p.21. ... no precipitation at time of observation

Table for July 1937 with columns for Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h-21h), Visibility (7h-21h), Precipitation (7h-21h), and Remarks on the Weather of the Day.

Table for August 1937 with columns for Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h-21h), Visibility (7h-21h), Precipitation (7h-21h), and Remarks on the Weather of the Day.

For international symbols of cloud and weather see pp.20,22. For visibility see p.21. ... no precipitation at time of observation



Day	Cloud Forms			Cloud Amount (All Forms)						Visibility					Precipitation					Remarks on the Weather of the Day		
	7h	13h	18h	7h	9h	13h	15h	18h	21h	7h	9h	13h	15h	18h	21h	7h	9h	13h	15h		18h	21h
1	Frnb:Ns	Sc:Cl	Cu:Ac	10	10	9	5	7	7	I	I	k	k	k	k	●	...	...	...	...	...	o, cm, a: c, bc p: bc n.
2	Frnb:Ns	Cu:Sc	Cu:Sc	10	3	2	6	5	7	I	l	k	k	k	j	●	...	...	...	...	p	c, bcp, a: bc p: bc n.
3	St:Ac	Frst:Cv:Sc	Frst:Sc	9	6	8	3	7	1	J	J	k	I	k	I	●	...	...	...	...	...	ci, p, a: cp, p: bc, b n.
4	Frst:Sc	Cu:Sc:Ac	St:Sc:As	9	9	5	7	10	10	J	J	k	k	k	I	●	...	...	...	...	...	p, bc a: bc, c p: c, cm n.
5	Ns	Ns	Frnb:Ns	10	10	10	10	10	10	F	G	G	I	J	F	●	●	●	●	●	●	o, m, a: o, ci, p: ci, m n.
6	Ns	Ns	St	10	10	10	10	10	10	h	h	h	h	h	j	d	id	●	...	d	...	oid, m, a: o, od, m p: od, o, m, bc n.
7	St:Sc:Cl	St:Sc:As	Ns	7	9	9	10	10	6	J	k	k	J	J	J	...	...	...	...	...	...	bc, cp, a: ci, m p: o, m, bc n.
8	Sc:Cl	Sc:Oc:Cl	Cu:Sc:Cl	1	7	6	3	8	2	k	k	k	k	l	k	...	...	...	...	...	...	b, bcp, a: bc, c p: c, b n.
9	St:Sc:Ac	Cu:Sc	Sc	7	7	5	4	6	1	k	k	l	l	l	l	...	...	...	...	...	...	bc, bcy a: bcy, bc p: bc, b n.
10	Cu:Sc	Sc	Cu:Sc	4	1	5	7	4	0	k	J	k	k	l	l	...	...	...	...	...	...	bc, bcy a: bcy, bc p: bc, b n.
11	Sc:Cl	Cu:Sc:Cl	Frst:Ac:Cl	1	2	4	2	4	5	l	k	l	l	l	k	...	...	...	...	...	...	b, bcy a: by, bc p: bc n.
12	St:Sc:Ns	Sc	St:Sc:Ns	9	10	10	10	10	10	k	I	h	h	I	G	●	●	id	d	...	d	c, id, m, a: cd, o, cm, p: cm, od, m n.
13	Ns	Frnb	Frnb:Ns	10	9	10	10	9	7	I	I	h	J	J	k	...	...	d	d	...	d	c, id, m, a: cd, i, p: ci, o, p, 2130-2230 n.
14	Sc	Frst:Sc:As	Frnb:Sc	10	9	9	10	9	10	l	J	l	J	l	J	...	...	id	●	...	...	c, p, a: ci, p: ci, o n.
15	Frst:Sc	St:Sc	Frnb	9	10	8	6	9	6	J	J	l	l	J	J	...	●	...	...	p	...	c, p, a: bc, bc p: cp, bc < n.
16	St:Sc:As	Cu:Sc:Ac:Cl	Cb:Sc:Ac:Cl	10	9	8	9	6	8	h	k	k	k	k	k	...	...	...	...	...	...	c, m, cy a: cy, p, p: bc, c T n.
17	Sc:Ac:Cs:Cl	St:Sc:Ns	Frnb	8	9	9	10	10	9	I	I	J	k	I	I	...	...	id	●	...	...	cm, p, a: ci, o, m p: c, o, i, m n.
18	St:Sc:As:Ac	Cu:Sc:Ac	Sc:Ac:Cl	1	7	7	6	2	1	J	J	J	k	k	k	...	...	...	...	...	...	c, bc a: bc, b p: b n.
19	Ac	Cb:Sc	Frnb:Cu	1	1	9	7	9	5	k	J	k	J	J	J	...	...	...	...	...	...	bl, cp, a: ci, o, bc T p: ci, bc n.
20	Sc:Cl	St:Sc	Sc:Ac:Cl	4	5	8	9	3	8	k	k	k	k	k	k	...	...	...	...	...	...	bc, c a: c, bc p: bc, c n.
21	Sc:Cl	Sc:As:Ac	St:Sc:Ac:Cl	5	8	9	9	8	4	l	J	k	k	k	k	...	...	...	...	...	...	bc, c a: c p: c, bc n.
22	Frst:St:As	Sc	Cl	10	10	7	8	1	2	h	I	k	k	J	J	...	...	...	...	...	...	cm, bc a: bc, b p: b n.
23	St	Ns	Frst	10	10	10	10	10	10	E	F	G	I	I	I	...	...	d	...	id	...	ofe, d, m, a: od, ci, m, p: c, o, cm n.
24	Ns	Sc:Ac:Cl	Sc:Ac	10	10	8	6	9	10	G	G	J	k	J	J	...	●	...	...	...	...	c, m, a: bc, c p: c, c n.
25	Frst:Sc	Cu:Sc	Sc:As:Cs:Cl	8	6	9	8	7	7	J	k	J	k	l	k	...	...	...	...	...	...	c, bcp, a: c, bc p: bc n.
26	St:Sc	Ns	St:Ac:Cs:Cl	10	10	10	10	9	7	I	I	I	G	h	h	...	...	d	d	...	...	c, m, od, m, a: od, m, cm, p: cm n.
27	Cc:Cl	Ac:Cl	Cu:Sc:Cl	2	1	1	1	9	9	F	I	I	I	h	h	...	...	...	...	...	...	bc, bm, a: bm, cz, p: c, bc, cm n.
28	St:Sc:Cs:Cl	Cu:Cl	Sc:Cs:Cl	4	3	2	8	9	1	k	l	l	l	l	k	...	...	...	...	...	...	bc, by a: by, c p: bc, b n.
29	Sc	Sc	Sc	9	9	9	9	10	10	k	l	l	l	k	k	...	...	...	...	...	...	c a, p and n.
30	Sc:Ac:Cl	Sc:Ns:As:Cs	St:Sc:Ns	7	7	9	9	10	10	J	J	J	I	I	h	p	...	...	p	...	...	bcp, c a: cp, o, m p: c, o, m n.
Mean Cloud Am't				7.4	7.2	7.5	7.4	7.7	6.4													

1	Ns	Frnb:Ns	Frnb	10	10	10	10	10	10	I	k	G	G	G	G	●	id	●	...	...	...	ci, o, m, a: cid, o, m, p: c, m n.
2	St	Frst:Sc:Ns	Sc	10	10	10	10	10	10	g	g	h	h	h	h	...	...	...	...	...	...	o, ci, o, m, a: ci, o, m, p: cm n.
3	Sc:Ac:Cl	St:Sc	Sc:Ac	7	9	9	7	1	1	k	k	k	k	k	k	...	...	...	...	...	...	bc, c a: bc, b p: b, 1930 onwards n.
4	Sc:Cl	Cu:Cl	Sc:Cl	1	2	5	2	2	0	k	k	l	l	l	l	...	...	...	...	...	...	b, bc, bcy a: bcy, b p: b, bc, 2245-0001 n.
5	Cl	Cu:Sc:Cl	Sc	1	1	6	7	4	1	k	k	k	J	J	J	...	...	...	...	...	...	bl, bc, bc a: bc, c p: bc, bc n.
6	Frst:Sc	Sc	St:Sc	10	9	10	10	10	10	J	J	k	J	I	i	...	...	...	...	...	...	c, c a: c, cid, m, p: cm n.
7	Sc	Sc	St:Sc	10	10	10	9	10	10	J	h	J	J	J	i	...	p	...	...	id	...	cp, c a: c, cid, p: cid, cm n.
8	Frst:Sc	Frst:Sc	Frst:Sc	9	10	9	9	9	9	J	J	k	J	J	J	...	id	id	...	...	...	cid, i, a: ci, o, c p: c n.
9	Sc	Frst:Sc	Frst:Sc	1	9	9	9	8	1	J	k	l	J	J	J	...	...	...	...	...	...	b, bc, c a: c, bcp, p: c, m n.
10	St:Sc:Cs:Cl	Frst:Sc	Cl	7	9	9	6	1	D	I	k	J	J	I	I	...	...	...	...	...	...	bef, cy a: cy, b p: b, bm, n.
11	Sc	Sc	Sc	9	9	10	10	9	0	k	k	l	J	J	J	...	...	...	...	...	...	c, c a: c p: c, bl, n.
12	Cl	Frst:Sc:Cl	Cl	1	0	1	1	1	10	k	J	J	J	G	F	...	...	...	...	...	...	b a: b, bm, p: b, cm n.
13	Frst:Sc:Cl	St	St	9	10	10	10	10	7	J	J	J	J	J	i	...	...	d	...	d	...	cm, d, m, a: cd, id, m, p: cid, bcm n.
14	Sc:Cl	Frst:Sc	Frst	9	9	9	10	10	3	J	J	J	J	J	J	...	...	...	...	...	...	c, o, c a: ci, o, p: ci, bc n.
15	St:Sc	Sc:Cs:Cs:Cl	Sc	9	9	6	8	10	10	J	J	J	J	J	i	...	...	id	d	...	...	cp, bc a: bc, cid, p: cid, d, m n.
16	St:Ac:As:Cl	St:Sc	St:Sc	9	9	10	10	10	10	I	J	J	J	J	J	...	...	...	...	...	...	cm, c a: c, ci, o, p: c n.
17	Frst:Sc:Ac:Cl	Sc:As	Sc:As:Ac	5	8	10	9	8	7	I	J	J	J	J	J	...	...	...	...	...	...	bcm, c a: c p: c, bc n.
18	Sc	Sc	Sc	10	9	8	9	8	9	k	k	k	I	I	g	...	...	...	...	...	...	c a: cz, p: bz, cm n.
19	---	Cl	Ac:Cl	0	1	1	1	2	6	E	E	I	I	I	I	...	...	...	...	...	...	Fe, bf, bz, a: bz, p: bz, bcm, n.
20	St	St	St	10	10	10	10	10	10	E	F	F	F	f	f	...	...	...	...	d	d	of, om a: om, d, m p: od, m n.
21	Frnb:Ns	Ns	Ns	10	10	10	10	10	10	h	h	G	F	g	g	...	d	d	...	id	d	oi, d, m, a: od, id, m, p: od, m n.
22	Ns	Frnb:Ns	Frnb:Ns	10	10	10	10	10	6	G	J	J	J	J	J	...	p	...	...	...	...	o, m, p a: c, c, m, p: c, m, bc n.
23	St	Frnb	Frnb	9	9	10	10	10	10	J	I	I	I	h	h	...	...	...	...	...	...	ci, i, m, a: ci, o, m, p: o, m, n.
24	Sc	Cu:Cs:Cl	Frst:Sc	10	3	4	4	2	3	l	l	l	l	l	k	...	...	...	...	...	...	c, bcy a: bcy, b p: b, bc n.
25	Sc:Ns	St:Sc	St:Sc	10	10	10	8	9	9	I	h	I	I	I	I	...	...	...	...	...	...	ci, o, m, a: ci, o, m, p and n.
26	Sc	Frnb	Sc	10	10	10	10	8	2	l	J	I	h	J	k	...	...	...	...	...	...	ci, o, m, a: c, p, p: bc, b n.
27	As:Ac:Cl	Sc:Ac:Cl	Sc:Ac:Cl	3	7	1	2	6	10	l	k	k	k	k	k	...	...	...	...	...	...	bc, b a: by, bc p: bc, c n.
28	Frnb	St:Sc	Frst:St	10	10	9	10	10	10	h	h	J	J	J	J	...	...	...	...	...	...	o, m, a: c, c, cm, p: bc, c n.
29	Sc	Frnb:Ns	St	10	10	10	10	10	10	J	I	I	I	F	G	...	...	id	...	id	...	c, o, id, m, a: c, o, id, m, p: cid, m n.
30	St	Ns	Frst	10	10	10	10	10	10	g	h	G	G	i	i	...	...	id	...	id	...	oid, m, a: o, i, m, p: ci, o, m n.
31	Fog	Sc:Cl	Sc	10	10	5	9	9	10	C	D	k	J	J	J	...	...	...	...	...	...	Fe, fe, bc a: bc, c p: bc, c n.
Mean Cloud Am't				7.7	8.1	8.1	7.7	7.2														
Day	7h	13h	18h	7h	9h	13h	15h	18h	21h	7h	9h	13h	15h	18h	21h	Remarks on the Weather of the Day						
	Cloud Forms			Cloud Amount (All Forms)						Visibility					Precipitation							

For international symbols of cloud and weather see pp.20,22. For visibility see p.21. ... no precipitation at time of observation

Table for November 1937 with columns for Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h-21h), Visibility (7h-21h), Precipitation (7h-21h), and Remarks on the Weather of the Day.

Table for December 1937 with columns for Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h-21h), Visibility (7h-21h), Precipitation (7h-21h), and Remarks on the Weather of the Day.

For international symbols of cloud and weather see pp.20,22. For visibility see p.21. ... no precipitation at time of observation

265. ESKDALEMUIR

1937

Month	JANUARY Factor 4-73				FEBRUARY Factor 4-80				MARCH Factor 4-91				
	Hour G.M.T.	2-3h	8-9h	14-15h	20-21h	2-3h	8-9h	14-15h	20-21h	2-3h	8-9h	14-15h	20-21h
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	-140	125	Z-	Z±	455	170	265	290	510	350	Z±	Z+	Z+
2	15	45	20	75	Z±	340	190	Z-	(480)	175	240	555	555
3	60	30	120	65	185	355	Z-	Z-	260	220	Z±	280	280
4	-150	-35	Z-	105	185	90	165	220	270	320	190	180	180
5	100	140	Z±	Z-	140	(290)	145	225	0	130	110	170	170
6	Z-	-20	145	Z±	35	185	125	390	115	80	110	180	180
7	Z±	Z+	125	185	400	625	480	110	90	130	155	250	250
8	85	125	185	120	Z±	-20	Z-	135	115	130	270	525	525
9	80	60	-70	Z-	50	280	Z-	Z±	385	200	215	170	170
10	-15	70	130	240	Z±	375	65	260	105	90	130	100	100
11	170	385	235	120	200	270	275	275	160	(650)	Z+	Z+	Z+
12	140	Z-	Z-	-360	135	215	350	275	Z+	Z+	Z+	Z+	Z+
13	165	140	210	400	130	500	655	275	Z±	50	320	155	155
14	300	385	410	Z+	215	265	175	615	90	105	410	140	140
15	415	430	310	200	210	190	150	Z-	535	90	280	350	350
16	40	Z-	70	45	95	Z+	Z±	265	325	220	Z-	40	40
17	320	125	Z-	50	Z-	185	190	380	Z-	Z-	Z-	370	370
18	Z-	125	190	510	60	Z-	120	145	365	Z-	-	-	-
19	130	260	290	435	105	30	150	Z+	-	-	30	225	225
20	315	245	365	Z-	Z+	170	Z+	Z+	325	460	405	335	335
21	Z-	255	Z-	450	135	115	195	250	(-110)	(20)	145	360	360
22	Z-	100	65	Z±	225	200	250	325	145	280	Z+	410	410
23	105	290	Z-	100	215	155	295	435	Z-	370	260	240	240
24	110	-55	Z-	120	375	290	355	345	370	565	Z-	200	200
25	170	365	40	490	25	120	255	Z+	110	210	Z±	Z+	Z+
26	65	-5	150	75	160	215	135	Z±	565	155	305	240	240
27	85	-20	65	470	215	130	Z+	-385	170	155	170	180	180
28	60	70	45	55	-	-	380	350	400	155	100	235	235
29	35	95	115	260	-	-	-	-	120	115	185	420	420
30	110	215	20	180	-	-	-	-	270	230	175	160	160
31	Z+	265	365	Z-	-	-	-	-	180	230	290	200	200
(a)	140	189	167	216	180	240	244	293	258	218	214	257	257
(b)	111	157	138	227	219	259	287	310	228	165	216	264	264
Mean	(a) 178 (b) 158				(a) 239 (b) 269				(a) 237 (b) 218				
Month	APRIL Factor 4-93				MAY Factor 4-91				JUNE Factor 4-88				
Hour G.M.T.	2-3h	8-9h	14-15h	20-21h	2-3h	8-9h	14-15h	20-21h	2-3h	8-9h	14-15h	20-21h	
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	235	220	185	400	170	120	130	170	30	75	Z-	190	
2	85	90	220	135	195	120	155	185	305	145	145	Z-	
3	285	190	80	335	215	180	150	185	165	Z±	35	190	
4	(160)	(15)	190	100	40	260	Z±	220	90	225	210	205	
5	70	115	180	170	150	120	Z±	Z-	115	205	245	70	
6	(95)	0	225	125	130	180	105	260	-95	380	295	170	
7	155	90	140	140	95	90	25	290	150	420	-	-	
8	Z-	80	Z-	230	300	350	170	365	-	-	130	190	
9	245	75	265	Z-	260	90	80	155	120	125	155	265	
10	5	120	125	230	80	-145	-40	65	180	320	-	-	
11	105	100	80	160	65	90	60	140	-	-	60	395	
12	120	210	110	100	115	120	50	300	130	460	145	145	
13	70	80	-20	220	90	110	120	190	150	70	120	205	
14	10	Z±	260	170	125	160	50	160	125	220	255	115	
15	180	205	95	165	150	200	100	100	290	220	215	255	
16	Z-	80	80	-180	45	85	65	150	115	125	125	390	
17	Z-	-35	95	35	190	275	245	175	160	170	85	245	
18	130	115	60	120	130	130	150	190	265	255	220	70	
19	140	140	Z-	-5	50	70	145	Z-	155	140	120	-60	
20	145	140	Z±	275	100	285	130	100	120	135	110	230	
21	160	150	135	-5	500	Z-	140	160	225	145	110	160	
22	150	255	140	150	Z-	260	120	410	160	170	105	215	
23	110	110	85	315	Z+	145	160	220	160	110	60	105	
24	520	175	200	240	120	210	(Z-)	110	125	80	115	120	
25	100	140	115	80	145	Z-	130	255	150	180	175	245	
26	90	120	260	325	185	135	Z-	365	230	125	140	215	
27	285	120	130	35	220	105	120	150	135	65	55	110	
28	85	150	150	130	210	165	185	295	105	Z-	25	75	
29	110	260	190	360	90	270	145	280	60	-105	160	130	
30	310	260	190	255	425	190	Z-	160	120	-125	170	170	
31	-	-	-	-	155	50	145	150	-	-	-	-	
(a)	154	136	157	184	172	163	123	205	153	187	140	187	
(b)	157	143	146	177	160	144	111	193	141	163	154	172	
Mean	(a) 158 (b) 156				(a) 166 (b) 152				(a) 167 (b) 157				

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

Month	JULY Factor 4.84				AUGUST Factor 4.81				SEPTEMBER Factor 4.80				
	Hour G.M.T.	2-3h	8-9h	14-15h	20-21h	2-3h	8-9h	14-15h	20-21h	2-3h	8-9h	14-15h	20-21h
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	55	155	90	320	185	145	120	115	110	Z-	150	245	
2	70	195	5	225	235	70	95	170	Z-	195	190	195	
3	40	205	135	125	320	130	145	160	100	100	Z-	365	
4	180	Z <sup>+</sup>	50	170	105	175	35	240	230	175	195	Z-	
5	205	215	(195)	195	85	170	-	370	Z-	15	Z-	255	
6	195	185	175	225	150	200	195	Z+	115	80	90	Z-	
7	285	140	Z-	215	135	220	170	270	105	185	40	50	
8	175	145	170	105	305	290	125	270	85	110	225	215	
9	100	Z-	170	195	60	115	55	270	55	120	165	420	
10	145	Z-	80	280	70	240	150	175	185	265	175	235	
11	310	195	160	165	110	320	235	-	180	250	215	245	
12	65	210	215	170	45	95	145	165	50	220	165	170	
13	150	50	110	230	80	160	110	215	60	195	60	240	
14	245	155	135	Z <sup>+</sup>	(20)	Z <sup>+</sup>	95	240	100	155	120	75	
15	145	120	115	235	275	115	Z-	350	205	205	165	305	
16	245	180	215	370	240	125	140	270	155	205	130	40	
17	270	130	135	215	155	125	90	175	(40)	(140)	(85)	110	
18	175	160	155	220	(15)	200	100	Z-	90	245	135	150	
19	185	195	(155)	180	135	95	160	270	105	80	Z-	175	
20	105	-	-	-	210	175	280	230	95	165	225	355	
21	-	-	20	100	205	110	135	190	165	175	210	315	
22	65	Z-	50	145	115	175	225	280	180	110	175	50	
23	200	125	Z-	-250	(35)	(40)	210	420	20	90	315	225	
24	75	145	55	195	165	135	110	215	130	235	185	135	
25	110	155	180	285	165	145	140	(20)	120	150	130	230	
26	225	115	215	360	75	50	160	175	90	70	35	490	
27	100	125	125	220	165	115	185	400	320	190	265	240	
28	245	55	115	90	65	115	165	420	120	170	240	555	
29	(10)	10	80	170	60	50	Z-	220	100	175	150	345	
30	-	50	155	295	-100	40	110	90	115	220	245	Z <sup>+</sup>	
31	605	400	120	245	-	-	145	145	-	-	-	-	
(a)	171	153	127	212	137	143	147	233	122	162	166	238	
(b)	174	159	138	216	137	134	145	226	120	174	164	236	
Mean	(a) 166 (b) 172				(a) 165 (b) 161				(a) 172 (b) 173				
Month	OCTOBER Factor 4.78				NOVEMBER Factor 4.78				DECEMBER Factor 4.83				
Hour G.M.T.	2-3h	8-9h	14-15h	20-21h	2-3h	8-9h	14-15h	20-21h	2-3h	8-9h	14-15h	20-21h	
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	140	135	100	220	260	150	300	300	205	155	185	395	
2	215	Z-	255	320	215	145	270	325	20	Z-	-115	150	
3	325	220	175	(95)	300	490	250	575	130	90	245	200	
4	(30)	(15)	145	205	385	320	375	420	210	150	525	600	
5	120	185	180	430	155	450	130	265	150	205	250	180	
6	535	270	75	250	240	265	235	275	20	135	280	180	
7	125	Z+	110	125	75	140	95	85	115	410	Z <sup>+</sup>	Z <sup>+</sup>	
8	95	95	100	205	180	205	130	45	Z-	305	300	470	
9	115	130	80	180	200	300	240	260	115	355	220	310	
10	40	140	385	505	250	240	170	275	105	405	Z <sup>+</sup>	235	
11	215	265	130	280	220	480	220	345	175	Z+	Z+	Z+	
12	270	390	415	165	160	185	260	485	-	-	-	590	
13	240	175	85	130	145	135	290	215	85	Z <sup>+</sup>	195	235	
14	65	140	90	155	250	145	265	175	Z-	Z <sup>+</sup>	-305	195	
15	165	175	115	145	335	285	285	280	10	145	495	485	
16	135	(45)	70	140	155	490	135	445	Z <sup>+</sup>	270	645	385	
17	165	290	190	225	370	265	280	380	235	240	575	485	
18	180	115	-	195	180	260	260	305	230	265	505	400	
19	590	500	425	400	0	Z+	475	240	50	100	305	610	
20	405	520	165	85	195	270	265	500	335	315	420	345	
21	150	50	75	120	435	260	225	425	145	Z-	60	125	
22	180	155	145	400	135	495	650	Z+	700	380	205	-40	
23	135	700	240	Z <sup>+</sup>	360	225	230	200	60	615	400	320	
24	Z+	175	245	265	165	175	295	420	-65	310	15	145	
25	Z-	Z-	Z-	225	335	180	130	30	475	440	460	295	
26	50	Z-	Z-	225	205	105	215	270	610	(830)	375	495	
27	80	225	290	330	330	75	135	195	335	615	710	525	
28	Z <sup>+</sup>	Z-	50	340	110	115	170	305	210	135	125	265	
29	245	140	20	405	115	115	330	510	190	190	140	305	
30	75	315	165	-15	300	Z-	405	Z-	Z-	70	165	285	
31	450	385	175	375	-	-	-	-	85	115	395	315	
(a)	198	229	167	247	225	252	255	305	200	290	328	340	
(b)	213	210	167	237	234	243	226	308	215	289	341	341	
Mean	(a) 210 (b) 207				(a) 259 (b) 253				(a) 289 (b) 297				
									Annual Means (a) 176 (b) 176				
									(a) 201 (b) 198				

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<sup>+</sup> Indeterminate in magnitude and sign  
 (a) Mean of all positive readings  
 (b) Mean from all complete days using both positive and negative readings

POTENTIAL GRADIENT (reduced to level surface): DIURNAL INEQUALITIES (in volts per metre)  
The departures from the mean of the day are adjusted for non-cyclic change †

266 ESKDALEMUIR

\* Oa Days Only

1937

MONTH AND SEASON	Hour 0 to 1	G.M.T. 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 12	12 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	Non Cyclic Change†	No. of Days Used	Mean Values
Jan.	v/m -18	v/m -32	v/m -108	v/m -109	v/m -63	v/m -73	v/m -35	v/m +18	v/m +8	v/m +61	v/m +2	v/m -43	v/m -3	v/m -49	v/m +5	v/m -3	v/m +38	v/m +94	v/m +100	v/m +80	v/m +62	v/m +76	v/m +25	v/m +4	v/m -166	2	v/m 314
Feb.	-50	-36	-50	-97	-32	+103	+12	-53	-60	-9	-58	-4	+88	+15	-3	+18	+43	+46	0	+39	+52	+34	+16	-15	+56	2	281
Mar.	+2	+12	+5	-26	-26	-21	-12	-1	-56	-63	-52	-46	-41	-31	-20	-27	+23	+42	+84	+68	+66	+53	+40	+36	-27	6	229
Apr.	+14	+11	-17	-11	-9	-19	-11	-15	+3	-31	+3	-6	+1	0	-7	-6	-26	-22	-40	+12	+14	+81	+60	+31	+72	5	211
May	+6	+14	-3	-18	-9	-10	+20	+39	+13	-15	-30	-39	-34	-33	-11	-2	0	+7	+27	+33	+18	+39	+7	-18	-19	6	142
June	0	+9	+30	+13	+13	-38	-23	0	-8	-2	-8	-8	-11	-25	-29	-21	-13	-5	+17	+27	+23	+19	+27	+11	+36	7	160
July	-1	-5	+44	+95	+74	+42	+58	+42	-32	-61	-75	-81	-70	-69	-58	-51	-30	-2	+17	+36	+47	+49	+19	+9	-31	6	213
Aug.	+9	+13	-21	-34	-43	0	+6	-9	-16	-22	-21	-15	-17	-21	-20	-16	-19	-5	+18	+51	+55	+62	+46	+14	-33	9	192
Sept.	-12	-45	-85	-70	-99	-93	-59	-26	-16	-3	-9	-35	-34	+1	-2	0	+22	+60	+75	+133	+144	+116	+29	+5	-56	7	201
Oct.	-14	-25	-13	-17	-21	-30	-17	+24	+18	-27	-48	-52	-35	-41	-25	-27	-7	+14	+72	+100	+68	+60	+44	+1	+38	11	187
Nov.	-8	-42	-37	-60	-63	-84	-38	-31	+3	-11	-54	-43	-41	-37	-23	+4	+44	+75	+112	+110	+84	+62	+56	+11	-25	18	269
Dec.	-16	-90	-82	-81	-54	-69	-77	-71	-58	-52	-29	-12	+46	+71	+82	+39	+56	+116	+101	+75	+62	+11	+9	+21	+52	7	299
Year	-7	-18	-28	-35	-28	-23	-15	-7	-17	-20	-32	-32	-13	-18	-9	-8	+11	+35	+49	+64	+58	+55	+31	+9	-	-	225
Winter	-23	-50	-69	-87	-53	-26	-35	-34	-27	-3	-35	-25	+23	0	+15	+15	+45	+83	+78	+76	+65	+46	+27	+5	-	-	291
Equinox	-3	-12	-27	-31	-39	-41	-25	-5	-13	-31	-27	-35	-27	-18	-13	-15	+3	+23	+48	+78	+73	+77	+43	+18	-	-	207
Summer	+3	+8	+13	+14	+9	-1	+15	+18	-11	-25	-33	-36	-33	-37	-29	-23	-15	-1	+20	+37	+36	+42	+25	-4	-	-	177

267 ESKDALEMUIR

\* 1a and 2a Days Only

1937

MONTH AND SEASON	Hour 0 to 1	G.M.T. 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 12	12 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	Non Cyclic Change†	No. of Days Used	Mean Values
Jan.	v/m -12	v/m -44	v/m -43	v/m -48	v/m -23	v/m -20	v/m -37	v/m -27	v/m -17	v/m -4	v/m -11	v/m +6	v/m +51	v/m +56	v/m +15	v/m -6	v/m -23	v/m -3	v/m +56	v/m +40	v/m +54	v/m +34	v/m +14	v/m -2	v/m -29	5	v/m 124
Feb.	-25	-197	-129	+32	+153	+148	+142	-41	-53	+5	+4	-60	-63	-38	-22	-20	-140	-106	+42	+151	+170	+151	+49	-49	-40	2	288
Mar.	+37	+19	+94	+63	+46	+4	-106	-148	-79	-29	-20	-17	+6	-13	-22	-16	-25	-57	-18	+20	+55	+52	+108	+44	+43	5	203
Apr.	-24	+24	+43	+22	+6	+42	+13	+6	-15	+4	+8	-5	-6	+25	-19	-40	-25	-18	+8	-14	-6	-14	-5	-11	+31	7	161
May	+47	+45	+10	+22	+27	+21	+33	-8	-18	-8	-24	-47	-69	-96	-73	-87	-32	-31	+24	+39	+61	+54	+54	+36	+65	7	110
June	+15	+7	-17	-32	+18	+38	+51	-5	+69	+38	-26	-53	-54	-15	-30	+22	+108	+70	+15	-33	-25	-99	-84	+31	+21	4	160
July	-16	+16	-5	+6	+24	-13	-46	-58	-18	-36	-36	-26	-41	+1	+9	+4	-30	-21	+76	+86	+12	+86	+15	+14	-28	3	156
Aug.	-9	-32	+6	-8	-26	-25	+7	-40	-29	-23	+14	-10	-27	-16	-33	-21	-20	+25	+25	+49	+83	+61	+44	+16	+1	7	146
Sept.	-17	-23	-42	-45	-48	-41	-51	+10	+22	+59	+42	+31	-35	-64	-63	-8	-6	-20	+12	+19	+66	+100	+105	+8	+78	4	150
Oct.	-45	-21	+81	+24	-24	-2	+13	+63	+73	+5	-38	+2	-60	+21	-29	-17	-63	+13	+43	-7	-35	+7	+16	-14	-92	4	222
Nov.	+21	+11	+35	-8	-20	-34	-35	-63	-19	-33	-9	-24	-13	-9	-13	-6	-13	+14	+43	+42	+12	+36	+52	+23	-2	6	179
Dec.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-
Year	-3	-18	+3	+3	+12	+11	-1	-28	-8	-2	-9	-18	-28	-13	-25	-18	-24	-12	+30	+36	+41	+43	+33	+9	-	-	173
Winter	-5	-77	-46	-8	+37	+31	+23	-44	-30	-11	-5	-26	-8	+3	-7	-11	-59	-32	+47	+78	+79	+74	+38	-9	-	-	197
Equinox	-12	0	+44	+16	-5	+1	-33	-17	0	+10	-2	+3	-24	-8	-33	-20	-30	-21	+11	+5	+20	+36	+56	+7	-	-	184
Summer	+9	+9	-1	-3	+11	+5	+11	-28	+1	-7	-18	-34	-48	-31	-32	-21	+7	+11	+35	+35	+33	+25	+7	+24	-	-	143

† See page 23

\* For explanation of Oa and 2a Days see page 166

Note.- Winter comprises Jan; Feb; Nov; Dec.  
Equinox, Mar; Apr; Sept; Oct.  
Summer, May to Aug.

MONTH	JANUARY		FEBRUARY		MARCH		APRIL		MAY		JUNE	
	Character	Duration of Negative Pot. Grad.	Character	Duration of Negative Pot. Grad.	Character	Duration of Negative Pot. Grad.	Character	Duration of Negative Pot. Grad.	Character	Duration of Negative Pot. Grad.	Character	Duration of Negative Pot. Grad.
1	2c	4.3	1b	3.1	1b	0.9	0a	...	0b	---	1b	1.4
2	2b	6.9	2c	5.4	1a	0.3	1a	0.1	0a	...	2b	3.6
3	1b	1.5	1c	6.4	1b	2.3	1b	2.6	1b	0.6	2c	8.0
4	2c	12.4	1b	1.4	1b	0.5	(1a)	0.7	1b	2.5	1b	0.7
5	2c	11.3	1b	1.1	1b	2.4	1a	0.2	2c	7.9	1a	2.8
6	2c	8.9	1b	0.9	1a	0.5	2b	4.4	1a	0.1	2a	3.5
7	2c	4.1	1a	2.4	1b	0.1	2b	4.1	1a	1.6	(1a)	(1.1)
8	1a	0.3	2c	9.5	0a	...	2c	7.3	0a	...	(1a)	0.3
9	2b	4.0	1c	2.3	0a	...	2b	5.7	1a	0.1	0a	...
10	1b	2.7	1b	1.2	1a	0.2	1b	2.1	2a	8.1	(0a)	...
11	1a	0.1	0a	...	1b	0.2	(0a)	...	1a	0.7	(1a)	1.6
12	2c	13.7	1a	1.6	1c	0.8	(0a)	...	1a	0.7	1a	(0.5)
13	1b	1.3	1a	0.2	2b	5.2	(1a)	3.1	0a	...	1a	0.5
14	0a	...	1a	0.2	1a	0.2	1b	1.9	1a	0.6	1b	0.1
15	0a	...	2c	6.3	1a	1.9	1b	1.8	0a	...	0a	...
16	2c	9.5	2c	3.8	2c	5.2	2c	15.3	1a	1.0	0a	...
17	2c	9.1	2b	4.4	2c	10.5	2c	9.7	1b	1.0	1a	0.2
18	2b	5.6	2c	7.1	(2b)	7.7	1a	1.7	0a	...	1b	1.9
19	0a	...	2c	8.1	1c	5.8	2c	6.8	1b	0.4	(1a)	0.9
20	2c	7.0	1b	1.8	1a	0.1	1b	2.3	0a	...	1b	0.6
21	2c	8.2	0a	...	2b	3.1	1b	1.7	2c	4.7	0a	...
22	2c	5.8	0a	...	1b	0.1	0a	0.8	2c	4.5	0a	...
23	2b	4.5	0a	...	1b	0.2	1a	0.1	1b	1.7	0a	...
24	2c	10.7	1a	0.1	1c	2.1	1a	0.1	1b	1.5	0a	...
25	1b	1.1	2c	4.0	1b	1.1	0a	...	1b	1.0	0a	...
26	2a	(4.9)	2b	3.6	0b	---	0a	...	1b	2.1	0a	...
27	2a	4.4	2c	10.0	1a	0.1	1a	0.4	0a	...	1a	0.8
28	1a	0.9	(2c)	...	0a	...	0a	...	(0a)	...	2c	4.1
29	1b	0.7	...	...	0a	...	0a	...	0a	...	1a	0.1
30	1c	2.6	...	...	0a	...	0a	...	(1b)	1.1	1b	2.3
31	2c	7.7	...	...	0a	...	...	...	1b	2.1	...	...
Total	---	154.2	---	84.9	---	51.5	---	72.9	---	44.0	---	35.0
No. of Days Used	---	31	---	27	---	31	---	30	---	31	---	30
Mean	---	5.0	---	3.1	---	1.7	---	2.4	---	1.4	---	1.2
JULY												
AUGUST												
SEPTEMBER												
OCTOBER												
NOVEMBER												
DECEMBER												
	Character	Duration of Negative Pot. Grad.	Character	Duration of Negative Pot. Grad.	Character	Duration of Negative Pot. Grad.	Character	Duration of Negative Pot. Grad.	Character	Duration of Negative Pot. Grad.	Character	Duration of Negative Pot. Grad.
1	1b	1.2	0a	...	2c	4.0	2b	4.0	1b	1.5	0a	...
2	2b	3.6	1a	0.1	2c	3.5	1b	1.8	0a	...	2c	6.6
3	1b	1.8	0a	...	1b	1.6	0a	...	0a	...	0a	...
4	2c	3.3	1a	0.2	1b	0.5	0a	...	0a	...	1c	2.0
5	1b	0.7	(1a)	(0.2)	2c	8.2	0a	...	0a	...	1b	2.1
6	1a	0.1	1b	1.3	1b	1.6	1a	0.1	0a	...	1b	1.3
7	1b	1.5	0a	...	1b	1.9	1b	0.1	1a	0.4	2c	5.7
8	(1a)	0.4	0a	...	1a	0.1	0a	...	1a	0.2	1b	1.7
9	1b	0.8	1a	0.2	1b	0.9	0a	...	0a	...	1b	0.1
10	1b	1.8	0a	...	0a	...	0a	...	1a	0.4	2c	5.3
11	0a	...	(0a)	...	0a	...	0a	...	0a	...	(1c)	1.7
12	1a	0.5	1a	0.2	1a	0.5	1a	0.1	0a	...	(0a)	...
13	(1a)	0.1	1a	0.2	1a	0.3	0a	...	0a	...	2c	4.8
14	1b	1.7	2b	3.3	1a	0.5	0a	...	1b	0.5	2c	10.1
15	1b	0.5	1b	0.9	1b	1.7	0a	...	0a	...	1b	2.0
16	0a	...	1a	1.1	1b	1.4	0a	...	0a	...	1c	2.2
17	0a	...	1a	0.1	1b	1.8	0a	...	0a	...	0a	...
18	1a	0.2	1b	1.3	0a	...	(1a)	0.1	0a	...	0a	...
19	(0a)	...	1b	0.6	1c	3.0	(1a)	0.1	1c	2.3	0a	...
20	(1a)	---	0a	...	0a	...	1a	1.1	(0a)	...	0a	...
21	(2c)	(4.0)	1a	0.1	0a	...	1a	1.8	0a	...	2b	5.7
22	2b	5.1	0a	...	1a	0.1	2b	3.9	(0a)	...	2c	9.0
23	2b	6.0	(0a)	...	1a	(0.7)	2c	8.1	0a	...	1a	0.6
24	2b	5.2	0a	...	1b	0.7	1b	2.3	0a	...	2b	4.0
25	0a	...	1a	0.3	0a	...	2c	6.4	1a	0.5	0a	...
26	0a	...	0a	...	1a	0.1	2c	8.6	0a	...	0a	...
27	0a	...	0a	...	1b	0.9	0a	...	1a	0.1	0a	...
28	1a	0.3	1a	0.1	0a	...	2c	7.3	0a	...	0a	...
29	(1a)	0.3	1b	2.9	0a	...	1b	(1.4)	1a	0.4	2c	4.9
30	(1a)	0.1	2b	5.0	1b	2.5	2b	5.1	2c	4.7	2c	4.6
31	0a	...	1b	1.1	...	...	0a	...	...	...	0a	...
Total	---	39.2	---	19.2	---	36.5	---	52.3	---	11.0	---	74.4
No. of Days Used	---	31	---	31	---	30	---	31	---	30	---	31
Mean	---	1.3	---	0.6	---	1.2	---	1.7	---	0.4	---	2.4

Annual Values Character Frequency ... 0 1 2  
116 170 79

Duration ... Total. No. of Days Mean  
675.1 364 1.85 hours

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

269 ESKDALEMUIR (H)

16,000  $\gamma$  ( $\cdot 16$  C.G.S.unit) +

JANUARY, 1937

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	Mean
Day	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
1 Q	516	517	516	515	515	515	515	515	510	506	504	507	508	515	514	514	515	515	519	520	523	523	521	519	515
2	519	519	517	515	516	519	519	519	513	511	513	509	505	512	515	519	523	524	523	511	506	518	515	503	515
3	502	503	503	515	515	507	507	511	510	506	501	483	494	499	499	503	507	515	519	519	522	521	518	512	508
4	510	508	507	508	518	513	512	508	503	496	497	494	495	496	504	508	509	506	511	510	522	523	523	517	508
5	515	512	512	513	512	516	513	519	515	510	499	498	500	507	511	514	515	513	523	527	525	526	524	522	514
6	517	519	514	515	519	516	524	520	513	504	499	495	503	513	515	516	518	522	526	531	529	529	530	524	517
7 D	516	515	518	518	522	524	522	520	518	514	507	507	510	518	519	514	516	496	493	498	453	441	445	461	503
8	478	480	487	494	500	504	504	503	498	495	494	489	488	493	497	500	501	501	501	506	507	510	506	505	498
9 D	503	503	507	511	506	510	513	507	497	482	482	482	495	514	516	509	510	511	517	516	527	526	522	515	509
10 D	506	506	504	508	510	509	511	505	508	494	493	489	498	485	501	495	498	497	498	502	494	513	509	510	502
11	506	503	502	508	514	516	509	523	518	507	506	498	503	506	505	505	502	504	507	510	508	498	542	498	508
12	502	506	509	510	516	521	518	516	515	515	508	504	503	507	508	499	494	511	516	519	522	516	513	514	510
13	513	508	517	526	521	524	517	516	510	505	504	503	497	505	505	503	508	514	514	517	511	511	514	516	512
14	516	518	521	522	522	524	522	519	518	510	506	505	503	510	511	511	514	514	518	518	518	516	511	517	515
15 Q	518	517	518	518	521	522	524	522	518	518	519	518	518	521	514	513	515	515	519	522	522	522	520	522	519
16 Q	523	520	519	524	524	526	523	520	518	516	512	513	514	515	513	513	518	522	526	527	526	526	524	520	520
17	522	522	524	526	530	528	527	527	519	507	509	509	516	519	515	516	522	524	528	530	526	526	521	524	521
18	522	522	520	518	522	525	530	526	518	511	506	507	514	518	520	518	516	522	527	531	529	527	521	521	520
19	521	521	522	522	523	525	526	526	522	519	514	510	510	514	518	518	522	522	518	522	528	529	522	515	520
20	521	522	525	525	528	529	526	525	520	513	509	513	517	517	516	515	505	506	496	494	502	526	523	517	516
21	509	505	510	513	517	517	522	522	519	513	505	496	500	506	516	517	521	505	512	493	506	520	489	496	510
22	502	506	509	509	511	513	513	509	500	491	484	482	488	501	510	511	513	518	518	522	523	518	518	514	508
23 Q	514	513	515	517	517	520	515	505	505	501	496	493	494	505	512	509	514	518	521	523	523	521	522	522	513
24	521	521	521	521	521	521	521	518	509	500	488	482	485	501	508	515	521	521	522	524	523	522	523	519	514
25 Q	517	517	519	519	522	524	526	522	513	500	489	481	484	501	517	517	517	517	522	525	526	526	526	526	515
26	526	528	527	529	530	532	532	526	513	497	492	497	509	521	519	517	517	523	529	531	530	530	530	529	521
27 D	529	529	530	534	538	538	537	534	530	522	497	486	480	493	493	517	513	525	526	522	517	500	503	499	516
28	494	495	497	502	508	509	507	508	495	485	478	485	481	485	488	489	497	501	497	484	492	496	492	472	493
29	473	471	494	503	504	504	520	520	508	492	476	474	475	483	491	498	501	504	509	512	507	508	515	517	498
30 D	516	520	520	520	521	527	529	526	516	508	499	486	495	504	507	512	496	500	507	514	518	516	516	517	512
31	515	514	516	516	516	516	516	512	508	496	487	479	481	491	499	501	508	516	521	525	525	524	524	521	509
Mean	512	512	514	516	518	519	520	518	512	505	499	496	499	506	509	510	511	513	516	517	516	516	516	516	512

MAGNETIC DECLINATION (WEST)

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

270 ESKDALEMUIR (D)

13° +

JANUARY, 1937

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	Mean
Day																									
1 Q	30.6	31.4	31.4	31.3	31.7	31.8	31.8	31.4	30.9	31.0	31.6	32.7	34.2	34.8	34.1	33.7	33.6	33.6	33.1	32.7	31.8	31.1	31.2	31.1	32.2
2	30.9	30.9	31.0	31.1	31.3	31.2	30.7	30.3	30.2	31.6	32.2	33.7	34.4	35.8	35.3	34.5	34.5	34.9	35.0	34.5	30.3	31.9	29.1	23.6	32.0
3	26.7	26.9	27.9	30.7	25.6	28.9	30.6	30.5	30.0	30.5	31.1	33.3	35.7	37.3	37.5	35.6	35.1	34.4	33.8	32.8	31.8	31.7	30.8	30.0	31.6
4	31.0	29.7	26.3	28.0	27.9	28.9	31.0	30.3	29.8	30.7	31.7	33.1	33.4	35.2	34.6	34.5	34.6	33.7	30.8	32.6	32.7	32.4	31.6	30.9	31.5
5	31.7	31.0	31.7	32.1	31.7	31.6	31.8	30.8	29.9	29.8	30.5	32.6	34.9	36.4	35.5	34.4	34.3	33.9	33.5	32.9	31.9	31.6	31.0	30.9	32.3
6	30.9	30.8	29.3	30.0	29.8	29.8	30.2	30.6	29.9	30.1	31.4	32.2	35.4	36.4	35.7	34.6	34.7	34.2	33.9	33.1	32.1	31.1	31.0	31.1	32.0
7 D	31.1	30.7	31.4	31.7	32.0	31.1	29.9	30.0	30.1	30.4	31.7	33.5	34.6	36.5	36.5	35.7	38.5	40.4	41.5	31.8	26.8	25.1	17.9	25.1	31.8
8	32.6	34.4	34.0	33.2	32.6	31.7	30.7	29.8	29.4	29.8	30.5	31.6	32.6	32.8	32.6	32.6	32.6	32.6	32.6	32.1	31.6	31.1	30.8	30.9	31.9
9 D	31.7	32.3	32.6	32.4	31.6	30.6	30.8	29.7	28.2	30.2	34.2	33.7	35.4	35.6	33.5	32.6	32.6	33.6	32.7	32.6	32.8	33.9	28.5	26.2	32.0
10 D	27.1	32.0	31.5	32.0	32.4	32.6	32.8	32.9	33.1	33.1	34.5	35.9	37.3	39.2	39.3	37.2	36.6	35.7	34.0	32.9	33.8	31.4	25.8	25.2	28.5
11	29.6	30.3	28.8	30.9	30.9	30.5	33.2	33.9	31.7	31.4	33.0	33.9	35.4	37.3	36.7	36.3	35.1	33.8	33.4	33.4	31.2	28.3	32.9	28.0	32.5
12	27.4	28.1	30.3	31.1	32.4	32.0	31.2	30.2	29.4	30.3	31.6	32.7	34.4	34.8	35.0	34.7	31.8	34.6	33.6	32.6	31.7	30.7	29.7	27.1	31.6
13	29.4	30.3	34.6	33.5	31.0	31.6	32.6	31.7	30.7	31.0	32.3	34.1	35.6	35.4	33.5	32.4	32.1	32.0	32.0	31.6	29.3	28.2	30.2	31.7	31.9
14	31.6	31.9	32.6	32.1	32.4	32.3	32.0	32.0	31.9	32.0	30.8	33.3	34.0	34.8	34.2	34.0	33.5	33.2	32.6	31.7	31.4	31.3	29.8	30.0	32.3
15 Q	30.4	30.8	31.0	31.1	31.1	31.0	30.8	30.3	30.2	30.7	31.1	32.4	33.0	33.5	32.8	33.1	32.9	33.6	32.6	31.8	31.5	31.0	30.3	30.9	31.6
16 Q	31.4	31.0	31.5	32.0	31.6	31.7	31.0	30.7	31.0	31.9	32.0	33.5	34.5	34.5	34.0	33.7	33.6	33.4	32.9	32.3	31.5	31.0	31.0	31.0	32.2
17	31.6	31.8	32.0	32.1	31.7	31.3	31.0	30.2	29.7	29.9	31.8	32.9	34.0	33.9	33.3	33.7	34.1	33.9	32.9	31.9	31.3	30.9	29.4	29.6	31.9
18	30.8	31.8	31.2	31.7	31.7	31.0	30.6	29.8	29.8	30.6	31.5	33.5	34.7	34.0	34.0	33.5	33.3	33.4	33.5	32.0	31.3				

TERRESTRIAL MAGNETIC FORCE: VERTICAL COMPONENT  
Mean values for periods of sixty minutes ending at the hours of Greenwich Mean Time

271 ESKDALEMUIR (V)

44,000 γ (.44 C.G.S.unit) +

JANUARY, 1937

Table with 24 columns (0-1 to 23-24) and 31 rows (Day 1 Q to 31 D). Each cell contains a numerical value representing magnetic force. A 'Mean' row is at the bottom.

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

272 ESKDALEMUIR

JANUARY, 1937

Table with 19 columns: Day, Horizontal Force (Maximum, Minimum, Range), Declination (Maximum, Minimum, Range), Vertical Force (Maximum, Minimum, Range), HRH+VRV (10,000γ²), Magnetic Character of Day (0-2), and Temperature in Magnet House (200+). Rows include days 1 Q to 31 D and a 'Mean' row.

§ For explanation see page 176. Q denotes an "International Quiet Day", while D denotes a disturbed day used for the computation of Tables 323-334



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

273 ESKDALEMUIR (H)

16,000 γ (-16 C.G.S.unit) +

FEBRUARY, 1937

Table with 24 columns (0-1 to 23-24) and 24 rows (Day 1 to 28). Each cell contains a numerical value representing magnetic force. Includes a 'Mean' row at the bottom.

MAGNETIC DECLINATION (WEST)  
Mean values for periods of sixty minutes ending at the hours of Greenwich Mean Time

274 ESKDALEMUIR (D)

13° +

FEBRUARY, 1937

Table with 24 columns (0-1 to 23-24) and 24 rows (Day 1 to 28). Each cell contains a numerical value representing magnetic declination. Includes a 'Mean' row at the bottom.

TERRESTRIAL MAGNETIC FORCE: VERTICAL COMPONENT  
Mean values for periods of sixty minutes ending at the hours of Greenwich Mean Time

275 ESKDALEMUIR (V)

44,000  $\gamma$  (.44 C.G.S.unit) +

FEBRUARY, 1937

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	Mean
Day 1	Y 927	Y 925	Y 916	Y 919	Y 922	Y 922	Y 922	Y 922	Y 919	Y 921	Y 922	Y 922	Y 922	Y 923	Y 929	Y 932	Y 928	Y 929	Y 929	Y 932	Y 931	Y 929	Y 927	Y 926	Y 925
2	926	926	926	924	924	924	924	924	923	926	931	929	924	924	931	933	933	933	933	932	930	927	923	918	927
3 D	920	898	862	903	898	888	879	883	887	894	911	922	927	930	939	936	941	986	1091	986	984	963	948	947	930
4	947	948	949	948	946	946	945	941	940	937	943	945	946	943	945	946	947	946	950	963	958	953	946	940	947
5 D	933	917	914	921	917	922	924	933	938	941	940	939	934	929	933	933	939	940	940	945	941	927	923	916	931
6	913	919	923	928	922	917	922	927	928	929	932	932	932	930	939	941	937	936	939	940	946	940	934	927	931
7	917	920	925	927	927	926	924	926	926	926	925	923	926	925	929	934	937	934	933	933	934	933	927	926	928
8 Q	927	927	927	927	927	927	925	927	927	923	923	919	917	916	919	927	927	928	929	932	935	934	933	929	926
9 D	922	923	923	923	923	923	922	922	922	917	914	912	916	916	927	948	957	971	987	1021	998	980	934	923	939
10	926	932	934	934	934	929	929	929	928	927	929	927	930	936	958	947	939	937	935	934	935	936	940	936	934
11	932	927	917	916	916	921	920	924	927	927	924	924	927	929	934	939	934	930	929	931	938	927	925	926	927
12	924	923	924	927	926	923	923	922	922	917	921	920	922	923	923	939	944	946	952	947	950	916	912	926	928
13	930	933	933	932	930	927	927	925	923	918	917	920	923	927	937	944	941	935	934	940	933	929	934	926	930
14	907	906	909	914	917	921	923	924	924	923	922	920	922	923	928	928	933	940	953	963	953	935	936	926	928
15	928	933	935	936	936	935	931	929	928	925	924	923	924	929	934	941	946	943	942	950	940	935	934	931	934
16	933	917	921	924	928	926	925	925	923	921	918	918	920	933	946	955	965	957	945	940	935	933	935	934	932
17	931	931	930	926	924	927	927	927	925	925	923	924	923	929	941	941	942	947	941	940	940	940	936	935	932
18	931	925	918	922	923	924	925	927	924	923	921	917	917	918	924	930	930	929	929	929	935	936	931	933	926
19 D	923	907	917	923	923	923	923	923	922	913	917	917	921	929	931	940	963	1006	969	942	935	930	931	928	931
20	928	928	927	926	924	923	923	924	924	923	917	915	915	913	915	921	923	927	928	928	930	929	930	928	924
21 D	928	926	923	922	920	918	917	917	917	913	917	917	914	913	915	929	930	928	928	937	928	924	924	924	922
22	923	923	923	923	923	923	923	918	916	917	917	917	918	925	935	937	940	941	935	934	930	930	930	929	926
23 Q	927	924	923	922	924	924	924	924	923	917	916	916	913	913	913	918	919	920	923	924	924	924	924	928	921
24 Q	927	925	924	924	923	922	920	917	913	915	911	913	915	918	913	917	922	923	923	924	923	923	923	924	920
25	924	923	916	910	914	917	917	917	917	916	911	909	904	907	911	914	917	917	918	918	923	923	923	923	916
26 Q	923	923	923	923	923	920	918	917	914	911	913	910	918	920	927	927	926	924	925	924	923	923	923	923	921
27 Q	923	923	921	913	911	913	917	919	921	920	921	918	922	925	930	931	935	931	927	927	925	924	924	924	923
28	923	922	918	923	923	923	923	924	923	922	913	911	913	917	927	928	930	934	938	941	941	941	938	935	926
Mean	926	923	921	924	923	923	922	923	922	921	921	921	922	924	930	934	937	940	943	941	939	934	930	928	928

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

276 ESKDALEMUIR

Day	Terrestrial Magnetic Elements																HR <sub>H</sub> +VR <sub>V</sub> 10,000 $\gamma^2$	Magnetic Character of Day (0-2)	Temperature in Magnet House 200 + °A					
	Horizontal Force						Declination						Vertical Force											
	Maximum 16,000 $\gamma^+$			Minimum 16,000 $\gamma^+$			Range	Maximum 13° +		Minimum 13° +		Range	Maximum 44,000 $\gamma^+$		Minimum 44,000 $\gamma^+$					Range				
1	h	m	$\gamma$	$\gamma$	h	m	$\gamma$	h	m	37° 1'	22° 4'	h	m	14° 7'	h	m	$\gamma$	$\gamma$	h	m	$\gamma$			
2	5	14	530	483	12	17	47	13	0	37° 1'	22° 4'	3	17	14° 7'	15	10	933	915	2	30	18	159	0	83° 2
3 D	23	10	589	486	11	22	103	13	27	36° 0'	28° 9'	6	33	7° 1'	15	30	934	916	23	39	16	251	1	83° 0
4	18	55	740	287	18	57	453	18	57	79° 5'	-8° 2'	19	10	88° 4'	18	31	1179	846	2	20	333	2242	2	83° 0
5 D	19	55	516	447	11	52	89	14	44	40° 0'	21° 8'	19	47	18° 2'	19	12	987	936	9	20	31	253	1	83° 0
6	20	30	540	463	11	2	77	14	40	38° 5'	10° 9'	20	17	27° 6'	20	13	957	910	1	52	47	338	1	83° 1
7	22	39	520	459	10	50	61	14	48	39° 8'	17° 5'	20	39	22° 3'	20	32	949	910	0	32	39	276	1	83° 0
8 Q	0	56	526	474	11	46	52	13	38	37° 5'	23° 1'	21	18	14° 4'	16	14	937	916	1	0	21	180	1	83° 0
9 D	23	42	543	482	12	36	61	14	30	35° 5'	22° 5'	23	37	13° 0'	20	28	936	916	13	30	20	191	0	83° 0
10	19	59	544	385	20	53	159	18	50	48° 4'	11° 7'	22	6	36° 7'	20	6	1052	910	11	38	142	900	2	83° 0
11	14	20	531	474	14	11	57	13	50	41° 2'	21° 3'	22	57	19° 9'	14	30	965	923	0	3	42	283	1	83° 0
12	5	55	535	474	10	50	61	14	5	37° 1'	14° 8'	20	18	22° 3'	20	21	940	911	4	10	29	231	1	83° 0
13	21	15	540	454	21	40	86	14	22	36° 3'	16° 7'	21	49	19° 6'	18	33	957	904	21	27	53	380	1	83° 0
14	24	0	548	473	14	28	75	12	43	38° 0'	21° 4'	22	47	16° 6'	15	0	946	916	10	22	30	259	1	82° 9
15	0	1	548	458	21	1	90	12	36	34° 7'	15° 4'	20	9	19° 3'	19	37	969	904	0	52	65	441	1	82° 9
16	18	54	526	479	0	16	47	14	40	37° 3'	17° 4'	0	1	19° 9'	19	25	953	915	0	9	38	249	1	82° 9
17	1	23	533	462	11	43	71	12	55	41° 8'	21° 3'	0	48	20° 5'	16	30	967	909	1	40	58	377	1	82° 9
18	16	48	531	477	11	15	54	14	14	41° 1'	24° 0'	22	21	17° 1'	19	30	947	920	10	20	27	210	1	82° 8
19 D	21	23	578	481	12	14	95	14	19	38° 3'	12° 1'	21	20	26° 2'	21	6	945	916	12	28	29	287	1	82° 8
20	0	50	602	421	13	0	181	12	32	40° 9'	19° 6'	1	34	21° 3'	17	23	1016	900	1	10	116	820	2	82° 8
21 D	5	30	538	473	15	43	65	14	47	38° 4'	27° 0'	10	3	11° 4'	20	28	933	911	10	15	22	206	1	82° 8
22	20	4	559	485	14	50	74	14	26	36° 9'	18° 3'	19	42	18° 6'	19	31	941	911	14	2	30	257	1	82° 8
23 Q	8	50	530	469	14	37	61	13	38	38° 7'	28° 1'	5	53	10° 6'	17	11	942	914	8	50	28	227	1	82° 8
24 Q	22	39	534	490	13	10	44	14	21	35° 5'	27° 3'	23	10	8° 2'	23	50	930	911	12	20	19	158	0	82° 8
25	8	12	547	494	14	20	53	14	33	36° 6'														

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

277 ESKDALEMUIR (H)

16,000 γ (·16 C.G.S.unit) +

MARCH, 1937

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	Mean	
Day	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
1 D	495	504	508	509	513	516	513	509	509	501	492	480	489	501	509	500	513	517	524	541	525	478	436	493	503	
2	493	484	473	484	490	496	497	483	479	467	460	465	469	492	500	505	498	500	495	509	501	507	509	507	490	
3 Q	506	502	501	500	501	506	505	499	489	476	464	465	472	484	493	498	503	507	513	513	513	514	517	517	498	
4	517	517	517	521	521	521	517	513	502	493	486	480	485	501	501	513	510	513	514	518	521	521	522	522	510	
5 D	517	510	511	510	526	505	517	522	524	514	472	458	505	501	468	493	493	497	500	500	497	497	497	480	501	
6	477	505	496	494	497	500	498	493	485	476	472	469	476	484	492	500	501	504	507	513	514	517	514	514	496	
7 Q	514	513	513	513	515	516	513	511	505	497	491	489	492	498	504	509	509	515	517	521	519	521	521	521	510	
8 Q	522	519	519	519	518	517	519	518	512	501	493	489	488	496	506	515	517	517	519	521	524	526	526	526	514	
9	530	510	513	509	528	517	517	521	517	508	500	498	505	511	521	517	517	522	529	522	517	513	513	519	516	
10	520	524	523	525	526	526	525	521	516	512	504	501	505	504	517	530	517	521	530	528	528	529	521	526	520	
11 Q	524	525	525	525	527	526	525	521	512	503	499	495	498	508	515	524	517	521	528	532	524	522	528	525	519	
12 Q	525	524	524	524	525	525	524	522	512	500	492	486	484	491	504	514	521	524	528	528	528	529	528	529	516	
13	532	532	532	532	533	533	528	527	520	511	502	500	509	519	524	528	529	521	524	529	529	532	492	467	520	
14	479	477	499	463	493	497	497	495	496	488	468	472	483	493	501	508	504	505	517	520	509	511	515	510	496	
15 D	505	523	513	512	513	511	515	511	498	483	461	451	473	496	492	475	484	491	492	496	500	501	505	504	496	
16	508	507	506	505	506	508	506	520	492	480	474	472	479	488	493	499	508	516	508	504	516	521	510	512	502	
17	511	509	512	512	512	508	519	511	500	492	476	474	483	493	496	504	508	521	512	518	513	527	505	521	506	
18	509	512	513	512	516	517	524	517	508	492	479	477	485	496	510	521	521	512	520	523	525	519	513	516	510	
19	517	512	516	514	514	516	521	517	510	497	490	483	488	497	512	515	524	522	524	528	528	532	520	520	513	
20	515	517	518	516	520	516	516	516	510	503	496	497	496	509	510	520	517	517	525	529	525	525	520	520	515	
21	523	523	521	521	524	525	526	525	518	508	500	500	504	515	528	528	537	532	545	549	547	540	540	543	526	
22	528	525	529	530	537	535	544	552	543	531	517	514	467	455	479	480	496	496	509	512	516	514	509	528	514	
23	520	503	506	503	504	509	512	513	496	488	475	475	489	483	509	516	516	509	521	524	520	521	520	520	506	
24	520	520	523	519	519	522	522	520	508	495	488	486	494	485	504	520	524	524	527	523	521	527	539	520	515	
25	519	515	515	515	515	515	515	508	494	470	485	487	491	493	496	510	517	523	526	526	524	524	524	523	510	
26	526	522	521	521	520	523	523	520	509	495	482	482	490	491	499	518	515	527	524	531	534	555	542	531	517	
27 D	512	492	531	531	539	530	528	517	511	496	481	471	478	495	514	466	467	492	495	508	494	491	486	495	501	
28	488	501	503	516	520	527	503	483	474	466	456	458	469	478	478	491	503	516	520	523	518	538	517	498	498	
29	504	504	507	511	517	515	517	509	501	487	474	470	475	488	498	507	512	519	520	523	520	528	523	508	506	
30	507	509	515	520	508	522	526	523	507	494	474	470	473	484	508	519	531	523	551	531	516	527	523	519	512	
31 D	520	520	531	539	526	507	506	438	404	455	450	438	424	434	466	496	522	552	532	487	467	463	478	495	485	
Mean	512	512	514	514	517	516	517	511	502	493	482	479	484	493	502	508	511	515	519	520	517	518	513	514	508	

MAGNETIC DECLINATION (WEST)

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

278 ESKDALEMUIR (D)

13° +

MARCH, 1937

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	Mean
Day	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
1 D	26.7	27.2	28.8	30.0	29.4	28.9	28.7	28.1	28.0	28.1	32.4	34.2	36.3	35.6	37.4	36.3	36.6	34.8	35.5	36.2	35.2	29.4	19.4	23.2	31.1
2	33.8	32.8	27.8	30.5	29.2	27.7	28.2	26.9	29.4	28.5	31.2	34.7	37.1	39.7	40.1	36.6	35.5	35.2	30.2	26.3	28.6	27.9	28.7	27.7	31.4
3 Q	27.1	28.9	29.3	29.0	29.6	29.2	28.9	27.7	26.7	27.8	29.9	33.5	35.6	36.3	35.4	33.6	32.1	31.5	31.5	31.2	30.8	30.7	30.5	30.3	30.7
4	30.3	30.0	30.0	30.5	29.6	29.2	28.8	28.7	28.0	28.1	29.7	32.8	34.8	36.4	35.5	33.5	32.4	31.7	31.4	31.3	30.8	30.7	30.7	30.0	31.0
5 D	29.3	27.7	26.1	27.7	25.0	24.6	28.1	26.8	26.5	29.1	36.1	36.6	42.9	44.9	41.8	42.2	41.2	34.2	32.4	31.4	30.0	36.1	16.7	23.1	31.7
6	23.8	25.2	26.9	27.7	28.2	28.0	27.9	27.8	28.1	28.6	29.8	32.0	33.7	33.5	33.4	32.4	31.5	31.2	31.5	31.4	30.3	30.8	30.6	30.1	29.8
7 Q	29.9	29.7	29.5	29.5	29.1	28.8	28.6	28.4	27.3	27.7	29.5	31.7	33.6	34.9	34.1	33.1	32.0	31.9	31.4	31.1	30.7	30.7	30.6	30.5	30.6
8 Q	29.8	29.5	29.5	29.3	29.0	28.6	28.7	28.1	26.7	26.4	28.1	30.7	32.7	33.9	33.6	32.7	32.3	32.3	31.7	31.2	31.2	31.1	30.7	30.5	30.3
9	27.5	23.3	24.6	24.6	25.2	26.1	27.6	27.9	27.6	28.3	30.3	33.2	35.4	36.4	36.9	34.4	32.6	32.4	32.3	30.6	32.5	30.7	29.6	30.4	30.0
10	29.3	29.5	29.6	29.1	28.8	28.4	28.3	27.8	27.1	28.5	31.0	33.6	35.4	34.5	34.5	35.2	33.2	31.8	32.0	31.4	31.1	30.8	29.9	28.8	30.8
11 Q	28.9	29.7	29.9	29.7	29.3	28.9	28.0	26.8	25.3	26.1	29.1	33.1	35.4	37.0	35.6	34.2	31.3	31.4	31.6	30.7	30.5	29.7	30.7	30.7	30.6
12 Q	30.6	30.2	29.8	29.5	29.3	28.6	28.4	27.5	26.0	26.0	28.5	32.3	34.5	35.6	35.3	33.6	32.2	31.6	31.1	31.2	31.0	31.1	30.7	30.1	30.6
13	30.4	30.0	29.8	29.6	29.1	28.8	27.9	27.0	25.3	26.1	29.5	32.6	35.1	36.1	35.4	33.6	31.8	31.4	31.2	30.7	30.4	30.3	19.1	13.2	29.3
14	19.6	21.3	15.1	16.0	26.1	29.4	28.5	27.1	25.7	27.1	30.8	34.5	35.0	35.5	35.4	35.3	33.6	28.6	31.1	31.3	30.7	29.8	29.1	25.7	28.4
15 D	26.5	27.4	27.4	26.1	25.3	25.9	31.4	35.3	34.1	32.4	32.3	37.0	40.4	40.7	39.3	34.1	32.3	31.3	31.1	30.5	29.3	29.2	29.4	28.8	31.6
16	28.9	28.8	28.7	28.7	28.6	28.1	27.9	27.2	27.0	28.0	30.7	32.6	34.5	36.4	35.4	34.3	32.9	32.2	33.1	32.0	31.4	25.7	28.8	29.7	30.5
17	29.0	30.7	30.0	27.9	25.5	26.9	26.8	26.9	26.2	25.7	27.3	30.5	33.9	35.3	35.2	34.9	32.7	32.3	29.3	27.6	29.0	26.2	26.8	30.2	29.5

TERRESTRIAL MAGNETIC FORCE: VERTICAL COMPONENT  
Mean values for periods of sixty minutes ending at the hours of Greenwich Mean Time

279 ESKDALEMUIR (V)

44,000 Y (-44 C.G.S. unit) +

MARCH, 1937

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	Mean
Day	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
1 D	928	923	924	928	930	930	929	928	922	913	911	917	918	923	924	928	935	941	935	934	958	964	925	924	929
2	914	935	930	904	916	923	924	928	929	934	930	928	930	934	947	974	976	974	976	958	944	940	933	928	928
3 Q	925	924	928	931	933	934	934	935	933	929	929	925	923	923	927	928	927	928	929	929	929	929	928	928	929
4	928	928	927	927	925	928	928	930	929	926	926	924	924	923	920	923	924	926	928	928	928	928	928	927	927
5 D	927	928	928	927	924	923	917	917	916	911	908	910	913	934	941	936	941	950	964	956	946	941	935	933	930
6	934	921	916	923	931	933	934	934	931	930	928	924	922	923	924	925	925	925	929	929	930	929	929	929	929
7 Q	929	929	929	929	929	929	928	929	929	929	923	921	926	923	924	925	925	925	927	927	927	928	926	926	927
8 Q	927	927	927	926	925	925	924	928	928	923	917	916	913	917	920	922	923	923	923	923	924	924	924	924	923
9	924	928	925	924	917	918	923	923	922	917	911	911	910	913	919	924	923	923	924	930	934	940	940	934	923
10	931	928	928	925	923	923	920	921	917	914	911	910	910	913	917	922	923	923	923	923	924	924	925	923	921
11 Q	923	923	922	921	920	920	920	923	923	920	911	906	906	906	913	919	923	923	919	922	921	921	918	920	918
12 Q	923	923	923	923	922	921	920	923	923	918	911	908	906	911	916	918	918	917	918	918	918	918	918	918	918
13	919	919	920	918	917	917	917	918	915	909	906	901	902	906	914	918	923	926	928	927	925	923	908	867	914
14	854	880	853	874	900	910	911	920	917	911	906	906	908	913	922	931	940	951	944	936	938	937	931	930	913
15 D	928	920	920	924	923	923	906	901	901	905	906	913	934	987	1012	986	955	942	935	934	933	933	931	931	933
16	930	930	930	933	933	931	930	929	924	923	919	918	918	923	923	928	933	935	939	940	935	931	927	928	929
17	928	927	913	910	917	923	923	928	928	927	919	920	913	916	920	917	929	930	936	937	935	930	925	917	924
18	923	924	925	925	923	923	917	924	928	928	917	917	911	913	917	918	934	938	934	929	929	930	929	925	924
19	923	923	923	923	924	925	923	924	921	914	913	910	907	911	915	923	930	931	929	928	928	926	924	923	922
20	925	925	924	922	919	919	921	924	920	917	911	908	907	908	918	925	930	930	929	929	929	929	929	928	922
21	925	925	924	924	924	921	919	922	922	919	912	909	907	908	916	925	929	930	930	925	929	929	925	924	922
22	924	923	918	919	918	918	912	912	912	907	904	906	918	924	936	947	952	952	943	939	940	930	915	901	924
23	891	901	905	905	907	911	918	921	918	916	915	912	911	924	931	931	935	936	934	930	930	930	928	929	920
24	929	928	920	921	922	921	922	925	925	921	916	916	918	925	934	938	941	936	937	936	930	929	916	916	926
25	919	920	924	925	925	925	930	931	928	924	914	907	907	914	917	922	924	926	926	925	924	924	925	926	922
26	924	925	926	924	924	924	924	925	924	921	913	901	901	908	918	924	934	931	929	925	924	918	924	900	920
27 D	860	896	914	905	882	897	908	912	911	908	905	901	908	937	956	978	961	953	949	958	948	936	928	909	922
28	902	858	894	895	867	891	894	906	912	914	919	918	916	918	926	928	929	930	931	931	931	930	916	913	911
29	914	920	924	916	908	918	923	928	928	925	924	914	909	913	918	923	924	926	928	927	927	927	927	925	921
30	922	919	917	916	916	912	916	922	923	918	914	911	906	903	907	911	917	924	925	938	939	930	928	929	919
31 D	928	926	918	912	901	877	841	823	852	882	908	921	935	942	953	966	973	995	998	996	968	942	940	878	924
Mean	919	920	919	919	918	922	918	920	920	918	915	913	914	921	924	932	934	936	935	934	933	931	926	920	923

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

280 ESKDALEMUIR

MARCH, 1937

Day	Terrestrial Magnetic Elements																		HR <sub>H</sub> +VR <sub>V</sub> 10,000γ <sup>2</sup>	Magnetic Character of Day (0-2)	Temperature in Magnet House 200 + °A			
	Horizontal Force						Declination						Vertical Force											
	Maximum 16,000 γ+		Minimum 16,000 γ+		Range		Maximum 13° +		Minimum 13° +		Range		Maximum 44,000 γ+		Minimum 44,000 γ+		Range							
	h	m	γ	γ	h	m	γ	h	m	γ	γ	h	m	γ	γ	h	m	γ						
1 D	19	46	554	398	22	12	156	20	6	40·9	14·5	22	4	26·4	21	25	983	905	22	10	78	607	2	82·8
2	19	11	552	428	7	47	124	13	46	41·1	15·7	7	48	25·4	18	54	981	899	3	33	82	573	1	82·7
3 Q	23	10	520	460	10	55	60	13	39	36·5	25·0	0	1	11·5	7	32	935	923	13	10	12	153	0	82·7
4	23	10	533	474	14	36	59	14	28	38·2	27·0	8	52	11·2	8	2	930	918	14	28	12	151	0	82·7
5 D	4	22	541	423	11	33	118	13	56	53·8	6·9	22	17	46·9	19	0	970	901	11	18	69	505	1	82·7
6	1	33	525	458	11	34	67	12	45	35·3	22·2	0	6	13·1	0	20	935	911	1	57	24	219	1	82·7
7 Q	20	52	526	488	12	30	38	13	8	35·2	26·4	8	42	8·8	7	52	930	918	11	30	12	117	0	82·7
8 Q	20	28	534	485	11	56	49	13	22	34·2	25·9	8	20	8·3	8	2	929	912	12	20	17	157	0	82·7
9	0	24	537	489	11	10	48	14	11	37·7	22·4	1	27	15·3	22	10	941	910	10	40	31	218	1	82·7
10	15	12	539	496	11	28	43	12	51	37·8	26·7	8	56	11·1	0	12	934	907	12	3	27	192	1	82·7
11 Q	22	12	536	491	11	0	45	13	25	37·3	25·1	8	40	12·2	16	10	925	905	11	40	20	164	0	82·7
12 Q	23	28	532	483	12	21	49	13	47	36·1	25·5	9	8	10·6	8	10	924	905	12	10	19	166	0	82·7
13	21	48	544	447	23	18	97	13	52	37·1	11·2	23	56	25·9	18	30	929	847	23	50	82	528	1	82·6
14	2	28	534	450	3	10	84	11	58	37·1	8·8	3	3	28·3	17	40	953	842	2	42	111	637	2	82·7
15 D	1	28	529	441	11	12	88	12	58	44·8	24·3	4	50	20·5	14	22	1019	900	7	8	119	679	2	82·6
16	21	46	529	470	10	0	59	13	28	37·5	31·5	21	40	6·0	19	44	942	917	11	58	25	209	1	82·7
17	21	24	565	467	11	13	98	13	56	36·5	20·7	22	6	15·8	19	8	941	906	3	10	35	319	1	82·7
18	15	43	528	472	11	5	56	14	16	37·2	21·3	22	49	15·9	17	28	940	911	11	55	29	222	0	82·7
19	21	32	537	479	11	11	58	13	55	38·6	24·2	21	32	14·4	17	38	932	906	12	50	26	213	0	82·7
20	20	17	533	492	10	58	41	13	26	36·5	23·3	8	26	13·2	18	10	931	906	12	20	25	180	0	82·7
21	18	42	558	499	11	30	59	14	43	39·9	24·9	8	26	15·0	18	13	934	906	13	11	28	223	0	82·7
22	22	24	656	442	13	33	214	13	7	45·4	18·2	20	56</											

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

281 ESKDALEMUIR (H)

16,000 γ (·16 C.G.S.unit) +

APRIL, 1937

Table with 24 columns (0-1 to 23-24) and 30 rows (Day 1 to 30). Includes a 'Mean' row at the bottom. Values range from 477 to 533.

MAGNETIC DECLINATION (WEST)  
Mean values for periods of sixty minutes ending at the hours of Greenwich Mean Time

282 ESKDALEMUIR (D)

13° +

APRIL, 1937

Table with 24 columns (0-1 to 23-24) and 30 rows (Day 1 to 30). Includes a 'Mean' row at the bottom. Values range from 24.2 to 35.8.

TERRESTRIAL MAGNETIC FORCE: VERTICAL COMPONENT  
Mean values for periods of sixty minutes ending at the hours of Greenwich Mean Time

283 ESKDALEMUIR (V)

44,000  $\gamma$  (·44 C.G.S.unit) +

APRIL, 1937

Hour	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	Mean
Day	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
1	908	921	924	928	932	935	937	938	935	931	930	925	925	925	928	935	937	941	941	941	934	929	931	926	931
2	917	901	908	912	914	916	926	931	930	925	916	916	911	908	916	925	931	941	958	953	964	965	955	937	928
3	921	909	894	881	871	883	908	917	918	922	925	926	926	934	948	961	959	957	969	955	948	938	901	909	924
4	920	914	912	918	925	928	932	936	932	930	924	916	911	917	929	940	944	948	953	953	950	943	936	934	931
5	932	931	927	928	929	929	931	932	928	921	917	906	901	906	917	928	929	929	930	930	930	929	928	927	925
6	927	926	926	926	925	924	925	926	925	919	912	906	905	905	911	912	916	919	924	925	925	925	925	925	920
7	925	925	925	924	923	923	925	928	925	919	914	911	907	906	912	916	919	920	924	924	924	924	922	922	920
8 Q	922	922	922	922	922	922	922	921	918	916	916	908	901	904	909	914	919	924	923	922	922	921	924	924	918
9 Q	924	924	924	923	921	919	922	922	918	913	911	906	899	899	906	912	914	916	918	919	920	922	922	923	917
10 Q	923	924	923	922	919	918	922	921	917	914	909	902	901	903	906	908	912	917	918	919	919	920	922	919	916
11	914	881	881	894	905	910	916	918	918	914	906	898	898	905	911	916	919	926	930	924	923	922	921	921	912
12	922	922	923	923	920	919	922	921	918	910	901	898	894	908	929	955	996	1018	1012	977	953	936	935	935	935
13	889	902	924	930	930	930	929	924	914	915	918	910	908	912	918	928	934	936	945	944	942	934	926	924	924
14 Q	925	926	928	929	928	924	921	924	923	919	919	915	914	919	928	931	934	935	936	937	937	936	935	934	927
15	929	929	929	929	928	925	925	925	925	911	908	902	902	906	917	925	927	936	943	941	934	931	928	925	924
16 Q	925	925	926	926	926	925	925	925	923	920	917	916	907	902	908	914	924	935	939	938	931	926	924	924	923
17	925	923	924	925	925	920	917	913	913	909	909	903	899	902	908	911	917	921	925	925	929	932	929	924	918
18	921	915	899	910	914	917	919	920	918	913	913	909	905	909	919	923	930	937	939	935	931	930	922	913	919
19	905	912	918	920	923	923	920	919	915	913	912	907	905	908	919	925	930	937	937	937	937	926	926	916	921
20	908	917	920	915	915	919	919	919	918	919	920	917	913	918	924	926	936	937	937	937	931	927	925	925	922
21	925	919	896	889	889	907	912	915	912	908	907	902	903	913	922	927	931	936	936	931	927	926	926	926	916
22	926	926	926	926	926	925	925	924	924	919	913	897	889	898	912	923	931	931	926	925	925	925	926	919	920
23	920	925	925	925	925	925	920	919	913	913	913	908	906	913	924	925	927	927	931	936	933	926	927	926	922
24 D	925	921	919	919	922	922	921	920	917	917	915	907	899	906	913	915	931	942	948	944	943	878	696	679	901
25 D	724	903	959	957	956	949	944	944	948	943	940	937	937	948	952	950	955	953	952	973	1031	1003	943	860	940
26 D	901	902	889	928	921	919	930	936	937	935	930	920	919	921	927	936	938	938	935	960	968	956	731	767	914
27 D	628	614	626	781	858	913	925	944	958	962	956	919	958	982	966	966	969	966	972	987	962	919	868	814	907
28 D	772	772	737	764	616	780	731	715	838	936	985	1002	997	1047	1065	1091	1047	1014	986	971	966	947	907	898	896
29	932	947	951	954	955	949	942	938	942	940	944	933	937	950	965	966	971	977	973	960	954	948	946	937	950
30	920	923	909	907	903	906	901	910	921	930	931	937	949	950	974	983	983	983	978	974	966	959	944	943	941
Mean	898	910	910	910	909	915	917	918	921	922	920	915	914	920	929	936	940	943	945	943	942	933	912	905	922

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

284 ESKDALEMUIR

APRIL, 1937

Day	Terrestrial Magnetic Elements										HR <sub>H</sub> +VR <sub>V</sub> 10,000 $\gamma^2$	Magnetic Character of Day (0-2)	Temperature in Magnet House 200 +											
	Horizontal Force			Declination			Vertical Force																	
	Maximum 16,000 $\gamma$ †		Minimum 16,000 $\gamma$ †	Range	Maximum 13° +		Minimum 13° +	Range	Maximum 44,000 $\gamma$ †					Minimum 44,000 $\gamma$ †	Range									
1	h	m	Y	Y	h	m	Y	h	m	Y	h	m	Y	Y	h	m	Y	374	1	82·7				
2	20	12	536	446	11	13	90	14	37	38·0	21·1	22	16	16·9	18	18	942	892	0	1	50	673	1	82·7
3	19	3	654	445	11	0	209	19	20	39·7	13·1	18	58	26·6	21	18	969	896	1	28	73	682	1	82·7
4	22	2	563	446	9	57	117	14	31	39·9	12·5	2	13	27·4	18	30	976	867	4	11	109	309	1	82·7
5	18	12	535	473	11	43	62	14	13	38·9	23·8	7	48	15·1	18	40	955	909	12	20	46	260	1	82·7
6	17	36	532	467	11	0	65	13	37	38·9	22·7	8	40	16·2	0	6	933	899	12	20	34	245	1	82·7
7	17	31	548	478	12	23	70	13	54	39·9	22·9	8	49	17·0	0	10	931	902	13	5	29	217	0	82·7
8 Q	21	9	556	487	11	6	69	14	16	35·6	23·7	9	12	11·9	7	20	929	906	13	20	23	206	0	82·7
9 Q	19	42	543	489	11	6	54	13	45	36·8	24·3	8	0	12·5	18	0	924	898	12	42	26	215	0	82·7
10 Q	2	3	540	486	11	37	54	13	44	36·8	23·9	8	48	12·9	23	30	925	897	12	42	28	219	0	82·7
11	21	29	548	486	11	21	62	13	34	37·2	22·9	8	18	14·3	1	0	925	899	12	20	26	381	1	82·7
12	1	21	547	471	10	43	76	12	58	38·6	17·9	3	23	20·7	18	5	932	875	1	51	57	784	2	82·7
13	20	6	595	487	21	9	108	15	47	48·7	17·2	20	50	31·5	17	38	1023	888	12	17	135	435	1	82·7
14 Q	0	4	568	473	12	20	95	0	11	38·8	20·0	21	19	18·8	19	31	945	883	0	48	62	187	0	82·7
15	18	0	535	487	11	6	48	13	24	33·8	23·7	8	27	10·1	19	28	938	914	12	50	24	285	1	82·7
16 Q	18	30	546	493	11	58	53	14	30	36·8	21·0	6	48	15·8	18	48	945	901	12	10	44	310	0	82·7
17	17	17	539	457	11	32	82	14	16	36·1	22·9	8	0	13·2	18	40	941	902	13	22	39	292	1	82·7
18	20	5	563	481	11	50	82	13	35	36·2	23·2	6	17	13·0	21	26	933	898	13	0	35	388	1	82·7
19	23	38	564	482	12	15	102	13	56	38·0	17·3	2	37	20·7	18	40	940	891	2	24	49	318	1	82·8
20	21	3	558	469	11	6	89	13	18	36·0	18·8	19	58	19·2	19	55	942	904	12	32	38	267	1	82·8
21	19	56	547	478	11	12	69	14	6	36·8	23·2	7	37	13·6	17	22	938	904	0	10	34	369	1	82·8
22	3	56	550	473	8	59	77	12	38	35·1	20·0	2	47	15·1	18	20	937	883	4	5	54	349	1	82·8
23	23	3	559																					

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

285 ESKDALEMUIR (H)

16,000 γ (·16 C.G.S.unit) +

MAY, 1937

Table with 24 columns (0-1 to 23-24) and 24 rows (Day 1 to 31). Each cell contains a numerical value representing magnetic force measurements.

MAGNETIC DECLINATION (WEST)  
Mean values for periods of sixty minutes ending at the hours of Greenwich Mean Time

286 ESKDALEMUIR (D)

13° +

MAY, 1937

Table with 24 columns (0-1 to 23-24) and 24 rows (Day 1 to 31). Each cell contains a numerical value representing magnetic declination measurements.

TERRESTRIAL MAGNETIC FORCE: VERTICAL COMPONENT  
Mean values for periods of sixty minutes ending at the hours of Greenwich Mean Time

287 ESKDALEMUIR (V)

44,000 γ (+44 C.G.S. unit) +

MAY, 1937

Table with 24 columns (0-1 to 23-24) and 25 rows (Day 1 to Mean). Columns represent 1-hour intervals of magnetic force. Rows represent days of the month, with some days marked as Quiet (Q) or Disturbed (D). The 'Mean' row at the bottom shows the average value for each interval.

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

288 ESKDALEMUIR

MAY, 1937

Table with 20 columns: Day, Horizontal Force (Maximum, Minimum, Range), Declination (Maximum, Minimum, Range), Vertical Force (Maximum, Minimum, Range), HRH+VRV, Magnetic Character of Day, and Temperature in Magnet House. Rows correspond to days of the month, with some marked as Quiet (Q) or Disturbed (D). The 'Temperature' column shows values in degrees Celsius.

§ For explanation see page 176. Q denotes an "International Quiet Day", while D denotes a disturbed day used for the computation of Tables 323-334



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

289 ESKDALEMUIR (H)

16,000 γ (.16 C.G.S. unit) +

JUNE, 1937

Table with 23 columns (0-1 to 23-24) and 24 rows (Day 1 to Mean). Columns represent 15-minute intervals, and rows represent hourly observations. Values range from approximately 480 to 550.

MAGNETIC DECLINATION (WEST)  
Mean values for periods of sixty minutes ending at the hours of Greenwich Mean Time

290 ESKDALEMUIR (D)

13° +

JUNE, 1937

Table with 23 columns (0-1 to 23-24) and 24 rows (Day 1 to Mean). Columns represent 15-minute intervals, and rows represent hourly observations. Values range from approximately 24 to 35.

TERRESTRIAL MAGNETIC FORCE: VERTICAL COMPONENT

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

291 ESKDALEMUIR (V)

44,000 γ (.44 C.G.S.unit) +

JUNE, 1937

Table with columns: Hour G. M. T., Day, 0-1, 1-2, 2-3, 3-4, 4-5, 5-6, 6-7, 7-8, 8-9, 9-10, 10-11, 11-12, 12-13, 13-14, 14-15, 15-16, 16-17, 17-18, 18-19, 19-20, 20-21, 21-22, 22-23, 23-24, Mean. Rows include days 1-30 and a Mean row.

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

292 ESKDALEMUIR

JUNE, 1937

Table with columns: Day, Horizontal Force (Maximum, Minimum, Range), Declination (Maximum, Minimum, Range), Vertical Force (Maximum, Minimum, Range), HRN+VRV, Magnetic Character of Day, Temperature in Magnet House. Rows include days 1-30 and a Mean row.

§ For explanation see page 176. Q denotes an "International Quiet Day", while D denotes a disturbed day used for the computation of Tables 323-334

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

JULY, 1937

293 ESKDALEMUIR (H)

16,000 γ (-16 C.G.S. unit) \*

Table with 24 columns (0-1 to 23-24) and 25 rows (Day 1 to Mean). Columns represent 15-minute intervals, and rows represent hourly observations. Values range from approximately 472 to 558.

MAGNETIC DECLINATION (WEST)

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

294 ESKDALEMUIR (D)

13° +

JULY, 1937

Table with 24 columns (0-1 to 23-24) and 25 rows (Day 1 to Mean). Columns represent 15-minute intervals, and rows represent hourly observations. Values range from approximately 19.0 to 35.7.

TERRESTRIAL MAGNETIC FORCE: VERTICAL COMPONENT  
Mean values for periods of sixty minutes ending at the hours of Greenwich Mean Time

295 ESKDALEMUIR (V)

44,000 γ (+.44 C.G.S. unit) +

JULY, 1937

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	Mean
Day 1	930	919	924	924	928	928	926	926	920	909	900	904	913	1119	932	934	936	936	936	939	945	939	936	932	935
2	932	926	925	925	931	931	932	930	923	910	907	909	909	912	922	935	948	951	953	954	946	943	935	925	930
3 Q	926	926	924	920	925	931	931	927	923	915	909	906	899	902	907	919	926	936	937	937	936	935	932	932	923
4	932	932	932	932	933	936	934	937	933	926	919	913	909	912	917	924	930	931	932	932	931	931	930	930	928
5	926	926	930	930	930	925	926	928	926	914	912	909	907	919	930	930	937	942	936	932	931	930	930	930	927
6	930	932	936	936	937	937	937	937	929	920	918	914	927	942	956	978	1007	1010	996	984	972	960	942	932	949
7	919	918	907	919	931	933	930	925	924	924	924	913	918	925	935	941	941	941	943	943	947	950	943	939	931
8 Q	938	938	937	937	939	942	941	937	937	926	919	917	926	926	925	931	942	943	944	944	944	944	947	943	937
9	937	937	937	937	936	932	932	937	936	925	918	913	915	924	930	939	944	954	954	950	948	943	936	915	935
10	892	843	872	872	872	883	909	928	935	937	939	931	923	919	926	936	936	937	943	950	943	941	937	937	918
11	937	937	938	941	941	940	939	938	932	926	919	917	919	925	930	942	966	977	988	992	984	966	948	932	945
12	897	900	913	930	937	943	948	949	944	934	924	917	914	919	930	932	942	949	949	946	942	938	936	936	932
13	937	937	937	937	942	941	938	937	937	933	925	914	909	907	913	924	936	945	948	949	946	943	938	936	934
14 D	935	939	937	936	924	906	898	909	910	913	929	931	937	964	999	1050	1119	1102	1071	1056	996	968	954	947	968
15	943	932	924	936	948	949	950	954	949	944	936	932	930	932	943	953	971	978	974	973	966	956	943	942	948
16	942	942	943	943	948	953	954	949	943	942	942	932	925	931	939	947	944	948	950	947	944	948	943	938	943
17	937	936	936	936	939	941	932	927	920	921	913	914	914	913	920	926	933	936	936	937	941	937	937	937	930
18	937	936	933	936	937	937	936	937	936	930	924	918	914	904	918	926	929	930	937	943	943	940	933	933	931
19 D	933	933	933	936	938	942	940	934	930	919	910	912	903	907	909	913	921	936	955	978	990	966	960	955	936
20 D	935	919	930	926	909	913	925	926	922	919	920	921	920	925	927	931	937	943	943	938	937	934	936	936	928
21	933	933	933	936	937	937	936	934	932	930	931	932	930	925	926	937	944	950	949	949	949	943	941	941	937
22 D	926	897	882	880	873	869	862	884	908	931	936	937	959	973	996	1008	1014	1012	995	977	972	938	913	932	934
23	942	927	926	930	943	943	936	931	930	924	927	930	931	937	937	937	955	968	977	983	966	950	943	930	942
24 D	885	811	824	856	901	914	916	924	931	931	936	937	938	943	950	966	966	965	974	990	984	958	949	941	929
25	890	908	931	931	915	909	928	938	943	941	932	930	932	930	952	978	980	977	957	939	930	934	921	937	937
26	920	919	930	936	932	932	937	942	937	932	924	924	920	930	949	960	960	954	948	944	943	939	938	938	937
27 Q	938	937	937	941	943	943	941	937	937	937	934	927	926	931	936	939	943	948	949	949	944	943	940	938	939
28 Q	931	932	937	938	942	942	939	939	937	932	925	919	910	913	921	929	937	940	941	938	937	936	936	935	933
29 Q	936	936	937	937	939	941	941	937	930	926	927	920	919	923	932	935	941	943	943	943	943	941	938	937	935
30	936	936	933	937	940	941	941	938	936	932	930	926	915	913	919	927	935	936	937	937	938	937	936	933	933
31	933	932	932	933	936	937	937	936	930	923	917	909	908	912	920	932	940	956	960	956	951	944	939	934	934
Mean	928	922	924	927	930	930	931	933	931	927	924	920	<u>920</u>	931	934	944	953	<u>957</u>	957	956	952	944	939	935	935

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

296 ESKDALEMUIR

JULY, 1937

Day	Terrestrial Magnetic Elements															HR <sub>H</sub> +VR <sub>V</sub> 10,000 γ <sup>2</sup>	Magnetic Character of Day (0-2)	Temperature in Magnet House 200 + °A						
	Horizontal Force					Declination					Vertical Force													
	Maximum 16,000 γ†			Minimum 16,000 γ†		Range	Maximum 13° +		Minimum 13° +			Range	Maximum 44,000 γ†		Minimum 44,000 γ†				Range					
	h	m	γ	γ	h m		h	m	h m	h m	h m		h m	γ	h m					h m	γ			
1	19	49	568	474	14	19	94	13	45	35-0	19-7	10	21	15-3	20	8	948	898	10	15	50	380	1	86-8
2	19	47	595	469	11	5	126	13	32	32-2	18-8	6	10	13-4	19	24	956	906	10	10	50	433	1	86-8
3 Q	19	1	547	469	10	20	78	13	40	32-9	18-8	4	0	14-1	18	20	937	897	12	50	40	309	0	86-9
4	19	39	559	490	9	24	69	13	43	38-4	18-4	8	17	20-0	7	30	937	907	12	11	30	249	0	86-9
5	16	40	597	464	9	48	133	13	58	38-5	17-7	7	17	20-8	17	22	943	906	12	17	37	365	1	86-9
6	16	16	612	482	24	0	130	13	18	41-4	20-7	6	35	20-7	16	44	1018	910	11	2	108	700	1	87-0
7	20	22	564	449	10	3	115	13	30	37-8	10-3	6	48	27-5	21	12	954	906	2	30	48	406	1	87-0
8 Q	19	50	583	465	10	35	98	14	12	35-6	18-4	8	1	17-2	20	51	949	914	12	9	35	319	0	87-1
9	14	33	644	457	10	19	187	14	32	42-4	16-4	7	55	26-0	18	5	955	906	24	0	49	529	1	87-1
10	18	28	550	438	10	53	112	1	5	38-0	15-0	7	11	23-0	19	3	944	819	1	26	125	746	1	87-1
11	19	30	603	473	11	0	130	14	57	41-1	17-0	6	34	24-1	19	46	995	881	24	0	114	727	1	87-2
12	19	2	551	454	11	2	97	14	10	36-9	16-8	8	4	20-1	18	58	950	868	0	10	82	528	1	87-2
13	18	3	571	460	11	23	111	13	40	35-7	16-3	6	27	19-4	19	20	949	906	13	32	43	376	0	87-2
14 D	15	36	<u>719</u>	440	9	46	<u>279</u>	15	8	40-2	17-9	7	27	22-3	16	50	<u>1138</u>	896	6	20	<u>242</u>	1547	2	87-3
15	16	28	588	420	11	58	148	14	4	36-9	17-7	8	54	19-2	17	20	983	919	2	3	64	531	1	87-3
16	17	39	576	456	10	18	120	13	34	36-9	16-1	7	28	20-8	6	20	955	924	12	10	31	337	1	87-3
17	18	30	582	468	10	55	94	12	58	33-7	17-5	7	19	16-2	20	22	942	912	10	50	30	290	0	87-3
18	19	21	583	472	9	48	111	14	33	35-8	18-9	6	48	18-9	19	51	944	902	13	10	42	372	0	87-2
19 D	18	47	707	486	9	18	221	18	48	38-4	16-1	19	52	22-3	19	58	1001	902	13	0	99	810	2	87-1
20 D	20	0	554	454	9	47	100	14	17	36-6	11-3	6	53	25-3	17	40	944	906	4	38	38	336	1	87-1
21	19	12	582	480	9	26	102	14	15	35-8	19-7	7	50	16-1	17	26	952	923	14	3	29	298	1	87-1
22 D	18	39	571	<u>399</u>	10	15	172	16	1	36-0	16-0	1	33	20-0	16	57	1019	843	3	52	176	1074	1	87-1
23	18	28																						

TERRESTRIAL MAGNETIC FORCE: HORIZONTAL COMPONENT

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

297 ESKDALEMUIR (H)

16,000 γ (·16 C.G.S. unit) +

AUGUST, 1937

Table with 23 columns (0-1 to 23-24) and 24 rows (Day 1 to Mean). Contains magnetic force data for ESKDALEMUIR (H) in August 1937.

MAGNETIC DECLINATION (WEST)

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

298 ESKDALEMUIR (D)

13° +

AUGUST, 1937

Table with 23 columns (0-1 to 23-24) and 24 rows (Day 1 to Mean). Contains magnetic declination data for ESKDALEMUIR (D) in August 1937.

Q denotes an "International Quiet Day", while D denotes a disturbed day, used for the computation of Tables 323-334

TERRESTRIAL MAGNETIC FORCE: VERTICAL COMPONENT  
Mean values for periods of sixty minutes ending at the hours of Greenwich Mean Time

299 ESKDALEMUIR (V)

44,000 γ (·44 C.G.S. unit) +

AUGUST, 1937

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	Mean
Day 1	925	927	932	936	937	939	938	940	931	920	915	907	907	917	927	936	943	950	954	953	953	945	936	936	933
2 D	24	930	928	890	830	813	820	808	828	869	902	920	943	970	1016	1045	1020	1025	994	963	949	946	947	948	926
3 D	947	942	941	943	943	946	949	948	943	936	923	927	927	938	948	950	944	941	939	944	955	947	942	913	941
4 D	861	780	816	862	870	896	921	933	933	937	926	923	922	927	950	965	960	961	955	949	946	943	944	943	918
5	938	928	938	943	946	945	943	941	942	937	934	923	924	925	929	940	949	955	960	962	956	947	944	942	941
6	937	936	931	937	941	947	948	946	937	930	926	925	920	927	934	936	943	956	966	966	959	948	943	940	941
7	939	937	939	941	942	941	932	932	926	919	914	917	925	930	927	932	939	949	952	950	947	943	941	941	941
8	936	938	936	937	936	937	943	943	940	931	930	932	932	935	942	948	952	948	954	949	946	943	941	941	937
9	940	940	942	943	945	946	945	944	939	931	919	912	912	923	929	935	942	953	954	947	941	937	936	936	937
10	936	937	937	937	939	943	942	938	933	925	919	913	914	924	931	943	955	959	959	952	945	940	937	937	937
11	937	936	937	939	943	947	944	942	936	923	914	907	907	913	920	929	932	939	942	940	937	935	936	933	932
12	936	936	936	938	938	940	937	936	932	924	920	914	910	913	920	926	932	936	934	933	932	932	932	932	928
13 Q	929	930	932	934	932	931	932	932	931	925	920	914	906	912	920	930	936	936	930	927	930	930	931	931	928
14	932	931	931	932	933	937	937	937	930	916	911	903	902	907	919	930	934	933	930	930	929	928	930	931	926
15	931	926	920	920	924	926	914	910	916	919	916	914	916	927	937	937	938	959	937	936	933	932	935	933	926
16 Q	932	931	932	933	936	936	936	934	930	924	916	914	916	927	937	937	938	959	937	936	933	932	935	933	931
17	932	932	932	933	935	934	933	932	927	920	918	919	919	923	933	937	942	946	944	941	939	937	937	934	932
18	932	931	931	933	933	936	935	936	932	923	915	913	917	922	932	938	937	933	930	930	932	931	932	931	930
19	931	931	929	928	931	933	932	931	928	918	910	907	909	918	927	937	943	941	937	937	937	930	926	931	928
20	932	932	932	932	933	935	935	932	930	927	928	924	920	920	927	932	932	931	931	936	937	941	940	937	933
21	932	932	930	930	931	931	926	922	919	919	919	919	913	919	928	935	939	939	934	931	931	930	933	932	928
22 D	932	932	931	927	924	869	858	859	870	849	831	895	913	937	947	954	962	962	958	962	963	953	953	949	920
23	948	947	942	948	954	955	954	948	943	940	939	941	945	949	953	954	953	950	944	943	943	943	945	946	947
24 Q	947	947	947	947	948	947	944	942	942	939	930	923	924	934	943	943	946	947	946	944	943	942	943	943	942
25 Q	943	943	943	943	945	946	944	943	939	937	931	927	928	933	942	945	945	941	937	937	937	936	937	937	939
26	937	937	936	937	937	937	936	933	931	925	913	906	908	918	927	931	932	937	946	954	950	944	939	937	933
27 D	936	933	932	932	935	928	927	926	925	923	919	919	919	923	947	968	991	983	966	967	957	941	932	889	938
28	912	917	926	930	940	943	944	943	939	931	930	932	943	939	940	949	954	952	944	939	938	938	937	937	937
29	936	930	913	903	916	929	939	942	937	932	931	929	931	935	938	944	944	946	944	943	941	940	937	936	935
30 Q	936	933	933	936	937	938	942	940	937	933	930	925	927	932	933	937	937	938	939	938	937	937	936	936	935
31	936	933	936	935	937	938	942	943	942	936	922	909	912	916	926	936	938	935	933	935	936	936	935	934	933
Mean	932	929	930	931	931	931	931	930	928	923	918	918	920	927	936	944	947	949	946	944	942	939	938	935	933

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

300 ESKDALEMUIR

AUGUST, 1937

Day	Terrestrial Magnetic Elements										HR <sub>H</sub> +VR <sub>V</sub> 10,000γ <sup>2</sup>	Magnetic Character of Day (0-2)	Temperature in Magnet House 200 +  °A											
	Horizontal Force			Declination			Vertical Force																	
	Maximum 16,000 γ+	Minimum 16,000 γ+	Range	Maximum 13° +	Minimum 13° +	Range	Maximum 44,000 γ+	Minimum 44,000 γ+	Range															
1	h 18	m 7	γ 584	γ 475	h 10	m 42	γ 109	h 13	m 24	33·7	16·8	h 5	m 48	16·9	h 18	m 45	γ 955	γ 906	h 12	m 0	γ 49	400	1	86·9
2 D	14	29	638	334	6	25	302	14	30	48·7	17·7	0	49	31·0	15	10	1080	798	5	52	282	1764	2	86·9
3 D	20	52	577	439	11	35	138	14	25	35·7	6·3	24	0	29·4	20	48	960	861	24	0	99	673	1	86·9
4 D	20	27	570	381	1	56	189	1	33	37·3	1·8	0	5	35·5	15	18	966	710	1	40	256	1461	2	86·9
5	0	50	571	484	10	59	107	13	23	34·3	17·1	7	53	17·2	19	42	965	919	1	8	46	384	1	86·9
6	19	48	580	460	11	10	130	13	35	34·5	15·9	6	23	18·6	19	39	967	919	12	31	48	431	1	86·9
7	19	18	547	433	12	8	114	14	15	36·7	17·1	7	20	19·6	18	42	953	912	11	0	41	372	1	86·9
8	18	33	537	458	11	49	79	14	8	34·4	17·7	7	22	16·7	18	7	956	926	10	10	30	265	0	87·0
9	16	26	563	452	9	53	111	13	22	36·5	14·8	7	48	21·7	18	0	955	909	11	43	46	390	1	86·9
10	18	28	558	449	9	59	107	13	2	38·1	18·3	7	42	19·8	18	0	960	912	12	10	48	393	0	86·9
11	20	58	563	448	10	10	115	12	55	37·0	17·0	8	2	20·0	6	0	947	906	12	0	41	374	0	86·9
12	20	41	559	454	10	58	105	13	30	35·9	18·7	7	52	19·2	5	18	942	910	12	50	32	317	0	86·9
13 Q	0	1	548	457	9	52	91	13	52	38·1	15·9	7	12	22·2	16	40	937	903	12	26	34	303	0	86·9
14	20	49	576	471	10	39	105	13	22	33·6	17·0	6	26	16·6	7	12	938	902	12	20	36	335	0	86·9
15	1	32	555	486	12	33	69	12	0	31·0	19·5	7	50	11·5	16	50	939	907	6	56	32	258	1	87·0
16 Q	19	54	543	465	10	30	78	12	45	33·0	17·7	8	5	15·3	17	20	941	913	12	8	28	255	0	86·9
17	18	42	545	473	11	20	72	13	33	34·0	17·7	6	48	16·3	17	44	947	917	10	41	30	254	0	86·9
18	19	56	551	477	10	8	74	13	33	32·9	18·4	6	58	14·5	15	38	939	912	11	20	27	243	0	87·0
19	16	15	559	497	9	34	62	12	21	30·3	19·6	7	17	10·7	16	55	945	906	11	20	39	277	1	87·0
20	19	16	551	493	11	0	58	13	14	31·6	20·6	6	55	11·0	21	12	942	919	13	10	23	199	0	87·0
21	21	18	559	479	10	59	80	12	33	28·2	15·9	5	57	12·3	17	0	942	914	12	23	28	258	0	87·1
22 D	5	4	594	178	9	29	418	10	4	46·9	-0·3	8	25	47·2										

TERRSTRIAL MAGNETIC FORCE: HORIZONTAL COMPONENT

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

301 BSKDALEMUIR (H)

16,000 γ (·16 C.G.S. unit) +

SEPTEMBER, 1937

Table with 24 columns (0-1 to 23-24) and 25 rows (Day 1 D to 30 D). Each cell contains a numerical value representing magnetic force measurements.

MAGNETIC DECLINATION (WEST)

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

302 BSKDALEMUIR (D)

15° +

SEPTEMBER, 1937

Table with 24 columns (0-1 to 23-24) and 25 rows (Day 1 D to 30 D). Each cell contains a numerical value representing magnetic declination measurements.

Q denotes an "International Quiet Day", while D denotes a disturbed day, used for the computation of Tables 323-334

TERRESTRIAL MAGNETIC FORCE: VERTICAL COMPONENT  
Mean values for periods of sixty minutes ending at the hours of Greenwich Mean Time

303 ESKDALEMUIR (V)

44,000 γ (·44 C.G.S.unit) +

SEPTEMBER, 1937

Table with 23 columns (Hour G. M. T., 0-1 to 23-24, Mean) and 30 rows (Day 1 D to 30 D). Values represent magnetic force in γ.

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

304 ESKDALEMUIR

SEPTEMBER, 1937

Table with 13 columns (Day, Horizontal Force, Declination, Vertical Force, HRH+VRV, Magnetic Character of Day, Temperature in Magnet House) and 30 rows (Day 1 D to 30 D). Values represent magnetic extremes and temperature.

For explanation see page 176. Q denotes an "International Quiet Day", while D denotes a disturbed day used for the computation of Tables 323-334



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

305 ESKDALEMUIR (H)

16,000 γ (·16 C.G.S. unit) +

OCTOBER, 1937

Table with 24 columns (0-1 to 23-24) and 25 rows (Day 1 to Mean). Each cell contains a numerical value representing magnetic force measurements.

MAGNETIC DECLINATION (WEST)

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

306 ESKDALEMUIR (D)

13° +

OCTOBER, 1937

Table with 24 columns (0-1 to 23-24) and 25 rows (Day 1 to Mean). Each cell contains a numerical value representing magnetic declination measurements.

Q denotes an "International Quiet Day", while D denotes a disturbed day, used for the computation of Tables 323-334

TERRESTRIAL MAGNETIC FORCE: VERTICAL COMPONENT

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

307 ESKDALEMUIR (V)

44,000 γ (.44 C.G.S. unit) +

OCTOBER, 1937

Table with 24 columns (0-1 to 23-24) and 31 rows (Day 1 to 31). Each cell contains a numerical value representing magnetic force. Includes a 'Mean' row at the bottom.

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

308 ESKDALEMUIR

OCTOBER, 1937

Table with 19 columns: Day, Horizontal Force (Maximum, Minimum, Range), Declination (Maximum, Minimum, Range), Vertical Force (Maximum, Minimum, Range), HR<sub>H</sub>+VR<sub>V</sub>, Magnetic Character of Day (0-2), and Temperature in Magnet House (200+). Includes a 'Mean' row and a 'No. of Days Used' row.

§ For explanation see page 176. Q denotes an "International Quiet Day", while D denotes a disturbed day used for the computation of Tables 323-334.

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

309 ESKDALEMUIR (H)

16,000 γ (·16 C.G.S.unit) +

NOVEMBER, 1937

Table with 24 columns (0-1 to 23-24) and 25 rows (Day 1 to Mean). Columns represent 1-hour intervals, and rows represent specific days or the mean. Values are magnetic force readings in γ.

MAGNETIC DECLINATION (WEST)

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

310 ESKDALEMUIR (D)

13° +

NOVEMBER, 1937

Table with 24 columns (0-1 to 23-24) and 31 rows (Day 1 to Mean). Columns represent 1-hour intervals, and rows represent specific days or the mean. Values are magnetic declination in degrees.

Q denotes an "International Quiet Day", while D denotes a disturbed day, used for the computation of Tables 323-334

**TERRESTRIAL MAGNETIC FORCE: VERTICAL COMPONENT**  
 Mean values for periods of sixty minutes ending at the hours of Greenwich Mean Time

271

311 ESKDALEUIR (V)

44,000 γ (·44 C.G.S.unit) +

NOVEMBER, 1937

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	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
1	946	944	944	944	943	943	943	944	944	943	938	937	940	941	944	950	951	956	959	962	964	966	966	960	949
2	956	951	932	930	931	931	933	934	938	941	940	940	943	940	946	947	944	943	944	956	955	951	950	944	943
3	941	940	940	943	943	942	941	939	939	938	939	943	945	947	950	951	951	949	946	944	944	946	945	944	943
4 Q	944	944	944	944	943	941	940	939	943	943	944	947	950	951	951	951	950	946	943	943	943	943	944	943	941
5 Q	943	943	941	940	938	935	933	934	939	941	942	941	943	944	944	944	943	946	940	940	940	941	944	943	941
6 Q	941	941	940	939	939	938	939	941	945	945	940	939	939	940	943	946	947	944	943	943	943	943	945	944	942
7	943	941	937	936	938	935	937	937	938	936	933	934	938	939	945	954	950	945	947	962	970	954	945	940	943
8	909	933	948	940	941	943	944	941	940	940	939	939	939	939	944	947	946	948	963	964	962	964	956	953	945
9	949	948	943	941	938	933	931	930	933	934	944	946	947	953	967	972	955	949	947	946	946	946	946	949	946
10	947	945	944	944	943	943	944	943	945	945	944	949	948	949	953	957	950	949	947	946	944	943	944	943	946
11	943	944	943	944	943	941	939	938	939	939	939	937	938	938	943	944	945	945	946	950	946	950	951	946	943
12	937	943	927	926	935	939	940	940	938	937	937	937	937	939	943	944	944	945	950	951	950	947	936	937	940
13	939	940	942	941	940	939	939	939	939	942	938	938	939	939	943	943	943	943	944	951	944	938	940	943	941
14	941	942	939	936	937	938	939	939	941	943	939	939	943	944	949	947	945	944	943	942	942	943	943	943	942
15 Q	941	939	939	939	939	938	939	938	938	939	943	942	940	939	939	939	941	940	939	939	939	939	939	939	939
16 Q	938	938	937	938	937	937	937	937	937	936	936	934	934	936	938	938	939	938	938	938	938	937	938	938	937
17	937	937	937	937	934	933	933	933	936	936	933	933	933	936	940	947	953	960	968	973	1016	1034	996	986	963
18 D	941	926	922	924	921	923	916	916	916	919	926	936	940	944	957	962	968	973	1016	1034	996	986	963	934	948
19 D	943	933	930	937	940	939	940	940	940	936	937	950	962	995	1002	1016	1004	987	972	966	960	957	953	946	958
20	939	944	950	950	941	942	944	944	944	946	947	950	952	966	983	995	979	987	961	959	956	953	944	944	954
21	947	947	944	941	939	940	942	941	941	939	939	941	949	951	950	948	950	950	960	965	959	954	947	939	947
22	937	938	940	939	940	937	939	940	939	939	944	945	944	957	975	970	984	974	968	973	963	943	940	940	950
23 D	919	912	929	937	940	941	939	943	945	946	944	945	957	957	969	966	960	965	954	956	949	931	934	934	945
24	931	933	937	939	934	938	937	942	941	941	941	943	956	974	972	963	958	958	959	959	953	946	945	943	948
25	935	936	941	944	944	944	946	947	948	946	944	944	943	943	947	949	950	950	950	950	952	950	948	945	946
26	944	944	944	944	943	943	944	945	948	949	947	944	943	946	949	947	949	949	946	945	944	945	940	937	945
27	939	939	939	940	939	939	940	943	943	944	943	940	940	943	944	943	946	947	949	946	953	950	931	935	942
28	937	936	929	920	922	926	931	933	936	935	944	947	951	963	974	990	1001	992	984	975	965	963	962	944	953
29 D	939	924	930	938	943	943	943	941	940	944	943	940	948	954	962	965	971	1005	1005	992	987	968	965	963	956
30 D	957	954	955	933	930	933	937	941	940	936	938	943	946	961	976	985	1004	1031	1031	1049	992	920	942	938	961
Mean	940	939	939	938	938	938	938	939	940	940	940	941	948	949	955	957	957	958	959	960	955	949	947	943	946

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

312 ESKDALEUIR

NOVEMBER, 1937

Day	Terrestrial Magnetic Elements															HR <sub>H</sub> +VR <sub>V</sub> 10,000γ*	Magnetic Character of Day (0-2)	Temperature in Magnet House 200+							
	Horizontal Force					Declination					Vertical Force														
	Maximum 16,000 γ†		Minimum 16,000 γ†		Range	Maximum 13° +		Minimum 13° +		Range	Maximum 44,000 γ†		Minimum 44,000 γ†		Range										
	h	m	γ	γ	h	m	γ	h	m	γ	h	m	γ	h	m				γ						
1			518	478	11	21	40	17	8	30·0	19·6	8	32	10·4	21	48	967	935	11	10	32	210	0	85·5	
2		2	535	476	10	8	59	13	15	27·9	9·8	2	46	18·1	19	52	960	927	2	38	33	245	1	85·4	
3		5	520	479	11	22	41	13	17	28·7	18·1	0	1	10·6	15	30	954	937	10	20	17	144	0	85·3	
4 Q		5	57	522	473	12	27	49	12	42	27·4	19·5	9	6	7·9	14	10	952	938	7	18	14	144	0	85·3
5 Q		4	530	471	11	50	59	13	58	27·2	18·7	8	40	8·5	14	45	946	933	6	20	13	155	0	85·2	
6 Q	5	40	522	478	12	0	44	14	21	27·3	18·9	8	41	8·4	16	40	948	937	11	40	11	122	0	85·1	
7	17	11	525	472	22	8	53	13	54	29·3	12·5	22	59	16·8	20	19	975	919	24	0	56	338	1	85·1	
8	17	14	534	448	0	24	86	14	10	29·5	7·6	0	20	21·9	21	14	967	886	0	21	81	506	1	85·2	
9	22	51	524	441	13	0	83	13	31	32·8	16·2	2	52	16·6	15	3	979	927	7	6	52	370	1	85·2	
10	22	48	519	480	15	14	39	14	53	30·1	20·4	3	24	9·7	15	14	960	942	23	20	18	145	0	85·1	
11	19	57	559	464	10	51	95	13	49	29·8	9·6	19	50	20·2	22	13	956	934	11	46	22	256	1	85·0	
12	22	5	537	484	11	23	53	11	4	27·2	14·3	1	56	12·9	18	46	953	923	2	40	30	222	1	84·9	
13	17	3	526	487	11	9	39	13	31	27·3	16·1	18	31	11·2	18	31	954	937	12	0	17	140	0	84·8	
14	19	40	521	480	11	2	41	13	36	27·3	19·9	8	57	7·4	14	19	950	934	3	41	16	140	0	84·8	
15 Q	21	23	525	491	11	22	34	13	2	25·7	20·0	9	36	5·7	10	50	943	937	8	10	6	83	0	84·8	
16 Q	0	15	525	502	11	37	23	13	7	25·5	20·8	9	2	4·7	0	1	939	933	12	10	6	65	0	84·7	
17	5	30	526	493	16	27	33	16	16	33·8	15·2	23	55	18·6	17	42	961	932	6	0	29	184	0	84·6	
18 D	6	28	529	449	11	53	80	14	24	37·0	7·7	2	40	29·3	19	7	1056	914	6	40	142	770	1	84·6	
19 D	13	42	529	449	16	1	80	13	10	41·4	15·4	21	55	26·0	15	33	1026	928	2	10	98	572	1	84·6	
20	22	19	549	427	13	47	122	10	18	31·2	12·7	22	37	18·5	15	34	1000	937	0	18	63	484	1	84·6	
21	21	57	513	457	12	8	56	12	24	28·2	15·4	22	19	12·8	19	35	967	937	23	38	30	227	1	84·5	
22	16	54	553	414	10	30	139	12	43	34·1	3·9	20	18	30·2	16	36	993	937	9	7	56	315	1	84·3	
23 D	17	55	536	423	12	51	173	13	43	31·8	3·2	17	49	28·6	14	54									

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

313 ESKDALEMUIR (H)

16,000 γ (·16 C.G.S. unit) +

DECEMBER, 1937

Table with 24 columns (0-1 to 23-24) and 25 rows (Day 1 to Mean). Values range from 435 to 509.

506 at 0-lh. on Jan lat 1938

MAGNETIC DECLINATION (WEST)

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

314 ESKDALEMUIR (D)

13° +

DECEMBER, 1937

Table with 24 columns (0-1 to 23-24) and 31 rows (Day 1 to Mean). Values range from 12.6 to 22.5.

18.3 at 0-lh Jan lat. 1938

Q denotes an "International Quiet Day", while D denotes a disturbed day, used for the computation of Tables 323-334

TERRESTRIAL MAGNETIC FORCE: VERTICAL COMPONENT  
Mean values for periods of sixty minutes ending at the hours of Greenwich Mean Time

315 ESKDALEMUIR (V)

44,000 γ (.44 C.G.S.unit) +

DECEMBER, 1937

Table with 25 columns (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, Mean) and 31 rows (Day 1 to 31, Mean). Values range from 945 to 922.

937 at 0-lh. Jan.1st.1938

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

316 ESKDALEMUIR

DECEMBER, 1937

Table with 13 main columns: Day, Horizontal Force (Maximum, Minimum, Range), Declination (Maximum, Minimum, Range), Vertical Force (Maximum, Minimum, Range), HR<sub>H</sub>+VR<sub>V</sub>, Magnetic Character of Day (0-2), Temperature in Magnet House 200+. Includes sub-columns for h, m, γ and h, m, γ. Rows 1-31 and Mean.

§ For explanation see page 176. Q denotes an "International Quiet Day", while D denotes a disturbed day used for the computation of Tables 323 - 334

DIURNAL INEQUALITIES OF THE GEOGRAPHICAL COMPONENTS OF MAGNETIC FORCE -(ALL DAYS)
Departures from the mean of the 24 hourly values (uncorrected for non-cyclic change)

Table for Station 317 ESKDALEMUIR, NORTH COMPONENT (ALL DAYS) 1937. Columns include months (January-December), Year, Winter, Equinox, Summer, and 24 hourly intervals (Hour 0-1 to 23-24). Values are in Gauss, with some underlined.

Table for Station 318 ESKDALEMUIR, WEST COMPONENT (ALL DAYS) 1937. Columns include months (January-December), Year, Winter, Equinox, Summer, and 24 hourly intervals (Hour 0-1 to 23-24). Values are in Gauss, with some underlined.

Table for Station 319 ESKDALEMUIR, VERTICAL COMPONENT (ALL DAYS) 1937. Columns include months (January-December), Year, Winter, Equinox, Summer, and 24 hourly intervals (Hour 0-1 to 23-24). Values are in Gauss, with some underlined.

Departures from the mean of the 24 hourly values (uncorrected for non-cyclic change)

MONTH AND SEASON	Hour 0-1	G.M.T. 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
	320 ESKDALEMUIR DECLINATION (measured positive towards the West) (ALL DAYS) 1937																							
January	-1.91	-1.53	-1.29	-0.82	-0.99	-0.99	-1.05	-1.63	-2.25	-1.88	-0.62	+1.17	+2.73	+3.75	+3.17	+2.74	+2.72	+2.74	+2.09	+0.68	-0.50	-1.52	-2.35	-2.46
February	-1.82	-1.65	-2.64	-2.47	-2.51	-2.20	-1.88	-1.68	-1.18	-0.38	+0.72	+2.51	+2.04	+4.70	+4.75	+3.39	+2.74	+2.05	+2.01	-0.28	-1.98	-2.24	-2.21	-1.79
March	-2.47	-2.46	-2.43	-2.21	-2.63	-2.27	-1.56	-2.29	-4.09	-3.26	-0.67	+2.73	+5.70	+7.11	+6.62	+4.91	+3.20	+1.62	+0.66	+0.10	-0.14	-0.94	-2.74	-2.49
April	-2.07	-3.34	-3.91	-3.74	-3.52	-3.03	-3.03	-3.70	-4.30	-3.42	-1.15	+2.35	+5.86	+7.87	+7.34	+5.76	+4.68	+3.05	+1.91	+1.03	-0.07	-0.93	-1.27	-2.17
May	-1.73	-2.47	-2.79	-2.07	-2.79	-3.88	-5.10	-5.11	-5.37	-4.01	-0.85	+2.68	+5.80	+7.14	+6.72	+5.85	+4.37	+2.83	+1.36	+0.70	+0.33	-0.01	-0.42	-1.18
June	-0.81	-0.81	-2.27	-2.99	-3.91	-4.84	-6.23	-6.84	-6.06	-3.68	-0.78	+3.11	+6.31	+7.53	+7.49	+6.29	+4.56	+2.71	+1.54	+0.61	+0.28	+0.26	-0.72	-0.77
July	-0.47	-1.79	-3.25	-3.69	-3.96	-5.13	-7.60	-7.55	-6.74	-4.46	-1.15	+2.31	+6.12	+8.49	+8.49	+7.09	+5.18	+3.19	+1.96	+1.18	+0.44	+1.05	+0.48	-0.19
August	-1.59	-1.38	-1.94	-2.50	-3.34	-4.73	-5.58	-6.20	-5.79	-3.03	+0.47	+4.22	+6.92	+7.61	+7.15	+4.72	+2.58	+1.12	+0.49	+0.28	+0.52	+0.52	+0.06	-0.38
September	-1.42	-2.21	-2.66	-2.53	-2.18	-2.42	-3.32	-4.43	-4.58	-3.32	-0.27	+3.41	+6.40	+7.45	+6.58	+4.64	+2.25	+1.11	+0.81	+0.67	-0.25	-0.38	-1.44	-1.91
October	-3.11	-2.86	-2.72	-2.18	-1.96	-1.67	-0.98	-1.68	-3.37	-2.79	+0.23	+3.47	+6.02	+6.81	+6.73	+5.01	+2.52	+1.20	+0.76	+0.08	-1.05	-2.70	-2.50	-3.26
November	-2.04	-1.93	-2.29	-2.59	-1.98	-1.77	-1.47	-1.34	-1.01	-0.51	+1.25	+3.04	+4.34	+5.30	+4.52	+3.81	+3.25	+1.32	+0.80	-0.22	-2.10	-2.19	-3.41	-2.78
December	-1.98	-1.87	-1.64	-1.66	-1.55	-1.14	-0.64	-0.82	-0.59	-0.36	+0.50	+1.89	+3.58	+4.26	+3.14	+2.75	+2.73	+1.14	+0.78	-1.02	-1.69	-1.83	-1.94	-2.04
Year	-1.79	-2.03	-2.49	-2.45	-2.61	-2.84	-3.20	-3.61	-3.78	-2.59	-0.19	+2.74	+5.32	+6.49	+6.06	+4.74	+3.40	+2.01	+1.26	+0.32	-0.52	-0.93	-1.54	-1.79
Winter	-1.94	-1.75	-1.97	-1.89	-1.76	-1.53	-1.26	-1.37	-1.26	-0.78	+0.46	+2.15	+3.67	+4.50	+3.89	+3.17	+2.86	+1.81	+1.42	-0.21	-1.57	-1.95	-2.48	-2.27
Equinox	-2.27	-2.72	-2.93	-2.67	-2.57	-2.35	-2.22	-3.03	-4.08	-3.20	-0.47	+2.99	+5.99	+7.26	+6.82	+5.08	+3.16	+1.75	+1.03	+0.47	-0.38	-1.24	-1.99	-2.46
Summer	-1.15	-1.61	-2.56	-2.81	-3.50	-4.65	-6.13	-6.43	-5.99	-3.79	-0.57	+3.08	+6.29	+7.69	+7.46	+5.99	+4.17	+2.46	+1.34	+0.69	+0.39	+0.41	-0.15	-0.63

321 ESKDALEMUIR INCLINATION (ALL DAYS) 1937																								
January	+0.04	+0.01	-0.15	-0.37	-0.53	-0.61	-0.62	-0.53	-0.11	+0.41	+0.81	+0.95	+0.69	+0.31	+0.20	+0.20	+0.10	0.00	-0.10	-0.10	-0.10	-0.10	-0.19	-0.20
February	-0.42	-0.49	-0.16	-0.12	-0.42	-0.67	-0.74	-0.51	-0.32	+0.08	+0.52	+0.61	+0.91	+0.62	+0.56	+0.41	+0.18	+0.20	-0.22	+0.02	+0.20	+0.02	-0.14	-0.32
March	-0.41	-0.36	-0.54	-0.52	-0.78	-0.60	-0.75	-0.34	+0.29	+0.88	+1.60	+1.69	+1.34	+0.94	+0.44	+0.21	+0.02	-0.20	-0.49	-0.57	-0.39	-0.55	-0.31	-0.50
April	+0.19	-0.08	+0.14	-0.16	+0.02	-0.19	0.00	+0.59	+0.80	+1.31	+1.79	+1.77	+1.28	+0.40	-0.21	-0.54	-0.85	-1.21	-1.79	-1.84	-1.38	-0.80	-0.28	+1.04
May	-0.38	+0.10	-0.34	-0.43	-0.31	+0.18	+0.69	+1.00	+1.50	+1.92	+2.08	+1.74	+0.98	+0.61	-0.19	-0.52	-0.95	-1.49	-1.70	-1.40	-1.11	-0.62	-0.68	-0.68
June	-0.34	-0.41	-0.21	-0.30	-0.31	-0.16	+0.46	+1.21	+1.87	+2.19	+2.40	+1.82	+1.17	+0.48	-0.01	-0.75	-0.91	-1.39	-2.02	-1.66	-1.34	-0.89	-0.50	-0.40
July	-0.50	-0.40	-0.42	-0.31	-0.20	-0.15	+0.53	+1.36	+2.09	+2.34	+2.65	+2.56	+1.77	+0.90	-0.13	-0.96	-1.38	-1.63	-2.13	-2.12	-1.48	-1.06	-0.74	-0.59
August	-0.90	-0.76	-0.91	-0.87	-0.69	-0.31	+0.28	+1.01	+2.13	+2.78	+2.60	+2.31	+1.78	+1.13	+0.20	-0.25	-0.60	-1.03	-1.32	-1.52	-1.52	-1.31	-1.17	-1.06
September	-0.91	-0.87	-0.60	-0.64	-0.67	-0.83	-0.43	+0.45	+1.23	+1.99	+2.39	+2.08	+1.35	+0.74	+0.21	0.00	-0.28	-0.43	-0.90	-0.92	-0.76	-0.75	-0.67	-0.78
October	-0.71	-1.10	-0.93	-0.89	-1.08	-0.95	-0.84	-0.19	+0.61	+1.62	+2.16	+2.32	+1.97	+1.30	+0.64	+0.50	+0.24	-0.21	-0.68	-0.78	-0.71	-0.87	-0.71	-0.71
November	-0.39	-0.42	-0.60	-0.68	-0.80	-0.96	-0.94	-0.54	-0.04	+0.48	+0.98	+1.06	+1.19	+0.84	+0.69	+0.48	+0.20	0.00	+0.01	+0.16	-0.18	-0.21	-0.15	-0.18
December	-0.10	-0.21	-0.35	-0.54	-0.87	-0.96	-0.87	-0.60	-0.25	+0.11	+0.45	+0.74	+0.62	+0.50	+0.47	+0.31	+0.49	+0.46	+0.40	+0.26	+0.10	-0.02	-0.07	-0.07
Year	-0.40	-0.42	-0.42	-0.49	-0.55	-0.52	-0.27	+0.24	+0.82	+1.54	+1.69	+1.65	+1.25	+0.73	+0.24	-0.08	-0.31	-0.58	-0.91	-0.87	-0.72	-0.60	-0.47	-0.37
Winter	-0.22	-0.28	-0.31	-0.43	-0.65	-0.80	-0.79	-0.55	-0.18	+0.27	+0.69	+0.89	+0.85	+0.57	+0.48	+0.35	+0.24	+0.17	+0.02	+0.09	0.00	-0.08	-0.14	-0.19
Equinox	-0.46	-0.60	-0.48	-0.55	-0.63	-0.64	-0.51	+0.13	+0.73	+1.45	+1.96	+1.97	+1.49	+0.85	+0.27	+0.04	-0.22	-0.51	-0.97	-1.03	-0.81	-0.74	-0.49	-0.24
Summer	-0.53	-0.37	-0.47	-0.48	-0.38	-0.11	+0.49	+1.15	+1.90	+2.31	+2.43	+2.11	+1.43	+0.78	-0.03	-0.62	-0.96	-1.39	-1.79	-1.67	-1.36	-0.97	-0.77	-0.68

322 ESKDALEMUIR HORIZONTAL FORCE (ALL DAYS) 1937																								
January	0.0	-0.2	+1.8	+4.1	+6.2	+7.4	+7.7	+6.2	-7.2	-12.6	-15.4	-12.3	-6.1	-3.0	-2.2	-0.6	+1.5	+3.7	+4.8	+4.0	+3.9	+3.9	+3.9	+3.9
February	+5.6	+5.5	0.0	+0.6	+4.8	+7.8	+7.5	+5.5	+2.6	-3.5	-10.1	-14.7	-15.7	-10.7	-7.7	-3.9	+0.6	+1.5	+8.9	+4.6	+1.1	+1.8	+2.9	+5.0
March	+4.7	+3.9	+6.3	+6.0	+9.2	+8.6	+9.0	+3.8	-5.7	-14.8	-25.3	-28.6	-23.2	-14.8	-6.2	0.0	+3.7	+7.5	+11.5	+12.5	+9.4	+10.7	+5.7	+6.1
April	-11.6	-3.5	-6.7	-2.0	-5.1	+0.2	-1.6	-10.1	-12.3	-19.7	-27.1	-28.5	-21.8	-6.6	+5.8	+13.1	+19.3	+25.9	+35.0	+35.2	+27.6	+15.9	+0.3	-21.7
May	+2.4	-6.0	+0.1	+1.1	-0.7	-5.2	-11.2	-15.2	-23.1	-31.0	-34.2	-30.7	-18.8	-10.4	+4.4	+12.0	+20.2	+29.3	+33.2	+27.8	+22.0	+13.1	+11.1	+9.7
June	+4.0	+3.2	-0.2	+1.8	+2.7	+0.6	-8.2	-13.5	-29.2	-36.1	-39.9	-33.4	-23.0	-10.3	+0.4	+14.2	+19.6	+27.4	+37.3	+31.6	+25.4	+16.3	+9.1	+6.0
July	+4.2	+1.1	+2.0	+1.3	+1.0	+0.3	-9.0	-21.2	-32.5	-37.8	-43.6	-43.5	-31.6	-15.0	+1.1	+17.3	+27.2	+32.3	+39.8	+39.3	+27.6	+19.0	+12.2	+8.5
August	+13.0	+9.4	+12.2	+12.0	+9.2	+3.9	-4.6	-16.3	-33.5	-44.8	-43.9	-39.9	-31.2	-19.4	-2.1	+7.5	+13.9	+20.9	+24.5	+26.7	+25.9	+21.6	+18.9	+16.1
September	+12.6	+10.1	+6.9	+7.1	+8.0	+11.1	+6.4	-5.6	-17.8	-30.1	-37.8	-35.2	-25.0	-14.2	-3.7	+2.6	+8.2	+10.8	+17.5	+18.6	+14.8	+12.1	+11.0	+11.6
October	+4.5	+5.2	+8.2	+6.0	+9.2	+8.7	+8.3	+5.4	-9.8	-24.3	-32.3	-34.9	-28.1	-16.3	-4.4	+0.6	+4.6	+9.9	+15.4	+16.3	+14.5	+15.4	+10.0	+7.9
November	+3.7	+3.8	+6.2	+8.0	+9.9	+11.2	+11.1	+5.2	-1.8	-9.4	-16.6	-17.5	-16.9	-11.4	-7.0	-2.9	+1.0	+4.0	+4.3	+2.6	+5.8	+4.1	+2.2	+1.4
December	+0.2	+0.9	+2.4	+5.2	+8.6	+9.9	+9.0	+5.8	+1.3	-3.3	-7.2	-11.5	-9.6	-6.5	-4.1	-2.4	-3.5	-0.8	+0.3	+0.7	+1.0	+1.8	+1.4	+0.4
Year	+3.6	+2.8	+3.3	+4.3	+5.2	+5.4	+2.0	-4.7	-13.4	-21.8	-27.6	-27.8	-21.4	-11.8	-2.2	+4.7	+9.5	+14.2	+19.3	+18.2	+14.9	+11.3	+7.4	+4.6
Winter	+2.4	+2.5	+2.6	+4.5	+7.1	+9.1	+8.8	+5.7	+0.7	-5.9	-11.6	-14.8	-13.6	-8.8	-5.5	-2.9	-0.6	+1.5	+4.3	+3.2	+3.0	+2.9	+2.6	+2.7
Equinox	+2.5	+3.9	+3.7	+4.3	+5.3	+7.2	+5.5	-1.6	-11.4	-22.2	-30.6	-31.8	-24.5	-13.0	-2.1	+4.1	+8.9	+13.5	+19.9	+20.7	+16.6	+13.5	+6.7	+1.0
Summer	+5.9	+1.9	+3.5	+4.1	+3.1	-0.1	-8.3	-18.0	-29.6	-37.4	-40.4	-36.9	-26.1	-13.8	+0.9	+12.7	+20.2	+27.5	+33.7	+31.3	+25.2	+17.5	+12.8	+10.1



DIURNAL INEQUALITIES OF THE GEOGRAPHICAL COMPONENTS OF MAGNETIC FORCE (INTERNATIONAL QUIET DAYS)

Departures from the mean of the 24 hourly values (uncorrected for non-cyclic change)

Table for station 323 ESKDALEUIR, NORTH COMPONENT (QUIET DAYS), 1937. Columns include months (January-December), Year, Winter, Equinox, Summer, and 24 hourly intervals (Hour 0-1 to 23-24). Values are numerical departures.

Table for station 324 ESKDALEUIR, WEST COMPONENT (QUIET DAYS), 1937. Columns include months (January-December), Year, Winter, Equinox, Summer, and 24 hourly intervals (Hour 0-1 to 23-24). Values are numerical departures.

Table for station 325 ESKDALEUIR, VERTICAL COMPONENT (QUIET DAYS), 1937. Columns include months (January-December), Year, Winter, Equinox, Summer, and 24 hourly intervals (Hour 0-1 to 23-24). Values are numerical departures.

Departures from the mean of the 24 hourly values ( uncorrected for non-cyclic change)

MONTH AND SEASON	Hour	G.M.T.	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
	0-1	1-2																						
DECLINATION (measured positive towards the West) (QUIET DAYS)																								
326 ESKDALEUIR <span style="float: right;">1937</span>																								
January	-1.28	-0.95	-0.68	-0.57	-0.73	-0.72	-0.99	-1.47	-1.80	-1.49	-0.74	+0.99	+2.40	+3.09	+2.30	+1.65	+1.37	+1.42	+0.87	+0.29	-0.52	-0.81	-0.90	-0.73
February	-1.02	-0.89	-1.10	-1.95	-2.31	-2.24	-2.31	-2.23	-2.60	-1.87	-0.24	+1.61	+3.70	+4.39	+4.66	+3.05	+1.81	+1.30	+0.99	+0.53	+0.16	-0.33	-1.08	-2.03
March	-1.30	-0.97	-0.97	-1.16	-1.31	-1.75	-2.04	-2.87	-4.17	-3.76	-1.55	+1.69	+3.30	+4.97	+4.23	+2.88	+1.41	+1.17	+0.90	+0.51	+0.27	+0.10	+0.07	-0.15
April	-1.12	-1.30	-1.74	-1.94	-2.52	-2.47	-2.78	-4.30	-5.22	-4.34	-2.14	+1.24	+4.32	+6.24	+5.96	+4.94	+3.66	+2.33	+1.32	+0.78	+0.56	+0.40	-0.24	-1.64
May	-0.20	-0.34	-0.51	-0.60	-1.64	-3.18	-5.12	-5.94	-6.09	-5.06	-2.54	+1.26	+4.22	+5.94	+6.21	+4.56	+2.90	+1.48	+0.84	+0.64	+1.03	+0.84	+0.76	+0.54
June	-1.01	-1.46	-1.43	-2.44	-3.56	-5.31	-6.72	-6.64	-6.05	-3.46	-0.57	+2.90	+5.91	+6.96	+7.09	+5.74	+3.88	+1.93	+0.66	+0.78	+0.83	+0.92	+0.67	+0.38
July	-0.87	-1.73	-2.39	-3.17	-4.31	-5.38	-6.49	-6.57	-6.57	-5.65	-3.37	-0.43	+2.53	+5.69	+7.71	+7.39	+6.15	+4.13	+2.42	+1.39	+0.99	+0.75	+1.05	+0.09
August	-0.61	-0.70	-1.63	-2.25	-2.91	-4.38	-5.71	-6.51	-6.07	-2.94	-0.09	+3.69	+6.81	+7.62	+6.21	+3.55	+1.13	+0.32	+0.75	+1.03	+1.19	+1.06	+0.35	+0.09
September	-1.47	-0.76	-0.99	-1.23	-1.63	-2.86	-4.11	-5.61	-6.19	-4.98	-1.71	+2.95	+6.53	+8.08	+6.99	+4.47	+2.15	+0.72	+0.53	+0.31	+0.13	-0.10	-0.69	-0.53
October	-1.20	-1.76	-1.70	-1.78	-1.80	-1.83	-2.02	-2.26	-3.44	-3.52	-0.76	+2.70	+4.60	+4.88	+4.64	+3.64	+2.34	+1.49	+0.66	-0.02	+0.06	-0.62	-1.12	-1.18
November	-0.49	-0.62	-0.62	-0.65	-0.70	-1.20	-1.87	-2.28	-2.76	-2.77	-0.72	+1.82	+2.89	+3.24	+3.08	+2.25	+1.56	+1.16	+0.73	+0.28	-0.02	-0.49	-0.76	-1.06
December	-0.79	-0.76	-0.51	-0.87	-1.01	-1.08	-0.97	-1.33	-1.01	-0.50	+0.55	+1.45	+2.23	+2.86	+1.67	+1.15	+0.99	+0.58	+0.27	-0.07	-0.63	-0.74	-0.65	-0.83
Year	-0.95	-1.02	-1.19	-1.55	-2.04	-2.70	-3.43	-4.00	-4.25	-3.17	-0.91	+2.07	+4.43	+5.50	+5.04	+3.67	+2.28	+1.36	+0.83	+0.50	+0.32	+0.11	-0.29	-0.59
Winter	-0.89	-0.81	-0.73	-1.01	-1.19	-1.31	-1.53	-1.83	-2.04	-1.66	-0.29	+1.47	+2.81	+3.39	+2.93	+2.03	+1.43	+1.11	+0.71	+0.26	-0.25	-0.59	-0.85	-1.16
Equinox	-1.27	-1.20	-1.35	-1.53	-1.81	-2.23	-2.74	-3.76	-4.75	-4.15	-1.54	+2.15	+4.81	+6.04	+5.45	+3.98	+2.39	+1.43	+0.85	+0.39	+0.25	-0.05	-0.49	-0.87
Summer	-0.67	-1.06	-1.49	-2.11	-3.11	-4.56	-6.01	-6.41	-5.97	-3.71	-0.91	+2.59	+5.66	+7.06	+6.73	+5.00	+3.01	+1.54	+0.91	+0.86	+0.95	+0.97	+0.46	+0.27

INCLINATION (QUIET DAYS)																								
327 ESKDALEUIR <span style="float: right;">1937</span>																								
January	-0.02	0.00	-0.05	-0.16	-0.26	-0.31	-0.38	-0.20	+0.24	+0.59	+0.80	+0.92	+0.82	+0.31	+0.18	+0.26	+0.08	+0.06	-0.32	-0.49	-0.51	-0.49	-0.48	-0.47
February	-0.31	-0.26	-0.18	-0.20	-0.41	-0.41	-0.30	-0.29	-0.26	+0.20	+0.62	+0.69	+0.99	+0.94	+0.70	+0.58	+0.39	+0.11	-0.20	-0.28	-0.41	-0.43	-0.65	-0.57
March	-0.39	-0.30	-0.28	-0.26	-0.31	-0.38	-0.32	-0.09	+0.47	+1.10	+1.49	+1.60	+1.44	+0.90	+0.40	+0.08	-0.13	-0.36	-0.66	-0.78	-0.66	-0.73	-0.86	-0.81
April	-0.50	-0.48	-0.29	-0.20	-0.20	-0.33	-0.38	-0.10	+0.40	+0.99	+1.68	+2.01	+1.50	+0.88	+0.39	0.00	-0.49	-0.71	-0.78	-0.78	-0.72	-0.82	-0.58	-0.49
May	-0.11	-0.18	-0.10	-0.13	-0.25	-0.11	+0.30	+0.68	+1.17	+1.58	+1.77	+1.71	+1.19	+0.50	-0.28	-0.59	-0.83	-0.98	-0.99	-1.19	-1.08	-0.74	-0.65	-0.69
June	-0.62	-0.39	-0.13	-0.48	-0.42	-0.21	+0.49	+1.22	+1.81	+2.11	+2.37	+2.19	+1.45	+0.71	+0.20	-0.50	-1.16	-1.51	-1.68	-1.47	-1.30	-1.05	-0.80	-0.83
July	-0.35	-0.25	-0.25	-0.31	-0.30	-0.08	+0.38	+1.11	+1.76	+2.14	+2.63	+2.37	+1.61	+0.81	-0.10	-0.87	-1.12	-1.31	-1.61	-1.70	-1.66	-1.19	-0.91	-0.80
August	-0.83	-0.66	-0.52	-0.43	-0.49	-0.20	+0.26	+0.96	+1.93	+2.73	+2.84	+2.31	+1.48	+0.83	+0.21	-0.30	-0.45	-0.82	-1.30	-1.51	-1.60	-1.59	-1.48	-1.37
September	-0.81	-0.71	-0.60	-0.64	-0.68	-0.76	-0.50	+0.39	+1.31	+2.20	+2.66	+2.47	+1.79	+1.10	+0.48	+0.29	-0.15	-0.64	-1.00	-1.26	-1.23	-1.19	-1.22	-1.30
October	-0.84	-0.39	-0.40	-0.40	-0.51	-0.59	-0.50	+0.20	+0.32	+1.31	+1.87	+1.86	+1.45	+1.07	+0.64	+0.38	-0.01	-0.32	-0.54	-0.69	-0.90	-1.04	-0.80	-0.77
November	-0.43	-0.35	-0.40	-0.54	-0.70	-0.79	-0.68	-0.45	+0.15	+0.91	+1.43	+1.55	+1.49	+1.01	+0.62	+0.41	+0.21	-0.19	-0.49	-0.80	-0.87	-0.88	-0.50	-0.51
December	+0.04	+0.02	-0.09	-0.28	-0.39	-0.50	-0.33	+0.04	+0.55	+0.73	+0.64	+0.50	+0.31	+0.30	+0.29	+0.19	0.00	-0.20	-0.30	-0.31	-0.33	-0.33	-0.25	
Year	-0.43	-0.33	-0.27	-0.34	-0.41	-0.39	-0.16	+0.23	+0.78	+1.37	+1.74	+1.69	+1.31	+0.78	+0.31	-0.01	-0.29	-0.57	-0.81	-0.92	-0.91	-0.85	-0.77	-0.74
Winter	-0.18	-0.15	-0.18	-0.29	-0.44	-0.50	-0.42	-0.31	+0.04	+0.56	+0.89	+0.95	+0.95	+0.64	+0.45	+0.39	+0.22	-0.03	-0.30	-0.42	-0.45	-0.47	-0.48	-0.45
Equinox	-0.63	-0.47	-0.39	-0.37	-0.43	-0.51	-0.43	0.00	+0.63	+1.40	+1.93	+1.99	+1.55	+0.99	+0.48	+0.15	-0.19	-0.51	-0.75	-0.88	-0.88	-0.95	-0.87	-0.84
Summer	-0.48	-0.37	-0.25	-0.34	-0.37	-0.15	+0.36	+0.96	+1.67	+2.14	+2.40	+2.15	+1.43	+0.71	+0.01	-0.57	-0.89	-1.15	-1.39	-1.47	-1.41	-1.14	-0.96	-0.92

HORIZONTAL FORCE (QUIET DAYS)																								
328 ESKDALEUIR <span style="float: right;">1937</span>																								
January	+1.2	+0.5	+1.1	+2.2	+3.5	+4.5	+5.2	+2.5	-3.5	-8.2	-12.3	-13.9	-12.8	-4.9	-2.3	-3.2	-0.5	+1.1	+5.0	+7.1	+7.7	+7.2	+6.5	+6.3
February	+5.6	+4.6	+3.0	+2.8	+6.0	+5.7	+3.8	+3.6	+2.8	-4.8	-11.2	-12.6	-16.4	-15.4	-10.8	-7.6	-4.2	-0.5	+4.0	+5.4	+7.6	+8.2	+10.8	+9.6
March	+6.8	+5.3	+5.0	+4.9	+5.8	+6.7	+5.8	+2.9	-5.4	-15.9	-23.6	-26.5	-24.6	-15.9	-7.0	+0.7	+2.0	+5.5	+9.6	+11.7	+10.2	+11.1	+12.6	+12.3
April	+8.7	+8.3	+5.8	+4.5	+3.9	+5.5	+6.5	+2.3	-6.0	-15.7	-26.7	-33.9	-28.1	-18.1	-8.8	-1.5	+7.3	+12.5	+13.7	+13.9	+13.0	+13.9	+10.3	+8.7
May	+3.4	+4.1	+3.0	+3.5	+5.2	+3.1	-3.6	-8.9	-17.0	-25.3	-30.0	-31.7	-24.6	-12.3	+0.8	+7.7	+13.4	+17.3	+18.2	+20.7	+18.4	+12.9	+10.8	+10.9
June	+6.8	+3.8	+1.6	+6.8	+7.4	+5.0	-4.6	-16.2	-26.2	-33.2	-27.8	-36.8	-26.8	-14.4	-4.2	+6.6	+18.0	+25.2	+28.4	+25.0	+21.6	+17.2	+13.0	+13.8
July	+5.3	+3.8	+4.1	+5.2	+5.9	+3.4	-3.5	-15.8	-26.1	-33.2	-42.5	-40.6	-30.9	-17.4	-1.9	+11.8	+18.5	+22.6	+27.5	+28.4	+27.3	+20.2	+15.1	+12.8
August	+13.2	+10.4	+8.6	+7.8	+8.6	+4.7	-2.0	-12.8	-28.2	-41.8	-45.6	-39.6	-27.2	-15.0	-3.2	+5.4	+8.6	+14.1	+20.4	+23.0	+24.0	+23.6	+22.2	+20.8
September	+12.1	+10.8	+9.3	+9.8	+10.4	+11.9	+8.6	-3.2	-17.1	-32.4	-41.7	-41.6	-32.3	-20.8	-8.7	-3.0	+4.0	+11.5	+15.8	+19.6	+19.5	+18.6	+19.3	+19.6
October	+10.2	+4.7	+5.4	+5.6	+7.0	+6.3	+6.8	+2.6	-3.8	-18.7	-27.4	-28.0	-22.2	-16.3	-9.4	-4.0	+1.4	+5.9	+8.6	+10.6	+13.8	+15.5	+12.0	+11.0
November	+6.7	+5.3	+5.8	+7.7	+9.9	+10.5	+8.9	+5.5	-2.4	-13.5	-21.1	-22.9	-21.7	-14.5	-8.4	-4.9	-1.9	+3.1	+7.1	+8.9	+8.2	+8.3	+7.7	+7.7
December	-0.5	-1.0	+0.3	+2.6	+4.6	+6.1	+4.2	+3.8	-1.1	-8.0	-9.9	-8.8	-6.9	-3.8	-2.9	-3.0	-1.6	+0.5	+3.2	+4.8	+4.7	+4.8	+4.7	+3.2
Year	+6.6	+5.1	+4.4	+5.3	+6.5	+6.3	+3.0	-2.8	-11.2	-20.9	-27.5	-28.1	-22.9	-14.1	-5.6	+0.4	+5.4	+9.9	+13.5	+14.9	+14.7	+13.5	+12.1	+11.4
Winter	+3.3	+2.3	+2.5	+3.8	+6.0	+6.7	+5.5	+3.9	-1.1	-8.6	-13.6	-14.5	-14.5	-9.7	-6.1	-4.7	-2.1	+1.1	+4.8	+6.5	+7.1	+7.1	+7.4	+6.7
Equinox	+9.5	+7.3	+6.4	+6.2	+6.8	+8.1	+6.9	+1.2	-8.1	-20.7	-29.9	-32.5	-26.8	-17.8	-8.5	-1.9	+3.7	+8.9	+11.9	+14.0	+14.1	+14.9	+13.5	+12.9
Summer	+7.2	+5.5	+4.3	+5.8	+6.8	+4.1	-3.4	-13.4	-24.4	-33.4	-39.0	-37.2	-27.4	-14.8	-2.1	+7.9	+14.6	+19.8	+23.6	+24.3	+22.8	+18.5	+15.3	+14.6

DIURNAL INEQUALITIES OF THE GEOGRAPHICAL COMPONENTS OF MAGNETIC FORCE - (INTERNATIONAL DISTURBED DAYS)

Departures from the mean of the 24 hourly values (uncorrected for non-cyclic change)

Table for station 329 ESKDALEMUIR, 1937, showing North Component (Disturbed Days) with columns for months (January-December), years, seasons, equinox, and summer, and rows for hours 0-1 through 23-24.

Table for station 330 ESKDALEMUIR, 1937, showing West Component (Disturbed Days) with columns for months (January-December), years, seasons, equinox, and summer, and rows for hours 0-1 through 23-24.

Table for station 331 ESKDALEMUIR, 1937, showing Vertical Component (Disturbed Days) with columns for months (January-December), years, seasons, equinox, and summer, and rows for hours 0-1 through 23-24.

Departures from the mean of the 24 hourly values (uncorrected for non-cyclic change)

MONTH AND SEASON	Hour	G.M.T.	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	
	0-1	1-2	DECLINATION (measured positive towards the West) (DISTURBED DAYS)																						
332 ESKDALEMUIR																							1937		
January	-2.09	-1.05	-0.94	-0.81	-0.85	-1.21	-1.87	-2.31	-3.00	-2.57	-0.45	+1.61	+2.91	+4.59	+4.08	+3.93	+4.37	+4.89	+3.93	+0.89	-0.20	-3.23	-5.99	-4.63	
February	-2.61	-3.89	-5.28	-4.23	-4.21	-2.37	-1.57	-0.77	+0.60	+1.09	+1.53	+2.91	+4.57	+3.97	+5.54	+4.47	+4.91	+3.89	+6.25	-1.61	-3.94	-3.43	-3.03	-1.79	
March	-3.23	-4.38	-2.96	-2.91	-5.28	-4.24	+0.73	+2.04	-3.00	-1.75	+1.22	+4.60	+8.81	+9.38	+8.62	+6.21	+5.26	+1.32	-0.41	-1.58	-1.74	-2.21	-8.80	-5.70	
April	-5.73	-10.77	-8.70	-9.31	-6.85	-4.05	-1.97	-1.77	-2.08	-2.11	-0.97	+1.83	+6.99	+9.17	+8.66	+7.57	+8.45	+7.27	+7.35	+4.27	+2.14	-1.77	-2.63	-4.99	
May	-2.03	-3.48	-5.80	-4.85	-2.22	-3.24	-5.31	-2.80	-4.58	-2.77	+1.28	+4.84	+8.01	+8.38	+6.52	+7.11	+4.76	+4.54	+1.97	+0.54	-1.24	-2.89	-2.10	-4.84	
June	-0.93	-0.36	-1.43	-3.41	-3.87	-3.52	-5.91	-9.25	-6.03	-4.34	-0.35	+3.37	+7.31	+8.78	+9.03	+8.61	+6.23	+3.80	+2.63	+0.11	-0.87	-1.42	-4.11	-4.07	
July	-0.22	-4.10	-5.65	-4.42	-2.42	-4.78	-5.50	-8.28	-7.03	-4.30	-0.68	+1.76	+5.66	+8.44	+9.49	+8.30	+5.74	+3.72	+2.66	+1.34	-0.57	+1.44	+0.36	-0.98	
August	-5.97	-2.16	-3.78	-3.05	+3.26	-3.90	-4.17	-4.20	-5.98	-0.17	+1.84	+5.28	+6.89	+6.72	+8.32	+5.05	+4.12	+2.66	+1.35	-0.08	-0.44	-1.17	-1.72	-2.18	
September	-1.82	-5.12	-4.41	-2.32	-1.80	-1.58	-2.64	-5.78	-5.89	-3.62	-0.56	+3.26	+7.24	+8.48	+8.17	+6.80	+4.06	+3.12	+3.86	+3.78	-2.35	-0.48	-4.70	-5.70	
October	-4.26	-8.38	-10.92	-5.86	-2.00	-0.37	+4.36	+2.62	-2.82	-3.92	-0.84	+2.52	+5.94	+6.16	+9.08	+7.54	+2.64	+1.93	+1.64	+1.38	-0.16	+0.04	-2.72	-3.60	
November	-0.49	-0.62	-0.62	-0.65	-0.70	-1.20	-1.87	-2.28	-2.76	-2.77	-0.72	+1.82	+2.89	+3.24	+3.08	+2.25	+1.56	+1.16	+0.73	+0.28	-0.02	-0.49	-0.76	-1.06	
December	-1.59	-1.03	-1.37	-1.33	-2.69	-1.40	-0.77	-0.19	+0.61	+0.61	+0.89	+2.85	+4.96	+6.67	+4.31	+4.19	+5.89	-0.04	-0.49	-5.53	-3.53	-3.69	-3.81	-3.31	
Year	-2.58	-3.78	-4.41	-3.80	-3.01	-2.65	-2.21	-2.73	-3.50	-2.22	+0.17	+3.05	+6.01	+7.00	+7.07	+6.00	+4.83	+3.19	+2.62	+0.32	-1.08	-1.61	-3.33	-3.57	
Winter	-1.69	-1.65	-2.30	-1.75	-2.11	-1.55	-1.49	-1.39	-1.14	-0.91	+0.26	+2.30	+3.83	+4.62	+4.25	+3.71	+4.18	+2.47	+2.61	-1.49	-1.92	-2.71	-3.40	-2.70	
Equinox	-3.76	-7.16	-6.75	-5.10	-3.98	-2.56	+0.12	-0.72	-3.45	-2.85	-0.29	+3.05	+7.25	+8.30	+8.63	+7.03	+5.10	+3.41	+3.11	+1.96	-0.53	-1.11	-4.71	-5.00	
Summer	-2.29	-2.53	-4.17	-3.93	-2.94	-3.86	-5.22	-6.08	-5.91	-2.89	+0.52	+3.81	+6.97	+8.08	+8.34	+7.27	+5.21	+3.68	+2.15	+0.48	-0.78	-1.01	-1.89	-3.02	

333 ESKDALEMUIR																							1937		
INCLINATION (DISTURBED DAYS)																									
January	-0.49	-0.55	-0.68	-0.87	-0.99	-1.19	-1.28	-1.00	-0.68	+0.02	+0.63	+0.80	+0.25	+0.09	+0.09	-0.04	+0.19	+0.30	+0.48	+0.38	+0.94	+1.52	+1.08	+1.00	
February	-1.29	-1.43	+0.34	+0.08	-0.88	-1.08	-1.26	-0.77	-0.64	-0.47	+0.22	+0.58	+0.89	+0.84	+0.53	+0.70	+0.21	+0.76	-0.30	+0.52	+0.92	+1.28	+0.28	-0.03	
March	-1.19	-1.09	-1.63	-1.75	-2.16	-1.55	-1.93	-0.91	-0.13	-0.10	+1.27	+2.18	+1.42	+1.21	+1.23	+1.54	+0.72	-0.15	-0.07	+0.09	+0.62	+1.16	+1.27	-0.05	
April	+3.87	+1.91	+2.09	+0.14	+1.12	+0.53	+0.72	+2.18	+1.10	+0.98	+1.59	+1.58	+0.55	-0.39	-1.10	-1.51	-2.64	-2.61	-5.90	-6.06	-5.06	-2.54	+0.95	+9.00	
May	-0.53	+1.09	-1.09	-1.52	+0.75	+0.57	+1.49	+1.14	+2.34	+3.23	+3.14	+2.10	+0.11	-0.25	-1.53	-1.69	-0.63	-2.26	-2.62	-1.91	-1.11	+0.74	+0.08	-0.14	
June	-0.62	-0.88	-0.81	-1.09	-0.63	-0.56	-0.42	+0.96	+1.47	+2.34	+3.07	+3.65	+3.00	+2.17	+0.92	-0.14	-2.20	-2.35	-2.53	-2.39	-2.10	-0.49	-0.22	+0.05	+0.04
July	-1.43	-1.39	-0.99	-0.80	+0.59	-0.82	+0.37	+2.02	+2.75	+3.07	+3.55	+2.70	+2.66	+1.94	+1.80	-0.01	-0.19	-0.12	-0.67	-0.91	-1.17	-1.12	-0.36	+0.81	
August	-1.12	-1.30	-2.55	-2.67	-2.30	-1.50	+0.09	+1.23	+4.01	+4.59	+2.70	+2.66	+1.94	+1.80	-0.01	-0.19	-0.12	-0.67	-0.91	-1.17	-1.12	-0.36	+0.81	+0.11	
September	-1.12	-0.54	-0.39	-0.71	-0.60	-1.31	-0.82	+0.33	+1.50	+2.36	+3.00	+2.52	+1.26	+0.52	-0.23	-0.97	-1.22	-0.80	-1.59	-1.41	+0.08	-0.25	+0.28	+0.11	
October	-0.64	-0.58	-1.00	-0.20	-1.62	-0.35	-0.18	-0.17	+0.26	+1.80	+2.22	+2.89	+1.80	+1.08	-0.81	+0.58	+0.50	-0.05	-0.97	-0.87	-0.80	-0.78	-1.22	-0.69	
November	-0.54	-1.17	-1.04	-1.57	-1.19	-1.30	-1.68	-1.10	-0.84	-0.29	+0.31	+1.12	+1.19	+0.62	+0.69	+0.50	+0.39	+1.08	+1.24	+2.11	+0.43	+0.42	+0.51	+0.11	
December	-1.04	-1.41	-1.29	-1.67	-1.71	-2.10	-2.17	-1.67	-1.09	-0.33	+0.18	+0.45	+0.03	+0.82	+0.50	+0.19	+1.66	+2.28	+2.48	+2.20	+1.61	+1.09	+0.60	+0.39	
Year	-0.51	-0.61	-0.75	-1.03	-1.03	-0.87	-0.59	+0.19	+0.84	+1.43	+1.82	+1.83	+1.15	+0.66	-0.06	-0.46	-0.43	-0.55	-1.09	-0.81	-0.45	+0.10	+0.34	+0.87	
Winter	-0.84	-1.14	-0.67	-1.01	-1.19	-1.42	-1.60	-1.13	-0.81	-0.27	+0.33	+0.74	+0.59	+0.59	+0.45	+0.34	+0.61	+1.11	+0.97	+1.30	+0.97	+1.08	+0.62	+0.37	
Equinox	+0.23	-0.07	-0.23	-0.63	-0.81	-0.67	-0.55	+0.36	+0.68	+1.26	+2.02	+2.24	+1.26	+0.48	-0.23	-0.09	-0.68	-0.91	-2.13	-2.06	-1.29	-0.60	+0.32	+2.09	
Summer	-0.93	-0.62	-1.36	-1.45	-1.07	-0.53	+0.38	+1.34	+2.64	+3.31	+2.52	+1.59	+0.89	-0.39	-1.62	-1.24	-1.86	-2.10	-1.65	-1.04	-0.17	+0.09	+0.14		

334 ESKDALEMUIR																							1937		
HORIZONTAL FORCE (DISTURBED DAYS)																									
January	+5.7	+6.3	+7.5	+9.9	+11.1	+13.4	+14.1	+10.1	+5.5	-4.3	-12.7	-15.7	-8.9	-5.1	-2.5	+1.3	-1.5	-1.2	-0.3	+4.3	-6.7	-13.1	-9.3	-7.9	
February	+17.3	+15.2	-13.5	-5.5	+7.7	+10.0	+12.1	+5.7	+4.7	+1.4	-7.3	-11.9	-15.9	-15.0	-8.5	-8.1	+2.5	+1.8	+23.9	+5.3	-3.9	-13.6	-3.7	-0.7	
March	+12.6	+12.6	+21.6	+23.0	+26.2	+16.7	+18.6	+2.2	-8.0	-7.4	-26.0	-37.6	-23.4	-11.8	-7.4	-11.2	-1.4	+12.7	+11.4	+9.2	-0.6	-11.2	-17.0	-3.8	
April	-102.3	-46.7	-47.9	-19.1	-37.9	-18.1	-18.7	-39.5	-13.5	-4.7	-12.7	-13.9	+2.9	+29.7	+35.7	+44.7	+60.1	+57.3	+104.9	+10.5	+98.1	+48.3	-44.7	-172.5	
May	-8.6	-34.3	-3.8	+1.7	-11.8	-25.3	-31.8	-21.9	-36.0	-46.3	-45.6	-30.3	+1.2	+12.9	+40.0	+45.7	+29.0	+50.5	+55.2	+42.7	+28.0	-5.1	-2.4	-3.7	
June	+6.5	+7.8	+2.1	+8.3	+2.1	-1.4	-4.5	-22.3	-28.1	-41.6	-51.5	-40.7	-34.7	-15.8	+5.3	+45.3	+42.1	+46.6	+52.5	+35.9	+22.7	+3.8	-14.5	-24.9	
July	+15.1	+2.3	-0.8	-5.7	-2.3	-2.5	-16.9	-38.7	-47.8	-51.5	-57.3	-48.9	-34.7	-12.1	+8.4	+45.5	+54.3	+57.1	+57.1	+49.5	+20.6	+8.5	+0.3	+0.5	
August	+13.6	+9.9	+30.6	+32.8	+23.8	+8.1	-13.6	-30.8	-70.4	-77.5	-50.6	-43.6	-30.0	-23.3	+12.0	+20.2	+19.0	+26.7	+26.8	+27.8	+35.2	+23.1	+18.4	+11.8	
September	+14.6	+1.7	+0.4	+2.7	+3.5	+16.2	+9.7	-4.5	-21.6	-35.7	-46.6	-41.9	-24.2	+11.3	+2.8	+17.1	+24.9	+19.0	+31.1	+35.4	+8.1	+2.0	-1.5	-1.9	
October	+1.3	-1.9	-1.2	-25.1	-3.5	-15.5	-13.7	-5.5	-5.8	-24.9	-29.9	-36.1	-21.3	-6.9	+25.4	+12.5	+12.9	+15.7	+25.5	+23.7	+21.4	+18.3	+22.1	+12.5	
November	+2.9	+8.5	+8.0	+15.9	+10.9	+12.9	+17.9	+9.9	+6.0	-2.3	-10.7	-20.7	-18.7	-6.1	-2.8	+1.7	+4.7	-1.7	-2.9	-14.5	+2.0	-6.9	-8.5	-5.5	
December	+8.9	+13.2	+11.9	+16.7	+17.1	+22.6	+23.9	+16.9	+9.1	-0.2	-6.7	-11.3	-4.7	-12.6	+4.3	+0.9	-14.5	-10.2	-11.5	-16.9	-18.1	-13.0	-9.5	-7.7	
Year	-1.1	-0.5	+1.2	+4.6	+3.9	+3.1	-0.2	-9.9	-17.2	-24.7	-29.8	-29.4	-17.7	-6.5	+8.7	+18.0	+19.3	+22.9	+31.1	+26.1	+17.2	+3.6	-5.9	-17.0	
Winter	+8.7	+10.8	+3.5	+9.3	+11.7	+14.7	+17.0	+10.7	+6.3	-1.3	-9.3	-14.9	-12.1	-9.7	-4.5	-1.1	-2.2	-2.8	+2.3	-5.5	-6.7	-11.7	-7.7	-5.5	
Equinox	-18.5	-8.6	-6.8	-4.6	-2.9	-0.2	-1.0	-11.8	-12.2	-18.2	-28.8	-32.4	-16.5	-0.1	+14.1	+15.8	+24.1	+26.2	+43.2	+44.7	+31.7	+14.3	-10.3	-41.4	
Summer	+6.4	-3.6	+7.0	+9.3	+2.9	-5.3	-16.7	-28.4	-45.6	-54.7	-51.3	-40.9	-24.5	-9.6	+16.4	+39.2	+36.1	+45.2	+47.9	+39.0	+26.6	+8.1	+0.5	-4.1	

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	25.0	26.7	14.3	23.2	22.5	3.7	32.9	52.7	40.1	6.21	1.57	23.1	4.89	1.43	21.6	10.88	2.80	29.8
February	29.9	32.7	22.2	31.8	30.7	11.0	36.9	67.3	75.2	7.39	1.65	24.6	7.26	1.64	27.2	12.53	2.71	39.8
March	43.0	50.1	22.3	40.4	40.8	13.7	73.1	86.2	62.6	11.20	2.47	41.1	9.14	2.46	39.1	18.18	4.34	63.8
April	63.5	58.5	46.2	47.5	51.6	22.5	265.0	122.3	184.4	11.97	3.63	63.7	11.46	2.83	47.8	19.94	15.06	283.0
May	63.8	62.9	36.4	51.7	61.6	28.8	97.3	76.1	117.9	12.51	3.78	67.5	12.30	2.96	52.4	14.18	5.85	103.5
June	72.6	71.5	36.3	66.0	66.9	24.0	97.8	99.2	76.1	14.37	4.42	77.2	13.81	4.05	66.2	18.28	5.54	104.0
July	81.8	80.1	37.6	68.8	68.5	28.7	107.6	97.0	107.8	16.09	4.78	83.4	14.28	4.33	70.9	17.75	6.08	114.4
August	69.2	67.8	30.6	66.3	67.0	20.2	110.5	86.0	86.1	13.81	4.30	71.5	14.13	4.44	69.6	14.30	7.26	112.7
September	55.4	57.0	26.8	55.2	65.8	23.0	74.9	71.3	60.0	12.03	3.31	56.4	14.27	3.96	61.3	14.37	4.59	82.0
October	55.9	49.1	42.2	46.1	40.3	9.6	62.4	99.6	132.6	10.18	3.42	51.2	8.40	2.91	43.5	20.00	4.31	61.6
November	34.2	37.5	22.0	35.9	28.5	6.4	45.1	27.2	69.5	8.71	2.15	28.7	6.01	2.34	33.4	12.88	3.79	38.6
December	24.2	27.8	28.9	17.4	17.8	7.4	44.8	58.0	91.3	6.30	1.70	21.4	4.19	1.23	16.0	12.20	4.65	42.0
Year	47.5	48.6	24.6	43.6	44.9	13.7	59.3	55.7	71.2	10.27	2.60	47.1	9.75	2.66	43.0	11.48	2.92	60.9
Winter	27.9	30.0	20.2	25.4	23.4	4.8	35.3	37.0	63.0	6.98	1.69	23.9	5.43	1.45	21.9	8.02	2.90	31.9
Equinox	53.9	52.9	27.9	48.5	48.3	14.5	76.2	79.0	79.7	11.34	3.00	52.5	10.79	2.94	47.3	15.79	4.37	86.1
Summer	70.6	70.0	34.3	61.8	64.5	24.8	94.7	81.3	83.9	14.12	4.22	74.1	13.47	3.87	63.3	14.42	5.41	102.6

NON-CYCLIC CHANGE

MEAN VALUES OF  $HR_H + VR_V^*$   
 (Unit 10,000γ<sup>2</sup>)

MONTH AND SEASON	All Days			Quiet Days			Disturbed Days		
	H	D	V	H	D	V	H	D	V
January	+0.1	0.00	-0.1	+5.1	+0.67	-3.5	-15.9	-1.59	+16.8
February	-0.7	-0.12	+0.2	+3.9	-1.03	-0.9	-19.0	+0.69	+0.1
March	-0.2	-0.01	-1.2	+6.0	+0.66	-1.6	-20.4	-1.49	-2.9
April	-0.7	-0.25	+1.5	-1.2	-0.85	+0.2	-7.1	+0.71	-2.1
May	+1.3	+0.19	-0.7	+5.2	+0.20	-1.5	-8.8	+0.18	+0.7
June	+0.6	+0.07	+0.5	+4.1	+0.94	+7.8	-25.7	-2.21	-11.8
July	+0.3	-0.03	-0.1	+5.8	+0.49	+0.7	-16.8	-0.89	+4.5
August	-0.4	-0.03	+0.1	+6.0	+0.36	-1.7	-16.3	-0.11	-1.9
September	-2.8	-0.52	-1.1	+5.8	-0.01	-1.2	-22.0	-3.08	-6.0
October	+2.1	-0.36	+1.5	+5.3	+0.97	+0.6	+4.6	+0.90	+14.0
November	-2.3	-0.29	-0.6	+0.6	-0.66	-1.0	-8.3	+0.37	-2.0
December	+2.0	+0.15	+0.3	+4.5	-0.43	-3.0	-8.4	-0.08	+5.4
Year 1937	-0.1	-0.10	0.0	+4.3	+0.11	-0.4	-13.7	-0.55	+1.2
Winter	-0.2	-0.07	-0.1	+3.5	-0.36	-2.2	-12.9	-0.15	+5.1
Equinox	-0.4	-0.29	+0.2	+4.0	+0.19	-0.5	-11.2	-0.74	+0.7
Summer	+0.5	+0.05	-0.1	+5.3	+0.50	+1.3	-16.9	-0.76	-2.1

$HR_H$	$VR_V$	Sum	Mean Character Figure
104	147	251	0.52
141	221	362	0.93
144	233	377	0.87
325	562	887	1.00
183	329	512	1.00
196	273	469	0.93
207	311	518	0.87
189	269	458	0.58
147	232	379	0.73
210	402	612	0.94
120	204	324	0.65
99	199	298	0.68
172	282	454	0.81
116	193	309	0.69
207	357	564	0.89
194	295	489	0.85

\* See page 175

MEAN MONTHLY AND ANNUAL VALUES OF TERRESTRIAL MAGNETIC ELEMENTS

MONTH	Horizontal Force			Declination (West)			Vertical Force			North Component	West Component	Inclination (North)	Total Force	
	a	q	d	a	q	d	a	q	d	all days	all days	all days	all days	
January	512	516	508	32.0	31.9	32.6	928	925	935	16053	3864	69	49.2	47866
February	506	511	501	30.9	31.2	30.3	928	922	931	16049	3858	69	49.6	47864
March	508	511	497	30.3	30.6	30.8	923	923	927	16051	3855	69	49.4	47860
April	505	520	461	28.5	29.3	26.7	922	920	912	16050	3846	69	49.6	47858
May	511	514	496	27.6	27.6	26.8	931	936	923	16057	3843	69	49.4	47869
June	517	516	520	27.3	26.9	27.6	932	933	932	16064	3843	69	49.0	47872
July	516	513	515	26.6	26.1	27.0	935	933	939	16063	3840	69	49.1	47874
August	505	504	487	25.5	25.2	26.1	933	935	929	16054	3832	69	49.8	47869
September	506	504	505	24.5	24.8	24.4	931	933	930	16056	3828	69	49.7	47867
October	487	501	469	23.7	23.3	23.9	947	945	941	16039	3820	69	51.4	47875
November	500	510	489	22.8	22.8	23.2	946	941	954	16052	3818	69	50.5	47879
December	503	509	489	22.5	22.3	22.8	949	945	963	16055	3817	69	50.4	47883
Year	506	511	495	26.9	26.8	26.9	934	933	935	16054	3839	69	49.8	47870

Month and Season	North Component								West Component								Vertical Component							
	$a_1$	$b_1$	$a_2$	$b_2$	$a_3$	$b_3$	$a_4$	$b_4$	$a_1$	$b_1$	$a_2$	$b_2$	$a_3$	$b_3$	$a_4$	$b_4$	$a_1$	$b_1$	$a_2$	$b_2$	$a_3$	$b_3$	$a_4$	$b_4$
ALL DAYS																								
Jan.	+7.7	+2.8	-5.2	-1.8	+1.9	-2.3	-0.8	+0.6	-6.3	-8.0	-3.1	+6.2	+1.9	-1.2	+1.5	+1.7	+2.9	-4.9	-0.7	-1.9	0.0	+0.6	-0.7	+0.1
Feb.	+9.6	+3.4	-6.0	-2.7	+2.9	+0.1	+0.6	+0.5	-10.7	-8.9	+0.9	+4.9	+0.9	-0.3	+2.3	+1.6	+2.5	-8.8	-4.4	-1.1	0.0	+0.7	-0.1	0.0
Mar.	+15.8	+1.0	-10.6	-1.5	+3.1	-0.9	-1.1	+0.7	-9.8	-13.2	+0.5	+9.4	-2.4	-6.0	+1.0	+3.3	+2.2	-8.4	-5.4	-0.9	+0.9	0.0	-1.4	-0.3
Apr.	+10.3	-12.7	-17.1	-1.7	-1.9	+1.1	-3.9	+3.1	-11.7	-22.7	-0.9	+8.7	-2.1	-5.9	+1.4	+2.7	-4.6	-13.3	-10.3	-3.5	-1.4	+2.2	-3.9	+0.9
May	+16.2	-13.8	-12.7	+1.5	+1.2	0.0	+0.6	+0.6	-6.9	-23.0	+3.1	+11.3	-3.3	-4.6	+0.9	0.0	+0.5	-14.0	-8.4	-4.2	+3.1	-0.6	-0.6	+0.5
June	+19.1	-13.9	-15.3	+2.6	-0.3	-0.9	+1.2	+1.5	-5.9	-25.6	+5.9	+12.9	-3.2	-3.3	+0.9	+1.0	+4.7	-11.4	-8.7	-2.2	+2.2	+0.3	-0.5	-0.5
July	+21.9	-16.0	-18.2	+2.6	+1.2	-0.1	+0.1	+0.9	-4.7	-30.3	+5.6	+13.2	-2.3	-5.1	+0.5	-0.1	+3.0	-12.6	-9.9	-3.2	+1.5	+0.2	-0.2	-0.7
Aug.	+27.1	-10.2	-14.0	+4.5	+1.1	-2.6	+0.2	+0.5	-4.5	-21.3	+8.4	+10.7	-5.3	-5.1	+0.4	+0.4	+4.7	-8.5	-7.1	+0.8	+2.8	-0.7	-0.8	-0.6
Sept.	+21.2	-4.2	-11.9	+1.9	+3.2	-2.8	+0.9	+1.9	-7.1	-16.9	+3.7	+9.5	-4.3	-6.8	+2.1	+2.2	+2.4	-6.9	-6.8	-3.0	+3.2	+0.6	-1.1	-0.3
Oct.	+19.9	-1.2	-12.3	-0.4	+3.3	-2.2	-1.5	+2.0	-11.3	-12.0	-0.6	+9.2	-2.6	-6.3	+1.5	+3.1	-7.7	-15.4	-3.9	-1.6	+2.1	-0.3	-2.4	-0.6
Nov.	+11.9	+3.3	-7.8	-0.8	+1.6	-1.6	-0.4	+0.1	-12.0	-7.8	+0.2	+6.0	-0.3	-1.4	+1.3	+1.6	-1.3	-10.8	-2.9	+0.3	-0.2	-0.2	-0.6	+0.7
Dec.	+6.9	+5.2	-4.8	-0.9	+0.7	-1.3	-0.6	+0.2	-9.7	-4.1	-0.1	+5.0	+0.1	-1.7	+1.1	+0.9	-1.1	-11.1	-2.1	-0.8	-0.3	+2.1	+0.4	+0.3
Year	+15.6	-4.7	-11.3	+0.3	+1.5	-1.1	-0.4	+1.0	-8.4	-16.1	+2.0	+8.9	-2.3	-4.0	+1.3	+1.5	+0.7	-10.5	-5.9	-1.8	+1.2	+0.4	-1.0	0.0
Winter	+9.1	+3.7	-5.9	-1.5	+1.8	-1.3	-0.3	+0.4	-9.7	-7.2	-0.5	+5.5	-0.3	-1.1	+1.6	+1.4	+0.8	-8.9	-2.5	-0.9	-0.1	+0.8	-0.3	+0.3
Equinox	+16.8	-4.3	-13.0	-0.4	+1.9	-1.2	-1.4	+2.0	-9.9	-16.2	+0.7	+9.1	-2.9	-6.3	+1.5	+2.9	-1.9	-11.0	-6.6	-2.2	+1.2	+0.6	-2.2	-0.1
Summer	+21.1	-13.5	-15.0	+2.8	+0.8	-0.9	+0.5	+0.9	-5.5	-25.0	+5.7	+12.0	-3.6	-4.6	+0.7	+0.3	+3.2	-11.7	-8.5	-2.2	+2.4	-0.2	-0.5	-0.3
QUIET DAYS																								
Year	+16.5	-1.3	-9.7	-0.2	+2.5	-1.5	-0.2	+0.8	-2.7	-13.8	+3.5	+8.4	-2.9	-4.1	+0.7	+1.4	+3.3	-0.9	-3.5	-0.7	+1.6	+0.4	-0.7	-0.3
Winter	+9.7	+3.1	-5.3	-1.8	+1.5	-1.2	-0.3	+0.7	-3.4	-6.9	+1.0	+4.3	-1.7	-2.1	+0.9	+1.3	+0.5	-2.3	-0.1	+0.1	+0.6	+0.1	-0.4	-0.3
Equinox	+18.6	+0.5	-10.3	-1.3	+4.0	-1.3	-0.6	+1.2	-2.6	-13.4	+2.4	+9.5	-2.9	-5.7	+1.4	+2.2	+3.4	0.0	-3.6	-1.4	+2.1	+0.8	-1.3	-0.4
Summer	+21.2	-7.6	-13.4	+2.5	+2.0	-1.9	+0.1	+0.6	-2.0	-21.0	+7.0	+11.4	-3.9	-4.6	+0.2	+0.6	+6.3	-0.5	-6.8	-0.9	+2.1	+0.3	-0.5	-0.2
DISTURBED DAYS																								
Year	+11.8	-13.6	-15.4	+2.7	-0.7	-0.5	-2.1	+2.1	-15.0	-20.9	-2.6	+9.2	-1.8	-4.3	+2.2	+1.9	-7.3	-31.7	-9.3	-3.3	-0.1	+2.0	-2.3	+0.7
Winter	+6.8	+6.0	-6.6	-0.7	+3.3	-0.9	+0.4	+1.0	-11.8	7.7	-1.6	+7.5	+1.3	+0.1	+2.6	+1.4	+2.4	-22.6	-9.6	-2.9	-1.9	+4.0	+2.2	+1.2
Equinox	+8.2	-18.4	-19.9	-1.4	-5.1	+0.9	-6.3	+4.9	-21.4	-24.8	-7.6	+5.9	-3.1	-8.7	+2.1	+5.2	-16.9	-32.4	-8.7	-4.4	-1.8	+1.9	-7.2	+2.7
Summer	+20.4	-28.4	-19.7	+10.1	-0.1	-1.4	-0.3	+0.4	-11.9	-30.1	+1.4	+14.2	-3.7	-4.4	+1.9	-0.8	-7.5	-40.1	-9.6	-2.5	+3.3	0.0	-1.8	-1.5

HARMONIC COMPONENTS OF THE DIURNAL INEQUALITY OF MAGNETIC FORCE  
 Values of  $c_n, a_n$  in the series  $\Sigma c_n \sin(15n T^\circ + a_n)$ ,  $T$  being Mean Local Time, reckoned in hours from midnight

Month and Season	North Component								West Component								Vertical Component							
	$c_1$	$a_1$	$c_2$	$a_2$	$c_3$	$a_3$	$c_4$	$a_4$	$c_1$	$a_1$	$c_2$	$a_2$	$c_3$	$a_3$	$c_4$	$a_4$	$c_1$	$a_1$	$c_2$	$a_2$	$c_3$	$a_3$	$c_4$	$a_4$
ALL DAYS																								
Jan.	8.3	73	5.5	257	3.0	149	1.0	320	10.1	221	6.9	340	2.2	247	2.3	56	5.7	152	2.0	207	0.6	6	0.7	293
Feb.	10.2	74	6.5	252	2.9	97	0.8	64	13.9	233	5.0	17	0.9	121	2.8	67	9.1	167	4.5	262	0.7	13	0.1	307
Mar.	15.9	90	10.7	269	3.2	116	1.3	318	16.4	220	9.4	9	6.6	211	3.5	30	8.7	169	5.5	267	0.9	101	1.4	272
Apr.	16.3	144	17.2	271	2.2	310	4.9	321	25.5	210	8.7	360	6.2	209	3.1	39	14.0	202	10.8	258	2.6	337	4.0	295
May	21.3	134	12.8	283	1.2	98	0.8	58	24.0	200	11.7	22	5.7	225	0.9	104	14.0	181	9.4	250	3.2	110	0.8	326
June	23.6	129	15.5	286	0.9	207	1.9	52	26.3	196	14.2	31	4.6	234	1.3	55	12.4	161	9.0	262	2.2	91	0.7	239
July	27.1	129	18.3	285	1.2	107	0.9	19	30.7	192	14.3	30	5.6	214	0.5	119	13.1	170	10.4	258	1.5	92	0.7	209
Aug.	29.0	114	14.7	294	2.8	167	0.5	36	21.7	195	13.6	44	7.3	236	0.6	58	9.7	154	7.2	283	2.8	113	1.0	249
Sept.	21.6	104	12.1	285	4.3	140	2.1	37	18.3	206	10.2	28	8.1	222	3.1	56	7.3	164	7.5	253	3.3	89	1.1	268
Oct.	19.9	97	12.3	274	4.0	134	2.5	335	16.5	227	9.3	3	6.9	212	3.5	39	17.3	210	4.2	255	2.2	108	2.5	269
Nov.	12.4	78	7.9	271	2.2	145	0.5	300	14.3	240	6.0	8	1.4	201	2.0	52	10.9	190	2.9	284	0.3	230	0.9	332
Dec.	8.6	56	4.9	266	1.5	163	0.6	299	10.5	250	5.0	5	1.7	186	1.5	64	11.1	189	2.2	255	2.1	3	0.5	66
Year	16.3	110	11.3	278	1.9	137	1.1	351	18.2	211	9.1	19	4.6	219	2.0	52	10.5	179	6.2	260	1.2	80	1.0	281
Winter	9.8	71	6.1	262	2.2	135	0.5	334	12.1	237	5.5	1	1.2	204	2.1	61	8.9	178	2.7	257	0.8	2	0.4	334
Equinox	17.3	107	13.0	275	2.2	132	2.4	337	19.0	215	9.1	11	6.9	215	3.3	41	11.1	193	7.0	258	1.4	73	2.2	281
Summer	25.0	126	15.3	287	1.2	148	1.0	43	25.6	195	13.3	32	5.8	228	0.7	79	12.1	168	8.8	262	2.4	103	0.6	253
QUIET DAYS																								
Year	16.6	98	9.7	275	2.9	130	0.8	356	14.0	194	9.1	29	5.0	224	1.6	39	3.5	199	3.6	265	1.7	85	0.8	259
Winter	10.2	75	5.6	258	1.9	139	0.7	349	7.7	209	4.4	20	2.7	229	1.5	46	2.3	171	0.1	326	0.7	90	0.5	248
Equinox	18.6	92	10.4	269	4.3	118	1.3	346	13.6	194	9.8	21	6.4	217	2.6	46	3.4	94	3.9	256	2.2	78	1.3	264
Summer	22.6	113	13.7	287	2.7	143	0.6	21	21.1	189	13.3	38	6.1	230	0.8	360	6.3	98	6.9	268	2.1	90	0.6	263
DISTURBED DAYS																								
Year	18.0	142	15.6	286	0.8	242	2.9	328	25.7	219	9.5	351	4.7	212	2.9	62	32.5	196	9.9	257	2.0	6	2.4	301
Winter	9.1	52	6.6	271	3.4	115	1.1	35	14.0	240	7.6	354	1.3	93	2.9	74	22.7	177	10.1	260	4.4	344	2.5	75
Equinox	20.1	159	19.9	272	5.2	290	8.0	321	32.8	224	9.6	314	9.2	209	5.6	35	36.5	211	9.7	249	2.6	326	7.6	303
Summer	35.0	148	22.2	304	1.4	196	0.5	336	32.4	205	14.2	12	5.8	229	2.1	127	40.8	194	9.9	262	3.3	100	2.4	243

	Latitude		Longitude		1937				1936				1935				
	°	N / S	°	E / W	Declination	Inclination	Horizontal Intensity	Vertical Intensity	Declination	Inclination	Horizontal Intensity	Vertical Intensity	Declination	Inclination	Horizontal Intensity	Vertical Intensity	
																	°
Tromso, Norway	69	40	18	57E	2	53-7W	77	17	11350	50308	3	5-6W	77	14	11389	50274	
Godhavn, Greenland	69	15	53	30W	55	40-2W	81	33-9	8183	55184	55	57-4W	81	34-2	08187	55237	
Abisko, Sweden	68	21	18	49E	* 0	54-7W	...	...	...	...	* 1	7-3W	...	...	...	* 1	15-2W
Sodankyla, Finland	67	22	26	39E	3	39-0E	76	21-9	11982	49395	3	27-8E	76	19-4	12017	49384	
Lerwick, Shetland Islands	60	8	1	11W	12	46-6W	72	53-3	14412	46812	12	57-6W	72	51-7	14429	46791	
Sloutsk, U.S.S.R.	59	41	30	29E	...	...	...	...	...	...	4	45-3E	72	5-3	15336	47448	
Lovo (Stockholm) Sweden	59	21	17	50E	1	54-0W	71	46-8	15356	46650	2	2-9W	71	44-4	15304	46626	
Sitka, Alaska	57	3	135	20W	29	57-6E	74	19-7	15442	55039	30	0-2E	74	19-8	15445	55058	
Wysokaya Doubrava U.S.S.R.	56	44	61	4E	...	...	...	...	...	...	12	52-5E	72	21-1	16177	50848	
Copenhagen (in Rude Skov), Denmark	55	51	12	27E	4	49-3W	69	34-5	16767	45022	4	58-9W	69	31-9	16786	44972	
Kasan (Sajmistsche), U.S.S.R.	55	50	48	51E	...	...	...	...	...	...	9	18-0E	70	57-5	16768	48594	
Eskdalemuir, Scotland	55	19	3	12W	13	26-9W	69	49-8	16506	44934	13	37-4W	69	48-4	16517	44908	
Meanook, Alberta, Canada	54	37	113	21W	25	59-6E	77	52-7	12729	59266	26	3-4E	77	53-1	12727	59291	
Hel, Poland	54	36	18	48E	...	...	...	...	...	...	2	25-2W	...	...	...	...	17530
Stonyhurst, Lancs., England	53	51	2	23W	12	29-3W	*68	52-2	17148	*44370	12	40-3W	*68	51-2	17154	*44349	
Zouy, Siberia, U.S.S.R.	52	28	104	2E	...	...	...	...	...	...	10	9-5W	71	27-1	18992	56599	
Swider, Poland	52	7	21	15E	...	...	...	...	...	...	1	15-2W	67	15-1	18384	43845	
De Bilt, Utrecht, Holland	52	6	5	11E	8	11-8W	67	8-4	18228	43237	8	21-4W	67	6-9	18236	43202	
Miemag, Germany	52	4	12	41E	4	35-9W	66	55-0	18444	43277	4	44-8W	66	52-0	18464	43219	
Valentia, Cahirciveen, Ireland	51	56	10	15W	*16	11-7W	*67	58-0	*17802	*43987	*16	21-6W	*67	57-7	*17801	*43972	
Abinger, Surrey, England	51	11	0	23W	11	10-4W	66	42-7	18522	43031	11	20-0W	66	41-8	18524	43007	
Val Joyeux, near Paris, France	48	49	2	1E	...	...	...	...	...	...	9	56-7W	64	45-4	19647	41668	
Vienna, (Auhof), Austria	48	12	16	14E	2	59-0W	63	41-8	20472	41444	3	7-3W	63	40-7	20475	41387	
Chambon-la-Forêt, France	48	1	2	16E	9	19-1W	64	12-9	20011	41422	...	...	...	...	...	...	
Stara Dalá, Czecho-Slovakia	47	53	18	11E	2	16-8W	...	...	...	...	2	24-1W	...	...	...	...	...
Nantes, France	47	15	1	34W	10	53-4W	63	43-2	20250	41008	11	3-4W	63	42-9	20251	41004	
Agincourt, Ontario, Canada	43	47	79	16W	7	35-9W	74	50-6	15333	56604	7	36-8W	74	49-8	15382	56657	
Karsani, U.S.S.R.	41	50	44	42E	...	...	...	...	...	...	...	...	...	...	...	...	...
Ebro, Tortosa, Spain	40	49	0	30E	...	...	...	...	...	...	...	...	...	...	...	...	...
Coimbra, Portugal	40	12	8	25W	*12	56-5W	*57	20-0	*23308	*36346	*13	3-0W	*57	26-8	*23303	*36516	
Cheltenham, Maryland, U.S.A.	38	44	76	50W	7	5-5W	71	20-0	18256	54037	7	8-2W	71	17-9	18291	54032	
†San Miguel, Azores Is.	37	46	25	39W	17	51-9W	*59	22-6	*23480	*39633	17	56-7W	*59	24-9	*23427	*39638	
San Fernando, Spain	36	28	6	12W	...	...	...	...	...	...	11	44-4W	*53	11-6	25261	*33759	
Kakioka, Japan	36	14	140	11E	5	54-2W	49	32-4	29717	34843	5	51-7W	49	31-6	29713	34823	
Taingtiao, China	36	4	120	19E	...	...	...	...	...	...	4	37-6W	52	6-1	30935	39741	
Tucson, Arizona, U.S.A.	32	15	110	50W	13	50-5E	59	41-3	26196	44808	13	51-4E	59	41-0	26230	44856	
Zo-Se, Shanghai, China	31	6	121	11E	3	24-7E	45	32-2	33299	33928	3	24-4W	45	31-8	33278	33900	
Dehra Dun, United Provinces, India	30	19	78	3E	0	51-6E	45	39-9	33223	34003	0	53-8E	45	40-3	33181	33968	
Helwan, Egypt	29	52	31	21E	* 0	16-9E	*42	2-2	*30335	*27349	* 0	12-5E	*41	59-6	*30298	*27274	
Hong Kong (Au Tau), China	22	27	114	3E	0	39-4W	30	29-2	37646	22163	0	40-5W	30	30-2	37616	22180	
Honolulu, Hawaii	21	19	158	4W	10	14-3E	39	7-3	28502	23182	10	11-9E	39	8-1	28522	23207	
Teoloyucan, Mexico	19	45	99	11W	9	39-4E	47	10-8	30883	33330	9	39-0E	47	8-4	30938	33336	
Alibeg, Bombay, India	18	38	72	52E	0	21-8W	25	26-1	37652	17906	0	19-9W	25	27-8	37593	17902	
San Juan, Puerto Rico	18	23	66	7W	5	33-2W	52	51-9	27262	36002	5	29-6W	52	49-3	27274	35961	
Antipolo, Philippine Is.	14	36	121	10E	0	34-3E	15	47-6	38347	10846	* 0	33-1E	*15	48-1	*38354	*10853	
Batavia (Kuyper), Java	6	2	106	44E	* 1	13-8E	*32	21-0	*37043	*23463	* 1	11-9E	*32	18-7	*37043	*23428	
Huancayo, Peru	12	3	75	20W	7	8-3E	2	15-3	29593	01165	7	11-6E	2	13-5	29609	01150	
Apia, Samoa	13	48	171	46W	10	41-5E	*30	32-7	34939	20629	10	38-4E	30	30-7	35001	20626	
†Mauritius	20	6	57	33E	13	22-9W	52	55-8	22471	29744	13	11-3W	52	51-5	22500	29706	
Vassouras, Brazil	22	24	43	39W	...	...	...	...	...	...	...	...	...	...	...	...	...
Watheroo, West Australia	30	19	115	52E	3	31-8W	64	22-5	24676	51445	3	37-1W	64	21-8	24677	51412	
Pilar, Cordova, Argentina	31	40	63	53W	5	41-7E	26	12-5	24335	11979	5	47-5E	26	8-0	24397	11969	
Capetown, S.Africa	33	57	18	28E	...	...	...	...	...	...	24	31-1W	...	...	...	...	...
Toolangi, Victoria, Australia	37	32	145	26E	* 8	43-2E	*67	49-4	*22913	*56211	8	39-8E	67	48-2	22931	56203	
Christchurch (Amberley), N.Z.	43	10	172	43E	18	14-1E	68	1-2	22283	55207	18	9-9E	68	0-5	22301	55219	

Notes.- \*Results derived from absolute observations only. † A local anomaly is known to exist at the site of the observatory.

Godhavn) The values of Inclination and Vertical Intensity depend upon direct measurement of the vertical component of the earth's field.

Abinger) Tromso; Ebro, (Tortosa)- The values are derived from International Quiet Days only.

Sitka 1937 Declination. The result relates to the months January to October.

Cheltenham. 1937. Inclination, Horizontal and Vertical Intensity. The results relate to the months January to September. A discontinuity of +0.8 in Inclination and +4γ in Vertical Intensity occurs at 1937.0.

Tucson. 1937. The results relate to the months January to November.

San Juan 1937. The results relate to the months January to October.

Apia.- 1935 Declination. The result relates to the months April to December

1937 The months July to September are omitted. A discontinuity of -22γ in Horizontal Intensity and -13γ in Vertical Intensity occurs at 1937.0

ERRATA

1936 YEAR BOOK  
Lovo (Stockholm) 1936 Inclination: for 71° 41'4 read 71° 44'4  
Cheltenham U.S.A. The footnote should be omitted.

REVISED VALUES FOR EARLIER YEARS

	Latitude		Longitude		Declination	Inclination	Horizontal Intensity	Vertical Intensity	Declination	Inclination	Horizontal Intensity	Vertical Intensity	Declination	Inclination	Horizontal Intensity	Vertical Intensity						
	°	N / S	°	E / W													Y	Y	Y	Y	Y	Y

M.O. 430.  
(Valentia)

Air Ministry  
METEOROLOGICAL OFFICE

THE  
OBSERVATORIES' YEAR BOOK  
1937

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

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VALENTIA OBSERVATORY

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Published by the authority of the  
METEOROLOGICAL COMMITTEE



LONDON  
HIS MAJESTY'S STATIONERY OFFICE

1939



## VALENTIA OBSERVATORY

Latitude	..	..	..	51° 56' N.
Longitude	..	..	..	10° 15' W.
G.M.T. of Local Mean Noon	..		..	12h 41 m.

## Heights in metres above Sea Level.

Barometer	..	..	..	13.7
Rain-gauge	..	..	..	9.1
Robinson Cup Anemograph			..	26
Dines Pressure Tube Anemometer				30

## Heights in metres above Ground.

Thermometer Bulbs	..	..	..	1.3
Sunshine Recorder	..	..	..	12.8
Robinson Cup Anemograph			..	14
Dines Pressure Tube Anemometer				13
Beckley Rain-gauge Rim			..	0.5

## INTRODUCTION

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 about  $\frac{3}{4}$  of a mile (1 km.) south-west of the town of Cahirciveen and about  $2\frac{1}{2}$  miles (4 km.) north-east of the former site. The Observatory was maintained by the British Meteorological Office until April 1st 1937, when the Irish Meteorological Service assumed control.

## SITE

The Observatory is remote from any other buildings. The general character of the surrounding country 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 (120m) 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 Benteen 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. A contoured map of the surroundings, a general view from South, a site plan and a view showing the disposition of the various instruments were reproduced in the Introduction to the 1935 Volume.

#### METEOROLOGY

The elements dealt with in the following tables are:- Atmospheric pressure, air temperature, humidity, rainfall, sunshine, wind speed and direction, earth temperature, 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 rain-gauge and 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 Pentee 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.
	hr	hr	hr	hr	hr	hr	hr	hr
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 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. From 1926 to 1931 measurements of wind speed and direction refer to records from an old pattern Dines Pressure Tube Anemometer. A comparison between the mean velocities as recorded

by this anemometer and the cup anemograph is given in the General Introduction. A new Dines Pressure Tube Anemometer with 1-inch connecting pipes, was brought into use as from January 1st 1932. The new instrument was erected alongside the old instrument with its head at the same height: a comparison extending over the period May, 1931, to January, 1932, showed that the new instrument recorded higher velocities than the old. In hourly mean values the difference was nearly uniform and equal to .4 m/s or 1 mi/hr. In great velocities the increase was approximately 12 per cent of the velocity recorded by the old instrument.

The site of the Dines Pressure Tube Anemometer is in an open field, about 250 metres S E by E of the Observatory tower. About 1 mile ( $1\frac{1}{2}$ km.) to the south-east is the highest point (1,245 feet) of the hill Pentee 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 Dines Pressure Tube Anemometers 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.

Earth Temperature.- The thermometers are at depths of 30 cm. and 122 cm. below the grass covered surface of the ground. The site is well exposed. The thermometers are of the standard type described in the "Meteorological Observers' Handbook".

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°	White post in fence of instrument enclosure
C	100	100	125°	Hedge at S. end of vegetable garden
D	200	200	330°	Notice board on beach
E	500	475	100°	Bungalow

## LANDWARDS VISIBILITY OBJECTS AT VALENTIA OBSERVATORY (Contd.)

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 1,100	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

F	1,000	1,000	235°	Farmhouse on skyline
G	2,000	2,200	265°	Laght Point
H	4,000	3,760	280°	Elack 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 letter A to E have therefore been included in the table of landwards objects only. Kilkeaveragh Mountain is used as both a landwards and seawards object corresponding with J.

Entries of "l" and "m" for visibility in a landwards direction are made:-

(a) When Croaghmarhin Mountain (see table of seawards objects) is clearly visible and there is reason to believe that the range of visibility in a landwards direction is as good as, or nearly as good as, visibility seawards.

(b) When Croaghmarhin Mountain is invisible but there is reason to believe from the appearance of Drung Hill that the range of visibility landwards is greater than the range seawards and is sufficiently good to justify the entry made.

When the mountains used as objects at 3,500 metres and beyond are cloud capped the appropriate entries for the range of visibility are determined by the clearness or otherwise with which the lower parts of the mountains can be seen.

The Observatory is far removed from smoky industrial areas; the observations are therefore not much affected by smoke pollution of the atmosphere.

#### Notes on the Meteorological Summaries

The Weather of 1937.- Generally, the year was a wet one with rainfall 15% above normal. Sunshine was slightly below the average and temperature about normal. January and July were abnormally wet, October particularly dry and November unusually bright.

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.

Mean Pressure for the year was 2.3 millibars below normal. Of the monthly mean pressures six were higher and six were lower than normal. The departures ranged from an excess of four millibars in August to a deficiency of fourteen millibars in January. The extreme values recorded were 1038 mb. and 966 mb. on the 31st December and 24th January respectively.

Details of the Fourier analysis of the diurnal inequalities of pressure for the year are given in Table A, together with normal values referring to the period 1871-1926 as computed by Dr. A. Crichton Mitchell.\* From 1935 onwards, these values have been adjusted for Local Mean Time so as to agree with current data. The coefficients are given to the nearest .01 mb. and the phase angles to the nearest 1°.

Temperature.- Mean temperature for the year was 0.2°A above normal. The greatest departures from normal were -1.8°A in March and +1.3° in April. The highest temperature (294.9°A) occurred on August 1st and the lowest (270.0°A) on December 10th.

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\* Diurnal Variation of Pressure and Temperature at Cahirciveen (Valentia) by A. Crichton Mitchell D.Sc., 1871-1926. Q.J.R. Met. Soc. 1929. p.310.

The harmonic analysis of the monthly and seasonal diurnal inequalities of temperature is given in Table B together with normal values referring to the period 1871-1926 as computed by Dr.A.Crichton Mitchell. From 1935 onwards, these values have been adjusted for Local Mean Time so as to agree with current data. The coefficients are given to the nearest .01°A and the phase angles to the nearest 1°.

**Rainfall.**- The total rainfall for the year was 1625 mm., this amount being 211 mm. above the average. January with 296 mm. and July with 223 mm. were the wettest for these months since records commenced in 1866. June with 51 mm. was the driest month of the year while October (-78 mm.) showed the greatest deficiency. Amounts in excess of 25 mm. were measured on 10 days.

**Bright Sunshine.**- Sunshine for the year totalled 1300 hours which is 5% below the average. May with a total of 221 hours (46% of possible) was the brightest and January with 32 hours (13% of possible) the dullest month.

**Cloud and Weather.**- The mean amount of cloud at all observation hours was 7.4. The most cloudy month was July with mean cloud amount of 8.4. The month with least cloud was November with a mean of 6.1.

**Visibility.**- The observations of visibility in tables 429-440 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 tables.

Date	Hour	Visibility Landwards	Visibility Seawards
Jan. 5	18	J	k
" 6	15	J	k
" 19	9	J	k
" 19	15	J	l
Feb. 2	15	I	H
" 12	9	I	H
" 14	9	J	k
" 23	18	J	k
Mar. 7	9	J	k
" 8	7	J	k
" 11	7	J	k
" 11	9	J	k
" 22	15	J	l
Apr. 6	9	I	H
" 8	7	J	k
" 8	9	J	k
" 23	18	k	G
May 6	13	h	G
" 7	13	k	H
" 7	15	J	k
June 3	7	I	J
" 4	7	h	G
" 4	13	I	G
" 4	18	F	G
" 16	15	k	J
" 18	18	h	G
" 23	15	J	l
" 28	7	J	k
July 8	18	h	G
" 8	21	h	G

Date	Hour	Visibility Landwards	Visibility Seawards
July 12	7	F	G
" 24	15	J	k
" 30	7	J	k
" 30	13	J	k
Aug. 6	13	J	k
" 6	18	J	l
" 9	21	k	H
" 13	13	J	k
" 14	9	J	k
" 18	9	J	k
" 22	7	k	J
" 29	18	J	k
Sept. 4	15	h	I
" 14	18	J	k
" 19	18	J	l
" 23	13	k	J
" 23	15	k	J
Oct. 3	15	k	J
" 6	18	J	k
" 7	9	J	k
" 9	13	J	k
" 9	15	J	k
" 14	9	k	J
" 16	7	J	l
" 18	15	k	J
" 18	18	k	J
Nov. 5	9	k	J
" 18	18	J	k
" 23	13	J	k
Dec. 14	18	J	k
" 20	18	J	k

Diurnal Variation of Pressure and Temperature at Cahirciveen (Valentia) 1871-1926 by A.Crichton Mitchell D.Sc., Q.J.R. Met. Soc. 1929, p.310

IDENTIFICATION NUMBERS OF INSTRUMENTS IN USE IN 1937

Standard Fortin Barometer	M.O.	463	
Standard Dry Bulb Thermometer	M.O.	1701	Corrections Nil. (255°-266°+ .2° (267°-268°+ .1°
Standard Wet Bulb Thermometer	M.O.	1702	Corrections (269°-272° Nil. (273° and above, -.1°
Recording Beckley Rain-gauge			
Jardi Rate of Rainfall Recorder	M.O.	3	
Control Rain-gauge	M.O.	258	
Glass for Control Rain-gauge	M.O.	1572 & 1737	
Campbell Stokes Sunshine Recorder	M.O.	5	
Robinson Cup Anemograph	Beck	46	
Dines Pressure Tube Anemometer	M.O.	1084/30	( 2.0°F. - .1°F. (12.0°F. Nil. (32.0°F. Nil. (52.0°F. + .1°F. (72.0°F. + .1°F. (260°A. + .1°
Grass Minimum Thermometer	M.O.	60004/31	corrections (280°A and above, Nil (273°A Nil. (278°A. - .1°A. (283°A and above, Nil
Earth Thermometer 1 ft.	M.O.	9	Corrections
Earth Thermometer 4 ft.	M.O.	24005	Corrections

All thermometer corrections are applied before tabulation.

TABLE A

DIURNAL VARIATION OF BAROMETRIC PRESSURE FOURIER COEFFICIENTS

VALENTIA OBSERVATORY, LONGITUDE 10° 15' W.

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

Month or Season	$c_1$		$a_1$		$c_2$		$a_2$		$c_3$		$a_3$		$c_4$		$a_4$	
	1937	1871-1926	1937	1871-1926	1937	1871-1926	1937	1871-1926	1937	1871-1926	1937	1871-1926	1937	1871-1926	1937	1871-1926
January	mb .28	mb .10	° 114	° 162	mb .35	mb .32	° 143	° 153	mb .19	mb .16	° 7	° 250	mb .10	mb .07	° 232	° 208
February	.91	.12	192	194	.35	.34	136	148	.13	.11	337	346	.09	.04	145	92
March	.40	.12	137	157	.30	.36	142	150	.06	.04	359	262	.03	.04	20	50
April	.45	.10	157	191	.29	.31	139	149	.05	.03	252	171	.02	.04	109	11
May	.16	.17	178	180	.31	.27	146	147	.06	.07	164	165	.02	.02	349	347
June	.21	.20	189	199	.26	.25	140	146	.11	.08	163	161	.02	.00	333	340
July	.32	.24	226	183	.27	.25	143	143	.07	.08	140	161	.02	.01	347	11
August	.21	.25	184	188	.29	.28	146	144	.07	.05	154	163	.06	.03	328	345
September	.38	.19	172	203	.39	.34	143	153	.02	.00	62	50	.07	.04	8	6
October	.08	.20	197	198	.35	.34	163	160	.07	.07	357	359	.01	.01	320	56
November	.21	.08	185	184	.37	.34	161	161	.11	.13	353	6	.05	.03	180	167
December	.16	.13	68	191	.29	.32	160	160	.16	.16	360	358	.10	.07	203	198
Arithmetic Mean	.31	.16	...	...	.32	.31	...	...	.09	.08	...	...	.05	.03	...	...
Year	.25	.15	172	188	.31	.31	147	153	.03	.03	10	5	.03	.00	223	70
Winter	.28	.11	168	184	.33	.33	150	155	.15	.14	357	356	.07	.04	195	182
Equinox	.31	.15	157	191	.33	.34	147	153	.03	.02	344	351	.02	.03	22	25
Summer	.21	.21	199	188	.29	.26	144	145	.08	.07	156	162	.03	.02	332	350

TABLE B

DIURNAL VARIATION OF TEMPERATURE FOURIER COEFFICIENTS

VALENTIA OBSERVATORY. LONGITUDE 10° 15' W

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

Month or Season	c <sub>1</sub>		a <sub>1</sub>		c <sub>2</sub>		a <sub>2</sub>		c <sub>3</sub>		a <sub>3</sub>		c <sub>4</sub>		a <sub>4</sub>	
	1937	1871-1926	1937	1871-1926	1937	1871-1926	1937	1871-1926	1937	1871-1926	1937	1871-1926	1937	1871-1926	1937	1871-1926
January	0.39	0.48	253	238	0.15	0.26	69	53	0.11	0.11	258	226	0.01	0.02	266	46
February	0.48	0.81	246	234	0.24	0.37	56	53	0.06	0.09	277	237	0.02	0.03	166	189
March	1.63	1.34	234	235	0.38	0.42	55	60	0.03	0.04	288	328	0.08	0.08	180	216
April	1.55	1.80	242	239	0.21	0.36	82	72	0.10	0.15	101	41	0.05	0.06	274	236
May	2.29	2.08	246	242	0.36	0.19	153	98	0.32	0.24	69	57	0.13	0.04	11	309
June	1.57	2.05	242	243	0.09	0.11	147	97	0.19	0.21	68	63	0.06	0.03	327	13
July	1.37	1.86	237	243	0.13	0.15	53	75	0.08	0.20	34	59	0.03	0.01	5	339
August	1.87	1.74	243	243	0.38	0.30	88	69	0.25	0.16	32	47	0.03	0.03	314	240
September	1.08	1.55	241	242	0.16	0.45	71	70	0.07	0.06	75	216	0.10	0.09	248	234
October	1.26	1.11	231	241	0.49	0.41	67	68	0.09	0.08	269	274	0.06	0.07	223	225
November	1.03	0.72	235	239	0.47	0.35	55	62	0.11	0.12	254	252	0.07	0.01	90	115
December	0.34	0.44	257	234	0.30	0.26	39	55	0.18	0.11	218	241	0.06	0.03	57	59
Arithmetic Mean	1.24	1.33	...	...	0.28	0.30	...	...	0.13	0.13	...	...	0.06	0.04	...	...
Year	1.26	1.33	241	240	0.24	0.30	73	66	0.04	0.05	47	38	0.01	0.02	306	234
Winter	0.56	0.61	244	236	0.28	0.31	54	56	0.10	0.10	247	232	0.03	0.13	97	92
Equinox	1.42	1.45	239	239	0.31	0.41	66	67	0.01	0.05	73	6	0.06	0.08	231	228
Summer	1.77	1.93	243	242	0.19	0.18	114	82	0.20	0.20	55	57	0.06	0.02	352	222

NOTE.- The seasonal means are derived from the following groups 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 1937

Absolute observations of declination, horizontal force and inclination were made weekly at Valentia Observatory during the year 1937. The instruments in use were Dover unifilar, No. 139, with collimator magnet 139A and mirror magnet 139C, and Dover dip circle, No. 118. These instruments are the same as in previous years except that Dover dip circle, No. 239 was used from May 1930 to October 1931. The mean times of observations were 10.23 for declination, 11.43 for horizontal force and 14.31 for inclination, all according to Greenwich Mean Time. In the individual observations the greatest departure from the mean time in any element was 13 minutes. The deflection of the mirror magnet was measured for two distances of the collimator magnet, namely, 30 cm. and 40 cm. The complete deflection observation consisted of eight readings of the mirror magnet. The distribution constant, P, used for 1937 was computed from the mean deflections for 30 cm. and 40 cm. for the seven years 1930-1936 inclusive. The mean P so obtained was 7.56. The moment of the collimator magnet has decreased at the rate of about 1 unit per annum.

The values of declination, horizontal force and inclination obtained in the absolute observations are given in detail in Table C, but in Table D the



mean monthly values are computed only from such of these 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 mean values in Table D, are marked with an asterisk. The north, west and vertical components and the total force for each month and the year are computed from the corresponding mean values of the observed elements.

Westerly declination has diminished by 9.9 as compared with 1936. From 1935 to 1936 the decrease was 11.1 and in the previous 12 months 11.0. The average annual decrease for five year periods since 1910 is as follows:-

1910-15	1915-20	1920-25	1925-30	1930-35
8.2	9.2	11.1	11.0	10.7

The rate of the eastward movement of the magnetic needle increased slowly up to about 1927, but is now apparently decreasing again.

Northerly inclination increased 0.3 from 1936 to 1937. Changes during the past ten years have been irregular but, on the whole, it appears that inclination is diminishing at a slow rate.

Up to 1920 the mean annual values of horizontal force had shown a steady decline from year to year. In the years 1921 to 1924, 1927, 1931, 1933, 1934 and in 1937 the change was in the opposite direction, each year having a mean value higher than that of the preceding year.

The amount of annual change is shown in the following table:-

Period	Annual Change
1910-15	5y decrease (Mean Value)
1915-20	6y " (Mean Value)
1920-25	2y increase (Mean Value)
1925-26	14y decrease
1926-27	2y increase
1927-28	11y decrease
1928-29	5y "
1929-30	8y "
1930-31	2y increase
1931-32	6y decrease
1932-33	2y increase
1933-34	1y "
1934-35	8y decrease
1935-36	3y "
1936-37	1y increase

The reversal of the annual change in horizontal force in certain years was not accompanied by a corresponding reversal in total force. The average annual decrease in total force for five year periods since 1910 is as follows

1910-15	1915-20	1920-25	1925-30	1930-35
49y	33y	32y	20y	22y

Total force which until 1935 had continued to decrease but at an apparently diminishing rate, has this year shown an increase of 15y. This is the second successive year in which an increase is shown, the amount being 1y in 1936. 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 of approximately  $4\gamma$  in T at Valentia. In addition, it is to be remembered that the secular change data for Valentia are obtained from absolute observations made at fixed hours at any of which the value obtained for an element may differ by an amount which is not necessarily constant from its true mean value for the day of observation. It is by no means improbable that owing to this and errors of observation, uncertainties to the extent of several tenths of a minute of arc may be introduced into the mean value of I for the year. For the average change over a series of years these possible errors are naturally much diminished and the average fall of  $31\gamma$  per annum in the total force up to 1935 obtained from the values in Table D is probably a close approximation to the true change. To assume that the magnetic field in the Valentia district is increasing at a specified rate would be premature at this stage, but the values obtained in recent years suggest that the minimum has been reached.

TABLE C

Valentia Observatory. Absolute Magnetic Observations, 1937

Latitude 51° 56' N Longitude 10° 15' W.

Date	Westerly Declination	Horizontal Force	Northerly Inclination	Date	Westerly Declination	Horizontal Force	Northerly Inclination
	° ' /	γ	° ' /		° ' /	γ	° ' /
January 7	16 17.6	17820	67 57.2	July	8 16 9.8	17799	67 58.5
15	16 17.2	17830	67 57.9		16 16 10.4	17784	67 57.1
22	16 17.9	17791	67 58.1		22 16 14.0*	17775*	67 58.6*
29	16 15.9	17786	67 58.1		30 16 8.8	17801*	67 57.3*
February 5	16 18.5	17773	67 59.1	August	6 16 9.7	17769	67 58.5
12	16 19.6	17809	67 57.2		13 16 10.9	17799	67 56.5
19	16 20.5	17805	67 59.3		20 16 9.9	17813	67 57.1
26	16 17.6	17803	67 59.4		26 16 4.8	17785	67 57.3
March 5	16 16.2*	17760*	67 59.5*	September	3 16 10.6	17796	67 57.4
12	16 14.1	17808	67 58.4		10 16 7.8	17793	67 56.9
19	16 16.2	17796	67 56.8		16 16 11.3	17809	67 59.8
25	16 13.6	17801	67 57.1		23 16 9.8	17810	67 59.2
					30 16 3.8	17809	67 59.0*
April 2	16 11.8*	17777*	67 57.9	October	7 16 6.4	17782*	68 0.7*
9	16 12.2	17805	67 56.2		15 16 13.2	17779*	67 59.5
16	16 11.9	17791*	67 56.8		21 16 9.2	17792	68 0.0
23	16 14.1	17805	67 57.0		29 16 8.4	17773	67 59.6
30	16 12.0	17777*	67 58.0*				
May 7	16 14.3	17809	67 57.1	November	5 16 8.5	17796	67 58.4
14	16 11.6	17795*	67 57.8		11 16 10.5	17807*	67 57.9
21	16 9.6	17807	67 56.9		18 16 12.7*	17789*	67 59.5*
28	16 11.5*	17768*	67 57.1*		26 16 9.2	17814	67 57.9
June 3	16 11.9	17821	67 57.0	December	3 16 10.2	17816	67 57.4
10	16 10.7	17832	67 58.7		9 16 8.3	17798	67 59.0
18	16 9.6	17813	67 57.7		17 16 8.4	17839	67 56.4
25	16 16.1	17814	67 58.9		24 16 9.0	17788	67 59.7
					30 16 6.7	17799	67 58.7
July 2	16 6.9	17796	67 57.3				

\* Disturbance at these times. Values not utilised in computing means given in Table D

TABLE D

## VALENTIA OBSERVATORY

Magnetic Data for the Year 1937

1937	Declination (West)	Inclination (North)	Horizon- tal Force	North	West	Vertical	Total
	° ' "	° ' "	γ	γ	γ	γ	γ
January	16 17.1	67 57.8	17807	17093	4993	43993	47460
February	16 19.1	67 58.7	17797	17080	5001	44002	47465
March	16 14.6	67 57.4	17802	17091	4980	43966	47433
April	16 12.5	67 57.0	17805	17097	4970	43958	47427
May	16 11.8	67 57.3	17808	17101	4967	43977	47446
June	16 12.1	67 58.1	17820	17112	4972	44036	47505
July	16 9.0	67 57.6	17793	17091	4949	43951	47415
August	16 8.8	67 57.3	17791	17089	4948	43935	47400
September	16 8.7	67 58.3	17803	17101	4950	44001	47466
October	16 9.3	67 59.7	17783	17081	4948	44004	47461
November	16 9.4	67 58.1	17805	17102	4955	43999	47465
December	16 8.5	67 58.2	17808	17106	4951	44011	47477
Year 1937	16 11.7	67 58.0	17802	17095	4965	43987	47453
Year 1936	16 21.6	67 57.7	17801	17080	5014	43972	47438
Year 1935	16 32.7	67 57.4	17804	17067	5070	43969	47437
Year 1930	17 27.6	67 59.8	17813	16992	5345	44081	47546
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



PRESSURE

Readings in millibars at exact hours, Greenwich Mean Time

343 VALENTIA OBSERVATORY: H<sub>b</sub> (height of barometer cistern above M.S.L.) = 13.7 metres

JANUARY, 1937

Table with 25 columns (1-24 hours + Mean) and 31 rows (Day 1-31). Includes sub-headers for Hour G. M. T., Day, Station Level, and Mean (Sea Level).

344 VALENTIA OBSERVATORY: H<sub>b</sub> = 13.7 metres

FEBRUARY, 1937

Table with 25 columns (1-24 hours + Mean) and 28 rows (Day 1-28). Includes sub-headers for Day, Station Level, and Mean (Sea Level).

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

PRESSURE
Readings in millibars at exact hours, Greenwich Mean Time

345 VALENTIA OBSERVATORY: Hb (height of barometer cistern above M.S.L.) = 13.7 metres

MARCH, 1937

Table with 25 columns (1-24) and 31 rows (Day 1-31). Includes 'Station Level' and 'Sea Level' mean values.

346 VALENTIA OBSERVATORY: Hb = 13.7 metres

APRIL, 1937

Table with 25 columns (1-24) and 30 rows (Day 1-30). Includes 'Station Level' and 'Sea Level' mean values.

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

PRESSURE  
Readings in millibars at exact hours, Greenwich Mean Time

347 VALENTIA OBSERVATORY:  $H_b$  (height of barometer cistern above M.S.L.) = 13.7 metres.

MAY, 1937

Table with 25 columns (1-24 hours, Mean) and 31 rows (Day 1-31). Includes 'Station Level' and 'Sea Level' mean values.

348 VALENTIA OBSERVATORY:  $H_b$  = 13.7 metres

JUNE, 1937

Table with 25 columns (1-24 hours, Mean) and 31 rows (Day 1-31). Includes 'Station Level' and 'Sea Level' mean values.

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



PRESSURE

Readings in millibars at exact hours, Greenwich Mean Time

349 VALENTIA OBSERVATORY: H<sub>b</sub> (height of barometer cistern above M.S.L.) = 13.7 metres

JULY, 1937

Table with 25 columns (1-24 hours + Mean) and 31 rows (Day 1-31). Includes 'Station Level' and 'Mean (Sea Level)' rows. Data values are in millibars.

350 VALENTIA OBSERVATORY: H<sub>b</sub> = 13.7 metres

AUGUST, 1937

Table with 25 columns (1-24 hours + Mean) and 31 rows (Day 1-31). 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

PRESSURE Readings in millibars at exact hours, Greenwich Mean Time

351 VALENTIA OBSERVATORY: H<sub>b</sub> (height of barometer cistern above M.S.L.) = 13.7 metres

SEPTEMBER, 1937

Table with 25 columns (1-24 hours + Mean) and 31 rows (Day 1-30 + Mean). Includes 'Station Level' and 'Sea Level' mean values.

352 VALENTIA OBSERVATORY: H<sub>b</sub> = 13.7 metres

OCTOBER, 1937

Table with 25 columns (1-24 hours + Mean) and 31 rows (Day 1-30 + Mean). Includes 'Station Level' and 'Sea Level' mean values.

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

PRESSURE

Readings in millibars at exact hours, Greenwich Mean Time

353 VALENTIA OBSERVATORY: H<sub>b</sub> (height of barometer cistern above M.S.L.) = 13.7 metres

NOVEMBER, 1937

Table with 25 columns (Hour G.M.T., 1-24, Mean) and 31 rows (Day 1-30, Mean Station Level, Mean Sea Level). Data represents pressure readings in millibars for station and sea level.

354 VALENTIA OBSERVATORY: H<sub>b</sub> = 13.7 metres

DECEMBER, 1937

Table with 25 columns (Day 1-31, Mean Station Level, Mean Sea Level) and 31 rows (Day 1-31, Mean Station Level, Mean Sea Level). Data represents pressure readings in millibars for station and sea level.

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

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

From readings in millibars at exact hours, Greenwich Mean Time

355 VALENTIA OBSERVATORY: H<sub>0</sub> = 13.7 metres

1937

Hour G. M. T.	1	2	3	4	5	6	7	8	9	10	11	Noon	13	14	15	16	17	18	19	20	21	22	23	24	Mean
Station Level	mb 010.39	mb 010.17	mb 009.97	mb 009.79	mb 009.71	mb 009.72	mb 009.83	mb 010.01	mb 010.21	mb 010.39	mb 010.48	mb 010.44	mb 010.36	mb 010.23	mb 010.17	mb 010.16	mb 010.20	mb 010.30	mb 010.43	mb 010.55	mb 010.71	mb 010.76	mb 010.70	mb 010.61	mb 010.26
Sea Level	mb 012.06	mb 011.84	mb 011.64	mb 011.46	mb 011.38	mb 011.39	mb 011.50	mb 011.68	mb 011.87	mb 012.05	mb 012.14	mb 012.10	mb 012.02	mb 011.89	mb 011.83	mb 011.82	mb 011.86	mb 011.96	mb 012.09	mb 012.21	mb 012.36	mb 012.43	mb 012.37	mb 012.28	mb 011.92

PRESSURE AT STATION LEVEL: MONTHLY MEANS AND DIURNAL INEQUALITIES  
The departures from the mean of the day are adjusted for non-cyclic change†

356 VALENTIA OBSERVATORY: H<sub>0</sub> = 13.7 metres

1937

Month	Mean	Hour 1	G.M.T. 2	3	4	5	6	7	8	9	10	11	Noon	13	14	15	16	17	18	19	20	21	22	23	24
Jan.	mb 998.98	mb +0.42	mb +0.20	mb +0.21	mb -0.07	mb -0.32	mb -0.59	mb -0.55	mb -0.33	mb +0.08	mb +0.23	mb +0.35	mb +0.09	mb -0.20	mb -0.54	mb -0.46	mb -0.34	mb -0.20	mb -0.10	mb +0.05	mb +0.23	mb +0.37	mb +0.51	mb +0.46	mb +0.51
Feb.	1001.25	-0.02	-0.48	-0.77	-1.00	-1.15	-1.20	-1.19	-0.95	-0.59	-0.06	+0.29	+0.52	+0.49	+0.41	+0.27	+0.42	+0.57	+0.74	+0.84	+0.81	+0.68	+0.66	+0.45	+0.27
Mar.	1001.39	+0.43	+0.25	-0.03	-0.29	-0.49	-0.51	-0.54	-0.50	-0.36	-0.23	-0.10	-0.05	-0.04	-0.10	-0.21	-0.26	-0.26	-0.17	+0.04	+0.23	+0.46	+0.55	+0.58	+0.52
Apr.	1008.60	+0.28	+0.01	-0.26	-0.46	-0.58	-0.55	-0.50	-0.54	-0.43	-0.15	-0.01	+0.06	+0.04	+0.03	-0.06	-0.09	-0.04	+0.11	+0.26	+0.46	+0.68	+0.65	+0.62	+0.47
May	1012.76	+0.14	-0.10	-0.29	-0.48	-0.48	-0.35	-0.23	-0.03	+0.03	+0.11	+0.19	+0.17	+0.13	+0.06	-0.03	-0.11	-0.16	-0.17	-0.04	+0.11	+0.39	+0.43	+0.40	+0.31
June	1018.05	+0.09	-0.13	-0.37	-0.49	-0.48	-0.39	-0.22	-0.10	0.00	+0.03	+0.07	+0.14	+0.16	+0.19	+0.15	+0.02	-0.06	-0.09	-0.04	+0.11	+0.30	+0.45	+0.36	+0.27
July	1014.79	-0.10	-0.27	-0.52	-0.67	-0.61	-0.48	-0.25	-0.04	+0.13	+0.25	+0.33	+0.33	+0.37	+0.32	+0.24	+0.16	+0.03	+0.01	+0.02	+0.05	+0.20	+0.27	+0.18	+0.06
Aug.	1017.19	+0.10	-0.07	-0.32	-0.51	-0.56	-0.46	-0.25	-0.06	+0.05	+0.13	+0.12	+0.09	+0.15	+0.14	+0.04	-0.01	-0.09	-0.11	-0.04	+0.17	+0.45	+0.45	+0.39	+0.22
Sept.	1011.57	+0.29	0.00	-0.38	-0.63	-0.79	-0.75	-0.52	-0.27	-0.09	+0.04	+0.14	+0.17	+0.19	+0.07	-0.02	-0.08	-0.13	-0.01	+0.20	+0.47	+0.58	+0.58	+0.53	+0.39
Oct.	1013.75	+0.07	-0.13	-0.29	-0.39	-0.38	-0.34	-0.23	+0.04	+0.27	+0.38	+0.34	+0.26	+0.07	-0.15	-0.26	-0.20	-0.28	-0.05	+0.11	+0.19	+0.34	+0.33	+0.25	+0.13
Nov.	1012.98	0.00	-0.16	-0.33	-0.49	-0.47	-0.43	-0.31	+0.15	+0.11	+0.33	+0.42	+0.31	+0.06	-0.18	-0.29	-0.24	-0.11	+0.14	+0.25	+0.30	+0.44	+0.44	+0.36	+0.23
Dec.	1011.28	+0.15	+0.06	+0.11	+0.02	-0.14	-0.20	-0.19	-0.06	+0.15	+0.39	+0.49	+0.13	-0.19	-0.54	-0.53	-0.42	-0.26	-0.13	+0.01	+0.09	+0.20	+0.25	+0.33	+0.32
Year	1010.26	+0.16	-0.06	-0.26	-0.45	-0.53	-0.52	-0.41	-0.23	-0.04	+0.14	+0.22	+0.18	+0.09	-0.04	-0.11	-0.11	-0.08	+0.03	+0.15	+0.27	+0.42	+0.47	+0.41	+0.31

† See page 23

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

357 VALENTIA OBSERVATORY: H<sub>0</sub> = 13.7 metres

1937

Month	Jan.		Feb.		Mar.		Apr.		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 017.8	mb 010.1	mb 999.0	mb 977.9	mb 011.5	mb 005.8	mb 005.4	mb 990.7	mb 029.3	mb 022.8	mb 023.8	mb 020.6	mb 017.8	mb 014.9	mb 021.5	mb 020.4	mb 007.8	mb 004.3	mb 016.2	mb 011.6	mb 008.4	mb 000.7	mb 004.9	mb 991.7
2	024.1	016.8	998.7	987.4	005.8	994.6	991.1	982.6	022.8	009.7	023.6	017.8	014.9	005.4	021.6	019.5	011.8	005.2	016.1	014.9	009.2	005.3	007.4	994.8
3	025.4	018.2	991.1	983.7	000.0	994.6	004.6	991.1	013.2	006.6	017.8	012.7	018.4	005.9	020.9	016.5	019.5	011.8	030.4	016.0	006.3	002.2	016.0	007.4
4	018.4	008.3	989.5	984.1	000.5	996.4	004.8	001.3	020.5	013.2	012.7	008.5	021.6	016.3	016.9	013.8	019.6	013.6	033.5	030.3	016.0	999.1	014.0	000.2
5	022.0	012.2	003.3	987.7	002.8	000.4	001.3	998.8	024.1	019.4	011.1	008.1	016.3	006.7	017.7	015.6	013.9	012.6	032.9	029.4	022.6	016.0	002.2	994.8
6	014.1	008.4	009.2	001.5	002.7	997.3	005.0	998.9	023.5	016.9	011.5	009.7	016.4	009.3	016.9	013.2	015.8	010.8	029.4	021.9	021.1	013.8	994.8	988.2
7	027.2	014.1	001.5	984.9	008.1	999.0	003.5	998.9	024.7	020.6	010.1	006.2	021.1	016.4	019.3	016.9	021.1	012.2	021.9	015.6	013.9	011.9	004.4	989.3
8	026.3	018.7	003.1	988.4	009.5	007.5	008.6	002.8	020.6	005.8	011.2	006.5	020.6	012.1	019.0	016.3	028.2	021.1	020.1	014.8	020.5	013.3	006.3	004.3
9	018.7	016.8	007.7	002.9	007.5	997.7	002.8	987.9	005.8	001.6	015.5	011.1	019.7	014.3	018.8	016.0	026.6	013.4	027.8	019.9	026.0	020.3	013.1	004.4
10	018.1	013.0	010.6	006.6	997.7	979.4	999.6	989.3	010.1	005.4	015.4	011.9	021.3	017.7	018.2	011.3	029.2	026.6	028.8	027.2	026.5	024.6	012.9	993.4
11	013.2	998.7	013.7	010.1	979.4	973.3	001.9	999.1	010.8	009.7	014.6	009.7	017.7	012.5	011.3	008.5	029.3	025.3	028.0	025.1	029.1	025.8	011.0	993.3
12	006.2	998.8	012.1	003.0	984.9	974.4	006.3	001.9	010.3	007.0	018.4	014.3	015.5	011.9	010.0	008.6	025.3	014.0	027.4	025.4	029.1	026.6	010.9	989.5
13	023.3	008.2	010.4	004.0	986.4	984.3	005.9	991.9	008.4	005.7	025.6	018.2	015.7	011.4	013.5	007.0	014.0	007.9	027.3	024.7	026.6	021.0	989.5	982.0
14	023.1	007.8	015.7	010.4	006.3	985.6	008.8	995.2	013.7	008.3	029.9	025.6	011.4	008.9	016.5	013.5	010.1	997.3	026.6	023.7	021.1	019.7	005.1	982.4
15	007.8	992.9	015.6	000.8	011.4	003.4	008.9	991.5	017.0	013.5	031.1	029.4	015.5	008.9	016.1	011.2	997.3	985.0	031.2	026.5	021.4	015.9	011.8	005.0
16	002.0	992.8	008.7	998.6	003.4	982.4	015.2	990.8	016.9	014.8	030.8	025.3	015.8	010.2	011.7	001.3	991.0	973.0	031.1	029.5	015.9	992.6	025.6	011.6
17	992.8	978.7	015.9	008.7	983.5	977.7	017.7	015.2	017.5	013.8	028.4	026.7	019.1	012.9	011.8	003.4	996.6	991.0	030.2	028.3	992.7	982.8	027.0	021.2
18	994.6	982.8	015.8	012.9	986.4	982.0	013.0	008.7	017.4	007.8	027.2	016.8	021.6	017.6	019.4	009.1	996.6	996.6	028.3	021.0	989.1	985.9	021.2	013.0
19	999.7	992.2	015.0	006.3	990.9	986.3	011.8	003.3	007.8	001.5	018.0	015.2	023.3	021.3	027.8	019.4	012.1	003.9	021.0	016.3	998.6	987.3	015.7	008.5
20	998.4	970.9	018.6	015.0	002.5	990.5	013.4	990.9	003.0	001.0	021.8	017.6	022.3	010.6	027.7	025.4	018.0	011.9	012.5	009.3	998.6	998.6	008.5	993.9
21	984.2	970.8	017.9	000.5	012.2	002.5	017.7	013.4	002.9	000.7	021.9	020.8	013.9	008.0	025.4	020.2	017.1	999.3	012.5	008.8	008.8	002.8	002.7	994.1
22	997.5	974.0	010.3	997.7	013.8	011.5	022.9	017.7	003.7	000.9	020.9	019.5	014.5	003.5	021.8	019.1	016.6	997.7	000.5	978.8	007.6	001.7	011.3	000.1
23	997.5	973.6	010.4	988.9	019.1	013.8	023.7	021.4	009.3	003.7	020.8	018.9	010.7	000.1	021.8	018.2	019.7	016.6	991.1	978.4	019.6	007.6	017.9	011.3
24	975.5	984.6	891.3	983.6	019.4	017.4	021.4	015.7	006.5	001.8	020.0	017.8	014.1	009.9	018.2	013.0								

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

358 VALENTIA OBSERVATORY: North Wall Screen:  $h_t$  (height of thermometer bulbs above ground) = 1.3 metres

JANUARY, 1937

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	82.1	81.1	81.7	81.2	80.7	80.9	82.2	80.8	81.9	82.0	82.0	81.7	81.0	81.4	80.5	80.2	81.0	81.0	81.4	81.5	82.0	81.8	81.8	82.0	81.4
2	82.0	82.6	82.6	82.8	82.9	82.9	83.0	83.1	83.3	83.7	83.9	84.0	84.0	84.0	84.0	84.1	84.0	84.0	84.0	84.0	84.0	84.0	83.9	83.9	83.5
3	83.8	83.5	83.5	83.4	83.4	83.2	83.4	83.5	83.4	83.4	83.6	84.0	84.0	84.0	83.9	84.0	83.9	83.9	83.7	83.6	83.8	83.9	83.9	83.9	83.7
4	83.6	83.5	83.8	83.9	83.9	83.9	84.0	84.0	81.6	80.4	80.1	79.8	79.0	80.0	79.3	78.1	80.1	80.0	80.3	79.0	81.0	79.4	80.2	80.2	81.3
5	80.0	79.5	80.0	79.1	80.3	80.5	80.8	81.0	80.7	81.2	81.6	82.0	81.4	82.5	82.5	82.5	82.6	83.0	83.0	83.3	83.6	83.7	83.9	84.0	81.7
6	84.0	84.0	84.1	84.1	84.0	83.9	84.0	84.1	84.0	84.2	84.4	84.4	83.9	83.6	83.3	82.9	83.0	83.1	83.1	82.6	82.1	82.1	82.0	82.1	83.5
7	81.5	81.4	81.3	81.8	81.1	81.5	81.5	81.4	81.5	81.3	82.0	82.1	82.1	82.4	81.9	81.4	80.0	79.1	79.8	80.0	81.1	82.1	82.4	82.3	81.4
8	82.0	82.0	82.1	82.5	83.2	83.5	83.6	83.7	83.9	83.8	84.0	84.2	84.0	84.1	84.1	84.0	83.9	83.6	83.4	83.5	83.3	83.4	83.4	83.7	83.4
9	83.8	83.8	83.9	84.0	83.9	83.8	83.8	83.4	83.4	83.4	83.3	83.0	82.7	81.9	81.4	81.6	81.0	80.0	79.5	79.9	80.7	78.8	79.5	80.0	82.2
10	80.0	80.5	80.9	81.1	81.3	81.2	81.7	81.9	82.2	82.5	82.9	82.9	83.0	83.1	82.8	82.2	82.7	82.8	83.0	83.0	83.2	83.4	83.5	83.7	82.2
11	83.5	83.8	83.9	83.9	84.0	84.5	84.8	84.9	85.0	84.9	85.0	85.0	84.9	84.9	84.8	84.8	84.8	84.9	85.0	85.0	84.4	84.2	83.5	83.1	84.5
12	82.8	82.8	82.8	82.8	82.4	82.2	83.0	83.2	83.0	83.1	83.9	83.9	83.4	83.9	83.7	83.7	83.3	83.4	83.1	82.1	82.0	83.2	82.0	80.5	83.0
13	80.1	81.1	80.9	80.8	81.0	80.4	80.0	79.0	79.0	79.8	80.0	80.0	80.2	80.3	80.0	80.0	79.0	79.1	78.8	78.5	76.5	77.0	75.2	75.4	79.4
14	74.5	74.0	74.4	74.4	74.3	75.0	76.6	78.0	78.1	78.0	79.8	81.0	81.1	81.7	81.5	81.3	81.3	81.8	81.2	81.8	81.9	82.0	82.0	82.0	78.9
15	82.0	82.1	81.6	82.0	81.5	82.0	82.0	82.1	82.2	82.1	82.6	81.1	81.1	80.0	79.9	80.0	79.0	78.9	79.0	78.1	78.5	79.9	79.6	78.9	80.7
16	79.0	79.0	77.6	78.5	79.2	79.3	77.4	77.0	77.5	77.1	77.1	78.0	79.0	80.1	80.0	79.7	79.3	79.1	79.9	80.0	79.5	80.0	80.0	80.0	78.9
17	79.7	79.7	79.5	79.5	79.2	79.0	79.0	79.7	80.0	80.4	81.0	80.4	80.8	80.1	79.1	79.1	79.6	80.8	81.5	81.4	81.4	81.4	81.4	81.0	80.2
18	80.0	79.9	79.8	79.5	79.1	79.0	78.9	79.0	78.9	80.4	80.2	80.8	81.1	80.9	80.1	80.5	79.2	79.0	78.1	78.0	78.2	77.2	76.5	76.9	79.3
19	75.8	76.0	76.2	76.6	77.9	76.2	77.4	78.2	77.0	78.0	78.0	78.9	78.3	78.1	76.9	77.9	76.4	77.1	76.7	76.0	77.1	76.1	76.0	77.0	77.1
20	78.1	78.2	79.4	80.0	80.3	81.0	81.5	81.1	81.1	81.5	81.9	81.9	82.0	82.1	81.8	81.1	81.2	81.5	80.0	80.2	80.1	80.4	80.0	80.4	80.6
21	80.1	80.5	79.7	79.9	79.8	79.3	79.4	79.0	79.7	80.0	81.0	81.6	81.9	82.0	83.0	83.0	83.1	83.8	83.8	83.3	82.7	82.0	82.0	81.7	81.3
22	81.4	81.9	82.0	81.8	81.0	80.8	80.1	80.0	80.2	79.9	80.5	80.0	80.1	80.3	80.9	81.0	80.3	80.2	80.8	80.0	80.3	79.8	79.2	79.4	80.5
23	79.6	80.4	80.7	80.4	79.6	79.5	81.0	81.8	82.0	82.1	82.0	82.1	82.9	82.9	82.5	82.5	82.6	83.1	83.5	82.9	82.9	81.3	81.7	81.5	81.7
24	82.3	82.0	82.4	82.0	83.0	81.1	78.9	78.4	79.7	80.8	80.2	81.0	81.9	81.9	81.0	81.0	80.4	80.1	80.8	80.2	79.4	79.6	79.3	79.0	80.7
25	79.0	78.6	78.2	78.0	78.0	77.7	77.3	77.1	76.8	77.0	77.0	76.9	77.5	78.0	78.3	77.7	76.8	76.3	75.2	77.0	77.6	78.4	79.0	79.4	77.6
26	79.3	80.0	80.0	80.6	80.5	80.3	80.8	80.2	81.0	79.9	80.9	81.4	81.5	82.0	82.1	82.0	82.0	82.0	80.2	80.0	79.2	79.0	78.8	78.9	80.5
27	78.9	79.0	79.9	80.0	80.6	80.5	79.9	80.1	80.8	81.1	81.0	81.0	81.0	81.0	80.5	79.7	79.3	79.1	79.2	79.2	79.3	79.3	79.4	79.3	80.0
28	79.0	78.4	78.8	78.4	78.1	78.0	77.9	77.5	77.2	77.3	77.5	77.9	77.9	77.9	77.7	77.7	77.6	77.0	77.0	77.0	76.6	76.6	76.5	76.2	77.6
29	76.4	76.0	76.4	77.0	76.6	76.5	76.1	76.0	76.6	76.7	76.9	76.9	76.8	76.8	76.9	76.4	76.2	76.0	76.0	76.2	75.9	76.0	76.0	76.0	76.4
30	76.1	76.1	76.7	76.9	76.7	76.6	77.3	77.2	77.3	77.6	78.3	78.9	79.5	79.0	78.4	78.8	78.0	77.7	77.5	78.5	79.3	78.7	79.9	79.3	77.9
31	78.2	79.0	79.0	78.5	77.9	77.9	78.0	79.2	80.0	80.2	80.8	80.8	80.9	81.7	81.5	81.9	81.7	81.3	81.2	81.4	81.5	81.1	81.1	81.3	80.2
Mean	80.3	80.3	80.4	80.5	80.5	80.4	80.5	80.5	80.6	80.8	81.1	81.2	81.3	81.4	81.1	81.0	80.7	80.7	80.6	80.6	80.6	80.5	80.4	80.4	80.7

359 VALENTIA OBSERVATORY: North Wall Screen:  $h_t$  = 1.3 metres

FEBRUARY, 1937

Day	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A
1	81.0	80.4	81.1	80.4	80.8	81.4	81.5	81.6	81.5	81.4	81.9	81.8	82.2	82.1	81.8	81.8	81.2	79.6	78.9	78.7	77.6	77.5	76.6	77.0	80.5
2	78.1	80.0	80.8	81.1	81.0	81.2	82.0	82.1	82.9	83.9	83.4	83.8	83.5	83.1	83.7	84.1	84.2	84.0	84.0	83.7	83.2	82.9	82.8	82.9	82.2
3	83.2	83.4	83.2	83.3	83.4	83.4	83.5	83.5	83.8	83.5	83.5	83.8	83.5	83.5	84.1	84.2	84.0	84.0	83.7	83.2	83.4	83.5	83.0	83.0	83.5
4	83.1	83.0	83.1	82.5	82.8	82.7	82.1	82.2	82.1	82.2	82.4	82.9	83.0	83.0	82.9	82.3	81.9	80.0	80.1	79.0	77.0	76.5	75.9	75.5	81.3
5	75.1	74.9	74.9	75.6	75.5	78.0	79.1	79.5	80.0	79.8	79.8	79.8	80.0	80.3	80.9	80.5	79.6	79.6	79.0	79.4	79.6	79.7	80.4	80.1	78.7
6	80.1	80.3	80.0	80.0	80.4	80.5	80.5	80.0	79.5	80.9	80.9	81.4	82.0	81.9	81.0	80.7	79.7	79.0	79.8	78.9	79.5	79.7	79.4	79.1	80.2
7	79.0	79.2	79.4	79.2	79.4	79.2	79.1	79.3	79.3	79.6	79.8	79.9	79.7	79.2	78.6	78.2	77.8	77.3	77.5	77.4	77.5	77.9	78.4	78.4	78.8
8	78.6	78.8	79.0	79.1	79.4	79.4	78.9	79.0	77.5	79.0	80.0	80.1	80.4	79.0	80.0	79.8	80.0	79.8	79.5	79.0	79.0	79.1	78.3	79.0	79.2
9	78.5	78.9	78.2	78.4	79.5	80.0	79.9	79.9	79.3	79.8	79.9	80.2	80.4	79.9	80.2	81.0	80.4	80.5	80.4	80.0	79.6	78.5	78.6	77.9	79.6
10	77.2	77.6	77.3	77.4	77.1	76.5	76.9	76.8	78.0	78.8	79.4	80.5	80.9	81.0	81.0	80.9	81.0	81.0	81.0	81.0	80.9	80.8	80.7	80.8	79.2
11	80.2	80.1	80.1	80.0	79.9	79.6	79.9	79.4	79.1	80.0	80.7	81.2	81.4	81.7	81.9	81.8	81.2	80.4	79.8	80.0	80.6	80.9	80.9	81.3	80.5
12	81.2	81.8	82.0	82.1	82.6	82.7	83.0	83.0	83.2	83.6	83.5	83.8	83.9	83.9	83.2	83.2	82.8	82.4	82.0	82.6	81.9	81.9	81.4	81.2	82.6
13	81.0	82.0	83.0	83.1	83.0	83.1	83.3	83.2	83.7	83.9	84.0	84.1	84.2	84.3	84.4	84.2	84.1	84.1	84.1	84.1	84.0	84.1	84.0	84.1	83.6
14	84.2	84.1	84.0	83.8	83.0	82.9	83.2	82.5	82.9	83.1	83.4	83.8	84.0	83.9	83.9	83.1	82.9	82.4	82.0	81.8	81.8	81.8	81.9	82.0	83.1
15	81.4	80.6	80.7	80.4	79.9	79.6	79.5	80.0	81.0	82.4	82.9	83.0	83.4	84.0	84.2	84.0	83.8	82.6	82.8	82.5	83.0	81.3	82.0	81.3	81.9
16	80.9	79.6	79.9	78.6	79.4	79.2	79.1	77.2	79.0	7															

TEMPERATURE

Readings in degrees absolute at exact hours, Greenwich Mean Time

360 VALENTIA OBSERVATORY: North Wall Screen:  $h_t$  (height of thermometer bulbs above ground) = 1.3 metres

MARCH, 1937

Hour G. M. T.	1	2	3	4	5	6	7	8	9	10	11	Noon	13	14	15	16	17	18	19	20	21	22	23	24	Mean
Day 1	77.2	76.9	76.9	76.0	76.2	76.9	77.1	77.8	77.5	78.6	78.8	79.8	78.9	80.0	80.1	79.5	79.8	78.9	77.5	76.7	76.6	76.8	76.1	76.8	77.8
2	76.1	76.0	75.9	75.1	74.4	74.1	73.8	74.1	74.5	75.5	76.6	78.0	78.3	78.9	78.9	78.8	78.4	77.9	76.6	75.6	74.0	73.4	73.0	72.6	75.9
3	72.0	71.9	71.9	72.1	72.1	73.0	73.1	73.2	73.6	75.0	76.9	78.0	78.2	79.0	79.2	79.4	79.5	78.8	77.3	76.6	76.3	75.9	76.4	75.9	76.6
4	75.4	75.0	75.2	75.5	75.1	74.2	74.6	74.3	74.6	76.0	77.9	79.0	79.4	79.6	80.1	79.7	79.1	78.9	78.1	76.0	75.1	74.9	74.1	74.9	76.5
5	74.9	74.9	74.8	74.7	74.8	74.5	73.8	73.7	74.3	76.6	78.8	79.0	80.0	79.9	79.7	79.5	79.1	78.9	78.7	78.5	78.2	78.2	77.7	77.4	77.1
6	76.9	75.9	76.0	76.8	77.2	77.6	78.0	78.0	78.8	79.9	80.3	80.6	81.0	81.4	81.1	80.4	80.0	79.9	79.1	78.7	78.2	77.9	77.4	77.0	78.7
7	76.8	76.5	76.5	76.5	76.6	76.5	76.2	76.0	75.8	75.9	75.9	76.0	76.3	77.0	76.9	77.0	76.8	76.6	76.3	76.1	75.9	75.8	75.7	75.5	76.3
8	75.4	75.5	75.1	75.0	74.7	74.9	74.8	74.1	74.4	75.1	75.4	75.9	76.5	77.0	77.1	77.4	76.6	76.6	75.8	75.4	74.5	73.0	72.9	71.6	75.3
9	71.1	71.4	71.1	72.0	72.9	73.8	74.0	74.0	74.4	76.0	77.1	77.8	77.9	77.9	76.9	76.9	76.9	76.0	74.9	74.0	73.9	73.9	74.0	74.4	74.7
10	73.9	74.6	74.8	74.6	75.4	75.9	75.0	74.8	76.6	77.0	78.1	78.9	79.0	79.0	79.5	79.4	78.9	78.1	78.1	76.5	76.5	76.3	76.8	76.0	76.8
11	77.0	76.5	76.4	75.9	75.6	75.9	76.0	76.1	76.3	76.8	77.0	77.0	77.0	77.0	76.7	76.1	76.0	75.9	75.9	75.7	75.0	75.4	75.6	76.0	76.2
12	75.9	76.0	76.0	76.2	76.1	76.4	76.2	76.6	76.4	75.4	75.6	76.1	76.4	76.3	76.4	76.4	76.9	76.0	75.8	75.8	75.8	75.6	75.4	75.4	76.0
13	75.2	74.7	74.1	73.4	73.1	72.4	72.2	72.4	73.2	75.0	76.5	77.1	77.3	78.0	77.7	77.7	77.1	76.3	75.4	75.8	75.4	75.0	74.4	74.0	75.2
14	74.4	74.9	75.0	75.0	75.1	75.0	75.3	76.1	76.9	77.0	78.2	78.2	79.0	79.0	79.0	79.0	78.5	77.9	77.4	75.8	76.0	75.7	74.9	75.3	76.6
15	74.1	73.0	73.2	73.4	73.0	73.8	77.4	78.0	79.0	79.1	80.0	80.1	80.4	80.9	81.0	80.2	79.9	79.2	79.0	79.0	78.9	79.0	79.2	80.0	77.9
16	80.4	80.0	80.0	80.3	80.7	81.0	81.8	82.0	81.8	80.7	81.0	82.4	83.2	83.1	82.9	83.1	83.1	83.0	82.6	81.9	81.4	81.0	81.3	81.7	81.6
17	80.3	81.2	81.6	81.0	81.2	80.1	81.0	81.0	81.7	82.5	82.1	83.0	82.6	83.9	84.0	83.8	83.4	82.9	82.0	81.9	81.6	81.8	81.8	81.3	82.0
18	81.3	81.3	81.1	81.2	81.2	81.4	81.4	81.9	81.5	82.2	82.9	83.6	83.4	83.5	84.0	83.2	83.0	82.8	82.2	82.0	82.1	82.0	82.3	81.0	82.2
19	81.9	82.0	82.0	82.1	81.4	81.6	81.0	81.4	81.0	81.9	82.6	83.5	83.9	82.9	82.4	82.9	82.6	82.6	81.9	81.9	81.7	81.5	81.4	81.4	82.1
20	81.0	81.0	80.9	80.4	80.6	80.6	80.8	81.0	81.0	81.2	81.2	82.1	81.4	82.1	82.0	82.2	82.5	82.0	81.3	81.0	81.8	81.4	81.0	80.1	81.3
21	79.6	79.9	80.1	80.0	80.0	80.0	79.8	79.4	79.8	80.2	79.9	79.5	79.3	79.4	80.4	79.9	79.8	79.5	79.0	79.0	79.1	78.8	78.7	77.3	79.6
22	78.0	77.4	76.9	76.1	76.0	75.5	75.7	76.4	75.9	76.8	77.4	78.5	79.0	79.0	79.3	78.1	78.5	78.5	78.0	78.0	78.1	78.0	76.6	77.9	77.5
23	76.5	76.9	77.4	76.1	76.9	77.0	77.4	78.4	79.0	79.4	79.6	78.8	79.7	80.2	80.6	80.7	80.2	80.0	79.2	79.3	79.1	79.4	79.9	79.9	78.8
24	79.5	80.7	80.9	80.9	80.9	80.9	80.8	81.0	81.3	81.0	81.7	82.0	82.1	81.8	82.2	81.7	81.8	80.9	80.4	80.6	80.4	80.5	80.4	80.3	81.0
25	80.1	80.0	80.1	80.1	80.4	80.5	80.6	80.7	81.0	81.0	81.0	81.0	80.5	80.2	79.9	79.3	79.5	79.1	79.0	78.9	79.1	78.7	77.7	77.9	79.9
26	76.2	75.6	75.5	75.0	74.3	73.0	72.6	73.5	75.1	77.0	78.9	79.1	79.6	79.8	79.8	79.8	80.0	79.4	78.7	77.5	76.9	76.8	75.9	75.2	76.9
27	74.6	74.0	73.0	72.9	72.9	73.0	72.5	74.0	75.9	78.8	80.0	80.6	81.1	81.9	81.9	81.9	81.6	80.7	79.1	77.9	77.6	76.6	76.2	77.0	77.3
28	76.2	76.3	75.0	74.5	76.0	76.0	77.1	77.5	78.5	79.9	80.5	81.0	81.4	81.6	81.3	81.1	80.5	79.4	78.9	79.0	79.0	79.0	78.4	78.7	78.0
29	78.5	78.1	78.0	78.1	79.0	79.3	79.0	79.8	80.8	81.4	82.0	82.1	82.4	83.0	82.4	82.1	81.9	81.5	81.1	80.9	81.0	81.0	81.0	80.7	80.6
30	81.0	81.0	80.9	80.9	80.9	80.9	80.9	81.0	81.4	81.4	81.7	81.9	82.2	81.8	81.1	80.5	80.6	80.8	81.4	81.7	81.4	81.4	81.8	81.7	81.2
31	81.5	81.8	82.0	82.0	82.1	82.1	82.2	82.4	82.4	82.6	82.6	83.7	84.0	84.2	84.3	84.3	84.1	83.9	83.1	82.9	82.1	81.4	80.0	79.4	82.6
Mean	77.2	77.1	77.0	76.9	77.0	77.0	77.1	77.4	77.9	78.6	79.3	79.8	80.0	80.3	80.3	80.1	79.9	79.5	78.9	78.4	78.2	77.9	77.7	77.5	78.4

361 VALENTIA OBSERVATORY: North Wall Screen:  $h_t$  = 1.3 metres

APRIL, 1937

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean
1	78.8	78.1	79.0	80.2	79.7	81.4	81.7	82.7	83.0	83.3	83.0	83.0	83.0	83.0	82.9	82.5	82.9	82.9	82.3	82.0	82.0	81.6	81.3	80.5	81.7
2	79.2	79.0	78.5	78.5	78.6	78.9	79.0	79.0	79.5	80.0	80.9	81.7	82.5	82.3	83.2	83.0	82.5	81.9	81.4	81.4	81.2	81.1	81.0	80.9	80.6
3	80.9	80.7	80.4	80.3	80.5	80.4	80.8	80.8	81.0	80.9	81.4	82.4	82.9	83.1	83.8	83.2	82.8	82.0	81.7	81.3	81.0	81.0	80.5	79.7	81.4
4	78.9	78.6	79.1	79.5	79.5	79.0	79.4	80.0	81.0	81.4	82.2	82.7	83.4	83.4	83.1	83.1	83.1	82.8	82.7	82.8	82.4	82.1	82.1	81.4	81.4
5	82.1	82.4	82.4	82.5	82.8	82.9	83.0	83.2	83.9	84.7	85.0	85.9	86.8	86.4	86.2	86.0	85.1	84.9	84.3	84.2	84.4	84.5	84.5	84.5	84.2
6	84.0	84.1	84.1	84.1	84.0	83.7	83.9	84.0	84.2	84.6	85.2	85.5	85.2	85.7	85.0	85.0	85.2	84.8	84.9	84.9	84.5	84.5	84.1	83.4	84.5
7	83.4	84.0	84.0	83.9	84.0	84.0	84.0	84.0	84.2	84.9	85.4	85.6	85.8	85.6	85.6	85.3	85.3	85.0	84.9	84.4	84.4	84.6	84.2	84.2	84.6
8	84.0	84.0	83.9	84.0	84.0	83.9	83.5	84.0	84.6	84.8	85.3	85.3	86.0	86.0	86.0	86.4	85.0	84.3	84.0	83.7	84.0	84.0	83.8	83.7	84.5
9	83.9	83.4	83.3	83.3	83.8	83.9	83.9	84.1	84.4	84.6	84.9	85.0	84.9	84.4	84.0	83.8	83.5	82.2	82.0	82.0	82.1	82.2	82.2	82.2	83.5
10	82.0	82.0	81.7	81.7	81.6	81.0	81.4	81.4	81.4	81.7	82.0	82.2	82.1	82.9	83.0	83.0	84.0	82.5	82.5	81.5	80.4	80.2	80.0	79.8	81.8
11	79.3	79.2	79.0	79.0	79.1	79.4	79.7	80.1	81.3	81.9	82.5	82.5	83.4	83.3	83.0	82.3	82.2	82.3	82.5	81.3	81.4	81.0	80.6	79.7	81.1
12	79.0	78.9	78.5	78.6	78.1	78.8	79.0	80.8	81.9	83.0	83.9	84.5	85.0	85.0	84.8	85.4	85.1	84.0	83.4	82.3	80.5	80.1	79.5	79.4	81.7
13	80.0	80.3	80.9	81.2	81.6	81.7	82.2	82.9	82.8	83.4	83.9	83.0	83.2	84.0	84.3	84.0	83.0	83.0	82.1	81.9	82.0	82.1	82.4	82.1	82.4
14	81.9	81.3	81.0	80.9	80.9	81.2	81.0	81.0	81.3	81.5	81.6	82.1	81.9	81.9	82.1	82.6	83.1	82.6	82.2	82.0	81.4	81.0	81.0	81.1	81.6
15	79.7	79.4	79.2	79.8	79.9	80.3	81.4	81.9	81.5	81.7	81.9	81.9	82.6	84.1	85.0	84.8	84.8	82.6	83.0	83.0	82.4	82.0	81.1	81.4	81.9
16	81.5	81.4	82.0	82.4	82.5	83.0	83.0	83.0	82.9	83.2	83.1	83.5	83.2	83.5	83.1	83.1	82.5	82.3	82.0	81.4	81.7	81.6	81.3	81.1	82.4
17	81.3	80.2	80.4	80.4	80.5	80.4	80.																		

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

362 VALENTIA OBSERVATORY: North Wall Screen:  $h_t$  (height of thermometer bulbs above ground) = 1.3 metres

MAY, 1937

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	0A	0A	0A	0A	0A	0A	0A	0A	0A	0A	0A	0A	0A	0A	0A	0A	0A	0A	0A	0A	0A	0A	0A	0A	0A
1	82.9	82.0	81.4	81.1	80.8	80.2	81.9	84.1	85.2	86.5	88.0	88.5	88.7	88.1	88.3	88.2	88.0	87.4	86.5	85.1	84.4	84.8	84.8	84.7	85.0
2	84.4	83.0	83.3	82.1	81.5	81.1	83.0	85.5	86.2	88.2	87.6	86.9	87.9	88.1	87.5	86.5	86.0	85.7	85.8	85.0	82.9	84.9	84.8	84.6	84.7
3	84.2	84.2	83.4	83.4	83.0	83.0	83.1	85.1	86.0	86.0	85.9	85.4	85.1	83.1	82.6	82.1	82.2	82.6	83.0	82.9	82.0	81.4	80.9	80.7	83.5
4	80.5	79.0	78.0	77.8	77.5	78.0	80.6	83.1	84.5	85.7	86.1	86.0	86.6	87.0	86.7	87.1	86.5	85.9	83.3	83.1	82.7	82.0	82.0	81.9	83.0
5	81.7	81.4	81.1	80.4	79.5	80.0	81.3	84.0	84.3	84.9	85.6	85.8	86.6	87.0	86.8	86.5	86.0	85.6	85.1	85.0	83.0	84.7	84.3	84.3	83.9
6	84.4	84.5	84.7	84.7	84.7	84.9	85.0	85.2	86.0	86.0	86.0	86.8	87.0	87.0	87.1	87.0	86.9	86.5	86.0	85.9	85.5	85.3	85.0	84.4	85.7
7	84.4	83.9	83.9	83.4	83.4	83.5	83.7	84.0	84.8	85.5	86.5	87.1	86.5	87.0	86.5	87.0	87.6	87.0	86.8	86.1	86.0	85.8	85.1	85.1	85.4
8	85.1	84.9	84.6	84.1	83.7	85.1	86.0	86.4	86.8	87.0	87.0	87.1	87.4	87.0	87.0	86.7	86.9	86.8	86.5	86.5	86.1	85.5	85.8	85.5	86.1
9	85.0	84.1	83.9	84.3	85.0	85.0	85.5	84.0	83.4	82.3	82.0	81.9	83.1	84.0	85.8	83.0	84.7	84.4	82.2	82.4	81.5	81.0	80.8	79.0	83.4
10	78.7	78.2	78.0	77.6	77.4	78.0	80.0	83.0	84.7	85.2	85.6	86.0	85.0	85.0	85.1	85.4	85.1	84.3	83.9	83.2	82.1	81.5	81.0	80.0	82.2
11	79.8	79.7	80.0	80.2	80.0	81.0	84.0	85.1	85.2	85.8	86.2	86.3	86.8	86.6	86.6	86.3	85.4	85.2	84.8	83.9	83.0	82.5	83.0	82.9	83.7
12	82.2	82.1	82.0	80.9	80.0	79.9	81.5	83.0	84.5	86.0	86.8	87.3	87.3	87.2	87.2	87.1	87.0	85.9	85.5	85.0	84.9	84.9	85.0	84.9	84.5
13	84.8	84.8	84.5	84.0	83.7	84.0	83.9	84.4	85.1	86.0	86.0	86.5	87.4	87.0	86.9	86.6	86.4	86.4	86.1	84.9	84.3	83.9	82.0	82.0	85.1
14	81.0	80.6	79.4	79.0	80.9	82.0	84.0	86.3	87.3	87.0	88.1	88.9	89.5	90.0	89.3	88.7	88.1	87.8	86.6	86.0	85.8	85.0	84.2	84.2	85.6
15	84.7	84.0	83.3	82.0	82.0	82.7	85.9	87.4	88.0	88.0	88.3	88.4	88.8	89.5	89.9	89.9	89.3	89.0	88.4	87.0	85.8	84.3	83.1	82.4	86.4
16	82.3	82.0	80.7	80.5	80.9	80.9	83.4	86.6	88.3	89.3	88.6	88.4	88.9	89.1	88.2	87.7	87.3	87.9	86.8	86.3	85.5	84.5	84.0	83.4	85.5
17	82.7	81.8	81.8	81.3	81.8	82.1	83.2	85.4	86.3	86.0	86.9	86.8	87.0	88.0	86.8	86.9	86.1	86.0	86.0	85.8	85.4	85.0	84.9	85.0	84.9
18	84.0	83.9	83.8	82.1	81.3	84.0	84.4	85.0	85.1	85.1	85.7	86.0	86.0	86.1	86.1	87.1	86.1	85.5	84.9	84.1	84.0	83.9	83.8	84.0	84.7
19	83.6	83.6	84.0	84.1	84.4	83.6	84.5	83.2	84.9	85.0	85.0	85.4	85.3	84.4	85.5	84.8	83.2	83.2	83.9	82.3	80.9	80.1	80.0	80.1	83.6
20	80.1	80.0	79.9	80.0	80.5	81.6	84.0	85.1	84.9	83.0	83.9	85.5	85.5	85.7	86.1	83.0	84.4	83.8	83.7	82.0	81.3	81.9	81.4	80.9	82.8
21	80.3	80.0	79.4	79.0	79.0	80.1	84.3	85.1	84.1	84.3	84.5	84.4	85.4	86.4	86.9	87.0	87.0	86.0	85.4	84.0	82.4	82.4	82.4	81.9	83.4
22	81.0	82.0	83.0	83.4	83.7	84.1	84.0	86.2	86.4	86.0	86.1	86.6	86.3	83.0	86.0	85.3	85.7	85.5	85.0	84.4	83.0	82.8	82.9	82.4	84.4
23	81.9	82.0	82.5	82.9	82.9	83.1	84.2	85.5	86.0	87.0	87.3	87.5	87.5	87.2	88.0	88.2	87.4	87.2	87.0	86.4	86.2	86.1	86.1	86.3	85.6
24	86.2	86.4	86.4	86.1	86.1	85.9	85.1	85.9	86.8	87.2	88.0	88.0	87.0	86.5	85.1	85.9	86.5	86.0	86.0	85.6	84.9	84.4	84.6	84.8	86.1
25	85.0	84.7	83.4	83.5	83.6	84.8	85.3	86.0	86.1	86.2	86.6	87.0	87.0	87.6	(88.3)	(88.0)	(87.9)	(87.6)	(86.6)	85.7	84.5	83.9	83.4	83.0	85.7
26	83.0	82.5	83.0	82.8	82.8	84.5	86.0	86.9	87.2	88.0	87.5	88.6	87.5	84.9	87.0	84.9	85.0	86.1	86.0	85.1	84.8	84.1	83.6	83.4	85.2
27	83.0	82.9	83.4	82.8	82.9	83.9	85.3	86.1	86.1	86.9	87.2	88.0	88.3	88.1	88.5	88.1	88.0	87.2	87.1	87.0	87.0	87.0	87.0	87.0	86.1
28	86.9	87.0	86.9	86.9	87.1	87.7	88.8	88.9	89.0	89.0	89.4	89.1	89.0	89.0	88.9	89.0	88.3	87.8	87.5	87.0	86.8	86.5	85.9	85.4	87.9
29	84.9	84.9	84.5	84.3	84.5	85.0	86.9	87.0	87.4	87.9	88.7	89.1	89.0	89.1	89.0	90.0	89.5	88.5	87.3	86.0	85.9	85.0	83.9	84.0	86.8
30	84.4	84.5	84.1	83.9	83.6	84.0	86.0	87.6	88.0	87.9	88.1	87.9	87.3	88.0	88.0	87.8	87.2	86.5	86.4	86.1	85.6	85.3	85.0	84.9	86.2
31	84.9	84.8	84.7	85.0	84.7	84.8	84.9	86.0	85.4	86.9	87.3	87.3	87.4	87.0	86.8	86.6	85.9	86.0	85.4	85.0	84.8	84.6	84.5	83.4	85.6
Mean	83.2	82.9	82.7	82.4	82.4	82.9	84.2	85.4	85.9	86.3	86.7	86.9	87.0	86.9	87.1	86.7	86.5	86.2	85.8	85.0	84.4	84.0	83.7	83.4	84.9

363 VALENTIA OBSERVATORY: North Wall Screen:  $h_t$  = 1.3 metres

JUNE, 1937

Day	0A	0A	0A	0A	0A	0A	0A	0A	0A	0A	0A	0A	0A	0A	0A	0A	0A	0A	0A	0A	0A	0A	0A	0A	0A
1	83.9	83.0	83.1	83.1	83.2	83.3	84.0	84.2	85.0	85.4	85.2	85.0	86.0	85.9	86.0	85.5	85.4	85.0	85.0	84.8	84.4	84.3	84.1	84.1	84.5
2	84.0	84.0	84.0	84.0	83.6	83.7	84.0	84.5	85.1	86.0	86.9	87.2	87.7	87.5	87.3	87.4	87.0	87.3	87.1	87.1	86.9	87.0	86.7	86.6	86.4
3	85.4	85.1	85.4	85.5	85.4	85.4	85.8	86.0	86.4	86.5	86.3	86.9	87.0	87.2	87.4	87.0	87.3	87.1	87.1	87.1	86.9	87.0	86.7	86.6	85.4
4	86.7	86.6	86.6	86.6	86.5	86.7	86.9	87.0	87.0	87.4	87.7	87.4	87.5	87.5	87.4	87.3	87.0	86.9	86.8	86.3	86.7	86.7	86.6	86.6	87.0
5	86.5	86.4	86.4	86.2	86.1	86.1	86.1	86.3	86.5	86.4	86.5	85.6	85.6	86.0	86.3	87.0	86.9	86.4	86.0	85.8	85.4	84.4	84.0	83.3	86.0
6	83.0	82.6	82.1	81.8	82.2	84.3	84.9	85.7	87.4	87.4	87.3	86.9	87.0	86.3	86.9	86.9	86.9	86.5	86.1	85.9	85.0	84.1	83.9	83.5	85.2
7	83.3	83.3	83.5	83.3	83.3	84.1	84.6	84.6	85.7	86.2	86.6	87.1	86.5	87.0	86.6	86.0	86.0	86.0	85.9	86.1	86.0	85.4	84.0	84.1	85.2
8	83.9	84.0	83.9	83.4	83.0	83.3	84.0	83.9	85.7	86.2	86.0	86.0	86.4	87.0	87.0	87.1	87.0	86.7	86.1	85.3	84.2	82.9	81.9	81.2	84.9
9	80.4	80.2	79.9	79.5	79.4	81.7	84.5	86.4	86.5	86.8	87.0	86.4	87.0	86.7	87.5	88.3	88.9	87.9	87.2	86.4	85.4	84.3	83.6	82.9	84.7
10	81.9	81.4	80.3	80.6	80.0	81.6	84.3	86.9	87.2	87.3	87.4	87.3	87.9	87.6	88.1	88.1	88.2	87.9	88.0	87.2	86.0	85.7	85.4	85.4	85.5
11	85.3	85.2	86.7	85.5	85.3	86.3	88.0	87.1	88.0	88.3	87.7	87.9	88.2	88.0	88.0	88.3	88.9	88.9	88.9	88.9	88.2	88.0	87.9	87.0	87.4
12	87.0	87.0	86.3	86.8	86.9	86.7	87.3	87.5	89.9	90.0	89.0	89.0	90.1	88.4	89.3	89.1	88.3	87.3	87.4	87.4	87.1	86.4	86.1	85.0	87.3
13	85.1	85.0	84.0	83.9	83.3	84.3	85.7	86.0	88.1	88.1	87.9	88.2	88.9	89.5	89.4	90.0	89.3	88.4	88.3	87.5	87.0	86.2	86.4	86.4	87.0
14	86.4	86.3	86.1	86.6	86.3	87.0	87.5	87.9	89.1	89.8	88.9	89.4	89.9	89.9	88.2	90.5	90.4	89.0	88.5	88.0	87.9	87.6	87.6	87.6	88.2
15	87.4	87.1	87.0	87.0	87.0	87.1	87.1	87.5	88.0	88.8	89.4	89.0	89.3	89.5	90.0	90.4	89.6	88.9	88.5	87.9	87.1	86.9	87.0	87.1	88.1
16	87.1	87.0	87.0	86.9	87.0	87.0	87.0	87.4	87.9	88.2	88.1	88.0	88.4	88.1	89.1	88.4	88.3	88.6	88.7	88.5	88.1	87.5	87.4	86.9	87.9
17	86.0	85.5	84.8	84.0	84.1																				

TEMPERATURE

Readings in degrees absolute at exact hours, Greenwich Mean Time

364 VALENTIA OBSERVATORY: North Wall Screen: h<sub>t</sub> (height of thermometer bulbs above ground) = 1.3 metres

JULY, 1937

Table with 25 columns (1-24, Mean) and 31 rows (Day 1-31, Mean). Each cell contains a temperature reading in degrees absolute.

365 VALENTIA OBSERVATORY: North Wall Screen: h<sub>t</sub> = 1.3 metres

AUGUST, 1937

Table with 25 columns (1-24, Mean) and 31 rows (Day 1-31, 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 printed 75.0



Table with 25 columns (1-25) 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.

Table with 25 columns (1-25) 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 printed 75.0

TEMPERATURE

Readings in degrees absolute at exact hours, Greenwich Mean Time

368 VALENTIA OBSERVATORY: North Wall Screen: h<sub>t</sub> (height of thermometer bulbs above ground) = 1.3 metres

NOVEMBER, 1937

Table with 24 columns (1-24) and 31 rows (Day 1-31). Columns 1-24 represent hourly temperature readings in degrees absolute. The 'Mean' row at the bottom shows the average for each hour, with values ranging from 80.7 to 81.4.

369 VALENTIA OBSERVATORY: North Wall Screen: h<sub>t</sub> = 1.3 metres

DECEMBER, 1937

Table with 24 columns (1-24) and 31 rows (Day 1-31). Columns 1-24 represent hourly temperature readings in degrees absolute. The 'Mean' row at the bottom shows the average for each hour, with values ranging from 79.6 to 79.8.

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

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

370 VALENTIA OBSERVATORY: North Wall Screen:  $h_t = 1.3$  metres

1937

1	2	3	4	5	6	7	8	9	10	11	Noon	13	14	15	16	17	18	19	20	21	22	23	24	Mean
°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A
82.70	82.63	82.58	82.48	82.43	82.56	82.86	83.24	83.62	84.05	84.49	84.78	84.95	85.03	85.01	84.82	84.57	84.26	83.89	83.55	83.32	83.09	82.94	82.83	83.61

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

371 VALENTIA OBSERVATORY: North Wall Screen:  $h_t = 1.3$  metres

1937

Month	Mean	Hour 1	G.M.T. 2	3	4	5	6	7	8	9	10	11	Noon	13	14	15	16	17	18	19	20	21	22	23	24
Jan.	280.69	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A
Feb.	280.88	-0.41	-0.35	-0.24	-0.19	+0.19	-0.30	-0.19	-0.18	-0.07	+0.08	+0.39	+0.53	+0.57	+0.69	+0.42	+0.31	+0.06	+0.04	-0.05	-0.13	-0.07	-0.18	-0.25	-0.27
Mar.	278.38	-0.29	-0.34	-0.21	-0.31	+0.38	-0.28	-0.36	-0.38	-0.23	+0.11	+0.49	+0.51	+0.77	+0.65	+0.61	+0.55	+0.30	+0.02	-0.03	-0.12	-0.19	-0.35	-0.32	-0.25
Apr.	283.06	-1.15	-1.22	-1.31	-1.45	-1.36	-1.33	-1.23	-0.93	-0.48	+0.24	+0.92	+1.44	+1.66	+1.92	+1.90	+1.68	+1.48	+1.09	+0.45	-0.02	-0.25	-0.47	-0.72	-0.87
May	284.94	-1.18	-1.35	-1.47	-1.42	-1.42	-1.26	-0.91	-0.23	+0.28	+0.61	+0.98	+1.24	+1.54	+1.70	+1.71	+1.51	+1.24	+0.83	+0.33	-0.11	-0.36	-0.53	-0.75	-0.98
June	286.57	-1.77	-2.05	-2.26	-2.56	-2.58	-2.08	-0.75	+0.45	+1.00	+1.38	+1.75	+1.98	+2.09	+1.95	+2.12	+1.79	+1.59	+1.25	+0.82	+0.07	-0.53	-0.90	-1.23	-1.50
July	287.98	-1.24	-1.37	-1.52	-1.61	-1.65	-1.25	-0.87	-0.09	+0.52	+0.76	+1.04	+1.06	+1.42	+1.38	+1.42	+1.60	+1.39	+0.93	+0.61	+0.19	-0.28	-0.62	-0.87	-1.14
Aug.	288.93	-1.05	-1.12	-1.19	-1.21	-1.30	-1.09	-0.85	-0.36	-0.01	+0.39	+0.73	+1.07	+1.24	+1.46	+1.45	+1.29	+1.26	+0.91	+0.62	+0.19	-0.19	-0.53	-0.80	-0.89
Sept.	286.67	-1.17	-1.35	-1.51	-1.76	-1.81	-1.36	-0.44	+0.32	+1.04	+1.53	+1.80	+1.84	+1.97	+1.94	+1.63	+1.36	+1.00	+0.58	-0.07	-0.60	-0.90	-1.11	-1.12	
Oct.	283.92	-0.83	-0.86	-0.90	-0.99	-0.97	-0.87	-0.69	-0.33	+0.07	+0.55	+0.80	+0.82	+0.94	+1.14	+1.24	+1.15	+0.95	+0.58	+0.19	-0.14	-0.13	-0.41	-0.59	-0.69
Nov.	281.36	-0.90	-1.02	-1.08	-1.20	-1.24	-1.15	-1.14	-1.04	-0.32	+0.41	+1.06	+1.45	+1.79	+1.89	+1.78	+1.44	+1.08	+0.53	+0.05	-0.14	-0.23	-0.50	-0.73	-0.77
Dec.	279.80	-0.66	-0.56	-0.51	-0.73	-1.11	-0.88	-0.69	-0.72	-0.71	-0.19	+0.66	+1.17	+1.47	+1.48	+1.39	+1.08	+0.69	+0.61	+0.02	-0.17	-0.29	-0.43	-0.40	-0.51
Year	283.61	-0.27	-0.21	-0.14	-0.08	-0.12	-0.07	-0.15	-0.20	-0.31	-0.18	+0.13	+0.59	+0.75	+0.76	+0.69	+0.42	+0.02	-0.03	-0.28	-0.26	-0.31	-0.36	-0.23	

† See page 23

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

372 VALENTIA OBSERVATORY: North Wall Screen:  $h_t = 1.3$  metres

1937

Month	Jan.		Feb.		Mar.		Apr.		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.
1	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A
2	82.1	79.3	82.4	76.4	80.1	75.0	83.4	78.0	89.0	80.1	86.2	83.0	90.7	87.9	94.9	84.9	91.1	86.8	85.8	81.1	84.7	76.5	81.9	76.5
3	84.1	82.0	83.8	77.0	79.0	72.5	83.4	78.4	88.5	81.1	88.0	83.5	88.9	85.1	94.0	86.0	90.4	86.0	85.9	78.4	85.0	77.1	82.3	79.4
4	84.0	83.2	84.3	82.7	79.8	71.6	83.8	79.7	86.4	80.7	87.5	85.1	87.7	84.0	93.6	84.8	90.1	87.0	87.8	81.6	87.0	85.0	81.2	78.5
5	84.1	77.6	83.1	75.3	80.1	74.0	83.7	78.4	87.2	77.4	87.8	86.5	89.1	83.9	90.4	86.3	90.7	86.3	88.1	78.4	87.0	81.0	82.7	77.4
6	84.0	79.0	80.9	74.7	80.7	73.1	86.8	82.0	87.1	79.3	87.1	83.3	89.8	86.0	91.3	84.7	91.9	89.2	87.9	81.6	85.2	78.4	80.0	77.1
7	84.5	81.9	82.0	78.8	81.4	75.9	85.8	83.4	87.2	84.3	88.1	81.7	88.0	85.3	91.9	86.2	91.0	88.0	86.0	80.0	84.9	81.5	79.0	75.3
8	82.8	79.0	79.9	77.2	77.1	75.5	85.9	83.3	87.7	83.4	87.2	83.2	88.9	84.0	91.0	84.3	91.4	86.4	87.0	82.5	84.9	83.6	77.9	74.9
9	84.2	82.0	80.5	78.1	77.8	71.5	86.1	83.5	87.5	83.5	87.4	81.1	88.2	84.9	91.5	85.9	88.6	85.0	87.9	82.1	84.0	82.6	78.9	72.0
10	84.0	78.7	81.1	77.9	78.0	71.0	85.1	82.0	85.9	82.0	89.5	79.0	88.9	85.1	92.8	89.0	90.0	83.4	88.0	84.6	83.8	77.6	76.5	70.1
11	83.7	79.6	81.1	76.0	79.6	73.7	84.1	79.8	86.1	77.3	88.4	79.9	89.3	85.6	92.9	88.9	88.2	82.4	88.9	84.0	79.6	76.9	81.5	70.0
12	85.0	83.1	82.0	79.0	77.3	75.0	84.1	78.9	86.9	79.4	89.0	85.0	90.3	87.3	94.2	89.8	87.3	80.8	87.9	80.5	82.0	78.2	80.3	76.6
13	83.9	80.5	84.0	81.2	76.8	75.1	85.6	78.0	88.0	79.8	90.2	85.0	90.9	88.5	94.0	88.4	88.0	84.4	86.2	80.3	82.6	79.1	81.9	75.3
14	81.7	75.2	84.4	80.8	78.4	71.7	84.3	79.4	87.5	82.0	90.0	83.3	91.4	88.2	91.0	86.1	87.2	83.9	86.9	79.8	80.3	76.7	81.0	77.7
15	82.0	74.0	84.2	81.8	79.1	74.0	83.1	80.8	90.0	79.0	91.0	86.1	89.0	86.5	90.2	86.1	88.0	84.8	87.6	85.1	80.4	75.9	79.9	77.1
16	82.5	78.0	84.2	79.5	81.4	72.8	85.2	79.1	90.0	81.9	90.5	86.7	90.2	85.9	91.2	85.1	87.5	83.4	86.7	84.9	81.4	73.7	81.8	78.2
17	80.2	77.0	81.3	77.0	83.4	79.9	84.0	81.1	89.4	79.9	89.4	86.9	89.3	84.0	91.0	87.0	86.3	83.4	87.2	84.4	83.6	79.0	82.1	74.9
18	81.7	78.7	83.5	80.6	84.0	79.9	83.1	79.5	88.1	80.9	89.0	83.9	92.0	87.8	91.5	88.1	86.4	84.3	87.4	84.8	85.5	82.8	79.0	72.2
19	81.1	75.9	84.1	82.6	84.0	81.0	85.0	79.7	87.3	81.2	87.8	85.0	92.0	86.5	(91.3)	87.9	86.4	83.2	88.1	85.4	85.0	79.1	82.2	79.0
20	79.0	75.4	84.7	81.5	84.0	81.0	84.5	80.0	86.3	79.9	89.1	85.5	91.0	84.2	89.9	86.1	87.1	83.8	87.1	85.4	82.1	76.1	80.5	77.4
21	82.6	77.0	82.3	79.9	83.0	80.1	84.3	80.1	86.2	79.4	88.3	84.9	89.0	83.9	90.0	82.7	86.9	80.0	85.9	82.9	81.9	74.4	83.8	80.0
22	83.8	78.9	83.9	81.4	80.8	77.1	85.1	81.0	87.2	78.9	89.5	84.4	89.2	86.0	91.3	84.1	87.1	79.6	84.6	81.0	81.5	75.4	84.4	82.0
23	82.1	78.5	84.0	78.4	79.5	76.0	85.1	84.0	87.2	81.0	87.8	84.4	89.7	85.8	90.8	87.1	90.0	85.3	84.4	79.4	80.9	78.0	85.0	81.5
24	83.5	79.1	82.4	74.0	81.0	76.0	89.0	82.1	88.5	81.9	88.5	83.5	89.5	85.2	91.6	84.8	88.5	85.1	85.0	80.5	80.8	78.5	84.6	81.1
25	83.1	78.4	83.0	80.9	82.5	79.5	90.0	79.4	88.5	84.4	89.1	83.6	87.9	85.0	92.5	86.9	88.5	83.5	83.0	79.7	80.8	77.0	85.6	77.9
26	79.4	75.0	83.0	78.9	81.1	77.4	86.5	82.4	88.3	82.9	89.6	82.6	89.5	85.6	90.0	85.8	87.3	79.5	82.9	79.4	80.1	74.0	84.8	78.9
27	82.1	78.7	82.4	80.0	80.0	72.5	86.0	82.1	89.0	82.5	89.8	85.9	89.2	86.5	90.0	83.0	88.8	85.7	84.0	78.7	83.3	78.9	83.9	83.0
28	81.1	78.8	81.2	74.3	82.3	72.1	85.4	83.4	88.5	82.5	90.7	85.9	91.4	86.0	90.5	80.5	88.2	85.0	81.9	73.2	83.8	82.0	83.5	81.9
29	79.5	76.2	78.2	74.0	81.9	74.3	86.4	82.0	90.0	85.4	89.1	85.0	90.5	87.1	91.1	85.9	88.0	84.5	84.0	73.0	85.0	82.9	82.0	80.7
30	77.1	75.9	-	-	83.1	77.6	88.0	78.8	90.0	83.7	88.0	84.4	92.1	86.8	88.5	85.9	89.3	85.3	85.5	82.9	85.9	84.9	81.3	75.7
31	80.0	76.0	-	-	82.2	80.2	88.5	80.7	88.6	83.4	89.9	86.2	94.3	84.1	90.4	85.4	88.8	83.5	84.0	79.1	85.7	80.7	79.9	77.9
Mean	82.3	78.4	82.6	78.6	80.7	75.7	85.4	80.7	87.9	81.3	88.8	84.1	90.0	85.7	91.5	86.0	88.6	84.3	86.1	81.1	83.3	78.9	81.5	77.3

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

RELATIVE HUMIDITY  
Percentages at exact hours, Greenwich Mean Time

373 VALENTIA OBSERVATORY: North Wall Screen:  $h_t$  (height of thermometer bulbs above ground) = 1.3 metres

JANUARY, 1937

Hour G. M. T.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean	Vapour Pressure*	
Day 1	81	82	77	75	76	75	71	75	73	72	71	67	72	66	79	70	67	73	74	73	72	76	72	77	77	73.7	mb 8.2
2	73	74	78	76	78	83	87	88	90	87	89	87	90	90	92	89	89	89	89	90	89	89	89	89	89	85.9	10.9
3	90	92	93	95	92	93	87	88	88	93	82	87	89	87	89	87	89	89	91	91	90	89	89	89	89	90.0	11.6
4	91	90	90	89	89	89	87	87	83	88	83	78	72	66	66	68	56	71	60	70	60	64	70	58	76.7	8.4	
5	72	67	71	71	69	65	68	65	67	70	76	74	82	75	79	80	82	84	88	89	92	92	89	90	76.7	8.6	
6	90	90	86	86	85	89	87	86	89	89	89	91	90	92	86	88	87	89	84	66	68	66	67	71	84.2	10.7	
7	67	79	69	59	70	66	66	67	69	69	63	61	71	67	65	74	78	83	76	77	71	66	66	72	69.6	7.7	
8	83	87	89	89	94	92	92	92	89	90	90	92	89	87	87	89	90	92	93	88	90	88	84	82	88.9	11.2	
9	77	79	82	77	82	81	87	92	93	95	94	92	93	92	91	90	91	93	91	90	90	93	87	88.4	10.3		
10	87	86	81	83	82	82	78	76	80	80	71	74	75	75	80	88	84	87	86	87	86	85	87	87	82.0	9.5	
11	88	89	85	89	92	89	88	89	86	84	84	83	84	85	90	90	91	90	89	89	92	90	93	91	88.3	12.0	
12	89	91	89	89	93	91	91	88	91	89	89	87	89	85	91	90	94	92	93	91	90	86	82	89.8	11.0		
13	86	89	83	82	81	83	85	82	79	74	71	67	68	68	63	66	76	68	73	71	78	70	82	79	76.1	7.3	
14	82	83	83	83	83	82	82	74	82	83	74	71	71	73	70	70	73	72	70	68	67	70	72	73	75.6	7.0	
15	73	72	81	78	88	86	87	87	88	89	91	93	93	87	87	85	85	72	79	82	76	60	62	72	81.4	8.6	
16	72	70	82	77	76	79	77	78	82	82	84	84	83	74	74	72	72	66	69	71	71	71	72	72	75.9	7.1	
17	78	83	87	88	90	87	87	90	93	90	86	91	82	88	90	87	83	88	73	67	67	67	72	72	82.5	8.4	
18	79	81	83	78	87	90	83	78	84	68	77	71	71	67	77	77	82	84	83	83	81	87	85	85	79.8	7.6	
19	86	83	90	90	86	93	77	71	84	80	83	72	78	75	82	92	76	82	85	85	80	81	83	84	82.4	6.8	
20	83	84	83	85	86	85	83	88	86	87	86	87	88	86	89	86	83	79	84	83	83	77	74	72	63.8	8.7	
21	70	72	74	73	74	79	79	82	76	84	76	73	76	78	86	86	86	89	90	90	89	86	87	89	80.6	8.8	
22	88	88	89	88	92	89	91	88	90	81	83	85	81	82	72	72	82	79	75	75	77	83	87	87	83.5	8.7	
23	81	80	76	79	77	80	73	76	71	71	73	80	64	67	67	70	66	69	67	75	76	87	88	79	74.8	8.4	
24	72	76	69	87	79	86	87	92	88	88	83	76	73	68	79	75	72	74	75	76	83	88	86	85	79.7	8.4	
25	87	88	86	87	84	87	89	90	85	84	84	85	90	83	80	87	80	85	87	73	73	68	66	68	82.7	7.0	
26	66	63	63	64	68	79	75	83	75	87	73	74	71	72	72	73	74	76	83	84	90	87	88	88	75.7	7.8	
27	88	93	87	85	82	83	86	84	81	83	82	78	73	73	76	77	79	76	76	78	79	76	75	75	80.6	8.1	
28	70	77	70	77	77	75	73	76	77	77	76	73	75	75	82	86	82	84	84	84	82	82	83	83	78.2	6.6	
29	82	83	76	70	75	75	81	81	73	72	69	70	70	72	70	75	75	73	73	70	71	69	71	73	73.9	5.8	
30	74	74	72	70	73	77	76	80	79	76	78	78	78	84	78	79	83	87	87	91	87	88	86	91	79.9	6.9	
31	94	91	85	91	86	86	87	90	85	84	78	81	81	77	78	74	74	71	73	71	70	78	82	82	81.4	8.5	
Mean	80.6	81.8	80.9	81.0	82.1	83.1	82.2	82.7	82.3	82.1	80.6	79.5	79.3	78.4	79.4	80.5	79.9	81.0	80.6	80.0	79.7	79.5	80.0	80.1	80.7	† 8.6	
Vapour Pressure*	mb 8.3	mb 8.4	mb 8.3	mb 8.4	mb 8.5	mb 8.6	mb 8.5	mb 8.6	mb 8.6	mb 8.7	mb 8.7	mb 8.7	mb 8.7	mb 8.6	mb 8.6	mb 8.4	mb 8.5	mb 8.4	mb 8.3	mb 8.3	mb 8.2	mb 8.2	mb 8.3	mb 8.3	mb 8.5	† 8.5	

374 VALENTIA OBSERVATORY: North Wall Screen:  $h_t$  = 1.3 metres

FEBRUARY, 1937

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean	Vapour Pressure*
1	86	91	92	94	79	81	78	77	69	69	74	74	76	75	74	76	74	81	86	86	87	84	88	85	80.6	mb 8.4
2	86	82	76	85	86	83	84	88	88	90	96	95	95	99	99	99	99	97	96	95	94	95	95	94	91.3	10.6
3	96	94	96	95	95	94	94	94	92	94	94	92	91	92	90	89	87	91	92	92	90	91	95	92	92.7	10.8
4	91	89	86	83	76	77	83	79	72	71	70	70	64	67	63	70	70	74	70	76	82	82	85	85	76.6	8.4
5	85	84	84	89	89	78	71	68	59	64	67	60	71	69	60	65	68	64	70	65	56	56	53	52	69.3	6.3
6	59	57	57	57	62	64	76	61	70	69	64	66	60	54	60	68	69	70	60	59	57	54	64	71	62.4	6.3
7	79	82	83	84	83	82	84	81	81	80	78	79	81	84	85	83	82	84	82	87	84	79	78	78	81.6	7.5
8	74	72	70	71	65	65	78	75	84	72	57	56	60	70	63	60	62	60	64	74	70	78	80	74	69.0	6.5
9	77	78	81	77	70	57	57	72	75	74	73	73	77	79	80	73	80	79	79	79	80	80	80	82	75.3	7.3
10	82	83	82	82	82	82	83	80	83	82	83	68	73	72	72	71	71	69	72	72	73	72	75	76	76.8	7.3
11	82	84	84	82	79	78	76	81	83	79	79	70	66	64	62	73	78	80	81	79	76	73	78	82	76.9	8.0
12	85	88	87	91	91	91	88	89	93	94	94	90	89	87	87	87	89	93	92	83	88	91	93	92	89.5	10.7
13	92	93	89	92	94	94	95	96	93	94	98	98	97	97	96	98	97	98	97	97	98	98	98	98	95.6	12.2
14	97	98	94	95	98	94	97	95	95	96	95	90	87	87	87	87	86	91	92	93	93	93	93	92	92.8	11.5
15	94	91	83	86	84	90	91	85	86	87	87	92	95	94	89	83	79	76	76	78	74	82	73	70	84.8	9.7
16	68	73	70	82	71	67	76	80	79	77	70	70	69	67	65	74	75	71	74	70	65	64	64	64	71.7	6.8
17	59	64	69	75	80	79	79	82	85	83	86	87	87	95	93	96	94	95	95	95	90	94	94	94	85.0	9.7
18	93	94	95	94	94	94	94	92	94	90	89	89	87	90	86	84	86	88	87	76	78	80	82	88	88.6	11.2
19	91	88	88	90	90	91	91	92	92	94	92	92	86	72	74	77	74	72	71	67	63	61	61	61	81.1	10.1
20	63	68	62	67	82	63	74	60	63	65	59	65	74	70	68	62	63	68	64	70	69	69	73	70	66.9	7.4
21	84	91	95	96	95	96	98	99	96	92	94	87	85	91	92	93	93	93	94	94	90	90	89	90	92.0	11.2
22	89	94	95	89	90	86	83	76	73	65	64	70	64	57	60	62	62	66	75	70	71	71	75	78	74.8	7.8
23	77	80	82	85	87	84	90	87	84	76	68	66	64	64	73	78	82	82	76	73	79	83	89	92	78.9	7.2
24	92	88	91	88	88	89	89	91	88	84	83	75	72	70	72	72	74	76	78	74	81	82	86	89	82.2	9.6
25	86	89	92	87	91	92	88	82	75	71	76	71	76	62	72	63	70	73	78	84	86	84	80	85	79.8	8.6
26	86	81	86	84																						

RELATIVE HUMIDITY  
Percentages at exact hours, Greenwich Mean Time

375 VALENTIA OBSERVATORY: North Wall Screen:  $h_t$  (height of thermometer bulbs above ground) = 1.3 metres

MARCH, 1937

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	57	69	67	81	78	69	65	56	73	70	72	60	72	57	68	64	66	72	71	75	82	75	79	67	69.3	6.0	
2	74	74	71	80	82	83	85	81	83	84	75	69	65	59	59	58	60	67	72	74	81	87	86	86	86	74.4	5.6
3	87	87	87	87	87	86	87	87	85	82	69	58	65	57	55	54	53	57	68	73	78	80	76	76	76	74.4	5.5
4	74	75	74	70	77	80	78	76	80	78	69	59	51	56	54	58	69	72	71	83	82	82	83	82	82	72.1	5.7
5	82	82	82	82	77	76	85	84	80	70	61	63	65	65	66	64	69	69	70	74	74	72	74	77	73	73.6	6.0
6	77	85	83	83	80	78	78	83	76	73	72	73	72	67	70	73	81	74	84	79	78	76	79	78	77.1	7.1	
7	77	77	77	75	75	75	80	78	74	69	68	69	65	66	67	67	69	73	75	73	71	72	74	75	72.6	5.6	
8	75	74	78	75	77	77	75	81	80	78	72	66	60	52	56	57	63	63	67	74	72	79	88	91	71.7	5.2	
9	90	90	90	91	90	89	83	89	91	85	84	79	76	78	84	84	84	83	82	81	85	84	81	80	80	84.9	5.9
10	82	73	75	80	74	69	75	71	69	67	68	63	57	56	54	52	57	57	52	79	82	83	78	83	80	68.9	5.5
11	73	77	76	80	82	82	81	81	78	75	73	72	70	69	72	78	78	76	79	79	84	79	79	79	77.3	5.9	
12	82	83	83	83	87	83	85	82	82	91	89	85	85	87	83	80	85	83	83	84	84	85	85	84	84.2	6.4	
13	84	85	81	81	81	84	85	86	87	75	72	61	63	58	56	57	59	61	66	60	65	64	72	75	71.8	5.1	
14	74	73	66	64	66	68	66	58	53	55	54	51	50	56	56	55	52	55	62	75	76	72	86	84	63.4	5.0	
15	89	90	91	91	90	85	76	72	70	68	71	70	67	58	64	69	63	69	69	69	63	62	60	59	72.4	6.3	
16	65	72	77	80	76	81	81	87	89	90	93	84	84	84	86	84	84	80	76	74	87	86	84	81	81.4	9.1	
17	82	82	77	82	83	91	89	93	88	83	89	88	92	89	79	79	81	82	88	88	89	88	87	93	85.7	9.8	
18	89	89	86	85	85	82	82	80	92	88	82	81	81	81	75	84	82	83	86	86	86	86	83	86	84.3	9.6	
19	88	81	81	79	81	76	85	74	78	74	78	70	79	82	83	82	79	79	86	84	84	87	81	81	80.6	9.3	
20	83	81	85	91	89	89	88	83	83	83	82	83	86	81	84	78	76	81	86	84	73	76	83	83	82.6	9.1	
21	78	81	83	84	78	79	76	76	71	70	74	78	74	68	64	60	59	50	55	52	56	61	63	77	69.6	6.8	
22	68	63	61	68	68	75	77	76	85	82	77	62	57	56	58	68	62	62	60	58	57	55	75	56	66.5	5.6	
23	80	73	76	81	75	75	77	75	69	59	62	73	69	68	64	58	61	66	67	71	75	79	77	83	70.8	6.5	
24	87	76	73	73	75	75	76	71	69	73	76	76	72	76	75	77	76	85	91	90	91	91	93	94	79.4	8.5	
25	94	94	93	96	94	94	93	91	93	94	88	88	90	89	86	81	78	83	72	71	69	74	78	73	86.1	8.6	
26	80	77	74	80	82	88	90	89	87	73	59	65	61	59	53	46	55	64	58	66	70	70	74	79	70.7	5.7	
27	84	83	83	82	82	83	82	81	82	69	61	61	58	54	62	70	71	75	83	81	82	88	83	67	75.5	6.3	
28	78	78	82	83	89	66	66	63	64	59	59	57	54	52	56	56	57	59	65	65	62	62	65	68	64.4	5.9	
29	65	68	68	68	65	63	66	63	61	57	54	55	51	50	50	50	50	54	57	59	59	59	59	62	59.0	6.2	
30	59	60	59	59	59	59	60	59	57	60	61	61	58	62	71	80	77	75	73	70	79	84	83	88	66.7	7.3	
31	92	89	88	92	91	95	91	93	93	92	94	92	89	92	94	89	92	89	92	88	92	92	93	94	91.3	10.9	
Mean	79.0	78.7	78.3	80.2	79.2	79.2	79.5	78.0	78.1	75.0	72.8	70.1	69.0	67.4	67.8	68.3	69.3	70.7	72.9	74.7	76.4	76.9	78.5	78.7	74.9	†6.8	
Vapour Pressure*	mb 6.5	mb 6.4	mb 6.4	mb 6.5	mb 6.4	mb 6.4	mb 6.5	mb 6.5	mb 6.6	mb 6.8	mb 6.9	mb 6.9	mb 6.9	mb 6.9	mb 6.9	mb 6.9	mb 6.9	mb 6.8	mb 6.8	mb 6.7	mb 6.8	mb 6.7	mb 6.6	mb 6.6	mb †6.7		

376 VALENTIA OBSERVATORY: North Wall Screen:  $h_t$  = 1.3 metres

APRIL, 1937

Day	1	2	3	4	5	6	7	8	9	10	11	Noon	13	14	15	16	17	18	19	20	21	22	23	24	Mean	mb
1	93	97	93	90	90	82	83	79	82	82	80	83	78	74	75	74	65	63	61	61	58	58	56	65	76.5	8.6
2	75	81	82	85	85	84	84	84	83	85	86	84	83	92	86	86	87	87	88	86	85	85	85	85	84.3	8.8
3	85	88	88	89	89	88	85	88	85	86	81	76	70	72	68	71	70	78	81	82	88	86	90	90	82.1	9.1
4	88	91	91	93	93	88	91	90	88	88	84	79	80	76	78	79	78	80	76	74	75	80	75	76	83.3	9.2
5	81	78	80	80	79	80	82	83	83	81	85	78	72	73	77	80	85	81	82	83	78	76	78	82	79.7	10.6
6	87	87	90	92	92	94	93	94	95	94	89	91	95	92	94	91	94	91	90	90	93	93	94	93	91.8	12.4
7	94	93	93	92	92	90	93	94	95	90	89	86	90	89	89	87	86	86	85	84	88	87	88	88	89.6	12.2
8	87	89	89	87	87	89	92	87	88	86	86	86	83	87	88	88	89	94	94	92	89	93	94	94	89.0	12.1
9	93	96	96	95	90	89	89	93	95	92	90	88	90	95	94	98	93	91	92	89	92	89	92	89	92.5	11.7
10	89	89	91	89	89	89	82	76	77	72	71	66	55	62	69	64	65	70	78	80	79	82	79	77	76.9	8.7
11	83	86	87	84	84	78	78	78	73	67	67	65	70	71	70	69	71	71	67	70	67	69	70	76	73.8	8.0
12	85	79	83	82	83	67	69	61	58	55	55	50	53	54	55	56	60	70	70	79	77	78	86	67.3	7.6	
13	84	82	81	81	78	78	79	74	75	72	69	80	75	68	68	67	74	74	83	80	77	73	70	73	75.9	9.0
14	74	84	86	89	89	92	88	89	93	91	91	83	78	77	84	79	74	80	84	86	89	88	88	86	84.8	9.5
15	88	90	90	88	88	93	88	88	93	91	89	89	92	98	94	91	87	86	87	80	84	86	88	93	89.1	10.2
16	93	94	92	84	89	86	74	74	75	73	75	69	72	71	72	62	66	65	71	69	69	66	67	61	75.2	8.9
17	59	70	67	67	62	55	65	61	60	61	65	71	61	63	62	63	66	67	73	79	83	84	76	78	67.1	7.3
18	81	83	83	79	86	84	84	77	72	69	67	69	64	74	76	75	70	78	79	85	86	85	86	85	78.1	8.9
19	89	90	89	91	89	95	94	95	94	90	91	91	93	93	94	93	93	84	86	87	88	84	92	90	90.5	10.7
20	89	91	93	92	92	93	88	94	95	79	86	77	74	73	69	62	63	69	67	69	70	69	69	79	79.5	9.1
21	72	73	71	75	79	83	82	78	83	81	86	86	87	90	93	88	89	89	91	88	87	87	87	87	83.7	10.3
22	87	87	86	85	87	84	88	87	88	88	89	89	88	88	89	88	88	88	90	92	93	93	95	94	88.6	12.1
23	95	95	97	97	95	94	97	95	95	90	88	86	84	84	84	87	90	93	94	94	91	96	98	92	92.0	12.8
24</																										

RELATIVE HUMIDITY  
Percentages at exact hours, Greenwich Mean Time

377 VALENTIA OBSERVATORY: North Wall Screen: h<sub>t</sub> (height of thermometer bulbs above ground) = 1.3 metres

MAY, 1937

Hour G. M. T.	1	2	3	4	5	6	7	8	9	10	11	Noon	13	14	15	16	17	18	19	20	21	22	23	24	Mean	Vapour Pressure*	
Day	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	mb
1	88	89	92	92	89	94	88	92	84	77	75	67	61	77	76	79	77	77	82	88	88	88	88	89	89	83.2	11.7
2	89	87	85	89	92	91	89	85	77	76	77	78	80	77	83	83	82	82	78	84	77	78	80	79	80	82.6	11.7
3	81	80	91	89	86	87	91	85	77	77	77	83	88	91	87	86	87	87	80	80	81	79	79	83	83	83.7	10.6
4	80	87	87	87	92	92	89	84	78	76	76	77	73	77	78	77	75	78	88	79	65	63	61	62	62	78.8	9.7
5	64	67	68	69	78	71	82	63	65	57	60	66	67	65	70	72	.80	83	87	88	93	96	96	96	96	74.4	9.7
6	96	95	94	94	95	95	96	97	93	95	95	92	94	91	94	94	90	93	95	94	96	97	94	96	94.4	13.9	
7	96	95	92	95	95	95	93	89	88	85	83	86	88	90	88	91	88	90	91	93	90	91	96	95	91.0	13.1	
8	94	90	92	92	92	84	78	78	78	76	77	76	74	82	79	81	79	79	81	80	82	88	85	90	82.9	12.5	
9	90	92	89	89	86	88	83	87	88	91	89	88	88	83	78	79	79	73	78	79	83	88	90	91	85.4	10.8	
10	90	94	90	90	92	90	87	84	70	72	70	72	66	65	73	72	75	66	67	74	76	79	82	85	78.5	9.1	
11	87	81	82	83	84	81	75	69	67	67	64	72	59	60	53	66	72	65	60	76	82	80	74	79	72.5	9.3	
12	87	91	88	89	91	88	93	82	81	75	70	74	70	65	65	65	75	75	82	82	83	79	80	79	79.5	10.8	
13	80	78	82	81	84	80	83	77	74	67	66	61	62	58	59	61	62	62	66	71	71	70	81	80	71.5	10.1	
14	85	83	86	85	79	74	75	71	58	50	49	42	46	43	55	56	54	57	59	62	66	67	71	78	64.7	9.4	
15	79	75	76	78	80	77	67	53	49	47	44	49	52	47	51	53	56	53	55	69	73	79	84	83	63.6	9.8	
16	84	87	88	86	82	86	82	74	66	64	68	68	61	66	75	81	74	78	80	86	82	82	87	88	78.0	11.3	
17	87	89	89	91	89	89	91	86	80	81	72	79	78	69	80	79	75	77	70	73	72	76	76	78	80.5	11.2	
18	81	89	90	89	93	87	84	82	83	78	75	72	75	71	66	67	65	62	67	80	75	77	83	80	77.9	10.7	
19	91	93	90	90	93	91	78	79	73	69	76	70	64	71	63	66	78	73	75	76	79	84	84	83	78.6	10.1	
20	81	85	74	82	79	76	65	66	65	75	76	71	70	69	64	78	72	83	79	86	88	84	84	79	76.4	9.3	
21	90	87	87	87	85	84	73	69	75	83	80	95	85	75	71	70	70	69	72	77	82	83	83	81	79.7	10.1	
22	86	78	79	81	79	75	75	69	67	75	87	75	77	88	88	88	82	83	83	84	88	87	87	92	81.1	10.9	
23	89	89	91	88	88	87	85	81	77	74	73	72	71	66	64	66	65	66	77	83	80	78	76	74	77.9	11.4	
24	75	77	78	81	80	87	82	81	80	72	69	70	76	77	85	80	73	78	78	82	87	88	91	90	79.5	12.0	
25	86	83	85	85	81	88	85	77	76	75	80	78	78	76	(69)	(70)	(72)	(74)	(75)	80	82	85	89	91	88	80.3	11.8
26	91	92	89	89	89	86	82	79	77	77	74	71	73	87	87	87	89	88	87	88	88	90	91	89	85.0	12.1	
27	89	88	92	89	89	89	89	88	83	79	76	76	68	69	74	78	84	92	93	93	91	84	80	79	84.0	12.7	
28	80	82	82	81	77	72	68	70	72	75	73	74	77	78	78	79	85	86	88	91	93	94	91	94	80.5	13.7	
29	90	90	88	84	86	88	79	79	83	78	72	77	78	78	79	72	74	76	78	86	83	85	87	87	81.7	12.9	
30	91	89	87	89	92	87	80	72	71	69	76	68	74	71	73	70	76	76	73	76	75	78	76	77	78.0	11.8	
31	79	78	79	82	79	69	67	77	73	68	65	71	74	67	69	71	66	67	72	71	78	80	75	82	73.2	10.7	
Mean	85.7	85.8	85.9	86.3	86.3	84.8	81.7	78.2	75.1	73.5	73.0	73.2	72.5	72.5	73.3	74.7	75.2	75.7	77.3	81.0	81.7	82.6	83.3	84.1	79.3	†11.1	
Vapour Pressure*	mb 10.7	mb 10.5	mb 10.3	mb 10.2	mb 10.2	mb 10.3	mb 10.9	mb 11.3	mb 11.2	mb 11.2	mb 11.2	mb 11.4	mb 11.6	mb 11.5	mb 11.8	mb 11.7	mb 11.6	mb 11.5	mb 11.4	mb 11.4	mb 11.0	mb 10.8	mb 10.7	mb 10.6	mb †11.1		

378 VALENTIA OBSERVATORY: North Wall Screen: h<sub>t</sub> = 1.3 metres

JUNE, 1937

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean	Vapour Pressure*
1	% 82	% 87	% 73	% 82	% 74	% 82	% 68	% 72	% 68	% 65	% 63	% 73	% 64	% 66	% 69	% 67	% 68	% 72	% 65	% 60	% 66	% 72	% 64	% 61	% 70.6	9.6
2	62	62	63	65	73	76	76	75	72	67	69	75	70	72	74	74	77	75	78	80	86	87	83	86	73.5	10.7
3	86	89	88	89	95	95	94	95	96	95	93	93	94	93	91	95	92	96	94	94	95	93	95	96	93.0	14.3
4	96	97	97	97	98	97	98	98	98	96	92	96	94	94	96	97	96	95	96	96	96	96	96	96	96.2	15.4
5	97	97	97	98	98	97	99	97	96	97	97	98	98	95	91	90	86	86	90	93	91	96	89	95	94.5	14.2
6	92	92	96	92	96	97	93	92	91	85	85	80	82	86	86	85	80	85	88	88	89	92	89	93	89.0	12.7
7	93	92	93	90	95	97	88	91	88	81	73	77	74	70	78	83	88	90	88	88	94	91	90	92	86.9	12.4
8	90	93	90	95	92	89	93	90	87	87	77	78	76	78	75	75	71	71	75	83	84	86	88	89	83.9	11.7
9	91	91	88	93	93	89	83	73	71	68	62	73	67	79	72	62	53	60	65	76	82	83	80	83	76.9	10.6
10	87	88	91	91	91	91	79	78	65	61	57	68	65	71	68	68	(70)	(71)	(62)	(59)	(68)	69	66	76	73.5	10.7
11	78	84	81	83	85	74	70	76	68	69	73	77	76	82	87	87	82	83	85	87	83	82	80	84	79.7	13.1
12	84	79	88	81	78	81	76	84	74	79	74	78	75	80	83	82	86	90	91	94	94	94	94	94	83.7	14.1
13	96	94	93	92	94	96	95	89	88	85	84	86	79	74	75	80	81	85	85	88	90	91	93	94	87.8	14.0
14	89	91	91	94	92	92	91	89	85	81	80	83	81	79	79	75	77	82	88	89	90	90	87	87	85.7	14.8
15	86	86	85	84	90	90	91	88	83	79	75	79	76	77	78	76	74	80	80	84	88	90	88	88	83.2	14.3
16	85	88	88	91	92	96	95	96	94	97	96	94	96	92	88	89	84	84	83	84	86	85	76	79	89.3	15.0
17	76	77	78	77	74	74	72	74	67	66	66	63	67	67	66	64	62	65	68	69	76	73	73	75	70.5	10.9
18	74	77	83	80	83	76	80	80	78	77	73	78	77	78	75	69	79	94	94	95	95	95	97	97	82.2	12.6
19	96	89	94	93	93	90	90	90	88	85	79	78	70	68	69	67	70	70	72	76	77	78	85	85	81.6	13.0
20	88	89	88	94	95	94	88	85	80	80	81	74	70	75	72	69	70	78	77	82	83	86	86	86	82.2	12.9
21	90	89	94	90	90	89	89	83	79	77	77	78	78	74	72	71	72	76	81	85	87	92	87	91	82.9	13.3
22	90	91	90	90	91	93	90	86	78	78	73	(70)	(60)	(54)	(56)	(55)	(60)	(57)	(59)	(68)	(70)	(66)	(65)	(67)	73.6	11.3
23	(70)	(72)	(74)	(84)	85	85	83	90	86	78	72	64	68	73	78	77	6									

RELATIVE HUMIDITY  
Percentages at exact hours, Greenwich Mean Time

379 VALENTIA OBSERVATORY: North Wall Screen:  $h_t$  (height of thermometer bulbs above ground) = 1.3 metres

JULY, 1937

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	93	94	93	94	94	94	93	91	97	91	90	89	89	89	89	90	89	88	87	89	90	90	92	91.2	16.8	
2	97	97	97	96	94	96	96	96	94	94	96	97	96	96	98	97	96	96	97	97	96	97	97	95	96.1	16.4	
3	94	94	95	89	89	92	90	85	85	80	74	82	80	76	73	72	63	63	66	70	71	67	66	67	79.0	11.3	
4	68	70	73	75	75	73	67	66	72	70	68	70	69	71	69	68	69	75	77	82	82	82	89	91	96	73.8	11.6
5	96	98	98	98	96	96	95	97	98	96	97	95	96	92	93	93	92	92	89	91	88	89	91	90	90	94.1	15.8
6	90	94	94	92	92	92	94	92	93	85	83	77	72	75	78	77	78	73	73	76	77	77	83	83	83.5	13.3	
7	81	74	66	72	78	83	87	84	72	69	71	62	68	68	73	69	73	73	74	77	82	82	83	89	75.3	11.6	
8	88	86	88	88	83	86	81	82	81	82	91	96	96	93	95	97	93	96	97	94	95	93	98	90	90.4	14.3	
9	85	83	83	86	83	85	83	85	84	88	76	74	80	68	75	72	71	77	73	74	77	77	78	78	79.2	12.3	
10	80	80	69	78	72	73	71	74	71	68	71	73	77	80	82	83	81	86	85	93	90	92	95	97	79.6	13.0	
11	94	98	93	93	93	93	93	94	93	93	92	90	89	90	93	94	97	96	93	93	94	95	93	94	96	93.5	16.9
12	96	96	97	96	97	96	96	98	96	95	93	95	96	95	95	92	95	93	92	91	91	95	96	97	94.9	17.8	
13	96	93	93	93	96	96	94	93	94	97	94	91	92	87	88	88	83	89	88	89	89	90	94	94	91.8	17.1	
14	97	98	93	97	93	93	94	92	97	94	91	90	91	96	98	97	93	96	91	92	93	93	94	92	94.0	16.2	
15	95	94	94	96	95	93	96	94	84	85	85	79	83	83	85	80	80	82	84	85	92	91	92	94	88.3	15.1	
16	95	95	96	96	97	97	94	94	88	87	87	88	85	80	78	87	91	90	91	98	98	96	93	98	91.5	15.1	
17	98	96	96	96	94	96	96	92	96	94	94	92	93	92	92	94	90	90	91	90	91	91	89	90	93.2	17.9	
18	91	93	95	96	93	93	93	93	93	93	88	82	81	75	80	79	82	81	82	88	90	93	93	93	88.3	16.6	
19	93	90	93	91	86	85	84	84	75	75	74	72	72	77	71	73	77	74	76	81	86	89	89	92	81.6	14.0	
20	90	90	94	90	90	91	95	93	91	90	86	89	89	87	87	91	93	96	96	96	97	98	96	96	92.0	15.0	
21	96	96	97	95	92	94	93	88	76	77	76	71	70	79	73	86	76	87	80	83	88	84	91	82	84.9	14.6	
22	80	78	72	78	79	77	89	74	78	80	77	78	76	69	75	85	88	90	94	93	88	88	93	92	81.9	13.7	
23	94	95	94	91	94	94	90	81	83	78	73	72	70	74	72	70	74	71	77	77	79	88	91	89	82.9	13.9	
24	89	93	89	86	88	88	90	93	89	88	88	83	80	84	85	84	94	90	84	84	81	83	82	83	86.7	13.3	
25	83	85	87	89	89	90	90	79	87	83	67	67	64	67	67	70	70	73	80	81	82	85	86	80	79.3	13.1	
26	78	86	85	86	86	86	82	84	76	77	79	70	65	70	74	75	74	75	75	81	81	79	85	78.2	13.0		
27	86	87	87	87	86	87	82	84	78	76	75	71	68	66	69	77	63	69	70	72	74	73	71	80	76.8	13.2	
28	77	75	74	76	73	73	74	74	73	72	72	75	77	79	75	72	71	69	73	74	75	79	76	74	74.3	13.7	
29	78	81	84	86	85	84	84	85	86	84	78	83	79	77	73	73	76	77	82	82	78	83	83	81	81.0	15.5	
30	84	88	90	89	91	90	91	81	75	65	66	67	67	65	65	66	65	73	82	83	84	88	88	88	78.4	14.9	
31	85	90	93	91	93	90	89	86	81	81	83	84	81	81	78	76	78	81	86	87	86	88	91	90	85.3	15.0	
Mean	88.6	89.2	88.8	89.2	88.7	88.9	88.6	86.8	84.8	83.7	82.0	80.9	80.3	80.2	80.4	81.6	81.0	82.9	83.1	84.9	86.2	87.0	88.3	88.5	85.2	†14.6	
Vapour Pressure*	mb 14.2	mb 14.2	mb 14.0	mb 14.1	mb 13.9	mb 14.1	mb 14.2	mb 14.4	mb 14.5	mb 14.6	mb 14.6	mb 14.8	mb 14.8	mb 15.0	mb 15.0	mb 15.1	mb 14.9	mb 15.0	mb 14.7	mb 14.6	mb 14.5	mb 14.3	mb 14.3	mb 14.2	mb 14.5		

380 VALENTIA OBSERVATORY: North Wall Screen:  $h_t$  = 1.3 metres

AUGUST, 1937

Day	1	2	3	4	5	6	7	8	9	10	11	Noon	13	14	15	16	17	18	19	20	21	22	23	24	Mean	Vapour Pressure*
1	91	95	93	90	94	93	96	91	83	74	(63)	(67)	72	73	72	75	70	73	75	81	84	84	88	80	81.7	15.5
2	84	90	90	86	88	90	90	89	89	88	82	(77)	75	73	75	73	73	80	81	88	89	89	91	94	84.0	16.9
3	95	95	95	93	93	93	98	91	91	84	73	69	65	61	68	77	75	79	83	81	82	83	85	85	83.3	15.5
4	85	87	87	88	91	93	93	94	93	93	94	96	94	92	94	95	89	87	86	84	86	87	90	88	90.2	16.7
5	88	87	92	92	91	91	89	84	80	80	71	77	70	71	72	74	76	76	76	83	85	86	83	85	81.7	14.8
6	85	86	91	91	95	91	91	92	94	90	91	90	91	86	81	81	84	83	75	67	72	75	70	74	84.6	15.9
7	72	80	82	84	88	87	75	77	66	61	64	67	67	65	66	68	65	69	77	81	80	81	80	83	74.2	12.8
8	86	89	86	89	88	88	85	83	79	76	71	70	71	71	74	81	88	92	94	95	95	93	95	96	84.6	15.2
9	97	96	94	95	96	96	94	95	93	95	90	86	87	84	85	85	83	89	90	91	92	95	94	94	91.5	18.2
10	93	92	95	92	93	96	95	93	90	90	90	88	87	84	88	92	90	89	91	92	94	94	90	91.4	18.5	
11	91	93	91	95	94	92	93	92	90	85	85	80	83	89	87	85	86	87	83	87	89	89	91	92	88.7	19.0
12	92	94	92	93	95	94	95	93	89	87	84	82	79	80	81	82	80	81	86	87	90	91	93	93	88.0	18.7
13	91	94	92	93	93	90	84	84	86	86	90	91	90	94	89	82	78	65	73	75	74	72	71	85.0	15.4	
14	74	73	71	72	77	74	74	69	76	74	64	66	66	70	70	68	76	77	80	82	86	83	85	88	74.4	12.6
15	91	88	89	93	91	93	94	81	84	80	72	80	81	79	78	79	76	80	78	81	88	88	90	90	84.3	14.6
16	91	90	92	92	92	94	97	93	97	92	92	89	88	89	91	87	84	85	85	86	85	85	82	84	89.4	16.5
17	83	88	91	92	90	91	89	90	87	79	80	77	78	79	80	81	81	84	84	84	84	88	84	85	84.3	15.9
18	85	90	92	93	92	92	92	89	89	(74)	(83)	(78)	(73)	(77)	(75)	(78)	(75)	(78)	70	71	72	70	69	74	81.3	15.2
19	73	71	72	74	73	70	73	75	73	75	76	71	73	75	66	68	69	72	75	75	79	73	83	87	73.5	12.7
20	87	85	89	88	86	88	87	91	84	76	71	70	74	72	74	75	76	77	79	83	85	88	89	90	81.8	13.3
21	90	91	90	91	95	93	94	90	82	74	(67)	(67)	(67)	(66)	(77)	(75)	79	78	83	83	83	88	85	89	82.4	14.4
22	89	87	86	87	88	90	92	96	95	95	93	94	94	91	81	83	79	80	81	84	85	85	82	82	87.6	16.0
23	83	87	88	87	87	88	(93)	(81)	(80)	80	76	78	78	80	80	82	81	83	89	87	88	92	90	84.5	14.9	
24	90</																									

RELATIVE HUMIDITY Percentages at exact hours, Greenwich Mean Time

381 VALENTIA OBSERVATORY: North Wall Screen: h<sub>t</sub> (height of thermometer bulbs above ground) = 1.3 metres

SEPTEMBER, 1937

Table with 24 columns for hours (1-24) and Mean, and 24 rows for hours (1-24). Includes Vapour Pressure\* column. Mean values: 85.9, 86.7, 86.8, 87.6, 87.6, 88.0, 88.1, 87.0, 87.1, 84.3, 82.0, 82.1, 81.0, 79.7, 80.3, 79.8, 80.1, 81.7, 82.1, 84.2, 84.0, 84.8, 84.9, 86.0, 84.3, +13.3.

382 VALENTIA OBSERVATORY: North Wall Screen: h<sub>t</sub> = 1.3 metres

OCTOBER, 1937

Table with 24 columns for hours (1-24) and Mean, and 31 rows for hours (1-31). Includes Vapour Pressure\* column. Mean values: 83.8, 83.0, 82.4, 82.4, 82.7, 82.1, 82.1, 82.7, 80.3, 79.1, 76.4, 74.9, 73.8, 73.5, 75.0, 76.3, 78.4, 80.5, 82.3, 81.4, 81.1, 81.5, 82.5, 82.7, 80.0, +10.6.

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

† Mean of the column

‡ Mean of the row



RELATIVE HUMIDITY
Percentages at exact hours, Greenwich Mean Time

383 VALENTIA OBSERVATORY: North Wall Screen: h\_t (height of thermometer bulbs above ground) = 1.3 metres

NOVEMBER, 1937

Table with 25 columns (Hour G.M.T., 1-24, Mean, Vapour Pressure\*) and 30 rows (Day 1-30). Contains relative humidity percentages and vapour pressure values.

384 VALENTIA OBSERVATORY: North Wall Screen: h\_t = 1.3 metres

DECEMBER, 1937

Table with 25 columns (Day, Hour G.M.T., 1-24, Mean, Vapour Pressure\*) and 31 rows (Day 1-31). Contains relative humidity percentages and vapour pressure values.

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

† Mean of the column

‡ Mean of the row

385 VALENTIA OBSERVATORY: North Wall Screen:  $h_t = 1.3$  metres

1937

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	% 83.9	% 84.6	% 84.3	% 84.8	% 85.0	% 84.7	% 84.2	% 83.1	% 81.9	% 80.2	% 78.4	% 77.6	% 76.7	% 76.4	% 76.9	% 77.3	% 78.0	% 79.2	% 80.1	% 81.1	% 81.8	% 82.3	% 82.8	% 83.2	% 81.2
Vapour Pressure in Millibars*	mb 10.1	mb 10.1	mb 10.1	mb 10.1	mb 10.0	mb 10.1	mb 10.2	mb 10.4	mb 10.5	mb 10.6	mb 10.6	mb 10.7	mb 10.7	mb 10.7	mb 10.8	mb 10.7	mb 10.6	mb 10.6	mb 10.4	mb 10.3	mb 10.3	mb 10.2	mb 10.1	mb 10.1	mb 10.4

\* 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 †

386 VALENTIA OBSERVATORY: North Wall Screen:  $h_t = 1.3$  metres

1937

MONTH	Mean	Hour 1	G.M.T. 2	3	4	5	6	7	8	9	10	11	Noon	13	14	15	16	17	18	19	20	21	22	23	24
January	80.7	-0.2	+1.0	+0.2	+0.2	+1.4	+2.3	+1.4	+2.0	+1.6	+1.4	-0.1	-1.2	-1.4	-2.3	-1.3	-0.2	-0.8	+0.3	-0.1	-0.7	-1.0	-1.2	-0.7	-0.5
February	79.7	+1.4	+3.0	+2.9	+3.9	+3.5	+1.9	+3.7	+2.2	+1.1	0.0	-1.5	-2.1	-3.2	-2.9	-3.4	-1.7	-1.8	-2.0	-1.7	-1.8	-0.4	+0.6	+0.2	
March	74.9	+4.5	+4.3	+3.8	+5.6	+4.6	+4.5	+4.7	+3.3	+3.3	+0.2	-2.1	-4.9	-6.0	-7.6	-7.3	-6.8	-5.8	-4.5	-2.3	-0.6	+1.1	+1.6	+3.1	+3.3
April	82.5	+3.1	+4.7	+4.8	+4.4	+4.8	+3.4	+3.2	+1.1	+0.6	-1.8	-2.2	-3.9	-5.9	-4.1	-3.5	-4.5	-4.0	-2.7	-0.5	-0.2	+0.4	+0.3	+0.8	+2.0
May	79.3	+6.3	+6.4	+6.5	+6.9	+6.9	+5.4	+2.4	-1.1	-4.2	-5.8	-6.3	-6.1	-6.8	-6.8	-5.9	-4.5	-4.1	-3.5	-2.0	+1.7	+2.4	+3.4	+4.1	+4.8
June	81.7	+3.7	+4.3	+4.9	+5.3	+6.2	+6.2	+4.2	+3.3	-0.8	-2.6	-5.1	-3.8	-5.5	-5.8	-5.8	-6.2	-5.8	-3.5	-2.8	-0.4	+1.9	+2.5	+2.2	+3.6
July	85.2	+3.3	+4.0	+3.6	+4.0	+3.5	+3.7	+3.4	+1.6	-0.4	-1.5	-3.2	-4.3	-4.9	-5.0	-4.7	-3.6	-4.1	-2.3	-2.1	-0.3	+1.0	+1.9	+3.2	+3.4
August	84.1	+3.5	+4.5	+4.7	+4.9	+5.2	+5.2	+5.4	+3.6	+1.0	-2.2	-5.4	-5.9	-5.7	-6.3	-5.4	-4.7	-4.5	-3.5	-2.8	-0.8	+1.6	+2.1	+2.5	+3.1
September	84.3	+1.3	+2.1	+2.3	+3.1	+3.1	+3.5	+3.7	+2.7	+2.7	0.0	-2.3	-2.2	-3.2	-4.5	-3.8	-4.3	-4.0	-2.4	-1.9	+0.1	0.0	+0.9	+0.9	+2.1
October	80.0	+4.0	+3.2	+2.6	+2.6	+2.8	+2.2	+2.2	+2.8	+0.3	-0.8	-3.6	-5.1	-6.3	-6.5	-5.1	-3.8	-1.7	+0.3	+2.1	+1.2	+0.9	+1.2	+2.2	+2.3
November	80.7	+1.9	+2.1	+1.1	+2.5	+2.4	+2.9	+2.0	+1.8	+2.1	+0.5	-2.1	-3.5	-4.6	-5.0	-3.9	-2.3	-1.4	-1.0	+0.7	+0.7	+0.6	+0.9	+0.4	+1.1
December	81.1	-0.8	+0.5	+0.1	+0.2	+1.0	+0.6	+0.2	+0.2	+1.2	+0.8	+0.7	-0.3	-0.3	-1.1	-2.3	-1.9	+0.3	+0.3	+0.6	+0.1	+0.6	+0.4	-0.1	-0.9
Year	81.2	+2.7	+3.3	+3.1	+3.6	+3.8	+3.5	+3.0	+1.9	+0.7	-1.0	-2.8	-3.6	-4.5	-4.8	-4.3	-3.9	-3.1	-2.0	-1.1	-0.1	+0.7	+1.1	+1.6	+2.1

† See page 23

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 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

1937

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 61.1	mm 68.7	mm 59.8	mm 70.2	mm 81.5	mm 83.2	mm 68.2	mm 95.8	mm 81.4	mm 88.0	mm 64.9	mm 60.1	mm 55.4	mm 59.7	mm 57.0	mm 46.9	mm 61.0	mm 62.5	mm 52.6	mm 57.3	mm 68.7	mm 70.7	mm 78.1	mm 71.9	mm 1624.7
Duration	hr 45.8	hr 48.8	hr 50.8	hr 58.6	hr 57.7	hr 55.5	hr 56.9	hr 57.1	hr 54.9	hr 46.7	hr 38.5	hr 38.2	hr 34.5	hr 34.9	hr 34.9	hr 39.3	hr 38.6	hr 40.3	hr 37.0	hr 35.9	hr 36.5	hr 44.6	hr 48.6	hr 51.5	hr 1086.1

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

NOTES ON RAINFALL

388 VALENTIA OBSERVATORY

1937

Notable falls of the Year

There were no "Noteworthy falls in short periods".

The greatest continuous fall between one exact hour and the next was 10.4 mm between 5h and 6h on September 10th.

Details of the greatest continuous falls are as follows:-

Date	Amount	Duration
Jan. 15th	mm 29	hrs 13.0
" 27th	mm 45	hrs 14.8
July 2nd-3rd	mm 50	hrs 18.0
" 5th	mm 27	hrs 11.0
Sept. 9th	mm 31	hrs 10.0

Wet Periods

There were three "rain spells" (i.e. periods of 15 or more consecutive days on each of which 0.2 mm or more of rain fell) - Jan. 15th to Feb. 4th, Feb. 12th to Mar. 1st and June 28th to July 14th.  
There was one "wet spell" (i.e. a period of 15 or more consecutive days on each of which 1 mm or more of rain fell) - Jan. 17th to Feb. 3rd.

Dry Periods

No "dry spell" occurred during the year, the longest period without rain being the twelve days between Oct. 7th and 18th.

Rate of Rainfall (Jardi Recorder)

The highest instantaneous rate of rainfall was 104 mm/hr at 19h 52m on September 15th.  
The maximum rate exceeded 50 mm/hr on 12 days.

RAINFALL

Amounts in millimetres, for periods of sixty minutes between the exact hours, Greenwich Mean Time  
 389 VALENTIA OBSERVATORY:  $H_r$  (height of receiving surface above M.S.L.) = H (height of station above M.S.L.) +  $h_r$  (height of receiving surface above ground) = 9.1 metres + 0.5 metre

JANUARY, 1937

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	Amount 0-24	Duration 0-24	Max Rate		
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	mm/hr		
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.9	0.7	13	
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.0	1.7	3	
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.9	4.0	7	
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10.0	4.9	21	
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.8	5.9	12	
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.1	2.3	3	
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.3	0.3	5	
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.2	4.3	6	
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7.8	5.8	11	
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.3	0.2	5	
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	20.6	6.6	36	
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9.5	5.1	21	
13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.6	1.2	25	
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	31.5	15.0	16	
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.6	0.4	6	
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	12.9	5.3	12	
18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.3	3.3	17	
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.9	3.4	18	
20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	26.1	10.0	26	
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	14.0	6.0	24	
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9.5	4.9	28	
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	22.8	5.8	(40)	
24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	25.2	8.5	(60)	
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.6	4.5	(15)	
26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	17.9	7.9	(20)	
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	40.2	14.7	13	
28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.4	5.5	1	
29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.4	2.0	...	
30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.3	4.9	9	
31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.1	2.6	6	
Sum	5.7	8.4	8.1	8.8	10.9	16.3	16.0	16.6	11.6	20.0	15.7	15.1	10.1	13.5	12.9	9.3	9.1	9.2	7.5	11.3	17.5	21.3	10.0	10.8	295.7	147.7			
Total Duration	hr 4.8	hr 4.3	hr 4.4	hr 4.8	hr 7.1	hr 9.2	hr 4.9	hr 6.6	hr 7.4	hr 6.6	hr 6.8	hr 5.7	hr 6.3	hr 6.4	hr 5.4	hr 6.4	hr 6.5	hr 6.4	hr 5.3	hr 5.3	hr 6.1	hr 6.3	hr 7.4	hr 7.3	147.7				

† Hour of occurrence of the maximum rate of fall (5 mm/hr or more)

390 VALENTIA OBSERVATORY:  $H_r$  = 9.1 metres + 0.5 metre

FEBRUARY, 1937

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	mm/hr		
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.1	1.9	8	
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	12.1	13.7	10
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.9	3.9	36
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.5	0.2	6
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	0.1	4
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9.9	12.1	4
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.1	0.9	25
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.7	2.2	11
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	0.1	1
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10.2	7.2	12
13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.4	5.8	2
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.1	2.1	4
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	17.1	14.6	7
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7.8	3.5	13
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7.2	9.1	4
18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.7	3.0	3
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.7	4.0	6
20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	0.2	4
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	17.0	9.3	15
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.8	4.1	7
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10.6	6.2	12
24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7.1	8.8	20
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7.2	4.1	32
26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	20.3	10.0	44
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.8	8.1	6
28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10.2	10.9	6
Sum	5.3	7.5	6.7	11.1	13.5	8.1	4.9	8.4	10.4	7.7	7.1	11.3	7.0	5.2	5.8	4.6	6.1	7.7	5.2	5.8	4.4	7.7	14.5	7.7	183.7	146.1			
Total Duration	hr 5.3	hr 6.8	hr 7.6	hr 10.4	hr 11.7	hr 10.0	hr 9.2	hr 7.9	hr 7.0	hr 5.6	hr 5.4	hr 5.1	hr 3.6	hr 4.9	hr 5.9	hr 4.8	hr 4.7	hr 4.8	hr 5.4	hr 3.3	hr 3.7	hr 4.2	hr 5.7	hr 3.1	146.1				
Hour G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24				

† Hour of occurrence of the maximum rate of fall (5 mm/hr or more)

RAINFALL

Amounts in millimetres, for periods of sixty minutes between the exact hours, Greenwich Mean Time
391 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

MARCH, 1937

Table with 25 columns for hourly rainfall (0-1 to 23-24) and 3 columns for Amount (0-24), Duration (0-24), and Max Rate. Rows represent days from 1 to 31, with a summary row for 'Sum' and a 'Total Duration' row.

↑ Hour of occurrence of the maximum rate of fall ( 5 mm/hr or more )

392 VALENTIA OBSERVATORY: H\_r = 9.1 metres + 0.5 metre

APRIL, 1937

Table with 25 columns for hourly rainfall (0-1 to 23-24) and 3 columns for Amount (0-24), Duration (0-24), and Max Rate. Rows represent days from 1 to 30, with a summary row for 'Sum' and a 'Total Duration' row.

↑ Hour of occurrence of the maximum rate of fall ( 5 mm/hr or more )



RAINFALL

Amounts in millimetres, for periods of sixty minutes between the exact hours Greenwich Mean Time
395 VALENTIA OBSERVATORY: H\_T (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, 1937

Table with columns: Hour G.M.T., Day, mm (0-1 to 23-24), Amount O-24, Duration O-24, Max Rate. Rows for days 1-31 and a summary row.

† Hour of occurrence of the maximum rate of fall ( 5 mm/hr or more )

396 VALENTIA OBSERVATORY: H\_T = 9.1 metres + 0.5 metre

AUGUST, 1937

Table with columns: Day, mm (0-1 to 23-24), Amount O-24, Duration O-24, Max Rate. Rows for days 1-31 and a summary row.

† Hour of occurrence of the maximum rate of fall ( 5 mm/hr or more )

RAINFALL

Amounts in millimetres, for periods of sixty minutes between the exact hours, Greenwich Mean Time  
 397 VALENTIA OBSERVATORY:  $H_r$  (height of receiving surface above M.S.L.) =  $H$  (height of station above M.S.L.) +  $h_r$  (height of receiving surface above ground) = 9.1 metres + 0.5 metre

SEPTEMBER, 1937

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	Amount 0-24	Duration 0-24	Max Rate
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	mm/hr
1	1.0	...	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	...	2.6	2.3†	1.8	...	...	...	10.0	5.0	38
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.3	0.4	28
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.6	0.1	34
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7.1	3.0	74
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	0.2	...
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.2	1.5	10
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	0.2	...
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	31.1	10.5	39
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.5	5.0	46
13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.5	4.9	42
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.3	5.9	10
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8.0	3.4	104
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9.1	7.2	22
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.5	3.9	23
18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	13.9	4.0	92
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.2	1.7	11
20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.3	0.4	4
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	15.6	11.6	15
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.0	4.3	9
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.1	3.8	6
24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8.2	7.9	10
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7.9	5.9	22
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.4	10.4	4
28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.1†	7	18
30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	16.6	7.9	48
Sum	10.2	14.9	9.6	6.9	9.7	19.6	13.1	8.1	8.5	7.2	2.3	2.6	3.1	3.5	5.5	3.4	3.3	3.3	3.2	7.3	3.0	4.1	7.1	7.9	167.4	110.9	
Total Duration	hr 6.3	hr 8.1	hr 6.9	hr 7.4	hr 5.4	hr 5.8	hr 7.9	hr 7.7	hr 7.4	hr 5.4	hr 2.0	hr 3.6	hr 3.2	hr 2.5	hr 2.8	hr 2.2	hr 2.5	hr 2.4	hr 1.3	hr 2.5	hr 2.9	hr 3.7	hr 5.2	hr 5.8	110.9		

† Hour of occurrence of the maximum rate of fall ( 5 mm/hr or more )

398 VALENTIA OBSERVATORY:  $H_r$  = 9.1 metres + 0.5 metre

OCTOBER, 1937

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	mm/hr
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	(D)	(D)	(D)	(D)	(D)	(D)	(D)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
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	6.0	1.9	0.6	1.2	1.8	1.5	0.6	3.1	2.6	5.5	1.2	0.1	0.1	0.4	0.4	2.0	1.7	5.1	9.8	5.4	7.4	3.5	0.3	1.4	63.6	41.6	
Total Duration	hr 3.0	hr 1.6	hr 1.0	hr 1.9	hr 1.0	hr 0.8	hr 1.6	hr 1.9	hr 2.0	hr 2.0	hr 0.8	hr 0.1	hr 0.1	hr 0.2	hr 1.2	hr 2.4	hr 2.0	hr 3.5	hr 3.0	hr 4.1	hr 3.1	hr 1.5	hr 0.1	hr 2.7	hr 41.6		
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		

† Hour of occurrence of the maximum rate of fall ( 5 mm/hr or more )





DURATION OF BRIGHT SUNSHINE  
For periods of sixty minutes, between the exact hours of Local Apparent Time

401 VALENTIA OBSERVATORY: H<sub>s</sub> (height of recorder above ground) = 12.8 metres

JANUARY, 1937

Hour L. A. T.	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	Total for Day	Per cent. of Possible	
Day 1	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	%
2	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	2.0	26
3	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...
4	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	1.6	20
5	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...
6	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...
7	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	4.7	59
8	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...
9	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	0.7	9
10	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	0.1	1
11	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...
12	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...
13	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	4.7	58
14	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	2.2	27
15	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...
16	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	2.8	34
17	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...
18	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	4.3	52
19	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	1.0	12
20	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...
21	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	0.1	1
22	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	0.3	4
23	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	0.6	7
24	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	1.8	21
25	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	1.4	16
26	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	1.4	16
27	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...
28	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...
29	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	...	...
30	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	1.2	13
31	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	1.2	13
Sum	---	---	---	---	...	...	3.4	4.8	5.8	6.1	5.4	5.0	1.6	...	---	---	---	---	32.1		
Mean	---	---	---	---	...	...	.11	.15	.19	.20	.17	.16	.05	...	---	---	---	---	1.04	13	

402 VALENTIA OBSERVATORY: H<sub>s</sub> = 12.8 metres

FEBRUARY, 1937

Day	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	%
1	---	---	---	---	...	...	1.0	.4	.9	1.0	1.0	1.0	.5	...	---	---	---	---	---	5.8	64
2	---	---	---	---	...	...	...	...	...	...	...	...	...	...	---	---	---	---	---	...	...
3	---	---	---	---	...	...	...	...	...	...	...	...	...	...	---	---	---	---	---	0.6	7
4	---	---	---	---	...	...	.1	.8	.9	.7	1.0	1.0	.9	.1	...	---	---	---	---	5.5	60
5	---	---	---	---	...	...	.1	.4	.1	.7	.6	1.0	.8	...	---	---	---	---	---	3.7	40
6	---	---	---	---	...	...	.1	...	.3	.9	1.0	.9	.4	...	---	---	---	---	---	3.6	39
7	---	---	---	---	...	...	...	...	...	...	...	...	...	...	---	---	---	---	---	...	...
8	---	---	---	---	...	...	.3	.6	1.0	.8	.9	.6	.6	...	---	---	---	---	---	4.8	51
9	---	---	---	---	...	...	.3	.2	.5	.4	.4	.4	.7	.4	...	---	---	---	---	3.3	35
10	---	---	---	---	...	...	...	...	.1	.2	...	...	...	...	---	---	---	---	---	0.3	3
11	---	---	---	---	...	...	...	...	.1	...	...	...	.1	...	---	---	---	---	---	0.2	2
12	---	---	---	---	...	...	...	...	...	.3	.5	.6	.3	...	---	---	---	---	---	1.7	18
13	---	---	---	---	...	...	...	...	...	...	...	...	...	...	---	---	---	---	---	...	...
14	---	---	---	---	...	...	...	...	...	...	...	...	...	...	---	---	---	---	---	0.1	1
15	---	---	---	---	...	...	...	...	...	...	...	...	.2	.1	...	---	---	---	---	0.3	3
16	---	---	---	---	...	...	...	.1	.6	.6	.6	.8	.1	...	---	---	---	---	---	2.8	28
17	---	---	---	---	...	...	...	...	...	...	...	...	...	...	---	---	---	---	---	...	...
18	---	---	---	---	...	...	...	...	...	...	...	...	...	...	---	---	---	---	---	...	...
19	---	---	---	---	...	...	...	...	.2	.6	.6	...	...	...	---	---	---	---	---	1.4	14
20	---	---	---	---	...	...	...	...	...	...	.2	.5	...	...	---	---	---	---	---	0.7	7
21	---	---	---	---	...	...	...	...	...	...	...	...	...	...	---	---	---	---	---	...	...
22	---	---	---	---	...	...	.8	.9	.8	.9	1.0	.8	.6	.6	...	---	---	---	---	6.4	62
23	---	---	---	---	...	...	.7	.3	...	...	...	...	...	...	---	---	---	---	---	1.0	10
24	---	---	---	---	...	...	...	...	.1	...	...	...	.4	...	---	---	---	---	---	0.5	5
25	---	---	---	---	...	...	...	.1	.2	.1	.2	.2	.9	.6	.1	...	---	---	---	2.4	23
26	---	---	---	---	...	...	...	.1	...	...	...	...	...	...	---	---	---	---	---	0.1	1
27	---	---	---	---	...	...	.3	.3	.2	.4	.4	.2	.2	...	---	---	---	---	---	2.0	19
28	---	---	---	---	...	...	.4	.5	.2	.4	.2	.6	.5	.1	...	---	---	---	---	2.9	27
Sum	---	---	---	...	...	2.3	4.4	5.1	7.2	8.5	8.2	9.1	5.1	0.2	...	---	---	---	---	50.1	
Mean	---	---	---	...	...	.08	.16	.18	.26	.30	.29	.33	.18	.01	...	---	---	---	---	1.79	18
Hour L. A. T.	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	Total for Day	Percent. of Possible	

DURATION OF BRIGHT SUNSHINE  
For periods of sixty minutes, between the exact hours of Local Apparent Time

403 VALENTIA OBSERVATORY:  $H_s$  (height of recorder above ground) = 12.8 metres

MARCH, 1937

Hour L. A. T.	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	Total for Day	Per cent. of Possible
Day	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	%
1	---	---	---	...	-1	.8	.9	1.0	.7	.8	.9	.8	.1	...	...	---	---	---	5.9	55
2	---	---	---	...	.4	1.0	1.0	1.0	1.0	1.0	.3	.1	.6	...	...	---	---	---	7.2	66
3	---	---	---	...	.4	1.0	1.0	1.0	1.0	.9	1.0	1.0	1.0	.9	...	---	---	---	9.2	84
4	---	---	---	...	.4	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.8	.7	...	---	---	---	8.9	81
5	---	---	---	...	.3	.8	.6	1.0	.9	.1	...	...	.1	...	...	---	---	---	3.8	34
6	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	...	...
7	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	...	...
8	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	2.3	20
9	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	3.6	32
10	---	---	---	...	.4	.5	.8	1.0	1.0	.7	...	...	...	...	...	---	---	---	4.4	39
11	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	3.3	29
12	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	...	...
13	---	---	---	...	.7	1.0	1.0	1.0	1.0	1.0	.9	.7	.5	...	...	---	---	---	7.8	67
14	---	---	---	...	.5	.3	1.0	1.0	1.0	1.0	1.0	1.0	.9	.7	...	---	---	---	8.4	72
15	---	---	---	...	.5	.1	1.0	1.0	1.0	.9	1.0	.8	.3	.4	...	---	---	---	7.0	60
16	---	---	---	...	...	...	...	.1	1.0	.4	.1	.1	.1	.1	...	---	---	---	1.9	16
17	---	---	---	...	...	...	...	.3	...	.1	.3	.2	.8	.7	...	---	---	---	2.4	20
18	---	---	---	...	.1	.5	.9	.9	.3	...	.2	.2	...	...	...	---	---	---	3.1	26
19	---	---	---	...	...	...	...	.4	...	.3	...	...	...	...	---	---	---	---	0.9	8
20	---	---	---	...	...	...	...	.1	.5	...	...	...	.6	.3	...	---	---	---	1.6	13
21	---	---	...	...	...	.3	.1	...	...	...	...	.2	...	...	.2	...	---	---	0.8	7
22	---	---	...	...	...	.8	.5	.6	1.0	.9	1.0	.7	.7	.5	.3	...	---	---	7.0	57
23	---	---	...	...	...	.1	.1	...	...	.2	...	.9	.9	1.0	.6	...	---	---	3.9	32
24	---	---	...	...	...	.1	...	.3	...	.8	.1	.4	.5	.1	...	...	---	---	2.3	19
25	---	---	...	...	...	...	...	...	...	...	...	...	.1	.2	.2	...	---	---	0.5	4
26	---	---	...	.3	1.0	1.0	1.0	1.0	1.0	1.0	.8	1.0	.9	.9	.6	...	---	---	10.5	84
27	---	---	...	.4	1.0	1.0	1.0	1.0	1.0	1.0	.9	.6	1.0	.9	.4	...	---	---	10.2	81
28	---	---	...	.4	1.0	1.0	1.0	1.0	.8	1.0	.1	.7	1.0	.3	...	---	---	---	8.3	66
29	---	---	...	.1	1.0	1.0	1.0	.9	.6	1.0	1.0	.9	.2	...	...	---	---	---	7.7	61
30	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	...	...
31	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	...	...
Sum	---	---	...	1.2	7.9	12.7	16.9	17.2	16.4	14.5	12.0	12.3	10.9	8.6	2.3	...	---	---	132.9	
Mean	---	---	...	.04	.25	.41	.55	.55	.53	.47	.39	.40	.35	.28	.07	...	---	---	4.29	36

404 VALENTIA OBSERVATORY:  $H_s$  = 12.8 metres

APRIL, 1937

Day	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	%	
1	---	---	...	...	.2	.2	...	.1	...	.4	.1	...	.1	...	.4	...	...	---	---	1.5	12
2	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	...	...
3	---	---	...	...	...	...	...	...	...	.3	.1	.5	.9	.2	...	...	---	---	---	2.2	17
4	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	...	...
5	---	---	...	...	...	...	.3	...	.2	1.0	1.0	.5	.1	.8	1.0	.2	...	---	---	5.1	39
6	---	---	...	...	...	...	...	...	.1	...	...	...	...	...	...	---	---	---	---	0.1	1
7	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	...	...
8	---	---	...	...	...	...	...	...	...	.5	.2	...	...	...	...	---	---	---	---	0.7	5
9	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	...	...
10	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	8.1	60
11	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	1.1	8
12	---	---	...	1.0	1.0	1.0	1.0	1.0	.9	1.0	.3	.7	.6	.2	.3	...	---	---	---	9.0	66
13	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	0.1	1
14	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	2.7	19
15	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	0.5	4
16	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	6.7	48
17	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	5.3	38
18	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	4.3	31
19	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	1.0	7
20	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	5.8	41
21	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	...	...
22	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	...	...
23	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	1.2	8
24	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	9.9	69
25	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	0.2	1
26	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	...	...
27	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	4.4	30
28	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	...	...
29	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	10.2	70
30	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	10.0	68
31	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	10.3	70
Sum	---	...	1.5	4.8	6.2	6.8	6.8	7.9	10.3	9.9	9.7	10.0	9.7	8.7	7.4	0.7	...	---	100.4		
Mean	---	...	.05	.16	.21	.23	.23	.26	.34	.33	.32	.33	.32	.29	.25	.02	...	---	3.35	24	
Hour L. A. T.	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	Total for Day	Per cent. of Possible	

DURATION OF BRIGHT SUNSHINE  
For periods of sixty minutes, between the exact hours of Local Apparent Time

405 VALENTIA OBSERVATORY: H<sub>s</sub> (height of recorder above ground) = 12.8 metres

MAY, 1937

Hour L. A. T.	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	Total for Day	Per cent. of Possible	
Day	hr <sup>9</sup>	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	%	
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	1.0	1.0	13.2	89
2	---	...	...	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	8.7	59
3	---	...	...	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.9	19
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	1.0	1.0	8.8	59
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	1.0	1.0	7.7	51
6	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.3	2
8	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.7	24
10	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11.9	78
11	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	14.6	95
12	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	12.2	79
13	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.1	7
14	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	14.1	91
15	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	13.8	89
16	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10.0	64
17	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.6	23
18	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7.0	45
19	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.4	34
20	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8.6	54
21	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11.0	69
22	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.1	32
23	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11.3	71
24	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.1	26
25	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8.0	50
26	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.0	37
27	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.5	3
28	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.3	27
29	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11.3	70
30	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10.6	65
31	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.4	9
Sum	...	1.5	11.8	19.5	19.5	18.5	16.2	18.5	17.8	16.7	17.5	15.4	14.2	14.2	12.0	7.3	0.6	...	221.2		
Mean	...	.05	.38	.63	.63	.60	.52	.60	.57	.54	.56	.50	.46	.46	.39	.24	.02	...	7.14	46	

406 VALENTIA OBSERVATORY: H<sub>s</sub> = 12.8 metres

JUNE, 1937

Day	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	%	
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.6	34
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.5	3
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.1	31
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.9	11
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9.2	56
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	12.0	73
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	15.8	96
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.8	17
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.3	8
13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10.3	62
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.5	15
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8.1	49
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.1	7
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	13.3	80
18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.2	19
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7.8	47
20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7.1	43
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.8	35
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7.7	46
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.0	24
24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	12.2	73
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8.6	52
26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.8	35
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.6	28
28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.2	19
29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.0	36
30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sum	...	3.9	6.3	6.4	11.2	12.2	10.1	12.0	12.2	14.2	13.3	14.3	15.0	13.2	9.4	8.0	3.8	...	165.5			
Mean	...	.13	.21	.21	.37	.41	.34	.40	.41	.47	.44	.48	.50	.44	.31	.27	.13	...	5.52	33		
L. A. T.	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	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 VALENTIA OBSERVATORY: H<sub>g</sub> (height of recorder above ground) = 12.8 metres

JULY, 1937

Hour L. A. T.	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	Total for Day	Per cent. of Possible	
Day	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	%	
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	...	...	0.9	1.0	1.0	0.6	1.0	0.6	0.7	0.7	1.0	0.5	0.2	1.0	0.9	0.5	...	...	...	...	
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6	...	...	...	...	...	...	...	...	0.3	0.2	...	0.1	...	0.1	...	...	...	...	...	...	
7	...	...	...	...	...	0.1	0.1	...	0.1	0.8	0.3	0.6	0.3	0.5	0.1	0.3	0.8	...	...	...	
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
9	...	...	...	...	...	0.4	0.2	0.4	0.5	0.4	0.2	0.1	0.5	...	...	...	...	...	...	...	
10	...	...	...	...	0.2	...	...	0.1	...	0.1	...	...	...	...	...	...	...	...	...	...	
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
13	...	...	...	...	...	...	...	...	...	0.1	...	...	...	0.2	...	...	...	...	...	...	
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	1.0	0.3	...	...	...	
15	...	0.1	...	0.2	0.8	...	0.6	0.6	0.8	...	1.0	1.0	1.0	1.0	1.0	0.7	0.5	...	...	...	
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
17	...	...	...	...	...	...	...	...	...	...	...	...	...	0.4	...	...	...	...	...	...	
18	...	...	...	...	...	...	0.1	0.3	0.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.3	...	...	...	
19	...	0.1	0.7	0.5	1.0	1.0	0.4	0.6	...	0.7	1.0	1.0	0.7	0.1	0.2	0.5	...	...	...	...	
20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
21	...	...	...	...	...	0.2	0.3	...	0.6	0.5	0.8	0.3	0.2	0.1	0.7	0.1	...	...	...	...	
22	...	...	...	0.1	...	...	0.1	0.3	0.2	...	...	...	...	...	...	...	...	...	...	...	
23	...	...	...	0.5	0.1	0.4	0.7	0.5	0.6	1.0	...	0.7	0.9	0.5	...	...	...	...	...	...	
24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
25	...	...	...	...	...	...	0.1	0.7	1.0	0.8	...	0.6	1.0	1.0	0.3	...	...	...	...	...	
26	...	...	...	...	...	...	...	0.1	...	0.1	0.1	...	...	...	0.1	0.1	...	...	...	...	
27	...	...	...	...	...	...	0.1	0.7	0.8	0.9	0.7	0.5	0.1	0.1	...	...	...	...	...	...	
28	...	...	0.2	...	...	...	...	...	...	...	...	...	...	0.2	...	...	...	...	...	...	
29	...	...	...	...	...	...	0.2	0.1	...	0.1	0.3	0.2	...	0.1	0.2	0.1	...	...	...	...	
30	...	0.1	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	0.7	...	...	...	...	
31	...	...	0.8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.8	...	...	...	...	...	
Sum	...	0.3	3.6	4.3	5.1	4.7	5.9	6.1	7.7	8.9	8.6	9.0	9.2	8.5	6.8	5.4	2.4	...	96.5		
Mean	...	0.01	0.12	0.14	0.16	0.15	0.19	0.20	0.25	0.29	0.28	0.29	0.30	0.27	0.22	0.17	0.08	...	3.11	19	

408 VALENTIA OBSERVATORY: H<sub>g</sub> = 12.8 metres

AUGUST, 1937

Day	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	%		
1	...	...	0.2	0.8	1.0	1.0	0.8	0.9	0.7	0.3	0.2	0.1	0.9	0.4	0.6	0.8	...	...	...	...	8.7	56	
2	...	...	...	0.1	...	...	0.5	0.6	0.9	0.9	1.0	1.0	0.9	1.0	1.0	1.0	...	...	...	...	8.9	58	
3	...	...	...	...	...	...	0.4	0.4	0.7	0.9	0.9	0.6	0.1	...	...	...	...	...	...	...	4.0	26	
4	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	...	0.2	0.1	...	...	...	0.4	3	
5	...	0.2	1.0	1.0	1.0	1.0	0.9	0.7	0.6	0.6	0.1	...	...	...	...	...	...	...	...	7.1	47		
6	...	...	...	...	...	...	...	...	...	0.5	0.8	0.1	0.4	...	0.5	0.8	...	...	...	...	3.1	20	
7	...	...	0.4	0.4	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.6	1.0	1.0	0.6	...	...	...	...	...	11.0	73	
8	...	...	...	...	...	0.1	0.2	0.3	0.1	...	...	...	...	...	...	...	...	...	...	...	0.7	5	
9	...	...	...	...	...	...	0.1	0.1	0.4	...	0.1	0.1	0.1	0.1	...	...	...	...	...	...	0.9	6	
10	...	...	...	...	0.4	0.1	...	0.1	0.1	...	0.1	...	...	0.6	...	...	...	...	...	...	1.4	9	
11	...	...	...	...	...	0.7	0.1	0.3	0.3	...	0.1	0.8	0.3	...	0.5	0.6	...	...	...	...	3.7	25	
12	...	...	...	...	0.1	0.7	0.6	0.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.6	...	...	...	...	9.2	62	
13	...	...	...	0.4	...	...	...	...	...	...	...	...	...	...	0.7	0.4	...	...	...	...	1.5	10	
14	...	...	0.6	0.8	1.0	0.4	0.8	1.0	0.2	0.3	...	0.2	...	0.2	...	...	...	...	...	...	5.7	39	
15	...	...	...	0.1	1.0	0.6	0.4	0.2	...	0.6	0.9	0.6	0.4	1.0	0.1	...	...	...	...	...	5.9	40	
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
17	...	...	...	0.1	...	0.1	0.1	0.9	0.7	0.2	0.6	0.5	...	...	0.1	...	...	...	...	...	3.2	22	
18	...	...	...	...	...	0.1	0.2	...	...	0.1	0.2	0.5	0.1	0.9	0.8	0.5	...	...	...	...	3.4	24	
19	...	...	...	...	0.1	...	0.1	0.8	0.4	0.2	1.0	1.0	0.5	0.6	0.6	0.4	...	...	...	...	5.7	40	
20	...	...	0.6	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.4	...	...	...	...	13.0	91	
21	...	...	0.6	1.0	1.0	1.0	1.0	0.9	1.0	1.0	1.0	1.0	0.7	0.2	...	...	...	...	...	...	10.4	73	
22	...	...	...	...	...	...	...	...	...	...	0.2	0.5	0.7	0.6	0.3	0.1	...	...	...	...	2.4	17	
23	...	...	0.4	0.9	1.0	1.0	1.0	1.0	0.8	1.0	1.0	1.0	0.6	0.6	0.2	0.1	...	...	...	...	10.6	75	
24	...	...	0.1	...	...	...	0.1	0.4	1.0	1.0	0.7	0.3	0.6	...	...	...	...	...	...	...	4.2	30	
25	...	...	0.1	0.3	0.7	0.2	0.8	1.0	0.9	1.0	1.0	1.0	1.0	1.0	1.0	0.5	...	...	...	...	10.5	75	
26	...	...	0.4	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9	0.6	...	...	...	...	...	11.9	85	
27	...	...	0.3	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.3	...	...	...	...	12.6	91	
28	...	...	...	...	0.1	0.1	0.3	0.2	0.1	...	...	...	...	...	...	...	...	...	...	...	...	0.8	6
29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
30	...	...	...	0.3	0.1	0.9	0.7	0.4	0.3	0.1	...	...	...	...	...	...	...	...	...	...	...	2.8	20
31	...	...	...	0.3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.3	2
Sum	...	0.2	4.6	9.5	11.6	11.9	13.1	14.7	13.8	13.7	14.9	13.9	12.3	12.2	10.8	6.7	0.1	...	...	...	164.0		
Mean	...	0.01	0.15	0.31	0.37	0.38	0.42	0.47	0.45	0.44	0.48	0.45	0.40	0.39	0.35	0.22	0.00	...	...	...	5.29	36	
Hour L. A. T.	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	Total for Day	Per cent. of Possible			

DURATION OF BRIGHT SUNSHINE  
For periods of sixty minutes, between the exact hours of Local Apparent Time

409 VALENTIA OBSERVATORY: H<sub>s</sub> (height of recorder above ground) = 12.8 metres

SEPTEMBER, 1937

Hour L. A. T.	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	Total for Day	Per cent. of Possible	
Day 1	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr
1	---	---	...	...	.9	.4	-1	-2	.3	...	...	.1	.1	...	...	...	---	---	2-1	15	
2	---	---	...	.5	.6	.6	1-0	1-0	.8	.9	.9	.9	1-0	.7	.6	...	---	---	9-5	70	
3	---	---	...	...	.7	.7	.8	1-0	.8	.7	.7	1-0	.1	.1	...	...	---	---	6-6	49	
4	---	---	...	...	.1	...	.4	...	...	...	...	...	...	...	...	...	---	---	0-5	4	
5	---	---	...	...	...	...	...	...	...	...	...	.2	...	...	...	...	---	---	0-2	1	
6	---	---	...	...	...	.4	...	...	...	...	...	...	...	.2	...	...	---	---	0-6	5	
7	---	---	...	...	...	...	...	...	...	...	...	...	...	...	.1	...	---	---	0-1	1	
8	---	---	...	.6	1-0	1-0	1-0	.8	1-0	1-0	1-0	1-0	1-0	.3	.1	...	---	---	9-8	75	
9	---	---	...	...	...	...	...	...	.3	.8	.1	.2	.1	.5	.2	...	---	---	2-2	17	
10	---	---	...	...	...	...	...	...	.1	.6	1-0	.4	.3	.8	.4	...	---	---	3-6	28	
11	---	---	...	.5	1-0	1-0	.7	-1	.8	.4	1-0	.9	1-0	.8	.9	...	---	---	9-1	70	
12	---	---	...	...	...	...	.3	.5	.1	...	...	.1	...	.1	...	...	---	---	1-1	9	
13	---	---	...	...	.1	.1	.3	.8	.8	.2	.9	1-0	1-0	1-0	.7	...	---	---	6-9	54	
14	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	...	...	
15	---	---	...	...	.2	.3	.7	.6	.3	.5	.9	.9	.3	.1	...	...	---	---	4-8	38	
16	---	---	...	...	...	...	...	...	...	.2	.5	.8	.1	.9	.6	...	---	---	3-1	25	
17	---	---	...	...	...	...	.1	...	.1	.1	.5	.2	.6	.1	...	---	---	1-8	14		
18	---	---	...	...	...	.3	.9	1-0	.5	.2	1-0	.5	.2	...	...	---	---	4-6	37		
19	---	---	...	...	.8	1-0	1-0	.9	.8	.8	1-0	.9	.7	.6	.2	...	---	---	8-7	70	
20	---	---	...	.1	.3	.1	.1	.3	.3	.2	.4	.2	1-0	.9	...	...	---	---	3-9	32	
21	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	...	...	
22	---	---	...	...	.4	1-0	1-0	1-0	.8	.8	...	...	...	...	.1	...	---	---	5-1	42	
23	---	---	...	...	.1	.7	.5	...	.3	...	...	...	...	...	...	...	---	---	1-6	13	
24	---	---	...	...	...	...	...	...	...	...	...	.4	...	.9	.3	...	---	---	1-6	13	
25	---	---	...	...	1-0	1-0	.9	.7	.1	.8	.1	.6	.5	...	...	---	---	5-7	47		
26	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	---	---	...	...	...	
27	---	---	...	...	...	...	...	...	...	...	...	...	.7	1-0	.4	...	---	---	2-1	18	
28	---	---	...	...	.3	1-0	1-0	1-0	.7	.3	.4	.2	...	...	...	---	---	4-9	41		
29	---	---	...	...	.1	...	...	...	...	...	...	.1	...	...	...	---	---	0-2	2		
30	---	---	...	...	...	...	...	...	...	...	...	...	.2	.2	...	---	---	0-4	3		
Sum	---	---	...	1-8	7-5	10-0	10-4	9-9	8-9	8-5	10-0	10-9	8-5	9-7	4-7	...	---	---	100-8		
Mean	---	---	...	.06	.25	.33	.35	.33	.30	.28	.33	.36	.28	.32	.16	...	---	---	3-36	28	

410 VALENTIA OBSERVATORY: H<sub>s</sub> = 12.8 metres

OCTOBER, 1937

Day	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	%	
1	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	---	...	...
2	---	---	---	...	.6	.9	1-0	1-0	1-0	.4	.1	.6	...	...	...	---	---	---	---	---	5-6	49
3	---	---	---	...	.6	1-0	1-0	1-0	1-0	1-0	1-0	1-0	1-0	.9	...	---	---	---	---	---	9-5	83
4	---	---	---	...	.6	.9	.7	1-0	1-0	1-0	1-0	1-0	1-0	1-0	...	---	---	---	---	---	9-2	81
5	---	---	---	...	.6	1-0	1-0	1-0	.6	...	.2	...	.3	.5	...	---	---	---	---	---	5-2	46
6	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	---	...	...
7	---	---	---	...	.4	.9	1-0	.7	.5	1-0	1-0	.9	.1	.4	...	---	---	---	---	---	6-9	61
8	---	---	---	...	...	...	...	...	.2	1-0	.7	.2	...	...	...	---	---	---	---	---	2-1	19
9	---	---	---	...	...	.4	...	...	...	...	...	...	...	...	...	---	---	---	---	---	0-4	4
10	---	---	---	...	.1	.4	.8	1-0	1-0	.9	.9	.9	1-0	.3	...	---	---	---	---	---	7-3	66
11	---	---	---	...	.4	1-0	1-0	1-0	1-0	1-0	1-0	1-0	.7	...	...	---	---	---	---	---	8-1	74
12	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	---	...	...
13	---	---	---	...	...	...	.4	.4	.4	.7	.1	...	...	...	...	---	---	---	---	---	2-0	18
14	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	---	...	...
15	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	---	...	...
16	---	---	---	...	...	...	...	...	...	.9	.5	...	...	...	...	---	---	---	---	---	1-4	13
17	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	---	...	...
18	---	---	---	...	...	...	...	...	.2	.5	1-0	.9	.9	.3	...	---	---	---	---	---	3-8	36
19	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	---	...	...
20	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	---	...	...
21	---	---	---	...	...	...	...	.2	.1	...	.1	.3	.3	...	...	---	---	---	---	---	1-0	10
22	---	---	---	...	...	...	...	...	.7	.9	.8	...	...	...	...	---	---	---	---	---	2-4	23
23	---	---	---	...	...	.6	.8	.8	.6	.2	.6	.7	.4	...	...	---	---	---	---	---	4-7	46
24	---	---	---	...	...	...	...	...	...	...	.3	.1	.1	...	...	---	---	---	---	---	0-5	5
25	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	---	...	...
26	---	---	---	...	...	.2	1-0	1-0	.8	.5	.9	.8	.2	...	---	---	---	---	---	---	4-4	44
27	---	---	---	...	...	1-0	1-0	1-0	1-0	1-0	1-0	1-0	1-0	.7	...	---	---	---	---	---	8-7	87
28	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	---	...	...
29	---	---	---	...	...	.1	.8	.4	1-0	.8	.3	.3	.3	...	---	---	---	---	---	---	4-0	41
30	---	---	---	...	...	.6	.7	.4	1-0	1-0	1-0	1-0	.2	...	---	---	---	---	---	---	5-9	61
31	---	---	---	...	...	...	.2	.2	...	.6	.6	...	...	...	---	---	---	---	---	---	1-6	17
Sum	---	---	---	...	3-3	8-8	10-6	11-3	12-4	13-9	13-0	10-7	6-9	3-8	...	---	---	---	---	---	94-7	
Mean	---	---	---	...	.11	.28	.34	.36	.40	.45	.42	.35	.22	.12	...	---	---	---	---	---	3-05	29
Hour L. A. T.	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	Total for Day	Per cent. of Possible		

DURATION OF BRIGHT SUNSHINE  
For periods of sixty minutes, between the exact hours of Local Apparent Time

411 VALENTIA OBSERVATORY: H<sub>s</sub> (height of recorder above ground) = 12.8 metres

NOVEMBER, 1937

Hour L. A. T.	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	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	---	---	---	---	...	.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.2	---	---	---	---	---	8.1	85
2	---	---	---	---	...	.8	.5	...	...	.4	1.0	1.0	.3	---	---	---	---	---	---	4.0	42
3	---	---	---	---	...	...	...	...	...	...	...	...	...	...	...	---	---	---	---	...	...
4	---	---	---	---	...	...	...	...	.1	.3	.8	.4	.1	---	...	---	---	---	---	1.7	18
5	---	---	---	---	...	.6	1.0	1.0	1.0	1.0	.3	.6	.8	.2	---	---	---	---	---	6.5	69
6	---	---	---	---	...	...	...	.5	.1	.1	...	...	...	...	---	---	---	---	---	0.7	8
7	---	---	---	---	...	...	...	...	...	...	...	...	...	...	---	---	---	---	---	...	...
8	---	---	---	---	...	...	...	...	...	...	.2	...	...	...	---	---	---	---	---	0.2	2
9	---	---	---	---	...	.6	1.0	1.0	.9	.9	1.0	1.0	.9	---	---	---	---	---	---	7.3	80
10	---	---	---	---	...	.6	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.1	---	---	---	---	---	7.7	85
11	---	---	---	---	...	.6	.7	.6	...	.3	...	...	...	...	---	---	---	---	---	2.2	24
12	---	---	---	---	...	.1	.4	.9	.3	...	.4	...	...	...	---	---	---	---	---	2.1	23
13	---	---	---	---	...	.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	...	---	---	---	---	---	7.5	84
14	---	---	---	---	...	.5	1.0	1.0	1.0	1.0	1.0	.8	.8	---	---	---	---	---	---	6.9	78
15	---	---	---	---	...	.4	1.0	1.0	1.0	1.0	1.0	1.0	1.0	...	---	---	---	---	---	7.4	84
16	---	---	---	---	...	...	...	...	...	...	...	...	...	...	---	---	---	---	---	...	...
17	---	---	---	---	...	...	...	...	...	...	...	...	...	...	---	---	---	---	---	...	...
18	---	---	---	---	...	...	...	...	...	...	.4	.1	...	...	---	---	---	---	---	0.5	6
19	---	---	---	---	...	...	...	.2	.5	.6	.6	.7	.4	...	---	---	---	---	---	3.0	35
20	---	---	---	---	...	.3	1.0	1.0	1.0	1.0	1.0	.9	...	...	---	---	---	---	---	6.2	73
21	---	---	---	---	...	.2	1.0	1.0	1.0	1.0	1.0	.8	.5	...	---	---	---	---	---	6.5	77
22	---	---	---	---	...	...	.8	1.0	1.0	.5	.4	...	...	...	---	---	---	---	---	3.7	44
23	---	---	---	---	...	...	...	...	...	...	.2	...	...	...	---	---	---	---	---	0.2	2
24	---	---	---	---	...	.1	.9	1.0	.3	1.0	1.0	1.0	.4	...	---	---	---	---	---	5.7	68
25	---	---	---	---	...	.1	1.0	1.0	1.0	1.0	1.0	1.0	.6	...	---	---	---	---	---	6.7	82
26	---	---	---	---	...	...	...	...	...	...	...	...	...	...	---	---	---	---	---	...	...
27	---	---	---	---	...	...	.4	.7	...	...	...	...	...	...	---	---	---	---	---	1.1	13
28	---	---	---	---	...	...	...	...	...	...	...	...	...	...	---	---	---	---	---	...	...
29	---	---	---	---	...	...	...	...	...	...	...	...	...	...	---	---	---	---	---	...	...
30	---	---	---	---	...	...	...	...	.2	.1	...	...	...	---	---	---	---	---	---	0.3	4
Sum	---	---	---	---	...	6.3	13.7	14.9	12.4	13.2	14.3	12.1	8.8	0.5	---	---	---	---	---	96.2	
Mean	---	---	---	---	...	.21	.46	.50	.41	.44	.48	.40	.29	.02	---	---	---	---	---	3.21	36

412 VALENTIA OBSERVATORY: H<sub>s</sub> = 12.8 metres

DECEMBER, 1937

Day	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	%		
1	---	---	---	---	---	...	.4	.5	1.0	.3	...	...	...	---	---	---	---	---	---	---	2.2	27	
2	---	---	---	---	---	...	.3	.6	.2	.1	.2	.9	.3	---	---	---	---	---	---	---	---	2.6	32
3	---	---	---	---	---	...	.3	.5	.5	.2	.6	...	...	---	---	---	---	---	---	---	---	2.1	26
4	---	---	---	---	---	...	...	.2	.2	.1	.4	.2	...	---	---	---	---	---	---	---	---	1.1	14
5	---	---	---	---	---	...	.1	.6	.6	.9	.6	.2	.1	---	---	---	---	---	---	---	---	3.1	39
6	---	---	---	---	---	...	.7	.7	.2	.4	...	...	...	---	---	---	---	---	---	---	---	2.0	25
7	---	---	---	---	---	...	...	.2	.1	.1	.4	.4	.1	---	---	---	---	---	---	---	---	1.1	14
8	---	---	---	---	---	...	...	.2	.8	.6	.6	...	...	---	---	---	---	---	---	---	---	2.2	28
9	---	---	---	---	---	...	.9	1.0	1.0	1.0	1.0	1.0	.2	---	---	---	---	---	---	---	---	6.1	78
10	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	---	---	...	...
11	---	---	---	---	---	...	...	.7	.4	.4	.3	.4	...	---	---	---	---	---	---	---	---	2.2	28
12	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	---	---	...	...
13	---	---	---	---	---	...	.1	.3	.2	.2	...	...	...	---	---	---	---	---	---	---	---	0.5	6
14	---	---	---	---	---	...	.6	.3	.2	.6	.5	.1	...	---	---	---	---	---	---	---	---	2.3	30
15	---	---	---	---	---	...	.5	.6	.1	.1	...	...	...	---	---	---	---	---	---	---	---	1.3	17
16	---	---	---	---	---	...	.7	1.0	1.0	1.0	1.0	.6	.3	---	---	---	---	---	---	---	---	5.6	73
17	---	---	---	---	---	...	.8	1.0	.9	.1	...	...	...	---	---	---	---	---	---	---	---	2.8	36
18	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	---	---	...	...
19	---	---	---	---	---	...	...	.6	.3	.2	...	...	...	---	---	---	---	---	---	---	---	1.1	14
20	---	---	---	---	---	...	...	...	...	.2	...	...	...	---	---	---	---	---	---	---	---	0.2	3
21	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	---	---	...	...
22	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	---	---	...	...
23	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	---	---	...	...
24	---	---	---	---	---	...	...	...	...	...	.1	.4	...	---	---	---	---	---	---	---	---	0.5	7
25	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	---	---	...	...
26	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	---	---	...	...
27	---	---	---	---	---	...	...	.3	...	...	...	...	...	---	---	---	---	---	---	---	---	0.3	4
28	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	---	---	...	...
29	---	---	---	---	---	...	.8	1.0	1.0	1.0	1.0	1.0	.3	---	---	---	---	---	---	---	---	6.1	79
30	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	---	---	...	...
31	---	---	---	---	---	...	...	...	...	...	...	...	...	---	---	---	---	---	---	---	---	...	...
Sum	---	---	---	---	---	...	6.2	9.8	8.7	7.5	6.7	5.2	1.3	---	---	---	---	---	---	---	---	45.4	
Mean	---	---	---	---	---	...	.20	.32	.28	.24	.22	.17	.04	---	---	---	---	---	---	---	---	1.46	19
Annual Totals	---	5.9	27.8	47.5	72.3	94.2	117.7	132.2	133.6	135.6	133.6	127.9	103.5	79.6	53.4	28.1	6.9	---	---	---	---	1299.8	
Annual Mean	---	.02	.08	.13	.20	.26	.32	.36	.37	.37	.37	.35	.28	.22	.15	.08	.02	---	---	---	---	3.56	30
Hour L. A. T.	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	Total for Day	Per cent. of Possible			

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	
Day	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s
1	250	6.2	240	6.5	245	6.2	245	5.7	240	4.8	235	4.5	245	7.4	270	7.0	240	6.9	255	10.0	270	11.6	275	10.6
2	255	10.4	260	10.4	260	10.3	255	10.0	250	9.7	245	9.1	245	10.2	245	10.5	250	10.1	255	10.5	255	11.5	260	11.0
3	255	7.1	250	7.2	250	6.6	245	6.5	250	6.5	250	6.5	250	6.4	245	5.0	240	5.8	245	4.9	235	4.0	230	6.6
4	215	7.9	215	8.5	220	9.4	220	10.2	220	10.3	220	10.1	215	11.4	225	11.8	285	10.0	295	8.2	285	8.9	295	8.5
5	280	8.3	300	6.9	295	6.1	315	6.4	290	6.6	300	6.9	280	6.5	285	7.8	285	8.3	285	8.4	270	9.1	270	9.6
6	250	12.2	255	12.0	255	13.0	260	12.9	265	11.9	265	10.2	260	10.7	260	12.3	260	11.1	260	11.7	260	11.2	255	11.8
7	300	9.4	295	7.3	305	9.7	300	8.9	305	8.1	310	7.6	305	8.4	310	6.8	310	5.4	310	5.5	305	5.1	300	5.0
8	160	8.2	165	9.0	165	8.8	160	8.5	160	7.1	200	6.8	200	7.6	190	8.8	185	8.7	190	9.5	190	9.2	190	9.9
9	190	11.0	185	10.9	185	10.3	185	10.4	185	10.6	190	9.1	180	9.6	180	9.0	180	8.4	175	8.4	170	7.9	180	6.3
10	205	4.7	200	5.5	200	5.8	200	6.4	200	6.4	190	6.6	190	7.3	190	7.2	190	6.3	200	9.4	195	10.2	195	9.7
11	185	8.8	180	9.9	190	10.3	175	10.3	180	11.0	190	11.7	185	10.8	190	13.0	185	13.1	185	13.2	185	14.0	185	13.5
12	210	7.1	185	6.0	195	5.9	185	5.4	175	5.3	170	4.2	195	5.0	205	6.1	195	6.2	180	6.2	190	7.1	195	7.5
13	265	3.3	240	5.3	245	6.8	230	6.0	265	5.4	270	2.5	350	2.2	340	8.5	345	7.7	345	5.2	330	4.4	315	4.0
14	60	(2.2)	60	(2.0)	60	(2.4)	60	(2.2)	60	(1.0)	---	(...)	170	4.5	165	5.4	170	5.6	180	5.3	190	5.9	200	7.8
15	175	14.1	170	14.2	175	14.7	170	14.7	170	14.5	175	14.6	175	14.8	170	15.0	175	14.9	175	13.5	170	15.0	180	12.2
16	285	6.4	275	6.9	270	6.6	240	5.5	260	6.5	255	6.1	230	4.4	200	3.6	190	3.0	210	1.0	175	1.5	170	3.3
17	95	5.6	90	4.1	85	4.2	90	4.0	85	1.0	---	---	---	---	175	3.1	170	4.3	200	4.6	200	5.0	195	5.6
18	200	3.1	185	2.5	165	3.0	60	2.6	50	2.0	---	---	30	3.9	25	3.5	325	1.1	295	5.5	300	5.7	290	6.2
19	50	1.3	55	1.8	155	3.5	180	2.1	270	6.6	175	3.9	175	3.5	290	4.0	290	6.7	290	4.2	280	7.3	270	5.9
20	185	5.7	180	7.1	190	8.9	180	9.9	180	10.8	180	11.5	180	12.4	185	15.0	180	14.6	180	4.8	185	15.8	185	15.4
21	230	12.0	215	9.6	220	9.8	225	7.2	215	6.8	205	4.9	200	5.7	195	4.6	190	6.4	180	6.2	165	8.0	150	9.8
22	195	6.0	195	5.2	185	6.5	215	7.7	220	6.6	220	5.2	185	3.1	190	4.7	195	5.1	220	6.7	215	6.7	230	8.5
23	205	7.7	200	9.5	200	10.1	205	9.3	210	8.1	190	6.3	155	6.0	150	8.2	145	8.6	135	10.1	135	9.6	155	9.4
24	170	11.6	160	12.9	160	9.6	160	7.0	150	7.9	145	10.6	230	6.7	180	3.4	170	6.4	175	8.1	195	8.0	185	8.0
25	170	5.8	225	4.6	165	3.9	240	4.5	180	2.7	265	5.4	175	1.3	175	3.1	210	1.6	50	1.0	305	3.1	60	1.4
26	90	6.5	125	7.7	110	10.4	110	10.4	125	10.5	135	10.6	130	10.0	140	10.3	140	10.2	155	6.2	120	5.7	130	8.9
27	---	...	135	1.0	140	2.1	150	4.7	105	6.2	105	5.6	85	4.8	120	5.1	115	8.1	110	9.0	110	10.7	105	9.6
28	85	9.4	70	5.4	80	5.6	360	2.9	50	3.0	55	2.5	65	4.8	80	5.1	70	8.1	75	6.8	70	4.7	90	3.5
29	70	5.8	60	4.2	85	5.8	90	6.0	90	6.2	100	5.4	85	7.2	75	7.0	80	6.4	90	5.5	85	6.5	90	8.1
30	80	10.3	80	9.5	80	9.5	80	10.8	80	10.1	90	9.4	90	10.0	90	8.8	100	8.9	90	9.2	95	9.6	65	8.3
31	195	3.2	230	5.6	225	4.4	200	3.7	190	3.4	180	2.8	140	1.5	160	2.7	160	5.4	180	5.5	170	6.4	170	7.0
Mean	---	7.2	---	7.1	---	7.4	---	7.2	---	7.0	---	6.5	---	6.7	---	7.3	---	7.5	---	7.6	---	8.0	---	8.2

414 VALENTIA OBSERVATORY: H<sub>a</sub> = 17 metres + 15 metres

Day	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	
1	175	7.2	170	8.4	220	7.1	310	6.6	295	8.6	295	10.1	295	9.6	300	8.9	295	8.9	290	8.0	280	5.9	280	4.4	
2	160	4.2	160	5.5	150	6.9	155	7.5	165	7.0	155	8.9	150	11.5	155	11.0	160	10.0	180	7.7	210	8.4	180	5.5	
3	190	6.8	190	6.8	195	5.5	180	6.0	180	6.7	175	7.2	175	7.6	180	8.0	180	8.0	180	8.6	180	8.9	185	8.9	
4	210	10.5	210	10.8	210	10.9	225	12.0	220	11.0	220	11.5	225	12.1	230	12.0	230	11.6	235	11.2	240	10.8	220	9.0	
5	---	...	---	...	60	1.0	---	---	---	...	45	1.4	5	1.9	---	...	5	3.9	360	4.4	360	5.0	350	5.5	
6	285	3.1	275	5.3	250	4.8	245	5.3	245	5.6	250	4.8	270	4.2	240	3.9	220	3.9	230	3.5	215	3.9	220	4.2	
7	75	5.9	65	5.5	65	6.6	70	7.0	70	7.3	70	8.1	70	9.1	70	9.6	70	11.1	70	11.6	70	12.3	65	12.6	
8	15	10.8	15	11.5	15	11.5	10	9.2	360	11.1	360	10.0	350	10.0	340	9.8	350	11.7	360	9.2	335	11.0	330	9.8	
9	290	7.6	285	7.6	290	7.6	285	7.7	285	7.4	290	7.0	290	7.8	285	6.6	280	6.5	295	5.8	270	5.9	280	5.9	
10	---	...	---	...	---	...	---	---	---	...	---	---	---	---	---	---	---	---	---	---	---	185	1.9	255	2.8
11	330	3.0	320	2.4	---	...	---	---	5	1.5	---	...	15	1.0	25	1.1	---	---	---	...	---	...	---	...	
12	160	4.4	160	4.8	160	6.5	160	7.9	165	7.0	170	5.7	165	7.4	170	6.5	170	6.3	195	6.2	210	6.9	210	7.2	
13	210	2.0	170	4.5	190	4.8	210	5.6	210	5.4	205	5.1	200	5.5	200	5.6	210	6.3	220	7.1	220	6.6	220	6.2	
14	220	5.3	220	4.5	225	4.3	220	3.5	200	2.8	205	2.8	215	3.4	200	2.5	195	2.6	220	3.4	205	2.9	220	4.2	
15	210	2.4	345	2.7	35	1.0	20	2.6	40	3.3	60	2.7	80	4.2	90	7.0	90	7.5	125	7.7	150	9.2	170	7.9	
16	230	13.6	225	14.1	250	13.6	240	11.5	230	9.7	235	12.2	265	9.9	245	8.6	270	7.7	290	8.3	290	9.0	295	9.4	
17	290	8.2	295	7.3	295	7.2	290	6.3	290	4.8	300	4.9	305	4.7	315	4.5	305	4.2	310	3.7	310	3.7	305	3.9	
18	255	8.2	250	7.7	240	6.3	245	8.1	240	8.1	240	8.4	240	8.2	245	8.9	250	9.3	250	9.5	250	9.2	245	9.2	
19	240	5.7	260	5.7	220	5.8	220	7.3	220	9.9	230	11.6	240	12.6	250	12.8	250	12.7	255	12.1	260	9.5	260	8.7	
20	295	7.5	300	7.8	300	7.1	290	8.0	300	8.3	295	6.9	300	7.4	295	7.2	305	6.2	300	6.8	300	7.3	300	7.4	
21	295	6.4	290	6.6	295	6.2	290	5.6	280	4.5	285	3.4	280	3.1	280	2.8	270	1.6	195	2.4	210	4.3	245	8.2	
22	265	9.2	270	6.4	290	5.2	330	6.4	10	7.2	360	7.4	355	8.4	360	8.8	350	7.7	345	9.2	340	8.7	340	8.9	
23	---	...	---	...	---	...	60	1.7	55	1.2	60	1.2	55	1.7	55	1.8	60	2.1	120	2.6	125	4.5	140	5.3	
24	175	7.0	175	8.3	180	7.6	200	8.0	210	7.7	230	7.9	245	6.9	265	10.9	275	10.7	275	8.6	275	8.4	270	8.4	
25	190	6.4	190	6.3	190	6.2	165	7.5	170	8.2	175	6.8	180	6.8	275	10.9	280	11.0							

WIND: DIRECTION AND SPEED

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

M.S.L. +  $h_a$  (height of anemometer above ground) = 17 metres + 13 metres

JANUARY, 1937

12 - 13		13 - 14		14 - 15		15 - 16		16 - 17		17 - 18		18 - 19		19 - 20		20 - 21		21 - 22		22 - 23		23 - 24		Mean	Day		
o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	m/s	
280	10.5	275	9.8	270	9.2	280	8.8	280	10.7	280	9.4	275	10.0	270	9.7	270	9.4	275	8.9	265	9.1	260	8.5	8.4	1		
280	11.3	265	10.3	265	10.0	265	10.1	265	10.1	270	9.4	270	8.7	270	8.2	265	9.4	265	7.8	265	8.3	265	7.4	9.8	2		
225	7.0	225	7.8	230	7.8	230	7.9	235	8.2	230	8.5	235	8.2	225	8.0	230	8.1	230	8.3	235	10.4	230	8.9	7.2	3		
290	10.3	290	10.2	300	10.4	290	10.1	290	9.8	290	9.8	300	8.9	290	7.7	290	9.2	305	8.2	280	7.6	280	6.4	9.3	4		
265	8.6	260	9.9	255	10.4	250	9.8	245	9.5	245	9.8	245	10.2	250	10.7	250	10.2	250	9.8	250	10.8	250	11.5	8.8	5		
255	10.7	270	7.7	270	8.7	280	8.0	270	8.7	270	7.8	280	7.8	300	9.7	300	8.8	300	8.6	300	8.4	295	7.5	10.1	6		
295	4.1	300	4.2	300	3.4	305	2.2	---	---	50	1.4	55	1.1	140	1.1	140	4.2	140	5.4	145	7.7	160	8.0	5.4	7		
190	9.8	185	9.0	185	9.5	185	9.5	185	9.2	185	9.6	180	10.1	185	11.0	185	10.7	185	9.6	180	10.0	185	10.6	9.2	8		
---	---	300	2.0	340	5.2	355	3.2	335	1.1	---	---	185	2.1	195	1.4	290	2.0	---	---	180	2.2	190	2.8	5.6	9		
190	9.5	190	9.1	185	9.0	190	9.2	195	8.3	190	9.4	190	8.0	190	8.2	190	7.6	185	8.0	185	8.0	185	8.7	7.9	10		
185	14.7	185	15.0	185	15.2	185	16.0	185	15.2	185	15.0	185	15.0	185	15.2	185	14.9	200	13.6	200	11.7	210	8.6	12.9	11		
190	6.5	190	6.9	190	5.7	190	5.3	200	5.5	180	5.4	180	7.6	265	3.3	180	2.6	200	8.4	220	11.8	290	7.4	6.2	12		
300	4.6	305	4.3	310	4.1	310	3.0	305	2.4	310	2.3	300	2.5	---	---	70	(1.8)	80	(1.0)	65	(1.0)	65	(1.6)	3.8	13		
195	9.0	195	9.6	200	9.9	195	10.2	190	10.5	190	11.0	185	10.8	180	11.6	180	12.1	180	12.6	180	12.2	180	12.6	7.4	14		
180	6.6	300	4.2	315	1.4	300	1.2	300	6.4	300	8.2	290	7.1	325	2.7	320	4.4	285	7.7	280	7.0	285	5.8	9.8	15		
170	4.7	170	6.4	170	5.1	160	4.9	130	4.1	130	5.1	100	4.9	110	5.5	100	6.6	95	6.3	105	6.5	105	7.1	5.1	16		
130	4.7	65	5.6	335	8.5	340	6.8	325	5.1	300	3.6	295	8.6	300	8.7	285	8.5	275	8.0	275	6.6	260	5.9	5.1	17		
280	6.9	290	5.9	275	6.3	270	6.2	280	6.1	285	5.6	255	4.2	180	3.5	305	3.2	---	---	---	---	60	1.5	3.7	18		
280	6.4	280	6.2	300	8.8	310	7.0	310	6.7	290	3.9	290	4.2	180	2.9	245	6.4	235	4.9	200	4.1	180	5.5	4.9	19		
180	16.3	185	16.0	205	10.3	215	9.0	215	9.0	215	10.1	215	9.7	210	9.6	215	11.0	225	11.3	225	10.5	220	10.7	11.5	20		
145	10.6	140	9.0	160	14.4	170	14.6	170	12.7	180	13.5	180	13.5	180	13.7	205	10.0	205	8.4	200	6.1	210	6.6	9.3	21		
225	7.9	210	9.3	230	9.1	245	8.9	235	10.2	220	8.4	210	9.1	200	9.6	195	9.8	200	8.5	205	6.5	190	8.0	7.4	22		
140	11.8	140	13.4	140	13.1	130	11.5	130	13.4	135	14.1	140	15.6	140	15.8	145	16.7	175	14.3	180	12.4	175	12.5	11.1	23		
190	9.3	195	9.8	195	10.0	195	9.2	195	9.3	190	10.0	190	9.7	195	9.9	195	9.9	195	8.4	190	7.4	180	8.1	8.8	24		
185	2.0	240	1.6	120	1.7	185	1.5	---	---	---	---	50	1.7	100	3.8	95	5.3	105	6.3	100	6.7	110	7.7	3.2	25		
125	8.2	130	9.1	140	11.1	140	9.4	150	6.7	145	6.9	175	5.1	150	2.2	170	3.4	180	1.0	85	2.7	85	1.8	7.3	26		
105	10.0	105	10.7	100	9.4	90	7.9	90	9.4	95	10.0	95	8.5	45	7.1	60	5.7	80	5.6	70	5.2	80	6.4	6.8	27		
60	2.0	60	2.8	60	2.8	60	2.6	45	2.8	60	4.4	80	4.2	70	4.0	75	3.0	70	5.8	70	3.7	75	5.9	4.4	28		
85	7.8	85	7.5	85	7.6	80	8.9	80	9.8	75	10.3	85	12.0	90	10.4	90	9.6	85	10.2	80	10.0	80	10.1	7.8	29		
90	8.0	80	7.6	75	7.6	75	9.1	75	8.7	70	8.0	75	8.3	80	7.1	85	6.1	70	6.1	95	5.1	105	2.2	8.3	30		
170	8.6	175	8.6	175	8.4	170	8.8	170	9.8	160	9.9	155	9.3	150	10.6	145	10.0	140	10.0	140	10.9	145	8.5	6.9	31		
---	8.0	---	8.0	---	8.2	---	7.8	---	7.8	---	7.8	---	8.0	---	7.5	---	7.8	---	7.5	---	7.5	---	7.2	7.5			

FEBRUARY, 1937

12 - 13		13 - 14		14 - 15		15 - 16		16 - 17		17 - 18		18 - 19		19 - 20		20 - 21		21 - 22		22 - 23		23 - 24		Mean	Day		
o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	m/s	
270	4.4	265	5.1	265	5.8	280	3.5	270	2.8	285	2.0	---	---	---	---	55	1.5	50	2.4	50	1.6	50	1.5	5.2	1		
195	6.0	190	4.1	200	1.8	190	2.6	210	3.7	215	7.0	210	4.3	180	3.6	170	4.3	170	5.5	180	5.4	180	6.0	6.2	2		
180	8.0	180	9.0	180	10.0	180	11.0	180	10.0	180	9.9	180	10.9	190	11.1	190	12.0	200	11.9	210	9.7	210	10.0	8.9	3		
240	9.0	240	8.9	240	7.4	250	6.2	260	4.9	245	3.6	245	1.8	---	---	---	---	65	1.0	---	---	---	---	7.4	4		
35	3.6	325	4.5	340	5.2	340	5.8	330	3.3	335	3.2	310	2.0	310	2.2	310	2.4	300	3.6	300	4.2	300	4.4	2.9	5		
220	5.6	230	4.9	230	4.2	240	2.1	210	1.2	140	2.4	125	3.0	90	3.4	95	3.8	90	5.1	80	5.0	75	4.8	4.1	6		
65	12.6	65	11.5	60	10.9	60	10.0	55	8.4	50	8.3	45	6.7	40	9.4	35	8.5	30	9.8	20	10.6	15	11.1	9.4	7		
330	10.5	320	10.6	315	7.2	300	7.0	295	6.7	290	8.3	290	8.1	285	7.5	285	7.0	280	6.5	275	8.5	275	8.2	9.2	8		
290	5.2	275	5.7	285	5.8	270	5.9	275	5.2	270	5.9	315	2.4	320	2.6	310	1.1	310	1.0	---	---	---	---	5.2	9		
270	2.5	270	4.2	265	4.9	295	4.9	290	4.8	290	4.1	295	4.4	295	4.1	300	4.9	295	4.9	295	4.5	300	4.0	2.6	10		
330	1.0	---	---	---	---	---	---	270	1.0	---	---	130	1.0	155	1.5	155	3.4	160	4.4	160	6.2	150	5.6	1.6	11		
240	7.8	260	7.4	280	4.5	280	3.3	280	3.2	280	1.7	---	---	290	2.1	290	1.7	170	1.0	---	---	---	---	4.8	12		
220	6.0	220	6.2	220	5.9	225	6.4	225	5.5	220	5.1	220	5.3	220	4.9	210	3.7	220	4.2	220	4.2	210	4.4	5.3	13		
220	4.0	225	4.6	225	3.8	220	4.2	210	3.4	200	3.3	190	3.5	185	3.1	170	3.9	180	3.5	175	3.1	180	2.9	3.6	14		
180	9.4	195	12.4	205	13.3	230	14.2	225	12.8	225	12.9	215	11.0	220	11.4	215	11.9	215	12.9	230	13.2	230	13.4	8.6	15		
275	9.8	280	9.2	275	10.0	275	10.2	280	10.0	285	10.9	290	10.1	290	10.0	290	9.9	295	9.8	295	7.7	300	7.6	10.1	16		
310	2.9	320	1.2	---	---	---	---	210	1.3	270	3.7	275	3.6	275	3.2	275	3.4	260	5.0	250	6.4	250	7.4	4.3	17		
245	8.9	260	9.4	260	5.8	260	6.7	260	6.9	260	4.4	250	5.0	260	7.5	265	7.5	250	7.2	245	5.7	240	6.0	7.5	18		
290	8.3	290	7.9	290	7.8	290	7.2	290	8.3	300	8.5	295	8.7	300	7.6	300	7.9	295	8.4	290	8.5	295	9.5	8.9	19		
310	6.8	305	6.9	310	7.7	310	7.7	300	7.8	300	7.5	305	7.6	300	7.1	300	7.5	300	6.5	300	6.9	300	7.0	7.3	20		
250	9.5	250	8.8	260	9.2	260	7.7	265	7.2	265	7.0	265	7.5	265	6.9	255	6.2	260	7.1	255	7.5	260	7.6	6.1	21		
350	8.7	335	9.1	340	8.5	335	8.7	340	8.0	340	7.6	350	5.3	345	4.8	355	4.4										



WIND: DIRECTION AND SPEED

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

415 VALENTIA OBSERVATORY:

Dines Pressure Tube Anemometer from Jan., 1926

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

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			
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
1	355	8.1	355	8.7	360	7.9	350	9.0	360	8.6	345	8.5	345	8.6	350	7.6	360	7.2	380	6.4	345	8.8	355	7.9		
2	40	2.5	25	1.7	40	1.0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
3	65	1.3	65	1.1	60	2.1	---	---	60	1.2	---	---	---	55	1.8	60	1.2	---	---	---	---	---	325	1.0		
4	75	2.5	85	2.8	65	1.7	55	2.7	55	2.7	---	---	---	---	---	---	---	---	---	---	60	1.6	60	2.2		
5	45	1.0	45	1.0	---	---	50	1.8	50	2.2	---	---	---	55	1.9	65	1.2	70	1.2	35	1.6	185	1.0			
6	90	2.7	80	1.3	80	1.6	85	3.1	90	4.5	90	5.0	90	5.0	90	5.2	85	5.2	90	5.7	80	5.3	85	5.7		
7	50	8.1	50	9.2	50	7.5	50	8.0	40	7.2	40	9.0	40	9.5	40	9.9	35	10.5	35	11.1	35	10.2	40	10.3		
8	40	7.4	40	8.8	45	7.5	35	5.9	60	5.2	50	5.0	50	5.4	70	4.9	60	4.6	55	4.7	30	6.4	30	6.3		
9	---	---	---	---	55	1.7	50	1.7	---	---	170	1.3	160	3.2	50	1.5	60	1.2	170	1.4	165	3.3	170	3.5		
10	90	2.3	90	1.5	---	---	135	1.0	110	3.0	110	4.4	110	3.9	120	2.0	110	3.5	100	4.4	100	4.1	120	5.9		
11	70	9.4	70	9.8	70	10.4	65	10.2	70	12.4	70	10.5	70	9.8	70	11.0	70	11.8	70	12.1	70	12.2	60	12.7		
12	20	7.4	15	6.0	20	5.5	10	8.2	360	7.4	345	8.7	350	9.0	360	7.3	15	6.2	5	8.4	360	6.6	10	6.1		
13	65	1.8	70	1.7	65	3.6	85	1.0	---	---	---	---	55	1.5	---	---	---	---	---	---	70	1.5	60	3.7		
14	25	4.2	30	5.9	30	6.4	35	6.4	35	5.7	30	4.8	25	3.6	10	5.9	20	5.4	10	6.2	15	7.9	5	7.5		
15	180	2.6	60	1.8	60	1.8	80	1.1	---	---	55	1.8	300	3.0	295	3.4	270	4.5	280	4.6	280	4.1	270	4.3		
16	130	10.8	115	12.7	120	13.5	120	13.5	115	16.1	115	17.4	110	14.0	150	8.9	165	5.8	200	5.6	175	4.0	175	6.6		
17	180	8.0	170	9.0	165	10.5	160	10.6	150	12.8	170	10.5	165	11.5	175	10.5	165	11.5	170	10.5	170	10.8	180	10.2		
18	165	6.5	160	6.5	155	6.4	155	6.8	155	6.4	150	6.0	145	5.4	135	3.6	130	2.9	180	3.5	180	5.5	175	6.7		
19	175	5.7	160	5.8	145	5.9	135	5.0	110	4.5	90	5.0	85	4.5	85	4.5	80	5.6	75	5.9	80	6.5	75	5.0		
20	10	5.6	10	6.6	360	7.5	360	7.2	5	7.2	15	6.1	20	7.0	30	6.6	50	6.0	55	8.1	45	7.1	45	6.7		
21	50	7.3	45	7.8	35	9.3	35	9.4	30	9.2	35	9.9	35	10.0	30	9.7	40	10.6	45	10.3	35	8.7	25	9.1		
22	30	6.0	25	7.6	30	5.6	25	4.1	35	2.2	---	---	---	45	1.6	75	3.7	70	2.0	5	3.1	25	4.8			
23	350	4.9	355	4.5	5	4.4	10	5.4	10	1.2	10	5.0	360	5.2	5	4.5	10	5.3	10	5.9	360	6.0	15	5.1		
24	305	2.4	305	3.7	305	4.5	305	6.0	305	6.4	300	5.5	295	5.5	300	5.0	300	3.1	290	3.0	295	4.3	270	5.2		
25	---	---	---	---	185	1.8	180	1.5	190	1.6	220	2.1	210	1.8	195	1.8	175	2.7	170	2.0	55	2.1	55	2.9		
26	70	3.8	70	3.0	65	2.3	80	1.3	---	---	---	---	---	---	---	---	---	---	---	---	---	320	1.8	315	3.0	
27	---	---	---	---	---	---	60	1.7	70	1.0	---	---	70	1.2	55	1.4	---	---	60	1.5	100	2.9	90	2.8		
28	80	3.5	85	3.0	80	2.5	70	1.8	85	2.5	90	4.6	90	4.8	90	4.6	85	4.4	90	4.5	85	4.9	100	4.7		
29	95	6.8	85	5.0	85	5.0	75	4.9	105	8.6	110	10.0	105	9.2	110	7.5	120	6.9	125	7.0	135	7.7	140	8.2		
30	150	9.5	150	10.8	150	10.0	150	10.0	150	10.1	150	11.1	155	11.4	150	13.1	155	15.4	150	15.0	155	15.3	160	15.8		
31	180	12.4	180	10.8	185	11.0	185	9.0	185	8.3	185	7.1	170	7.0	180	6.9	175	6.0	185	5.5	180	5.0	175	4.6		
Mean	---	5.0	---	5.1	---	5.2	---	5.1	---	5.2	---	5.3	---	5.3	---	5.0	---	5.0	---	5.1	---	5.5	---	5.8		

416 VALENTIA OBSERVATORY: H<sub>a</sub> = 17 metres + 1.3 metres

Day	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s
1	---	---	---	---	---	---	105	2.1	95	2.2	100	3.1	100	4.0	100	3.8	105	5.0	110	5.2	105	5.7	105	6.8		
2	70	8.0	70	10.5	65	10.2	60	10.9	55	10.2	60	11.2	60	11.6	60	12.4	60	13.9	50	9.8	55	8.2	60	6.9		
3	65	5.0	30	5.3	30	6.6	60	6.1	50	4.9	40	5.0	30	3.7	25	3.5	25	4.6	40	4.1	50	4.6	75	5.4		
4	---	---	55	1.2	---	---	---	---	50	1.8	---	---	---	40	1.6	---	---	---	---	---	---	175	1.9	130	2.5	
5	100	5.8	100	6.4	85	5.5	70	6.4	70	6.7	80	5.9	90	5.5	95	4.2	105	2.6	155	4.5	150	4.8	170	6.5		
6	150	9.4	150	10.3	155	8.3	160	7.8	160	8.0	180	7.0	190	6.6	190	7.1	195	7.7	210	8.0	215	9.1	225	7.1		
7	180	7.8	185	7.2	195	6.9	190	6.8	195	7.6	195	7.9	190	8.6	195	8.7	195	8.8	210	10.3	205	11.8	200	10.3		
8	235	9.3	235	9.1	230	9.0	230	8.3	230	9.5	235	9.1	235	9.2	230	7.7	230	7.8	235	8.2	230	8.1	230	8.6		
9	165	7.7	175	9.5	180	8.9	175	9.2	170	10.0	170	9.7	165	9.6	170	9.8	170	10.0	175	8.7	170	9.4	165	9.2		
10	315	6.4	305	5.3	320	5.3	325	5.8	325	5.4	325	7.4	325	5.1	325	7.0	330	6.4	325	6.2	325	5.9	325	6.8		
11	---	---	---	---	---	---	---	---	140	1.0	70	1.5	120	1.0	50	2.2	70	1.7	---	---	340	1.0	60	1.1		
12	80	3.3	---	---	65	1.5	80	2.8	90	2.6	60	4.1	65	4.4	80	4.5	65	5.9	70	4.4	55	3.5	45	4.2		
13	65	1.0	65	1.7	(65)	1.1	(120)	2.7	(130)	2.6	(140)	4.0	145	5.1	110	4.6	130	4.5	150	5.6	135	6.9	135	7.5		
14	(85)	3.5	---	---	---	---	---	---	---	---	345	1.2	355	1.8	360	1.4	45	1.5	325	4.0	330	5.3	335	5.9		
15	---	---	---	---	55	1.4	---	---	---	---	145	1.7	160	5.5	165	6.7	175	7.4	180	10.0	165	11.2	170	11.7		
16	185	3.6	225	2.5	275	2.4	295	7.0	285	7.0	285	8.2	325	10.6	315	11.9	320	12.0	325	11.2	320	11.8	320	11.2		
17	320	9.5	320	9.0	315	7.5	320	7.5	320	7.3	315	8.4	310	7.7	305	7.1	320	7.2	315	6.7	330	7.4	290	5.3		
18	150	5.0	150	5.0	150	5.1	130	4.4	90	4.8	80	5.1	85	4.7	85	4.6	80	5.5	90	5.4	90	3.9	50	2.9		
19	165	4.7	175	4.8	185	5.8	185	6.2	185	6.2	185	7.5	190	7.4	205	7.7	210	7.3	215	7.3	230	8.9	230	9.3		
20	190	2.0	180	3.2	180	4.2	185	4.5	190	5.8	185	5.7	165	4.2	230	8.1	235	7.4	20	12.7	340	10.5	325	10.2		
21	300	7.4	300	7.6	300	6.8	285	6.7	290	6.9	285	5.5	290	5.9	275	4.8	270	5.4	265	4.6	250	6.5	245	7.0		
22	260	7.6	260	7.0	260	8.0	265	8.4	260	6.3	250	7.1	250	7.9	255	9.5	260	10.0	260	10.0	260	8.6	260	7.9		
23	155	2.1	160	1.5	175	1.5	195	1.4	195	1.0	170	2.2	175	2.7	170	3.5	175	4.0	180	4.1	170	5.0	175	4.7		
24	---	---	---	---	30	1.1	110	1.4	115	2.4	175	1.0	180	3.2	205	2.5	105	2.6	95	3.5	100	3.9	110	6.4		
25	120	4.0	100	5.3	90	6.9	80	5.4	70	3.1	130	2.2	85	3.5	110	3.5	195	2.5	185	4.1	195	3.9	160	2.3		
26	275	2.5	305	3.1	335	3.5	360	2.7	355	2.4	350	2.0	335	3.6	330	3.0	335	4.0	335	4.9	320	5.4	315	5.1		
27	290	2.0	---	---	325	2.2	335	2.4	310	2.1	315	4.4	320	4.5	315	2.4	305	3.8	300	2.8	270	2.9	310	3.7		
28	325	3.5	335																							

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

M.S.L. + h<sub>a</sub> (height of anemometer above ground) = 17 metres + 13 metres

MARCH, 1937

Table with columns for 12-13, 13-14, 14-15, 15-16, 16-17, 17-18, 18-19, 19-20, 20-21, 21-22, 22-23, 23-24, Mean, Day. Rows contain wind speed data in m/s for each hour.

APRIL, 1937

Table with columns for 12-13, 13-14, 14-15, 15-16, 16-17, 17-18, 18-19, 19-20, 20-21, 21-22, 22-23, 23-24, Mean, Day. Rows contain wind speed data in m/s for each hour.

## 417 VALENTIA OBSERVATORY:

Dines Pressure Tube Anemometer from Jan., 1926

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

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	
	°	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	1.0	---	---	---	---	50	1.1	---	---	---	---	---	---	270	1.0	270	1.5	275	2.6
2	---	---	---	---	---	---	55	1.0	60	1.0	55	1.4	---	---	---	---	---	---	300	1.4	280	3.3	320	3.0
3	155	7.5	180	6.3	185	6.0	175	5.8	180	6.7	180	6.3	165	5.5	180	6.0	180	7.7	180	8.0	185	7.9	185	8.0
4	295	1.0	180	1.0	---	---	60	2.1	60	2.0	55	3.1	50	1.8	185	3.2	230	6.0	230	7.2	230	7.5	225	8.0
5	300	4.6	310	3.8	305	3.6	310	2.5	---	---	---	---	---	---	---	---	150	1.4	175	2.8	190	4.1	180	6.0
6	180	8.2	180	8.0	185	7.8	185	7.5	185	7.6	185	7.8	190	8.0	190	8.0	200	7.8	210	6.5	215	7.2	220	7.3
7	265	2.9	265	3.3	260	2.7	250	2.5	245	1.1	245	1.0	270	1.3	---	---	---	---	305	1.1	295	1.2	280	2.2
8	---	---	180	1.2	---	---	200	1.0	---	---	120	2.2	110	3.4	100	4.4	100	5.8	115	6.3	105	7.2	105	7.1
9	170	3.7	170	4.2	150	3.3	155	3.8	155	4.9	145	5.2	145	5.9	165	6.1	275	7.2	280	5.6	290	5.2	290	5.4
10	65	2.1	65	2.6	65	1.8	65	1.8	70	1.8	65	1.4	65	1.6	---	---	165	3.7	165	2.6	205	2.7	275	3.3
11	30	1.4	30	1.8	30	1.7	30	1.8	335	1.5	75	4.0	85	2.7	60	3.4	15	5.2	360	4.9	360	5.2	315	5.1
12	---	---	190	1.1	180	1.1	60	1.2	60	1.6	60	2.3	---	---	---	---	---	---	280	1.6	280	1.4	275	2.8
13	150	4.3	150	3.7	145	4.6	105	3.7	95	4.5	105	3.6	90	3.1	90	2.6	100	2.3	95	2.5	95	4.4	95	4.4
14	70	1.3	65	1.9	65	2.0	60	2.0	60	2.2	50	1.8	70	2.2	45	1.4	30	5.1	60	5.6	15	6.4	45	8.0
15	---	---	65	1.4	60	2.5	---	---	---	---	40	1.0	---	---	85	3.5	65	5.3	60	5.9	65	6.1	55	5.8
16	---	---	---	---	60	1.1	60	2.5	---	---	60	1.4	---	---	180	1.4	180	3.3	190	3.4	275	2.5	300	2.6
17	---	---	60	1.0	---	---	55	2.1	---	---	---	---	---	---	---	---	330	1.4	325	3.4	325	3.5	325	5.1
18	340	1.0	350	2.0	355	3.1	55	1.6	60	1.1	350	2.3	350	5.0	360	3.9	330	4.2	335	5.9	325	5.4	320	4.4
19	210	8.0	205	8.3	210	7.9	205	7.9	210	8.6	240	6.7	240	5.3	275	6.4	275	3.5	275	6.1	270	5.2	275	4.2
20	190	1.3	60	1.9	155	2.5	175	2.0	155	4.3	140	6.2	145	5.6	170	6.5	175	7.7	180	7.5	190	5.8	180	7.3
21	150	3.2	175	3.5	55	1.1	55	2.1	50	1.8	55	1.8	125	2.5	150	4.1	165	5.6	170	5.9	180	6.7	185	5.8
22	170	3.1	160	5.0	145	4.6	145	5.0	145	5.1	140	4.9	145	5.7	140	5.6	160	5.9	170	6.4	170	7.8	175	9.8
23	210	5.3	200	6.5	200	5.6	200	4.9	205	5.9	195	5.2	205	5.4	195	5.8	190	6.9	180	8.2	185	9.2	180	9.4
24	150	7.2	155	8.6	155	10.2	170	10.7	170	11.0	170	11.3	180	11.6	180	10.9	185	10.2	190	10.8	195	10.7	190	11.2
25	170	7.0	170	6.9	175	5.5	180	6.1	165	6.8	180	7.8	190	11.0	220	11.4	210	10.5	215	10.3	200	10.2	200	11.2
26	185	4.5	185	3.1	195	3.6	190	3.5	170	3.4	155	4.4	165	5.0	180	6.0	190	6.2	195	7.6	205	7.6	210	8.6
27	205	3.2	195	3.8	195	3.5	195	3.5	180	3.1	165	3.0	165	2.8	185	3.9	185	5.1	185	5.3	185	7.0	180	6.9
28	160	9.9	165	10.2	170	10.2	165	9.7	160	10.6	155	11.2	155	10.5	155	10.4	165	12.0	165	11.2	160	11.0	160	11.5
29	205	5.7	205	5.5	210	6.1	205	7.0	205	7.1	210	8.3	210	8.7	210	9.8	215	9.5	220	10.0	220	10.3	230	9.5
30	210	4.3	215	5.0	235	5.0	230	4.5	235	4.3	225	4.4	240	4.4	265	5.4	265	5.6	270	6.3	270	5.3	270	6.4
31	290	4.8	290	5.0	295	4.2	275	5.2	270	4.6	290	5.3	300	4.3	275	4.0	275	4.4	295	3.9	280	4.1	280	5.2
Mean	---	3.5	---	3.5	---	3.7	---	3.7	---	3.7	---	4.1	---	4.1	---	4.4	---	5.2	---	5.7	---	5.9	---	6.4

418 VALENTIA OBSERVATORY: H<sub>a</sub> = 17 metres + 13 metres

Day	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s
	1	300	3.4	300	4.4	310	3.3	305	3.0	325	4.6	320	2.9	305	2.8	330	5.5	325	5.4	325	5.8	325	6.1	325
2	360	3.2	355	2.6	5	2.2	320	1.9	230	1.0	200	1.1	200	1.7	245	2.7	260	2.7	235	2.8	240	4.2	235	5.0
3	210	6.9	205	7.5	210	8.0	210	8.8	215	9.0	215	9.0	220	9.9	220	9.4	225	9.3	220	8.7	225	9.3	220	9.8
4	215	7.7	215	7.2	215	7.4	215	7.5	210	7.8	210	8.0	215	8.2	210	9.0	210	8.7	210	8.3	205	8.9	205	8.2
5	200	5.9	210	5.3	210	6.1	210	6.7	200	6.9	190	6.4	190	6.3	190	7.0	195	6.6	195	6.1	195	6.3	280	4.7
6	---	---	---	---	---	---	60	1.3	55	1.7	150	2.5	165	5.0	200	4.3	205	4.5	195	3.7	185	5.4	190	5.1
7	210	5.0	200	5.1	205	5.4	205	5.6	215	6.1	210	5.1	220	6.2	210	5.1	215	7.1	215	8.4	225	9.0	225	9.6
8	205	5.0	195	4.4	215	4.8	200	3.3	240	3.1	180	3.2	205	1.0	245	2.0	185	2.2	270	3.3	275	4.1	275	4.0
9	60	2.1	65	2.2	65	2.3	65	2.3	65	2.5	65	1.3	---	---	---	1.0	345	1.0	340	2.7	355	3.8	350	5.4
10	65	1.1	70	1.3	---	---	---	---	---	---	60	1.4	55	1.3	---	---	320	1.5	310	2.3	325	3.7	320	4.7
11	40	6.5	45	6.7	30	9.6	35	8.1	35	2.7	35	5.8	35	6.0	20	7.2	20	8.8	60	9.7	65	9.8	60	9.1
12	130	3.3	120	2.9	50	1.3	110	1.4	95	2.5	70	3.5	90	3.7	85	2.1	130	1.8	120	1.5	330	1.9	310	2.0
13	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	330	3.4	325	4.8	330	5.5	335	6.1
14	---	---	---	---	---	---	265	1.9	270	1.4	275	1.0	275	1.5	275	2.3	275	2.5	270	2.9	280	3.5	270	2.4
15	295	3.0	305	3.0	315	3.5	320	2.5	320	3.0	325	3.0	320	2.6	345	4.0	350	4.7	345	4.7	320	4.9	330	5.9
16	310	2.2	300	2.4	300	2.7	300	2.3	270	2.6	270	2.7	270	3.3	250	2.6	250	3.0	225	3.6	270	3.7	265	3.7
17	110	2.9	100	5.6	55	5.4	50	4.2	50	4.1	50	5.0	55	5.4	50	4.5	25	6.6	30	5.6	35	6.4	20	6.5
18	15	4.5	5	5.5	360	5.0	10	5.1	355	3.3	20	3.4	355	6.0	345	5.4	345	6.0	345	7.9	340	7.8	340	6.8
19	345	8.1	350	7.7	355	7.3	355	8.0	355	7.5	360	7.7	10	5.2	360	4.3	355	5.0	350	6.4	335	5.8	340	7.4
20	355	5.3	350	5.0	350	5.8	350	5.4	350	5.8	345	6.0	355	6.8	350	7.3	340	7.3	335	7.4	335	7.0	340	7.2
21	30	2.6	350	3.2	350	4.2	350	3.5	360	3.1	345	4.1	330	3.3	350	2.8	310	2.8	320	2.5	320	2.6	320	2.8
22	350	3.5	350	2.5	350	2.8	350	3.1	350	2.8	355	3.8	360	4.5	5	5.7	5	7.2	360	8.2	355	8.5	350	9.5
23	360	5.5	360	4.4	350	5.0	345	3.7	350	4.2	10	5.9	360	6.2	340	7.1	345	6.4	30	5.2	55	3.8	15	4.8
24	---	---	95	1.0	---	---	---	---	---	---	100	1.0	60	1.1	---	---	15	3.5	15	4.5	5	6.0	5	6.3
25	---	---	---	---	---	---	---	---	---	---	---	---	---	---	340	1.0	335	3.5	330	3.7	320	4.1	320	4.6
26	340	3.1	330	3.1	340	3.9	330	2.7	335	2.1	340	2.8	330	3.3	330	3.6	325	4.4	325	5.4	320	4.7	325	5.5
27	---	---	310	2.6	320	2.6	315	3.1	320	2.6	---	---	---	---	295	1.5	290	2.8	290	4.7	285	4.2	280	

WIND: DIRECTION AND SPEED

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

M.S.L. + h<sub>a</sub> (height of anemometer above ground) = 17 metres + 13 metres

MAY, 1937

12 - 13		13 - 14		14 - 15		15 - 16		16 - 17		17 - 18		18 - 19		19 - 20		20 - 21		21 - 22		22 - 23		23 - 24		Mean	Day
o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	m/s	
280	3.0	315	5.0	270	3.5	265	3.7	265	3.5	265	2.7	265	1.6	260	1.0	---	---	---	---	---	---	---	---	1.5	1
320	3.0	270	4.2	185	7.2	180	7.7	180	6.0	165	5.2	160	5.0	160	6.5	170	6.5	170	6.8	170	6.2	170	6.2	3.5	2
185	7.3	310	5.5	310	5.6	325	6.0	330	3.4	10	2.4	320	1.8	325	2.5	325	1.4	30	1.1	---	---	---	---	5.0	3
230	8.1	230	9.6	230	9.7	230	10.0	240	10.6	240	9.9	270	8.0	300	5.3	310	6.1	315	5.5	310	5.0	300	4.8	5.7	4
175	7.3	185	7.9	175	8.5	160	8.0	160	8.9	160	7.6	175	7.3	165	7.9	175	8.1	180	7.4	175	7.0	175	7.8	5.2	5
230	7.3	235	6.7	240	5.5	230	4.4	260	3.7	265	3.6	270	1.8	220	1.6	275	2.1	270	2.0	265	3.8	260	3.1	5.7	6
275	2.8	280	2.0	280	1.2	190	1.6	180	3.1	280	1.4	170	3.1	155	3.3	160	1.6	45	1.0	---	---	---	---	1.8	7
105	7.7	105	6.1	105	5.7	105	6.6	100	6.3	100	8.7	105	8.6	110	8.2	110	8.4	100	6.8	95	5.9	110	3.7	5.1	8
315	2.7	280	2.0	240	5.3	270	5.2	265	4.3	275	5.1	250	4.0	240	3.2	330	1.4	310	2.4	150	1.1	65	2.0	4.1	9
280	4.2	290	4.2	280	4.5	280	4.7	280	4.0	300	3.2	330	3.9	330	2.6	80	3.1	85	2.5	15	1.0	---	---	2.7	10
320	6.1	20	7.0	20	7.7	360	7.6	330	8.4	340	8.6	345	7.3	355	6.0	345	5.8	350	2.6	35	4.3	---	---	4.6	11
275	3.5	275	4.2	285	3.3	280	3.0	275	3.4	280	3.5	290	1.7	---	---	160	1.1	150	1.9	160	2.8	165	3.7	2.0	12
100	5.0	115	6.2	100	9.1	100	6.4	95	5.8	90	4.7	70	4.6	75	3.8	95	4.8	90	4.8	85	4.4	90	3.6	4.5	13
45	7.0	45	7.0	30	6.6	10	7.6	5	8.6	5	8.3	5	7.1	15	5.5	30	5.0	65	1.7	---	---	---	---	4.4	14
40	5.0	45	4.8	45	4.6	360	6.3	360	6.8	5	5.8	5	5.0	10	2.7	180	2.2	---	---	---	---	---	---	3.3	15
275	3.8	280	4.1	280	5.0	285	4.5	300	2.7	280	2.5	270	1.8	---	---	---	---	---	---	---	---	---	---	2.0	16
320	4.7	335	5.9	330	4.2	55	2.8	95	3.7	90	3.8	20	2.3	35	1.6	35	1.0	95	2.4	320	1.1	20	3.4	2.3	17
280	4.6	280	5.7	280	5.0	275	4.5	270	5.5	270	5.2	235	5.1	220	5.4	220	5.7	205	6.5	220	6.9	210	7.2	4.5	18
270	5.5	275	5.2	245	5.4	260	5.4	240	6.1	225	4.7	235	2.6	240	4.3	190	3.1	195	3.6	190	2.9	180	3.0	5.4	19
185	8.7	180	8.6	185	8.8	195	8.6	170	7.3	230	6.7	200	4.5	185	4.6	175	2.9	155	4.2	155	4.3	155	4.6	5.5	20
215	5.3	230	6.5	240	7.5	235	7.6	235	7.8	240	7.5	235	6.5	220	5.9	185	4.5	180	4.4	170	4.0	170	4.2	4.8	21
180	9.2	185	7.2	195	5.8	210	6.0	180	6.6	190	6.3	195	5.6	195	4.0	185	6.4	160	5.7	165	5.0	205	6.4	6.0	22
180	10.8	170	10.6	170	9.7	160	9.0	155	7.3	160	8.2	160	6.6	165	6.7	160	7.7	160	6.9	160	7.9	150	8.6	7.4	23
190	10.1	190	9.6	180	8.4	180	7.4	185	8.9	180	8.4	175	8.7	180	7.7	180	6.4	180	5.6	180	4.9	180	5.2	9.0	24
205	10.9	210	10.4	215	11.4	215	11.5	215	9.6	220	9.3	210	9.1	210	8.1	200	5.7	190	5.0	185	4.5	190	4.7	8.5	25
205	8.9	235	8.7	220	6.1	260	8.0	190	6.0	210	6.8	225	6.1	230	5.6	235	4.8	235	4.6	200	4.0	230	4.1	5.7	26
170	6.4	160	7.1	150	7.3	155	8.4	155	9.2	175	8.7	180	7.6	180	7.2	170	7.8	170	9.2	165	8.7	165	8.9	6.1	27
160	10.4	160	11.5	165	12.2	165	11.6	160	11.3	165	11.9	170	10.0	175	8.6	175	8.6	190	7.8	185	5.8	200	5.6	10.2	28
230	9.0	240	8.8	240	8.3	235	7.8	240	7.2	240	7.0	240	6.3	230	5.2	230	5.0	235	4.5	195	3.9	195	4.1	7.3	29
275	6.5	270	7.0	275	7.1	275	6.4	270	7.0	270	6.3	280	6.5	275	5.8	270	5.7	270	5.4	275	4.9	285	4.2	5.5	30
280	5.5	300	5.5	305	4.3	300	4.2	300	5.9	300	4.5	300	4.5	310	4.2	310	4.2	300	4.7	300	3.8	300	4.1	4.6	31
---	6.5	---	6.6	---	6.6	---	6.5	---	6.4	---	6.1	---	5.3	---	4.7	---	4.5	---	4.1	---	3.8	---	3.8	5.0	

JUNE, 1937

12 - 13		13 - 14		14 - 15		15 - 16		16 - 17		17 - 18		18 - 19		19 - 20		20 - 21		21 - 22		22 - 23		23 - 24		Mean	Day
o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	m/s	
310	4.8	300	5.2	315	5.1	320	4.9	320	5.4	320	5.2	330	5.6	330	4.9	340	4.7	335	3.5	360	3.5	360	3.2	4.5	1
230	5.2	240	5.5	225	6.3	220	6.7	230	6.2	225	5.2	220	6.3	220	6.0	215	5.9	210	5.4	210	6.1	215	7.1	4.3	2
225	9.6	235	10.0	230	9.9	235	9.8	235	9.5	230	8.8	235	8.7	230	8.7	230	7.2	210	7.1	215	7.4	215	7.8	8.8	3
210	8.3	210	9.2	210	10.1	205	8.8	195	7.3	190	7.6	190	7.7	190	7.4	180	6.8	185	5.4	180	5.8	205	7.0	7.8	4
280	3.1	280	3.1	280	3.8	280	3.2	290	2.2	285	2.3	275	1.7	---	---	---	---	---	---	180	1.0	65	1.2	4.1	5
200	5.7	185	5.8	195	5.1	190	5.7	180	6.7	185	6.4	185	6.3	195	5.2	200	4.8	210	4.6	215	4.8	205	4.5	4.2	6
210	9.5	200	10.1	200	10.1	200	10.8	195	10.9	200	10.1	205	9.0	210	9.1	205	8.0	215	7.4	200	5.5	220	5.4	7.7	7
285	4.6	280	4.5	280	4.5	280	5.0	280	4.7	280	3.5	280	3.5	265	2.7	270	2.1	195	1.0	60	1.1	65	1.2	3.3	8
320	4.6	320	3.8	325	5.4	330	5.8	330	4.4	330	4.4	335	4.5	325	3.6	335	3.2	---	---	---	---	---	---	2.8	9
325	5.0	325	5.4	330	6.4	335	8.0	335	9.7	340	8.3	360	7.2	30	5.8	45	4.7	45	3.7	70	2.4	60	6.0	3.8	10
50	7.6	65	4.8	70	2.7	---	---	70	1.5	90	3.0	80	2.6	175	3.2	160	3.9	150	5.2	160	5.0	150	2.9	5.5	11
300	1.4	330	3.7	275	2.6	270	1.9	285	1.1	185	1.1	---	---	---	---	---	---	---	---	---	---	---	---	1.8	12
335	4.7	325	4.8	330	4.5	305	4.1	275	4.2	280	4.1	280	3.2	280	2.2	---	---	---	---	---	---	---	---	2.4	13
275	2.8	275	3.2	280	3.0	265	1.8	275	3.8	275	3.5	280	2.9	285	2.0	285	1.6	280	1.8	275	2.6	290	2.6	2.2	14
330	5.8	330	5.6	315	5.3	325	5.2	325	6.5	330	6.2	330	5.6	335	4.8	340	3.5	335	3.6	330	2.5	330	2.6	4.3	15
275	3.2	310	4.5	315	5.7	330	6.5	355	6.3	10	6.5	15	5.7	5	6.5	10	7.4	30	6.4	20	3.7	11.5	5.0	4.3	16
20	6.1	15	7.0	25	7.8	20	8.0	15	8.0	10	7.1	10	8.3	15	8.8	10	5.7	10	6.7	15	6.9	15	5.9	6.2	17
320	6.8	315	6.7	320	7.5	325	6.8	320	5.1	280	4.2	315	5.3	325	7.1	345	9.2	345	8.7	330	8.6	335	9.7	6.3	18
340	7.9	340	8.1	340	9.0	345	9.0	345	8.2	345	8.4	345	7.5	345	7.1	15	5.3	5	4.1	360	5.0	355	5.2	6.9	19
340	6.9	330	7.5	330	7.8	330	8.2	330	7.6	335	7.6	340	7.3	340	6.8	355	4.9	350	3.5	360	3.5	30	2.2	6.3	20
275	3.6	300	4.0	310	4.5	305	4.0	310	5.2	310	4.7	320	4.5	320	3.4	330	3.5	350	2.4	340	3.6	350	4.0	3.5	21
355	9.4	345	9.4	350	10.0	350	9.5	5	9.3	350	10.1	360	8.6	5	7.6	5	7.2	5	6.9	5	6.3	5	5.4	6.7	



WIND: DIRECTION AND SPEED

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

JULY, 1937

M.S.L. + h<sub>a</sub> (height of anemometer above ground) = 17 metres + 13 metres

12 - 13		13 - 14		14 - 15		15 - 16		16 - 17		17 - 18		18 - 19		19 - 20		20 - 21		21 - 22		22 - 23		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	5.8	230	6.6	235	6.3	235	6.3	230	5.8	220	6.2	220	7.1	215	6.2	200	5.4	185	5.1	200	5.4	195	5.8	195	5.7	1	
190	9.1	195	10.6	185	9.3	185	10.0	180	9.7	180	10.0	185	9.7	190	9.6	190	7.7	185	7.0	190	5.6	345	5.1	345	8.7	2	
25	7.4	20	10.0	10	8.9	380	9.4	355	10.8	350	11.5	350	11.0	350	10.2	355	8.6	360	8.1	360	8.0	360	7.8	360	8.3	3	
275	4.2	225	5.1	240	6.3	225	7.1	220	7.7	205	7.0	205	6.9	195	6.5	190	6.7	190	7.4	195	8.2	190	8.6	190	5.8	4	
215	9.2	225	8.1	235	8.3	245	7.5	270	8.0	265	6.5	260	6.5	220	4.2	225	6.6	210	5.1	210	5.1	210	5.6	210	8.4	5	
325	6.7	320	6.1	320	6.0	325	6.2	325	6.0	330	5.0	325	4.9	330	5.3	345	4.4	335	4.0	345	4.4	340	3.0	340	4.9	6	
270	3.0	275	3.4	275	3.5	275	3.1	280	3.7	280	4.5	280	3.3	270	2.6	240	2.5	185	3.0	180	2.0	175	2.0	175	2.9	7	
185	8.5	180	7.6	175	8.1	180	7.1	190	6.4	210	6.8	230	6.0	270	4.5	295	3.8	315	4.8	325	5.2	330	6.6	330	6.5	8	
300	5.9	300	5.1	305	5.7	295	5.6	295	5.5	300	5.6	300	5.6	305	5.6	305	6.0	320	5.6	310	5.6	305	5.7	305	5.1	9	
275	3.3	270	3.1	275	3.2	275	2.5	280	2.9	235	4.3	200	3.8	185	5.2	170	7.3	170	7.8	180	6.5	180	5.7	180	4.7	10	
275	1.9	285	1.0	180	2.9	175	4.7	185	4.1	195	3.4	180	3.2	180	5.1	210	6.3	220	7.3	230	7.9	225	7.1	225	4.9	11	
230	8.5	230	8.8	235	7.6	235	6.0	245	6.6	245	6.2	235	5.1	235	5.4	235	5.6	235	4.6	200	4.5	225	4.9	225	5.4	12	
180	8.8	185	9.6	185	10.3	180	9.9	180	9.8	180	10.8	180	11.0	175	10.5	175	9.9	180	9.8	180	9.0	180	9.2	180	7.6	13	
180	8.3	190	6.0	200	3.8	190	2.3	200	1.4	280	2.7	270	3.1	270	3.1	265	3.0	225	2.7	215	3.0	220	3.0	220	6.1	14	
270	4.4	270	4.8	275	4.1	275	4.7	280	3.9	280	4.0	275	4.5	280	2.9	270	1.5	---	---	---	---	---	---	---	---	2.9	15
175	7.6	160	7.3	155	9.0	150	9.1	150	11.4	150	11.5	140	10.1	160	7.4	210	4.6	210	4.1	230	5.2	225	4.6	225	5.2	16	
165	6.4	170	8.0	180	5.2	180	4.5	170	6.8	175	8.6	170	9.8	175	9.0	170	8.6	170	7.9	165	7.7	175	8.0	175	5.6	17	
240	6.4	230	5.5	265	4.8	240	5.5	240	5.7	265	5.0	270	4.9	260	3.4	210	2.5	190	2.5	200	1.1	205	2.3	205	4.5	18	
280	4.5	275	3.7	280	4.8	280	4.2	280	4.1	280	2.8	275	2.3	285	1.5	---	---	---	---	---	---	---	---	---	---	2.7	19
195	8.0	195	8.4	190	8.8	200	9.3	195	8.5	195	8.6	195	8.2	190	9.0	190	8.9	185	9.0	195	8.5	205	9.8	205	6.6	20	
290	7.7	285	7.6	280	8.7	290	8.4	290	7.8	295	7.7	290	7.6	295	7.5	290	7.0	295	7.0	300	7.3	295	7.1	295	7.5	21	
280	4.3	280	5.1	270	4.5	240	4.1	230	3.7	200	3.5	180	4.4	170	5.1	135	5.3	140	5.6	170	7.3	200	6.5	200	5.5	22	
330	8.3	330	8.0	315	6.2	315	4.9	310	4.8	290	4.1	300	3.8	300	3.5	295	2.2	295	3.4	270	1.2	290	2.9	290	6.4	23	
315	5.2	310	5.3	300	5.6	305	6.3	305	6.7	330	6.1	325	6.4	330	6.2	325	5.3	330	5.3	315	4.0	310	3.3	310	5.1	24	
330	5.4	330	5.9	330	6.1	330	5.7	330	5.8	330	5.3	330	4.2	330	3.5	355	4.0	360	2.8	345	2.7	15	3.0	330	3.7	25	
330	3.5	330	3.6	345	4.4	340	3.6	315	3.4	335	4.2	340	4.0	340	3.3	10	2.7	345	1.5	25	1.5	---	---	---	2.6	26	
180	4.2	185	3.2	320	2.7	330	2.8	330	2.7	190	4.3	180	4.9	170	3.5	180	1.2	145	2.7	145	2.3	---	---	---	2.2	27	
140	7.7	135	6.7	140	6.5	140	6.8	125	5.7	130	6.9	130	6.6	115	7.3	110	6.1	105	5.7	90	7.1	90	8.0	90	5.8	28	
110	5.2	130	4.8	145	4.7	140	4.5	145	3.2	195	3.2	280	2.1	---	---	75	1.2	90	3.1	---	---	---	---	---	4.4	29	
180	5.1	190	6.0	185	6.6	185	7.9	190	6.7	190	5.5	180	5.2	180	5.5	160	5.3	165	1.6	---	---	---	---	---	3.2	30	
320	2.2	275	2.5	275	2.3	275	2.6	275	2.6	265	1.9	265	1.0	---	---	---	---	---	---	---	---	---	---	---	---	1.2	31
---	6.0	---	6.0	---	6.0	---	5.9	---	5.9	---	5.9	---	5.7	---	5.3	---	4.9	---	4.7	---	4.5	---	4.5	---	4.5	5.2	

AUGUST, 1937

12 - 13		13 - 14		14 - 15		15 - 16		16 - 17		17 - 18		18 - 19		19 - 20		20 - 21		21 - 22		22 - 23		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			
190	5.1	180	3.5	185	4.3	185	4.7	185	6.0	195	3.5	190	3.7	185	1.0	---	---	---	---	---	---	150	4.8	150	2.2	1	
245	5.2	245	4.2	250	3.7	245	3.5	225	2.8	285	4.5	285	2.7	290	1.1	---	---	---	---	---	---	55	1.1	130	3.7	2	
205	4.5	185	4.5	205	4.3	185	6.0	185	6.2	190	6.0	180	4.4	160	4.5	160	4.0	180	4.2	150	4.4	160	3.7	160	2.9	3	
290	1.3	320	1.7	325	3.3	330	4.0	335	4.5	345	6.3	360	5.7	355	6.3	355	4.5	360	1.7	45	1.6	30	1.6	30	4.4	4	
(275)	(2.8)	275	3.1	280	3.3	285	3.4	280	2.3	290	1.2	---	---	---	---	170	2.2	180	2.8	165	7.7	175	6.6	175	2.1	5	
270	6.1	265	4.8	270	5.0	260	5.5	265	6.5	300	6.0	330	4.2	325	4.9	330	3.5	355	1.5	315	2.5	305	2.9	305	5.8	6	
265	4.8	270	4.9	265	5.2	275	4.4	280	3.9	275	3.8	270	2.5	250	1.7	185	2.5	190	3.0	185	3.0	185	3.2	185	3.1	7	
195	7.0	190	6.9	180	7.4	180	8.4	175	7.1	180	6.8	175	6.7	175	8.0	185	6.9	205	5.7	205	7.8	200	7.0	200	5.1	8	
240	5.3	240	5.5	235	4.7	265	3.9	235	3.1	285	1.7	---	---	---	---	160	2.0	175	1.6	180	2.5	160	1.8	160	3.7	9	
205	4.7	215	4.4	215	4.2	200	4.0	235	4.3	195	3.4	180	3.6	185	3.2	180	3.8	170	3.0	170	3.9	155	3.2	155	3.1	10	
180	4.6	195	4.5	195	5.1	190	5.2	210	3.6	215	3.5	185	2.7	175	2.6	140	1.5	---	---	---	---	---	---	---	2.9	11	
200	6.1	195	6.1	185	6.9	190	6.2	190	5.5	190	4.9	185	4.5	200	3.5	180	1.7	170	4.0	---	---	---	---	---	3.4	12	
180	5.0	330	7.3	340	9.6	345	10.1	355	10.0	5	8.1	355	10.2	360	9.0	360	8.2	350	8.6	355	8.5	355	7.5	355	6.0	13	
305	3.5	290	4.0	285	3.7	280	4.6	280	5.2	265	4.0	270	2.8	285	3.1	285	1.5	270	3.3	260	2.2	180	2.3	180	4.3	14	
270	3.0	270	2.8	280	3.9	275	3.7	275	3.0	275	2.7	320	2.3	320	1.3	---	---	---	---	---	50	1.0	135	1.0	---	1.6	15
260	10.0	275	7.8	280	6.6	280	6.3	275	6.5	280	7.1	275	6.6	275	5.9	275	5.9	275	6.7	265	7.2	265	6.6	265	6.9	16	
275	4.4	280	3.5	285	3.5	240	4.8	235	5.1	235	5.0	250	3.9	235	3.9	220	3.0	190	3.2	200	3.4	195	3.7	195	4.2	17	
265	7.0	270	6.9	265	7.5	265	8.3	275	8.0	280	5.9	300	7.3	300	6.4	300	6.7	300	6.5	300	6.2	300	5.6	300	5.8	18	
330	6.7	330	6.0	325	7.1	330	7.0	335	6.6	350	5.5	350	6.0	350	5.1	355	4.0	360	3.4	360	2.4	10	2.4	10	5.1	19	
335	4.5	305	3.8	310	3.8	320	4.5	315	4.0	320	3.5	320	3.6	320	1.8	360	1.2	---	---	---	---	---	---	---	2.2	20	
285	3.5	250	5.0	240	5.1	235	5.1	230	4.3	240	3.9	225															

WIND: DIRECTION AND SPEED

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

421 VALENTIA OBSERVATORY:

Dines Pressure Tube Anemometer from Jan., 1926

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

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		
	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	
1	230	6.2	230	6.4	235	4.9	235	5.4	235	5.1	245	5.8	225	4.7	230	4.7	230	6.3	230	7.6	225	6.8	230	8.3	
2	230	4.8	245	6.8	240	6.0	240	6.2	240	7.0	240	6.4	230	5.2	230	6.4	230	6.9	225	8.8	220	8.9	225	9.9	
3	250	6.6	235	5.8	235	6.1	235	6.1	245	6.9	250	7.0	250	6.6	245	6.5	240	6.1	245	7.1	255	8.4	255	8.3	
4	220	5.1	240	4.9	230	4.7	200	3.9	210	4.9	210	5.3	195	4.7	190	4.9	195	7.1	200	8.7	195	9.1	195	10.1	
5	210	11.2	205	11.1	205	10.3	210	11.2	210	9.4	205	9.8	210	10.0	210	9.5	210	8.8	210	9.7	215	9.5	215	9.6	
6	190	8.2	195	8.5	195	8.3	195	8.0	200	7.4	190	7.6	200	8.6	210	7.8	210	7.7	205	8.5	210	8.6	215	8.4	
7	240	3.0	185	2.7	180	3.3	170	3.3	170	4.4	180	4.1	180	6.2	170	6.9	185	6.8	195	7.9	195	7.6	180	9.5	
8	335	4.4	340	4.7	360	3.5	325	4.0	360	3.3	10	3.0	10	2.8	355	3.6	350	3.1	330	3.6	330	3.1	330	3.3	
9	165	4.5	165	5.1	160	6.2	170	8.4	160	9.2	165	10.8	230	7.5	245	7.8	240	7.0	255	8.0	300	5.2	70	7.5	
10	35	3.0	25	3.5	45	1.8	50	1.3	---	---	---	---	15	1.0	15	2.3	25	2.9	25	3.6	40	4.2	35	4.2	
11	60	2.7	65	2.3	---	---	70	1.1	60	1.7	60	1.5	---	---	---	---	---	---	---	---	360	3.0	10	2.9	
12	---	---	65	1.0	165	4.0	165	4.4	175	4.5	175	4.2	220	4.0	325	5.2	335	6.4	335	5.9	325	6.0	335	6.7	
13	310	6.1	325	7.5	330	7.5	330	7.0	335	7.1	325	6.9	330	7.5	360	7.1	335	8.4	350	7.9	350	10.0	360	9.2	
14	345	4.8	345	4.2	325	4.0	310	2.6	310	2.2	290	2.2	270	4.3	230	3.5	180	4.6	220	4.5	230	6.5	230	7.2	
15	265	7.2	240	5.7	225	7.7	260	9.2	290	8.4	290	8.5	280	8.0	280	9.2	275	8.4	270	8.5	275	9.9	280	9.4	
16	240	6.9	235	7.0	215	9.2	210	8.7	255	6.2	180	5.5	40	6.0	360	5.0	15	5.7	15	8.2	20	11.5	25	11.8	
17	15	5.3	10	5.1	10	5.0	15	3.4	350	4.0	345	4.2	350	3.6	345	6.3	345	7.3	350	6.9	345	7.9	335	7.9	
18	340	8.6	345	8.4	345	9.6	345	8.5	355	6.9	360	7.0	345	7.8	345	6.0	340	6.7	335	7.0	330	7.3	315	7.2	
19	350	5.7	335	6.0	335	5.7	355	6.8	5	7.0	15	5.2	15	3.6	10	2.8	340	1.8	340	4.7	340	6.0	330	5.7	
20	355	7.1	360	7.5	360	8.0	5	7.5	5	7.1	15	6.0	15	6.5	15	6.3	355	8.5	355	9.2	5	8.4	360	8.3	
21	---	---	55	1.8	60	1.8	55	1.7	170	4.7	170	4.6	175	5.5	185	5.0	200	6.0	200	7.5	195	8.1	190	8.1	
22	230	4.4	220	3.7	220	3.6	210	3.2	180	1.5	185	1.1	45	1.5	---	---	55	1.0	70	3.8	50	6.8	55	5.2	
23	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
24	175	8.6	170	8.6	170	8.0	180	7.2	200	5.6	220	7.0	220	5.4	250	3.7	310	1.8	320	2.5	305	1.5	320	2.9	
25	---	---	---	---	60	1.8	---	---	65	1.6	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
26	135	6.2	135	6.3	150	5.4	150	6.7	155	5.1	150	4.8	150	5.7	160	5.6	175	5.3	170	6.0	175	7.4	175	7.6	
27	165	6.7	165	6.7	160	6.2	165	5.3	165	5.3	165	4.9	165	3.7	175	2.5	180	2.2	190	3.0	195	2.7	300	1.7	
28	315	2.2	310	1.6	295	2.2	310	1.9	---	---	330	1.1	---	---	---	---	---	---	---	---	---	---	---	---	
29	195	3.4	200	3.8	190	4.1	200	4.0	190	3.6	185	3.9	180	4.3	160	4.6	165	4.8	170	3.9	165	6.0	165	7.6	
30	185	7.7	180	7.1	185	6.8	190	7.6	190	6.7	200	6.9	210	6.7	220	4.2	200	2.4	340	5.8	335	8.1	340	8.8	
Mean	---	5.1	---	5.2	---	5.2	---	5.2	---	4.9	---	4.9	---	4.8	---	4.7	---	4.9	---	5.8	---	6.6	---	7.0	

422 VALENTIA OBSERVATORY: H<sub>a</sub> = 17 metres + 13 metres

Day	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s
	1	35	2.9	50	2.0	55	1.9	---	---	55	1.5	15	2.8	10	4.0	40	2.3	10	3.8	10	4.2	15	3.9	20
2	35	3.0	45	3.0	45	2.1	60	2.3	---	---	---	---	---	---	65	1.3	60	1.3	55	1.2	305	1.6	310	2.8
3	235	4.4	260	1.0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	220	1.4	265	2.8
4	70	1.0	---	---	65	1.6	60	2.0	60	3.0	60	1.6	55	2.3	35	1.2	150	1.0	185	3.1	175	6.8	175	7.3
5	145	5.9	140	5.9	130	5.3	125	5.8	135	6.1	145	5.4	150	3.6	155	5.0	165	5.8	170	5.2	160	7.7	160	6.8
6	55	1.5	---	---	55	2.3	---	---	100	1.6	---	---	60	1.3	---	---	---	---	---	---	140	2.9	120	2.4
7	55	1.2	---	---	---	---	---	---	---	---	---	---	95	2.5	70	2.9	55	3.4	45	4.5	65	4.9	40	3.0
8	---	---	---	---	---	---	---	---	---	---	---	---	55	2.2	60	1.3	90	(3.0)	90	(1.8)	100	(2.2)	65	3.7
9	85	5.7	85	5.9	85	5.5	85	5.7	80	5.7	75	7.5	85	6.5	75	5.8	70	5.8	95	8.5	95	8.0	95	6.8
10	85	5.8	60	4.8	55	5.3	65	3.8	90	4.9	95	5.3	85	4.4	90	3.6	105	4.8	106	6.2	95	6.7	95	8.2
11	65	2.7	---	---	95	2.5	85	1.8	50	1.5	---	---	---	---	---	---	20	1.6	95	3.4	300	2.0	105	2.5
12	85	5.1	85	5.2	90	5.2	90	5.4	95	4.3	75	2.8	65	2.7	90	3.0	90	2.4	105	1.5	70	3.2	80	3.6
13	65	2.8	60	2.4	55	1.5	---	---	60	2.0	60	1.2	60	2.2	60	2.4	60	2.5	---	---	---	---	---	---
14	260	3.2	235	3.7	255	4.7	260	4.7	245	4.5	255	4.2	255	5.0	265	4.9	265	4.7	250	5.1	255	6.1	265	5.9
15	310	2.8	330	2.8	310	4.2	330	4.0	335	4.9	335	1.8	---	---	---	---	330	2.5	340	2.7	285	1.5	295	2.5
16	160	1.5	165	2.4	160	3.2	180	2.7	190	2.6	170	2.8	200	2.7	170	4.0	170	4.8	170	4.8	175	4.4	180	6.1
17	175	4.6	165	5.0	175	4.5	180	3.7	170	4.7	170	4.2	160	3.0	155	2.9	160	3.8	140	4.7	155	5.6	175	5.2
18	135	3.3	130	3.6	100	4.2	105	4.8	135	4.3	130	4.9	145	4.3	155	5.8	180	2.2	175	1.7	155	5.1	180	5.5
19	165	5.9	165	7.3	170	5.9	175	5.7	170	4.8	160	3.1	130	5.3	120	3.5	115	3.6	135	3.5	150	5.2	160	3.8
20	---	---	360	5.0	5	5.0	345	5.8	360	4.6	380	4.5	5	5.2	360	5.9	15	5.6	35	5.0	35	6.6	35	6.4
21	45	2.5	55	2.2	80	1.0	85	4.2	120	1.2	---	---	85	3.6	50	1.3	45	1.4	40	1.6	45	2.6	50	2.0
22	230	4.2	250	3.9	265	5.3	190	3.4	190	3.9	190	4.9	210	6.1	210	6.9	235	8.1	210	5.9	175	3.0	175	3.3
23	350	11.2	355	12.0	350	11.6	340	12.4	340	10.2	330	9.6	335	9.0	360	10.8	360	10.7	355	11.4	355	11.3	360	12.6
24	340	4.6	315	2.3	295	2.6	325	1.2	220	1.0	---	---	60	2.4	65	1.0	55	1.4	55	1.2	340	1.5	55	1.6
25	45	8.0	60	6.9	40	8.6	40	9.0	35	8.6	25	9.0	25	9.1	15	10.4	20	10.3	15	10.6	15	10.9	10	11.4
26	15	9.4	20	9.7	10	8.9	5	7.1	15	7.2	25	7.5	10	5.9	20	7.1	360	6.7	10	5.1	15	6.1	20	6.5
27	65	2.2	90	1.7	55	1.1	---	---	100	1.0	75	4.0	80	5.2	120	1.2	90	3.4	105	2.3	85	2.1	130	1.8
28	55	2.5	65	1.6	45	2.5	50	1.0	130	3.4	125	4.4	125	5.2	120	5.3	140	6.8	145	7.4	140	7.7	145	8.0
29	185	3.5	180	3.2	180	3.2</																		

WIND: DIRECTION AND SPEED

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

M.S.L. + h<sub>a</sub> (height of anemometer above ground) = 17 metres + 13 metres

SEPTEMBER, 1937

Table with columns for time intervals (12-13 to 23-24), wind speed in m/s, and a 'Day' column. Data is organized in a grid with multiple rows per interval.

OCTOBER, 1937

Table with columns for time intervals (12-13 to 23-24), wind speed in m/s, and a 'Day' column. Data is organized in a grid with multiple rows per interval.



423 VALENTIA OBSERVATORY:

Dines Pressure Tube Anemometer from Jan., 1926

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

Table with 24 columns (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) and 31 rows (Day 1-30, Mean). Each cell contains wind speed in degrees and m/s.

424 VALENTIA OBSERVATORY: H<sub>a</sub> = 17 metres + 13 metres

Table with 24 columns (Day, 0-1, 1-2, 2-3, 3-4, 4-5, 5-6, 6-7, 7-8, 8-9, 9-10, 10-11, 11-12) and 31 rows (Day 1-31, Mean, Annual Mean, Hour G. M. T.). Each cell contains wind speed in degrees and m/s.

WIND: DIRECTION AND SPEED

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

M.S.L. + h<sub>a</sub> (height of anemometer above ground) = 17 metres + 13 metres

NOVEMBER, 1937

Table for November 1937 showing wind data for periods 12-13 to 23-24, with columns for direction and speed in m/s, and Mean/Day columns.

DECEMBER, 1937

Table for December 1937 showing wind data for periods 12-13 to 23-24, with columns for direction and speed in m/s, and Mean/Day columns.

425 VALENTIA OBSERVATORY: H<sub>a</sub> = 17 metres + 13 metres

Day	Jan.		Feb.		Mar.		Apr.		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	23	15 25	20	5 10	23	3 55	19	19 30	7	13 25	12	15 15	12	18 15	10	23 50	19	17 50	13	16 35	6	13 25	15	19 00
2	19	2 35	20	6 30	8	0 05	23	8 10	12	15 15	11	15 40	18	18 20	10	0 55	18	11 35	13	21 45	19	19 30	20	2 50
3	20	22 35	21	18 40	7	14 50	13	15 10	13	10 30	16	11 20	18	19 10	10	15 55	17	12 30	9	0 15	22	23 20	18	2 35
4	23	12 30	23	3 05	7	15 40	12	19 50	17	18 10	16	14 15	15	23 50	13	9 00	19	23 55	12	12 00	25	7 35	27	17 30
5	19	12 35	12	16 25	9	22 45	17	22 55	14	15 20	13	7 40	19	4 35	12	22 45	18	3 35	13	10 30	14	16 00	23	8 35
6	27	2 20	11	4 50	15	23 35	17	1 40	15	7 05	11	15 45	11	13 25	14	6 55	16	4 25	6	18 45	10	9 15	12	1 30
7	20	0 50	21	11 00	18	9 40	20	12 25	6	2 45	18	14 25	10	2 50	8	13 55	17	13 20	10	15 15	11	11 15	16	13 10
8	20	19 35	21	8 40	14	1 15	16	5 00	15	12 50	9	0 05	17	9 55	15	22 55	10	1 40	11	13 55	15	16 35	17	5 50
9	19	0 50	23	3 45	7	13 00	17	6 00	17	7 50	9	15 30	13	23 45	13	0 50	22	12 40	16	20 15	18	0 40	6	15 20
10	18	10 10	10	14 50	21	22 30	13	5 40	9	13 05	14	16 50	14	4 00	8	23 35	11	15 05	17	10 25	15	10 40	21	21 00
11	28	17 50	11	22 30	22	12 40	6	22 00	12	16 35	17	10 35	13	22 00	9	15 25	8	16 35	12	21 00	11	12 45	27	14 25
12	21	22 05	15	12 05	14	5 50	11	15 00	6	17 35	6	13 35	14	12 55	12	14 50	13	19 50	8	1 15	6	13 00	15	23 25
13	16	7 25	12	9 30	12	17 05	17	14 40	13	14 35	8	11 25	18	18 40	16	18 20	17	10 45	6	20 20	14	19 55	19	15 30
14	23	21 40	9	0 10	16	19 10	10	11 55	13	16 45	7	23 45	17	5 55	15	11 35	15	17 55	11	15 20	12	7 00	23	23 50
15	28	7 40	28	23 50	20	23 10	27	17 10	10	12 55	10	11 30	9	13 15	6	15 25	22	8 50	10	2 05	11	23 25	27	16 35
16	15	2 20	28	1 40	29	5 40	22	8 35	7	15 20	16	22 35	19	17 30	17	12 00	19	11 15	11	13 30	27	21 40	19	1 30
17	17	18 25	16	0 45	26	4 35	18	1 30	9	17 10	14	19 05	17	19 55	14	0 00	18	18 40	10	13 30	28	0 15	12	23 55
18	15	20 25	17	5 20	14	14 55	12	8 35	12	23 50	15	23 30	13	1 45	14	18 10	15	5 40	12	22 20	14	20 45	13	9 35
19	21	14 30	22	6 30	13	7 40	14	12 20	17	16 05	13	14 35	9	10 55	11	5 10	14	19 25	12	2 55	26	0 55	12	23 40
20	29	10 20	17	4 05	17	21 50	26	9 15	15	15 45	12	15 45	18	23 55	7	15 30	15	10 40	12	9 40	7	3 55	28	8 10
21	31	14 30	18	12 30	20	8 55	18	16 05	13	16 55	9	16 40	16	15 55	8	13 25	20	15 45	8	23 40	9	19 40	15	14 40
22	20	16 40	19	10 30	15	22 35	15	9 05	17	13 40	17	14 00	16	6 20	10	7 45	11	10 10	17	8 00	10	23 20	23	8 20
23	31	20 40	23	19 45	14	0 25	7	10 20	17	12 30	13	15 20	23	6 45	9	17 15	13	20 35	24	1 25	21	16 15	22	19 00
24	25	4 50	18	8 15	13	16 00	17	14 00	21	6 25	12	16 15	13	5 40	17	12 55	13	0 15	11	23 55	16	3 15	23	8 40
25	14	23 35	26	11 50	12	15 25	12	2 35	22	6 50	8	14 45	9	16 05	13	3 25	13	22 15	18	11 45	10	23 55	19	3 40
26	24	3 55	29	18 25	8	15 45	9	10 20	15	15 10	9	17 30	11	10 25	7	12 05	17	21 20	16	1 25	21	16 50	13	5 10
27	21	17 10	28	20 45	9	14 05	11	12 20	17	16 00	10	8 20	9	19 05	8	15 45	11	0 35	10	6 40	19	2 20	9	18 15
28	15	0 30	30	9 30	13	23 25	10	14 15	20	15 25	17	11 05	15	12 45	9	9 35	7	13 50	23	17 05	19	12 00	8	14 30
29	19	18 10	-	-	21	22 10	6	13 40	17	10 00	15	8 15	15	1 55	15	21 05	17	20 55	13	21 40	14	22 55	12	5 20
30	22	5 05	-	-	34	13 15	12	18 55	11	13 20	15	4 45	12	15 25	11	0 20	15	10 50	15	0 35	20	5 40	10	10 40
31	21	21 30	-	-	21	0 15	-	-	12	5 40	-	-	5	11 50	22	22 45	-	-	13	3 20	-	-	9	2 00

DISTRIBUTION OF WIND SPEED: EXTREME VELOCITIES AS RECORDED BY THE DINES PRESSURE TUBE ANEMOMETER

426 VALENTIA OBSERVATORY: H<sub>a</sub> = 17 metres + 13 metres

	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	Hour Ended	Speed	Dates	
Jan. ..	-	hr	19	97	451	159	37	0	145	17	23 21	31	21 14 30	
Feb. ..	-	-	14	103	329	177	63	0	340	16	27 20	30	28 9 30	
Mar. ..	16th,30th	5	7	52	300	274	113	0	160	19	30 14	34	30 13 15	
Apr. ..	-	-	6	31	300	283	106	0	60	14	2 9	27	15 17 10	
May ..	-	-	4	23	297	311	113	0	165	12	28 15	22	25 6 50	
June ..	-	-	1	2	291	342	85	0	195	11	7 17	19	7 14 25	
July ..	-	-	5	10	315	345	74	0	360	12	23 8	23	23 6 45	
Aug. ..	-	-	1	3	180	410	151	0	190	12	31 22	22	31 22 45	
Sept. ..	-	-	4	10	410	235	65	0	25	12	16 12	22	9 12 40	
Oct. ..	-	-	3	20	199	403	122	0	355	14	23 15	24	23 1 25	
Nov. ..	-	-	11	46	284	296	94	0	170	14	4 8	28	17 0 15	
Dec. ..	-	-	11	58	348	265	73	0	140	14	20 10	28	20 8 10	
Year ..	2 days	5	86	455	3704	3500	1096	0	160	19	Mar. 30 14	34	Mar. 30 13 15	



429 VALENTIA OBSERVATORY

Day	Cloud Forms			Cloud Amount (All Forms)					Visibility					Precipitation					Remarks on the Weather of the Day			
	7h	13h	18h	7h	9h	13h	15h	18h	21h	7h	9h	13h	15h	18h	21h	7h	9h	13h		15h	18h	21h
1	Cb:Sc:Ac	Cb:Cu:Sc	Cb:Cu	9	7	4	4	3	7	1	1	1	1	1	1	...	...	...	...	...	...	bc, cp <sup>0</sup> , bc a: bcp <sup>0</sup> , cp <sup>0</sup> q, bc p: bc, cp <sup>0</sup> n.
2	St	St	St:Fh	10	10	10	10	10	10	I	h	I	I	I	I	d <sub>0</sub>	...	d <sub>0</sub>	d <sub>0</sub>	d <sub>0</sub>	d <sub>0</sub>	cp <sup>0</sup> , oidd <sub>0</sub> a: oia <sub>0</sub> , c, oi <sup>0</sup> p: oi <sup>0</sup> , oia <sub>0</sub> n.
3	St:Sc	St	St:Sc	10	9	10	10	10	10	J	J	I	I	h	h	...	...	...	...	...	...	oi <sup>0</sup> , cp <sup>0</sup> , oia <sub>0</sub> a: oia <sub>0</sub> , c, oi <sup>0</sup> p: oi <sup>0</sup> n.
4	St:Fh	Cb:Fh:Sc	Cb:Fh	10	10	9	3	8	6	J	J	I	1	1	1	...	...	...	...	...	...	c, oi <sup>0</sup> q, cp <sup>0</sup> a: c, bc, cp <sup>0</sup> p: cp <sup>0</sup> n.
5	Cb:Sc:Ac:Cs	St:Fh:As	St:Fh:Sc	7	9	10	10	10	10	1	1	k	1	J	I	...	...	...	...	...	...	cp <sup>0</sup> a: c: ci <sup>0</sup> q, cp <sup>0</sup> p: c, o from 19h n.
6	St	St	St:Sc	10	10	10	10	10	4	J	J	I	J	J	k	...	...	...	...	...	...	ci <sup>0</sup> , oia <sub>0</sub> a: oia <sub>0</sub> , c, ci <sup>0</sup> p: cp <sup>0</sup> , bc n.
7	Cu:Sc	Fs:Cu:Sc	Sc	3	2	6	1	9	4	1	1	1	m	1	1	...	...	...	...	...	...	cp <sup>0</sup> , bc, b a: bc, b <sup>0</sup> , c p: c, bc, c n.
8	St:Fh	St:Fh	St:Fh	10	10	10	10	10	10	J	J	J	k	J	k	d <sub>0</sub>	d <sub>0</sub>	...	...	...	...	ci <sup>0</sup> , oia <sub>0</sub> a: c, oia <sub>0</sub> , c, ci <sup>0</sup> p: ci <sup>0</sup> , c n.
9	St:Sc	St:Fh	Fs:Sc	10	10	10	9	4	2	J	J	J	1	1	1	d <sub>0</sub>	d <sub>0</sub>	...	...	...	...	cid <sub>0</sub> , oia <sub>0</sub> a: c, oi <sup>0</sup> p: oia <sub>0</sub> , then bc, b, c p and n.
10	Sc	Fh:Sc	St:Sc:Ac:As	7	9	10	9	9	10	1	1	1	k	k	k	...	...	...	...	...	...	c, bc, cp <sup>0</sup> a: cp <sup>0</sup> , c p: c, bc, c n.
11	St:Sc	St:Fh	St:Fh	10	10	10	10	10	10	J	k	J	J	J	I	...	...	...	...	...	...	c, c <sup>0</sup> , c a: cid <sub>0</sub> , ci <sup>0</sup> p: ci <sup>0</sup> p, o <sup>0</sup> from 20h n.
12	St:Sc	St:Fh:Ac:As	St:Fh	8	8	9	9	10	9	J	k	1	k	k	k	...	...	...	...	...	...	o <sup>0</sup> , cp <sup>0</sup> , bc a: cp <sup>0</sup> , ci <sup>0</sup> p: ci <sup>0</sup> , c n.
13	Fh:Sc	Cu:Ac:As	Cb:Fh	9	7	6	1	4	2	1	1	m	m	m	m	...	...	...	...	...	...	bc, cp <sup>0</sup> , bc a: bc, b <sup>0</sup> , bcp <sup>0</sup> p: bc, cp <sup>0</sup> , b <sup>0</sup> n.
14	Cu:Sc	Cu:Sc	St:Sc	2	4	4	7	10	9	1	m	m	m	1	1	...	...	...	...	...	...	b <sup>0</sup> , bc <sup>0</sup> , c a: bc <sup>0</sup> , cp <sup>0</sup> , c p: cloudy n.
15	Fh	St:Fh	Fh:As	10	10	10	10	10	9	I	J	J	k	J	k	...	...	...	...	...	...	c, o <sup>0</sup> q, cp <sup>0</sup> a: cp <sup>0</sup> , c p: 4h to 18h, then ci <sup>0</sup> , cp <sup>0</sup> n.
16	Sc	Cb:Cu	St:Sc	3	6	3	3	9	6	1	1	1	1	1	1	...	...	...	...	...	...	cp <sup>0</sup> , bc, c a: cp <sup>0</sup> , bc, c p: cp <sup>0</sup> , bc n.
17	St:Sc	St:Fh:As	Cb	8	9	10	10	3	5	k	J	J	J	k	1	...	...	...	...	...	...	bc, cp <sup>0</sup> , o <sup>0</sup> 11h to 16h, then cp <sup>0</sup> , bc n.
18	St:Sc	Cu	Cb:Fh:Sc	10	3	3	6	9	8	1	1	m	m	1	1	...	...	...	...	...	...	bc, ci <sup>0</sup> , cp <sup>0</sup> , bc a: bc, cp <sup>0</sup> , cp <sup>0</sup> p: cp <sup>0</sup> , c n.
19	Cb	Cb:Fh:Ac	Cb:Fh	2	7	7	7	9	4	1	J	1	J	J	k	...	...	...	...	...	...	cp <sup>0</sup> , bc, cp <sup>0</sup> a: cp <sup>0</sup> q, bcp <sup>0</sup> p: cp <sup>0</sup> , bc n.
20	St:As	Fh	St:Fh	10	10	10	10	9	5	k	h	h	I	k	k	...	...	...	...	...	...	bc, ci <sup>0</sup> , o <sup>0</sup> 8h to 15h, then cp <sup>0</sup> , bc.
21	Cu:Sc	St:Fh:As	St:Fh:As	2	3	10	10	10	10	1	1	J	k	I	k	...	...	...	...	...	...	cp <sup>0</sup> , bc a: c <sup>0</sup> , ci <sup>0</sup> p: ci <sup>0</sup> , cp <sup>0</sup> n.
22	St:Sc	Cb:Fh:As:Ac	Cu:Fc	8	9	9	9	3	7	k	k	1	1	1	1	...	...	...	...	...	...	ci <sup>0</sup> , cp <sup>0</sup> q a: c k p a, cp <sup>0</sup> , bc p: cp <sup>0</sup> k n.
23	Cb	Cu:Sc:Ac	St:Fh:Sc:As	3	4	6	9	10	10	1	1	1	1	1	h	...	...	...	...	...	...	cp <sup>0</sup> , bc, ci <sup>0</sup> a: bc, cp <sup>0</sup> , c p: c, c <sup>0</sup> a n.
24	Fh	Cb:Sc:Ac:Ci	Cb:Sc	10	9	7	4	7	10	I	1	1	1	1	J	...	...	...	...	...	...	ci <sup>0</sup> , o <sup>0</sup> 4h to 8h, cp <sup>0</sup> a: cp <sup>0</sup> , bcp <sup>0</sup> p: cp <sup>0</sup> .
25	St:Sc	St:Fh:As	Cb:Sc	8	9	10	4	2	1	k	k	k	m	1	1	...	...	...	...	...	...	cp <sup>0</sup> , ci <sup>0</sup> a: ci <sup>0</sup> , bc p: bc, b, c n.
26	St:Fh:As	Cu:Sc:Ac:As	Cb:Fh:Ns	10	10	9	9	10	10	J	1	m	1	k	h	...	...	...	...	...	...	c, ci <sup>0</sup> , ci <sup>0</sup> k, c a: c, cp <sup>0</sup> p: cp <sup>0</sup> , c <sup>0</sup> from 20h n.
27	Fh:Ns	Fh:Sc	Fh:Sc	10	10	10	10	10	9	J	J	k	k	J	k	...	...	...	...	...	...	o <sup>0</sup> to 12h a: ci <sup>0</sup> , o <sup>0</sup> p: o <sup>0</sup> , c n.
28	Fh:Sc	St:Sc	St:Fh:As	10	9	10	10	10	10	J	J	J	I	I	I	...	...	...	...	...	...	cloudy a: c, c <sup>0</sup> p: ci <sup>0</sup> n.
29	St:Fh:As	St:Sc	St:Sc	10	10	10	10	10	10	J	k	k	k	k	k	...	...	...	...	...	...	ci <sup>0</sup> , c a: c, ci <sup>0</sup> p: c, c <sup>0</sup> n.
30	St:Sc:As	Cb:Fh:Sc:Ac	Fh:Sc:As	10	10	9	9	10	9	k	J	k	k	J	J	...	...	...	...	...	...	c <sup>0</sup> , ci <sup>0</sup> , c a: cp <sup>0</sup> , c <sup>0</sup> 17h to 22h, then cid <sub>0</sub> .
31	St:Sc	Cb:Fh:Sc	Cb	9	9	9	8	3	9	k	k	k	k	k	k	...	...	...	...	...	...	c, bc, cp <sup>0</sup> a: cp <sup>0</sup> , bc p: cp <sup>0</sup> n.

Mean Cloud Am't				8-0	8-18-4	7-8	8-1	7-6														
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430 VALENTIA OBSERVATORY

Day	Cloud Forms			Cloud Amount (All Forms)					Visibility					Precipitation					Remarks on the Weather of the Day			
	7h	13h	18h	7h	9h	13h	15h	18h	21h	7h	9h	13h	15h	18h	21h	7h	9h	13h		15h	18h	21h
1	St:Sc	Cu:Sc	Cu:Sc:Ac:Ci	9	9	7	6	2	4	k	1	1	1	1	1	...	...	...	...	...	...	ci <sup>0</sup> , cp <sup>0</sup> , bc a: c, bc p: bc, b n.
2	St:Fh	St	St	10	10	10	10	10	9	I	G	I	I	G	J	d	d	d	d	d	d	oi <sup>0</sup> , od, o <sup>0</sup> a: od, o <sup>0</sup> , oia <sub>0</sub> p: oi <sup>0</sup> , oia <sub>0</sub> , bc n.
3	St	St:Sc	St:Cb:Fh	10	10	8	9	9	9	J	J	k	k	J	k	...	...	...	...	...	...	oia <sub>0</sub> , oi <sup>0</sup> , ci <sup>0</sup> a: c, cp <sup>0</sup> p: cp <sup>0</sup> , o <sup>0</sup> from 21h n.
4	Cb	Cu:Sc:Ac:Ci	Cu:Sc:Ac:Ci	3	2	2	3	1	2	k	1	k	k	k	k	...	...	...	...	...	...	cp <sup>0</sup> q, cp <sup>0</sup> , bc a: bc, bc, b <sup>0</sup> , bc, b n.
5	Sc	Cu:Sc:Ac:Ci	Cu:Sc	5	7	6	2	1	1	k	1	m	m	1	1	...	...	...	...	...	...	b <sup>0</sup> , bc, c a: bc, p <sup>0</sup> , b p: b, bc n.
6	St:Sc	Sc:Ci	Sc:Ca:Ci	8	9	6	8	9	9	1	m	m	m	m	m	...	...	...	...	...	...	bc, c <sup>0</sup> a: bcy <sup>0</sup> , c <sup>0</sup> p: c <sup>0</sup> , ci <sup>0</sup> n.
7	Fh:Ns	St:As	St:Fh:As	10	10	10	10	10	9	k	k	k	k	J	J	...	...	...	...	...	...	ci <sup>0</sup> , c <sup>0</sup> , c a: ci <sup>0</sup> , c <sup>0</sup> 14h to 21h, then cp <sup>0</sup> .
8	St:Cb:Fh:As	Cu	Cb:Cu	10	9	4	7	4	3	k	J	1	m	1	1	...	...	...	...	...	...	cp <sup>0</sup> q, cp <sup>0</sup> a: bc, cp <sup>0</sup> , bc p: bc, cp <sup>0</sup> n.
9	St:Sc:Ac	Cu:Sc	St:Sc	3	7	6	9	4	3	1	k	1	1	1	1	...	...	...	...	...	...	cp <sup>0</sup> q, cp <sup>0</sup> , c, cp <sup>0</sup> a: bc, b <sup>0</sup> , bc p: bc, cp <sup>0</sup> , bc n.
10	Cu:Sc	St:Sc:Ac:Cs	Cu:Sc:Ac:Cs	7	9	9	9	10	7	1	m	m	1	1	k	...	...	...	...	...	...	bc, bc <sup>0</sup> , c a: cloudy p and n.
11	Sc:Ac	Sc:Ac	Sc:Ac	9	9	9	9	9	10	1	1	1	m	1	k	...	...	...	...	...	...	cp <sup>0</sup> , c a: cloudy p: c, cp <sup>0</sup> n.
12	St:Fh	St:Sc	St:Sc	10	10	10	9	10	10	h	I	k	k	1	k	...	...	...	...	...	...	c, o <sup>0</sup> 4h to 9h, oia <sub>0</sub> a: c, bc, c p: cloudy n.
13	St	St	St	10	10	10	10	10	10	h	G	h	h	h	G	d	d	d	d	d	d	c, o <sup>0</sup> , od a: oia <sub>0</sub> , o <sup>0</sup> p: oia <sub>0</sub> , c n.
14	St	St:Sc:Ac	St:Sc:As	10	9	9	10	10	10	I	J	1	1	1	k	...	...	...	...	...	...	oi <sup>0</sup> , oia <sub>0</sub> , cp <sup>0</sup> a: c, cp <sup>0</sup> p: c, oia <sub>0</sub> , c n.
15	St:Fh:Ns	St:Fh	Cb:Fh:Sc:Ci	10	10	10	9	8	7	k	h	k	h	k	k	...	...	...	...	...	...	cp <sup>0</sup> , o <sup>0</sup> 1h to 14h, cq, cp <sup>0</sup> a and p: c p a q n.
16	St:Cb:Fh	Cb:Cu	Cb:Sc	9	9	7	4	4	3	k	k	1	k	1	1	...	...	...	...	...	...	cp <sup>0</sup> q, cp <sup>0</sup> k, c a: cp <sup>0</sup> q, bcp <sup>0</sup> p: cp <sup>0</sup> , bc, c n.
17	St:Sc:Ac:As	St:Sc:As	St	10	9	10	10	10	10	G	J	k	J	J	G	...	...	...	...	...	...	cloudy a: cp <sup>0</sup> , o <sup>0</sup> , od <sub>0</sub> , od <sub>0</sub> p: oi <sup>0</sup> , od <sub>0</sub> n.
18	St	St:Fh:As	St:Sc:As	10	10	10	10	10	10	G	G	J	J	J	J	d	d	...	...	...	...	o <sup>0</sup> , od <sub>0</sub> , cp <sup>0</sup> a: c, ci <sup>0</sup> p: ci <sup>0</sup> , c n.
19	St:Fh	St:Sc:Ac	St:Sc	10	10	9	9	8	h	I	k	k	1	k	...	...	...	...	...	...	...	c, o <sup>0</sup> , ci <sup>0</sup> , od <sub>0</sub> a: c, cp <sup>0</sup> p: cp <sup>0</sup> , bc n.
20	St:Cb:Sc	St:Sc	St:Cu:Sc:Ac	9	9	9	7	9	3	k	k	k	k	k	k	...	...	...	...	...	...	bc, cp <sup>0</sup> , c a: cloudy p: c, bc n.
21	St:Fh:Ns	St:Fh:Ac:As	St:Sc	10	10	10	10	10	10	k	G	J	h	G	h	...	...	...	...	...	...	bc, c <sup>0</sup> , ci <sup>0</sup> a: c, c <sup>0</sup> od, od <sub>0</sub> p: oia <sub>0</sub> , o <sup>0</sup> from 20h n.
22	Cb:Cu:Sc	Cb:Cu:Ac	Cu:Ac:Cs:Ci	9	1	4	5	7	9	k	1	m	1	1	1	...	...	...	...	...	...	o <sup>0</sup> , ci <sup>0&lt;/</sup>

431 VALENTIA OBSERVATORY

MARCH, 1937

Table for March 1937 with columns for Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (All Forms), Visibility, Precipitation, and Remarks on the Weather of the Day. Includes a summary row for Mean Cloud Am't.

432 VALENTIA OBSERVATORY

APRIL, 1937

Table for April 1937 with columns for Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (All Forms), Visibility, Precipitation, and Remarks on the Weather of the Day. Includes a summary row for Mean Cloud Am't.

433 VALENTIA OBSERVATORY

Table for May 1937 observations. 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 with various cloud codes and weather notes.

434 VALENTIA OBSERVATORY

JUNE, 1937

Table for June 1937 observations. 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 with various cloud codes and weather notes.

435 VALENTIA OBSERVATORY

Table for July 1937 observations at Valentia Observatory. 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 1-31 show various cloud types like St, Cu, and visibility conditions.

436 VALENTIA OBSERVATORY

Table for August 1937 observations at Valentia Observatory. 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 1-31 show various cloud types like Ci, Cu, and visibility conditions.



437 VALENTIA OBSERVATORY

Day	Cloud Forms			Cloud Amount (All Forms)					Visibility					Precipitation					Remarks on the Weather of the Day				
	7h	13h	18h	7h	9h	13h	15h	18h	21h	7h	9h	13h	15h	18h	21h	7h	9h	13h		15h	18h	21h	
1	St:Ac:As:Cl	Cu:Sc:Ac	St:Sc:As	9	8	9	9	10	10	1	1	1	1	1	1	J							ci <sup>0</sup> , bc, cp <sup>0</sup> : a: bc, c p: ci <sup>0</sup> , o <sup>0</sup> 20h to 23h, c n.
2	Cb:Cu:Ac	Cu:Sc:Ac	Cu:Sc:Ac	3	2	5	6	3	4	1	1	1	1	1	1	I							bc, cp <sup>0</sup> : a: bcp <sup>0</sup> , bc p: bc, bcp <sup>0</sup> n.
3	Cu:Fu:Sc	Cu:Sc	St:Cu:Sc	9	3	3	2	8	7	1	1	1	1	1	1	J							cp <sup>0</sup> , bc a: bc, cp <sup>0</sup> p: cloudy n.
4	St:Sc:Ac	St:Sc	Fs:Fu:Ns	9	9	9	10	10	10	1	1	1	1	1	1	J							cp <sup>0</sup> , c a: c <sup>0</sup> , ci <sup>0</sup> p: ci <sup>0</sup> , o <sup>0</sup> n.
5	Fs:Sc:As	St:Sc	St:Sc:Ac:As	10	10	10	9	9	10	1	1	1	1	1	1	J							cloudy a: c, cp <sup>0</sup> p: cp <sup>0</sup> , c n.
6	St:Sc	St:Sc	St:Sc	10	8	10	10	9	9	h	k	J	J	k	k	d <sub>0</sub>							cid <sub>0</sub> , c a: cid <sub>0</sub> , c p: c, bc, c n.
7	St:Sc	St:Sc	St:Sc:Ac	9	10	10	10	9	8	k	k	k	I	k	l								cloudy a: c, c <sup>0</sup> , c p: c, bc n.
8	Cu:Cl	Cu:Sc:Cl	Fc:Cs:Cl	4	4	4	6	9	10	1	1	1	1	1	1	m							bc, c, bc a: bc, c p: c, c <sup>0</sup> n.
9	Fu	St:Sc	St:Cu:Sc	10	10	7	8	7	1	h	h	l	1	m	m								o <sup>0</sup> 20 <sup>0</sup> to 10h, ci <sup>0</sup> a: c, bc, c p: b, bc n.
10	Cu:Sc:Ac	Cu:Sc:Ac	Cu:Sc:Ac	9	8	8	8	2	8	m	m	m	m	m	m								bc, c a: c, bc p: bc, c, bc n.
11	Cu:Sc:Cs:Cl	Cu:Sc:Ac	Fc:Ac:Cs:Cl	6	3	8	4	2	5	m	m	m	m	m	m								bc, bc a: c, b, bc p: bc, c n.
12	St	St:Ac	St:Ac:Cs:Cl	10	10	9	10	9	10	I	J	k	k	k	k								bc, c <sup>0</sup> 5h to 9h, c a: c, cp <sup>0</sup> p: cp <sup>0</sup> , c n.
13	St:Cb:Fu:Cs	Cb:Cu	Cu:Ac	8	9	3	5	3	7	k	k	m	1	1	1								cp <sup>0</sup> , bc a: bc, bcp <sup>0</sup> , bc p: bc, c, bc n.
14	St:Fu:As	St:Fu	St:Fu:Sc	10	10	10	10	10	9	J	I	h	k	J	J								bc, c <sup>0</sup> 6h to 10h, od <sub>0</sub> a: c <sup>0</sup> , cp <sup>0</sup> p: cp <sup>0</sup> , c n.
15	Fu:Sc	Cb:Fu:Ac	Cb:Cu:Fu:Ac	9	6	9	9	9	10	k	1	1	1	1	1								ci <sup>0</sup> , cp <sup>0</sup> , cp <sup>0</sup> a: cp <sup>0</sup> p: cp <sup>0</sup> , c p <sup>0</sup> n.
16	St:Fu:Sc	Fu:Sc	Cu:Ac:Cl	9	9	9	8	4	5	k	k	1	1	1	1								c <sup>0</sup> to 6h, cp <sup>0</sup> , ci <sup>0</sup> a: c, bc p: bc n.
17	Fu:Sc	Cu:Fu:Sc:Ac	Cu:Sc	8	10	9	9	8	8	k	J	k	1	k	k								bc, cp <sup>0</sup> , ci <sup>0</sup> a: c, cp <sup>0</sup> p: cp <sup>0</sup> n.
18	Fu:Sc	St:Cu:Sc	St:Cu:Sc:Ac	9	7	8	6	9	7	k	k	1	1	1	1								c <sup>0</sup> , c, bc a: c, bc p: bc, cp <sup>0</sup> , bc n.
19	Cu:Fu:Sc	Cu:Sc:Ac	Cu:Fu:Sc	9	1	8	6	8	9	1	1	m	m	J	k								bc, cp <sup>0</sup> , bc, cp <sup>0</sup> , bc, cp <sup>0</sup> a: c, bc, cp <sup>0</sup> p: cp <sup>0</sup> n.
20	Cu	St:Cu:Sc	Cu:Cl	3	5	9	8	9	8	m	1	m	1	1	1								cp <sup>0</sup> , bc, cp <sup>0</sup> a: cp <sup>0</sup> , bc, c p: c, bc, c n.
21	St:Sc:Ac:As	St:Fu	St:Fu	10	10	10	10	10	10	1	1	I	G	G	I								bc, ci <sup>0</sup> a: c <sup>0</sup> 13h to 18h p: o, oi <sup>0</sup> n.
22	St	Cu:Sc	Fs:Sc:Cl	8	1	5	9	6	8	J	m	1	1	1	1								oi <sup>0</sup> , o <sup>0</sup> , bc a: bc, c, bc p: bc, c n.
23	St:Sc	St:Sc	St	9	3	9	10	10	10	I	k	k	k	k	I								c, cf, bc, c a: cid <sub>0</sub> , o p: o <sup>0</sup> , od n.
24	St	St:Sc	Sc:Ac	10	10	10	9	2	6	G	h	1	k	1	1								oi <sup>0</sup> , o <sup>0</sup> 1h to 10h, cp <sup>0</sup> a: ci <sup>0</sup> , bc p: bc, c n.
25	Cu:Sc	Cu:Ac:As:Cl	St:Cu:Sc	3	3	9	8	9	9	1	1	1	1	1	1								c, bc, c a: c, bc, c p: c, bc, c n.
26	Cu:Fu:Sc:As	St:Fu:Ns	St:Fu:As	10	9	10	10	10	10	1	1	J	k	J	J								c, ci <sup>0</sup> a: c <sup>0</sup> , ci <sup>0</sup> , c p: ci <sup>0</sup> , o <sup>0</sup> n.
27	St:Fu:As	St	Cu	10	10	10	9	1	6	h	G	h	m	1	1								o <sup>0</sup> to 10h, om <sub>0</sub> a: od, bc, b p: bc, bc n.
28	St:Sc	Cu:Sc:Cl	Fs:Sc	9	5	8	8	10	10	m	m	m	m	m	m								cp <sup>0</sup> , bc a: c, bc, c p: cloudy n.
29	St:Sc:Ac	St:Sc	St:Sc:As	9	10	9	8	10	10	1	k	k	1	m	k								c, cid <sub>0</sub> , c a: cloudy p: cp <sup>0</sup> , ci <sup>0</sup> n.
30	St:Fu	St:Fu	Fs:Cu:Ac:Cl	10	10	10	9	8	6	J	I	J	1	1	1								c, c <sup>0</sup> , ci <sup>0</sup> a: cp <sup>0</sup> , c p: c, bc n.
Mean Cloud Am't				8	4	7	1	8	2	8	1	7	4	8	0								

438 VALENTIA OBSERVATORY

Day	Cloud Forms			Cloud Amount (All Forms)					Visibility					Precipitation					Remarks on the Weather of the Day				
	7h	13h	18h	7h	9h	13h	15h	18h	21h	7h	9h	13h	15h	18h	21h	7h	9h	13h		15h	18h	21h	
1	St:Sc:As	St:Cu:Sc:As	St:Cu:Sc:Ac	10	10	9	9	9	2	1	1	1	1	1	1								bc, c a: cp <sup>0</sup> p: c, bc n.
2	Cu:Sc	Fc:Sc:Cl	Ac:cl:Cl	6	2	6	9	6	10	1	1	m	m	m	I								b, bc, b <sub>0</sub> a: bc, c <sub>0</sub> , bc p: bc, cp <sup>0</sup> n.
3	Cu	Cu	Cu:Cl	1	1	2	2	4	0	I	J	k	k	J	I								bc, bc, bc a: bc p: bc, bm <sup>0</sup> n.
4	Cl	Cu:Fc:Cl	Fc:Cl	3	2	4	3	3	1	1	1	1	1	1	1								bc, bc a: bc, b p: bc, b n.
5	Fc:Cu:Cl	Fc:Ac:Cl	Fc:Ac:Cl	8	9	9	9	1	8	1	1	m	m	m	1								b, bc, c a: c <sub>0</sub> , c p: c, n.
6	Cu:Ac:Cl	Fs:Sc:Ac:As	Fs:Sc:Ns	9	10	10	10	10	10	k	k	k	k	J	I								c, id <sup>0</sup> , c a: c <sup>0</sup> , c <sup>0</sup> , c <sup>0</sup> , p: c <sup>0</sup> m <sup>0</sup> n.
7	St:Sc	Cu:Sc	Fc:Sc:Ac	9	5	1	5	1	5	k	J	k	k	k	J								c <sup>0</sup> , c, bc, b a: b, bc, b p: b, bc, c n.
8	St:Sc:As	Cu:Sc:Ac	Cu:Sc:Ac	10	10	3	8	3	8	J	k	k	k	J	J								bc, c, o, c, bc a: bc, c, cy, bc p: bc, c, bc n.
9	Sc:Cl	Sc	St:Sc:Ac	7	8	9	10	10	9	k	k	J	J	J	J								bc, c a: c, o, c p: c n.
10	St:Sc	Cu:Sc:Ac	Sc	6	3	3	2	2	1	k	k	k	k	k	k								c, bc, c, bc a: bc p: bc, b, bc, b n.
11	Sc:Cl	Cl	Ac:Cl	2	6	8	9	9	1	k	1	k	1	1	1								b, bc, bc, c a: c p: c, bc, b n.
12	Sc	Sc	Sc	9	9	10	9	7	1	1	1	1	k	k	k								b, bc, c, o a: o, c p: c, bc n.
13	Sc	Cu:Cs:Cl	Sc	10	9	9	9	10	8	k	k	k	k	k	J								bc, c, o, c a: c, o p: o, c, o, c n.
14	St:Sc	St:Sc	St:Sc:Ac:cl	10	9	10	9	9	9	k	k	k	J	J	d <sub>0</sub>								c, id <sup>0</sup> , c, id <sup>0</sup> a: cid <sup>0</sup> , c p: c, id <sup>0</sup> , c, id <sup>0</sup> , c n.
15	St:Sc	St:Sc	St:Sc	10	10	10	10	10	1	1	1	1	1	1	1								c, id <sup>0</sup> , c a: c p: c n.
16	St:Sc	Cu:Sc:Cl	St:Sc	9	9	8	9	10	5	J	1	1	k	k	k								c, id <sup>0</sup> , c a: c, bc, c p: c, bc, c n.
17	St:Sc	Sc	Sc	10	9	10	10	9	9	1	1	1	1	1	1								c, o a: o, c p: c n.
18	St:Sc	Sc	St:Sc:Cl	9	10	6	6	9	9	k	k	k	k	J	J								c, bc a: bc, c p: c n.
19	St:Sc	St:Sc	St:Sc	10	10	9	9	10	10	k	k	k	k	J	h								c a: c p: c, o, om <sup>0</sup> , ir <sup>0</sup> n.
20	St:Fu:Sc	St:Sc	St:Sc	10	10	9	10	9	8	k	J	1	1	1	1								ir <sup>0</sup> , c, id <sup>0</sup> , c a: c p: c n.
21	St:Sc	Sc:As:Cs:Cl	St:As:Ac	9	9	9	9	10	8	1	1	1	1	1	1								c a: c p: c, om <sup>0</sup> , ci <sup>0</sup> n.
22	Cu:Sc:Cl	Cb:Fu:As:Ac	Fu:Ns	5	10	6	9	10	10	1	J	1	1	1	1								i <sup>0</sup> , i <sup>0</sup> , p <sup>0</sup> , bcp <sup>0</sup> , c <sup>0</sup> , o <sup>0</sup> a: c <sup>0</sup> , c <sup>0</sup> , c <sup>0</sup> p: c <sup>0</sup> n.
23	Cb:Cu	Cb:Fu	Cb:Fu:Sc	5	2	9	6	5	1	1	1	k	k	1	1								cp <sup>0</sup> , bcp <sup>0</sup> , a: bcp <sup>0</sup> p: bcp <sup>0</sup> , b, bc, cp <sup>0</sup> , bc n.
24	Fu:Sc:As	St:Cu:Sc:As	St:Sc	10	10	8	8	10	10	k	m	1	1	1	1								bc, cp <sup>0</sup> , c, ci <sup>0</sup> , cp <sup>0</sup> , c <sup>0</sup> a: cp <sup>0</sup> , c p: c n.
25	St:As	St:Fu:As	St:Fu:Sc:As	10	10	10	10	10	9	1	1	1	1	1	1								c a: cp <sup>0</sup> , p: p <sup>0</sup> , i <sup>0</sup> n.
26	Fu:Sc:Cl	Cu:Sc:Ac:Cl	Cu:Sc:Ac:Cl	9	9	7	4	7	4	k	1	m	m	1	1								c, p <sup>0</sup> , i <sup>0</sup> , c a: c, bc, c p: c, b n.
27	---	---	Ac	0	0	0	0	1	0														

Table for November 1937 with columns for Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (All Forms), Visibility (7h-21h), Precipitation (7h-21h), and Remarks on the Weather of the Day. Includes mean cloud amount at the bottom.

Table for December 1937 with columns for Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (All Forms), Visibility (7h-21h), Precipitation (7h-21h), and Remarks on the Weather of the Day. Includes mean cloud amount and annual cloud amount at the bottom.



M.O. 430.  
(Kew)

Air Ministry  
METEOROLOGICAL OFFICE

THE  
OBSERVATORIES' YEAR BOOK  
1937

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

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KEW OBSERVATORY

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Published by the authority of the  
METEOROLOGICAL COMMITTEE



LONDON  
HIS MAJESTY'S STATIONERY OFFICE  
1939

## KEW OBSERVATORY

Latitude	..	..	..	..	..	51° 28' N.
Longitude	..	..	..	..	..	0° 19' W.
G.M.T. of Local Mean Noon	..	..	..	..	..	12h. 1m.

## Heights in Metres above Sea Level

Barometer	..	..	..	..	..	10.4
Raingauge Site	..	..	..	..	..	5.5
Dines Pressure Tube Anemometer	..	..	..	..	..	28

## Heights in Metres above Ground

Thermometer Bulbs	..	..	..	..	..	3.0
Sunshine Recorder	..	..	..	..	..	13.3
Dines Pressure Tube Anemometer	..	..	..	..	..	23
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. A general view of the Observatory building and the exposure lawn, an aerial photograph, a plan of the surrounding country and a site plan are to be found in the 1935 volume. The photographs were taken in 1935. For the early history of the Observa-

tory reference may be made to papers by S.P. Rigaud\*, R.H. Scott†, C. Chree‡, O.J.R. Howarth\*\*, R.S. Whipple†† and F.J.W. Whipple†††

### 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 darkroom (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, the accuracy of which has been confirmed by indirect comparisons with the new standard of the N.P.L.\*\*\* A zero correction for the Newman barometer 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  $g = 981.199 \text{ cm/sec}^2$ . This is the value given by pendulum observations.†††

\*Observatory, London 1882, p.279

†London, Rec. roy. Soc., 1897

‡London, Proc. roy. Soc., 39, 1885 pp. 37-86

††London Proc.opt. conv., 1926

\*\*The British Association for the Advancement of Science: a retrospect, 1831-1921. London, 1922

‡‡London, Quart. J.R. met. Soc., 63, 1937, pp. 127-135

\*\*\*London Met. Mag., 68, 1933, pp.119-120

†††A comparison between the values of "g" at Cambridge and Kew Observatory was made during the year 1925 by Sir G.P. Lenox-Conyngham with the assistance of Mr. G. Manley. A similar comparison between Potsdam and Cambridge was made by Prof. Meinesz earlier in the year. These observations are in accord with those made at Kew and Potsdam by Putnam in 1900, from which the value stated above was derived. The value for Potsdam,  $g = 981.274$ , based on the observations of Kühnen and Fürtwangler, is adopted as the standard of reference. For the latitude of Kew Observatory,  $51^\circ 28'$ , the formula in the General Introduction gives  $g = 981.185$

The departure from the value given for the latitude by the formula quoted in the General Introduction is insignificant. On occasions when a loss of trace occurred, the missing hourly values were derived from the Dines Float Barograph.\* In the year there were 38 hours 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 with a scale value of 1 mm. =  $0.334^{\circ}\text{A}$ ; for the wet-bulb, tube No. 4 was in use with a scale value of 1 mm. =  $0.271^{\circ}\text{A}$ .

Up to the year 1916 thermometers graduated on the Fahrenheit scale were in use in the North Wall Screen for controlling the thermograph readings. Then thermometers graduated in the absolute scale were introduced. Of these two absolute thermometers one was broken in June, 1933 and one of the old Fahrenheit thermometers took its place. Readings of the control thermometers are used for the daily weather service and for that purpose readings on the absolute scale have to be converted to Fahrenheit. It was decided that it would be more convenient to make the alternative conversion from Fahrenheit to Absolute and accordingly the use of thermometers with the absolute graduation terminated at the end of 1933. Before the Fahrenheit thermometers which had been in use up to 1916 were put back in the screen they were tested at the National Physical Laboratory. It is satisfactory to note that the two thermometers are correct within  $0.1^{\circ}\text{F}$ . The close agreement of the scale of the Kew standards with the scale of the hydrogen thermometer was demonstrated by Harker in 1905\*\*. The recent tests indicate that these thermometers with large bulbs keep their zeros well.

The water for the wet-bulb thermometers is supplied from a tank fitted outside the screen. A large bottle is inverted over the tank and water flowing from this bottle keeps the level constant in the tank and in the cups from which wicks are taken to the wet-bulbs. The height of the apparatus is adjusted so that the water drips steadily from the wet-bulbs. A bottleful of water lasts at least a week. It is found that the bottle survives severe frost.

Control eye-readings of the standard thermometers are taken daily at 9h, 15h and 21h. Residual corrections obtained from the control observations are applied to the hourly measurements of the curves. The same correction is applied to all the readings on the same photographic sheet, i.e., generally for forty-eight hours. The individual entries published for the hours of the control observations may differ by  $0.3^{\circ}\text{A}$ . from these observations. The larger departures refer to occasions when temperature is oscillating or changing rapidly.

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\*For descriptions of this instrument see "Observatories' Year Book", 1923 p.94, and London, Quart. J. R. met. Soc., 55, 1929, p.37

\*\*London Proc. roy. Soc. 78 (A), 1907, p.225. and London, Coll. Res. nat. phys. Lab., 2, p.215

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 mercury in steel thermograph are adopted. In the year there were 38 hours for which this was necessary.

When the wet-bulb trace is missing or defective the missing values are derived from the dry-bulb trace and the records of a hair hygograph. The same procedure is always adopted when the wet-bulb reading is below  $273^{\circ}\text{A}$ . 373 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 1937, 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 rain gauge for the Observatory has been an 8 -inch gauge with the deep "Snowdon" funnel. The site is level and protected from wind, principally by hedges about  $1\frac{1}{2}$ m. high and distant 11 metres to East and 17 metres to West. The readings of this standard gauge are at 7h and 18h. The hourly readings normally refer to the Beckley gauge. This gauge was out of action from June 12th 1936 to May 27th 1937 pending a complete overhaul including the construction of a copper funnel to replace the old iron one, the porcelain finish of which had become chipped, giving a rough surface even when painted over, and the fitting of a steel liner to the float chamber to make the scale value correspond with the graduations on the chart. During this period a Casella natural-syphon gauge No.M.O. 13/28/34 was used. The hourly readings are adjusted to give totals in agreement with the standard gauge. Continuous records of the rate of rainfall are obtained from the Jardi rate of rainfall recorder. The instrument is situated 12 metres from the north wall of the Observatory and the rim is 1.2 metres above the surrounding ground. With heavy rainfall comparable records are obtained from the "minute-by-minute gauge"††. The rim of this gauge, which is situated on the lawn 10 metres SW of the Beckley gauge, is 1.2 metres above the ground.

Sunshine.- The sunshine recorder is mounted on the south parapet of the roof. The same frame has been in use since 1880 and it is believed that the ball has not been changed. The ball is now somewhat yellow. The exposure is satisfactory. The greatest elevations of the sky line in the azimuths in which the sun can rise and set are  $1^{\circ}$  and  $3^{\circ}$  respectively.

Solar Radiation.- Observations made with the Ångström pyr heliometer of the intensity of direct solar radiation received by a surface normal to the sun's rays have been published regularly since 1911. From 1934 daily totals of radiation recorded by the Gorczynski pyr heliograph have also been printed.

The Ångström pyr heliometer observations†† are made within half an hour of noon. The mean intensity, derived from three readings, is given in Tables 499 to 510 in  $\text{mw}/\text{cm}^2$ . (1  $\text{mw}$  = 0.01435 cal/min). The secant of the sun's zenith distance at the time of these observations is entered under "sec Z" and the atmospheric conditions under "sky".

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\*Prior to 1926 the tables, based on Glaisher's factors, published in "The Computer's Handbook," M.O. 223, Sec. 1, 1916, were used

†† London, Met. Mag. Aug. 1934, pp. 157-158

†† London, Report of the International Meteorological Committee, St. Petersburg, 1899, p.57



Ångström pyrheliumeter No. 24 by Rose, Stockholm was in use throughout the year. This instrument was compared in 1924 with the standard instrument at Uppsala, No. 70, and the reduction factor adopted depends on this comparison. Until recently there was considerable uncertainty as to the accuracy of the Ångström pyrheliumeter regarded as an absolute instrument. Investigations at the National Physical Laboratory and elsewhere have now demonstrated† that the error of the scale of Ångström Standard No. 70 does not exceed  $\frac{1}{2}$  per cent.

The Moll thermopile of the Gorzynski pyrheliumeter is mounted on a heliostat near the sunshine recorder and is connected to a Richard millivoltmeter in the dome. The pen of the millivoltmeter is depressed once each minute electromagnetically. The apparatus is standardised by the Ångström pyrheliumeter. The total radiation for the day is derived from hourly readings and is reduced to joules/cm<sup>2</sup> (1 joule = .239 calorie). The hourly readings are communicated to Paris for publication in the Bulletin Actinometrique International.

#### Wind Speed and Direction.-

Particulars of Dines Pressure Tube Anemometer:-

Pattern .. .. Mark II (see "Observer's Handbook" 1934 p.115).

Suction Holes .. .. 80 holes in 4 rows of 20. Diameter 2 mm.

Connecting tubes .. .. Length 8 m. Internal diameter 24 mm.

Height of vane above lawn 23 m.

The present instrument with its head mounted above the dome has been in regular use since January 1st 1931. Details of the anemometers previously in use will be found in the 1933 Year Book.

There is a continuous belt of trees along the river about 300 metres away and other tall trees at shorter distances, but few of the trees have their summits above the level of the new vane.

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. In some years the underground water surpasses this 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 has a spherical bulb, diameter 17 mm.

†J. Guild, London, Proc. roy. Soc. Ser.A. vol. 161, July 1937, pp 1-38

\* The hour of the readings to be published in the Observatories' Year Book was changed from 9h. to 7h. as from January 1st, 1924



## Notes on Meteorological Tables

The mean temperature for the year  $283.6^{\circ}\text{A}$  ( $51.0^{\circ}\text{F}$ ) was slightly higher than the normal for the period 1906-1935 ( $49.6^{\circ}\text{F}$ ).

The lowest reading of the grass minimum thermometer was  $264.0^{\circ}\text{A}$  ( $15.8^{\circ}\text{F}$ ), on Nov. 14th.

The lowest temperature in the North Wall Screen  $269.0^{\circ}\text{A}$  ( $24.8^{\circ}\text{F}$ ) was recorded between 9h and 10h on Nov. 21st.

Jan. 29th was an "ice day", the maximum temperature in the North Wall Screen being  $272.8^{\circ}\text{A}$  ( $31.6^{\circ}\text{F}$ ).

The maximum temperature in the same screen was  $302.4^{\circ}\text{A}$  ( $84.9^{\circ}\text{F}$ ) on Aug. 6th.

There were 7 days on which the maximum temperature exceeded  $300^{\circ}\text{A}$  ( $80.6^{\circ}\text{F}$ ).

The rainfall for the year, 753 mm. was the highest since 1927 (816 mm.) and was 24% above the normal for the standard period 1881-1915 (606mm). That for Feb., 103 mm. was the second highest recorded for that month since regular readings commenced in 1856. The highest was 105 mm. in 1879. The heaviest fall in one day occurred on Aug. 13th, 54 mm. This is the highest on record for Aug.

The sunshine for the year, 1358 hours, was 111 hours below the normal for the period 1906-1935.

The highest wind velocity recorded in a gust was 25 m/s (56 mi/hr) on Feb. 16th.

Diurnal Variation of Pressure and Temperature.- Harmonic Analysis. The first four harmonic components computed for each month, for the year and for each of the three seasons Winter, Equinox and Summer are set out in Tables A and B. In these tables the  $c$ 's are the amplitudes of the component sine waves, the angles  $\alpha$  are the phases of the waves at midnight so that if it is the time in hours since midnight the inequality is given by the expression

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

The curves are tabulated according to Greenwich Mean Time but the phases 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.

The "normals" refer to the years 1871-1926 and are based on Dr. Crichton-Mitchell's calculations\*. It should be mentioned that in the tables published by Dr. Mitchell the phases were with reference to local apparent time.

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\* cf. London, Quart. J.R. met. Soc., 56, 1930, p.77

TABLE A

Diurnal Variation of Barometric Pressure. Fourier Coefficients.  $\Sigma c \sin(nt + \alpha)$   
Kew Observatory, Longitude  $0^\circ 19' W$ . Local Mean Time

Month and Season	$c_1$		$\alpha_1$		$c_2$		$\alpha_2$		$c_3$		$\alpha_3$		$c_4$		$\alpha_4$	
	1937	1871-1926	1937	1871-1926	1937	1871-1926	1937	1871-1926	1937	1871-1926	1937	1871-1926	1937	1871-1926	1937	1871-1926
January	mb .21	mb .02	o 32	o 315	mb .32	mb .31	o 163	o 151	mb .16	mb .17	o 345	o 346	mb .06	mb .07	o 222	o 202
February	.70	.05	78	73	.37	.36	148	146	.14	.12	342	340	.05	.03	72	108
March	.17	.11	128	38	.36	.40	152	149	.06	.07	326	332	.06	.04	51	25
April	.25	.28	344	31	.46	.40	154	151	.05	.03	226	185	.04	.04	330	353
May	.18	.32	21	27	.31	.35	144	148	.06	.09	162	161	.02	.02	327	319
June	.43	.30	14	17	.32	.32	142	143	.09	.09	167	160	.01	.01	312	260
July	.36	.26	11	16	.27	.31	128	140	.11	.10	150	153	.00	.01	-	281
August	.40	.21	352	20	.40	.34	149	144	.04	.06	163	155	.03	.04	310	309
September	.16	.12	358	6	.45	.40	154	152	.05	.01	21	350	.08	.04	320	332
October	.07	.06	346	76	.42	.38	156	160	.08	.09	346	359	.02	.01	319	22
November	.09	.03	339	124	.41	.34	155	160	.14	.13	359	358	.05	.03	178	183
December	.07	.08	259	137	.27	.31	144	152	.14	.15	355	353	.07	.07	211	205
Arithmetic Mean	.26	.15	-	-	.38	.35	-	-	.09	.09	-	-	.04	.03	-	-
Year	.19	.14	24	29	.36	.35	150	150	.04	.03	351	359	.01	.01	295	280
Winter	.20	.03	60	111	.34	.33	153	152	.14	.14	350	350	.03	.05	189	208
Equinox	.09	.14	6	32	.42	.39	154	153	.04	.04	333	345	.04	.03	346	359
Summer	.34	.27	8	20	.32	.33	142	144	.07	.08	160	157	.01	.02	313	305

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.  $\Sigma c \sin(nt + \alpha)$   
Kew Observatory, Longitude  $0^\circ 19' W$ . Local Mean Time

Month and Season	$c_1$		$\alpha_1$		$c_2$		$\alpha_2$		$c_3$		$\alpha_3$		$c_4$		$\alpha_4$	
	1937	1871-1926	1937	1871-1926	1937	1871-1926	1937	1871-1926	1937	1871-1926	1937	1871-1926	1937	1871-1926	1937	1871-1926
January	°A 1.12	°A .99	o 213	o 221	°A .40	°A .43	o 44	o 35	°A .19	°A .17	o 229	o 208	°A .05	°A .01	o 126	o 3
February	1.52	1.53	227	221	.41	.57	38	34	.02	.12	303	211	.10	.06	161	169
March	2.10	2.45	221	222	.51	.63	42	40	.10	.07	317	334	.14	.11	158	197
April	2.60	3.21	217	226	.43	.48	17	51	.16	.22	32	24	.06	.07	166	218
May	3.28	3.72	221	227	.14	.15	359	74	.20	.31	25	35	.12	.04	54	20
June	3.61	3.72	222	226	.01	.02	273	84	.28	.26	35	35	.10	.10	88	33
July	2.99	3.68	223	225	.12	.06	127	50	.26	.29	16	31	.06	.07	18	28
August	3.86	3.54	219	226	.44	.34	23	52	.24	.30	25	28	.02	.03	98	218
September	3.36	3.22	226	228	.72	.71	49	49	.20	.14	351	24	.13	.16	216	213
October	2.16	2.32	233	229	.75	.76	35	50	.04	.10	222	248	.10	.12	205	200
November	1.42	1.39	221	226	.63	.57	35	44	.19	.18	199	232	.02	.02	294	141
December	.74	.90	237	226	.29	.40	13	41	.08	.16	214	215	.01	.04	75	38
Arithmetic Mean	2.40	2.56	-	-	.40	.43	-	-	.16	.19	-	-	.08	.07	-	-
Year	2.39	2.56	223	226	.34	.42	24	45	.08	.08	6	17	.04	.02	147	195
Winter	1.19	1.20	224	223	.43	.49	34	39	.11	.15	216	217	.03	.01	150	121
Equinox	2.54	2.80	224	226	.49	.64	13	47	.10	.09	353	4	.10	.11	188	207
Summer	3.44	3.67	222	226	.13	.14	30	59	.24	.29	25	32	.07	.04	61	27

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 527 there is given for each day the height of the surface of underground water. The level measured is that of the surface of water in a pipe passing through the basement floor into the ground. According to measurements made in 1935 the zero of the scale is 63 cm. below the present datum of the Ordnance Survey, M.S.L. at Newlyn.

Cloud Amount.- The mean cloud amounts for the six hours of observation 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	8.0	8.0	7.8	7.9	7.4	7.2	8.3	6.3	6.7	7.6	7.3	8.3	7.6

Mean Amount of Cloud for the Year at the Six Observation Hours

Hour ..	7h	9h	13h	15h	18h	21h
Cloud..	7.7	7.7	7.8	8.1	7.4	6.8

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.

LIST OF OBJECTS

Identifica- tion Letter	Object	View Point	Bearing	Actual Distance	Standard Distance
X	(A not visible) .. ..	-	-	-	-
A	Verification House .. ..	S.W. Corner of Observatory Eldg.	S.W.	25	25
P	17 ft. Stevenson Screen.. ..	S.E. Corner of Observatory Eldg.	S.W.	50	50
C	New Magnetic Hut .. ..	S.W. Corner of Observatory Eldg.	S	110	100
D	S.W. Tree .. ..	" "	S.W.	200	200
E	Golf Club House .. ..	Observatory	S.E.	500	500
F	Orange Tree Hotel .. ..	"	S.E.	970	1,000
G	St. Matthias's Church .. ..	"	S.E.	1,900	2,000
H	South Ealing Church .. ..	"	N.	4,000	4,000
i	(Mortlake Chimneys 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 (Near Headley) .. ..	"	S.	20,000	20,000
L	Surrey Hills ( " Merrow) .. ..	"	S.S.W.	30,000	30,000
M	Surrey Hills, exceptionally visible .. ..	"	S.S.W.	30,000	50,000

## ATMOSPHERIC ELECTRICITY

In Atmospheric Electricity the systematic observations reported in the Year Book are devoted to potential gradient, air-earth current and conductivity. These three elements are observed each afternoon when conditions are favourable. In the case of potential gradient the continuous autographic records are also utilised.

Potential Gradient, Air-Earth Current and Conductivity.- Measurements of these elements are made with the Wilson apparatus in the Underground laboratory. The test plate is flush with the roof of the laboratory and nearly at ground level.\* The plate is supported from below on a stand which carries a Lindemann electrometer and a variable condenser or "compensator". The cover for the plate is mounted on a long handle which can be manipulated from below. The electrometer is calibrated once a month by means of Weston standard cells.

The potential gradient,  $F$ , is given in volts per centimetre by the formula,

$$F = 4\pi (9 \times 10^{11}) C v / A,$$

where  $C$  is the capacity, in farads, of the system (when shielded)  $v$  the voltage acquired by the test plate after being exposed to the field, earthed and then shielded, and  $A$  is the area of the plate. The value of  $C$  is  $5.91 \times 10^{11}$  farads and the diameter of the plate is 20.8 cm. Experiments have shown that the potential gradient found in this way is, to a very close approximation, equal to that found by measuring the potential at a height of one metre in the open part of the grounds.

The air-earth current is given in amperes per square centimetre by the formula,

$$i = C \delta v / At,$$

where  $\delta v$  is the voltage acquired by the plate in  $t$  seconds. For obtaining the mean value of the current four observations, each lasting five minutes, are averaged. The observations of the current are sandwiched between the observations of the field strength and from the two mean values  $i$  and  $F$  the conductivity  $\lambda^+$  is deduced. No observations are made during rain nor when the potential gradient is negative.

The use of the testplate at ground level introduced a discontinuity in the series of observations. Revised mean values for the period up to 1931 have been published in Mr. Scrase's memoir.\* In 1937 the mean value of the current for the year, allowing equal weight to each month, is  $107 \times 10^{-18}$  amp.  $\text{cm}^{-2}$ . The mean value of the conductivity for the year is  $46 \times 10^{-18}$  ohm $^{-1}$   $\text{cm}^{-1}$ . The mean values for the period 1912-1936 are:- conductivity  $37 \times 10^{-18}$  ohm $^{-1}$   $\text{cm}^{-1}$  and current  $101 \times 10^{-18}$  amp.  $\text{cm}^{-2}$ . The 1937 value of  $46 \times 10^{-18}$  ohm $^{-1}$   $\text{cm}^{-1}$  for conductivity is the highest mean obtained since 1912.

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\* For comparisons between the present and earlier methods vide:-F.J. Scrase, London, Met. Off., Geophys. Mem., No. 60, 1934

Potential Gradient - Continuous Records.- The Kelvin electrograph, which has been housed since 1915 in a low building known as the Clinical House, provides a record of the electrical potential at a point not far from the wall of the building. The radio-active collector which is used is 121 cm. from the window through which the boom projects and 187 cm. above ground level. A collector freshly coated with polonium is installed every six months.

By means of the observations of the field strength on the test plate of the Wilson apparatus in the underground laboratory a factor is derived by which the potential recorded by the electrograph must be multiplied to obtain the potential gradient in the open.

The mean factor for the year was 2.75. The equivalent height of the collector of the electrograph may be estimated by dividing one metre by this factor, i.e., the collector was on the average at the same potential as a point 36.4 cm. above ground in the paddock.

The data appearing in Table 541 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. The present criteria for character figures were adopted as from the beginning of 1914. Correcting for missing days, the average frequency of character figure 0, 1, and 2 during the years 1914-1936 inclusive were 182: 139: 44. The corresponding figures for 1937 are 130: 149: 86.

In accordance with a resolution of the International Union for Geodesy and Geophysics (Section for Terrestrial Magnetism and Atmospheric Electricity: Prague Meeting 1927) tabulations of the duration of negative potential gradient have been included in the Year Book since 1928. The total duration of negative gradient is given for each day for which the electrograph record is satisfactory.

Since the beginning of 1934 there have been numerous occasions when negative potential gradient has occurred in fine weather. This phenomenon, which has not yet been explained, happens with wind from North-East and mostly at night. The days on which it occurred in 1937 and the duration of the "abnormal" negative potential gradient are set out in the following table.

	hr.		hr.		hr.		hr.		hr.		
Jan.	14 4.1	Apr.	15 0.7	Aug.	7 0.7	Sept.	19 1.6	Nov.	27 0.7	Dec.	26 0.1
Feb.	1 0.5		24 0.7		26 9.4		23 0.6		28 0.3		27 1.1
Mar.	5 3.8		28 1.9		27 1.1	Oct.	2 0.1	Dec.	2 3.3		28 6.6
	21 1.9	May	8 1.3		28 0.1		3 4.7		3 18.0		29 5.8
	22 2.7		12 1.6		29 0.1		4 0.3		6 0.3		30 2.0
	23 0.5		14 0.3		30 0.3		5 13.3		7 0.1		31 6.7
	27 1.5		15 4.1	Sept.	9 1.1		6 0.9		9 8.1	Total	160.0
	28 0.3		16 0.1		10 3.0		7 3.6		11 1.2		
	29 0.2		18 5.9		11 0.1		8 0.9		15 3.1		
Apr.	13 3.7	June	17 0.7		13 1.5	Nov.	9 4.5		16 9.3		
	14 4.9	July	28 0.2		14 1.7		24 1.0		17 1.2		

Table 542 contains daily data derived from measurements of the electrograms. They represent means for the 60-minute intervals ending at 3h, 9h, 15h and 21h G.M.T. respectively. On occasions when the trace was defective, either through failure of insulation or some other cause, values of potential gradient have been omitted. The electrograph is intended to record the potential gradient of fine weather and the limits are approximately -1500 and +2000 volts per metre. In showers and thunderstorms gradients of 10000 volts per metre or more may occur. These are, of course, beyond the range of the instrument. Even when the curve does not go beyond the limits of the chart the changes may be so rapid that no satisfactory estimate is possible of the mean value of the ordinate. All such occurrences 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 values in Table 542 are 1370v/m at 3h on Dec. 20th and -1335 at 3h on Jan. 21st. The former value is representative of foggy conditions. The extreme negative gradient was associated with slight rain.

At the foot of each section of Table 542 there are two sets of mean values. These are obtained according to different rules. The (a) mean is the arithmetic mean of all the positive potential gradients in the column. The (b) mean is the algebraic mean of all the entries which remain in the column after those have been eliminated which refer to days in which at least one of the four hourly values is indeterminate. The last line gives the mean value for each month as derived from the (a) and (b) means for the four hours.

The diurnal inequalities and the mean monthly and annual values in Table 543 are based on the curves for certain "quiet days". Normally 10 quiet days are selected in each month, these being calendar days characterised by no negative potential gradient, no large irregular movements, no indication of inferior insulation and no large non-cyclic change. When there are not 10 calendar days with these characteristics in a month the number can sometimes be made up by using other spells of 24 hours. The treatment of the months in which there were not 10 quiet days is shewn in the following list.

<u>1937</u>	<u>Calendar Days</u>	<u>Other Spells</u>	<u>Total</u>
Jan.	7	1	8
Feb.	4	2	6
Mar.	7	2	9
Oct.	6	3	9
Nov.	8	1	9
Dec.	4	2	6

Except in the months where other spells were used the non-cyclic change is given explicitly in Table 543, so that anyone who may desire to reproduce the figures as they were before the non-cyclic change was applied can easily do so.

The inequalities generally shew 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 inequalities for the whole year shew the higher maximum at 20h, the lower minimum at 3h. This is not the case in every year. The following list gives the annual mean potential gradient for selected quiet days together with the hours of the extremes and the range of



the inequality for each year from 1910. The correction\* of +12 per cent has been applied to the means and ranges of all years from 1910 to 1931.

KEW OBSERVATORY POTENTIAL GRADIENT (REFERRED TO PADDOCK) 1910-1937

Year	Mean Range Max. Min.				Year	Mean Range Max. Min.				Year	Mean Range Max. Min.			
	v/m	v/m	hr.	hr.		v/m	v/m	hr.	hr.		v/m	v/m	hr.	hr.
1910	347	155	20	4	1919	371	319	8	4	1928	334	139	9	3
1911	337	172	9	4	1920	353	137	9	3	1929	379	153	9	4
1912	336	167	9	4	1921	315	148	20	3,4	1930	373	183	9	3
1913	375	179	19	3,4	1922	356	161	20	4	1931	379	171	20	4
1914	386	189	20	3	1923	356	179	9	4	1932	391	173	21	4
1915	397	194	19	5	1924	368	149	20	4	1933	363	183	9	3
1916	411	169	20	4	1925	365	144	19	3	1934	374	189	9	5
1917	397	172	20	4	1926	313	132	20	4	1935	361	192	9	4
1918	388	156	20	2	1927	353	144	19	3	1936	366	157	20	3
										1937	333	164	20	3

\* London, Met. Off., Geophys, Mem., No. 60, 1934, pp. 8-11

## 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 1 $\frac{1}{2}$ 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 0.1mg/m<sup>3</sup>. When fog prevails the auxiliary tank is put out of action and the unit shade reverts to the value 0.32 mg/m<sup>3</sup>.

Special attention is paid to the maintenance of consistency in the standard of shades. Each new scale of shades is compared directly with the standard preserved by Dr. Owens. New scales of shades were taken into use on the following dates:-

January 1, 1936 and November 1, 1937.

	days	hours
During 1937 the highest estimate of pollution was 3.2 mg/m <sup>3</sup> , this value occurring on November 28th from 23h to 24h. There were 25 days on which the pollution reached 1.0 mg/m <sup>3</sup> ; the number of hours credited with 1.0 mg/m <sup>3</sup> or more being 95. The months in which these days and hours occurred are given in the accompanying table. It may be noted that of the 60 hours credited with 1.0 mg/m <sup>3</sup> or more in November, 12 occurred on the 21st, 11 on the 26th and 15 on the 28th.	Jan. 1	2
	Feb. 4	4
	Mar. 1	1
	Apr. 1	1
	Oct. 2	2
	Nov. 8	60
	Dec. 8	25
	Year 25	95

Table 544 gives for each month mean hourly values derived from all the days for which complete records were obtained. There were 364 such days in the year. The highest and lowest of these hourly values are underlined.

Table 545 gives diurnal inequalities derived from the data in Table 544 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 in the potential gradient of atmospheric electricity.

The mean values computed for recent years are given in the following table, together with the means for successive pairs of months. The unit is 1 mg/m<sup>3</sup>

\* A description of the instrument is given in the "Report of the Advisory Committee for Atmospheric Pollution", 4th Report, 1917-1918, p.20  
 † "Report of the Advisory Committee for Atmospheric Pollution", 3rd Report, 1916-1917, p.20

Kew Observatory. Atmospheric Pollution. Mean values mg/m<sup>3</sup>

	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937
Jan.-Feb.	.29	.25	.22	.40	.18	.24	.32	.25	.44	.19	.39	.12
Mar.-Apr.	.30	.10	.18	.27	.13	.15	.26	.17	.19	.15	.19	.12
May-June	.08	.07	.09	.05	.05	.06	.09	.10	.10	.05	.09	.06
July-Aug.	.07	.05	.05	.06	.07	.07	.05	.08	.08	.05	.04	.03
Sept.-Oct.	.19	.17	.15	.10	.13	.25	.15	.21	.10	.07	.13	.13
Nov.-Dec.	.26	.21	.25	.21	.29	.33	.29	.43	.30	.27	.21	.29
Year	.20	.14	.15	.18	.14	.18	.19	.21	.20	.13	.17	.12

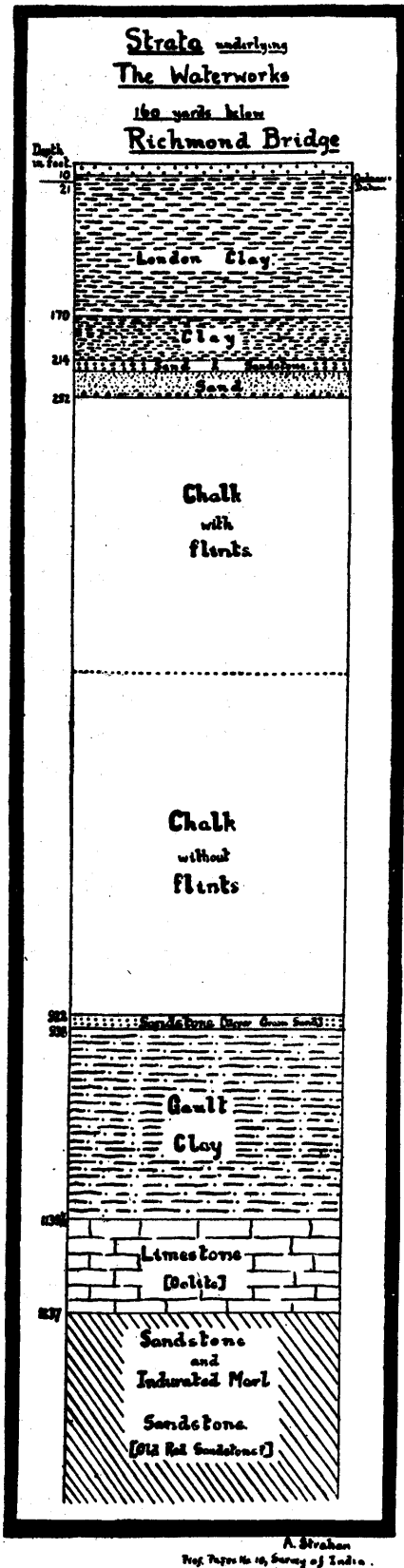
The nature of the diurnal variation is most easily recognised in Table 545. There is always a well defined minimum during the night and another in the early afternoon. The first maximum of the day usually occurs about 9h and the second one follows about 12 hours later. This double oscillation is apparently due to two causes, the variation in human activity in producing pollution and the variation in the wind which disperses it. In 1937 the principal maximum was in the evening from February to May and from September to December; in the forenoon in the remaining months. The principal minimum occurred in the afternoon in April and from June 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. Whipple on the relation between Atmospheric Pollution and Potential Gradient.

#### SEISMOLOGY

The Galitzin seismographs which were transferred from Eskdalemuir Observatory during the latter part of 1925 have been in regular operation at Kew since the beginning of 1926. Earth movements in the north, east and vertical directions are recorded. A pair of modified Wood-Anderson seismographs, recording the two horizontal components, have recently been added to the equipment. The seismographs were installed until 1937 in the basement of the main Observatory building. The behaviour of the Galitzin instruments indicated that the building and the ground on which it stands are rocked whenever there is an appreciable wind. Some experiments were made during 1932 which showed that the disturbed region did not extend far from the main building, and a scheme was put forward for the construction of a new underground seismograph house about 100 yards away. The new building was ready for use early in 1937. The Wood-Anderson seismographs were transferred in February; the Galitzin horizontal seismographs were moved in April, and the vertical in September, 1937. The removal of the seismographs presented a suitable opportunity for making a number of improvements in the installation. A full description of the seismographs and the new building has been published, together with a discussion concerning the operation and standardisation of Galitzin seismographs, in a Geophysical Memoir.\* It is satisfactory to note that the records obtained from the seismographs in the new building are not disturbed during strong winds.

†London, Quart. J.R. met. Soc., 55, 1929, pp. 351-361

\*"Seismology at Kew Observatory", A.W.Lee, London, Meteorological Office, Geophysical Memoir, No. 78, (1938)



The walls of the new building are of brick carried on a floor of reinforced concrete about 15 inches in thickness; the main walls of thickness  $13\frac{1}{2}$  inches are separated by a 2 inch cavity from  $4\frac{1}{2}$  inch inner walls. The surfaces are rendered waterproof by a thick coating of asphalt. The floor is some 5 feet below the level of the surrounding paddock. The ceiling is covered by soil to a depth of about 2 feet and turfed, the level of the turf being about 5 feet above the surroundings. The entrance to the building is reached from a flight of steps; the paddock in the vicinity is liable to flooding when the Thames is exceptionally high and a barrier is provided at the top of the steps to prevent flood water from entering the building. Rainwater which drives beneath the cement cover over the steps collects at the bottom in a sump and is removed when necessary. The building contains two rooms opening from a small entrance lobby on the east side. The rooms are ventilated, and they are heated by electric radiators which can be controlled by thermostats. The south room, 20 feet by 15 feet, contains the Galitzin pendulums and the Wood-Anderson seismographs; the galvanometers and recording drum for the Galitzin instruments are set up in the north room which is smaller, 10 feet by 15 feet. Concrete pillars for the seismographs stand on the floor in the south room; the galvanometers and recording drum in the north room are placed on slate slabs cemented to concrete pillars.

A small transformer in the north room supplies low tension electric current for recording with 6 volt, 6 watt, bulbs. The low tension supply is cut off automatically for two seconds at the beginning of each minute and for 4 seconds at the hour by an Isenthal Vertex switch; the operation of the switch is controlled by a synchronome clock, Hope-Jones, No.1901, which is rated daily from the Greenwich wireless time-signals relayed by Droitwich.

The geological strata in the vicinity of the Observatory are shown on 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

\*London, Quart. J. Geol. Soc., 40, 1884, p. 274; 41, 1885, p. 523

†Records of London Wells, Mem. Geol. Surv. Eng., London, 1913

600 metres, the last 280 metres being in Old Red Sandstone. There is no information as to deeper strata near Richmond.

The first important alteration to be made to any of the Galitzin instruments after they came to Kew was the replacement, in 1928, of the large steel spring supporting the vertical pendulum, by a spring made of elinvar, an alloy which has a temperature coefficient of elasticity about one-tenth that of steel.\* The difficulties usually associated with the operation of the vertical pendulum have been greatly diminished.†

A further improvement was made in 1937 when the three recording drums driven by clock-work motors were replaced by a single large drum driven by an alternating current electric motor. The electrically driven drum rotates more uniformly than the older drums. The time scale of the records is 15 mm. per minute and the traverse 4 mm. per hour. The three records are on a sheet 93 cm. x 43 cm.

Until the removal of the instruments in 1937 the adjustments were those adopted by Galitzin, the free periods of pendulum and galvanometer being the same for each seismograph, but the free periods for the horizontal components were twice as long as those for the vertical. In the new scheme each of the horizontal seismographs is adjusted to have the free period of the pendulum one-third of the galvanometer period; in this way their response to the earth-movements is brought into approximate agreement with that of the vertical component. The methods by which the instruments are standardised are set out in the Memoir.

The mirrors of the galvanometers were sent away for resilvering in 1937; when they were replaced it was found that the free periods of two of the galvanometers differed from the old values by a few tenths of a second. The seismographs were not standardised during 1937 before removal to the new house, and it has been assumed that the constants while the instruments were in the main building has not changed from the values determined in September 1934.

In the following table the values of the constants are summarised; there is some uncertainty about the values obtained after the instruments were moved.

$\ell$	is the length of the simple equivalent pendulum.
$T_0$	is the free period of the pendulum.
$T_1$	is the free period of the galvanometer.
$\mu^2$	is a damping coefficient which vanishes when the free movement of the pendulum is just aperiodic.
$k$	is the "transmission" factor.
$A$	is the length of the beam of light from the galvanometer mirror to the recording drum.
$\frac{kA}{\pi\ell}$	is the factor for obtaining the magnification for simple harmonic earth waves of very short period; i.e., if $V$ denotes the magnification and $T$ the period of the earth-waves, $\frac{kA}{\pi\ell} = \left(\frac{V}{T}\right) T \rightarrow 0$ .

\*Y. Dammann, Bur. Cent. Seis. Int., Strasbourg, Ser. A. Fasc. No. 5, 1927, pp. 122-129

†F.J. Scrase, London, Inst. Physics, J. Sci. Instr., 6, 1929, p. 385

Component	$l$	$T_1$	1937	$T_0$	$\mu^2$	$\frac{KA}{\pi l} = \left(\frac{V}{T}\right) T \rightarrow 0$
N	mm. 118	sec. 24.7	Jan. 1 - June 3	sec. 24.5	+0.01	sec.-1 46.7
		24.2	June 3 - Dec.31	8.1	0.00	77.3
E	118	24.8	Jan. 1 - Apr.18	24.8	-0.01	42.6
		24.8	Apr.18 - Dec.31	8.3	0.00	76.3
Z	360	13.0	Jan. 1 - Sep.15	13.1	+0.01	109.
		13.1	Sep.15 - Dec.30	13.0	+0.05	48.2
		13.3	Dec.30 - Dec.31	13.0	-0.01	75.4

A complete description of the Wood-Anderson seismograph appears in the Bulletin of the Seismological Society of America, XV, 1, March, 1925. In this seismograph the moving system is very small, weighing about 0.7 gram, and the control is due to the torsional reaction of the suspension. The Kew instruments were copied from the Wood-Anderson design but some alterations have been introduced. The moving system in the Kew type consists of a copper bar, 3 mm. by 5 mm. by 20 mm., and weighing about 3 gram; this mass is attached near the middle of a tungsten wire 0.025 mm. in diameter. These instruments are set up with the axis inclined slightly to the vertical and the controlling force is chiefly due to gravity. The damping is magnetic. Direct optical registration is employed, the image of an illuminated slit reflected from a small mirror attached to the mass being focussed on the photographic sheet. The two horizontal components (N-S and E-W) are recorded using an electrically driven recording drum. The approximate constants during 1937 were:- Magnification 700, Free period 2.5 seconds, Damping ratio 20:1.

Table 546 contains the particulars of the earthquakes recorded at the Observatory. The notation employed is as follows\*:-

In the second column of the diary the entries N, E, Z, refer to the records from the north-south, east-west and vertical seismographs respectively.

P is the normal first phase (longitudinal waves). PKP is a longitudinal wave which has passed through the earth's central core, and PcP one which has been reflected from the core.

PP, PPP... are longitudinal waves reflected once, twice ... near the earth's surface.

S is the normal second phase (transverse waves). The waves which penetrate the central core and pass through it as longitudinal vibrations are designated by the symbol SKS.

PS and PPS are waves which suffer a change or changes from longitudinal to transverse oscillation or vice versa, on reflection near the surface.

SS, SSS...are transverse waves reflected once, twice... near the surface.

The notations adopted for the supplementary reflected waves from deep focus earthquakes and for the waves from near earthquakes, are those of F.J. Scrase† and H. Jeffreys‡ respectively.

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 notation was amended from the beginning of 1933, the most important change being the adoption of a special letter, K, for the compressional waves through the core. This symbol, taken from the Georgetown bulletins, is now used in the International Seismological Summary. Previously a pulse which started and finished as a transverse wave but passed through the core as a compressional wave was denoted by ScPcS. In the new notation such a pulse is denoted by SKS.

†Proc. roy. Soc., A. 132, 1931

‡London, Mon. Not. R. Astr. Soc., Geophys. Supp., 1, No.8, 1926

All times entered against the above phases are the times of arrival of the phases at the station. The phases denoted by M are successive prominent maxima occurring during the principal or surface phase. The period is the duration of a double oscillation (to and fro movement).

The entries under A are the amplitudes, in microns ( $1 = 0.001$  mm.), of the components of the true displacement of the ground from the position of rest. Displacement 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.

The times of the maxima and the amplitudes of sinusoidal waves are computed from the standard formulae given by Galitzin, c.f. *Observatories' Year Book*, 1936, p. 367.

$\Delta$  is the distance in kilometres of the epicentre measured along the arc of a great circle. For earthquakes of normal focal depth located within 10,000 km. of Kew, the distance is generally derived from the interval between P and S by the table, due to Zeissig, given in Klotz's "Seismological Tables" (Publication of the Dominion Observatory, Ottawa, Vol. III, No.2). For greater distances other phases are considered and  $\Delta$  is obtained from the travel curves given by Gutenberg.\* In the case of deep focus shocks both  $\Delta$  and the depth of focus are determined from the Brunner diagram†. The azimuth of the epicentre ( $0^\circ$  to  $360^\circ$ ) is measured from north through east. When an estimation of the azimuth is possible, it is used, together with  $\Delta$ , for provisional determination of the co-ordinates of the epicentre. The co-ordinates given in the Diary have generally been received at a later date; the authorities for these determinations are inserted in brackets. Here the letters J.S.A. signify the Jesuit Seismological Association of America, U.S.C.G.S., the United States Coast and Geodetic Survey, and U.R.S.S. the bulletins issued by the United Soviet States.

Brackets enclosing figures or phase symbols indicate that the interpretation is uncertain.

The total number of shocks recorded during the year was 211. The phases being sufficiently well defined, estimates of the epicentral distances were obtained for 64 shocks, whilst in 8 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 7 earthquakes which produced at the observatory a disturbance in which the maximum amplitude of the surface waves exceeded 0.1 mm. in one or more of the components. These earthquakes originated, in Tibet (January 7th), in the Kurile Islands (February 21st), in Oceania (April 16th), in Alaska (July 22nd), in the Philippines (August 20th), in the Aleutian Islands (September 3rd) and in Mexico (December 23rd).

The British earthquakes were recorded during the year, one near Birmingham on 9th July and the other near Horsham, Sussex, on 8th September.

For comparison the statistics for all the years in which the Galitzin seismographs have been in operation at Kew Observatory are given:-

Year	Shocks recorded	Epicentral distances	Azimuths estimated	Shocks exceeding 0.1 mm.
1926	306	55	-	10
1927	314	76	6	9
1928	339	97	19	18
1929	320	74	6	12
1930	301	56	6	8
1931	274	53	11	16
1932	246	57	8	8
1933	263	71	8	8
1934	269	59	10	9
1935	232	72	10	13
1936	256	72	6	8
1937	211	64	8	7

\*Handbuch der Geophysik, Berlin, 1929, p.212

†The Brunner Focal Depth-Time-Distance Chart, G.T. Brunner and J.B. Macelwane, New York, 1935

The following table shows the number of occasions on which the initial movements recorded at Kew and originating in different parts of the Globe were recognised as anaseismic or kataseismic.

Types of initial movements recorded at Kew Observatory  
1926-1936 and 1937

Region of Epicentre	1926-1936		1937	
	Ana-seismic (Compression)	Kata-seismic (Dilatation)	Ana-seismic (Compression)	Kata-seismic (Dilatation)
Southern Europe and Mediterranean	17	21	0	0
Central and Southern Asia with Formosa	35	10	3	0
North Siberia	0	3	0	0
Indian Ocean	4	4	2	0
Japan	21	3	1	0
East Indies and Polynesia	18	8	3	6
Australia and New Zealand	4	3	1	0
Kurile Islands	14	5	2	1
Aleutian Islands and Alaska	16	8	2	2
North America	4	3	0	0
Central America	29	8	7	0
South America	11	4	2	0
North Atlantic Ocean, Baffin Bay and North Sea	19	9	2	1
South Atlantic Ocean	1	1	0	1
Africa	1	0	0	0
	194	90	25	11

It will be seen that in 1937 as in the earlier years there were twice as many anaseisms as kataseisms.

**Microseisms.**- The routine tabulations of microseisms recorded at Kew from 1926 to 1934, and at Eskdalemuir from 1911 to 1925, were taken from the north-south component for each day at 0h, 6h, 12h and 18h. The results obtained from a comparison of the microseisms recorded by the three components during a complete year (1932) having shown\* that the vertical is more reliable than either of the horizontal components for such tabulations, the vertical component was adopted from the beginning of 1935.

The advantages of the vertical component are:-

- (a) The amplitude recorded does not depend upon the direction of travel of the waves.
- (b) The effects of the local geological structure are smaller.
- (c) For oscillations with the period of microseisms the vertical Galitzin seismograph has, with the tuning adopted at Kew, the higher magnification.
- (d) Freedom from wind disturbance.

The hours of tabulation are the same as for the north-south component in earlier years. The group of waves of greatest amplitude occurring in the 30 minutes centring at the hour in question is selected, and the amplitude tabulated is the mean obtained from the three largest complete waves in that group. The period is obtained from a measurement made on the same group. 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:-

\* A.W.Lee, London, Met. Off., Geophys. Mem., 7, No.66, 1935



Number of Waves	Time interval in seconds							
	30	29	28	27	26	25	24	23
3	10.0	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	6.0	5.7
5	6.0	5.8	5.6	5.4	5.2	5.0	4.8	4.6
6	5.0	4.8	4.7	4.5	4.3	4.2	4.0	3.8
7	4.3	4.1	4.0	3.9	3.7	3.6	3.4	3.3
8	3.7	3.6	3.5	3.4	3.3	3.1	3.0	2.9
9	3.3	3.2	3.1	3.0	2.9	2.8	2.7	2.6
10	3.0	2.9	2.8	2.7	2.6	2.5	2.4	2.3
11	2.7	2.6	2.5	2.5	2.4	2.3	2.2	2.1
12	2.5	2.4	2.3	2.3	2.2	2.1	2.0	1.9

On the occasions of failure of the Z record, gaps in the tabulations (Table 547) have been filled in by interpolation or from measurements of the microseisms recorded by the horizontal seismographs. By use of the data of 1932 (Geophysical Memoir No. 66) it was found that there was a linear relation between the ratio of horizontal to vertical amplitude and the period of the oscillations, the ratio varying from 1.2 for microseisms of period  $4\frac{1}{2}$  sec. to 0.85 for those of period 9 sec. Allowance is accordingly made for the difference between the amplitudes recorded by the horizontal and vertical components. Values obtained by interpolation or from the horizontal seismograms are bracketed in the tables.

The mean values of amplitude and period, together with the maximum amplitudes, for each month of 1937 are given below:-

Kew Observatory. Microseisms of Vertical Component, 1937

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
Mean period (sec)	6.8	6.1	5.7	6.0	5.2	4.7	4.5	4.9	5.8	6.1	5.9	5.9	5.6
Mean Amplitude ( $\mu$ )	3.4	1.9	1.2	0.8	0.5	0.3	0.3	0.3	0.9	1.0	0.7	0.7	1.0
Maximum Amplitude ( $\mu$ )	7.9	6.2	3.3	2.5	2.2	1.3	0.8	0.7	3.0	2.7	2.2	2.3	7.9
Maximum Amplitude (day and hour)	25:18	17:0	2:18	1:0	20:0	29:0	19:0	25:6	30:12	1:0	4:0	7:18	25:18

The greatest amplitude of the year was  $7.9 \mu$  on 25th January at 18h. Amplitudes of  $5 \mu$  or more were recorded on the following dates:- January, 12th, 15th, 16th, 21st, 22nd, 24th, 25th and 26th; February, 16th and 17th.

For comparison, the following table gives for Kew the monthly and annual means of amplitude and period of the north-south component microseisms from 1926 to 1934, and of the vertical component microseisms from 1935 to 1937.

Kew Observatory. Microseisms, 1926-37

Component	Years		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
N-S	1926-34	Mean Period (sec)	6.5	6.1	5.9	5.4	4.9	4.7	4.4	4.6	5.0	5.4	6.0	6.4	5.5
		Mean Amplitude ( $\mu$ )	2.3	1.6	1.4	0.9	0.5	0.4	0.3	0.5	0.6	1.1	1.6	2.0	1.1
Z	1935-37	Mean Period (sec)	6.4	6.2	5.7	5.6	5.1	4.8	4.7	4.8	5.3	6.1	6.3	6.2	5.6
		Mean Amplitude ( $\mu$ )	2.4	2.3	1.1	0.8	0.4	0.3	0.3	0.2	0.7	1.3	1.4	1.8	1.1

The means of amplitude and period for the several hours are given in the following table. The values entered are those for the vertical component during 1937, together with averages for the vertical component from 1935 to 1937 and for the north-south component from 1926 to 1934.

Component	Years		0h.	6h.	12h.	18h.
Z	1937	Amplitude ( $\mu$ )	0.99	0.98	1.03	1.01
		Period (sec)	5.65	5.60	5.62	5.61
Z	1935-37	Amplitude ( $\mu$ )	1.08	1.07	1.10	1.09
		Period (sec)	5.62	5.61	5.61	5.61
N-S	1926-34	Amplitude ( $\mu$ )	1.10	1.09	1.06	1.08
		Period (sec)	5.46	5.45	5.42	5.45

It may be noticed that there is no regular diurnal variation in the amplitude or period of the microseisms when recorded by frictionless seismographs.

The results obtained from the special investigation for 1932 showed that, within the accuracy of the measurements, the annual means of amplitude and period were equal for the three components. Accordingly the value of the data for determining secular variations was not impaired by the change from the north-south to the vertical component. The annual means of amplitude and period from 1926 to 1937 are:-

Year	N-S Component									Z Component		
	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937
Mean amplitude ( $\mu$ )	1.1	1.3	1.3	1.3	1.1	0.9	0.9	0.8	0.9	1.1	1.2	1.0
Mean period (sec)	5.5	5.4	5.5	5.3	5.4	5.3	5.6	5.5	5.6	5.7	5.6	5.6



441 KEW OBSERVATORY:  $H_b$  (height of barometer cistern above M.S.L.) = 10.4 metres

JANUARY, 1937

Hour G. M. T.	1	2	3	4	5	6	7	8	9	10	11	Noon	13	14	15	16	17	18	19	20	21	22	23	24	Mean
Day 1	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb
1	019.7	019.3	019.0	018.2	018.0	017.3	016.8	016.5	015.8	015.2	014.7	014.0	013.2	012.8	012.5	012.2	013.6	013.7	013.8	014.3	014.6	015.7	016.2	015.6	
2	017.0	017.9	018.9	019.4	019.3	019.5	020.2	020.5	020.5	020.6	020.8	019.9	018.9	018.9	018.5	018.4	018.7	018.8	019.2	019.6	020.0	020.6	021.2	019.3	
3	021.4	021.8	022.3	022.8	023.6	024.4	024.6	025.5	026.2	026.2	026.2	026.3	025.9	025.6	025.6	026.0	026.3	026.4	026.5	026.4	026.3	025.9	025.7	025.3	
4	024.9	024.6	024.2	023.6	023.2	022.5	021.9	021.7	021.2	020.3	019.3	017.8	016.6	015.2	014.3	013.2	012.4	011.8	011.3	011.3	013.2	013.7	013.7	014.0	
5	014.6	014.8	015.4	015.7	016.0	016.2	016.7	017.4	018.2	018.6	018.9	018.9	019.0	018.8	019.4	019.6	019.6	019.4	019.3	019.4	019.4	018.5	017.1	016.3	
6	015.3	013.7	011.9	009.6	008.0	006.4	005.5	005.4	004.8	004.8	004.6	004.4	004.3	004.1	004.6	004.7	004.8	005.1	004.7	004.7	004.7	004.8	005.2	005.7	
7	006.5	007.3	008.5	009.4	010.1	010.8	011.9	012.9	014.2	014.3	015.3	015.7	015.9	016.9	018.1	019.8	020.7	022.1	023.6	025.0	026.1	026.8	027.5	028.4	
8	029.1	030.0	030.9	031.6	032.1	032.5	033.1	033.8	034.5	034.7	034.9	034.6	034.4	034.4	034.5	034.4	034.7	034.7	034.9	034.9	035.2	035.3	035.2	034.7	
9	034.5	034.7	034.6	034.0	033.7	033.2	033.4	033.8	034.0	033.9	033.4	032.5	032.3	031.9	031.8	031.7	031.4	031.2	030.8	030.5	030.4	029.8	029.4	032.6	
10	029.3	029.0	028.6	028.2	027.8	027.8	027.9	027.9	028.2	028.2	027.6	027.0	026.4	026.3	026.3	026.3	026.2	026.2	026.4	026.5	026.4	026.2	025.8	027.2	
11	025.4	025.6	025.6	025.5	025.2	025.2	025.4	025.6	025.8	025.8	025.5	024.9	024.2	024.1	024.0	024.1	024.0	023.6	023.5	023.3	022.9	022.4	021.9	021.2	
12	021.0	021.1	020.8	020.8	020.3	020.1	019.9	020.3	020.2	020.0	020.0	019.4	019.2	019.3	019.1	019.1	019.2	019.1	019.0	018.7	018.3	018.0	017.8	019.7	
13	017.2	016.7	016.2	015.7	015.4	015.5	015.7	016.0	016.4	017.1	017.3	017.3	017.8	018.2	018.3	019.0	018.8	019.5	019.5	019.4	019.4	019.5	019.5	017.6	
14	019.3	019.3	019.3	019.3	019.3	019.3	019.4	019.8	020.4	020.5	021.0	020.3	020.2	020.4	020.5	020.6	020.7	020.6	020.6	020.6	020.6	020.3	020.0	019.8	
15	019.3	019.1	019.0	018.9	018.5	018.4	017.7	017.7	017.2	017.0	016.8	015.7	015.0	014.0	013.7	013.1	012.8	012.3	011.3	010.9	010.0	009.0	008.3	007.1	
16	006.4	005.6	004.7	003.6	002.7	002.3	001.9	001.4	001.0	002.6	004.2	004.9	005.2	006.2	007.3	008.1	008.9	009.3	009.9	010.2	010.3	010.4	010.5	010.4	
17	010.0	009.8	009.5	008.9	007.9	007.4	007.3	007.1	006.1	005.8	005.1	004.3	002.7	001.7	001.0	000.2	999.1	998.4	997.3	996.3	995.5	994.4	992.9	991.5	
18	990.8	991.3	991.8	992.3	992.6	992.4	992.3	991.5	990.2	987.5	984.7	982.1	980.3	979.2	978.9	979.3	982.4	985.9	988.9	991.2	991.8	993.0	993.7	994.2	
19	994.4	994.6	995.1	995.1	994.7	994.4	994.4	994.4	994.5	994.6	994.7	994.6	995.1	995.0	995.4	995.7	996.0	996.2	996.7	997.7	998.5	999.3	000.2	001.2	
20	001.9	003.1	004.3	004.8	005.5	006.5	007.3	007.7	008.6	008.3	007.9	007.2	006.4	005.7	005.0	004.3	003.5	002.7	002.1	000.9	000.0	999.3	998.7	997.7	
21	996.9	995.9	995.2	994.5	994.8	995.8	997.2	998.4	999.0	999.9	000.1	999.8	999.7	000.4	000.5	000.6	000.8	001.4	001.6	001.3	001.0	000.6	000.4	999.8	
22	999.8	999.6	000.2	000.0	000.0	000.4	001.3	001.7	002.6	003.2	004.0	004.4	004.7	005.7	006.9	008.2	009.3	010.4	011.6	012.6	013.0	013.9	005.2	005.2	
23	013.8	013.8	013.7	013.9	013.6	013.1	012.3	010.8	010.1	009.0	008.5	007.1	006.0	005.0	004.5	004.2	004.0	003.3	003.1	002.4	001.8	001.6	001.0	000.7	
24	000.3	999.1	998.4	997.3	995.6	995.0	994.8	993.8	992.4	991.8	991.2	990.4	989.3	988.4	988.0	988.5	988.6	988.5	988.9	989.7	990.3	990.4	990.2	990.3	
25	990.7	990.8	990.7	990.7	990.9	991.4	991.7	992.2	992.7	993.5	993.3	993.1	993.0	993.0	993.3	993.5	993.7	994.0	994.5	994.7	994.9	995.0	995.6	992.9	
26	996.2	996.4	996.6	996.8	997.1	997.6	998.5	999.3	999.7	000.0	000.6	000.7	000.6	000.2	000.2	000.3	000.6	000.6	000.4	000.4	999.9	999.5	999.0	998.4	
27	997.5	997.1	996.6	995.7	995.7	995.4	994.9	994.6	994.3	993.2	992.7	992.0	991.0	990.9	989.8	988.7	988.5	988.1	987.6	987.3	986.7	985.9	985.7	985.6	
28	985.4	984.8	984.5	984.4	983.8	983.1	983.2	983.5	983.7	984.2	984.7	984.9	984.5	984.3	984.8	984.6	985.1	985.1	985.2	985.4	986.0	986.2	986.3	986.6	
29	986.9	987.4	987.7	988.0	988.2	988.3	988.6	989.1	989.5	990.1	990.4	990.4	990.4	990.4	990.6	990.6	990.6	990.7	991.0	990.9	990.6	990.6	990.6	989.6	
30	990.4	990.3	990.2	990.1	990.2	990.2	990.2	990.2	990.2	991.0	991.6	991.5	991.1	990.6	990.1	989.6	988.7	988.2	988.6	988.7	989.2	989.8	990.7	991.6	
31	992.0	992.2	992.5	992.5	992.8	992.9	993.3	994.2	994.9	995.2	995.4	995.3	995.3	995.0	994.2	993.2	992.8	992.8	992.0	989.9	989.2	989.4	989.8	992.8	
Mean (Station Level)	1008.64	1008.60	1008.60	1008.43	1008.28	1008.24	1008.37	1008.56	1008.64	1008.64	1008.57	1008.10	1007.65	1007.42	1007.42	1007.43	1007.55	1007.69	1007.83	1007.90	1007.96	1007.89	1007.82	1007.74	
Mean (Sea Level)	1009.93	1009.89	1009.89	1009.72	1009.57	1009.52	1009.66	1009.85	1009.93	1009.93	1009.85	1009.38	1008.93	1008.69	1008.71	1008.71	1008.83	1008.98	1009.11	1009.18	1009.25	1009.18	1009.10	1009.03	

442 KEW OBSERVATORY:  $H_b$  = 10.4 metres

FEBRUARY, 1937

Hour G. M. T.	1	2	3	4	5	6	7	8	9	10	11	Noon	13	14	15	16	17	18	19	20	21	22	23	24	Mean
Day 1	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb
1	989.3	989.4	989.6	989.7	990.1	990.4	991.5	992.7	993.6	994.7	995.8	995.6	995.7	996.3	997.0	997.4	998.2	998.8	999.6	000.5	001.5	002.4	003.5	004.0	
2	004.0	004.5	005.3	005.3	005.4	005.6	005.8	006.3	006.8	006.8	006.6	006.6	006.8	007.0	007.5	008.0	008.9	009.3	009.3	009.3	009.3	009.3	009.3	009.3	
3	001.8	002.1	002.2	002.2	002.2	002.3	002.6	002.8	003.4	003.7	003.8	003.4	003.8	004.2	004.8	005.2	005.8	006.2	006.2	006.2	006.1	006.1	006.1	006.1	
4	000.3	999.9	999.6	999.2	999.0	998.9	999.0	998.9	999.0	999.1	999.2	998.8	998.4	997.8	997.9	997.8	997.8	997.4	996.8	995.6	994.4	993.4	992.0	990.3	
5	988.7	986.9	985.4	984.2	983.4	983.4	983.8	984.3	984.7	985.0	985.5	985.9	986.7	986.9	988.0	989.3	990.4	991.7	992.5	993.6	994.6	995.7	996.8	998.4	
6	999.2	000.1	001.1	002.3	003.0	004.1	005.3	006.6	007.6	008.4	009.3	009.6	009.5	009.8	010.4	010.4	010.8	011.3	011.5	011.4	011.5	011.6	011.6	011.2	
7	010.5	009.6	008.7	007.5	006.4	005.2	004.2	003.0	001.7	000.5	998.6	997.4	995.5	993.6	992.2	991.3	990.4	989.8	989.2	988.8	988.4	988.5	987.9	987.7	
8	987.4	987.1	986.5	985.6	984.8	984.2	983.7	983.4	983.3	983.3	983.8	983.9	983.7	983.9	984.1	984.4	985.1	985.9	986.7	988.2	989.7	991.1	992.3	993.4	
9	995.1	996.1	997.3	998.1	998.9	999.3	999.7	000.2	000.2	001.5	001.7	001.6	001.6	001.6	001.6	001.6	001.6	001.6	001.6	001.6	001.6	001.6	001.6	001.6	
10	004.2	004.1	003.9	003.6	003.4	003.2	003.3	003.7	004.1	004.3	004.8	004.6	005.0	005.0	005.4	005.1	005.2	005.5	005.6	005.7	005.1	005.0	004.6	004.5	
11	003.9	003.7	003.7	003.7	003.9	004.0	004.4	004.8	005.1	005.2	005.5	005.7	005.9	006.0	006.4	007.0	008.0	008.6	009.1	009.6	010.0	0			

PRESSURE

Readings in millibars at exact hours, Greenwich Mean Time

443 KEW OBSERVATORY: H<sub>0</sub> (height of barometer cistern above M.S.L.) = 10.4 metres

MARCH, 1937

Table with 25 columns (Hour G.M.T., 1-24, Mean) and 31 rows (Day 1-31). Includes 'Station Level' and 'Sea Level' mean values.

444 KEW OBSERVATORY: H<sub>0</sub> = 10.4 metres

APRIL, 1937

Table with 25 columns (Day 1-24, Mean) and 31 rows (Day 1-31). Includes 'Station Level' and 'Sea Level' mean values.

NOTE.- When pressure exceeds 1000 mb the leading figure 1 is not printed, i.e., 1005.8 mb. is written 005.8. This rule does not, however, apply to monthly means

PRESSURE

Readings in millibars at exact hours, Greenwich Mean Time

445 KEW OBSERVATORY: H<sub>0</sub> (height of barometer cistern above M.S.L.) = 10.4 metres

MAY, 1937

Table with 25 columns (1-24 hours + Mean) and 31 rows (Day 1-31). Includes 'Station Level' and 'Sea Level' mean values.

446 KEW OBSERVATORY: H<sub>0</sub> = 10.4 metres

JUNE, 1937

Table with 25 columns (1-24 hours + Mean) and 30 rows (Day 1-30). Includes 'Station Level' and 'Sea Level' mean values.

NOTE.- When pressure exceeds 1000 mb. the leading figure 1 is not printed, i.e., 1005.8 mb. is written 005.8. This rule does not, however, apply to monthly means

PRESSURE
Readings in millibars at exact hours, Greenwich Mean Time

447 KEW OBSERVATORY: Hb (height of barometer cistern above M.S.L.) = 10.4 metres

JULY, 1937

Table with 26 columns (Hour G.M.T., 1-24, Mean) and 31 rows (Day 1-31). Includes 'Station Level' label and 'Mean (Station Level)' and 'Mean (Sea Level)' rows at the bottom.

448. KEW OBSERVATORY: Hb = 10.4 metres

AUGUST, 1937

Table with 26 columns (Day 1-24, Mean) and 31 rows (Day 1-31). Includes 'Station Level' label and 'Mean (Station Level)' and 'Mean (Sea Level)' rows at the bottom.

Note.- When pressure exceeds 1000 mb. the leading figure 1s is not printed, i.e., 1005.0 mb. is written 005.0. This rule does not, however, apply to monthly means

449 KEW OBSERVATORY: H<sub>0</sub> (height of barometer cistern above M.S.L.) = 10.4 metres

SEPTEMBER, 1937

Hour G. M. T.	1	2	3	4	5	6	7	8	9	10	11	Noon	13	14	15	16	17	18	19	20	21	22	23	24	Mean
Day	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb
1	014.3	013.5	013.8	013.3	013.6	013.6	013.4	013.3	013.5	013.6	013.1	012.7	012.4	012.2	012.3	012.3	011.8	012.1	012.3	012.5	012.5	013.0	012.9	013.0	013.0
2	012.8	012.9	013.1	013.2	013.2	013.3	013.4	013.5	013.5	013.7	013.9	014.4	014.2	014.5	014.3	014.3	014.0	015.0	015.3	015.9	016.3	016.4	016.6	016.6	014.3
3	016.7	016.7	016.5	016.3	016.5	016.5	017.2	017.5	017.7	017.8	017.7	017.6	017.7	017.5	017.5	017.6	018.0	018.5	019.3	020.0	020.6	021.2	021.5	021.9	018.1
4	022.5	022.6	022.4	022.5	023.3	023.6	023.9	024.2	024.3	023.9	024.0	024.0	023.7	023.3	022.8	022.4	022.3	022.1	022.3	022.5	022.8	022.8	022.7	022.6	023.1
5	022.3	021.6	021.4	020.8	020.7	020.6	020.6	020.7	020.3	020.1	019.8	019.4	019.1	018.5	018.1	017.7	017.7	017.8	018.2	018.4	018.7	018.6	018.5	019.0	019.6
6	019.1	019.0	018.6	018.8	018.9	018.9	019.2	019.2	019.3	018.9	018.4	017.6	017.2	016.6	016.4	016.4	016.1	016.0	016.2	016.4	016.4	016.4	016.3	016.5	017.7
7	016.4	016.4	016.7	016.8	016.8	017.4	018.2	018.5	018.9	019.0	018.5	018.4	017.7	017.5	017.1	016.6	016.8	016.8	017.2	017.3	017.3	017.2	016.7	017.3	017.4
8	016.8	016.8	016.8	017.3	017.8	019.7	020.6	021.9	023.1	023.3	023.5	024.0	024.1	024.0	024.0	023.9	023.9	024.2	024.4	024.7	025.2	025.3	024.9	024.7	022.1
9	024.5	024.6	023.8	023.5	023.2	022.6	022.4	022.0	021.7	021.1	020.3	019.8	019.5	019.0	018.1	017.4	017.1	016.5	016.6	016.5	016.4	016.4	016.5	016.5	020.0
10	016.8	017.2	017.6	017.8	018.3	018.8	019.6	019.9	019.9	020.1	020.1	019.7	019.5	019.3	019.4	019.6	019.7	020.1	020.6	020.7	020.9	020.7	020.8	020.7	019.4
11	020.5	019.9	019.8	019.3	019.2	019.3	019.4	019.5	019.0	019.0	019.1	018.9	019.2	019.2	019.0	018.8	018.8	019.2	020.0	020.5	020.7	020.8	020.6	020.5	019.6
12	020.6	020.4	020.2	019.6	020.0	020.1	020.0	020.0	019.8	019.8	019.3	018.8	018.1	017.4	016.8	016.1	015.3	014.7	014.1	013.4	012.6	011.5	010.7	009.4	017.3
13	008.4	007.2	006.1	005.3	004.6	004.2	003.3	003.1	002.7	002.4	001.7	001.5	000.8	000.1	000.1	000.3	000.3	000.2	000.3	000.3	000.3	000.2	000.2	000.2	002.4
14	000.3	000.4	000.4	000.4	000.5	001.1	001.6	001.8	002.1	002.2	002.2	002.3	002.4	002.4	002.4	002.2	002.1	001.8	002.2	002.1	001.8	001.4	000.6	000.5	001.5
15	998.8	997.6	996.3	994.4	994.4	994.1	994.0	994.2	994.2	993.9	993.9	992.6	992.3	991.2	990.1	990.0	990.0	990.1	990.6	991.1	991.3	991.4	991.5	991.5	993.1
16	991.7	991.7	991.5	991.1	991.0	991.0	990.7	990.8	991.4	990.5	989.9	989.6	989.0	988.4	989.1	989.1	988.8	988.9	989.4	989.6	989.6	989.4	989.0	988.5	990.1
17	988.3	988.1	987.6	987.2	987.2	987.1	987.4	987.6	987.7	987.7	987.6	987.1	986.7	986.5	986.8	986.6	986.6	987.3	987.9	989.0	990.1	991.1	991.9	992.8	988.0
18	993.5	994.4	994.6	995.2	995.6	996.4	996.6	997.4	997.4	998.1	998.4	998.3	998.3	998.1	998.0	997.9	997.8	998.3	998.8	999.1	999.0	998.7	998.5	998.2	997.3
19	998.0	997.7	997.6	997.4	997.6	997.8	998.3	999.0	999.7	999.0	000.1	000.2	000.7	001.2	001.8	002.0	002.4	003.1	003.8	003.8	004.4	004.5	004.4	004.2	000.7
20	004.2	004.2	004.3	004.4	004.4	004.7	005.4	006.3	006.6	007.0	007.5	007.4	007.9	008.4	009.0	009.9	010.5	010.9	011.6	012.4	012.9	013.3	013.8	014.1	008.2
21	014.4	014.6	014.7	014.8	015.2	015.6	015.8	016.0	016.2	015.8	015.6	015.4	015.3	014.8	014.4	013.9	013.7	013.6	013.5	013.4	013.2	013.0	012.5	012.4	014.5
22	012.4	012.0	011.6	011.4	011.5	011.6	011.7	012.1	012.4	012.5	012.7	012.6	012.6	012.8	013.2	013.4	013.8	014.8	015.5	016.2	016.7	017.3	017.5	018.0	013.5
23	018.4	018.5	018.9	019.4	019.7	020.5	020.8	021.5	021.4	021.4	021.4	021.0	021.0	020.8	020.7	020.8	020.9	020.9	021.2	021.6	021.8	021.7	021.6	021.8	020.7
24	021.8	021.6	021.2	021.0	021.3	021.4	021.5	021.7	021.9	021.3	020.7	019.8	019.7	019.3	018.9	018.4	018.1	018.2	018.2	018.0	018.0	017.8	017.5	017.4	019.9
25	017.3	017.3	017.3	017.3	017.2	017.9	018.5	019.3	019.8	020.3	019.9	019.9	019.9	019.3	019.2	018.8	018.8	019.0	019.2	019.2	019.1	019.1	018.7	018.7	018.7
26	018.6	018.3	018.0	017.9	017.8	018.0	018.3	018.4	018.4	018.3	018.2	017.8	017.3	017.1	016.6	016.3	016.0	016.1	016.4	016.5	016.4	016.3	016.4	015.8	017.4
27	015.4	015.2	014.9	014.3	013.9	014.1	014.1	014.6	014.7	014.5	014.0	013.4	013.0	012.8	012.8	013.1	013.3	013.5	013.7	013.5	013.4	013.4	013.3	013.2	013.9
28	013.2	013.1	013.3	013.4	013.4	014.1	014.7	015.5	016.4	016.8	017.5	017.5	017.9	018.0	018.4	018.8	019.4	019.9	020.3	020.8	021.3	021.4	021.8	022.1	017.3
29	022.2	022.0	021.8	021.8	021.5	021.8	022.0	022.2	022.4	022.4	021.9	021.3	020.8	020.4	019.8	019.5	019.5	019.5	019.9	020.1	020.1	020.1	019.5	019.5	021.0
30	019.3	018.8	018.2	017.8	017.7	017.6	017.8	017.8	017.5	016.7	016.1	015.4	014.7	014.4	013.9	013.6	013.4	013.5	013.6	013.6	013.6	013.6	013.3	012.7	015.7
Mean (Station Level)	1012.65	1012.48	1012.30	1012.14	1012.20	1012.45	1012.68	1012.98	1013.17	1013.04	1012.92	1012.64	1012.43	1012.17	1012.03	1011.91	1011.91	1012.09	1012.41	1012.64	1012.78	1012.79	1012.67	1012.63	1012.52
Mean (Sea Level)	1013.91	1013.74	1013.57	1013.40	1013.47	1013.72	1013.95	1014.24	1014.43	1014.29	1014.16	1013.88	1013.67	1013.41	1013.27	1013.15	1013.15	1013.33	1013.66	1013.89	1014.04	1014.05	1013.93	1013.90	1013.76

450 KEW OBSERVATORY: H<sub>0</sub> = 10.4 metres

OCTOBER, 1937

Hour G. M. T.	1	2	3	4	5	6	7	8	9	10	11	Noon	13	14	15	16	17	18	19	20	21	22	23	24	Mean
Day	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb
1	012.2	011.7	011.6	011.7	011.6	011.9	011.9	012.1	011.9	011.7	011.4	010.8	010.6	010.3	010.0	009.7	009.8	010.3	010.8	010.8	010.8	010.7	010.5	010.3	011.1
2	010.4	010.2	010.4	010.4	010.6	010.8	011.4	011.4	011.4	011.4	011.3	010.9	010.7	010.8	011.1	011.6	012.0	012.5	012.9	013.6	014.0	014.4	014.6	011.6	
3	014.8	014.9	015.0	015.5	016.3	017.0	017.8	018.6	019.3	019.4	019.3	019.5	020.0	020.3	020.9	021.4	021.9	022.6	022.9	023.9	024.7	025.3	025.9	019.9	
4	027.5	027.9	028.4	028.6	029.4	030.4	030.9	031.4	032.0	032.3	032.2	032.4	032.1	032.2	031.9	032.0	031.9	032.3	032.6	032.6	032.8	032.6	032.5	031.8	021.2
5	031.6	031.3	030.7	030.1	029.5	029.2	029.1	029.3	029.3	028.9	028.9	028.4	028.3	028.3	028.3	028.2	028.0	028.3	028.3	028.3	028.2	027.9	027.7	027.4	029.0
6	027.3	026.8	026.4	026.1	026.0	025.4	025.1	024.8	024.3	023.9	023.4	022.8	022.1	021.6	020.5	020.1	019.8	019.7	019.5	018.9	018.7	018.1	017.4	017.0	022.5
7	016.4	016.2	015.8	015.5	015.3	014.9	014.7	014.8	014.8	014.5	014.2	013.9	013.4	013.0	012.6	012.5	012.7	013.2	013.4	013.4	013.6	013.3	012.7	012.5	014.1
8	012.3	011.9	012.2	012.3	012.5	012.9	013.8	014.5	015.1	015.4	015.8	015.8	016.0	016.5	016.7	017.1	017.6	018.4	019.1	019.6	020.1	020.6	021.0	021.6	016.0
9	022.3	022.3	022.4	022.5	023.0	023.6	024.6	025.4	026.0	026.4	026.8	027.3	027.1	027.4	027.6	027.9	028.3	028.8	029.6	030.4	030.8	030.9	031.0	026.4	
10	031.1	030.9	030.8	030.8	031.1	031.1	031.2	031.4	031.4	031.2	031.0	030.2	029.4	028.9	028.2	028.0	027.8	027.7	027.7	027.7	027.5	027.4	027.0	026.9	029.5
11	026.6	026.4	026.0																						



PRESSURE

Readings in millibars at exact hours, Greenwich Mean Time

451. KEW OBSERVATORY: H<sub>0</sub> (height of barometer cistern above M.S.L.) = 10.4 metres

NOVEMBER, 1937

Table with 25 columns (1-24, Mean) and 31 rows (Day 1-30, Mean Station Level, Mean Sea Level). Columns 1-24 contain hourly pressure readings in millibars. Includes a vertical 'Station Level' indicator on the left.

452. KEW OBSERVATORY: H<sub>0</sub> = 10.4 metres

DECEMBER, 1937

Table with 25 columns (1-24, Mean) and 31 rows (Day 1-30, Mean Station Level, Mean Sea Level). Columns 1-24 contain hourly pressure readings in millibars. Includes a vertical 'Station Level' indicator on the left.

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

**PRESSURE AT STATION LEVEL AND AT SEA LEVEL  
ANNUAL MEANS FROM HOURLY VALUES**  
From readings in millibars at exact hours, Greenwich Mean Time

453 KEW OBSERVATORY:  $H_b = 10.4$  metres

1937

Hour G. M. T.	1	2	3	4	5	6	7	8	9	10	11	Noon	13	14	15	16	17	18	19	20	21	22	23	24	Mean
Station Level	mb 011.75	mb 011.64	mb 011.52	mb 011.44	mb 011.47	mb 011.57	mb 011.74	mb 011.92	mb 012.03	mb 012.02	mb 011.97	mb 011.72	mb 011.49	mb 011.26	mb 011.14	mb 011.08	mb 011.13	mb 011.30	mb 011.50	mb 011.70	mb 011.87	mb 011.93	mb 011.93	mb 011.88	mb 011.62
Sea Level	mb 013.03	mb 012.92	mb 012.80	mb 012.72	mb 012.75	mb 012.85	mb 013.02	mb 013.19	mb 013.30	mb 013.29	mb 013.23	mb 012.98	mb 012.75	mb 012.52	mb 012.40	mb 012.24	mb 012.39	mb 012.56	mb 012.76	mb 012.97	mb 013.14	mb 013.20	mb 013.20	mb 013.15	mb 012.89

**PRESSURE AT STATION LEVEL: MONTHLY MEANS AND DIURNAL INEQUALITIES**  
The departures from the mean of the day are adjusted for non-cyclic change†

454 KEW OBSERVATORY:  $H_b = 10.4$  metres

1937

Month	Mean	Hour 1	G.M.T. 2	3	4	5	6	7	8	9	10	11	Noon	13	14	15	16	17	18	19	20	21	22	23	24
Jan.	mb 1008.10	mb +0.08	mb +0.09	mb +0.13	mb -0.01	mb -0.12	mb -0.12	mb +0.06	mb +0.29	mb +0.41	mb +0.46	mb +0.42	mb 0.00	mb -0.41	mb -0.60	mb -0.55	mb -0.51	mb -0.35	mb -0.16	mb +0.01	mb +0.13	mb +0.23	mb +0.21	mb +0.17	mb +0.14
Feb.	mb 1001.55	mb +0.79	mb +0.60	mb +0.36	mb +0.14	mb -0.05	mb -0.19	mb -0.15	mb -0.04	mb -0.03	mb -0.12	mb -0.10	mb -0.41	mb -0.69	mb -0.96	mb -1.07	mb -0.97	mb -0.59	mb -0.13	mb +0.19	mb +0.39	mb +0.55	mb +0.72	mb +0.86	mb +0.88
Mar.	mb 1003.27	mb +0.18	mb -0.05	mb -0.29	mb -0.41	mb -0.38	mb -0.29	mb -0.13	mb 0.00	mb +0.12	mb +0.17	mb +0.22	mb +0.13	mb -0.08	mb -0.33	mb -0.38	mb -0.46	mb -0.25	mb +0.04	mb +0.27	mb +0.40	mb +0.41	mb +0.42	mb +0.41	mb +0.28
Apr.	mb 1009.42	mb -0.08	mb -0.18	mb -0.29	mb -0.30	mb -0.11	mb +0.08	mb +0.34	mb +0.45	mb +0.62	mb +0.62	mb +0.48	mb +0.25	mb +0.07	mb -0.26	mb -0.49	mb -0.70	mb -0.71	mb -0.54	mb -0.24	mb +0.09	mb +0.29	mb +0.25	mb +0.22	mb +0.11
May	mb 1015.17	mb +0.11	mb +0.02	mb -0.11	mb -0.24	mb -0.07	mb +0.05	mb +0.13	mb +0.31	mb +0.31	mb +0.21	mb +0.25	mb +0.10	mb -0.02	mb -0.22	mb -0.35	mb -0.43	mb -0.51	mb -0.43	mb -0.25	mb +0.02	mb +0.24	mb +0.33	mb +0.33	mb +0.25
June	mb 1016.82	mb +0.21	mb +0.11	mb +0.03	mb +0.10	mb +0.15	mb +0.26	mb +0.48	mb +0.45	mb +0.41	mb +0.33	mb +0.26	mb +0.06	mb -0.10	mb -0.33	mb -0.54	mb -0.71	mb -0.75	mb -0.70	mb -0.53	mb -0.23	mb +0.13	mb +0.27	mb +0.33	mb +0.30
July	mb 1014.94	mb +0.23	mb +0.15	mb 0.00	mb +0.03	mb +0.11	mb +0.26	mb +0.32	mb +0.36	mb +0.31	mb +0.28	mb +0.23	mb +0.08	mb -0.03	mb -0.19	mb -0.35	mb -0.51	mb -0.65	mb -0.68	mb -0.56	mb -0.30	mb +0.02	mb +0.23	mb +0.32	mb +0.33
Aug.	mb 1016.94	mb +0.06	mb -0.03	mb -0.16	mb -0.11	mb +0.01	mb +0.21	mb +0.43	mb +0.59	mb +0.66	mb +0.60	mb +0.47	mb +0.21	mb -0.01	mb -0.29	mb -0.52	mb -0.69	mb -0.75	mb -0.70	mb -0.47	mb -0.11	mb +0.08	mb +0.18	mb +0.18	mb +0.15
Sept.	mb 1012.51	mb +0.11	mb -0.06	mb -0.23	mb -0.39	mb -0.33	mb -0.08	mb +0.16	mb +0.46	mb +0.65	mb +0.53	mb +0.41	mb +0.13	mb -0.08	mb -0.33	mb -0.46	mb -0.58	mb -0.58	mb -0.40	mb -0.07	mb +0.16	mb +0.31	mb +0.31	mb +0.20	mb +0.16
Oct.	mb 1013.75	mb +0.05	mb -0.17	mb -0.28	mb -0.35	mb -0.30	mb -0.26	mb +0.03	mb +0.36	mb +0.49	mb +0.52	mb +0.48	mb +0.15	mb -0.07	mb -0.28	mb -0.45	mb -0.54	mb -0.43	mb -0.11	mb +0.04	mb +0.17	mb +0.33	mb +0.29	mb +0.21	mb +0.13
Nov.	mb 1015.91	mb -0.02	mb -0.06	mb -0.25	mb -0.35	mb -0.29	mb -0.21	mb -0.04	mb +0.27	mb +0.52	mb +0.68	mb +0.54	mb +0.22	mb -0.17	mb -0.44	mb -0.48	mb -0.44	mb -0.26	mb -0.10	mb -0.01	mb +0.09	mb +0.20	mb +0.27	mb +0.22	mb +0.13
Dec.	mb 1010.38	mb -0.04	mb -0.09	mb -0.09	mb -0.26	mb -0.35	mb -0.33	mb -0.21	mb +0.10	mb +0.36	mb +0.51	mb +0.50	mb +0.22	mb -0.09	mb -0.22	mb -0.22	mb -0.15	mb -0.11	mb -0.07	mb +0.03	mb +0.09	mb +0.12	mb +0.10	mb +0.13	mb +0.06
Year	mb 1011.62	mb +0.14	mb +0.03	mb -0.09	mb -0.17	mb -0.14	mb -0.04	mb +0.13	mb +0.31	mb +0.41	mb +0.40	mb +0.35	mb +0.10	mb -0.13	mb -0.36	mb -0.48	mb -0.55	mb -0.50	mb -0.33	mb -0.13	mb +0.07	mb +0.24	mb +0.30	mb +0.30	mb +0.25

† See page 23

**ABSOLUTE EXTREMES OF PRESSURE AT STATION LEVEL FOR EACH DAY**  
Maximum and Minimum for the interval 0h. to 24h., Greenwich Mean Time

455 KEW OBSERVATORY:  $H_b = 10.4$  metres

1937

Month	Jan.		Feb.		Mar.		Apr.		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	020.2	012.2	004.0	989.2	997.9	991.6	014.1	001.0	028.1	023.3	018.5	016.4	019.1	015.6	023.0	019.9	014.7	011.8	012.4	009.7	003.5	997.7	010.5	993.9
2	mb	021.2	016.1	006.9	002.5	999.7	996.9	001.0	991.8	023.6	013.8	021.3	018.5	019.0	015.7	023.0	020.5	017.2	012.7	014.6	010.0	014.4	003.5	993.9	985.1
3	mb	026.6	021.0	003.9	000.7	001.6	999.7	003.1	993.4	013.8	008.2	019.5	016.3	016.7	009.4	021.4	016.9	021.9	016.2	026.8	014.6	019.5	014.1	006.6	998.8
4	mb	025.3	010.8	000.7	990.3	000.4	995.1	008.5	003.1	017.5	010.3	017.7	015.6	020.7	010.9	018.1	015.9	024.4	021.9	032.9	026.8	020.3	018.5	010.0	992.5
5	mb	019.8	014.0	998.0	982.9	005.6	996.4	009.5	007.4	025.0	017.4	018.2	016.0	021.3	016.8	018.0	016.3	022.6	017.4	032.3	027.4	023.5	018.8	994.0	996.8
6	mb	016.3	004.0	011.7	998.0	010.0	002.4	014.8	009.5	026.0	023.7	017.2	013.3	016.9	011.5	017.9	013.4	019.3	015.8	027.4	017.0	023.1	017.7	994.5	991.4
7	mb	028.4	005.7	011.2	987.7	005.3	998.4	014.6	006.1	023.7	020.3	015.0	012.8	018.2	010.9	016.0	013.0	019.1	016.2	017.0	012.3	018.0	015.6	996.2	993.8
8	mb	035.4	028.4	993.4	983.2	005.2	001.7	014.4	009.5	021.2	015.9	016.7	014.8	020.7	018.2	020.5	015.7	025.4	016.6	021.6	011.9	019.3	015.5	001.5	996.0
9	mb	034.8	029.4	005.0	993.4	001.7	999.2	013.6	996.5	015.9	007.6	016.4	014.5	018.7	010.5	020.5	017.9	024.9	016.2	031.0	021.6	021.8	018.4	007.2	998.1
10	mb	029.5	025.8	005.7	003.2	001.2	995.7	996.7	992.8	010.0	007.4	015.7	008.7	018.1	011.9	016.4	014.6	024.9	016.5	031.6	026.6	020.5	015.2	010.0	993.1
11	mb	025.9	021.2	011.5	003.6	995.7	981.5	004.8	995.1	007.4	003.5	015.2	010.3	018.6	014.8	014.7	011.5	020.9	018.7	026.9	023.3	023.2	016.0	994.5	989.1
12	mb	021.2	017.8	013.4	004.4	984.2	981.7	005.0	003.5	006.2	004.7	020.8	014.5	015.6	014.5	012.4	009.7	020.7	009.4	025.5	023.0	023.9	022.3	002.3	994.5
13	mb	019.6	015.4	013.6	002.4	988.2	981.7	004.8	984.4	009.3	004.6	021.2	018.6	018.6	014.6	009.7	006.1	009.4	000.0	026.7	022.7	024.2	018.6	999.9	977.1
14	mb	021.1	019.2	018.6	003.6	994.6	975.2	003.9	993.3	010.2	008.8	024.7	021.2	017.0	009.6	010.0	006.0	002.5	999.5	022.9	020.7	019.6	017.6	987.0	977.5
15	mb	019.8	007.1	019.8	013.1	018.5	994.6	007.7	997.9	016.9	009.8	027.3	023.8	009.7	002.5	011.6	009.9	999.5	989.4	031.1	022.9	020.8	018.0	999.2	987.0
16	mb	010.5	001.0	013.1	001.2	018.7	000.2	998.3	992.7	018.2	015.9	026.9	022.1	020.0	004.7	011.6	002.6	991.9	988.4	032.7	030.3	020.7	009.6	014.8	999.2
17	mb	010.4	991.5	014.9	001.5	002.2	999.2	009.2	998.3	016.0	013.6	022.6	020.0	024.0	019.8	012.7	002.3	992.8	988.4	034.0	032.0	009.6	000.6	020.4	014.8
18	mb	994.2	978.7	017.5	009.3	001.6	999.1	009.5	007.8	014.4	009.3	020.7	013.0	024.0	020.9	015.3	012.7	999.1	992.8	033.4	028.6	000.6	989.0	020.4	018.6
19	mb	001.2	994.2	010.0	997.9	002.3	000.9	011.6	006.2	009.3	005.5	013.7	011.7	021.0	017.2	021.6	014.5	004.6	997.4	028.6	018.6	997.6	987.3	018.7	015.2
20	mb	006.6	997.7	009.8	005.2	002.1	000.2	006.2	989.7	008.0	000.2	017.5	013.1	019.5	017.2	021.7	019.4	014.1	004.1	018.6	012.7	010.9	997.6	018.7	013.9
21																									

TEMPERATURE

Readings in degrees absolute at exact hours, Greenwich Mean Time

456 KEW OBSERVATORY: North Wall Screen: h<sub>t</sub> (height of thermometer bulb above the ground) = 3.0 metres

JANUARY, 1937

Table with 25 columns (Hour G.M.T., 1-24, Mean) and 31 rows (Day 1-31). Contains temperature readings in degrees absolute for January 1937.

457 KEW OBSERVATORY: North Wall Screen: h<sub>t</sub> = 3.0 metres

FEBRUARY, 1937

Table with 25 columns (Day, Hour G.M.T., 1-24, Mean) and 28 rows (Day 1-28). Contains temperature readings in degrees absolute for February 1937.

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

TEMPERATURE

Readings in degrees absolute at exact hours, Greenwich Mean Time

458 KEW OBSERVATORY: North Wall Screen: h<sub>t</sub> (height of thermometer bulb above the ground) = 3.0 metres

MARCH, 1937

Table with 24 columns (1-24) and 31 rows (Day 1-31, Mean). Columns 1-24 represent hourly readings in degrees absolute. The 'Mean' row shows the average for each day. Values range from approximately 73.0 to 85.5.

459 KEW OBSERVATORY: North Wall Screen: h<sub>t</sub> = 3.0 metres

APRIL, 1937

Table with 24 columns (1-24) and 31 rows (Day 1-31, Mean). Columns 1-24 represent hourly readings in degrees absolute. The 'Mean' row shows the average for each day. Values range from approximately 78.0 to 88.5.

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

TEMPERATURE

Readings in degrees absolute at exact hours, Greenwich Mean Time

460 KEW OBSERVATORY: North Wall Screen: h<sub>t</sub> (height of thermometer bulb above the ground) = 3.0 metres

MAY, 1937

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	80.6	80.3	80.1	80.0	80.1	80.2	80.4	81.4	82.4	83.3	85.2	86.5	87.0	87.1	87.0	86.9	87.0	85.9	84.4	83.6	83.2	82.7	82.2	81.6	83.3
2	81.4	81.2	81.4	81.4	81.4	81.2	81.2	81.5	81.9	82.6	83.6	85.8	87.3	89.0	90.4	90.9	90.4	89.0	87.1	85.0	83.8	82.9	82.9	82.7	84.4
3	82.6	82.3	81.7	81.4	81.0	81.5	82.4	84.0	85.8	87.7	90.2	91.7	93.4	92.5	92.4	93.7	91.7	93.6	91.8	88.5	87.3	85.7	85.1	84.2	87.1
4	83.4	83.0	82.8	82.6	82.5	82.4	82.5	83.3	84.6	85.3	86.0	87.7	88.6	89.2	89.6	89.5	90.1	89.3	88.4	87.0	85.8	84.7	84.6	84.0	85.7
5	82.7	81.5	80.7	80.2	80.4	81.8	82.9	83.8	83.7	84.4	85.0	85.9	86.8	86.7	87.6	87.9	87.9	87.3	86.0	84.5	83.2	82.5	81.6	80.7	84.0
6	79.8	79.5	78.9	78.3	77.5	79.1	80.9	82.6	84.4	85.4	86.6	87.2	87.9	87.8	87.5	87.0	86.9	86.8	86.0	85.6	85.1	84.3	83.9	83.8	83.8
7	83.7	83.7	83.7	83.8	83.9	84.4	85.1	85.9	87.1	88.2	89.6	89.7	90.9	91.5	90.9	91.3	90.8	90.7	89.6	88.5	87.7	87.0	86.4	85.6	87.5
8	84.5	83.9	83.6	84.0	84.0	84.2	84.6	84.6	83.5	83.7	83.7	84.2	84.7	85.4	85.7	85.2	84.5	84.0	83.4	82.7	82.0	81.8	81.4	81.2	83.9
9	81.0	80.6	80.5	80.8	80.7	80.5	80.6	80.8	81.0	81.1	81.6	81.9	82.0	82.7	83.4	83.4	84.1	84.3	84.2	84.2	84.2	83.8	83.6	83.6	82.2
10	83.6	83.6	83.5	83.0	82.6	82.9	83.4	83.6	84.1	85.0	86.5	86.5	88.6	88.0	88.5	87.5	87.5	87.0	85.9	85.6	85.2	84.5	83.9	83.2	85.2
11	82.9	82.6	82.4	82.6	83.1	83.1	83.7	83.7	83.5	84.2	84.7	84.5	84.4	84.6	85.8	86.8	89.2	89.9	87.7	84.5	82.9	82.4	80.6	79.6	84.2
12	79.4	79.6	79.8	80.2	81.0	81.6	82.7	83.3	84.8	85.8	86.2	86.6	87.0	86.2	85.3	84.1	84.3	84.6	83.9	83.7	83.6	83.2	82.8	82.4	83.4
13	82.4	82.4	82.0	81.8	81.9	82.0	82.0	82.2	82.4	82.5	83.0	83.2	84.0	84.3	84.7	85.3	85.6	84.8	84.3	83.5	83.1	82.8	82.9	82.7	83.2
14	82.7	82.6	81.5	80.2	79.7	79.6	80.5	81.2	82.6	84.6	85.0	86.0	86.3	85.6	85.5	85.8	85.6	85.4	84.7	84.3	84.0	83.7	83.2	82.8	83.1
15	83.7	83.6	83.2	82.6	82.2	82.1	82.0	82.7	83.5	83.4	84.2	84.6	84.5	84.5	84.1	84.3	84.4	84.3	83.8	83.6	83.6	83.1	82.6	82.4	83.5
16	81.6	81.4	80.6	80.6	80.8	80.9	81.0	81.5	81.7	81.8	82.0	82.8	83.5	83.9	84.0	84.4	84.5	83.9	83.2	82.5	81.6	80.5	81.4	81.3	82.2
17	81.7	81.5	81.6	81.4	81.4	81.6	81.8	82.7	83.6	84.6	85.4	86.5	87.5	87.9	88.6	88.0	88.2	87.3	86.8	84.2	83.1	82.5	81.9	81.5	84.2
18	80.8	80.2	79.6	79.1	78.7	79.6	80.2	81.2	82.6	84.6	85.0	86.0	86.3	85.6	85.5	85.8	85.6	85.4	84.7	84.3	84.0	83.7	83.2	82.8	83.1
19	82.8	82.7	82.6	82.5	82.4	82.5	82.6	82.7	83.0	83.4	83.7	84.4	85.2	86.3	87.7	89.3	90.0	89.6	87.8	86.2	85.2	84.2	83.2	82.6	84.7
20	82.1	80.7	81.4	81.1	81.2	82.7	84.1	85.5	86.5	87.6	88.6	89.5	90.4	91.1	91.9	90.5	90.0	89.1	88.5	87.5	87.3	86.8	86.1	85.7	86.4
21	85.4	85.2	85.0	84.9	84.8	84.7	85.0	85.2	84.8	86.2	86.8	86.8	87.2	88.3	88.1	88.0	88.1	87.5	87.8	85.4	84.1	83.3	82.2	82.3	85.8
22	81.6	82.1	82.1	81.5	82.7	84.1	84.6	85.8	86.4	86.7	85.6	84.9	86.0	86.2	87.1	87.4	86.9	86.3	86.6	86.6	86.3	86.2	86.9	87.2	85.2
23	87.1	87.0	87.0	86.9	87.2	88.0	88.5	89.1	89.6	89.8	90.9	91.9	92.8	93.9	94.0	94.3	94.4	93.6	92.0	91.3	90.6	89.0	88.0	87.8	90.2
24	87.8	86.8	85.6	85.9	86.2	87.6	88.5	89.7	90.6	91.4	93.3	92.8	93.4	93.7	94.0	94.8	95.6	97.1	95.9	92.5	90.1	88.8	87.3	86.9	90.7
25	87.5	88.2	88.6	88.8	89.2	90.4	92.1	92.8	93.8	94.0	94.7	95.7	96.4	97.0	97.6	98.0	98.6	97.4	94.9	94.2	92.3	91.0	90.0	91.0	93.0
26	91.2	88.9	88.6	88.3	88.7	88.6	89.3	90.7	92.4	93.1	94.5	94.9	95.2	95.2	90.3	88.2	88.9	88.7	89.0	88.7	88.3	87.9	86.7	85.6	90.2
27	84.6	84.0	83.2	83.0	83.8	85.1	86.2	87.4	88.2	88.8	89.5	91.0	91.0	92.5	92.0	93.2	92.0	91.5	91.5	89.8	88.5	87.5	86.5	85.5	88.2
28	84.8	84.6	84.4	83.0	83.9	85.8	86.8	88.5	90.2	91.0	92.3	93.8	95.2	95.8	96.2	96.2	96.2	95.0	93.8	91.8	90.7	89.9	88.7	88.3	90.2
29	87.6	87.0	86.9	86.6	87.2	88.4	90.0	91.6	93.1	94.8	96.6	97.0	97.1	98.5	99.2	99.2	99.0	98.0	96.8	94.6	93.1	91.0	89.6	88.8	93.0
30	87.6	87.2	86.8	86.3	87.3	89.3	89.9	91.8	92.5	93.8	95.2	95.4	95.4	96.5	94.9	95.1	94.6	94.9	93.5	92.0	91.2	90.6	89.2	88.1	91.6
31	87.7	87.2	86.7	86.1	85.9	86.2	86.7	88.4	89.2	89.7	90.5	90.7	92.0	91.9	91.8	92.2	92.5	92.3	91.5	89.6	88.5	87.5	86.5	86.1	89.1
Mean	83.8	83.4	83.1	82.9	83.0	83.6	84.3	85.1	85.9	86.7	87.6	88.3	89.0	89.4	89.4	89.5	89.5	89.2	88.3	87.0	86.2	85.4	84.7	84.3	86.2

461 KEW OBSERVATORY: North Wall Screen: h<sub>t</sub> = 3.0 metres

JUNE, 1937

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	85.0	84.4	83.7	83.2	83.7	84.2	85.2	86.2	87.9	87.8	88.9	88.7	88.9	88.9	89.0	89.7	88.4	88.3	87.8	87.2	85.7	84.9	84.2	83.7	86.5
2	83.1	82.5	81.8	81.6	82.1	82.5	83.9	84.9	86.1	86.3	87.4	88.3	88.2	88.2	89.7	89.3	90.0	89.5	89.1	88.1	85.7	85.5	84.5	86.0	86.0
3	82.5	82.1	82.2	81.6	82.2	82.9	83.7	85.7	86.5	87.6	88.0	89.1	89.2	89.7	90.0	90.6	90.9	90.0	89.2	88.4	87.7	87.4	87.0	86.7	86.7
4	86.6	86.6	86.6	86.6	86.8	87.2	88.6	90.1	91.3	91.5	93.0	92.5	93.2	93.6	94.2	95.0	94.3	94.1	93.6	91.5	89.8	88.4	87.8	86.7	90.4
5	86.6	86.3	86.2	86.3	86.4	86.8	87.5	88.3	89.6	90.4	90.9	92.7	92.9	93.8	94.7	95.4	96.1	96.9	96.1	92.8	90.8	89.2	87.3	85.9	90.4
6	85.6	84.7	84.7	84.4	86.2	88.5	89.2	89.3	91.1	92.3	94.2	95.7	97.8	97.5	98.4	98.3	98.9	99.0	97.5	94.7	92.6	91.5	90.6	89.6	92.1
7	90.0	89.3	88.7	88.2	88.2	89.0	90.1	90.9	92.1	94.4	96.3	96.7	97.3	97.1	96.5	96.2	97.0	96.8	95.0	92.8	91.3	90.8	89.7	88.4	92.6
8	87.2	86.5	85.6	84.8	85.1	86.3	87.0	88.1	88.6	90.8	91.1	89.5	88.0	89.1	89.2	90.9	91.8	92.2	92.1	88.5	87.0	85.9	84.8	83.8	88.2
9	82.8	82.5	81.9	81.7	83.7	85.5	87.0	88.8	90.5	91.7	92.2	92.7	94.2	93.7	91.9	90.2	89.7	89.1	89.0	88.7	88.2	87.2	87.3	87.6	88.2
10	86.6	85.9	85.4	85.3	86.0	86.4	87.0	87.4	88.7	90.7	92.4	94.0	95.3	96.5	97.2	97.7	97.5	96.3	95.1	90.8	90.4	90.6	90.1	89.5	90.9
11	89.3	89.1	89.0	88.4	89.3	90.1	90.7	90.4	92.0	91.9	93.0	95.1	95.9	97.1	98.3	99.0	00.0	99.9	99.0	97.0	94.2	94.0	93.3	92.2	93.6
12	91.6	90.8	90.4	90.2	90.6	90.8	91.6	92.6	94.0	95.6	96.0	95.8	96.3	96.0	97.4	97.6	97.0	94.7	93.6	92.2	91.2	90.7	90.2	89.6	93.2
13	89.4	89.0	88.7	87.9	88.4	90.0	88.6	87.3	87.8	88.5	89.2	90.2	90.9	92.6	92.7	93.8	94.2	93.0	91.6	90.5	89.1	88.5	87.6	87.2	89.9
14	86.8	86.5	86.1	85.7	86.5	86.1	88.0	88.6	89.6	90.7	91.3	92.5	93.1	93.8	93.6	93.9	94.4	94.0	93.7	92.4	90.8	89.5	88.7	88.1	90.2
15	87.8	87.5	87.3	86.9	86.9	87.2	88.0	88.0	87.9	88.2	89.2	89.8	88.0	89.3	90.6	90.6	88.8	89.2	88.7	87.8	86.8	85.7	85.0	83.9	88.0
16	84.2	84.7	84.5	84.2	84.5	84.8	86.6	87.0	87.6	88.7															

TEMPERATURE

Readings in degrees absolute at exact hours, Greenwich Mean Time

462 KEW OBSERVATORY: North Wall Screen: h<sub>t</sub> (height of thermometer bulb above the ground) = 3.0 metres

JULY, 1937

Table with 25 columns (Hour G.M.T., 1-24, Mean) and 31 rows (Day 1-31). Contains temperature readings in degrees absolute.

463 KEW OBSERVATORY: North Wall Screen: h<sub>t</sub> = 3.0 metres

AUGUST, 1937

Table with 25 columns (Hour G.M.T., 1-24, Mean) and 31 rows (Day 1-31). Contains temperature readings in degrees absolute.

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

TEMPERATURE

Readings in degrees absolute at exact hours, Greenwich Mean Time

464 KEW OBSERVATORY:

North Wall Screen: h<sub>t</sub> (height of thermometer bulb above the ground) = 3.0 metres

SEPTEMBER, 1937

Table with 25 columns (1-24, Mean) and 31 rows (Day 1-31). Columns 1-11 are labeled '1' through '11' and 'Moon'. Columns 13-24 are labeled '13' through '24'. Each cell contains a temperature reading in degrees absolute. The 'Mean' column shows the average for each day.

465 KEW OBSERVATORY: North Wall Screen: h<sub>t</sub> = 3.0 metres

OCTOBER, 1937

Table with 25 columns (1-24, Mean) and 31 rows (Day 1-31). Columns 1-11 are labeled '1' through '11' and 'Moon'. Columns 13-24 are labeled '13' through '24'. Each cell contains a temperature reading in degrees absolute. The 'Mean' column shows the average for each day.

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

TEMPERATURE

Readings in degrees absolute at exact hours, Greenwich Mean Time

466 KEW OBSERVATORY: North Wall Screen:  $h_t$  (height of thermometer bulb above the ground) = 3.0 metres

NOVEMBER, 1937

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	83.2	82.9	82.8	82.6	82.8	82.8	83.6	84.0	84.5	84.8	84.5	84.6	84.5	84.2	84.1	84.2	84.7	85.0	84.0	83.4	83.0	81.8	81.9	81.6	83.6
2	81.4	81.5	81.7	81.2	81.0	80.8	80.7	80.2	79.9	80.3	80.5	80.9	81.9	82.3	82.5	82.3	81.8	81.7	81.4	81.4	81.4	81.3	81.5	81.4	81.3
3	81.5	81.5	81.8	81.4	81.5	81.7	81.8	81.9	82.0	82.3	82.8	82.8	83.1	83.1	82.9	82.4	81.3	80.3	81.0	81.3	81.1	80.4	79.6	79.7	81.7
4	79.9	80.1	80.8	81.2	81.7	81.4	81.1	81.9	82.7	83.2	84.0	84.7	85.3	85.5	85.2	84.1	83.5	81.3	81.4	81.9	81.1	80.2	80.2	79.3	82.2
5	79.3	79.9	80.2	80.9	81.1	81.1	81.5	81.9	82.2	82.4	83.0	83.3	83.7	83.8	83.2	82.9	82.6	81.7	81.1	80.5	80.3	80.2	80.8	81.6	81.6
6	81.4	81.8	82.0	81.9	81.0	82.3	82.2	82.2	82.4	82.3	82.7	82.7	83.0	83.1	82.9	82.8	82.7	82.8	83.0	83.2	82.8	82.5	82.3	82.2	82.4
7	82.0	81.9	81.9	82.0	82.1	82.2	82.2	82.3	82.6	82.9	83.3	83.5	83.9	84.2	84.3	84.3	84.3	84.1	84.0	84.0	84.1	84.0	84.0	83.7	83.2
8	83.3	82.5	82.3	82.5	81.8	81.5	81.5	81.5	82.3	82.8	83.3	83.9	84.9	85.0	84.5	84.2	84.0	84.0	84.1	84.0	84.2	84.0	83.8	83.3	83.3
9	83.2	83.3	83.1	83.0	82.9	82.6	83.0	82.7	82.4	82.2	82.2	82.5	82.6	82.3	82.2	81.2	80.5	80.3	79.3	78.3	77.6	77.0	76.9	76.9	81.3
10	76.3	76.1	75.8	75.4	75.4	75.2	74.8	75.1	76.1	77.3	78.3	78.9	79.0	79.6	80.8	80.0	79.2	79.0	78.8	78.3	78.0	77.7	77.2	77.2	77.5
11	77.1	77.0	77.5	78.2	78.0	77.9	77.9	77.9	78.7	80.0	80.5	80.9	81.6	81.7	81.7	81.5	80.4	79.5	79.4	79.8	79.7	79.2	79.1	78.8	79.3
12	77.2	76.5	76.2	75.9	75.5	75.8	76.0	76.1	76.9	78.5	80.5	81.3	81.7	81.9	81.7	80.8	79.7	79.1	78.3	77.5	76.8	76.4	76.0	75.1	78.1
13	74.5	74.0	73.3	72.8	72.4	72.0	71.9	71.8	72.9	74.0	75.4	77.0	77.9	78.3	77.9	77.1	75.9	75.3	74.4	73.8	73.2	73.1	73.0	72.3	74.4
14	71.3	72.3	71.9	70.9	71.5	71.2	70.5	70.4	72.3	73.6	74.9	76.3	77.9	78.3	77.8	77.0	76.4	75.5	74.3	73.8	73.6	73.4	73.0	72.6	73.8
15	72.7	72.5	72.2	72.2	71.8	71.9	72.3	72.8	74.0	76.3	78.0	79.6	79.9	80.6	80.7	80.3	78.0	79.6	78.3	77.2	77.8	77.6	77.8	77.9	76.3
16	78.0	78.0	77.8	78.0	77.7	76.6	76.2	75.7	76.0	76.2	76.9	78.0	78.0	79.1	79.2	78.2	77.8	78.0	77.9	77.6	76.7	76.4	76.3	76.7	77.4
17	77.0	76.7	76.5	76.5	76.6	76.5	76.5	76.8	77.3	77.6	78.0	78.0	78.3	77.8	77.6	77.2	77.0	77.2	77.3	77.6	77.6	77.7	77.8	78.0	77.3
18	78.0	77.9	78.1	78.4	78.5	78.4	78.2	78.3	78.4	78.5	78.7	79.1	79.2	79.3	79.4	79.6	79.3	79.2	79.2	79.2	79.7	80.0	80.2	80.3	78.9
19	80.5	80.6	80.7	80.7	80.4	80.1	79.9	79.6	79.7	80.0	80.9	80.9	81.4	81.4	80.9	80.2	79.5	78.6	78.0	77.6	77.4	76.8	77.1	76.9	79.6
20	76.4	76.4	75.8	75.7	75.3	75.2	74.6	74.8	76.2	76.8	76.7	77.6	77.4	77.2	77.2	76.8	75.4	74.8	74.0	74.1	73.4	73.0	72.7	71.6	75.5
21	70.4	69.8	70.0	70.1	70.3	70.0	69.4	70.2	69.2	69.6	70.2	71.7	72.6	72.7	73.0	72.9	72.9	72.6	72.0	72.6	73.4	73.7	74.6	76.0	71.6
22	76.6	76.6	76.0	76.3	76.1	76.2	77.2	77.2	78.2	78.8	79.2	80.4	80.6	81.0	80.6	80.4	80.2	80.2	80.1	79.4	79.2	79.7	79.8	79.8	78.7
23	80.0	80.6	80.5	80.4	80.3	80.4	80.2	79.7	80.6	81.8	82.2	82.9	83.2	83.8	84.1	83.3	82.7	82.6	81.9	81.6	81.8	81.7	81.5	81.6	81.6
24	81.0	80.7	79.9	80.2	80.3	80.5	80.6	80.7	80.5	80.5	81.0	81.5	82.1	81.8	81.5	81.6	80.2	80.2	79.8	79.2	78.6	78.0	77.2	76.8	80.3
25	76.0	75.0	74.4	74.1	72.3	72.6	72.8	72.7	72.8	72.9	73.3	74.9	76.0	76.9	76.2	75.8	74.5	74.1	73.9	74.2	74.2	73.9	73.7	73.4	74.3
26	73.0	72.8	73.0	72.5	72.4	71.7	71.6	72.0	71.7	72.0	73.2	75.1	77.5	78.6	78.7	77.9	75.4	74.0	72.4	71.7	72.3	72.6	72.6	72.4	73.7
27	72.0	72.2	72.6	72.7	73.1	73.4	74.1	74.7	74.9	75.2	75.3	76.1	77.2	80.4	80.4	80.2	80.2	79.6	79.7	78.7	78.0	77.3	76.6	75.6	76.2
28	75.7	75.7	74.8	73.1	72.8	72.4	72.3	70.2	71.2	71.8	72.1	73.5	75.3	75.9	75.2	74.0	72.2	72.7	71.8	73.1	73.6	73.9	74.4	74.4	73.4
29	74.7	74.9	74.8	74.8	75.2	75.0	74.6	73.0	75.0	77.2	78.6	80.0	80.4	80.5	79.7	78.6	78.3	78.1	78.0	77.6	77.3	77.7	78.9	79.4	77.1
30	79.4	79.4	79.8	80.3	80.7	81.1	81.4	81.7	82.2	83.0	83.3	83.6	83.7	83.6	83.6	83.3	83.0	82.6	82.3	82.3	82.4	82.5	82.7	82.6	82.0
Mean	77.8	77.7	77.6	77.5	77.4	77.3	77.4	77.3	77.9	78.5	79.1	79.9	80.5	80.8	80.7	80.2	79.5	79.1	78.7	78.5	78.3	78.1	78.1	78.0	78.6

467 KEW OBSERVATORY: North Wall Screen:  $h_t$  = 3.0 metres

DECEMBER, 1937

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	82.7	83.1	83.3	83.4	83.4	83.4	83.1	82.9	83.0	83.6	84.0	84.0	84.2	84.2	84.1	83.9	83.9	82.6	82.0	81.7	81.9	81.8	81.6	81.4	83.1
2	81.0	80.7	80.8	81.3	80.9	80.0	79.8	80.0	80.1	80.6	80.2	79.8	80.4	79.8	80.2	79.7	79.3	79.3	79.6	80.1	80.2	79.9	79.8	79.6	80.2
3	79.7	79.7	79.1	79.4	79.6	79.6	79.0	78.4	78.3	78.2	78.4	78.8	78.7	79.0	79.9	80.5	79.8	80.3	79.6	79.3	79.1	78.7	78.3	77.4	79.2
4	77.2	77.0	76.7	76.2	75.9	75.6	75.7	75.8	75.9	76.0	76.0	76.6	77.1	77.3	75.7	74.8	75.7	75.8	75.7	74.7	75.5	74.9	74.8	75.2	76.0
5	76.0	76.5	76.7	76.7	76.5	76.9	76.9	76.6	76.4	76.5	77.2	78.0	78.4	78.7	78.7	78.0	77.0	76.1	75.7	74.8	74.2	73.1	72.9	72.0	76.3
6	72.3	72.1	71.8	71.4	71.4	71.6	71.1	70.9	71.4	72.0	73.0	73.7	74.4	74.8	75.0	74.4	75.0	74.2	73.2	73.0	73.3	73.6	73.4	73.0	72.9
7	73.6	73.8	73.7	73.5	73.7	73.7	73.9	73.8	73.6	73.9	73.8	74.4	74.8	75.0	74.7	75.3	75.6	75.8	76.0	75.6	75.4	75.7	75.9	76.2	74.6
8	76.1	75.9	76.1	76.3	76.3	76.6	76.3	76.1	76.3	76.6	76.6	76.9	76.2	76.3	76.3	76.1	75.8	75.9	75.7	75.6	75.5	75.1	74.7	75.1	76.0
9	75.5	75.6	75.6	75.0	75.0	74.8	75.0	74.6	74.6	75.3	75.7	75.6	75.8	76.0	76.3	76.2	76.2	75.7	74.7	74.9	75.0	74.9	74.8	74.8	75.3
10	74.8	74.6	74.4	74.2	73.9	73.7	73.5	73.0	73.3	73.5	73.7	73.7	74.4	74.9	74.6	74.3	73.5	76.0	76.7	77.0	77.3	77.9	78.2	78.1	75.0
11	78.0	77.6	77.6	77.0	76.7	76.8	77.1	77.7	78.8	79.3	79.1	79.4	79.1	79.3	79.2	78.0	77.8	77.7	77.0	76.9	76.6	76.1	76.0	75.5	77.7
12	75.7	76.2	76.4	76.6	76.2	75.7	75.6	75.7	75.3	75.7	76.3	76.8	76.9	77.2	77.0	76.2	75.6	75.7	74.9	74.4	73.9	73.5	73.9	74.0	75.7
13	74.0	75.1	75.6	75.8	77.5	78.5	78.3	78.1	77.5	77.8	79.0	79.4	79.5	79.2	79.1	78.7	78.4	78.2	78.3	77.0	76.1	75.3	75.6	76.2	77.4
14	76.4	76.3	76.0	75.3	74.6	74.5	74.1	73.5	73.6	74.3	75.7	76.7	76.9	76.6	76.3	75.7	74.8	74.0	73.8	73.8	74.5	74.7	74.9	74.8	75.1
15	73.9	73.6	73.5	73.8	74.1	74.7	75.0	75.1	75.3	75.4	75.3	75.4	75.8	76.5	76.6	76.2	74.7	73.7	73.7	73.2	73.7	73.9	74.0	73.2	74.6
16	72.8	72.5	72.7	73.1	73.8	74.2	74.6	75.4	75.8	76.3	76.8	77.1	77.4	77.5	77.6	77.4	77.5	76.9	76.6	76.4	75.9	75.7	75.6	75.8	75.6
17	75.8	75.7	75.7	75.7	75.7	75.6	75.8	75.7	75.7	75.9	76.5														



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

468 KEW OBSERVATORY: North Wall Screen: h<sub>t</sub> = 3.0 metres

1937

Table with 24 columns (Hour 1 to 24) and 2 rows of temperature data in degrees absolute.

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

469 KEW OBSERVATORY: North Wall Screen: h<sub>t</sub> = 3.0 metres

1937

Table with 24 columns (Hour 1 to 24) and 12 rows (Jan. to Dec. and Year) showing monthly means and diurnal inequalities.

† See page 23

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

470 KEW OBSERVATORY: North Wall Screen: h<sub>t</sub> = 3.0 metres

1937

Large table with 24 columns (Day 1 to 24) and 12 rows (Jan. to Dec. and Mean) showing absolute extremes of temperature for each day.

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

Year 87.1 80.1

RELATIVE HUMIDITY Percentages at exact hours, Greenwich Mean Time

471 KEW OBSERVATORY: North Wall Screen: h<sub>t</sub> (height of thermometer bulbs above the ground) = 3.0 metres

JANUARY, 1937

Table with 24 columns (1-24) and 25 rows (Day 1-31, Mean, Vapour Pressure\*). Columns 1-24 contain relative humidity percentages. The Mean row shows average values for each column. The Vapour Pressure\* row shows values in mb. The table is divided into three sections by a large blank space.

472 KEW OBSERVATORY: North Wall Screen: h<sub>t</sub> = 3.0 metres

FEBRUARY, 1937

Table with 24 columns (1-24) and 25 rows (Day 1-28, Mean, Vapour Pressure\*, Hour G. M. T.). Columns 1-24 contain relative humidity percentages. The Mean row shows average values for each column. The Vapour Pressure\* row shows values in mb. The Hour G. M. T. row lists the corresponding hours for each column.

\* Computed from the mean temperature and mean relative humidity

†Mean of the column

‡Mean of the row

RELATIVE HUMIDITY
Percentages at exact hours, Greenwich Mean Time

473 KEW OBSERVATORY: North Wall Screen: ht (height of thermometer bulbs above the ground) = 3.0 metres

MARCH, 1937

Table with 24 columns (1-24) and 31 rows (Day 1-31). Columns 1-24 contain percentage values. Column 25 is 'Mean' and column 26 is 'Vapour Pressure\*'. Includes a 'Mean' row at the bottom of the data section.

474 KEW OBSERVATORY: North Wall Screen: ht = 3.0 metres

APRIL, 1937

Table with 24 columns (1-24) and 31 rows (Day 1-31). Columns 1-24 contain percentage values. Column 25 is 'Mean' and column 26 is 'Vapour Pressure\*'. Includes a 'Mean' row at the bottom of the data section.

\*Computed from the mean temperature and mean relative humidity

† Mean of the column

‡ Mean of the row

RELATIVE HUMIDITY  
Percentages at exact hours, Greenwich Mean Time

475 KEW OBSERVATORY: North Wall Screen:  $h_t$  (height of thermometer bulbs above the ground) = 3.0 metres

MAY, 1937

Table with 25 columns (1-24) and 25 rows (Day 1-31). Columns 1-24 contain percentage values. Column 25 is 'Mean'. Column 26 is 'Vapour Pressure\*'. Includes a 'Mean' row at the bottom of the table.

476 KEW OBSERVATORY: North Wall Screen:  $h_t$  = 3.0 metres

JUNE, 1937

Table with 25 columns (1-24) and 25 rows (Day 1-30). Columns 1-24 contain percentage values. Column 25 is 'Mean'. Column 26 is 'Vapour Pressure\*'. Includes a 'Mean' row at the bottom of the table.

\*Computed from the mean temperature and mean relative humidity

†Mean of the column

‡Mean of the row

RELATIVE HUMIDITY Percentages at exact hours, Greenwich Mean Time

477 KEW OBSERVATORY: North Wall Screen: h<sub>t</sub> (height of thermometer bulbs above the ground) = 3.0 metres

JULY, 1937

Table with 25 columns (Hour G.M.T., 1-24, Mean, Vapour Pressure\*) and 31 rows (Day 1-31). Data includes relative humidity percentages and vapour pressure in mb.

478 KEW OBSERVATORY: North Wall Screen: h<sub>t</sub> = 3.0 metres

AUGUST, 1937

Table with 25 columns (Day 1-31, Hour G.M.T., 1-24, Mean, Vapour Pressure\*) and 31 rows (Day 1-31). Data includes relative humidity percentages and vapour pressure in mb.

\*Computed from the mean temperature and mean relative humidity

†Mean of the column

‡Mean of the row

479 KEW OBSERVATORY: North Wall Screen:  $h_t$  (height of thermometer bulbs above the ground) = 3.0 metres

SEPTEMBER, 1937

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	92	92	91	88	88	85	83	80	76	73	65	66	65	68	76	74	80	82	86	93	91	93	93	81.2	17.3
2	96	94	94	90	93	92	88	82	74	67	65	74	71	82	70	68	66	70	76	79	83	86	89	91	80.9	17.6
3	94	94	96	94	94	92	90	88	82	75	65	54	47	51	49	46	53	50	53	60	63	72	78	84	72.0	14.6
4	87	90	92	94	94	93	91	85	73	59	52	50	49	47	48	47	49	51	68	75	77	83	89	94	72.2	12.5
5	92	92	92	94	95	95	91	88	82	71	56	58	53	52	51	50	45	52	60	66	79	87	94	90	74.5	13.2
6	92	96	97	97	98	97	93	90	82	77	66	52	52	51	49	47	51	54	60	67	71	72	72	72	73.5	14.5
7	74	76	80	85	88	91	88	83	70	68	65	67	63	61	60	61	66	72	78	84	86	87	86	85	75.7	17.4
8	87	87	87	93	95	90	72	67	64	63	53	51	44	37	38	38	37	42	50	74	82	73	79	83	66.1	12.5
9	94	87	84	84	80	83	83	76	65	59	59	68	82	90	84	85	85	93	93	90	90	92	94	95	82.9	11.2
10	92	89	93	91	93	93	89	81	69	65	56	51	49	48	47	50	52	53	59	62	66	68	71	73	69.6	9.3
11	73	71	70	73	72	72	69	66	63	61	59	58	57	62	57	58	56	56	62	65	68	75	75	80	65.6	8.6
12	80	79	80	79	79	80	81	78	59	57	56	56	57	57	57	61	69	83	89	89	89	91	93	93	74.3	10.1
13	94	97	98	98	97	97	96	95	90	76	76	74	69	65	77	91	94	93	94	94	94	94	93	91	89.1	12.5
14	89	88	87	89	89	91	89	88	83	74	60	56	51	46	42	46	51	66	76	77	82	86	83	83	74.0	10.9
15	85	89	84	93	96	96	91	85	80	74	69	67	68	68	83	88	80	78	76	74	78	84	80	85	81.7	13.6
16	87	89	91	93	94	98	91	83	75	68	67	82	71	65	87	77	78	87	89	93	93	93	88	85	84.3	11.5
17	90	90	91	94	96	95	95	94	93	92	89	90	75	66	79	90	88	91	95	96	97	96	92	94	90.1	13.2
18	95	96	96	96	96	98	93	89	86	79	66	60	55	58	56	60	63	73	79	80	89	94	96	98	81.2	12.1
19	99	99	99	99	98	98	98	93	90	89	89	80	88	88	89	81	77	82	85	90	88	89	89	92	90.5	11.9
20	92	93	94	93	93	93	93	91	84	78	69	63	64	64	72	83	83	76	79	87	89	89	89	90	83.4	10.7
21	89	94	93	94	97	99	94	91	88	84	69	71	71	61	70	71	75	81	83	85	87	88	91	92	84.0	10.6
22	95	94	95	94	95	92	92	91	78	70	69	64	60	62	67	69	70	77	90	94	95	95	99	99	83.5	12.8
23	99	99	99	99	99	99	99	99	98	86	77	69	63	55	51	56	79	85	87	89	91	92	98	95	86.0	11.9
24	96	96	96	96	96	96	96	96	97	94	81	67	65	67	67	69	74	76	79	83	86	87	88	90	85.0	12.7
25	91	90	92	95	96	93	94	90	90	88	94	88	91	93	98	99	99	99	98	97	97	98	98	98	94.3	14.7
26	98	99	99	100	99	99	98	93	88	82	79	72	66	64	58	60	61	69	77	81	81	86	88	90	83.0	15.6
27	91	97	95	98	99	100	98	96	91	85	81	79	74	72	73	76	83	88	89	93	90	93	94	91	88.5	16.4
28	91	91	92	93	92	93	91	90	85	72	67	59	58	57	55	54	59	64	81	88	93	92	94	96	79.3	13.4
29	98	96	98	98	96	98	99	99	91	84	75	70	63	62	58	57	63	73	84	86	92	95	96	98	84.5	12.3
30	98	96	96	97	98	99	98	99	97	89	77	68	58	58	58	63	67	73	82	87	91	90	91	95	84.4	12.6
Mean	91.0	91.3	92.1	92.8	93.1	93.3	90.8	87.6	81.6	75.4	69.3	66.1	63.3	62.5	63.9	65.9	68.2	72.7	78.4	82.2	85.1	87.3	88.6	89.8	80.5	†12.9
Vapour Pressure*	mb 12.5	mb 12.4	mb 12.3	mb 12.4	mb 12.2	mb 12.0	mb 12.2	mb 12.6	mb 12.9	mb 12.9	mb 12.6	mb 12.7	mb 12.6	mb 12.7	mb 12.9	mb 13.0	mb 13.1	mb 13.1	mb 13.1	mb 13.0	mb 12.8	mb 12.7	mb 12.5	mb 12.7		

480 KEW OBSERVATORY: North Wall Screen:  $h_t$  = 3.0 metres

OCTOBER, 1937

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean	mb	
1	96	97	95	96	96	98	95	95	90	75	60	59	63	61	58	61	61	68	74	80	85	89	89	90	80.6	12.7	
2	91	91	93	95	93	94	95	91	89	87	75	70	63	64	62	65	65	71	81	88	91	89	92	95	82.8	14.0	
3	96	96	95	96	96	95	96	93	90	88	88	85	83	82	83	80	81	87	95	90	86	79	79	82	88.7	13.9	
4	83	88	89	92	93	93	95	89	76	72	65	65	55	58	55	52	55	63	69	77	75	74	78	80	74.7	10.4	
5	83	80	81	81	82	81	82	81	81	81	78	76	74	71	72	84	80	75	77	78	80	84	82	85	86	79.6	11.5
6	84	84	84	83	85	84	80	76	74	71	60	64	61	59	59	58	63	62	68	71	75	77	79	84	72.7	10.5	
7	87	93	87	94	95	97	93	91	92	89	86	83	78	77	75	74	70	68	69	74	84	81	83	82	83.5	11.6	
8	82	81	83	84	85	84	83	82	78	74	73	71	66	64	63	64	70	75	79	84	87	88	87	86	78.0	11.6	
9	85	86	86	78	75	80	82	77	70	68	56	54	58	56	54	54	58	66	74	76	80	83	86	87	72.0	10.6	
10	92	94	96	97	95	99	99	98	98	93	84	76	56	54	51	58	67	83	88	92	92	92	91	91	84.7	9.9	
11	84	86	87	86	88	92	91	88	81	77	72	68	70	69	70	63	66	74	75	79	88	93	89	89	80.3	10.8	
12	89	89	86	85	87	81	78	78	82	82	80	80	87	80	82	84	83	85	85	82	82	83	80	79	83.1	11.4	
13	83	77	79	74	75	76	75	75	74	74	70	68	68	68	68	70	76	86	93	88	86	88	88	88	77.6	9.3	
14	89	89	89	90	89	93	91	90	89	81	82	74	65	68	70	70	76	80	82	77	82	78	79	79	81.5	10.6	
15	82	82	83	83	83	85	87	83	84	64	56	57	53	56	57	58	65	71	82	89	94	92	91	96	76.0	10.4	
16	96	97	96	98	97	98	98	96	94	90	85	76	70	64	66	67	70	78	82	83	88	92	93	93	86.2	9.8	
17	96	94	93	93	91	93	91	88	76	73	70	68	69	67	64	66	80	88	98	100	99	100	98	98	85.4	10.0	
18	96	98	97	98	98	99	100	99	99	98	98	92	88	84	82	83	85	92	93	96	98	98	98	98	94.5	10.0	
19	98	96	98	96	98	98	96	96	93	82	74	73	70	71	73	76	82	90	92	95	97	98	98	98	89.1	11.0	
20	98	99	99	99	99	99	99	99	99	93	86	73	69	70	71	70	81	86	90	94	96	99	96	97	90.1	11.4	
21	97	98	98	98	98	99	99	99	99	98	97	94	94	94	96	99	99	98	99	99	99	99	100	100	97.8	10.9	
22	100	99	99	99	99	97	99	99	97	89	78	69	68	71	78	90	93	94	94	95	95	94	92	92	91.0	11.9	
23	92	94	94	92	89	85	86	89	82	89	90	75	63	72	71	87	82	92	89	91	91	92	89	91	86.2	10.7	
24	87	82	80	77	76	76	71	78	70	65	60	55	53	48	43	55	69	71	72	78	78	80	89	90	71.0	8.5	
25																											

481 KEW OBSERVATORY: North Wall Screen:  $h_t$  (height of thermometer bulbs above the ground) = 3.0 metres

NOVEMBER, 1937

Hour G. M. T.	1	2	3	4	5	6	7	8	9	10	11	Noon	13	14	15	16	17	18	19	20	21	22	23	24	Mean	Vapour Pressure*	
Day	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	mb	
1	94	96	96	96	98	99	100	98	96	94	95	95	96	95	95	94	95	94	94	93	91	93	93	96	95.2	12.2	
2	98	98	95	99	99	99	99	98	99	99	98	94	95	95	96	96	96	99	99	99	99	99	99	99	99	97.6	10.7
3	98	98	99	98	98	96	96	98	97	98	98	96	95	95	94	96	100	98	99	100*	100	100	99	99	99	97.7	11.0
4	99	99	100	100	98	96	94	92	89	90	85	84	83	81	75	81	76	87	86	84	88	93	96	100	89.8	10.5	
5	100	99	98	94	93	94	89	87	87	86	83	82	79	69	70	73	73	81	85	90	88	87	85	78	85.9	9.6	
6	82	80	81	84	98	83	88	93	93	98	91	88	83	79	79	82	83	88	89	89	92	91	92	92	87.1	10.3	
7	93	91	86	86	84	86	86	86	84	88	88	88	87	85	85	87	87	87	87	87	87	87	90	92	87.3	10.9	
8	93	94	93	91	92	93	92	93	91	87	86	83	79	80	83	85	87	89	87	89	86	90	92	96	88.7	11.1	
9	97	97	96	96	92	96	92	87	84	81	71	66	59	57	58	66	69	66	71	77	79	82	80	78	79.4	8.7	
10	83	81	85	87	84	84	82	80	76	74	72	71	72	71	61	70	74	75	76	80	81	81	85	85	77.8	6.6	
11	85	85	86	81	83	82	82	82	82	78	76	75	74	70	69	70	73	78	79	77	78	81	79	78	78.6	7.5	
12	92	92	93	93	94	89	93	91	90	88	76	67	63	59	58	62	72	72	72	76	80	87	83	93	80.3	7.1	
13	91	96	96	98	98	98	98	98	98	95	84	72	61	47	52	54	64	72	80	84	87	83	84	89	82.6	5.6	
14	91	87	90	94	95	96	98	98	98	89	81	75	61	53	56	63	60	70	75	81	87	89	90	92	82.0	5.3	
15	94	95	97	97	98	98	99	99	99	96	81	77	61	81	80	80	83	85	88	94	97	96	97	97	91.7	7.1	
16	97	97	98	95	97	93	97	96	96	97	95	87	87	86	88	90	90	81	73	70	77	82	83	78	89.1	7.5	
17	72	72	73	73	72	73	73	73	73	74	72	74	74	81	82	87	90	89	89	86	89	87	89	89	79.2	6.6	
18	90	94	92	89	89	92	95	96	96	96	93	94	96	96	96	98	97	94	97	96	94	96	96	96	94.3	8.8	
19	96	96	96	98	98	94	93	91	88	87	76	73	66	63	63	72	72	79	83	82	84	87	85	87	83.9	8.2	
20	90	90	93	91	93	93	96	96	90	87	83	74	73	74	79	80	87	90	90	90	94	94	94	97	88.0	6.4	
21	97	99	100	100	100	100	100	100	100	100	99	97	96	96	98	100	100	100	100	100	98	96	96	96	98.7	5.4	
22	97	97	96	97	96	98	98	97	95	93	93	89	89	86	88	90	91	90	94	96	96	96	96	98	94.0	8.6	
23	98	98	99	100	99	99	100	99	98	98	98	94	90	87	79	83	84	86	91	91	92	92	91	91	93.3	10.4	
24	94	96	98	98	98	93	91	91	90	89	81	77	70	72	74	70	83	79	80	82	83	86	90	90	85.7	8.8	
25	93	98	98	98	99	100	100	100	100	100	100	98	93	90	93	96	96	98	98	100	100	100	98	100	97.5	6.5	
26	100	100	100	100	100	100	100	100	100	100	98	92	86	88	88	94	96	96	98	98	98	100	100	100	97.2	6.2	
27	100	100	100	100	100	100	100	98	96	96	98	98	96	86	70	77	72	71	69	67	74	77	80	85	88.2	6.8	
28	84	84	90	94	95	96	98	98	98	98	98	96	96	94	98	98	100	100	100	100	100	100	100	100	96.2	6.1	
29	100	100	98	98	98	98	100	100	94	84	71	63	61	65	72	75	75	77	78	82	84	84	84	86	84.7	6.9	
30	90	93	94	91	90	93	93	95	93	92	92	92	93	94	93	93	94	96	95	95	95	95	96	96	93.3	10.7	
Mean	92.9	93.4	93.9	93.9	94.3	93.7	94.0	93.7	92.3	91.1	87.2	83.7	81.1	79.1	79.1	82.1	83.9	85.7	86.8	88.0	89.3	90.3	90.7	91.8	88.8	†8.3	
Vapour Pressure*	mb 8.0	mb 8.0	mb 8.0	mb 7.9	mb 7.9	mb 7.8	mb 7.8	mb 7.8	mb 7.8	mb 8.0	mb 8.2	mb 8.2	mb 8.4	mb 8.4	mb 8.3	mb 8.3	mb 8.1	mb 8.1	mb 8.0	mb 8.0	mb 8.0	mb 7.9	mb 8.0	mb 8.0	mb †8.1		

482 KEW OBSERVATORY: North Wall Screen:  $h_t$  = 3.0 metres

DECEMBER, 1937

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean	Vapour Pressure*	
1	98	96	96	96	96	98	98	98	98	98	94	87	85	84	85	89	92	91	92	93	95	96	95	92	93.5	11.6	
2	94	96	98	96	88	93	90	93	93	90	93	93	90	91	89	90	90	91	88	89	87	87	88	88	91.3	9.3	
3	86	84	86	83	81	80	79	78	78	73	82	85	84	83	87	86	79	88	86	87	84	78	77	75	76	82.4	7.8
4	73	69	72	75	76	79	77	77	78	79	83	78	77	71	85	95	94	96	98	98	96	98	98	96	83.7	6.3	
5	96	95	95	87	85	82	78	77	76	77	74	69	66	64	64	64	70	76	74	82	85	87	90	92	79.5	6.2	
6	93	94	95	95	96	97	98	98	98	98	90	86	85	85	84	83	85	87	92	94	96	94	92	92.1	5.6		
7	92	94	94	90	92	94	94	92	92	90	92	87	85	87	88	87	85	86	87	87	84	85	84	85	81	89.0	6.1
8	83	85	83	78	78	75	76	76	77	77	78	88	87	82	85	88	88	87	89	87	93	94	93	93	83.2	6.3	
9	91	87	89	93	93	95	93	94	93	94	91	81	89	90	90	92	90	89	93	93	91	91	91	91	91.5	6.6	
10	90	89	89	89	92	92	90	91	91	93	94	92	87	86	84	85	84	83	82	90	90	92	94	94	89.2	6.3	
11	95	96	92	95	95	95	93	94	94	91	94	94	93	90	74	78	81	81	84	84	80	83	87	84	88.8	7.6	
12	84	83	78	72	75	79	74	69	72	69	63	60	62	60	59	70	72	77	84	85	89	89	89	85	74.2	5.6	
13	85	80	82	89	81	77	85	88	87	90	94	91	91	96	97	97	99	98	99	93	93	94	94	97	90.5	7.6	
14	97	93	91	94	94	94	94	98	96	96	91	92	90	92	90	89	93	96	96	96	96	98	98	98	94.2	6.7	
15	98	98	100	96	98	96	93	93	87	89	85	82	82	80	78	78	88	92	92	96	92	90	89	90.3	6.2		
16	92	92	92	92	90	89	93	89	89	88	87	85	84	86	86	84	84	84	85	87	86	87	85	86	87.6	6.5	
17	86	87	85	85	84	85	86	87	87	86	85	82	79	79	81	82	85	87	85	83	86	85	87	88	84.6	6.6	
18	85	89	87	87	88	90	93	93	93	90	86	81	77	72	75	78	80	85	86	86	87	90	91	92	85.8	5.4	
19	93	94	94	93	92	92	94	94	94	94	94	94	93	93	93	89	90	92	93	94	94	95	96	96	92.9	5.8	
20	96	98	99	100	100	100	100	100	100	100	100	99	97	85	85	83	86	85	83	82	80	80	78	80	91.8	5.5	
21	80	80	77	77	77	76	71	76	83	83	88	90	92	92	96	97	97	95	97	97	97	98	98	98	87.6	7.1	
22	98	98	99	98	96	98	98	98	98	95	95	94	92	94	92	94	95	94	95	98	98	95	94	97	96.0	11.0	
23	97	97	97	96	96	97	98	98	94	91	90	85	81	82	86	88	90	93	96	94	95	96	97	97	93.0	10.8	
24	96	97	97	94	96	96	98	95	96	92	95	92	90	89	90	90	92	93	94	94	94	94	94	96	94.1	11.0	
25	98	99	99</																								

483 KEW OBSERVATORY: North Wall Screen:  $h_t = 3.0$  metres

1937

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	87.3	88.2	88.7	89.1	89.3	88.7	87.1	84.9	81.4	78.1	74.5	71.4	69.5	68.2	68.0	69.2	70.6	72.9	76.2	79.5	82.1	83.9	85.3	86.4	80.0
Vapour Pressure in Millibars*	mb 10.0	mb 9.9	mb 9.9	mb 9.8	mb 9.8	mb 9.8	mb 9.9	mb 10.0	mb 10.1	mb 10.2	mb 10.2	mb 10.3	mb 10.3	mb 10.3	mb 10.3	mb 10.4	mb 10.4	mb 10.4	mb 10.4	mb 10.3	mb 10.3	mb 10.2	mb 10.1	mb 10.0	mb 10.2

\* 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 †

484 KEW OBSERVATORY: North Wall Screen:  $h_t = 3.0$  metres

1937

Month	Mean	Hour 1	G.M.T. 2	3	4	5	6	7	8	9	10	11	Noon	13	14	15	16	17	18	19	20	21	22	23	24
January	85.5	+0.5	+1.7	+2.1	+2.6	+3.0	+4.0	+4.3	+5.0	+4.3	+1.9	-1.0	-3.2	-5.0	-5.7	-5.7	-3.5	-1.9	-1.6	-0.5	-0.2	-0.5	-0.8	-0.2	+0.5
February	82.1	+3.2	+4.0	+4.9	+5.9	+6.5	+6.7	+7.1	+5.1	+3.9	+1.3	-1.5	-4.7	-6.0	-8.2	-9.7	-9.0	-7.0	-4.5	-3.0	-1.1	-0.1	+0.9	+1.6	+2.7
March	77.6	+7.8	+8.4	+9.3	+9.6	+10.4	+10.5	+9.8	+8.3	+2.8	-2.0	-7.5	-11.7	-13.3	-14.0	-14.2	-13.2	-11.2	-7.0	-3.0	+0.3	+2.7	+4.9	+5.6	+6.7
April	78.2	+8.6	+9.5	+8.9	+9.2	+9.9	+9.4	+7.3	+5.1	+1.9	-0.3	-5.2	-8.0	-9.7	-10.9	-13.1	-12.5	-11.5	-10.0	-5.1	-1.3	+1.6	+3.3	+5.1	+7.6
May	76.2	+9.3	+11.3	+11.3	+12.3	+12.1	+10.5	+8.7	+4.9	+0.4	-3.3	-6.5	-9.6	-11.8	-13.2	-12.6	-12.4	-12.3	-11.7	-7.5	-3.3	+1.3	+5.3	+8.0	+8.9
June	70.8	+13.2	+15.1	+16.1	+17.0	+15.5	+12.1	+7.6	+3.1	-3.7	-6.7	-10.0	-12.0	-12.5	-14.4	-15.5	-15.8	-15.8	-13.0	-8.5	-2.6	+3.3	+6.9	+9.3	+11.3
July	73.5	+10.6	+12.1	+12.7	+13.0	+13.4	+10.6	+6.4	+1.7	-3.0	-6.5	-8.3	-9.7	-11.2	-12.4	-11.9	-11.1	-11.6	-9.4	-6.6	-2.1	+2.4	+4.8	+7.1	+9.1
August	75.2	+12.0	+13.3	+15.0	+15.0	+15.7	+14.7	+10.4	+6.1	+1.5	-4.1	-8.6	-12.8	-15.2	-17.4	-17.9	-17.4	-15.9	-13.3	-8.5	-1.5	+3.1	+5.8	+9.1	+10.8
September	80.5	+10.5	+11.0	+11.6	+12.3	+12.6	+12.9	+10.3	+7.1	+1.1	-5.1	-11.2	-14.4	-17.2	-18.1	-18.6	-14.6	-12.3	-7.9	-2.2	+1.7	+4.5	+6.7	+8.0	+9.2
October	83.7	+5.9	+5.9	+6.2	+6.2	+6.7	+7.0	+6.8	+5.7	+2.9	-1.5	-6.1	-10.0	-13.1	-14.1	-13.7	-11.3	-7.3	-2.6	+1.1	+3.7	+5.3	+5.4	+5.4	+5.6
November	88.8	+4.1	+4.6	+5.1	+5.1	+5.5	+4.9	+5.2	+4.9	+3.5	+2.3	-1.7	-5.1	-7.8	-9.7	-9.8	-6.7	-4.9	-3.2	-2.0	-0.9	+0.4	+1.5	+1.9	+2.9
December	88.2	+1.4	+1.2	+0.8	+0.8	+0.5	+1.0	+1.0	+1.2	+1.1	+0.8	+0.3	-1.9	-3.1	-3.5	-3.7	-2.8	-1.4	-0.7	+0.1	+0.6	+0.9	+1.7	+1.9	+1.7
Year	80.0	+7.3	+8.2	+8.7	+9.1	+9.3	+8.7	+7.1	+4.9	+1.4	-1.9	-5.5	-8.6	-10.5	-11.8	-12.0	-10.8	-9.4	-7.1	-3.8	-0.5	+2.1	+3.9	+5.3	+6.4

† See page 23

RAINFALL: ANNUAL TOTALS OF HOURLY VALUES

485 KEW OBSERVATORY:  $H_r$  (height of receiving surface above M.S.L.) =  $H$  (height of station above M.S.L.) +  $h_t$  (height of receiving surface above ground) = 5.5 metres + 0.53 metres

1937

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 16.2	mm 30.2	mm 26.5	mm 25.4	mm 24.1	mm 27.9	mm 31.9	mm 28.5	mm 34.6	mm 31.5	mm 29.4	mm 22.4	mm 30.0	mm 23.2	mm 38.5	mm 76.8	mm 39.7	mm 45.7	mm 31.3	mm 38.2	mm 32.6	mm 21.1	mm 22.4	mm 25.2	mm 753.3
Duration	hr 22.2	hr 27.5	hr 24.5	hr 24.5	hr 24.2	hr 27.7	hr 22.9	hr 26.8	hr 27.6	hr 25.9	hr 23.1	hr 16.5	hr 16.8	hr 14.8	hr 18.8	hr 20.1	hr 19.7	hr 22.5	hr 25.1	hr 22.3	hr 24.6	hr 21.5	hr 20.4	hr 23.9	hr 543.9

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

NOTES ON RAINFALL

486 KEW OBSERVATORY

1937

Dry Periods.

The following definitions are adopted by "The British Rainfall Organisation".

An "absolute drought" is a period of at least 15 consecutive days to none of which is credited 0.2 mm of rain or more.

A "partial drought" is a period of at least 29 consecutive days, the mean daily rainfall of which does not exceed 0.2 mm.

A "dry spell" is a period of at least 15 consecutive days to none of which is credited 1.0 mm or more.

The following dry periods occurred in 1937

Absolute Droughts		Partial Drought		Dry Spells	
Began	Ended	Began	Ended	Began	Ended
July 24th	August 9th			July 22nd	August 9th
August 17th	September 1st			August 17th	September 1st
		September 20th	October 21st	September 26th	October 21st

Wet Periods.

The following definitions are adopted by "The British Rainfall Organisation".

A "Rain Spell" is a period of at least 15 consecutive days to each of which is credited 0.2 mm of rain or more.

A "Wet Spell" is a period of at least 15 consecutive days to each of which is credited 1.0 mm or more.

No "Rain Spells" or "Wet Spells" occurred in 1937.

Rainfall Duration.

The distribution of days according to the duration of Rainfall is shown in the following table.

Duration of Rainfall (hours)	0.1-1.0	1.1-2.0	2.1-6.0	6.1-12.0	>12.0
Number of Calendar Days	57	33	61	25	1

Continuous Falls

The falls of the longest duration occurred on February 22nd when 17 mm fell in 10 hrs. 6 mins. and on December 13th when 19 mm fell in 10 hrs. 36 mins.

Heavy Falls in Short Periods.

On August 13th 10 mm fell in 5 minutes, 25 mm in 26 mins., 39 mm in 1 hr. and 51 mm in 2 hrs. The two latter measurements come within the category of "Remarkable Falls" as now defined by "The British Rainfall Organisation" (see British Rainfall 1936 pg. 274).

Rate of Rainfall (Minute by minute gauge)

The highest rate of Rainfall was 2.85 mm/min i.e. 170 mm/hr on August 13th. The highest on record since the installation of this gauge (1928) is 5 mm/min. on July 18th 1934.



RAINFALL

Amounts in millimetres, for periods of sixty minutes between the exact hours, Greenwich Mean Time  
487 KEW OBSERVATORY:  $H_T$  (height of receiving surface above M.S.L.) = H (height of station above M.S.L.) +  $h_T$  (height of receiving surface above ground) = 5.5 metres + 0.53 metres

JANUARY, 1937

Table with 25 columns for hours (0-1 to 23-24) and 3 columns for Amount (0-24), Duration (0-24), and Max Rate. Rows include Day 1-31 and Sums/Total Duration.

† Hour of occurrence of the maximum rate of fall ( 5 mm/hr or more)

488 KEW OBSERVATORY:  $H_T$  = 5.5 metres + 0.53 metres

FEBRUARY, 1937

Table with 25 columns for hours (0-1 to 23-24) and 3 columns for Amount, Duration, and Max Rate. Rows include Day 1-28 and Sums/Total Duration.

† Hour of occurrence of the maximum rate of fall ( 5 mm/hr or more )

RAINFALL

Amounts in millimetres, for periods of sixty minutes between the exact hours, Greenwich Mean Time  
 489 KEW OBSERVATORY:  $H_T$  (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

MARCH, 1937

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	Amount 0-24	Duration 0-24	Max Rate	
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	mm/hr
1	...	...	...	...	...	-1	-1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	0.7	...
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.7	1.0	2
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sums	3.6	3.1	3.9	3.4	4.4	5.6	11.0	4.5	1.6	1.7	1.6	1.6	0.8	0.7	4.1	0.5	0.8	2.7	2.5	4.0	1.7	1.3	2.5	2.4	70.0	64.4		
Total Duration	hr 4.2	hr 4.2	hr 1.9	hr 2.8	hr 3.2	hr 3.6	hr 3.5	hr 3.3	hr 2.8	hr 2.9	hr 2.2	hr 1.5	hr 0.7	hr 0.7	hr 1.8	hr 1.1	hr 1.7	hr 3.3	hr 3.1	hr 4.1	hr 4.0	hr 2.4	hr 2.2	hr 3.2	hr 64.4			

† Hour of occurrence of the maximum rate of fall ( 5 mm/hr or more )

490 KEW OBSERVATORY:  $H_T$  = 5.5 metres + 0.53 metres

APRIL, 1937

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	mm/hr
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sums	1.7	3.8	1.2	1.7	1.6	1.5	2.9	2.7	1.4	1.5	1.7	0.5	2.5	3.8	0.8	1.0	...	0.7	2.8	3.9	3.5	2.8	3.8	2.6	50.4	54.3	
Total Duration	hr 3.2	hr 5.2	hr 2.8	hr 2.5	hr 2.8	hr 2.7	hr 2.3	hr 2.4	hr 2.4	hr 1.4	hr 2.3	hr 0.7	hr 2.3	hr 2.6	hr 1.1	hr 0.6	hr ...	hr 0.2	hr 2.3	hr 1.7	hr 2.3	hr 3.4	hr 3.4	hr 3.7	hr 54.3		
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		

† Hour of occurrence of the maximum rate of fall ( 5 mm/hr or more )

RAINFALL

Amounts in millimetres, for periods of sixty minutes between the exact hours, Greenwich Mean Time
491 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

MAY, 1937

Table with 25 columns (Hour G.M.T. 0-1 to 23-24) and 31 rows (Day 1 to 31). Includes sub-headers for Amount (mm) and Duration (hr) for each hour, and summary rows for Sums and Total Duration.

† Hour of occurrence of the maximum rate of fall ( 5 mm/hr or more )

492 KEW OBSERVATORY: H\_r = 5.5 metres + 0.53 metres

JUNE, 1937

Table with 25 columns (Hour G.M.T. 0-1 to 23-24) and 31 rows (Day 1 to 30). Includes sub-headers for Amount (mm) and Duration (hr) for each hour, and summary rows for Sums and Total Duration.

† Hour of occurrence of the maximum rate of fall ( 5 mm/hr or more )

RAINFALL

Amounts in millimetres, for periods of sixty minutes between the exact hours, Greenwich Mean Time  
 493 KEW OBSERVATORY:  $H_r$  (height of receiving surface above M.S.L.) = H (height of station above M.S.L.) +  $h_r$  (height of receiving surface above ground) = 5.5 metres + 0.53 metres

JULY, 1937

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	Amount 0-24	Duration 0-24	Max Rate		
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	mm/hr	
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
6	...	...	...	(...)	4	1.6	3	...	...	...	...	...	...	...	...	...	...	...	...	...	2	(...)	...	...	...	2.5	2.7	3	
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
9	...	...	...	...	...	...	...	...	...	...	...	...	(...)	3	2	6	...	...	...	...	...	...	...	...	...	1.1	0.8	3	
10	...	...	...	...	...	...	...	...	...	...	4	5†	...	...	...	...	...	...	...	...	...	...	...	...	...	0.9	0.4	7	
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.5	1.5	2	
12	...	...	...	...	...	...	...	...	...	3	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.5	0.9	1	
13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5†	...	...	...	...	1	1.2	4	4	...	2.6	3.7	5	
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.8	2.2	1	
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8.7†	1.2	1	2.8	...	...	...	...	12.8	1.2	90	
20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9	5	...	...	...	...	...	...	...	...	...	...	1.4	1.5	2
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.0	1.8	3
24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
30	(●)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Sums	...	...	0.2	0.1	0.8	1.9	0.5	0.5	...	0.4	0.6	0.5	...	0.3	1.1	1.6	...	8.7	1.3	1.6	3.5	0.5	...	...	24.1	16.7			
Total Duration	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr
	...	...	0.5	0.6	1.8	1.6	1.0	0.8	...	0.6	0.6	0.2	0.1	0.3	1.1	1.2	...	0.3	1.1	1.4	2.4	1.1	...	...	16.7				

† Hour of occurrence of the maximum rate of fall ( 5 mm/hr or more )

494 KEW OBSERVATORY:  $H_r$  = 5.5 metres + 0.53 metres

AUGUST, 1937

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	mm/hr	
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.5†	(...)	...	...	...	...	...	...	...	2.6	1.1	18
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	0.2	...
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Sums	...	...	0.3	0.1	...	...	...	0.3	2.2	0.2	...	0.1	4.2	1.5	4.5	37.7	19.8	0.8	0.7	0.4	2.9	0.1	...	...	75.8	14.3			
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	hr
	...	...	0.6	0.2	...	...	0.8	1.2	0.7	...	0.1	0.4	1.0	0.4	1.1	3.0	1.8	0.8	0.9	1.0	0.3	...	...	...	14.3				
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	21-2							





DURATION OF BRIGHT SUNSHINE  
For period of sixty minutes, between the exact hours of Local Apparent Time

499 KEW OBSERVATORY:  $h_s = 13.3$  metres

JANUARY, 1937

Hour L. A. T.	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	Total for Day	Per cent of Possible	SOLAR RADIATION Received on surface perpendicular to solar beam			
																					*Total for Day	†Rate near Noon	Sec Z	Sky
Day	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	%	joules/cm <sup>2</sup>	mw/cm <sup>2</sup>		
1	--	--	--	--	--	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	1	10	...	...
2	--	--	--	--	--	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10	...	...
3	--	--	--	--	--	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10	...	...
4	--	--	--	--	--	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5	--	--	--	--	--	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6	--	--	--	--	--	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7	--	--	--	--	--	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	--	--	--	--	--	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	--	--	--	--	--	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10	--	--	--	--	--	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11	--	--	--	--	--	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	--	--	--	--	--	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13	--	--	--	--	--	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
14	--	--	--	--	--	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15	--	--	--	--	--	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
16	--	--	--	--	--	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17	--	--	--	--	--	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
18	--	--	--	--	--	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
19	--	--	--	--	--	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20	--	--	--	--	--	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
21	--	--	--	--	--	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
22	--	--	--	--	--	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
23	--	--	--	--	--	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
24	--	--	--	--	--	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25	--	--	--	--	--	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
26	--	--	--	--	--	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
27	--	--	--	--	--	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
28	--	--	--	--	--	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
29	--	--	--	--	--	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
30	--	--	--	--	--	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
31	--	--	--	--	--	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sum	--	--	--	--	...	2.4	7.3	8.3	9.1	9.2	6.2	4.4	0.8	...	--	--	--	--	--	47.7	--	6880	--	--
Mean	--	--	--	--	...	.08	.24	.27	.29	.30	.20	.14	.03	...	--	--	--	--	--	1.54	18	220	--	--

500 KEW OBSERVATORY:  $h_s = 13.3$  metres

FEBRUARY, 1937

Day	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	%	joules/cm <sup>2</sup>	mw/cm <sup>2</sup>	Sec Z	Sky
1	--	--	--	--	...	.7	.6	1.0	.9	.9	.5	.6	.6	...	...	...	...	...	...	5.8	64	540	...	...
2	--	--	--	--	...	.3	...	...	...	...	...	...	...	...	...	...	...	...	...	0.3	3	50	...	...
3	--	--	--	--	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	30	...	...
4	--	--	--	--	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	70	...	...
5	--	--	--	--	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6	--	--	--	--	...	.1	1.0	1.0	1.0	1.0	.7	.6	.5	...	...	...	...	...	...	...	...	...	...	...
7	--	--	--	--	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	--	--	--	--	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	--	--	--	--	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10	--	--	--	--	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11	--	--	--	--	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	--	--	--	--	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13	--	--	--	--	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
14	--	--	--	--	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15	--	--	--	--	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
16	--	--	--	--	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17	--	--	--	--	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
18	--	--	--	--	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
19	--	--	--	--	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20	--	--	--	--	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
21	--	--	--	--	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
22	--	--	--	--	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
23	--	--	--	--	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
24	--	--	--	--	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25	--	--	--	--	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
26	--	--	--	--	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
27	--	--	--	--	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
28	--	--	--	--	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sum	--	--	--	...	2.5	7.7	8.6	7.6	9.6	7.5	5.8	6.8	5.6	0.8	...	--	--	--	62.5	--	6880	--	--	--
Mean	--	--	--	...	.09	.27	.31	.27	.34	.27	.21	.24	.20	.03	...	--	--	--	2.23	27	250	--	--	--
Hour L. A. T.	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	Total for Day	Per cent of Possible	*Total for Day	†Rate near Noon	Sec Z	Sky

DURATION OF BRIGHT SUNSHINE  
For periods of sixty minutes, between the exact hours of Local Apparent Time

501 KEW OBSERVATORY:  $h_s$  (height of recorder above ground) = 13.3 metres

MARCH, 1937

Hour L. A. T.																				Total for Day	Per cent of Possible	SOLAR RADIATION Received on surface perpendicular to solar beam			
	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	*Total for Day			†Rate near Noon	Sec Z	Sky	
Day	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	%	joules/cm <sup>2</sup>	mw/cm <sup>2</sup>		
1	---	---	---	...	...	...	.1	.2	.8	.6	.4	.1	...	...	...	---	---	---	2.2	20	250	...	...	...	
2	---	---	---	...	...6	1.0	.5	.3	.2	...	...	...	...	...	...	---	---	---	2.6	24	390	...	...	...	
3	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	2.8	26	380	...	...	...	
4	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	0.7	6	100	...	...	...	
5	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	...	...	0	...	...	...	
6	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	1.0	9	50	...	...	...	
7	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	0.4	4	20	...	...	...	
8	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	...	...	...	...	...	...	
9	---	---	---	...	...5	...	...	...	...	...	...	...	...	...	...	---	---	---	3.4	30	190	...	...	...	
10	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	0.7	6	80	...	...	...	
11	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	1.3	11	100	...	...	...	
12	---	---	---	...	...1.0	...	...	...	...	...	...	...	...	...	...	---	---	---	4.0	35	310	...	...	...	
13	---	---	---	...	...2	...1.0	...	...	...	...	...	...	...	...	...	---	---	---	5.2	45	640	...	...	...	
14	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	...	...	...	...	...	...	
15	---	---	---	...	...6	...1.0	...	...	...	...	...	...	...	...	...	---	---	---	9.7	82	1640	...	...	...	
16	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	...	...	40	...	...	...	
17	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	2.2	19	290	...	...	...	
18	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	6.0	50	500	...	...	...	
19	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	1.9	16	130	...	...	...	
20	---	---	---	...	...7	...9	...	...	...	...	...	...	...	...	...	---	---	---	7.8	64	1340	73	1.63	Clear	
21	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	...	...	10	...	...	...	
22	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	3.5	29	260	...	...	...	
23	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	6.0	49	460	...	...	...	
24	---	---	---	...	...3	...1.0	...	...	...	...	...	...	...	...	...	---	---	---	8.2	66	1400	...	...	...	
25	---	---	---	...	...8	...1.0	...	...	...	...	...	...	...	...	...	---	---	---	8.5	68	1100	...	...	...	
26	---	---	---	...	...4	...1.0	...	...	...	...	...	...	...	...	...	---	---	---	9.0	72	2000	...	...	...	
27	---	---	---	...	...5	...1.0	...	...	...	...	...	...	...	...	...	---	---	---	6.7	53	610	...	...	...	
28	---	---	---	...	...5	...8	...	...	...	...	...	...	...	...	...	---	---	---	6.4	51	1260	...	...	...	
29	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	3.1	24	500	...	...	...	
30	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	---	---	---	...	...	10	...	...	...	
31	---	---	---	...	...6	...9	...	...	...	...	...	...	...	...	...	---	---	---	9.4	73	1320	...	...	...	
Sum	---	---	---	2.0	9.5	11.9	12.6	12.1	13.1	12.1	11.6	9.4	10.7	6.5	1.2	...	---	---	112.7	--	15380	--	--	--	
Mean	---	---	---	.06	.31	.38	.41	.39	.42	.39	.37	.30	.35	.21	.04	...	---	---	3.64	31	500	--	--	--	

502 KEW OBSERVATORY:  $h_s$  = 13.3 metres

APRIL, 1937

Day																				Total for Day	Per cent of Possible	SOLAR RADIATION Received on surface perpendicular to solar beam			
	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	*Total for Day			†Rate near Noon	Sec Z	Sky	
1	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.8	30	430	...	...	...	
2	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0	...	...	...	
3	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.9	45	880	...	...	...	
4	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.6	20	270	...	...	...	
5	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.5	27	560	52	1.43	Hazy	
6	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.9	7	130	...	...	...	
7	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	1	40	...	...	...	
8	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.7	5	30	...	...	...	
9	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	1	30	...	...	...	
10	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.3	17	220	...	...	...	
11	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.4	47	550	...	...	...	
12	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.3	32	230	...	...	...	
13	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	120	...	...	...	
14	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.1	8	70	...	...	...	
15	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
16	---	---	---	...	...2	...8	...	...	...	...	...	...	...	...	...	...	...	...	4.9	35	590	...	...	...	
17	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
18	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.6	4	30	...	...	...	
19	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.6	47	730	...	...	...	
20	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.6	4	30	...	...	...	
21	---	---	---	...	...6	...1.0	...	...	...	...	...	...	...	...	...	...	...	...	10.2	72	1750	...	...	...	
22	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.3	9	80	...	...	...	
23	---	---	---	...	...3	...8	...	...	...	...	...	...	...	...	...	...	...	...	10.1	71	1360	...	...	...	
24	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.9	6	120	...	...	...	
25	---	---	---	...	...9	...1.0	...	...	...	...	...	...	...	...	...	...	...	...	13.3	92	3400	...	...	...	
26	---	---	---	...	...7	...1.0	...	...	...	...	...	...	...	...	...	...	...	...	7.1	49	740	...	...	...	
27	---	---	---	...	...2	...1.0	...	...	...	...	...	...	...	...	...	...	...	...	6.0	41	710	...	...	...	
28	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	1	20	...	...	...	
29	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.1	14	150	...	...	...	
30	---	---	---	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.5	44	660	...	...	...	
Sum	---	---	---	2.4	4.3	5.0	5.5	9.2	8.7	8.9	11.2	11.1	11.2	9.2	10.0	4.6	0.8	...	102.1	--	13880	--	--	--	
Mean	---	---	---	.08	.14	.17	.18	.31	.29	.30	.37	.37	.37	.31	.33	.15	.03	...	3.40	25	460	--	--	--	
Hour L. A. T.	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	Total for Day	Per cent of Possible	*Total for Day	†Rate near Noon	Sec Z	Sky	
SOLAR RADIATION Received on surface perpendicular to solar beam																									



DURATION OF BRIGHT SUNSHINE

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

503 KEW OBSERVATORY:  $h_s$  (height of recorder above ground) = 13.3 metres

MAY, 1937

Hour L. A. T.	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	Total for Day	Per cent of Possible	SOLAR RADIATION Received on surface perpendicular to solar beam				
																					*Total for Day	†Rate near Noon	Sec Z	Sky	
Day	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	%	joules/cm <sup>2</sup>	mw/cm <sup>2</sup>		
1	...	...	...	...	...	...	...	0.6	1.0	1.0	0.9	0.9	0.7	0.3	...	...	...	...	5.5	...	60	...	...	...	
2	...	...	...	...	...	...	...	0.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.6	...	...	7.8	53	1080	...	...	...	
3	...	...	...	...	0.5	1.0	1.0	1.0	0.9	1.0	0.2	0.1	0.2	0.7	0.8	...	...	...	8.2	55	710	...	...	...	
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.4	36	540	...	...	...	
5	...	...	0.4	...	0.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.8	1.0	1.0	0.1	...	11.8	79	2840	93	1.23	Clear	
6	...	...	0.8	1.0	1.0	0.7	0.1	0.2	0.4	...	...	...	...	...	...	...	...	...	4.2	28	650	...	...	...	
7	...	...	...	...	...	...	...	0.2	0.3	0.7	0.7	0.9	1.0	0.8	0.7	0.1	...	...	5.4	36	1130	...	...	...	
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
10	...	...	...	...	...	...	...	...	0.7	0.8	0.9	0.8	0.1	...	...	...	...	...	3.3	22	460	...	...	...	
11	...	...	...	...	...	...	...	...	...	...	...	...	...	0.8	1.0	0.7	...	...	2.5	16	410	...	...	...	
12	...	...	...	...	...	...	...	...	...	0.3	...	...	...	...	...	...	...	...	0.3	2	80	...	...	...	
13	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	...	...	...	...	0.1	1	20	...	...	...	
14	...	...	...	...	...	...	...	...	0.5	...	...	...	...	...	...	...	...	...	0.5	3	90	...	...	...	
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
16	...	...	...	...	...	...	...	...	...	0.1	...	...	...	...	...	...	...	...	0.1	1	100	...	...	...	
17	...	...	...	...	0.4	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9	0.5	...	...	...	10.7	68	1590	...	...	...	
18	...	...	...	...	...	...	0.2	0.2	...	...	...	...	...	...	...	...	...	...	0.4	3	40	...	...	...	
19	...	...	...	...	...	...	...	...	...	...	0.1	1.0	1.0	0.8	...	...	...	...	2.9	18	410	...	...	...	
20	...	...	0.5	1.0	0.9	0.7	1.0	0.6	...	0.4	0.4	0.4	0.3	...	...	...	...	6.2	39	940	...	...	...		
21	...	...	...	...	...	...	0.6	0.2	0.3	0.3	0.9	0.4	0.5	0.9	0.2	0.9	0.2	...	5.4	34	570	...	...	...	
22	...	...	0.2	...	0.1	...	...	0.1	...	...	...	...	...	...	...	...	...	...	0.4	3	110	...	...	...	
23	...	...	0.3	0.1	0.1	0.1	0.2	0.9	0.9	1.0	1.0	1.0	1.0	0.8	0.6	...	...	...	8.0	50	1450	...	...	...	
24	...	...	0.6	0.6	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.8	0.1	...	12.7	80	3040	88	1.16	Clear	
25	...	...	...	1.0	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.8	0.1	...	11.8	74	3530	...	...	...	
26	...	...	...	0.1	0.9	0.9	...	0.3	...	0.8	0.6	...	...	...	...	0.2	0.1	...	3.9	24	450	...	...	...	
27	...	0.1	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.8	0.7	0.3	0.4	...	...	0.2	...	10.4	65	2380	...	...	...	
28	...	...	0.8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9	1.0	1.0	1.0	0.8	0.1	...	...	13.5	84	2850	...	...	...	
29	...	...	...	0.2	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9	0.8	0.1	...	...	10.9	68	2270	...	...	...	
30	...	...	0.8	0.4	1.0	0.9	1.0	0.7	0.6	0.8	0.3	...	0.2	0.7	...	0.5	...	...	7.9	49	1250	...	...	...	
31	...	...	0.1	1.0	1.0	1.0	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	0.8	0.2	...	12.8	79	2540	...	...	...	
Sum	...	0.1	4.8	7.8	11.3	12.3	12.1	14.4	14.2	16.9	15.3	13.4	14.1	15.1	12.2	7.6	1.4	...	173.0	--	32430	--	--	--	
Mean	...	0.00	0.15	0.25	0.36	0.40	0.39	0.46	0.46	0.55	0.49	0.43	0.46	0.49	0.39	0.25	0.05	...	5.58	36	1050	--	--	--	

504 KEW OBSERVATORY:  $h_s$  = 13.3 metres

JUNE, 1937

Day	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	%	joules/cm <sup>2</sup>	mw/cm <sup>2</sup>	Sec Z	Sky	
																									1
2	...	0.2	0.1	0.8	0.8	0.6	0.1	0.8	0.9	0.2	0.4	0.7	0.1	0.7	0.7	0.1	...	...	...	7.2	44	1030	...	...	...
3	...	...	0.2	0.9	1.0	1.0	1.0	1.0	1.0	0.5	...	0.6	0.6	0.4	...	...	...	...	8.2	50	1360	...	...	...	
4	...	...	...	...	0.1	0.5	0.2	0.3	...	...	0.3	...	0.2	1.0	0.5	0.5	0.4	...	4.0	24	430	...	...	...	
5	...	...	...	...	...	...	0.5	0.7	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.6	...	...	9.8	60	2100	...	...	...	
6	...	...	1.0	1.0	0.8	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.6	...	...	14.3	87	3630	...	...	...	
7	...	0.2	0.8	0.7	...	0.7	1.0	1.0	0.8	1.0	1.0	1.0	1.0	1.0	1.0	0.2	...	...	12.4	76	2440	...	...	...	
8	...	...	...	...	0.5	1.0	0.8	0.1	...	...	0.1	...	0.9	0.8	0.9	1.0	0.6	...	6.7	41	1250	...	...	...	
9	...	...	0.9	1.0	1.0	1.0	0.9	0.7	0.4	0.1	...	...	...	...	...	...	...	...	7.0	43	1680	...	...	...	
10	...	...	...	...	...	0.1	0.2	1.0	1.0	1.0	1.0	1.0	0.9	0.5	...	...	...	...	6.7	41	1270	58	1.14	Clear	
11	...	...	0.3	0.4	0.3	0.4	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	...	...	11.4	69	2790	84	1.14	Clear	
12	...	...	...	0.4	1.0	1.0	0.8	0.7	0.5	0.9	0.2	0.8	0.9	0.7	0.5	...	...	...	8.4	51	1280	...	...	...	
13	...	0.1	0.2	...	...	...	...	...	...	0.1	0.8	0.8	0.6	0.9	0.8	0.1	...	...	4.4	27	540	...	...	...	
14	...	...	0.2	0.2	...	0.6	0.4	0.5	0.7	0.6	0.1	0.5	0.5	0.7	...	...	...	...	5.0	30	650	...	...	...	
15	...	...	0.2	...	0.1	0.2	0.1	0.8	0.6	0.3	...	0.7	0.3	...	...	0.1	...	...	3.4	21	380	...	...	...	
16	...	...	0.2	0.5	0.1	...	0.1	0.3	...	...	...	...	...	...	...	...	...	...	1.2	7	220	...	...	...	
17	...	...	...	...	0.1	...	...	0.3	0.3	0.4	0.4	0.4	1.0	0.6	0.6	0.1	...	...	4.1	25	480	...	...	...	
18	...	...	...	...	0.4	0.4	0.4	0.7	0.5	0.5	0.6	0.7	0.9	0.9	0.2	...	...	...	6.2	37	710	...	...	...	
19	...	...	0.1	0.9	0.4	0.6	0.7	0.9	0.4	...	0.6	0.1	0.5	0.1	...	...	...	...	5.3	32	800	...	...	...	
20	...	...	...	...	...	...	...	0.1	0.2	0.8	0.8	0.9	0.1	...	0.4	...	...	...	3.3	20	290	...	...	...	
21	...	...	0.4	1.0	1.0	0.5	0.5	1.0	0.9	0.8	0.9	0.8	0.8	1.0	0.8	1.0	...	...	11.4	69	1780	...	...	...	
22	...	0.3	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.7	0.8	0.9	...	...	...	...	...	10.7	65	2140	...	...	...	
23	...	...	0.2	0.3	0.6	1.0	1.0	1.0	1.0	1.0	0.8	0.6	1.0	0.9	0.7	0.8	0.1	...	11.0	66	2500	79	1.13	Clear	
24	...	...	...	...	0.5	0.8	0.3	...	...	0.7	0.9	0.6	0.2	0.6	0.4	...	...	...	5.0	30	650	...	...	...	
25	...	...	...	...	...	0.1	0.8	0.4	0.9	0.1	0.5	0.9	0.1	0.2	0.3	...	...	...	4.3	26	480	...	...	...	
26	...	...	...	...	...	...	...	...	...	0.2	...	0.5	0.7	0.3	0.7	...	...	...	2.4	14	370	...	...	...	
27	...	...	0.2	1.0	1.0	1.0	1.0	1.0	0.1	0.1	0.5	0.8	0.1	0.2	0.8	...	...	...	7.6	46	1000	...	...	...	
28	...	...	0.6	1.0	1.0	1.0	1.0	1.0	0.8	1.0	0.3	...	0.1	0.4	0.1	...	...	...	8.3	50	1840	...	...	...	
29	...	0.6	1.0	1.0	1.0	0.9	0.8	0.5	0.1	0.2	0.2	0.3	0.1	...	0.2	0.1	...	...	7.8	47	1850	...	...	...	
30	...	0.7	...	0.8	0.1	...	0.1	...	...	...	...	...	...	...	...	...	...	...	2.7	16	340	...	...	...	
Sum	...	2.7	9.3	13.9	14.0	15.7	16.3	17.8	16.3	14.8	15.4	14.7	17.3	16.2	12.5	9.0	2.6	...	208.5	--	37580	--	--	--	
Mean	...	0.09	0.31	0.46	0.47	0.52	0.54	0.59	0.54	0.49	0.51	0.49	0.58	0.54	0.42	0.30	0.09	...	69.5	42	1250	--	--	--	

\* Gortynski Pyrheliograph † Ångström Pyrheliometer

505 KEW OBSERVATORY:  $h_s$  (height of recorder above ground) = 13.3 metres

JULY, 1937

Hour L. A. T.	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	Total for Day	Per cent of Possible	SOLAR RADIATION Received on surface perpendicular to solar beam			
																					*Total for Day	†Rate near Noon	Sec Z	Sky
Day	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	%	joules/cm <sup>2</sup>	mw/cm <sup>2</sup>	Sec Z	Sky
1	...	...	...	1	4	3	...	1	5	...	...	4	9	1.0	9	1.0	5	...	6.1	37	990	...	...	...
2	...	...	...	...	...	...	...	...	...	...	...	...	...	1.0	9	1.0	4	...	2.5	15	380	...	...	...
3	...	1	6	8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	3	...	...	...	...	...	9.8	60	2500	91	1.15	Clear
4	...	...	2	1.0	2	4	1	...	...	...	...	1	7	5	2	...	...	...	3.4	21	460	...	...	...
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	1	30	...	...	...
6	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	4.4	27	390	...	...	...
7	...	...	...	...	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	9	7	5	1	...	2	4	69	2280	93	1.15	Clear
8	...	5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	9	9	7	1	...	2	...	0.9	6	120	...	...	...
9	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	7	...	...	2.7	17	310	...	...	...
10	...	...	...	2	3	...	...	3	...	3	7	5	3	1	...	...	...	...	6.3	39	1320	...	...	...
11	...	3	1.0	1.0	1.0	1.0	1.0	6	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13	...	...	...	...	2	...	1	...	5	9	1.0	7	6	1.0	1.0	1.0	4	...	7.4	46	920	...	...	...
14	...	...	...	...	6	9	8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	8	6	1	...	10.8	67	2130	78	1.15	Clear
15	...	...	...	8	6	...	8	6	2	...	6	1	...	...	...	...	...	...	3.7	23	420	...	...	...
16	...	...	...	1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	9	1.0	1.0	6	...	12.6	78	3370	92	1.16	Clear
17	...	2	3	4	1	...	3	...	...	...	...	...	...	...	...	6	...	...	1.9	12	270	...	...	...
18	...	...	...	...	...	...	...	7	5	2	2	2	1	...	...	...	...	...	2.0	12	230	...	...	...
19	...	...	2	1	4	...	...	...	...	...	...	...	...	...	1	...	...	...	0.8	5	100	...	...	...
20	...	...	1	1.0	1.0	1.0	1.0	1.0	9	8	9	3	2	6	...	...	...	...	9.4	59	1480	...	...	...
21	...	...	...	6	7	6	5	...	...	...	...	...	...	...	1	...	...	...	2.5	16	440	...	...	...
22	...	5	1.0	1.0	2	...	...	...	2	1	1	1	3	2	4	5	...	...	4.6	29	670	...	...	...
23	...	...	...	...	...	...	...	...	...	...	5	4	9	1.0	3	2	...	...	3.3	23	340	...	...	...
24	...	...	4	1.0	1.0	1.0	9	8	1	3	4	1	7	6	...	...	...	...	8.3	51	1600	...	...	...
25	...	...	...	...	...	6	4	3	1	...	...	...	...	...	7	1	...	...	2.2	14	270	...	...	...
26	...	...	...	...	...	...	...	...	...	1	...	1	2	3	...	...	...	...	0.7	4	100	...	...	...
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
28	...	...	...	...	6	8	1.0	9	3	3	3	1	...	4	4	2	...	...	5.3	34	710	...	...	...
29	...	...	...	...	...	9	1.0	9	9	9	8	8	6	2	2	1	...	...	6.4	41	610	...	...	...
30	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	0.2	1	50	...	...	...
31	...	...	...	...	...	...	...	1	2	6	6	3	7	9	1.0	1.0	2	...	5.6	36	490	...	...	...
Sum	...	2.2	6.2	8.3	10.7	9.4	11.4	10.9	8.9	8.9	10.9	8.8	9.8	9.9	8.6	7.9	2.4	...	135.2	--	22970	--	--	--
Mean	...	0.07	0.20	0.27	0.35	0.30	0.37	0.35	0.29	0.29	0.35	0.28	0.32	0.32	0.28	0.25	0.08	...	4.36	27	740	--	--	--

506 KEW OBSERVATORY:  $h_s$  = 13.3 metres

AUGUST, 1937

Day	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	%	joules/cm <sup>2</sup>	mw/cm <sup>2</sup>	Sec Z	Sky	
																									1
2	...	...	...	...	8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	8	...	11.4	74	2090	62	1.21	Hazy	
3	...	...	...	...	7	1.0	1.0	1.0	1.0	1.0	1.0	3	6	4	8	5	...	...	8.3	54	850	44	1.21	Hazy	
4	...	...	...	5	1.0	1.0	9	9	1.0	1.0	5	...	...	...	...	...	...	...	6.8	45	680	...	...	...	
5	...	...	...	...	...	...	...	...	...	2	4	8	9	1.0	1.0	8	...	...	5.1	34	960	...	...	...	
6	...	...	...	1.0	1.0	1.0	1.0	1.0	1.0	1.0	9	9	1.0	9	5	...	...	...	12.2	81	2300	68	1.22	Clear	
7	...	...	...	1.0	1.0	1.0	1.0	1.0	1.0	1.0	9	8	1.0	3	...	...	...	...	12.2	81	1550	47	1.22	Hazy	
8	...	...	...	1.0	1.0	1.0	1.0	1.0	1.0	7	4	7	1.0	9	8	4	...	...	11.2	75	1990	...	...	...	
9	...	...	...	8	1.0	1.0	1.0	8	7	1.0	1.0	1.0	1.0	9	8	1.0	7	...	11.7	78	1830	...	...	...	
10	...	...	...	4	1	4	4	3	1	8	4	1	...	...	...	...	...	...	3.1	21	230	...	...	...	
11	...	...	...	...	...	2	6	7	7	8	5	7	1	...	...	...	...	...	4.3	29	310	...	...	...	
12	...	...	...	2	5	8	1.0	1.0	1.0	1.0	7	4	9	...	...	...	...	...	9.6	65	1080	...	...	...	
13	...	...	...	...	...	...	...	4	1.0	6	...	...	...	...	...	...	...	...	2.0	14	210	...	...	...	
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
15	...	...	7	1.0	1.0	1.0	1.0	1.0	1.0	6	8	1.0	7	2	...	...	...	...	11.0	75	1740	...	...	...	
16	...	...	5	8	1.0	1.0	9	7	6	3	...	...	...	...	...	...	...	...	5.8	40	850	...	...	...	
17	...	...	...	7	9	4	1	5	3	8	1.0	1.0	4	9	7	...	...	...	7.7	53	760	...	...	...	
18	...	...	...	1	...	5	6	1	3	2	8	3	4	1	...	...	...	...	3.4	24	420	...	...	...	
19	...	...	6	1.0	1.0	1.0	9	1.0	1.0	9	1.0	9	3	4	...	...	...	...	10.1	70	2220	...	...	...	
20	...	...	...	1	6	9	7	2	1.0	7	1.0	9	6	8	4	...	...	...	7.9	55	960	79	1.28	Clear	
21	...	...	1	1.0	1	8	8	...	5	5	5	3	2	1	...	...	...	...	5.7	40	540	...	...	...	
22	...	...	...	...	1	3	9	1.0	1.0	1.0	9	1.0	1.0	3	...	...	...	...	9.5	67	1610	...	...	...	
23	...	...	...	7	1.0	1.0	1.0	1.0	1.0	8	8	9	8	7	...	...	...	...	10.5	75	1420	...	...	...	
24	...	...	...	4	1.0	1.0	1.0	1.0	1.0	9	1.0	6	8	8	...	...	...	...	10.5	75	1740	...	...	...	
25	...	...	...	...	6	2	6	3	8	1.0	4	...	...	...	...	...	...	...	3.9	28	440	...	...	...	
26	...	...	...	...	...	...	...	...	2	1	...	2	...	...	...	...	...	...	0.5	4	50	...	...	...	
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
28	...	...	...	...	...	...	...	...	...	...	...	7	1.0	2	...	...	...	...							

DURATION OF BRIGHT SUNSHINE

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

507 KEW OBSERVATORY: h<sub>s</sub> (height of recorder above ground) = 13.3 metres

SEPTEMBER, 1937

Hour L. A. T.	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	Total for Day	Per cent of Possible	SOLAR RADIATION Received on surface perpendicular to solar beam				
																					*Total for Day	†Rate near Noon	Sec Z	Sky	
Day 1	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	%	joules/cm <sup>2</sup>	mw/cm <sup>2</sup>	Sec Z	Sky
1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1.1	8	130	...	...	...
2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	5.6	42	490	...	...	...
3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	9.0	67	1880	87	1-39	Clear
4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	10.3	77	2000	...	...	...
5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	9.7	73	2480	...	...	...
6	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.6	58	1940	...	...	...
7	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.3	55	1240	...	...	...
8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	8.2	63	2070	89	1-43	Clear
9	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.6	5	90	...	...	...
10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	6.0	46	880	...	...	...
11	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	5.7	44	800	...	...	...
12	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1.2	9	250	...	...	...
13	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1.2	9	200	...	...	...
14	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.0	55	1020	...	...	...
15	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	3.5	28	430	84	1-50	Clear
16	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	4.3	34	660	...	...	...
17	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	2.1	17	220	...	...	...
18	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	9.9	80	2180	...	...	...
19	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	...	...	...	...	...	...
20	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	3.4	28	310	...	...	...
21	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1.3	11	230	...	...	...
22	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	4.3	35	650	...	...	...
23	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.5	62	980	...	...	...
24	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	5.4	45	880	...	...	...
25	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	...	...	...	...	...	...
26	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	9.3	78	1530	...	...	...
27	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.1	1	30	...	...	...
28	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	6.4	54	1000	...	...	...
29	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	8.4	72	1230	...	...	...
30	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	6.7	57	1160	...	...	...
Sum	---	---	---	3.4	8.3	12.6	18.3	19.3	17.1	16.7	15.7	13.1	12.9	10.0	5.5	0.2	---	---	153.1	---	27060	---	---	---	
Mean	---	---	---	.11	.28	.42	.61	.64	.57	.56	.52	.44	.43	.33	.18	.01	---	---	5.10	40	900	---	---	---	

508 KEW OBSERVATORY: h<sub>s</sub> = 13.3 metres

OCTOBER, 1937

Day	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	%	joules/cm <sup>2</sup>	mw/cm <sup>2</sup>	Sec Z	Sky	
																									*Total for Day
1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	2.9	25	370	...	...	...
2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	2.0	17	200	...	...	...
3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	...	...	...	...	...	...
4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	8.0	70	1100	...	...	...
5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.1	1	10	...	...	...
6	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.2	2	10	...	...	...
7	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	...	...	...	...	...	...
8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.1	1	20	...	...	...
9	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	4.3	39	540	...	...	...
10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	4.1	37	590	58	1-89	Hazy
11	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	5.5	50	700	...	...	...
12	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	...	...	...	...	...	...
13	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.5	5	60	...	...	...
14	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.2	2	30	...	...	...
15	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	5.1	48	890	68	2-01	Clear
16	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.1	67	1070	45	2-03	Hazy
17	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	3.7	35	580	...	...	...
18	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	2.2	21	200	...	...	...
19	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	4.4	42	350	...	...	...
20	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	5.4	52	550	...	...	...
21	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	...	...	...	...	...	...
22	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	3.0	29	640	...	...	...
23	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	2.4	24	430	...	...	...
24	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	5.7	56	1000	77	2-22	Clear
25	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	2.3	23	170	...	...	...
26	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	2.9	29	390	...	...	...
27	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	...	...	...	...	...	...
28	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	6.3	64	1020	...	...	...
29	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	...	...	...	...	...	...
30	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	2.6	27	410	...	...	...
31	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.8	8	80	...	...	...
Sum	---	---	---	...	2.4	4.8	7.4	10.8	12.8	11.5	9.6	11.6	8.7	2.2	...	---	---	---	81.8	---	11500	---	---	---	
Mean	---	---	---	...	.08	.16	.24	.35	.41	.37	.31	.37	.28	.07	...	---	---	---	2.64	25	370	---	---	---	
Hour L. A. T.	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	Total for Day	Per cent of Possible	SOLAR RADIATION Received on surface perpendicular to solar beam				
																					*Total for Day	†Rate near Noon	Sec Z	Sky	

DURATION OF BRIGHT SUNSHINE  
For periods of sixty minutes, between the exact hours of Local Apparent Time

509 KEW OBSERVATORY:  $h_g$  (height of recorder above ground) = 13.3 metres

NOVEMBER, 1937

Hour L. A. T.	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	Total for Day	Per cent of Possible	SOLAR RADIATION Received on surface perpendicular to solar beam					
																					*Total for Day	†Rate near Noon	Sec Z	Sky		
Day	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	%	joules/cm <sup>2</sup>	mw/cm <sup>2</sup>	Sec Z	Sky	
1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	...	...	...	...	...	
2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	...	...	...	...	...	
3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	...	...	...	...	...	
4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.8	8	100	...	...	
5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	...	...	70	...	...	
6	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	...	...	...	...	...	
7	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	...	...	...	...	...	
8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	...	...	...	...	...	
9	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	4.0	44	470	61	2.69	Hazy
10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	4.7	52	500	...	...	
11	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1.5	17	120	...	...	
12	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	5.4	60	610	51	2.78	Hazy
13	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	6.0	67	560	...	...	
14	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	6.2	70	660	26	2.90	Hazy
15	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	2.6	29	300	...	...	
16	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	...	...	30	...	...	
17	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	...	...	...	...	...	
18	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	...	...	...	...	...	
19	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	5.8	67	1190	70	3.08	Clear
20	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1.1	13	150	...	...	
21	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	...	...	10	...	...	
22	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	...	...	...	...	...	
23	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.5	6	90	...	...	
24	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.9	11	120	...	...	
25	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	2.3	27	200	...	...	
26	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	3.0	36	290	25	3.31	Fog
27	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	...	...	...	...	...	
28	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.4	5	120	...	...	
29	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1.2	15	180	...	...	
30	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	...	...	...	...	...	
Sum	---	---	---	---	...	2.0	5.4	6.3	8.5	8.2	7.3	6.8	1.9	...	---	---	---	---	---	46.4	---	5800	---	---	---	
Mean	---	---	---	---	...	.07	.18	.21	.28	.27	.24	.23	.06	...	---	---	---	---	---	1.55	17	190	---	---	---	

510 KEW OBSERVATORY:  $h_g$  = 13.3 metres

DECEMBER, 1937

Day	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	%	joules/cm <sup>2</sup>	mw/cm <sup>2</sup>	Sec Z	Sky	
																										hr
1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.9	11	100	...	...	
2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	...	...	...	...	...	
3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	...	...	...	...	...	
4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	...	...	...	...	...	
5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1.4	17	130	...	...	
6	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	2.1	26	250	...	...	
7	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	...	...	...	...	...	
8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	...	...	...	...	...	
9	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.4	5	20	...	...	
10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	...	...	...	...	...	
11	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1.2	15	90	...	...	
12	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	5.9	75	980	59	3.75	Hazy
13	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	...	...	...	...	...	
14	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	3.2	41	400	...	...	
15	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.1	1	20	...	...	
16	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.1	1	10	...	...	
17	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.1	1	10	...	...	
18	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	4.4	57	460	...	...	
19	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	...	...	...	...	...	
20	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1.1	14	120	...	...	
21	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	...	...	...	...	...	
22	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	...	...	...	...	...	
23	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	2.7	35	300	...	...	
24	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.6	8	60	...	...	
25	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.7	9	90	...	...	
26	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	...	...	...	...	...	
27	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	...	...	...	...	...	
28	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	...	...	...	...	...	
29	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	...	...	...	...	...	
30	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	...	...	10	...	...	
31	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	...	...	...	...	...	
Sum	---	---	---	---	...	0.1	2.1	4.7	5.6	3.9	5.8	2.5	0.2	...	---	---	---	---	---	---	24.9	---	3060	---	---	
Mean	---	---	---	---	...	.00	.07	.15	.18																	

WIND: DIRECTION AND SPEED

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

511 KEW OBSERVATORY:

Dines Pressure Tube Anemometer from Jan., 1926

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

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	
	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s
1	200	8.2	205	8.5	200	8.2	200	7.7	210	7.7	210	6.1	200	6.2	200	5.8	205	5.3	230	7.3	205	7.5	210	6.5
2	255	4.0	260	4.2	255	4.0	255	4.3	245	3.8	230	3.9	225	4.2	220	4.1	225	5.5	225	5.5	225	6.0	230	6.7
3	250	5.0	250	4.8	250	4.6	240	3.8	225	2.3	225	2.3	235	2.8	230	2.8	230	2.6	240	2.8	245	4.1	250	5.3
4	225	5.4	230	4.5	230	6.0	225	5.7	225	4.5	215	3.8	215	5.0	210	5.2	210	5.8	205	6.1	210	6.4	205	6.5
5	205	2.9	225	2.5	230	2.8	230	2.8	235	2.9	235	3.2	235	2.9	240	3.0	235	3.3	250	4.5	265	6.0	265	6.4
6	225	5.8	220	6.9	215	8.4	210	9.0	215	9.9	220	9.2	225	8.9	230	8.3	235	7.8	240	7.8	250	7.8	250	7.8
7	285	7.0	280	7.4	270	6.5	270	6.4	270	6.1	260	6.1	255	6.0	250	5.9	250	5.0	245	6.4	260	6.9	270	8.8
8	280	3.5	260	1.3	225	1.6	225	1.9	205	1.6	240	0.9	215	1.3	195	1.5	210	1.0	200	0.5	220	1.0	240	1.0
9	150	1.0	140	1.8	115	1.6	110	2.0	130	1.4	160	1.9	130	1.5	160	2.0	145	2.2	135	2.1	175	5.2	175	4.6
10	160	2.9	160	4.4	165	3.8	150	2.8	115	2.1	135	2.4	105	1.3	115	2.2	85	1.3	45	0.5	150	4.0	160	4.1
11	110	1.1	70	1.0	90	0.7	265	0.4	105	1.2	140	0.8	175	1.4	40	0.5	90	1.0	130	1.4	160	1.6	160	2.5
12	120	2.4	140	2.3	110	1.8	165	1.5	155	2.4	190	2.7	160	2.4	180	2.9	165	2.9	175	4.8	180	6.3	175	6.9
13	180	6.9	180	6.7	180	5.7	185	5.7	185	6.0	185	4.9	190	5.2	195	5.0	195	3.9	210	2.9	210	2.4	225	2.7
14	35	3.6	35	3.2	25	2.4	35	2.2	360	2.4	20	2.2	30	2.8	360	2.9	355	2.7	350	3.5	355	3.0	360	3.6
15	355	1.9	35	2.5	15	2.4	20	1.8	345	1.9	350	2.2	40	2.8	35	2.3	35	1.4	335	0.8	310	0.4	260	0.7
16	160	4.9	150	4.5	155	5.4	155	6.6	155	6.8	155	7.2	150	6.8	150	6.5	160	5.7	235	5.0	240	6.0	255	4.8
17	140	2.5	150	2.2	130	1.9	120	2.9	130	4.5	135	4.6	135	4.2	145	5.2	135	6.7	150	7.7	150	8.9	155	8.5
18	170	7.9	200	6.4	215	5.3	215	5.5	215	5.2	205	3.6	195	3.7	185	3.5	155	4.1	150	5.7	150	8.7	160	10.2
19	235	4.5	225	2.8	225	4.0	220	3.9	225	1.9	225	1.5	205	1.3	210	1.2	220	1.2	225	1.4	230	2.9	240	3.4
20	235	3.1	225	3.6	230	3.8	230	3.4	220	1.9	210	2.5	205	2.4	215	1.9	210	1.3	175	1.2	165	2.2	165	3.3
21	175	9.9	175	9.4	180	9.4	185	8.9	190	9.2	200	7.4	205	6.6	195	6.7	190	6.0	190	5.8	190	5.7	195	6.5
22	170	7.8	175	7.1	180	7.0	190	7.1	185	8.0	190	7.8	190	7.8	190	8.6	185	7.2	185	7.9	180	7.9	180	8.4
23	165	2.8	155	1.8	110	1.0	130	1.4	85	1.1	95	2.0	70	1.3	55	2.4	75	4.4	90	3.6	90	4.3	125	4.3
24	150	4.3	140	4.2	130	5.8	130	5.7	125	7.0	135	8.0	135	9.0	135	8.2	125	8.0	125	8.8	130	9.1	140	10.0
25	150	3.2	150	3.8	160	3.2	160	2.6	160	2.9	185	3.3	190	3.8	195	1.8	170	1.4	175	2.2	175	2.0	135	0.7
26	80	3.2	70	2.8	65	1.8	60	1.8	45	2.0	35	2.8	40	2.6	45	1.7	50	1.7	40	2.8	40	3.1	35	2.3
27	70	5.8	60	4.4	55	5.5	55	5.2	55	5.0	50	4.7	45	4.2	45	4.4	60	3.4	50	4.6	80	9.8	75	9.3
28	80	9.3	65	8.6	60	8.3	60	8.3	60	9.1	60	9.2	60	10.7	60	10.4	65	11.5	70	12.3	65	12.2	60	10.8
29	50	9.8	50	9.0	50	8.8	45	9.0	40	9.0	40	8.2	40	7.3	40	6.7	40	7.3	45	6.3	40	6.6	40	6.2
30	95	3.2	85	4.8	85	5.2	75	3.1	60	1.6	45	2.5	30	2.9	45	3.3	45	3.4	55	2.6	55	2.7	70	3.5
31	195	4.6	185	4.5	165	3.7	150	2.9	185	4.0	185	4.8	185	4.0	175	3.5	185	2.9	175	3.1	180	3.0	170	3.9
Mean	---	4.8	---	4.6	---	4.5	---	4.4	---	4.4	---	4.3	---	4.3	---	4.2	---	4.1	---	4.4	---	5.3	---	5.5

512 KEW OBSERVATORY: H<sub>a</sub> = 5 metres + 23 metres

Day	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s
	1	180	4.8	185	3.9	185	4.5	200	3.6	195	3.4	195	3.7	210	3.8	235	5.2	220	5.8	220	6.3	220	6.3	225
2	225	3.3	215	2.7	215	3.0	205	2.2	205	2.0	205	2.8	205	2.0	200	3.4	205	4.1	200	4.0	200	5.1	205	5.5
3	205	7.3	205	7.9	210	8.6	215	7.8	220	7.9	215	7.8	210	7.8	210	7.5	205	6.5	205	5.9	205	6.8	205	8.3
4	195	5.0	200	5.9	200	5.0	195	5.5	205	5.4	210	5.8	205	6.0	200	6.8	210	7.8	205	7.5	215	8.4	215	9.7
5	185	7.6	175	6.8	175	5.4	165	2.3	155	1.0	260	0.3	240	0.6	235	0.8	220	0.7	265	0.3	305	1.1	345	3.8
6	305	2.8	290	2.9	265	3.1	280	1.7	270	1.9	270	3.4	265	3.6	245	3.2	245	3.9	260	3.4	255	3.4	260	5.2
7	235	1.2	65	1.0	55	0.8	80	1.3	120	2.0	115	3.2	105	4.0	105	3.8	100	3.6	115	4.0	110	5.2	110	4.9
8	200	1.2	185	1.7	175	2.0	155	1.9	145	2.5	150	2.8	125	2.4	125	2.3	150	2.2	175	2.1	215	3.4	220	4.1
9	280	7.4	275	6.6	265	6.0	250	5.0	250	5.0	245	5.1	240	4.5	230	4.5	230	6.0	235	5.9	270	4.6	265	6.2
10	235	3.7	235	4.1	230	3.1	230	2.5	230	2.8	245	3.1	250	3.0	260	3.5	260	4.5	270	5.4	265	5.3	285	6.1
11	235	4.9	245	4.0	265	3.9	265	3.4	265	3.2	250	2.8	245	2.6	255	2.5	255	2.1	270	4.0	285	4.1	295	6.2
12	270	2.0	275	2.9	265	2.2	250	1.8	220	1.4	220	1.4	230	1.3	215	1.0	240	1.1	265	1.2	295	0.9	265	1.0
13	145	3.5	140	3.3	105	1.9	95	1.4	60	0.5	65	0.4	275	0.2	265	0.6	285	1.5	305	2.2	330	1.8	325	1.8
14	130	1.2	135	1.3	165	1.0	180	2.0	205	0.5	180	0.2	175	1.3	225	1.1	215	0.6	190	1.2	230	1.2	210	2.2
15	230	2.2	210	2.2	215	1.8	215	1.9	225	1.3	240	2.2	235	2.1	205	1.3	220	1.4	195	3.2	230	3.7	230	2.9
16	205	5.9	205	6.9	205	6.0	205	5.8	200	5.6	200	5.2	205	6.2	205	5.8	205	6.0	210	5.5	210	7.4	225	6.0
17	230	4.8	230	5.2	225	5.9	225	6.5	225	6.4	225	5.6	220	5.8	235	5.8	250	6.1	260	8.4	270	8.2	270	7.8
18	245	0.8	240	1.4	215	1.1	220	1.0	215	0.6	200	0.8	210	0.8	190	1.5	210	1.3	190	1.0	190	3.3	200	3.5
19	255	4.9	255	4.8	245	4.1	235	4.6	235	4.0	235	3.0	230	3.5	235	3.1	220	3.6	215	4.1	200	4.2	190	4.8
20	270	5.8	265	5.2	255	5.1	250	5.6	250	5.5	255	5.3	250	4.8	245	3.8	245	4.8	250	5.8	270	7.7	275	8.0
21	260	6.0	260	5.2	260	5.7	265	5.5	260	4.8	255	3.5	255	4.7	260	4.5	260	4.8	255	5.4	270	7.2	270	6.8
22	230	2.5	210	1.2	160	0.2	80	0.3	35	1.2	40	2.2	40	2.6	15	3.2	10	3.0	350	4.0	340	4.6	330	5.0
23	250	2.5	230	2.8	235	2.7	245	2.9	225	2.8	225	1.7	235	2.0	240	2.7	255	3.4	275	4.8	295	5.0	310	5.8
24	100	0.3	80	0.8	120	0.4	140	0.8	105	2.2	140	2.0	135	1.3	115	1.3	105	3.0	115	3.9	125	5.6	120	5.0
25	85	2.7	95	2.8	85	2.6	85	2.3	80	2.2	75													

WIND: DIRECTION AND SPEED

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

M.S.L. + h<sub>a</sub> (height of anemometer above ground) = 5 metres + 23 metres

JANUARY, 1937

12 - 13		13 - 14		14 - 15		15 - 16		16 - 17		17 - 18		18 - 19		19 - 20		20 - 21		21 - 22		22 - 23		23 - 24		Mean	Day
o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	m/s	
220	6.3	215	4.8	225	3.9	215	4.3	210	5.0	270	5.6	250	3.4	225	4.4	230	4.5	235	4.4	245	4.0	245	2.8	5.8	1
230	6.7	225	7.1	235	7.2	235	6.9	235	7.5	235	7.6	230	6.9	240	5.9	245	6.1	245	5.8	240	4.8	245	3.9	5.5	2
255	5.6	250	5.7	250	5.6	240	4.0	230	4.5	230	4.3	225	5.0	220	5.2	220	5.0	220	5.9	225	5.0	230	5.7	4.4	3
205	7.4	205	7.2	210	7.2	205	6.9	215	7.2	215	8.3	210	7.8	215	7.1	290	6.1	295	4.3	235	2.2	235	2.2	5.8	4
270	5.9	255	4.9	255	4.4	250	3.9	230	3.6	235	4.5	235	4.8	240	5.2	230	3.9	220	3.7	220	5.0	220	4.9	4.1	5
250	7.5	250	7.4	255	7.9	255	8.3	260	9.2	260	8.8	255	8.7	255	8.8	260	8.6	260	7.3	260	7.4	265	6.8	8.1	6
270	9.8	275	10.2	270	9.6	275	7.2	270	6.6	270	5.5	265	3.9	255	3.5	250	3.8	275	3.8	270	2.9	255	2.9	6.2	7
230	0.9	200	0.6	195	2.5	200	2.6	180	2.2	170	2.5	165	2.2	155	2.0	145	0.5	155	0.7	150	1.0	150	1.5	1.5	8
175	6.7	175	6.4	175	6.1	165	4.4	150	3.8	135	3.0	130	3.0	135	3.2	145	3.4	135	2.7	155	2.2	150	2.2	3.1	9
160	4.3	165	4.7	165	3.4	165	3.3	160	2.0	155	2.1	130	1.4	100	0.3	100	0.8	100	1.6	70	0.5	100	1.0	2.4	10
190	1.9	175	2.7	165	2.0	170	3.1	165	3.2	150	2.5	155	2.2	165	2.7	120	1.5	130	2.7	140	2.6	125	2.6	1.8	11
170	6.1	170	6.2	170	4.8	175	5.5	175	5.4	170	6.0	170	6.2	170	6.2	170	6.0	175	6.5	175	6.0	180	5.7	4.6	12
230	2.4	255	1.8	265	1.5	285	1.0	305	0.6	345	1.5	5	1.6	25	1.9	25	2.4	25	2.2	25	2.5	30	2.7	3.3	13
5	4.0	5	3.8	5	3.9	355	4.0	360	4.1	5	3.5	5	4.5	10	3.7	15	3.8	25	3.6	10	2.3	350	1.8	3.2	14
270	0.7	200	0.5	175	2.4	190	3.4	205	3.5	190	3.8	130	2.8	145	2.7	140	4.0	130	4.8	145	3.9	140	4.5	2.4	15
265	5.7	270	5.7	250	4.8	245	4.2	235	2.4	210	2.8	200	2.4	185	2.5	190	2.5	180	1.9	175	2.8	165	3.3	4.6	16
155	9.2	155	7.5	145	8.4	150	6.3	150	6.9	150	7.9	150	8.3	155	8.5	160	8.3	160	7.8	165	7.8	160	7.8	6.4	17
185	7.8	195	7.8	215	6.6	215	5.2	245	6.9	275	10.3	270	10.0	270	8.6	250	6.8	250	6.4	245	5.5	245	4.9	6.5	18
250	2.8	240	2.8	215	3.5	220	2.2	235	1.5	190	1.2	190	3.0	240	4.8	230	2.9	230	3.4	240	3.0	240	2.6	2.7	19
165	5.5	165	5.3	175	6.5	165	6.4	155	7.0	160	7.0	155	8.0	160	8.2	175	9.5	175	10.1	175	10.0	180	10.2	5.2	20
200	7.9	200	8.4	200	4.2	195	3.4	190	4.7	180	4.4	175	6.6	160	5.9	165	7.5	160	7.3	170	7.3	170	7.3	6.9	21
180	7.4	180	7.4	190	8.5	200	7.9	210	6.5	210	5.6	205	5.6	210	5.0	215	4.2	185	2.7	180	2.7	180	2.7	6.7	22
130	5.5	125	6.2	140	5.5	130	5.9	140	5.5	130	5.5	130	5.6	145	5.4	150	6.9	155	7.5	155	7.9	150	5.5	4.3	23
140	8.9	140	8.9	140	8.8	145	8.5	155	6.4	170	6.3	160	5.6	185	5.3	200	4.8	150	3.0	155	2.9	160	2.4	6.7	24
130	1.6	120	2.0	125	1.6	115	2.0	85	1.2	70	0.8	65	1.6	95	2.5	90	4.0	90	2.5	80	2.5	70	4.2	2.4	25
75	2.4	40	3.1	40	2.8	70	2.9	80	2.6	105	2.5	90	4.5	85	4.2	80	4.6	75	4.2	70	4.3	80	4.7	3.0	26
35	10.0	90	10.0	75	10.5	75	9.9	75	9.8	75	9.0	75	10.1	75	12.8	80	12.1	90	11.3	85	10.3	80	10.3	8.0	27
55	10.6	50	10.5	55	10.0	50	11.6	55	11.8	55	11.3	55	10.1	55	10.5	55	10.2	55	10.3	55	10.9	55	9.9	10.3	28
35	5.1	35	5.4	40	5.7	40	5.5	40	5.7	40	6.0	45	3.8	50	3.6	80	3.9	55	3.2	90	4.5	95	3.5	6.3	29
80	3.7	80	4.5	90	3.7	85	3.4	115	2.8	165	5.0	180	5.7	180	4.5	180	4.8	185	4.1	190	3.8	195	4.2	3.7	30
170	3.5	155	3.3	125	2.2	115	2.2	100	2.4	75	2.2	65	2.2	65	4.1	110	2.5	150	2.9	165	4.4	175	4.7	3.4	31
---	5.6	---	5.6	---	5.3	---	5.0	---	4.9	---	5.1	---	5.1	---	5.2	---	5.1	---	4.8	---	4.6	---	4.5	4.8	

FEBRUARY, 1937

12 - 13		13 - 14		14 - 15		15 - 16		16 - 17		17 - 18		18 - 19		19 - 20		20 - 21		21 - 22		22 - 23		23 - 24		Mean	Day
o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	m/s	
225	7.3	230	6.8	230	6.5	225	6.4	215	5.2	210	6.6	215	7.3	215	7.5	215	6.5	220	5.3	225	4.5	225	3.8	5.5	1
200	6.2	200	6.5	200	6.8	195	6.5	185	6.9	195	6.8	200	7.0	200	7.4	205	7.8	210	7.9	210	8.2	205	6.9	5.2	2
210	8.8	200	7.4	200	7.1	200	7.1	205	7.4	205	7.9	205	6.9	200	4.9	195	5.1	190	5.2	195	5.7	195	6.2	7.1	3
210	9.3	215	9.6	215	9.4	215	8.8	210	7.7	205	5.5	200	6.6	195	5.9	195	5.9	195	9.3	185	8.1	185	8.2	7.2	4
345	5.9	345	5.1	330	3.4	310	3.0	315	2.3	305	2.9	310	2.5	290	1.8	305	2.2	310	2.7	310	3.2	300	3.2	2.9	5
265	6.2	265	5.9	265	4.9	260	4.0	245	3.5	230	2.7	230	2.8	215	3.0	220	2.5	225	2.2	225	2.2	230	1.7	3.3	6
85	5.7	85	5.9	90	6.4	85	6.0	50	6.5	80	6.3	85	6.4	80	4.7	80	3.4	80	1.5	85	1.1	95	0.4	3.7	7
225	5.8	220	7.1	235	4.9	220	4.7	225	4.8	225	4.1	240	3.3	275	5.4	285	7.3	285	5.8	280	5.7	275	6.7	3.9	8
275	8.5	275	8.9	270	8.3	270	7.0	255	4.9	250	5.4	230	4.0	225	4.0	235	5.1	235	4.3	235	4.4	240	4.1	5.7	9
295	6.2	295	6.1	295	4.9	285	4.8	275	2.9	275	3.0	260	3.3	250	3.4	235	3.4	235	3.8	235	4.2	240	3.8	4.0	10
310	6.7	310	6.1	290	5.7	290	4.9	290	4.2	280	2.8	265	2.0	250	2.2	260	2.3	270	3.0	270	3.5	270	2.7	3.7	11
250	1.4	250	1.2	220	1.8	180	1.4	170	1.6	170	2.0	185	2.8	190	4.2	165	2.9	145	3.7	115	2.9	110	3.0	2.0	12
325	3.2	330	1.7	335	1.0	335	1.0	25	0.2	90	0.2	160	0.6	170	0.7	120	1.3	125	0.9	160	1.8	135	1.6	1.4	13
210	2.8	220	3.3	220	2.5	215	1.9	210	2.0	230	2.2	215	1.9	225	2.5	220	2.7	215	2.5	220	2.5	230	2.0	1.8	14
220	2.6	215	3.9	205	4.4	200	4.2	200	4.8	205	5.0	195	5.0	195	5.1	195	4.9	200	5.2	210	5.1	205	4.9	3.4	15
235	7.5	225	3.4	225	5.0	230	6.8	235	6.6	245	4.5	235	3.7	230	3.6	245	4.4	245	4.3	240	4.1	230	3.9	5.4	16
290	9.1	300	8.3	300	8.1	320	6.4	320	5.9	330	4.5	330	3.2	330	3.7	290	1.1	275	0.5	270	1.2	280	1.5	5.4	17
195	3.7	205	4.4	210	4.9	210	4.8	235	3.4	230	3.8	230	4.0	235	4.5	235	4.9	245	6.2	250	6.4	245	6.5	3.1	18
205	5.0	230	5.7	245	6.7	250	8.0	255	6.9	260	6.8	285	8.6	280	7.5	265	5.0	260	4.8	270	5.9	270	6.6	5.3	19
275	7.3	270	8.4	280	8.2	280	7.4	275	6.7	280	6.6	270	4.0	275	3.6	265	3.6	245	4.9	255	4.5	255	5.5	5.8	20
265	7.0	260	6.6	265	5.9	260	5.9	250	4.3	240	4.1	240	4.0	230	3.7	225	3.8	220	3.6	225	3.4	225	3.8	5.0	21
315	5.8	315	5.5	310	6.4	310	6.8	300	6.0	305	6.0	300	5.9												

WIND: DIRECTION AND SPEED

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

513 KEW OBSERVATORY:  
Dines Pressure Tube Anemometer from Jan., 1926

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

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	
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	310	6.1	305	5.8	300	5.8	300	5.9	295	5.5	300	4.0	310	4.6	315	4.4	315	4.3	315	4.7	320	4.3	305	4.9
2	235	2.2	240	2.0	250	2.5	270	3.4	285	3.4	275	2.2	280	2.2	245	1.3	230	1.9	245	2.4	265	3.6	260	3.5
3	180	1.4	185	1.1	195	1.0	240	0.5	190	0.7	190	0.2	135	0.5	110	0.2	170	1.4	155	2.5	155	2.8	155	3.9
4	85	3.1	75	3.5	75	3.7	75	3.9	75	3.9	65	3.4	55	3.2	45	3.3	50	3.5	55	4.1	70	6.8	80	9.4
5	30	3.4	20	4.5	20	4.4	20	3.8	15	4.2	20	4.9	25	5.2	30	5.1	30	5.4	35	6.3	35	5.5	30	6.0
6	330	2.0	320	1.6	330	1.2	345	0.9	335	0.7	345	1.4	325	0.8	340	0.9	320	0.4	325	1.0	270	0.4	340	1.0
7	70	7.5	60	6.3	55	6.5	50	7.2	50	6.5	45	6.5	35	6.0	30	6.2	40	7.4	35	6.9	40	6.5	45	6.2
8	45	4.5	50	4.5	45	4.4	45	4.8	45	5.8	50	4.8	50	5.6	50	5.5	50	6.3	50	6.8	50	6.8	45	6.8
9	35	5.6	30	6.2	35	5.8	35	5.3	25	5.4	20	5.0	20	5.0	20	5.0	25	6.5	30	5.5	20	5.0	20	5.0
10	340	0.5	270	0.3	235	0.6	220	1.2	200	0.9	200	0.8	185	0.4	50	0.2	310	0.1	240	0.1	180	1.6	135	2.7
11	90	6.5	90	6.0	85	5.1	85	5.5	100	5.7	115	6.2	115	5.3	105	4.6	100	5.2	135	3.8	155	4.8	185	6.2
12	195	3.8	195	2.8	175	3.4	165	2.8	175	3.9	165	4.6	155	3.9	170	4.8	180	6.8	185	7.4	185	9.6	185	8.9
13	205	6.7	215	8.2	220	8.3	220	6.5	225	6.9	220	6.8	225	5.6	220	4.9	220	5.1	225	4.7	240	4.4	245	4.9
14	75	2.7	70	4.5	75	4.6	75	5.0	65	6.9	75	9.4	75	10.2	55	8.9	55	7.3	50	6.1	35	5.4	5	5.5
15	270	5.2	265	5.0	260	4.8	265	4.8	265	5.0	270	4.9	265	5.1	270	4.8	270	6.4	275	7.0	285	8.5	280	8.3
16	155	0.9	85	0.4	120	0.5	110	0.8	55	0.6	120	1.2	110	4.0	110	3.7	125	5.4	125	7.9	125	7.4	130	7.5
17	190	5.8	190	4.3	185	3.9	185	3.7	175	4.2	175	4.0	165	3.8	170	4.3	180	3.8	185	5.6	185	5.6	195	6.9
18	185	6.6	190	8.5	190	7.5	200	6.9	195	6.3	190	5.0	185	4.8	180	5.6	185	5.8	185	5.9	190	7.1	190	8.7
19	170	5.4	180	4.3	185	4.2	175	3.6	175	3.0	180	3.3	170	3.6	175	4.6	175	5.3	175	6.5	175	7.0	180	6.9
20	75	0.7	85	0.8	95	1.6	100	1.2	75	1.5	80	0.9	95	1.4	85	0.5	105	0.3	185	2.8	190	3.6	170	4.1
21	65	2.6	35	3.2	35	3.9	50	4.7	55	5.6	55	5.4	50	5.0	45	5.0	50	4.9	45	5.0	45	4.8	35	4.3
22	10	4.7	15	5.6	15	4.8	15	4.7	15	5.8	15	5.3	15	5.0	15	5.9	20	4.8	15	4.3	25	6.1	15	6.4
23	240	0.4	205	0.8	190	1.2	210	1.1	210	0.5	45	0.2	350	1.1	350	1.8	15	4.1	15	4.7	15	5.5	15	5.7
24	350	3.4	355	2.8	330	2.9	330	2.5	315	1.8	260	1.2	265	1.1	245	0.9	240	1.6	235	2.4	255	3.9	260	4.3
25	270	4.2	285	4.4	280	3.4	270	2.7	275	2.3	270	3.0	260	3.5	270	4.5	290	4.9	300	5.6	295	5.8	290	5.5
26	5	5.6	360	3.9	320	1.8	320	4.6	320	4.5	330	4.9	325	4.3	305	3.9	300	4.6	295	6.5	290	7.0	290	6.6
27	230	2.2	245	2.9	255	2.9	250	2.5	235	1.3	245	1.9	260	1.3	260	1.8	275	3.8	310	5.4	315	4.5	320	5.1
28	330	0.4	325	1.0	315	1.2	330	1.8	340	1.5	320	0.7	230	0.6	295	0.1	360	1.5	10	3.9	25	3.7	25	3.8
29	15	1.5	360	1.8	5	1.4	15	2.5	15	2.7	15	2.8	20	2.1	15	2.3	20	2.7	25	2.7	45	4.4	55	4.7
30	15	1.2	350	1.0	20	1.5	15	0.7	355	0.8	10	1.4	360	1.5	35	1.5	50	3.8	30	3.4	50	2.6	80	3.7
31	125	3.9	135	1.9	110	1.7	100	2.3	100	1.7	100	1.0	100	1.9	120	2.2	105	3.0	105	3.8	110	3.8	115	4.0
Mean	---	3.6	---	3.5	---	3.4	---	3.5	---	3.5	---	3.5	---	3.5	---	3.5	---	4.1	---	4.7	---	5.2	---	5.5

514 KEW OBSERVATORY: H<sub>a</sub> = 5 metres + 23 metres

Day	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s
1	35	0.5	355	1.2	355	1.4	20	1.2	40	1.0	50	2.4	55	2.5	70	2.9	80	2.2	80	1.6	75	3.9	75	5.2
2	85	4.0	90	4.2	80	4.6	70	5.0	75	6.5	75	6.7	75	6.8	80	6.7	80	5.7	80	5.4	75	4.8	80	3.7
3	155	2.0	150	1.5	185	0.8	140	1.0	145	0.6	180	0.8	115	0.5	160	1.9	170	2.2	175	2.5	185	2.9	160	2.1
4	150	0.5	265	0.2	310	0.2	330	0.5	205	0.2	230	0.3	255	0.6	275	0.1	65	0.1	190	0.1	40	0.4	10	0.6
5	165	1.4	160	0.2	225	0.3	220	0.2	330	0.1	275	0.5	240	0.3	270	0.5	280	0.2	170	0.7	180	0.6	230	0.7
6	45	0.2	65	0.3	210	0.1	95	0.4	145	0.4	330	0.2	15	0.3	30	0.6	90	0.3	115	1.0	140	1.1	190	1.3
7	170	2.6	175	2.5	200	2.6	205	3.3	210	4.2	195	2.8	195	4.1	195	4.9	195	4.8	190	5.0	180	5.7	175	7.2
8	215	4.3	215	4.3	215	5.1	215	5.5	220	5.0	215	4.2	220	5.1	225	5.1	230	5.9	230	7.0	225	6.9	240	5.4
9	210	2.8	210	2.8	205	2.4	195	3.1	190	2.8	180	2.1	155	2.1	170	2.4	155	3.4	135	4.2	165	5.0	175	6.2
10	165	4.8	160	2.4	190	0.4	185	4.0	180	3.6	155	1.8	140	2.4	150	2.8	170	3.7	185	3.7	185	3.5	205	4.3
11	215	2.5	285	5.1	285	5.6	285	6.5	275	5.2	270	5.1	260	3.9	245	3.1	230	3.5	240	3.6	230	4.2	225	5.0
12	80	0.1	20	0.3	50	0.4	40	0.1	15	0.8	40	0.2	45	1.1	45	2.6	45	2.6	70	4.1	55	4.2	35	4.8
13	45	4.0	35	3.5	40	3.3	30	3.9	30	3.9	15	4.1	20	4.3	10	4.1	5	3.5	10	3.3	20	4.0	45	5.6
14	30	3.3	30	3.0	35	3.7	40	3.5	20	3.8	15	3.8	25	3.2	30	3.7	35	3.8	40	3.8	35	4.2	25	4.7
15	345	4.0	350	4.2	355	4.2	350	4.0	345	3.0	345	3.2	345	3.8	350	3.9	5	3.9	5	2.8	310	1.5	285	1.1
16	175	6.9	175	6.3	195	5.8	225	6.6	225	5.2	220	5.0	215	5.3	225	6.4	225	6.4	215	6.3	215	5.8	200	4.8
17	255	6.9	255	6.1	275	6.4	275	5.9	280	6.2	285	5.2	280	6.6	285	6.7	280	6.5	280	7.3	290	7.6	285	7.5
18	265	4.9	270	4.9	265	3.9	260	4.2	260	3.4	260	4.0	260	4.0	265	4.4	270	4.7	275	5.0	270	3.9	265	3.8
19	290	1.6	295	1.9	300	1.6	285	0.7	290	1.4	270	0.8	260	0.8	270	1.6	230	1.6	235	2.3	240	3.0	240	3.1
20	190	6.7	190	6.4	185	6.0	190	5.2	190	5.0	195	4.5	205	4.5	210	5.2	220	5.6	230	4.6	220	4.0	200	6.0
21	250	4.0	260	4.9	280	7.0	270	4.2	255	2.5	260	3.3	270	4.8	270	5.9	290	7.2	295	8.4	290	7.4	285	7.0
22	185	3.0	195	3.2	210	3.2	230	3.0	230	3.2	230	3.3	240	2.8	240	3.3	245	4.0	250	4.5	260	5.5	265	5.6
23	245	2.5	225	2.2	225	2.2	235	2.7	255	2.2	270	2.5	310	2.3	315	5.3	310	5.0	320	4.7	330	5.0	325	4.8
24	360	2.7	35	2.3	40	2.2	30	1.8	10	1.2	20	1.8	15	1.8	35	2.5	45	1.9	35	2.4	35	2.4	40	2.5
25	20	3.6	15	2.2	360	2.2	360	2.8	360	2.3	360	2.9	5	3.5	355	3.9	360	4.9	360	4.8	15	5.4	10	5.0
26	320	1.9	350	2.6	345	3.6																		

WIND: DIRECTION AND SPEED

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

M.S.L. + h<sub>a</sub> (height of anemometer above ground) = 5 metres + 23 metres

MARCH, 1937

12 - 13		13 - 14		14 - 15		15 - 16		16 - 17		17 - 18		18 - 19		19 - 20		20 - 21		21 - 22		22 - 23		23 - 24		Mean	Day
o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	m/s	
305	5.1	320	5.4	305	4.8	280	3.8	290	3.8	280	2.6	250	1.8	270	2.5	270	1.8	250	2.3	235	2.8	245	2.5	4.1	1
270	3.9	260	2.9	240	3.0	235	2.8	280	2.5	270	1.0	225	1.2	195	0.5	170	1.4	180	1.7	205	1.6	200	1.5	2.3	2
170	3.6	165	3.8	175	4.9	215	3.8	175	3.8	155	3.8	120	2.5	105	2.0	90	2.8	105	3.1	100	2.9	85	3.0	2.3	3
70	10.2	65	8.1	60	7.9	55	9.4	55	8.9	50	8.9	50	8.9	50	7.8	45	5.9	40	5.5	30	4.8	30	4.2	6.0	4
20	6.2	350	4.4	345	4.3	350	3.8	350	4.2	345	4.1	345	3.0	315	1.8	295	1.2	320	2.2	315	2.3	320	1.8	4.1	5
10	1.3	245	0.4	125	2.5	145	2.5	110	2.8	115	1.8	105	2.5	80	4.5	90	4.8	85	5.9	75	6.3	75	7.4	2.3	6
45	7.0	50	6.8	45	5.9	40	5.0	35	5.8	40	6.1	40	6.0	50	5.9	40	6.2	45	4.6	40	4.2	40	4.1	6.1	7
45	7.4	50	6.5	50	7.5	40	7.2	40	7.4	30	6.3	30	6.1	30	6.2	30	6.6	35	6.3	35	5.9	35	5.9	6.1	8
20	5.6	30	5.4	10	5.0	10	4.5	15	4.4	35	3.6	35	3.2	20	2.5	25	2.2	10	1.2	325	1.2	350	1.5	4.4	9
140	3.4	145	3.2	65	1.5	75	3.8	115	3.4	125	2.5	105	2.3	95	2.4	90	2.5	80	3.2	85	4.3	90	6.2	2.0	10
185	6.6	175	6.2	180	4.6	170	5.2	160	5.4	150	2.8	195	3.4	175	2.9	170	2.6	185	3.9	205	3.6	195	4.2	4.8	11
185	8.5	190	7.5	200	8.8	195	7.2	200	6.6	190	5.4	205	6.2	205	5.9	200	5.4	195	6.2	195	6.5	195	6.5	6.0	12
250	4.8	245	4.4	255	5.6	260	4.9	245	6.2	255	3.9	240	1.6	190	1.3	195	2.2	185	1.8	125	1.2	95	1.0	4.7	13
360	6.4	360	5.9	355	8.0	350	7.8	335	6.7	320	6.5	315	6.3	305	7.0	295	6.0	290	6.5	295	6.5	285	5.8	6.5	14
275	8.5	275	8.8	280	7.8	280	7.3	275	7.2	280	4.8	285	3.3	265	1.5	260	1.0	195	0.5	190	0.4	190	0.7	5.1	15
145	9.5	130	8.3	135	7.9	130	8.4	135	7.4	145	6.4	150	7.8	170	7.4	185	3.8	190	4.8	190	5.8	190	6.0	5.2	16
195	7.1	200	7.2	210	9.2	210	8.6	195	6.9	195	4.9	175	5.0	180	5.7	185	6.3	195	7.8	195	7.0	195	7.7	5.8	17
195	8.6	200	9.3	200	9.5	205	8.9	210	7.8	195	6.9	190	5.5	175	3.2	170	3.9	160	3.9	165	3.2	165	3.3	6.4	18
175	6.5	175	5.9	175	6.0	180	4.1	185	3.7	185	3.8	180	3.5	180	2.8	180	2.4	175	2.8	175	1.2	155	1.6	4.3	19
160	4.3	115	4.2	170	3.8	180	3.3	150	2.2	165	3.4	160	2.9	135	2.2	80	0.7	60	0.2	185	1.2	75	2.3	2.1	20
25	3.8	15	2.7	350	3.3	355	4.3	355	5.0	10	4.9	15	5.0	15	3.5	15	5.0	25	5.7	15	5.0	10	4.4	4.5	21
15	7.5	5	7.2	5	6.6	355	6.4	15	4.9	5	3.5	325	1.2	290	1.3	320	2.2	330	2.2	285	1.6	265	1.0	4.5	22
15	6.5	25	5.1	15	7.0	355	8.0	5	6.9	360	6.6	340	6.1	335	4.4	350	5.8	360	6.5	355	4.8	350	5.9	4.2	23
270	5.0	265	5.6	260	5.8	265	6.1	250	5.8	250	5.3	255	5.0	235	3.8	225	3.5	230	3.5	255	4.2	265	4.3	3.6	24
280	5.1	270	4.6	295	4.6	270	5.1	260	3.9	260	2.7	230	1.4	230	3.6	240	1.8	220	2.2	280	1.3	360	4.0	3.8	25
280	6.5	275	6.8	260	6.9	265	5.6	305	4.8	345	5.1	315	4.5	280	3.7	280	3.8	265	2.8	260	2.7	260	3.1	4.8	26
330	5.5	335	5.0	330	4.8	330	4.2	335	3.0	325	2.6	15	2.4	345	2.2	20	2.8	25	2.7	20	1.6	360	1.4	3.1	27
35	4.7	40	4.0	35	2.4	355	3.6	360	3.9	10	4.5	20	4.2	15	3.2	20	2.8	10	1.5	20	1.7	15	2.0	2.4	28
40	4.6	40	4.2	50	3.9	60	3.8	40	3.8	30	4.8	35	4.7	50	4.3	90	2.8	75	2.3	60	1.5	40	1.4	3.1	29
80	3.8	90	4.3	85	4.0	90	3.5	100	4.0	100	5.1	100	5.2	105	4.8	110	4.3	125	3.3	120	3.2	110	3.3	3.0	30
130	3.9	130	3.6	130	3.7	140	3.7	135	3.2	170	2.5	195	1.5	145	1.1	85	2.4	75	2.6	90	2.2	60	1.0	2.6	31
---	5.9	---	5.4	---	5.5	---	5.4	---	5.0	---	4.4	---	4.0	---	3.6	---	3.4	---	3.5	---	3.3	---	3.5	4.2	

APRIL, 1937

12 - 13		13 - 14		14 - 15		15 - 16		16 - 17		17 - 18		18 - 19		19 - 20		20 - 21		21 - 22		22 - 23		23 - 24		Mean	Day
o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	m/s	
90	4.4	80	4.8	85	4.6	90	4.8	80	5.2	80	6.2	75	5.8	70	4.7	70	5.6	80	4.2	85	4.3	80	3.5	3.5	1
80	3.5	75	3.1	100	3.1	85	2.6	85	2.0	105	2.0	115	2.8	185	2.0	175	1.5	155	2.0	135	1.9	155	2.7	3.9	2
130	2.2	135	2.4	160	2.9	145	3.4	170	3.0	165	2.8	155	2.3	150	1.1	25	0.1	15	0.6	70	0.1	25	0.5	1.7	3
25	1.9	70	1.3	80	1.5	110	2.2	170	2.3	180	2.1	165	1.8	120	1.2	110	1.3	150	0.3	125	1.0	145	1.3	0.9	4
270	0.2	265	1.3	195	2.4	200	1.9	190	0.7	190	0.2	---	0.0	70	1.0	70	2.6	70	3.9	65	2.2	70	1.0	1.0	5
175	2.2	180	4.5	180	4.9	185	4.7	195	4.5	190	4.4	190	3.1	180	1.9	195	3.1	180	3.2	185	3.3	175	2.2	2.0	6
175	6.5	195	6.5	205	6.5	210	5.1	200	6.0	210	6.3	225	4.3	210	4.8	210	6.1	210	4.8	210	5.2	210	4.6	4.9	7
240	6.8	230	5.0	235	4.0	225	4.6	225	6.1	225	4.9	225	4.2	210	4.6	220	2.8	210	2.2	195	3.0	210	3.5	4.8	8
165	6.3	155	6.3	155	5.4	160	5.2	135	5.3	135	5.0	130	5.6	135	4.6	140	6.2	135	7.0	145	5.3	160	5.5	4.5	9
195	4.7	195	4.8	205	5.4	190	5.8	180	5.2	190	4.1	180	4.5	165	3.8	175	2.2	180	1.7	180	1.4	185	1.9	3.5	10
240	5.4	255	4.8	235	5.0	220	4.4	225	4.0	215	3.3	215	2.8	200	2.0	180	2.8	185	1.9	195	1.4	245	0.1	3.8	11
65	4.3	55	5.0	70	6.3	60	5.6	65	5.4	80	5.4	80	4.7	70	4.2	40	4.0	40	3.4	40	4.6	45	3.5	3.2	12
50	5.3	45	5.4	45	5.1	40	5.0	45	4.9	40	5.5	45	5.0	40	5.1	60	4.2	40	3.3	30	3.6	25	3.8	4.3	13
25	5.0	20	6.2	25	7.4	35	7.3	30	6.8	25	5.8	10	6.0	15	6.5	10	6.2	15	6.3	350	5.1	355	4.9	4.9	14
270	1.8	230	1.8	230	2.2	220	2.4	210	2.6	205	4.0	185	3.7	185	4.6	190	4.8	180	4.5	175	4.8	165	5.9	3.4	15
200	4.3	270	3.9	265	2.5	230	3.3	235	3.4	215	3.3	245	3.7	255	3.8	260	4.8	260	5.9	260	6.4	260	7.2	5.1	16
275	7.2	270	7.0	275	6.8	290	5.7	280	5.8	275	7.1	280	6.3	275	6.4	270	5.3	260	4.7	255	4.5	265	4.1	6.2	17
285	4.3	300	3.4	300	3.1	290	3.6	280	3.9	270	2.5	270	2.4	280	1.9	310	1.8	320	1.9	315	1.2	290	1.2	3.4	18
355	3.8	240	4.8	240	6.3	215	6.5	215	7.2	210	6.9	210	7.0	205	5.7	205	5.7	205	4.8	190	4.8	190	5.7	3.7	19
200	5.8	180	5.1	180	3.7	205	4.9	220	6.6	300	7.0	330	7.2	310	6.0	310	5.3	300	5.4	275	5.6	265	4.9	5.5	20
290	6.6	285	6.2	285	7.7	285	7.0	290	6.7	280	6.2	255	4.1	255	4.0	255	4.5	250	4.2	235	4.2	210	4.2	5.5	21
260	6.9	260	6.5	255	5.3	255	4.7	270	6.1	260	4.7	255	4.7	260	5.0	265	4.2	265	3.2	260	3.6	270	3.7	4.3	22
320	4.9	315	4.8	330																					



WIND: DIRECTION AND SPEED

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

515 KEW OBSERVATORY:

Dines Pressure Tube Anemometer from Jan., 1926

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

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	
	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s
1	80	1.3	30	1.3	40	1.8	35	1.6	40	0.9	40	1.3	5	1.4	55	1.2	50	0.4	205	0.2	210	0.5	85	3.2
2	100	4.0	80	4.2	65	2.8	55	3.3	50	4.2	50	4.1	55	4.7	65	4.4	60	4.2	70	4.7	60	4.2	60	4.0
3	65	3.5	50	2.1	45	2.5	40	2.8	40	2.7	35	2.3	60	2.5	75	2.4	85	1.7	95	1.5	65	2.2	85	4.0
4	225	3.8	230	3.4	240	2.7	240	1.6	250	2.8	250	2.7	265	1.7	280	2.1	255	1.8	245	1.9	260	2.3	260	2.6
5	285	3.2	250	2.2	230	2.6	225	2.5	220	2.9	220	3.2	240	3.3	280	4.5	295	7.0	290	6.7	285	6.2	285	5.7
6	260	2.9	265	2.6	245	2.6	245	2.1	230	1.7	220	1.5	245	1.5	260	2.1	260	2.6	265	3.0	260	3.2	265	3.9
7	215	3.0	210	3.3	220	3.8	220	3.5	215	2.8	230	1.8	245	2.7	260	2.8	275	3.3	270	3.1	290	3.9	285	4.7
8	5	2.4	355	1.2	20	1.7	45	1.0	355	0.2	330	1.0	350	1.7	110	2.7	95	4.1	80	5.1	80	5.1	80	5.5
9	80	4.2	90	4.5	85	4.8	75	5.1	80	5.1	75	5.2	75	5.5	80	7.0	80	5.9	80	6.2	90	6.4	90	5.5
10	200	2.3	200	3.0	210	2.9	215	2.3	235	1.2	235	0.7	220	0.7	240	0.8	280	0.8	220	0.2	240	0.2	185	0.7
11	25	3.0	40	3.0	30	3.2	30	4.0	50	3.7	30	5.2	40	4.3	45	5.1	45	5.8	40	5.7	40	5.1	65	5.6
12	320	0.3	330	0.6	10	0.8	15	2.3	40	1.2	15	2.3	25	1.8	35	2.4	40	3.1	30	3.7	30	3.2	35	3.5
13	240	2.1	250	1.7	275	1.7	270	1.9	275	1.7	270	1.9	270	2.0	285	2.6	280	2.2	275	2.8	270	2.7	265	2.6
14	345	0.5	---	0.0	310	0.1	360	0.1	330	0.1	340	1.4	300	0.2	320	0.1	335	0.8	260	0.6	280	1.3	295	0.5
15	35	4.5	40	4.5	40	5.7	35	6.5	30	6.8	20	6.3	20	6.2	30	6.4	35	6.2	25	6.7	20	6.9	35	6.7
16	15	3.6	30	4.1	25	4.0	10	2.9	10	2.4	35	1.8	340	0.8	360	2.7	15	3.2	15	3.1	5	2.8	5	2.6
17	80	0.4	45	0.7	35	1.7	45	2.6	65	2.9	80	4.5	65	4.6	80	4.7	85	4.2	80	4.7	80	4.6	85	4.7
18	40	3.7	30	3.2	25	3.3	25	3.9	45	3.9	35	5.3	40	6.2	35	6.3	30	6.2	30	6.2	20	5.2	15	5.7
19	10	2.8	360	2.2	10	2.4	5	2.2	360	1.5	340	1.6	355	1.9	10	1.8	345	1.2	340	0.6	315	0.7	340	0.3
20	200	1.5	200	1.5	190	2.2	185	1.8	195	1.3	190	0.8	180	1.3	195	2.4	190	2.5	170	1.2	185	1.3	155	2.2
21	325	1.3	290	1.8	280	2.3	265	2.2	290	3.0	280	2.0	250	2.6	240	3.3	245	4.3	255	4.2	250	5.5	250	6.6
22	170	2.2	170	2.7	160	2.9	145	2.5	145	2.1	150	3.5	155	4.9	155	5.2	160	6.4	160	7.2	170	8.1	165	7.1
23	200	6.4	190	6.2	195	5.4	195	6.0	200	5.4	200	5.4	200	5.6	205	5.3	195	5.0	180	5.6	180	6.6	190	6.6
24	90	2.3	105	1.3	120	0.5	90	1.2	95	1.1	240	0.7	230	2.1	220	2.8	225	3.1	225	2.9	210	4.7	215	5.1
25	95	1.0	310	0.5	85	1.4	100	3.3	100	3.1	115	3.7	160	5.8	170	7.0	185	6.2	205	6.7	210	5.1	195	4.5
26	325	4.2	300	2.7	335	1.5	60	2.7	105	2.0	60	1.7	360	1.4	45	3.0	50	3.8	60	4.7	80	5.1	100	5.0
27	230	2.2	235	2.9	220	2.7	205	3.1	210	3.2	215	3.2	225	3.4	240	3.5	235	4.2	240	4.6	215	5.0	240	4.3
28	205	1.2	190	0.5	250	0.7	200	0.4	140	0.5	---	0.0	190	0.3	110	0.1	210	0.7	180	1.1	225	1.5	215	1.2
29	85	0.9	100	1.4	85	0.3	100	0.3	70	1.8	70	2.3	75	2.6	90	2.2	110	1.2	110	1.9	140	3.6	170	3.7
30	260	0.3	235	0.3	220	1.1	195	1.1	200	0.6	200	0.2	245	0.5	245	0.6	260	1.6	260	2.2	280	3.5	290	3.7
31	350	2.5	15	3.0	20	2.5	10	2.8	360	1.7	345	1.4	340	2.4	360	3.7	340	3.5	325	3.6	320	3.3	320	3.3
Mean	---	2.5	---	2.3	---	2.4	---	2.6	---	2.4	---	2.5	---	2.8	---	3.3	---	3.5	---	3.6	---	3.9	---	4.0

516 KEW OBSERVATORY: H<sub>a</sub> = 5 metres + 23 metres

Day	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s
	1	310	2.0	320	1.3	315	1.7	280	1.0	240	0.8	280	0.5	315	1.6	320	1.3	305	1.5	305	1.8	300	3.6	295
2	285	3.3	275	2.2	280	2.1	260	1.2	255	1.5	275	2.2	290	2.7	300	3.8	315	4.2	310	3.8	325	3.6	280	3.1
3	225	1.1	190	1.3	220	2.2	225	2.2	220	1.8	235	1.7	230	1.9	235	2.8	250	3.5	260	4.1	265	4.8	265	4.3
4	220	4.5	225	3.5	230	4.4	240	5.0	240	4.8	235	4.2	240	4.7	245	5.1	250	4.8	265	5.0	250	4.7	235	4.6
5	225	3.8	225	3.4	230	4.7	230	4.8	225	4.9	225	4.5	220	3.7	210	4.0	205	5.2	205	5.0	220	3.9	230	4.2
6	195	0.1	250	0.3	240	0.6	165	0.1	90	0.5	---	0.0	280	0.4	275	1.2	220	0.4	210	1.5	205	1.9	200	2.9
7	225	2.0	230	2.2	230	1.9	245	1.4	220	0.8	180	1.2	205	1.2	230	1.2	220	1.0	200	1.6	220	3.4	200	4.0
8	260	3.0	260	2.4	240	1.5	230	1.4	225	1.7	220	1.9	230	1.1	220	1.7	230	2.7	235	3.3	220	4.7	225	5.2
9	190	0.6	170	0.9	195	0.2	130	0.2	100	0.2	90	0.4	130	0.6	140	1.1	150	2.6	165	2.8	150	3.4	150	2.8
10	15	2.3	20	2.2	25	2.3	30	2.1	50	3.3	45	2.8	60	3.9	50	4.8	55	4.7	50	4.5	55	6.0	60	5.7
11	110	4.2	115	2.7	120	1.7	170	0.7	200	3.1	220	3.5	220	4.0	235	3.6	230	3.4	235	3.1	235	2.5	210	1.8
12	325	0.9	295	1.8	270	0.1	---	0.0	230	1.7	235	1.5	250	1.1	335	0.7	35	0.1	200	1.9	220	2.4	240	3.5
13	235	2.1	230	2.1	230	1.2	170	0.2	70	0.9	60	1.3	145	2.9	120	2.5	100	3.6	115	2.5	110	3.2	130	3.1
14	230	3.3	240	2.5	260	2.5	255	1.9	240	1.3	280	1.5	270	1.4	260	3.2	285	3.6	295	3.5	270	3.3	290	3.2
15	320	2.3	315	2.4	310	2.4	305	2.8	295	1.9	285	2.7	300	4.1	310	6.1	325	6.0	325	5.4	335	5.1	340	4.1
16	225	0.7	290	1.4	275	1.2	250	1.6	255	2.5	270	2.5	300	2.3	310	4.0	295	3.2	310	4.3	310	4.0	295	4.7
17	350	1.1	320	1.4	310	1.1	310	1.4	280	0.6	310	0.5	290	1.7	305	2.5	330	3.3	315	3.2	310	2.7	305	2.3
18	310	1.3	310	1.3	310	1.3	280	0.8	240	1.0	250	1.4	255	2.2	250	2.5	295	3.2	295	3.5	320	5.2	320	6.0
19	140	1.1	65	1.2	180	0.1	305	0.3	340	0.7	330	1.2	355	1.6	10	2.7	35	3.8	50	5.1	60	4.5	75	2.9
20	300	1.1	310	2.1	315	1.3	320	0.8	330	0.6	330	0.8	280	0.3	280	0.6	285	1.6	280	1.8	30	1.9	350	1.3
21	310	1.1	310	0.3	260	0.9	265	0.7	255	0.7	240	0.2	240	0.8	300	0.6	345	0.7	325	1.2	350	3.1	335	3.2
22	240	0.8	240	1.2	240	1.0	240	0.9	255	0.1	250	0.7	275	0.8	275	0.7	240	1.5	235	3.7	240	4.5	255	4.2
23	325	0.8	345	2.1	10	2.3	20	0.9	5	2.3	360	2.3	355	2.9	360	2.5	360	1.5	355	2.6	325	2.7	335	2.9
24	10	1.8	25	2.8	75	2.4	40	1.8	35	2.8	50	2.7	55	4.0	70	4.1	60	4.2	80	4.8	50	4.9	55	4.2
25	75	1.3	360	0.7	340	0.8	360	0.8	340	0.4	200	0.8	220	0.8	210	0.8	195	1.2	205	2.0	240	2.2	260	2.2



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

517 KEW OBSERVATORY:

Dines Pressure Tube Anemometer from Jan., 1926

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

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	
	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s
1	235	4.8	240	3.5	240	4.1	235	3.5	220	4.0	225	4.4	240	4.3	250	4.5	255	5.0	260	4.9	265	4.7	265	5.1
2	245	2.7	215	1.7	225	1.7	220	2.2	225	2.1	230	2.5	210	2.7	205	2.8	220	2.8	230	2.4	220	4.0	215	3.5
3	130	1.7	150	2.9	160	3.3	155	4.0	155	2.9	155	3.2	160	5.2	180	5.3	170	5.7	170	7.0	170	6.8	175	5.9
4	210	8.7	205	8.4	205	9.1	205	7.3	205	5.7	215	8.2	215	8.0	215	8.2	220	8.2	225	8.0	225	8.3	225	7.7
5	240	3.5	255	2.5	250	1.8	235	1.4	235	1.3	245	1.5	240	1.4	230	2.1	225	2.3	215	3.0	240	2.6	230	3.3
6	200	2.8	200	3.0	210	3.9	210	4.5	205	3.7	210	3.5	215	4.0	210	4.2	215	5.1	210	5.8	205	4.8	210	4.1
7	220	1.4	220	1.4	225	1.8	240	1.4	230	2.4	230	2.1	245	2.6	250	3.0	230	2.8	250	3.0	250	2.8	275	3.4
8	275	0.9	250	1.1	255	1.1	265	1.2	285	1.3	285	1.2	290	2.1	290	2.6	290	3.9	290	3.1	300	3.2	295	3.9
9	225	2.5	230	1.6	220	1.8	230	1.9	220	2.3	215	1.4	210	2.2	220	3.8	205	5.2	210	5.0	200	6.1	205	7.1
10	260	2.7	230	2.2	250	2.7	250	2.5	235	2.4	260	3.4	255	4.8	270	5.1	270	5.5	260	5.3	270	5.7	285	4.8
11	300	2.2	290	1.3	255	1.3	235	1.8	230	1.9	230	1.6	275	1.7	270	1.5	250	2.3	250	3.3	260	3.3	230	4.4
12	250	2.2	250	2.1	250	1.2	250	1.6	255	1.8	250	1.2	250	1.8	235	2.1	230	1.9	250	1.4	215	2.6	205	1.5
13	250	2.1	235	2.2	250	2.0	240	2.2	250	2.4	250	2.7	255	3.2	265	3.6	265	3.6	270	3.5	275	4.0	260	4.5
14	215	1.5	220	2.2	235	1.7	245	0.7	240	0.1	230	0.3	245	1.6	250	2.9	240	2.8	245	2.7	215	3.1	190	3.5
15	85	0.3	100	1.2	80	1.0	20	1.2	355	1.1	75	0.9	80	1.9	80	2.6	90	2.7	95	2.0	130	4.0	165	4.5
16	290	4.5	290	5.1	290	5.8	285	5.7	285	5.3	290	5.2	290	6.0	290	8.2	295	8.0	295	8.0	300	7.2	290	7.2
17	215	1.2	210	1.3	220	2.0	210	0.9	195	0.4	220	0.5	205	0.4	210	0.6	175	1.2	195	2.2	200	3.3	200	4.4
18	170	0.2	140	0.2	---	0.0	175	0.5	205	0.6	170	0.3	155	0.2	190	0.7	210	0.6	210	0.7	200	1.3	200	1.3
19	225	0.1	190	0.3	175	0.3	225	0.3	---	0.0	---	0.0	265	0.1	255	0.5	230	0.9	230	1.1	215	1.9	230	2.9
20	315	1.4	320	2.0	330	1.6	330	1.5	305	1.3	310	1.8	320	1.6	340	1.3	315	1.4	310	1.7	325	2.5	315	2.2
21	130	0.2	245	0.1	---	0.0	205	1.2	210	1.7	200	1.2	210	2.1	210	2.1	200	4.2	210	6.2	220	6.5	220	7.0
22	255	4.2	250	3.8	250	4.0	240	4.5	230	4.0	240	4.3	250	5.0	255	6.2	255	5.5	255	5.3	250	5.8	250	6.7
23	235	3.9	230	3.2	235	2.6	220	2.7	220	3.6	220	4.0	190	2.1	160	2.8	150	3.5	190	4.9	220	6.8	215	7.4
24	265	3.8	260	3.3	270	3.8	260	2.7	255	3.2	255	3.3	265	2.9	280	3.5	275	3.4	270	4.4	270	4.2	270	4.3
25	235	2.9	235	2.5	245	2.0	255	3.0	255	2.9	255	3.1	260	3.0	265	2.7	270	3.1	290	4.2	290	4.7	290	4.6
26	290	2.9	290	2.2	260	2.3	260	2.2	245	2.2	265	1.8	290	2.6	320	3.2	325	4.0	320	3.5	330	3.2	320	3.2
27	350	2.0	355	1.5	330	0.9	305	0.5	280	0.8	265	0.5	260	1.2	280	1.1	270	1.9	290	3.0	265	2.8	265	2.3
28	295	1.1	290	1.2	270	0.6	290	1.0	310	1.4	320	2.3	355	3.1	10	4.5	10	3.1	10	4.0	10	4.8	15	4.0
29	150	0.2	---	0.0	---	0.0	335	0.2	25	0.3	---	0.0	---	0.0	355	0.1	55	1.8	50	1.5	55	2.4	70	3.4
30	50	0.6	15	1.7	20	1.7	35	2.2	40	2.7	20	2.7	40	2.5	35	1.5	85	2.2	95	2.9	85	3.0	65	2.9
31	75	4.6	80	4.7	55	3.8	45	3.4	55	4.0	55	3.9	45	3.8	45	4.4	50	4.5	40	4.5	50	4.7	45	4.3
Mean	---	2.4	---	2.3	---	2.3	---	2.3	---	2.3	---	2.4	---	2.7	---	3.2	---	3.5	---	3.8	---	4.2	---	4.4

518 KEW OBSERVATORY: H<sub>a</sub> = 5 metres + 23 metres

Day	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s	°	m/s
	1	10	1.9	25	2.3	40	3.6	35	3.9	30	3.6	35	4.1	45	4.0	45	4.3	30	3.1	30	3.2	25	2.7	20
2	90	1.5	130	1.2	355	0.1	30	1.1	10	1.2	15	1.7	355	1.5	20	1.2	360	1.3	35	2.8	55	4.0	45	3.4
3	105	0.4	160	0.4	---	0.0	185	0.2	220	0.3	230	0.3	---	0.0	275	0.2	260	0.5	260	0.5	270	1.0	330	1.2
4	210	0.3	220	1.1	235	0.3	240	0.2	235	0.1	200	0.2	225	0.6	200	0.1	180	0.1	170	0.1	155	0.9	180	1.5
5	240	0.6	225	0.6	220	0.3	200	1.3	200	1.2	225	1.1	225	1.9	210	1.2	230	1.8	245	1.2	225	3.0	215	3.1
6	215	0.5	220	0.7	200	0.7	195	0.8	195	0.5	195	0.3	---	0.0	---	0.0	355	0.2	90	0.5	175	2.2	180	2.9
7	355	0.2	325	0.2	315	0.1	310	1.5	345	0.5	90	0.3	70	0.1	340	0.3	355	2.2	5	3.8	5	3.3	360	3.5
8	40	3.2	15	2.8	15	2.5	20	2.6	360	2.2	5	2.7	5	3.3	360	2.6	5	3.3	15	3.1	35	2.6	25	2.4
9	105	0.9	110	0.2	---	0.0	75	0.1	160	0.1	100	0.6	150	0.1	160	1.5	185	3.5	180	3.6	215	4.8	220	3.6
10	220	2.4	250	2.5	240	2.2	220	1.2	215	1.7	220	2.0	235	2.3	245	2.5	260	3.0	275	2.4	240	2.7	240	2.7
11	200	2.5	190	2.3	200	3.0	200	2.6	200	2.7	205	2.7	210	2.6	225	2.4	220	2.7	230	2.2	215	2.5	240	2.1
12	220	1.4	220	1.3	225	0.7	185	0.6	110	0.2	---	0.0	70	0.5	190	0.6	70	1.8	90	2.9	90	3.2	90	3.8
13	20	1.3	40	2.4	30	1.6	30	3.0	40	2.1	360	0.6	310	0.6	25	1.3	120	0.8	205	0.7	350	1.7	360	2.8
14	225	2.2	240	2.4	260	1.3	240	1.1	250	0.5	240	0.8	225	2.2	240	2.8	250	2.0	240	1.5	225	1.1	205	1.8
15	280	4.5	275	4.8	270	4.3	265	4.3	265	3.2	260	3.8	265	4.3	280	5.5	290	6.8	290	6.9	290	6.7	290	6.3
16	265	1.0	240	1.6	220	1.5	220	1.7	220	1.3	210	0.5	230	2.0	230	2.2	235	2.0	230	3.3	230	4.5	215	5.2
17	205	3.8	210	3.5	220	2.7	235	2.8	230	3.4	230	3.7	235	4.1	240	5.6	245	4.8	250	4.9	245	5.0	260	5.2
18	225	1.5	225	1.1	230	0.7	205	1.4	215	1.1	210	1.5	210	2.5	210	1.6	215	2.5	230	3.4	230	4.5	230	5.1
19	240	4.3	225	3.3	230	3.1	245	3.0	260	2.9	255	2.6	270	3.2	280	3.6	290	5.2	295	3.9	280	4.6	280	5.2
20	275	2.2	275	2.5	270	2.2	255	1.3	225	1.1	245	1.1	275	2.0	315	4.5	320	4.5	335	4.6	325	4.4	330	4.5
21	310	2.9	300	2.9	290	3.2	305	2.2	335	5.0	320	4.0	320	4.6	345	5.2	335	5.4	345	6.5	345	6.3	345	6.8
22	310	1.4	340	2.0	5	1.5	360	2.5	360	2.7	355	2.5	5	2.7	15	3.4	25	3.8	5	3.5	5	3.6	10	3.2
23	240	0.1	200	0.5	225	0.3	235	0.5	220	0.7	240	0.7	220	0.5	220	0.6	210	1.0	235	1.4	260	0.8	230	1.3
24	210	0.8	230	0.2	225	0.1	240	0.6	230	0.8	255	0.5	205	0.1	200	0.1	190	0.1	205	0.1	220	0.5	250	1.0
25	150	0.1	160	0.1	230	0.1	230	0.5	300	0.1	280	0.1	220	0.3	175	0.4	200	0.7						

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

M.S.L. + h<sub>a</sub> (height of anemometer above ground) = 5 metres + 23 metres

JULY, 1937

Table with 25 columns (12-13 to 23-24) and 2 additional columns (Mean, Day). Rows contain wind speed data in m/s for various time intervals.

AUGUST, 1937

Table with 25 columns (12-13 to 23-24) and 2 additional columns (Mean, Day). Rows contain wind speed data in m/s for various time intervals.

519 KEW OBSERVATORY:  
Dines Pressure Tube Anemometer from Jan., 1926

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

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	
Day	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s
1	225	2.1	220	2.7	215	3.0	225	2.5	230	3.0	225	2.5	195	3.0	195	4.5	215	5.1	205	5.0	215	5.1	210	6.0
2	240	0.2	210	1.9	220	3.3	210	4.2	210	3.7	195	2.5	200	4.1	210	5.7	210	7.1	220	7.5	220	7.0	215	6.8
3	180	0.3	185	0.7	190	1.0	210	0.9	225	1.1	245	1.6	245	1.4	260	2.2	250	2.5	240	3.2	230	3.9	240	4.0
4	195	1.0	190	1.0	200	1.5	210	0.3	220	0.9	200	1.0	200	0.2	240	0.7	260	1.0	270	2.3	270	2.3	250	2.7
5	200	0.6	195	0.7	195	0.8	210	0.5	230	0.4	230	0.1	200	0.1	235	0.1	210	0.4	200	2.8	215	5.2	210	5.1
6	235	1.2	200	1.2	205	1.2	215	1.5	215	1.3	210	2.4	210	2.8	215	3.1	225	3.0	210	3.3	205	3.7	225	5.7
7	215	3.5	210	4.3	220	4.5	210	4.1	210	3.5	210	3.2	225	3.3	240	3.4	260	4.5	250	4.5	240	4.2	225	4.4
8	220	5.1	215	5.7	215	5.2	220	4.9	230	3.4	345	4.4	340	4.1	330	3.0	335	4.5	340	3.5	335	4.4	335	4.5
9	275	0.3	240	0.8	260	0.9	230	1.0	255	0.9	225	0.9	230	1.2	235	0.8	245	1.3	255	2.0	250	2.5	275	3.1
10	320	1.4	345	2.1	335	1.8	340	1.4	300	1.1	265	0.9	290	1.8	330	2.3	340	2.9	345	4.1	335	5.6	340	5.1
11	305	2.2	325	2.8	330	3.3	330	3.5	330	4.8	330	5.0	335	6.0	340	7.2	345	7.0	350	7.8	360	7.6	360	7.7
12	350	3.4	355	3.6	350	3.7	350	4.5	345	4.4	350	3.5	345	2.7	335	2.3	350	3.2	345	3.7	340	3.8	350	3.6
13	140	1.1	105	0.3	100	0.1	---	0.0	---	0.0	205	0.1	270	0.8	285	1.1	295	1.6	295	1.9	285	2.0	260	1.3
14	360	2.4	355	2.8	345	3.5	345	3.9	345	3.1	340	3.4	330	3.2	330	3.2	330	3.1	335	4.0	340	3.9	320	4.2
15	190	3.5	190	4.2	180	4.1	185	4.4	200	3.3	220	3.1	230	4.7	230	4.9	235	5.4	235	5.2	225	7.3	235	6.2
16	220	2.6	205	2.5	200	1.7	185	1.3	180	2.0	190	1.0	150	1.5	155	1.8	175	3.2	175	3.2	175	4.2	165	3.8
17	105	4.1	105	3.3	115	2.6	105	3.0	100	2.9	110	3.5	155	3.3	110	2.8	120	2.8	150	3.0	145	3.8	145	3.6
18	230	4.1	225	4.2	230	2.7	215	3.1	220	3.1	220	3.1	215	4.0	225	4.3	225	5.2	240	5.0	240	5.1	240	5.5
19	50	0.2	50	0.3	340	0.2	355	0.7	350	1.0	360	0.8	350	2.0	5	2.4	355	2.7	15	2.9	15	2.9	25	2.8
20	325	2.3	300	1.8	305	0.8	290	1.0	300	1.2	300	1.7	280	1.7	285	1.1	330	2.4	355	3.4	355	4.8	360	4.1
21	300	1.4	280	1.4	285	1.9	275	1.0	275	0.9	270	1.3	235	1.4	230	0.8	230	1.5	215	1.7	225	3.4	225	3.7
22	180	0.9	180	1.4	175	1.5	170	1.7	130	0.7	110	0.8	95	1.1	100	1.3	145	2.3	190	4.4	180	4.0	180	4.3
23	5	0.2	345	0.5	345	0.5	100	0.2	280	0.1	285	0.2	220	0.6	205	0.8	200	1.0	235	0.2	230	0.7	220	1.2
24	210	1.4	200	1.0	205	0.3	200	0.4	260	0.2	220	0.4	225	0.8	230	0.8	220	2.9	220	2.8	220	4.2	225	4.8
25	225	2.0	225	2.2	230	2.4	235	1.5	240	1.5	10	2.8	15	3.3	25	4.2	15	3.8	25	3.2	35	2.7	40	2.2
26	105	1.0	130	1.2	155	1.9	90	0.8	100	1.2	115	1.0	95	1.1	110	1.2	125	1.3	160	2.6	165	3.2	180	3.7
27	65	1.2	75	1.0	70	1.5	55	1.6	50	1.5	50	1.3	50	1.1	35	1.0	55	1.2	65	0.5	95	1.5	90	2.0
28	235	1.6	245	2.0	270	2.9	255	2.1	255	2.7	250	2.7	250	2.5	260	2.5	290	2.6	310	3.2	305	4.3	295	4.8
29	250	0.4	215	0.9	230	0.3	70	0.4	220	0.6	230	0.6	225	0.3	---	0.0	---	0.0	225	0.2	200	2.0	215	2.1
30	210	0.3	250	0.3	355	0.2	---	0.0	40	0.5	85	1.3	95	1.3	95	1.0	115	1.7	130	1.4	165	3.8	170	5.0
Mean	---	1.7	---	2.0	---	2.0	---	1.9	---	1.8	---	1.9	---	2.2	---	2.4	---	2.9	---	3.3	---	4.0	---	4.1

520 KEW OBSERVATORY: H<sub>a</sub> = 5 metres + 23 metres

Day	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s
1	50	0.1	75	1.0	75	0.7	60	0.5	65	0.9	65	1.0	75	1.7	80	0.6	80	1.7	70	1.6	100	3.0	120	4.2
2	40	2.5	40	2.9	40	2.4	45	1.6	45	2.4	40	1.7	30	1.1	60	1.2	55	1.3	50	1.2	50	2.5	75	2.5
3	335	0.1	360	0.5	345	1.1	360	0.1	340	0.1	305	0.4	310	0.5	335	0.7	10	1.7	10	1.9	5	1.8	350	2.3
4	335	2.6	320	0.7	320	2.6	320	2.2	320	1.9	320	2.2	330	2.3	320	1.5	345	2.5	355	4.0	360	4.8	335	4.6
5	345	4.4	355	4.1	355	5.1	360	6.2	360	5.8	5	7.3	5	7.3	10	7.8	10	7.3	5	7.2	5	7.1	5	7.1
6	35	4.8	30	5.0	5	4.7	5	4.9	5	4.9	5	4.0	5	4.1	30	6.3	30	6.7	35	7.5	50	7.8	45	7.9
7	30	3.7	115	1.2	5	0.5	30	3.9	10	2.9	355	2.3	360	3.9	35	4.5	45	3.9	40	4.5	45	5.0	45	4.6
8	355	2.0	20	3.0	20	2.4	35	2.5	55	2.0	45	2.6	40	3.4	35	3.3	35	3.2	45	4.3	40	4.0	45	3.5
9	30	3.5	35	2.8	15	3.7	40	5.1	45	5.2	45	3.6	45	3.0	45	3.2	50	4.6	45	4.9	50	5.4	55	5.1
10	350	1.5	335	0.6	320	0.4	325	0.3	---	0.0	355	0.8	10	2.3	355	0.6	335	1.1	350	1.3	355	2.7	355	2.2
11	340	0.7	20	2.2	355	2.7	360	2.5	355	2.1	355	1.9	10	2.6	15	3.1	20	3.7	5	5.3	20	7.1	10	6.2
12	360	3.1	360	4.0	360	3.8	360	4.5	355	3.8	350	3.3	350	4.9	360	4.3	5	5.6	10	5.3	15	5.4	15	5.2
13	360	2.4	360	2.1	5	2.1	360	2.2	5	2.8	5	1.9	15	1.8	350	2.0	5	1.5	345	1.1	305	1.4	305	1.4
14	230	1.9	225	2.6	235	2.3	235	1.6	235	1.9	230	1.5	220	2.6	230	1.4	230	1.6	250	1.8	280	2.2	275	2.3
15	270	1.7	260	1.9	255	1.8	245	2.0	255	1.8	270	2.2	270	1.9	275	1.8	280	2.0	300	3.7	310	6.0	320	5.4
16	220	1.5	230	1.2	225	1.0	245	1.0	270	0.2	230	0.7	240	0.7	220	0.9	220	0.7	210	0.6	230	0.8	215	2.2
17	210	1.0	250	0.5	225	1.2	225	0.9	235	1.6	240	1.2	260	0.6	230	1.1	235	2.4	255	2.5	265	2.7	285	2.4
18	270	0.3	265	0.5	235	0.2	260	0.3	285	0.2	255	0.3	185	0.2	---	0.0	205	0.3	15	0.2	65	0.4	255	0.2
19	70	0.8	65	1.1	85	0.4	85	0.8	95	0.7	100	1.3	95	0.5	30	0.4	360	0.3	45	1.2	85	5.1	80	5.8
20	85	0.7	110	0.8	120	1.2	---	0.0	---	0.0	180	0.1	190	0.1	170	0.8	155	0.3	340	0.2	195	0.7	190	2.9
21	350	0.2	350	0.7	15	0.7	30	0.7	30	0.2	---	0.0	5	0.5	---	0.0	320	0.2	10	0.4	85	0.2	290	0.3
22	160	2.1	160	2.2	165	2.2	160	2.1	155	2.2	170	2.2	175	0.5	175	0.1	170	1.7	180	4.4	180	5.4	190	6.2
23	150	4.1	135	4.2	120	3.2	120	4.2	120	4.3	110	5.7	115	7.5	120	7.9	130	8.3	160	5.6	155	4.5	170	7.0
24	240	5.5	250	5.8	250	6.1	245	6.3	255	6.0	260	5.2	260	5.7	255	6.0	255	6.1	265	7.8	270	7.0	260	6.0
25	125	3.6	140	6.1	135	7.8	135	5.9	120	6.5	140	9.4	145	8.5	160	7.9	170	7.4	175	7.5	170	6.9	160	7.7
26	155	3.0	115	1.6	140	3.2	165	3.7	160	2.6	150	2.0	160	1.7	155	2.1	170	2.2	155	2.0	165	3.2	210	4.2
27	15	2.2																						

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

M.S.L. + h<sub>a</sub> (height of anemometer above ground) = 5 metres + 23 metres

SEPTEMBER, 1937

Table with columns for time intervals (12-13 to 23-24), wind speed in m/s, and Day. Includes data for various time slots and a summary row at the bottom.

OCTOBER, 1937

Table with columns for time intervals (12-13 to 23-24), wind speed in m/s, and Day. Includes data for various time slots and a summary row at the bottom.

521 KEW OBSERVATORY:

Dines Pressure Tube Anemometer from Jan., 1926

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

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	
	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s
1	115	2.3	85	1.1	40	1.1	65	2.2	75	2.5	70	2.0	65	2.5	40	2.6	65	2.3	55	2.1	15	2.1	355	2.3
2	85	2.7	45	1.8	20	0.9	20	1.7	30	1.8	5	1.2	360	0.7	355	0.8	325	0.8	305	0.8	275	1.1	290	1.2
3	220	1.7	245	1.1	245	0.8	185	1.1	205	1.0	240	1.6	230	1.2	230	1.0	220	1.0	225	1.6	215	2.0	180	1.4
4	55	0.8	75	1.2	110	1.2	100	2.1	100	2.5	115	2.3	100	2.3	100	2.6	110	2.6	115	2.4	115	2.0	110	2.8
5	115	0.7	330	0.7	40	1.2	75	1.4	70	3.2	80	0.4	155	0.6	50	3.9	55	4.3	60	3.9	50	2.9	45	3.1
6	50	2.7	55	3.4	40	3.1	35	3.4	25	3.6	40	3.7	45	4.1	45	3.1	45	2.9	90	1.4	90	3.0	90	4.5
7	65	0.3	70	1.2	80	1.8	80	1.3	40	0.6	45	1.3	55	1.8	60	2.8	65	2.5	85	2.5	85	3.2	80	2.8
8	85	3.7	95	2.7	95	2.6	100	3.7	80	3.2	95	2.9	95	3.2	100	2.3	85	3.7	110	3.1	85	4.0	75	3.3
9	360	0.7	360	1.5	5	1.9	5	1.4	5	2.3	360	2.6	360	3.0	10	2.2	15	6.1	10	5.7	5	6.7	5	6.9
10	350	5.6	345	5.4	345	5.0	345	5.0	345	5.0	345	4.5	335	5.1	340	2.2	345	4.8	345	6.6	330	6.7	330	6.4
11	315	3.8	310	4.2	320	4.6	330	5.7	335	5.6	325	5.4	340	5.2	330	5.1	335	4.4	335	5.0	345	5.9	345	5.0
12	225	1.6	220	2.0	225	1.8	235	1.6	250	1.2	250	1.7	230	1.9	250	1.5	255	1.7	270	2.3	285	2.6	320	3.8
13	240	1.3	245	0.9	250	1.2	250	1.0	245	0.4	270	0.3	265	0.4	240	0.9	235	0.8	255	0.8	255	1.0	270	1.4
14	240	0.5	310	1.7	280	1.1	255	0.8	290	0.9	310	0.6	230	1.1	240	0.8	245	1.1	275	1.2	290	1.5	265	1.7
15	225	2.1	230	2.2	220	2.4	215	2.7	210	2.6	220	2.0	220	1.6	225	1.7	230	1.5	240	1.5	270	2.4	275	2.3
16	310	0.3	225	0.1	60	1.0	65	1.0	90	0.2	85	1.5	90	0.4	70	1.8	100	2.8	85	3.2	65	1.1	60	2.8
17	85	7.4	90	7.5	90	8.6	85	9.3	90	7.7	90	6.4	90	6.2	85	7.5	90	6.8	95	6.7	95	6.3	90	6.4
18	80	5.6	75	5.5	75	5.2	70	5.3	80	6.8	85	6.6	85	6.6	80	8.2	90	7.7	85	6.6	80	7.8	70	8.1
19	70	4.2	70	3.5	80	4.0	85	2.9	250	3.8	255	4.8	255	4.2	240	3.7	245	4.4	235	4.8	240	5.3	230	6.5
20	230	3.3	235	3.8	230	4.0	235	3.2	230	2.9	230	3.1	220	2.7	235	2.5	275	2.2	300	3.1	335	3.0	325	3.6
21	205	0.7	210	0.1	---	0.0	210	0.5	210	0.1	---	0.0	210	0.1	180	0.1	130	0.1	90	0.1	360	0.4	275	0.2
22	80	1.2	85	2.2	80	1.6	85	2.2	90	2.5	85	1.8	90	3.8	95	4.5	100	3.1	110	3.3	90	3.1	100	3.7
23	90	4.3	75	2.7	85	3.2	85	2.9	90	2.5	95	1.8	80	1.2	75	1.7	90	1.2	100	1.4	115	2.1	115	2.6
24	70	1.2	5	1.8	15	3.1	20	2.9	35	4.2	30	4.2	45	3.3	30	3.7	75	5.0	40	5.1	45	4.9	45	5.2
25	355	2.0	360	1.7	330	1.1	255	0.8	220	1.7	210	1.8	210	2.0	235	1.2	215	2.4	235	2.0	240	1.7	230	0.7
26	275	0.2	240	0.1	240	0.2	250	0.3	225	0.4	305	0.5	285	0.6	250	0.4	230	1.4	255	0.4	230	0.4	210	0.3
27	230	1.6	230	0.7	260	0.6	340	1.0	235	0.8	330	0.7	15	0.4	180	0.3	225	1.1	220	1.2	210	1.0	210	1.4
28	10	2.0	355	2.1	35	1.7	15	0.7	220	1.8	205	1.0	215	1.5	220	0.7	205	1.2	220	1.1	220	1.5	225	1.8
29	230	0.3	225	0.1	170	0.5	195	0.6	195	1.0	200	1.1	190	1.5	185	1.8	195	2.2	195	4.0	200	5.3	205	6.8
30	205	4.4	205	4.5	200	4.2	205	4.2	210	4.5	205	4.6	210	3.3	205	3.7	195	3.6	195	3.5	200	4.0	200	3.5
Mean	---	2.3	---	2.3	---	2.3	---	2.4	---	2.6	---	2.4	---	2.5	---	2.6	---	2.9	---	2.9	---	3.2	---	3.4

522 KEW OBSERVATORY: H<sub>a</sub> = 5 metres + 23 metres

Day	0 - 1		1 - 2		2 - 3		3 - 4		4 - 5		5 - 6		6 - 7		7 - 8		8 - 9		9 - 10		10 - 11		11 - 12	
	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s	o	m/s
1	185	3.4	180	3.8	190	4.0	190	4.5	195	3.5	205	2.8	200	2.1	195	2.5	230	1.9	205	2.0	210	3.6	200	3.5
2	115	1.0	75	1.7	90	2.9	100	3.7	125	4.8	115	3.8	100	2.9	95	4.3	110	2.3	95	3.6	115	4.8	95	3.8
3	360	7.1	360	8.1	360	8.6	355	9.1	355	8.6	350	7.7	350	8.7	345	8.1	350	7.3	345	7.5	340	6.6	335	7.1
4	345	5.7	345	5.8	340	5.4	335	4.9	340	4.5	330	3.3	295	3.0	305	1.8	245	1.9	235	2.7	230	3.3	215	2.0
5	205	1.6	260	1.8	230	3.1	270	7.0	280	7.6	270	5.7	275	7.0	275	7.1	275	7.1	275	7.0	275	6.2	290	7.4
6	220	1.8	230	1.7	220	1.4	215	1.3	215	2.1	220	1.5	225	2.0	225	1.1	230	1.0	235	0.9	285	0.6	110	0.5
7	325	0.9	10	1.7	30	2.7	30	2.8	40	3.7	80	2.6	85	1.7	50	2.8	35	3.6	40	3.1	40	3.4	40	3.1
8	55	4.8	40	4.5	40	5.0	40	4.8	45	4.6	40	4.9	40	5.3	30	4.1	20	3.9	35	5.1	40	4.6	30	4.7
9	20	7.2	20	7.1	20	7.0	20	5.7	15	6.2	20	7.0	10	7.1	5	6.9	5	5.1	5	4.6	360	4.9	360	4.8
10	335	4.2	335	4.0	325	3.5	345	4.0	350	3.5	335	2.9	300	2.0	275	1.7	245	2.4	230	3.1	220	3.8	225	3.5
11	220	3.1	215	3.6	215	4.2	210	2.8	180	2.5	180	3.1	175	3.2	180	4.0	180	4.0	195	4.6	195	4.0	210	3.2
12	255	3.5	270	4.7	285	6.6	280	6.2	290	7.2	290	7.8	285	7.1	285	6.8	285	7.7	285	7.2	285	6.8	290	7.6
13	175	2.1	170	2.8	165	3.8	160	4.0	160	5.2	170	7.3	170	7.8	170	9.1	170	9.8	165	10.0	170	8.9	190	7.3
14	240	3.0	255	3.8	250	4.0	245	3.2	210	2.8	215	3.2	220	2.8	205	1.7	190	1.8	185	1.5	185	2.3	190	2.5
15	335	1.7	320	1.1	265	1.2	265	0.8	270	0.7	310	1.9	220	2.3	310	3.0	305	3.4	305	3.3	295	4.1	295	5.0
16	305	1.5	260	1.8	250	2.0	300	1.5	315	3.2	320	3.1	325	3.2	340	4.7	345	5.1	340	5.6	345	5.1	345	6.1
17	345	5.5	340	5.3	340	5.1	350	5.3	355	5.3	345	4.9	345	5.5	340	5.7	350	5.5	340	5.2	345	5.0	335	4.8
18	300	2.1	310	2.5	310	2.9	285	2.3	260	1.7	225	1.6	240	2.0	245	1.5	230	2.1	240	2.3	230	2.5	265	2.2
19	220	0.7	210	0.5	195	0.1	65	0.3	330	0.2	95	1.5	35	0.6	60	0.5	75	1.3	65	1.4	65	1.4	80	2.0
20	285	0.4	240	0.3	105	0.2	210	0.5	290	0.2	330	0.2	30	1.0	345	0.9	105	1.2	120	1.2	100	0.2	100	0.3
21	140	6.3	135	5.8	140	5.5	140	5.9	140	6.2	125	4.9	130	5.5	150	5.8	155	5.5	155	5.5	145	6.0	145	4.3
22	180	2.3	170	1.5	165	1.4	195	2.7	180	1.6	190	1.9	185	2.3	190	2.2	205	3.0	200	4.4	205	5.3	200	5.6
23	205	5.9	205	6.2	195	5.8	205	6.5	210	7.3	205	5.8	210	5.1	220	3.8	240	3.8	285	4.7	255	3.5	255	4.1
24	205	1.5	215	2.0	180	2.4	160	2.2	185	1.3	200	1.8	190	2.4	190	3.7	195	4.2	200	5.3	200	5.9	205	6.2
25	240	2.3	215	2.2	220	1.8	250	1.0	235	1.4	320	1.7	355	1.0	350	0.5	285	0.3	305	0.2	285	0.4	300	0.8
26	240	1.1	130	0.																				

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

M.S.L. + h (height of anemometer above ground) = 5 metres + 23 metres

NOVEMBER, 1937

Table with columns for time intervals (12-13 to 23-24), wind speed in degrees and m/s, and a 'Day' column. Includes a 'Mean' row at the bottom.

DECEMBER, 1937

Table with columns for time intervals (12-13 to 23-24), wind speed in degrees and m/s, and a 'Day' column. Includes a 'Mean' row at the bottom.



523 KEW OBSERVATORY:  $h_a = 5$  metres + 23 metres

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

DISTRIBUTION OF WIND SPEED: EXTREME VELOCITIES AS RECORDED BY THE DINES PRESSURE-TUBE ANEMOMETER

524 KEW OBSERVATORY:  $h_a = 5$  metres + 23 metres

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	Hour Ended	Speed	Date
Jan. ...	---	hr 0	2	hr 11	277	392	64	0	10	13	day h 27 20	23	day h m 28 8 50
Feb. ...	---	0	1	1	246	341	84	0	330	11	28 19	25	16 12 50
Mar. ...	---	0	0	0	217	416	111	0	70 75	10	(4 13 14 7)	20	17 14 30
Apr. ...	---	0	0	0	117	501	102	0	295	8	21 10	19	17 10 55
May ...	---	0	0	0	81	519	144	0	205	8	23 13	18	26 14 50
June ...	---	0	0	0	50	479	191	0	65	8	10 16	21	10 19 20
July ...	---	0	0	0	87	521	136	0	215	10	23 16	19	23 15 25
Aug. ...	---	0	0	0	36	446	262	0	220	7	16 15	16	15 8 50
Sept. ...	---	0	0	0	54	432	234	0	205	8	15 15	19	11 11 50
Oct. ...	---	0	0	0	97	456	191	0	170	10	25 15	21	25 14 25
Nov. ...	---	0	0	0	81	410	229	0	85	9	17 4	15	10 11 5
Dec. ...	---	0	0	0	178	444	122	0	355	10	3 20	19	3 19 20
Year ...	---	0	3	12	1521	5357	1870	0	10	13	Jan. 27 20	25	Feb. 16 12 50

Month	Jan.		Feb.		Mar.		Apr.		May		June		July		Aug.		Sept.		Oct.		Nov.		Dec.	
	Day	30cm	122cm	30cm	122cm	30cm	122cm	30cm	122cm	30cm	122cm	30cm	122cm	30cm	122cm	30cm	122cm	30cm	122cm	30cm	122cm	30cm	122cm	30cm
1	79.0	80.5	78.0	80.1	76.7	79.9	78.1	79.6	83.8	82.6	90.6	85.9	90.0	87.9	89.8	88.7	91.0	89.3	86.6	87.3	84.2	85.2	79.1	81.3
2	79.0	80.6	78.2	80.0	77.0	79.9	78.7	79.6	84.1	82.6	89.8	86.2	90.8	87.9	90.8	88.6	91.1	89.4	86.8	87.4	83.7	85.1	79.8	81.1
3	79.8	80.6	79.6	80.0	77.2	79.8	79.2	79.5	84.6	82.8	89.1	86.2	91.8	87.9	91.6	88.7	91.2	89.5	87.2	87.4	83.7	85.2	79.4	81.2
4	80.4	80.7	80.2	80.1	77.2	79.8	80.0	79.7	85.0	82.7	89.5	86.2	91.7	87.9	92.1	88.9	90.6	89.7	86.3	87.5	83.4	85.1	79.0	81.2
5	79.7	80.8	80.5	80.1	76.9	79.8	80.0	79.8	85.1	83.2	89.6	86.3	90.4	88.1	92.3	89.0	90.0	89.4	86.0	87.3	83.0	85.1	78.3	81.3
6	79.3	80.8	79.5	80.2	76.5	79.7	80.9	79.9	85.0	83.1	90.0	86.3	90.2	88.1	92.8	89.0	90.0	89.5	85.9	87.2	82.7	85.0	77.2	81.3
7	80.0	80.8	78.7	80.3	76.7	79.6	82.0	80.0	85.2	83.1	91.0	86.5	90.5	88.3	93.1	89.1	90.8	89.4	85.8	87.1	82.8	84.9	76.3	81.2
8	78.7	80.8	79.0	80.4	76.2	79.5	82.3	80.1	86.1	83.1	91.1	86.8	90.3	88.3	93.0	89.2	91.3	89.4	85.7	87.1	82.8	84.8	76.4	81.1
9	77.3	80.8	79.0	80.3	75.9	79.4	82.6	80.4	85.2	83.2	90.0	86.9	90.9	88.2	93.0	89.2	90.1	89.4	85.5	87.0	83.1	84.8	76.7	80.9
10	77.0	80.8	78.1	80.3	75.7	79.3	83.1	80.5	84.9	83.3	90.0	87.0	89.7	88.2	93.5	89.4	85.8	89.4	84.8	86.9	81.8	84.8	76.6	80.9
11	76.6	80.7	77.9	80.3	76.2	79.1	83.5	80.7	85.4	83.3	90.7	87.1	89.7	86.2	93.0	89.6	87.4	89.3	84.8	87.0	80.9	84.6	76.7	80.7
12	77.5	80.4	77.0	80.2	77.2	79.1	83.3	81.0	85.0	83.5	92.2	87.1	90.3	88.2	93.3	89.8	87.0	89.1	85.0	86.7	80.3	84.6	76.8	80.5
13	76.6	80.3	77.1	80.1	77.7	79.1	82.8	81.2	85.0	83.4	91.6	87.1	91.0	88.2	93.3	89.7	87.7	89.1	85.0	86.6	79.2	84.1	76.2	80.2
14	79.0	80.3	77.8	80.1	77.6	79.1	82.9	81.3	85.0	83.5	91.0	87.4	91.7	88.2	92.7	89.9	87.3	88.9	84.2	86.4	78.0	84.0	76.8	80.2
15	78.6	80.3	79.3	80.0	77.0	78.9	82.9	81.4	84.8	83.6	91.0	87.4	92.8	88.3	91.1	89.9	88.0	88.9	84.9	86.4	77.2	83.9	76.1	80.1
16	78.1	80.2	80.3	80.0	76.7	78.9	82.9	81.7	84.4	83.6	90.0	87.4	91.8	88.3	90.9	90.0	87.2	88.6	84.0	86.3	77.8	83.4	75.7	80.0
17	77.6	80.2	79.2	80.1	77.8	78.9	82.9	81.6	84.4	83.7	89.2	87.5	91.9	88.7	91.1	89.9	87.1	88.4	84.0	86.1	77.8	83.2	75.9	80.0
18	78.2	80.2	78.5	80.1	78.9	78.9	82.2	81.7	85.0	83.8	88.8	87.5	92.1	88.8	91.3	90.0	86.9	88.5	83.8	86.1	78.2	83.0	75.8	79.8
19	78.0	80.2	79.0	80.2	79.1	78.9	82.5	81.9	84.9	83.7	88.8	87.5	92.6	88.9	91.3	89.9	86.9	88.4	83.8	86.0	79.1	83.0	75.2	79.7
20	77.2	80.1	79.1	80.2	78.9	79.0	83.0	81.7	85.1	83.9	88.8	87.4	91.9	89.0	91.1	89.8	86.2	88.1	83.9	86.0	78.6	82.7	75.0	79.5
21	77.8	80.1	78.7	80.3	79.7	79.2	82.8	82.1	86.2	83.8	88.3	87.3	92.4	89.0	91.1	89.9	85.5	88.1	83.9	85.9	77.4	82.5	74.9	79.4
22	79.0	80.1	79.0	80.3	79.0	79.3	83.1	82.0	85.9	83.9	89.7	87.3	91.0	89.0	90.9	89.9	86.0	88.0	83.3	85.9	77.0	82.3	75.2	79.3
23	79.6	80.1	78.0	80.2	78.0	79.5	83.8	82.1	86.0	84.0	90.1	87.3	90.1	89.0	90.9	89.8	86.0	87.9	83.9	85.9	78.1	82.1	77.8	79.3
24	80.0	80.1	77.5	80.1	77.9	79.6	84.4	82.1	87.6	84.1	90.6	87.3	90.4	89.1	91.0	89.7	86.0	87.6	83.5	85.6	79.0	82.1	77.8	79.2
25	80.0	80.1	78.0	80.1	78.9	79.5	84.0	82.1	88.8	84.2	89.9	87.5	90.2	88.9	91.3	89.7	87.0	87.4	83.8	85.5	78.3	82.1	79.0	79.3
26	79.9	80.2	78.3	80.1	79.2	79.6	84.0	82.3	90.0	84.3	90.0	87.5	90.2	89.0	91.6	89.6	87.3	87.4	83.8	85.4	77.8	82.0	78.9	79.5
27	78.8	80.3	78.3	80.1	78.6	79.7	83.0	82.4	89.3	84.8	90.7	87.6	90.1	88.8	91.1	89.6	87.3	87.4	84.0	85.3	77.2	82.0	78.4	79.6
28	78.4	80.3	77.7	80.0	78.0	79.6	84.1	82.3	89.5	85.0	91.0	87.8	90.0	88.9	90.5	89.5	88.0	87.4	84.2	85.4	77.0	81.9	78.8	79.8
29	77.1	80.3	-	-	77.9	79.7	83.5	82.4	90.2	85.2	91.0	87.7	90.2	88.9	90.4	89.6	87.2	87.4	84.7	85.2	76.5	81.6	77.9	79.9
30	76.3	80.3	-	-	77.6	79.6	83.2	82.5	90.8	85.4	89.9	87.9	90.1	88.8	90.3	89.5	86.9	87.4	84.7	85.2	78.4	81.4	77.7	79.8
31	77.0	80.3	-	-	77.8	79.7	-	-	91.2	85.8	-	-	89.9	88.8	90.6	89.3	-	-	84.4	85.2	-	-	76.8	79.9
Mean	78.5	80.4	78.6	80.2	77.6	79.4	82.4	81.2	86.2	83.7	90.1	87.1	90.9	88.5	91.6	89.5	88.1	88.6	84.8	86.3	79.8	83.5	77.2	80.2
																					Year		83.9	84.1

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

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

HEIGHT OF SURFACE OF UNDERGROUND WATER Zero = 63 cm. below M.S.L.

526 KEW OBSERVATORY 1937

527 KEW OBSERVATORY 1937

Month	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Day	30cm	122cm	30cm	122cm	30cm	122cm	30cm	122cm	30cm	122cm	30cm	122cm
1	80.1	78.2	71.3	67.3	78.9	75.6	87.2	80.5	85.7	75.7	77.8	80.8
2	74.4	71.7	71.4	76.3	79.7	75.9	87.1	81.2	85.7	80.7	76.0	76.2
3	80.7	81.7	70.8	72.8	77.9	74.4	87.4	81.9	87.6	83.6	80.8	76.9
4	81.2	81.2	69.7	71.9	76.7	84.8	87.6	82.8	75.7	74.2	75.7	73.0
5	72.6	80.2	72.4	72.5	74.8	83.6	78.1	85.3	76.8	75.6	72.3	70.2
6	76.2	70.2	69.1	74.7	71.3	77.5	84.7	83.6	77.3	80.8	75.3	64.4
7	77.1	70.7	72.8	80.7	82.0	84.1	86.4	85.7	87.6	83.0	80.2	66.6
8	68.0	76.3	73.4	81.3	76.7	77.0	80.4	84.8	86.3	82.3	77.9	73.3
9	67.9	73.6	71.3	80.2	78.6	74.3	84.0	83.3	76.5	77.5	81.8	73.9
10	68.1	72.4	84.1	82.7	79.7	79.8	82.4	86.6	76.4	77.2	71.5	71.8
11	68.0	72.6	73.1	78.8	78.7	84.6	79.9	88.4	75.4	74.0	73.8	72.4
12	70.8	68.1	72.4	73.1	72.8	88.4	86.6	85.6	79.2	82.3	70.9	72.4
13	80.3	74.6	74.7	76.9	81.2	85.2	89.4	87.7	83.1	81.9	64.2	67.6
14	76.9	75.9	69.4	80.5	78.6	81.4	83.7	88.1	79.6	71.3	64.0	71.3
15	69.7	80.8	72.4	79.3	81.8	83.8	84.9	81.0	80.2	81.9	86.9	67.5
16	74.2	81.5	65.3	78.7	80.1	78.5	85.1	78.7	73.9	72.4	69.5	66.3
17	68.7	73.0	79.2	78.9	75.2	75.3	80.8	87.6	79.6	72.3	74.1	72.5
18	78.0	68.9	78.6	77.9	76.4	77.1	83.8	84.5	80.1	72.3	76.4	67.2
19	69.6	79.8	74.8	76.9	82.0	77.9	85.2	82.9	76.5	73.6	78.6	64.3
20	69.1	74.9	70.7	80.2	75.8	81.4	81.3	80.7	76.7	75.0	71.0	66.3
21	77.3	73.8	75.8	74.2	83.9	75.0	84.6	85.3	72.8	74.1	65.1	72.4
22	79.8	77.2	74.7	79.7	75.9	77.9	83.2	81.4	80.3	73.7	68.3	76.4
23	78.4	69.6	65.9	79.1	85.4	80.8	83.6	79.1	75.3	80.6	76.5	82.1
24	79.2	68.2	67.8	78.6	81.3	81.4	81.9	80.0	74.3	79.5	75.2	70.3
25	77.8	77.3	73.2	71.9	80.7	84.6	82.9	85.3	80.2	87.0	79.1	
26	75.3	74.7	71.4	72.3	85.1	79.3	85.9	84.8	82.4	78.7	71.4	70.8
27	74.5	76.2	68.0	68.1	80.1	84.7	85.7	87.2	78.4	80.3	69.6	73.6
28	74.8	70.9	65.3	82.4	76.9	79.7	83.3	81.4	83.5	82.5	65.8	73.8
29	70.9	-	66.5	77.5	80							



Day	Cloud Forms			Cloud Amount (All Forms)					Visibility					Precipitation					Remarks on the Weather of the Day			
	7h	13h	19h	7h	9h	13h	15h	18h	21h	7h	9h	13h	15h	18h	21h	7h	9h	13h		15h	18h	21h
1	Stcu	Cu:C1st:C1cu	Stcu:Acu:St	9	10	9	9	9	9	H	1	1	G	G	H	*	*	...	...	...	...	☒ p * a.
2	Stcu:Acu:C1	Stcu:C1st:Acu	Frnb:Nbst	5	5	9	10	10	10	H	H	G	K	H	H	...	...	...	...	...	...	☒ early, p ° a : p ° ° ° p : ° ° ° n.
3	Stcu:Acu:St	Stcu:Acu:C1	Stcu:C1st:Acu	10	10	9	9	1	7	H	H	G	J	K	H	...	...	...	...	...	...	☒ early : p ° p.
4	Stcu:Acu:St	Cu:Acu:St	Cu:St	9	9	9	10	10	9	G	E	1	H	G	1	...	...	...	...	...	...	☒ early, f a.
5	St:Stcu	Stcu	Frnb:Nbst	9	10	10	10	10	10	H	H	G	G	G	G	...	...	...	...	...	...	☒ p : ° * n.
6	St	Cu	---	10	10	3	10	10	10	1	G	G	E	E	H	...	...	...	...	...	...	*☒ early : f g p : f * n.
7	Nbst	St:Stcu	St:Stcu	10	10	9	-	10	9	F	F	G	-	G	H	*	*	...	...	...	...	*☒☒ a.
8	Frst:Stcu:St	Frst:Stcu:St	Frst:Stcu:St	10	10	10	10	10	10	1	G	G	G	G	1	...	...	...	...	...	...	*° a.
9	Stcu:Acu:C1	Cu:Acu	Cu:St	8	8	9	9	8	5	1	1	1	1	1	1	...	...	...	...	...	...	y p.
10	St	Stcu:St	St	10	10	10	10	10	10	B	B	G	G	G	G	...	...	...	...	...	...	F☒ a : *° p.
11	Frnb	Cu:Stcu:St	Stcu:St	10	10	9	10	10	10	H	G	1	1	G	G	...	...	...	...	...	...	☒° a : p ° p : ° n.
12	Stcu:Acu:C1st	Frnb:Nbst	Cumb:Frnb:C1	5	8	10	9	9	9	J	J	1	1	1	J	...	...	...	...	...	...	☒ early, ° a : p ° p and n.
13	Stcu:C1	Stcu:Cumb	Acu:C1	2	9	9	1	7	K	1	J	J	H	1	...	...	...	...	...	...	☒° q early a.	
14	Frnb:Nbst	Frst:Stcu	Frst:Stcu	10	10	9	-	10	10	1	1	G	-	H	1	*	*	...	...	...	...	*☒ f a : °° p and n.
15	Stcu:Frst	Cu	Cu:Stcu	7	3	5	9	3	0	K	1	K	J	1	G	...	...	...	...	...	...	
16	C1:C1st	Frnb:Nbst	Frnb:Nbst	9	10	10	10	10	10	J	1	1	H	H	J	...	...	...	...	...	...	☒ early, °° a : °°° p and n.
17	Frnb:Stcu	Cu:Stcu	Frnb	9	10	9	8	10	8	1	K	K	1	K	J	...	...	...	...	...	...	p °° early, p °° a : K p °°▲° q (gust) p : °° n.
18	Stcu:Acu:C1st	Cu	Cu:C1	9	9	5	8	3	1	J	1	J	K	1	J	...	...	...	...	...	...	p °° early, °° a : (gust) p.
19	Stcu	Cumb:Frnb:Nbst	Cumb:Acu:C1	9	9	10	9	8	3	1	1	1	1	1	1	...	...	...	...	...	...	p °°▲° a : p °° p : ☒ n.
20	Stcu:Acu:St	Cu	Stcu:Acu	1	2	8	8	9	9	B	G	J	K	1	H	...	...	...	...	...	...	F☒ early a : y p.
21	St	Stcu:Frst	Stcu	10	10	10	-	9	10	G	G	G	-	G	1	...	...	...	...	...	...	☒° early a.
22	Frnb	Cu:C1st	Cu	10	10	9	8	1	0	1	G	J	J	H	G	*	*	...	...	...	...	☒° early, *°° a : y p and n.
23	Stcu	Cu	Stcu	9	9	5	7	9	9	G	G	1	J	1	1	...	...	...	...	...	...	☒ early a : *° n.
24	---	Cu:Stcu:C1st	Stcu	0	0	8	9	10	10	G	G	J	J	1	1	...	...	...	...	...	...	☒ early a : °° n.
25	Stcu:Acu:C1	Cu:C1	Stcu:St:C1st	2	6	9	9	10	10	J	K	K	K	H	1	...	...	...	...	...	...	☒° early : °°° n.
26	---	Cu	Cumb:Stcu	0	1	8	-	9	1	1	J	J	-	G	1	...	...	...	...	...	...	*☒ early a : *° p and n.
27	Frst	Cu:Stcu	Cu:C1	1	1	9	9	4	0	J	1	1	1	G	H	...	...	...	...	...	...	☒ early a.
28	---	Cu:Stcu	Cu	0	9	9	-	2	0	G	H	1	-	H	H	...	...	...	...	...	...	☒ early a.
29	St	Cu:Stcu	Stcu	10	4	9	10	8	3	F	G	H	H	H	H	...	...	...	...	...	...	☒ early a. ☒ n.
30	Stcu	Stcu	Stcu	9	10	10	9	8	10	H	H	G	G	H	1	...	...	...	...	...	...	
31	Stcu	C1	St:C1	9	8	8	8	6	0	1	1	1	1	G	F	...	...	...	...	...	...	y a and p : m ☒ later n.
Mean Cloud Am't				7.1	7.7	8.6	9.1	7.6	6.7													

1	St	Cu	Stcu:Acu:C1	10	10	2	10	9	10	C	D	G	G	G	G	...	...	...	...	...	...	F☒ early, f a.
2	Frnb:Nbst	St:Stcu	St:Stcu	10	10	9	10	10	10	G	E	F	F	G	G	...	...	...	...	...	...	☒° f a : °° p : ° n.
3	St	Cu:C1	Cu:Acu:C1	9	9	8	5	3	0	G	H	H	K	1	H	...	...	...	...	...	...	☒° early : y p.
4	St	Stcu	Stcu	10	10	1	-	9	1	A	C	E	-	G	H	...	...	...	...	...	...	F☒ early, Fe f a.
5	St	---	Stcu:Acu:C1	10	10	0	9	3	0	B	C	G	1	H	F	...	...	...	...	...	...	Fe f a : m n.
6	St	Cu:St:C1	Stcu:Acu:St	10	10	9	9	9	4	D	D	J	J	H	H	...	...	...	...	...	...	f p °° a.
7	Stcu	Frnb:Nbst	Cu:Cumb	10	10	10	9	9	9	1	1	G	H	H	J	...	...	...	...	...	...	☒°° a : p °° T p.
8	Stcu	Cu:Stcu:C1st	Cu:Frnb:C1st	9	9	9	10	9	10	H	J	K	J	H	H	...	...	...	...	...	...	p °° p.
9	Stcu:Acu:St	Frst:Acu:C1st	Stcu:St	9	10	9	10	9	7	J	1	K	K	1	J	...	...	...	...	...	...	☒°° a.
10	Frnb:Nbst	Cu:Stcu:St	Cu:St	10	10	9	9	7	9	1	1	J	K	K	J	...	...	...	...	...	...	☒°° a.
11	Stcu:Nbst	Cu:Stcu	Cu:Stcu	9	7	9	-	5	1	K	K	L	-	K	K	...	...	...	...	...	...	☒° early a : p °° p.
12	Stcu	Stcu:St	Stcu:Acu	9	9	10	7	8	0	H	G	H	H	G	1	...	...	...	...	...	...	☒ early, °° a.
13	St:Stcu	St	St:St	10	10	10	9	9	10	1	G	H	G	G	G	...	...	...	...	...	...	☒° a.
14	St	St	St	10	10	10	9	10	10	G	G	G	G	G	1	...	...	...	...	...	...	p °° p.
15	St	St	St	10	10	10	10	10	10	H	G	G	G	G	G	...	...	...	...	...	...	p °° early a : °°° n.
16	Stcu	Frnb:Nbst	Cu:St	5	7	10	5	10	10	K	1	G	J	G	K	...	...	...	...	...	...	☒°° early, ° a : ° T p : °°° n.
17	Frst:Stcu	Frnb:Nbst	Stcu:St:C1	10	10	10	10	9	10	K	1	1	J	J	J	...	...	...	...	...	...	☒°° a : °° p °° p : °°° n.
18	Stcu:St	Stcu:Cu	Stcu	10	9	10	-	9	10	L	K	J	-	1	G	...	...	...	...	...	...	☒° early a : °° n.
19	Stcu	Cu	Stcu:St	7	8	7	4	10	10	1	K	K	K	K	K	...	...	...	...	...	...	☒° early a : y p : °° n.
20	St:Stcu	Frnb:Nbst	Frnb:Nbst	10	10	10	10	10	10	1	1	1	H	1	1	...	...	...	...	...	...	☒°° a : °°° p T p : °°° n.
21	Frst	Cu:Cumb:C1	Cu:Stcu:Acu	1	8	8	7	8	10	K	K	L	K	1	J	...	...	...	...	...	...	p °° early, p °° q a : p °° p : °°° n.
22	St:Stcu	Stcu:Acu:C1st	Stcu:Acu:C1cu	10	10	9	9	9	1	H	1	J	J	J	J	...	...	...	...	...	...	☒° early a.
23	Stcu	Cu:Acu	Cu:Stcu	9	6	4	2	9	10	J	J	J	J	1	H	...	...	...	...	...	...	
24	Stcu	Stcu	Stcu	9	9	9	9	9	9	H	1	H	H	1	J	...	...	...	...	...	...	y n.
25	---	Cu	Cu	0	0	1	-	2	0	J	J	J	-	J	J	...	...	...	...	...	...	y a, p and n.
26	Stcu	Stcu	---	3	9	9	3	0	0	H	1	1	1	H	1	...	...	...	...	...	...	y p.
27	St:C1st	C1	Stcu:St	3	4	9	9	10	10	G	H	1	1	H	H	...	...	...	...	...	...	☒ early a : °° p : °° n.
28	St:Frst	Frst:St	Frst:St	10	10	10	10	10	10	J	1	F	G	H	1	...	...	...	...	...	...	☒° early, g m °° a : °° n.
29	Stcu	---	Stcu	9	10	0	10	10	10	H	H	G	1	G	H	...	...	...	...	...	...	
30	Stcu	Frst	---	10	10	1	0	0	10	H	H	G	G	G	F	...	...	...	...	...	...	
Mean Cloud Am't				6.4	8.8	7.4	7.8	7.8	7.0													

Day	7h	13h	19h	Cloud Amount (All Forms)					Visibility					Precipitation					Remarks on the Weather of the Day	
	7h	13h	19h	7h	9h	13h	15h	18h	21h	7h	9h	13h	15h	18h	21h	7h	9h	13h		15h

532 KEW OBSERVATORY

Day	Cloud Forms			Cloud Amount (All Forms)					Visibility					Precipitation					Remarks on the Weather of the Day			
	7h	13h	18h	7h	9h	13h	15h	18h	21h	7h	9h	13h	15h	18h	21h	7h	9h	13h		15h	18h	21h
1	St:Stcu	Acu:Cist	Acu:St:Cl	10	0	9	9	9	10	G	F	G	H	G	H	...	...	...	...	...	...	z a.
2	St	---	---	10	10	0	0	1	1	G	G	-	H	G	...	...	...	...	...	...	...	z a : y p and n.
3	Stcu	Cu:Acu	Stcu:Acu	9	0	4	8	1	0	F	F	i	L	K	...	...	...	...	...	...	...	Δ m early a : y p and n.
4	St:Stcu	Cu	Cu:Stcu:Cl	10	10	4	5	9	4	F	i	i	J	J	...	...	...	...	...	...	...	p ●° early : y a, p and n.
5	Stcu:Frst	Cu:Frca	Cu	9	1	5	5	4	0	K	L	L	L	K	...	...	...	...	...	...	...	●° early a : y p.
6	Stcu:Acu:Cist	Stcu:Cist	Stcu:St	5	8	9	10	10	10	i	K	L	L	J	...	...	...	...	...	...	...	●° y a : p ●° p : ●° n.
7	Stcu	Cu:Frca	Cu:Frca	10	9	8	5	4	9	i	J	J	K	J	...	...	...	...	...	...	...	●° early a.
8	St	Stcu:St	St	9	10	10	10	10	10	G	G	G	G	G	...	...	...	...	...	...	...	Δ early a.
9	Frnb:Nbst	Frnb:Nbst	Stcu	10	10	10	-	9	9	H	G	F	-	F	...	...	...	...	...	...	...	●° a, p and n.
10	Frst:St	Cu:Stcu:Cl	Stcu	9	9	9	10	9	9	i	i	J	K	i	...	...	...	...	...	...	...	●° y a : y p.
11	Stcu	Frnb:St:Nbst	Stcu:Frca	9	10	10	10	3	1	G	F	F	F	K	...	...	...	...	...	...	...	●° m a : m p : Δ n.
12	St	Stcu:St	St:Stcu	10	9	9	9	10	10	F	G	H	G	G	...	...	...	...	...	...	...	m Δ early a : ●° p and n.
13	St:Stcu	St:Stcu	St	10	10	10	10	10	10	i	i	i	H	H	...	...	...	...	...	...	...	●° early a.
14	St	St	St	10	10	10	10	10	10	B	D	F	G	E	...	...	...	...	...	...	...	Fe f z a : ●° p : f n.
15	St:Stcu	Stcu	St:Stcu	10	10	10	10	10	10	i	i	i	i	i	...	...	...	...	...	...	...	...
16	St:Stcu	Stcu	---	10	10	10	-	0	0	i	i	H	-	G	...	...	...	...	...	...	...	●° a : Δ n.
17	Stcu	---	Stcu:Nbst	9	4	0	1	9	1	i	i	i	i	i	...	...	...	...	...	...	...	...
18	Stcu	St:Stcu	Frnb:Nbst	10	9	10	10	10	10	H	i	i	i	i	...	...	...	...	...	...	...	●° p and n.
19	Frnb:Nbst	Stcu:St	Stcu	10	10	10	5	9	9	G	F	G	G	H	...	...	...	...	...	...	...	●° m a.
20	Cu:Acu:Cl	Cu:Stcu	Cu:Stcu	7	2	9	9	9	10	i	J	J	i	H	...	...	...	...	...	...	...	Δ early a : ●° n.
21	Frnb:Nbst	Cu:Stcu	Cu:Stcu	10	10	9	8	6	0	H	H	K	L	K	...	...	...	...	...	...	...	●° a : p ●° p.
22	Frst:Stcu:St	Frnb:Nbst	Frnb:Nbst	10	10	9	10	10	10	J	K	i	K	i	...	...	...	...	...	...	...	p ●° a : ●° p and n.
23	Stcu	Cu:Cl	Frca:Acu:Cl	9	9	6	-	8	10	K	K	L	L	L	...	...	...	...	...	...	...	⊕ y p : ●° n.
24	Cl:Cist	Cu	Cu	9	5	7	5	2	1	i	K	L	L	L	...	...	...	...	...	...	...	●° early a : y p.
25	Frca:Acu:Cl	Frca:Acu:Cl	Cu:Acu:Cl	2	3	1	1	9	7	J	K	L	L	L	...	...	...	...	...	...	...	p ●° early a : y p : Δ < n.
26	Cu:Stcu:Cl	Cu:Stcu:Cl	Cu:Cumb:St	8	9	7	10	10	9	i	J	L	K	K	...	...	...	...	...	...	...	⊕ ●° early a : p ●° Δ ⊕ p.
27	Cl	Cu:Cist	Cu:Stcu:Cist	2	2	9	9	9	9	K	L	K	K	K	...	...	...	...	...	...	...	Δ early, ⊕ a : y p.
28	Cl:Cist	Acu:Cist	Cist	7	7	9	9	9	9	J	J	K	L	L	...	...	...	...	...	...	...	Δ early : ⊕ y a and p.
29	Frca:Acu:Cist	Cu	Cl	9	1	1	5	8	9	G	i	K	K	K	...	...	...	...	...	...	...	y a, p and n.
30	Acu:Cl	Cu:Stcu:Cist	Cu:Stcu:Acu	6	5	10	-	9	9	H	J	J	-	K	...	...	...	...	...	...	...	Δ early a : y p and n.
31	Stcu:Cl	Cu:Cl	Cu	4	7	5	4	4	5	J	J	K	L	L	...	...	...	...	...	...	...	y a, p and n.
Mean Cloud Am't				6.5	7.1	7.4	7.6	7.3	6.8													

533 KEW OBSERVATORY

1	Acu	Cu:Stcu	Cu:Stcu	1	8	9	9	9	3	J	K	K	K	K	J	...	...	...	...	...	...	Δ early : y a, p and n.
2	Cu:Cl:Cicu	Cu:Stcu:Cl	Cu:Stcu:Cl	8	9	9	7	9	9	J	K	K	K	K	J	...	...	...	...	...	...	y a, p and n.
3	Stcu:Acu	Cu:Acu:Cl	Cu:Acu:Cl	6	4	10	9	9	9	i	K	L	L	K	...	...	...	...	...	...	...	Δ early, ⊕ y a : y p : ●° n.
4	Stcu	Cu:Stcu	Cu:Stcu:Acu	9	9	10	9	5	1	K	K	K	K	L	...	...	...	...	...	...	...	y p : Δ n.
5	Stcu	Cu	---	10	10	4	3	0	0	K	K	K	K	L	...	...	...	...	...	...	...	y p and n.
6	Acu:Cl:Cicu	Cu:Cl	Acu:St	1	1	4	-	1	2	i	J	K	-	L	...	...	...	...	...	...	...	Δ early : y a, p and n.
7	Stcu:Acu:St	Cu:Acu	Cu:Acu	9	7	6	1	1	4	J	J	K	K	L	...	...	...	...	...	...	...	y p.
8	Stcu	Frnb:Nbst	Cu:Acu:Cl	9	6	10	7	3	1	K	K	J	L	L	...	...	...	...	...	...	...	●° a and p.
9	Cl	Cu:Acu:St	Stcu:St:Acu	7	3	10	10	10	10	K	K	K	K	J	...	...	...	...	...	...	...	Δ early, y a : ●° p.
10	Stcu:St	Stcu:Acu:Cist	Stcu:Acu	10	10	4	4	9	10	H	i	J	J	J	...	...	...	...	...	...	...	●° y a : y p : ⊕ ●° n.
11	Stcu	Cl	Cu:Acu:Cl	9	7	1	4	6	7	K	K	K	K	K	...	...	...	...	...	...	...	y p : < n.
12	Stcu	Cumb:Cl	Cumb:Acu:Cl	6	9	9	7	9	9	i	K	L	L	K	...	...	...	...	...	...	...	y p and a.
13	Frnb:Nbst	Cu:Stcu	Cu:Stcu	10	10	9	-	8	6	H	H	K	-	K	...	...	...	...	...	...	...	●° a.
14	Frst:Acu	Cu:Stcu	Cu:Stcu	9	10	5	9	6	9	i	J	J	J	J	...	...	...	...	...	...	...	...
15	Stcu	Cu:Stcu	Cu:Stcu	9	9	9	7	9	2	K	J	J	J	J	...	...	...	...	...	...	...	p ●° a and p : Δ n.
16	Stcu:Acu:Cl	Cu:Stcu:Acu	Stcu:St	8	9	9	10	10	10	i	J	K	K	i	...	...	...	...	...	...	...	p ●° p : ●° n.
17	Stcu	Cu:Cumb:Stcu	Cu:Stcu	9	10	9	7	5	9	i	i	i	J	J	...	...	...	...	...	...	...	p ●° a : y p.
18	Stcu	Cu:Stcu	Cu:Stcu	9	9	9	5	9	10	i	K	J	J	J	...	...	...	...	...	...	...	y a and p : ⊕ ●° n.
19	Stcu	Cu:Stcu	Cu:Stcu	3	6	9	9	10	10	H	i	J	H	J	...	...	...	...	...	...	...	●° early a.
20	Cu:Stcu:St	Cu:Stcu	Cu:Stcu:Acu	10	10	9	-	9	9	i	i	J	-	i	...	...	...	...	...	...	...	●° a : ⊕ ●° n.
21	---	Cu:Stcu	Cu:Stcu	0	9	6	9	5	5	H	i	K	J	J	...	...	...	...	...	...	...	Δ early : y a, p and n.
22	Cl	Cu:Stcu	Cumb:Stcu:St	1	1	6	6	9	9	i	J	K	K	H	...	...	...	...	...	...	...	Δ early : y a and p : ●° n.
23	Stcu	Cu:Cl	Cu:Stcu:Cist	6	2	6	7	7	2	J	J	K	K	L	...	...	...	...	...	...	...	●° early : y a, p and n.
24	Stcu:Acu:St	Cu:Stcu:Cl	Stcu:Cist:Cl	9	9	9	9	9	9	i	J	K	K	K	...	...	...	...	...	...	...	y ⊕ p and n.
25	St:Stcu	Cu:Stcu:Cist	Stcu:St:Cist	10	9	10	10	10	8	G	H	J	J	K	...	...	...	...	...	...	...	Δ early, ●° a : y p.
26	Stcu:Acu:St	St:Stcu	Stcu:Acu:Cist	9	10	9	9	8	10	G	i	J	J	J	...	...	...	...	...	...	...	Δ early.
27	Stcu	Cu:Stcu	Stcu:Cu:Cl	1	2	5	-	6	9	i	i	J	-	J	...	...	...	...	...	...	...	y a and p.
28	Cl	Cu:Cl	Cu:Acu:Cl	3	3	9	9	9	10	H	J	K	L	L	...	...	...	...	...	...	...	Δ early : y a and p : ●° n.
29	Cu:Stcu:Acu:St	Cu:Cumb:Stcu	Cumb:Stcu:Acu	2	9	9	9	8	3	K	L	K	K	K	...	...	...	...	...	...	...	p ●° a and p.
30	Stcu:Acu:Cl	Frnb:Nbst	Stcu:Frst	9	9	10	10	10	10	K	K	K	J	K	...	...	...	...	...	...	...	p ●° a and p.
Mean Cloud Am't				6.7	7.3	7.6	7.5	7.3	6.6													
Day	7h	13h	18h	7h	9h	13h	15h	18h	21h	7h	9h	13h	15h	18h	21h	7h	9h	13h	15h	18h	21h	Remarks on the Weather of the Day
	Cloud Forms			Cloud Amount (All Forms)					Viability					Precipitation								

Day	Cloud Forms			Cloud Amount (All Forms)					Visibility					Precipitation					Remarks on the Weather of the Day			
	7h	13h	18h	7h	9h	13h	15h	18h	21h	7h	9h	13h	15h	18h	21h	7h	9h	13h		15h	18h	21h
1	Stcu: Ast	Cu: Stcu	Cu: Stcu	9	9	9	8	2	5	K	K	L	L	L	K	...	...	...	...	...	...	p <sup>o</sup> a : y p.
2	Cu: Stcu	Cu: Stcu	Cu: Ci: Cist	9	10	9	9	10	8	J	J	K	L	L	K	...	...	...	...	...	...	⊕ p.
3	Ci: Cist	Cu: Acu: Cist	Ast: Acu	7	8	5	8	9	9	K	K	L	L	L	K	...	...	...	...	...	...	y a and p.
4	Stcu	Stcu	St: Stcu	9	10	10	-	10	10	K	L	L	-	L	K	...	...	...	...	...	...	☉ (gusts) early.
5	Stcu	Cu: Ast	Stcu: Ast: Acu	9	9	10	9	9	9	J	K	K	K	K	K	...	...	...	...	...	...	y p.
6	Frnb: Nbst	Stcu: St	Stcu	10	10	10	10	9	10	1	J	K	K	K	J	...	...	...	...	...	...	●● <sup>o</sup> early, p <sup>o</sup> a : ●● <sup>o</sup> n
7	Stcu	Cu: Stcu	Cu: Stcu	9	9	9	9	9	7	J	J	J	K	L	K	...	...	...	...	...	...	y a, p and n.
8	Cu: Acu: Ci	Cu: Ci	Cu: Stcu: Ast	2	6	8	8	10	8	J	L	L	L	L	L	...	...	...	...	...	...	●● <sup>o</sup> a and p.
9	Stcu: Acu: Ast	Frnb: Nbst	Cu: Stcu	9	10	10	10	8	8	K	K	J	J	J	J	...	...	...	...	...	...	p <sup>o</sup> a : y p.
10	Cu: Acu: Ast	Cu: Cumb: Stcu	Stcu	8	9	9	8	9	10	K	K	K	K	L	K	...	...	...	...	...	...	●● <sup>o</sup> p and n.
11	Acu: Ci	Cu: Stcu: Ast	St: Stcu: Ast	1	5	10	-	10	10	K	K	K	-	J	H	...	...	...	...	...	...	●● <sup>o</sup> a : ●● <sup>o</sup> p.
12	St	St: Stcu	St: Stcu	10	10	10	10	10	10	1	J	K	J	1	1	...	...	...	...	...	...	y p.
13	St: Stcu	Cu: Stcu	Cu: Ci	10	10	9	9	9	7	J	J	J	J	L	K	...	...	...	...	...	...	⊕ p.
14	Stcu	Cu: Ci	Ci: Cist	9	9	2	8	9	8	J	K	K	K	K	K	...	...	...	...	...	...	☉ p.
15	Stcu: Acu: Ci	Cumb: Stcu: Cist	Cu: Fracu: Ast	6	9	10	10	10	10	G	1	J	J	J	J	...	...	...	...	...	...	☉ p.
16	Stcu: Acu: Ci	Cu: Fracu: Ci	Cu: Fracu: Ci	7	4	2	1	5	2	K	L	L	L	L	K	...	...	...	...	...	...	●● <sup>o</sup> early : y a, p and n.
17	Stcu: Acu: Ci	Stcu	Stcu	7	9	9	10	9	7	K	K	L	L	L	K	...	...	...	...	...	...	☉ early.
18	St: Stcu: Ast	Cu: Stcu	Stcu: Cu	10	10	9	-	9	7	1	K	K	-	L	K	...	...	...	...	...	...	☉ <sup>2</sup> late p and n.
19	Cu: Stcu	Cu: Stcu: Ast	Cumb: Cu	9	10	10	10	9	9	H	1	J	J	K	K	...	...	...	...	...	...	☉ <sup>2</sup> late p and n.
20	---	Cu: Ci	Cu: Acu: Ci	0	0	5	7	9	9	1	1	J	J	J	J	...	...	...	...	...	...	●● <sup>o</sup> a : ●● <sup>o</sup> p.
21	Ast: Acu	Cu: Ast: Acu	Stcu	7	9	10	10	10	5	1	K	K	H	J	K	...	...	...	...	...	...	y p.
22	Cu: Stcu: Acu	Cu: Stcu	Cu: Stcu: Cicu	5	10	9	9	8	9	K	K	L	L	L	1	...	...	...	...	...	...	●● <sup>o</sup> a.
23	Frnb: Nbst	Frnb: Nbst	Cu: Stcu: Ci	10	10	10	8	8	9	G	1	J	K	K	L	...	...	...	...	...	...	...
24	Stcu: Acu	Cu: Stcu	Cu: Stcu	1	5	9	9	9	9	K	L	L	K	L	K	...	...	...	...	...	...	...
25	Stcu	Stcu: Cu	Cu: Stcu: Cist	9	9	10	-	8	9	K	K	L	-	K	K	...	...	...	...	...	...	...
26	Stcu	Cu: Stcu	Stcu	10	9	9	9	9	9	J	J	J	K	K	K	...	...	...	...	...	...	...
27	St: Stcu	Cu: Fracu: Stcu	St: Stcu	10	10	10	10	10	10	1	1	K	K	J	J	...	...	...	...	...	...	y p and n.
28	St: Stcu	Cu: Stcu: Ci	Cu: Stcu: Ci	9	8	9	10	9	9	1	J	J	J	J	J	...	...	...	...	...	...	y a and p.
29	Stcu	Cu	Cu: Ci	9	9	9	7	4	7	G	G	1	J	J	J	...	...	...	...	...	...	...
30	Stcu	Stcu	Cu: Stcu	9	9	9	10	10	8	1	1	1	J	J	J	...	...	...	...	...	...	...
31	St: Stcu	Stcu	Stcu: Ci	10	10	9	9	4	3	1	1	J	J	J	J	...	...	...	...	...	...	...
Mean Cloud Am't				7.7	8.5	8.6	8.7	8.4	8.1													

1	Stcu	---	---	10	10	0	-	0	0	J	J	J	-	K	J	...	...	...	...	...	...	y p and n.
2	St	Ci	Cu: Ci	10	0	1	3	2	0	1	1	1	J	J	J	...	...	...	...	...	...	y p and n.
3	St	Cu	Cu	9	1	1	7	7	7	G	H	1	1	1	1	...	...	...	...	...	...	☉ early : y a and p : ☉ n.
4	...	Cu	Ast	0	0	4	10	10	10	G	H	1	1	1	1	...	...	...	...	...	...	☉ early : y a, p and n.
5	Stcu: Acu: Ast	Stcu	Acu: Ast	9	10	9	6	2	1	1	1	J	K	K	K	...	...	...	...	...	...	p <sup>o</sup> a : y p : ☉ n.
6	...	Cu: Acu: Ci	Ci: Cicu	0	1	2	4	5	4	G	1	J	J	J	J	...	...	...	...	...	...	☉ early : y a, p and n.
7	Ci	Cu	...	1	1	1	3	0	0	G	H	1	J	J	L	...	...	...	...	...	...	y a and p.
8	Acu: Ci	Cu: Ci: Cist	Cu: Acu: Ci	4	3	8	-	4	5	J	J	J	-	J	K	...	...	...	...	...	...	y a, p and n.
9	Stcu	Cu: Acu	Acu: Ci	1	1	3	5	2	4	1	K	K	K	K	K	...	...	...	...	...	...	y a, p and n.
10	Stcu	Cu: Stcu	Frnb: Ast: Acu	9	9	9	9	9	6	1	K	K	K	K	K	...	...	...	...	...	...	p <sup>o</sup> early : ●● <sup>o</sup> p.
11	Stcu	Cu: Cumb: Cist	Cu: Ast: Cist	10	10	10	10	9	9	1	1	J	K	L	J	...	...	...	...	...	...	●● <sup>o</sup> early : ⊕ a and p.
12	Ci	Cu	Acu: Ci: Cist	7	9	6	5	9	6	G	1	J	1	1	1	...	...	...	...	...	...	☉ late n.
13	St	Cu: Stcu: Ci	Frnb: Nbst	10	10	7	10	10	10	G	G	1	1	1	1	...	...	...	...	...	...	●● <sup>o</sup> a : ☉ <sup>2</sup> p.
14	St	Frnb: Nbst	Frnb: Nbst	10	10	10	10	10	10	G	G	1	1	1	1	...	...	...	...	...	...	●● <sup>o</sup> a and p.
15	Cu: Acu	Cu	Cu: Stcu	1	4	6	-	7	4	K	L	m	-	K	K	...	...	...	...	...	...	y a, p and n.
16	Acu: Ci	Cu: Stcu: Ast	Frnb: Nbst	6	7	9	10	10	10	1	L	L	K	1	K	...	...	...	...	...	...	☉ early. ●● <sup>o</sup> p : ●● <sup>o</sup> n.
17	Stcu	Cu	Cu: Stcu: Ci	3	9	7	8	6	9	J	K	K	L	L	L	...	...	...	...	...	...	p <sup>o</sup> early : y p.
18	Stcu	Cu: Stcu	Stcu	9	9	8	7	9	3	1	J	L	L	K	m	...	...	...	...	...	...	y p.
19	Acu: Ci	Cu	Cu: Stcu	3	1	4	7	9	10	K	L	L	L	L	K	...	...	...	...	...	...	y a, p and n.
20	Stcu: Acu: Cist	Cu	Cu: Stcu: Ast	9	9	6	8	9	8	1	J	K	K	J	J	...	...	...	...	...	...	☉ early : y p.
21	Fracu: Stcu	Cu: Stcu	Cu: Stcu	5	8	9	9	9	2	1	1	J	J	K	L	...	...	...	...	...	...	●● <sup>o</sup> a.
22	Stcu	Cu	Cu	9	7	6	-	3	1	J	J	J	-	K	K	...	...	...	...	...	...	y p and n : ☉ n.
23	...	Cu	Cu: Ci: Cist	0	0	5	4	4	7	G	G	1	J	J	J	...	...	...	...	...	...	☉ early : y a, p and n : ☉ late n.
24	Ci	Cu	Cist	1	0	3	4	7	7	G	G	J	J	J	J	...	...	...	...	...	...	☉ early : y a and p : ☉ n.
25	Stcu: Acu: Ast	Acu	Stcu	9	9	7	9	9	8	G	G	1	G	1	J	...	...	...	...	...	...	☉ early : y a and p : ☉ n.
26	St: Stcu	Stcu: Ast	Stcu: Ast	10	10	10	10	8	10	F	G	1	1	1	1	...	...	...	...	...	...	☉ m early.
27	St: Stcu	St: Stcu	Cu: Stcu	10	10	10	10	9	9	J	1	1	1	1	1	...	...	...	...	...	...	●● <sup>o</sup> a.
28	St: Stcu	St: Stcu	...	10	10	10	9	0	5	G	1	H	H	H	H	...	...	...	...	...	...	☉ n.
29	St	St: Stcu	Cu	10	10	10	-	1	0	G	G	H	-	1	J	...	...	...	...	...	...	☉ early a and late n.
30	St	Cu: Acu: Ci	Cumb: Acu: Cist	10	10	7	9	7	1	G	G	1	1	1	1	...	...	...	...	...	...	☉ early : T p.
31	St	Cu: Stcu	Cu: Acu: Cist	10	3	8	6	7	2	F	G	J	J	J	J	...	...	...	...	...	...	☉ m early : y p.
Mean Cloud Am't				6.6	6.2	6.3	7.4	6.3	5.4													
Day	7h	13h	18h	7h	9h	13h	15h	18h	21h	7h	9h	13h	15h	18h	21h	7h	9h	13h	15h	18h	21h	Remarks on the Weather of the Day
	Cloud Forms			Cloud Amount (All Forms)					Visibility					Precipitation								

\*Mean of 27 days

†Mean of 26 days



Day	Cloud Forms			Cloud Amount (All Forms)					Visibility					Precipitation					Remarks on the Weather of the Day			
	7h	13h	18h	7h	9h	13h	15h	18h	21h	7h	9h	13h	15h	18h	21h	7h	9h	13h		15h	18h	21h
1	St	Frb:Nbst	Frb:Nbst	10	10	10	10	10	9	E	F	F	F	G	1	...	...	...	...	...	...	fe early, ● m a : ●●° p.
2	St	St	St	10	10	10	0	10	10	B	B	D	F	F	C	...	...	...	...	...	...	Fe a : m f p : Fe n.
3	St	St	St	10	10	10	9	10	10	C	C	E	F	B	B	...	...	...	...	...	...	Fe f a : m fe p : Fe n.
4	Stcu	St:Frst	Stcu	8	10	9	5	3	3	G	G	F	G	H	F	...	...	...	...	...	...	Fe early : m Δ n.
5	St:Stcu	St:Stcu	...	10	9	9	7	0	0	G	F	F	G	G	F	...	...	...	...	...	...	m Δ n.
6	St:Stcu	Stcu:Frst	Stcu	10	10	10	10	10	10	G	E	G	G	F	H	...	...	...	...	...	...	●° f a : ●° m n.
7	St	St	Stcu:St	10	10	10	-	10	10	G	G	E	-	G	H	...	...	...	...	...	...	f a : f m p.
8	St	Acu:Cist	St:Stcu	10	10	10	9	10	10	G	F	F	F	F	G	...	...	...	...	...	...	m ⊕ a : m p : ●●° n.
9	Frb:Nbst	Cu:Frst	Stcu	10	10	6	3	4	0	G	I	I	I	J	J	...	...	...	...	...	...	●●° early.
10	Stcu	Stcu	Stcu	1	1	9	9	4	6	H	I	I	I	J	J	...	...	...	...	...	...	Δ n.
11	Stcu	Stcu	Acu	5	9	5	1	6	0	H	H	H	H	H	I	...	...	...	...	...	...	Δ n.
12	Stcu	Cu:Frst	...	9	2	5	2	0	0	G	G	I	I	H	G	...	...	...	...	...	...	Δ n.
13	...	Cu:Stcu:Acu	...	0	0	4	6	0	0	D	D	I	I	H	G	...	...	...	...	...	...	F V f a : Δ n.
14	...	...	...	0	0	0	-	0	0	G	E	G	-	G	G	...	...	...	...	...	...	Δ V early, f a : Δ n.
15	Stcu	Cu:Acu	Stcu	9	4	9	10	9	10	G	D	G	F	G	C	...	...	...	...	...	...	Δ early, f a : z p : Fe n.
16	St	Stcu	Cist	10	10	2	9	6	7	C	A	D	D	F	I	...	...	...	...	...	...	Fe f a : f m p : m ⊕ n.
17	St:Stcu	Frst:St:Stcu	St:Stcu	10	10	10	10	10	10	G	G	G	G	H	H	...	...	...	...	...	...	●° p and n.
18	St:Stcu	St	St	10	10	10	10	10	10	G	E	E	E	F	...	...	...	...	...	...	...	●° f a : ●° f m p : ●° n.
19	St:Stcu	Cu:St:Stcu	Cu:Stcu	10	3	9	6	2	4	G	H	I	I	I	I	...	...	...	...	...	...	●° early a.
20	Stcu:St	Stcu	...	1	9	9	2	0	0	G	H	I	G	E	E	...	...	...	...	...	...	Δ early : f Δ V n.
21	St	...	St	10	10	0	-	10	10	B	B	C	-	A	A	...	...	...	...	...	...	Δ F a, p and n.
22	St	St:Stcu	Stcu:St	10	9	10	10	9	10	D	E	G	G	H	F	...	...	...	...	...	...	f ●° a : ●° n.
23	Cu:Stcu	Cu:Acu:Ci	Stcu	9	9	9	9	8	10	G	E	G	G	J	F	...	...	...	...	...	...	●●° early, f a.
24	Stcu:St	Cu:Stcu	Stcu	10	10	9	5	1	0	G	G	H	G	I	J	...	...	...	...	...	...	F Δ f a : f F p : F n.
25	St	...	St	10	10	0	3	10	10	C	B	D	D	X	A	...	...	...	...	...	...	F Δ f a : f F p : F n.
26	St	...	St	10	10	0	0	10	10	B	A	D	E	A	A	...	...	...	...	...	...	Fe Δ f a : f F p : F Δ n.
27	St	Stcu:Frst	Stcu	10	10	10	9	8	9	C	C	C	G	H	H	...	...	...	...	...	...	Fe F a :
28	...	St	St	0	10	6	-	10	10	C	A	C	-	A	B	...	...	...	...	...	...	F Δ a : F p : F Δ n.
29	Stcu	Stcu:Acu	Stcu	9	9	9	9	8	6	C	G	I	G	J	J	...	...	...	...	...	...	Fe early a : ●° late n.
30	St:Stcu	St:Frst	St:Frst	10	10	10	10	10	10	I	G	G	I	I	I	...	...	...	...	...	...	●° a, p and n.
Mean Cloud Am't				8-0	8-1	7-4	3-8	6-4	6-7													

Day	Cloud Forms			Cloud Amount (All Forms)					Visibility					Precipitation					Remarks on the Weather of the Day			
	7h	13h	18h	7h	9h	13h	15h	18h	21h	7h	9h	13h	15h	18h	21h	7h	9h	13h		15h	18h	21h
1	Frst	Stcu:St:Stcu	Frst:Nbst	9	9	9	9	10	8	G	G	I	G	J	J	...	...	...	...	...	...	●●° a, p and n.
2	Cu:Stcu	Frst:Stcu	Frst:Nbst	9	10	10	10	10	8	I	H	G	F	F	H	...	...	...	...	...	...	●●° a, p and n.
3	St:Stcu	St:Stcu	Frst:Nbst	10	10	9	9	8	1	H	G	G	G	I	K	...	...	...	...	...	...	●° a.
4	Stcu	St	St	9	9	10	10	10	10	J	G	G	G	I	D	...	...	...	...	...	...	★●° p : f ●° n.
5	Stcu	Stcu:Acu:St	...	9	9	8	-	0	0	K	K	I	-	J	I	...	...	...	...	...	...	●●° early a.
6	St	Frst:Stcu	Stcu	1	0	2	9	9	10	G	D	E	E	G	C	...	...	...	...	...	...	Δ early : f a and p : F Δ n.
7	St:Stcu	St	St:Stcu	10	10	10	10	9	10	G	D	D	D	F	G	...	...	...	...	...	...	Δ early : f a and p.
8	St:Stcu	St:Stcu	Frst:Nbst	10	10	9	10	10	10	H	F	D	G	H	J	...	...	...	...	...	...	●° a, p and n.
9	Frb:Nbst	Frst:St:Stcu	St	10	10	10	10	10	9	I	F	G	C	I	I	...	...	...	...	...	...	●° early, ★●° a : ●° p and n.
10	Stcu	St:Stcu	St	9	10	9	8	10	10	J	G	G	G	I	J	...	...	...	...	...	...	●° Δ (gusts) n.
11	Stcu:St	Cu:Stcu:Acu	Stcu	9	9	6	7	9	10	K	H	G	I	J	J	...	...	...	...	...	...	●° a.
12	Stcu	Frst	Stcu:St	4	1	1	-	5	3	K	J	I	-	J	J	...	...	...	...	...	...	p ●° early a.
13	Frb:Nbst	Frst:St:Stcu	Frst:Nbst	10	10	10	10	10	10	J	H	I	F	F	G	...	...	...	...	...	...	●●° a : ●° m p and n.
14	Frst:Stcu	St:Stcu	St	4	1	7	7	4	10	H	F	G	F	G	C	...	...	...	...	...	...	Δ early, m a : Fe Δ n.
15	St	Frst:St:Stcu	Ci:Cist	10	10	10	4	7	10	G	G	G	F	F	F	...	...	...	...	...	...	f Δ early, ●° a : m p : m Δ n.
16	St:Stcu	Frst:St:Stcu	Frst:Stcu	10	9	10	9	5	1	H	G	G	G	I	I	...	...	...	...	...	...	★●° early, ●° a : ●° p : Δ n.
17	Stcu	Stcu	Stcu	10	9	9	9	7	7	J	G	G	G	I	H	...	...	...	...	...	...	●° late p.
18	...	Ci	Ci	0	1	2	8	8	0	G	E	G	G	F	...	...	...	...	...	...	...	f Δ a : m Δ n.
19	Frb	St	St	10	10	10	-	10	0	G	D	C	-	C	C	...	...	...	...	...	...	Δ★●° early, ★ f a : F Δ p and n.
20	St	...	Stcu	10	10	0	8	9	9	B	B	C	G	G	I	...	...	...	...	...	...	Δ F a.
21	Stcu	St	St	9	9	10	10	10	10	J	H	G	F	G	G	...	...	...	...	...	...	●° m p : ●° n.
22	St:Stcu	Frst:St:Stcu	Frst:Stcu	9	10	10	9	10	10	I	H	H	H	I	J	...	...	...	...	...	...	●° early a : ●° n.
23	Frst:St	Frst:Stcu	...	10	9	7	9	0	0	I	H	I	G	F	F	...	...	...	...	...	...	●° early a : f n.
24	St:Stcu	Frst:Stcu	Frst:Stcu	10	9	10	10	10	10	I	G	G	H	I	I	...	...	...	...	...	...	●° late n.
25	St	St	...	10	10	10	-	10	10	C	C	B	-	G	A	...	...	...	...	...	...	Fe a and p : Fe ●° n.
26	St	St	St:Stcu	10	10	10	-	10	10	C	C	C	-	F	G	...	...	...	...	...	...	Fe ●° a : Fe m p.
27	St:Stcu	Stcu	Stcu	10	10	10	10	10	10	H	G	G	G	H	H	...	...	...	...	...	...	●° f p.
28	Stcu	St	St	10	10	10	10	9	9	H	G	F	D	I	J	...	...	...	...	...	...	●° a : ●° p and n.
29	Frst:Stcu	St:Frst	St:Frst	10	10	10	10	10	10	J	G	G	F	H	H	...	...	...	...	...	...	●° m a.
30	Stcu	St:Frst:Stcu	Stcu	9	10	10	5	9	4	H	F	F	G	H	G	...	...	...	...	...	...	●° m a.
31	Stcu	St:Stcu	...	9	10	10	10	10	9	I	F	G	G	G	I	...	...	...	...	...	...	m a : ●° p and n.
Mean Cloud Am't				8-7	8-5	8-3	8-6	7-8	7-6													
Mean Annual Cloud Am't				7-7	7-7	7-8	8-1	7-4	6-8													

\*Mean of 26 days



Mean value for periods of 20 min. about 14h.  
 F = Potential Gradient; unit 1 volt/cm.  $\lambda +$  = Conductivity due to positive ions; unit  $10^{-18}/\text{ohm.cm.}$   
 i = Air-earth current; unit  $10^{-18}\text{amp/cm}^2$

Month	JANUARY			FEBRUARY			MARCH			APRIL			MAY			JUNE		
Day	F	$\lambda +$	i	F	$\lambda +$	i	F	$\lambda +$	i	F	$\lambda +$	i	F	$\lambda +$	i	F	$\lambda +$	i
1	...	...	...	...	...	...	...	...	...	4:40	-	-	...	...	...	2:25	58	130
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1:70	44	75
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1:35	64	86
4	...	...	...	4:70	40	189	6:60	19	126	...	...	...	1:20	53	63	1:50	87	131
5	3:70	18	65	...	...	...	0:75	37	27	2:05	45	128	1:25	147	187	...	...	...
6	...	...	...	...	...	...	...	...	...	2:90	55	158	1:20	119	141	...	...	...
7	2:60	30	78	...	...	...	...	...	...	...	...	...	2:75	59	162	1:65	74	121
8	4:95	11	54	...	...	...	5:05	30	150	...	...	...	...	...	...	...	...	...
9	...	...	...	3:40	32	110	2:95	32	95	3:05	41	124	...	...	...	0:95	63	60
10	...	...	...	3:65	28	104	...	...	...	...	...	...	...	...	...	2:25	68	143
11	4:40	17	73	2:70	29	78	...	...	...	...	...	...	...	...	...	...	...	...
12	2:35	22	52	4:60	28	131	...	...	...	4:80	22	105	...	...	...	...	...	...
13	4:95	13	65	...	...	...	...	...	...	5:20	24	123	1:10	38	42	...	...	...
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1:70	61	104
15	3:40	7	25	3:95	21	83	2:10	31	66	...	...	...	...	...	...	1:70	51	88
16	...	...	...	4:70	36	168	...	...	...	4:15	53	219	...	...	...	1:55	84	130
17	...	...	...	2:80	40	112	...	...	...	...	...	...	...	...	...	1:75	116	203
18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1:50	77	118
19	3:95	18	70	...	...	...	...	...	...	2:50	40	100	3:60	17	60	...	...	...
20	3:75	16	62	...	...	...	...	...	...	...	...	...	1:85	58	107	...	...	...
21	...	...	...	...	...	...	...	...	...	2:50	38	95	1:85	76	141	1:30	53	69
22	2:40	37	90	4:25	-	-	...	...	...	2:55	53	136	...	...	...	1:50	107	157
23	...	...	...	4:75	19	90	2:60	45	116	2:60	39	101	...	...	...	1:80	47	84
24	...	...	...	...	...	...	2:95	42	126	...	...	...	1:75	51	90	2:80	40	112
25	...	...	...	...	...	...	2:80	67	188	...	...	...	2:00	60	119	1:45	57	82
26	...	...	...	...	...	...	...	...	...	2:30	65	150	...	...	...	...	...	...
27	5:50	11	60	...	...	...	...	...	...	2:25	62	140	1:35	69	92	...	...	...
28	2:50	21	52	...	...	...	...	...	...	...	...	...	1:75	44	78	1:30	65	85
29	...	...	...	-	-	-	...	...	...	3:90	35	136	...	...	...	...	...	...
30	...	...	...	-	-	-	6:50	13	88	6:40	15	98	...	...	...	...	...	...
31	...	...	...	-	-	-	2:75	33	92	-	-	-	1:75	48	84	-	-	-
Mean	3:70	18	62	3:95	30	118	3:51	35	107	3:49	42	129	1:80	65	105	1:67	67	110
No. of days used	12	12	12	10	9	9	10	10	10	15	14	14	13	13	13	18	18	18
Month	JULY			AUGUST			SEPTEMBER			OCTOBER			NOVEMBER			DECEMBER		
Day	F	$\lambda +$	i	F	$\lambda +$	i	F	$\lambda +$	i	F	$\lambda +$	i	F	$\lambda +$	i	F	$\lambda +$	i
1	2:05	63	130	...	...	...	...	...	...	2:55	52	134	...	...	...	5:60	19	105
2	2:25	66	149	...	...	...	1:85	54	101	...	...	...	...	...	...	...	...	...
3	...	...	...	1:15	66	76	1:65	89	146	...	...	...	4:20	17	73	...	...	...
4	...	...	...	0:95	73	69	...	...	...	3:40	35	120	...	...	...	...	...	...
5	2:10	58	121	1:65	66	110	...	...	...	...	...	...	4:55	26	120	...	...	...
6	3:35	47	159	...	...	...	1:55	89	139	4:65	35	161	...	...	...	...	...	...
7	2:25	61	137	...	...	...	1:55	84	132	4:00	30	121	...	...	...	5:85	27	161
8	...	...	...	...	...	...	...	...	...	4:40	41	179	6:65	11	72	...	...	...
9	...	...	...	...	...	...	...	...	...	...	...	...	2:85	30	86	...	...	...
10	...	...	...	1:65	62	103	1:75	39	68	...	...	...	3:20	25	79	6:80	16	107
11	...	...	...	...	...	...	...	...	...	2:00	47	95	3:60	21	77	...	...	...
12	1:05	54	57	3:65	39	141	...	...	...	...	...	...	3:70	24	90	...	...	...
13	1:20	78	93	...	...	...	...	...	...	2:60	45	119	...	...	...	...	...	...
14	...	...	...	...	...	...	1:50	63	95	2:30	39	90	...	...	...	9:40	6	55
15	...	...	...	...	...	...	...	...	...	2:40	40	97	4:10	13	51	6:00	6	38
16	2:00	63	127	...	...	...	...	...	...	...	...	...	7:80	7	54	...	...	...
17	...	...	...	1:65	60	100	...	...	...	...	...	...	...	...	...	4:10	13	51
18	...	...	...	2:25	63	141	...	...	...	3:65	37	135	...	...	...	...	...	...
19	1:75	68	118	1:65	67	110	...	...	...	6:25	19	118	5:40	26	141	...	...	...
20	1:70	60	100	1:65	53	87	...	...	...	...	...	...	...	...	...	2:45	12	30
21	...	...	...	...	...	...	2:20	44	96	2:75	14	38	...	...	...	...	...	...
22	...	...	...	...	...	...	...	...	...	2:15	66	142	...	...	...	...	...	...
23	1:95	70	137	1:60	75	120	2:50	60	150	...	...	...	...	...	...	...	...	...
24	...	...	...	1:30	119	154	2:30	82	186	...	...	...	...	...	...	...	...	...
25	...	...	...	3:05	29	88	...	...	...	...	...	...	5:45	5	30	...	...	...
26	1:50	49	73	1:20	63	76	...	...	...	3:75	36	135	...	...	...	...	...	...
27	1:00	75	74	2:35	42	99	3:80	36	138	...	...	...	...	...	...	...	...	...
28	1:45	81	117	...	...	...	2:30	46	106	3:50	56	198	...	...	...	...	...	...
29	2:45	50	123	...	...	...	2:80	60	167	2:80	21	59	...	...	...	5:45	13	73
30	3:60	33	118	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
31	...	...	...	1:40	102	144	-	-	-	...	...	...	-	-	-	...	...	...
Mean	1:98	61	115	1:81	65	108	2:15	62	127	3:32	38	121	4:68	19	79	5:71	14	77
No. of days used	16	16	16	15	15	15	12	12	12	16	16	16	11	11	11	8	8	8
													The Year	Mean . . . . .		2:95	46	107
														No. of Days used		156	154	154

Month	JANUARY		FEBRUARY		MARCH		APRIL		MAY		JUNE	
Day	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	2	9.7	1	0.5	1	0.5	1	0.1	0	...	0	...
2	1	0.3	1	0.2	1	2.1	2	7.2	0	...	0	...
3	0	...	1	0.2	0	...	1	1.6	1	0.3	0	...
4	1	2.7	2	5.5	0	...	1	2.8	1	0.1	0	...
5	0	...	1	2.9	2	8.2	0	...	0	...	0	...
6	2	8.8	0	...	2	3.9	0	...	0	...	0	...
7	1	0.8	2	8.6	2	4.1	1	0.5	1	1.3	0	...
8	0	...	1	2.8	0	...	0	...	1	1.3	1	2.3
9	0	...	1	0.8	0	...	1	0.4	2	3.7	1	1.1
10	0	...	0	...	1	0.7	2	5.6	0	...	1	1.6
11	0	...	0	...	2	10.4	1	2.7	2	3.7	1	0.4
12	1	0.3	2	4.7	1	2.3	0	...	2	6.7	1	0.2
13	1	1.5	1	1.8	1	1.0	2	4.2	2	3.4	1	2.7
14	2	15.4	1	0.2	2	15.0	2	7.6	1	0.3	0	...
15	0	...	1	0.3	0	...	1	2.2	2	4.1	1	1.0
16	2	4.8	1	2.7	2	5.5	2	4.2	1	0.1	1	1.3
17	2	5.8	1	0.5	2	3.8	2	19.7	0	...	1	0.8
18	2	6.2	1	0.4	1	1.0	2	3.4	2	8.8	2	3.1
19	1	0.8	1	1.1	1	1.7	0	...	2	5.6	2	3.5
20	1	2.5	1	0.1	1	0.2	2	4.0	1	0.6	2	6.6
21	2	7.3	1	2.0	2	7.8	1	0.2	2	5.9	0	...
22	2	5.0	2	5.4	2	4.6	0	...	1	0.1	1	1.3
23	2	7.8	0	...	2	3.6	0	...	1	2.0	1	0.2
24	2	10.4	2	7.4	1	1.0	1	0.7	1	1.1	0	...
25	0	...	2	5.3	2	5.7	0	...	1	0.2	0	...
26	2	4.3	2	5.1	1	1.7	0	...	2	3.7	0	...
27	0	...	2	3.5	1	1.5	1	0.6	0	...	0	...
28	1	1.1	2	7.0	1	0.3	2	9.9	0	...	1	0.3
29	0	...	---	---	1	0.2	0	...	0	...	1	1.6
30	1	2.7	---	---	0	...	0	...	0	...	0	...
31	1	1.1	---	---	0	...	---	---	0	...	---	---
Total	---	99.3	---	69.0	---	86.8	---	77.6	---	53.0	---	28.0
No. of Days Used	---	31	---	28	---	31	---	30	---	31	---	30
Mean	---	3.2	---	2.5	---	2.8	---	2.6	---	1.7	---	0.9
Month	JULY		AUGUST		SEPTEMBER		OCTOBER		NOVEMBER		DECEMBER	
Day	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.
1	0	...	0	...	1	0.1	0	...	2	4.6	1	2.9
2	0	...	0	...	1	0.1	1	0.1	1	0.2	2	13.6
3	0	...	0	...	1	0.3	2	5.5	1	0.4	2	19.4
4	1	0.7	0	...	0	...	1	0.3	0	...	1	2.7
5	0	...	0	...	0	...	2	13.3	1	0.3	1	2.4
6	1	0.9	0	...	0	...	1	0.9	0	...	1	0.3
7	0	...	1	0.7	0	...	2	5.1	0	...	1	0.1
8	0	...	0	...	1	0.2	1	0.9	1	1.5	2	4.4
9	0	...	0	...	1	2.7	0	...	2	8.0	2	15.9
10	1	1.8	1	1.5	2	3.0	0	...	0	...	2	3.8
11	1	0.9	0	...	1	0.1	1	0.1	1	0.1	1	1.7
12	1	1.3	1	0.5	1	1.9	1	1.4	0	...	1	0.2
13	0	...	2	6.5	2	3.9	0	...	0	...	2	13.6
14	0	...	2	6.9	1	1.7	0	...	0	...	1	0.6
15	2	5.8	0	...	1	0.1	1	0.5	1	0.1	2	3.1
16	2	4.8	1	0.8	1	1.5	0	...	1	0.1	2	10.7
17	1	0.1	0	...	2	3.3	1	0.7	2	3.0	1	1.6
18	1	0.1	0	...	0	...	0	...	1	2.8	0	...
19	2	3.5	0	...	2	9.6	0	...	1	1.4	1	1.6
20	1	0.8	0	...	1	1.3	0	...	0	...	1	0.8
21	1	0.2	1	0.6	0	...	1	0.5	0	...	1	1.2
22	0	...	0	...	0	...	2	5.5	2	3.3	0	...
23	1	0.4	0	...	1	0.6	2	10.0	1	1.9	0	...
24	0	...	0	...	0	...	1	2.3	1	1.0	0	...
25	0	...	0	...	2	3.3	2	7.1	0	...	1	0.1
26	0	...	2	9.4	0	...	1	1.2	0	...	1	0.5
27	0	...	1	1.1	0	...	2	8.6	1	0.7	1	1.1
28	1	0.2	1	0.1	1	0.2	1	2.6	1	0.3	2	7.6
29	0	...	1	0.1	0	...	1	1.8	0	...	2	9.3
30	0	...	1	0.3	0	...	1	0.4	1	0.9	2	3.3
31	0	...	0	...	---	---	1	1.3	---	---	2	10.0
Total	---	21.5	---	28.5	---	33.9	---	70.1	---	30.6	---	132.5
No. of Days Used	---	31	---	31	---	30	---	31	---	30	---	31
Mean	---	0.7	---	0.9	---	1.1	---	2.3	---	1.0	---	4.3

Annual Values:- Character 0 1 2 Duration of ( ) Total Days used Mean  
 Number of Days 130 149 86 Negative Pot. Gradient) 730.8 365 2.00 hrs.

POTENTIAL GRADIENT (reduced to level surface, Paddock Site): VOLTS PER METRE  
 KELVIN ELECTROGRAPH STANDARDIZED BY WILSON READINGS, UNDERGROUND LABORATORY  
 Mean values for periods of sixty minutes, between the exact hours, Greenwich Mean Time

Month	JANUARY Factor 2.69				FEBRUARY Factor 2.71				MARCH Factor 2.70			
Hour G.M.T.	2-3h	8-9h	14-15h	20-21h	2-3h	8-9h	14-15h	20-21h	2-3h	8-9h	14-15h	20-21h
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	15	-200	Z-	285	205	290	245	275	290	215	390	290
2	245	300	345	115	290	375	290	205	130	420	290	320
3	160	345	330	315	115	320	450	505	305	565	360	710
4	70	315	260	Z-	-175	Z+	450	-665	420	490	590	535
5	315	400	385	545	15	435	145	580	-70	550	70	-160
6	-185	-115	170	-260	290	405	290	725	30	505	505	435
7	100	275	275	400	665	390	-350	0	Z+	15	290	460
8	490	690	530	275	450	390	175	-260	260	420	490	735
9	-	-	285	-	175	495	350	405	345	435	345	680
10	-	-	430	490	100	320	365	595	635	940	Z+	765
11	500	515	415	285	145	495	290	405	-85	-435	Z-	-160
12	375	145	200	160	275	625	465	-535	200	290	Z+	320
13	-115	215	490	200	45	290	305	350	Z+	345	230	650
14	55	-590	-475	-55	85	695	275	275	305	-1170	-765	-60
15	385	515	400	275	115	435	375	85	130	320	230	1055
16	85	-560	285	805	-	-	505	725	565	345	-200	230
17	285	230	345	-115	215	365	275	405	175	15	Z+	130
18	160	285	Z+	145	275	595	275	375	115	-85	345	520
19	230	790	305	230	205	335	45	505	230	290	130	550
20	245	575	385	230	145	480	375	550	375	1040	260	460
21	-1335	545	Z+	115	160	290	275	480	290	230	85	-175
22	-460	100	230	500	375	-260	405	480	30	15	330	405
23	430	-590	260	400	335	550	420	1045	505	290	245	-420
24	200	-230	-375	-905	535	450	-100	350	405	695	290	535
25	285	790	515	430	435	145	Z-	565	215	435	260	-1055
26	-15	200	475	260	260	-60	100	450	60	450	260	200
27	245	490	515	430	245	505	Z+	260	200	405	245	260
28	85	130	230	185	205	290	-480	85	330	275	245	200
29	85	315	460	445	490	490	490	490	475	290	490	780
30	185	460	260	490	490	490	490	490	200	580	620	405
31	285	445	490	Z+	490	490	490	490	230	475	290	450
Means (a)	230	394	360	334	245	399	311	427	276	405	315	483
(b)	175	225	293	235	237	361	219	347	255	339	256	315
Mean for Day	(a) 329 (b) 232				(a) 345 (b) 291				(a) 370 (b) 291			
Month	APRIL Factor 2.70				MAY Factor 2.77				JUNE Factor 2.73			
Hour G.M.T.	2-3h	8-9h	14-15h	20-21h	2-3h	8-9h	14-15h	20-21h	2-3h	8-9h	14-15h	20-21h
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	145	145	430	420	355	250	475	310	160	265	205	335
2	445	15	230	Z+	180	325	295	445	175	265	160	175
3	430	345	290	460	180	505	105	385	100	205	130	205
4	145	275	405	460	120	310	120	150	145	205	130	275
5	290	375	275	290	220	280	135	415	115	190	145	265
6	130	390	260	375	220	445	150	295	190	235	115	220
7	160	185	245	290	0	295	265	460	160	265	175	190
8	160	230	260	375	0	150	400	220	145	320	15	220
9	230	360	315	200	180	45	-30	430	45	350	45	410
10	-45	-315	345	460	165	385	250	535	465	465	250	Z+
11	-85	185	175	405	310	Z-	310	605	205	235	220	265
12	460	575	490	635	875	325	Z+	135	145	290	75	350
13	345	-145	520	445	-135	90	120	535	175	Z+	205	235
14	315	390	Z+	-275	205	90	445	590	130	275	175	205
15	60	130	200	145	220	105	30	520	250	235	175	365
16	100	260	Z+	130	90	120	415	445	90	410	160	250
17	-635	-675	-245	Z-	205	355	310	535	30	145	90	290
18	-70	175	200	300	180	385	-180	-490	235	220	175	Z+
19	175	315	175	345	-105	-60	310	235	Z-	220	525	130
20	60	200	45	15	190	265	180	445	-220	90	175	145
21	145	330	245	290	15	-15	180	415	305	440	100	90
22	115	160	230	390	135	180	135	295	145	320	130	205
23	215	315	230	145	120	220	190	295	60	410	175	235
24	315	490	315	575	295	385	180	340	235	395	265	380
25	315	445	215	390	180	325	180	205	-	290	130	130
26	185	360	275	420	Z+	475	30	310	90	380	220	220
27	230	260	245	230	180	295	135	190	115	235	90	145
28	70	-60	475	245	-	445	150	415	45	320	130	145
29	315	315	405	490	30	235	165	205	90	235	Z+	160
30	315	560	605	505	220	250	120	250	175	290	-	-
31					105	340	180	235				
Means (a)	226	299	300	349	192	281	213	361	156	283	164	231
(b)	185	254	307	358	139	243	195	329	119	279	159	238
Mean for Day	(a) 293 (b) 276				(a) 262 (b) 226				(a) 209 (b) 199			

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; Zi, Indeterminate in magnitude and sign

(a) Mean from all positive readings

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

Month	JULY Factor 2.74				AUGUST Factor 2.75				SEPTEMBER Factor 2.77			
Hour G.M.T.	2-3h	8-9h	14-15h	20-21h	2-3h	8-9h	14-15h	20-21h	2-3h	8-9h	14-15h	20-21h
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	-	280	205	295	235	205	145	235	45	225	120	180
2	115	280	205	410	90	145	175	250	120	210	180	340
3	145	235	235	280	30	250	105	120	30	355	135	295
4	45	60	160	160	60	295	75	130	280	445	150	310
5	160	335	205	235	90	325	160	145	195	400	135	355
6	105	280	320	350	160	365	120	265	325	295	135	325
7	160	235	220	295	120	60	45	250	150	210	165	240
8	145	235	145	145	105	75	120	190	45	310	195	210
9	90	250	115	280	60	205	120	235	195	370	15	240
10	60	205	205	115	Z-	235	-	-	-30	415	150	355
11	115	235	130	465	-	-	235	355	240	225	135	210
12	75	250	115	335	205	380	325	380	165	295	195	265
13	90	160	145	235	-45	120	120	175	370	240	180	225
14	320	205	175	205	-130	120	-295	175	60	325	165	325
15	115	455	Z+	-320	175	265	175	340	120	250	240	490
16	-105	295	220	235	295	355	160	Z+	340	565	Z+	625
17	90	320	115	90	120	235	-	220	-15	-	Z+	460
18	30	235	115	75	235	355	205	295	240	370	210	475
19	60	265	-	-	175	295	175	235	180	-15	-415	150
20	-	-	160	115	120	295	145	120	120	240	120	565
21	60	220	60	265	75	160	160	235	445	595	240	400
22	160	265	130	145	-	60	120	175	250	340	225	355
23	160	-	205	160	175	325	145	220	-	280	240	340
24	145	265	130	220	175	340	120	75	165	265	210	265
25	130	220	115	175	105	380	250	145	105	-15	445	295
26	115	205	145	250	75	0	160	-120	120	355	210	565
27	105	190	115	115	-30	235	235	45	135	225	385	180
28	60	190	145	190	175	325	205	310	75	295	250	325
29	90	235	235	310	205	205	175	120	120	580	240	325
30	190	380	320	500	-	-	145	280	240	-	265	505
31	145	380	115	295	30	105	145	325				
Means (a)	117	254	169	240	137	232	159	216	181	334	198	340
Means (b)	109	245	167	246	107	233	140	196	164	300	170	318
Mean for Day	(a) 195 (b) 192				(a) 186 (b) 169				(a) 263 (b) 238			
Month	OCTOBER Factor 2.81				NOVEMBER Factor 2.75				DECEMBER Factor 2.82			
Hour G.M.T.	2-3h	8-9h	14-15h	20-21h	2-3h	8-9h	14-15h	20-21h	2-3h	8-9h	14-15h	20-21h
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	285	495	270	405	120	-	-705	280	105	420	510	315
2	195	315	360	240	280	310	235	295	30	-	450	60
3	45	0	60	270	105	470	220	175	-120	-180	-75	630
4	60	495	315	285	-	-	340	265	195	735	-90	875
5	75	-180	-120	-60	145	410	440	470	450	240	435	905
6	-30	540	450	-	410	325	470	265	660	480	860	300
7	-	-	375	-75	500	425	455	545	435	600	645	705
8	60	480	435	300	365	515	645	455	375	785	600	240
9	165	540	360	660	-130	-130	295	280	-180	-540	-360	-15
10	270	-	270	270	205	515	310	355	210	540	690	Z+
11	150	60	210	195	235	175	355	425	420	660	450	270
12	165	60	105	180	130	630	365	340	30	270	450	735
13	180	225	225	405	190	380	365	205	480	705	Z-	Z-
14	120	345	240	390	280	500	530	690	375	950	890	920
15	195	285	240	360	530	470	425	190	1160	165	600	965
16	270	270	255	360	175	-	750	825	405	-105	-345	60
17	195	270	285	0	425	500	-355	575	30	300	330	405
18	540	525	360	405	250	-75	395	440	720	720	890	995
19	105	-	585	180	90	325	530	720	675	360	1010	540
20	-	-	300	300	355	705	605	530	1370	800	270	435
21	690	845	285	540	-	-	880	910	225	360	90	465
22	195	255	210	-435	530	825	-130	630	660	630	450	345
23	180	-240	Z+	360	340	615	-	-	150	450	495	225
24	75	255	270	615	-	-	440	-	240	375	450	360
25	-45	210	Z+	-180	-	-	560	675	390	660	-	-
26	300	450	345	420	1105	1350	895	515	-	-	450	600
27	-120	360	-	-	1175	825	560	880	75	330	645	600
28	-	-	345	-30	205	705	880	880	330	-180	540	60
29	15	45	330	450	825	720	470	865	-60	-815	600	195
30	105	300	315	585	235	340	380	235	360	-90	600	-180
31	345	390	225	-					90	525	-120	-300
Means (a)	199	334	298	355	368	547	492	497	394	524	558	488
Means (b)	184	310	256	313	367	488	406	477	353	317	433	425
Mean for Day	(a) 297 (b) 268				(a) 476 (b) 435				(a) 491 (b) 382			
									Annual Means (a)			
									226 350 289 358			
									Annual Means (b)			
									199 298 249 316			
									(a) 306 (b) 265			

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

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

543 KEW OBSERVATORY

1937

Table with 25 columns: Month and Season, Hour 0-1, G.M.T. 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, Non Cyclic Change, Mean. Rows include months (Jan-Dec), Year, Winter, Eqnx., and Summer.

AIR POLLUTION: HOURLY MEANS FOR EACH MONTH (milligrams per cubic metre)
COMPLETE DAYS ONLY

544 KEW OBSERVATORY

1937

Table with 25 columns: Month and Season, Hour 0-1, G.M.T. 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, Mean, No. of Days Used. Rows include months (Jan-Dec), Year, Winter, Spring, Autumn, and Summer.

AIR POLLUTION: DIURNAL INEQUALITIES (milligrams per cubic metre)
The departures from the mean of the day are adjusted for non-cyclic change†

545 KEW OBSERVATORY

1937

Table with 25 columns: Month and Season, Hour 0-1, G.M.T. 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, Non Cyclic Change, Range. Rows include months (Jan-Dec), Year, Winter, Eqnx., and Summer.

SEISMOLOGICAL DIARY

Galitzin Seismographs, three components

546 KEW OBSERVATORY

Lat. 51° 28' 6" N. Long. 0° 18' 47" W. Height above M.S.L. 5 metres

1937

Date	Compt.	Phase	G.M.T.	Period	Amplitude	Δ	Remarks	Date	Compt.	Phase	G.M.T.	Period	Amplitude	Δ	Remarks
Jan.			h. m. s.	s.	μ	km.		Feb.			h. m. s.	s.	μ	km.	
2		e F	14 18 ...25	...	...	...	Mediterranean Sea. 32.5° N., 23.5° E. (Strasbourg.)	12		e F	6 5 30	...	...	...	Very small. Gilbert Islands. 3° N., 173° E. (U.R.S.S.)
2		e F	23 22 30	...	...	...		18	—	—	9 31 to 16 58	...	...	...	No records.
5	E NE Z N E Z	eS eL eL M M M F	22 1 42 20 27 30 22 38 3 38 5 23 5	...	...	...	South of Japan. 31° N., 132° E. (Zinsen.)	21	Z ZNE ZNE Z ZNE NE ZNE ZNE N ZE NE Z Z Z N E	iP iP <sub>c</sub> P i i iPPPP iS i iPPS i i eL eL M M M F	7 14 53 15 1 15 18 16 51 21 23 24 56 25 8 25 12 26 4 27 8 30 50 31 16 36 36 43 40 55 52 8 2 39 12 39	...	...	8850 Dilatation. NE, e. Kurile Islands. 45° N., 148° E. (U.S.C.G.S.)	
7	NE Z N	eL eL M F	6 53 7 0 3 32 20	...	...	...	East of Japan. 39° N., 142 E. (Zinsen.)		NE NE Z	eS eL eL F	22 51 24 23 13 17 45	...	...	...	Kurile Islands. 45° N., 151° E. (U.R.S.S.)
7	Z Z ZNE ZE Z N E ZE N E Z ZNE ZNE N Z E ZNE N Z E	iP i iPP iPPP i iS i iSP iSS i iSSS L M M M eL <sub>2</sub> M M M F	13 31 37 31 40 34 10 35 57 40 3 40 31 40 37 40 40 44 43 44 51 46 17 48 5 50 14 3 9 3 34 6 33 15 49 59 7 59 20 59 27 17 15	...	...	7490 NE, e. Compression. Confused by micro-seisms. Eastern Tibet. 35° N., 97° E. (U.S.C.G.S.)	*Maxima passing beyond limits of registration. Via antipodes.		NE NE Z	eS eL eL F	3 16 27 37 4 15	...	...	...	No "Z" record. East of Japan. 41° N., 146° E. (U.R.S.S.)
8	ZNE	eL F	16 8 30	...	...	...		22	E NE	eS eL F	5 19 50	...	...	...	No "Z" record. Kurile Islands. 47° N., 155° E. (U.R.S.S.)
11	—	—	14 12 to 14 31	...	...	...	No records.	22	Z NE E Z	eP eL M eL F	13 36 12 14 4 8 33 10 50	...	...	...	Horizontal components disturbed by wind. Kurile Islands. 45° N., 152° E. (U.R.S.S.)
19		e F	23 2 15	...	...	...	Confused by micro-seisms.	23	Z N E NE E Z N Z	iP iSKS iS eSS eL M eL M M F	1 0 30 10 33 10 43 16 27 30 33 31 34 38 21 44 13 2 55	...	...	9050 Compression. NE, e. Kurile Islands. 45° N., 152° E. (U.R.S.S.)	
23	NE Z E N	eSS L L M M F	11 33 50 59 12 0 30 4 56 13 25	...	...	...	Confused by micro-seisms. North of Solomon Islands. 1° S., 157° E. (Strasbourg.)	25	Z Z NE NE N E Z N Z	iPP i ePS ePPP eSS iPSS iSSS L M M M F	6 56 12 56 27 7 6 29 8 26 14 4 14 26 19 25 39 49 56 58 36 9 35	...	...	15000 Confused by micro-seisms. By path greater than 180°. Solomon Islands. 11° S., 163° E. (J.S.A.)	
25	Z Z NE NE N E NE ZNE N N E	iPP i ePS ePPP eSS iPSS iSSS L M M M F	6 56 12 56 27 7 6 29 8 26 14 4 14 26 19 25 39 49 56 58 36 9 35	...	...	...		27	ZNE	eL F	2 7 20	...	...	...	East of Japan. 39° N., 146° E. (U.R.S.S.)
Feb. 1	NE Z	eL eL F	10 14 21 55	...	...	...		Mar. 9	E E Z ZE NE E ZNE E Z	iP eP iP i eS eSS eL M M F	15 52 24 52 25 52 26 52 33 16 2 36 7 56 14 20 4 23 3 17 25	...	...	9030 Wood-Anderson record. Galitzin record. Compression. SS Large movement. Caribbean Sea. 11° N., 83° W. (J.S.A.) Focal depth at least 50 km.	
1		e F	21 47 22 22	...	...	...		10		e F	5 30 45	...	...	...	Very small.
7	NE ZNE	eS eL F	5 3 13 19 50	...	...	...	Pacific ocean near Northern California. 40° N., 125° W. (J.S.A.)	14	E ZE NE Z E Z	iSKS iSP eL eL M M F	12 19 56 22 12 35 41 48 0 48 16 13 35	...	...	11000 Destructive in Taltal, Chile. 24° S., 71° W. (J.S.A.) Focal depth about 80 km.	
10	ZNE N E	eL M M F	8 22 24 56 25 44 45	...	...	...	Tunis. 34° N., 11° E. (U.R.S.S.)					...	...	...	

## SEISMOLOGICAL DIARY

Galitzin Seismographs, three components

546 KEW OBSERVATORY Lat. 51° 28' 6" N. Long. 0° 18' 47" W. Height above M.S.L. 5 metres

1937

Date	Compt.	Phase	G.M.T.	Period	Amplitude	Δ	Remarks	Date	Compt.	Phase	G.M.T.	Period	Amplitude	Δ	Remarks	
Mar. 16	ZNE	eL F	h. m. s. 16 42 17 0	...	μ	km.	Felt in Northern Luzon. 21° N., 124° E. (U.R.S.S.)	April 11		e F e F	h. m. s. 6 25 55 16 48 17 0	s.	μ	km.	Felt at Taihoku, Formosa.	
17		e F	14 46 15 0	...	...	...	Very small.	12	—	—	8 37 to 14 18	...	...	...	No records.	
19	ZNE	eL F	19 3 40	...	...	...	Pacific coast of Chile. (J.S.A.)	16	ZNE	ePKP <sub>1</sub> Z N ZN Z ZNE Z Z Z N Z NE N NE E N NE ZNE	3 20 42 20 52 20 58 21 6 22 34 24 32 25 54 28 6 33 8 34 30 34 43 35 55 43 6 43 43 45 13 45 54 47 2 48 38 51	...	...	16000	South of Fiji Islands. 22° S., 179° E. (J.S.A.) Focal depth about 390 km. PKP <sub>2</sub> and pPKP <sub>2</sub> by path of greater deviation. PP Large movement.	
21		e F	16 47 17 15	...	...	...	Felt in Assam. 25° N., 91° E. (U.R.S.S.)			i iPKP <sub>2</sub> iPP iPPP iPPP i iPSKS iSP iPS iSS i isSS i i iSSS	21 6 22 34 24 32 25 54 28 6 33 8 34 30 34 43 35 55 43 6 43 43 45 13 45 54 47 2 48 38	...	...	...		
21	ZNE	eL F	20 12 40	...	...	...	Japan. 40° N., 142° E. (Zinsen.)			Z Z Z Z N Z NE N NE E N NE ZNE	25 54 28 6 33 8 34 30 34 43 35 55 43 6 43 43 45 13 45 54 47 2 48 38 51	...	...	...		
23	ZNE E NE ZNE E Z N	eSP eSS eSSS eL M M M F	1 14 54 21 49 26 19 42 45 46 48 36 49 6 2 25	...	...	...	West of Cape Horn. 57° S., 75° W. (U.R.S.S.)			N N Z NE N NE E N NE ZNE	34 43 35 55 43 6 43 43 45 13 45 54 47 2 48 38 51	...	...	...	13500	
24	—	—	9 23 to 11 23	...	...	...	No records.			E N Z	4 1 47 14 41 40 17 7 15	22 26 19	(+120) +65 -17	...	L poorly developed.	
24	Z	eL F	14 44 55	...	...	...	Very small.			F	7 15	...	...	...		
25	ZNE N	eL M F	17 30 33 35 55	...	...	...	Felt in Southern California. 33.5° N., 116.6° W. (Pasadena.)	28		e F	2 48 3 0	...	...	...	Asia Minor. 37° N., 31° E. (Strasbourg).	
28	ZNE	eL F	19 1 15	...	...	...		29		e F	1 16 55	...	...	...		
29	ZNE	eL F	6 56 7 20	...	...	...		29	ZNE	iP i iS L M M F	18 16 13 16 17 20 8 21 22 41 22 55	...	...	...	2370	Atlantic Ocean. 53° N., 34° W. (J.S.A.)
29	ZNE ZNE ZE	e e e F	8 13 0 13 51 15 23 55	...	...	...	Surface waves very small.			E Z	22 41 22 55	17 16	(-30) +18	...	Overlapped by next shock.	
April 1	ZNE	eL F	18 36 19 0	...	...	...	Felt in Apia.	29	ZNE	iP iS iSS L L M M F	19 4 6 13 33 18 24 22 29 30 23 34 31	...	...	...	8150	Aleutian Islands. 54° N., 161° W. (J.S.A.)
3		e F	4 54 6 5	...	...	...	Bismarck Archipelago 6° S., 150° E. (U.R.S.S.)			E Z	30 23 34 31	30 24	(-53) -35	...	Overlapped by next shock.	
3		e F	12 7 25	...	...	...	Felt at Taihoku, Formosa.	29	NE ZNE	i(S) eL F	20 39 18 21 16 22 30	...	...	...	Maritime Province, Siberia. 47° N., 136° E. (Chiufeng.)	
3		e F	22 0 20	...	...	...	Felt in Western Luzon.	May 1	ZNE	eL F	13 21 45	...	...	...		
5	Z Z NE Z N NE NE NE Z E N Z	iPP iSP iPS iPPS iSS iPPP eSSS eL eL M M M F	7 16 26 26 5 26 8 27 13 32 35 33 26 38 43 49 55 32 56 25 8 11 55 9 55	...	...	...	Dilatation. NE, e. Felt in New Guinea. 2° S., 134° E. (J.S.A.)	1	ZNE	eL F	16 13 30	...	...	...	Very small.	
				...	...	...	By path greater than 180°.	1/2	ZNE	eL F	23 55 0 35	...	...	...	South Atlantic Ocean. 15° S., 26° W. (U.R.S.S.)	
				...	...	...		4	E NE Z E Z	eS eL eL M M F	5 28 47 36 41 42 34 51 5 6 50	...	...	...	South of Alaska. 59° N., 153° W. (J.S.A.)	
7		e F	18 47 19 15	...	...	...	Persia. 35° N., 51° E. (U.R.S.S.)	7	Z ZNE	eP eL F	14 22 26 51 15 20	...	...	...	Compression. South of Alaska. 58° N., 161° W. (J.S.A.) Focal depth 80-90 km.	
9		e F	14 55 15 10	...	...	...	Very small. Felt at Taihoku, Formosa.					...	...	...		

SEISMOLOGICAL DIARY

Galitzin Seismographs, three components

546 KEW OBSERVATORY

Lat. 51° 28' 6" N. Long. 0° 18' 47" W. Height above M.S.L. 5 metres

1937

Date	Compt.	Phase	G.M.T.	Period	Amplitude	Δ	Remarks	Date	Compt.	Phase	G.M.T.	Period	Amplitude	Δ	Remarks
			h. m. s.	s.	μ	km.					h. m. s.	s.	μ	km.	
May 7		e F	18 53 19 20	...	...	...	Very small.	June 1	ZNE	eL F	15 49 16 15	...	...	...	Very small.
7	ZNE	eL F	22 47 23 5	...	...	...		2	ZNE ZE ZNE	iP eS L F	1 26 34 30 28 31 2 10	...	...	2360	
9	ZN NE E NE Z E Z	iP eS i eL M M F	14 58 58 15 9 1 9 10 28 31 31 47 39 41 17 45	...	...	8850	Compression.  Z, e. Kurile Islands. 46° N., 149° E. (J.S.A.)	7		e F	16 45 17 10	...	...	...	
12	Z E NE Z	iPP ePS eL eL F	3 5 34 15 8 36 44 4 25	...	...	13000	Compression. NE, e. Onset doubtful. North of New Guinea. 3° S., 144° E. (U.R.S.S.)	8	ZE ZE E NE E ZNE	iP ipP isP isS eL F	22 41 27 42 12 42 30 51 9 52 25 23 2 55	...	...	9000	Compression. South of Mexico. 16° N., 93° W. (J.S.A.) Focal depth about 200 km. L poorly developed.
12		e F	13 55 14 45	...	...	...	Very small. West of Sumatra. 1° S., 97° E. (U.R.S.S.)	13/14	ZNE Z ZNE NE Z	eP ePP eS eL eL F	23 36 20 39 33 46 42 0 7 10 45	...	...	9230	Pacific Ocean south of Mexico. 15° N., 98° W. (J.S.A.)
13		e F	10 0 20	...	...	...	Very small.	14	Z ZNE	e(PKP) eL F	13 30 9 14 24 15 50	...	...	...	Loyalty Islands. 22° S., 171° E. (Manila)
16	Z ZNE	e(PKP) eL F	11 59 14 13 0 14 15	...	...	...		19	Z NE	ePKP e(SSS) F	17 26 8 49 2 18 15	...	...	...	New Hebrides. 12° S., 171° E. (Chiufeng.) Probably deep focus.
21	NE NE Z	e(SKS) eL eL F	2 21 23 42 50 3 10	...	...	...	East of Japan. 35° N., 147° E. (U.R.S.S.)	21	ZNE ZNE ZNE ZNE Z E	iP i eSKS is iSP iSS	15 26 2 26 14 36 28 36 51 38 0 43 7	...	...	9800	Compression. Amplitudes of iP as read in mm:— Z. N. E. +3.8 +0.3 +1.0 Azimuth about WSW Destructive in north- ern Peru. Possibly SPSP.
23	Z NE NE Z	eP is eL eL F	8 22 33 30 41 35 40 9 20	...	...	6600	Atlantic Ocean. 0°, 25° W. (Strasbourg).	22		e F	6 2 45	...	...	...	Very small. Turkestan 41° N., 71° E. (U.R.S.S.)
23	Z ZNE ZNE	eP is L F	11 2 38 6 56 10 40	...	...	2670	Asia Minor. 38° N., 28° E. (U.R.S.S.)	24	Z N ZE E N Z	i L L M M M F	43 27 51 56 58 47 59 20 16 5 57 20 30	...	...	...	7° S., 79° W. (Strasbourg.)
24	E NE Z	e eL eL F	1 4 8 16 55	...	...	...		24	ZE Z NE N ZNE Z	iP(I) iP(II) i is(II) L L M F	13 23 47 25 38 25 50 35 39 47 52 14 1 4 55	...	...	8820	Compression.  Two shocks over- lapping; epicenters in the Pacific Ocean near Costa Rica. 8° N., 84° W. (U.S.C.G.S.)
27	NE Z	eL eL F	5 16 26 6 0	...	...	...	South of Japan. 29° N., 137° E. (U.R.S.S.)	24	ZE ZNE E NE N ZNE Z	iP is i i i L M F	20 6 8 11 2 12 52 13 22 13 37 15 16 11 21 30	...	...	3160	Compression to ENE.  North Atlantic. 36° N., 36° W. (U.S.C.G.S.)
28	NE NE NE Z	i(S) i eL eL F	20 18 30 19 18 44 52 21 30	...	...	...	South of Japan. 24° N., 143° E. (Hukuoko.)	26		e F	19 33 50	...	...	...	Felt in Apia.
29	ZNE	eL F	15 32 50	...	...	...	South of Asia Minor. 36° N., 30° E. (Strasbourg.)	28	ZNE	eL F	20 39 50	...	...	...	
31		e F	6 13 20	...	...	...	Very small. South of Persia. 28° N., 57° E. (U.R.S.S.)	30		e F	14 55 15 30	...	...	...	East of Minlanao. 7° N., 127° E. (U.R.S.S.)
31	ZNE NE Z	e(PPS) eL eL F	16 4 10 29 34 17 35	...	...	...	North of Solomon Islands. 3° S., 159° E. (U.R.S.S.)					...	...	...	





## SEISMOLOGICAL DIARY

Galitzin Seismographs, three components

546 KEW OBSERVATORY Lat. 51° 28' 6" N. Long. 0° 18' 47" W. Height above M.S.L. 5 metres

1937

Date	Compt.	Phase	G.M.T.	Period	Amplitude	Δ	Remarks	Date	Compt.	Phase	G.M.T.	Period	Amplitude	Δ	Remarks		
			h. m. s.	s.	μ	km.					h. m. s.	s.	μ	km.			
July 26 cont.	Z	i	9 53	...	...	...	Azimuth about west by north. Destructive in Maltrata and Jalapa, Mexico. 20° N., 96° W. (U.S.C.G.S.) Focal depth about 100 km.	Aug. 5 cont.	Z	i	15 59	...	...	...	Very small.		
	E	isS	10 1	...	...	N			e	23 7	...	...	...				
	N	eL	20	...	...	N			e	27 36	...	...	...				
	ZE	L	24	...	...	ZNE			eL	30	...	...	...				
	Z	M	33 53	18	+21	...			Z	M	52 59	25	+ 7	...			
	E	M	34 0	18	-22	...			F	F	17 20	...	...	...			
26		e	9 25	...	...	...			e	13 30	...	...	...				
		F	10 10	...	...	...			F	14 10	...	...	...				
26						9300	Compression. NE, e. Amplitudes in mm of movements at 20h. gm. 10s. Z. N. E. -6.2 +1.1 +0.7 Azimuth about north-east by north. Small. Japan. 37° N., 141° E. (Strasbourg.) Focal depth about 100 km.	9		e	14 53	...	...	...	Near Bonin Islands. 26° N., 140° E. (Bombay.)		
	Z	iP	20 9 3	...	...	...				F	16 15	...	...	...			
	ZNE	iP <sub>c</sub> P	9 10	...	...	...											
	ZNE	iPP	9 28	...	...	...			11	Z	iP	1 9 32	...	...		12000	Dilatation. NE, e.
	ZNE	iPP	12 22	...	...	...				ZE	epP	11 42	...	...		...	
	ZNE	iPPP	14 16	...	...	...				ZNE	iPP	14 20	...	...		...	
30	N	iS	19 25	...	...	...	Azimuth about north-east by north. Small. Japan. 37° N., 141° E. (Strasbourg.) Focal depth about 100 km.	11	ZE	iPP	16 18	...	...	...	East of Java. 7° S., 116° E. (Strasbourg.) Focal depth about 600 km. SKS Large movement.		
	NE	ipS	19 31	...	...	...			NE	ipPP	16 18	...	...	...			
	ZNE	isS	19 50	...	...	...			NE	iS	20 20	...	...	...			
	Z	ePS	20 11	...	...	...			ZNE	ipSKS	22 48	...	...	...			
	N	eSSS	28 35	...	...	...			NE	i	20 20	...	...	...			
	NE	L	36	...	...	...			ZNE	ipSKS	22 48	...	...	...			
	Z	L	39	...	...	...			ZNE	iPS	24 0	...	...	...			
	E	M	42 12	28	+ 25	...			Z	isPS	26 38	...	...	...			
	Z	M	48 17	23	+ 58	...			NE	i	26 51	...	...	...			
	N	M	48 24	22	+ 50	...			Z	i	27 48	...	...	...			
		F	22 35	...	...	...			ZNE	iSS	28 52	...	...	...			
	30		e	14 23	...	...			...	12	ZNE	eL	33	...		...	...
		F	16 35	...	...	...	Z	M	2 6 45		18	- 13	...				
31		e	11 40	...	...	...	13			F	4 15	...	...	...	Very small.		
		F	12 10	...	...	...				e	1 10	...	...	...			
31						8540	Felt in Kiang-Si Province, China. 38° N., 114° E. (Bombay.)	15	NE	e	5 16	...	...	...	China Sea. (Bombay.)		
	ZNE	eP	20 47 39	...	...	...			ZNE	eL	21	...	...	...			
	Z	e	57 13	...	...	...			Z	M	26 20	17	+ 5	...			
	NE	iS	57 26	...	...	...				F	45	...	...	...			
	NE	e	21 5 55	...	...	...			15		e	12 18	...	...		...	Very small. Tibet. 30° N., 89° E. (Bombay.)
	Z	e	13 28	...	...	...				F	40	...	...	...			
	NE	L	14	...	...	...			16*	Z	e	11 55	...	...		...	
	Z	L	19	...	...	...					F	12 35	...	...		...	
	N	M	19 2	17	+ 53	...			17*	Z	eL	14 1	...	...		...	
	E	M	19 51	15	+ 49	...					F	40	...	...		...	
	Z	M	24 44	13	+ 41	...			18*	Z	eP	15 16 0	...	...		...	
		F	23 20	...	...	...				Z	eL	33	...	...		...	
Aug. 1						8500	Repetition from Chinese earthquake of July 31d. 20h.	20			F	16 10	...	...	...		
	ZNE	eP	10 52 57	...	...	...			ZN	iP	6 51 43	...	...	11000	Compression.		
	Z	e	11 2 (33)	...	...	...			ZN	iPP	55 45	...	...	...			
	ZNE	iS	2 42	...	...	...			N	ePS	7 4 39	...	...	...			
	E	e	11 33	...	...	...			N	eSS	9 24	...	...	...			
	Z	e	18 44	...	...	...			Z	e	10 5	...	...	...			
	NE	L	19	...	...	...			ZNE	eL	27	...	...	...			
	Z	L	24	...	...	...				F	8 20	...	...	...			
	N	M	24 18	17	+ 42	...			20*	Z	eP	12 12 51	...	...	...		
	E	M	28 1	15	- 20	...				Z	i	13 23	...	...	...		
	Z	M	29 56	13	+ 23	...				Z	i	14 52	...	...	...		
		F	13 5	...	...	...				Z	i	17 54	...	...	...		
2	ZNE	eL	10 31	...	...	...	Sicily. (Strasbourg.)		Z	i	23 5	...	...	...			
		F	11 5	...	...	...			Z	i	25 46	...	...	...			
2	ZN	iP	15 57 40	...	...	8550	Sea of Okhotsk. (Hukuoko.)	20*	Z	i	27 12	...	...	...	Destructive in Manila. 14° N., 122° E. (Manila.)		
	NE	eS	16 7 28	...	...	...			Z	i	34 28	...	...	...			
	ZNE	eL	23	...	...	...			Z	i	36 59	...	...	...			
	Z	M	37 7	20	+ 4	...			Z	i	38 13	...	...	...			
4/5	ZNE	iP	23 48 11	...	...	9170	Bay of Bengal. 10° N., 95° E. (Strasbourg.)	21	Z	e	38 49	...	...	...	Maximum exceeded limits of registration.		
	Z	ePP	51 46	...	...	...			Z	i	44 42	...	...	...			
	NE	iS	58 30	...	...	...			Z	L	47	...	...	...			
	NE	i	58 51	...	...	...			Z	M	13 0 7	19	>300	...			
	N	iPS	58 59	...	...	...				F	16 55	...	...	...			
	ZNE	eL	0 30	...	...	...					e	7 13	...	...		...	
5		F	1 25	...	...	...	New Guinea. 7° S., 149° E. (Strasbourg.)	21			F	8 10	...	...	Very small.		
	ZNE	e	15 2 50	...	...	...					e	11 20	...	...		Very small.	
	Z	i	5 3	...	...	...					F	12 15	...	...			
	ZNE	i	5 26	...	...	...											
	Z	i	7 2	...	...	...											

\* No records of horizontal components during standardisation, etc.

## SEISMOLOGICAL DIARY

Galitzin Seismographs, three components

546 KEW OBSERVATORY Lat. 51° 28' 6" N. Long. 0° 18' 47" W. Height above M.S.L. 5 metres

1937

Date	Compt.	Phase	G.M.T.	Period	Amplitude	Δ	Remarks	Date	Compt.	Phase	G.M.T.	Period	Amplitude	Δ	Remarks
Aug.			h. m. s.	s.	μ	km.		Sept.			h. m. s.	s.	μ	km.	
1/22	NE	e(S)	23 26 4	...	...	...	No "Z" record.	4	Z	iPKP	6 34 3	...	...	...	
	NE	eL	43	...	...	...	Japan. (Hukuoko.)		NE	eL	7 23	...	...	...	
		F	0 20	...	...	...			Z	eL	27	...	...	...	
				...	...	...			Z	M	39 12	20	+ 10	...	
22	Z	eP	11 40 59	...	...	5930				F	8 25	...	...	...	
	NE	eS	48 31	...	...	...		8	NE	i	0 11 59	...	...	...	From records of Wood-Anderson instruments. Very small, Felt around Horsham Sussex.
	Z	eSP	48 35	...	...	...				F	13	...	...	...	
	ZNE	eL	54	...	...	...						...	...	...	
		F	12 45	...	...	...						...	...	...	
23	Z	e(PP)	16 57 7	...	...	...	Very small.	8	Z	eP	0 54 49	...	...	12250	
	ZNE	eL	17 55	...	...	...			NE	i	1 4 43	...	...	...	
		F	19 15	...	...	...			NE	iSKS	5 41	...	...	...	
24	Z	iPKP <sub>1</sub>	18 47 34	...	...	(17000)	Dilatation. NE, e.		NE	eS	7 19	...	...	...	South Atlantic Ocean.
	Z	i	47 47	...	...	...			NE	i	8 15	...	...	...	55° S., 30° W.
	NE	i	47 54	...	...	...	Tonga Islands.		ZN	i	9 14	...	...	...	(Pasadena.)
	ZNE	iPKP <sub>2</sub>	48 18	...	...	...	(Pasadena.)		ZN	iPS	11 33	...	...	...	
	Z	i	48 56	...	...	...			N	i	11 33	...	...	...	
	Z	i	49 8	...	...	...			ZNE	eL	25	...	...	...	
	Z	eSKSP	19 1 53	...	...	...			E	M	32 46	19	- 19	...	
	N	eL	35	...	...	...			N	M	38 1	22	+ 16	...	
	ZE	eL	42	...	...	...			Z	M	40 31	18	- 13	...	
	Z	M	51 24	19	+ 6	...				F	3 30	...	...	...	
		F	21 25	...	...	...						...	...	...	
24	ZNE	eL	23 19	...	...	...		9		F	17 8	...	...	...	Very small.
		F	55	...	...	...					25	...	...	...	
26	ZNE	e	19 30	...	...	...	Japan.	15	E	iP	12 44 5	...	...	(15000)	Manihiki Islands.
	ZNE	eL	39	...	...	...	31° N., 131° E.		NE	iPP	49 34	...	...	...	9° S., 161° W.
	Z	M	48 47	24	+ 9	...	(Hukuoko.)		E	i	49 48	...	...	...	(U.S.C.G.S.)
		F	20 20	...	...	...			NE	iPKS	50 21	...	...	...	
31	Z	e(PKP)	2 48 17	...	...	...			E	iSS	13 6 22	...	...	...	
	ZNE	eL	3 40	...	...	...				F	13	...	...	...	
		F	4 50	...	...	...		15**	—	—	13 23 to	...	...	...	No records.
31	Z	iP	14 26 49	...	...	...	No records of horizontal components.				16 58	...	...	...	
	Z	eL	44	...	...	...	Upper Burma.	16	ZE	iP	0 0 57	...	...	8900	
	Z	M	15 2 19	20	- 20	...	25° N., 96° E.		E	i	7 50	...	...	...	
		F	16 45	...	...	...	(Bombay.)		NE	iS	10 44	...	...	...	Pacific Ocean near Guatemala.
Sept. 1	Z	iPKP <sub>1</sub>	8 58 42	...	...	17500	Compression.		E	iS <sub>2</sub> S	10 57	...	...	...	14° N., 92° W.
	Z	i	58 54	...	...	...			E	iSP	11 13	...	...	...	(J.S.A.)
	Z	iPKP <sub>2</sub>	59 26	...	...	...	By path of greater deviation. Kermadec Islands.	16†			11 41	...	...	...	Depth of focus about 100 km.
	Z	i	59 38	...	...	...			N	eL	22	...	...	...	
	Z	iPP	9 3 6	...	...	...			ZE	eL	27	...	...	...	
	Z	e	21 6	...	...	...			N	M	41 21	16	+ 10	...	
	N	eL	46	...	...	...				F	1 15	...	...	...	
	ZE	eL	52	...	...	...		16†	—	—	8 25 to	...	...	...	No records.
	N	M	10 10 23	21	+ 12	...					17 38	...	...	...	
	Z	M	10 28	21	- 20	...					8 20 to	...	...	...	No records.
		F	11 20	...	...	...					16 25	...	...	...	
1		e	18 45	...	...	...	Japan. (Hukuoko.)	17†	—	—	8 20 to	...	...	...	No records.
		F	55	...	...	...					12 53	...	...	...	
1	ZNE	eL	23 5	...	...	...		18†	—	—	8 20 to	...	...	...	No records.
		F	50	...	...	...					16 3	...	...	...	
3	Z	iP	18 59 56	...	...	8300	Dilatation. NE, e.	20†	—	—	8 38 to	...	...	...	No records.
	ZN	iP <sub>2</sub> P	19 0 16	...	...	...					16 3	...	...	...	
	ZNE	iP <sub>2</sub> P	0 30	...	...	...					10 6	...	...	...	Celebes.
	ZN	iSP	0 53	...	...	...	Aleutian Islands.				11 40	...	...	...	4° N., 125° E.
	ZNE	iPPP	5 12	...	...	...	52° N., 177° W.					...	...	...	(Bombay.)
	NE	iS	9 36	...	...	...	(U.S.C.G.S.)					...	...	...	
	E	iSP	9 54	...	...	...	Focal depth about 170 km.	23	ZNE	iPKP	13 25 9	...	...	14500	Dilatation.
	Z	iSP	10 29	...	...	...			ZNE	iPP	27 18	...	...	...	Solomon Islands.
	Z	iS	10 43	...	...	...			NE	i	27 39	...	...	...	7° S., 154° E.
	ZNE	iSP	10 59	...	...	...			NE	iPKS	28 33	...	...	...	(J.S.A.)
	N	iSS	15 27	...	...	...			ZNE	i	28 41	...	...	...	
	E	eL	21	...	...	...			ZNE	L	14 6	...	...	...	
	N	M	25 23	34	+ 71	...			N	M	15 54	27	- 35	...	
	ZN	iL	25 27	...	...	...	Very large.			F	16 45	...	...	...	
	Z	M	25 36	38	- 130	...		24†	—	—	10 30 to	...	...	...	No records.
	E	M	29 19	30	+ 54	...					12 0	...	...	...	
	N	M	35 59	23	+ 47	...						...	...	...	
	Z	M	36 17	24	+ 54	...						...	...	...	
	Z	eL <sub>2</sub>	21 2	...	...	...	Via antipodes.	25	ZNE	iP	4 33 57	...	...	2000	Compression. Azimuth slightly south of west.
		F	22 15	...	...	...			ZNE	iS	37 20	...	...	...	North of the Azores.
				...	...	...			ZNE	L	38	...	...	...	45° N., 25° W.
				...	...	...			N	M	39 33	11	+ 23	...	(Strasbourg.)
				...	...	...			Z	M	40 42	11	- 36	...	
				...	...	...				F	5 25	...	...	...	

\*\* Removal of Z seismograph to new underground house.

† Adjustment and standardisation of Galitzin instruments.

## SEISMOLOGICAL DIARY

Galitzin Seismographs, three components

546 KEW OBSERVATORY

Lat. 51° 28' 6" N. Long. 0° 18' 47" W. Height above M.S.L. 5 metres

1937

Date	Compt.	Phase	G.M.T.	Period	Amplitude	Δ	Remarks	Date	Compt.	Phase	G.M.T.	Period	Amplitude	Δ	Remarks			
			h. m. s.	s.	μ	km.					h. m. s.	s.	μ	km.				
Sept. 27	NE	iSKS	9 20 16	...	...	12000	Tabulations from Wood - Anderson records. Galitzin instruments under adjustment Destructive in Java. 7° S., 110° E. (Strasbourg.)	Oct. 26		e	0 1	...	...	...	Very small. South of Kamtchatka. 48° N., 154° E. (Pasadena.)			
	NE	iS	21 11	...	...	...				F	20	...	...	...				
	NE	eL	48	...	...	...						...	...	...				
		F	11 45	...	...	...							...	...		...		
27	NE	e	20 45	...	...	...	Very small.	Nov. 10		e	7 50	...	...	...	Bokhara. 39° N., 69° E. (Strasbourg.)			
		F	55	...	...	...				F	8 15	...	...	...				
28	NE	eS	6 43	...	...	...	Pacific Ocean near Guatemala. 14° N., 92° W. (J.S.A.)	Nov. 11	ZNE	eL	0 35	...	...	...	Arabian Sea. 23° N., 62° E. (Bombay.)			
	ZNE	eL	58	...	...	...				F	1 20	...	...	...				
	E	M	7 6 35	38	+18	...							...	...		...		
		F	50	...	...	...					...	...	...					
28	ZNE	eL	19 1	...	...	...		Nov. 13	ZNE	eL	10 25	...	...	...				
		F	35	...	...	...				F	11 40	...	...	...				
29	ZNE	e	12 1	...	...	...	Pacific Ocean near Columbia. 50° N., 130° W. (Pasadena.)	Nov. 14	Z	iP	11 6 56	...	...	5700	NE, e. Compression. Destructive in Chitral, North-west India. 36.5° N., 70.5° E., with focal depth 220 km. (Strasbourg.)			
		L	9	...	...	...			ZE	iPcP	8 12	...	...	...				
		F	25	...	...	...			ZN	iPP	8 56	...	...	...				
				...	...	...			NE	iS	13 56	...	...	...				
30	ZNE	eL	22 58	...	...	...	South Pacific Ocean. (Pasadena.)	Nov. 14	N	iScS	16 20	...	...	...				
		F	23 25	...	...	...				N	eSS	17 45	...	...		...		
Oct. 1		e	16 22	...	...	...	Very small.	Nov. 15	NE	e(S)	21 55	...	...	...	No "Z" record. North-western Tibet. 35° N., 82° E. (Strasbourg.)			
		F	35	...	...	...					eL	22 7	...	...		...		
1	ZNE	eL	20 38	...	...	...			N	M	10 27	13	+13	...				
		F	21 35	...	...	...				F	55	...	...	...				
5	NE	eL	6 58	...	...	...	Gulf of California. 22° N., 108° W. (U.S.C.G.S.)	Nov. 18		e	3 53	...	...	...				
	Z	eL	7 3	...	...	...				F	4 20	...	...	...				
		F	40	...	...	...					...	...	...	...				
6	—	—	9 36 to 11 40	...	...	...	No records.	Nov. 21	ZNE	L	19 39	...	...	...	Felt in Santa Maria, Azores. 37° N., 25° W. (Strasbourg.)			
				...	...	...				F	55	...	...	...				
6	ZNE	ePP	17 26 20	...	...	14000	New Guinea. 10° S., 150° E. (Strasbourg.)	Nov. 26	ZNE	eL	11 27	...	...	...	China. 27° N., 122° E. (Bombay.)			
	NE	iPKS	27 22	...	...	...					F	12 0	...	...		...		
	NE	eL	18 2	...	...	...								...		...	...	
	Z	eL	13	...	...	...								...		...	...	
		F	19 50	...	...	...					...	...	...					
9	ZNE	eL	19 25	...	...	...	Very small.	Nov. 27	ZNE	eL	14 30	...	...	...				
		F	50	...	...	...				F	15 10	...	...	...				
11	ZNE	eL	22 22	...	...	...	South America. (Pasadena.)	Nov. 28	NE	eL	6 15	...	...	...	No "Z" record. Near Sumatra. 2° S., 97° E. (Bombay.)			
		F	50	...	...	...				F	7 0	...	...	...				
12	ZNE	eL	16 35	...	...	...	Central America. (Pasadena.)	Nov. 30	N	iS	1 3 43	...	...	...	Indian Ocean. 5° N., 90° E. (Strasbourg.)			
		F	17 10	...	...	...					eL	21	...	...		...		
12	ZE	eP	21 4 20	...	...	10500	Northern Chile. 24° S., 68° W. (Pasadena.) Depth of focus about 120 km. Japan. 36° N., 141° E. (Strasbourg.)	Nov. 30	Z	eL	30	...	...	...	Eastern Abyssinia. 7° N., 45° E. (Strasbourg.)			
	ZE	iPP	4 46	...	...	...						M	41 11	18		+10	...	
	NE	iSKS	14 46	...	...	...						F	2 15	...		...	...	
	N	iS	15 36	...	...	...										...	...	...
	NE	eL	30	...	...	...						ZE	eP	13 7 31		...	...	6200
	Z	eL	40	...	...	...							i	7 58		...	...	...
		F	22 15	...	...	...			N	iS	15 18	...	...	...				
17	ZNE	iP	4 59 48	...	...	9400	Japan. 36° N., 141° E. (Strasbourg.)	Nov. 30	ZNE	L	23	...	...	...				
	ZNE	eSKS	5 10 11	...	...	...						N	M	32 42		16	+ 29	
	NE	eL	29	...	...	...						Z	M	32 44		16	+ 21	
	Z	eL	36	...	...	...							F	14 25		...	...	
		M	39 36	23	-13	...					...	...	...					
		F	6 25	...	...	...		Dec. 4	—	—	11 8 to 13 8	...	...	...	No records.			
20		e	1 53	...	...	...	Felt in northern India. 30° N., 78° E. (Bombay.)	Dec. 8	Z	iP	8 45 9	...	...	9800	Observations of N and E from Wood-Anderson instruments. Horizontal Galitzin instruments not recording. Destructive in Formosa. 23.2° N., 121.3° E. (Taihoku.)			
		F	2 20	...	...	...					i	45 24	...	...		...		
23	ZNE	eL	18 21	...	...	...	Felt in New Zealand. 38° S., 179° E. (Strasbourg.)	Dec. 8	NE	iPP	48 46	...	...	...				
		F	19 0	...	...	...						eL	9 15	...		...	...	
24	ZNE	eL	12 0	...	...	...	Alaska. 62° N., 150° W. (U.S.C.G.S.)	Dec. 8	Z	L	22	...	...	...				
		F	30	...	...	...						M	30 24	16		+ 99		
				...	...	...				F	10 30	...	...	...				
25		e	12 0	...	...	...	Very small. Felt in New Zealand. Repetition from Oct. 23d. 18h.	Dec. 8	—	—	14 47 to 16 55	...	...	...	No records.			
		F	25	...	...	...						...	...	...				

## SEISMOLOGICAL DIARY

Galitzin Seismographs, three components

546 KEW OBSERVATORY

Lat. 51° 28' 6" N. Long. 0° 18' 47" W. Height above M.S.L. 5 metres

1937

Date	Compt.	Phase	G.M.T.	Period	Amplitude	Δ	Remarks	Date	Compt.	Phase	G.M.T.	Period	Amplitude	Δ	Remarks	
			h. m. s.	s.	μ	km.					h. m. s.	s.	μ	km.		
Dec. 8	ZN	eL F	21 27 55	...	...	...	No "E-W" record. Repetition of the shock at 8d. 8h.	Dec. 23	ZNE ZNE NE Z ZN E Z E NE ZNE Z N E Z	iP i iPP iS i iPS iPPS i iSS L i L M M M F	13 30 20... 30 33 33 30 40 42 40 53 41 5 41 15 41 37 45 14 45 54 49 53 34 56 14 5 14 5 27 5 33 16 45	...	...	...	9230	Compression. Amplitudes of iP as read in mm:— Z N E +4.8 (-0.7) +2.7 Azimuth about West by North. Destructive in Mexico. 15° N., 98° W. (U.S.C.G.S.)
10		e F	14 9 — —	...	...	...		24		e F	0 2 20	...	...	...	...	Repetition of preceding shock
10	—	—	14 30 to 16 51	...	...	...	No records.	24	E E ZNE N ZE E Z	e eSKS iS eL eL M M F	6 36 11 44 2 44 28 58 7 3 9 38 9 52 8 15	...	...	...	10000	Confused by micro-seisms. Destructive in Peru. 10° S., 76° W. (U.S.C.G.S.)
10	ZNE E ZNE ZE E N	i(S) i i i M i F	18 8 6 8 44 9 6 10 50 10 51 11 13 15	...	...	...	Confused by micro-seisms. Northern Italy. Possibly L.	25	ZNE	eL F	10 28 55	...	...	...	...	
13	—	—	9 12 to 16 11	...	...	...	No records.	26	NE	eL F	22 27 23 5	...	...	...	...	
13	E NE ZNE NE NE E ZNE E Z	iSKS iS ePS e eL <sub>Q</sub> L <sub>R</sub> M M F	19 17 21 17 57 19 5 30 35 35 43 15 44 48 36 52 18 20 40	...	...	...	South of Formosa. 23° N., 120° E. (Strasbourg.)	27	ZNE	eL F	0 21 50	...	...	...	...	
13	ZNE	eL F	23 12 45	...	...	...		28		e F	3 55 4 35	...	...	...	...	
14	—	—	9 55 to 16 50	...	...	...	No records.	28	ZNE Z N ZE E NE ZNE Z N E	iP ePP iS i iS <sub>Q</sub> e L M M M F	6 29 8 31 6 36 58 37 8 39 7 43 22 45 46 38 47 33 47 46 8 5	...	...	...	6250	Dilatation. Atlantic Ocean.  1° N., 28° W. (U.S.C.G.S.)
16	E NE NE E	iP iS L M F	17 40 35 44 42 49 51 7 18 0	...	...	...	No "Z" record. Ionian Sea. 36° N., 21° E. (Athens.)	30	E E N E E NE	e i i i i F	2 13 12 13 45 13 52 14 7 14 26 14 37 16	...	...	...	...	Near Alicante, Spain. (San Fernando.)
17		e F	9 50 — —	...	...	...	Felt in Formosa.	30	—	—	10 28 to 13 4	...	...	...	...	No records.
17	—	—	10 15 to 16 50	...	...	...	No records.	31	ZE Z NE ZNE	iP iPP iS eL F	17 53 45 56 56 18 4 9 20 19 15	...	...	...	9280	Compression. Pacific Ocean south of Mexico. 15° N., 98° W. (Strasbourg.)
18	ZE Z E NE NE N E ZNE N E Z	iP i iPP iS iSS L <sub>Q</sub> M M L <sub>R</sub> M M M F	13 26 38 27 29 28 34 33 40 37 27 44 45 55 45 55 46 48 52 48 52 48 54 14 25	...	...	...	Compression. Turkestan. 41° N., 73° E. (Strasbourg)					...	...	...	...	
18	ZNE Z E NE Z E	eP iSKS L L M F	3 50 16 4 0 41 17 22 26 18 5 10	...	...	...	Confused by micro-seisms. Pacific Ocean near Mexico. 17° N., 106° W. (U.S.C.G.S.)					...	...	...	...	

MICROSEISMS OF VERTICAL COMPONENT: AMPLITUDE ( $\mu = .001$  mm.) AND PERIOD (seconds)  
 Derived from readings for the period of thirty minutes centring at the exact hours, Greenwich Mean Time

547 KEW OBSERVATORY:

1937

Month	JANUARY								FEBRUARY								MARCH							
	0h		6h		12h		18h		0h		6h		12h		18h		0h		6h		12h		18h	
	A	Tp	A	Tp	A	Tp	A	Tp	A	Tp	A	Tp	A	Tp	A	Tp	A	Tp	A	Tp	A	Tp	A	Tp
Day	$\mu$	s	$\mu$	s	$\mu$	s	$\mu$	s	$\mu$	s	$\mu$	s	$\mu$	s	$\mu$	s	$\mu$	s	$\mu$	s	$\mu$	s	$\mu$	s
1	3.0	6.7	2.1	7.5	2.2	7.3	1.6	7.0	1.2	6.3	1.6	6.0	1.5	5.7	1.3	5.8	2.3	6.3	2.5	6.5	3.1	7.0	2.2	6.7
2	2.0	6.5	2.2	6.5	2.4	6.7	2.5	6.7	1.1	5.8	0.8	6.7	1.2	7.0	1.1	7.5	2.6	6.5	3.3	7.0	3.1	6.7	3.3	6.7
3	1.7	6.5	2.2	7.0	3.0	6.7	3.0	6.7	1.2	6.7	1.0	6.0	1.3	7.3	1.7	7.8	2.1	6.3	1.9	5.7	2.1	6.0	1.6	6.5
4	2.6	7.0	3.3	7.0	3.0	7.3	4.8	8.3	2.1	7.7	2.1	7.7	2.1	7.5	2.1	6.7	1.6	6.0	1.3	5.7	1.1	5.0	1.1	5.7
5	4.9	9.0	4.9	8.3	4.0	8.0	2.5	7.5	2.3	6.5	2.3	5.8	3.2	5.6	2.8	6.0	0.8	5.0	0.8	6.0	0.9	4.8	0.6	4.6
6	1.9	7.7	2.2	6.7	2.9	6.7	3.1	6.7	2.0	6.0	1.9	6.0	2.0	5.2	1.6	5.0	0.3	5.7	0.3	5.4	0.5	7.5	0.4	8.0
7	3.3	6.5	3.5	7.0	3.2	6.5	2.4	6.3	1.7	4.8	1.1	5.0	0.9	5.6	1.1	4.8	0.4	7.7	0.9	4.5	0.7	4.0	0.7	4.3
8	2.0	6.0	1.3	6.0	1.3	6.3	1.5	5.8	0.9	5.4	1.4	5.4	1.4	4.7	1.4	5.0	0.9	4.8	0.9	4.2	1.4	4.5	1.0	5.4
9	1.2	6.0	2.1	6.0	3.4	6.3	2.1	6.3	1.8	6.0	2.1	6.3	2.2	6.0	2.7	4.8	1.1	5.2	1.0	5.0	0.8	5.8	1.1	6.3
10	2.1	6.3	1.5	6.7	2.2	6.7	2.3	6.5	2.1	6.0	1.5	5.4	1.3	5.8	1.0	5.6	1.3	7.0	1.2	6.5	1.1	6.3	0.9	6.0
11	2.9	6.7	3.0	7.0	3.5	6.7	3.8	7.0	0.9	5.6	0.8	5.2	1.0	5.0	0.7	5.0	1.0	6.5	1.1	6.0	1.6	5.0	1.8	5.2
12	3.3	7.0	5.1	7.3	3.5	7.5	3.4	7.3	0.9	4.5	0.6	6.0	0.6	4.8	0.6	4.8	1.8	5.6	1.5	5.6	1.5	5.8	1.6	6.0
13	3.5	7.3	4.3	6.5	4.0	6.7	3.8	6.7	0.5	5.2	0.6	5.0	0.7	5.8	0.8	6.0	0.9	6.0	0.9	5.6	1.0	5.6	0.9	4.8
14	3.1	7.3	3.3	6.7	2.7	6.5	3.2	6.5	1.8	5.7	2.2	7.0	3.2	6.7	2.8	6.5	1.3	5.2	2.4	5.0	2.5	5.0	1.2	5.7
15	3.0	7.3	3.3	6.5	5.2	7.0	4.0	7.3	2.4	7.0	2.3	7.0	3.0	6.7	2.1	6.9	1.2	5.0	1.3	5.7	0.8	5.2	1.0	5.8
16	4.8	7.5	4.1	7.3	5.0	8.7	4.2	7.7	2.5	7.0	2.7	6.7	3.9	7.0	5.9	8.0	1.1	5.6	1.3	5.4	2.0	5.4	1.9	5.2
17	3.6	8.0	3.1	8.0	2.7	5.7	1.2	6.7	6.2	7.7	4.0	7.5	3.3	7.5	2.5	7.7	2.6	5.4	2.2	5.8	2.8	6.7	2.1	6.5
18	1.7	6.3	1.6	5.4	2.7	5.8	2.4	6.3	1.2	7.7	0.8	7.3	1.2	6.7	1.6	6.3	1.9	6.3	1.9	6.3	1.2	6.3	1.0	5.4
19	2.5	5.7	3.2	5.7	3.0	6.3	4.2	6.7	2.5	6.7	2.6	6.3	2.4	6.7	1.8	6.7	0.9	4.8	0.7	4.8	1.2	5.0	1.0	5.0
20	3.8	7.0	3.7	7.5	3.8	6.7	4.1	6.7	2.7	6.5	3.3	7.0	2.9	7.5	2.1	7.0	0.6	4.8	0.4	4.8	0.4	5.0	0.4	4.8
21	4.8	7.5	5.1	7.0	5.7	7.0	5.5	6.7	2.6	6.5	1.3	6.7	1.3	6.0	1.3	5.5	0.5	4.6	0.4	4.3	0.6	5.0	0.5	5.0
22	4.8	6.5	5.2	6.5	4.5	6.7	5.1	6.7	1.3	5.0	0.8	5.7	1.0	5.0	0.8	5.2	0.4	6.3	0.6	5.6	0.7	5.6	0.6	5.2
23	3.9	7.0	4.4	6.7	4.1	7.5	4.3	7.0	0.7	5.6	0.8	5.4	1.0	6.0	1.0	5.8	0.8	5.6	0.6	5.6	0.5	5.0	0.4	4.8
24	5.7	7.7	4.5	7.3	5.7	7.7	5.7	6.7	1.2	5.2	1.3	6.0	2.0	5.8	2.0	5.8	0.4	5.0	0.4	4.8	0.4	5.0	0.6	5.7
25	5.3	7.3	6.8	7.5	6.0	7.5	7.9	7.3	2.5	5.4	2.4	5.7	2.2	5.6	2.4	6.0	0.8	6.3	1.1	5.7	1.0	5.6	0.7	5.2
26	7.3	7.0	5.9	7.7	4.1	8.3	4.2	6.7	3.3	5.6	2.9	5.6	2.7	5.7	2.5	5.4	0.5	5.4	0.5	5.0	0.5	6.3	0.8	6.0
27	4.2	7.5	3.5	7.3	3.7	7.3	2.8	7.0	3.1	6.3	4.0	5.7	3.4	6.3	3.5	6.5	0.7	6.5	0.5	5.8	0.4	6.0	0.6	6.0
28	3.1	6.3	2.9	5.8	3.4	5.2	3.3	5.7	3.2	7.0	3.3	6.3	2.5	6.7	2.9	6.7	0.5	5.0	0.5	4.8	0.5	5.0	0.5	4.8
29	2.7	6.0	3.0	5.6	2.4	5.0	2.5	5.4	3.2	7.0	3.3	6.3	2.5	6.7	2.9	6.7	0.4	6.7	0.4	6.0	0.3	5.7	0.5	6.3
30	2.1	5.2	2.5	5.2	1.8	5.4	2.5	5.8									0.7	5.4	0.9	6.0	1.7	5.8	2.2	6.5
31	2.0	5.2	2.4	6.0	3.0	6.3	1.9	6.5									2.5	6.7	2.5	6.7	2.4	7.0	2.5	7.3
Mean	3.3	6.8	3.4	6.7	3.5	6.8	3.4	6.7	2.0	6.1	1.9	6.1	2.0	6.1	1.9	6.1	1.1	5.8	1.2	5.5	1.3	5.6	1.1	5.7
Mean for Days	A = 3.4 $\mu$ ; Tp = 6.8s								A = 1.9 $\mu$ ; Tp = 6.1s								A = 1.2 $\mu$ ; Tp = 5.7s							
Month	APRIL								MAY								JUNE							
Hour G.M.T.	0h		6h		12h		18h		0h		6h		12h		18h		0h		6h		12h		18h	
Day	A	Tp	A	Tp	A	Tp	A	Tp	A	Tp	A	Tp	A	Tp	A	Tp	A	Tp	A	Tp	A	Tp	A	Tp
1	2.5	6.7	1.4	6.7	1.3	6.5	1.1	7.0	0.1	5.2	0.2	5.0	0.4	5.0	0.3	5.4	0.4	5.0	0.4	5.2	0.2	4.8	0.3	4.6
2	0.9	6.5	1.0	4.6	1.3	5.4	1.3	5.2	0.4	5.0	0.4	5.2	0.5	5.0	0.7	6.0	0.2	4.8	0.4	5.2	0.4	5.2	0.6	5.4
3	1.0	5.4	0.8	5.2	0.8	5.4	0.8	5.8	0.7	5.8	0.7	6.3	0.5	5.0	0.6	5.2	0.8	5.2	0.7	5.2	0.9	5.2	1.0	5.0
4	0.9	6.7	1.0	6.7	0.6	7.3	0.8	7.0	0.6	5.4	0.6	5.8	0.6	5.6	0.5	5.4	0.9	4.8	0.7	4.8	0.6	4.8	0.4	4.6
5	0.6	7.3	1.0	8.3	2.2	8.3	2.1	9.0	0.4	5.2	0.4	4.8	0.2	4.7	0.2	4.8	0.3	4.3	0.2	4.7	0.3	4.5	0.1	5.0
6	2.3	9.0	2.2	8.0	1.2	7.3	1.9	7.5	0.2	4.8	0.3	4.0	0.3	4.3	0.3	4.5	0.1	4.5	0.1	4.5	0.1	4.6	0.3	4.6
7	1.0	8.0	0.9	6.7	0.9	6.5	1.0	7.3	0.4	4.6	0.3	4.5	0.3	4.6	0.2	4.7	0.1	4.5	0.2	4.7	0.2	4.8	0.2	4.8
8	1.1	7.0	1.3	6.7	1.2	6.3	0.9	5.7	0.2	4.7	0.1	4.3	0.2	4.7	0.1	4.3	0.2	4.7	0.2	4.7	0.2	4.7	0.2	5.0
9	0.8	6.5	0.9	6.3	0.5	5.2	0.5	5.4	0.1	4.5	0.1	4.6	0.3	6.7	0.6	6.7	0.2	5.0	0.2	4.8	0.2	4.7	0.3	4.5
10	0.4	4.3	0.5	4.6	0.5	4.7	0.5	4.6	0.8	6.7	0.8	6.5	0.8	6.5	0.7	7.3	0.3	4.6	0.1	4.8	0.4	4.7	0.2	4.7
11	0.6	4.8	0.7	4.6	0.5	5.0	0.5	4.8	0.4	6.7	0.4	6.5	0.8	4.0	0.5	4.3	0.3	4.5	0.3	4.5	0.3	4.3	0.1	4.5
12	0.5	4.8	0.5	5.2	0.5	5.3	0.5	5.4	0.4	4.2	0.3	4.6	0.2	4.7	0.1	5.0	0.1	4.3	0.1	4.0	0.1	3.8	0.1	3.8
13	0.5	5.2	0.5	5.7	0.6	5.2	0.5	5.5	0.1	4.7	0.1	4.5	0.1	3.6	0.1	4.2	0.1	4.0	0.1	4.0	0.1	4.0	0.1	3.8
14	0.3	5.7	0.5	5.7	1.2	8.0	1.6	7.7	0.1	4.0	0.3	3.9	0.4	4.2	0.4	4.0	0.1	3.8	0.1	4.3	0.1	4.0	0.1	4.6
15	1.7	7.7	1.3	7.0	1.3	7.0	1.2	6.7	0.4	4.0	0.1	3.7	0.1	4.3	0.1	3.7	0.1	4.6	0.1	4.5	0.1	4.8	0.1	4.3
16	1.2	6.5	1.1	6.3	1.0	6.0	1.1	5.2	0.1	4.0	0.1	4.0	0.1	4.5	0.1	5.0	0.1	4.5	0.1	4.6	0.1	4.6	0.1	4.7
17	1.4	5.4	1.1	6.3	1.1	5.7																		

Month	JULY								AUGUST								SEPTEMBER							
	0h		6h		12h		18h		0h		6h		12h		18h		0h		6h		12h		18h	
	A	Tp	A	Tp	A	Tp	A	Tp	A	Tp	A	Tp	A	Tp	A	Tp	A	Tp	A	Tp	A	Tp	A	Tp
Day	$\mu$	s	$\mu$	s	$\mu$	s	$\mu$	s	$\mu$	s	$\mu$	s	$\mu$	s	$\mu$	s	$\mu$	s	$\mu$	s	$\mu$	s	$\mu$	s
1	0.2	4.8	0.3	4.3	0.3	4.2	0.1	4.2	0.1	4.8	0.1	4.5	0.1	4.6	0.1	4.5	0.4	4.8	0.5	5.4	0.5	5.0	0.7	5.4
2	0.1	4.6	0.1	4.3	0.1	4.2	0.1	4.2	0.1	4.6	0.1	4.8	0.1	4.6	0.1	4.8	0.9	6.3	1.2	6.7	1.2	6.7	1.1	6.5
3	0.3	4.3	0.3	4.2	0.4	4.8	0.4	5.0	0.1	4.3	0.1	5.0	0.3	4.6	0.2	4.8	0.9	5.8	1.1	6.7	1.1	6.3	1.3	6.3
4	0.5	4.3	0.5	5.0	0.5	4.3	0.4	4.6	0.1	4.7	0.1	4.7	0.1	4.7	0.1	4.8	1.1	6.5	1.0	6.3	0.9	6.0	0.8	5.8
5	0.2	5.0	0.2	4.8	0.2	5.0	0.2	5.2	0.1	4.8	0.1	4.5	0.1	5.0	0.1	5.0	0.6	5.0	0.5	5.2	0.5	5.0	0.4	4.8
6	0.2	5.0	0.2	5.0	0.2	4.8	0.3	4.6	0.1	5.2	0.1	5.0	0.1	4.6	0.1	4.7	0.4	4.5	0.4	5.0	0.4	5.0	0.4	5.0
7	0.3	4.6	0.3	4.5	0.3	4.6	0.2	4.8	0.1	4.5	0.1	4.5	0.1	4.5	0.1	4.5	0.9	7.3	1.6	6.5	1.7	6.3	1.2	7.0
8	0.1	4.6	0.1	4.3	0.1	4.5	0.1	4.2	0.1	4.5	0.1	4.5	0.1	4.3	0.1	4.3	1.0	6.3	0.9	6.0	1.0	5.6	1.0	5.8
9	0.1	4.7	0.1	4.5	0.1	4.3	0.1	4.2	0.1	4.3	0.1	4.3	0.3	4.3	0.1	4.6	0.9	5.7	0.9	6.0	1.0	6.0	0.8	5.6
10	0.1	4.3	0.1	4.2	0.1	3.4	0.1	3.7	0.1	4.5	0.1	4.6	0.1	4.3	0.1	4.3	0.8	6.0	0.9	6.3	0.9	6.3	1.0	6.3
11	0.1	4.0	0.1	3.6	0.4	5.2	0.2	5.2	0.1	4.3	0.1	4.6	0.1	4.8	0.1	4.3	1.0	6.5	1.1	5.6	1.1	5.8	0.9	5.2
12	0.2	5.0	0.1	4.6	0.1	3.6	0.1	3.7	0.1	4.6	0.1	4.3	0.3	4.6	0.1	5.0	1.0	5.8	0.7	5.4	0.8	5.4	0.9	7.0
13	0.1	4.2	0.2	4.8	0.3	4.6	0.2	5.0	0.1	5.0	0.1	4.6	0.2	5.0	0.3	5.4	1.0	6.3	1.1	6.5	0.9	6.0	0.8	5.6
14	0.2	4.8	0.3	4.6	0.2	4.8	0.3	4.6	0.3	5.6	0.5	5.6	0.6	5.8	0.6	5.6	0.7	5.4	0.6	5.6	0.6	5.8	0.7	5.7
15	0.3	4.5	0.3	4.5	0.3	4.5	0.2	4.7	0.6	5.6	0.6	5.6	0.4	5.8	0.6	6.0	0.6	5.4	0.8	5.6	1.1	6.5	1.7	6.5
16	0.1	4.5	0.1	4.6	0.4	2.7	0.3	2.9	0.3	5.4	0.3	5.4	0.2	5.0	0.4	4.2	2.1	6.5	2.1	7.0	1.6	7.0	1.2	7.0
17	0.3	3.3	0.1	4.3	0.1	4.0	0.1	4.2	0.3	3.8	0.4	4.6	0.4	4.8	0.4	4.8	1.1	6.7	1.0	6.7	2.0	7.0	1.7	7.0
18	0.1	4.6	0.3	4.5	0.3	7.0	0.5	6.3	0.4	4.5	0.2	4.8	0.2	4.7	0.2	4.7	1.3	6.3	0.7	6.5	0.6	4.3	0.6	4.3
19	0.8	6.5	0.8	6.0	0.6	6.0	0.5	5.4	0.3	4.6	0.2	4.7	0.4	4.8	0.4	4.3	0.6	3.8	0.6	3.8	0.4	2.9	0.6	4.2
20	0.4	5.2	0.2	5.4	0.2	4.8	0.2	4.8	0.4	4.3	0.2	4.7	0.3	4.5	0.5	4.5	0.6	3.8	0.6	4.0	0.6	4.0	0.9	4.2
21	0.4	4.8	0.4	4.6	0.4	4.6	0.5	5.0	0.4	4.2	0.4	3.9	0.3	3.8	0.1	3.7	0.9	4.2	0.6	4.3	0.9	4.3	0.6	4.3
22	0.6	5.8	0.6	5.6	0.5	5.4	0.3	5.3	0.1	4.3	0.1	4.0	0.1	4.0	0.1	4.3	0.8	6.0	1.0	6.3	1.5	6.5	0.7	6.7
23	0.2	5.2	0.3	3.6	0.3	3.3	0.3	3.6	0.1	4.8	0.2	4.8	0.2	5.4	0.2	5.0	0.7	6.7	0.5	5.7	0.5	5.0	0.6	4.8
24	0.3	3.8	0.3	3.4	0.3	3.3	0.1	3.4	0.3	6.7	0.3	6.0	0.4	6.0	0.5	5.4	0.5	5.4	0.3	4.2	0.8	5.0	1.1	5.4
25	0.2	3.1	0.2	3.0	0.2	2.9	0.1	3.6	0.5	3.4	0.7	5.2	0.7	5.6	0.7	5.6	0.5	5.4	1.3	5.6	2.1	5.6	2.3	5.6
26	0.1	4.2	0.1	3.8	0.3	4.3	0.4	4.3	0.6	5.6	0.6	5.5	0.6	5.4	0.6	5.2	1.1	5.4	1.1	5.0	0.8	5.4	1.6	5.6
27	0.3	4.5	0.3	4.5	0.3	4.3	0.2	4.8	0.5	5.0	0.5	5.0	0.5	5.2	0.6	5.2	2.0	6.3	1.3	5.2	1.8	6.0	0.5	5.6
28	0.4	4.8	0.4	4.8	0.5	4.5	0.5	4.7	0.6	5.4	0.5	5.4	0.5	5.6	0.4	4.8	0.3	6.0	0.2	6.5	0.3	5.6	0.3	4.8
29	0.4	4.7	0.4	4.5	0.3	4.6	0.3	4.5	0.2	4.8	0.1	4.6	0.3	4.5	0.1	5.0	0.5	6.5	0.5	6.5	0.5	7.0	1.0	6.5
30	0.1	4.3	0.1	4.3	0.1	4.6	0.1	4.0	0.3	4.3	0.1	4.5	0.1	4.3	0.1	5.0	0.5	6.7	0.7	8.0	3.0	8.7	2.7	8.0
31	0.1	3.8	0.1	3.9	0.1	4.5	0.1	4.7	0.1	5.0	0.1	5.0	0.2	5.0	0.2	4.8								
Mean	0.3	4.6	0.3	4.5	0.3	4.4	0.2	4.5	0.3	4.8	0.2	4.8	0.3	4.8	0.3	4.8	0.9	5.8	0.9	5.8	1.0	5.7	1.0	5.7
Mean for Days	A = 0.3 $\mu$ ; Tp = 4.5s								A = 0.3 $\mu$ ; Tp = 4.8s								A = 0.9 $\mu$ ; Tp = 5.8s							
Month	OCTOBER								NOVEMBER								DECEMBER							
Hour G.M.T.	0h		6h		12h		18h		0h		6h		12h		18h		0h		6h		12h		18h	
	A	Tp	A	Tp	A	Tp	A	Tp	A	Tp	A	Tp	A	Tp	A	Tp	A	Tp	A	Tp	A	Tp	A	Tp
Day	$\mu$	s	$\mu$	s	$\mu$	s	$\mu$	s	$\mu$	s	$\mu$	s	$\mu$	s	$\mu$	s	$\mu$	s	$\mu$	s	$\mu$	s	$\mu$	s
1	2.7	7.7	2.7	8.0	2.5	8.0	2.0	8.3	0.3	4.5	0.3	5.3	0.3	5.6	0.5	6.5	0.3	5.0	0.2	6.5	0.8	6.0	1.1	5.4
2	1.7	6.7	1.7	6.3	1.2	6.7	1.7	8.0	0.7	7.0	0.7	7.5	1.2	6.7	1.2	7.0	0.8	5.0	1.3	5.2	1.0	7.5	1.3	6.0
3	2.0	7.0	1.7	7.3	1.7	8.3	1.7	7.7	1.0	7.3	0.7	6.7	1.0	8.0	1.5	7.0	1.0	5.7	0.5	5.5	0.5	5.5	0.3	5.7
4	2.2	7.7	2.2	7.0	2.2	7.0	1.7	6.7	2.2	7.0	1.5	7.3	1.3	6.0	1.3	5.6	0.3	5.2	0.3	5.4	...	...	...	...
5	1.0	7.5	0.5	6.5	1.0	7.0	1.2	7.3	1.5	6.3	1.0	5.6	0.8	5.4	0.8	6.0	...	...	...	...	...	...	...	...
6	2.0	7.0	2.0	6.5	1.5	6.5	0.7	6.5	0.5	6.5	0.5	5.7	0.6	4.8	0.5	6.2	...	...	...	...	1.7	6.7	1.5	7.0
7	0.7	5.7	0.5	6.0	0.5	5.7	0.8	5.6	0.3	5.0	0.5	6.0	0.5	6.0	0.5	5.4	0.8	6.0	0.7	6.5	0.5	6.3	2.3	4.5
8	0.8	6.0	0.5	5.6	0.5	6.0	0.8	5.8	0.3	6.0	0.5	6.3	0.6	3.8	0.6	4.8	2.0	4.7	1.4	4.7	0.8	6.0	0.5	6.3
9	0.5	5.0	0.5	5.4	0.5	6.0	0.6	4.7	0.6	4.6	0.5	5.0	0.3	5.0	0.3	4.6	0.3	6.3	0.3	5.2	0.3	4.6	0.3	5.0
10	0.5	6.5	0.6	4.3	0.6	4.0	0.6	4.3	0.5	5.0	0.8	5.4	1.1	5.4	1.1	5.4	0.3	4.5	0.3	4.8	0.5	5.2	0.5	5.6
11	0.6	4.0	0.6	4.3	0.6	4.0	0.8	3.0	0.8	5.2	0.8	5.8	0.8	5.6	0.9	4.6	0.7	6.5	1.0	6.3	0.8	5.7	0.8	5.6
12	0.6	4.0	0.5	5.0	0.3	4.2	0.3	4.7	0.5	6.3	0.5	5.6	0.5	5.4	0.8	5.5	0.6	4.8	0.5	5.0	0.6	4.8	0.3	4.5
13	0.3	4.2	0.3	3.8	0.3	4.0	0.3	4.0	0.5	5.4	0.5	5.2	0.5	6.7	0.6	4.8	0.3	4.0	0.3	4.6	0.6	4.5	0.9	4.0
14	0.6	4.5	0.3	4.0	0.8	6.0	0.8	6.0	0.5	5.4	1.0	6.6	0.5	5.3	0.8	5.8	0.5	5.2	0.8	5.5	0.8	5.0	1.0	4.8
15	0.8	5.6	0.5	5.4	1.0	5.6	1.3	6.0	0.8	6.0	0.7	6.7	0.7	6.7	0.7	6.7	1.4	4.7	1.8	4.7	1.5	5.0	1.4	4.7
16	1.2	6.7	1.7	6.5	1.0	6.7	1.0	6.0	0.7															

M.O. 430

Aerological

Air Ministry

METEOROLOGICAL OFFICE

THE  
OBSERVATORIES' YEAR BOOK  
1937

Comprising the meteorological and geophysical results obtained from autographic records and eye observations at the observatories at Lerwick, Aberdeen, Eskdalemuir, Valentia Observatory and 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

HIS MAJESTY'S STATIONERY OFFICE

1939



## 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.
Teddington ...	51° 25' N. ...	0° 20' W. ...	10 metres.

**Notes on the tables of Upper Air Temperatures obtained from soundings with registering balloons at Kew Observatory and Sealand, 1937**

The tables in the Aerological Section are presented in the same form as those appearing in the *Observatories' Year Book* since 1930. As in that volume geopotential is used in place of geometric height for the vertical coordinate. The units employed are :

- 1 Leo (symbol l.). =  $10^5$  c.g.s. units of geopotential.  
 1 Kiloleo (symbol Kl.). =  $10^8$  c.g.s. " " "

A table shewing the relation between height and geopotential in latitude  $52^\circ 20'$ , the approximate mean latitude of Kew Observatory and Sealand, is given in the Introduction to the Aerological Section of the *Observatories' Year Book*, 1930. For ordinary purposes it may be taken that if 2.1% be added to the geopotential in kiloleos the corresponding height in kilometres will then be obtained.

The Dines pattern meteorograph was employed solely as before, and the method of operation remained the same as in recent years. A full description will be found in a pamphlet entitled "The Dines balloon meteorograph and the method of using it."\* In the computation of pressure-geopotentials the graphical method was employed, checked as to its main features by an arithmetical process. The effect of humidity on the density of the air was neglected.

A total of 90 soundings were made during the year, 26 from the Aviation Service Station of the Meteorological Office at Sealand Aerodrome, 61 from Kew Observatory. 1 from Nottingham and 2 from Teddington. In 80 cases the apparatus was found and returned, only 10 being lost. One record was lost owing to faulty adjustment of the instrument. In 61 cases the meteorograph was sent up attached to an apparatus intended to obtain a sample of the atmosphere from the highest point reached; on such occasions the exposure was a little different from that of the normal case. The chief difference lay in the fact that the distance of the instrument below the balloon was only a few metres instead of forty, but the vertical velocity of the balloon was large and the effects were not very noticeable. In the cases of 44 of the soundings made with the air sampling apparatus and two of the others the records of temperature have not been published, the heights reached having been mostly low; the remaining 9 together with 24 ordinary soundings are published in the tables.

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 near the start is indicated approximately in Table 548, being based on a formula derived from a limited number of observations.† It is probable that even when the balloon is known to have burst, this velocity was not always maintained up to the highest point of the sounding. After the balloon had burst the velocity of fall was much higher, ranging from about 15 metres per second at 20 Kl. down to 5 near the ground. The ventilation on the descent was more adequate than on the ascent, especially in the stratosphere.

\* DINES, L.H.G. : The Dines balloon meteorograph and the method of using it. (M.O. 321) London, 1929.

† The formula is given on p. 8 of DINES, L.H.G. : *London, Prof. Notes, met. off.* No. 67, 1935.

As regards temperature, unless stated to the contrary the mean of the records on the ascent and descent in the troposphere was employed in computing the published figures. In general the difference between the two records did not exceed  $5^{\circ}\text{A.}$ , with a mean of about half that amount. 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.\* In the stratosphere the rule has been followed of using the mean for the lower part, but if the two records begin to diverge steadily with increasing height, or if in the upper part they differ consistently by more than  $2$  or  $3^{\circ}\text{A.}$ , then the descent only is employed from thence upwards. Occasionally in exceptional circumstances it is deemed best to vary these rules, in which cases the fact is stated in the remarks.

In the case of high soundings made during the day-time a pronounced rise of temperature is sometimes observed over about a kiloleo 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. An account of this phenomenon is to be found in *Memoirs of the Royal Meteorological Society*, 2, No. 18. By L. H. G. Dines.

Whenever possible the meteorograph was briefly calibrated again at one temperature 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. This provides some check on the behaviour of the instrument, but disturbance is almost inevitable considering the rough treatment experienced in the shock of the fall and after.

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.

Owing to lag in the response of the aneroid box the 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 temperatures at assigned pressures to allow for this error, it results, for an average sounding in the troposphere, in an increase in the difference between the temperatures recorded at any pressure on the ascent and descent. The effect is to make the recorded temperatures on the descent too high by about half a degree at a level of 6 or 7 kiloleos, with a tendency for the error to fall off above and below. When the mean of the two records is employed the resultant error is halved and becomes negligible.

In most cases the meteorograph was fitted with a hair hygograph. Only the record of relative humidity on the ascent in each case has been published, except when specific mention to the contrary is made in the remarks. 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

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\* See also :—FIELD J. H., Simla, Mem. Indian met. Dep. 24. Part V. 1924

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 uncertain error, especially at temperatures below freezing. No difference has been made as concerns this or previous volumes, in the interpretation of the records as between temperatures above and below the freezing point. For purposes of reference it may however be stated that Depegrams supplied to the International Commission for the exploration of the Upper Air were, up to the year 1929, drawn on the assumption that the published figures of relative humidity at temperatures below  $273^{\circ}\text{A}$ . referred to ice; since 1930 it has been presumed that they refer to water in all cases. Below a temperature of  $250^{\circ}\text{A}$ . it seems 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 of calibrating the hygograph has remained the same as in former years. A full account of the process will be found in the Introduction to the Aerological Section of the Year Books for 1934 and preceding years.

In working up the records the hair has been assumed to have a uniform absolute coefficient of thermal expansion of  $34 \times 10^{-6}$  per  $^{\circ}\text{A}$ . Since the frame of the hygograph is made of nickel silver having a coefficient of  $18 \times 10^{-6}$  the relative expansion of hair to frame is assumed to be  $16 \times 10^{-6}$  per  $^{\circ}\text{A}$ .

No allowance has been made in computing the published figures for the fact that the results of the calibration are not necessarily valid at low temperatures below the freezing point.

It has been noticed on many occasions that on passing through a cloud the hygograph hairs expand more than they do when immersed in water or in an artificial saturated atmosphere. This phenomenon is not yet fully understood, but it has been proved that it is not due to errors in calibration or setting of the instrument; accordingly its occurrence is indicated by publishing a value of the relative humidity in excess of 100%. The values are determined by extrapolation of the calibration upwards through 100.

Data of well marked inversions and regions of zero lapse rate in the troposphere are included in the remarks on the soundings. They are set out in a uniform manner on the principle that corresponding values of geopotential, temperature and relative humidity are given for the salient points in each special case, the sequence being always from lesser geopotentials to greater.

The figures given in the table of lapse rates do not in every case agree with the temperatures appearing in the table of temperatures at assigned geopotentials. The reason for this is that both were determined independently from the original data, which can sometimes profitably be read to the nearest half degree, but are rounded off to whole degrees for publication.

The lapse rates given between ground level and 0.5 Kl. are determined from the reading in the thermometer screen at the station and that of the meteorograph at 0.5 Kl. A source of error arises here in that the two standards are independent and are not exposed in the same manner. A small difference is capable of making an appreciable error in the lapse rate, and it is possible that lapse rates apparently greater than  $10^{\circ}\text{A}$ . per Kl. in this layer are sometimes due to this cause.

In Table 548 occur the entries "Type of Tropopause" and " $L_c$ =Geopotential at Tropopause." These are defined as follows:—Type I. The stratosphere commences with an inversion, and  $L_c$  is the geopotential at the first point of zero temperature gradient. Type II. The stratosphere begins with an abrupt transition to a temperature gradient below  $2^\circ\text{A}$ . per kiloleo without inversion, and  $L_c$  is the geopotential of the abrupt transition. Type III. There is no abrupt change of temperature gradient, and the base of the stratosphere is taken at the point where the mean fall of temperature for the kiloleo next above is  $2^\circ\text{A}$ . or less, provided that it does not exceed  $2^\circ\text{A}$ . for any subsequent kiloleo. In the remarks on the soundings the pressure distribution is classified according to the types defined in "Aids to forecasting." †

Statistical and correlation tables will be found in the Aerological Section of the *Observatories' Year Book* for the years 1929 and 1935.

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†—GOLD, E., F.R.S., *London, Geophys. Mem.* No. 16, 1920.

T=Temperature in degrees absolute

P=Pressure in millibars

548

L=Geopotential Level above M.S.L. in kiloleos (Kl.)

RH=Relative Humidity as percentage

1937

No. of Sounding	1173	1179	1180	1181	1183	1184	1185	1186
Date	Feb. 17	Mar. 16	Mar. 16	Mar. 16	Mar. 17	Mar. 17	Mar. 17	Mar. 17
Station	Kew	Sealand	Kew	Sealand	Sealand	Sealand	Sealand	Kew
Start G.M.T. . . . .	14h. 37m.	14h. 30m.	17h. 50m.	17h. 55m.	1h. 0m.	7h. 1m.	12h. 55m.	18h. 10m.
$L_t$ =Greatest Geopotential . . . . . (Kl.)	19·67	18·03	11·81	16·11	16·22	21·79	22·66	6·61
$T_t$ =Corresponding Temperature . . . . . (°A)	217	220	217	218	218	219	221	232
$P_t$ =Corresponding Pressure . . . . . (mb.)	53	68	183	91	90	37	33	410
Place of Fall . . . . .	St. Victor l'Abbaye Seine Inferieure, France	Reith, Richmond, Yorks	Culford Heath, Suffolk	Raydale-side, Askrigg, Yorks	Greenhow Hill, Harrogate, Yorks	Gargrave, Skipton, Yorks	Brogden, Barnoldswick, Yorks	Epping, Essex
Distance . . . . . (Km.)	240	146	120	135	130	107	94	39
Bearing. Degrees from N . . . . .	150	27	36	26	46	34	35	50
Type of Balloon . . . . .	Dewey-Almey	Saul	Saul	Saul	Dewey-Almey	Dewey-Almey	Premier	Veedip
Weight of Balloon . . . . . (Kg.)	0·37	0·47	0·52	0·46	0·37	0·37	0·36	0·49
Weight of Instrument . . . . . (Kg.)	0·17	0·15	0·17	0·15	0·15	0·15	0·15	1·13
Net Free Lift . . . . . (Kg.)	0·58	0·55	0·67	0·40	0·55	0·55	0·50	0·77
Estimated vertical velocity at start . . . . . (m/s.)	5·0	4·5	5·5	3·5	5·0	5·0	4·0	5·0
Geostrophic Wind— Speed . . . . . (m/s.)	12	30	20	23	18	18	16	14
Degrees from N . . . . .	360	170	190	180	190	180	190	220
Wind (Anemograph)— Speed . . . . . (m/s.)	7	13	7	5	1	1	3	4
Degrees from N . . . . .	315	110	160	135	90	200	135	130
Humidity at surface . . . . . (%)	69	89	88	93	93	95	64	76
Type of Tropopause . . . . .	I	I	I	I	I	I	II	—
$L_c$ =Geopotential at the tropopause . . . . . (Kl.)	10·00	10·11	10·08	9·90	9·66	9·66	8·68	—
$T_c$ =Temperature . . . . . (°A)	219	211	214	217	218	216	221	—
$P_c$ =Pressure . . . . . (mb.)	246	240	242	245	254	252	296	—
Mean Temp. in Stratosphere	( $L_c+2$ ) to ( $L_c+5$ ) . . . . . (°A.)	222	219	—	219	221	223	—
( $L_c+5$ ) to ( $L_c+8$ ) . . . . . (°A.)	218	219	—	—	—	220	222	—
( $L_c+8$ ) to ( $L_c+11$ ) . . . . . (°A.)	—	—	—	—	—	219	221	—
$T_m$ (Mean Temp. 1 to 9 Kl.) . . . . . (°A.)	249	250	249	246	246	245	246	—
$P_s$ (Pressure at M.S.L.) . . . . . (mb.)	1005	1001	1005	999	999	997	996	—

549

1937

## REMARKS ON THE SOUNDINGS AND THE PREVAILING WEATHER CONDITIONS, 1937

No. of Sounding

- 1173 c. Clouds Stcu. 9/10 from NW. Inversion (4·62—5·19 Kl., 546—504 mb., 249—250·6°A., 34—30%). Pressure distribution :—A depression has moved ESE. across Scotland and is now centred over the North Sea. Type IV.
- 1179 orr. Clouds Nbst. 10/10 from ESE. at 0·3 Kl. Change of lapse rate (5·90 Kl., 458 mb., 243°A.). Pressure distribution :—A deep depression is centred west of Ireland, moving very slowly ESE. An anti-cyclone covers Western Europe. Type VII.
- 1180 or. Clouds Frnb. 10/10 from S. Change of lapse rate (10·59 Kl., 223 mb., 217°A.). Pressure distribution :—Similar to the foregoing. Type VII.
- 1181 crm. Clouds Nbst. 10/10 from S. at 0·3 Kl. Pressure distribution :—Similar to the foregoing. Type VII.
- 1183 o. Clouds Nbst. 10/10 at 0·5 Kl. Change of lapse rate (2·35 Kl., 740 mb., 217°A.). Pressure distribution :—A deep depression is centred west of Ireland. Type VII.
- 1184 cm<sub>o</sub>/r<sub>c</sub>. Clouds Nbst. 10/10 from S. at 0·4 Kl. Inversion on descent (7·51—7·73 Kl., 354—342 mb., 223·5—224·5°A.), inversion on ascent (7·75—7·93 Kl., 341—331 mb., 222·5—223·5°A.). Pressure distribution :—Similar to the foregoing, the anti-cyclone is receding southwards. Type VII.
- 1185 bc. Clouds Cu. from S. at 0·7 Kl.; Acu. and Ast. from S. at 9 r.p.h. Change of lapse rate (9·41 Kl., 264 mb., 220°A.). Pressure distribution :—Similar to the foregoing; the depression in the West is moving slowly ESE. Type VII.
- 1186 \*or. Clouds Nbst. 10/10 at 0·3 Kl. Pressure distribution :—Similar to the foregoing. Type VII.

\* Meteorograph attached to air sampling apparatus, see introduction

$T$ =Temperature in degrees absolute  
 $L$ =Geopotential Level above M.S.L. in kiloeos (Kl.)

$P$ =Pressure in millibars  
 $RH$ =Relative Humidity as percentage

548

1937

No. of Sounding	1187	1188	1189	1190	1191	1192	1200	1202
Date	Mar. 17	Mar. 18	Mar. 18	Mar. 18	Mar. 19	Mar. 25	May 5	May 25
Station	Sealand	Sealand	Kew	Kew	Sealand	Sealand	Kew	Kew
Start G.M.T. . . . .	18h. 10m.	7h. 0m.	13h. 37m.	18h. 17m.	7h. 10m.	14h. 35m.	19h. 30m.	14h. 21m.
$L_t$ =Greatest Geopotential . . . . . (Kl.)	23.42	21.37	20.90	13.25	21.31	16.88	10.02	14.91
$T_t$ =Corresponding Temperature . . . . . ( $^{\circ}$ A)	219	220	218	223	219	221	222	222
$P_t$ =Corresponding Pressure . . . . . (mb.)	29	40	43	144	40	81	254	120
Place of Fall . . . . .	Haworth Moor, Yorks	Hapton, Burnley, Lancs	Bradfield St. George, Bury St. Edmunds, Suffolk	Belchamp Walk, Sudbury, Suffolk	Adlington, Lancs	Rothley, Leicester	Iden, Sussex	West Wickham, Cambs.
Distance . . . . . (Km.)	93	77	111	95	51	137	92	85
Bearing. Degrees from N . . . . .	45	37	40	46	32	114	126	31
Type of Balloon . . . . .	Premier	Premier	Veedip	Saul	Dewey-Almey	Dewey-Almey	Veedip	Veedip
Weight of Balloon . . . . . (Kg.)	0.35	0.37	0.48	0.51	0.37	0.38	0.43	0.46
Weight of Instrument . . . . . (Kg.)	0.15	0.15	0.15	1.63	0.15	0.15	1.10	0.15
Net Free Lift . . . . . (Kg.)	0.50	0.50	0.70	0.83	0.60	0.55	0.85	0.70
Estimated vertical velocity at start . . . . . (m/s.)	4.5	4.5	6.0	5.0	5.5	5.0	5.5	6.0
Geostrophic Wind— Speed . . . . . (m/s.)	13	16	15	17	14	6	12	7
Degrees from N . . . . .	170	200	230	220	180	340	300	220
Wind (Anemograph)— Speed . . . . . (m/s.)	10	3	4	4	3	6	4	2
Degrees from N . . . . .	130	110	190	190	110	280	290	200
Humidity at surface . . . . . (%)	81	91	65	69	80	64	50	44
Type of Tropopause . . . . .	I	I	I	II	I	I	I	I
$L_c$ =Geopotential at the tropopause . . . . . (Kl.)	8.40	8.39	8.52	8.47	8.71	9.52	9.83	11.77
$T_c$ =Temperature . . . . . ( $^{\circ}$ A)	220	219	218	219	213	215	222	214
$P_c$ =Pressure . . . . . (mb.)	308	308	304	306	293	261	262	198
Mean Temp. in Stratosphere								
{ ( $L_c+2$ ) to ( $L_c+5$ ) . . . . . ( $^{\circ}$ A.)	223	223	222	223	222	219	—	—
{ ( $L_c+5$ ) to ( $L_c+8$ ) . . . . . ( $^{\circ}$ A.)	222	222	220	—	220	220	—	—
{ ( $L_c+8$ ) to ( $L_c+11$ ) . . . . . ( $^{\circ}$ A.)	220	221	220	—	220	—	—	—
$T_m$ (Mean Temp. 1 to 9 Kl.) . . . . . ( $^{\circ}$ A.)	245	245	245	245	244	244	252	259
$P_s$ (Pressure at M.S.L.) . . . . . (mb.)	996	995	1001	1001	998	1012	1024	1017

549

1937

## REMARKS ON THE SOUNDINGS AND THE PREVAILING WEATHER CONDITIONS, 1937

No. of Sounding

- 1187 cpr. Clouds Stcu. 9/10 from S. at 0.7 Kl. Pressure distribution :—Similar to the foregoing. Type VII.
- 1188 c. Clouds Stcu. 3/10 from SW. at 0.7 Kl.; Acu. 5/10 from SSE. moving at 9 r.p.h. Pressure distribution :—A deep depression centred just off South West Ireland is almost stationary and an anti-cyclone is stationary over North Italy. Type VII.
- 1189 bc. Clouds Cu. and Frcu. 7/10 from SSW. Isothermal on descent (2.21—2.31 Kl., 756—746 mb., 266 $^{\circ}$ A.), isothermal on ascent (2.33—2.67 Kl., 745—712 mb., 265.5 $^{\circ}$ A.). Pressure distribution :—Similar to the foregoing. Type VII.
- 1190 \*bc. Clouds Cu. and Ci. 3/10 from SSW. Ci. moving at 7 r.p.h. Pressure distribution :—Similar to the foregoing. Type VII.
- 1191 c. Clouds Stcu. from S. at 0.7 Kl. Acu. and Ast. Pressure distribution :—A deep depression centred south south west of Ireland is moving slowly ESE. Anti-cyclones cover Central Europe and North Iceland. Type VII.
- 1192 bc. Clouds Cu. and Stcu. from NW. at 0.7 Kl. Isothermal (1.94—2.29 Kl., 788—752 mb., 261 $^{\circ}$ A.), isothermal (3.65—3.81 Kl., 625—612 mb., 254 $^{\circ}$ A.). Pressure distribution :—Dumb-bell depression with main centre stationary off West Coast of Denmark and another centre over St. Georges Channel moving rapidly east. Type XIV.
- 1200 \*b. Clouds Cu. 1/10. Inversion (2.11—2.37 Kl., 784—758 mb., 267—267.5 $^{\circ}$ A., 42—40%). Pressure distribution :—High pressure extends from France across the British Isles to Thorshavn, and pressure is low south west of Iceland and north of Denmark. Type IVa.
- 1202 b. Clouds Ci. and Cicu. 2/10 from SW. moving at 9 r.p.h. Change of lapse rate (5.26 Kl., 523 mb., 259 $^{\circ}$ A., 59%), and at (12.87 Kl., 166 mb., 220 $^{\circ}$ A.). Pressure distribution :—Pressure is high from Scandinavia to Spain, and low to the west of Ireland. Type VI or VIa.

\* Meteorograph attached to air sampling apparatus, see introduction

T=Temperature in degrees absolute

P=Pressure in millibars

548

L=Geopotential Level above M.S.L. in kiloleos (Kl.)

RH=Relative Humidity as percentage

1937

No. of Sounding	1211	1213	1215	1216	1223	1225	1230	1237
Date	July 20	July 28	Aug. 4	Aug. 4	Aug. 30	Sept. 6	Sept. 17	Nov. 12
Station	Kew	Sealand	Sealand	Teddington	Sealand	Sealand	Kew	Sealand
Start G.M.T. . . . .	20h. 5m.	19h. 0m.	17h. 5m.	19h. 50m.	17h. 0m.	19h. 45m.	18h. 12m.	16h. 30m.
$L_t$ =Greatest Geopotential . . . . . (Kl.)	15.62	23.33	23.81	14.77	24.87	23.64	16.26	16.89
$T_t$ =Corresponding Temperature . . . . . (°A)	219	227	230	215	224	219	225	214
$P_t$ =Corresponding Pressure . . . . . (mb.)	110	33	31	124	25	30	95	81
Place of Fall . . . . .	Tonbridge, Kent	Stone, Staffs	Hayfield, Derbyshire	Bekesbourne, Canterbury, Kent	Rugeley, Staffs	Farnsfield, Newark, Notts	Chadwell Heath, Essex	Houghton Regis, Bedfordshire
Distance . . . . . (Km.)	52	106	73	104	87	147	34	224
Bearing. Degrees from N . . . . .	126	151	76	100	126	96	71	130
Type of Balloon . . . . .	Saul	Veedip	Saul	—	Saul	Dewey-Almey	Veedip	Saul
Weight of Balloon . . . . . (Kg.)	0.47	0.46	2.13	—	2.16	0.37	0.45	2.72
Weight of Instrument . . . . . (Kg.)	1.11	0.95	0.95	—	0.95	0.15	1.17	0.95
Net Free Lift . . . . . (Kg.)	1.04	0.70	0.90	—	0.80	0.40	0.77	0.95
Estimated vertical velocity at start . . . . . (m/s.)	6.0	5.0	5.5	—	5.0	4.0	5.0	5.5
Geostrophic Wind— Speed . . . . . (m/s.)	4	3	7	5	4	18	9	4
Degrees from N . . . . .	—	—	280	250	110	260	—	350
Wind (Anemograph)— Speed . . . . . (m/s.)	Calm	Calm	1	2	2	5	Calm	4
Degrees from N . . . . .	—	—	290	230	310	200	—	310
Humidity at surface . . . . . (%)	61	77	59	66	82	78	98	63
Type of Tropopause . . . . .	I	I	II	I	I	I	I	I
$L_c$ =Geopotential at the tropopause . . . . . (Kl.)	11.36	11.23	11.85	12.03	11.43	13.09	8.46	10.91
$T_c$ =Temperature . . . . . (°A)	220	217	220	211	217	207	228	208
$P_c$ =Pressure . . . . . (mb.)	216	218	200	194	209	165	312	216
Mean Temp. in Stratosphere								
{ ( $L_c+2$ ) to ( $L_c+5$ ) . . . . . (°A)	—	221	221	—	218	213	229	213
{ ( $L_c+5$ ) to ( $L_c+8$ ) . . . . . (°A)	—	223	223	—	221	218	225	—
{ ( $L_c+8$ ) to ( $L_c+11$ ) . . . . . (°A)	—	227	226	—	222	219	—	—
$T_m$ (Mean Temp. 1 to 9 Kl.) . . . . . (°A)	262	261	263	263	257	266	252	250
$P_s$ (Pressure at M.S.L.) . . . . . (mb.)	1019	1016	1016	1017	1020	1012	988	1025

549

1937

## REMARKS ON THE SOUNDINGS AND THE PREVAILING WEATHER CONDITIONS, 1937

No. of Sounding

- 1211 \*o. Clouds Stcu. 10/10. Change of lapse rate (10.59 Kl., 244 mb., 221°A.). Pressure distribution:—A high pressure belt from Scandinavia to the Azores and a depression centred south of Iceland. Type V or Va.
- 1213 \*bc. Clouds Acu. and Cist. 6/10. Ci. moving from NW'W. at 9 r.p.h. Pressure distribution:—High pressure extends north and south over England, a depression west of Ireland is moving SE. Type IVa.
- 1215 \*cz<sub>y</sub>. Clouds Stcu. at 1 Kl., Ast., total 8/10. Change of lapse rate (3.61 Kl., 650 mb., 207°A.). Pressure distribution:—An anticyclone extends from Scandinavia southwards, then eastwards across South England to another off Western Ireland. A stationary depression covers Iceland. Type VIIc.
- 1216 Isothermal on descent (4.63–5.06 Kl., 572–540 mb., 262°A.). Pressure distribution:—Similar to the foregoing. Type VIIc.
- 1223 \*cz<sub>o</sub>. Clouds Stcu. at 0.5 Kl., Acu., total 9/10. Change of lapse rate (15.63–16.30 Kl., 107–96 mb., 216–220°A.). Pressure distribution:—An extensive high pressure system covers the British Isles and the North Sea. Type XIIIb.
- 1225 c. Clouds Stcu. 10/10 from WSW. at 0.3 Kl. Change of lapse rate (14.52–15.56 Kl., 131–110 mb., 214–209°A.). Pressure distribution:—Pressure is low to the NW. and N. of the British Isles, and high from western Europe to the Azores. Type Va.
- 1230 \*bcm. Clouds St. 2/10, Ast. 2/10, Ci. 1/10 from ESE. Pressure distribution:—A large depression centred over southern England is moving NE. Type XV.
- 1237 \*cz<sub>o</sub>. Clouds Stcu. 9/10 from NW. at 0.7 Kl. Inversion (1.69–2.00 Kl., 825–793 mb., 265.5–267.0°A.). Pressure distribution:—Low pressure extends southwards from Scandinavia and an anticyclone is centred off the NW. coast of Ireland. A depression is centred between the Azores and Spain. Type X.

\* Meteorograph attached to air sampling apparatus, see introduction

548

$T$ =Temperature in degrees absolute  
 $L$ =Geopotential Level above M.S.L. in kiloeos (Kl.)

$P$ =Pressure in millibars  
 $RH$ =Relative Humidity as percentage

1937

No. of Sounding	1238	1239	1240	1241	1242	1243	1245	1247	1248									
Date	Dec. 13	Dec. 13	Dec. 14	Dec. 14	Dec. 15	Dec. 15	Dec. 16	Dec. 17	Dec. 18									
Station	Sealand	Sealand	Sealand	Sealand	Sealand	Sealand	Sealand	Sealand	Sealand									
Start G.M.T. ... ..	7h. 20m.	18h. 50m.	7h. 5m.	19h. 5m.	7h. 50m.	18h. 50m.	18h. 45m.	18h. 45m.	7h. 20m.									
$L_t$ =Greatest Geopotential ... (Kl.)	13.70	17.42	14.47	14.40	18.79	10.11	18.19	15.46	14.05									
$T_t$ =Corresponding Temperature ... (°A.)	221	219	223	221	216	225	214	216	217									
$P_t$ =Corresponding Pressure ... (mb.)	130	76	116	117	58	232	65	102	128									
Place of Fall ... ..	Manchester, Lancs	Halifax, Yorks	Sealand, Flint	Ludlow, Salop	Shifnal, Salop	Mountford, Bridge, Shrews- bury	Bridge- water, Somerset	Bristol, Somerset	Bismore, nr. Stroud, Gloucester									
Distance ... (Km.)										62	95	3	94	75	56	234	206	175
Bearing. Degrees from N ...										58	50	135	171	147	173	177	172	161
Type of Balloon ... ..	Dewey- Almey	Veedip	Veedip	Veedip	Veedip	Veedip	Veedip	Saul	Veedip									
Weight of Balloon ... (Kg.)	0.37	0.44	0.40	0.41	0.49	0.40	0.45	0.46	0.42									
Weight of Instrument ... (Kg.)	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15									
Net Free Lift ... (Kg.)	1.20	0.70	0.55	0.70	0.35	0.35	0.35	0.55	0.55									
Estimated vertical velocity at start ... (m/s.)	7.5	6.0	5.0	6.0	3.5	3.5	3.5	5.0	5.0									
Geostrophic Wind— Speed ... (m/s.)	33	11	9	13	11	10	11	9	9									
Degrees from N ... ..	170	290	—	10	340	330	10	10	340									
Wind (Anemograph)— Speed ... (m/s.)	6	Calm	1	4	4	3	4	4	Calm									
Degrees from N ... ..	130	—	110	340	340	310	350	310	—									
Humidity at surface ... (%)	98	85	92	90	87	96	93	90	93									
Type of Tropopause ... ..	I	II	II	II	I	I	III	II	I									
$L_c$ =Geopotential at the tropopause ... (Kl.)	9.45	8.26	7.64	8.09	9.74	6.66	9.53	10.18	10.64									
$T_c$ =Temperature " " " ... (°A.)	216	221	225	220	218	224	221	215	210									
$P_c$ =Pressure " " " ... (mb.)	256	308	336	316	245	395	260	239	223									
Mean Temp. in Stratosphere	( $L_c+2$ ) to ( $L_c+5$ ) ... (°A.)	220	220	223	222	220	225	218	216									
( $L_c+5$ ) to ( $L_c+8$ ) ... (°A.)	—	221	—	—	218	—	215	—	—									
( $L_c+8$ ) to ( $L_c+11$ ) ... (°A.)	—	—	—	—	—	—	—	—	—									
$T_m$ (Mean Temp. 1 to 9 Kl.) ... (°A.)	244	244	243	242	241	241	242	245	248									
$P_s$ (Pressure at M.S.L.) ... (mb.)	983	980	979	986	997	1000	1019	1025	1022									

549

549

No. of  
Sounding

## REMARKS ON THE SOUNDINGS AND THE PREVAILING WEATHER CONDITIONS, 1937

- 1238 cr<sub>c</sub>m<sub>c</sub>. Clouds Nbst. 10/10 at 0.4 Kl. Change of lapse rate (8.83 Kl., 283 mb., 216.5 °A.) A large deep depression is centred over the NW. coast of England and deepening slightly. Type XV.
- 1239 bcm<sub>c</sub>. Clouds Stcu. 5/10 at 0.7 Kl. Unusually large difference between the temperatures on the ascent and descent near the ground. Change of lapse rate (4.59 Kl., 532 mb., 245 °A., 73%), and at (485 Kl., 513 mb., 244.5 °A., 69%). Pressure distribution:—Similar to the foregoing, the depression is now centred over Northern England. Type XV.
1240. bcm<sub>c</sub>. Clouds Stcu. 3/10 at 0.7 Kl. Isothermal (1.47–1.70 Kl., 810–785 mb., 264 °A., 92–87%). Pressure distribution:—A large deep depression is centred over North East England. Type XV.
- 1241 or<sub>c</sub>r<sub>c</sub>. Clouds Nbst. 10/10 at 0.4 Kl. Pressure distribution:—Similar to the foregoing. Type XV.
- 1242 c/pr<sub>c</sub>. Clouds Stcu. 9/10 from NNW. at 0.7 Kl. Pressure distribution:—A system of depressions extends north and south from Bear Island across the British Isles to the Mediterranean. High pressure extends from Iceland to the Azores. Type XV.
- 1243 bm<sub>c</sub>. Clouds Stcu. 1/10 at 0.7 Kl. Pressure distribution:—A large depression is centred off the north east coast of England. Type XV.
- 1245 bm<sub>c</sub>x. Clouds, none. Inversion (6.75–7.11 Kl., 400–378 mb., 228–229 °A.). Pressure distribution:—Similar to the foregoing. Type IXa or X.
- 1247 bmx. Clouds, none. Pressure distribution:—A ridge of high pressure extends from Scandinavia across the British Isles to Western Spain. Low pressure extends from Denmark to Corsica. Type X.
- 1248 cmx. Clouds Stcu. 8/10 at 0.7 Kl. Inversion (2.27–2.55 Kl., 760–732 mb., 258.5–260.2 °A., 39–27%); Isothermal (4.02–4.99 Kl., 600–525 mb., 253 °A., 30–36%). Pressure distribution:—A wedge of high pressure extends northwards over the British Isles from Portugal, and pressure is low from Denmark to Corsica. Type IV.



T=Temperature in degrees absolute

P=Pressure in millibars

L=Geopotential Level above M.S.L. in kiloleos (Kl.)

RH=Relative Humidity as percentage

No. Date Station Start (G.M.T.)	1173 Feb. 17 Kew 14h. 37m.	1179 Mar. 16 Sealand 14h. 30m.	1180 Mar. 16 Kew 17h. 50m.	1181 Mar. 16 Sealand 17h. 55m.	1183 Mar. 17 Sealand 1h. 0m.	1184 Mar. 17 Sealand 7h. 1m.	1185 Mar. 17 Sealand 12h. 55m.	1186 Mar. 17 Kew 18h. 0m.																			
<b>550 GEOPOTENTIALS, TEMPERATURES AND RELATIVE HUMIDITIES CORRESPONDING WITH ISOBARIC SURFACES 1937</b>																											
Pressure	L	T	RH	L	T	RH	L	T	RH	L	T	RH	L	T	RH	L	T	RH	L	T	RH						
Milibars	Kl	°A	%	Kl	°A	%	Kl	°A	%	Kl	°A	%	Kl	°A	%	Kl	°A	%	Kl	°A	%	Kl	°A	%			
		200			200			200			200			200			200			200			200				
100	15.71	18	...	15.59	19	...	15.51	18	...	15.56	19	...	15.54	20	...	15.61	22	...	...	...	...	...	...	...			
200	11.31	20	...	11.23	19	...	11.17	16	...	11.17	19	...	11.12	23	...	11.18	23	...	...	...	...	...	...	...			
300	8.74	27	...	8.73	21	...	8.75	19	...	8.63	22	...	8.61	21	...	8.57	20	...	8.59	21	54	...	...	...	...	...	...
400	6.81	40	29	6.83	37	6.87	34	6.75	33	30	6.75	30	6.71	30	84	6.73	31	57	...	...	...	...	...	...			
500	5.25	50	30	5.28	50	5.33	49	5.21	45	31	5.23	44	5.20	43	85	5.21	44	57	5.25	44	89	...	...	...			
600	3.93	53	41	3.95	59	4.00	58	3.91	55	39	3.93	54	3.90	53	107	3.91	54	46	3.95	55	90	...	...	...			
700	2.80	60	61	2.79	65	2.83	66	2.76	62	69	2.78	64	2.75	63	83	2.77	63	48	2.80	63	92	...	...	...			
800	1.79	66	115	1.76	70	1.81	72	1.75	69	104	1.75	70	1.73	69	106	1.75	70	65	1.77	70	102	...	...	...			
900	.88	74	88	.83	74	.88	75	.83	73	105	.83	77	.81	75	101	.82	77	78	.85	76	96	...	...	...			
1000	.04	...	69	.01	77	.04	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...				

<b>551 PRESSURES, TEMPERATURES AND HUMIDITIES AT GIVEN GEOPOTENTIALS 1937</b>																								
Geopotentials	P	T	RH	P	T	RH	P	T	RH	P	T	RH	P	T	RH	P	T	RH	P	T	RH			
Kiloleos	mb	°A	%	mb	°A	%	mb	°A	%	mb	°A	%	mb	°A	%	mb	°A	%	mb	°A	%	mb	°A	%
		200			200			200			200			200			200			200			200	
		+			+			+			+			+			+			+			+	
26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	37	21	...	...	...			
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	42	19	...	43	21	...			
20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	49	19	...	50	22	...			
19	59	17	...	...	...	...	...	...	...	...	...	...	...	...	...	58	19	...	59	22	...			
18	69	18	...	68	20	...	...	...	...	...	...	...	...	...	...	68	19	...	69	20	...			
17	81	17	...	80	20	...	...	...	...	...	...	...	...	...	...	79	19	...	80	20	...			
16	95	18	...	95	19	...	...	93	18	...	93	19	...	93	19	...	94	22	...	...	...			
15	112	20	...	110	19	...	...	108	19	...	109	20	...	109	21	...	110	22	...	...	...			
14	131	23	...	129	19	...	...	127	18	...	128	21	...	127	23	...	129	22	...	...	...			
13	153	22	...	151	19	...	...	149	19	...	150	21	...	149	23	...	150	24	...	...	...			
12	179	21	...	177	19	...	...	175	19	...	176	21	...	174	22	...	176	23	...	...	...			
11	210	20	...	207	18	...	209	17	...	205	18	...	206	22	...	204	23	...	206	23	...			
10	246	19	...	244	12	245	14	241	17	...	241	19	...	239	19	...	240	22	...	...	...			
9	287	25	...	287	19	288	18	283	20	...	282	20	...	280	18	...	281	21	...	...	...			
8	335	32	30	336	28	337	24	330	25	30	330	24	328	23	80	329	23	55	...	...	...			
7	389	39	29	390	36	392	33	385	31	30	385	29	383	27	84	384	28	57	...	...	...			
6	450	45	29	452	42	454	43	446	39	30	448	38	445	36	83	446	37	59	449	38	89			
5	518	50	30	519	52	523	51	514	46	32	517	46	514	45	84	515	45	56	518	47	90			
4	595	52	40	595	59	600	58	592	54	37	593	53	591	52	103	592	54	48	595	55	91			
3	682	58	55	680	64	685	65	678	61	55	680	62	677	61	84	678	61	46	681	62	92			
2.5	729	62	93	726	66	731	68	724	63	87	726	66	723	64	89	724	65	52	728	65	100			
2	779	65	115	775	69	780	71	774	67	102	775	68	772	67	94	773	68	63	777	69	101			
1.5	831	69	108	826	72	832	73	826	70	104	827	72	824	71	104	825	72	67	828	72	103			
1	886	73	91	881	74	887	75	881	72	105	881	76	879	74	101	879	76	74	883	75	100			
0.5	944	76	73	939	75	944	78	939	75	...	938	...	936	...	106	937	...	74	940	79	90			
Ground	1004	82	69	1000	77	1004	81	998	79	93	998	79	997	78	95	995	86	64	1000	82	76			

Note.—Tables of correlation coefficients, mean monthly pressures and temperatures for geodynamic levels, and corrections for kilometre heights will be found in the Introduction to the Observatories' Year Book, 1935

<b>552 LAPSE RATE OF TEMPERATURE BETWEEN GIVEN GEOPOTENTIALS 1937</b>								
Degrees absolute per kiloleo								
Kiloleos								
25 to 26	...	...	...	...	...	...	...	...
24 to 25	...	...	...	...	...	...	...	...
23 to 24	...	...	...	...	...	...	...	...
22 to 23	...	...	...	...	...	...	...	...
21 to 22	...	...	...	...	...	...	...	0
20 to 21	...	...	...	...	...	...	...	0
19 to 20	...	...	...	...	...	...	...	0
18 to 19	1	...	...	...	...	...	...	0
17 to 18	-1	0	...	...	...	...	...	0
16 to 17	1	-1	...	...	...	...	...	0
15 to 16	2	0	...	...	...	...	...	2
14 to 15	3	0	...	...	...	...	...	2
13 to 14	-1	0	...	...	...	...	...	0
12 to 13	-1	0	...	...	...	...	...	-1
11 to 12	-1	-1	0	...	...	...	...	0
10 to 11	-1	-6	-3	...	...	...	...	-1
9 to 10	6	7	4	...	...	...	...	-1
8 to 9	7	9	6	...	...	...	...	2
7 to 8	7	8	9	...	...	...	...	4
6 to 7	6	6	10	...	...	...	...	9
5 to 6	5	10	8	...	...	...	...	8
4 to 5	2	7	7	...	...	...	...	9
3 to 4	6	5	7	...	...	...	...	7
2.5 to 3	7	5	6	...	...	...	...	8
2 to 2.5	7	6	7	...	...	...	...	6
1.5 to 2	8	5	4	...	...	...	...	8
1 to 1.5	7	4	3	...	...	...	...	8
0.5 to 1	8	4	6	...	...	...	...	6
Gd. to 0.5	10	3	6	...	...	...	...	3



T=Temperature in degrees absolute  
L=Geopotential Level above M.S.L. in kiloleos (Kl.)

P=Pressure in millibars  
RH=Relative Humidity as percentage

No. Date Station Start (G.M.T.)	1211 July 20 Kew 20h. 5m.	1213 July 28 Sealand 19h. 0m.	1215 Aug. 4 Sealand 17h. 5m.	1216 Aug. 4 Teddingt'n 19h. 50m.	1223 Aug. 30 Sealand 17h. 0m.	1225 Sept. 6 Sealand 19h. 45m.	1230 Sept. 17 Kew 18h. 12m.	1237 Nov. 12 Sealand 16h. 30m.											
<b>GEOPOTENTIALS, TEMPERATURES AND RELATIVE HUMIDITIES CORRESPONDING WITH ISOBARIC SURFACES—<i>continued.</i> 1937</b>																			
Pressure	L	T	RH	L	T	L	T	L	T	L	T	L	T	RH	L	T	RH	L	T
Millibars	Kl	°A	%	Kl	°A	Kl	°A	Kl	°A	Kl	°A	Kl	°A	%	Kl	°A	%	Kl	°A
	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200
100	...	...	...	16.15	22	16.23	22	...	...	16.05	18	16.13	11	...	15.93	25	...	15.59	13
200	11.85	20	...	11.75	18	11.85	20	11.84	12	11.71	18	11.95	14	...	11.41	30	...	11.38	08
300	9.25	32	44	9.17	32	9.24	33	9.27	33	9.11	32	9.32	37	39	8.73	28	...	8.91	22
400	7.26	48	45	7.19	46	7.25	49	7.27	49	7.15	43	7.30	52	36	6.81	38	69	7.00	38
500	5.63	60	41	5.57	58	5.62	61	5.64	60	5.55	54	5.64	65	27	5.25	51	74	5.44	49
600	4.25	69	40	4.20	68	4.23	68	4.26	66	4.20	63	4.23	72	50	3.91	61	79	4.11	58
700	3.04	76	40	3.01	74	3.03	73	3.06	75	3.03	70	3.01	79	59	2.74	68	107	2.95	65
800	1.97	79	53	1.95	77	1.97	81	1.99	81	1.97	76	1.93	83	100	1.70	74	93	1.93	68
900	1.03	84	77	1.00	82	1.01	87	1.03	88	1.03	83	1.01	85	100	1.03	81	97	1.03	71
1000	1.15	92	70	1.14	...	1.13	...	1.15	94	1.17	...	1.10	91	79	...	...	...	1.20	79

<b>551 PRESSURES, TEMPERATURES AND HUMIDITIES AT GIVEN GEOPOTENTIALS—<i>continued.</i> 1937</b>																			
Geopotentials	P	T	RH	P	T	P	T	P	T	P	T	P	T	RH	P	T	RH	P	T
Kiloleos	mb	°A	%	mb	°A	mb	°A	mb	°A	mb	°A	mb	°A	%	mb	°A	%	mb	°A
	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200
26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
24	...	...	...	...	...	...	...	...	...	29	24	...	...	...	...	...	...	...	...
23	...	...	...	36	27	35	29	...	...	33	23	33	19	...	...	...	...	...	...
22	...	...	...	41	27	41	27	...	...	39	22	39	20	...	...	...	...	...	...
21	...	...	...	47	27	48	25	...	...	46	22	46	18	...	...	...	...	...	...
20	...	...	...	55	26	56	24	...	...	54	21	54	18	...	...	...	...	...	...
19	...	...	...	64	25	65	23	...	...	63	21	63	18	...	...	...	...	...	...
18	...	...	...	75	23	76	23	...	...	74	21	74	15	...	...	...	...	...	...
17	...	...	...	87	22	89	23	...	...	86	21	87	14	...	...	...	...	...	...
16	...	...	...	102	22	104	21	...	...	101	18	102	11	...	99	25	...	93	14
15	121	19	...	120	22	121	20	...	...	118	17	121	12	...	115	25	...	110	13
14	142	19	...	140	20	142	20	141	14	139	19	142	11	...	135	26	...	130	13
13	167	22	...	164	20	167	20	166	12	163	19	168	7	...	157	28	...	153	11
12	195	20	...	192	18	196	20	195	11	191	19	198	13	...	183	30	...	182	9
11	229	20	...	226	18	229	22	229	18	224	20	233	23	...	213	31	...	213	8
10	267	26	...	264	24	267	27	268	26	262	25	271	31	39	247	32	...	252	13
9	311	34	44	307	33	311	35	312	35	304	32	314	39	40	288	29	...	295	21
8	360	42	45	356	41	360	43	361	43	353	39	363	47	38	335	29	74	345	30
7	415	50	44	411	48	414	50	415	51	408	44	416	55	36	389	36	69	401	38
6	476	57	41	472	56	475	58	476	58	470	51	477	62	30	450	45	71	463	45
5	544	64	40	541	62	543	64	544	63	539	58	544	69	35	518	52	75	531	52
4	619	71	40	616	69	618	69	621	69	616	64	617	73	53	593	60	79	608	59
3	704	76	40	700	74	703	73	706	76	702	70	701	79	59	676	67	96	698	65
2.5	750	78	42	746	76	749	77	751	78	748	73	746	81	68	722	69	104	743	66
2	798	79	53	795	77	797	81	800	81	797	76	794	83	100	770	72	100	793	68
1.5	848	81	72	846	79	848	84	850	85	848	80	844	84	100	821	76	90	846	67
1	902	84	77	900	82	902	87	903	88	903	83	897	85	100	874	79	93	903	71
0.5	960	89	73	957	85	958	91	959	91	960	87	953	88	88	930	83	100	961	75
Ground	1018	94	61	1016	89	1016	95	1017	...	1019	90	1012	92	78	988	85	98	1024	80

Note.—Tables of correlation coefficients, mean monthly pressures and temperatures for geodynamic levels, and corrections for kilometre heights will be found in the Introduction to the Observatories' Year Book, 1935

<b>552 LAPSE RATE OF TEMPERATURE BETWEEN GIVEN GEOPOTENTIALS—<i>continued.</i> 1937</b>									
Degrees absolute per kiloleo									
Kiloleos									
25 to 26	...	...	...	...	...	...	...	...	...
24 to 25	...	...	...	...	...	...	...	...	...
23 to 24	...	...	...	...	...	...	...	...	...
22 to 23	...	0	...	-2	...	...	...	...	...
21 to 22	...	0	...	-2	...	...	...	...	...
20 to 21	...	-1	...	-1	...	...	...	...	...
19 to 20	...	-1	...	-1	...	...	...	...	...
18 to 19	...	-2	...	0	...	...	...	...	...
17 to 18	...	-1	...	0	...	...	...	...	...
16 to 17	...	0	...	-2	...	...	...	...	...
15 to 16	...	0	...	-1	...	...	...	...	...
14 to 15	0	-2	...	0	...	...	...	...	...
13 to 14	3	0	...	0	...	...	...	...	...
12 to 13	-2	-2	...	0	...	...	...	...	...
11 to 12	0	0	...	2	...	...	...	...	...
10 to 11	6	6	...	5	...	...	...	...	...
9 to 10	8	9	...	8	...	...	...	...	...
8 to 9	8	8	...	8	...	...	...	...	...
7 to 8	8	7	...	7	...	...	...	...	...
6 to 7	7	8	...	8	...	...	...	...	...
5 to 6	7	6	...	6	...	...	...	...	...
4 to 5	7	7	...	5	...	...	...	...	...
3 to 4	5	5	...	4	...	...	...	...	...
2.5 to 3	3	4	...	9	...	...	...	...	...
2 to 2.5	3	3	...	8	...	...	...	...	...
1.5 to 2	4	3	...	5	...	...	...	...	...
1 to 1.5	6	6	...	7	...	...	...	...	...
0.5 to 1	9	6	...	8	...	...	...	...	...
Gd. to 0.5	10	9	...	9	...	...	...	...	...



