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THE
OBSERVATORIES'
YEAR BOOK
1958

Comprising the meteorological and geophysical results
obtained from autographic records and eye observations
at the Lerwick, Eskdalemuir, and Kew Observatories

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PREFACE

The *Observatories' Year Book* was published for the years 1922 to 1937 in continuation of Part III Section II and Part IV of the *British Meteorological and Magnetic Year Book* for the period 1908 to 1921. Further publication was resumed eventually after a long interruption because of the 1939-45 war but in an abridged form as outlined in the next paragraph.

The General Introduction to the Meteorological Tables and the parts of the Sectional Introductions which deal with site, instruments, procedure and tabulations included in the volume for 1938 have served as the standards of reference for subsequent Year Books; only important departures from these standards have since been mentioned explicitly. The space devoted to the discussion of observations has been reduced and the monthly tables of individual hourly values of meteorological elements have been discontinued, but summaries of the daily mean values (or total), monthly means (or totals) of the hourly values and some maximum and minimum values have been given. The diary of cloud, weather and visibility, and, after 1939, the aerological and seismological tables have also been discontinued but no major changes have been made in the tables of atmospheric electricity and terrestrial magnetism.

Another major review of the contents of the *Observatories' Year Book* has now been carried out and a number of important changes have been made, commencing with this volume. It has also been decided to publish the volumes for 1957 and 1958 out of turn in order that the observations for the period of the International Geophysical Year may become available as early as possible. Volumes of the *Observatories' Year Book* up to and including the year 1956 will however conform in style and content to the volumes for 1939 and subsequent years as outlined above, whenever they may be published.

The meteorological data for Kew and Eskdalemuir have been omitted from 1957 onwards; a punched card system of recording such data has been adopted. It has also been decided to omit all mention of the seismological work at Kew. Full details of the seismological measurements are given in the *Kew Seismological Bulletin*, distribution of which was resumed in 1947 after a break of seven years, and are also communicated to the *International Seismological Summary*. There are also some changes in the terrestrial magnetism and atmospheric electricity tables; full details of the changes are given in the Introduction to this volume.

There is now only one Introduction, replacing the General Introduction and separate Introductions to each Observatory. This is followed by the tables; firstly the geomagnetic, auroral and atmospheric electrical data for Lerwick; secondly the geomagnetic and atmospheric electrical data for Eskdalemuir; thirdly the atmospheric electrical and atmospheric pollution data for Kew. The form of the General Auroral table has been altered and the observations now cover the whole of the British Isles.

It may be of assistance to those who make use of the data in this volume to know the full range of the other work now (1960) carried out at the three Observatories and this is detailed below. Requests for information about this other work should be addressed to the Director-General, Meteorological Office, Air Ministry, Victory House, London, W.C.2.

Lerwick Observatory

Full hourly synoptic observations of the weather. Hourly tabulations of pressure, wind, rainfall, sunshine, temperature, humidity, total and diffuse solar radiation on a horizontal surface, daylight illumination on a horizontal surface (the last named from May, 1958). Daily measurements of evaporation (from April, 1958) and atmospheric pollution.

PREFACE (contd.)

Routine radio sonde and radar wind upper air measurements (twice and four times daily respectively). Regular measurements, normally several times a day, of the total amount of ozone. Chemical sampling of the air and rain water (from January, 1958).

Eskdalemuir Observatory

Full hourly synoptic observations 06-21h. G.M.T. (Three-hourly 06-21h. G.M.T. before May, 1958). Hourly tabulations of pressure, wind, rainfall, sunshine, temperature, humidity, total and diffuse solar radiation on a horizontal surface, daylight illumination on a horizontal surface (the last named from May, 1958). Daily measurements of evaporation (from October, 1957) and atmospheric pollution. Regular measurements, several times a day, of the total amount of ozone and occasional *umkehr* measurements of the vertical distribution. Chemical sampling of the air and rain water (from October, 1957).

Kew Observatory

Three-hourly synoptic observations 06-21h. G.M.T. Hourly tabulations of pressure, wind, rainfall, sunshine, temperature, humidity, total and diffuse radiation on a horizontal surface, solar radiation at normal incidence, daylight illumination on a horizontal surface, net flux of radiation. Daily measurements of evaporation and atmospheric pollution. Records from a set of Galitzin seismographs (3 components) and a short period vertical seismograph.

NOTE ON THE TABLES: Maximum and minimum values are shown in italics.

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LERWICK

INTRODUCTION

DESCRIPTION OF OBSERVATORIES

Lerwick Observatory, Shetland Isles ($60^{\circ}08'N$, $0^{\circ}11'W$)

The Observatory is set on a ridge of high ground about 85 m. above M.S.L. and about $2\frac{1}{2}$ km. to the south-west of the small fishing town of Lerwick (population about 6000). The surrounding country is desolate moorland. Views of the station are given in Figs.2 and 4 together with a contoured map of the surroundings, Fig.1, and a site plan, Fig.3 in the *Observatories' Year Book* for 1938. An account of the history of the Observatory is given by W.G. Harper (*Met. Mag.*, London, 79, 1950, p.309).

Eskdalemuir Observatory, Dumfriesshire ($55^{\circ}19'N$, $3^{\circ}12'W$)

The Observatory is situated on a rising shoulder of open moorland about 245 m. above M.S.L. in the upper part of the valley of the River Esk in the Southern Uplands of Scotland. It is surrounded by open grass covered hills rising within 8 km. to the north-west to nearly 700 m. above M.S.L.

In the *Observatories' Year Book* for 1938 a general view of the Observatory and its grounds is given in Fig.12; Fig.13 is a site plan and Fig.11 is a contoured map of the surrounding country. The history of the Observatory is described by M.J. Blackwell in a paper marking the fiftieth anniversary of the commencement of observations (*Met. Mag.*, London, 87, 1958, p.129), and by J. Crichton (*Met. Mag.*, London, 79, 1950, p.337).

Kew Observatory, Richmond, Surrey ($51^{\circ}28'N$, $0^{\circ}19'W$)

Kew Observatory lies in the centre of an area of parkland about 16 km. west of the centre of London. The ground level is about 5 m. above M.S.L. Outside the parkland within 1 km., the area is extremely built-up, with a number of small factories within a few kilometres to the north and east.

Figs.18, 19, 20 and 21 in the 1938 *Observatories' Year Book* are respectively a plan of the surrounding country (shading indicates built-up areas), an aerial photograph of the Observatory, a site plan and a photograph of the Observatory and instrument lawn.

For the early history of the Observatory reference may be made to papers by G. Rigaud¹, R.H. Scott², C. Chree³, O.J.R. Howarth⁴, R.S. Whipple⁵, F.J.W. Whipple⁶ and A.J. Drummond⁷.

Fuller descriptions of the sites of each observatory are given in the 1938 volume of the *Observatories' Year Book* (Lerwick, p.14, Eskdalemuir, p.84, Kew, p.168).

1 RIGAUD, G.; Dr. DEMAINEBRAY and the King's Observatory at Kew. *Observatory, London*, 5, 1882, p.279.

2 SCOTT, R.H.; The history of the Kew Observatory. *Proc. roy. Soc. London*, 39, 1885, p.37.

3 CHREE, C.; Description of the Kew Observatory, Old Deer Park, Richmond, Surrey. *Rec. roy. Soc.*, London, 1st. edn., 1897, p.137.

4 HOWARTH, O.J.R.; The British Association for the Advancement of Science: a retrospect 1831-1921. London, 1922.

5 WHIPPLE, R.S.; An old catalogue and what it tells us of the scientific instruments and curios collected by Queen Charlotte and King George III. *Proc. opt. Conv.*, London, Pt. II, 1926.

6 WHIPPLE, F.J.W.; Some aspects of the early history of Kew Observatory. *Quart. J.R. met. Soc.*, London, 63, 1937, p.127.

7 DRUMMOND, A.J.; Kew Observatory. *Weather London*, 1947, p.69.

TERRESTRIAL MAGNETISM

Regular recording of the earth's magnetic field commenced at Kew in 1857. By the beginning of the twentieth century however, the extension of London's electric railway and tramway system had caused so much magnetic disturbance that it was decided to establish another magnetic observatory in an area considered unlikely to be similarly affected. This led to the building of Eskdalemuir Observatory which was opened in 1908, but magnetic observations were also continued at Kew up to 1924.

Comparisons of the magnetic results obtained at Kew and Eskdalemuir showed, however, that it would be very desirable to obtain magnetic records as far north as possible in the British Isles, and this resulted in the establishment of Lerwick Observatory in 1921. Recording of the magnetic field has been continuous at Lerwick since January 1923.

The principal magnetographs at Lerwick and Eskdalemuir are La Cour instruments, each set consisting of H , D and Z 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 Z 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 *Publikationer fra det Danske Meteorologiske Institut, 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 contact every five minutes. The width of paper is 10 cm. for each element, but the effective range of the variometer is increased by a number of small prisms which reflect light from the lamp into the variometers, producing a series of vertical light sources.

Scale values of H and Z 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 milliammeter which is periodically calibrated. It is thought that the scale values adopted, about $4\gamma/\text{mm.}$ for H and about $6\gamma/\text{mm.}$ for Z at both Observatories, are accurate to about 1 per cent. The scale value of D depends only on the geometry of the system, with a small correction for torsion but it may also be checked by means of a Helmholtz-Gaugain coil. It is about $0.9/\text{mm.}$ The H and Z variometers are capable of accurate compensation for temperature.

In addition to the La Cour standard magnetograph each Observatory also has a La Cour quick run magnetograph. This is similar to the standard set but has a time scale twelve times as great and a more complicated optical system.

Complete sets (H , D and Z) of supplementary magnetographs with lower sensitivity are also operated to provide information during any breaks in the standard magnetograph records and also to provide information when rapid magnetic disturbance renders the traces of the standard magnetograph indecipherable. Details of these instruments can be found in the 1938 volume of the *Observatories' Year Book*.

The La Cour magnetographs at Lerwick are housed in a non-magnetic concrete chamber above ground whose internal size is 4.9 m. by 3 m. with walls 76 cm. thick. In 1947 an electric heater was installed, controlled by a thermostat. This enables the temperature inside the chamber to be kept reasonably constant for periods of up to a few months at a time but the power is insufficient to keep the same temperature throughout the year. The thermostat is reset by several degrees at a time, so as to reduce the number of changes to a minimum. The time for a cycle of temperature changes (that is, the time between successive operations of the thermostat contacts) is of the order of one hour and a small oscillation of the temperature of the magnetograph is evident from the records, but the amplitude is only about one degree Celsius. The supplementary magnetographs are housed in a wooden hut.

At Eskdalemuir the magnetographs are placed in an underground chamber constructed throughout of non-magnetic material. Within the outer shell of stone and concrete and separated there from, and from each other, by corridors and vaultings are two similar rooms of approximate internal dimensions - length 7.6 m., width 6.1 m., height 3.0 m. The ceilings of the rooms are slightly below the undisturbed level of the surrounding ground. The roof portions of the outer containing shell is covered with a thick layer of earth which forms a mound. Electrical heating, thermostatically controlled, was introduced in November 1936 but, although the diurnal range in temperature is normally negligible, there is an annual range of temperature of about 4°C.

The temperature in the magnetograph chamber at both Lerwick and Eskdalemuir is read daily at 09h. and the readings are given in Table 4 (for Lerwick) and Table 25 (for Eskdalemuir).

Absolute measurements of each element of the magnetic field are made three times weekly and from these the base line values of the magnetographs are computed, using the mean ordinate of the variometer curve at the times of the absolute observation. The adopted values of the baseline are obtained by a graphical smoothing process. Normally one value is adopted for the whole of one day (0-24h. G.M.T.) except for known instrumental discontinuities, but at Lerwick the temperature compensation of the H variometer is not quite perfect and a baseline change of 2 or 3 γ may occur when the chamber thermostat is altered. Since the magnetograph record shows that the temperature change is substantially complete in 24 hours, the adopted baseline is on these occasions changed in 1 γ steps at eight or twelve hourly intervals.

TABULATIONS

Tables 1 and 22 give, for Lerwick and Eskdalemuir respectively, mean values of the horizontal component (H) of magnetic force for periods of 60 minutes ending at the exact hour G.M.T. together with hourly, daily and monthly sums and means. Tables 2 and 23 give similar information for declination (D) and Tables 3 and 24 for the vertical component (Z). Tables 4 and 25 contain the values of the daily extremes of each component, the range during the day and the magnetic character figures K and C together with the 09h. temperature in the magnetograph chamber.

Tables 1-4 are subdivided into monthly sections and the same monthly parts of each table are grouped together on facing pages. Tables 22-25 are treated similarly. The days selected by the International Association of Geomagnetism and Aeronomy (I.A.G.A.) as being typical "quiet" and "disturbed" days are marked by the letters "q" and "d" respectively.

In general the declination (D) is measured to the west and is considered to increase with increasing westerly declination in accordance with the convention adopted in previous volumes. There is, however, an important exception in the Tables 17 and 42 entitled "Noteworthy Magnetic Disturbances" (see below). In these two tables a movement of D to the east (that is, decreasing westerly declination) is regarded as positive, in order that the data in the tables may agree in every respect with data already supplied to I.A.G.A.

The magnetic character figures K and C are derived in the conventional way (see for example, *I.G.Y. Instruction Manual Part IV Geomagnetism - Part I*). The lower limit for $K = 9$ is 1000 γ for Lerwick and 750 γ for Eskdalemuir.

Tables 5 (for Lerwick) and 26 (for Eskdalemuir) give the mean monthly and annual values of the magnetic elements H , D and Z together with the values of the North Component (X), West Component ($-Y$), Inclination (I) and Total Force (F). The values for H , D and Z are also given for the international quiet and disturbed days.

Tables 6 and 7 (for Lerwick) and 27 and 28 (for Eskdalemuir) give monthly, seasonal and annual means and frequency distributions of the daily range for each component (H , D and Z).

For this purpose "Winter" is defined as the four months November to February; "Equinox" as March, April, September and October; "Summer" as May to August.

Tables 8 and 29 contain values of the Q index (from July 1, 1957). This index gives a measure of the magnetic disturbance in the H and D traces during intervals of 15 minutes centred at 00h., 00h.15m., 00h.30m., etc., (that is, covering the periods 2352½ to 0007½ etc.) throughout the day. The entry for each day consists of 96 figures on a scale 0-9, T, E, (T standing for 10 and E standing for 11). Full details of the definition of the Q index and the methods used in scaling it are given in the *I.G.Y. Instruction Manual Part IV, Geomagnetism - Part I* and in a paper by J. Bartels and N. Fukushima "A Q index for the Geomagnetic activity in quarter-hourly intervals", *Abhandlungen Akad. Wiss. Gottingen Math-Phys. Klasse*. No.3 1956, but briefly it can be said that the figure allotted for each 15 minute interval is a measure of the maximum deviation of the H and D records from what it is estimated the records would have been on a perfectly quiet day. The figure is first allotted from the H magnetogram and then increased if necessary by inspection of the D record. The lower limits of the ranges corresponding to the figures 0-9, T, E are as follows (expressed in γ):

Q	0	1	2	3	4	5	6	7	8	9	T	E
Lower Limit	0	10	20	40	80	140	240	400	660	1000	1500	2200

There is no upper limit for the highest index. At Lerwick and Eskdalemuir the estimated quiet day curves are normally drawn lightly in pencil on the magnetograms using templates, the position of the template being adjusted by reference to the preceding and following charts as necessary.

The next set of tables (9-16 for Lerwick and 30-38 for Eskdalemuir) give data on the diurnal inequalities of each magnetic element. As recommended by a resolution of the Commission for Terrestrial Magnetism and Atmospheric Electricity and approved by the Conference of Directors at Warsaw in 1935, the diurnal inequalities are all uncorrected for non-cyclic change, but the values of the non-cyclic change are also given separately in tables 14 and 37.

Some information is given for Eskdalemuir but not for Lerwick. This includes the diurnal inequalities of the North (X) and West ($-Y$) components and the Inclination (I), and values of the first four harmonic components of the diurnal inequalities of the north, west and vertical components.

The inequalities of X , $-Y$ and I have been computed from those of H , D and Z by means of the formulae:

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

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

$$\delta I = \frac{180 \times 60}{\pi} \cos I \left[\frac{\delta Z \cos I - \delta H \sin I}{H} \right]$$

in which δD and δI 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 26.

The results of harmonic analysis of the mean diurnal inequalities of X , $-Y$ and Z for the months, seasons and year are to be found in Table 39, in which are given the values of a_n , b_n , c_n and α_n in the two equivalent series $\sum (a_n \cos 15nt^\circ + b_n \sin 15nt^\circ)$ and

$\sum c_n \sin(15nt^\circ + a_n)$. In the former series t is reckoned in hours from midnight G.M.T., whilst the published values of a_n refer to local mean time. The harmonic coefficients have been computed from the inequalities as given in Tables 30-35 but for this purpose the non-cyclic change has been eliminated. A correction has been applied where necessary, because the hourly values are not instantaneous but are mean values; the factors by which the coefficients have to be multiplied (see *Report of the British Association*, 1883, p.98) are 1.00286 for a_1 , b_1 , and c_1 ; 1.01152 for a_2 , b_2 , and c_2 ; 1.02617 for a_3 , b_3 and c_3 ; and 1.04720 for a_4 , b_4 and c_4 . The values were obtained to two decimal places and finally were rounded off to 0.1γ .

Tables 17 and 42 are entitled "Noteworthy Magnetic Disturbances". These were revised in content in 1947 and now include all the disturbances which would have been included in the previous type of tables, with, however, additional disturbances of the form of sudden commencements and those which can be recognised as being solar flare effects. The tables are divided into three parts:

- (a) Disturbances noteworthy for some reason (usually, but not always, range) and without a sudden commencement.
- (b) Well marked sudden commencements whether followed by a large disturbance or not.
- (c) Disturbances accompanying a solar flare or other known solar flare effect.

The time given of commencement and ending of disturbances in (a) must depend on an arbitrary judgement. The list of sudden commencements under (b) will usually be a little shorter than that given in the I.A.G.A. bulletins because a somewhat stricter meaning has been given to the words "well marked", and also because the sharp beginnings of small polar disturbances have been omitted. The (c) table has been made as complete as possible by a careful scrutiny of the magnetograms at the time of any known solar flare or solar flare effect, but a small "crochet" can easily be masked by other disturbances. The signs given to the movements of H , D and Z are positive for increasing H , Z and an increase of force towards the east (that is, a decreasing westerly declination). Particulars of the same disturbances are given in both the Lerwick and the Eskdalemuir tables, even if the disturbances at one of the stations is relatively small.

Tables 40 and 41 are based on declination data (for Eskdalemuir) supplied to mine surveyors. Each hourly period between exact hours G.M.T. has been classified into one of four groups according to the range of declination within the period. The limits are: less than $5'$, $5'-15'$, $15'-30'$ and greater than $30'$; the range is less than $5'$ in about 85% of the hours.

Table 40 gives the number of occurrences of hourly ranges in each of the last three of the four divisions mentioned above, in each month of the year. Table 41 gives the hourly distribution using data for the whole year.

NOTES ON THE RESULTS

Comparing mean values on all days of 1958 with those for 1957 at Lerwick H increased by 21γ , D (west) decreased by $5'$ and Z increased by 23γ . The changes deduced in X , Y , I and F are $+24\gamma$, -17γ , -0.9 and $+29\gamma$. The ranges between the extreme values recorded during 1958 were H 3216γ , D $6^\circ 42' 6$, Z 1408γ . The range of $6^\circ 42' 6$ in declination corresponded to a range of about 1699γ in the component of force perpendicular to the magnetic meridian.

Similarly at Eskdalemuir H increased by 24γ , D (west) decreased by $6'$, and Z increased by 24γ . The changes deduced in X , Y , I and F are $+29\gamma$, -23γ , -1.0 and $+30\gamma$. The ranges between the extreme values recorded during 1958 were H 2762γ , D $3^\circ 5' 6$, Z 970γ . The range

of $3^{\circ}5'6''$ in declination corresponded to a range of about 902γ in the component of force perpendicular to the magnetic meridian.

ABSOLUTE STANDARDS OF MAGNETIC FORCE AT LERWICK AND ESKDALEMUIR

Horizontal Component

Since January 1, 1934 the standard absolute instrument for the measurement of the horizontal component at Eskdalemuir has been a Schuster-Smith coil magnetometer. A complete description of this instrument and of the method of using it is given in the *Philosophical Transactions of the Royal Society*, A.223, 1922, p.175. Essentially the instrument consists of a Helmholtz-Gauguin 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 to a series of known values by means of a potentiometer and a standard cell. A horizontal magnetic field is set up at the centre of the coil, of a magnitude slightly greater than H and approximately opposed to it in direction. The coil is then rotated in azimuth until the resultant horizontal 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 α is the angle between the direction of the earth's field and that set up by the coil system, A the constant of the coil (that is, the field due to unit current through the coil) and i the current, then

$$H = Ai \cos \alpha$$

Since 1939 at Lerwick the standard instrument has been a Smith portable coil magnetometer reconstructed to operate as a Schuster-Smith instrument.

In addition three Copenhagen Quartz Horizontal Magnetometer instruments (Q.H.M.'s) are available for intercomparison of the H standards at each Observatory and for use as standby absolute instruments.

The coil constant of the Eskdalemuir Schuster-Smith instrument was obtained by a direct comparison with the original instrument of this type at Abinger. Its potentiometer was calibrated at the National Physical Laboratory in 1933 and again in 1938 and 1953. The recalibrations showed negligible change in the resistances.

The constant of the Lerwick coil instrument was determined in 1932 by comparison with the Schuster-Smith Coil at Abinger and this constant has since been used unchanged. During the magnetometer's modification to act as a Schuster-Smith instrument, however, a small amount of magnetic material was removed from near the suspended magnet. A comparison with the Schuster-Smith magnetometer at Eskdalemuir then showed that the Lerwick instrument read 13γ low. This was generally confirmed when it was installed at Lerwick in 1939 as it then gave results 11γ below those obtained with the unifilar magnetometer currently in use as a standard. It was decided that the Lerwick standard of H should be (Coil values + 11γ) and there was no discontinuity in the published values of H , the term "Coil value" meaning the results obtained using the original value of the coil constant as determined in 1932.

However in 1946 comparisons between Lerwick and Abinger using Q.H.M. No.89 indicated that the Lerwick Coil magnetometer (uncorrected by any addition) gave results which were only 5γ lower than the Abinger Schuster-Smith Coil; that is, values of H according to the Lerwick standard (Coil + 11γ) were 6γ greater than the values given by the Abinger standard.

In 1947 it seemed desirable to assimilate the standard of H at Lerwick to that at Abinger so that the revised H standard at Lerwick became (Coil + 5γ). This assimilation was back-dated to January 1, 1934; where necessary corrections have been published (see, for example, 1938 *Observatories Year Book*, p.21).

The potentiometer in use with the Coil magnetometer had been calibrated at the National Physical Laboratory in 1938 and this was sent for recalibration in 1953. It was then found that the resistances had changed slightly and that the effect of this, when the new values were used, was to lower the values of H observed by 7γ . The time of this change could not be identified with certainty and it was decided that no discontinuity should be introduced and that the Lerwick H standard should be altered from June 1, 1953 to (Coil + 12γ), using the new calibration of the potentiometer. Although this avoided a discontinuity, it established a new standard for H at Lerwick which was 7γ higher than the Abinger standard.

Comparisons were made fairly frequently between 1948 and 1957 between Lerwick and Eskdalemuir using Q.H.M.'s, but it was found that reliable results (to an accuracy of 1 or 2γ) could not be obtained by using only one Q.H.M. or by using Q.H.M.'s sent through the post. It has been found necessary to use at least three instruments, carried personally by a responsible person, with comparisons at one station made both immediately before and immediately after the travelling.

The results of what appear to be the most reliable comparisons between Lerwick and Eskdalemuir Coil instruments are given below, (the figure for the Lerwick Coil is that obtained from the use of the original coil constant without the addition of any constant factor and using the 1938 potentiometer calibration up to 1953 and the 1953 potentiometer calibration after that).

Date	Instruments used for comparison	Difference Eskdalemuir H - Lerwick H^*
Dec. 1938	Direct	γ
Sept. 1946	Q.H.M. 89	+13
Apr. 1948	Q.H.M. 89	+11
June-Sept. 1950	Q.H.M. 90, 91, 92	+13.5
May-June 1957	Q.H.M. 119A, 120, 121A	+12
Apr. 1959	Q.H.M. 119A, 120, 121A	+15
		+11

*uncorrected coil values.

This evidence suggests that there has been no detectable change in the relationship between the two coils and suggests also that the change in the Lerwick potentiometer resistances occurred between 1950 and the recalibration in 1953, and that the standards currently in use at the two Observatories are in good agreement.

Comparisons between the H standards at Eskdalemuir and Abinger (1954 and earlier) and between Eskdalemuir and Hartland (1959) are given below. The table shows the difference Eskdalemuir minus Abinger (or Hartland). The comparison in 1933 has however a much higher probable error than the later observations.

Date	Instruments used for comparison	Difference Eskdalemuir H - Abinger H or Hartland
Dec. 1930	Direct at Abinger	γ
Jan. 1933	Travelling Kew instrument	0
Sept. 1946	Q.H.M. 89	-5
Apr. 1948	Q.H.M. 89	+6
May-Nov. 1950	Q.H.M. 91, 92	+6
July 1954	Q.H.M. 120	+10
May 1959	Q.H.M. 119A, 120, 477, 478, 479	+5
		+4

There is therefore no reliable evidence of a change in the relationship between the Eskdalemuir and Abinger/Hartland Schuster-Smith coil instruments over the last 13 years at least, although a change of some 6γ is indicated following the installation of the coil instrument at Eskdalemuir. When compared with the results shown for the comparison between Lerwick and Eskdalemuir, these seem to indicate that all three coil instruments have remained in a very constant relationship to each other over the past 13 years and possibly therefore since they were installed at their respective Observatories. There remains, however, the difference of some 6γ between Abinger (and later Hartland) H standard on the one hand, and Lerwick and Eskdalemuir H standards on the other. It is possible that the difference has existed at Eskdalemuir since the Coil was brought into use in 1932; at Lerwick the difference seems to have developed after 1950 and was finally accepted when the standard (Coil + 12γ) was introduced in June 1953.

Declination

The declination is measured at each Observatory by a Kew pattern unifilar magnetometer. The azimuths of both the fixed marks were remeasured by the Ordnance Survey in 1948 and since that date the values then obtained have been used.

The 1948 determination of the azimuth of the Lerwick fixed mark confirmed that the azimuth in use up to that time (based on a determination in October 1922) was in error. From a survey of the results obtained from five determinations made at intervals from 1923 to 1948 it was concluded that (i) the original determination was in error by about $3\frac{1}{2}'$ and (ii) an apparently uniform small drift of about $1'$ occurred between 1923 and 1948. Values of westerly declination published previous to 1948 are too large by amounts ranging from $3\cdot5$ in 1923 to $4\cdot4$ in 1948. The corrections for 1938 and previous years are given in the 1938 *Observatories' Year Book* (p.21) and for subsequent years in succeeding volumes. Since 1948 the correct fixed mark azimuth has been used and no corrections to the tabulated values are required.

The observation of the azimuth of the fixed mark at Eskdalemuir in 1948 gave results negligibly different from previous observations and no changes were required in the tabulations.

Vertical Force

The standard instrument in use at Lerwick from 1940 to 1952 was the Copenhagen Balance Magnetometer B.M. No.8 and a detailed account of its history up to 1947 is given in the 1938 *Observatories' Year Book* (p.20). Difficulties with its clamping mechanism were however often experienced and in 1952 the mechanism was unfortunately broken. Upon the advice of the Observatory at Rude-Skov it was replaced with a modern instrument, B.M.Z. No.83, in 1953. Since that date B.M.Z. No.83 has been used as the Lerwick standard using the original Rude-Skov calibration.

B.M.Z. No.83, on its arrival in 1953, was found to give close agreement with the existing Z standard which had been carried over from B.M. No.8, by the use of the Eskdalemuir B.M.Z. No.35 in the interim period.

On November 24, 1957, the instrument suffered an accidental knock and its readings immediately afterwards were found to be 150γ lower than previously. On September 28, 1958, the instrument suffered a further slight jar and a further change in reading was found; the 150γ correction now became 126γ . These additive corrections have been applied to the observed readings since the appropriate dates.

The standard absolute instrument for determining vertical force at Eskdalemuir is a Schulze dip indicator. This instrument measures the inclination of the magnetic field and this has to be used in conjunction with measurements of H (from the magnetograph records) to calculate Z using the relation:-

$$Z = H \tan I$$

It consists essentially of a coil which can be rotated continuously and rapidly about an axis which coincides with a diameter of the coil. This axis is itself capable of rotation about other horizontal and vertical axes, so that it can be set in any required direction in space; the azimuth and inclination of the coil axis can be read from horizontal and vertical scales respectively. The windings of the coil are connected through a commutator to a Broca galvanometer.

To determine the magnetic inclination the coil is set with its axis in the magnetic meridian (as determined by other means) and the coil rotated steadily (about 360 rev./min.). The inclination of the axis of rotation is adjusted until the galvanometer deflection is the same whatever the sense of rotation. In this position the axis of rotation of the coil is parallel to the direction of the earth's total field and the inclination can be read from the vertical circle.

Two series of settings are normally made, one with the vertical circle facing east and one with the circle facing west.

Measurements are also made regularly with a Copenhagen balance magnetometer B.M.Z. No.35. The results with this type of instrument have less scatter than those of the dip inductor, but its constants are liable to change (either by slow drift or sudden jump). Consequently B.M.Z. No.35 is used to identify and measure changes in the Z baseline, while the absolute value is determined by the long term measurements with the dip inductor.

The Schulze inductor is nominally an absolute instrument requiring no checking except for the engraving of its scales. Inter-observatory comparisons are however a valuable means of checking this and the results of such comparisons are given below. The portable instrument most used as an intermediary has been B.M.Z. No.35. It has however been subject to sudden shifts in calibration, probably associated at least in part with the mounting and demounting of the instrument, and it has not always been possible to carry out the desirable number of observations before and after each movement. The estimated probable error of each comparison should be put at least at 5 γ , and possibly as much as 10 γ .

The difficulty of interpretation is shown by the results of particularly careful comparisons in 1954 and 1957, using two B.M.Z. instruments which revealed very different results from those before and after, as shown in the following tables.

Date	Instruments used for comparison	Difference Eskdalemuir Z - Lerwick Z
		γ
1948	B.M.Z. 35	+18
1950	B.M.Z. 35	+14
1952	B.M.Z. 35	+18
1952-1953	B.M.Z. 35	+15
1957	B.M.Z. 35, 53	-23
1959	B.M.Z. 35	+14

Comparisons between the Z standard instruments at Eskdalemuir and Abinger (up to 1954) and between Eskdalemuir and Hartland (1959) are in the next table.

Date	Instruments used for comparison	Difference Eskdalemuir Z - Abinger Z or Hartland
		γ
1949	B.M.Z. 35	+19
1950	B.M.Z. 35	+14
1951-1952	B.M.Z. 35	+19
1954	B.M.Z. 35	+1
1954	B.M.Z. 53	+6
1959	B.M.Z. 35	+14

It is worthwhile pointing out here that an error of 6γ in H at Eskdalemuir makes a corresponding error of 16γ in Z when the dip inductor is used. The comparisons with Abinger and Hartland are thus consistent with the supposition that the Eskdalemuir H coil reads high by about 6γ . Alternative explanations seem less probable since the measurement of Z at Abinger and Hartland is by a coil method which is completely independent of the measurements of H .

There are no comparisons between Lerwick and Abinger or Hartland which did not also involve a measurement at Eskdalemuir so that, combining the information given in the two preceding tables, and disregarding the anomalous 1954 and 1957 results, it is seen that, within 5γ , Lerwick and Abinger and Hartland Z measurements are in agreement and Eskdalemuir is high by some 15γ .

In view of the difficulties of the measurement of vertical force it has been decided to obtain improved instruments for both Lerwick and Eskdalemuir, and it is hoped to introduce two nuclear precession magnetometers early in 1960. These instruments will measure the total field F and are believed to have an absolute accuracy of $\pm 1\gamma$ when used with suitably precise frequency measuring apparatus. The vertical force can then be computed from simultaneous measurements of F and H . The error in Z caused by an error ΔH in the H measurements can easily be shown to be $-(H/Z)(\Delta H)$. For Eskdalemuir the ratio H/Z averages about 0.36 and for Lerwick 0.31. The effect of systematic errors in H (which are believed to be 6γ or less) is thus very small (2γ or less).

A description of this apparatus and details of the results obtained will be found in later volumes of this publication.

AURORA

A special watch for Aurora is kept at Lerwick Observatory. Up to 2200hr. each evening observations of the northern horizon and general meteorological conditions are made at intervals of 15 to 20 minutes; if any aurorae are seen continuous observations are made and details of the phenomena observed are noted. If necessary a second observer is called. Elevations of significant points are measured with a simple alidade.

Any aurorae which commence after 2200hr. are also noted by the staff making regular synoptic observations and upper air soundings, but these staff may not be able to devote long periods solely to recording the detailed aurorae changes. It should be noted that in former years the auroral watch was suspended during the months May to August. During 1957 and 1958 however, because of the I.G.Y., the watch was continued throughout this period although it was realised that twilight would prevent aurorae being seen for a number of weeks during mid-summer, and would in the other months severely restrict the time during which faint aurorae could be seen.

A brief account of the results obtained is given in Table 18. All dates, on which the sky remained completely overcast throughout the evening and on which, therefore, no opportunity arose of determining whether or not aurora occurred, have been omitted. Those nights on which aurora was actually observed are indicated by the symbol Φ ; other nights on which no aurora was observed, despite at least an occasional interval of more or less clear sky, are indicated by the symbol \dots . 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 showing that, in fact, there was no aurora. Each night is described by a letter code which has the following significance:-

- a = Conditions favourable for seeing aurora
 - b = Unfavourable for faint aurora (because of moonlight, mist, thin cloud etc.), but not such as to mask bright aurora
 - c = Cloudy, but aurora not seen in clear intervals
 - ca, cb = Cloudy, but with conditions a or b respectively, in the intervals.
- Changing conditions are indicated by a hyphen; for example, a-c.

The detailed observations are available in manuscript and have also been sent to Mr. J. Paton of the Balfour Stewart Auroral Laboratory, University of Edinburgh [I.G.Y. World Data Centre C (Visual observations)].

Table 19 is a general auroral table giving a summary of the observations of aurorae in the British Isles. It is compiled from the detailed observations received at the Balfour Stewart Auroral Laboratory.

ATMOSPHERIC ELECTRICITY

The programme at Lerwick and Eskdalemuir is to maintain a continuous record of the atmospheric electric potential gradient as it exists over open level country in the immediate neighbourhood at the height of one metre. This is also done at Kew Observatory but there, in addition, regular measurements are made on fine afternoons of the air-earth current. These latter are expressed as mean values covering the period of observation which is normally about 20 minutes centred on about 1430 G.M.T.

Continuous Potential Gradient measurements

The instruments used for the recording of the potential gradient are similar in principle at all three Observatories. An insulated boom projects through the wall of the building and is caused to take up the potential of the air because a small radioactive collector is fitted to its tip. The potential of the boom is recorded by an electrostatic voltmeter.

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 each quarter. Tests at Kew Observatory in 1959 showed that the strength of a new collector is usually between 80 and 200 micro-curies. A note about the supply of the collectors and of the techniques used in plating them is given in *Nature* 1955, 175, p.965.

The potential of the boom is of course affected by the presence of buildings, although it is assumed that this potential is always proportional to the potential gradient in the open. Standardising measurements have therefore to be made of the true potential gradient at a suitable open site. The ratio of the potential gradient in the open to the potential of the boom is called the exposure factor and is expressed in the units (metre^{-1}).

The methods of making the standardisation measurements of potential gradient are different at each Observatory.

At Lerwick an insulated wire with a polonium collector fixed to its centre is stretched horizontally between two stout wooden posts 9 m. apart. The centre of the wire is exactly 1 m. above a levelled piece of ground. The potential of this wire is observed at 1 minute intervals for a period of 10-20 minutes using a Wulf electrometer, the times of observation being chosen to coincide with the minute dots on the electrograph. From the mean value of the observed potential and the mean reading of the electrograph an exposure factor is calculated. Observations are made in fine weather and as many as possible are made. Smoothed monthly means of the factors so obtained are used in the reduction of the records.

At Eskdalemuir absolute observations of potential gradient are made with a Wulf electrometer using a small pit about 50 yards from the main building. The electrometer is placed inside the pit and from the electrometer a thin metal rod (0.4 cm. in diameter) projects vertically upwards through a hole in the metal lid covering the pit. A polonium collector is fixed to the rod at exactly one metre above the ground level. It has been shown experimentally that the potential of the rod is the same (within experimental error) as that of a stretched wire at one metre exposed to the same potential gradient.

The observer shuts himself in the pit and takes readings of the electrometer every half minute until 15-30 readings have been obtained. As at Lerwick observations are made in

fine weather and at least six per month are aimed at. From the mean potential of the Wulf electrometer over the period and the corresponding mean value of the record, the exposure factor of the electrograph is obtained.

For any given month a mean exposure factor is used and this is a smoothed running mean using observations made during the preceding and following months.

The absolute measurements at Kew are made with the Wilson apparatus in the underground laboratory; these are described on p.15.

At Lerwick the boom potential is recorded by a Benndorf electrograph 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 m.) away from the ground where absolute determinations are made, the values of the reduction factor suggest that these disadvantages are less serious than might be anticipated.

The collector is screwed into the end of a tube which projects about 120 cm. through a window in the north-west wall about 190 cm. from the corner of the building and 476 cm. above ground. The inner end of the tube is supported from a wooden framework by metal rods embedded in cast sulphur insulators; an electrical heater, which is situated below the tube, keeps the insulation dry even in wet weather. Draughts through the hole in the window are practically eliminated by a system of baffles.

A detailed description of the electrometer is to be found in the *Physikalische Zeitschrift, Leipzig* for 1906 (p.98) whilst the general principle is described in Mathias' "*Traité d'électricité atmosphérique et tellurique*" (p.54) and in Chauveau's "*Electricité atmosphérique*" (p.61).

The scale value of the record has varied from time to time following adjustments but has usually been kept between 25 and 30 volts per metre per millimetre, which permits a range from about +1500 to -1500 volts per metre in the open to be recorded. Tests of the scale value of the record are made daily with the aid of batteries after removing the collector from the boom; the insulation is also tested regularly. Considering the climatic difficulties, the behaviour of the instrument in the matter of insulation has been satisfactory, especially since electrical heating was installed in the room. The rate of leak has been small; an average value for 1957, for instance, was such that the instrument would lose half its potential in 20-30 minutes.

Tests of the rate of rise of potential of the Benndorf recorder and electrograph boom with a polonium collector fitted, after being earthed, were made at various times in the years 1954-1957. It was found that with a freshly plated collector the potential rose from zero to half the final value in about 4-6 seconds, but that this time increased after the collector had been in use. This loss of efficiency was found to depend almost as much on the weather as on the radio active decay of the polonium. The regular use of fresh collectors ensures that the time taken for the Benndorf to reach half its final potential is not allowed to exceed 20 seconds. The rate of leak is thus so very much less than the rate of charging that the difference between the potential of the boom and that of the air surrounding it is negligible.

The electrograph at Eskdalemuir consists essentially of quadrant electrometer with a small mirror on the vane which reflects a light spot on to a sheet of bromide paper wrapped around a drum rotated by clockwork. From 1936 until 1954 the electrograph boom projected through a pipe in the North wall a few feet to the West of its present position; it now projects through a small wooden door in the wall of a room.

The boom is supported on insulators, formerly of sulphur but, since October 1957, of polythene. Tests of the insulation of the boom and electrograph are made frequently (about 3 times per week). The insulation was in general very satisfactory throughout the year.

The scale value of the record was between 1.74 and 1.94 volts per millimetre during 1958 and this combined with an exposure factor of about 10 means that one millimetre on the record corresponded to about between 12 and 20 volts per metre in the potential gradient over open level country.

The Kew electrograph, which is also a quadrant electrometer recording photographically, was moved in April 1940 from a low building known as the Clinical House to a room in the main Observatory Building; the new position is 18 m. to the East of the former position. In March 1941 a metal fire escape was erected on this wall above the boom and this reduced the recorded potential by nearly 50%. This was compensated by increasing the sensitivity of the recorder by an approximately similar amount. The radioactive collector is now 90 cm. from the window of the building through which the boom projects and 360 cm. above ground level.

The scale value of the electrograph has been fixed at about 17 volts per metre per millimetre.

The electrograph became unreliable in May 1953 and from then until the end of 1955 the continuous records of potential gradient have not been published. Reliable recording started again on January 1, 1956.

Air-earth current and conductivity measurements at Kew

Measurements of the air-earth current and potential gradient are made in an underground laboratory using a modified Wilson apparatus. From these observations the conductivity can be calculated. The apparatus was devised by C.T.R. Wilson* and is described in detail by F.J. Scrase†. Briefly, it consists of an insulated brass plate, mounted with its top surface flush with the ground level, and connected to a sensitive electrometer. The test plate can be covered when necessary with an earthed cylindrical cover, and can be maintained at any desired potential (usually zero) by a small charged variable capacitor (called the compensator). The method of using the instrument at Kew differs slightly from that adopted by Wilson, who used the readings of the position of the Compensator to obtain the charge on the test plate. At Kew the compensator is used merely to keep the plate at zero potential, and the charge is measured by reading the deflexion of the electrometer. The potential gradient is measured by the charge induced on the plate when it is exposed to the earth's field, and the air-earth current is measured by finding the charge collected by the plate during a known period (usually five minutes).

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 is the potential acquired by the test plate after being exposed to the field, earthed and then shielded, and A is the area of the test plate‡. The potential gradient found in this way is, to a close approximation, equal to that found by measuring the potential at a height of 1 m. in the open part of the grounds with a stretched wire apparatus.

The air-earth current is given in amperes per square centimetre by the formula

$$i = C \delta v / A t$$

where δv is the potential acquired by the plate in t seconds. The value of δv used is the

*WILSON, C.T.R.: *Camb. Proc. Phil. Soc.* 13, 1906, pp.184 and 363

†SCRASE, F.J.: *London, Met. Off. Geophys. Mem.* VII, No.60, 1934

‡In practice, at present, half the potential gradient observations are made by a slightly different procedure, less desirable in principle, but giving negligibly different results; the plate is shielded, earthed and then exposed to the field and its potential measured.

mean result from four observations, each lasting five minutes. The observations of the current are sandwiched between measurements of the field strength, and from the mean values of i and F the conductivity λ is deduced. This conductivity is that due to positive ions only since measurements are made only with positive fields. No observations are made in precipitation and fog.

From July 1, 1949 to the end of 1955 trouble was experienced with the Wilson test plate apparatus and the observations of air-earth current and conductivity during the period have subsequently been found to be unreliable. These observations have not therefore been published. The observations of the potential gradient with this apparatus during this time were checked, however, on a number of occasions by simultaneous observations of the potential of a stretched wire at one metre above the ground level; the differences between the two methods of observations occasionally reached 15 per cent but the mean difference was only 4 per cent, the Wilson measurements being the greater. In view of the trouble with the apparatus it was decided that from July 1949 onwards until the end of 1955 the stretched wire observations should be the standard and that, before being used for electrograph standardisations, the Wilson observations should be corrected to allow for the differences between the two. Throughout this doubtful period the observations of potential gradient with the Wilson apparatus have been considered of sufficient value to publish, but the differences found between these observations and those made with the stretched wire apparatus must be borne in mind.

The instrument was overhauled late in 1955 and from January 1, 1956 the records and tabulations are considered reliable.

TABULATIONS

As was stated in the preface to this Year Book the layout of the atmospheric electricity tables has been altered. The information now given is substantially similar to that provided for the I.G.Y. returns.

Table 20 (for Lerwick), 43 (for Eskdalemuir) and 45 (for Kew) contains the mean value of the potential gradient for periods of 60 minutes ending at exact hours G.M.T. The entry for these hours, however, for which the mean is indeterminate because of large fluctuations, is made according to the following code:- $Z+$ means an indeterminate but positive value, $Z-$ an indeterminate but negative value and $Z\pm$ an hour when the gradient was indeterminate in both magnitude and sign. In addition the entry for hours when precipitation is observed or recorded is marked with an asterisk.

Mean values and sums are given for each hour and for the months and year, using only hours without precipitation and for which the entry is not Z . The number of hours used for each mean is given. Estimated values are entered in brackets and are included in the sums and means. Besides this the monthly and annual mean potential gradient are given, using only the entries for 0a days (or for "selected quiet days" at Kew Observatory). The definition of 0a days is given in the next paragraph; the definition of "selected quiet days" at Kew is as follows:- 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 in a month the number can sometimes be made up by using other spells of 24 hr. The purpose of these entries is to enable comparison to be made with previous years for which corresponding information has been published.

In Tables 21, 44 and 46 (for Lerwick, Eskdalemuir and Kew respectively) the duration of negative potential is tabulated and an electrical character figure is assigned to each day.

At Kew the following scheme is used for the latter entries:-

0 denotes a day during which, 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 to three hours or more during the same period.

Besides allocating each day a number as done at Kew, Lerwick and Eskdalemuir Observatories also allocate to each day a symbol, either "a", "b" or "c". The definition of these is as follows:-

- a denotes that within the 24 periods of 60 minutes for which an estimate of the mean potential gradient has to be made there was in no case a range of potential gradient in the open exceeding 1000 volts per metre.
- b denotes that a range of 1000 volts per metre or more was reached in one hour at least but in fewer than six individual hours.
- c denotes that a range of 1000 volts per metre or more was reached in at least six individual hours.

During periods of defective record the sign of the gradient is assumed positive when no precipitation was recorded. If precipitation was recorded for less than one hour during such defective periods, an approximate value for the duration of negative potential for that hour has been assigned and the total for the day is given in brackets. If this cannot be done the entry for any day with a defective record is -. When, because of oscillating gradients, there is uncertainty as to the times of change of sign, half the total duration of doubtful sign is accounted negative.

Table 47 contains the results of the measurements of the potential gradient, air-earth current and conductivity due to positive ions made with the Wilson apparatus at Kew. Each entry is the mean value for a period of twenty minutes centred about 1430 h. on the date in question. Monthly and annual means are also given.

It should be pointed out that the unit of potential gradient is volts per centimetre (not volts per metre as in the other tables); the unit of air-earth current is 10^{-18} ampere per square centimetre and the unit of conductivity is 10^{18} per ohm per centimetre.

NOTES ON THE RESULTS

While no detailed discussion of the results is attempted here, it is perhaps of interest to point out various marked changes which have occurred since around 1950. Most obvious is the large and continuing fall in the potential gradient at Eskdalemuir. At Kew the air-earth current and conductivity are now about twice the previous long term average but the potential gradient is almost unchanged. At Lerwick the potential gradient has fallen slightly. It seems almost certain that these changes are linked with the deposition on the ground of radioactive debris from nuclear weapon tests.

ATMOSPHERIC POLLUTION

The Owens atmospheric pollution recorder at Kew Observatory was originally installed in 1926 in the building known as the Clinical House. It was transferred in July 1953 to a site in the large Calibration hut some 25 m. to the South-west. The level of the intake is about two metres above that of the adjacent ground.

The instrument is described in the Report on observations in the year 1917-18, *London, Meteorological Office, Advisory Committee on Atmospheric Pollution*. Briefly, it consists of a device for passing a fixed volume of air through a filter paper clamped between two halves of a circular orifice; the density of the black stain is then taken as being

proportional to the weight of suspended solid matter in unit volume of air. In the Kew instrument each sample of air (6.4 litres) takes about twenty minutes to flow through the filter paper and a sample is taken approximately once an hour.

The density of the stain is measured by comparing it visually with a standard set of shades. The standard set now in use was originally supplied by the Department of Scientific and Industrial Research (D.S.I.R.) in 1942 and was recalibrated in 1948 and 1958.

In addition to the Owens recorder, from which of course the diurnal variation of pollution can be measured, D.S.I.R. have installed daily smoke filters at Kew, Lerwick and Eskdalemuir. These consist of an electrically operated pump which draws air through a filter paper continuously, an air meter being used to measure the volume of air. They are used to obtain the mean daily pollution concentration.

A summary of the results obtained at Kew with the Owens filter is given in Table 48. In this table are hourly means of the concentration of suspended matter, in milligrams per cubic metre, for each month, the seasons and the years. Winter is taken as the months January, February, November and December, Spring as March and April, Summer as May to August and Autumn as September and October.

The data from this instrument are also published in a different form in the various Reports of the Atmospheric Pollution Research Committee, (D.S.I.R., "*The Investigation of Atmospheric Pollution*", H.M.S.O. published yearly). The results of the observations made with the daily smoke filters are also published in these volumes.

During 1958 the highest estimate of pollution was 1.5 mg.m^{-3} , this value occurring on January 14, from 21h. to 22h. and on December 6 from 22h. to 23h. There were three days on which the pollution reached 1.0 mg.m^{-3} . The number of hours credited with 1.0 mg.m^{-3} was seven, of which four were recorded in January, two in November and one in December.

TERRESTRIAL MAGNETIC FORCE: HORIZONTAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

1	LERWICK (H)												14,000γ (0.14 C.G.S. unit) +												JANUARY 1958	
	Hour G.M.T.																								Mean	Sum 10,000+
	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		
1 d	321	298	192	334	354	367	407	460	454	444	440	449	449	454	475	469	479	498	589	715	605	587	545	478	453	863
2	475	454	450	449	456	445	474	475	465	454	476	479	458	484	485	471	480	488	493	491	486	487	486	487	473	1348
3 q	502	499	498	501	501	501	500	499	499	495	486	476	473	482	486	489	492	491	495	497	495	493	496	500	494	1846
4 q	502	507	506	507	509	509	511	510	503	496	492	488	484	486	490	495	499	505	509	514	514	517	517	515	504	2085
5 q	505	495	501	498	503	507	509	509	509	504	499	495	494	498	496	500	502	506	514	516	514	513	512	510	505	2109
6	509	509	514	520	528	524	524	516	511	509	508	504	498	502	499	496	495	504	515	519	519	516	517	515	511	2271
7 q	508	508	509	507	512	517	517	521	515	508	503	496	496	496	495	499	502	506	510	511	509	508	508	510	507	2171
8 q	514	512	515	516	521	525	525	520	512	504	494	490	488	491	490	496	501	499	507	513	515	514	514	512	508	2188
9	510	513	511	519	524	526	529	526	519	512	501	492	490	501	494	501	507	520	529	522	521	537	527	505	514	2336
10	500	510	495	497	501	501	501	504	504	494	483	478	483	495	486	492	502	510	517	517	514	515	517	512	501	2028
11	505	512	507	510	504	505	505	507	506	508	502	499	498	502	503	509	515	520	523	525	520	523	514	511	510	2233
12	507	502	499	506	510	510	502	500	496	492	488	483	485	498	497	504	510	509	520	522	521	518	511	501	504	2091
13	502	512	507	506	515	518	511	514	509	502	492	483	477	484	499	510	517	515	515	519	528	492	495	507	505	2129
14	507	505	510	511	512	514	509	507	490	487	498	489	488	493	503	517	521	516	512	517	525	506	503	509	506	2149
15	507	506	503	506	506	496	504	510	492	484	479	476	487	496	498	502	502	499	504	510	509	510	501	503	500	1990
16	504	504	504	504	505	504	501	497	495	492	484	483	489	499	509	514	510	510	521	526	511	517	519	515	505	2117
17 d	505	503	501	495	505	505	506	505	493	473	457	461	472	474	491	495	515	521	505	506	517	512	480	482	495	1879
18 d	451	465	447	495	492	498	488	476	462	441	446	467	454	452	498	510	518	514	514	514	499	496	496	499	483	1592
19	496	493	497	498	500	506	498	489	485	480	473	465	462	471	497	498	506	518	510	496	501	503	500	509	494	1851
20	501	501	498	500	502	502	503	503	492	488	482	475	475	488	506	506	515	534	529	521	524	536	501	475	502	2057
21 d	395	415	349	289	341	457	483	478	486	481	476	469	463	475	488	492	495	508	511	515	518	511	507	503	463	1105
22	499	498	498	498	498	501	500	497	502	504	499	491	482	489	480	499	506	510	518	513	517	514	511	503	501	2027
23 d	499	517	499	494	511	514	514	499	499	492	481	476	471	484	514	508	517	506	514	498	496	502	507	504	501	2016
24	502	504	504	506	506	503	504	504	496	491	486	480	470	484	495	496	505	508	513	514	517	514	514	510	501	2026
25	510	506	504	517	517	515	510	508	502	477	493	502	495	515	492	514	547	544	498	499	500	500	502	507	507	2174
26	504	505	506	469	492	483	466	476	484	476	469	471	473	485	491	495	496	503	502	506	510	501	491	497	490	1751
27	496	502	501	507	508	506	506	506	499	493	495	495	490	494	496	505	511	512	512	518	518	515	541	518	506	2144
28	509	511	513	514	515	517	518	522	511	500	492	491	480	488	492	495	507	511	517	518	519	523	523	521	509	2207
29	514	521	514	510	508	527	531	523	503	499	491	496	503	506	507	504	500	504	506	502	521	520	514	514	510	2238
30	515	516	517	511	519	523	528	525	514	505	506	504	500	502	509	507	505	510	510	503	506	506	507	508	511	2256
31	515	515	512	513	518	517	519	519	514	507	501	500	502	508	508	511	518	512	514	517	509	512	510	520	512	2291
Mean	493	494	486	491	497	501	503	503	497	490	486	484	482	489	496	500	506	510	514	519	515	513	509	505	499	
Sum 14,000+	1289	1318	1081	1207	1393	1543	1603	1605	1421	1192	1072	1003	929	1176	1369	1499	1695	1811	1946	2074	1978	1918	1786	1660		Grand Total 371,568

MAGNETIC DECLINATION (WEST)
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

2 LERWICK (D)													9° +													JANUARY 1958	
	Hour G.M.T.																										Sum
	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	1200.0+	
1 d	41.3	38.1	57.2	35.5	28.9	32.8	51.2	52.1	50.9	50.3	51.0	53.1	57.3	56.1	54.4	54.9	58.4	64.7	69.2	73.0	60.5	55.8	46.5	44.8	51.6	38.0	
2	42.6	36.5	41.5	45.7	52.3	55.9	55.0	55.4	52.8	55.0	56.7	57.8	57.5	62.1	60.7	60.4	56.8	56.1	55.7	55.2	54.3	52.8	51.2	51.2	53.4	81.2	
3 q	49.9	51.8	52.6	53.0	54.7	54.2	53.0	52.2	51.4	51.1	51.0	51.8	55.3	57.7	57.0	57.5	58.1	58.3	57.7	57.1	56.2	55.1	53.6	53.1	54.3	103.4	
4 q	53.8	52.8	53.6	54.6	54.0	53.2	52.8	52.4	51.8	51.7	52.7	53.8	55.3	57.6	57.2	56.6	57.0	57.0	56.6	56.2	55.4	55.3	55.2	55.0	54.7	111.6	
5 q	52.1	48.8	48.8	51.0	52.4	53.3	52.8	52.3	52.3	53.4	54.1	54.6	56.9	59.5	58.4	57.4	58.4	58.2	57.7	56.6	56.1	55.9	54.7	53.8	54.6	109.5	
6	52.5	53.8	55.4	55.7	55.8	55.1	54.6	54.3	54.7	53.7	54.7	56.6	58.2	61.5	60.4	60.7	59.9	58.0	57.0	56.0	55.5	54.6	52.8	51.1	55.9	142.6	
7 q	49.7	52.8	54.1	54.0	56.5	55.2	53.7	52.8	52.8	53.4	54.8	57.1	58.6	60.1	60.1	60.0	58.6	58.8	57.1	56.6	55.7	54.7	53.8	51.6	55.5	132.6	
8 q	51.1	52.0	52.5	54.3	53.3	53.7	54.6	54.3	53.8	52.5	52.9	56.5	58.5	60.9	61.5	57.7	61.2	59.6	57.4	56.1	55.7	55.7	55.6	55.1	55.7	136.5	
9	54.3	53.7	55.6	54.3	53.7	53.3	53.2	53.6	52.9	53.6	54.8	55.7	60.0	62.8	64.2	70.3	72.1	70.0	61.5	54.6	57.6	56.6	50.4	47.9	57.4	176.7	
10	46.5	43.8	41.7	50.1	53.2	52.9	53.6	53.1	52.7	52.8	53.7	54.9	58.6	60.5	58.4	58.5	59.6	59.5	56.8	58.7	56.5	54.2	53.7	55.3	54.1	99.3	
11	52.4	50.0	47.9	51.8	54.6	52.6	54.2	53.0	52.8	54.4	54.2	53.2	55.2	58.1	56.8	58.4	59.4	60.9	66.7	63.7	54.2	54.6	54.7	52.9	55.3	126.7	
12	53.7	50.9	47.1	43.3	44.1	49.8	53.5	51.8	52.7	53.0	54.6	58.0	62.2	62.4	60.7	61.3	62.5	58.4	59.4	59.4	55.8	55.6	54.7	52.8	54.9	117.7	
13	51.8	48.8	50.3	51.8	53.3	52.8	53.3	51.8	51.8	54.2	54.6	56.3	58.1	59.4	58.9	58.1	60.1	57.9	59.7	59.7	48.6	47.5	52.7	54.0	54.3	103.7	
14	55.6	54.8	55.9	54.5	54.1	53.7	52.7	51.8	52.0	57.6	57.7	59.6	60.9	59.7	59.9	60.1	62.1	63.2	59.7	55.5	55.4	35.2	47.5	54.2	55.6	133.4	
15	55.6	54.4	53.5	52.3	51.1	51.8	51.8	49.9	48.7	51.8	54.7	57.1	62.9	63.3	64.8	62.9	62.1	59.6	57.0	56.7	52.8	50.9	51.1	53.3	55.4	130.1	
16	53.7	53.8	53.7	53.9	53.7	52.3	51.1	50.9	50.2	52.3	53.6	55.8	60.3	60.3	61.1	60.8	61.2	60.0	59.5	58.5	57.4	55.6	52.1	44.4	55.3	126.2	
17 d	51.7	55.2	52.3	50.8	51.8	52.8	51.1	51.7	50.3	52.0	56.8	59.2	62.5	60.2	60.9	57.1	61.9	59.4	60.4	58.3	52.3	37.2	45.3	44.3	54.0	95.5	
18 d	36.4	41.5	43.0	36.0	41.2	46.8	47.7	48.7	57.6	60.0	53.9	57.8	62.7	63.6	62.9	62.3	72.0	71.5	68.3	59.6	55.9	53.9	53.7	48.1	54.4	105.1	
19	46.1	49.1	51.1	51.8	53.8	51.4	51.3	51.6	51.3	52.7	54.4	56.3	58.8	60.0	58.3	60.7	60.9	62.2	61.2	54.2	52.9	52.8	52.7	51.5	54.5	107.1	
20	52.9	53.7	52.7	54.7	53.7	54.3	52.8	51.8	50.7	52.6	55.5	54.2	56.4	59.7	61.9	58.5	58.1	62.5	65.9	63.2	57.8	48.9	39.9	41.3	54.7	113.7	
21 d	29.3	35.0	26.0	18.7	44.1	48.8	50.9	49.6	48.9	50.2	52.8	53.6	56.6	59.0	57.1	57.1	57.6	60.9	63.2	64.2	60.3	57.6	55.8	55.1	50.5	12.4	
22	53.5	52.7	53.7	54.9	54.2	54.5	52.8	52.3	49.8	52.0	54.4	57.1	59.3	64.1	60.9	60.2	60.5	59.4	61.2	56.6	54.1	53.9	54.1	53.8	55.8	140.0	
23 d	51.6	49.1	50.1	48.8	51.5	52.6	54.4	52.4	52.8	52.3	53.0	56.4	61.3	62.2	64.1	62.6	61.3	59.2	52.1	50.9	51.8	52.9	54.4	54.2	54.7	112.0	
24	54.4	54.4	54.2	53.7	53.5	53.7	53.0	52.3	52.3	53.1	55.6	57.8	60.0	60.5	61.2	59.5	56.1	57.1	56.4	56.1	55.2	54.7	54.4	54.4	55.6	133.6	
25	52.8	52.7	52.8	48.6	50.9	51.3	53.0	51.8	52.3	52.3	53.9	57.8	60.5	65.2	66.2	65.5	68.0	67.9	56.6	53.8	52.0	52.5	53.7	54.2	56.1	146.3	
26	54.7	55.2	53.1	48.5	45.6	47.0	48.9	50.7	49.9	50.9	52.8	55.2	56.6	58.2	58.2	59.4	58.5	60.5	58.6	54.2	52.0	49.0	52.5	43.7	53.1	73.9	
27	49.7	52.8	52.3	50.9	50.4	51.6	51.8	52.3	51.8	52.8	54.1	55.9	56.3	58.1	58.5	58.8	58.4	59.9	58.3	57.1	55.7	55.6	39.2	50.6	53.9	92.9	
28	55.0	55.2	54.7	53.9	53.6	53.5	54.0	53.5	53.7	51.8	53.6	55.9	56.5	58.5	58.1	56.7	57.3	57.8	56.3	56.6	55.7	55.9	55.8	54.0	55.3	127.6	
29	54.4	52.4	49.6	55.7	45.3	49.4	54.7	55.7	55.6	53.8	54.7	56.4	58.3	58.3	57.8	58.3	57.9	56.8	46.8	44.4	52.7	55.7	55.7	55.0	54.1	98.0	
30	53.7	54.2	53.9	53.4	53.1	53.3	53.0	53.6	53.3	53.8	54.7	56.6	58.1	57.7	57.3	55.4	57.3	57.4	57.3	55.6	52.9	53.6	53.9	53.9	54.9	117.0	
31	55.9	51.8	52.7	54.0	55.7	56.3	55.5	55.2	54.4	54.2	55.7	56.6	57.8	57.0	56.6	56.4	56.6	57.1	57.1	57.9	55.1	54.7	54.6	50.6	55.4	129.5	
Mean	50.6	50.4	50.8	50.0	51.1	51.9	52.8	52.4	52.2	53.1	54.2	56.1	58.6	60.1	59.8	59.5	60.3	60.4	59.2	57.4	54.7	52.8	52.1	51.5	54.7		
Sum 1500.0+	68.7	61.8	73.6	50.2	84.1	109.9	136.0	124.9	119.0	145.3	181.7	238.7	317.5	364.3	354.5	344.1	370.3	370.9	336.6	278.7	195.8	136.0	116.0	95.2		Grand Total 40673.8	

TERRESTRIAL MAGNETIC FORCE: VERTICAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

21

3 LERWICK (Z)		47,000γ (0.47 C.G.S. unit) +																				JANUARY 1958					
	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	Sum 4000+
		γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ		
1 d	238	288	210	124	79	136	168	173	210	241	253	256	251	262	271	274	257	272	324	297	336	348	346	315	247		1929
2	257	298	249	204	206	198	217	225	241	248	246	261	268	277	285	289	281	271	264	261	264	264	254	236	253		2064
3 q	223	231	238	237	231	233	236	238	238	240	243	243	243	248	250	250	250	250	249	251	254	255	250	241	243		1822
4 q	237	229	233	234	236	236	235	236	236	236	233	236	238	239	240	243	238	235	234	233	232	230	231	232	234	235	1640
5 q	224	229	226	231	230	228	228	229	229	233	236	238	240	240	243	244	241	240	240	238	235	236	235	236	236	234	1625
6	236	237	233	229	223	227	227	231	227	227	225	227	230	234	236	244	246	244	243	238	234	233	233	223	233		1587
7 q	222	225	227	227	227	227	230	230	230	229	227	229	232	238	244	243	244	248	248	248	246	243	238	230	235		1632
8 q	220	220	221	221	224	223	227	227	229	229	232	233	233	233	237	245	248	251	257	255	250	245	238	233	233	235	1635
9	231	223	222	221	224	227	227	229	230	227	229	233	233	236	247	253	265	296	316	292	275	289	298	284	250		2007
10	260	200	202	222	226	230	233	237	236	238	240	241	236	240	240	236	238	244	245	243	244	241	237	240	235		1649
11	245	236	229	231	238	238	240	238	236	236	240	240	237	238	241	238	238	243	263	329	336	284	268	258	251		2020
12	253	244	243	235	230	224	233	238	241	240	244	237	237	237	238	241	245	254	250	256	258	258	264	265	244		1865
13	245	231	238	237	233	221	228	230	233	238	241	240	238	236	236	239	239	242	248	254	240	236	245	248	238		1716
14	244	240	241	239	238	237	238	237	240	238	238	243	244	241	240	238	244	250	260	253	250	271	238	246	244		1848
15	243	243	241	234	230	227	201	199	225	238	243	248	245	252	265	277	267	261	252	261	269	250	256	254	245		1881
16	248	244	243	241	238	237	236	239	243	243	243	241	240	240	238	235	235	235	233	250	277	278	265	249	245		1871
17 d	249	250	246	231	171	180	207	220	232	244	246	251	248	250	267	274	255	261	275	268	261	244	222	213	240		1765
18 d	181	191	196	157	164	169	203	217	210	215	226	238	254	271	277	274	271	293	313	316	310	278	264	255	239		1743
19	236	243	241	237	237	233	233	236	238	242	244	251	255	264	275	266	265	271	298	284	259	249	251	238	252		2046
20	236	238	241	241	241	240	238	237	238	234	234	238	240	240	246	246	240	240	274	259	255	262	218	235	242		1811
21 d	137	61	57	19	88	122	185	223	227	227	237	245	251	255	255	250	246	246	258	265	265	267	246	244	203		876
22	243	244	244	240	237	231	236	238	241	237	237	240	264	277	281	262	265	261	258	264	253	246	243	247	250		1989
23 d	237	212	228	227	171	167	175	198	215	227	231	238	246	256	254	270	276	274	284	296	272	260	244	246	238		1704
24	237	233	236	238	238	240	240	244	244	241	238	240	253	246	243	249	254	247	244	242	238	234	234	234	241		1787
25	233	235	227	203	214	215	222	226	225	231	226	224	227	235	252	271	335	386	316	275	261	244	236	226	248		1945
26	229	231	223	174	122	83	131	194	226	238	241	243	241	238	241	244	256	278	278	266	253	248	243	205	222		1326
27	219	232	237	222	220	223	230	236	238	241	243	240	236	233	238	238	243	246	242	243	244	243	238	221	235		1646
28	224	230	231	233	233	232	231	230	236	241	244	244	240	233	237	237	237	237	238	238	237	234	234	232	235		1643
29	230	216	209	184	162	157	164	184	203	215	221	224	226	228	230	239	272	274	277	285	257	237	243	246	224		1383
30	243	238	234	241	239	238	237	237	240	241	241	242	240	243	246	254	249	246	249	252	250	250	248	241	243		1839
31	226	209	226	231	230	231	232	233	238	243	243	243	242	238	243	244	244	247	244	246	262	257	250	228	239		1730
Mean	232	228	225	214	209	210	218	225	231	235	238	240	242	245	250	252	254	260	264	263	260	255	249	242	239		
Sum 6000+	1186	1081	972	645	480	510	768	989	1175	1298	1369	1449	1509	1606	1748	1802	1883	2048	2169	2149	2071	1907	1707	1503		Grand Total 178,024	

DAILY EXTREMES OF TERRESTRIAL MAGNETIC ELEMENTS, MAGNETIC CHARACTER FIGURES (K AND C) AND TEMPERATURE IN MAGNET HOUSE

4 LERWICK		TERRESTRIAL MAGNETIC ELEMENTS												JANUARY 1958					
		Horizontal force			Declination			Vertical force			3-hr. range indices K	Sum of K indices	Magnetic character of day (0-2)	Temperature in magnet house 200 +					
		Maximum 14,000γ +	Minimum 14,000γ +	Range	Maximum 9° +	Minimum 9° +	Range	Maximum 47,000γ +	Minimum 47,000γ +	Range									
		h. m. γ	γ h. m.	γ	h. m. °	° h. m.	°	h. m. γ	γ h. m.	γ				°A.					
1 d	19 35	788	16 02	17	772	19 47	114.3	23.6	04 22	90.7	21 50	384	34 04	45	350	6,5,4,3,3,4,6,5	36	2	80.0
2	00 15	571	391 00	19	180	14 52	64.9	30.3	01 34	34.6	01 22	310	175 00	14	135	5,3,3,3,3,2,1,3	23	1	79.7
3 q	00 49	509	470 12	28	39	17 22	59.0	48.3	00 35	10.7	20 21	258	218 00	33	40	2,1,1,2,1,0,0,1	8	0	78.7
4 q	22 43	522	481 12	47	41	13 46	58.1	51.5	09 33	6.6	14 32	244	227 01	36	17	1,0,0,0,1,1,1,1	5	0	78.8
5 q	19 24	520	488 01	26	32	13 26	60.7	45.3	01 02	15.4	14 00	247	216 00	41	31	3,2,0,1,1,1,1,0	9	0	79.4
6	04 15	533	489 16	02	44	13 15	64.4	50.3	23 01	14.1	16 02	248	219 23	48	29	1,1,1,1,2,1,1,1	9	0	80.8
7 q	07 39	525	489 14	10	36	12 50	62.3	46.9	00 21	15.4	17 49	248	222 00	01	26	2,1,1,1,1,0,1,1	8	0	80.8
8 q	05 55	530	487 12	27	43	14 17	63.0	49.9	00 20	13.1	17 30	260	217 00	52	43	1,1,1,1,1,2,1,0	8	0	81.1
9	18 37	549	486 14	09	63	17 00	73.9	41.0	19 08	32.9	18 52	350	219 03	05	131	1,0,1,2,3,3,4,3	17	1	81.0
10	01 44	539	469 01	33	70	13 20	62.0	33.4	02 03	28.6	00 17	270	157 01	53	113	4,2,1,2,2,1,1,1	14	0	80.8
11	19 10	538	489 00	34	49	19 26	72.6	45.3	02 07	27.3	19 50	363	227 02	07	136	3,2,1,2,2,2,4,3	19	1	81.1
12	19 06	527	477 11	56	50	12 52	64.7	40.7	04 24	24.0	23 18	275	223 05	28	52	3,3,2,2,2,2,2,2	18	1	81.1
13	20 22	562	472 12	50	90	16 53	62.9	37.0	21 05	25.9	20 19	265	216 05	26	49	2,2,2,1,2,3,4,4	20	1	80.7
14	20 10	531	474 09	11	57	17 30	64.6	24.5	21 39	40.1	21 25	285	231 22	12	54	1,0,2,2,2,2,2,4	15	1	79.8
15	21 00	521	470 11	09	51	12 38	69.0	46.8	08 16	22.2	15 11	283	194 06	32	89	1,2,3,3,3,2,2,2	18	1	79.4
16	19 46	540	473 10	55	67	19 20	66.7	40.6	23 18	26.1	20 37	295	230 15	19	65	0,1,1,2,2,2,3,3	14	0	79.9
17 d	21 12	549	445 11	00	104	14 02	65.5	25.3	21 10	40.2	18 38	288	162 04	37	126	2,3,3,3,2,3,4,4	24	1	79.8
18 d	16 39	526	386 02	49	140	16 48	75.5	28.3	03 44	47.2	19 07	330	148 03	04	182	4,4,3,3,3,3,3,3	26	1	79.2
19	17 52	533	459 12	26	74	17 58	68.1	40.6	00 00	27.5	18 32	318	226 00	17	92	3,1,1,2,3,2,3,2	17	0	76.3
20	21 52	560	396 23	49	164	18 30	71.0	19.1	23 57	51.9	21 26	292	141 24	00	151	1,1,2,2,3,3,3,5	20	1	78.6
21 d	20 11	527	197 03	22	330	19 43	66.9	-2.2	03 19	69.1	20 59	274	-62	03 20	336	5,6,4,3,2,2,2,2	26	1	78.0
22	18 20	530	466 14	01	64	12 45	70.0	48.0	08 29	22.0	14 03	288	226	05 50	62	2,2,2,3,4,1,3,2	19	1	77.6
23 d	01 37	536	451 12	57	85	15 23	65.5	43.9	18 44	21.6	19 23	319	152	05 01	167	3,3,3,3,3,3,3,3	24	1	77.2
24	20 26	518	462 11	59	56	14 00	62.1	51.3	06 57	10.8	16 05	260	231	01 34	29	1,1,1,2,2,2,1,1	11	0	77.3
25	17 05	601	469 09	33	132	14 18	76.5	47.0	03 20	29.5	17 26	409	196	03 10	213	2,2,1,3,3,5,4,2	22	1	77.0
26	21 18	517	440 04	03	77	17 15	62.5	37.3	23 22	25.2	17 44	289	76	05 02	213	2,4,4,1,1,3,2,3	20	1	77.6
27	22 37	566	489 12	33	77	17 35	61.9	29.4	22 36	32.5	22 14	254	206	00 00	48	2,1,1,1,1,1,1,4	12	0	78.1
28	07 37	526	477 12	57	49	13 45	60.5	50.6	09 09	9.9	11 50	246	218	00 00	28	1,0,2,1,1,2,1,1	9	0	78.7
29	06 45	535	487 10	19	48	03 16	66.5	42.1	20 10	24.9	19 26	296	151	05 28	145	2,4,3,1,1,2,3,3	19	1	78.7
30	06 39	531	495 15	03	36	12 30	60.3	51.1	20 58	9.2	15 25	255	229	02 23	26	1,1,1,1,1,1,2,2	10	0	78.9
31	23 44	538	496 10	41	42	19 54	59.0	44.9	23 59	14.1	20 43	268	196	01 07	72	3,1,1,1,1,1,2,3	13	0	79.0
Mean	- -	545	443 - -	102	- -	66.9	39.1 - -	27.8	- -	289	185 - -	105	-	-	-	-	0.58	-	79.2

TERRESTRIAL MAGNETIC FORCE: HORIZONTAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

1	LERWICK (H)												14,000γ (0.14 C.G.S. unit) +												FEBRUARY 1958										
	Hour G.M.T.																																		Sum
	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	8000+									
1	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ									
2	512	507	513	516	517	522	523	522	510	502	499	499	493	494	497	496	501	508	512	516	515	508	506	514	508	4202									
3	515	527	519	517	519	523	528	528	524	520	499	496	495	498	499	502	508	508	509	517	518	518	517	517	513	4321									
q	519	520	520	520	522	522	524	525	520	514	509	508	510	494	493	498	507	514	517	522	526	527	523	515	515	4369									
4	529	523	522	527	528	528	531	526	520	512	508	494	488	509	508	508	508	516	547	588	517	536	534	533	523	4540									
5	501	485	495	470	496	502	517	514	510	508	500	500	480	489	502	528	522	513	514	534	527	493	510	514	505	4124									
6	d	478	466	476	502	489	501	514	512	506	512	505	485	491	504	511	531	502	534	517	511	513	514	520	491	504	4085								
7		490	471	469	496	491	487	498	509	502	496	501	489	482	490	502	514	505	508	510	533	519	508	499	488	498	3957								
8		482	500	502	453	476	495	505	501	495	470	500	499	500	518	548	541	523	527	513	519	509	496	503	500	503	4075								
9		474	487	487	467	484	495	494	491	493	488	485	484	484	497	509	516	508	522	530	511	489	492	497	496	495	3880								
10		434	474	467	502	501	493	501	499	499	498	492	491	496	504	522	542	597	595	562	536	503	507	508	510	510	4233								
11	d	498	200	-467	275	375	107	158	14	-120	-157	163	297	592	530	583	501	488	471	530	760	791	583	448	436	336	56								
12	d	450	469	430	410	456	470	470	461	463	444	443	436	432	426	449	461	492	540	543	466	484	491	484	476	464	3146								
13		478	491	485	485	489	491	491	489	491	474	482	491	488	493	486	514	525	509	515	506	493	493	488	482	493	3829								
14		484	495	493	435	428	493	491	488	478	464	469	472	494	501	489	501	557	547	494	500	499	495	507	501	491	3775								
15	q	499	494	499	499	499	503	503	504	502	501	495	488	495	496	493	495	494	511	518	522	523	516	517	526	504	4092								
16		515	518	515	517	518	521	520	520	520	513	512	508	492	496	498	514	496	515	528	528	518	515	530	535	515	4362								
17	d	534	525	528	506	487	497	504	514	510	506	507	507	530	541	514	508	525	514	538	529	514	509	502	508	515	4357								
18	d	497	480	489	456	460	485	491	486	482	480	456	477	498	501	504	504	510	512	545	521	499	492	488	479	491	3792								
19		432	480	487	497	497	502	496	513	506	494	483	487	485	499	502	509	513	501	523	516	521	515	499	473	497	3930								
20		470	491	498	509	510	516	510	506	499	492	483	485	491	500	507	489	505	515	529	569	514	363	488	510	498	3949								
21		503	493	466	477	469	457	492	483	493	492	488	485	479	499	499	515	515	530	619	523	518	475	477	504	498	3951								
22		495	397	417	476	492	494	504	508	510	507	497	495	501	505	504	510	497	509	534	529	524	518	513	485	497	3921								
23		469	476	442	471	489	502	508	503	496	485	496	488	493	487	491	491	530	515	520	525	510	502	506	511	496	3906								
24	q	511	508	504	498	501	507	510	508	496	489	478	470	486	492	492	499	499	506	524	518	515	515	515	515	502	4056								
25	q	517	516	515	515	518	514	499	511	511	496	488	489	492	491	495	499	505	512	520	526	523	524	522	524	509	4222								
26	q	527	525	521	521	523	523	526	521	517	509	502	495	498	496	502	505	509	512	518	521	523	517	517	518	514	4346								
27		527	517	514	520	523	525	524	519	516	511	505	498	499	497	503	509	520	518	526	523	518	504	504	514	514	4334								
28		511	516	516	523	521	519	520	514	503	490	494	490	464	494	513	514	516	507	516	520	520	517	516	512	509	4226								
Mean	495	484	458	484	492	489	495	489	480	472	480	482	494	498	504	508	513	517	528	532	523	505	505	503	497										
Sum 12,000+	1851	1551	822	1560	1778	1694	1852	1689	1452	1210	1439	1503	1828	1941	2115	2214	2377	2489	2771	2889	2643	2143	2138	2087		Grand Total 334,036									

MAGNETIC DECLINATION (WEST)
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

2	LERWICK (D)												9° +												FEBRUARY 1958	
	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	Sum 1200+0
1	46.2	51.0	52.7	53.5	53.6	53.9	54.7	53.8	54.8	58.0	58.1	59.8	61.2	58.3	60.2	60.9	60.0	57.8	56.7	55.9	55.7	53.1	53.8	53.9	55.7	137.6
2	54.4	48.9	52.3	55.0	55.1	56.0	58.1	56.1	55.7	55.3	58.4	60.5	59.5	60.7	59.8	58.5	57.1	57.6	57.9	56.1	55.7	55.7	54.7	54.8	56.4	153.9
3 q	54.8	54.7	54.7	54.6	55.8	55.5	55.6	54.7	53.8	54.2	55.7	56.6	58.6	57.0	57.9	57.8	57.0	56.8	56.9	56.1	55.8	55.2	53.1	52.2	55.6	135.1
4	49.7	51.7	53.2	54.7	54.9	54.3	53.7	53.3	52.8	52.9	54.2	55.3	58.5	62.4	61.7	62.1	61.0	60.7	63.2	50.8	51.9	57.6	55.9	51.0	55.7	137.5
5	42.2	41.6	38.0	45.9	46.5	49.0	51.8	51.5	51.7	53.7	57.7	58.4	62.4	59.5	62.3	67.6	64.7	65.3	61.9	55.7	38.4	42.4	51.2	49.1	52.9	68.5
6 d	46.5	45.6	46.3	48.7	47.0	52.5	48.0	47.7	51.9	54.3	57.2	57.9	57.6	63.3	62.2	64.3	60.0	55.7	54.2	52.8	53.7	50.1	45.1	54.1	53.2	76.7
7	45.1	46.6	49.6	48.0	46.1	48.9	50.4	50.4	52.5	52.3	54.2	59.4	58.1	58.5	60.6	60.5	56.5	55.7	55.6	51.1	47.1	46.9	49.0	46.9	52.1	50.0
8	47.1	54.7	44.1	46.1	49.5	42.2	45.2	49.0	53.8	58.1	56.0	58.7	59.8	64.3	60.0	58.7	57.9	52.8	57.3	59.1	53.5	45.1	51.9	50.4	53.1	75.3
9	50.6	54.6	52.3	51.8	50.4	51.3	50.8	51.2	53.8	55.8	58.1	59.3	58.1	60.4	61.7	59.3	57.8	57.3	54.2	55.7	51.3	50.4	51.5	53.7	54.6	111.4
10	61.4	62.4	56.9	50.2	45.8	53.7	53.7	53.7	55.5	57.1	57.6	59.0	61.2	60.7	60.4	59.5	58.3	64.3	59.5	61.1	58.1	58.1	51.8	54.7	57.3	174.7
11 d	55.9	66.2	194.0	30.7	31.2	24.9	18.4	26.4	30.4	28.8	37.9	36.9	47.0	61.9	64.6	57.8	62.9	62.4	60.5	65.7	61.0	54.7	37.9	30.7	52.0	48.8
12 d	43.4	47.5	52.0	48.9	45.1	43.7	47.3	48.0	49.1	53.8	56.1	56.7	58.5	57.1	56.1	52.3	53.7	54.7	41.9	46.5	47.3	52.3	52.8	55.6	50.9	20.4
13	55.2	55.7	52.3	51.8	52.4	52.3	52.4	52.3	53.6	55.0	57.8	60.6	60.5	59.4	62.4	58.3	57.1	58.5	53.3	51.3	51.3	50.9	47.3	46.1	54.5	107.8
14	52.8	50.1	40.5	38.9	45.6	46.3	50.7	50.1	51.3	57.1	60.4	59.5	60.7	62.4	63.4	64.2	52.8	56.9	56.6	55.7	55.7	54.7	49.9	53.7	53.7	90.0
15 q	53.6	52.8	52.6	51.0	51.9	52.8	52.3	52.8	53.2	53.8	55.3	54.3	56.5	57.1	58.4	57.3	55.7	56.7	57.8	57.2	57.0	55.5	54.7	54.7	54.8	115.0
16	57.6	53.7	52.9	52.9	52.8	52.5	53.0	53.5	53.8	54.7	56.5	58.9	57.9	60.4	60.7	64.9	64.7	61.7	62.8	60.5	57.9	55.8	53.8	52.9	56.9	166.8
17 d	54.7	51.2	52.1	48.7	45.9	47.0	51.0	50.0	52.3	53.6	55.9	61.5	63.4	67.8	64.5	58.1	63.1	63.9	62.4	57.1	45.1	48.7	49.7	51.3	55.0	119.0
18 d	55.1	48.0	45.4	46.5	51.8	45.0	50.9	56.1	55.2	54.7	57.7	62.3	64.3	58.5	60.0	56.7	57.6	57.6	53.1	49.1	47.8	50.3	44.2	46.5	53.1	74.4
19	55.7	54.6	48.9	49.1	50.9	49.9	50.9	48.7	49.4	51.1	53.5	56.6	58.7	58.6	58.4	58.9	58.4	56.1	56.9	54.8	48.9	46.0	51.8	48.9	53.2	75.7
20	43.2	49.8	48.8	46.2	46.4	47.0	50.8	50.2	51.2	51.7	52.9	56.3	59.4	62.9	62.5	60.2	60.6	59.5	56.7	50.6	51.1	46.8	42.3	45.9	52.2	53.0
21	50.9	49.9	46.4	49.3	40.7	50.9	53.9	53.5	52.8	52.7	53.7	57.9	58.9	65.2	63.0	65.9	63.1	61.0	50.6	48.1	52.7	45.1	39.3	47.9	53.1	73.4
22	50.0	54.7	51.7	46.1	44.3	48.8	51.6	52.8	53.7	54.0	53.1	57.1	60.5	58.3	59.5	61.4	58.5	52.7	51.7	56.6	49.0	51.8	50.2	45.0	53.0	73.1
23	42.6	48.7	46.9	48.8	48.0	49.9	50.9	54.7	58.5	58.0	58.0	58.3	57.4	57.4	57.5	53.7	51.3	48.4	55.2	57.0	57.5	53.0	51.0	52.0	53.1	74.7
24 q	52.7	54.1	51.0	52.8	53.7	51.8	51.2	51.3	51.9	54.2	56.8	58.2	60.7	58.5	58.9	58.5	57.1	54.9	50.9	55.2	56.5	55.2	54.7	53.7	54.8	114.5
25 q	53.6	53.3	52.8	52.8	51.8	50.9	54.4	54.3	52.8	53.7	57.6	59.8	60.0	58.1	56.8	55.7	55.7	55.7	55.9	55.9	54.9	54.1	53.7	54.4	54.9	118.7
26 q	52.8	50.5	51.7	53.6	53.7	52.3	52.7	54.8	53.9	54.9	55.7	57.5	58.1	57.6	56.7	56.0	55.8	56.0	55.8	55.7	55.7	53.6	53.2	52.8	54.6	111.1
27	49.9	53.8	51.7	52.8	52.8	52.4	51.9	51.9	52.8	54.4	56.7	57.5	58.5	57.7	57.6	56.5	55.8	54.7	56.4	57.1	52.2	44.2	50.5	52.8	53.9	92.6
28	53.7	54.8	54.7	53.7	49.9	49.3	49.8	51.8	53.2	54.1	58.6	60.7	60.5	61.8	61.5	57.7	56.1	56.1	53.3	53.9	55.2	54.7	54.2	52.0	55.1	121.3
Mean	51.1	52.2	55.2	49.4	49.1	49.5	50.6	51.2	52.3	53.6	55.8	57.7	59.2	60.2	60.3	59.4	58.2	57.6	56.0	55.1	52.8	51.5	50.3	50.6	54.1	
Sum 1300+0	131.4	161.2	246.5	83.1	73.6	85.0	116.1	134.6	165.4	202.0	261.4	315.5	356.5	385.8	389.3	363.3	330.3	311.5	269.2	242.4	178.0	142.0	109.2	117.7		Grand Total 36371.0

TERRESTRIAL MAGNETIC FORCE: VERTICAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

23

3 LERWICK (Z)													47,000γ (0.47 C.G.S. unit) +													FEBRUARY 1958										Mean	Sum 5000+																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
	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																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
1	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ

DAILY EXTREMES OF TERRESTRIAL MAGNETIC ELEMENTS, MAGNETIC CHARACTER FIGURES (K AND C) AND TEMPERATURE IN MAGNET HOUSE

4 LERWICK												FEBRUARY 1958				
	TERRESTRIAL MAGNETIC ELEMENTS											3-hr. range indices K	Sum of K indices	Magnetic character of day (0-2)	Temperature in magnet house 200 + °A.	
	Horizontal force			Declination			Vertical force									
	Maximum 14,000γ +	Minimum 14,000γ +	Range	Maximum 9° +	Minimum 9° +	Range	Maximum 47,000γ +	Minimum 47,000γ +	Range							
	h. m. γ	γ h. m.	γ	h. m. °	° h. m.	°	h. m. γ	γ h. m.	γ							
1	07 27	525	489 12 08	36	12 40	62.5	44.9 00 04	17.6	16 45	260	198 00 10	62	2,0,1,1,2,1,1,2	10	0	79.0
2	06 53	537	489 12 55	48	13 42	61.5	46.4 01 36	15.1	14 25	256	190 01 17	66	3,1,1,2,1,0,1,1	10	0	78.9
3 q	20 16	531	489 13 37	42	12 40	60.3	50.3 23 27	10.0	13 01	245	215 24 00	30	0,1,1,0,2,1,2,2	9	0	78.8
4	19 15	663	482 23 59	181	19 20	69.9	30.5 19 44	39.4	19 25	394	173 00 52	221	3,0,1,2,2,2,5,3	18	1	78.4
5	23 30	565	450 23 14	115	16 50	70.2	31.6 20 26	38.6	19 42	328	118 23 00	210	3,4,2,3,3,3,5,5	28	1	78.7
6 d	17 44	565	406 02 27	159	15 29	70.1	39.3 22 28	30.8	17 42	322	123 23 26	199	4,3,3,3,3,4,3,5	28	1	78.0
7	19 52	562	450 01 56	112	16 04	64.3	34.7 21 00	29.6	16 36	318	166 21 05	152	3,2,2,3,2,3,4,4	23	1	77.7
8	14 42	569	412 03 41	157	13 42	67.7	37.4 20 59	30.3	17 08	339	147 01 33	192	3,4,3,3,3,3,4,4	27	1	77.2
9	18 08	546	451 03 58	95	19 48	66.2	40.6 20 12	25.6	18 20	349	200 20 24	149	3,3,1,2,2,3,5,3	22	1	77.5
10	16 59	830	385 00 23	445	17 20	80.6	40.8 23 17	39.8	16 58	469	160 02 10	309	4,3,2,1,2,6,6,4	28	1	76.9
11 d	20 13	940	-227.6 02 07	321.6	02 36	356.6	-46.0 02 09	402.6	08 58	665	-74.3 02 18	140.8	9,8,8,8,7,4,7,6	57	2	77.4
12 d	18 08	704	333 02 36	371	12 19	64.0	27.8 18 18	36.2	18 03	375	166 00 20	209	5,5,4,4,3,4,6,3	34	1	78.1
13	16 17	532	463 09 24	69	14 41	66.3	40.0 19 51	26.3	18 23	318	208 00 51	110	3,1,2,3,3,3,3,3	21	1	78.2
14	17 07	578	396 03 47	182	15 29	66.5	30.5 03 08	36.0	17 32	365	140 05 23	225	4,4,3,2,3,4,3,3	26	1	78.5
15 q	23 21	554	481 16 27	73	23 26	60.6	50.0 23 51	10.6	16 35	264	190 23 35	74	1,1,1,1,2,2,2,3	13	0	78.7
16	18 09	542	478 16 34	64	16 04	69.1	49.6 23 09	19.5	16 20	277	201 01 00	76	2,1,1,3,2,3,2,2	16	1	78.8
17 d	13 27	567	482 04 22	85	13 26	75.0	39.3 20 36	35.7	18 58	317	214 05 09	103	2,3,3,3,4,3,4,3	25	1	78.3
18 d	18 35	739	416 03 56	323	19 14	85.5	27.3 19 07	58.2	18 34	406	135 19 13	271	4,4,3,3,3,3,6,4	29	1	77.8
19	18 10	537	383 00 48	154	00 36	74.7	38.4 20 45	36.3	19 21	304	43 00 33	261	5,3,3,2,2,2,4,3	24	1	77.7
20	19 37	674	179 21 28	495	21 59	71.4	29.7 21 44	41.7	19 38	376	100 21 56	276	3,2,2,3,3,3,5,6	27	1	77.8
21	20 20	714	388 21 42	326	20 21	75.2	18.9 21 55	56.3	18 38	427	85 22 07	342	5,4,3,2,3,3,6,5	29	1	78.2
22	22 53	557	278 01 34	279	01 51	65.5	32.1 24 00	33.4	20 31	326	120 02 09	206	3,3,3,2,2,3,4,4	26	1	78.0
23	20 23	558	418 02 40	140	20 30	66.8	31.8 00 02	35.0	17 22	294	147 00 00	147	4,4,3,2,2,3,4,3	25	1	78.0
24 q	18 45	530	463 11 10	67	12 41	62.0	49.1 18 30	12.9	13 26	256	230 00 08	26	2,2,1,2,2,2,2,0	13	0	77.7
25 q	19 04	531	483 11 08	48	11 46	60.6	50.5 05 35	10.1	16 57	244	226 07 23	18	1,1,2,2,1,1,1,1	10	0	77.1
26 q	00 48	534	488 11 30	46	12 45	60.0	49.8 01 52	10.2	22 02	246	224 00 50	22	2,1,1,2,1,0,1,1	9	0	77.1
27	00 20	540	484 21 52	56	12 38	60.4	32.1 21 14	28.3	20 54	297	203 00 32	94	2,0,1,1,1,2,3,4	14	0	77.2
28	14 28	536	458 12 34	78	13 41	64.8	48.0 05 34	16.8	16 11	278	217 03 40	61	1,2,2,2,3,2,2,2	16	1	77.6
Mean	- -	599	332 - -	267	- -	77.8	35.6 - -	42.2	- -	333	136 - -	197	-	-	0.75	78.0

TERRESTRIAL MAGNETIC FORCE: HORIZONTAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

1 LERWICK (H)													14,000γ (0.14 C.G.S. unit) +													MARCH		1958																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
	Hour G.M.T.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													

MAGNETIC DECLINATION (WEST)
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

2 LERWICK (D)													9° +													MARCH 1958	
	Hour G.M.T.																										Sum
	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	1100.0+	
1 q	48.7	48.7	51.5	52.3	51.1	51.0	50.6	50.6	51.8	52.3	55.8	59.5	62.0	62.3	60.0	58.3	57.6	56.7	56.1	55.8	55.2	52.9	53.1	48.9	54.3	202.8	
2 q	50.4	52.7	53.5	52.8	52.3	52.6	58.1	54.3	54.7	56.7	60.1	60.5	59.9	58.5	57.6	55.8	54.7	54.8	55.2	55.7	55.7	55.8	52.3	55.4	230.4		
3	51.9	52.3	52.8	52.8	53.7	53.4	52.3	53.9	52.8	53.3	58.5	62.4	60.9	60.3	57.6	56.1	57.6	63.3	53.4	58.1	54.2	44.6	47.0	51.9	54.8	215.1	
4	36.3	42.5	44.1	36.7	37.4	41.7	49.4	51.8	53.7	53.8	56.2	60.9	60.3	63.1	61.9	60.1	62.2	55.5	50.5	53.3	47.3	50.4	51.7	49.9	51.3	130.7	
5 d	49.5	47.5	49.2	49.5	51.3	46.8	56.0	52.1	54.1	51.4	52.8	57.2	57.2	60.5	59.6	60.0	57.6	57.6	56.1	53.7	53.1	46.2	45.9	44.5	52.9	169.4	
6	48.5	45.7	51.1	39.3	43.1	43.7	50.0	50.3	50.9	52.1	56.0	57.2	58.5	61.9	62.1	60.9	55.1	56.7	54.7	47.5	52.3	37.1	48.5	51.5	51.4	134.7	
7	54.2	58.3	51.8	51.3	52.3	49.9	48.3	47.5	48.8	49.1	51.8	61.1	65.7	64.9	67.1	63.3	59.5	57.4	58.5	56.7	52.7	51.0	52.7	53.7	55.3	227.6	
8	51.8	47.5	36.0	42.3	45.6	48.5	49.9	48.9	49.1	51.1	54.6	56.6	56.6	62.9	60.7	58.5	57.1	56.1	56.1	56.0	51.7	48.9	51.1	48.0	51.9	145.6	
9	44.5	42.7	40.3	49.4	48.9	51.9	57.2	53.3	51.3	52.2	56.1	60.9	60.4	63.6	66.7	62.4	57.1	56.0	54.4	49.9	49.5	52.3	54.3	54.2	53.7	189.5	
10	52.5	55.0	45.7	44.8	51.4	50.4	49.3	48.1	48.5	51.4	54.3	60.1	64.9	64.2	66.0	63.0	61.0	58.6	52.4	55.8	54.1	49.6	50.0	48.6	54.2	199.7	
11	36.1	40.9	50.2	51.9	51.1	51.9	51.4	51.0	51.9	53.4	54.8	62.5	64.4	66.8	64.4	67.3	62.6	61.5	65.4	63.0	53.9	51.4	38.4	39.0	54.4	205.2	
12 d	34.6	21.7	5.4	44.2	27.0	32.2	39.9	48.1	57.8	53.8	56.4	64.5	64.9	64.8	62.0	60.9	58.8	51.7	48.6	53.4	51.9	50.5	47.6	48.6	47.9	49.3	
13 d	52.4	44.5	44.8	54.3	46.4	60.6	67.2	54.3	56.7	47.6	54.8	58.7	59.6	59.6	62.3	61.5	64.3	62.5	60.1	62.5	54.0	52.9	54.8	53.4	56.2	249.8	
14	53.0	49.9	49.0	51.9	50.5	50.4	49.7	49.7	49.7	51.4	54.1	56.2	63.4	59.6	65.4	61.7	58.3	62.0	61.6	61.3	60.1	58.2	56.0	53.8	55.7	236.9	
15	52.4	51.3	51.4	50.5	54.0	57.0	57.2	51.4	51.5	58.2	56.2	60.5	65.1	66.3	66.8	65.8	61.0	61.5	55.9	55.3	53.9	53.1	52.9	52.9	56.8	262.1	
16 q	57.9	51.9	38.9	41.5	48.1	47.4	49.5	47.1	48.6	53.0	55.0	57.8	61.0	62.8	62.0	58.6	57.7	57.6	57.8	57.7	57.2	51.2	46.4	50.7	53.2	177.4	
17	51.3	54.4	54.9	51.9	50.7	48.1	52.6	53.4	47.7	55.3	55.3	59.6	62.5	66.8	67.7	64.5	58.6	62.5	57.4	52.9	49.0	52.4	53.8	53.6	55.7	236.9	
18	53.8	51.9	53.4	52.0	49.1	46.3	46.2	51.0	49.5	52.8	53.8	57.1	63.9	63.9	66.6	67.9	63.7	63.0	60.7	52.2	59.5	52.9	53.0	51.9	55.7	236.1	
19 d	54.3	47.2	42.6	40.9	41.8	45.3	49.9	51.1	48.3	49.5	53.3	56.0	61.5	65.4	69.2	66.7	69.7	64.9	60.6	51.9	38.1	49.0	44.7	40.4	52.6	162.3	
20 d	40.4	41.1	37.0	51.9	47.6	48.1	51.1	47.2	45.7	46.2	49.2	54.8	60.8	64.9	66.3	62.9	62.0	55.3	58.6	54.2	33.7	29.4	34.7	45.8	49.5	88.9	
21	53.8	48.1	48.1	49.4	40.4	46.2	45.2	47.6	45.7	47.1	50.2	54.7	60.1	63.7	68.0	66.4	66.7	64.0	59.5	53.8	56.2	52.9	45.8	33.2	52.8	166.8	
22	53.3	7.3	32.3	40.4	48.2	50.0	50.5	48.3	48.3	49.5	51.6	54.8	59.7	63.1	62.7	59.3	57.5	55.1	53.4	50.1	53.8	53.4	44.7	40.4	49.5	87.7	
23	44.4	41.6	44.7	46.1	50.2	51.0	47.6	45.7	45.7	48.2	49.9	57.2	61.0	65.1	66.2	65.0	61.9	61.3	56.2	54.0	56.0	50.8	52.0	50.7	53.0	172.5	
24	46.3	48.8	51.0	47.7	46.2	44.1	47.1	47.2	47.1	52.4	54.8	60.3	61.5	65.9	67.7	65.4	62.5	60.6	63.7	56.9	50.4	56.0	42.0	34.4	53.3	180.0	
25	39.0	36.8	34.8	43.8	46.2	46.2	50.8	46.4	44.3	47.1	52.7	56.7	63.4	63.4	65.4	63.6	77.5	67.8	68.4	68.0	65.0	61.2	59.6	54.6	55.1	222.7	
26	55.9	52.3	53.8	51.9	51.7	50.8	49.0	47.4	47.8	50.0	52.6	55.7	61.7	63.7	63.9	62.1	62.4	60.5	60.9	60.6	52.6	56.7	54.8	58.8	55.7	237.6	
27	62.8	54.3	54.5	52.9	50.5	50.4	49.5	46.9	44.2	45.2	51.9	53.8	56.7	59.4	59.6	58.3	57.0	56.0	56.2	54.1	56.7	54.8	46.2	50.5	53.4	182.4	
28 q	51.9	52.0	51.8	53.8	50.0	48.9	48.1	47.1	46.9	49.6	52.6	54.8	57.7	59.7	60.9	59.7	59.0	54.3	52.9	56.2	57.2	56.7	49.6	51.2	53.4	182.6	
29 q	53.4	43.2	48.7	48.9	49.0	50.7	50.8	48.6	47.3	49.0	51.6	56.8	60.8	62.5	61.5	59.6	57.4	54.6	52.9	55.8	57.5	57.7	55.6	53.8	53.6	186.9	
30	53.0	53.4	53.4	53.4	52.4	51.0	49.3	47.1	46.0	55.1	54.3	62.5	68.6	70.0	67.8	65.8	67.6	64.6	53.8	57.2	56.7	53.1	50.3	53.8	56.7	260.2	
31	52.9	52.7	48.3	46.7	45.2	45.2	47.4	44.3	44.9	50.0	55.3	58.5	63.7	64.4	63.2	63.7	58.2	58.2	58.2	56.3	56.9	57.2	58.4	57.0	54.5	206.8	
Mean	49.7	46.4	46.0	48.3	47.9	48.8	50.6	49.4	49.4	51.2	54.1	58.4	61.6	63.4	63.8	62.1	60.8	59.1	57.1	55.8	53.4	51.6	50.0	49.4	53.7		
Sum 1400.0+	141.2	38.2	25.0	97.2	83.4	111.7	170.3	131.7	131.3	187.8	276.6	409.9	508.4	564.0	578.9	525.1	483.9	432.2	370.2	329.9	256.1	200.2	151.4	132.0		Grand Total 39936.6	

TERRESTRIAL MAGNETIC FORCE: VERTICAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

25

3 LERWICK (Z)		47,000γ (0.47 C.G.S. unit) +																								MARCH 1958		
	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	Sum 5000+
1 q	199	207	224	235	237	239	239	239	239	240	241	240	236	237	239	240	239	237	236	240	240	244	251	250	233	236	236	662
2 q	233	235	237	237	235	232	217	208	213	221	225	234	235	238	240	239	237	235	233	233	233	233	234	231	231	231	548	
3	234	232	229	229	229	229	228	223	224	230	232	240	248	237	243	242	251	260	362	327	300	155	193	119	237	696		
4	154	137	234	189	174	188	198	199	208	220	232	243	256	275	281	268	269	302	307	297	228	195	195	230	228	479		
5 d	257	248	208	227	186	197	188	163	158	186	221	235	240	245	265	264	263	275	277	276	268	249	130	148	224	374		
6	168	164	102	100	162	198	216	221	223	240	238	247	265	273	300	325	332	304	290	259	265	228	195	219	231	544		
7	210	194	189	157	130	166	201	221	236	247	248	241	252	268	266	270	291	302	286	288	298	263	248	221	237	693		
8	179	141	118	107	144	172	203	228	237	248	255	252	247	256	274	269	257	252	248	244	252	255	239	232	221	309		
9	202	188	150	207	227	221	206	222	239	243	250	251	262	252	262	285	276	256	253	251	233	220	225	229	234	610		
10	220	167	163	189	188	199	223	234	237	236	234	236	239	251	257	276	274	309	325	294	284	295	270	251	244	851		
11	240	212	232	241	244	245	248	249	247	245	239	232	245	256	263	276	335	380	378	310	262	266	208	144	258	1197		
12 d	49	36	186	44	-48	24	87	181	197	214	248	277	308	328	357	353	328	357	349	302	280	257	195	184	212	93		
13 d	158	153	122	90	53	90	135	193	222	260	318	321	344	367	374	413	423	415	366	312	349	293	290	282	264	1343		
14	234	226	237	256	259	259	262	266	267	269	269	270	264	267	256	300	338	299	273	264	258	254	259	250	265	1356		
15	237	243	246	239	238	224	208	220	236	243	240	253	271	311	333	333	345	345	325	283	255	243	247	242	265	1360		
16 q	194	133	110	149	158	182	215	235	245	252	264	268	261	255	253	254	250	255	269	273	260	255	253	235	228	478		
17	233	243	239	250	249	244	237	220	232	245	248	249	256	284	309	320	339	357	364	295	256	268	259	253	269	1449		
18	250	245	219	157	201	218	220	204	210	225	239	247	260	278	289	322	362	324	357	328	309	309	302	266	264	1341		
19 d	237	214	188	181	197	187	187	215	238	249	256	268	292	315	348	396	419	436	437	376	265	239	151	90	266	1381		
20 d	82	152	139	142	182	220	232	253	260	261	264	264	261	265	287	302	306	305	295	314	297	198	163	150	233	594		
21	101	118	146	127	172	222	235	245	254	261	263	254	248	249	275	302	335	341	395	344	305	294	198	143	243	827		
22	162	56	96	141	203	247	262	266	269	273	272	270	261	266	277	277	265	265	269	270	258	247	210	119	229	501		
23	138	155	174	175	158	190	206	221	237	241	254	260	269	273	290	300	313	317	329	309	245	244	252	244	241	794		
24	227	235	247	233	181	195	204	220	232	235	232	243	255	237	253	286	329	312	377	371	255	199	175	135	245	868		
25	70	55	96	170	218	231	235	233	238	239	237	247	253	278	306	332	321	393	343	305	290	280	217	224	242	811		
26	225	181	181	226	243	246	249	249	249	250	249	263	264	252	273	342	402	414	352	371	360	295	268	218	276	1622		
27	115	170	213	236	247	252	255	260	264	256	261	257	255	256	258	261	264	265	261	281	272	266	225	226	245	876		
28 q	237	239	218	206	220	233	244	249	255	255	248	243	239	241	244	247	245	293	294	275	258	248	242	244	247	917		
29 q	201	152	196	210	219	220	236	243	249	252	247	243	243	239	239	241	244	261	267	254	249	245	241	231	234	622		
30	233	237	239	237	237	237	239	244	251	243	243	240	247	284	350	374	391	372	376	333	330	288	239	249	280	1713		
31	233	212	223	210	216	192	180	211	232	243	255	255	252	249	255	266	283	280	294	293	294	281	264	258	247	931		
Mean	191	180	187	187	192	206	216	227	236	243	249	253	259	267	281	296	307	313	316	296	275	252	227	210	244			
Sum 5000+	912	580	801	797	959	1399	1695	2035	2309	2523	2721	2839	3029	3284	3717	4174	4524	4717	4791	4172	3512	2813	2037	1500		Grand Total 181,840		

DAILY EXTREMES OF TERRESTRIAL MAGNETIC ELEMENTS, MAGNETIC CHARACTER FIGURES (K AND C) AND TEMPERATURE IN MAGNET HOUSE

4 LERWICK		TERRESTRIAL MAGNETIC ELEMENTS												MARCH 1958			
		Horizontal force			Declination			Vertical force			3-hr. range indices K	Sum of K indices	Magnetic character of day (0-2)	Temperature in magnet house 200 +			
		Maximum 14,000γ +	Minimum 14,000γ +	Range	Maximum 9° +	Minimum 9° +	Range	Maximum 47,000γ +	Minimum 47,000γ +	Range							
		h. m. γ	γ h. m.	γ	h. m. γ	γ h. m.	γ	h. m. γ	γ h. m.	γ				°A.			
1 q	00 32	532	477 12 43	55	13 52	63.1	39.8 00 58	23.3	21 26	255	175 00 49	80	3,1,1,1,2,1,1,2	12	0	78.0	
2 q	06 48	529	478 11 39	51	06 33	62.0	49.7 23 41	12.3	14 42	241	200 06 53	41	1,1,2,2,2,1,1,2	12	0	78.3	
3	20 19	659	-20 20 42	679	20 33	85.2	11.3 20 46	73.9	18 22	390	74 23 06	316	1,1,1,2,3,4,6,5	23	1	78.6	
4	18 30	551	191 02 36	360	11 43	64.3	27.7 00 19	36.6	02 43	353	118 01 33	235	6,4,3,3,3,3,4,3	29	1	78.8	
5 d	06 18	555	406 07 24	149	06 49	68.6	31.0 23 10	37.6	19 38	307	72 22 52	235	3,3,5,4,3,3,3,5	29	1	78.6	
6	14 30	592	124 02 05	468	14 06	65.5	23.5 21 39	42.0	16 36	343	53 03 40	290	6,5,3,2,4,4,3,4	31	1	78.2	
7	16 38	583	372 03 52	211	14 13	68.3	41.9 05 54	26.4	20 15	321	117 04 05	204	3,5,3,3,2,4,3,3	26	1	77.9	
8	21 16	524	427 03 03	97	13 30	64.8	30.7 02 20	34.1	14 41	277	80 03 30	197	4,4,3,2,3,2,3,3	24	1	78.0	
9	20 40	541	413 01 23	128	14 15	69.7	34.8 01 44	34.9	15 50	290	134 02 09	156	4,3,3,3,3,3,3,2	24	1	77.7	
10	17 46	577	447 02 08	130	14 57	70.4	39.4 24 00	31.0	18 26	339	144 01 53	195	4,3,2,2,3,4,3,3	24	1	77.3	
11	18 40	800	297 24 00	503	19 44	113.6	25.5 22 51	88.1	18 15	443	97 23 45	346	4,1,1,2,2,4,6,6	26	1	77.6	
12 d	15 04	580	-248 03 05	828	03 00	89.5	-33.4 02 14	122.9	17 53	387	-97 04 42	484	7,8,5,4,4,4,4,4	40	2	77.4	
13 d	18 38	877	189 01 04	688	19 18	92.1	32.2 04 42	59.9	17 40	435	-4 04 16	439	6,5,5,4,5,4,7,3	39	1	77.0	
14	15 52	612	413 12 12	199	12 26	74.6	47.5 02 00	27.1	16 45	355	218 00 48	137	3,1,1,1,4,4,2,2	18	1	77.1	
15	17 41	584	430 10 05	154	15 28	69.2	47.6 08 55	21.6	17 53	356	202 06 44	154	1,3,3,3,4,3,4,2	23	1	77.0	
16 q	18 20	539	343 01 51	196	00 26	65.5	34.8 02 23	30.7	19 04	279	85 02 00	194	5,4,3,2,2,2,2,3	23	1	77.0	
17	19 24	711	400 20 05	311	19 28	87.2	16.5 19 51	70.7	18 30	390	163 20 03	227	2,2,3,3,3,4,6,2	25	1	77.4	
18	16 00	814	412 03 20	402	16 07	77.8	39.6 23 22	38.2	18 45	394	133 03 25	261	3,4,3,3,3,6,6,5	33	2	77.8	
19 d	16 27	755	175 23 42	580	17 00	76.1	20.4 24 00	55.7	18 20	470	-17 23 32	487	4,5,4,2,5,5,6,6	37	2	77.7	
20 d	17 23	587	230 23 53	357	13 56	69.0	14.0 20 59	55.0	17 08	339	32 00 23	307	5,5,3,3,3,4,5,6	34	1	77.5	
21	16 05	673	230 00 01	443	16 10	75.7	27.0 23 33	48.7	18 30	434	69 00 46	365	5,4,3,1,4,4,5,5	31	1	77.8	
22	18 46	527	-14 01 21	541	00 46	78.9	-29.6 01 24	108.5	15 09	284	-101 01 17	385	7,5,2,2,3,2,2,5	28	1	77.6	
23	19 59	604	355 20 31	249	20 28	91.7	36.4 20 48	55.3	18 14	341	98 00 04	243	4,3,3,3,2,3,6,2	26	1	77.7	
24	20 34	711	176 24 00	535	18 31	70.0	23.9 23 54	46.1	18 42	404	-3 23 56	407	3,4,3,3,3,5,7,6	34	1	77.6	
25	16 51	784	133 00 01	651	16 42	86.5	18.6 02 10	67.9	17 14	424	-26 01 43	450	6,4,2,2,4,5,4,4	31	1	77.9	
26	16 09	665	442 01 40	223	17 06	69.2	45.2 09 19	24.0	17 17	437	161 02 16	276	3,3,2,3,5,5,3,4	28	1	77.8	
27	18 57	550	312 00 30	238	00 21	66.8	33.7 22 06	33.1	19 39	286	87 00 42	199	5,2,3,2,2,3,2,4	23	1	77.8	
28 q	17 06	604	447 10 49	157	15 03	62.1	43.4 08 17	18.7	17 43	316	202 03 42	114	2,3,2,1,1,4,3,2	18	1	77.9	
29 q	17 29	545	438 00 54	107	13 48	63.9	39.4 01 10	24.5	18 17	272	130 01 13	142	4,2,1,1,2,3,2,2	17	0	77.7	
30	16 52	774	435 10 47	339	16 53	76.5	40.7 22 30	35.8	16 53	422	210 22 43	212	1,1,3,3,5,6,4,4	27	1	77.8	
31	19 41	585	447 11 48	138	13 24	66.6	41.3 05 11	25.3	19 50	312	159 06 02	153	3,3,3,3,3,3,3,3	24	1	77.8	
Mean	- -	630	302 - -	328	- -	74.3	28.9 - -	45.5	- -	351	96 - -	256	-	-	1.00	77.8	

TERRESTRIAL MAGNETIC FORCE: HORIZONTAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

1 LERWICK (H)													14,000γ (0.14 C.G.S. unit) +													APRIL 1958	
	Hour 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	Sum 11,000+	
1	γ	503	474	461	470	491	498	489	478	470	459	446	453	465	491	528	553	551	527	553	566	539	512	496	509	499	982
2 d	γ	507	511	511	498	485	500	496	485	479	456	444	408	436	456	483	503	504	527	548	534	534	537	495	472	492	809
3	γ	458	460	408	470	492	504	474	486	476	466	459	456	466	485	490	507	531	537	539	538	551	516	514	520	492	803
4 d	γ	506	493	454	497	520	511	499	493	482	464	457	456	503	562	621	610	620	688	675	585	559	533	347	427	523	1562
5	γ	373	318	300	423	486	482	462	452	448	432	432	441	472	488	512	525	537	547	545	537	525	520	499	456	467	212
6	γ	414	409	485	503	503	499	496	492	485	470	462	452	462	470	512	571	575	584	585	578	551	522	474	402	498	956
7	γ	468	507	498	468	465	482	497	485	466	453	443	438	459	496	514	548	546	555	578	523	519	518	518	505	498	949
8	γ	498	497	479	481	502	512	512	503	486	463	449	444	451	464	488	509	537	526	516	535	544	510	518	515	497	939
9	γ	514	507	505	497	482	507	514	508	489	473	459	451	458	472	486	492	515	540	560	564	556	538	519	514	505	1120
10 q	γ	512	515	515	512	512	514	515	507	488	471	458	449	451	467	488	499	508	522	524	533	543	542	533	529	504	1107
11 q	γ	534	533	529	536	531	529	524	520	512	495	478	466	467	470	486	500	508	518	529	533	537	540	533	535	514	1343
12 q	γ	534	533	533	533	529	529	527	523	517	503	492	476	478	492	507	518	529	550	549	552	542	540	540	541	524	1567
13 q	γ	533	533	533	529	524	523	521	516	504	496	492	485	485	499	510	514	529	537	540	549	540	539	537	537	521	1505
14	γ	530	529	527	529	532	529	528	528	523	515	492	475	490	536	534	530	560	528	557	564	542	534	538	497	527	1647
15	γ	439	476	511	469	477	511	504	470	445	462	466	471	462	479	492	504	515	529	559	566	553	512	508	453	493	833
16 d	γ	463	451	442	489	504	507	488	467	492	471	451	452	475	493	503	513	549	609	598	639	537	490	440	384	496	907
17 d	γ	294	261	367	383	425	462	488	473	455	472	481	474	499	510	522	753	653	648	648	563	515	492	317	436	483	591
18 d	γ	414	410	333	322	461	476	468	456	453	451	445	455	548	568	524	585	661	620	572	525	496	427	372	386	476	428
19	γ	486	435	467	484	492	486	491	492	477	434	440	455	497	518	556	562	563	572	529	559	514	492	449	488	497	938
20	γ	511	509	498	472	457	484	496	503	493	488	477	476	488	518	520	515	529	555	560	555	540	537	505	514	508	1200
21	γ	522	514	511	494	492	503	510	507	492	479	470	479	478	495	530	570	578	583	549	534	537	539	515	477	515	1358
22 q	γ	512	518	512	508	504	503	505	507	492	473	469	466	477	488	504	507	520	529	540	535	534	529	522	520	507	1174
23	γ	521	521	521	518	518	518	512	504	492	481	481	494	499	507	522	559	581	564	560	557	555	534	527	518	523	1564
24	γ	514	508	503	499	484	467	492	477	473	474	473	474	485	488	504	518	554	545	552	557	553	540	530	525	508	1189
25	γ	527	520	532	505	508	510	506	496	485	477	466	462	477	480	486	500	527	534	540	544	539	537	536	535	510	1229
26	γ	534	531	529	527	529	526	519	509	499	485	475	464	476	483	508	543	589	542	594	579	554	537	528	529	525	1589
27	γ	524	522	520	519	519	518	517	507	499	486	471	460	462	476	493	512	546	582	600	587	572	525	527	512	519	1456
28	γ	498	482	489	477	464	492	506	506	499	481	490	477	486	507	516	578	600	571	621	575	544	516	512	467	515	1354
29	γ	475	440	467	456	436	412	485	480	460	433	441	444	467	511	512	490	579	600	583	578	573	528	503	500	494	853
30	γ	496	442	466	484	492	492	496	496	474	470	470	462	507	512	518	559	615	622	595	589	545	519	369	428	505	1118
Mean		487	479	480	485	494	500	501	494	483	471	464	461	478	496	512	538	557	563	567	558	541	522	491	488	505	
Sum 13,000+		1614	1359	1406	1552	1816	1986	2037	1826	1505	1133	929	815	1326	1881	2369	3147	3709	3891	3998	3733	3243	2655	1721	1631		Grand Total 363,282

MAGNETIC DECLINATION (WEST)
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

2 LERWICK (D)		9° +												APRIL 1958													
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	Sum 1200.0+
1		48.8	47.7	43.5	42.0	42.5	45.6	42.9	45.8	47.8	50.0	54.1	61.5	65.5	67.4	67.3	63.0	58.9	54.9	56.9	51.1	49.8	52.9	53.6	50.7	52.7	64.2
2	d	51.4	48.3	45.8	43.2	40.5	47.9	43.0	38.6	45.3	48.6	54.9	59.7	62.1	65.4	63.4	61.5	57.4	55.9	58.4	56.8	54.9	52.5	50.6	44.0	52.1	50.1
3		50.2	52.3	49.5	47.4	43.6	41.8	46.8	48.5	48.5	50.7	54.5	59.1	62.2	62.2	60.6	56.9	53.6	53.3	54.5	56.6	56.2	49.5	51.9	51.6	52.6	62.0
4	d	53.1	57.1	54.1	55.3	47.1	47.7	46.8	45.7	44.6	48.8	56.2	61.7	70.4	72.8	71.6	73.0	68.2	70.9	68.3	59.6	54.0	55.3	52.3	40.9	57.3	175.5
5		39.1	37.5	31.4	26.5	39.9	42.6	46.6	51.0	54.0	58.8	59.1	63.7	64.1	65.9	65.1	62.3	58.4	56.8	53.6	52.1	51.4	53.4	54.1	48.5	51.5	35.9
6		49.6	44.8	45.8	46.7	46.2	47.0	47.0	44.0	44.1	47.0	53.4	58.6	62.6	64.7	66.0	64.7	63.5	61.0	59.2	57.8	56.8	58.4	56.7	48.9	53.9	94.5
7		44.2	48.1	45.3	41.6	43.9	45.4	46.8	45.8	49.3	51.8	56.7	61.4	64.2	67.4	64.4	57.7	62.0	59.0	56.4	54.8	54.5	55.5	52.9	46.4	53.1	75.5
8		48.6	50.0	50.0	51.6	48.3	49.5	48.1	45.2	43.3	46.9	51.5	56.5	61.1	64.4	65.0	62.5	59.9	56.0	54.5	55.9	57.0	46.8	52.1	51.2	53.2	75.9
9		46.9	46.3	43.0	44.9	47.7	45.1	45.5	45.2	46.1	48.3	51.5	55.9	59.7	62.5	62.1	59.7	57.7	56.2	54.8	57.7	58.6	56.6	54.7	51.4	52.4	58.1
10	q	48.8	49.1	50.2	49.5	48.9	47.8	46.3	44.8	46.2	48.3	51.6	55.8	59.1	60.3	60.3	58.2	56.6	55.2	55.4	55.9	57.1	56.3	51.0	51.3	52.7	64.0
11	q	52.9	53.0	54.8	53.0	49.2	47.6	46.7	46.2	45.7	49.9	50.8	54.3	58.5	61.0	61.6	60.4	58.4	56.2	55.9	56.7	57.2	56.2	55.0	54.8	54.0	96.0
12	q	54.7	54.0	53.8	52.9	51.9	49.9	48.4	48.6	49.5	51.8	54.7	58.3	60.6	62.0	60.5	58.7	56.2	55.4	55.2	56.1	55.5	57.2	53.9	53.7	54.7	113.5
13	q	54.5	54.8	53.9	52.0	49.4	47.1	45.8	47.0	47.9	50.1	52.5	55.0	57.5	59.2	58.4	57.0	55.0	53.8	53.8	54.8	56.0	55.6	54.8	53.0	53.3	78.9
14		50.7	52.3	53.6	51.9	51.9	50.1	49.4	47.1	46.7	47.7	52.5	57.7	61.6	64.7	63.7	64.3	68.2	60.4	58.7	53.4	53.8	54.4	50.0	46.6	54.6	111.4
15		47.6	38.0	34.8	37.5	48.7	47.3	47.0	44.7	52.8	56.7	55.8	58.6	60.2	63.3	61.2	60.7	57.3	56.0	55.0	52.9	45.2	51.9	51.2	51.2	51.5	35.6
16	d	42.3	43.2	43.0	44.3	44.2	42.2	44.3	49.9	48.9	46.6	54.2	59.9	67.3	68.6	68.3	66.2	63.4	64.5	57.8	52.1	51.3	47.0	44.3	42.5	52.3	56.3
17	d	48.6	32.3	23.1	37.5	43.0	39.4	45.4	44.0	48.2	51.9	54.5	59.4	63.4	67.3	68.6	58.2	61.7	67.8	63.4	49.3	56.7	52.6	50.5	33.9	50.9	20.7
18	d	38.5	47.4	53.0	41.0	39.4	46.3	47.9	50.0	47.3	50.6	55.4	60.8	64.9	62.7	64.1	66.3	60.5	61.5	57.0	57.8	53.7	44.5	45.2	51.2	52.8	67.0
19		51.4	52.0	52.5	49.4	48.8	48.4	48.5	48.5	46.3	46.6	49.5	55.6	60.8	62.0	65.4	63.4	58.6	35.9	53.8	47.6	45.8	48.6	53.8	40.4	52.2	53.6
20		48.2	50.0	50.2	52.4	50.0	46.6	45.2	46.6	48.6	49.5	52.4	57.6	61.0	62.8	63.0	60.7	59.1	56.7	51.4	52.1	52.9	48.1	48.8	50.0	52.7	63.9
21		52.9	53.4	52.9	55.9	53.4	47.6	44.2	44.3	47.2	51.5	51.9	57.2	61.5	62.0	62.4	62.0	57.9	56.2	54.8	54.1	54.0	47.4	50.8	51.0	53.6	86.5
22	q	50.1	52.0	52.0	51.2	49.9	51.2	48.1	44.6	49.1	53.1	55.8	57.8	58.3	59.7	59.7	57.7	56.2	54.4	53.3	53.4	54.4	54.3	53.9	53.8	53.5	84.0
23		52.9	52.4	51.6	50.5	49.9	48.6	46.7	45.8	46.8	48.3	51.4	56.7	60.7	62.5	63.0	63.0	63.4	60.2	55.2	55.9	55.3	56.7	46.4	47.6	53.8	91.5
24		48.6	47.4	45.3	33.2	39.7	42.6	39.4	43.3	50.4	55.8	59.1	63.0	66.8	68.2	67.8	64.9	63.0	57.2	55.8	55.6	54.3	54.8	49.1	52.2	53.2	77.5
25		52.0	51.5	48.1	41.5	43.3	42.9	44.4	45.7	48.5	51.6	57.8	61.7	63.9	65.2	62.5	61.0	59.1	56.8	55.9	56.7	56.8	56.2	55.3	54.0	53.9	92.4
26		53.8	53.2	52.4	51.1	49.5	48.4	48.2	48.6	49.4	52.9	55.2	57.2	58.5	58.9	57.7	57.3	56.9	56.8	58.2	56.8	51.0	52.9	55.4	55.3	54.0	95.6
27		54.2	52.9	52.3	50.5	48.5	46.2	45.3	45.4	47.7	51.0	52.0	53.1	56.2	58.9	58.9	59.9	59.2	58.6	58.1	59.6	52.9	54.8	56.2	52.8	53.5	85.2
28		47.4	45.1	43.7	39.5	43.8	40.4	41.6	41.9	42.3	55.3	60.3	61.7	65.8	66.3	63.5	63.6	59.8	57.2	57.2	57.0	54.8	46.4	48.8	52.5	60.6	
29		48.0	42.8	39.7	37.0	42.8	41.5	43.4	45.2	46.7	52.4	58.9	63.0	65.0	62.8	62.0	60.0	61.0	53.8	55.2	57.5	55.9	47.2	50.4	46.6	51.6	38.8
30		50.7	42.5	49.2	49.6	46.3	44.1	49.1	46.8	50.1	53.5	56.0	60.7	66.6	64.7	64.7	63.6	62.1	53.1	57.3	53.6	53.5	54.6	57.5	48.5	54.1	98.4
Mean		49.4	48.4	47.3	46.0	46.4	46.0	46.0	46.0	47.6	50.9	54.5	58.8	62.3	63.9	63.4	61.6	59.8	57.7	56.5	55.1	54.1	52.9	52.0	49.1	53.1	
Sum 1300.0+		180.7	151.4	118.5	80.6	92.2	78.8	78.8	78.8	129.3	226.0	334.2	463.2	570.1	615.8	602.8	548.4	493.2	431.7	395.0	351.5	323.5	287.0	258.8	172.8		Grand Total 38263.1

TERRESTRIAL MAGNETIC FORCE: VERTICAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

27

3 LERWICK (Z)													47,000γ (0.47 C.G.S. unit) +													APRIL 1958	
	Hour G.M.T.																										Sum
	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	4000+	
1	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		
2 d	215	195	174	172	188	208	233	234	234	238	245	248	255	265	275	298	301	290	278	288	232	235	235	222	240	1758	
3	220	229	228	218	178	187	182	193	209	220	227	242	241	253	260	266	268	256	247	252	270	278	234	298	231	1556	
4 d	192	169	123	135	151	179	213	220	235	241	241	239	242	257	265	269	275	269	257	249	229	214	209	211	220	1284	
5	226	218	199	208	209	224	230	230	231	238	242	248	244	286	362	368	369	390	351	350	295	283	273	149	268	2423	
6	140	156	178	160	175	176	225	244	248	259	270	289	295	299	313	325	340	327	320	295	266	253	236	220	250	2009	
7	187	178	192	236	244	247	233	232	236	240	244	242	242	245	248	283	340	362	346	339	304	288	234	101	252	2043	
8	155	212	214	202	191	190	227	236	244	247	252	248	249	268	294	314	330	325	302	259	268	259	249	237	249	1972	
9	236	242	225	201	225	242	249	256	258	258	252	248	242	241	247	257	271	282	272	262	255	233	237	251	248	1942	
10 q	247	238	223	229	202	214	237	246	248	249	246	238	233	230	236	241	241	248	262	275	291	302	290	268	247	1934	
11 q	265	253	251	253	249	248	247	244	242	246	248	246	242	240	240	238	240	242	243	243	243	253	253	237	246	1906	
12 q	232	236	233	222	233	236	238	238	240	242	243	244	242	242	236	236	240	242	240	236	236	236	241	240	238	1704	
13 q	238	238	237	238	240	242	242	239	235	233	226	226	225	227	230	232	240	247	249	248	253	242	233	236	237	1696	
14	236	237	238	242	246	243	242	237	236	227	226	227	225	226	231	234	237	243	244	244	248	241	236	234	237	1680	
15	231	233	235	240	236	234	236	236	231	227	236	237	230	230	259	264	277	299	275	299	266	259	266	229	249	1965	
16 d	125	149	170	174	159	195	213	229	229	225	236	242	252	253	266	272	272	259	262	281	265	220	224	190	223	1362	
17 d	182	169	148	140	203	208	213	199	199	220	233	249	262	282	280	279	290	314	345	321	227	214	179	86	227	1442	
18 d	19	73	79	111	112	119	156	189	204	219	239	261	280	290	287	331	330	330	337	263	253	229	134	121	207	966	
19	121	109	42	46	127	202	224	230	244	257	272	274	290	365	339	332	345	325	289	250	210	189	151	131	223	1364	
20	182	165	188	218	234	239	252	259	260	269	263	260	259	267	268	284	308	294	280	250	198	184	141	145	236	1667	
21	198	230	232	210	195	217	231	235	236	238	239	240	255	275	282	280	272	272	281	268	257	212	171	224	240	1750	
22 q	233	239	240	233	215	217	232	233	234	238	237	233	234	239	238	255	281	285	281	272	261	223	142	170	236	1665	
23	208	233	240	246	241	229	210	211	211	218	225	224	227	232	238	242	243	251	255	253	245	243	243	242	234	1610	
24	240	240	240	244	244	244	245	241	238	229	220	216	223	239	251	262	289	336	324	294	283	268	256	210	253	2076	
25	216	217	204	185	188	155	176	201	210	213	218	229	241	254	266	284	293	309	285	275	267	264	251	234	235	1635	
26	227	229	179	175	194	207	217	227	225	221	216	220	221	227	232	232	227	236	238	234	237	236	234	234	222	1325	
27	234	236	238	238	238	237	233	232	232	229	227	224	223	228	231	233	261	278	275	280	273	250	247	245	243	1822	
28	243	240	240	241	243	243	244	241	238	238	240	240	235	238	245	248	257	265	289	306	303	253	243	244	251	2017	
29	231	218	184	183	177	190	219	223	227	225	223	243	259	283	329	336	351	329	308	290	292	280	227	188	251	2015	
30	212	181	165	134	160	110	154	214	227	238	240	254	279	306	295	280	288	325	299	273	260	243	205	204	231	1546	
Mean	204	140	181	192	197	213	224	238	244	245	254	262	266	293	286	284	306	336	304	280	250	224	104	155	237	1682	
Sum 5000+	1095	1102	920	926	1094	1295	1677	1887	1985	2087	2180	2293	2413	2780	3029	3259	3582	3766	3538	3229	2737	2308	1578	1056		Grand Total 171,816	

DAILY EXTREMES OF TERRESTRIAL MAGNETIC ELEMENTS. MAGNETIC CHARACTER FIGURES (K AND C) AND TEMPERATURE IN MAGNET HOUSE

4 LERWICK													APRIL 1958						
	TERRESTRIAL MAGNETIC ELEMENTS												3-hr. range indices K	Sum of K indices	Magnetic character of day (0-2)	Temperature in magnet house 200 +			
	Horizontal force			Declination			Vertical force												
	Maximum 14,000γ +	Minimum 14,000γ +	Range	Maximum 9° +	Minimum 9° +	Range	Maximum 47,000γ +	Minimum 47,000γ +	Range										
	h. m.	γ	γ	h. m.	γ	h. m.	γ	h. m.	γ	γ	h. m.	γ	γ				°A.		
1	19 47	594	435	10 55	159	14 36	70.4	39.7	04 02	30.7	16 25	304	159	03 27	145	4,3,2,2,4,3,4,3	25	1	77.8
2 d	17 58	572	399	11 13	173	13 35	68.0	32.0	07 06	36.0	21 01	291	169	04 17	122	3,3,3,3,4,4,3,4	27	1	77.9
3	20 40	604	327	02 30	277	20 56	73.6	39.9	21 35	33.7	16 36	278	93	02 26	185	5,4,3,2,2,3,4,4	27	1	78.0
4 d	18 28	922	198	22 11	724	18 30	92.7	30.2	22 30	62.5	18 06	446	100	23 55	346	4,3,2,3,5,5,7,6	35	2	78.0
5	18 06	560	230	02 28	330	12 01	68.2	17.7	02 52	50.5	16 40	350	104	00 00	246	5,4,3,3,3,3,3,4	28	1	77.9
6	17 00	597	291	23 31	306	14 58	66.8	34.8	22 59	32.0	17 16	367	58	23 46	309	5,2,2,3,4,4,3,6	29	1	78.0
7	18 21	607	416	00 01	191	15 07	69.0	37.2	00 09	31.8	18 18	347	124	00 00	223	4,3,3,2,3,3,4,3	25	1	78.0
8	20 43	562	440	11 32	122	13 53	66.3	40.3	21 15	26.0	17 18	283	195	03 21	88	2,3,2,2,2,3,3,3	20	0	78.0
9	19 34	568	447	11 19	121	13 23	63.2	42.0	03 00	21.2	21 29	309	185	04 44	124	2,3,2,2,2,3,3,3	20	0	77.8
10 q	21 04	552	445	12 00	107	13 44	60.8	43.1	07 40	17.7	00 20	270	235	23 44	35	1,1,1,1,2,2,2,2	12	0	77.6
11 q	21 38	558	462	11 56	96	14 00	61.7	45.2	08 04	16.5	11 04	246	219	03 28	27	1,2,0,2,1,2,1,2	11	0	77.7
12 q	17 27	562	471	11 45	91	13 18	62.6	48.1	06 49	14.5	20 38	255	222	10 50	33	0,1,1,2,1,3,2,2	12	0	77.6
13 q	19 25	555	478	11 52	77	13 30	59.8	43.9	06 56	15.9	20 27	249	224	12 54	25	1,2,2,1,1,2,1,2	12	0	78.1
14	16 01	593	440	24 00	153	16 02	70.5	41.4	23 58	29.1	19 23	313	163	24 00	150	2,1,1,3,4,4,3,4	22	1	78.7
15	20 14	575	379	01 03	196	00 45	71.6	27.0	01 09	44.6	20 07	304	56	00 37	248	5,4,3,2,2,3,4,4	27	1	78.9
16 d	19 10	846	295	23 14	551	20 06	74.8	22.5	23 01	52.3	19 04	411	5	23 12	406	4,4,3,3,3,4,6,5	32	1	78.4
17 d	15 38	865	64	22 33	801	22 50	81.7	-2.0	23 08	83.7	18 38	403	-75	00 50	478	6,5,4,3,4,6,6,7	41	2	78.2
18 d	16 19	686	234	02 46	452	15 12	70.2	22.8	03 41	47.4	13 39	374	-11	03 09	385	5,6,3,3,4,5,5,6	37	2	78.3
19	17 11	613	393	23 00	220	14 26	67.7	33.2	23 27	34.5	16 36	350	142	22 33	208	4,3,2,3,3,4,4,4	27	1	78.8
20	17 54	577	444	04 12	133	14 12	64.2	35.2	21 43	29.0	18 36	288	156	22 29	132	3,3,3,1,3,3,3,4	23	1	78.9
21	17 31	591	431	23 09	160	22 59	65.7	38.1	21 58	27.6	17 00	295	125	22 43	170	2,3,2,2,3,3,3,4	22	1	79.0
22 q	18 50	544	459	11 34	85	14 12	60.8	43.8	07 29	17.0	19 00	257	182	00 00	75	3,2,2,1,1,2,1,1	13	0	79.0
23	16 34	589	476	10 41	113	15 23	65.2	41.0	22 41	24.2	17 41	343	204	23 38	139	1,1,1,2,2,4,3,3	17	0	79.1
24	16 44	565	436	05 06	129	14 15	69.7	29.7	03 32	40.0	17 07	314	140	05 32	174	3,4,3,2,3,3,3,3	24	1	79.1
25	19 50	548	455	11 23	93	13 15	68.7	39.0	03 43	29.7	17 53	239	162	02 52	77	3,3,2,2,3,2,1,0	16	0	79.2
26	16 17	631	458	11 00	173	19 46	68.9	47.9	05 10	21.0	19 12	302	221	15 42	81	1,1,1,2,3,4,4,2	18	1	79.0
27	20 21	622	455	12 29	167	15 35	61.7	44.0	07 03	17.7	20 23	336	234	23 36	102	1,2,1,2,2,4,4,3	19	1	79.0
28	18 30	635	424	04 00	211	13 38	68.7	30.3	21 54	38.4	16 21	356	165	04 49	191	3,3,2,3,4,4,4,4	27	1	79.0
29	17 27	610	354	05 06	256	12 30	67.8	31.9	03 00	35.9	17 27	343	82	05 14	261	4,4,4,4,3,4,4,3	29	1	79.4
30	16 46	655	315	22 51	340	12 26	68.5	36.0	01 33	32.5	17 12	355	29	22 42	326	4,3,3,3,3,4,4,5	29	1	79.5
Mean	- -	619	385 - -	234	- -	68.3	35.2 - -	33.1 - -	- -	319	136 - -	184	-	-	-	-	0.80	-	78.5

TERRESTRIAL MAGNETIC FORCE: HORIZONTAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

1	LERWICK (H)																								14,000γ (0 14 C.G.S. unit) +										MAY 1958	
	Hour G.M.T.																									Sum										
	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	11,000+										
1	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ										
2	447	408	478	477	469	496	502	491	467	445	456	463	462	481	507	536	598	584	623	569	543	521	441	504	499	968										
3	505	490	496	497	496	488	486	479	492	481	460	452	449	460	474	499	517	529	552	573	555	521	514	518	499	983										
4	519	519	511	506	497	509	508	496	478	462	460	460	464	476	493	503	513	530	543	545	553	535	530	527	506	1137										
5	531	523	517	513	505	512	510	496	491	477	464	457	462	480	506	527	531	538	542	538	546	549	524	517	511	1256										
6	517	518	508	505	521	522	517	500	488	473	466	462	469	484	506	513	548	569	587	593	565	545	500	514	516	1390										
7	516	510	491	512	516	516	521	518	499	479	463	462	466	477	507	506	520	535	539	550	554	540	532	528	511	1257										
8	528	524	521	524	527	529	533	529	513	495	480	475	467	482	494	507	521	533	539	543	555	552	550	545	519	1466										
9	542	543	544	544	541	541	540	530	517	502	495	492	492	510	550	509	519	534	550	566	563	561	534	522	531	1741										
10	528	532	534	536	539	538	530	524	513	499	485	489	501	498	517	521	524	529	544	542	551	554	551	549	526	1628										
11	536	517	526	535	537	533	528	511	517	521	502	484	473	495	514	552	513	554	591	599	565	541	530	502	528	1676										
12	524	524	524	524	524	521	506	469	457	456	467	485	489	483	497	527	537	575	593	579	555	535	529	528	517	1408										
13	528	528	526	527	529	527	521	510	499	485	485	491	494	521	528	532	573	592	583	608	580	535	480	496	528	1678										
14	481	510	521	521	517	520	519	503	496	493	489	495	519	508	570	631	745	725	625	645	572	456	243	416	530	1720										
15	267	315	366	402	458	470	469	466	462	477	469	481	498	561	647	647	615	593	588	600	545	525	510	457	495	888										
16	426	445	427	436	446	415	492	477	478	481	473	480	493	524	551	559	622	627	620	555	515	511	522	503	503	1078										
17	480	473	482	491	505	509	510	499	481	452	459	467	473	503	548	562	632	584	547	518	530	528	528	529	512	1290										
18	513	514	485	486	488	516	514	502	500	495	485	491	499	513	569	563	583	595	608	573	540	532	531	491	524	1586										
19	481	443	452	489	506	508	500	485	478	468	470	462	481	513	524	552	632	639	600	572	535	524	515	510	514	1339										
20	515	517	518	510	477	463	484	491	480	463	462	459	478	515	528	550	562	570	579	573	539	538	521	515	513	1307										
21	515	524	518	521	528	522	513	506	488	468	458	460	473	493	513	529	552	563	560	549	540	530	530	531	516	1384										
22	517	527	516	508	515	522	517	502	485	469	455	450	462	479	502	524	535	552	552	544	539	538	535	535	512	1280										
23	535	535	533	533	537	534	523	507	492	475	466	469	486	494	507	543	555	550	547	554	555	550	547	541	524	1568										
24	537	520	526	535	535	536	528	513	499	484	480	486	495	507	521	547	561	565	569	554	556	551	545	543	529	1693										
25	542	542	543	542	543	543	538	525	509	491	480	477	489	513	513	521	532	551	560	555	550	543	544	542	529	1688										
26	543	545	545	547	548	542	530	516	500	490	483	486	499	510	524	540	550	576	605	603	590	586	538	543	539	1939										
27	531	509	461	505	527	527	520	502	480	451	463	513	509	549	750	852	831	683	585	552	543	540	535	508	559	2426										
28	483	487	505	511	509	501	490	476	465	458	474	473	453	470	513	510	520	566	618	612	581	550	477	452	506	1154										
29	375	392	450	461	489	490	480	472	471	481	476	482	488	505	520	568	558	565	590	590	566	547	524	525	503	1065										
30	503	453	454	383	505	505	459	421	419	423	434	604	746	801	691	622	598	615	590	581	527	499	513	520	536	1866										
31	520	502	456	450	498	513	505	482	476	474	471	472	487	509	516	522	553	592	559	561	559	543	504	507	510	1231										
Mean	508	498	476	392	465	492	491	498	491	457	457	477	523	572	509	500	524	741	782	659	512	42	287	158	480	511										
Sum 14,000+	1493	1387	1410	1423	1797	1860	1784	1396	1081	725	587	856	1239	1886	2609	3074	3674	4054	4070	3755	3079	2122	1664	1576		Grand Total 384,601										

MAGNETIC DECLINATION (WEST)
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

2 LERWICK (D)		9° +																							MAY 1958		
	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	Sum 1200·0+
1		49·7	52·1	45·9	43·5	45·5	48·3	46·9	43·5	45·4	49·3	52·4	56·5	59·1	60·3	60·3	58·8	58·0	53·5	51·5	52·1	53·0	53·6	57·4	50·2	51·9	46·8
2		51·7	53·8	52·2	44·7	40·6	43·0	41·9	44·4	44·0	45·8	47·8	50·8	55·5	58·1	57·9	57·4	55·7	54·0	54·1	49·7	52·6	53·9	54·5	51·6	50·7	15·7
3		52·1	52·7	51·4	51·4	49·5	47·6	44·4	42·8	44·0	47·3	52·2	56·2	59·7	62·2	61·9	59·8	58·7	58·1	55·5	54·5	54·5	52·6	54·5	53·7	53·2	77·3
4		50·7	47·8	49·3	47·1	46·5	44·4	42·0	42·5	46·4	51·7	54·0	58·4	59·9	60·8	60·9	60·3	58·4	56·4	56·0	55·1	54·6	55·5	45·4	48·3	52·2	52·4
5		48·8	46·5	43·0	41·1	43·5	43·5	41·6	42·5	45·5	47·4	50·3	53·6	57·4	59·7	60·2	58·2	58·3	58·8	59·3	56·5	56·9	53·6	53·6	51·6	51·3	31·4
6	7 q	51·6	46·4	44·6	44·8	44·5	44·5	42·0	41·1	43·0	45·9	51·5	56·2	59·3	60·3	60·0	56·4	56·1	54·0	52·6	53·6	53·1	54·9	55·2	53·6	51·1	25·2
7		51·2	49·9	49·3	48·3	46·6	45·4	43·0	43·8	43·0	46·4	50·7	57·1	60·1	62·0	61·2	59·2	57·0	55·0	53·7	54·5	55·2	51·2	50·3	51·3	51·9	45·4
8		53·6	53·6	53·3	52·5	52·1	48·6	44·9	43·2	44·1	48·8	51·6	56·0	61·8	64·1	63·6	60·3	57·4	55·4	53·6	53·1	56·0	53·0	44·9	49·1	53·1	74·6
9		51·5	50·4	50·4	50·3	48·8	46·8	44·5	47·2	48·8	50·6	54·0	56·2	60·3	61·5	60·3	58·9	56·6	55·9	54·6	54·0	54·3	53·6	53·8	53·5	53·2	76·8
10		56·3	50·6	50·7	51·4	50·5	53·5	54·5	52·2	53·9	50·7	55·0	58·9	62·9	61·2	59·8	59·8	57·4	57·4	50·7	51·1	56·1	54·2	54·3	53·8	54·9	116·9
11		52·2	51·2	50·3	49·4	47·9	46·5	45·6	47·8	49·7	53·6	58·9	58·8	59·4	59·2	58·8	58·4	57·5	56·3	53·3	53·1	54·3	55·4	55·9	55·3	53·7	88·8
12		53·6	52·4	50·7	49·2	47·5	45·8	44·9	46·5	49·5	53·1	56·5	59·3	61·0	60·0	60·2	59·8	59·7	60·2	57·4	58·0	53·5	53·1	47·2	47·5	53·6	86·6
13	d	45·4	45·9	47·5	46·4	44·4	44·0	43·5	42·0	46·6	47·1	52·0	57·9	58·8	64·7	67·1	66·6	64·0	67·0	64·6	59·4	61·4	55·1	56·4	51·8	54·1	99·6
14	d	54·0	34·8	27·6	40·8	47·8	43·0	37·8	41·0	48·8	50·7	54·5	58·9	62·7	65·0	61·2	60·3	62·4	60·9	58·4	52·4	56·4	55·4	52·4	56·3	51·8	43·5
15		51·7	43·1	45·3	49·2	55·0	47·9	46·6	45·6	48·8	50·7	54·3	57·4	60·4	63·1	62·6	62·2	59·3	59·0	56·5	54·8	54·3	56·0	50·7	46·6	53·4	81·1
16		44·9	48·8	45·9	47·3	47·6	45·9	44·0	42·7	43·0	47·8	50·8	55·1	58·9	60·8	62·0	60·6	58·8	55·8	52·7	53·6	54·5	52·1	53·7	54·0	51·7	41·3
17		54·0	56·8	56·3	55·9	49·7	42·8	42·0	40·1	40·2	42·4	48·0	52·3	56·8	57·2	57·4	58·7	59·3	58·0	55·3	53·7	52·7	54·1	53·5	51·3	52·0	48·5
18		47·1	48·7	51·5	43·9	46·3	45·5	45·4	44·4	47·7	48·0	50·5	56·1	60·8	62·5	63·7	62·8	60·5	62·2	57·4	56·3	56·4	54·0	52·2	54·5	53·3	78·4
19		52·6	50·8	51·2	51·4	53·6	53·7	51·3	44·8	44·1	48·8	52·6	57·7	62·3	65·0	64·1	62·2	59·8	57·4	54·5	53·1	56·0	54·5	50·6	52·4	54·4	104·5
20	q	55·4	53·5	50·2	48·8	47·8	46·2	43·5	43·4	42·7	47·2	52·8	57·9	62·5	63·9	62·6	59·4	57·4	55·3	54·0	52·1	53·1	54·4	55·4	53·6	53·0	73·1
21		50·8	52·2	44·3	45·8	48·3	44·9	43·0	41·8	44·8	48·8	54·1	59·1	62·4	63·6	62·2	59·5	56·4	54·7	53·1	53·5	54·0	55·0	54·7	53·8	52·5	60·8
22	q	53·6	53·1	51·6	50·2	49·2	45·7	42·9	41·8	42·6	46·3	51·6	57·0	62·5	65·4	63·5	60·4	57·4	55·5	55·5	55·6	56·1	56·7	55·5	57·5	53·6	87·2
23	q	53·6	50·7	49·5	48·8	46·9	45·9	44·5	45·9	47·4	51·6	56·4	60·6	64·6	65·6	63·2	60·5	59·3	56·8	55·7	56·0	55·9	55·3	55·5	55·3	54·4	105·5
24	q	54·2	52·6	51·5	49·5	46·6	45·5	43·9	43·8	45·0	47·3	51·6	57·4	61·2	64·3	63·0	59·6	56·4	55·0	54·1	54·1	54·7	55·0	55·1	54·1	53·1	75·5
25		53·3	52·5	51·6	50·7	48·0	45·7	45·3	45·9	47·3	49·5	54·5	60·2	62·2	63·0	63·0	63·6	61·9	61·7	63·1	61·1	61·0	61·5	53·7	46·0	55·2	125·9
26	d	52·3	46·2	35·9	39·3	40·7	41·5	40·5	42·9	43·3	55·1	58·2	61·4	67·8	69·6	75·7	75·3	72·9	65·7	61·5	59·5	59·4	59·9	53·7	56·2	55·6	134·5
27		55·6	49·9	49·9	46·0	46·5	47·0	46·0	45·2	46·0	51·3	54·2	59·3	61·7	64·2	64·1	59·0	59·0	58·5	58·8	57·1	58·0	53·0	59·0	44·3	53·9	93·6
28		36·6	45·1	51·1	50·0	44·6	44·5	44·1	47·5	49·8	51·9	55·6	58·8	60·9	61·4	61·4	61·6	58·0	56·6	58·5	58·1	59·5	57·1	57·5	57·1	53·6	87·3
29	d	54·2	47·9	35·6	40·3	45·5	40·4	36·9	49·4	35·5	46·5	53·6	57·1	62·4	70·1	65·7	68·1	61·2	61·2	59·5	54·2	62·5	61·9	59·5	57·5	53·6	86·7
30		57·5	56·1	53·2	45·1	38·7	39·8	38·4	37·4	40·3	45·9	50·8	55·4	59·0	60·0	59·6	58·5	55·5	55·1	57·6	57·5	58·7	55·1	49·9	48·4	51·4	33·5
31	d	49·1	47·0	43·1	47·5	41·9	43·4	42·3	44·5	44·6	47·5	51·3	56·6	57·5	59·3	59·5	59·7	58·6	72·4	74·2	66·0	64·3	79·8	58·5	54·0	55·1	122·6
Mean		51·6	49·8	47·9	47·4	46·9	45·5	43·8	44·1	45·3	48·9	53·0	57·2	60·7	62·5	62·2	60·8	59·0	58·2	56·7	55·3	56·2	55·8	53·7	52·4	53·1	
Sum 1300·0+		298·9	243·1	183·9	170·6	152·6	111·2	58·1	67·6	105·8	215·0	342·3	474·2	581·8	638·1	626·7	585·5	528·9	503·8	457·3	413·4	443·0	430·5	364·5	324·2		Grand Total 39521·0

TERRESTRIAL MAGNETIC FORCE: VERTICAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

29

3 LERWICK (Z)		47,000γ (0.47 C.G.S. unit) +																							MAY 1958		
	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	Sum 5000+
1	γ	181	122	150	197	201	217	240	252	250	248	248	259	263	268	276	282	285	299	277	262	256	248	176	195	235	652
2	γ	224	195	154	161	166	193	217	225	225	237	243	246	250	247	245	246	250	251	252	262	242	242	231	230	226	434
3	γ	239	242	246	245	239	240	246	248	245	242	240	240	234	231	229	234	236	239	241	242	242	252	244	236	241	772
4	γ	183	209	236	242	234	217	223	229	229	229	234	238	235	232	231	234	245	246	243	242	240	242	242	217	231	552
5	γ	225	220	196	204	228	240	247	249	242	240	239	234	234	233	234	240	241	252	264	282	280	248	215	224	238	711
6	γ	223	197	183	216	241	241	239	235	231	229	234	237	239	241	251	262	250	248	249	249	250	246	241	240	236	672
7 q	γ	237	236	237	238	240	240	236	231	228	221	217	212	210	208	217	228	237	244	245	240	234	233	231	228	230	528
8	γ	231	232	233	234	237	239	241	237	229	228	223	215	215	219	234	258	263	262	258	256	252	234	206	207	235	643
9	γ	223	232	238	241	240	241	241	237	238	240	234	225	220	220	221	224	229	236	241	245	240	241	237	231	234	615
10	γ	217	201	212	227	232	229	220	219	212	215	223	232	234	242	253	266	283	264	295	270	274	266	241	223	240	750
11	γ	236	243	244	243	243	242	243	241	231	228	225	231	235	236	240	254	252	251	272	274	268	257	248	243	245	880
12	γ	245	243	244	244	243	244	242	238	236	232	225	229	232	234	240	243	249	270	278	274	276	258	195	166	241	780
13 d	γ	154	209	236	245	243	240	240	240	231	226	225	237	269	272	269	297	385	354	322	310	292	240	191	145	253	1072
14 d	γ	112	79	58	99	132	146	163	204	228	232	246	252	260	292	348	345	314	297	285	269	249	247	240	196	221	293
15	γ	120	114	118	120	149	152	191	227	231	233	241	246	257	274	297	286	279	256	249	248	266	252	219	185	217	210
16	γ	166	112	155	163	209	227	240	248	252	258	256	252	247	241	256	269	277	278	277	257	240	242	239	230	233	591
17	γ	230	223	200	174	175	192	216	227	224	223	227	231	237	252	274	289	283	278	277	260	257	243	206	138	231	536
18	γ	129	134	142	183	215	232	237	234	231	229	234	239	236	239	247	263	276	277	283	274	257	240	216	160	225	407
19	γ	206	231	237	236	219	186	176	200	216	228	231	233	229	240	256	250	247	250	257	260	247	234	237	240	231	546
20 q	γ	228	200	209	220	232	243	246	245	243	243	240	232	223	223	229	234	238	243	250	257	252	243	236	226	235	635
21	γ	212	169	178	203	212	227	234	240	245	246	242	236	233	232	233	239	246	242	246	246	240	237	234	234	229	506
22 q	γ	234	236	241	243	243	242	243	245	240	232	215	206	208	223	232	237	246	253	247	240	240	236	230	226	235	638
23 q	γ	209	209	220	230	234	238	243	237	233	226	220	222	227	229	234	237	242	247	249	250	245	243	240	237	233	601
24 q	γ	237	238	239	240	241	238	240	239	234	228	223	225	223	219	223	227	232	236	240	241	237	234	233	233	233	600
25	γ	232	233	234	236	234	236	237	237	232	228	220	210	211	216	219	220	223	219	225	241	251	246	204	177	226	421
26 d	γ	175	135	125	173	200	230	241	235	230	235	232	236	264	309	345	381	361	386	360	316	289	272	230	227	258	1187
27	γ	212	212	197	223	242	252	258	264	261	245	240	263	282	253	248	269	256	260	277	284	269	232	158	133	241	790
28	γ	49	130	150	138	170	207	227	235	242	246	248	247	249	258	258	261	278	269	261	259	246	232	227	195	220	282
29 d	γ	113	19	39	39	133	178	185	169	178	238	287	324	381	392	403	375	398	335	309	289	249	227	215	238	238	713
30	γ	244	255	238	188	181	211	232	239	229	231	238	240	236	249	269	275	280	276	261	262	258	230	197	187	238	706
31 d	γ	207	202	183	138	145	179	202	215	225	236	234	239	281	312	315	264	247	249	331	358	315	386	327	386	257	1176
Mean	γ	198	191	193	199	211	221	229	233	232	234	235	238	244	250	259	264	269	267	268	265	257	248	225	214	235	
Sum 5000+	γ	1133	912	972	1183	1553	1839	2086	2221	2201	2252	2284	2368	2554	2736	3026	3189	3328	3267	3321	3219	2953	2683	1986	1633		Grand Total 174,899

DAILY EXTREMES OF TERRESTRIAL MAGNETIC ELEMENTS, MAGNETIC CHARACTER FIGURES (K AND C) AND TEMPERATURE IN MAGNET HOUSE

4 LERWICK

MAY 1958

	TERRESTRIAL MAGNETIC ELEMENTS										3-hr. range indices K	Sum of K indices	Magnetic character of day (0-2)	Temperature in magnet house 200 + °A.
	Horizontal force			Declination			Vertical force							
	Maximum 14,000γ +	Minimum 14,000γ +	Range	Maximum 9° +	Minimum 9° +	Range	Maximum 47,000γ +	Minimum 47,000γ +	Range					
1	h. m. γ	γ h. m.	γ	h. m. °	° h. m.	°	h. m. γ	γ h. m.	γ	5, 3, 3, 3, 3, 4, 4, 5	30	1	81.2	
2	18 24 652	303 01 04	349	22 43 70.6	40.6 07 50	30.0	17 50 303	106 01 10	197	4, 3, 2, 2, 1, 2, 3, 2	19	1	81.7	
3	20 10 590	446 12 01	144	14 06 58.7	39.5 06 26	19.2	19 31 269	146 02 51	123	1, 2, 1, 2, 2, 2, 2, 3	15	0	81.3	
4	20 20 560	448 11 50	112	13 46 63.2	42.4 07 30	20.8	21 17 254	219 24 00	35	3, 2, 2, 2, 2, 1, 1, 3	16	0	81.2	
5	21 13 552	454 12 10	98	15 03 62.3	40.6 06 15	21.7	22 20 252	174 00 38	78	3, 3, 1, 2, 2, 3, 3, 4	21	1	81.1	
6	19 17 608	459 10 50	149	22 10 65.6	39.4 02 50	26.2	19 50 310	188 02 38	122	3, 3, 2, 2, 2, 2, 2, 1	17	0	81.3	
7 q	20 40 558	457 11 35	101	14 29 61.4	39.8 07 22	21.6	15 37 265	165 02 01	100	1, 1, 1, 2, 1, 1, 2, 3	12	0	81.1	
8	20 54 561	462 12 18	99	13 25 62.7	42.1 08 26	20.6	17 52 247	207 13 19	40	1, 1, 2, 2, 3, 2, 3, 3	17	1	81.0	
9	19 27 580	481 11 45	99	14 15 65.7	41.4 22 23	24.3	16 22 266	187 23 02	79	2, 1, 3, 3, 2, 1, 2, 1	15	0	81.0	
10	21 41 559	472 11 38	87	12 58 63.2	40.1 06 58	23.1	19 04 246	215 11 51	31	3, 2, 2, 3, 3, 4, 3, 3	23	1	81.0	
11	19 20 619	452 12 32	167	12 42 64.5	44.0 18 45	20.5	18 45 314	194 01 50	120	1, 0, 3, 3, 2, 3, 3, 1	16	0	81.0	
12	18 30 601	450 09 30	151	12 07 60.8	43.8 06 30	17.0	19 04 279	223 10 30	56	1, 0, 2, 2, 2, 4, 3, 5	19	1	81.0	
13 d	17 10 625	400 22 42	225	17 10 62.5	30.0 22 43	32.5	17 58 285	118 22 46	167	4, 2, 2, 3, 4, 5, 5, 7	32	2	81.0	
14 d	16 47 794	-85 22 44	879	16 19 85.0	39.4 07 30	45.6	16 19 435	83 23 03	352	6, 4, 4, 3, 5, 4, 4, 5	35	2	81.1	
15	14 36 702	150 00 52	552	14 26 68.2	19.7 02 17	48.5	14 37 364	24 01 15	340	4, 5, 3, 2, 3, 4, 4, 4	29	1	81.1	
16	16 26 654	316 05 04	338	13 32 64.4	37.7 01 11	26.7	14 38 301	93 00 34	208	4, 4, 2, 2, 3, 4, 3, 1	23	1	81.0	
17	16 38 669	442 00 48	227	16 18 63.1	41.6 08 20	21.5	16 38 287	93 01 24	194	3, 3, 2, 2, 4, 3, 4, 4	25	1	81.0	
18	18 41 630	473 04 15	157	15 58 61.9	38.8 07 30	23.1	15 37 294	112 23 57	182	3, 3, 2, 3, 3, 4, 4, 3	25	1	81.0	
19	16 50 669	423 01 17	246	14 32 65.5	40.8 07 02	24.7	18 25 287	106 00 12	181	3, 3, 3, 2, 3, 2, 3, 2	21	0	81.0	
20 q	19 11 587	451 10 09	136	14 13 65.4	42.2 08 07	23.2	19 07 266	168 06 20	98	3, 2, 1, 2, 2, 2, 2, 2	16	0	81.0	
21	18 00 566	453 10 49	113	14 06 64.8	42.0 08 17	22.8	19 46 260	199 01 30	61	3, 3, 2, 2, 2, 2, 1, 1	12	0	81.1	
22 q	17 49 560	447 11 20	113	13 28 63.9	39.7 07 20	24.2	18 28 248	157 01 53	91	1, 1, 2, 2, 2, 2, 1, 1	16	0	81.0	
23 q	16 13 566	462 10 50	104	13 23 66.0	41.6 07 40	24.4	17 13 254	203 11 56	51	2, 1, 1, 2, 1, 1, 2, 1	11	0	81.2	
24 q	18 17 574	477 10 21	97	13 25 65.8	44.2 06 28	21.6	19 16 252	203 01 24	49	1, 1, 1, 2, 2, 2, 1, 1	11	0	81.2	
25	18 10 563	476 11 22	87	13 48 64.6	43.5 07 20	21.1	19 01 243	127 13 31	26	1, 1, 1, 2, 1, 3, 3, 4	16	1	81.1	
26 d	18 07 619	480 10 39	139	18 08 66.9	42.8 23 07	24.1	20 51 260	174 23 28	86	4, 4, 3, 4, 7, 6, 4, 4	36	1	81.2	
27	15 03 927	439 09 28	488	15 06 93.5	30.2 02 30	63.3	15 10 405	106 02 20	299	3, 3, 2, 3, 4, 3, 4, 5	27	1	81.7	
28	18 53 643	374 24 00	269	22 27 84.0	37.5 21 37	46.5	18 52 296	93 24 00	203	5, 4, 3, 1, 3, 3, 3, 3	25	1	81.5	
29 d	18 25 600	325 01 17	275	14 44 62.8	30.4 00 53	32.4	16 50 281	20 00 54	261	5, 5, 4, 6, 5, 4, 5, 4	38	2	81.4	
30	13 47 837	308 03 21	529	21 09 74.2	27.4 08 47	46.8	14 01 415	-3 01 50	418	4, 3, 2, 2, 4, 2, 4, 2	23	1	81.2	
31 d	17 25 607	438 03 01	169	12 58 60.9	36.3 04 07	24.6	17 08 288	159 03 43	129	3, 4, 3, 3, 4, 6, 7, 8	38	2	81.6	
Mean	- - 638	379 - -	258	- - 69.3	38.6 - -	30.7	- - 304	144 - -	160	-	-	0.74	81.2	

TERRESTRIAL MAGNETIC FORCE: HORIZONTAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

1	LERWICK (H)													14,000γ (0.14 C.G.S. unit) +													JUNE 1958				
	Hour G.M.T.																										Mean	Sum 9000+			
	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							
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ					
1 d	37	136	190	374	502	428	440	483	492	483	487	495	494	498	509	502	543	590	659	640	562	524	450	406	455	1924					
2	505	476	417	465	486	473	472	481	492	484	483	475	492	535	586	623	639	626	557	518	511	515	520	523	515	3354					
3 q	520	519	516	516	516	506	491	476	454	448	453	467	461	484	494	514	554	553	572	555	546	543	535	532	509	3225					
4 q	535	536	535	538	542	543	537	520	506	497	487	484	490	498	509	520	536	545	558	553	542	539	535	535	526	3620					
5	538	536	538	538	535	532	524	513	504	484	473	464	469	487	515	554	602	567	563	547	543	541	535	535	527	3637					
6	535	539	539	538	536	521	518	494	489	481	470	484	492	500	508	515	524	561	599	599	602	533	440	409	518	3426					
7 d	207	-349	-39	-76	470	467	436	394	320	348	413	488	496	484	517	604	586	585	570	577	561	540	534	529	403	662					
8	515	512	515	515	514	510	499	485	473	469	476	477	490	502	506	515	534	563	602	602	574	549	532	478	517	3407					
9	389	495	513	513	524	512	483	478	477	473	466	477	508	510	562	609	611	561	622	592	580	519	328	230	501	3032					
10	248	300	337	305	424	462	483	491	491	469	458	483	491	562	592	583	527	554	576	566	548	507	491	491	477	2439					
11	498	495	445	420	499	528	513	491	480	469	466	472	477	503	491	509	558	542	572	565	558	547	511	513	505	3122					
12	520	520	524	518	467	464	497	484	477	482	473	481	498	498	499	538	562	589	579	580	580	541	515	524	517	3410					
13	517	514	514	503	499	506	502	502	488	476	470	478	498	508	517	521	535	572	571	552	555	543	531	521	516	3393					
14	524	523	518	517	514	510	505	510	501	488	477	488	495	506	510	517	521	528	563	599	586	569	548	515	522	3532					
15	520	528	518	494	504	506	502	499	480	476	464	469	499	510	521	514	530	552	546	543	544	537	529	526	513	3311					
16	513	499	512	510	508	499	482	473	482	479	487	495	520	557	532	535	524	531	557	547	542	535	523	519	515	3361					
17 q	518	513	513	510	495	506	509	499	480	477	482	492	491	508	527	530	533	534	537	546	550	548	539	531	515	3368					
18 q	530	533	537	538	537	528	517	506	495	493	498	511	527	535	528	550	547	576	594	595	577	561	537	536	537	3886					
19	535	536	536	532	535	539	532	521	509	495	477	480	478	501	533	541	581	578	548	569	559	547	537	536	531	3735					
20 q	537	538	535	543	543	535	523	509	498	491	487	484	491	491	510	523	535	556	568	561	561	562	556	528	528	3665					
21 d	533	530	445	462	439	455	493	503	491	495	516	469	500	547	654	658	726	761	605	604	523	419	380	389	525	3597					
22	213	408	237	310	402	469	448	437	477	465	480	508	540	526	513	517	534	550	550	572	554	537	496	498	468	2241					
23	450	460	463	460	464	477	500	506	500	485	481	485	493	494	514	514	529	555	573	560	559	541	534	529	505	3126					
24	520	517	512	504	479	480	484	475	482	475	465	499	523	537	545	537	563	548	557	567	557	546	528	515	517	3415					
25	510	513	485	473	498	511	497	490	469	445	441	470	491	491	520	511	529	603	607	608	560	533	531	518	513	3304					
26	504	504	502	517	527	506	495	498	488	469	458	460	466	494	525	521	533	560	549	553	549	545	544	539	513	3306					
27	530	517	524	532	527	523	516	502	492	485	465	457	469	490	505	532	531	540	553	558	569	560	530	513	517	3420					
28 d	516	524	510	503	503	511	511	498	498	492	480	454	480	502	529	530	568	605	704	663	586	408	180	186	498	2941					
29 d	105	120	175	-164	-231	-81	189	292	351	437	430	421	456	583	738	911	955	838	690	598	562	542	527	505	415	949					
30	509	520	510	508	521	527	513	492	480	470	467	472	484	502	518	531	533	540	555	535	547	542	535	535	514	3346					
Mean	454	450	453	447	476	482	487	483	477	473	471	478	492	511	534	553	569	579	582	574	558	532	500	488	504						
Sum 13,000+	631	512	576	416	1279	1453	1611	1502	1316	1180	1130	1339	1759	2343	3027	3579	4083	4363	4456	4224	3747	2973	2011	1644		Grand Total 363,154					

MAGNETIC DECLINATION (WEST)
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

2 LERWICK (D)		9° +													JUNE 1958													
	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	Sum 1000.0+	
1	d	56.6	19.8	26.3	43.6	43.6	42.7	46.0	46.1	50.8	51.9	54.2	58.2	61.6	62.3	61.9	60.3	60.4	61.3	57.3	52.3	61.4	57.8	56.5	55.5	52.0		248.4
2		53.0	51.3	50.5	44.6	39.5	42.3	41.3	39.6	42.9	45.5	52.3	55.0	59.0	60.9	62.9	59.9	61.9	59.0	55.3	56.1	55.4	56.1	55.9	55.8	52.3		256.0
3	q	55.8	56.1	53.9	50.1	47.2	44.6	43.6	43.3	46.2	50.1	55.6	59.7	64.0	64.7	62.6	59.7	57.1	51.7	52.4	53.0	55.0	55.1	55.2	54.8	53.8		291.5
4	q	54.5	55.2	54.1	54.0	50.9	47.2	44.2	45.1	47.1	49.5	52.5	56.9	59.6	60.7	59.7	58.5	55.9	54.8	54.2	54.1	54.2	53.9	53.2	53.2	53.5		283.2
5		53.7	53.2	52.3	51.8	50.2	48.4	46.0	44.4	46.1	45.6	51.9	57.4	61.8	64.2	64.4	62.8	60.3	54.1	54.1	54.5	55.0	55.6	55.5	55.0	54.1		298.3
6		53.8	52.5	51.1	49.8	46.3	43.6	44.7	44.1	46.4	50.3	54.5	56.4	58.8	58.6	58.5	57.4	56.8	57.5	57.2	55.9	58.4	59.7	46.8	47.3	52.8		266.4
7	d	43.5	17.1	-8.1	-5.0	37.7	38.5	43.4	42.0	41.8	47.3	60.7	62.8	62.6	61.2	54.5	52.4	55.5	55.5	54.5	50.7	58.4	57.8	52.8	57.4	45.6		95.0
8		54.1	52.6	50.2	48.3	46.3	45.9	45.4	45.9	47.9	52.1	56.0	57.9	59.3	58.8	57.9	58.3	58.4	57.4	57.8	58.4	54.5	57.0	57.0	53.6	53.8		291.0
9		49.7	42.2	41.1	38.2	36.8	37.0	39.2	45.4	50.1	51.9	55.5	60.1	62.3	62.9	63.4	65.1	64.1	60.2	58.2	60.7	56.2	48.4	55.5	46.6	52.1		250.8
10		42.0	32.4	24.3	30.2	38.2	48.1	43.6	39.1	42.8	47.3	54.4	57.3	61.8	64.5	59.9	61.0	61.0	60.3	58.7	58.8	59.7	55.6	50.2	51.2	50.1		202.4
11		52.5	51.3	44.4	35.0	40.3	46.4	42.6	43.3	44.0	43.9	48.9	53.9	60.5	62.5	62.2	61.0	61.0	54.9	55.6	54.2	56.4	56.2	55.1	52.8	51.6		238.9
12		51.6	51.8	50.7	49.0	50.8	47.3	42.6	40.7	43.9	48.8	51.4	55.5	59.3	60.7	60.9	61.2	56.6	56.9	57.8	57.4	56.9	59.5	60.3	54.7	53.6		286.3
13		53.6	53.8	51.1	48.0	43.0	45.3	44.9	43.4	44.4	48.0	51.5	55.4	59.1	60.1	59.9	58.1	58.8	58.8	55.7	57.4	58.5	57.3	54.5	56.2	53.2		276.8
14		54.7	51.3	47.5	46.4	44.9	43.0	42.0	43.4	47.4	50.7	54.5	59.8	62.7	60.8	58.8	57.3	56.9	55.5	57.4	61.2	54.5	55.5	58.3	49.2	53.1		273.7
15		48.3	49.5	48.9	46.6	48.0	39.6	43.0	38.2	46.6	51.6	58.0	59.2	60.9	61.2	62.6	58.7	57.8	53.3	52.6	53.6	55.6	56.1	55.1	54.1	52.5		259.1
16		54.7	55.0	51.2	49.5	46.5	46.4	46.6	51.6	51.3	49.9	53.6	57.5	60.6	60.0	57.0	57.4	56.2	55.9	55.1	54.7	56.0	55.5	54.6	53.6	53.8		290.4
17	q	51.9	50.7	50.1	47.2	45.9	44.9	45.5	45.7	47.7	50.1	54.5	59.8	62.2	62.0	60.9	58.6	57.4	56.0	54.7	55.2	55.0	53.4	54.0	53.8	53.2		277.4
18	q	52.5	51.3	49.4	47.3	45.3	43.2	42.9	43.9	46.8	50.1	55.5	60.0	63.5	65.6	63.6	61.2	59.7	60.3	60.0	59.0	58.4	56.4	54.5	54.1	54.4		304.5
19		53.6	52.4	52.1	49.5	48.8	46.4	44.9	44.0	45.9	50.2	54.4	57.3	60.3	61.8	62.8	61.3	63.4	59.9	57.4	58.0	55.5	56.8	55.0	51.8	54.3		303.5
20	q	50.5	51.6	46.1	44.9	43.5	41.9	42.2	44.5	46.4	47.9	50.9	55.9	57.3	58.9	58.8	58.5	57.3	57.4	56.5	56.0	56.1	56.9	53.9	47.8	51.7		241.7
21	d	51.4	49.7	55.1	34.9	38.8	35.2	38.0	36.8	34.2	45.7	44.7	48.4	67.1	66.5	73.4	74.0	65.4	66.6	68.2	67.5	59.3	46.4	35.5	37.4	51.7		240.2
22		39.0	41.8	50.4	50.4	52.0	51.1	42.5	41.2	45.7	52.2	54.2	56.4	61.8	63.4	62.2	60.8	59.4	57.1	54.6	56.9	57.9	60.8	49.0	45.0	52.7		265.8
23		45.9	43.8	48.5	48.4	46.8	47.3	44.4	42.7	44.2	47.4	52.3	57.0	60.6	61.2	61.8	57.7	56.5	56.2	55.0	56.0	56.4	57.4	57.2	55.4	52.5		260.1
24		57.1	54.9	47.7	42.6	42.5	44.4	43.0	41.3	49.0	48.3	52.1	56.1	58.6	62.2	61.7	60.8	60.8	58.4	59.7	59.8	57.6	55.6	53.4	52.1	53.3		279.7
25		55.0	53.8	53.0	49.9	45.5	43.9	42.0	42.5	44.2	49.6	53.4	58.7	59.8	58.9	58.9	57.4	58.7	58.6	58.8	57.3	57.8	57.4	58.0	50.9	53.5		284.0
26		47.3	48.2	44.3	41.3	40.5	42.0	42.4	42.4	44.3	45.9	48.4	52.2	54.5	56.3	57.9	57.4	57.8	58.0	54.7	55.3	56.0	56.3	56.9	53.0	50.6		213.3
27		49.2	46.9	46.9	48.1	48.1	45.4	44.7	45.4	49.0	49.0	52.9	56.6	60.7	63.4	62.5	61.2	58.7	57.2	57.3	58.3	58.5	58.5	51.3	48.7	53.3		278.5
28	d	49.6	50.1	50.9	52.4	48.1	47.8	43.2	39.4	46.8	46.1	50.9	58.0	62.5	63.3	63.8	62.5	61.2	62.4	73.0	61.7	67.1	54.5	44.2	39.3	54.1		298.8
29	d	26.0	30.8	39.8	40.8	46.6	33.2	41.8	47.1	47.6	52.8	57.2	57.6	53.9	50.0	47.1	46.0	55.1	58.8	63.2	60.7	58.5	60.3	59.1	57.0	49.6		191.0
30		54.7	54.3	53.6	48.4	43.8	43.7	44.0	46.4	47.8	51.0	54.3	57.2	59.5	59.9	60.8	59.3	58.2	58.0	53.6	53.8	55.5	57.2	54.8	52.1	53.4		281.9
Mean		50.5	47.5	45.9	44.2	44.9	43.9	43.4	43.3	46.0	49.0	53.4	57.1	60.5	61.3	60.8	59.5	58.9	57.7	57.4	56.9	57.2	56.2	53.8	51.6	52.5		
Sum 1200.0+		315.8	225.4	177.4	126.2	146.4	116.7	100.6	98.9	179.2	270.7	401.2	514.2	616.2	637.7	623.3	585.8	568.3	532.0	520.6	508.5	515.7	485.1	513.3	349.4		Grand Total 37828.6	

TERRESTRIAL MAGNETIC FORCE: VERTICAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

31

3 LERWICK (Z)													47,000γ (0.47 C.G.S. unit) +													JUNE 1958	
	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	Mean	Sum 5000+	
	0-1	1-2																									
1 d	526	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ		
2	223	243	135	181	204	192	204	228	244	249	245	261	283	314	362	403	421	387	341	305	278	251	246	248	269	1323	
3 q	249	255	260	263	263	264	255	250	249	244	240	244	249	249	252	260	273	301	291	280	263	254	249	249	259	1448	
4 q	249	249	250	249	249	255	261	260	258	252	252	253	257	258	265	267	271	274	269	261	255	251	248	247	257	1206	
5	246	247	249	249	249	245	246	247	241	232	233	229	230	231	236	247	265	303	293	274	260	251	246	241	250	1160	
6	241	242	246	246	246	254	246	248	243	236	232	226	229	230	229	240	245	242	249	268	262	237	148	126	234	990	
7 d	89	6	-25	6	140	248	240	245	269	310	343	300	276	292	309	308	305	329	326	319	283	276	260	252	238	611	
8	258	253	257	261	259	262	263	263	261	258	249	246	246	252	257	260	257	253	257	269	278	270	246	178	255	706	
9	120	158	172	200	213	229	234	229	227	220	219	217	229	262	291	307	318	330	303	257	263	206	147	197	231	1113	
10	209	233	119	97	171	209	249	271	277	289	277	265	263	270	323	331	310	291	290	274	250	204	187	195	244	548	
11	208	180	127	137	187	238	253	257	262	262	257	257	247	250	257	254	263	292	280	276	257	240	229	241	238	711	
12	240	245	245	243	234	183	199	232	237	231	237	237	240	248	252	253	286	293	274	257	255	223	201	220	240	765	
13	229	224	222	229	229	229	233	241	244	240	235	226	223	225	234	242	242	241	260	260	248	246	243	236	237	681	
14	229	225	229	232	234	236	234	229	230	231	221	212	212	217	224	233	240	241	231	226	256	261	229	179	229	491	
15	195	220	228	219	185	185	169	180	197	209	228	241	242	241	254	264	260	273	273	257	245	243	243	241	229	492	
16	234	200	211	228	234	240	240	231	228	232	229	234	238	262	296	281	274	260	257	258	248	246	246	242	244	849	
17 q	236	235	241	245	240	224	227	234	241	234	228	227	226	227	229	235	238	240	238	234	236	241	241	242	235	639	
18 q	240	240	240	244	245	245	244	244	240	234	224	215	217	226	239	243	256	257	261	265	259	248	235	236	242	797	
19	240	241	241	241	243	248	250	250	243	239	234	229	230	229	229	239	240	263	270	250	260	250	240	234	243	833	
20 q	238	233	228	234	240	244	243	237	228	219	219	219	217	220	225	227	229	231	234	237	234	231	215	219	229	501	
21 d	217	206	131	82	87	120	178	214	220	203	196	215	270	276	276	314	370	289	208	269	250	212	166	140	213	109	
22	149	139	111	89	15	69	156	205	244	259	264	290	301	293	283	279	284	285	280	258	241	231	189	167	212	81	
23	149	127	149	169	197	192	222	246	252	246	241	234	234	241	246	262	263	260	270	269	263	258	248	237	228	475	
24	224	176	179	183	202	206	217	235	246	257	253	251	280	293	311	314	292	284	265	257	257	225	192	200	242	799	
25	214	216	212	164	171	204	236	245	251	252	251	233	227	232	247	265	260	262	277	267	245	254	247	236	236	668	
26	235	232	214	221	234	235	232	238	246	250	244	230	223	224	234	244	237	238	255	253	250	247	239	232	237	687	
27	216	218	231	237	237	232	231	236	237	233	231	230	231	231	233	234	244	246	242	236	232	241	243	230	234	612	
28 d	227	237	232	187	183	181	209	225	227	234	238	238	220	222	230	249	249	255	244	218	203	107	45	278	214	138	
29 d	415	393	33	-65	133	318	61	133	232	307	322	345	369	419	465	526	500	437	394	351	306	285	285	252	301	2216	
30	235	248	249	237	240	260	269	271	272	274	275	273	277	280	280	274	271	264	272	268	259	254	255	257	263	1314	
Mean	233	216	193	189	207	224	224	236	244	247	247	245	249	257	269	278	281	280	274	267	255	240	221	219	241	241	
Sum 5000+	1980	1488	800	663	1196	1720	1725	2073	2307	2413	2396	2352	2461	2696	3063	3350	3443	3405	3224	2997	2663	2210	1622	1570		Grand Total 173,817	

DAILY EXTREMES OF TERRESTRIAL MAGNETIC ELEMENTS, MAGNETIC CHARACTER FIGURES (K AND C) AND TEMPERATURE IN MAGNET HOUSE

4 LERWICK												JUNE 1958			
	TERRESTRIAL MAGNETIC ELEMENTS											3-hr. range indices K	Sum of K indices	Magnetic character of day (0-2)	Temperature in magnet house 200 +
	Horizontal force				Declination			Vertical force							
	Maximum 14,000γ +	Minimum 14,000γ +	Range		Maximum 9° +	Minimum 9° +	Range	Maximum 47,000γ +	Minimum 47,000γ +	Range					
	h. m. γ	γ h. m.	γ		h. m. γ	γ h. m.	γ	h. m. γ	γ h. m.	γ					°A.
1 d	18 59 688	-289 01 00	977		00 27 147.1	-21.5 01 06	168.6	00 26 886	γ 67 23 15	819		8,7,5,3,3,4,5,5	40	2	81.7
2	16 41 662	372 02 03	290		16 50 66.5	35.9 07 11	30.6	16 23 439	100 02 22	339		5,3,3,3,5,4,4,2	29	1	81.9
3 q	16 55 580	444 09 45	136		13 14 66.0	41.8 07 02	24.2	17 30 307	238 10 38	69		1,2,2,2,2,3,3,1	16	0	81.0
4 q	18 20 566	477 11 44	89		13 09 60.9	43.2 07 01	17.7	17 42 277	244 04 16	33		1,2,1,2,1,2,2,1	12	0	82.1
5	16 28 631	461 11 24	170		15 01 65.1	42.9 07 51	22.2	17 15 306	234 08 56	72		1,1,1,2,3,3,3,1	15	1	82.2
6	20 22 618	355 22 27	263		22 20 67.5	32.2 22 38	35.3	19 38 270	56 22 17	214		1,2,3,2,1,3,2,5	19	1	82.0
7 d	15 13 618	-652 01 36	1270		03 17 83.5	-134.2 02 52	217.7	10 10 379	-208 02 59	587		9,9,5,5,4,3,3,3	41	2	82.1
8	19 04 619	409 23 57	210		23 38 60.8	44.9 05 54	15.9	20 26 287	71 23 56	216		2,1,1,2,1,3,3,5	18	1	82.2
9	18 40 674	154 23 57	520		16 25 67.6	35.6 04 31	32.0	17 03 342	59 00 05	283		5,3,3,3,3,4,4,7	32	1	82.1
10	14 53 623	50 02 26	573		22 04 74.7	5.1 02 27	69.6	14 46 355	26 03 15	329		6,6,3,3,4,4,3,5	34	2	81.8
11	18 37 583	387 03 35	196		13 16 64.5	33.4 03 16	31.1	17 22 295	120 02 47	175		4,5,2,3,3,3,3,3	26	1	81.6
12	17 53 597	431 04 50	166		22 09 64.6	39.6 07 20	25.0	16 45 304	176 05 47	128		1,4,3,3,3,3,3,3	23	1	81.6
13	18 06 588	464 11 03	124		13 14 60.8	41.6 06 09	19.2	19 06 269	215 02 08	54		2,2,2,1,1,3,3,2	16	0	81.7
14	18 33 618	471 10 27	147		12 29 63.8	41.0 06 32	22.8	21 09 269	159 23 50	110		2,1,2,2,2,1,4,4	18	1	82.0
15	17 36 561	446 09 13	115		14 10 65.1	30.0 07 21	35.1	18 25 276	158 06 46	118		3,3,4,3,2,2,2,1	20	1	82.2
16	13 24 579	465 07 26	114		12 33 61.8	44.5 06 10	17.3	14 10 298	191 01 37	107		3,2,2,3,3,3,2,1	19	0	82.5
17 q	20 28 556	473 08 39	83		12 43 62.8	44.0 05 41	18.8	04 02 245	221 05 42	24		1,2,1,2,1,1,2,1	11	0	83.0
18 q	19 19 604	489 09 48	115		13 18 65.8	42.3 06 42	23.5	19 50 267	213 11 30	54		1,1,1,2,3,3,2,3	16	0	83.0
19	17 16 612	468 10 52	144		17 16 64.1	42.4 07 04	21.7	18 00 281	225 11 10	56		1,1,1,2,3,3,3,2	16	1	82.9
20 q	18 27 577	482 10 30	95		14 51 59.8	41.2 05 51	18.6	05 33 244	201 22 45	43		2,1,1,1,2,2,1,3	13	0	82.7
21 d	17 07 908	259 24 00	649		17 53 81.9	24.1 03 33	57.8	16 55 394	55 04 34	339		4,4,4,4,6,6,6,5	39	2	82.4
22	19 45 584	97 00 25	487		14 01 66.1	24.0 00 14	42.1	12 38 309	-9 04 33	318		6,5,5,4,4,2,3,4	33	2	82.2
23	19 11 587	422 00 48	165		14 00 62.9	40.0 06 19	22.9	18 50 277	119 01 18	158		3,3,3,2,2,3,3,1	20	1	82.2
24	21 07 579	454 10 11	125		14 02 64.5	39.4 07 26	25.1	15 10 323	169 01 40	154		3,3,3,3,3,3,3,4	25	1	84.7
25	19 38 629	424 10 12	205		19 52 61.5	40.1 06 22	21.4	18 26 288	154 03 32	134		3,3,2,3,2,4,4,3	24	1	84.9
26	17 41 567	451 11 20	116		17 33 58.8	39.5 04 48	19.3	19 02 258	207 02 21	51		3,3,2,2,3,3,2,2	20	1	85.0
27	20 43 575	449 11 27	126		13 35 64.4	42.6 06 46	21.8	22 46 248	210 01 05	38		2,1,2,2,2,2,2,3	16	0	85.0
28 d	18 43 745	-57 21 58	802		22 32 98.9	6.7 21 39	92.2	23 26 425	-115 22 29	540		2,3,3,3,3,4,5,8	31	2	85.1
29 d	16 17 1030	-560 03 18	1590		04 39 113.3	-72.1 04 19	185.4	16 13 553	-265 03 47	818		8,8,6,4,7,6,5,3	47	2	85.1
30	18 16 583	461 10 15	122		14 25 62.0	40.7 04 07	21.3	14 15 285	227 00 34	58		2,2,2,1,2,3,3,2	17	1	85.5
Mean	- - 631	292 - -	339	- - 70.9	25.0 - -	45.9	- - 332	117 - -	215	-	-	0.97	82.8		

TERRESTRIAL MAGNETIC FORCE: HORIZONTAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

1	LERWICK (H)													14,000γ (0.14 C.G.S. unit) +													JULY 1958																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
	Hour G.M.T.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				</

MAGNETIC DECLINATION (WEST)
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

2	LERWICK (D)													9° +													JULY 1958	
	Hour G.M.T.																											Sum
	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	900.0+		
1	52.4	56.0	42.8	46.4	46.6	48.0	49.6	48.3	50.0	49.6	50.6	53.3	54.8	55.6	55.6	55.9	54.2	53.4	55.3	56.1	55.9	54.3	55.4	54.9	52.3	355.0		
2 q	53.6	52.3	51.3	51.1	50.4	46.2	44.0	44.6	47.2	51.0	54.8	56.8	58.4	58.7	58.6	58.4	57.7	57.5	57.1	56.1	54.9	55.4	55.0	53.9	53.5	385.0		
3	52.4	49.4	45.5	44.1	42.8	43.5	44.5	46.3	46.6	47.5	49.3	52.9	54.7	55.7	55.3	56.1	57.9	57.6	59.8	55.1	55.3	57.2	57.2	56.9	51.8	343.6		
4	54.6	51.9	51.3	52.0	50.4	49.0	45.7	43.8	46.0	53.1	52.4	55.3	59.1	58.9	56.8	56.0	62.0	58.1	58.3	59.8	55.4	55.3	52.2	49.8	53.6	387.2		
5	52.0	53.4	53.6	47.7	47.6	48.3	49.5	50.2	53.0	52.4	52.4	54.2	56.4	57.0	54.0	57.9	57.6	56.2	56.0	56.0	58.5	59.6	52.2	53.8	53.7	389.5		
6 q	55.2	55.4	52.4	45.3	43.1	40.8	40.0	41.4	41.6	44.5	47.0	52.4	57.4	59.2	57.5	56.2	56.1	56.1	55.9	55.2	55.3	54.9	54.3	53.4	51.3	330.6		
7	52.9	53.2	51.8	50.4	49.6	46.7	43.8	44.5	45.2	48.5	52.7	59.9	62.5	63.5	61.0	61.5	60.9	62.4	63.7	60.4	59.2	59.0	51.4	52.9	54.9	417.6		
8 d	53.1	52.4	50.4	50.5	44.8	43.9	40.1	36.8	29.4	33.2	29.7	20.2	65.8	75.0	98.0	138.8	109.5	122.6	112.5	110.5	102.4	101.4	55.3	35.0	67.1	711.3		
9 d	45.7	34.6	11.6	5.3	33.7	31.3	29.4	24.0	39.0	44.8	39.3	41.8	41.6	39.4	43.4	52.9	51.2	51.6	51.0	50.6	51.2	52.7	54.7	43.6	40.2	64.4		
10	38.7	47.5	44.5	45.9	40.7	39.6	39.4	40.9	43.6	45.3	47.7	53.4	60.4	60.0	57.7	58.2	55.8	54.4	54.3	52.4	52.3	55.0	52.3	52.4	49.7	292.4		
11	47.8	42.4	50.5	45.4	41.7	41.6	40.7	41.2	45.2	45.3	48.3	53.2	58.6	62.1	60.0	58.6	58.0	55.3	54.7	56.9	54.3	52.7	51.3	51.8	50.7	317.6		
12	52.4	48.3	46.6	46.5	46.4	46.2	42.8	44.8	50.5	54.9	59.3	63.9	64.9	63.0	61.5	56.2	55.0	57.7	53.7	52.4	57.1	56.2	54.0	53.4	53.7	387.7		
13	52.4	52.8	53.9	54.1	48.2	50.4	47.5	44.7	42.3	44.5	47.6	52.4	58.2	58.3	54.7	52.9	50.0	55.3	53.0	54.4	55.3	55.7	54.9	54.3	52.0	347.8		
14	54.8	49.2	48.6	52.3	44.5	42.4	43.3	43.9	47.6	52.5	57.2	57.2	59.7	58.6	59.8	58.5	55.8	54.8	57.2	56.9	57.2	57.3	55.1	53.5	53.2	377.9		
15 q	51.5	49.1	47.0	46.6	48.5	45.5	43.8	44.2	45.4	46.8	50.2	53.7	55.5	55.3	53.4	53.4	54.7	55.4	56.2	57.2	56.2	55.4	55.3	55.4	51.5	335.7		
16 q	54.3	46.5	47.6	45.7	46.7	45.5	43.2	45.1	47.6	50.7	53.9	55.9	61.0	62.4	62.6	62.4	57.2	57.7	57.2	55.3	56.2	56.8	54.7	47.8	53.1	374.0		
17	52.2	43.1	49.1	47.9	53.4	57.2	56.0	46.4	42.0	45.7	49.4	54.1	58.6	58.6	56.7	55.3	53.6	52.6	51.7	51.4	51.6	53.2	52.5	52.4	51.9	344.7		
18 d	50.4	48.9	42.9	41.4	40.4	39.9	38.6	39.2	51.9	54.1	58.0	60.6	65.4	70.2	67.8	66.3	69.2	62.0	62.0	57.2	54.3	51.3	55.1	50.8	54.1	397.9		
19	50.7	48.6	48.1	47.0	48.0	44.7	42.5	47.1	51.2	51.3	50.0	52.9	57.9	60.5	61.0	58.6	58.9	57.6	55.8	55.9	46.2	52.4	47.5	45.9	51.7	340.3		
20	47.4	46.2	34.6	40.9	44.1	48.2	47.1	48.0	50.0	48.4	49.0	51.9	57.5	63.0	62.3	61.3	59.1	57.5	55.5	55.8	57.2	55.3	53.1	50.4	51.8	343.8		
21 d	52.7	53.1	47.9	47.8	42.8	44.2	46.2	44.0	45.6	47.8	50.2	54.3	59.7	63.0	61.5	58.6	61.5	72.1	73.5	59.2	52.6	56.9	41.4	54.0	53.8	390.6		
22	53.1	58.7	53.7	53.1	49.0	44.0	42.0	42.3	44.9	49.9	53.1	59.1	60.1	59.7	57.4	56.7	56.2	54.4	54.8	55.5	55.3	55.1	53.9	52.4	53.1	374.4		
23 q	51.4	50.1	48.9	48.8	47.1	44.1	42.6	43.6	44.0	46.7	50.4	55.6	59.1	59.1	58.3	58.7	58.6	55.9	55.3	54.1	53.4	53.8	53.0	53.0	51.9	345.6		
24	51.3	49.4	44.7	42.4	43.1	44.6	42.8	43.0	43.4	44.4	48.8	53.4	59.7	61.0	63.9	62.3	60.8	63.7	55.4	58.2	56.1	50.5	55.2	51.4	52.1	349.5		
25	50.6	49.9	49.7	49.1	47.6	47.7	45.7	45.8	49.1	48.2	52.0	53.7	58.7	59.1	61.6	60.6	59.3	60.7	57.6	58.1	58.3	58.0	54.9	44.7	53.4	380.7		
26	44.3	48.1	54.0	46.3	45.4	43.7	42.8	43.7	43.8	47.6	52.4	48.1	61.2	62.0	62.4	61.4	58.6	54.5	54.3	55.3	54.6	55.5	56.8	55.6	52.2	352.4		
27 d	54.4	55.5	56.2	48.4	40.8	42.8	41.4	37.5	46.6	51.2	54.1	58.7	64.5	63.5	64.5	60.2	60.8	63.1	66.1	68.7	65.8	60.2	57.2	57.5	55.8	439.7		
28	45.8	44.7	42.8	42.5	40.0	40.1	40.1	39.9	41.1	43.9	50.2	56.7	60.5	61.7	59.7	57.8	55.6	54.9	55.2	55.4	56.2	55.7	53.4	52.7	50.3	306.6		
29	51.8	50.5	50.1	47.1	44.2	44.1	44.0	44.2	45.8	47.8	50.5	53.4	57.3	59.3	58.8	57.6	56.2	55.4	56.8	54.4	55.0	54.3	54.0	54.8	52.0	347.4		
30	53.4	51.5	53.5	52.4	48.7	45.9	46.6	46.5	44.7	47.6	50.6	55.5	59.3	61.2	61.4	58.8	57.1	51.7	51.4	51.5	53.9	51.2	53.4	54.9	52.6	362.7		
31	54.4	55.0	52.6	51.2	48.6	48.7	47.8	47.5	48.6	50.1	52.6	56.3	58.7	61.6	60.2	59.1	60.1	54.3	52.0	54.5	54.7	54.3	53.9	50.6	53.6	387.4		
Mean	51.2	49.9	47.7	46.3	45.4	44.8	43.7	43.3	45.6	48.0	50.4	53.6	58.9	60.2	60.2	60.9	59.3	59.2	58.5	57.8	56.8	56.7	53.6	51.7	52.7			
Sum 1300.0+	287.7	247.7	178.2	135.6	108.9	88.8	53.5	43.4	112.9	189.3	263.7	360.8	527.2	566.2	567.4	587.2	539.2	536.5	513.3	490.5	461.9	456.6	360.6	303.9		Grand Total 39181.0		

TERRESTRIAL MAGNETIC FORCE: VERTICAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

33

3 LERWICK (Z)												47,000γ (0.47 C.G.S. unit) +												JULY 1958																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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DAILY EXTREMES OF TERRESTRIAL MAGNETIC ELEMENTS, MAGNETIC CHARACTER FIGURES (K AND C) AND TEMPERATURE IN MAGNET HOUSE

4 LERWICK

JULY 1958

	TERRESTRIAL MAGNETIC ELEMENTS												3-hr. range indices K	Sum of K indices	Magnetic character of day (0-2)	Temperature in magnet house 200 +			
	Horizontal force			Declination			Vertical force												
	Maximum 14,000γ +	Minimum 14,000γ +	Range	Maximum 9° +	Minimum 9° +	Range	Maximum 47,000γ +	Minimum 47,000γ +	Range										
	h. m.	γ	γ	h. m.	γ	h. m.	h. m.	γ	γ	h. m.	γ	h. m.	γ						
1	15 42	573	351	02 02	222	01 16	65.6	39.2	02 22	26.4	16 43	315	167	01 57	148	5,3,3,2,3,3,1,2	22	1	85.1
2 q	18 43	578	456	10 20	122	15 44	59.5	43.5	06 25	16.0	16 14	278	224	23 53	54	1,1,1,2,3,2,2,3	15	0	86.5
3	17 25	634	482	13 24	152	16 47	60.7	41.5	05 52	19.2	18 03	330	210	00 41	120	3,2,2,2,3,4,3,3	22	1	87.2
4	17 23	700	433	08 45	267	16 47	64.4	39.4	07 28	25.0	18 03	357	176	22 11	181	2,2,4,3,5,5,4,3	28	1	87.4
5	21 22	568	486	11 57	82	21 51	60.0	42.4	22 46	17.6	15 01	310	220	22 31	90	2,2,1,2,3,3,2,3	18	0	87.2
6 q	17 47	558	480	09 17	78	13 14	59.9	38.5	06 11	21.4	16 05	258	195	02 50	63	3,3,1,2,2,2,2,0	15	0	86.6
7	18 39	634	458	11 22	176	12 56	65.6	42.5	06 47	23.1	19 53	265	204	12 28	61	1,1,2,3,3,3,3,3	19	1	86.0
8 d	15 11	1979	-1075	21 22	3054	17 12	196.1	-11.0	10 48	207.1	21 58	920	-439	17 17	1359	3,3,6,6,8,9,7,9	51	2	85.7
9 d	16 53	631	-171	05 05	802	00 38	85.4	-20.9	03 30	106.3	00 40	555	-10	03 48	565	6,7,7,6,4,4,2,6	42	2	85.4
10	13 38	563	85	01 51	478	13 02	62.7	31.8	00 00	30.9	14 06	297	20	01 43	277	6,4,2,3,3,3,2,3	26	2	85.6
11	20 36	587	388	02 18	199	13 12	63.4	37.5	07 08	25.9	15 05	291	112	02 43	179	4,4,3,2,3,3,4,3	26	1	86.1
12	17 28	624	412	09 13	212	12 09	66.7	41.2	06 35	25.5	18 53	340	180	01 00	160	3,3,3,4,3,4,3,2	25	1	85.3
13	16 58	630	430	03 10	200	03 02	61.8	37.7	08 22	24.1	16 34	302	184	03 28	118	3,3,3,2,3,4,2,3	23	1	85.2
14	16 17	594	459	08 59	135	14 40	60.4	40.4	05 57	20.0	17 02	318	155	04 32	163	3,4,3,2,2,4,2,2	22	1	85.6
15 q	18 47	565	457	09 50	108	21 00	58.1	43.2	06 37	14.9	16 41	298	228	04 51	70	2,2,2,2,3,2,2,2	17	0	85.4
16 q	16 53	593	463	11 20	130	13 30	64.0	42.3	23 11	21.7	16 30	341	215	23 22	126	3,2,1,2,3,3,2,3	19	0	85.1
17	20 30	543	453	05 16	90	05 13	62.2	37.7	01 20	24.5	17 32	258	171	01 16	87	3,4,3,3,2,2,2,1	20	1	85.0
18 d	16 42	612	444	23 32	168	13 28	73.8	32.7	07 18	41.1	17 20	325	84	23 10	241	2,3,4,3,4,4,4,4	28	1	85.0
19	19 49	610	362	22 59	248	14 26	63.4	40.6	06 34	22.8	20 20	296	33	22 57	263	3,3,4,2,3,2,4,5	26	1	85.0
20	16 22	659	385	02 59	274	13 49	65.5	26.0	02 59	39.5	15 55	331	72	02 54	259	4,4,3,3,3,4,2,2	25	1	85.1
21 d	18 34	839	273	22 32	566	18 40	89.6	12.3	22 30	77.3	18 52	354	37	22 48	317	3,2,3,2,3,5,7,6	31	2	85.3
22	13 42	585	472	09 32	113	01 37	66.8	38.3	07 32	28.5	14 39	310	198	02 12	112	3,3,2,3,3,2,2,1	19	1	85.5
23 q	19 01	546	472	12 13	74	13 43	60.4	40.2	06 18	20.2	06 23	256	234	24 00	22	1,1,1,2,3,1,1,2	12	0	84.9
24	17 35	657	454	10 43	203	14 52	66.8	41.6	02 51	25.2	18 40	318	180	02 22	138	2,2,1,2,4,4,3,3	21	1	84.9
25	17 17	655	429	23 10	226	19 08	69.1	40.3	23 45	28.8	14 02	344	106	24 00	238	2,2,3,3,5,4,4,4	27	1	84.9
26	20 15	579	415	02 33	164	14 00	63.2	38.4	00 22	24.8	17 25	274	106	00 00	168	4,3,2,3,1,2,2,1	18	1	84.6
27 d	15 09	700	373	23 39	327	18 50	74.4	35.1	07 20	39.3	15 30	398	179	05 56	219	2,3,3,3,5,3,5,5	29	1	84.8
28	20 12	553	421	01 35	132	13 11	62.2	37.7	06 01	24.5	01 14	281	175	02 24	106	4,2,2,2,2,2,2,2	18	1	85.1
29	18 48	590	462	11 14	128	13 22	60.3	42.0	04 12	18.3	14 20	267	237	18 50	30	1,2,1,1,2,1,3,2	13	0	85.0
30	17 07	645	466	11 20	179	13 32	62.5	41.6	21 33	20.9	17 50	331	218	11 40	113	1,2,2,2,3,4,3,3	20	1	85.2
31	17 11	747	447	11 50	300	16 04	63.9	46.8	17 42	17.1	17 20	381	211	23 48	170	2,1,2,2,2,5,4,2	20	1	85.0
Mean	- -	662	352 - -	310	- -	69.6	34.9 - -	34.8	- -	339	138 - -	201	-	-	-	-	0.90	-	85.5

TERRESTRIAL MAGNETIC FORCE: HORIZONTAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

1 LERWICK (H)													14,000γ (0.14 C.G.S. unit) +													AUGUST 1958																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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MAGNETIC DECLINATION (WEST)
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

2	LERWICK (D)												9° +												AUGUST 1958	
	Hour G.M.T.																									Sum
	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	1100.0+
1	52.0	49.1	48.5	45.6	45.6	43.2	42.2	43.5	45.9	48.2	49.9	58.6	62.3	63.0	62.4	60.7	57.1	55.8	55.3	54.7	53.8	52.2	51.7	53.3	52.3	154.6
2	54.1	53.1	51.2	50.5	50.9	51.6	47.8	47.6	49.0	51.9	53.4	57.0	60.0	60.6	59.1	59.6	57.0	51.8	51.8	52.4	53.6	54.9	55.0	55.6	53.7	189.5
3	56.4	62.9	56.9	51.4	53.0	47.2	45.4	43.9	43.2	45.1	49.0	52.1	54.8	57.9	57.2	57.7	54.2	52.3	51.8	51.1	51.5	52.2	53.5	53.1	52.2	153.8
4 q	54.2	53.2	54.0	55.1	49.4	47.5	45.9	45.4	45.4	46.6	50.8	56.0	60.6	61.7	62.2	60.6	58.7	56.1	55.2	54.3	55.6	55.1	55.7	54.6	53.9	193.9
5 q	53.8	53.1	52.1	50.4	49.6	47.2	46.0	47.1	49.2	51.3	53.3	56.1	60.2	60.6	60.2	57.3	55.8	54.9	56.4	56.3	56.4	55.7	56.6	56.7	54.0	196.3
6 q	54.9	55.0	52.1	50.3	48.0	44.9	44.5	43.9	45.0	45.7	48.9	53.2	59.1	61.8	62.1	60.8	57.4	55.5	54.5	54.4	54.6	54.1	51.9	53.2	52.7	165.8
7	52.5	51.6	50.3	48.3	46.3	45.2	43.0	42.9	45.1	48.4	53.5	59.5	62.3	62.3	62.7	61.4	58.0	56.4	54.0	54.1	52.5	53.5	53.5	52.3	52.9	169.6
8 q	51.3	49.6	48.4	49.2	46.3	45.3	43.9	43.9	45.9	47.4	51.9	57.5	61.6	65.6	63.2	59.6	57.6	55.3	54.9	55.4	55.4	54.7	54.2	55.1	53.1	173.2
9	53.1	49.3	46.7	47.8	49.2	45.2	42.7	41.8	43.9	45.9	48.6	53.8	59.5	62.7	63.1	62.6	59.3	56.3	55.5	55.5	55.6	52.5	50.1	52.0	52.2	152.7
10	51.7	49.9	48.5	45.2	44.8	41.0	39.1	42.9	43.6	45.7	53.1	56.6	59.5	62.7	61.2	59.9	57.5	54.2	51.7	54.0	54.0	55.8	51.6	46.0	51.3	130.2
11	48.2	50.1	50.7	51.5	46.8	45.4	43.8	46.3	49.7	50.3	54.5	58.5	61.7	61.4	60.2	57.3	54.8	51.1	52.1	56.4	57.5	53.5	49.7	50.1	52.6	161.6
12	49.5	50.2	50.3	50.7	48.4	49.9	50.9	47.4	45.4	48.9	53.4	57.6	61.2	60.8	59.6	55.4	53.6	53.4	54.5	55.5	55.8	54.6	54.1	53.8	53.1	174.9
13	49.7	48.0	45.4	45.0	42.4	41.2	50.3	51.7	48.2	50.8	55.9	57.2	57.7	58.4	57.4	56.0	53.0	52.5	53.6	53.9	54.0	54.3	53.4	52.3	51.8	142.3
14	51.1	50.7	49.2	50.5	47.9	45.1	42.8	42.6	44.0	46.7	51.4	56.9	60.0	61.2	59.4	56.3	54.5	52.9	49.7	52.2	55.1	54.5	54.5	45.5	51.4	134.7
15	47.0	49.2	47.4	44.7	44.0	46.0	44.1	43.5	43.6	46.8	52.2	55.8	59.3	61.2	60.4	57.1	55.1	54.4	53.6	54.1	54.5	53.5	53.4	52.3	51.4	133.2
16	49.6	44.1	40.4	45.8	44.5	39.7	40.3	41.2	44.8	47.8	53.2	58.5	62.0	63.2	61.3	60.5	61.2	54.5	53.7	54.3	55.0	54.1	52.6	51.5	51.4	133.8
17 d	50.6	50.4	50.0	48.7	47.0	46.0	43.9	43.9	40.3	51.0	57.4	62.7	63.3	63.6	63.3	63.2	61.6	59.8	57.6	56.4	52.6	48.4	48.3	53.5	53.3	179.0
18 d	52.4	49.5	49.3	42.8	43.6	43.5	40.8	40.1	44.6	49.5	53.7	59.2	62.4	61.8	58.9	57.3	55.5	53.4	53.5	52.6	51.6	54.4	52.6	51.5	51.4	134.5
19	54.1	53.5	53.2	51.7	45.7	43.0	41.9	41.0	43.4	47.3	54.2	58.9	62.9	63.2	60.0	56.4	54.2	49.8	50.2	52.4	54.0	55.4	54.7	52.3	155.1	
20 q	54.1	52.6	49.8	48.2	47.5	45.9	43.4	42.0	44.9	48.0	52.7	57.6	61.2	63.1	60.8	57.8	56.0	54.9	53.4	54.0	53.9	53.0	53.0	51.4	52.5	159.2
21	51.4	51.6	51.5	50.4	49.2	45.5	42.6	41.8	43.1	46.5	51.0	56.2	61.5	62.9	59.9	58.2	57.0	55.2	56.0	54.4	55.3	55.3	56.4	53.0	52.7	165.9
22 d	50.5	48.8	49.4	31.9	39.5	23.8	27.4	42.6	40.1	43.6	49.4	56.1	61.0	60.8	59.3	61.4	55.3	54.1	52.4	55.3	54.6	53.6	51.6	50.7	48.9	73.2
23	49.3	48.8	49.1	48.0	44.1	40.5	45.6	44.1	47.3	48.7	52.1	55.0	57.0	59.1	58.1	57.9	56.3	55.9	54.5	53.1	49.7	50.0	51.6	49.6	51.1	125.4
24 d	46.3	54.6	55.4	4.6	7.1	29.5	45.5	44.9	46.3	52.3	55.3	49.7	54.8	62.2	61.0	58.6	55.0	55.6	49.4	50.6	52.3	55.6	56.1	52.3	48.1	55.0
25	51.9	54.0	54.1	54.0	58.8	52.1	49.9	48.2	46.8	48.8	53.1	57.2	60.1	61.8	60.0	57.1	53.7	51.8	51.2	50.4	51.7	53.0	52.8	52.6	53.5	185.1
26	52.6	53.0	52.3	49.0	50.9	53.1	50.2	46.3	45.9	46.0	46.2	53.0	59.0	59.5	59.6	58.1	55.2	52.2	49.5	49.4	52.5	53.5	52.2	52.8	52.2	152.0
27 d	51.1	53.1	54.5	52.6	62.0	52.8	39.1	38.2	57.8	44.1	63.1	63.4	64.8	65.2	62.8	55.2	57.4	55.2	53.5	51.1	42.5	50.6	49.3	48.2	53.6	187.6
28	49.6	49.7	49.3	49.3	48.9	47.0	43.7	40.6	40.4	45.6	52.5	58.8	62.1	61.5	57.8	53.9	52.6	50.2	47.3	48.3	51.6	51.8	52.2	53.2	50.7	117.9
29	52.8	52.6	53.3	53.4	48.9	46.8	45.5	44.1	45.6	52.0	55.6	62.4	65.0	63.5	59.2	54.4	50.2	47.7	46.0	48.5	52.5	53.4	53.9	53.4	52.5	160.7
30	53.5	50.4	51.3	53.0	52.0	45.8	44.3	46.4	47.1	51.1	52.6	57.7	61.2	63.3	57.4	54.5	51.4	50.4	51.1	52.6	52.1	53.2	53.5	51.1	52.4	157.0
31	51.6	51.9	52.9	52.5	49.3	48.1	46.3	44.9	47.8	52.1	55.4	58.5	61.7	63.1	59.9	55.9	50.4	49.1	50.3	51.8	53.2	53.0	53.0	52.6	52.7	165.3
Mean	51.6	51.4	50.6	47.5	46.8	44.8	44.0	43.9	45.6	48.2	52.8	57.1	60.6	61.9	60.3	58.2	55.7	53.6	52.7	53.2	53.4	53.5	53.0	52.2	52.2	
Sum 1300.0+	300.9	293.6	267.5	172.1	151.6	89.0	62.8	60.2	113.3	194.1	337.3	471.3	579.8	619.7	569.7	502.7	426.6	362.7	334.2	349.5	355.0	358.0	343.4	318.0		Grand Total 38833.0

TERRESTRIAL MAGNETIC FORCE: VERTICAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

35

3 LERWICK (Z)												47,000γ (0.47 C.G.S. unit) +												AUGUST 1958																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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DAILY EXTREMES OF TERRESTRIAL MAGNETIC ELEMENTS, MAGNETIC CHARACTER FIGURES (K AND C) AND TEMPERATURE IN MAGNET HOUSE

4 LERWICK												AUGUST 1958			
	TERRESTRIAL MAGNETIC ELEMENTS											3-hr. range indices K	Sum of K indices	Magnetic character of day (0-2)	Temperature in magnet house 200 +
	Horizontal force			Declination			Vertical force								
	Maximum 14,000γ +	Minimum 14,000γ +	Range	Maximum g° +	Minimum g° +	Range	Maximum 47,000γ +	Minimum 47,000γ +	Range						
	h. m. γ	γ h. m.	γ	h. m. γ	γ h. m.	γ	h. m. γ	γ h. m.	γ						
1	19 27 588	408 12 14	180	12 50 65.3	41.2 05 51	24.1	20 42 273	211 01 12	62	2, 1, 2, 2, 4, 2, 3, 2	18	1	(85.0)		
2	19 41 588	460 10 35	128	13 15 63.0	44.3 07 07	18.7	17 25 299	227 01 29	72	1, 2, 2, 3, 3, 3, 3, 2	19	1	85.0		
3	17 46 556	455 10 43	101	01 44 67.4	41.7 08 06	25.7	15 17 293	144 02 13	149	3, 2, 2, 1, 3, 2, 2, 1	16	1	84.8		
4 q	18 08 567	459 11 14	108	14 27 62.7	44.9 07 49	17.8	19 13 269	231 03 56	38	1, 2, 2, 2, 2, 2, 2, 1	14	0	84.7		
5 q	18 27 560	468 11 59	92	12 48 61.3	45.7 06 33	15.6	17 29 273	234 09 52	39	1, 1, 2, 2, 3, 1, 1, 1	12	0	85.0		
6 q	20 07 561	462 11 15	99	13 55 62.7	42.6 05 54	20.1	05 32 254	208 12 48	46	1, 2, 2, 2, 2, 2, 2, 2	15	0	84.7		
7	18 03 588	462 13 02	126	12 41 64.6	41.4 06 41	23.2	18 38 279	224 03 30	55	1, 1, 2, 2, 4, 3, 3, 2	18	1	84.4		
8 q	20 01 551	464 11 31	87	13 41 66.6	43.0 06 10	23.6	15 52 282	238 01 37	44	1, 1, 1, 2, 2, 2, 1, 1	11	0	84.3		
9	16 12 568	470 11 36	98	13 55 64.3	40.6 07 00	23.7	17 15 265	216 01 38	49	2, 2, 1, 1, 2, 2, 2, 2	14	1	84.6		
10	15 38 600	453 11 28	147	13 29 66.0	37.8 06 09	28.2	17 35 306	201 23 32	105	2, 1, 2, 3, 4, 4, 3, 3	22	1	84.9		
11	18 56 583	432 11 16	151	13 13 62.5	42.8 06 43	19.7	17 41 284	196 06 09	88	2, 2, 2, 3, 3, 3, 3, 2	20	1	85.0		
12	20 42 574	462 10 30	112	12 21 61.8	45.0 08 02	16.8	13 48 250	211 06 28	39	2, 2, 3, 2, 2, 1, 3, 2	17	1	(85.1)		
13	18 50 549	439 10 40	110	14 11 58.9	39.8 05 28	19.1	16 04 249	195 00 28	54	3, 2, 3, 3, 2, 3, 1, 1	18	0	85.1		
14	17 43 592	450 10 50	142	13 00 61.7	41.3 06 58	20.4	18 02 275	148 23 56	127	1, 1, 2, 2, 1, 3, 3, 4	17	1	85.3		
15	19 30 565	456 11 07	109	13 50 62.8	41.2 07 30	21.6	15 56 249	149 00 00	100	4, 2, 2, 2, 2, 2, 2, 1	17	1	85.3		
16	16 47 604	454 10 02	150	13 39 64.6	38.2 05 16	26.4	17 32 316	161 01 43	155	3, 2, 2, 2, 2, 3, 3, 1	18	1	85.1		
17 d	16 08 844	-40 23 52	884	23 38 80.4	10.6 23 50	69.8	15 55 415	42 20 59	373	1, 1, 4, 3, 6, 6, 7, 7	35	2	85.2		
18 d	19 54 537	172 00 00	365	00 24 71.0	31.0 00 10	40.0	08 25 271	82 00 22	189	6, 4, 3, 3, 3, 2, 2, 2	25	1	85.2		
19	17 45 572	424 10 18	148	13 28 64.7	37.9 07 40	26.8	07 41 265	195 00 38	70	2, 3, 2, 3, 2, 3, 3, 2	20	0	85.4		
20 q	17 48 552	450 11 13	102	13 05 63.6	40.6 07 39	23.0	05 35 250	224 01 48	26	2, 2, 2, 2, 2, 2, 1, 1	14	0	85.3		
21	18 25 556	457 10 58	99	13 09 63.8	41.5 07 39	22.3	19 56 254	183 23 01	71	1, 1, 1, 2, 2, 2, 1, 3	13	0	85.4		
22 d	18 06 570	323 04 41	247	13 13 63.8	16.7 05 36	47.1	18 36 285	-85 04 36	370	6, 5, 4, 3, 2, 3, 2, 2	27	1	85.5		
23	19 51 560	465 11 05	95	13 55 60.3	35.5 05 54	24.8	20 30 267	217 06 44	50	1, 3, 3, 2, 2, 3, 3, 2	19	1	85.6		
24 d	06 32 633	-27.3 03 25	906	02 24 78.1	-35.5 04 22	113.6	12 07 347	-337 03 50	684	8, 8, 5, 5, 5, 4, 3, 2	40	2	85.7		
25	12 58 546	455 11 09	91	13 02 66.7	43.9 08 25	22.8	13 50 266	146 02 40	120	4, 3, 3, 2, 4, 2, 2, 1	21	1	85.3		
26	19 16 549	414 10 34	135	13 02 61.4	44.0 09 49	17.4	14 05 316	185 05 40	131	1, 3, 3, 3, 3, 2, 3, 2	20	0	85.2		
27 d	18 12 805	229 08 53	576	04 34 72.9	21.6 06 38	51.3	18 12 445	76 05 40	369	3, 5, 5, 6, 4, 4, 6, 4	37	2	85.0		
28	17 19 614	431 10 28	183	12 59 64.6	37.3 08 13	27.3	15 56 330	227 00 00	103	1, 2, 3, 3, 4, 3, 4, 2	22	1	85.3		
29	20 23 546	444 10 02	102	12 18 66.5	42.6 07 58	23.9	18 53 285	210 24 00	75	2, 2, 2, 3, 3, 2, 3, 3	20	0	85.4		
30	15 20 548	451 11 12	97	13 19 64.8	43.4 06 29	21.4	15 50 274	206 00 17	68	2, 2, 2, 1, 3, 3, 2, 2	17	0	85.4		
31	15 56 576	461 10 54	115	13 40 63.8	44.2 07 48	19.6	17 10 306	233 03 33	73	1, 2, 1, 1, 2, 3, 2, 2	14	0	85.6		
Mean	- - 587	391 - -	196	- - 65.2	36.3 - -	28.9	- - 290	161 - -	129	-	-	0.71	85.1		

TERRESTRIAL MAGNETIC FORCE: HORIZONTAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

1 LERWICK (H)													14,000γ (0.14 C.G.S. unit) +													SEPTEMBER					1958
	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	Sum 9000+					
	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	521	520	518	517	517	515	508	497	475	459	464	483	501	522	537	537	531	512	519	530	536	535	533	532	513	3319					
2	528	523	517	516	520	522	518	503	487	482	475	476	482	486	508	514	522	529	534	537	539	536	533	535	513	3322					
3 d	530	517	516	520	525	525	514	508	497	468	450	467	494	585	574	552	637	738	762	687	599	382	300	245	525	3592					
4 d	296	499	432	508	513	509	500	487	475	464	475	466	470	510	703	1106	924	717	736	589	408	46	-35	-389	475	2409					
5 d	102	-49	-132	-108	119	443	482	466	441	442	442	449	464	505	500	512	492	482	531	618	512	490	492	476	382	171					
6	476	475	474	472	474	482	485	475	462	450	442	439	443	454	475	482	493	505	520	519	512	508	505	505	480	2527					
7	501	501	500	502	504	494	486	485	472	461	440	446	452	476	536	587	607	608	547	548	514	435	356	339	492	2797					
8	465	452	417	484	501	506	505	495	478	462	453	462	468	486	498	525	498	504	508	518	519	532	483	490	488	2709					
9	499	410	499	512	511	511	504	490	478	465	466	468	470	560	587	539	499	501	530	524	518	506	490	498	501	3035					
10	506	482	486	512	516	509	505	493	480	461	462	468	486	515	505	524	547	545	524	516	516	521	516	521	505	3116					
11	515	514	512	513	515	513	508	494	485	471	452	457	471	481	504	512	509	512	526	532	531	526	520	519	504	3092					
12	522	514	518	522	518	516	509	496	479	465	458	463	476	489	501	506	517	520	526	529	526	525	525	527	506	3147					
13 q	523	522	522	524	526	522	516	500	482	462	451	452	470	496	509	518	523	519	523	528	539	534	533	529	509	3223					
14 q	526	526	526	526	524	525	519	505	483	450	454	457	482	498	505	522	523	533	527	538	533	530	532	529	511	3273					
15	531	533	529	529	530	528	524	506	487	465	453	454	472	496	506	520	528	539	544	539	538	542	545	548	516	3386					
16 d	541	535	532	533	530	533	525	501	488	480	477	483	491	547	517	506	624	641	599	588	537	434	446	442	522	3530					
17	461	502	515	513	504	494	494	486	472	461	455	450	466	468	496	501	506	514	520	523	520	520	518	519	495	2878					
18 q	518	518	516	513	508	504	495	483	469	457	453	461	470	483	493	498	508	520	527	533	525	520	521	522	501	3015					
19	520	519	519	519	517	516	512	503	487	473	463	466	468	471	487	499	509	518	525	536	535	528	528	530	506	3148					
20	529	528	525	529	529	526	521	514	498	482	472	469	479	490	502	509	517	522	537	540	537	536	533	528	515	3352					
21 q	527	527	528	526	526	525	522	514	501	491	479	478	480	490	502	515	524	530	536	538	538	533	534	535	517	3399					
22 q	533	529	527	527	528	528	524	516	506	493	481	476	481	493	505	515	519	526	536	542	536	535	535	533	518	3424					
23	533	532	533	533	527	531	534	530	517	509	493	487	493	502	509	520	527	532	536	539	541	546	541	530	524	3575					
24	533	533	535	534	533	533	528	519	504	496	484	480	495	498	510	526	529	534	544	544	542	540	538	505	522	3517					
25 d	516	520	516	508	464	504	417	431	426	442	490	543	604	703	807	841	643	702	552	560	478	387	130	232	517	3416					
26	388	405	353	297	456	474	475	462	461	462	467	471	494	497	484	514	524	526	517	509	504	502	512	511	469	2265					
27	502	504	505	507	506	507	505	495	484	476	462	468	474	481	494	524	519	524	525	528	520	509	499	492	500	3010					
28	497	485	501	507	499	496	512	518	495	477	466	466	475	485	500	496	506	514	522	522	524	521	521	522	501	3027					
29	522	521	521	522	522	519	510	511	502	482	461	462	467	480	494	508	514	519	526	528	528	524	525	524	508	3192					
30	520	524	524	524	525	526	527	525	512	493	475	482	485	492	490	514	551	572	631	550	542	499	507	515	521	3505					
Mean	489	487	483	488	500	511	506	497	483	470	464	468	481	505	525	548	546	549	550	544	525	493	474	461	502						
Sum 13,000+	1681	1621	1484	1641	1987	2336	2184	1908	1483	1101	915	1049	1423	2139	2738	3442	3370	3458	3490	3332	2747	1782	1216	844		Grand total 361,371					

MAGNETIC DECLINATION (WEST)
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

2	LERWICK (D)												9° +												SEPTEMBER 1958	
	Hour G.M.T.																								Mean	Sum
	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		9000+?
1	51.6	51.4	50.6	49.8	48.0	46.7	45.8	46.3	47.9	51.4	55.6	61.3	63.2	64.6	60.7	57.0	54.0	52.2	52.7	52.6	51.6	52.9	52.8	52.8	53.1	373.5
2	53.2	53.1	53.5	50.0	47.8	44.9	43.1	42.1	44.4	48.4	54.0	58.8	61.3	62.4	60.0	56.9	54.3	52.1	51.6	52.9	53.6	53.6	53.6	54.5	52.5	360.1
3 d	51.5	46.8	45.6	47.5	47.3	44.9	44.8	43.4	43.2	41.0	52.1	61.7	65.5	65.5	66.0	78.0	77.0	70.8	69.3	61.5	65.0	53.2	43.9	42.6	55.3	428.1
4 d	36.2	41.0	37.5	38.4	45.5	42.0	42.5	43.0	45.4	48.1	53.5	56.3	59.3	62.2	64.1	62.2	107.5	100.2	110.5	80.4	75.7	60.4	48.5	-9.7	56.3	450.7
5 d	21.4	14.5	-23.0	10.3	26.7	37.2	40.1	39.6	42.5	44.6	51.4	54.2	55.4	52.6	50.9	48.7	50.2	51.6	53.8	43.0	43.9	50.2	51.1	49.7	40.0	60.6
6	49.7	49.6	49.3	49.7	47.8	47.0	42.0	40.7	44.5	46.9	49.8	53.5	56.4	57.4	57.0	53.7	51.6	50.5	50.2	48.7	49.5	52.1	51.6	51.6	50.0	300.8
7	52.6	52.2	51.2	48.7	48.1	44.6	42.7	44.4	45.6	47.8	53.5	57.4	59.4	60.6	61.2	54.1	55.3	53.0	55.7	50.1	47.0	52.4	46.4	43.4	51.1	327.4
8	45.5	47.9	49.7	42.7	41.6	42.9	42.0	43.0	44.9	48.5	53.2	56.4	57.9	58.9	57.1	56.6	54.1	53.6	53.1	53.3	53.0	51.8	47.5	43.0	49.9	298.2
9	44.9	37.9	40.0	44.9	43.9	44.6	44.6	43.2	43.3	45.8	51.5	58.3	61.2	66.0	62.0	55.0	51.3	52.1	53.5	51.0	50.4	48.6	48.3	48.7	49.6	291.0
10	49.2	53.0	51.3	48.2	46.8	45.4	44.1	43.7	45.6	49.7	52.9	57.4	61.2	62.2	57.2	55.0	52.6	50.7	51.6	53.1	54.1	53.6	52.4	54.7	51.9	345.7
11	49.2	48.7	49.2	49.7	46.2	44.6	41.5	41.8	43.0	46.0	50.4	56.5	61.4	59.9	58.3	55.1	53.1	51.6	52.1	52.6	51.9	50.6	51.5	51.6	50.7	316.5
12	49.7	47.8	48.7	46.5	46.0	44.9	44.9	43.1	44.9	47.7	52.9	57.8	59.4	59.3	57.9	55.2	53.0	52.2	53.0	52.5	54.0	52.5	51.6	49.6	51.0	325.1
13 q	49.7	50.2	49.8	49.6	48.7	47.4	45.8	44.7	46.4	47.6	51.7	56.3	60.1	61.0	59.8	56.4	52.6	51.6	52.8	52.4	52.9	50.3	50.3	51.6	51.7	339.7
14 q	52.1	51.7	51.4	50.4	49.5	47.9	45.5	44.5	44.4	44.7	50.8	56.4	61.6	62.6	59.9	56.9	54.0	53.5	53.3	53.5	52.7	53.3	53.5	52.4	52.4	356.5
15	51.7	51.4	50.8	50.2	48.7	47.3	44.9	44.0	44.5	47.7	52.6	59.3	64.3	66.0	62.1	57.4	55.0	54.5	54.6	55.5	55.1	54.5	54.0	50.4	53.2	376.5
16 d	43.9	44.4	43.8	44.9	42.2	40.7	39.1	42.1	43.0	44.9	51.2	56.2	61.8	70.8	65.5	61.2	64.6	59.5	53.9	58.5	51.6	40.5	37.8	42.9	50.2	305.0
17	42.8	49.8	46.6	46.6	45.6	47.4	47.5	47.4	47.3	51.5	55.4	57.9	62.4	59.5	58.3	53.9	51.3	50.3	50.4	52.1	52.6	51.6	53.0	51.6	51.4	332.8
18 q	51.3	50.6	50.1	49.2	48.2	46.7	44.6	43.2	43.9	48.2	53.1	57.1	59.3	58.3	56.0	54.5	54.1	52.5	52.5	48.5	51.6	51.7	52.1	51.3	51.2	328.8
19	51.6	51.0	49.9	49.2	48.3	47.4	45.8	45.6	44.9	47.6	51.4	56.1	60.2	58.8	57.2	55.2	53.6	52.5	53.0	53.5	54.0	52.1	52.2	52.1	51.8	343.2
20	51.6	50.5	50.0	50.4	48.7	47.3	46.5	44.6	44.9	47.0	50.2	54.1	57.8	58.9	58.3	56.8	55.0	53.4	53.2	53.2	54.1	54.0	50.7	50.6	51.7	341.8
21 q	51.5	50.4	49.9	49.3	49.2	48.2	46.7	45.0	44.8	45.5	47.8	51.4	55.0	56.7	56.3	55.2	54.0	53.0	53.0	52.9	52.6	51.4	52.5	51.6	51.0	323.9
22 q	49.6	48.3	49.3	48.8	48.8	48.2	46.9	45.4	43.9	44.7	47.4	51.6	56.3	57.7	58.1	56.3	54.4	53.9	53.4	53.0	53.0	52.8	51.9	51.8	51.1	325.5
23	51.2	50.3	49.8	47.6	46.5	45.8	46.1	48.2	47.8	49.2	50.0	52.6	56.4	59.1	58.7	57.3	55.4	53.9	53.5	53.6	53.4	53.0	51.6	54.0	51.9	345.0
24	53.3	49.3	47.5	46.7	46.8	46.5	45.5	44.8	45.6	46.8	50.4	53.3	57.0	59.0	59.1	57.5	55.4	55.1	54.4	53.5	52.5	52.4	51.3	54.9	51.6	338.6
25 d	45.8	41.7	46.8	39.6	41.9	45.6	41.9	53.0	52.1	45.3	56.0	56.4	56.9	56.3	58.1	55.4	55.2	58.8	53.0	56.7	46.8	44.6	66.3	37.1	50.5	311.3
26	34.2	31.4	33.7	32.9	42.4	45.8	48.6	49.2	52.1	50.2	50.6	52.6	56.3	55.0	54.9	52.9	53.0	49.3	48.7	49.5	44.9	43.4	47.2	48.0	46.9	226.8
27	43.6	46.5	46.3	46.2	46.8	47.3	45.8	45.4	44.4	45.1	48.4	51.9	54.2	56.1	54.7	51.5	50.1	50.2	48.2	49.7	50.6	45.4	47.0	49.2	48.5	264.6
28	42.5	49.0	50.8	48.2	50.1	52.1	51.7	48.7	49.2	50.6	53.0	56.4	58.1	58.5	56.9	55.0	54.1	53.0	52.4	52.1	51.6	50.5	49.9	50.2	51.9	344.6
29	50.2	50.6	50.6	50.6	49.7	48.4	48.6	46.3	44.8	45.3	48.7	54.5	56.9	57.8	57.5	56.4	54.5	52.9	52.2	52.6	53.5	51.6	51.1	50.9	51.5	336.2
30	51.0	51.6	50.5	50.7	50.2	49.1	48.2	47.1	45.9	47.0	51.3	58.8	63.3	65.5	65.0	64.3	59.9	62.4	55.2	48.7	53.5	47.0	37.5	48.0	53.0	371.7
Mean	47.4	47.1	45.7	45.9	46.3	46.0	44.9	44.8	45.5	47.2	51.7	56.1	59.3	60.3	59.0	56.7	56.7	55.4	55.2	53.4	52.9	51.1	50.3	47.7	51.1	
Sum 13000+?	122.3	112.6	71.2	77.5	88.0	78.8	47.8	43.5	65.1	114.8	250.8	382.5	479.5	509.2	468.8	401.6	400.2	360.9	354.8	301.4	286.7	232.0	209.1	131.1		Grand Total 36790.2

TERRESTRIAL MAGNETIC FORCE: VERTICAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

37

3 LERWICK (Z)		47,000γ (0.47 C.G.S. unit) +																				SEPTEMBER 1958						
	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	Sum 5000+
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	
1	245	247	250	252	256	258	257	260	262	247	231	225	225	233	256	279	283	277	260	257	257	250	248	245	253		1060	
2	244	246	250	243	250	256	258	256	252	246	244	241	243	246	252	259	264	263	260	259	254	251	247	243	251		1027	
3 d	236	230	229	243	246	251	255	252	248	252	246	235	253	309	389	401	365	392	390	374	322	330	350	190	291		1988	
4 d	211	236	273	282	280	281	285	289	285	286	280	281	280	280	351	259	-261	188	156	344	422	580	652	355	286		1875	
5 d	424	212	94	166	315	195	280	313	316	307	306	316	327	344	365	364	335	305	298	374	314	306	295	270	298		2141	
6	267	286	288	286	286	285	291	296	289	280	283	288	281	280	280	287	285	285	289	299	297	288	281	274	285		1851	
7	272	267	267	271	276	280	281	277	271	271	271	263	267	265	285	338	384	378	353	328	245	192	194	196	279		1692	
8	204	216	104	205	261	271	273	276	275	278	277	272	271	268	272	276	287	269	263	260	262	260	128	103	243		831	
9	204	139	174	241	255	263	269	273	271	265	269	267	265	278	349	382	329	288	280	293	279	271	222	180	263		1306	
10	229	220	200	235	253	264	270	272	272	271	273	276	285	300	309	297	297	304	292	278	267	266	270	218	267		1418	
11	238	255	251	248	260	267	271	273	268	266	267	258	264	265	269	277	281	279	271	269	275	273	269	269	266		1383	
12	262	272	268	268	271	273	275	277	275	265	263	259	258	262	267	269	268	267	265	265	265	264	261	262	267		1401	
13 q	264	268	268	266	267	268	268	268	268	257	251	244	243	244	251	255	255	254	252	253	250	254	255	253	257		1176	
14 q	256	257	260	260	260	262	262	259	259	259	249	238	228	233	244	249	253	254	257	251	255	253	249	253	253		1060	
15	250	251	255	257	258	260	260	258	255	258	249	238	236	242	251	257	254	253	258	260	258	251	251	240	253		1060	
16 d	222	235	240	246	223	183	202	223	236	242	237	223	229	227	272	271	298	264	336	335	303	235	188	206	249		976	
17	207	202	254	267	264	270	271	274	280	278	270	267	277	281	283	289	285	280	273	266	260	258	254	254	265		1364	
18 q	254	256	257	263	264	269	272	272	266	265	254	251	248	248	249	253	257	263	264	269	267	261	257	253	260		1232	
19	254	253	254	253	258	257	260	259	262	258	253	246	241	243	241	244	245	246	249	251	254	256	256	252	252		1045	
20	252	250	251	246	249	251	254	257	257	246	244	243	240	236	234	236	238	241	243	247	252	253	252	254	247		926	
21 q	251	250	249	250	250	252	253	257	257	248	244	238	238	238	240	241	241	244	246	250	252	253	251	251	248		944	
22 q	251	252	251	249	249	249	250	251	251	254	251	246	240	240	243	245	245	244	246	252	256	256	252	253	249		976	
23	254	254	251	243	242	244	242	245	245	243	247	243	240	241	246	253	257	262	265	258	254	250	249	241	249		969	
24	206	227	240	243	244	244	244	244	246	242	242	242	243	252	257	267	274	273	271	270	269	262	257	211	249		970	
25 d	188	218	216	172	121	66	115	126	183	226	286	351	407	416	410	391	416	349	333	324	306	223	336	151	264		1330	
26	174	181	167	153	167	222	241	260	274	271	283	299	320	345	356	363	355	350	335	308	292	266	276	257	271		1515	
27	237	258	264	269	273	273	274	275	276	281	289	292	297	300	303	319	329	313	306	302	290	272	266	247	284		1805	
28	227	241	242	247	247	248	254	260	271	274	279	281	281	282	285	297	294	280	272	269	265	264	261	260	266		1381	
29	260	260	258	260	260	262	258	255	257	266	263	263	265	266	263	268	268	268	266	264	263	262	258	257	262		1290	
30	258	255	255	255	257	258	257	258	260	262	259	253	262	278	290	306	329	364	385	330	314	251	264	264	280		1724	
Mean	243	240	236	245	252	249	257	261	263	262	262	261	265	271	285	290	274	287	281	285	277	270	268	239	263			
Sum 7000+	301	194	80	339	562	482	702	815	887	864	860	839	954	1142	1562	1692	1210	1597	1434	1559	1319	1111	1049	162		Grand Totl 189,716		

DAILY EXTREMES OF TERRESTRIAL MAGNETIC ELEMENTS, MAGNETIC CHARACTER FIGURES (K AND C) AND TEMPERATURE IN MAGNET HOUSE

4 LERWICK

SEPTEMBER 1958

	TERRESTRIAL MAGNETIC ELEMENTS												3-hr. range indices K	Sum of K indices	Magnetic character of day (0-2)	Temperature in magnet house 200 +			
	Horizontal force			Declination			Vertical force												
	Maximum 14,000γ +	Minimum 14,000γ +	Range	Maximum 9° +	Minimum 9° +	Range	Maximum 47,000γ +	Minimum 47,000γ +	Range										
	h. m.	γ	γ	h. m.	γ	h. m.	h. m.	γ	γ	h. m.	γ					°A.			
1	14 52	550	451	10 08	99	13 18	65.5	45.6	06 30	19.9	17 06	285	222	11 33	63	1,1,2,3,3,3,2,1	16	0	85.6
2	20 36	541	471	10 52	70	13 30	63.1	41.5	07 40	21.6	16 48	267	239	24 00	28	1,2,2,2,2,2,1,1	13	0	85.6
3 d	18 04	784	57	22 31	727	22 37	89.5	-5.5	22 27	95.0	22 23	479	78	22 34	401	3,2,3,4,5,6,7,7	37	2	85.7
4 d	15 33	1221	-753	22 33	1974	16 42	216.0	-69.2	23 46	285.2	22 39	854	-554	16 40	1408	6,3,3,3,7,8,8,9	47	2	85.9
5 d	19 39	687	-488	03 26	1175	03 32	104.4	-94.1	01 49	198.5	00 43	648	-196	03 22	844	8,8,4,3,3,4,5,3	38	2	85.9
6	18 04	530	435	12 03	95	13 30	57.9	39.7	07 12	18.2	19 53	305	240	00 02	65	3,1,2,1,2,3,2,1	15	0	85.9
7	17 16	623	242	23 42	381	14 12	63.1	34.7	20 06	28.4	16 48	392	240	23 59	252	2,2,2,2,4,4,5,6	27	1	85.9
8	22 18	567	343	00 00	224	13 18	60.2	29.2	23 04	31.0	16 22	295	-7	23 00	302	5,5,3,2,2,4,1,6	28	1	86.0
9	13 49	620	379	01 39	241	13 41	69.3	33.8	01 34	35.5	15 23	392	109	01 41	283	5,3,3,3,5,4,3,5	31	1	86.0
10	16 52	575	454	10 02	121	13 34	64.3	42.6	07 28	21.7	14 18	312	183	02 16	129	3,3,3,2,3,3,2,3	22	1	85.9
11	20 02	543	442	10 45	101	12 22	62.9	40.4	06 49	22.5	16 26	285	214	00 00	71	3,2,1,2,2,2,2,2	16	0	85.8
12	19 15	535	453	10 45	82	12 43	60.2	42.9	07 28	17.3	07 15	279	254	00 33	25	2,1,2,2,2,2,1,1	13	0	85.7
13 q	20 52	542	444	11 00	98	13 02	61.5	44.1	07 42	17.4	07 08	271	240	13 20	31	0,1,2,2,2,1,2,1	11	0	85.5
14 q	19 32	541	446	09 20	95	13 15	63.9	43.2	09 02	20.7	05 10	265	226	12 10	39	0,1,3,3,3,1,1,1	13	0	85.4
15	18 02	565	447	11 24	118	13 22	67.4	43.4	07 08	24.0	07 00	262	227	24 00	35	1,1,2,3,2,2,3,2	16	0	85.5
16 d	20 11	678	373	21 19	305	13 47	82.5	27.9	21 28	54.6	17 17	379	171	21 45	208	2,3,3,3,5,5,6,4	31	1	85.8
17	19 21	525	365	00 44	160	12 22	63.8	36.7	00 59	27.1	15 07	290	148	00 42	142	5,3,2,2,3,2,1,1	19	0	85.6
18 q	19 50	539	451	10 23	88	12 13	59.8	43.1	07 43	16.7	07 25	273	246	12 50	27	1,1,1,2,2,2,2,1	12	0	85.4
19	20 10	542	451	10 56	91	12 09	62.4	43.4	08 14	19.0	08 22	262	236	12 09	26	1,1,1,2,2,1,1,1	10	0	85.6
20	20 16	548	468	10 41	80	13 13	59.7	42.9	07 51	16.8	07 53	259	233	14 37	26	1,1,1,1,1,1,1,2	9	0	85.4
21 q	19 07	549	472	10 59	77	12 50	57.4	43.6	08 35	13.8	08 10	260	235	12 09	25	1,0,1,1,1,1,1,1	7	0	85.2
22 q	19 13	548	471	11 29	77	13 37	58.8	43.8	08 22	15.0	21 03	258	238	12 44	20	1,0,1,1,1,1,2,1	8	0	85.1
23	21 10	547	484	11 12	63	23 54	60.7	44.7	06 00	16.0	18 10	266	222	24 00	44	1,1,2,1,1,1,1,3	11	0	85.2
24	21 33	550	473	11 05	77	00 03	59.9	44.4	06 55	15.5	16 32	277	194	00 23	83	3,1,1,1,2,1,1,3	13	0	85.0
25 d	15 39	925	362	22 42	1287	22 44	164.5	-0.7	23 18	165.2	22 48	559	47	23 32	512	3,4,4,5,6,6,7,8	43	2	85.2
26	16 48	546	155	03 01	391	13 22	57.4	25.2	03 10	32.2	15 46	367	95	02 56	272	6,6,3,3,3,3,3,3	30	1	84.9
27	15 46	539	456	10 45	83	13 48	57.4	40.6	21 39	16.8	16 12	336	204	23 55	132	3,1,2,2,2,2,2,3	17	1	85.0
28	20 12	526	462	10 20	64	13 15	59.5	40.5	00 48	19.0	15 18	299	207	00 02	92	3,2,2,1,1,2,1,1	13	0	84.8
29	19 03	530	456	10 43	74	13 00	59.0	43.4	09 09	15.6	16 02	271	252	07 03	19	0,1,2,2,2,1,1,1	10	0	85.0
30	18 21	746	441	21 50	305	18 36	69.6	29.1	18 53	40.5	18 14	430	201	21 49	229	1,0,1,3,3,4,5,4	21	1	85.2
Mean	- -	609	315 - -	294	- -	73.4	28.7 - -	44.7	- -	346	152 - -	194	-	-	-	-	0.53	-	85.5

TERRESTRIAL MAGNETIC FORCE: HORIZONTAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

1	LERWICK (H)													14,000γ (0.14 C.G.S. unit) +												OCTOBER 1958		
	Hour	G.M.T.																										Sum
	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	10,000+		
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ		
1	517	514	511	515	523	535	533	522	511	492	470	459	463	477	494	504	514	522	522	536	535	524	513	434	506	2140		
2	459	449	450	460	511	511	500	502	503	493	474	463	465	474	495	507	509	516	524	525	529	526	543	521	496	1909		
3	520	521	513	522	526	505	515	508	504	496	474	474	481	529	512	551	555	606	591	526	525	520	522	522	522	2518		
4 q	522	519	518	522	524	526	526	516	506	497	485	478	481	481	492	492	508	515	524	526	525	529	531	529	511	2272		
5	498	494	521	523	524	522	518	520	507	496	481	475	469	486	501	512	516	543	539	535	530	526	518	521	511	2275		
6	524	524	522	523	514	518	520	515	505	496	485	478	488	502	493	515	526	532	526	533	535	517	524	532	514	2347		
7	526	522	536	534	534	518	512	523	515	490	483	478	472	481	495	518	541	527	526	522	525	523	489	464	511	2254		
8	504	500	508	497	508	516	520	512	501	499	482	477	482	487	498	507	516	519	523	526	523	525	529	529	508	2188		
9 q	525	521	520	523	523	522	521	518	512	496	478	476	479	485	496	505	517	529	532	532	529	526	528	529	513	2322		
10 q	528	525	525	526	525	525	525	523	512	496	484	477	481	490	499	514	525	537	530	533	529	532	531	535	517	2407		
11 q	537	528	525	525	528	525	525	521	509	492	479	470	472	480	493	509	518	528	541	540	529	543	534	531	516	2382		
12 q	529	528	528	529	529	528	526	518	509	489	475	473	481	491	499	506	518	528	535	542	539	536	534	536	517	2406		
13	536	536	534	534	535	533	535	532	521	492	471	468	486	484	488	499	515	528	525	532	534	536	536	533	518	2423		
14	534	531	529	532	537	536	533	528	517	493	476	469	480	491	506	515	518	526	534	539	539	537	536	537	520	2473		
15	532	528	529	534	535	534	536	532	515	495	479	478	492	496	510	523	526	525	532	539	535	536	533	534	521	2508		
16	532	532	532	528	530	520	518	521	514	495	482	472	479	491	499	511	521	528	531	537	536	536	535	536	517	2416		
17	533	526	529	529	530	536	526	518	510	496	479	474	477	488	499	513	523	542	543	532	529	534	534	547	519	2447		
18	532	529	528	532	529	534	525	517	503	488	477	473	477	491	503	521	521	525	530	536	537	536	539	537	517	2420		
19	533	532	526	528	529	533	532	528	518	498	488	487	477	486	511	532	550	528	530	527	525	530	524	519	520	2471		
20	526	532	529	525	525	526	526	521	511	495	482	476	475	489	504	514	522	531	534	536	536	539	547	536	518	2437		
21	534	530	528	535	532	531	531	524	514	501	491	489	489	489	503	509	518	525	524	529	531	532	529	532	519	2450		
22 d	532	532	530	539	555	512	496	461	457	480	474	474	485	479	485	533	680	573	582	493	418	423	395	495	503	2083		
23 d	377	418	461	416	425	418	454	437	420	440	492	525	551	537	598	569	571	671	631	544	455	335	447	349	481	1541		
24 d	379	430	351	320	462	472	459	442	414	458	479	477	547	661	587	634	692	596	548	412	328	436	136	109	451	829		
25	412	473	469	469	471	473	477	483	480	469	454	449	449	455	458	468	480	488	491	493	496	499	502	500	473	1358		
26	502	501	502	504	505	510	503	495	482	482	468	464	462	468	484	510	506	514	510	510	480	484	493	500	493	1839		
27 d	499	494	475	471	480	498	508	507	496	482	480	479	482	495	495	506	538	583	733	661	434	342	366	239	489	1743		
28 d	449	495	491	488	495	503	510	518	506	480	471	493	483	488	491	525	540	572	455	517	517	445	436	423	491	1791		
29	460	490	494	497	503	498	501	501	490	477	469	477	480	481	496	511	511	514	517	519	525	491	475	398	491	1775		
30	427	467	504	509	517	515	511	514	499	491	477	464	484	494	519	518	525	529	512	512	512	494	517	511	501	2022		
31	513	514	514	518	526	521	520	518	512	492	476	466	480	485	501	514	511	521	522	528	525	526	528	533	511	2264		
Mean	501	508	507	507	516	515	514	510	499	488	478	475	482	494	503	518	533	539	539	528	511	504	497	486	506			
Sum 14,000+	1531	1735	1732	1707	1990	1954	1942	1795	1473	1136	815	732	949	1311	1604	2065	2531	2721	2697	2372	1845	1618	1404	1051		Grand Total 376,710		

MAGNETIC DECLINATION (WEST)
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

2	LERWICK (D)													9° +												OCTOBER 1958		
	Hour G.M.T.																											Sum
	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	1000.0+		
1	49.7	50.7	50.1	49.8	49.2	49.1	51.4	54.7	48.2	47.3	48.3	51.8	54.9	57.6	57.5	56.0	55.7	55.0	54.6	54.9	53.8	49.4	47.6	41.0	51.6	238.3		
2	34.0	34.3	39.7	42.2	45.5	43.3	46.0	46.3	45.5	45.6	48.0	51.7	55.5	56.8	57.6	56.6	55.2	54.4	54.0	53.8	53.9	52.9	47.8	46.1	48.6	166.7		
3	46.2	45.8	46.4	42.4	39.1	48.7	47.3	45.9	45.7	47.0	50.3	58.0	63.7	65.7	65.3	62.2	59.2	61.2	51.4	48.7	50.4	49.9	49.2	50.1	51.7	239.8		
4 q	49.9	50.2	51.0	49.7	49.3	48.2	47.6	47.7	47.1	47.4	49.7	53.6	57.6	58.9	58.6	56.1	54.1	53.2	52.8	52.4	52.6	52.8	52.9	52.8	51.9	246.2		
5	38.2	38.6	46.8	48.1	48.0	47.2	47.4	46.9	46.3	46.9	50.2	54.4	56.3	59.7	60.6	58.2	55.8	55.8	56.8	58.7	54.8	52.8	45.8	49.7	51.0	224.0		
6	50.1	50.8	49.4	49.1	49.3	50.0	47.0	45.8	45.7	48.2	50.2	53.5	57.8	62.3	58.9	57.2	56.3	54.4	52.9	53.3	52.6	49.2	50.3	49.6	51.8	243.9		
7	49.7	46.0	44.9	44.9	44.1	43.9	48.5	48.9	48.4	47.3	49.7	54.7	57.8	57.6	57.1	57.0	56.5	52.4	51.6	50.7	50.2	46.3	31.6	32.2	48.8	172.0		
8	38.8	36.1	33.2	39.3	40.7	45.0	45.2	43.3	42.5	45.9	48.9	52.9	56.3	56.2	56.3	54.7	53.4	53.6	53.3	53.1	52.7	52.2	50.5	45.7	47.9	149.8		
9 q	49.7	48.6	48.5	48.9	48.5	48.0	48.0	46.7	45.7	46.6	50.1	53.2	55.1	57.0	56.7	55.4	54.1	53.8	53.8	54.1	53.9	50.9	51.6	51.5	51.3	230.4		
10 q	50.6	50.4	49.2	48.8	48.9	48.9	47.8	46.6	44.8	44.2	46.2	49.9	53.1	55.7	56.6	56.8	55.3	54.4	53.6	53.4	52.8	52.4	51.9	51.5	51.0	224.8		
11 q	47.6	47.9	49.4	49.9	49.1	49.3	48.5	46.4	44.3	45.4	49.2	51.8	55.4	56.6	57.3	57.1	55.4	54.3	54.4	55.4	53.3	48.7	47.1	46.7	50.9	220.5		
12 q	48.9	49.5	50.3	49.8	49.5	49.3	48.2	46.8	45.8	45.8	48.5	52.0	55.7	58.7	58.9	58.1	56.7	54.8	53.9	53.8	52.8	50.1	50.6	51.3	51.7	239.8		
13	51.3	51.1	50.8	50.6	50.7	49.7	50.6	48.8	47.4	47.9	51.8	57.6	62.7	62.5	61.7	58.0	55.2	54.2	53.1	53.2	52.6	52.8	52.4	50.8	53.2	277.5		
14	50.8	49.2	49.6	50.8	49.7	50.7	49.4	48.0	45.8	46.9	50.5	55.8	58.7	60.2	60.0	58.7	56.0	55.4	55.2	54.5	53.0	52.8	49.3	49.4	52.5	260.4		
15	46.9	48.7	51.1	49.7	49.2	50.2	48.6	47.2	46.9	47.0	50.7	55.1	57.4	57.5	58.2	58.1	57.1	56.1	55.2	55.3	51.8	48.4	50.0	49.8	51.9	246.2		
16	51.3	50.4	49.5	48.4	47.7	44.5	48.2	48.0	47.0	47.7	49.7	53.5	57.2	59.6	58.4	57.0	55.7	55.4	55.0	54.7	54.7	53.0	52.3	50.6	52.1	249.5		
17	50.4	48.9	50.3	47.8	49.7	47.5	45.4	46.2	44.9	46.1	49.6	54.2	57.1	58.9	58.1	56.6	55.2	55.2	55.4	53.9	51.5	51.6	49.4	47.6	51.3	231.5		
18	49.7	47.8	50.8	50.4	48.4	47.4	47.0	45.1	44.3	45.6	47.7	52.3	55.2	57.8	57.8	57.8	55.4	51.8	54.0	54.2	53.7	51.1	48.3	49.5	51.0	223.1		
19	50.4	51.1	51.8	51.6	50.8	48.9	48.0	46.3	45.5	47.0	50.8	57.8	59.0	59.5	61.3	62.3	55.4	57.1	56.6	54.2	53.2	50.8	47.6	49.3	52.8	266.3		
20	48.0	47.8	48.2	50.3	49.4	49.4	48.4	47.5	45.7	46.0	49.4	53.9	55.6	57.4	57.4	56.8	55.4	54.3	54.9	54.4	53.3	53.1	45.8	51.3	51.4	233.7		
21	50.9	50.2	48.7	45.8	47.0	48.4	48.0	46.8	45.6	46.8	51.3	55.4	57.6	58.5	58.3	55.3	53.0	53.1	53.5	54.1	53.4	51.8	50.2	51.1	51.5	234.8		
22 d	51.4	51.8	50.6	49.9	50.4	50.8	60.6	55.2	50.1	49.1	50.3	54.7	59.5	60.0	59.0	60.2	66.2	53.9	59.7	53.4	36.2	40.6	45.1	40.7	52.5	259.4		
23 d	42.2	44.1	43.6	47.3	47.5	49.2	49.1	51.3	45.8	46.2	50.4	52.3	53.1	52.8	53.0	49.5	55.2	65.6	62.8	49.9	42.7	39.6	41.2	46.4	49.2	180.8		
24 d	36.4	32.9	29.6	39.1	43.4	51.3	53.9	47.7	46.1	39.7	44.8	48.3	55.2	56.1	61.9	59.0	52.2	44.7	51.3	45.3	30.2	48.5	35.0	30.2	45.1	82.8		
25	40.5	44.8	47.3	47.0	47.3	46.5	45.8	45.7	44.6	45.6	46.0	47.7	49.5	51.6	52.6	52.5	51.8	51.3	51.2	50.6	50.1	50.1	48.5	48.7	48.2	157.3		
26	50.2	49.7	49.4	49.6	49.4	49.1	48.7	49.3	48.7	50.4	50.6	54.2	56.1	55.6	56.0	54.7	55.2	59.3	53.4	45.0	43.7	43.4	43.2	44.9	50.4	209.8		
27 d	45.6	46.7	51.6	50.1	50.6	48.9	47.2	47.3	45.4	46.0	50.4	53.5	55.1	56.4	55.6	55.4	57.3	60.0	51.8	63.8	43.4	32.1	42.0	45.7	50.1	201.9		
28 d	45.3	48.7	49.9	48.7	49.4	47.6	46.6	45.4	46.8	47.0	51.5	60.1	59.2	57.3	57.9	61.0	60.4	50.8	51.5	49.9	51.2	37.5	34.5	43.5	50.1	201.7		
29	45.8	44.7	48.9	48.9	48.9	48.3	46.6	46.5	46.5	48.4	48.4	52.8	55.0	55.0	53.5	53.9	50.6	53.4	52.8	51.9	28.7	28.3	38.6	44.3	47.5	140.7		
30	45.6	46.3	48.5	46.7	48.1	47.0	47.4	47.1	47.2	49.6	52.3	55.1	58.0	59.5	55.8	54.2	56.1	52.8	53.2	50.2	51.3	42.2	25.9	47.0	49.5	187.1		
31	48.4	50.6	50.8	50.4	50.2	49.4	49.7	48.4	48.5	49.4	52.2	55.2	57.1	56.7	56.6	56.6	54.1	54.3	54.1	54.0	50.4	49.6	50.6	51.3	52.0	248.6		
Mean	46.9	46.9	47.7	47.9	48.0	48.2	48.5	47.5	46.2	46.8	49.6	53.8	56.7	57.9	57.9	56.9	55.7	54.7	54.1	53.1	49.6	47.9	46.0	47.1	50.7			
Sum 14,00.0+	54.5	54.4	79.9	86.0	89.0	95.7	102.1	73.8	32.8	50.0	137.7	267.0	357.5	395.7	394.5	363.0	325.2	297.0	277.8	244.8	138.9	84.9	26.8	60.3		Grand Total 37689.3		

3	LERWICK (Z)												47,000γ (0.47 C.G.S. unit) +												OCTOBER 1958				
	Hour G.M.T.																									Sum			
	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	5000+			
	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	268	270	270	269	266	262	259	254	259	262	266	266	267	265	261	263	264	264	264	261	283	304	265	141	261	1273			
2	163	153	160	161	189	221	237	245	246	255	259	259	254	257	259	266	268	264	263	266	266	267	211	215	233	604			
3	235	236	235	204	214	210	206	235	255	271	272	266	271	286	289	297	326	386	413	349	305	285	269	259	274	1574			
4 q	251	251	252	254	261	263	264	265	263	261	263	263	258	259	263	265	264	264	262	261	261	260	255	248	260	1231			
5	188	178	228	244	250	255	258	257	261	262	262	260	260	252	249	252	257	254	270	275	287	284	285	271	254	1099			
6	260	257	257	254	254	242	247	254	257	251	251	250	248	251	251	245	246	251	261	258	262	282	267	266	255	1122			
7	264	258	252	244	240	242	238	233	240	252	253	257	263	262	259	262	289	299	292	299	284	260	233	195	257	1170			
8	191	184	173	200	185	231	244	249	262	261	259	261	261	261	258	261	257	256	256	256	257	259	256	256	241	794			
9 q	256	256	256	243	245	251	256	262	265	261	262	259	258	256	256	258	256	256	256	259	260	265	262	261	257	1175			
10 q	260	261	260	258	258	257	258	261	265	264	264	261	257	254	254	253	254	255	262	261	261	259	259	257	259	1213			
11 q	249	255	258	258	257	259	260	261	262	256	251	249	247	248	248	248	251	253	250	253	259	251	230	238	252	1051			
12 q	248	256	259	259	259	259	258	259	261	256	255	252	249	249	251	253	253	253	252	252	255	255	257	254	255	1114			
13	250	250	252	255	250	249	244	243	245	244	244	245	245	253	250	253	259	260	271	263	256	251	248	250	251	1030			
14	251	251	253	253	250	250	251	253	256	254	254	244	236	239	246	249	252	249	249	249	249	247	252	247	249	984			
15	237	242	246	246	243	243	245	247	249	249	247	242	234	237	242	249	255	253	249	253	261	252	250	249	247	920			
16	247	249	245	244	234	234	247	253	263	264	264	257	253	251	251	254	257	260	263	261	262	261	258	257	254	1089			
17	255	254	252	257	250	239	254	264	270	275	276	269	261	257	257	258	261	261	270	279	277	269	254	239	261	1258			
18	245	253	252	241	254	257	264	270	276	273	270	265	262	258	261	264	268	273	270	270	267	270	264	254	263	1301			
19	252	255	260	258	257	260	264	270	273	270	267	261	261	257	257	264	291	314	307	297	288	275	267	261	270	1486			
20	221	240	250	255	257	260	261	264	270	268	265	257	254	249	249	252	255	259	259	262	260	258	249	243	255	1117			
21	249	255	255	236	230	237	243	252	258	259	255	259	263	262	259	265	263	262	266	262	257	256	259	253	255	1115			
22 d	242	241	241	235	216	214	199	209	213	246	261	263	277	287	290	293	360	416	388	333	268	253	170	243	265	1358			
23 d	167	174	182	128	116	94	104	172	216	265	309	339	364	351	351	364	357	376	400	333	296	191	229	231	255	1109			
24 d	219	182	146	99	142	167	204	252	275	320	350	380	387	420	373	393	392	301	361	263	280	297	63	165	268	1431			
25	190	267	288	297	289	287	286	284	289	294	301	304	305	300	296	291	288	280	278	278	275	277	276	278	283	1798			
26	278	278	279	278	275	272	273	269	273	273	271	272	279	282	288	295	312	331	340	306	249	258	276	277	283	1784			
27 d	268	263	239	218	222	230	257	258	264	264	263	272	275	279	284	284	299	342	254	106	315	249	233	224	257	1162			
28 d	166	245	278	284	289	286	281	276	272	270	269	268	285	299	308	325	370	370	254	303	311	234	150	159	273	1552			
29	160	230	272	281	288	276	280	275	279	278	282	283	287	290	295	302	314	293	282	284	289	220	220	155	267	1415			
30	152	161	228	260	271	272	273	274	277	273	271	278	285	287	305	314	313	333	345	322	289	265	250	251	273	1549			
31	254	260	269	271	271	275	277	275	281	270	269	270	263	264	265	267	270	268	270	272	279	274	269	268	270	1471			
Mean	230	238	243	240	241	244	248	255	261	265	268	269	270	272	272	276	285	289	286	272	273	261	241	238	260				
Sum 7000+	136	365	547	444	482	554	692	895	1095	1221	1305	1331	1369	1422	1425	1559	1821	1956	1877	1446	1468	1088	486	365		Grand Total 193,349			

DAILY EXTREMES OF TERRESTRIAL MAGNETIC ELEMENTS, MAGNETIC CHARACTER FIGURES (K AND C) AND TEMPERATURE IN MAGNET HOUSE

4 LERWICK												OCTOBER 1958					
TERRESTRIAL MAGNETIC ELEMENTS												3-hr. range indices K	Sum of K indices	Magnetic character of day (0-2)	Temperature in magnet house 200 +		
Horizontal force				Declination				Vertical force									
Maximum 14,000γ +		Minimum 14,000γ +		Range	Maximum 9° +		Minimum 9° +		Range	Maximum 47,000γ +						Minimum 47,000γ +		Range
h. m.	γ	γ	h. m.		h. m.	γ	γ	h. m.		h. m.	γ	γ	h. m.				
1	19 54	545	382 23 32	163	07 19	59.3	30.5	23 58	28.8	21 23	307	109 23 17	198	1,2,3,3,2,2,3,5	21	1	85.2
2	22 08	563	414 02 54	149	14 42	58.1	30.5	01 28	27.6	16 02	270	133 03 03	137	3,4,2,2,2,1,1,3	18	1	85.1
3	18 02	670	467 10 34	203	13 01	68.4	37.2	04 10	31.2	18 06	448	194 06 05	254	2,3,3,2,3,5,5,2	25	1	85.3
4 q	22 33	535	474 13 30	61	14 12	61.5	45.8	08 58	15.7	15 55	268	216 24 00	52	1,1,1,1,2,2,1,2	11	0	85.3
5	17 52	559	454 00 52	105	13 31	61.6	33.4	00 21	28.2	22 30	300	154 01 11	146	4,2,2,2,2,3,3,3	21	1	85.2
6	20 18	543	471 11 46	72	13 15	66.6	44.5	08 31	22.1	21 07	299	237 05 22	62	1,2,2,2,3,2,2,3	17	1	85.1
7	16 05	548	443 23 51	105	12 26	60.9	26.8	22 49	34.1	16 58	312	182 23 48	130	2,2,2,2,3,3,2,4	19	1	84.9
8	23 08	537	455 00 00	82	12 19	58.1	31.3	02 17	26.8	08 40	267	161 01 54	106	3,3,2,2,1,1,1,2	15	1	85.0
9 q	18 58	537	473 11 55	64	13 13	57.9	45.1	08 56	12.8	21 42	265	237 03 42	28	1,1,1,2,1,2,1,1	10	0	84.6
10 q	17 42	543	474 11 35	69	15 48	57.7	43.7	09 41	14.0	10 20	267	251 15 50	16	1,1,1,1,1,2,1,1	9	0	84.5
11 q	21 43	554	467 11 41	87	14 02	57.8	43.6	21 42	14.2	08 59	267	226 22 38	41	2,1,1,1,1,2,2,2	12	0	84.4
12 q	19 32	543	469 11 03	74	13 47	59.7	45.4	08 38	14.3	08 44	264	243 00 00	21	1,1,1,1,1,2,1,1	9	0	84.1
13	19 28	539	461 11 12	78	12 47	63.7	46.5	08 43	17.2	18 17	271	239 06 44	32	1,1,1,2,2,2,1,1	11	0	84.2
14	23 03	547	460 11 39	87	14 03	65.1	44.6	08 58	20.5	08 22	257	234 13 03	23	1,2,1,2,3,1,1,2	13	0	84.0
15	19 51	548	469 10 41	79	12 28	61.7	43.4	07 41	18.3	20 24	266	231 12 34	35	2,1,2,2,2,1,2,2	14	0	84.3
16	20 00	541	469 11 32	72	13 18	61.5	42.9	05 50	18.6	09 57	270	225 05 02	45	2,2,2,2,1,2,1,1	13	0	84.0
17	23 12	556	471 11 26	85	13 43	60.1	44.3	08 50	15.8	19 23	282	227 05 08	55	2,2,2,2,1,2,2,3	16	0	84.1
18	22 47	547	471 11 37	76	13 30	59.7	43.4	07 28	16.3	08 44	278	233 03 14	45	2,2,2,1,2,2,1,2	14	0	84.0
19	16 30	565	471 12 26	94	15 35	63.8	44.2	08 40	19.6	17 40	319	249 00 17	70	1,2,1,2,2,3,2,2	15	0	84.1
20	22 12	560	471 12 09	89	15 03	58.8	42.7	22 08	16.1	08 40	273	205 00 29	68	3,1,1,1,1,2,1,3	13	0	84.0
21	00 10	541	486 12 43	55	13 03	59.1	43.5	03 50	15.6	18 50	269	225 03 45	44	1,2,2,2,2,1,1,1	12	0	84.0
22 d	16 46	832	117 19 46	715	16 40	97.2	25.6	20 21	71.6	17 08	453	15 22 27	438	1,4,4,3,3,6,7,6	34	2	84.2
23 d	17 20	726	103 21 25	623	17 53	81.6	29.7	21 27	51.9	18 22	444	62 05 25	382	5,4,5,5,4,5,6,6	40	2	84.5
24 d	17 20	794	-62 22 38	856	14 51	68.4	-5.0	22 05	73.4	13 40	436	-104 22 34	540	5,6,5,4,6,6,7,7	46	2	84.6
25	22 18	506	238 00 01	268	14 45	52.9	36.4	00 00	16.5	11 09	311	83 00 01	228	6,2,3,2,2,2,1,1	19	1	84.9
26	19 44	524	455 12 47	69	17 49	61.7	36.0	20 39	25.7	18 19	344	231 20 08	113	1,1,2,2,2,3,4,2	17	1	84.6
27 d	18 29	891	156 23 38	735	19 20	100.6	13.4	21 09	87.2	20 42	430	-133 19 17	563	3,3,2,2,2,5,8,6	31	2	84.8
28 d	17 29	648	356 22 24	292	15 59	71.4	16.3	21 54	55.1	17 26	400	106 00 00	294	5,2,4,4,4,5,5,5	34	1	84.7
29	20 38	547	319 23 42	228	12 44	57.0	18.8	20 36	38.2	16 05	322	73 23 33	249	5,2,3,2,2,2,5,5	26	1	84.5
30	17 36	550	390 00 34	160	13 01	61.6	17.2	22 10	44.4	18 22	356	121 00 57	235	4,1,2,2,3,3,4,4	23	1	84.6
31	16 14	536	458 11 36	78	13 00	58.4	45.5	08 02	12.9	20 30	282	250 00 03	32	2,2,1,2,1,3,2,1	14	1	84.2
Mean	-	586	394 -	193	-	64.3	35.1 -	29.2	-	316	165 -	151	-	-	-	0.68	84.5

TERRESTRIAL MAGNETIC FORCE: HORIZONTAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

1 LERWICK (H)														14,000γ (0.14 C.G.S. unit) +														NOVEMBER 1958																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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MAGNETIC DECLINATION (WEST)
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

2 LERWICK (D)													9° +												NOVEMBER 1958		
	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	Sum 1100.0+	
1	50.6	50.4	49.9	49.9	50.4	50.1	49.6	48.8	46.8	46.0	48.5	52.4	54.3	56.1	56.1	57.0	57.0	57.8	57.7	55.2	54.2	50.4	47.4	51.2	52.0	147.8	
2 d	50.7	49.9	48.9	49.1	49.5	49.3	48.9	48.4	47.7	48.9	49.8	54.5	58.9	61.0	63.8	65.2	64.8	71.0	55.6	50.4	49.4	48.9	47.4	45.4	53.2	177.4	
3 d	42.6	45.1	50.2	44.9	46.2	48.3	48.2	47.6	47.6	47.6	49.3	52.3	55.4	57.0	59.0	59.4	58.5	56.8	53.9	53.3	53.3	49.3	49.1	44.8	50.8	119.7	
4	46.4	48.1	45.2	48.0	47.5	47.0	47.9	48.0	47.6	48.7	51.1	54.4	57.0	55.1	54.9	53.2	53.0	52.6	53.9	52.7	49.7	46.3	50.4	50.9	50.4	110.0	
5 q	50.5	49.6	49.8	49.9	49.6	49.4	48.4	47.4	47.1	47.0	49.3	52.2	54.3	54.7	54.7	53.6	52.8	52.7	52.2	52.2	51.5	50.7	49.8	50.4	50.8	119.8	
6 q	51.2	50.5	49.8	49.9	49.3	48.9	48.2	47.9	46.7	47.0	49.2	51.7	53.6	53.8	54.7	54.2	54.2	54.9	55.5	54.4	53.3	52.8	46.9	50.4	51.2	129.0	
7	50.8	49.3	49.7	49.3	49.0	48.2	47.8	48.0	48.0	48.3	50.7	54.7	58.0	60.2	62.4	61.2	56.6	54.1	53.1	52.8	52.4	46.7	47.0	48.9	52.0	147.2	
8 q	50.4	50.8	50.2	49.6	49.3	48.4	48.4	48.2	47.4	47.3	49.4	52.3	54.7	55.6	56.0	54.4	53.9	54.3	53.5	52.8	51.2	50.8	49.4	49.7	51.2	128.0	
9	50.0	51.0	51.2	51.1	50.8	50.8	49.4	48.5	47.1	47.4	48.8	51.7	53.6	54.7	54.8	54.2	54.3	54.0	53.3	53.2	52.9	52.4	52.2	51.8	51.6	139.2	
10 d	51.7	51.9	52.1	52.3	51.7	52.8	53.1	51.5	50.4	49.4	53.1	52.4	53.8	55.7	55.1	54.2	55.7	59.0	59.0	56.1	49.4	50.3	48.4	47.5	52.8	166.6	
11 d	43.2	32.1	27.6	44.1	42.6	49.2	53.2	49.5	48.8	50.6	50.4	53.2	54.4	53.7	54.2	54.1	54.2	53.8	53.5	53.7	52.5	50.6	50.4	50.3	49.2	79.9	
12	49.5	49.9	49.3	48.9	48.8	48.9	48.9	48.8	48.8	49.4	50.9	52.9	55.2	56.4	52.8	52.2	53.7	54.2	55.2	47.0	48.4	45.6	46.2	48.4	50.4	110.3	
13	48.4	46.2	44.6	44.5	45.1	45.3	47.5	49.0	50.0	49.4	51.5	53.3	54.3	54.8	53.2	52.8	53.2	52.9	52.8	52.7	51.7	51.3	50.4	50.4	50.2	105.3	
14	49.7	50.1	49.3	49.3	49.3	49.1	48.4	48.2	47.9	48.3	49.6	51.2	52.2	53.5	53.5	53.0	53.0	53.1	52.8	52.4	52.0	50.6	44.0	48.2	50.4	108.7	
15	45.0	48.1	49.3	49.4	47.0	47.6	48.3	48.4	48.4	50.6	52.5	54.7	55.7	57.4	55.4	54.6	54.1	53.7	53.1	52.4	51.8	51.1	50.4	50.2	51.2	129.2	
16	48.9	48.0	48.9	49.5	49.3	47.6	49.9	49.9	48.5	49.0	50.9	55.1	57.5	57.6	61.5	59.2	55.2	53.4	52.8	52.0	51.1	50.8	49.9	48.2	51.9	144.7	
17	48.4	48.2	49.4	48.8	49.9	49.5	50.3	51.2	48.5	50.3	52.8	54.2	54.7	55.6	55.6	55.2	54.4	52.5	52.5	51.3	49.5	47.6	49.3	47.3	51.1	127.0	
18	49.0	49.9	50.1	49.1	50.3	49.9	49.9	49.9	49.3	50.2	51.1	53.7	55.6	56.1	58.9	61.2	59.1	58.1	54.1	54.8	51.3	46.5	45.0	45.8	48.4	52.0	147.4
19	50.4	50.6	50.5	50.7	50.5	49.4	49.4	50.1	50.3	49.9	51.8	52.3	54.2	55.9	57.3	55.5	53.1	52.2	51.6	50.5	50.6	50.6	50.4	51.6	51.6	138.4	
20	50.7	50.5	52.2	50.5	48.9	48.5	49.2	49.1	48.9	49.3	50.5	52.3	54.6	55.9	57.1	56.2	56.0	53.4	52.2	51.6	51.4	51.3	50.6	50.2	51.7	141.1	
21	51.1	48.5	49.4	50.2	50.0	49.4	49.6	49.9	49.8	50.5	52.4	53.3	56.5	57.1	58.0	58.8	57.0	53.3	52.1	51.8	51.8	51.4	50.6	49.5	52.2	152.0	
22 q	48.4	47.4	47.5	48.0	48.5	49.4	49.4	49.3	49.5	50.4	51.8	53.7	54.2	53.1	54.4	55.1	53.4	52.9	52.8	53.1	52.3	51.3	51.2	50.1	51.1	127.2	
23	49.5	48.3	49.0	50.1	50.6	50.3	50.3	50.4	51.1	52.3	54.2	54.1	54.1	55.1	53.7	53.1	54.6	54.2	53.0	52.5	51.3	51.2	50.2	50.3	51.8	143.5	
24	50.7	50.9	50.9	50.8	50.6	50.6	51.0	52.6	51.3	49.8	54.4	58.0	56.2	56.2	54.1	52.2	50.6	49.9	49.5	50.2	47.5	47.4	49.2	49.3	51.4	133.9	
25	49.5	49.7	49.5	49.3	49.6	49.5	49.7	49.8	50.0	50.6	51.9	53.0	55.3	56.9	57.1	60.2	55.9	54.2	53.5	51.3	49.4	46.6	44.9	41.6	51.2	129.0	
26	43.0	47.1	49.4	50.4	50.3	50.2	49.4	48.7	47.7	48.4	50.4	52.3	53.0	55.1	56.6	58.1	57.6	57.5	52.0	49.2	51.3	49.8	48.3	43.6	50.8	119.4	
27	46.5	48.2	48.4	49.4	50.8	52.2	49.4	48.9	48.8	49.6	53.0	54.0	55.2	57.4	57.4	56.3	58.5	52.0	51.5	55.1	50.9	47.5	46.7	41.3	51.2	129.0	
28 d	45.1	47.6	49.3	46.0	44.2	47.3	50.5	56.4	55.6	52.0	54.7	56.0	59.2	56.1	55.4	54.6	53.3	52.8	53.0	52.5	50.8	48.8	42.7	45.4	51.2	129.3	
29	47.7	50.8	48.4	44.3	46.6	51.9	50.9	51.1	49.8	51.4	50.8	52.4	55.8	58.0	59.8	59.6	53.3	51.4	50.8	50.1	49.9	50.2	49.9	48.4	51.4	133.3	
30 q	49.6	50.4	50.1	49.7	49.3	49.8	50.3	49.9	49.6	50.4	51.2	53.0	53.3	53.2	53.4	53.3	53.2	52.6	52.1	51.8	51.3	50.6	50.4	50.2	51.2	128.7	
Mean	48.6	48.6	48.7	48.9	48.9	49.3	49.5	49.5	49.0	49.4	51.3	53.4	55.2	56.1	56.4	56.0	55.1	54.4	53.3	52.2	51.0	49.6	48.7	48.4	51.3		
Sum 1400.0+	59.2	59.1	60.1	67.0	65.5	78.8	85.4	84.8	70.3	80.9	138.6	203.2	255.3	281.8	293.2	279.8	253.2	231.3	199.3	165.6	129.3	87.9	59.7	52.7		Grand Total 36942.0	

TERRESTRIAL MAGNETIC FORCE: VERTICAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

41

3 LERWICK (Z)													47,000γ (0.47 C.G.S. unit) +													NOVEMBER 1958				
	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	Mean	Sum 5000+				
	0-1	1-2																												
1	γ	272	γ	275	γ	277	γ	278	γ	279	γ	283	γ	291	γ	286	γ	279	γ	273	γ	266	γ	263	γ	273	1557			
2 d	γ	272	γ	272	γ	273	γ	274	γ	274	γ	272	γ	275	γ	277	γ	271	γ	270	γ	265	γ	263	γ	270	1903			
3 d	γ	261	γ	260	γ	265	γ	246	γ	212	γ	238	γ	258	γ	267	γ	270	γ	274	γ	276	γ	273	γ	267	1524			
4	γ	256	γ	256	γ	258	γ	253	γ	224	γ	239	γ	261	γ	269	γ	273	γ	274	γ	271	γ	266	γ	273	1390			
5 q	γ	271	γ	269	γ	268	γ	269	γ	268	γ	269	γ	271	γ	273	γ	274	γ	267	γ	262	γ	260	γ	266	1359			
6 q	γ	265	γ	263	γ	262	γ	260	γ	257	γ	255	γ	254	γ	255	γ	261	γ	270	γ	269	γ	269	γ	267	1321			
7	γ	269	γ	269	γ	268	γ	264	γ	264	γ	264	γ	267	γ	269	γ	270	γ	269	γ	269	γ	269	γ	267	1480			
8 q	γ	265	γ	264	γ	264	γ	263	γ	262	γ	262	γ	264	γ	270	γ	269	γ	267	γ	267	γ	267	γ	267	1312			
9	γ	252	γ	251	γ	252	γ	252	γ	244	γ	240	γ	239	γ	245	γ	257	γ	255	γ	256	γ	257	γ	264	1114			
10 d	γ	266	γ	266	γ	265	γ	264	γ	261	γ	259	γ	248	γ	247	γ	254	γ	260	γ	263	γ	265	γ	265	1501			
11 d	γ	302	γ	229	γ	201	γ	258	γ	274	γ	248	γ	240	γ	247	γ	256	γ	250	γ	259	γ	265	γ	267	1141			
12	γ	258	γ	260	γ	261	γ	262	γ	262	γ	257	γ	257	γ	256	γ	255	γ	249	γ	249	γ	253	γ	259	1270			
13	γ	249	γ	253	γ	251	γ	242	γ	241	γ	236	γ	240	γ	245	γ	250	γ	251	γ	254	γ	256	γ	257	1020			
14	γ	247	γ	246	γ	240	γ	252	γ	253	γ	255	γ	257	γ	257	γ	258	γ	256	γ	256	γ	257	γ	257	1123			
15	γ	244	γ	251	γ	247	γ	246	γ	249	γ	246	γ	241	γ	245	γ	249	γ	261	γ	260	γ	260	γ	260	1019			
16	γ	242	γ	242	γ	242	γ	242	γ	240	γ	236	γ	240	γ	254	γ	255	γ	253	γ	253	γ	253	γ	253	1011			
17	γ	243	γ	239	γ	236	γ	234	γ	237	γ	223	γ	231	γ	234	γ	239	γ	254	γ	252	γ	253	γ	253	855			
18	γ	228	γ	229	γ	234	γ	237	γ	235	γ	237	γ	239	γ	241	γ	247	γ	254	γ	253	γ	250	γ	250	902			
19	γ	246	γ	245	γ	246	γ	242	γ	241	γ	244	γ	241	γ	246	γ	245	γ	249	γ	250	γ	249	γ	248	968			
20	γ	248	γ	242	γ	241	γ	229	γ	236	γ	236	γ	238	γ	243	γ	244	γ	247	γ	247	γ	249	γ	249	853			
21	γ	239	γ	229	γ	230	γ	233	γ	229	γ	231	γ	229	γ	240	γ	239	γ	248	γ	249	γ	252	γ	249	834			
22 q	γ	238	γ	236	γ	237	γ	238	γ	239	γ	239	γ	238	γ	238	γ	236	γ	247	γ	248	γ	250	γ	248	850			
23	γ	248	γ	249	γ	248	γ	242	γ	242	γ	241	γ	237	γ	238	γ	242	γ	238	γ	239	γ	240	γ	240	941			
24	γ	250	γ	250	γ	250	γ	250	γ	249	γ	247	γ	245	γ	244	γ	246	γ	251	γ	252	γ	254	γ	254	1229			
25	γ	264	γ	264	γ	263	γ	258	γ	253	γ	251	γ	249	γ	248	γ	252	γ	251	γ	254	γ	254	γ	254	1452			
26	γ	233	γ	235	γ	227	γ	241	γ	254	γ	257	γ	256	γ	255	γ	256	γ	256	γ	258	γ	260	γ	260	1235			
27	γ	256	γ	253	γ	252	γ	251	γ	250	γ	233	γ	239	γ	248	γ	250	γ	249	γ	253	γ	252	γ	252	1297			
28 d	γ	239	γ	216	γ	207	γ	186	γ	198	γ	228	γ	239	γ	239	γ	235	γ	236	γ	244	γ	248	γ	248	858			
29	γ	248	γ	234	γ	189	γ	215	γ	221	γ	221	γ	228	γ	238	γ	251	γ	240	γ	241	γ	246	γ	246	903			
30 q	γ	251	γ	252	γ	253	γ	254	γ	255	γ	256	γ	254	γ	254	γ	254	γ	243	γ	242	γ	244	γ	244	1011			
Mean		254	250	247	248	247	247	248	251	255	256	257	257	258	259	261	265	269	269	271	268	264	261	259	254	257				
Sum 7000+		622	499	405	434	404	405	444	543	639	678	697	709	736	761	836	960	1082	1069	1126	1043	931	819	769	622		Grand Total 185,233			

DAILY EXTREMES OF TERRESTRIAL MAGNETIC ELEMENTS, MAGNETIC CHARACTER FIGURES (K AND C) AND TEMPERATURE IN MAGNET HOUSE

4 LERWICK												NOVEMBER 1958							
	TERRESTRIAL MAGNETIC ELEMENTS											3-hr. range indices K	Sum of K indices	Magnetic character of day (0-2)	Temperature in magnet house 200 +				
	Horizontal force			Declination			Vertical force												
	Maximum 14,000γ +	Minimum 14,000γ +	Range	Maximum 9° +	Minimum 9° +	Range	Maximum 47,000γ +	Minimum 47,000γ +	Range										
	h. m.	γ	γ	h. m.	γ	h. m.	γ	h. m.	γ	h. m.	γ				°A.				
1	18 52	543	476	11 46	67	15 10	58.1	44.2	22 23	13.9	08 59	296	254	15 00	42	1,1,2,2,3,1,1,2	13	0	83.9
2	17 38	950	487	10 53	463	17 47	90.5	43.3	23 56	47.2	16 36	416	237	17 45	179	1,0,1,2,3,6,5,2	20	1	83.7
3 d	21 40	536	465	04 23	71	14 30	61.4	40.2	01 06	21.2	17 25	299	200	04 08	99	3,3,2,2,2,2,2,2	18	0	83.8
4	19 29	535	484	10 40	51	12 02	65.0	42.1	21 13	22.9	20 37	284	219	04 33	65	2,3,1,3,3,1,3,3	19	0	84.0
5 q	22 51	532	482	11 47	50	13 18	55.4	46.1	08 23	9.3	08 32	276	251	14 38	25	1,1,1,1,1,1,1,1	8	0	83.8
6 q	22 53	539	490	11 23	49	18 19	56.1	42.9	22 46	13.2	22 41	281	250	06 01	31	1,1,1,1,1,1,1,2	9	0	83.7
7	20 19	535	490	11 16	45	15 24	62.9	43.1	21 41	19.8	15 14	281	263	06 43	18	1,0,1,2,2,3,1,3	13	0	83.9
8 q	05 55	536	480	11 10	56	14 21	56.6	46.5	08 50	10.1	08 59	274	245	23 42	29	1,1,1,2,1,1,1,1	9	0	83.7
9	22 08	548	484	12 15	64	14 38	55.2	45.8	09 12	9.4	23 26	266	236	06 19	30	0,1,2,2,2,1,1,0	9	0	83.3
10 d	20 11	558	470	11 34	88	17 47	60.8	45.7	23 37	15.1	20 31	341	233	17 09	108	0,1,2,3,2,3,3,2	16	1	83.2
11 d	00 26	560	422	02 08	138	12 04	56.6	15.3	02 06	41.3	00 12	318	160	02 07	158	5,3,2,1,2,1,1,1	16	1	80.3
12	20 14	545	494	14 18	51	13 36	58.9	40.7	19 32	18.2	19 27	289	246	09 50	43	1,1,0,2,2,1,3,2	12	0	80.0
13	04 10	539	494	02 52	45	13 17	55.6	42.3	02 13	13.3	00 38	279	231	05 52	48	2,3,1,1,1,1,1,1	11	0	80.1
14	21 25	540	498	11 44	42	13 39	54.3	42.9	22 21	11.4	22 43	277	237	24 00	40	1,0,0,0,1,1,1,2	6	0	79.9
15	21 33	541	498	12 45	43	13 12	60.3	43.2	00 08	17.1	09 12	266	237	00 04	29	2,1,1,1,2,1,1,1	10	0	80.1
16	04 53	545	496	13 08	49	14 47	62.8	45.2	05 35	17.6	16 10	268	234	05 53	34	1,2,2,2,2,2,0,1	12	0	80.6
17	21 06	551	493	11 51	58	15 38	56.2	45.4	21 05	10.8	09 20	257	219	05 53	38	1,1,2,2,1,1,1,2	11	0	80.9
18	06 00	538	436	21 10	102	14 44	62.4	36.0	20 43	26.4	19 06	291	177	21 39	114	1,1,2,1,2,2,4,4	17	1	81.0
19	04 58	529	489	11 36	40	14 18	57.9	48.3	06 16	9.6	15 07	261	239	04 10	22	1,1,1,1,2,2,0,1	9	0	81.3
20	23 23	536	496	11 55	40	14 31	57.6	48.2	08 27	9.4	17 10	253	223	03 19	30	1,1,1,1,1,1,0,0	6	0	81.1
21	01 00	540	506	11 51	34	15 29	59.7	47.6	01 24	12.1	16 38	263	226	02 00	37	1,0,1,1,1,2,0,0	6	0	81.2
22 q	19 30	542	505	11 57	37	14 39	55.4	46.5	01 31	8.9	12 12	254	235	01 00	19	1,1,0,1,1,1,0,0	5	0	81.5
23	05 45	544	495	13 58	49	13 04	57.6	47.8	01 10	9.8	17 35	263	234	10 03	29	2,1,1,1,2,1,0,1	9	0	81.5
24	20 18	538	488	13 26	50	11 44	58.5	44.6	20 56	13.9	14 26	290	243	07 48	47	0,0,2,2,2,2,2,2	12	0	81.6
25	15 39	547	435	23 04	112	15 41	62.8	32.9	23 29	29.9	17 58	370	161	23 02	209	0,1,0,1,2,4,3,4	15	1	81.6
26	19 15	538	486	11 42	52	17 08	60.6	36.8	00 05	23.8	17 50	313	216	02 33	97	3,2,1,2,2,3,3,2	18	0	81.7
27	19 46	536	477	10 45	59	16 22	59.9	39.4	23 36	20.5	17 42	313	225	05 43	88	1,2,1,2,2,3,3,2	16	0	81.7
28 d	04 31	552	483	13 36	69	12 34	62.8	40.6	04 08	22.2	13 44	275	184	03 42	91	3,3,3,2,3,1,1,2	18	1	81.5
29	02 44	542	488	12 55	54	15 24	62.7	41.8	02 51	20.9	16 00	292	176	02 37	116	3,3,2,2,2,3,1,1	17	0	81.3
30 q	20 14	534	503	11 42	31	12 46	54.3	49.0	04 34	5.3	04 20	257	240	10 05	17	0,1,0,1,0,0,0,0	2	0	81.0
Mean	- -	555	483 - -	72	- -	60.0	42.5 - -	17.5	- -	289	224 - -	64	-	-	-	-	0.20	-	81.9

TERRESTRIAL MAGNETIC FORCE: HORIZONTAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

1	LERWICK (H)													14,000γ (0.14 C.G.S. unit) +													DECEMBER 1958												
	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	Sum 10,000+											
1	q	γ	529	529	530	529	529	531	532	529	525	522	517	516	517	518	518	521	527	533	540	536	536	536	533	529	γ	528	2662										
2		γ	530	526	526	526	526	523	523	526	529	529	525	511	516	511	531	542	535	585	615	542	560	544	523	521	γ	534	2825										
3		γ	511	507	513	511	514	512	509	507	506	506	505	505	505	508	512	516	521	526	530	529	529	529	528	527	γ	515	2366										
4	d	γ	530	537	530	530	531	539	534	534	525	496	489	514	508	543	561	643	728	748	561	346	447	397	200	208	γ	507	2179										
5	d	γ	25	243	352	398	449	448	455	466	474	482	482	478	470	476	476	482	495	496	497	501	501	501	510	496	γ	444	653										
6		γ	496	495	498	505	509	509	507	507	503	497	481	480	496	495	511	509	500	503	507	505	508	505	496	498	γ	501	2020										
7	q	γ	501	511	514	516	521	525	519	508	503	493	491	493	496	500	502	507	515	521	525	527	525	525	523	520	γ	512	2281										
8		γ	520	522	521	521	520	522	522	521	518	516	512	508	514	517	518	522	523	527	530	530	536	517	521	529	γ	521	2507										
9		γ	517	494	504	506	509	510	515	504	503	507	502	501	506	504	518	523	529	529	527	530	530	530	530	529	526	γ	515	2353									
10	q	γ	524	519	519	518	518	515	515	515	508	500	497	501	509	516	520	523	525	525	528	530	530	530	530	530	γ	519	2445										
11		γ	531	531	527	529	537	531	530	529	525	524	527	523	522	524	523	528	529	533	537	537	536	525	525	525	γ	529	2688										
12	q	γ	529	525	531	522	523	526	527	526	523	520	516	511	511	514	516	520	525	530	535	537	537	530	520	512	γ	524	2566										
13	d	γ	485	498	427	487	524	536	533	536	536	526	525	525	536	541	525	589	773	752	900	655	628	569	486	485	γ	566	3577										
14		γ	473	466	474	498	507	499	502	506	506	505	502	495	495	491	493	492	514	505	515	526	504	525	502	492	γ	499	1987										
15		γ	511	510	508	510	514	516	514	512	510	507	510	503	497	505	513	517	516	521	526	529	533	525	522	529	γ	515	2358										
16		γ	533	528	526	511	516	534	529	532	530	521	520	526	522	517	518	515	518	523	531	531	531	529	528	525	γ	525	2594										
17	d	γ	525	525	526	525	529	533	535	533	525	516	511	517	512	511	514	518	540	565	659	754	587	581	577	245	γ	536	2863										
18	d	γ	56	184	62	442	507	500	503	504	498	499	498	493	493	493	491	499	503	510	515	521	518	512	518	509	γ	451	828										
19		γ	479	438	434	477	485	492	494	508	501	474	489	496	488	504	504	499	500	514	507	514	515	512	514	514	γ	494	1852										
20		γ	508	509	497	497	519	529	529	519	507	500	499	490	495	504	512	516	506	512	519	521	525	521	516	519	γ	511	2269										
21		γ	516	516	518	522	522	522	521	520	510	509	504	505	505	510	516	512	512	513	518	522	523	525	523	519	γ	516	2383										
22		γ	504	511	519	523	529	533	529	529	520	510	502	502	506	512	505	510	518	525	527	506	517	536	523	523	γ	517	2419										
23		γ	524	520	523	523	527	532	536	541	525	514	514	508	504	515	508	514	529	516	516	510	515	512	512	518	γ	519	2456										
24		γ	519	522	514	518	518	523	523	521	516	512	507	501	507	503	511	521	525	529	529	533	533	532	537	526	γ	520	2480										
25	q	γ	528	529	529	529	529	531	533	533	529	522	514	511	508	514	517	516	520	524	527	530	533	533	534	540	γ	526	2613										
26		γ	535	534	531	527	530	533	533	533	529	522	520	520	517	514	523	523	526	525	516	529	533	531	509	510	γ	525	2603										
27		γ	517	521	526	520	526	519	529	523	518	507	501	495	504	513	520	521	516	523	526	531	530	530	527	527	γ	520	2470										
28		γ	520	522	519	518	528	532	539	529	523	517	509	508	511	519	519	507	519	525	526	535	523	520	533	527	γ	522	2528										
29		γ	526	520	519	518	518	527	523	522	522	520	513	508	507	513	515	525	525	527	527	523	519	525	513	515	γ	520	2470										
30		γ	515	518	525	520	521	525	530	525	520	512	509	509	511	523	527	524	526	530	523	522	516	520	526	525	γ	521	2502										
31		γ	518	524	523	522	525	530	531	526	520	519	510	507	509	518	524	528	528	528	533	527	534	535	534	532	γ	524	2585										
Mean		γ	485	495	492	510	518	521	521	520	516	510	506	505	506	511	515	522	534	539	544	531	529	524	512	500	γ	515											
Sum 15,000+		γ	35	334	265	798	1060	1137	1154	1124	987	804	701	660	697	846	961	1182	1566	1723	1872	1469	1392	1242	872	501		Grand Total	383,382										

531 at 0-1h. January 1, 1959.

MAGNETIC DECLINATION (WEST)
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

2 LERWICK (D)		9° +													DECEMBER 1958												
	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	Sum 1000.0+
1 q	50.0	50.5	50.3	49.9	50.4	50.3	49.7	49.3	49.3	49.9	50.6	51.4	52.2	52.8	53.4	53.8	53.7	53.6	53.5	52.4	51.3	50.8	50.6	50.7	51.3	230.4	
2	50.5	49.4	47.4	47.5	47.3	48.9	49.4	49.7	50.1	50.6	51.3	53.5	56.7	57.8	57.9	66.7	64.1	66.5	66.6	52.0	54.9	41.7	43.5	48.5	53.0	272.5	
3	46.6	42.4	36.8	45.1	48.5	48.4	49.9	49.9	50.7	51.3	52.8	53.9	54.7	54.6	53.8	53.4	53.9	52.9	52.8	51.9	51.0	50.5	50.4	50.2	50.3	206.4	
4 d	50.4	50.1	49.4	49.0	49.5	49.1	49.0	48.9	48.5	47.6	51.7	56.7	59.5	56.6	58.8	55.0	58.1	68.6	50.6	36.3	54.3	50.4	41.6	31.8	50.9	221.5	
5 d	28.4	-8.0	22.8	28.1	42.0	46.7	47.0	49.8	50.4	50.0	50.8	50.7	50.9	51.1	51.0	51.0	51.9	51.9	51.4	51.0	49.1	49.1	49.6	48.5	44.4	65.2	
6	48.0	47.6	48.2	48.1	48.0	48.2	48.2	48.3	48.3	50.0	49.7	53.4	55.6	53.8	57.4	58.7	60.3	52.0	52.0	51.0	49.6	49.2	43.9	42.9	50.5	212.4	
7 q	49.2	49.6	50.0	50.3	49.0	49.6	50.3	48.8	48.3	48.6	49.6	51.3	52.7	54.2	53.1	52.4	52.5	52.1	51.8	50.8	50.6	50.7	51.1	48.9	50.6	215.5	
8	50.0	50.0	49.3	48.9	49.1	49.0	49.1	49.0	49.3	50.0	50.9	53.3	53.3	56.3	56.5	57.2	59.7	52.9	52.6	54.8	43.1	49.4	50.0	43.0	51.1	226.7	
9	43.6	40.0	43.6	47.9	49.8	49.2	47.7	51.6	51.8	50.7	51.8	53.9	53.0	53.3	54.1	53.4	53.2	52.5	51.8	50.9	50.8	50.6	51.4	50.1	50.3	206.7	
10 q	49.8	49.9	48.7	47.1	45.9	47.1	47.1	48.6	48.5	49.7	51.5	53.2	53.7	54.1	53.6	52.4	51.6	51.5	51.1	51.0	50.8	50.8	50.6	50.6	50.4	208.9	
11	50.7	49.9	49.1	48.1	46.1	47.7	48.5	48.5	48.7	51.3	53.1	53.8	54.2	55.3	53.3	53.2	54.0	53.4	53.0	52.9	52.5	52.0	38.5	48.4	50.7	216.2	
12 q	49.5	47.7	43.7	44.7	47.6	48.4	48.9	49.0	49.1	50.5	50.6	52.0	52.5	54.4	53.9	52.9	52.3	51.9	53.7	53.3	51.3	48.4	42.6	46.1	49.8	195.0	
13 d	45.8	38.5	34.0	28.4	39.5	42.4	46.7	48.1	49.1	51.0	52.5	54.2	58.2	61.4	56.5	59.7	72.2	66.4	74.6	65.1	55.8	46.9	37.6	45.5	51.3	230.1	
14	46.3	48.1	49.9	50.2	51.3	49.5	48.8	48.5	49.3	50.6	51.2	51.8	51.7	51.3	52.5	53.3	55.6	57.1	54.4	46.9	45.2	47.3	45.9	41.5	49.9	198.2	
15	47.2	48.6	48.4	48.5	48.6	48.8	48.5	48.4	48.6	49.0	51.0	52.2	52.0	53.1	54.0	55.8	55.0	48.7	54.0	52.2	49.5	49.6	46.7	47.7	50.3	206.1	
16	49.1	48.4	47.0	48.2	50.4	45.8	48.3	49.2	49.9	49.6	51.0	55.4	53.7	55.1	55.4	52.5	51.9	52.0	52.5	51.3	50.1	49.6	49.6	49.6	50.7	215.6	
17 d	50.0	50.3	50.8	50.9	50.9	50.8	50.2	49.9	49.6	50.3	51.3	52.4	53.1	53.7	53.8	53.2	55.4	60.2	46.5	53.3	49.9	49.0	53.3	28.5	50.7	217.3	
18 d	26.1	16.1	5.2	42.1	48.5	51.4	48.6	48.6	48.6	49.2	49.6	50.6	50.9	51.0	50.8	51.3	51.2	50.6	50.3	51.4	50.5	46.0	44.8	47.9	45.1	81.3	
19	46.9	33.9	28.4	42.4	42.6	47.8	52.5	51.5	50.6	49.2	49.5	52.7	53.0	52.6	52.0	51.9	47.5	53.4	50.7	49.2	42.2	46.8	48.0	48.7	47.7	144.0	
20	48.7	50.0	49.7	52.8	49.9	52.5	53.5	51.4	49.7	48.9	51.5	52.0	54.6	55.9	53.4	53.0	50.7	50.8	52.5	49.6	43.0	43.7	49.5	49.7	50.7	217.0	
21	50.6	49.4	51.1	48.1	49.1	49.0	50.5	49.7	48.0	50.5	50.7	51.0	54.0	54.5	55.4	53.9	52.5	51.6	51.3	45.2	48.6	49.8	48.2	47.8	50.4	210.5	
22	49.1	54.3	50.2	49.5	49.4	50.1	50.7	50.7	49.5	49.9	49.3	51.5	52.4	54.6	53.4	52.8	53.1	52.4	53.0	45.7	49.6	45.8	46.7	48.6	50.5	212.3	
23	49.1	50.1	50.8	50.1	49.7	49.6	49.8	50.6	50.3	52.0	53.6	54.2	54.4	55.3	56.3	52.5	53.4	51.5	42.4	50.1	47.8	46.0	43.8	47.9	50.4	210.3	
24	48.8	48.5	49.6	49.4	52.0	51.6	49.9	49.2	47.8	47.6	49.7	50.4	54.4	54.9	53.4	53.0	52.5	53.0	50.8	51.0	49.5	50.3	45.9	47.2	50.4	210.4	
25 q	49.6	50.3	50.6	50.7	50.7	50.8	50.1	49.2	48.4	48.6	48.4	49.7	51.5	55.2	53.9	52.2	53.0	52.2	52.0	50.8	50.6	50.6	50.1	50.0	50.8	219.2	
26	48.6	47.7	48.2	47.1	48.9	48.6	49.4	49.1	49.1	50.2	50.9	53.4	55.4	54.4	54.4	55.0	56.3	58.2	50.6	50.8	50.9	41.9	36.8	44.3	50.0	200.2	
27	46.0	48.2	47.6	46.7	46.3	48.4	49.1	48.7	49.3	50.2	51.7	50.6	53.4	56.2	55.4	53.7	52.1	52.7	52.0	50.8	50.8	49.9	49.6	48.6	50.3	208.0	
28	40.2	45.9	45.5	48.7	48.5	49.2	51.2	49.6	51.9	51.3	53.3	52.3	54.4	55.8	56.5	54.7	54.9	52.9	51.5	45.3	47.5	47.2	48.0	45.6	50.1	201.9	
29	48.8	49.5	48.9	49.7	50.3	48.4	49.9	49.4	48.6	49.3	49.6	51.5	53.4	55.8	54.6	54.4	55.9	54.6	52.5	49.7	53.9	47.2	42.6	41.9	50.4	210.7	
30	43.7	47.7	50.3	50.0	50.6	50.2	48.9	49.3	50.1	50.6	51.0	54.0	57.2	56.3	56.3	57.2	54.9	55.4	54.4	51.1	46.5	47.2	49.7	45.5	51.2	228.1	
31	50.2	53.4	51.2	50.6	49.4	47.7	47.8	48.2	48.4	48.3	49.7	51.5	55.3	55.4	54.4	54.0	54.0	53.4	53.0	49.7	50.6	51.3	51.4	50.6	51.2	229.5	
Mean	46.8	45.1	45.1	47.1	48.4	48.9	49.3	49.3	49.3	49.9	51.0	52.5	53.9	54.7	54.5	54.3	54.8	54.4	52.9	50.6	49.7	48.4	46.8	46.3	50.2		
Sum 1300.0+	151.5	98.0	96.7	158.8	199.8	215.2	229.2	229.7	229.8	246.5	279.9	328.5	372.0	396.8	389.2	384.2	397.4	386.9	339.9	267.5	241.8	200.0	152.0	136.8		Grand Total 37328.1	

TERRESTRIAL MAGNETIC FORCE: VERTICAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

43

3 LERWICK (Z)		47,000γ (0.47 C.G.S. unit) +																				DECEMBER					1958	
	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	Sum 5000+		
1 q	256	256	256	259	259	261	263	265	266	265	264	263	262	261	262	265	267	267	265	267	266	264	262	264	263	263	1305	
2	264	265	263	264	265	264	262	262	260	256	255	265	268	289	312	316	334	334	406	374	355	314	287	286	293	2020		
3	284	278	261	266	265	265	268	266	265	266	265	266	265	264	264	263	261	261	261	261	261	259	257	257	265	1349		
4 d	251	247	245	245	243	241	242	241	244	250	257	259	272	332	342	384	266	146	187	302	327	292	85	259	257	1159		
5 d	147	-29	119	188	241	260	275	285	285	285	288	289	291	290	286	282	279	279	279	281	282	285	282	301	252	1050		
6	298	296	291	286	283	281	279	281	284	285	291	290	291	301	308	318	343	339	323	318	305	303	310	297	300	2201		
7 q	282	282	282	283	273	267	273	279	282	275	277	276	276	277	278	277	275	275	272	271	273	274	277	280	277	1636		
8	279	278	276	276	273	269	270	270	270	262	262	266	266	267	272	284	286	284	274	282	299	287	287	294	276	1633		
9	278	256	269	289	287	284	275	273	262	254	258	263	263	264	266	267	266	266	264	264	260	260	264	269	268	1421		
10 q	271	273	274	272	272	272	272	269	272	264	264	264	264	264	266	271	270	270	264	264	263	263	263	264	268	1425		
11	264	264	266	265	260	264	264	262	261	229	230	237	243	246	253	255	256	257	256	256	261	268	264	259	256	1140		
12 q	264	269	263	269	268	263	260	260	261	244	247	247	248	251	254	259	260	257	255	255	261	270	266	248	258	1199		
13 d	166	193	120	116	188	209	222	229	226	247	247	244	245	269	313	336	304	330	218	369	331	251	285	274	247	932		
14	253	251	239	254	254	255	255	254	248	266	267	275	270	275	289	316	338	343	347	364	329	335	254	223	281	1754		
15	275	282	278	277	276	273	274	273	273	268	268	269	268	268	270	275	283	290	279	277	278	282	284	272	275	1612		
16	266	267	262	266	261	250	261	262	265	266	260	257	264	266	268	277	278	275	273	275	273	275	273	273	267	1413		
17 d	270	270	268	268	267	266	269	270	275	260	264	260	256	256	260	263	263	311	293	344	347	325	270	306	279	1701		
18 d	183	13	38	77	200	255	268	281	279	260	263	271	267	261	266	266	265	264	267	275	286	288	313	312	238	718		
19	278	160	94	110	190	228	222	252	276	277	281	287	298	318	324	318	320	308	321	308	306	293	287	287	264	1343		
20	281	261	253	256	249	251	255	262	272	289	289	292	287	289	294	293	305	302	298	290	284	269	260	256	277	1637		
21	244	244	242	237	234	237	237	241	246	282	286	287	289	288	289	291	291	285	286	285	271	266	263	259	266	1380		
22	248	222	222	248	248	246	248	248	253	268	272	268	267	263	270	273	268	266	268	292	278	255	262	262	259	1215		
23	261	257	256	257	253	251	249	249	256	259	260	263	269	280	285	287	281	296	312	298	290	281	279	269	271	1498		
24	262	250	247	243	249	249	255	260	262	265	266	268	267	272	274	269	267	266	264	262	262	261	258	262	261	1260		
25 q	261	262	264	264	263	261	258	261	262	259	264	261	258	260	265	268	268	265	263	264	261	258	257	254	262	1281		
26	252	254	252	253	253	252	251	249	248	251	251	247	246	265	264	265	270	289	311	274	263	264	265	259	260	1248		
27	252	248	253	258	239	233	239	250	256	260	258	257	260	273	278	277	286	280	268	262	258	258	258	253	259	1214		
28	242	245	248	248	249	249	243	247	246	246	245	250	251	254	264	278	272	268	269	265	260	260	250	241	254	1090		
29	216	216	246	253	253	251	253	253	253	253	253	249	248	250	258	260	260	263	270	283	290	283	279	273	257	1166		
30	260	255	253	258	260	260	258	260	265	264	263	256	253	256	254	259	264	264	276	281	295	283	268	260	264	1325		
31	258	236	238	251	258	258	256	256	258	254	254	254	255	257	257	257	259	260	260	267	263	258	258	257	256	1139		
Mean	254	236	237	244	253	256	257	260	262	262	264	265	265	272	278	283	281	279	279	288	285	277	265	269	265			
Sum 7000+	866	321	338	556	833	925	976	1070	1131	1129	1169	1200	1227	1426	1605	1769	1705	1660	1649	1930	1838	1584	1227	1330		Grand Total 197,464		

261 at 0-1h. January 1, 1959.

DAILY EXTREMES OF TERRESTRIAL MAGNETIC ELEMENTS, MAGNETIC CHARACTER FIGURES (K AND C) AND TEMPERATURE IN MAGNET HOUSE

4 LERWICK														DECEMBER 1958						
TERRESTRIAL MAGNETIC ELEMENTS														3-hr. range indices K	Sum of K indices	Magnetic character of day (0-2)	Temperature in magnet house 200 +			
Horizontal force				Declination				Vertical force												
Maximum 14,000γ +		Minimum 14,000γ +		Range	Maximum 9° +		Minimum 9° +		Range	Maximum 47,000γ +		Minimum 47,000γ +						Range		
	h. m.	γ	γ	h. m.	γ	h. m.	γ	h. m.	γ	γ	h. m.	γ	h. m.	γ				°A.		
1 q	18 06	544	514	11 29	30	15 56	54.4	48.9	07 48	5.5	19 24	269	255	02 21	14	0,0,0,1,1,1,1,1	5	0	80.8	
2	18 09	697	477	22 02	220	18 01	99.4	10.7	21 55	88.7	18 39	436	217	22 03	219	2,1,1,2,3,5,5,5	24	1	80.8	
3	02 04	538	494	01 35	44	12 14	55.4	34.4	02 22	21.0	00 03	287	253	24 00	34	3,2,1,1,1,1,1,1	11	0	80.8	
4 d	17 27	824	-32	22 55	856	17 32	87.9	16.8	18 54	71.1	15 36	415	-47	22 20	462	2,1,2,3,4,6,6,7	31	2	80.9	
5 d	22 22	537	-433	00 24	970	00 10	101.1	-29.4	01 16	130.5	00 19	403	-215	01 01	618	8,4,3,2,2,2,1,3	25	1	80.6	
6	14 36	518	467	10 55	51	16 30	64.2	31.4	23 00	32.8	16 53	357	279	07 18	78	1,1,1,2,3,3,2,3	16	0	80.6	
7 q	05 36	534	488	10 16	46	13 03	55.5	47.6	07 21	7.9	00 26	286	266	05 52	20	1,2,2,1,1,1,0,1	9	0	80.6	
8	23 28	554	500	23 17	54	16 07	64.1	27.9	20 42	36.2	20 42	312	259	09 40	53	0,0,0,1,2,3,4,3	13	0	80.1	
9	22 19	536	487	01 24	49	11 43	57.5	38.0	01 13	19.5	00 02	296	247	01 39	49	3,3,3,2,1,1,1,1	15	0	80.0	
10 q	22 32	533	495	10 37	38	13 00	54.4	45.4	04 27	9.0	06 12	279	260	22 34	19	1,1,1,1,0,0,0,1	5	0	79.9	
11	22 35	554	489	22 13	65	13 22	58.3	24.1	22 30	34.2	22 20	283	223	09 46	60	1,1,1,2,2,1,1,4	13	0	79.6	
12 q	20 45	543	500	13 02	43	13 10	55.4	41.0	22 36	14.4	21 32	272	242	23 43	30	2,2,0,1,1,1,1,3	11	0	78.5	
13 d	18 05	1052	350	02 26	702	16 22	99.5	21.1	21 00	78.4	19 16	428	78	02 32	350	5,4,2,1,4,7,7,5	35	1	78.8	
14	19 04	566	423	01 57	143	17 07	64.7	32.6	23 00	32.1	19 46	390	153	23 07	237	4,1,2,1,3,3,4,5	23	1	79.8	
15	20 27	547	493	12 09	54	15 56	56.8	45.2	00 07	11.6	17 05	295	255	00 01	40	2,1,1,2,1,3,2,2	14	0	79.8	
16	05 18	547	505	15 11	42	11 40	58.0	42.4	05 19	15.6	16 24	279	242	05 00	37	2,3,1,2,2,2,1,1	14	0	79.9	
17 d	19 38	849	-269	23 50	1118	18 27	67.1	-5.6	23 42	72.7	23 55	441	164	18 35	277	1,1,1,1,1,4,6,7	22	2	79.7	
18 d	22 11	526	-299	02 20	825	02 23	70.5	-36.0	02 25	106.5	00 05	406	-157	02 46	563	8,7,2,2,3,2,2,3	29	2	79.4	
19	20 35	530	388	01 46	142	13 52	56.6	22.3	01 50	34.3	14 23	327	73	02 04	254	5,5,3,3,3,3,3,2	27	1	78.9	
20	06 28	537	483	11 18	54	13 23	58.2	38.0	21 06	20.2	16 34	309	244	03 57	65	3,3,3,2,2,2,3,3	21	1	78.5	
21	21 38	530	500	12 22	30	14 46	56.3	42.4	19 43	13.9	19 08	296	229	04 55	67	2,1,2,1,1,2,2,1	12	0	79.6	
22	21 39	547	497	00 50	50	01 37	58.2	41.9	19 38	16.3	19 44	304	198	01 59	106	3,1,1,1,2,2,3,3	16	0	80.3	
23	16 50	545	497	12 30	48	12 52	58.2	35.2	18 15	23.0	18 11	317	245	07 06	72	1,1,2,2,2,4,3,2	17	1	80.3	
24	22 40	543	500	13 40	43	13 19	56.8	44.4	22 37	12.4	13 53	276	238	02 58	38	2,2,2,2,1,1,1,2	13	0	80.7	
25 q	23 36	549	505	12 22	44	13 43	55.4	48.0	10 24	7.4	15 40	271	246	23 59	25	0,0,1,1,2,1,2,2	9	0	80.4	
26	20 41	541	496	22 48	45	17 26	62.7	33.3	21 51	29.4	18 13	333	239	11 58	94	1,1,1,2,2,3,3,3	16	1	(80.4)	
27	19 59	534	486	11 45	48	13 54	60.0	43.4	03 05	16.6	16 40	288	228	05 48	60	2,2,2,2,2,2,1,1	14	0	80.4	
28	06 18	544	500	15 25	44	14 38	59.3	38.0	00 29	21.3	15 50	280	228	23 50	52	3,2,2,2,2,2,3,2	18	1	80.2	
29	17 55	534	503	22 52	31	20 32	59.4	39.2	22 25	20.2	20 50	297	203	01 09	94	3,1,1,1,2,1,3,3	15	0	80.3	
30	15 43	540	505	11 52	35	12 56	63.2	41.5	00 08	21.7	20 31	301	250	14 35	51	2,1,1,2,2,2,3,3	16	0	80.2	
31	19 16	537	504	11 52	33	12 46	56.4	46.7	19 55	9.7	19 41	272	231	01 34	41	2,1,1,1,2,1,2,1	11	0	80.2	
Mean	-	-	581	388	-	-	64.0	30.7	-	-	33.4	-	323	188	-	-	-	-	0.48	80.0

MEAN MONTHLY AND ANNUAL VALUES OF TERRESTRIAL MAGNETIC ELEMENTS
For all, *a*, quiet, *q*, and disturbed, *d*, days for *H*, *D* and *Z* and for all days for *N*, *W*, *I* and *F*

5 LERWICK

	Horizontal (H) force			Declination (D) (west)			Vertical (Z) force			North component (X) all days	West component (-Y) all days	Inclination (I) (north) all days	Total force (F) all days
	a	q	d	a	q	d	a	q	d				
	14,000γ +			9° +			47,000γ +						
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	
Jan.	499	503	479	54.7	54.9	53.0	239	236	233	14283	2496	72 56.2	49414
Feb.	497	509	462	54.1	55.0	52.8	245	240	258	14281	2493	72 56.5	49419
Mar.	496	499	479	53.7	54.0	51.8	244	235	240	14280	2491	72 56.5	49418
Apr.	505	514	494	53.1	53.6	53.1	239	238	231	14289	2490	72 55.9	49415
May	517	523	520	53.1	53.2	54.1	235	233	245	14301	2492	72 55.0	49415
June	504	523	459	52.5	53.3	50.6	241	244	246	14289	2488	72 55.9	49418
July	511	517	491	52.7	52.3	54.2	250	253	250	14296	2489	72 55.6	49428
Aug.	509	517	487	52.2	53.2	51.1	240	244	222	14294	2487	72 55.6	49418
Sept.	502	511	484	51.1	51.5	50.5	263	253	278	14288	2481	72 56.5	49438
Oct.	506	515	483	50.7	51.3	49.4	260	257	263	14293	2480	72 56.2	49436
Nov.	520	521	520	51.3	51.1	51.4	257	257	266	14306	2485	72 55.2	49438
Dec.	515	521	501	50.2	50.6	48.5	265	265	255	14302	2480	72 55.7	49444
Year	507	514	488	52.5	52.8	51.7	248	246	249	14292	2487	72 55.9	49425

DAILY RANGE AND MEAN MONTHLY VALUES

6 LERWICK

	Mean absolute daily range			Mean daily range expressed as percentage of yearly mean					
	1958			Mean 1932-53			1958		
	<i>H</i>	<i>D</i>	<i>Z</i>	<i>H</i>	<i>D</i>	<i>Z</i>	<i>H</i>	<i>D</i>	<i>Z</i>
	γ	γ	γ	γ	γ	γ	%	%	%
January	102	117	105	100	102	104	44	80	63
February	267	178	197	124	113	123	115	122	119
March	328	192	256	216	149	176	141	132	154
April	234	140	184	204	120	163	101	96	111
May	258	130	160	195	111	141	111	89	96
June	339	194	215	150	94	109	146	133	130
July	310	147	201	158	96	110	134	101	121
August	196	122	129	178	111	135	84	84	78
September	294	189	194	209	133	170	127	129	117
October	193	123	151	188	129	164	83	84	91
November	72	74	64	107	101	112	31	51	39
December	193	141	135	89	93	96	83	97	81
Winter	159	127	125	105	103	109	69	87	75
Equinox	262	161	196	204	134	168	113	110	118
Summer	276	148	176	170	103	123	119	101	106
Year	232	146	166	160	113	133	..	..	..

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

FREQUENCY DISTRIBUTION OF DAILY RANGE

7 LERWICK

Range	Number of cases, 1958			Percentage distribution					
				<i>H</i>		<i>D</i>		<i>Z</i>	
	<i>H</i>	<i>D</i>	<i>Z</i>	1958	1932-53	1958	1932-53	1958	1932-53
γ				%	%	%	%	%	%
0 - 9	0	0	0	0.0	0.0	0.0	0.0	0.0	0.3
10 - 19	0	0	9	0.0	1.4	0.0	0.4	2.5	6.8
20 - 29	0	3	29	0.0	4.9	0.8	2.3	7.9	10.5
30 - 39	14	6	28	3.8	6.3	1.6	4.0	7.7	9.3
40 - 49	31	16	24	8.5	7.5	4.4	7.3	6.6	7.2
50 - 59	22	16	17	6.0	9.3	4.4	10.0	4.7	6.2
60 - 69	16	24	20	4.4	9.1	6.6	12.3	5.5	5.1
70 - 79	22	33	18	6.0	8.6	9.0	10.5	4.9	4.4
80 - 89	19	32	9	5.2	7.4	8.8	9.2	2.5	3.9
90 - 99	25	42	12	6.8	5.8	11.5	7.0	3.3	3.4
100 - 109	14	33	11	3.8	4.3	9.0	5.6	3.0	3.3
110 - 119	17	21	11	4.7	3.5	5.8	4.0	3.0	2.9
120 - 129	13	17	13	3.6	2.9	4.7	3.6	3.6	2.6
130 - 139	12	19	12	3.3	2.2	5.2	3.1	3.3	2.6
140 - 149	13	13	9	3.6	2.4	3.6	2.9	2.5	2.3
150 - 159	12	11	11	3.3	1.6	3.0	1.8	3.0	2.0
160 - 169	12	10	3	3.3	1.5	2.7	1.9	0.8	1.8
170 - 179	5	6	7	1.4	1.1	1.6	1.4	1.9	1.4
180 - 189	5	2	7	1.4	1.1	0.5	1.5	1.9	1.4
190 - 199	6	7	10	1.6	1.0	1.9	1.1	2.7	1.5
200 +	107	54	105	29.3	18.3	14.8	10.0	28.7	21.1
Days omitted	0	0	0	..	..	..	..	..	..

Q-INDICES OF GEOMAGNETIC ACTIVITY

Q-indices for 4 consecutive intervals of 15 minutes centred at the full hour, 15 minutes later, etc.

8 LERWICK

JANUARY 1958

JANUARY 1958																								
	Hour G.M.T.																							
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	7644	4455	6766	5444	4554	4444	4433	3212	1111	2111	2211	1121	1111	2111	0122	1111	1121	2233	3445	5666	5444	4455	5344	3332
2	3533	3344	3333	3332	1112	2222	1112	2212	1001	1111	2222	2222	1011	1222	2222	2211	1101	1111	1221	1111	1110	0111	2111	1111
3	2222	2222	2222	2222	2221	2111	1111	1111	2222	2111	1111	1110	0000	0000	0000	0000	0011	1111	0111	1111	0000	0000	0000	0000
4	0001	0111	1000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0011	1111	1111	1110	0000	0000	0000	0000	0000	0000	0011	1111
5	0011	2221	1222	1110	0000	0000	0000	0000	0000	0000	0000	0000	0000	1111	1011	1111	0011	1100	0000	0000	0000	0000	0000	0000
6	0000	0000	0000	0000	1111	1000	0011	1000	0000	0000	0000	0000	0001	2201	1111	2212	2212	2111	0000	0000	0000	0000	0000	1100
7	1221	1000	0000	0000	0100	0000	0000	0000	0000	0000	0000	0000	0001	2111	2222	1111	1111	1111	1111	0011	0110	0000	0000	0000
8	1110	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0110	0001	1112	2222	2221	1122	2222	1111	0000	0000	0000	0000	0000
9	0000	0000	0000	0000	0000	0000	0011	1100	0000	0011	0000	0001	1111	1122	2233	3333	3333	3333	2233	3322	1011	2222	2222	2122
10	2222	2233	4433	2211	1000	0000	0000	0000	0000	0000	0111	1111	0122	2222	2222	2222	2223	3322	2222	2222	2221	1221	1111	1111
11	1012	2011	2211	1000	0111	1000	0000	0000	0000	0000	0000	0111	1100	0000	0110	0011	1111	1112	2333	3332	2010	0112	2100	0000
12	0000	0001	2222	3332	3332	2111	0110	0100	0000	0000	0000	0111	2222	2222	2112	1122	2222	2110	1111	2221	1111	1111	1001	2100
13	1100	2211	1110	0011	1101	1110	0100	0000	0000	0000	0000	1111	1122	2211	1111	0011	0012	2111	1111	1222	2333	3322	2111	1001
14	1111	0001	1010	0000	0000	0000	0000	0000	0011	2211	1210	0012	2221	0000	1001	1111	2222	2222	2211	1001	2212	2344	4322	1100
15	1111	0000	0000	0000	0010	1110	0011	0011	1211	1000	0001	1102	2233	2222	3323	3322	2222	2221	0111	1111	1111	1111	0010	0000
16	0111	0000	0000	0000	0111	0001	0000	0000	0000	0011	1100	1111	1222	1222	1222	2322	2222	2221	1112	3332	3322	1111	1121	2332
17	1010	0111	1001	1000	0011	2110	1111	2111	1111	1122	2222	2222	2222	2221	3222	2212	2223	3233	2322	2222	1223	4433	3311	1333
18	4432	3323	3224	4334	3332	2110	0010	1112	2233	3333	2222	2012	3322	2223	2332	2232	3434	4443	3333	3322	2211	1011	1111	0222
19	3232	1211	1011	1111	1111	1211	1101	0000	0000	1000	0000	0011	1121	2122	2112	2222	2222	2222	3321	1100	0001	2111	1000	2221
20	0011	1111	1000	0011	0000	0010	0000	0000	0010	0000	0111	2211	2122	2222	2233	3222	3222	3333	3343	3333	2233	3333	3333	2234
21	4455	5445	5555	4666	6654	3333	3221	1011	1100	0112	2221	1111	1221	1111	0001	0010	0000	1122	2332	2233	3222	2221	1111	0010
22	1001	0111	0001	0001	1111	0112	1111	0211	0111	1010	0000	1321	2223	3222	2222	2111	2111	1111	0122	2100	0000	0001	1100	0000
23	0001	1222	1121	2221	2110	1110	1111	0110	0111	2101	1111	1222	2223	3222	2222	2222	2222	1111	1123	2221	2211	1001	2011	0000
24	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0002	2111	2222	1112	2222	2221	1000	0111	0000	0100	0001	1000	0000	0010
25	0000	0000	0112	2222	1100	1110	0000	0000	0000	1222	1001	1121	0222	2333	2233	3333	2333	4433	3111	0100	0000	0000	0001	1111
26	1111	1111	1110	2223	3322	3312	3222	2222	1000	0000	0000	0000	0010	0011	1111	2211	1211	2222	2221	1000	1111	2222	1111	3332
27	2111	0000	0000	0011	1100	0000	0000	0000	0000	0000	0000	0000	0000	0000	0111	1111	1111	1112	1111	0000	0000	1000	1344	3300
28	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	1111	1111	1011	2222	2222	2222	2222	1111	0001	0000	0000	0000	0000	0000
29	0000	0112	2222	3322	3333	2222	2111	1001	1111	1100	1110	0100	0000	0000	0000	1011	0000	0011	1111	2333	3333	2221	1000	0000
30	0000	0000	0000	0000	0000	0010	0111	1011	1000	0001	1000	0000	0010	0010	0000	0000	0000	0000	0000	0001	1001	1100	0000	0000
31	0110	1110	1100	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0001	1000	0000	0011	1000	0000	0111	0000	0000	0012

Q-INDICES OF GEOMAGNETIC ACTIVITY

Q-indices for 4 consecutive intervals of 15 minutes centred at the full hour, 15 minutes later, etc.

8 LERWICK

FEBRUARY 1958

	Hour G. M. T.																							
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	3322	2211	1110	0000	0000	0000	0000	0000	0000	1100	0000	0011	0101	0111	1111	1111	1111	1111	1000	0000	0000	0122	2110	0000
2	0000	1232	2111	0000	0000	0000	0111	1000	0000	0000	0000	0111	1111	2111	1222	2221	1111	1121	1211	1110	0000	0000	0000	0000
3	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0001	2222	2222	2222	2221	1111	1110	1100	0000	0000	0001	1111
4	1122	2100	0000	0000	0000	0000	0000	0000	0000	0000	0000	0122	2222	2332	2222	2122	2222	2222	2332	4444	3222	1222	2113	3233
5	3323	3233	3343	3233	3221	1223	2111	0011	1100	1011	1222	1113	3333	3212	3222	3333	3233	3333	3222	2233	3443	4333	2323	4333
6	2332	3333	2443	2112	2223	3222	2222	2211	2231	0122	2222	1223	2123	2233	2333	3333	2222	2223	3312	2011	1000	1112	3332	1333
7	2221	2233	3333	3221	1122	2222	2211	0111	1012	1100	0011	2221	1212	2111	1222	2222	2211	2100	0000	2223	3233	4332	2221	1122
8	2222	2222	2332	3344	3322	3333	2322	2111	1111	2222	1121	1122	2022	2223	3333	3332	2222	2222	1011	1122	2223	3322	1001	1111
9	1222	3321	1011	2222	3211	0000	0000	0000	0111	1112	2222	1222	1011	1211	2222	2221	2111	1112	2333	3233	3322	1111	1011	0000
10	2443	3233	3332	1122	2222	2111	0000	0000	0111	1111	1110	0001	1111	1111	1122	2233	3334	6444	3333	3554	4331	1112	3213	3332
11	2211	2158	ETT9	7766	6655	7777	7777	7878	8888	8888	7776	6665	4446	6444	3355	4322	3333	3333	3345	5466	7765	5444	4355	3445
12	5542	2232	3355	4443	3333	3333	4333	3243	2111	3322	2222	2222	2333	3333	3322	2222	2112	3333	5534	3234	3331	1122	1000	0111
13	1121	2221	0110	1000	0000	0000	0000	0000	0121	1111	1111	2222	2212	3122	1123	2222	2322	2112	2222	2223	3210	0111	1113	3221
14	0012	1022	2234	4434	4433	3222	1001	1111	0010	1122	2222	2221	1221	1122	2322	2333	3343	4332	1100	0000	0000	0000	0331	1100
15	0000	0000	0000	1111	0000	0000	0000	0000	0000	0000	0010	0000	0000	0011	1111	1111	1222	1000	0000	0000	0001	0000	0000	0222
16	2222	1000	0000	0000	0000	0000	0000	0000	0000	0000	0000	1101	1222	1112	2221	1223	3333	3222	2332	2222	2101	1100	0022	1222
17	2222	2111	2111	1221	2222	2222	2110	0112	1100	1011	0112	2222	2332	2333	3223	3221	2223	3221	2332	2223	4333	3322	1121	1102
18	1212	2222	2233	2333	3332	3323	2211	2222	1112	2221	2223	3222	3322	2111	1222	1110	0111	1212	2155	4643	3322	1132	3333	2222
19	3444	4221	2122	1221	2211	1100	2212	1122	1221	1112	0111	0110	0111	1210	1111	0112	2111	1100	2221	1110	1123	3332	2011	1333
20	3323	3221	1112	2222	1222	2221	0210	1212	0000	0100	1211	1212	2211	1222	2222	2211	1111	1111	2222	3345	3424	4665	5343	3322
21	1112	2111	2332	2222	2333	3433	1220	1211	2121	0111	1201	1111	1222	2233	3222	2333	2222	2222	3454	4322	2554	3344	5443	3321
22	0112	2455	5544	3333	3233	3222	2121	2232	2111	1121	1111	2211	2212	2111	2212	2222	2211	1112	2123	2121	1133	2112	2123	3233
23	4332	2332	2334	3322	1210	0011	1001	2222	2211	2122	2111	1200		0111	1211	0221	2123	3222	2101	1112	3232	2220	0001	0000
24	0100	0001	0011	1111	1101	0000	0000	0000	1001	1001	1111	2222	2212	1011	1111	1110	1111	1001	1222	1000	0000	0000	0000	0000
25	1100	0010	0000	0000	0000	0000	0011	1110	0000	0001	2111	1222	1111	1110	0011	0011	0000	0000	0000	1000	0000	0000	0000	1100
26	0001	1111	1110	0000	0000	0000	0000	0001	0000	0000	0001	1111	1111	1221	1112	2111	1111	1111	1100	0000	0000	0000	0000	0000
27	0211	0000	0100	0000	0000	0000	0000	0000	0000	0000	0000	0000	0101	1111	1111	1111	0000	0000	0000	0111	1111	3432	2221	0000
28	0100	0000	0000	0000	1111	2122	1112	1101	1111	1000	0122	1121	1122	1122	1222	2111	1100	0011	0111	1100	0000	0000	0000	0111

Q-INDICES OF GEOMAGNETIC ACTIVITY

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Q-indices for 4 consecutive intervals of 15 minutes centred at the full hour, 15 minutes later, etc.

8 LERWICK

MARCH 1958

	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
	0																							
1	1123	3320	0000	0000	0000	0000	0000	0000	0000	0000	0011	1111	1110	0000	0000	0000	0000	0000	0000	0000	0001	1111	1212	2122
2	2111	1100	0000	0000	0000	0000	0222	2100	0110	1111	1211	1101	1101	1111	1111	1222	1222	2211	1111	1111	1001	0000	0100	0012
3	2111	1110	0100	0000	0000	0000	0000	0000	0001	1111	1111	1221	1222	1111	1212	2222	2121	3222	3433	3223	4456	5443	4434	4454
4	5445	5555	4566	4443	3444	3333	3333	3221	2111	0010	0000	1111	1122	2322	2210	1111	1112	2111	2331	1123	3422	3223	3233	3223
5	2222	3322	3333	3333	3323	3322	2334	4444	4333	2332	2101	1122	2111	1201	1123	2211	2222	2312	2122	2102	2111	2233	3343	3433
6	3333	3456	6666	5444	4333	3333	2333	3333	3333	3100	0011	0111	1110	0012	3444	3323	3322	1101	1112	3332	1221	3344	4322	2122
7	2112	3221	2222	3334	4423	3322	2212	2222	1011	2110	0011	1222	2222	2222	2222	3222	2344	3222	2221	2222	2122	1211	1002	1210
8	0121	2212	3443	3333	3222	1222	0111	1112	1122	1221	0112	2111	1111	1222	2222	2100	1111	1100	0000	0011	1123	3321	1111	2222
9	3333	3344	4333	3221	2222	1111	1112	2001	1110	0111	2122	2222	2100	0002	2332	2111	1111	1111	0001	1133	2233	1121	0000	0000
10	0110	1112	3333	2222	2322	0011	1000	1110	0010	0000	0010	1122	2223	3221	2223	3332	1223	3333	3332	1011	1121	1111	1110	1112
11	3443	3332	2100	0000	0000	0000	0000	0000	0000	0000	0000	1222	2122	2222	2122	2233	3344	4444	5556	3566	3211	0122	3434	4344
12	5555	5577	6766	8866	5554	5443	3333	4444	3333	2222	1232	3333	2222	2222	3334	4433	2333	3333	3333	2222	2221	1013	3333	3322
13	2245	6543	2333	2343	4554	4433	3333	3233	3333	3333	3222	3334	3444	5555	5555	5566	5555	5556	6566	4543	3211	1211	1110	0000
14	2233	2211	2111	0000	0000	0001	0000	0000	0000	0000	0000	0111	1433	1123	2223	2234	4332	2222	2222	2222	2122	2122	1110	0011
15	1111	1111	1112	2221	2121	2212	2222	3111	1112	3332	3221	2112	2222	2333	3333	3333	3333	3333	3310	0100	1111	1110	1110	0001
16	1333	3345	5433	3333	3322	1221	0000	1111	1001	1111	1111	1111	1111	1111	0111	1000	0001	2222	2221	1110	0110	1122	2233	2111
17	1111	0111	1111	1111	1111	2222	2222	1000	2222	2332	2221	1111	1222	2222	2233	2122	2233	4444	4443	4465	4332	2111	1000	0001
18	0000	0001	2233	3443	3111	1222	2222	3322	0111	1001	0000	1110	1222	2222	2222	3345	6643	2444	4445	5433	2332	3444	3221	1331
19	2333	3323	3334	4554	4332	2222	2333	2222	2111	2201	1111	0101	1222	2222	3344	5555	5433	4443	2113	3444	3334	5555	5566	5566
20	5543	3333	3344	5554	3311	1322	2211	0112	2221	1121	2120	1111	1232	2223	3333	2223	3333	3343	2222	2232	1344	5444	4554	4336
21	6545	5334	4334	4444	3332	2112	2211	2221	2220	0111	1121	1111	1112	2224	4444	3234	5544	5545	4554	3221	1112	1332	2444	4544
22	5556	6776	6544	5544	3221	1110	0001	1121	0000	0000	1011	1122	2211	2221	2222	1111	1111	1111	1122	2211	1221	2111	1223	3555
23	3432	2233	3222	2222	2110	1221	0221	1110	0000	0000	2331	2221	2222	2223	3333	3333	3333	3333	3223	3333	4354	3111	1000	1000
24	1222	0111	1211	0000	1122	2221	1111	1110	1000	1222	2221	2222	2222	2333	3333	3333	3455	5555	4554	4443	3255	5554	3344	4556
25	6654	4566	6543	3212	1222	2221	1122	2211	0001	1111	1222	2222	2333	3223	3333	3335	5556	6544	4333	4333	3333	3333	3333	3222
26	2222	2333	3221	1110	0012	1110	0000	0000	0011	1221	1110	1222	2232	2222	3334	4334	5544	4322	2233	3333	3221	2213	3222	3333
27	4555	5332	2222	1111	1111	0000	0000	0000	2112	2211	2111	1222	2222	2222	2233	2233	2111	1111	1122	2211	1222	2222	3323	2111
28	0111	1111	2222	2222	2000	0010	0001	0111	2222	2222	2222	2222	2222	2222	2222	2222	2222	4432	1221	0111	1111	1122	2111	1111
29	1233	3332	2011	2100	0000	1200	0110	0000	0000	0000	0111	1222	2222	2222	2111	1111	1122	2222	1110	0001	1111	1112	2111	1011
30	1111	1111	0111	1111	1110	0001	1111	1112	2223	3333	3333	2322	2233	3344	4444	3443	4556	6544	4432	2122	2332	2312	3333	2111
31	1222	1221	1122	2111	1122	2233	1112	1210	0000	0111	2222	2222	3222	2222	2223	3333	3223	3333	3333	3344	4332	2222	2222	3233

1st: 0915 Q = 0, Q' = 0
 9th: 1545 Q = 1, Q' = 0
 23rd: 1015 Q = 3, Q' = 1
 28th: 1030 Q = 2, Q' = 1
 29th: 1345 Q = 2, Q' = 1 1630 Q = 2, Q' = 2

Q-INDICES OF GEOMAGNETIC ACTIVITY

Q-indices for 4 consecutive intervals of 15 minutes centred at the full hour, 15 minutes later, etc.

8 LERWICK

APRIL 1958

	Hour G. M. T.																							
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	2222	2111	2322	2222	3222	2111	2222	1101	0000	1000	0111	2222	2233	3332	2333	3333	3333	2222	3333	3334	4332	2011	1113	2211
2	2121	0222	1122	2222	2332	2001	1221	3322	3211	1111	0223	3333	3222	3222	2232	3332	1112	2233	3333	3322	3332	2333	3222	2233
3	3233	2223	3454	3212	2233	3333	2211	2001	1100	0111	0111	1122	2222	2211	1210	0123	3223	3332	2332	2334	4333	2211	1122	1122
4	1122	2322	2233	3233	2222	2111	1011	1120	0100	0112	2223	3333	3334	4444	5554	5544	4455	5555	6675	4544	4324	4333	5655	4434
5	4445	5555	5566	5444	3322	2322	2222	3222	2222	2333	3332	2333	3222	2332	3223	3233	3322	3333	3333	3322	2221	2211	1121	2233
6	4444	4543	3211	0000	0000	0101	1100	1011	0001	1000	0122	2222	2223	3223	3333	3444	3444	4443	4444	4343	4422	3223	3335	4454
7	4322	1212	1112	2232	2222	2211	1121	1110	0111	1111	1122	2222	2332	3333	3223	3333	3333	3333	4443	3212	1111	1112	2222	2121
8	1100	0000	1122	2222	1100	0111	1100	0000	0000	1112	2222	2222	2222	2233	3333	3333	3222	2222	2122	2222	2233	3222	1122	2221
9	1100	0000	1112	2111	2222	2210	0000	0000	0011	1111	1222	2222	2222	2222	2222	2222	2222	2222	2333	3333	3323	3222	2222	1111
10	0000	0000	0001	1000	0000	0000	0000	0000	1111	1122	2222	2222	2222	2222	2222	2111	1111	1111	1122	2222	2222	2222	1111	1111
11	2211	1112	2222	2221	0000	0000	0000	0000	0000	0111	1112	2222	2222	2223	3222	2222	2222	2221	1111	1111	1122	2122	1221	1111
12	1111	1111	1111	0000	0000	0000	0000	0000	0000	0000	0000	1222	2122	2111	1111	1110	0000	1221	1012	2111	1101	1111	1111	0110
13	0001	1111	1100	0000	0000	1111	1111	2100	0000	0000	0000	0001	1111	0000	0000	1100	0000	0110	0011	1111	1111	1111	1111	1111
14	0000	0001	1111	0000	1111	0000	0000	0000	0000	1111	1101	2221	2222	2233	3321	1223	3333	3222	2233	3333	3122	2122	1222	1123
15	4444	4433	3343	3333	3331	2222	2112	2222	2232	2222	2111	1111	1111	2122	1100	1111	2211	1123	3333	3333	3333	2122	2100	0244
16	4334	4433	3343	3333	2222	2322	2223	3332	2111	1112	2122	2222	2333	3332	2333	3333	4444	4344	6644	5543	3223	3335	5554	5554
17	4556	6666	6554	4445	5443	3333	3222	2233	3322	2112	2222	3223	3333	3333	3334	5666	6655	5555	5556	4443	3223	3322	2476	6544
18	3334	4344	4445	5555	3431	1222	2332	3333	3322	1112	2222	2222	3444	5554	4333	4454	5555	5554	5543	3333	3332	2334	4445	6554
19	2211	3333	3321	2122	1112	2122	2011	1100	0011	1233	3322	2211	2332	3333	3344	4333	4333	4433	3221	2333	3332	2222	3333	4333
20	2210	1100	1102	2223	3333	3222	2222	1111	0110	0110	0000	0111	2211	2332	2222	2112	2233	3333	3322	2222	2233	3221	1100	
21	1101	1000	0000	1222	2222	1111	2222	2222	1111	0111	0110	0111	1122	1111	1223	3333	3333	3333	3322	2111	1112	2223	3333	4432
22	0011	0000	0000	0000	0011	1111	1111	2222	2100	1111	1111	1111	0000	0000	0101	0000	0001	2111	2222	1111	1111	1000	0000	1111
23	0000	0000	0000	0000	0000	0000	0000	0111	1111	0000	0000	1111	1112	2211	1222	3333	3333	3333	3333	3222	3322	2222	0033	3211
24	0011	1122	2222	4444	3333	3333	3333	3222	2222	2112	2222	2222	2222	2222	2222	2222	2333	3322	2333	3232	2222	2211	2221	1111
25	1111	1111	1222	2333	3322	2233	2222	2222	1111	1000	1122	2222	2222	2222	2222	2211	1111	1111	2211	2222	2222	2221	1111	1111
26	1111	1111	1111	1111	1111	1111	1111	1110	0100	0000	0001	2221	1111	1111	1221	0133	4443	1222	3443	3333	3222	2111	1111	1111
27	1110	0000	0000	0000	0011	1122	2211	2211	1000	1000	0111	1222	2222	2211	1110	0121	2222	3333	4443	3333	3442	2100	1221	1120
28	1122	2333	3233	3333	4333	2333	3332	2332	2222	2222	2222	2222	2222	2222	3222	3334	4444	3333	4444	4433	3233	2333	4322	2223
29	3223	4433	3333	4433	3334	4443	3333	2222	2212	2233	2222	2222	2222	3333	3332	1001	3444	4444	4433	3334	4433	3342	2222	2333
30	2222	3444	3322	2223	3332	3333	3321	2233	3211	1212	1221	1222	2233	3333	3333	3443	3455	5444	4444	4434	4333	2222	4555	5443

Q-INDICES OF GEOMAGNETIC ACTIVITY

Q-indices for 4 consecutive intervals of 15 minutes centred at the full hour, 15 minutes later, etc.

8 LERWICK

MAY 1958

	Hour G.M.T.																							
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	2224	5543	2222	2322	2332	2221	1111	1222	2122	1222	1111	2111	1111	1111	1112	2223	3444	3334	4444	4333	3221	2111	1245	4221
2	0111	2222	2222	1111	2221	1112	1110	1111	0112	1111	1000	0011	1122	1111	1111	1111	1111	1111	2223	3333	3322	1111	2222	1111
3	1111	2222	1111	1122	2122	2111	1010	0000	0000	0111	1111	1112	2122	2222	2222	2222	2222	2222	2221	1112	2222	2111	2221	1112
4	3222	2211	1111	1100	0000	0111	1110	0011	1111	1111	1111	2222	1111	1111	1122	2222	2222	2222	2222	2111	1112	2222	2122	2000
5	0000	1100	0002	2221	1100	0000	0000	0000	0010	0001	0011	1111	1111	1111	2222	1111	1111	2222	1112	2222	2233	3333	3332	1111
6	1221	1221	2222	2000	2000	0011	1111	1111	1100	0011	1111	1222	2222	2222	1222	1122	1111	1111	0000	1111	1111	1111	1222	1111
7	1000	0000	0000	0000	0000	0000	0011	1111	1111	1111	1111	1112	2222	2222	2222	2222	2222	2111	1111	1111	0001	1122	2100	0000
8	0011	1111	1122	1111	2222	2111	0000	0011	1111	1111	1111	1112	2222	2222	2223	3332	3332	2222	1110	0110	1111	2122	2332	2222
9	2111	1000	0000	0010	0111	0010	0001	2113	1011	0000	1111	2122	1211	2222	2111	1112	2222	2222	2201	2111	0000	0000	0000	0000
10	1122	2122	2110	0000	0000	1122	2222	2121	2211	1221	0011	1133	1333	3221	1111	2323	3322	2222	3323	3333	2221	1001	1112	2332
11	1000	0000	0000	0000	0000	0000	0122	2233	3333	2333	3332	2222	2221	1222	2212	2221	1222	2223	3333	2222	2211	1111	1222	1221
12	1111	1111	1100	0000	0000	0000	0000	0000	0012	1112	2222	2222	2222	1122	2111	1221	2233	4432	2333	3333	3323	3111	1244	4333
13	3333	3210	0000	0000	0011	0112	1111	1111	1211	1101	1221	2222	2222	2333	3334	4445	5566	6555	4344	4444	3333	3444	5567	7543
14	4666	6665	5555	4455	4433	3333	3333	3333	3333	2222	2222	2222	2223	3333	4455	5444	4444	4333	3333	4433	3222	1111	1111	1344
15	5444	4433	3444	4444	2245	5545	3222	2222	1101	1110	0211	0221	1222	2333	3333	3333	4444	4444	4444	3321	1111	1222	2212	2223
16	3233	3333	2222	2222	2111	2220	2000	0000	0012	2222	1111	1111	1221	1123	3333	3233	4455	4333	2210	0222	1111	1000	1111	1111
17	1112	2222	2333	3223	2332	1122	1112	2222	2222	2222	1100	0111	0022	2133	3333	3333	3333	3333	3334	3332	1110	0111	1211	1233
18	3332	3443	3333	3222	2001	0000	1111	1221	1111	1000	1121	2111	2222	2332	2233	3233	3445	5444	4433	3332	2222	2121	2112	2212
19	2211	1111	2221	1122	2233	3333	3322	1100	1100	0001	1111	1222	2222	2222	3322	2233	3333	3333	3333	3333	2222	2221	1000	0011
20	2222	2222	1001	1011	1111	1000	0000	0000	1111	1111	1112	2222	2222	2222	2222	2112	2222	2222	2222	2101	1111	1111	1222	2221
21	0000	2222	2211	1111	2112	1000	0000	0110	0011	1111	1222	2222	2222	2222	2222	2222	1111	1112	2111	1111	1111	1122	2222	1111
22	1122	2221	1111	1111	1111	1110	0000	0000	0011	1111	1111	1122	2222	2222	2222	2222	2221	1111	1111	1112	2222	2222	2222	2222
23	2211	1101	1001	1111	0011	1111	1110	0000	0100	0111	2222	2222	2222	2222	2222	2222	2222	2222	2221	1112	2222	1122	2222	2222
24	2222	2211	1111	1111	1000	0000	0000	0001	1111	2222	2222	2222	2222	2222	2222	2221	1111	1101	1111	1001	1111	1111	1111	1111
25	1111	1111	1111	1111	1111	1000	0000	0000	0000	0000	0011	2222	2111	1111	1112	2222	2222	2223	3333	3333	3333	3333	3322	2222
26	1012	2233	3333	3322	2222	1111	1221	1111	2222	3333	2233	3223	3333	3344	5566	7666	6666	6554	4333	3322	2223	3333	3332	3222
27	2233	3333	2111	1111	1112	2222	3222	3322	2222	3222	2111	2222	2233	3332	2223	3222	1112	2233	3344	4443	3333	2233	3444	4334
28	5555	5554	4333	3333	3222	2222	2222	2222	2221	1001	1011	0100	0000	0111	1022	3333	3322	2223	3333	3333	3332	2232	1002	2112
29	2213	3344	4444	4555	3123	3233	3333	3444	4344	4333	3333	3445	6666	6666	6655	4444	4443	4444	3333	3333	3232	3322	2221	1112
30	2111	1112	3333	3333	3333	3333	3333	3333	3333	3222	2211	1111	1111	2222	2221	1122	2223	3443	3322	2233	3332	3333	2233	2222
31	2222	2223	3333	4444	4333	2222	2322	2222	2222	2222	1111	0012	3333	4444	4310	0001	1102	5556	6765	6654	3333	5888	8666	7776

Q-INDICES OF GEOMAGNETIC ACTIVITY

Q-indices for 4 consecutive intervals of 15 minutes centred at the full hour, 15 minutes later, etc.

8 LERWICK

JUNE 1958

	Hour G.M.T.																							
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	6888	8777	6677	7653	3333	3355	5444	3333	2232	3222	2222	3332	2122	2222	2222	1001	2233	3344	4455	5554	4332	2222	3333	4554
2	3212	2223	4444	3333	3333	2222	2222	3333	2322	2222	2122	2222	2322	3333	4444	4544	4455	5444	4323	2111	0000	0001	1112	2222
3	2222	2222	2222	2222	2222	2222	2222	2222	2222	2111	1000	1111	1111	1111	1000	0012	3233	3322	3333	3322	2222	2222	2111	1111
4	2222	2222	2222	2222	2222	2222	2222	2211	1111	2111	0110	0000	0000	0000	0000	0000	0001	2001	1221	1111	1100	0000	0000	0000
5	1111	1111	1111	1111	1111	1100	0000	0011	1001	1110	0111	2222	2222	2222	2222	3322	3444	3222	2211	1111	1111	1222	2222	2222
6	2222	2221	1111	1111	1111	2111	1000	0122	2111	2222	2222	2222	2211	1111	1111	1111	1222	2223	3333	3333	3443	3333	4554	5444
7	5667	7899	8888	8887	6433	3333	4444	4445	5555	5554	4443	3333	3333	3322	2223	4444	3333	3333	3222	2233	3323	3332	2221	2333
8	3222	2221	1111	0001	0000	0110	1111	1111	1211	1222	2222	2222	2211	1110	0100	1112	2222	2233	3344	4443	3333	2222	2222	2234
9	5554	3322	2223	3322	2222	2222	2222	2222	2222	2222	2222	2233	2222	2222	3333	3444	4443	3223	3345	4333	3333	3223	4556	6666
10	6666	6667	7677	6666	4444	4333	3333	2222	2211	1112	2233	2222	2223	3334	4444	4433	3322	3332	3333	3332	2233	3322	4432	2322
11	2221	1023	3344	3444	4322	2212	1111	2111	1111	0111	1111	2112	2222	2322	2222	2222	3333	2112	2333	3333	2223	2222	2222	1111
12	1111	1111	2222	2111	1233	3332	1111	1222	1111	1111	2211	1112	3221	2111	1112	2223	4323	3333	3333	3333	3333	3333	3332	2222
13	2222	2222	2221	1100	0001	1122	1111	1001	1000	0000	0111	1111	1122	2211	1122	2112	2222	2333	3332	2222	2222	2222	2212	2222
14	2222	2211	1000	0000	0000	0000	0111	0000	0111	1112	2222	2222	2222	2211	1111	1111	1111	1243	3333	3333	3322	2233	2233	2222
15	2101	1110	1110	2222	2221	2332	1223	2332	1122	2332	2223	2222	2222	2222	2222	1111	2221	1222	1110	0001	1111	1111	1111	1111
16	1112	3321	1110	0000	1111	1222	2233	2332	2222	1201	1111	2222	2223	3443	2222	2122	1111	1111	1222	2111	1122	2212	2111	1111
17	1111	1111	1110	0001	1222	2110	0000	0000	1111	1000	1112	2222	2222	2222	2111	1111	1111	1111	1111	1111	1111	1110	1111	1111
18	1110	0000	1111	1000	0000	0000	0111	1111	1111	1001	2222	2222	2222	2222	2222	2222	2222	2222	2222	2233	3332	2222	2212	2111
19	1111	0111	1111	1000	0111	0000	0000	1000	0000	0111	1222	2122	2222	2221	2222	2222	3333	3322	2222	2222	2222	2111	1222	2112
20	0000	0012	2011	0111	0111	0111	1101	1111	1111	1111	0011	1111	1111	1122	2111	1111	2222	2222	2222	2222	2222	2222	2222	1100
21	1112	2112	2444	4343	3444	4333	3113	3322	2333	2222	2333	3333	3344	4334	5555	5455	5555	6665	5444	4444	4434	5544	5555	5445
22	6676	5335	6666	6556	5544	3233	3334	4443	3222	2222	2222	2223	4333	4323	3222	2222	2222	2223	2222	2333	3222	2333	3333	2321
23	2334	3332	3333	2333	3333	2232	2221	1112	2222	2121	2112	2222	2222	2222	2222	2111	2122	2233	3333	3323	3332	2222	2222	2221
24	1223	3321	1001	1122	2232	2332	2222	2222	2111	1201	2211	2222	2333	3333	3332	2222	3333	2222	2232	2233	3332	2222	1112	2211
25	0123	3222	2222	3333	3210	0100	1111	1111	1222	2233	3332	2222	2222	1111	2121	1111	2222	3344	4433	4444	3222	2222	2223	3121
26	1111	1111	1111	1222	2111	1001	2221	1000	0000	1111	1111	1211	1111	1111	0222	2111	1222	2222	2111	1222	2222	2222	2222	2222
27	2210	1110	0111	1112	1111	1000	1100	0100	1111	1000	0111	1222	1111	2222	2221	1222	2221	1111	1222	2222	2333	3332	2221	1111
28	0000	1111	1001	2220	1011	1100	0111	1332	1011	1111	1010	1223	3222	2222	2233	2222	2333	3334	4555	5554	4344	4667	7776	6776
29	7777	7677	7766	7998	8888	7788	7766	6665	5555	4333	3333	3334	3333	3345	5566	6777	7776	6666	6555	5333	3333	3233	2332	2222
30	1111	1112	2221	2220	2222	2221	1110	0000	0000	0000	0011	1111	1110	1112	3222	2223	3222	2222	2332	1112	2222	2222	2222	2222

Q-INDICES OF GEOMAGNETIC ACTIVITY

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Q-indices for 4 consecutive intervals of 15 minutes centred at the full hour, 15 minutes later, etc.

8 LERWICK

JULY 1958

	Hour G.M.T.																							
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	2222	2344	5432	2221	1212	2222	2232	1111	1110	0001	0111	1111	1122	2122	2221	2333	3332	1112	3333	2222	2222	2222	2111	1111
2	0000	0000	0000	0000	0000	0000	1111	1111	1000	0001	1111	1011	2122	2222	1233	3233	3222	2222	3333	2223	3333	3333	2111	1110
3	0121	1122	2122	1222	2211	1001	1100	0000	1122	2222	2222	2221	2111	1112	1111	0123	3434	4444	3344	3333	3333	1222	1222	2222
4	2111	1100	0001	1111	0011	2221	1101	1222	2333	3321	1112	2222	2223	3333	4444	4432	2345	5554	4444	4333	3332	1123	3332	2222
5	1110	0000	0110	0111	2111	0000	0000	0000	0111	1000	1111	1111	1122	2233	2222	2110	1000	1000	1000	1112	1122	2222	2223	2122
6	1112	2222	2222	2111	1122	1122	2221	1111	1111	1111	1111	0000	0000	0010	0000	0000	1111	1111	1111	1110	1111	1111	1111	1111
7	0111	1111	1111	0000	1111	0000	0111	1111	1111	1001	2122	2222	2332	2222	3211	2233	2322	2233	3344	3333	3332	2222	2221	0121
8	2110	0122	3322	2221	1110	0111	1222	2235	7656	5554	4346	5555	4345	5456	7778	9799	8887	7776	6666	6666	6656	7779	9766	7777
9	7667	7676	7777	7777	7778	8777	7776	6666	6555	5444	5444	4333	4334	4444	4343	3233	2234	4333	2233	3322	2223	3222	2112	3356
10	6554	5567	7544	3333	3444	4332	2222	2222	2222	2221	2111	0002	2222	3333	3211	0000	0111	1222	2222	2222	1221	0011	1233	3222
11	3333	3333	4444	4332	2222	2211	2221	2212	2222	2332	2222	3333	2011	1112	2221	0011	1111	1212	2200	1122	3333	3322	1111	1001
12	1122	2122	2222	2111	2100	0000	1121	1212	2233	3322	2223	3332	2222	2212	2112	3323	3332	3444	4443	3333	3222	2221	1100	0000
13	0100	0001	1023	3333	3200	0112	2222	0012	2232	2222	2222	2222	1100	0012	2222	2222	3334	4432	2111	1101	1000	0000	0322	2222
14	2211	2222	2222	1022	1222	2222	2222	2222	1121	1111	1111	1111	2210	0011	0060	1223	3333	3210	1222	2222	1111	1110	0000	0000
15	1001	1111	2222	2212	2100	0111	1122	1111	1111	1222	1111	1111	1112	2223	3332	2222	2223	3222	2222	2222	2112	2111	1100	0000
16	1101	2222	2221	2222	2211	1111	2222	1111	1110	0110	0000	0001	1000	0010	0102	2233	3334	4333	3333	3322	2221	1110	0000	3322
17	2002	3333	2112	2222	2222	3332	2222	2112	2223	2332	1111	1111	0002	2221	1112	2222	1111	0010	0100	0001	1111	0100	0000	0000
18	0000	1101	2222	2332	2222	2212	3332	2333	2222	2222	2222	2333	2222	3343	3333	3332	3334	4333	3334	3333	3223	3221	1123	3333
19	2121	1111	1111	1111	1221	1121	1122	3444	3332	2211	1111	1111	2121	1111	1221	0000	2222	1111	0033	2333	3333	3222	3445	5443
20	2223	3332	3444	4433	2222	2344	3222	3322	2223	2222	2212	2322	2212	2212	2212	3334	4444	4332	0001	1111	1110	0000	0012	2111
21	0110	0001	1122	2111	2222	2111	1221	1222	2211	1111	1112	2222	2011	2121	2221	1111	2215	5555	5567	4443	4223	3333	5565	5332
22	2222	2233	2221	1222	2212	1222	2222	2232	2222	1110	1110	1112	3333	4334	3322	1101	1221	0000	0001	2222	1111	1110	0000	0000
23	0000	0000	0000	0100	0000	0001	1211	0000	1111	1100	0001	1112	1111	1011	1111	1111	1111	0111	0110	0001	1110	0000	0000	0002
24	2111	1101	1122	2222	2222	0000	0111	1111	1111	1122	1111	1111	2332	2221	1223	3443	2223	4444	4332	2333	3222	2122	1122	2000
25	0001	1211	2111	1111	1111	1111	1112	2223	3333	3332	3321	2232	3332	2344	4443	3344	4444	4444	4444	4333	2222	2222	2333	4433
26	3333	1133	3344	3321	1000	0100	0112	2222	2222	2223	2222	2222	2222	2222	2222	2222	2222	2222	2222	2222	3322	2212	2222	2222
27	2222	2223	3332	1112	2222	2211	2012	2222	2222	2211	2222	2232	3333	2233	4555	5555	5555	5555	5555	5544	3333	3233	2333	3345
28	3322	2344	3332	2222	1222	2221	2112	2212	1222	2222	1222	2222	2222	2222	2211	1111	1111	0111	1111	1221	1222	2222	2211	2222
29	1111	2112	1222	1111	1100	0000	0000	0000	0000	0000	0000	0000	0001	1111	0111	1111	2222	2121	1133	2222	3322	1222	2222	2222
30	2222	2222	2222	2222	2222	2222	2222	1212	2222	1110	0000	1111	1111	1122	2222	2222	3444	4444	4443	3333	3222	2233	1001	2221
31	1111	1222	2111	1111	1222	2211	1110	0000	0000	0001	1000	1122	2211	1111	1111	0244	5555	5555	5443	3332	2110	0122	2222	2221

Q-INDICES OF GEOMAGNETIC ACTIVITY

Q-indices for 4 consecutive intervals of 15 minutes centred at the full hour, 15 minutes later, etc.

8 LERWICK

AUGUST 1958

	Hour G. M. T.																							
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	1111	1111	1111	2221	1111	1111	1000	1000	0000	0000	0011	0112	3333	2121	2111	1112	0000	2011	0122	2333	3222	2222	3111	0112
2	2221	1121	1111	2111	1111	1122	2222	2221	1121	1111	0000	1221	1111	1133	2211	1013	3333	3333	3323	3333	3332	2111	1122	2222
3	2222	2333	3321	1001	2222	1000	0000	0112	2222	2222	2111	0011	1110	0022	2333	3222	2221	1222	2222	1101	0000	0000	0000	0000
4	0111	1111	1112	2222	2210	0000	0000	0000	1122	2222	2221	2111	2211	1111	1111	1111	1222	2222	2221	1111	1000	0000	0111	1111
5	1100	0110	0111	0100	0110	0000	0000	0000	0000	0000	0000	0001	1110	0001	2221	0000	0000	0010	2221	1111	1111	1111	1111	1222
6	1111	1111	1111	1111	1111	1111	1100	1111	1111	1110	0111	1122	2222	2223	3333	3333	3222	2222	2222	2222	2222	2122	2222	2222
7	2222	2222	2222	2111	1222	2222	2111	1000	0001	1122	2222	2223	3333	2222	2222	2222	2222	2223	3323	3333	2211	1112	2111	1111
8	1111	1111	1011	1111	1111	1111	1100	0000	0000	0001	1111	1111	2211	2222	2222	2222	2221	1111	1111	1111	1111	1111	1111	1222
9	2111	1110	0000	0001	2211	1000	0000	1010	0000	0000	0000	0011	1222	2222	2222	2332	2322	2222	2222	2222	2222	2222	2000	1111
10	1111	1111	1222	1111	1112	1111	1111	1012	2222	1011	1222	3222	2222	2333	2233	2233	3333	3322	1111	2233	3322	2222	2212	2210
11	1111	1121	1012	2222	2110	1111	1111	1211	2222	1111	1222	3332	2222	2221	1222	1112	2223	3322	2113	3222	2222	2222	2211	1111
12	1111	0111	1111	1221	0011	2222	2333	2111	1000	0000	0111	1011	1111	0111	1000	0000	0111	1111	1111	1111	1112	2222	2211	1122
13	2221	1001	1111	1011	1111	1222	2222	3322	2111	1122	2233	2222	1111	1111	1111	2111	1111	1122	1111	1111	1111	1211	1111	1111
14	1111	1111	1001	2221	1111	1111	1011	1122	2222	2222	2222	2222	2222	2222	2222	2111	1111	1233	3333	2211	2222	2222	2332	1111
15	2222	1111	0110	0001	0221	1211	1100	0011	1111	1222	2222	2222	2222	2222	2222	2222	2211	2211	1112	2222	2222	2122	2222	2222
16	1222	2212	2222	2111	1112	1101	1111	2222	2122	2222	2222	2222	2222	2233	2222	2233	3333	3210	1122	2211	1222	2211	1111	1111
17	0000	0001	0111	1110	0001	0101	0342	2223	3333	3322	1223	3333	3222	2333	2226	6566	6655	5564	4532	3344	6543	2345	6653	4357
18	7665	5433	3322	2223	3234	4444	3333	3333	3233	3333	3333	3223	3333	3322	2232	2211	2111	1122	2111	1221	0121	1222	2211	1111
19	1222	1222	2222	2222	2222	2222	2222	2223	2232	2222	3333	2222	2222	2222	2221	1111	1111	1233	2222	2211	1221	1112	2222	3322
20	2222	2222	1111	1110	1111	1111	1000	0001	1111	1111	1112	2222	2222	2222	2222	2222	2112	1112	2222	2111	1111	1111	1111	1111
21	1111	1112	2111	1111	1221	1111	0000	0001	1000	0000	0111	1222	2222	2222	2222	2222	2222	1112	2222	2222	2222	2222	2332	2221
22	1122	2211	1233	4444	3455	4344	4443	3222	3222	2211	1122	2232	2222	2222	1112	2233	3222	1122	3222	1122	2121	2222	0001	1010
23	0010	0111	1111	1110	1222	2122	3221	2221	1111	1011	1011	2112	1111	2112	1111	2222	2222	2222	2221	1112	2101	1101	1111	1111
24	2101	0123	4678	7878	7887	7654	4354	3343	3333	3333	3222	2255	4323	3333	4444	4333	2222	1222	2333	2110	0111	1222	2222	2222
25	2122	2222	2222	2333	3343	3322	2222	2112	2111	0011	1111	1111	1112	3222	1111	1000	0111	1111	1211	1110	0000	0000	0000	0000
26	0101	1111	1110	0000	1123	3333	3333	3333	3333	3333	3333	3233	3222	2121	1011	1111	1112	2111	1121	2211	1100	0000	0110	0011
27	1000	1122	2223	2325	3345	5555	4555	5555	5555	6654	4433	3333	3233	3322	3444	3333	3333	4411	5653	3322	4432	1122	2344	3222
28	1100	0000	0000	0110	0000	1111	2221	2222	2222	2332	2222	2222	1122	2333	3334	4433	3333	4444	3333	3332	2001	1111	1000	0000
29	0000	0000	1111	1221	0000	0000	1111	1222	2122	2222	2122	2222	2223	3222	2222	2101	1112	2222	2222	3221	1111	0000	0000	1102
30	2110	0000	1111	0122	2221	0000	0010	0000	1111	2222	2222	2222	2112	2333	2011	2221	1111	1111	1001	1100	0101	1110	0100	0000
31	0000	0100	0111	1221	0000	1110	0000	0000	0000	0011	1111	1111	1121	1111	1122	2333	3332	2222	1111	1100	0000	0000	0000	0000

Q-INDICES OF GEOMAGNETIC ACTIVITY

Q-indices for 4 consecutive intervals of 15 minutes centred at the full hour, 15 minutes later, etc.

8 LERWICK													SEPTEMBER 1958														
	Hour G.M.T.																										
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
1	0000	0111	1000	0000	0000	0000	0000	0000	0011	2222	2222	2222	2222	2332	2333	3322	2122	2000	0000	1111	1112	2221	1111	1111			
2	1111	1111	1101	1001	1111	2222	2222	2222	2222	2111	0000	0011	0006	0000	0122	1011	1221	1122	2222	2222	2222	2222	2222	2222			
3	2222	2222	3332	2222	2222	2222	3222	2222	2223	3333	3223	3222	2333	4444	4553	3444	4455	5666	6666	5555	5544	6654	4677	6666			
4	6656	6454	4444	4333	3223	3333	3332	2222	3222	2211	1132	3231	2111	2124	5556	7888	8777	7765	6676	6655	6665	7788	7699	8889			
5	9777	6888	7788	8887	7776	5433	3233	3223	3333	3322	2222	2321	2211	2333	3223	2223	3110	0022	2224	4455	5422	1100	0111	0122			
6	2111	1111	1111	1000	0000	0110	1122	2222	1111	1222	1122	2222	2222	2221	1110	0111	1000	0001	2211	1111	2110	0000	0000	0100			
7	0001	1000	0000	0000	1001	1222	2222	2211	1112	2212	2222	2212	2221	1000	2333	3444	4444	4444	4332	2233	4332	2344	5555	5556			
8	5432	2224	4443	4332	2332	2222	3322	2222	2221	1111	1122	2122	1110	1110	1100	2213	3211	1000	0000	0011	0000	1222	2344	4443			
9	2123	3444	4333	3222	2222	2222	2322	3222	2322	2221	1222	2112	2111	3345	4444	4432	2222	2110	2222	2221	1113	3331	1233	3331			
10	1111	2222	2221	1222	2222	2222	2222	2222	2222	2211	1000	0111	1222	2333	2211	2233	2233	3333	2221	0001	1000	1111	1000	2222			
11	1111	1111	1111	1112	1111	2222	2222	2222	2222	2111	0112	1111	2222	1001	1112	2221	1012	2111	1222	2222	2221	2221	1111	1111			
12	1222	2211	1222	2222	2211	1222	2122	2222	2111	1100	0001	1111	1111	1111	1221	1111	2221	1222	2222	2222	2222	2222	2222	2222			
13	2222	2222	2222	2222	2222	2222	2222	1101	0000	0000	0111	1111	1222	2222	2222	2222	2222	2212	2222	2222	2222	2222	2222	2222			
14	2222	2222	2222	2222	2222	2222	2221	1111	1111	2222	1111	1112	2222	2222	1111	2222	2212	2222	2111	2222	2221	1122	2222	1122			
15	2222	2222	2222	2222	2222	2222	2211	2222	2211	1111	2222	2222	2222	2222	2111	1122	2222	2222	3322	2222	2222	2222	2222	2333			
16	3333	3322	2333	2222	2233	3333	3333	3322	3323	2232	2211	2222	2212	2235	4322	2122	4555	5555	5444	3444	5554	4444	4344	4443			
17	3345	4212	2322	2222	3323	2222	2222	1222	2212	1111	0011	1121	1110	1110	0112	2112	2222	2222	1222	1111	1111	1111	1111	1111			
18	1122	2222	2211	1111	1111	1111	1122	2222	2211	1111	1111	1111	1110	0000	0000	0000	0000	1221	1122	2222	2211	0011	1111	1111			
19	1111	1111	1111	1111	1111	1011	0000	0000	0100	0000	0001	1111	2221	1110	0000	0000	0000	0111	1111	1222	2222	1111	1111	1111			
20	2112	2122	2211	1222	1221	1111	1111	1221	2111	1100	0000	0000	0000	0000	0000	0000	0000	0000	1011	1112	2221	1111	0111	1000			
21	0000	0111	0011	1000	0000	0000	0000	0111	1011	1111	0111	1000	0110	0000	0000	0000	0011	0011	0001	2210	0111	1000	0000	1110			
22	0011	1100	0000	0000	0000	0000	0000	0000	1111	1000	0011	0111	1111	1000	0001	1000	0011	0000	1001	1110	0000	0000	0000	0000			
23	0000	0000	0000	0001	1111	1111	1111	0000	0000	0000	0011	1111	1111	0001	1111	1000	0100	0000	0000	0000	0000	0000	0000	0013			
24	3210	0000	0011	1111	1000	0000	0001	1111	1111	1111	1112	2222	1001	1012	2111	1111	1001	0111	0110	0000	0000	0001	0000	1233			
25	3322	2222	2211	2333	3445	4333	4445	5444	4444	4443	3323	2333	4445	5556	6666	6677	6445	5566	5233	3233	3226	6555	5588	7766			
26	5555	4444	4446	6655	4333	3332	2222	3333	3332	2221	1011	0000	2211	2221	1221	2221	1023	3112	1110	0000	1122	3321	1100	0012			
27	1211	1000	0000	0000	0000	0000	0000	0000	0000	0001	1001	0000	0111	1000	0011	1123	2122	1222	1122	2211	1011	1233	2211	1133			
28	2222	2212	2100	0000	0001	1011	2221	1111	1001	1011	1011	1111	1111	0000	0111	0100	0000	0000	1100	0000	0000	0000	0000	0000			
29	0010	0000	0000	0000	0000	0000	0000	0011	1111	1211	1122	2111	1111	1011	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000			
30	0000	0000	0000	0000	0000	0000	0000	0001	0110	0001	2212	2222	2222	2222	2222	2332	2232	3333	4555	4322	2210	0124	4433	2110			
1st: 1045 Q = 2, Q' = 1 7th: 1445 Q = 3, Q' = 3																											

1st: 1045 Q = 2, Q' = 1
7th: 1445 Q = 3, Q' = 3

Q-INDICES OF GEOMAGNETIC ACTIVITY

Q-indices for 4 consecutive intervals of 15 minutes centred at the full hour, 15 minutes later, etc.

8	LERWICK													OCTOBER 1958													
	Hour G.M.T.																										
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
1	0000	0000	0001	1000	0000	1111	1111	2322	1001	1111	0112	2222	2222	2222	2111	1111	1000	1100	0000	0111	1100	2121	1113	3454			
2	4334	4443	3334	4333	3222	2222	2222	2111	1112	1111	1122	2222	2222	2222	2222	2111	1001	1111	1100	0000	0000	0000	2222	2222			
3	2221	1222	2222	1233	3333	2222	1112	2111	1111	2111	1121	2111	2222	3233	2222	2333	3332	3344	4432	2211	1011	1001	0100	0000			
4	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0011	1111	1122	1122	2222	1111	1110	0000	0000	0000	0001	1122				
5	2333	3333	2110	0000	0000	0000	0001	2110	0000	0000	0011	2222	2222	2222	2222	2112	2111	1122	2222	2222	2112	2101	1233	2000			
6	0001	1000	0000	0000	0011	1100	0000	0000	0010	0011	0000	1101	1111	2221	2211	1110	0000	0001	1000	0000	0112	2211	1112	1000			
7	0000	0122	2222	2222	2222	2222	1111	0010	0000	0021	1111	1111	2222	2212	2112	2112	2222	1001	1000	0111	1111	0113	3344	4444			
8	4323	3333	3333	3333	2233	2111	1110	0112	2211	1111	0111	1111	1111	1111	1111	1111	1110	0000	0000	0000	0000	0001	2220				
9	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0111	1111	1111	1111	1111	1111	0000	0000	0000	0000	0000	0000	0000	0000			
10	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0111	1111	1111	1111	1112	1111	1111	1111	1111	1000	0000	0000	1111			
11	1211	1000	0000	0000	0000	0000	0000	0111	1111	1111	1011	1122	1222	2222	1111	1111	0000	0000	0111	1111	1000	0122	2211	1121			
12	1000	0000	0000	0000	0000	0000	0000	0000	0000	0011	1111	1111	1111	1111	1111	1111	1111	1110	0000	0000	0000	0011	1000	0000			
13	0000	0000	0000	0000	0000	0000	0000	0000	0000	0122	2222	2322	2222	2222	2322	2222	2222	1100	1111	1101	0000	0000	0000	0000			
14	0000	0011	1101	0000	0011	0000	0000	0000	0111	1111	2222	2222	2221	1222	2222	2111	1121	1111	0000	0000	0000	0001	1000	1000			
15	0122	1000	0000	0000	0000	0000	0000	1101	0000	0000	1122	2111	1221	1001	1000	1111	1111	1111	1111	1211	1001	1012	2000	0000			
16	0000	0000	0000	0000	0001	1222	2100	0000	0101	1000	1111	2222	2222	2111	1111	1111	0110	0000	0000	0000	1100	0000	0000	0000			
17	0000	1110	0000	1111	2111	1111	2221	1111	1111	1111	1111	1221	1222	2111	1111	1111	1011	1111	2111	0100	0110	0000	1111	2211			
18	1000	0111	1001	2100	0000	1101	1000	1111	1111	1111	1111	1122	2222	2111	1111	1111	1111	0011	0000	0000	0002	1012	1000				
19	0000	0000	0000	0001	1100	0000	0000	0011	1111	1110	0100	1121	1222	2211	1122	2222	2232	2111	1111	0111	0011	1000	0122	1111			
20	2112	2111	1001	1000	0000	0000	0000	0000	0000	0000	0001	1111	1111	1111	1000	0000	0000	0001	0000	1000	0000	0011	2221	1000			
21	1100	0000	0011	1122	2111	1011	0000	0001	1011	1011	0000	0000	0000	0111	1110	1111	0000	0000	0000	0000	0000	0000	0000	0000			
22	0000	0000	0000	0222	3322	2122	3333	3333	3333	3311	0222	2222	2222	2222	2223	3223	3456	5333	3333	3557	5454	4345	6555	5445			
23	5555	5444	3333	4544	4444	4444	4334	4444	4444	4433	3111	0134	4333	3332	3444	4333	3333	4555	5554	3334	4334	4675	4443	5445			
24	6544	4344	4456	6664	3333	3223	3333	3254	4443	3322	2232	2223	3443	4556	5543	4455	5565	5663	3244	4446	6665	3444	6677	7776			
25	6543	2222	2222	2222	2222	2222	2223	2112	2210	0000	0111	1111	2222	2222	2222	2222	2222	2111	1111	1111	1111	1010	0000	0000			
26	0000	0000	0000	0000	0000	0100	1100	0111	1111	1110	0000	0000	0011	1011	1000	0111	1012	2222	2200	0133	2233	3322	2222	2222			
27	1111	1011	1222	1233	3222	2100	0000	1110	0100	0011	0010	1110	0011	1111	1000	0012	3333	3334	5566	6655	4366	6555	5555	6666			
28	5432	2001	1111	2211	1111	0000	0012	2234	3222	2211	1122	2322	4322	2133	2212	2223	4432	2443	4444	3221	1120	2345	5554	4554			
29	3333	2211	1101	2111	1100	0221	1113	1000	1100	0000	0011	0011	0000	0001	1111	1210	1200	0000	0000	0000	1454	4444	3333	3455			
30	5444	4433	2001	0011	0000	0001	1100	0001	1211	0111	1111	1122	2111	1111	1122	1210	1111	0222	2221	2222	2222	2223	4554	3221			
31	1111	1000	0000	0000	0001	1010	1000	0000	0000	0000	0011	1222	1110	1111	1001	0000	0321	1000	0000	0000	0111	1111	0000	0000			
13th: 1115 Q = 3, Q' = 2																											

Q-INDICES OF GEOMAGNETIC ACTIVITY

51

Q-indices for 4 consecutive intervals of 15 minutes centred at the full hour, 15 minutes later, etc.

8	LERWICK														NOVEMBER 1958													
	Hour G.M.T.																											
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23				
1	0000	0000	0000	0000	0000	0000	0000	0000	0000	1111	1112	1121	1221	1111	1111	2222	1222	2222	2222	2111	1112	1210	2221	1110				
2	1100	0000	0000	0000	0000	0000	0000	0000	0000	0111	2222	2222	2222	2222	2333	3333	3455	5677	5322	1110	0001	1001	1001	1112				
3	2222	2210	1100	0122	2332	1221	1000	0000	0100	0011	1112	1111	0002	2122	1222	2222	2222	2222	1110	1000	1111	1122	1111	1222				
4	2111	1111	1122	1111	1111	1000	0000	0000	0000	0000	0000	0002	3221	1011	1111	1000	0000	0000	0111	1121	1112	2221	1100	1111				
5	1111	1111	1111	1111	1100	0000	0000	0000	0111	1111	1111	1111	1111	1111	1100	0100	0000	0000	0000	0000	0000	0011	1111	1100				
6	0000	0000	0000	0000	0000	0000	0000	0000	0100	0111	0111	1111	1111	1000	0000	0000	0000	0101	1111	1111	1111	1111	1112	2000				
7	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0011	1222	2222	2222	2222	2222	3332	2221	1110	0000	0000	0000	0222	1111				
8	0000	0000	0000	0000	0000	0000	0000	0000	0000	0112	2222	2222	2222	2222	2221	1111	1111	0111	1000	0000	0000	0000	0000	0000				
9	0000	1100	0000	0000	0011	1011	1111	1100	0000	0111	1222	2222	2222	2222	2222	2111	1000	0000	0000	0000	0000	0111	1000	0000				
10	0010	0000	0000	0000	0000	0001	1111	1110	0000	1111	2233	3333	3333	3333	3222	2221	1111	1122	2222	2221	2222	1001	1110	0011				
11	1333	3334	5544	3222	2233	2222	2111	1110	0000	0000	1001	1111	1111	1111	0000	0000	1000	0010	1101	1100	0110	0111	1000	0000				
12	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	2111	1111	1211	1100	0000	0000	0001	1332	2211	1223	3201	1000				
13	0000	1112	2222	2122	2221	1111	1111	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0001	1000	0000				
14	0000	0001	1111	0000	0000	0000	0000	0000	0000	0000	0000	0001	1111	1000	0000	0000	0000	0000	0000	0000	0001	1111	2222	1110				
15	2211	1000	0000	0110	1111	0100	0000	0000	1101	1000	0000	0111	1122	2211	1110	0000	1000	0000	0000	0000	0000	0111	1110	0011				
16	1110	0000	0110	0000	0011	1011	1011	1000	0111	1110	0111	1111	2222	2222	2233	3222	2111	0000	0000	0000	0000	0000	0000	1100				
17	0000	0000	0000	0000	0000	0001	0000	0000	1111	0000	1111	1111	1122	2221	1111	1111	1111	0000	0000	0000	0000	2221	0001	1001				
18	1000	0000	0000	0000	0000	0000	0000	0000	0001	1111	1111	1111	1122	2221	2222	2222	2222	1110	0221	1111	2223	4432	2221	1100				
19	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0011	1111	1111	1111	1111	1111	1100	0000	0000	0001	1000	0000	0000	0000				
20	0000	0000	0001	1100	0000	0000	0000	0000	0000	0000	0000	0000	0011	1111	1111	1111	1111	1000	0000	0000	0000	0000	0000	0000				
21	0001	1110	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0111	1100	0000	1111	1222	2211	1000	0000	0000	0000	0000	0000				
22	0010	1111	1111	1111	0010	0000	0000	0000	0000	0000	0000	0000	0001	1111	1111	1111	1000	0000	0000	0000	0000	0000	0000	0000				
23	0110	0000	0000	0000	0000	0000	0000	0000	0000	0001	1000	0001	1001	1111	1122	3222	2222	1111	1111	1111	0000	0000	0000	1111				
24	0000	0000	0000	0000	0000	0000	0000	0000	1111	1211	1111	1112	2221	1001	2222	2222	1111	1111	1111	1111	1111	1122	2111	1000				
25	0000	0000	0000	0000	1000	0000	0000	0000	0000	0000	0000	0000	0001	0001	0111	2112	2223	2012	3212	2222	2111	1122	2222	4333				
26	3322	2211	1011	1000	0000	0000	0000	0000	0001	1100	0000	0011	1112	2221	1111	1111	2222	2122	2222	0111	2211	1000	0000	0011				
27	2110	0000	0000	0000	0001	1111	0000	0000	0000	0001	2222	2222	2111	1111	1111	1111	2222	1112	2200	0002	2221	1122	1212	3333				
28	2223	2122	2211	1123	3332	2122	2110	2222	2222	0101	1000	2111	2122	1222	2110	0110	0001	1100	0100	1111	1111	1112	2323	3222				
29	1111	1111	1113	3222	2222	2000	0000	0000	1122	2222	1111	1111	2222	2222	2222	2222	2222	2111	1111	1110	0000	0000	0000	0000				
30	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000				

5th: 1015 Q = 1, Q' = 1

Q-INDICES OF GEOMAGNETIC ACTIVITY

Q-indices for 4 consecutive intervals of 15 minutes centred at the full hour, 15 minutes later, etc.

8	LERWICK														DECEMBER 1958																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
	Hour G.M.T.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					

ALL DAYS

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

9 LERWICK

	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
	HORIZONTAL FORCE																							
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
Jan.	-6.2	-5.4	-12.9	-8.9	-2.9	+2.0	+3.8	+4.0	-1.9	-9.3	-13.2	-15.5	-17.8	-9.9	-3.6	+0.6	+6.8	+10.6	+15.0	+19.1	+16.0	+14.0	+9.8	+5.8
Feb.	-2.4	-13.1	-39.1	-12.8	-5.0	-8.0	-2.4	-8.2	-16.6	-25.3	-17.1	-14.8	-3.2	+0.8	+7.1	+10.5	+16.4	+20.4	+30.4	+34.6	+26.0	+8.0	+7.8	+6.0
Mar.	-35.1	-47.5	-42.0	-32.0	-8.1	+2.0	-0.3	-6.0	-14.6	-23.1	-27.9	-26.9	-19.4	-1.7	+25.8	+41.1	+64.7	+62.9	+54.4	+39.5	+19.0	+7.3	-10.7	-21.4
Apr.	-17.5	-25.9	-24.4	-19.4	-10.7	-5.0	-3.4	-10.3	-21.1	-33.4	-40.3	-44.0	-27.1	-8.5	+7.7	+33.7	+52.4	+58.5	+62.0	+53.3	+36.8	+17.3	-13.9	-16.8
May	-17.2	-20.5	-19.9	-19.4	-7.3	-5.4	-7.7	-20.3	-30.5	-41.9	-46.5	-37.7	-25.4	-4.4	+18.8	+33.9	+53.2	+65.4	+66.0	+55.8	+33.9	+3.2	-11.7	-14.4
June	-50.0	-53.9	-51.9	-57.2	-28.4	-22.6	-17.3	-21.0	-27.2	-31.7	-33.4	-26.3	-12.4	+7.0	+29.8	+48.2	+65.1	+74.4	+77.5	+69.7	+53.8	+28.1	-4.0	-16.3
July	-14.7	-30.6	-30.9	-19.4	-14.3	-17.4	-19.3	-29.2	-40.9	-42.5	-43.6	-43.2	-19.6	+3.6	+32.7	+63.7	+71.6	+68.4	+66.5	+53.3	+39.6	-9.6	-9.7	-14.5
Aug.	+6.2	+7.0	-7.5	-13.3	-14.7	-9.2	-10.1	-19.1	-33.3	-44.0	-45.4	-41.0	-29.1	-10.5	+6.8	+25.2	+36.2	+40.8	+40.8	+38.3	+28.8	+22.7	+13.8	+10.6
Sept.	-12.5	-14.5	-19.1	-13.9	-2.3	+9.2	+4.2	-5.0	-19.1	-31.9	-38.1	-33.6	-21.1	+2.7	+22.7	+46.2	+43.8	+46.6	+47.8	+42.5	+23.0	-9.2	-28.0	-40.4
Oct.	-5.3	+1.3	+1.1	+0.4	+9.5	+8.2	+8.0	+3.2	-7.3	-18.0	-28.4	-31.2	-24.1	-12.4	-3.0	+11.9	+27.0	+33.0	+32.3	+21.8	+4.7	-2.5	-9.4	-20.8
Nov.	+4.5	+2.7	+2.6	+4.7	+6.7	+9.5	+9.1	+5.2	-2.3	-13.1	-19.7	-24.0	-20.3	-15.8	-7.6	-1.9	+6.5	+14.5	+8.6	+8.8	+7.8	+5.4	+3.9	+4.2
Dec.	-30.3	-20.7	-22.9	-5.7	+2.8	+5.2	+5.8	+4.8	+0.4	-5.5	-8.8	-10.2	-8.9	-4.1	-0.4	+6.7	+19.1	+24.2	+29.0	+16.0	+13.5	+8.6	-3.3	-15.3
Year	-15.0	-18.4	-22.2	-16.4	-6.2	-2.6	-2.5	-8.5	-17.9	-26.6	-30.2	-29.0	-19.0	-4.4	+11.4	+26.7	+38.6	+43.3	+44.2	+37.7	+25.2	+7.8	-4.6	-11.1
Winter	-8.6	-9.1	-18.1	-5.7	+0.4	+2.2	+4.1	+1.5	-5.1	-13.3	-14.7	-16.1	-12.5	-7.3	-1.1	+4.0	+12.2	+17.4	+20.7	+19.6	+15.8	+9.0	+4.5	+0.2
Equinox	-17.6	-21.7	-21.1	-16.2	-2.9	+3.6	+2.1	-4.5	-15.5	-26.6	-33.7	-33.9	-22.9	-5.0	+13.3	+33.2	+47.0	+50.3	+49.1	+39.3	+20.9	+3.2	-15.5	-24.9
Summer	-18.9	-24.5	-27.5	-27.4	-16.2	-13.7	-13.6	-22.4	-33.0	-40.0	-42.2	-37.1	-21.6	-1.1	+22.0	+42.7	+56.5	+62.3	+62.7	+54.3	+39.0	+11.1	-2.9	-8.7
	DECLINATION																							
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
Jan.	-4.07	-4.29	-3.91	-4.66	-3.57	-2.73	-1.90	-2.25	-2.44	-1.60	-0.42	+1.42	+3.96	+5.47	+5.15	+4.82	+5.66	+5.69	+4.58	+2.71	+0.03	-1.90	-2.54	-3.21
Feb.	-3.01	-1.93	+1.11	-4.73	-5.06	-4.66	-3.56	-2.88	-1.78	-0.49	+1.64	+3.57	+5.04	+6.08	+6.21	+5.28	+4.10	+3.43	+1.92	+0.96	-1.33	-2.62	-3.80	-3.49
Mar.	-3.96	-7.28	-7.71	-5.38	-5.83	-4.91	-3.03	-4.27	-4.28	-2.45	+0.40	+4.70	+7.88	+9.68	+10.16	+8.42	+7.09	+5.43	+3.42	+2.12	-0.26	-2.05	-3.63	-4.26
Apr.	-3.78	-4.76	-5.87	-7.12	-6.73	-7.19	-7.18	-7.18	-5.51	-2.27	+1.33	+5.62	+9.20	+10.72	+10.28	+8.47	+6.63	+4.57	+3.36	+1.91	+0.97	-0.24	-1.18	-4.05
May	-1.54	-3.34	-5.25	-5.68	-6.26	-7.60	-9.31	-9.00	-7.77	-4.25	-0.14	+4.11	+7.58	+9.40	+9.03	+7.70	+5.88	+5.07	+3.57	+2.15	+3.11	+2.70	+0.57	-0.73
June	-2.01	-5.03	-6.63	-8.33	-7.66	-8.65	-9.19	-9.24	-6.57	-3.52	+0.83	+4.61	+8.00	+8.72	+8.24	+6.99	+6.40	+5.19	+4.81	+4.41	+4.65	+3.63	+1.24	-0.89
July	-1.44	-2.73	-4.99	-6.35	-7.21	-7.87	-9.00	-9.32	-7.09	-4.62	-2.22	+0.90	+6.28	+7.54	+7.57	+8.22	+6.67	+6.57	+5.83	+5.10	+4.17	+4.00	+0.91	-0.92
Aug.	-0.55	-0.79	-1.63	-4.71	-5.37	-7.38	-8.24	-8.32	-6.60	-4.00	+0.63	+4.94	+8.45	+9.73	+8.12	+5.95	+3.50	+1.45	+0.52	+1.01	+1.20	+1.28	+0.82	-0.01
Sept.	-3.69	-4.00	-5.39	-5.18	-4.83	-5.13	-6.17	-6.32	-5.60	-3.93	+0.59	+4.98	+8.22	+9.22	+7.86	+5.62	+5.57	+4.27	+4.06	+2.28	+1.79	-0.02	-0.80	-3.40
Oct.	-3.74	-3.73	-2.92	-2.72	-2.63	-2.40	-2.21	-3.12	-4.44	-3.88	-1.06	+3.11	+6.03	+7.28	+7.23	+6.21	+4.99	+4.09	+3.46	+2.40	-1.02	-2.75	-4.63	-3.55
Nov.	-2.67	-2.67	-2.64	-2.40	-2.46	-2.02	-1.80	-1.82	-2.30	-1.95	-0.02	+2.14	+3.87	+4.75	+5.13	+4.68	+3.80	+3.07	+2.00	+0.89	-0.33	-1.71	-2.65	-2.89
Dec.	-3.35	-5.07	-5.13	-3.11	-1.79	-1.30	-0.84	-0.82	-0.83	-0.28	+0.79	+2.35	+3.77	+4.57	+4.31	+4.16	+4.58	+4.24	+2.73	+0.39	-0.44	-1.78	-3.33	-3.82
Year	-2.82	-3.80	-4.25	-5.03	-4.95	-5.15	-5.20	-5.38	-4.60	-2.77	+0.20	+3.54	+6.52	+7.76	+7.44	+6.38	+5.41	+4.42	+3.35	+2.19	+1.05	-0.12	-1.59	-2.60
Winter	-3.27	-3.49	-2.64	-3.73	-3.22	-2.68	-2.03	-1.94	-1.84	-1.08	+0.50	+2.37	+4.16	+5.22	+5.20	+4.73	+4.53	+4.11	+2.81	+1.24	-0.52	-2.00	-3.08	-3.35
Equinox	-3.79	-4.94	-5.47	-5.10	-5.01	-4.91	-4.65	-5.22	-4.96	-3.13	+0.31	+4.60	+7.83	+9.23	+8.88	+7.18	+6.07	+4.59	+3.57	+2.18	+0.37	-1.27	-2.56	-3.81
Summer	-1.39	-2.97	-4.63	-6.27	-6.63	-7.87	-8.93	-8.97	-7.01	-4.10	-0.23	+3.64	+7.58	+8.85	+8.24	+7.21	+5.61	+4.57	+3.68	+3.17	+3.28	+2.90	+0.89	-0.64
	VERTICAL FORCE																							
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
Jan.	-7.5	-10.9	-14.3	-24.9	-30.3	-29.3	-21.0	-13.8	-7.7	-3.9	-1.6	+1.0	+2.9	+6.1	+10.7	+12.4	+15.0	+20.3	+24.2	+23.6	+21.2	+15.8	+9.3	+2.7
Feb.	-21.8	-28.5	-40.0	-28.8	-24.6	-23.6	-11.4	-7.2	+0.4	-0.6	-2.1	+2.8	+4.8	+13.8	+19.7	+25.1	+34.4	+33.8	+35.7	+29.8	+8.3	+2.3	-6.8	-15.5
Mar.	-53.7	-64.4	-57.3	-57.4	-52.2	-38.1	-28.4	-17.5	-8.6	-1.7	+4.7	+8.5	+14.6	+22.8	+36.8	+51.5	+62.8	+69.0	+71.4	+51.5	+30.2	+7.6	-17.4	-34.7
Apr.	-35.5	-35.2	-41.4	-41.2	-35.6	-28.8	-16.1	-9.1	-5.9	-2.4	+0.6	+4.4	+8.4	+20.7	+28.9	+36.6	+47.4	+54.7	+45.9	+35.6	+19.2	+5.0	-19.4	-36.8
May	-37.3	-44.3	-42.5	-35.6	-23.7	-14.4	-6.5	-2.2	-2.8	-1.1	-0.1	+2.6	+8.6	+14.5	+23.8	+29.1	+33.5	+31.7	+33.3	+30.0	+21.4	+12.8	-9.7	-21.1
June	-8.7	-25.1	-48.1	-52.7	-34.9	-17.4	-17.2	-5.6	+2.2	+5.7	+5.1	+3.6	+7.3	+15.1	+27.4	+36.9	+40.0	+38.8	+32.7	+25.1	+14.0	-1.1	-20.7	-22.4
July	-18.7	-25.6	-35.6	-31.2	-20.5	-13.9	-9.7	-3.5	+0.1	-3.4	-2.6	+1.8	+0.4	+10.0	+25.0	+26.4	+24.3	+26.6	+29.1	+21.8	+14.9	+15.1	-7.3	-23.5
Aug.	-12.4	-15.4	-27.0	-33.3	-27.8	-19.8	-11.6	-4.6	-3.3	-2.8	-1.2	-0.8	+1.7	+8.5	+18.6	+25.2	+28.4	+29.4	+22.5	+16.6	+10.8	+6.9	-2.1	-6.5
Sept.	-20.1	-23.7	-27.5	-18.9	-11.4	-14.0	-6.8	-3.0	-0.6	-1.4	-1.5	-2.2	+1.6	+7.9	+21.9	+26.2	+10.2	+23.2	+17.6	+21.8	+13.8	+6.9	+4.8	-24.8
Oct.	-29.7	-22.3	-16.4	-19.8	-18.5	-16.2	-11.7	-5.2	+1.2	+5.3	+8.0	+8.9	+10.1	+11.8	+11.9	+16.2	+24.6	+29.0						

DIURNAL INEQUALITIES OF THE TERRESTRIAL MAGNETIC ELEMENTS
INTERNATIONAL QUIET DAYS

53

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

10 LERWICK

	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
HORIZONTAL FORCE																								
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
Jan.	+2.9	+0.8	+2.5	+2.5	+5.9	+8.4	+9.1	+8.5	+4.3	-2.0	-8.5	-14.3	-16.3	-12.8	-11.9	-7.5	-4.1	-2.0	+3.7	+6.9	+6.1	+5.6	+6.1	+6.1
Feb.	+5.5	+3.6	+2.7	+1.6	+3.6	+4.7	+3.4	+4.8	+0.1	-7.2	-14.7	-19.0	-12.9	-15.2	-14.1	-9.8	-6.2	+1.9	+10.4	+12.8	+12.9	+10.8	+9.7	+10.6
Mar.	+1.4	-17.5	-11.0	-6.1	+5.8	+13.9	+13.2	+8.7	-2.8	-18.9	-28.6	-34.5	-33.8	-25.9	-13.0	-3.3	+14.6	+28.3	+22.2	+19.7	+19.4	+21.1	+14.0	+13.1
Apr.	+10.8	+12.3	+10.3	+9.4	+5.9	+5.5	+4.2	+0.5	-11.5	-26.6	-36.3	-45.7	-42.6	-30.9	-15.1	-6.6	+4.7	+17.1	+22.2	+26.3	+25.1	+23.8	+18.9	+18.3
May	+8.1	+5.6	+4.9	+7.7	+10.7	+9.4	+3.7	-7.3	-23.1	-40.8	-50.5	-49.9	-41.3	-25.6	-13.7	+6.1	+20.9	+29.0	+31.7	+27.7	+27.9	+21.8	+19.9	+17.1
June	+4.9	+4.8	+4.2	+5.9	+3.6	+0.6	-7.7	-21.0	-36.4	-41.9	-41.6	-35.4	-31.1	-19.8	-9.4	+4.3	+18.0	+29.8	+42.7	+39.0	+32.2	+27.5	+17.4	+9.4
July	-2.6	-5.9	-6.0	-2.9	-4.2	-0.9	-6.8	-17.5	-30.4	-41.5	-43.6	-36.7	-26.8	-9.5	+3.4	+16.3	+28.8	+37.5	+41.4	+34.7	+31.2	+26.5	+12.4	+3.1
Aug.	+8.3	+7.8	+7.7	+8.8	+8.8	+7.5	-0.4	-14.4	-31.3	-41.2	-48.7	-50.4	-41.9	-17.4	-3.2	+4.3	+19.6	+27.5	+31.4	+30.2	+28.3	+23.8	+20.1	+14.8
Sept.	+14.3	+13.3	+12.6	+12.1	+11.3	+9.7	+4.1	-7.5	-23.0	-40.5	-47.5	-46.3	-34.5	-19.1	-8.4	+2.5	+8.3	+14.5	+18.7	+24.7	+23.0	+19.3	+19.9	+18.5
Oct.	+13.3	+9.3	+8.3	+10.1	+10.9	+10.2	+9.7	+4.3	-5.3	-20.9	-34.7	-40.1	-36.1	-29.5	-19.1	-9.7	+2.3	+12.4	+17.5	+19.7	+15.3	+18.3	+16.7	+17.1
Nov.	+4.3	+5.8	+4.4	+4.7	+5.8	+6.6	+6.5	+3.4	-4.2	-15.3	-22.8	-26.2	-22.7	-16.6	-8.4	-1.5	+3.4	+8.0	+10.1	+11.8	+12.4	+10.7	+10.6	+9.2
Dec.	+0.8	+1.2	+3.2	+1.4	+2.6	+4.3	+3.8	+0.8	-3.8	-10.0	-14.4	-15.0	-13.2	-9.0	-6.8	-4.0	+1.0	+5.3	+9.6	+10.6	+10.8	+9.4	+6.6	+4.8
Year	+6.0	+3.4	+3.7	+4.6	+5.9	+6.7	+3.6	-3.1	-13.9	-25.6	-32.7	-34.5	-29.4	-19.3	-10.0	-0.7	+9.3	+17.4	+21.8	+22.0	+20.4	+18.2	+14.4	+11.8
Winter	+3.4	+2.9	+3.2	+2.5	+4.5	+6.0	+5.7	+4.4	-0.9	-8.6	-15.1	-18.6	-16.3	-13.4	-10.3	-5.7	-1.5	+3.3	+8.5	+10.5	+10.5	+9.1	+8.3	+7.7
Equinox	+9.9	+4.3	+5.1	+6.4	+8.5	+9.8	+7.8	+1.5	-10.7	-26.7	-36.8	-41.7	-36.7	-26.3	-13.9	-4.3	+7.5	+18.1	+20.1	+22.6	+20.7	+20.6	+17.4	+16.7
Summer	+4.7	+3.1	+2.7	+4.9	+4.7	+4.1	-2.8	-15.1	-30.3	-41.3	-46.1	-43.1	-35.3	-18.1	-5.7	+7.7	+21.8	+30.9	+36.8	+32.9	+29.9	+24.9	+17.5	+11.1
DECLINATION																								
Jan.	-3.62	-3.31	-2.63	-1.56	-0.77	-1.03	-1.56	-2.15	-2.53	-2.52	-1.85	-0.19	+1.98	+4.21	+3.89	+2.90	+3.71	+3.43	+2.36	+1.57	+0.87	+0.40	-0.37	-1.23
Feb.	-1.46	-1.87	-2.39	-2.00	-1.57	-2.29	-1.72	-1.37	-1.83	-0.80	+1.27	+2.33	+3.82	+2.71	+2.79	+2.10	+1.31	+1.07	+0.50	+1.07	+1.03	-0.24	-1.07	-1.39
Mar.	-1.54	-4.30	-5.12	-4.14	-3.90	-3.89	-2.74	-4.46	-4.14	-1.88	+1.02	+3.88	+6.28	+7.16	+6.40	+4.40	+3.28	+1.59	+0.98	+2.24	+2.56	+0.84	-1.90	-2.62
Apr.	-1.43	-1.06	-0.70	-1.91	-3.78	-4.92	-6.57	-7.40	-5.96	-2.99	-0.56	+2.60	+5.17	+6.80	+6.46	+4.77	+2.84	+1.36	+1.09	+1.74	+2.40	+2.29	+0.08	-0.32
May	+0.38	-1.27	-2.80	-4.10	-5.80	-7.49	-9.66	-9.48	-9.08	-5.47	-0.60	+4.78	+8.96	+11.01	+9.48	+6.60	+4.28	+2.29	+1.38	+1.24	+1.78	+1.29	+1.14	+1.14
June	-0.28	-0.34	-2.60	-4.62	-6.76	-8.95	-9.64	-8.82	-6.48	-3.78	+0.48	+5.14	+8.00	+9.10	+7.80	+5.98	+4.16	+2.73	+2.24	+2.14	+2.42	+1.82	+0.84	-0.58
July	+0.94	-1.57	-2.82	-4.76	-5.10	-7.83	-9.54	-8.48	-7.10	-4.31	-1.00	+2.62	+6.02	+6.69	+5.82	+5.56	+4.60	+4.27	+4.08	+3.32	+2.94	+3.01	+2.20	+0.44
Aug.	+0.43	-0.54	-1.96	-2.59	-5.08	-7.08	-8.49	-8.78	-7.16	-5.43	-1.72	+2.84	+7.31	+9.32	+8.46	+5.99	+3.86	+2.10	+1.65	+1.64	+1.94	+1.29	+1.04	+0.96
Sept.	-0.62	-1.21	-1.35	-2.00	-2.57	-3.77	-5.56	-6.89	-6.77	-5.32	-1.29	+3.11	+7.00	+7.81	+6.57	+4.40	+2.37	+1.45	+1.54	+0.65	+1.11	+0.44	+0.61	+0.29
Oct.	-2.01	-2.02	-1.67	-1.93	-2.29	-2.60	-3.33	-4.51	-5.81	-5.46	-2.61	+0.75	+4.03	+6.04	+6.27	+5.35	+3.77	+2.96	+2.35	+2.47	+1.73	-0.36	-0.53	-0.59
Nov.	-1.08	-1.37	-1.62	-1.69	-1.91	-1.92	-2.17	-2.57	-3.04	-2.69	-0.92	+1.47	+2.92	+2.97	+3.54	+3.01	+2.39	+2.38	+2.11	+1.75	+0.82	+0.13	-1.56	-0.95
Dec.	-0.96	-0.97	-1.92	-2.03	-1.86	-1.33	-1.36	-1.59	-1.86	-1.11	-0.44	+0.95	+1.94	+3.57	+3.00	+2.17	+2.04	+1.69	+1.84	+1.09	+0.34	-0.31	-1.58	-1.31
Year	-0.94	-1.65	-2.30	-2.78	-3.45	-4.43	-5.19	-5.54	-5.15	-3.48	-0.69	+2.52	+5.29	+6.45	+5.87	+4.44	+3.22	+2.28	+1.84	+1.74	+1.66	+0.88	-0.09	-0.51
Winter	-1.78	-1.88	-2.14	-1.82	-1.53	-1.64	-1.70	-1.92	-2.37	-1.78	-0.49	+1.14	+2.67	+3.37	+3.31	+2.55	+2.36	+2.14	+1.70	+1.37	+0.77	-0.01	-1.15	-1.22
Equinox	-1.40	-2.15	-2.21	-2.49	-3.13	-3.79	-4.55	-5.81	-5.67	-3.91	-0.86	+2.59	+5.62	+6.95	+6.43	+4.73	+3.07	+1.84	+1.49	+1.77	+1.95	+0.80	-0.43	-0.81
Summer	+0.37	-0.93	-2.55	-4.02	-5.69	-7.84	-9.33	-8.89	-7.45	-4.75	-0.71	+3.85	+7.57	+9.03	+7.89	+6.03	+4.23	+2.85	+2.34	+2.09	+2.27	+1.85	+1.31	+0.49
VERTICAL FORCE																								
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
Jan.	-11.1	-9.5	-7.2	-6.3	-6.7	-6.9	-5.1	-4.3	-3.8	-2.9	-1.3	-0.1	+1.1	+4.9	+9.0	+7.7	+7.7	+9.5	+6.3	+6.9	+6.0	+4.1	+1.5	-1.5
Feb.	-2.8	-1.9	-0.7	-1.4	-2.5	-1.5	-2.0	-4.7	-3.9	-3.4	-0.3	+1.7	+4.2	+7.1	+5.3	+4.4	+5.1	+3.1	+1.2	-0.1	+0.1	+1.4	-0.1	-8.3
Mar.	-22.4	-42.1	-38.2	-27.8	-21.4	-14.1	-5.0	-0.4	+5.2	+8.9	+9.6	+9.6	+7.8	+7.1	+8.0	+8.8	+7.4	+20.7	+25.4	+19.8	+13.6	+10.7	+9.2	-0.4
Apr.	-2.5	+1.1	+1.5	+1.9	+3.5	+1.3	-2.5	-4.5	-5.5	-5.1	-4.7	-4.9	-6.1	-4.9	-3.3	-1.9	+1.7	+6.7	+7.9	+6.5	+6.7	+4.7	+2.9	-0.5
May	-4.4	-9.5	-4.2	+0.9	+4.6	+6.9	+8.2	+6.1	+2.2	-3.3	-10.4	-13.9	-15.2	-12.9	-6.4	-0.7	+5.6	+11.3	+12.8	+12.3	+8.2	+4.5	+0.6	-3.3
June	-1.8	-1.8	-0.4	+2.8	+3.2	+2.3	+1.8	+0.8	-1.0	-7.6	-11.6	-12.6	-11.0	-8.2	-2.2	+2.2	+9.2	+16.5	+14.4	+11.2	+5.2	+0.8	-6.6	-5.6
July	-8.0	-8.6	-10.0	-14.2	-11.2	-10.3	-4.6	-4.4	-5.0	-7.4	-8.0	-10.8	-10.0	-6.6	+1.8	+17.6	+29.0	+25.7	+20.0	+17.2	+13.4	+5.8	0.0	-11.4
Aug.	-6.8	-8.1	-4.6	-1.7	-1.4	+0.7	+2.8	+4.9	+2.4	-1.5	-6.8	-9.3	-12.2	-10.1	0.0	+4.9	+5.6	+9.5	+9.4	+8.9	+7.4	+5.3	+1.6	-0.9
Sept.	+1.9	+3.4	+3.8	+4.3	+4.8	+6.8	+7.7	+8.2	+7.0	+3.3	-3.4	-9.8	-13.9	-12.6	-7.8	-4.7	-3.0	-1.4	-0.3	+1.8	+2.8	+2.1	-0.4	-0.6
Oct.	-3.8	-0.7	+0.5	-2.2	-0.5	+1.3	+2.6	+5.1	+6.7	+3.0	+2.5	+0.3	-2.8	-3.3	-2.1	-1.2	-0.9	-0.3	-0.2	+0.7	+2.7	+1.4	-3.9	-4.9
Nov.	+0.9	-0.3	-0.3	-0.3	-0.9	-1.0	-0.9	+0.9	+1.7	+1.7	+0.5	+0.9	-1.1	-2.9	-2.9	-0.7	-0.1	-0.4	-0.3	+1.3	+0.3	+1.9	+1.7	+0.3
Dec.	+1.4	+3.0	+2.5	+4.0	+1.6	-0.6	-0.2	+1.4	+3.3	-4.0	-2.2	-3.2	-3.8	-2.8	-0.3	+2.6	+2.6	+1.4	-1.6	-1.2	-0.5	+0.4	-0.4	-3.4
Year	-4.9	-6.3	-4.8	-3.3	-2.2	-1.3	+0.2	+0.8	+0.8	-1.5	-3.0	-4.3	-5.3	-3.8	-0.1	+3.3	+5.8	+8.5	+8.1	+7.1	+5.5	+3.6	+0.5	-3.4
Winter	-2.9	-2.2	-1.4	-1.0	-2.1	-2.5	-2.1	-1.7	-0.7	-2.1	-0.8	-0.2	+0.1	+1.6	+2.8	+3.5	+3.8	+3.4	+1.9	+1.7	+1.5	+1.9	+0.7	-3.2
Equinox	-6.7	-9.6	-8.1	-5.9	-3.4	-1.2	+0.7	+2.1	+3.3	+2.5	+1.0	-1.2	-3.7	-3.4	-1.3	+0.3	+1.3	+6.4	+8.2	+7.2	+6.5	+4.7	+1.9	-1.6
Summer	-5.3	-7.0	-4.8	-3.1	-1.2	-0.1	+2.1	+1.9	+0.3	-4.9	-9.2	-11.7	-12.1	-9.5	-1.7	+6.0	+12.3	+15.7	+14.1	+12.4	+8.5	+4.1	-1.1	-5.3

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

DIURNAL INEQUALITIES OF THE TERRESTRIAL MAGNETIC ELEMENTS

INTERNATIONAL DISTURBED DAYS

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

11 LERWICK

	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
HORIZONTAL FORCE																								
Jan.	<i>γ</i> -44.6	<i>γ</i> -39.2	<i>γ</i> -81.2	<i>γ</i> -57.4	<i>γ</i> -38.2	<i>γ</i> -10.5	<i>γ</i> +0.8	<i>γ</i> +4.8	<i>γ</i> 0.0	<i>γ</i> -12.6	<i>γ</i> -18.8	<i>γ</i> -14.4	<i>γ</i> -17.0	<i>γ</i> -11.0	<i>γ</i> +14.4	<i>γ</i> +16.0	<i>γ</i> +26.0	<i>γ</i> +30.7	<i>γ</i> +47.8	<i>γ</i> +70.8	<i>γ</i> +48.2	<i>γ</i> +42.8	<i>γ</i> +28.2	<i>γ</i> +14.4
Feb.	+29.5	-34.0	-170.8	-32.1	-8.6	-50.0	-34.5	-64.6	-93.8	-104.9	-47.2	-21.6	+46.7	+38.4	+50.2	+39.1	+41.4	+52.2	+72.7	+95.4	+98.2	+55.9	+26.4	+16.0
Mar.	-60.0	-75.9	-91.9	-110.6	-48.1	-15.1	-12.4	-32.5	-26.3	-13.0	-5.9	-1.9	+11.6	+43.5	+65.1	+111.8	+108.3	+101.5	+77.8	+49.3	+17.3	+12.2	-51.9	-52.9
Apr.	-57.4	-68.9	-72.8	-56.3	-15.1	-3.0	-6.3	-19.3	-22.0	-31.3	-38.6	-45.1	-2.0	+23.7	+36.4	+98.7	+103.3	+124.2	+114.1	+75.1	+34.0	+1.7	-100.0	-73.1
May	-62.1	-63.1	-64.5	-79.5	-25.7	-17.2	-28.5	-42.1	-50.5	-59.9	-57.7	-6.1	+38.9	+78.1	+113.3	+130.3	+142.5	+151.4	+113.9	+87.3	+19.7	-107.7	-102.5	-108.3
June	-179.4	-266.7	-202.8	-239.1	-122.3	-103.0	-45.1	-24.9	-28.6	-7.9	+6.2	+6.5	+26.2	+63.9	+130.4	+182.1	+216.7	+216.8	+186.7	+157.5	+99.8	+27.7	-44.8	-55.9
July	-49.6	-84.7	-93.2	-75.7	-65.7	-82.8	-73.9	-73.5	-80.4	-35.9	-30.6	-36.3	+18.2	+62.1	+168.4	+270.7	+200.5	+138.8	+147.1	+95.9	+60.0	-185.5	-93.4	-100.5
Aug.	-6.9	+16.3	-58.7	-97.7	-104.9	-51.3	-23.9	-28.1	-48.9	-52.9	-23.3	-12.9	-1.5	+7.5	+51.9	+88.7	+98.1	+96.9	+79.1	+39.3	+19.5	+16.1	-1.5	-0.9
Sept.	-87.3	-79.9	-111.6	-92.1	-54.1	+18.5	+3.3	-5.7	-19.0	-25.1	-17.5	-2.7	+20.3	+85.7	+135.8	+219.1	+179.7	+171.7	+151.7	+124.1	+22.4	-136.5	-217.7	-283.1
Oct.	-36.0	-9.5	-21.6	-36.4	+0.2	-2.7	+2.2	-10.2	-24.6	-15.3	-4.0	+6.4	+26.4	+48.7	+48.0	+70.2	+121.0	+115.7	+106.6	+42.2	-52.8	-87.1	-127.2	-160.2
Nov.	+2.2	-7.8	-10.5	0.0	+1.6	+4.6	+7.8	+4.0	-2.5	-14.2	-21.8	-31.2	-22.8	-20.6	-3.1	+8.0	+34.6	+58.4	+8.2	+2.8	+3.5	-0.2	-1.6	+0.6
Dec.	-176.7	-103.4	-121.4	-24.5	+7.2	+10.4	+11.1	+13.8	+10.8	+2.9	+0.2	+4.6	+2.9	+12.0	+12.6	+45.3	+107.0	+113.4	+125.5	+54.6	+35.4	+11.1	-42.6	-112.2
Year	-60.7	-68.1	-91.7	-75.1	-39.5	-25.2	-16.6	-23.2	-32.1	-30.8	-21.6	-12.9	+12.3	+36.0	+68.6	+106.7	+114.9	+114.3	+102.6	+74.5	+33.8	-29.1	-60.7	-76.3
Winter	-47.4	-46.1	-96.0	-28.5	-9.5	-11.4	-3.7	-10.5	-21.4	-32.2	-21.9	-15.7	+2.5	+4.7	+18.5	+27.1	+52.3	+63.7	+63.5	+55.9	+46.3	+27.4	+2.6	-20.3
Equinox	-60.2	-58.5	-74.5	-73.9	-29.3	-0.6	-3.3	-16.9	-23.0	-21.2	-16.5	-10.8	+14.1	+50.4	+71.3	+124.9	+128.1	+128.3	+112.5	+72.7	+5.2	-52.4	-124.2	-142.3
Summer	-74.5	-99.5	-104.8	-123.0	-79.7	-63.6	-42.9	-42.1	-52.1	-39.1	-26.3	-12.2	+20.5	+52.9	+116.0	+167.9	+164.5	+151.0	+131.7	+95.0	+49.7	-62.3	-60.5	-66.4
DECLINATION																								
Jan.	-10.96	-9.25	-7.30	-15.07	-9.52	-6.27	-1.96	-2.13	-0.92	-0.07	+0.48	+2.99	+7.06	+7.19	+6.86	+5.77	+9.22	+10.11	+9.62	+8.17	+3.14	-1.55	-1.88	-3.73
Feb.	-1.71	-1.12	+25.13	-8.13	-8.63	-10.20	-9.71	-7.19	-5.05	-3.78	+0.13	+2.23	+5.33	+8.90	+8.65	+5.01	+6.63	+6.04	+1.59	+1.41	-1.85	-1.60	-6.89	-5.19
Mar.	-5.59	-11.43	-16.03	-3.67	-9.01	-5.24	+0.99	-1.27	+0.69	-2.13	+1.47	+6.41	+8.97	+11.21	+12.05	+10.57	+10.65	+6.56	+4.97	+3.31	-5.67	-6.23	-6.29	-5.29
Apr.	-6.30	-7.42	-9.28	-8.82	-10.24	-8.38	-7.60	-7.44	-6.22	-3.78	+1.96	+7.22	+12.54	+14.28	+14.12	+11.96	+9.16	+11.04	+7.90	+2.04	+1.04	-2.70	-4.50	-10.58
May	-3.06	-9.69	-16.12	-11.20	-10.00	-11.59	-13.86	-10.10	-10.30	-4.67	-0.14	+4.32	+7.78	+11.69	+11.78	+11.94	+9.76	+11.39	+9.58	+4.24	+6.74	+8.37	+2.04	+1.10
June	-5.19	-17.11	-17.82	-17.27	-7.65	-11.13	-8.13	-8.33	-6.38	-1.85	+2.93	+6.39	+10.93	+10.05	+9.52	+8.43	+8.91	+10.31	+12.63	+7.97	+10.32	+4.75	-0.99	-1.29
July	-2.94	-5.30	-12.40	-15.52	-13.70	-13.77	-15.06	-17.90	-11.70	-7.98	-7.94	-7.08	+5.20	+8.02	+12.84	+21.16	+16.24	+20.09	+18.82	+15.04	+11.06	+10.30	-1.46	-6.02
Aug.	-0.90	+0.21	+0.64	-14.96	-11.24	-11.95	-11.74	-10.04	-5.26	-2.97	+4.70	+7.14	+10.18	+11.65	+9.98	+8.06	+5.88	+4.55	+2.20	+2.12	-0.36	+1.45	+0.50	+0.16
Sept.	-10.71	-12.78	-20.33	-14.32	-9.74	-8.39	-8.78	-6.24	-5.23	-5.68	+2.37	+6.50	+9.31	+11.02	+10.45	+10.64	+20.44	+17.71	+17.64	+9.56	+6.13	-0.68	-0.95	-17.94
Oct.	-5.21	-4.55	-4.32	-2.37	-1.13	+0.17	+2.09	-0.01	-2.54	-3.79	+0.09	+4.39	+7.03	+7.13	+8.10	+7.63	+8.87	+5.61	+6.03	+3.07	-8.64	-9.73	-9.83	-8.09
Nov.	-4.78	-6.12	-5.82	-4.16	-4.60	-2.07	-0.66	-0.76	-1.42	-1.74	+0.02	+2.24	+4.90	+5.26	+6.06	+6.06	+5.86	+7.23	+3.56	+1.76	-0.36	-1.86	-3.84	-4.76
Dec.	-8.32	-19.06	-16.03	-8.76	-2.38	-0.38	-0.16	+0.60	+0.77	+1.16	+2.72	+4.46	+6.06	+6.30	+5.71	+5.58	+9.30	+11.08	+6.22	+2.96	+3.45	-0.18	-3.08	-8.02
Year	-5.47	-8.63	-8.31	-10.35	-8.15	-7.43	-6.21	-5.90	-4.46	-3.11	+0.73	+3.93	+7.94	+9.39	+9.68	+9.40	+10.08	+10.14	+8.40	+5.14	+2.08	+0.03	-3.10	-5.80
Winter	-6.44	-8.89	-1.01	-9.03	-6.28	-4.73	-3.12	-2.37	-1.65	-1.11	+0.84	+2.98	+5.84	+6.91	+6.82	+5.61	+7.75	+8.61	+5.25	+3.57	+1.09	-1.30	-3.92	-5.43
Equinox	-6.95	-9.05	-12.49	-7.29	-7.53	-5.46	-3.33	-3.74	-3.33	-3.85	+1.47	+6.13	+9.46	+10.91	+11.18	+10.20	+12.28	+10.23	+9.13	+4.49	-1.79	-4.83	-5.39	-10.47
Summer	-3.02	-7.97	-11.43	-14.74	-10.65	-12.11	-12.20	-11.59	-8.41	-4.37	-0.11	+2.69	+8.52	+10.35	+11.03	+12.40	+10.20	+11.59	+10.81	+7.34	+6.94	+6.22	+0.02	-1.51
VERTICAL FORCE																								
Jan.	<i>γ</i> -25.1	<i>γ</i> -33.0	<i>γ</i> -46.1	<i>γ</i> -81.9	<i>γ</i> -98.9	<i>γ</i> -78.6	<i>γ</i> -45.9	<i>γ</i> -27.3	<i>γ</i> -14.7	<i>γ</i> -2.6	<i>γ</i> +5.1	<i>γ</i> +12.1	<i>γ</i> +16.5	<i>γ</i> +25.4	<i>γ</i> +31.3	<i>γ</i> +34.9	<i>γ</i> +27.5	<i>γ</i> +35.8	<i>γ</i> +57.3	<i>γ</i> +54.9	<i>γ</i> +55.3	<i>γ</i> +46.0	<i>γ</i> +30.9	<i>γ</i> +21.1
Feb.	-15.7	-43.1	-122.3	-62.3	-43.1	-42.2	+10.7	+16.9	+35.9	+15.3	+1.1	+12.7	+0.7	+26.7	+40.3	+46.7	+40.7	+47.0	+53.7	+28.7	-9.3	+15.3	-16.1	-38.3
Mar.	-83.3	-79.2	-71.3	-103.1	-125.9	-96.2	-74.1	-38.9	-24.9	-5.8	+21.5	+33.1	+49.1	+64.2	+86.3	+105.7	+107.9	+117.8	+104.9	+76.1	+51.9	+7.4	-54.1	-69.1
Apr.	-77.6	-71.7	-92.0	-86.7	-65.5	-43.2	-30.3	-23.1	-13.8	-0.5	+11.4	+23.5	+32.2	+63.9	+74.4	+83.9	+89.1	+91.8	+82.5	+55.9	+19.8	+7.3	-37.0	-94.3
May	-93.2	-116.5	-117.2	-106.5	-74.7	-50.8	-39.1	-32.7	-27.0	-11.9	-0.6	+12.3	+45.6	+70.1	+90.6	+87.1	+95.7	+78.8	+76.1	+63.1	+33.4	+29.1	-4.8	-6.9
June	+49.1	-44.0	-134.8	-172.7	-90.8	-17.8	-63.3	-32.6	-4.0	+20.5	+29.8	+28.8	+36.3	+52.4	+69.2	+92.7	+95.0	+73.0	+52.7	+50.4	+16.0	-16.3	-51.8	-37.8
July	+11.4	-10.8	-60.3	-65.4	-51.8	-25.8	-25.4	-8.2	+10.3	-7.6	-5.2	+27.4	+14.8	+28.6	+67.5	+37.6	-11.0	-17.8	+23.8	+23.0	+19.7	+62.6	+14.0	-51.4
Aug.	-10.4	-18.3	-86.4	-147.7	-121.2	-74.7	-36.2	-5.3	-3.6	-6.9	+13.6	+21.7	+34.2	+40.9	+53.6	+76.1	+80.6	+68.7	+42.4	+32.9	+17.6	+19.3	0.0	+9.1
Sept.	-21.4	-51.4	-67.1	-55.8	-40.6	-82.4	-50.2	-37.0	-23.9	-15.0	-6.6	+3.6	+21.6	+37.6	+79.9	+59.6	-47.0	+42.0	+25.0	+72.6	+55.9	+57.2	+86.6	-43.2
Oct.	-51.1	-42.4	-46.2	-70.7	-66.4	-65.2	-54.5	-30.0	-15.4	+9.5	+27.0	+41.0	+54.1	+63.8	+57.8	+68.3	+92.2	+97.6	+67.9	+4.2	+30.6	-18.7	-94.4	-59.0

"Winter" comprises the four months January, February, November

RANGE OF MEAN DIURNAL INEQUALITIES FOR THE
MONTHS, YEAR AND SEASONS OF 1958

AVERAGE DEPARTURES

55

The ranges are derived from the diurnal inequalities
printed in Tables 9 to 11

Arithmetical averages of diurnal inequalities in
Tables 9 to 11 taken regardless of sign

12 LERWICK

	All days			Quiet days			Disturbed days		
	H	D	Z	H	D	Z	H	D	Z
	γ	γ	γ	γ	γ	γ	γ	γ	γ
Jan.	36.9	10.35	54.5	25.4	7.83	20.6	152.0	25.18	156.2
Feb.	73.7	11.27	75.7	31.9	6.21	15.4	269.0	35.33	176.0
Mar.	112.2	17.87	135.8	62.8	12.28	67.5	222.4	28.08	243.7
Apr.	106.0	17.91	96.1	72.0	14.20	14.0	224.2	24.86	186.1
May	112.5	18.71	77.8	82.2	20.67	28.0	259.7	28.06	212.9
June	134.7	17.96	92.7	84.6	18.74	29.1	483.5	30.45	267.7
July	115.2	17.54	64.7	85.0	16.23	43.2	456.2	39.06	132.9
Aug.	86.2	18.05	62.7	81.8	18.10	21.7	203.0	26.61	228.3
Sept.	88.2	15.54	53.7	72.2	14.70	22.1	502.2	40.77	169.0
Oct.	64.2	11.91	58.7	59.8	12.08	11.6	281.2	18.70	192.0
Nov.	38.5	8.02	24.1	38.6	6.58	4.8	89.6	13.35	55.5
Dec.	59.3	9.71	51.9	25.8	5.60	8.0	302.2	30.14	175.8
Year	74.4	13.14	64.3	56.5	11.99	14.8	206.6	20.49	150.1
Winter	38.8	8.95	45.1	29.1	5.68	7.0	159.7	17.64	112.7
Equinox	84.2	14.70	80.4	64.3	12.76	17.8	270.6	24.77	166.4
Summer	104.9	17.82	69.9	82.9	18.36	27.8	290.9	27.14	196.5

13 LERWICK

	All days			Quiet days			Disturbed days		
	H	D	Z	H	D	Z	H	D	Z
	γ	γ	γ	γ	γ	γ	γ	γ	γ
Jan.	9.0	3.29	13.8	6.6	2.11	5.6	28.7	5.88	37.8
Feb.	14.0	3.28	17.6	8.3	1.67	2.8	55.2	5.92	32.7
Mar.	26.4	4.94	35.9	16.3	3.39	14.3	49.9	6.49	68.8
Apr.	26.8	5.25	25.6	17.9	3.13	3.9	50.9	7.77	53.0
May	27.5	5.07	20.1	21.0	4.65	7.0	72.9	8.39	56.8
June	37.8	5.64	21.2	20.4	4.40	5.9	110.0	8.59	55.5
July	33.3	5.31	16.3	19.6	4.38	10.9	96.8	11.56	28.4
Aug.	23.1	3.97	14.1	20.7	4.07	5.3	42.8	5.79	42.6
Sept.	24.1	4.54	13.0	18.9	3.11	4.8	94.4	10.15	45.1
Oct.	13.5	3.73	15.0	16.3	2.98	2.2	49.0	5.02	51.2
Nov.	8.7	2.53	6.2	9.8	1.96	1.0	11.4	3.58	12.5
Dec.	11.3	2.66	11.3	6.3	1.55	2.0	48.4	5.53	32.4
Year	19.6	4.02	17.2	14.1	3.02	3.7	55.3	6.41	39.2
Winter	9.3	2.91	11.9	7.5	1.78	1.9	30.4	4.61	25.6
Equinox	21.8	4.57	22.1	16.4	3.10	3.8	59.0	7.12	51.0
Summer	29.2	4.97	17.6	19.8	4.35	6.4	79.1	8.18	42.4

NON-CYCLIC CHANGE

14 LERWICK

	All days			Quiet days			Disturbed days		
	H	D	Z	H	D	Z	H	D	Z
	γ	γ	γ	γ	γ	γ	γ	γ	γ
Jan.	+5.9	+0.23	-0.4	+2.9	+1.38	+3.2	+39.7	+4.41	+21.7
Feb.	+0.1	+0.07	-0.1	+7.2	-0.47	-12.5	-22.3	-0.16	-26.3
Mar.	-0.4	+0.08	+0.6	+6.8	-0.09	+6.2	+0.2	+1.98	-10.0
Apr.	-2.2	-0.13	-2.3	+9.3	+0.91	+3.6	-35.6	-2.35	-25.9
May	-11.0	+0.20	+9.3	+6.4	-0.33	-5.1	-98.5	+4.54	+77.5
June	+14.5	-0.10	-6.6	+5.2	-0.56	-4.2	+67.0	+0.92	-39.3
July	-0.2	-0.03	-1.3	+2.6	-0.94	-10.4	-45.2	-2.77	-41.6
Aug.	-0.2	+0.03	+0.9	+3.8	-0.30	+1.7	-9.8	+0.22	+3.8
Sept.	-0.2	-0.11	+0.7	+2.6	+0.57	-2.2	-70.0	-4.46	-6.5
Oct.	+0.5	+0.07	+0.1	+0.1	-0.18	-8.2	-65.9	-3.30	-36.6
Nov.	0.0	-0.03	-0.5	+4.0	+0.41	-0.9	-4.1	-0.77	-2.7
Dec.	+0.1	+0.03	+0.2	+1.6	+0.50	-13.8	-16.6	-0.90	+25.1
Year	+0.6	+0.03	+0.1	+4.4	+0.07	-3.5	-21.8	-0.22	-5.1
Winter	+1.5	+0.07	-0.2	+3.9	+0.45	-6.0	-0.3	+0.65	+4.5
Equinox	-0.6	-0.02	-0.2	+4.7	+0.30	-0.1	-42.8	-2.03	-19.7
Summer	+0.8	+0.03	+0.6	+4.5	-0.53	-4.5	-21.6	+0.73	+0.1

AVERAGE RANGE OF DIURNAL INEQUALITY 1932-53
WITH 1958 AS PERCENTAGE OF THIS

15 LERWICK

		All days			International quiet days			International disturbed days		
		Z	H	D	Z	H	D	Z	H	D
		γ	γ	γ	γ	γ	γ	γ	γ	γ
Year	1932-53	53.3	49.4	9.36	10.3	37.4	8.68	131.1	131.6	14.22
	1958(%)	121	151	140	144	151	138	114	157	144
Winter	1932-53	41.1	24.4	7.87	7.7	15.1	4.65	116.6	85.0	13.84
	1958(%)	110	159	114	91	193	122	97	188	127
Equinox	1932-53	68.8	59.2	10.94	12.9	42.3	9.54	168.9	193.4	18.89
	1958(%)	117	142	134	138	152	134	98	140	131
Summer	1932-53	53.0	72.6	12.72	17.0	57.5	12.77	134.0	156.9	15.61
	1958(%)	132	144	140	164	144	144	147	185	174

RATIO OF RANGE OF INEQUALITY AT LERWICK
TO THAT AT ESKDALEMUIR, 1958

16 LERWICK

Type of day	Element	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
q	D	1.14	1.08	1.06	1.04	1.12	1.11	1.09	1.03	.98	.99	.94	1.04
d	D	1.51	1.74	1.41	1.23	1.22	1.54	1.43	1.33	1.68	1.12	1.32	1.45
q	H	.95	.97	1.16	1.17	1.23	1.16	1.18	1.08	1.11	.97	.99	.99
d	H	3.60	2.32	4.07	2.14	1.99	2.60	1.47	1.89	1.69	4.49	2.06	4.47
q	Z	2.00	2.85	2.81	.57	.74	.92	1.41	.69	.78	.73	.56	1.08
d	Z	1.87	1.21	1.72	1.94	1.81	1.25	1.23	1.90	1.00	1.58	1.67	1.25

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

17 LERWICK

(a) Disturbances without S.C's

Serial Number	From		To		Range (γ)			Notes
	Date	Hour	Date	Hour	H	D	Z	
1a	Mar. 11	10	Mar. 14	03	1125	642	540	
2a	Mar. 18	00	Mar. 22	08	828	439	571	
3a	Mar. 24	10	Mar. 25	05	578	208	430	
4a	Apr. 4	05	Apr. 6	04	724	304	346	
5a	Apr. 14	08	Apr. 21	02	801	339	486	
6a	May 12	11	May 20	03	879	264	411	
7a	May 25	15	May 30	12	619	297	418	
8a	June 6	17	June 8	01	1270	919	587	
9a	June 8	17	June 12	00	624	294	329	
10a	June 20	21	June 23	21	811	244	403	
11a	Aug. 27	02	Aug. 28	01	576	216	369	
12a	Dec. 12	18	Dec. 14	05	702	331	350	

(b) Disturbances with a S.C.

Serial Number	Date	Time of S.C.	End of Disturbance		With initial reversed stroke			Magnitude main stroke of S.C.			Range of following disturbance (γ)		
			Date	Hour	H	D	Z	H	D	Z	H	D	Z
1b	Jan. 25	10.50			Yes	Yes	Yes	γ +17	γ +22	γ -9			
2b	Feb. 11	01.25	Feb. 13	03	Yes	No	No	-126	-73	-108	3216	1631	1408
3b	Feb. 16	16.42			Yes	No	Yes	+26	-8	-9			
4b	Mar. 3	09.31			?	Yes	Yes	?	+20	-4			
5b	Mar. 14	12.12			Yes	Yes	Yes	+74	-47	+28			
6b	Mar. 17	07.50			Yes	No	No	-13	+18	-4			
7b	Mar. 25	15.40			No	No	No	+80	-36	+23			
8b	Apr. 26	12.47			Yes	No	Yes	+15	-3	+4			
9b	May 31	16.53	June 2	23	Yes	Yes	Yes	+112	-32	-46	1312	714	819
10b	June 14	18.28			Yes	Yes	Yes	+77	-20	-23			
11b	June 28	07.13	See 12b		Yes	Yes	Yes	-40	+76	-17			
12b	June 28	17.42	June 30	06	Yes	Yes	Yes	+48	-12	-14	1590	782	818
13b	July 8	07.48	July 10	15	Yes	Yes	Yes	Illegible			3054	916	1359
14b	July 21	16.37	July 22	22	Yes	Yes	Yes	+223	-65	-88	566	326	317
15b	July 31	15.29			Yes	Yes	Yes	+77	-16	-25			
16b	Aug. 17	06.22	Aug. 20	19	Yes	Yes	Yes	-91	-65	-30	884	295	373
17b	Aug. 22	02.27			No	Yes	Yes	+22	-49	-9			
18b	Aug. 24	01.40	Aug. 25	21	No	No	No	+60	-49	-34	906	479	684
19b	Sept. 3	08.43	Sept. 6	02	Yes	Yes	Yes	+20	+49	-12	1974	1309	1408
20b	Sept. 16	09.30			Yes	Yes	Yes	-24	+30	-9			
21b	Sept. 25	04.08	Sept. 27	01	Yes	Yes	Yes	-40	-36	-18	1287	697	512
22b	Sept. 30	10.05			Yes	Yes	No	+25	+12	-8			
23b	Oct. 22	03.15	See 24b		Yes	Yes	Yes	+22	-40	+6	729	302	438
24b	Oct. 24	07.30	Oct. 25	15	Yes	Yes	Yes	-166	+48	-71	856	310	540
25b	Oct. 27	15.23	Oct. 31	02	Yes	Yes	Yes	+11	-4	+4	735	368	563
26b	Dec. 4	00.35	Dec. 5	14	No	Yes	Yes	+21	-20	+4	1257	551	630
27b	Dec. 13	00.01	Dec. 15	01	Yes	No	Yes	+17	-6	+4	702	331	350
28b	Dec. 17	15.47	Dec. 18	15	Yes	Yes	Yes	+13	-4	+4	1148	449	598

(c) Disturbances due to Solar Flare

Serial Number	Date	Commence- ment	Max.	End	Movement (γ)			K	K'	Flare or S.F.E.
					H	D	Z			
1c	Mar. 1	09.13	09.20	09.22	-5	+2	0	1	1	S.E.A., S.W.F.
2c	Mar. 9	15.41	15.45	15.50	+13	-6	0	3	3	S.E.A.
3c	Mar. 23	09.53	10.15	11.10	-45	+18	+17	3	2	S.E.A.
4c	Mar. 28	10.34	10.37	10.41	-11	-8	+3	1	1	S.E.A.
5c	Mar. 29	13.41	13.46	13.57	-18	-8	+6	2	1	Very clear. S.E.A.
6c	Mar. 29	16.30	16.34	16.39	-7	-8	-4	3	3	S.E.A.
7c	June 3	15.11	15.13	15.25	-4	-4	+3	3	3	Class 2 flare, S.E.A.
8c	Aug. 7	15.01	15.09	15.23	+7	-10	0	3	3	Class 3 flare, S.E.A.
9c	Sept. 1	10.38	10.42	11.00	+10	-4	-6	3	3	
10c	Sept. 7	14.48	14.51	14.54	-2	-3	0	4	4	S.E.A.
11c	Oct. 13	11.05	11.10	11.50	-12	0	0	2	2	S.E.A., S.W.F.
12c	Nov. 5	10.15	10.22	10.25	-5	0	0	1	1	S.E.A., S.W.F.
13c	Dec. 9	13.01	13.06	13.15	-7	+12	0	1	1	S.E.A.
14c	Dec. 12	12.57	13.01	13.25	-11	-10	+6	1	1	S.E.A.

S.E.A. = Sudden enhancement atmospherics
S.W.F. = Short wave fade out

18 LERWICK

Night commencing			Night commencing			Night commencing		
JANUARY			FEBRUARY (contd.)			MARCH (contd.)		
1 c-a	Φ	Cloudy most of night then fine. Faint rayed band 05h.10m. to 06h. with diffuse arc from 05h.45m.	19 c	..	Cloudy	21 a	Φ	Fair then mainly fine. Faint rayed arc and corona 23h. and 24h. Faint glow 01h., rays 02h., glow 03h.
2 c	..	Cloudy	20 ca	Φ	Variable cloud. Faint to moderate rayed arc 18h.30m. to 20h. with moderate to bright rays 19h.30m. to 20h.05m. deteriorating to faint diffuse surface 20h.20m. then to moderate glow 22h. Faint glow seen in clear periods till 04h.	22 ca-c	..	Fair to fine soon becoming overcast
3 ca-c	Φ	Variable soon becoming cloudy. Faint rays 17h.50m.				26 c-a	..	Cloudy then fine
5 c-ca	..	Cloudy then mainly fair to fine				27 c	..	Cloudy then overcast
6 c	..	Cloudy				28 ca-a	..	Variable cloud then fine
7 ca	..	Variable cloud	21 a	Φ	Fine. Active aurora 20h.05m. to 22h.02m. including faint to bright homogeneous and rayed arcs, rays, draperies, and corona	29 a-c	..	Fair soon becoming cloudy
9 c	..	Overcast with fair period				31 c	..	Cloudy
11 ca-a	Φ	Variable cloud then mainly fine. Suspicion of aurora behind cloud 21h. Faint glow 21h.50m. to 01h.30m. Faint homogeneous arc 01h.50m. developing into moderate rayed arc 02h.05m., fading back to faint homogeneous arc for short while 02h.30m., finally deteriorating to faint glow 03h.05m. Faded completely by 04h.	22 a	Φ	Mainly fine. Faint homogeneous arc, moderate rayed arc, then moderate homogeneous band 20h.15m. to 21h. deteriorating to faint glow 21h.20m. Aurora lasting all night though occasionally disappearing. Faint rays 02h. Faint homogeneous arc 04h.	APRIL		
12 a	Φ	Fine. Faint glow from 18h.50m. to 22h. developing into faint homogeneous arc by 22h.15m. with double rayed arc 22h.40m. Faint single rayed arc again from 00h.15m. to 01h. changing to rayed band by 01h.10m., disappearing completely by 01h.35m.	23 a-c	..	Fine becoming cloudy	1 ca	..	Fair to cloudy
13 c	..	Cloudy	24 ca-a	..	Fair then fine	2 b-c	..	Fair soon becoming cloudy. Moonlight
14 a-ca	..	Fine becoming variable cloud	25 ca	..	Variable cloud	3 c	..	Cloudy
16 ca	Φ	Fair to cloudy. Faint rays 19h.02m. Diffuse surface 19h.04m. to 19h.07m. Faint rays 22h.50m.	26 c	..	Cloudy	4 ca	..	Mainly cloudy
17 ca-c	Φ	Variable cloud then cloudy. Faint glow 21h.50m. to 00h.20m. seen through cloud breaks, with diffuse surface 23h.30m. and moderate rays 23h.50m.	28 c	..	Mainly cloudy	5 cb	Φ	Mainly cloudy. Bright moonlight. Moderate rayed arc 23h.50m. Aurora suspected behind cloud 01h.
18 a-ca	Φ	Fine then variable cloud. Faint glow seen through cloud breaks 23h.50m. to 01h.				7 c-a	Φ	Cloudy becoming fine. Faint rays 03h.
19 a	..	Mainly fine, cloudy at times				8 c	..	Cloudy with fair break
20 ca	Φ	Variable cloud then overcast. Faint rayed band 21h.30m. then glow 21h.50m. to 23h. Faint glow visible through cloud breaks 05h.50m.				9 a	..	Mainly fine
23 a	Φ	Cloudy soon becoming fine. Suspicion of aurora behind cloud 21h. Faint glow 21h.50m.				10 a	..	Fine
24 a	..	Fair to fine				11 ca-c	..	Variable cloud then overcast
29 ca-a	..	Variable cloud then fine	1 cb-c	..	Mainly cloudy then overcast. Bright moonlight	13 c	..	Mainly overcast
30 c-ca	..	Cloudy then variable cloud	4 cb	Φ	Variable cloud. Moonlight. Moderate becoming faint rayed arc 23h.40m. to 01h.20m.	14 c-a	Φ	Cloudy becoming fine. Faint rays 24h. developing into rayed arc with flaming 00h.17m. Faint diffuse surface seen through cloud breaks 02h. Very faint glow 03h.
31 c	..	Cloudy	5 ca-c	..	Variable cloud then cloudy	15 ca	Φ	Variable cloud. Faint diffuse surface 24h. seen only through cloud breaks 01h. and 02h.
FEBRUARY			6 c	..	Mainly cloudy. Suspicion of aurora behind cloud 21h.	16 c	..	Cloudy
1 ca-c	..	Variable cloud then cloudy	7 cb	..	Overcast becoming cloudy. Bright moonlight. Clear break 05h.	18 ca	Φ	Variable cloud. Faint glow 22h. to 24h. with an isolated ray 23h.
2 c	..	Fine break then cloudy	8 ca	..	Variable cloud	23 ca	..	Variable cloud
3 c	..	Fair break then overcast	9 ca-a	Φ	Cloudy then overcast. Faint diffuse surface 22h. Diffuse surface perhaps with rays, seen through cloud breaks 24h.	24 a	..	Fair to fine
5 c	..	Cloudy	10 ca-a	Φ	Mainly fair to fine. Faint glow 22h. becoming moderate diffuse surface with rays, gradually fading by 01h.40m.	25 ca	..	Cloudy then variable cloud
6 c	..	Mainly cloudy	11 a	Φ	Fine. Magnificent display starting with faint glow and homogeneous and rayed arcs, becoming moderate with flaming after midnight. Magnificent aurora with homogeneous and rayed bands, all bright, from before 02h. to 03h.20m. then deteriorating to faint rayed arc till 05h.	26 b	..	Mainly fair to fine. Bright moonlight
7 ca	..	Variable cloud	12 a	Φ	Fine. Faint single and double rayed arcs from 19h.40m. diffusing into homogeneous arc then brightening to moderate rayed arc with partial corona 21h.50m. Faint glow from 23h. becoming moderate rayed arc after 04h. fading once more to faint homogeneous arc by 05h.	29 a	..	Fair to fine
9 c	..	Mainly cloudy	13 a	Φ	Fine. Faint glow 21h. to 24h.	AUGUST		
12 ca-a	Φ	Variable cloud then mainly fine. Faint to moderate glow 18h.50m. to 21h., clouding over then clearing to reveal faint rayed arc 24h. to 00h.15m., then diffuse surface by 01h. lasting till 02h.	14 a	Φ	Fine. Faint glow 20h.50m. Faint homogeneous arc 21h.50m.	17 ca	Φ	Cloudy. Faint rays visible 22h.40m. Aurora suspected 23h. Moderate corona visible 23h.50m. but only a faint glow at 00h.15m.
13 ca	Φ	Variable cloud then fair to fine. Faint glow 23h. to 04h. partly obscured by cloud at times	15 ca	Φ	Mainly cloudy. Faint glow visible through cloud breaks 04h.	18 ca	Φ	Variable cloud. Faint glow 22h.50m. and 23h.50m.
14 ca	..	Variable cloud	16 c	..	Fair soon becoming overcast	SEPTEMBER		
15 ca	..	Variable cloud	17 ca	..	Fair to fine then cloudy	2 c-a	..	Overcast becoming fine
16 ca	..	Variable cloud. Aurora suspected behind cloud 23h., 04h. and 05h. Faint glow visible through cloud breaks 04h.10m.	18 a	Φ	Fine. Faint glow 20h.50m. with rays at times and rayed arc 21h.50m. Faint glow continuing till 03h. then brightening to moderate rayed arc 03h. to 04h. pulsating 03h.40m.	3 a	Φ	Fine. Active aurora starting as faint rays 21h.10m. soon becoming corona with homogeneous and rayed arcs. Moderate in brightness from 21h.30m., flaming and pulsating from 22h.30m. Bright rayed arc 01h.32m. deteriorating to faint homogeneous arc then to diffuse surface which remained visible till dawn
17 ca-a	Φ	Variable cloud soon becoming fair to fine. Faint glow 19h.30m. clouding over then glow observed again 22h. to 04h. partly obscured by cloud	19 ca	Φ	Fair becoming cloudy. Faint homogeneous arc, homogeneous band then rayed arc from 20h.03m. becoming moderate homogeneous band 20h.30m. sometimes double. Faint diffuse surface 21h. to 01h. seen through cloud breaks	5 a-c	..	Fair to fine then overcast
18 ca-c	..	Fair period soon becoming cloudy	20 ca-a	Φ	Variable cloud. Faint homogeneous arc 22h.50m. Faint glow 23h.50m. and again 02h. to 04h.	10 ca	..	Mainly fair to cloudy
						11 c-ca	..	Overcast becoming variable cloud
						13 c	..	Cloudy then overcast
						14 ca	..	Cloudy becoming fair
						15 c	..	Mainly overcast
						16 a-c	Φ	Fine then mainly overcast. Glow 19h.50m. developing into moderate homogeneous arc and rayed band by 20h.30m. lasting until 20h.50m. but fading to faint rays by 21h.30m. Moderate rayed band again observed 00h.50m.
						17 ca	Φ	Variable cloud. Faint glow 20h.10m. to 20h.30m., partly obscured by cloud

18 LERWICK (contd.)

Night commencing		Night commencing		Night commencing	
SEPTEMBER (contd.)		NOVEMBER		DECEMBER (contd.)	
18 ca ..	Variable cloud	1 c ..	Mainly cloudy	4 ca-c ⚡	Variable cloud then cloudy. Faint draperies from 17h.50m. with corona at times, changing to numerous faint to moderate homogeneous arcs, rays and rayed arcs from 18h.23m., forming corona again from 18h.30m., pulsating at times. Faint to moderate pulsating bands observed around 20h. then becoming cloudy but rays sometimes visible till 22h. Indefinable aurora observed through cloud breaks till 24h. Glow visible through cloud breaks 03h.20m.
19 c-a-c ..	Overcast, fine, then cloudy	2 ca-c ⚡	Variable cloud then cloudy. Faint rays 17h.45m. to 18h.	5 c ..	Variable cloud soon becoming
20 a ..	Fair to fine	3 a-ca ⚡	Fine then variable cloud. Faint glow 05h.	6 ca ..	Variable cloud
21 ca-a ..	Fair to cloudy soon becoming fine	4 ca ..	Variable cloud	7 ca ..	Variable cloud then mainly cloudy
22 ca ..	Mainly cloudy	5 ca ..	Variable cloud	8 a-ca ..	Fine then variable cloud
23 c ..	Mainly overcast	6 a-c ..	Fine, then overcast	9 a-ca ..	Fine then variable cloud
24 b-a ⚡	Fine. Bright moonlight. Faint rays 23h.	7 ca ..	Variable cloud then mainly fair to fine	10 ca ..	Mainly fair to fine
25 ca ⚡	Cloudy. Faint rays visible through breaks in cloud 23h.	8 ca ..	Variable cloud	11 ca ⚡	Cloudy then fair. Faint glow 23h.
26 ca ..	Cloudy soon becoming fair to fine	9 a ..	Fair to fine	14 ca ⚡	Variable cloud. Rays observed through cloud breaks 22h.
27 cb ..	Mainly cloudy. Bright moonlight	10 a ⚡	Mainly fine. Faint rays 17h.40m. fading to glow then becoming moderate homogeneous then rayed arc after 20h. Back to glow by 21h.30m., moderate rayed arc reappearing 22h. to 24h. then faint glow till 04h.30m.	15 a ..	Fair to fine
OCTOBER		11 c-a ..	Overcast then fair to fine	16 a-ca ..	Fine becoming variable
2 c ..	Mainly overcast	12 a-c-a ..	Fair to fine	17 b-a ⚡	Fine. Moonlight. Faint triple rayed arc from 17h.50m. becoming moderate draperies. Corona 18h.37m. Faint rayed arc 18h.50m. becoming rayed band then fading to diffuse surface 19h.30m. to 21h. Faint glow 23h. to 04h. Faint homogeneous arc 05h. Faint corona 06h.
4 cb ..	Mainly cloudy. Bright moonlight	13 a ⚡	Mainly fine. Faint glow 02h.	18 a-b-a ⚡	Fine. Moonlight. Ray activity just visible in moonlight 22h. Presence of aurora uncertain 23h. and 24h. but faint rays observed 01h. deteriorating to glow 02h. to 04h.
5 ca ..	Mainly cloudy	14 c ..	Mainly overcast	22 c ..	Mainly cloudy
6 ca ..	Variable cloud	15 a-c ..	Fine then mainly cloudy	23 ca ⚡	Mainly cloudy becoming variable. Faint glow 21h.
7 ca-b ⚡	Mainly fair to fine. Moonlight. Faint rayed arc visible most of the time from 20h.50m. till 04h.	16 c-ca ..	Mainly overcast then variable	24 ca ..	Variable cloud
8 ca ..	Variable cloud	17 ca-c ..	Fine then overcast	25 c ..	Mainly cloudy then overcast
9 a-ca ⚡	Fine then mainly cloudy. Very faint glow 23h. and 24h.	19 c ..	Mainly overcast	26 ca ..	Variable cloud
10 c-ca ⚡	Variable cloud. Very faint glow, partly obscured by cloud 01h.	21 c ..	Mainly cloudy	27 ca-c ..	Mainly cloudy then overcast
11 a ⚡	Mainly fine. Faint rayed arc 20h. for a few minutes, then faint glow till 24h.	22 c ..	Cloudy then overcast	28 ca ..	Mainly cloudy
12 c ..	Mainly overcast	23 c-a ..	Cloudy becoming fine	29 c-ca ..	Cloudy then variable cloud
13 c-a ..	Cloudy becoming fair to fine	25 c ..	Cloudy to overcast	30 ca ..	Fair to fine then variable cloud
14 ca ..	Variable cloud	26 a-c ..	Fine soon becoming overcast	31 a-c ..	Fine then cloudy
15 ca-a ..	Variable cloud	27 a-cb ⚡	Fine then variable cloud. Bright moonlight. Faint homogeneous arc 24h. and 02h.		
16 c-a ..	Cloudy becoming fine	28 cb-c ..	Variable cloud then cloudy. Bright moonlight	DECEMBER	
17 ca ..	Cloudy with fine period	29 cb-a ..	Variable cloud becoming fair. Bright moonlight		
18 c-a ..	Overcast becoming fine	30 ca-c ..	Fine break then mainly cloudy		
19 ca ⚡	Fair to fine becoming cloudy. Faint glow 22h.				
24 c ..	Cloudy soon becoming overcast				
26 c ..	Overcast then cloudy				
27 c-cb ..	Overcast then variable cloud. Bright moonlight				
29 c ..	Cloudy then overcast				
30 cb-c ..	Variable cloud then cloudy. Bright moonlight	1 c-a ..	Cloudy then fine		
31 a-ca ..	Fine then variable cloud	2 c-ca ..	Overcast then variable cloud		
		3 ca ..	Variable cloud		

In the interests of brevity there have been omitted from Table 18 all dates on which the sky throughout the evening remained completely overcast and on which, therefore, no opportunity arose of determining whether or not aurora occurred. The nights on which aurora was actually seen are indicated by the symbol ⚡. The nights on which aurora was not seen, despite at least an occasional interval of more or less clear sky, are indicated by the symbol ..; in the latter case also, remarks on the weather are added to assist the reader in judging how far the fact of no observation of aurora may be taken as indicating that there was not actual aurora.

The letters a, b, c, have the following significance:-

- a = Conditions favourable for seeing aurora
 - b = Unfavourable for faint aurora (because of moonlight, mist, thin cloud etc.), but not such as to mask bright aurora
 - c = Cloudy, but aurora not seen in clear intervals
 - ca, cb = Cloudy, but with conditions a or b respectively, in the intervals.
- Changing conditions are indicated by a hyphen; for example, a-c.

19 OTHER SCOTTISH STATIONS

Date	Φ_1	Forms	Time	Φ_2	Date	Φ_1	Forms	Time	Φ_2	Date	Φ_1	Forms	Time	Φ_2
JANUARY					APRIL (contd.)					SEPTEMBER (contd.)				
1-2	56	HA, RA, RB, R, S, P	1650-0600	63	8-9	60	G			5-6	58	G		
3-4	63	R	1750-1800	63	9-10	60	HA, R	2125-0100	65	7-8	58	HA, RA, R	2000-0250	65
9-10	57	HA, RA	1800-0100	63	10-11	60	HA, RA, S	2055-0120	67	8-9	58	S	2010-2325	
11-12	57	HA, RA, R	1755-0330	66	14-15	57	RA, R, S, F	2200-0300	64	9-10	61	HB, RB	2250-2350	64
12-13	58	HA, RA, RB, R, S	1900-0110	67	15-16	58	S	2050-0300		10-11	60	G		
13-14	57	G			16-17	54	R	2045-2315		11-12	62	G		
14-15	60	G			17-18	53	RA, R, F	2005-0145	62	15-16	62	G		
15-16	59	G			18-19	59	RA, R	2100-0300		16-17	56	HA, RA, RB, R, S, P	1940-0200	63
16-17	57	RA, R, S	1850-0600	64	19-20	59	G			17-18	63	G		
17-18	55	HA, RA, HB, R, S	1745-0345	65	20-21	59	G			20-21	59	G		
18-19	58	G			21-22	60	L			21-22	60	G		
20-21	56	HA, RA, RB, R, F	1835-0600	63	23-24	60	HA	2200-0200	66	22-23	61	G		
21-22	60	G			24-25	60	G			24-25	59	RA, R	1900-2400	
22-23	59	R	2100-0600	64	28-29	60	R	2145-2245		25-26	55	HA, RA, HB, RB, R, S	2000-0250	63
23-24	60	G			29-30	60	G			30-1	61	HA, RA, R	2040-2250	64
27-28	60	G			30-1	59	G							
29-30	61	G												
FEBRUARY					MAY					OCTOBER				
4-5	58	HA	1900-2225		1-2	60	HA, RA, R	2320-2350		2-3	60	G		
5-6	57	HA, R	1845-0530	67	2-3	62	G			3-4	60	G		
6-7	60	RA	2105-0215	65	6-7	60	G			5-6	57	RA, R	2000-0200	67
7-8	61	R	2045-2245		8-9	61	G			6-7	59	G		
8-9	60	HA, RA	2255-0155	66	9-10	60	G			7-8	59	HA, RA, R	2030-0400	67
9-10	62	G			10-11	59	R	2200-0100		9-10	60	R	2000-2400	
10-11	46	HA, RA, RB, R, S, P, F	2100-0625	51	12-13	56	HA, R, S	2155-2355	65	10-11	61	G		
11-12	54	R, F	1810-0500	61	13-14	54	RA	2210-0100	65	11-12	59	RA, R, S	1955-2400	
12-13	57	RA, RB, R	1800-0200		14-15	61	G			14-15	61	G		
13-14	60	HA, RA, F	1945-0600	62	17-18	60	G			17-18	60	G		
15-16	60	R	2055-0100	65	25-26	59	G			18-19	62	G		
16-17	57	HA, RA, R	1900-0600	65	26-27	60	G			20-21	60	G		
17-18	56	RA	1800-0400		28-29	60	G			22-23	56	HA, RA, RB, R, S, F	1920-0600	59
18-19	58	HA, R	1905-0050	65	31-1	53	HA, RA, RB, R, S, P	2230-0200	56	23-24	59	RA, R	1950-0500	65
19-20	59	G								24-25	58	HA, RA, RB, R, S, P	1920-0500	61
20-21	54	HA, RA, R, S	1755-0355							27-28	59	HA, RA, R, S, P	1810-2110	59
21-22	58	HA, RA, R, S	1905-0355	62	JUNE					28-29	56	KB, R, S	1850-0300	65
22-23	60	HA, RA, HB, R	1940-0555	67	6-7	54	G			30-31	59	HA	1745-2300	67
23-24	60	G			9-10	59	G			NOVEMBER				
MARCH					14-15	60	G			1-2	61	R	2050-2100	
1-2	60	G			20-21	60	L			2-3	56	R	1745-2400	63
2-3	60	G			21-22	60	L			3-4	57	HA	1930-0455	67
3-4	59	RA, RB	1845-0045	61	24-25	60	L			4-5	58	HA, R	2055-2250	67
4-5	63	HA	2340-0120		28-29	54	R	2130-0130	60	10-11	56	HA, RA, R, S	1740-0555	66
5-6	60	G			JULY					12-13	60	HA, RA, R	1855-0255	65
6-7	60	G			7-8	60	L			13-14	63	G		
7-8	61	G			8-9	55	HA, RA, R, S, P	2230-0140	55	14-15	60	G		
8-9	61	G			9-10	54	R	2200-2400		17-18	62	G		
9-10	63	R, S	2155-2355	67	10-11	60	L			25-26	58	HA	2040-2355	66
10-11	57	HA, RA, R, S	1940-0245	66	11-12	60	G			27-28	61	HA, RA	2235-0255	65
11-12	55	HA, RA, HB, RB, R, S, P, F	1905-0600	60	21-22	60	L			28-29	61	G		
12-13	54	HA, RA, RB, R	1920-0500	63	25-26	60	G			DECEMBER				
13-14	57	HA, RA, RB, R	1930-0445	65	29-30	60	G			1-2	61	G		
14-15	56	HA	1945-2400							2-3	56	HA, R	1755-2310	66
15-16	56	G			AUGUST					3-4	59	G		
16-17	57	HA, RA	1855-0400	67	10-11	59	L			4-5	52	HA, RA, RB, R, S, P, F	1720-0555	58
17-18	57	G			14-15	61	HA	2300-0100	67	5-6	60	R	1900-0045	
18-19	56	HA, RA, R, S	1925-0445	62	16-17	61	G			6-7	60	G		
19-20	54	HA, RA, HB, RB, R, S, P	1925-0355	63	17-18	54	HA, RA, HB, R, S, P, F	2135-0215	59	7-8	62	G		
20-21	58	HA, RB	1930-0400	64	18-19	62	G			8-9	56	HA, HB, R, S	1700-0455	65
21-22	56	HA, RA, RB, R	1930-0400	62	21-22	60	G			11-12	62	G		
22-23	60	G			23-24	57	HA, RA, RB, R, F	2045-0320	57	12-13	60	HA, RA	1930-0555	67
23-24	61	G			24-25	62	G			13-14	55	HA, RA, HB, RB, R, S, P	1700-0455	60
24-25	59	HA, R	1950-2330	64						14-15	59	RA, R	1955-0555	
APRIL										15-16	61	G		
1-2	61	RA	2200-0300	67	SEPTEMBER					17-18	46	HA, RA, RB, R, S	1740-0655	59
2-3	60	G			3-4	54	HA, RA, HB, RB, R, S, P, F	2020-0300	59	18-19	59	R	2155-0555	64
5-6	60	RA	2235-0055	64	4-5	45	HA, RA, HB, RB, R, S, P, F	1930-0430	52	20-21	60	G		
6-7	57	HA, RA, R	2030-2355	63						21-22	61	G		
7-8	59	R	2100-0300							23-24	63	G		

The above table was compiled in the Balfour Stewart Auroral Laboratory of the University of Edinburgh from all data available for the longitude of the British Isles, using mainly observations made at British Meteorological Office stations and by British voluntary observers, but including also some of the data from the Faroes, from Ireland and from France. Acknowledgements are made to the Directors of the Meteorological Services of Denmark (for the Faroes data), Ireland and France.

In the table, Φ_1 is the lowest geomagnetic latitude from which aurora was seen in the longitudes considered. On any night, if more than a horizon glow was seen from the British Isles, the other forms reported are listed and the period of time (G.M.T.) during which the display was observed from the British Isles is stated. The standard abbreviations are used for the forms and types of activity: G = horizon glow; HA = homogeneous arc; RA = rayed arc; HB = homogeneous band; RB = rayed band; R = rays; S = surface; P = pulsating; F = flaming. If the forms could not be determined because of cloud or twilight, but auroral light was positively identified, the abbreviation L is used. Under Φ_2 is given the lowest geomagnetic latitude of overhead occurrence in the longitudes considered. In the absence of direct visual observations, Φ_2 is deduced from elevation measurements made in other latitudes, assuming a height of 100 Km. for the lower edges of arcs and bands.

Because of varying observing conditions, these data are in some cases incomplete: aurora may have been overhead in latitudes lower than those listed, and other forms may have occurred. Fuller details may be obtained from the Laboratory on request.

POTENTIAL GRADIENT (reduced to open level surface)
Mean values for periods of sixty minutes between exact hours

20 LERWICK													Factor 1.12 (metre ⁻¹)												JANUARY 1958													
	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													
	volts per metre																																					
1	195*	110*	250	Z*	250*	Z*	55	55	55	55	85*	Z*	Z*	225	Z*	Z*	170*	335*	Z+	Z*	Z*	Z+	Z+	Z-	115	(6)												
2	Z-	Z*	Z*	185*	55	55	55	55	55	55	85	85	85	85	140	250	225	250	Z+	Z*	Z*	310*	Z*	110	(15)													
3	Z†	Z*	55	55	60	55	55	55	55	30	30	55	55	55	85	55	110	250	110	110	225	110	195*	80	(21)													
4	110	60	-340*	Z-	Z-	-680*	-715*	-465*	-370*	-60*	55*	85*	110*	170*	140	170	195	170*	170*	250*	225*	170*	140*	30*	155	(4)												
5	140*	110*	-95*	-185*	-215*	-495*	-560*	Z-	Z-	Z-	-60*	30*	Z-	Z-	Z-	Z*	55*	155*	Z+	250*	Z†	110*	Z†	110*	-	(0)												
6	195	195	170	Z*	110	85	85	110	110	110	85	110	110	125*	110*	110	225	170	Z+	Z*	Z*	95*	55*	55*	130	(15)												
7	85	85	85	85	55*	85	85	55	85	60	280*	Z*	Z*	-95*	85	Z†	Z†	370*	Z†	Z†	370*	110	110	90	(8)													
8	Z+	Z†	Z*	110*	Z†	170	Z†	55	55	Z†	55*	85	60*	55*	55	55	110	195	250	110	110	110	110	115	(14)													
9	85	95	85	85	Z*	95	30*	Z†	Z†	Z†	125*	Z†	-310*	-215*	0	140*	170	Z+	Z†	Z†	-95*	85*	Z+	Z+	105	(5)												
10	85	55	55	85	85*	Z†	110*	110*	-155*	-280*	-715*	-835*	-495*	-370*	-310*	-465*	-405*	-250*	-215*	Z†	-495*	-95*	30*	110	80	(5)												
11	60	-650*	-310*	0*	0*	55*	85	85	85	85	85	85	85	85	85	85	110	110	110	110*	110*	110	85	85	90	(17)												
12	85	85	85	55	Z†	55	55	55	55	85*	85*	85	85	85*	110	85	110	85	110	85	85	85	55	80	(19)													
13	30	30	30	30	30	30	30	30	55	85	85	85	85	85	110	-	(110)	110	110	140	110	125*	110*	110*	70	(19)												
14	140*	125*	110*	170*	170*	60*	-560*	-155*	110*	30*	125*	125*	140*	195	85	85	85	85	85	85	85	85	55*	55	95	(10)												
15	85	55	55	55	55	55	85	30*	55*	30*	0	195*	310*	280*	195*	170*	140*	170*	170*	170*	195*	195*	110*	110*	60	(6)												
16	110*	110*	110*	85*	85*	85*	85*	85*	55*	85*	85*	125*	110*	170*	170*	Z*	280*	Z*	Z†	Z†	185*	140	Z*	Z*	140	(1)												
17	110*	Z*	Z*	Z†	Z†	Z†	140*	Z†	Z†	Z†	-	-	-	-	-	-	-	-	-	-	Z*	Z†	110*	110*	-	(0)												
18	55*	30*	Z†	Z†	Z†	Z†	Z†	Z†	Z†	Z†	Z†	Z†	Z†	110*	0	Z†	-	-	-	140*	140*	110*	110*	110*	110	(1)												
19	Z+	110*	110*	Z†	Z†	170	Z†	Z†	Z†	Z†	Z†	Z†	Z†	Z†	110	85	85	85	85	85	85	95*	85*	85	90	(5)												
20	110	195	110	Z+	170	185	Z†	140	140	110	140	110	110	110	140	110	170	Z†	Z†	Z†	Z†	Z-	Z†	Z-	135	(16)												
21	140*	195*	Z†	Z†	Z†	Z†	170	185	250*	-	280	420	Z†	Z†	Z†	Z-	Z†	Z†	Z†	Z†	Z†	Z†	Z†	225*	265	(4)												
22	Z-	Z†	Z†	Z†	Z†	Z†	Z†	280*	250	225*	250	390	365	Z†	Z†	Z†	Z†	Z†	Z†	Z†	Z†	Z†	Z†	Z†	315	(4)												
23	Z†	Z†	Z†	Z†	Z†	Z†	370*	530	505	Z†	Z†	Z†	-	170	250	140	Z†	Z†	225	195	225	225	195	195	260	(11)												
24	140	85	55	55	55	110	110	110	110	110	85	85	225	225	Z+	Z†	Z†	170	170	335	450	195	Z†	Z†	150	(19)												
25	Z+	Z†	Z†	195	195	195	170	195	225	195	170	170	170	170	195	-125*	-60*	0	-60*	-250*	Z†	Z†	Z†	Z†	185	(12)												
26	Z-	140*	170	140	140	110	110	110	110	85	140	195	170	140	170	140*	170*	140*	110*	110*	85*	110*	110*	110*	140	(13)												
27	140*	140*	110	110	170	170*	225*	250	310	335	335	335	420	335	390	310*	390	420	420	390	420	450	365	195*	330	(18)												
28	250*	280*	280*	280*	335*	280*	250*	280*	280*	280*	250	225	225*	225*	170*	170*	225*	195*	140*	85*	225*	250*	280*	140*	250	(3)												
29	110*	55*	30	30	55*	110*	110*	85*	55*	-	-	-	-	-	-	-	110*	110	170*	225	140*	140	170	140	155	(5)												
30	110	85	110	85	110	110	110	110	85*	85	110*	110	110	110	110	110	110	110	110	110	110	85	110	110	105	(22)												
31	110	110	110	110	110	110	110	110	110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	110	(9)												
Mean	100	100	100	90	105	105	90	105	145	150	155	165	160	155	135	105	150	160	190	170	190	170	145	105	140	(307)												
	(13)	(11)	(15)	(13)	(12)	(12)	(14)	(16)	(16)	(14)	(13)	(16)	(13)	(13)	(16)	(12)	(13)	(13)	(11)	(11)	(9)	(11)	(10)	(10)														
Mean for 0a days																									170	(3)												

POTENTIAL GRADIENT (reduced to open level surface)
Mean values for periods of sixty minutes between exact hours

20 LERWICK													Factor 1.17 (metre ⁻¹)													FEBRUARY 1958																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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POTENTIAL GRADIENT (reduced to open level surface)
Mean values for periods of sixty minutes between exact hours

63

20 LERWICK		Factor 1.22 (metre ⁻¹)																				MARCH 1958						
	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	
volts per metre																												
1	70*	95*	95*	95	95	130*	190*	95*	95*	95	95	95	65	95*	95*	95*	95	65	95*	65	65	-70*	65	65	65	75	(10)	
2	-	-	-	-	-	-	-	-	-	-	-	95	95	130	160	95*	70*	130*	130	130	130	130	130	95	95*	95*	120	(9)
3	95*	95*	95*	65*	65	65	65	30	30	65	95	95	95	0	-35*	-105*	0	225*	255*	190*	225*	225*	225*	190*	130*	65	(8)	
4	65*	95	65*	95*	130*	95*	65*	65	65	65	65*	130*	95*	-175*	-350*	2-	65*	-70*	130*	2+	130*	95	95*	95*	95*	80	(4)	
5	95	2+*	2+*	95	2+*	2+*	2+*	2+*	2+*	(2+)*	130*	140*	140*	2+*	160	130*	2+*	2+*	2+*	225*	255	290	130	130*	2+*	170	(6)	
6	2+*	2+*	2+*	2+*	95*	2+*	2+*	2+*	130*	2+*	2+*	2+*	2+*	160*	130*	130*	210*	2+*	255*	2+*	2+*	2+*	255	130*	2+*	255	(1)	
7	130*	210	2-	210	210*	130*	160*	160*	160*	-	2+*	2+*	2+*	95*	65*	-	130*	130*	160*	160*	130*	130*	210*	160*	160*	210	(2)	
8	160*	130	130	130	130	130	160	210	225	190	160	130	130	105*	130*	190*	255*	255*	225*	190*	2+*	2+*	190*	280*	255*	155	(11)	
9	2+*	95*	95*	2+*	2-	2+*	140*	65	95	130	2+*	2+*	2+*	2+*	2+*	2+*	255*	190*	290*	2+*	2+*	2+*	2+*	2+*	2+*	95	(3)	
10	2+*	2+*	2-*	2+*	2+*	2+*	-	190*	190	160	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	175	(2)	
11	-	-	-	-	-	-	-	-	-	-	-	225	350	385	320	415	450	415	480	510	415	480	385	320	385	395	(14)	
12	320	255	290	290	225	95	95	130	320	450	415	290	290	290	290	350	320	350	510	385	385	320	350	320	255	305	(24)	
13	255	225	225	225	190	160	225	255	225	255	225	255	255	190	225	2+*	2+*	190*	255*	255	190	225	130	225	190	215	(20)	
14	160	160	160	130	130	95	95	95	130	95	95*	65	65	175	160*	190*	190	190	190	190	160	130	95	95	65	135	(21)	
15	95	95	95	95	95	95	95	95	160	225	65	65	65	65	95	95	95	95	95	95	95	95	95	95	95	100	(24)	
16	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	160	160	160	160	160	160	160	130	130	130	140	(24)	
17	95	95	95	65	65	95	95	95	95	95	95	-	-	95	130*	130	130	385*	130	-	-	160	255	190	160	120	(18)	
18	130	95	95	95	95*	95*	65*	30*	65	65*	130	130*	130*	2+*	2+*	2+*	130	130	190	2+*	95	190	225	2-	2-*	130	(12)	
19	35*	65	65	65	2+	2+*	2+*	2+*	2+*	130	160	160	160	160	160	160*	160*	140	190	175*	2+*	2+*	95	130	130	130	(14)	
20	130	130	130	130	130	130*	95*	65*	160*	160*	160	130	130	130	130	130	95	95	65	130*	95	95*	65*	65	65	115	(16)	
21	30	65	30	30	30	30	30	95	95	-	-	-	-	-	-	95	95	95	130	130	95	95	95	65	65	75	(19)	
22	65	65	65	65	65	65	95	95	95	95	130	160	190	190*	190	190	160*	160*	130*	130*	130	160	190	130*	130*	120	(17)	
23	130*	130	130	130	130	130*	130*	130	130	130	130	160	160	160*	190*	190*	190*	190*	190*	190	190	130*	130*	130*	160*	145	(11)	
24	160*	130	130*	130*	130*	130*	130*	130*	130*	130*	-	-	-	-	-	-	190	190	190	190	190*	190*	160*	160	160	165	(7)	
25	95	95*	95*	95*	95	95	130*	225*	190*	190*	160*	160*	160*	160*	130*	160*	190	190*	225*	225*	160*	130*	160*	95	65*	120	(4)	
26	130*	95*	95*	95	130	130	130	130	160	160	130	190	190	160	160	130	130	160	190	95	130	130	130	160	160	140	(21)	
27	130	130	130	130	130	130	130	130	130	130	130	160	160	160	160	160	190	190	225	225	225	190	190	190	165	(24)		
28	130	130	130	130	130	130	130	130	130	130	130	130	130	130	160	160	160	160	160	160	160	160	160	130	145	(24)		
29	160	160	160	160	160	160	160	160	160	160	160	130	130	130	130	130	160	160	160	160	160	190	190	160	130	155	(24)	
30	130	130*	2-*	2+*	2+*	255*	2+*	95*	65*	95	-	-	-	-	-	-	-	-	-	-	130*	130*	95*	95	65*	105	(3)	
31	65*	95*	105*	-70*	30*	65*	30*	65*	65*	65*	65	2+*	2+*	130*	130*	130	160	190	225	225	225	225	225	225	225	195	(11)	
Mean	135	130	130	125	120	110	115	120	140	155	155	160	160	165	175	175	175	175	200	195	180	190	175	155	155	155	(408)	
	(16)	(19)	(16)	(20)	(18)	(14)	(14)	(17)	(20)	(19)	(18)	(17)	(17)	(14)	(14)	(13)	(16)	(16)	(17)	(17)	(17)	(19)	(18)	(20)	(19)	(17)	Mean for 0a days [155 (11)]	

POTENTIAL GRADIENT (reduced to open level surface)
Mean values for periods of sixty minutes between exact hours

20	LERWICK												Factor 1.34 (metre ⁻¹)												APRIL 1958						
	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				
			volts per metre																												
1	200	200	165	130	200	230	265	230	230	230	230	230	165	130	130	165	200	200	200	200	165	165	130	100	100		180 (24)				
2	65	100	100	100	100	100	130	130	130	130	130	100	100	100	130	165	165	165	165	130	100	165	165	130	130		125 (24)				
3	130	100	65	35	130	130	100	130	165	100	130	100	100	100	100	165*	Z*	165*	230*	110*	200*	265*	200*	200*	200	130	120 (12)				
4	65	65	65	65	65	65	65	65	65	65	65	65	65	65	100	130	165	165	165	165	165	165	130	100	100		105 (24)				
5	35	35	65	65	35	35	65	65	65	65	65	100	100	100	100	100	100	100	130	130	130	130	100	100	65	65	85 (24)				
6	65	65	65	35	35	-110*	Z*	Z*	65*	35*	35*	0*	65	65	65	65	65	65	65	65*	65	100	130	100	100	100	75 (16)				
7	65	65	35	35	35	Z*	Z*	Z*	35*	Z*	35*	0*	0*	35	35	35	35	35	65*	65	75*	100	100	65	65	75 (7)					
8	65	100	65	65	65	65	65	65	65	65	65	35	35	35	35	35	35	35	65*	Z*	130*	100	100	65*	65*	60 (13)					
9	65*	65	65*	65*	35	65	35	65	65	65	65	65	65	65	65	65	100	100	100	100	100	100	130	100	65	65	85 (13)				
10	35	35	35	35	35	65	65	65	65	65	65	100	100	100	100	100	100	100	100	100	65	-	-	-	-	-	75 (19)				
11	-	-	-	-	-	-	65	65	100	100	100	100	100	100	130	165	165	165	165	130	130	130	100	100	65	65	115 (18)				
12	65	65	65	100	130	200	230	230	165	130	130	130	65*	65*	130*	200*	200	200	200	200*	265*	330*	365*	230	200	130	155 (15)				
13	100	100	100	100	100	100	100	100	130	130	130	130	200	200	200	165*	165*	130*	200	230	230	265	295	295	265	230	175 (21)				
14	130	200	230*	200*	100*	100	100	100	100	100	-	-	65	65	65	0	35	100	100	100	75*	100*	Z*	Z*	35*	-75*	90 (13)				
15	Z*	75*	100*	Z*	100	75	100*	230	Z*	Z*	65*	Z*	2+	100*	110*	130*	200*	Z*	165*	200*	Z*	130*	200*	130*	65*	135 (3)					
16	65*	165*	130*	100*	65*	65*	35*	65*	35*	65*	65	100	100	100*	100*	100*	100	100	100	65*	65	65	65*	65	65*	65*	80 (7)				
17	35	35	35	65	65	65	100	100	100	100	100	100	100	100	100	100	100	100	100	100*	65*	35*	-110*	-295*	-445*	-520*	80 (17)				
18	-555*	110*	165*	65*	100*	65	35	65	100	110*	Z*	-405*	0*	0*	35	65	65	100	100	100	100	130	130	100*	65*	65	80 (13)				
19	-75	75*	65*	65*	65	35	65	65	65	100	100	100	100	100	100	65	35*	-35*	35*	65	100*	65	65	65	-110*	-260*	65 (13)				
20	-75*	65*	65	35*	65*	35*	35	35	35	35	35	65	65*	100*	100	100	130*	Z*	395*	130	130	130	100	130	Z*	90 (12)					
21	65*	110*	35*	0*	35*	35*	0*	-110*	0*	65*	35*	35	35	65*	(65)*	130*	100	130	100	100	100	65	65	65	35*	80 (9)					
22	65*	35*	35*	35*	35*	65*	65*	100*	130	100	100	100	100	65	65	100	130	200	165	130	100	230	65	65	65	115 (16)					
23	65	65	65*	100*	65	100	265*	100*	65*	Z*	Z*	Z*	Z*	Z*	-890*	-150*	100	100	130	130	230	460	430*	495*	Z*	145 (10)					
24	130*	165	130	130	130	130	130	130	130	200	265	230	230	265	265	330	530	825	695	460	295*	595	330	165	130	290 (22)					
25	130	130	130	130	130	165	200	200	200	200	200	130	230	265	395	595	495	330	220	335*	Z*	Z*	Z*	100*	100	230 (18)					
26	65*	65*	65*	100	100	100	100	100	Z+	0*	-75*	100	100	130	130	100*	65*	130	100	100	130	100	65	100	100	100	105 (16)				
27	65	65	65	35	35	65	65	65	35	65	65	65	65	65	100	100	100	100	100	100	100	65	100	65	65	70 (23)					
28	65	130	100*	100*	-75*	Z*	110*	130	130*	100*	100*	100	100	65	65	65	65	100	100	100	100	100	100	65	65	85 (16)					
29	65	65	75*	65*	75*	110*	65	65	65*	65	100*	65*	100	100	100	100	65	65	100	100	100	100	100	100	65	65	80 (17)				
30	65	65	65	65	65	65	65	65	65	65	65	65	100	100	100	100	100	100	100	100	65	100	265	495	430	265	125 (24)				
Mean	70 (20)	95 (20)	80 (16)	80 (16)	85 (19)	95 (21)	100 (21)	115 (21)	110 (19)	110 (18)	110 (16)	105 (21)	115 (20)	125 (19)	140 (20)	145 (22)	160 (25)	150 (20)	135 (21)	120 (21)	170 (22)	140 (21)	125 (20)	105 (20)		120 (479)					
																										Mean for 0a days	[150 (9)]				

POTENTIAL GRADIENT (reduced to open level surface)
Mean values for periods of sixty minutes between exact hours

The potential gradient is reckoned as positive when the potential increases upwards. The symbol Z indicates either that the trace fluctuates rapidly so that estimation of a mean value is impracticable, or that the trace is limited by the range of the instrument (see Introduction); and the suffix +, - or ± indicates that the mean value is plainly positive, plainly negative, or indeterminate in sign. The occurrence of precipitation of any sort is indicated by an asterisk. Round brackets round any hourly mean indicates that the record during that hour is somehow imperfect.

POTENTIAL GRADIENT (reduced to open level surface)
Mean values for periods of sixty minutes between exact hours

65

20	LERWICK												Factor 1.19 (metre ⁻¹)												JULY 1958		
	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		
													volts per metre														
1	65*	65*	100	130	165	230	200*	430*	Z+	Z-	Z+	595	495	165	295	165	100	65	100	100*	100	100	100	100	100	190	(16)
2	100	65	65	65	65	100	130	130	130	130	130	130	130	130	130	100	100	100	100	65	65	65	65	65	65	100	(24)
3	65	65	65	100	130	130	100	100	130	130	100	130	130	130	165	165	200	230	165	100	100	100	100	130	130	125	(24)
4	100	65	65	100	65	100	100	100	140	-	65	100	65	35	105	65*	65*	100	65	65	100*	100*	100*	105*	85	(17)	
5	130*	65*	100*	65	130	100	100	100	130	130	65	65	65	100	100	65	65	100	100	100	65	65	65	100	90	(21)	
6	65	65	65	130*	100*	100*	65	100	65	65	100*	100*	100	100	100	130	100	100*	65*	65*	35*	35*	35*	35*	85	(12)	
7	65*	65*	65*	65*	100*	130*	100*	100*	65*	35*	35*	35	35	35	65	65	100	100	100*	100*	100	130	100*	100*	75	(9)	
8	65*	130*	130*	165*	330*	230	130	130	265	230*	295*	330	230	130*	200	100*	65*	100*	165*	130*	130*	100*	200*	165*	215	(7)	
9	100*	100*	100*	130	100*	100*	130	130*	105*	35*	65	35	35	35	35	35	35	35	35	35	65	35*	130	130*	60	(14)	
10	130	165	165	165*	130*	130*	130	130	130	100	100	100	65	65	65	65	100	65	65*	100*	65	65	65	100	100	(19)	
11	100	100	100*	130	130	130	65*	130	100	130	200	200	200	230	200	130	130	165*	130*	130	130	100	65	65	135	(20)	
12	100	130	165	295	265	265	430	395	230	165	-	100	165*	100*	-245*	-630*	-525*	-430*	-210*	Z-	Z-	Z-	Z-	230	(11)		
13	130*	100	130	100	295	330	530	460	625*	230	265	265	230	265	200	130	100	130	130	130	100	100	130	130	205	(22)	
14	100	100	130*	130*	100*	100*	100*	-70*	65*	65*	35*	65	65	65	65	65	65	65	35	65	100	100	100	65*	75	(14)	
15	65*	65	65	35	35	65	65	100	65*	65*	65*	130*	100*	35*	35	65	100	65	65	100	65	35	65	35	60	(17)	
16	35	35	35	35	35	65	100	130	130	165	130	130	100	100	130	130	100	130	130	100	100	100	35	65	95	(24)	
17	65	65	65	65	65	65	65	65	65	65	65	65	100	65	65	100	100	100	100	100	130	130	100	100	80	(24)	
18	100	100	130	165	230	230	200	165	165	165	165	165	165	130	130	130	130	130	130	100	100	65	65	140	(24)		
19	100	130	130	130	200	230	130	265	295	-	200	230	200*	130	130	265	295	395	430	460	530	430	Z+	Z+	255	(20)	
20	Z+	Z+	560	330	130	165	165	200	200	165	100	165	165	130	200	165	100	100	65	100	55	65	65	65	155	(22)	
21	65	65	100	130	130	100	65*	100	130	65*	35*	35*	35*	35	35	35	35	65	65	65	65*	65	65	65*	75	(17)	
22	65*	65*	65*	65	100	130	130	165	165	-	Z-	Z+	Z+	140*	165*	130	130	130*	100	65	65	35	35	35	100	(13)	
23	65*	70*	35*	-105*	-70*	65*	65*	100*	65*	35	65	65*	100*	100	65*	65*	65*	65*	65*	65*	65	65	65*	65*	65	(6)	
24	65	65	65	65	35	35	35	35*	35*	70*	100*	100	100*	65*	100	100	65	65	100	65	100	65*	35*	65*	75	(13)	
25	100*	100*	100*	100	100	130	100	100*	100*	65	65*	65*	100*	65*	65	35*	35*	65	65	65	65	100	65	65	85	(13)	
26	100	65	65	65	65	100	130	165	265	230	100*	130*	200*	165	165	130	130	165	-70*	-105*	130	100	165	100	130	(19)	
27	35	35	35	35	130	230	130	130	130	130	165	165	200	200	100	35	35	65	100	130	130	65	35	35	105	(24)	
28	65	200	330	200	200	100	200	130	230*	200	230	200	100*	100	65	65	100*	65*	130	130	130*	165*	200*	-70*	160	(16)	
29	-245*	-245*	35*	-105*	35*	-70*	-210*	-245*	70*	200*	200*	265*	230	460	460*	365*	70*	330*	200*	-35*	280*	265*	105*	-105*	345	(2)	
30	-455*	Z-	-315*	-350*	-910*	-420*	-70*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	35*	100	165	135	(2)	
31	100*	100	100*	130*	100*	100	165	200*	230*	165	65*	130	100*	100	100*	100	100	130	130	130	100	100	100	65	115	(15)	
Mean	80	90	125	115	135	145	155	160	160	135	130	160	150	130	120	105	105	110	110	110	110	100	80	85	120	(501)	
	(17)	(20)	(19)	(22)	(20)	(23)	(22)	(21)	(18)	(18)	(16)	(22)	(19)	(24)	(25)	(24)	(23)	(22)	(21)	(21)	(21)	(23)	(22)	(21)	(18)		
Mean for 0a days																								[110	(17)]		

POTENTIAL GRADIENT (reduced to open level surface)
Mean values for periods of sixty minutes between exact hours

20 LERWICK												Factor 1.12 (metre ⁻¹)												AUGUST 1958					
	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				
													volts per metre																
1	90	60	30	30	30	60	120	90	-	150	120	150	150	120	120	150	150	180	180	180	210	120	150	90	120	(23)			
2	120	90*	60	60	90	90	120	120	60*	120*	90	60	120	120	150	120	90*	60*	90*	60*	90*	90	90*	90	100	(15)			
3	90*	60*	30*	90*	90	90*	120*	30*	120*	60	60*	60*	90	90	60	90	60	90	60	90	-	-	-	-	80	(10)			
4	-	-	-	-	-	-	-	-	-	-	-	-	-	Z+	90*	Z+	240*	120*	150*	(120)*	390*	240*	210*	150*	150	(1)			
5	210*	150*	150*	90	120	150	90	0*	-65	-65*	-160*	-255*	-160*	-130*	-130*	-130*	-95*	-130*	30*	30*	-30*	0*	60*	30*	75	(5)			
6	30*	0*	-30*	-65*	60*	60*	30*	60*	60*	30*	30*	30*	30*	30	30*	0*	0*	0*	30*	150*	120*	90*	130*	120	75	(2)			
7	90*	Z-	90	Z+	Z+	Z-	-65*	Z-	Z-	Z*	120*	150*	90*	95*	-255*	65*	210	180	180	180	120	150	150	150	155	(9)			
8	150	150	150	150	150	180	210	180	180	150	150	150	120	120	150	180	180	180	180	180	120	120	120	120	155	(24)			
9	90	90	90	90	120	150	180	210	240	210	210	150	180	180	180	210	210	240	270	240	270	270	240	190	(24)				
10	210	180	120	65*	150*	120	-	-	-	-	-	-	-	-	-	-	-	-	120	150	300	420	600	510	275	(10)			
11	240	180*	270*	330	-	390	240	240	60	90	-	-	-	300*	-	-	-	-	-	-	-	-	-	-	225	(7)			
12	360	570	330	390	480	Z+	Z+	Z+	Z+	Z+	510	390	270	240	270	180	240	180	240	330	270	390	420	300	335	(19)			
13	300	240	180	210	240*	240*	330	180	150	120	90	150	120*	150*	150*	95*	210*	210*	240*	210*	150*	90*	120*	120*	195	(10)			
14	-95*	120*	150*	90*	90*	180*	240*	270*	270*	120*	60*	90*	95*	90*	60*	60*	90*	90*	120	120	150	150	150	150	140	(6)			
15	120	150	120	120	120	150	240	240	120	180	150	180	240	300	210	150	120*	120*	90	120	120	150	90	60*	160	(21)			
16	60*	30*	30*	30*	-30*	30*	240*	180*	150*	150*	120	90	120	60	90	60*	-30*	30*	0*	0*	0*	30	60*	60	80	(7)			
17	30	30	30	30	30	60	60	60	90	60	30	90	180	180	180	180	120	120	180	210	210	180	150	240	115	(24)			
18	210	240	210	180	240	180	180	210	240	180	120	180	240	180	210	210	150	180	210	150	120	180	180	190	(24)				
19	150	180	120	90	60	60	60	90	90	95*	-95*	65*	30	Z+	Z+	Z+	130*	570*	420*	210*	240*	300*	225*	160*	95	(10)			
20	-130*	Z*	95*	180*	240*	270*	360	510	690	570	630	Z+	Z+	390*	150	150*	270*	90*	0*	-65*	130*	-95*	-320*	0*	485	(6)			
21	120*	150*	180*	180*	180*	210*	300*	210*	360*	300	300	210	180	150	120	120	120	180*	300*	(180)*	300*	270	210	150*	200	(10)			
22	240*	240*	150	180	240	210	240*	150	90*	0*	120*	65*	Z+	180*	180*	150	120	90	90	90	120	150	240	240	160	(13)			
23	180	270	180	95	Z-	Z-	90	120	150	180	150	150	90	60	60	60	30*	30*	60	60	90*	60*	60*	60*	130	(14)			
24	90*	120*	90*	120*	90*	-65*	0*	150*	95*	150*	60*	90*	60*	120*	90*	30*	30*	120*	90*	90*	60*	0*	60*	30*	-	(0)			
25	90*	90*	120*	150*	120*	150*	120*	180*	180*	150*	120*	120*	120*	120	120*	90*	120*	120*	90	120	90	60*	90*	60*	110	(3)			
26	60*	60*	30	30*	30*	30*	30*	60	60	60*	60	30	60*	30	60	60	60	30	60	60	60	60	60	60	55	(16)			
27	60	90	150	180	300	390	720	480	210	120	210	240	330*	360	420	390	360	390	420	450*	360*	240	180	180*	300	(19)			
28	120*	240*	210*	210*	300	480	390	600	570	-	450*	510*	480	Z+	300*	130*	450*	Z+	540*	Z+	450	Z+	Z+	Z+	465	(7)			
29	Z+	Z+	Z+	-	-	-	-	-	-	-	120	150	210	420	360	240	-	-	90	150	300	240	330	300	245	(12)			
30	240	Z+	Z+	510	360	630	Z+	480	360	420	Z+	Z+	Z+	240	150	150	240	450	570	420	510	600	540	510	410	(18)			
31	390	300	240	210	180	210	120	90	240*	Z+	420*	420	360	Z+	Z+	600*	630*	630*	Z+	Z+	660*	540	660	630	335	(13)			
Mean	185 (16)	195 (13)	135 (17)	175 (17)	180 (16)	220 (16)	230 (15)	235 (17)	210 (15)	200 (14)	190 (16)	170 (15)	190 (16)	165 (18)	175 (17)	165 (16)	175 (13)	190 (12)	175 (19)	180 (16)	220 (15)	225 (19)	265 (17)	235 (17)	195 (382)				
																						Mean for 0a days			160	(10)			

POTENTIAL GRADIENT (reduced to open level surface)
Mean values for periods of sixty minutes between exact hours

20 LERWICK													Factor 1.02 (metre ⁻¹)													SEPTEMBER 1958						
	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							
	volts per metre																															
1	540	390	360	360	390	570	450	420*	Z ⁺	(Z ⁺)*	Z ⁺	Z ⁺	300*	Z ⁺	Z ⁺	240*	Z ⁺	270*	90	120*	420*	180*	150	210	330 (11)							
2	270	270	240*	270*	390*	360*	300*	330*	300*	270*	210*	210*	180	150	150	150	120	90	120*	240*	210*	270*	210	240*	175 (9)							
3	240	240	180	180	180	180	210	210	210	210	210	180	120	120	150	120	90	120	120	120	150	120	120	150	165 (24)							
4	150	120	120	120	120	120	150	150	150	180	180	180	180	210	210	180	210	Z ⁺	450	360	360*	300*	240*	240	190 (20)							
5	270	360	450*	240*	(240)*	210*	210	210	240	240	360	270	180	180	180	180	120	120	180	240	240	240	240	240	225 (20)							
6	300	420	510	360	360	360	420	450	450	Z ⁺	Z ⁺	Z ⁺	Z ⁺	480	270	120	Z ⁺	450	Z ⁺	Z ⁺	Z ⁺	Z ⁺	Z ⁺	Z ⁺	380 (13)							
7	150	150	Z ⁺	Z ⁺	Z ⁺	Z ⁺	Z ⁺	420	270	240	180	180	180	150	150	120	90	60	30	Z ⁺	90	Z ⁺	540	Z ⁺	185 (16)							
8	660	750	510	270	180	180	270	420*	570	300	300	300	240	120	Z [±]	Z ⁻ *	-90*	60*	90	90	0	30	180	120*	280 (18)							
9	120	90	120	90	60	90	90	240	180	90	60	60	60	60	60	60	30	60	-30	30	60	30	60	60	75 (24)							
10	60	90	60	60	60	60	60	90	60	60*	60*	30*	60	30	60	60	60	60	60	30	60	60	90	90	65 (21)							
11	60	30	30	30	30	30	30	60	60	60	30	60	30*	60	90	90	90	60	60	60	90	90	90	90	60 (23)							
12	60	60	30	30	30	60	60	60	90	90	90	120	120	90	120	120	120	90	60	180	330	210	180	105 (24)								
13	180	120	180	150	180	300	300	240	180	90	90	90	60	60	60	60	60	30	30	90	90	90	120	150	125 (24)							
14	120	150	90*	120*	90*	60	30	30*	60	60	120	150*	180	240	540	Z [±] *	Z ⁺ *	Z ⁺ *	420	210	180	120	90	0	170 (15)							
15	90*	90	90	90	90	90	90	60	60	60	60	0	30	30	60*	120*	120*	150*	120	120	210	300	180	150	100 (19)							
16	150	150	60	60*	60*	90*	90	120*	150	120	120	90	120	90	60	0	-30	0	120	150	210	450	330	125 (20)								
17	210	180	120	90	90	90	120	90	120	120	90	60	60	60*	60*	30*	60	60	90	150	150	210	180	180	120 (21)							
18	150	150	150	180	180*	180	180	180	180*	180	210	210	210	210	240	270	300	330	330	330	300	270	240	210	225 (23)							
19	210	180	180	180	60*	-210*	Z ⁻ *	Z ⁻ *	-60*	-90*	120*	150*	150*	120*	270*	Z [±] *	Z ⁻ *	Z ⁻ *	-60*	240*	300	180	150	120	185 (8)							
20	90	90	90	90	120	120	120*	60*	-90*	60*	180	120	60	90	30*	120	60	60	60	90	90	150	150	90	100 (19)							
21	60	60	90	90	90	90	90	180	180	240	270	210*	180	150	120	150	150	120	120	150	150	180	150	120	140 (23)							
22	120	60	30	0	0	30	90	120	-	120	90	120	150	150	60	30	0	30	30	60	60	30*	30*	30*	65 (20)							
23	90*	60	120	120	120	90	90	150	180	(120)*	90	60	60	-	150	120	120	150	210	210	210	330	540	420	170 (21)							
24	420	360	300	-90*	0	Z ⁻ *	Z ⁻ *	Z ⁻ *	Z ⁻ *	-	120*	120*	120	210	120	120	150	120	90	90	120	120	120	120	170 (15)							
25	90	90	90	60	60	90	90	90	90	60	60	Z [±] *	90*	-120*	-450*	30*	90*	90	120	120	120	120	120	90*	90 (15)							
26	60	60	60	60	60	90	90	90	90*	90	90*	90	120	120	120	120	120	120	120	120	120	90	60	60	95 (22)							
27	60	30	30	30	30	90	120	120	150	120	120	120	90	90	90	90	90	120	120	150	150	150	150	120	100 (24)							
28	180	150	150	150	180	210	240	180	180	180	180	210	270	300	290	480	420	330	300	300*	300	300	360	330	255 (23)							
29	300	270	330	330	240	270	330	300	300	150	210	180*	270*	300*	150*	120*	240*	Z ⁺ *	60*	-60*	300*	480*	300*	180*	275 (11)							
30	Z ⁻ *	Z ⁻ *	Z ⁻ *	Z [±] *	Z [±] *	150*	300	390	570	420	420	420	510	750	570	510	330	420	240	210	240	270	270*	270	400 (17)							
Mean	195	180	160	135	130	150	170	185	205	155	165	145	145	175	175	150	125	135	135	140	150	175	200	180	160 (563)							
	(27)	(29)	(25)	(23)	(22)	(23)	(25)	(22)	(22)	(22)	(22)	(20)	(24)	(24)	(22)	(22)	(23)	(23)	(26)	(23)	(25)	(23)	(24)	(22)								
																							Mean for 0a days		[150	(12)]						

POTENTIAL GRADIENT (reduced to open level surface)
Mean values for periods of sixty minutes between exact hours

20 LERWICK												Factor 1.01 (metre ⁻¹)												OCTOBER 1958											
	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										
	volts per metre																																		
1	150	120*	180	180	90	120	90	90	120	120	90	90	120	90*	60*	180	180	150	180	240	240	180	120	120	150	(18)									
2	150	120	120	90	90	120	150	210	60	120*	-60	90*	90	Z ⁻	Z ⁻	120	120	90	120	240	420	420	420	330	190	(18)									
3	270	210	120	180	180	120	240	270	240	150	120*	180*	300	270	450	600	390	510	840	690	150*	0*	210*	240*	335	(18)									
4	240*	120*	180	Z ⁺	270*	180*	180*	240*	300*	270	240	240*	0*	Z ⁻	Z ⁺	Z ⁻	Z ⁻	180*	240	270	270	390	450	420*	305	(10)									
5	270	240	180	210	240	240*	210*	-90*	60*	60	-	-	-	-	-	-	-	-	60	150	150	0	-60*	-30*	155	(10)									
6	60*	60*	60*	Z ⁻	90*	90*	120	120	120	120	150	150*	150	180	150	180	180	270	330	270	240	240	240	270	195	(18)									
7	240	210	210	240	300	Z ⁺	Z ⁺	Z ⁺	30*	Z ⁺	60	60*	60	60	Z ⁻	90	120	120	120	120	120	120	90	60	150	(15)									
8	90*	90	90*	60*	90	120	120	180	240	180	180*	120*	90*	240*	Z ⁺	Z ⁺	180*	Z ⁺	180	Z ⁻	210	180	Z ⁺	Z ⁺	145	(12)									
9	90	120	Z ⁺	Z ⁺	Z ⁺	240	Z ⁺	Z ⁺	Z ⁺	240*	Z ⁺	Z ⁺	150	180	270	180*	180	180	180	210	180	150	150	150	175	(14)									
10	90	60	60*	60	60	60	60	60	120	-420*	Z ⁺	Z ⁺	Z ⁻	120	120	90*	120	150	150	120	90	60	90	120	95	(18)									
11	90	Z ⁻	Z ⁺	90	90	90	150	Z ⁺	120*	90	120	120	120*	Z ⁺	Z ⁻	360	Z ⁺	Z ⁺	150	240	150	120	120	420	160	(15)									
12	Z ⁺	Z ⁺	180	60	60	60	60	60	90	90	90	90	60	60	90	90	90	90*	150*	150	150*	90	180*	180*	85	(17)									
13	270	360*	Z ⁺	Z ⁺	-420*	Z ⁻	-420*	-240*	120*	(120)*	90	90*	120	120	120	120	180	150	120	120	90*	90*	90	60	135	(10)									
14	90	60	60	60	60	60	60	90	90	60	30*	60*	30*	60*	30*	60*	Z ⁻	Z ⁻	-60*	120	120	90*	120*	90*	80	(13)									
15	60	-30*	-90*	90*	120*	Z ⁺	180*	Z ⁺	Z ⁺	Z ⁺	30*	Z ⁺	150*	180*	180*	Z ⁺	Z ⁺	Z ⁺	Z ⁻	Z ⁺	Z ⁺	Z ⁺	Z ⁺	Z ⁺	60	(1)									
16	90	Z ⁺	60	60	60	60	90	Z ⁺	Z ⁺	60*	150*	120*	60*	90*	90*	120*	120*	120*	Z ⁻	90*	60*	90*	60*	60*	70	(6)									
17	60*	-90*	60*	60	60	60	60	60	60	60	60	60	60*	90*	90	90	90	90	90	90	60	60	60	60	70	(19)									
18	60	60	60	60	60	60	30	30	30	60	60	60	60	30*	60	60	90*	60	60	30*	180*	240*	210*	90*	55	(16)									
19	90	90	60	60	60	90	60	60	30*	0*	-270*	-120*	60*	210*	120*	120	90	120	90	120	120*	90*	90	90	85	(15)									
20	60	60	30	60*	30*	30	60*	60*	30*	0	0*	0	0*	30*	30	-30*	0*	60*	120*	60*	30*	30*	30*	30*	30	(7)									
21	30*	30*	0*	30*	30*	30*	30*	30*	30	30*	30*	30	30*	60	60*	60*	60*	60*	60*	30*	60*	60*	60*	60	45	(4)									
22	60	30	30	60	60	60*	60*	60*	120	120*	120	60*	60	30	30	30	30	30	30	60	150*	270*	210*	90*	55	(16)									
23	60	60	90	90	60*	60	60	60*	60*	-*	-*	-*	-*	60	60	-*	-*	30	-	-	60*	-*	-*	-*	70	(6)									
24	-	-	-	-	-	-	-	-	-	-*	60*	60*	60*	60*	60	120	150	120	150	120	120	90	90	115	(10)										
25	60	60	60	60	60	60	60	60*	60*	-*	-*	-*	-*	60*	60	-*	150	120	-	-	-	-	-*	60	(7)										
26	-*	-*	-*	-*	-*	-*	-*	-*	60	60*	60	30	60	60	60	30	30	30	30	60	60	60	60	60	50	(15)									
27	90	90	90	120	120	120	120	120	120	120	120	90	90	90	90	-	-	-	-	-	-	-	-	-	105	(16)									
28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	90	90	60	60	75	(4)									
29	60	60	60	60	30	60*	60	60	60	30	60	60*	60	60	90	90	60	90	90	90	90	90	90	60	65	(24)									
30	60	30	30*	30*	30*	30*	Z ⁻	60	60	60	90	Z ⁻	90*	Z ⁺	Z ⁺	Z ⁺	Z ⁺	Z ⁺	Z ⁺	Z ⁺	Z ⁺	90*	Z ⁺	90*	60	(6)									
31	90	120*	Z ⁺	Z ⁺	Z ⁻	90	Z ⁺	60*	60*	60*	120*	90	60	120*	90*	60*	60	60	60	60	60	60	60*	60	70	(11)									
Mean	115 (22)	95 (17)	105 (18)	100 (19)	100 (17)	85 (20)	95 (17)	105 (14)	115 (16)	100 (15)	105 (11)	70 (12)	100 (13)	110 (11)	120 (13)	150 (16)	130 (16)	140 (16)	170 (19)	175 (20)	155 (17)	145 (17)	150 (15)	145 (18)	120 (389)										
																							Mean for 0a days			[70 (2)									

POTENTIAL GRADIENT (reduced to open level surface)
Mean values for periods of sixty minutes between exact hours

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20 LERWICK													Factor 1.01 (metre ⁻¹)													NOVEMBER 1958				
	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					
	volts per metre																													
1	30	30	30	30	30	30	30	30	30	60*	60	60	90	90	120	120	150	130*	Z*	Z*	Z*	65*	90*	90*	60 (16)					
2	95*	90	90	60	60	60	90*	90*	90*	120	180*	Z*	90*	65*	65*	95*	60*	60*	Z*	60	60*	60	65*	60	75 (9)					
3	30	30	30	30*	30*	30*	30*	30*	30*	30	60	60*	60*	90	90	90	120*	90	90	60	60	60	60	60	60 (15)					
4	30	30	30	30	60	60	60	60	60	30	30	30*	30*	60	60*	60*	60	90	90	90	90	120	120	120	65 (20)					
5	120	Z*	-320*	95*	90	90	90	90	90	90	-130*	-385*	-320*	-510*	130*	90*	60	60	60	60	90	60	60	90	80 (15)					
6	60	60*	90*	150*	150	150	130	-705*	Z*	60*	60	120	90	90	90	60	60	60	60	60	90*	60	60	60*	85 (16)					
7	60	60	60	60	60	60	30	30	30	30	30	60	60	60	60	30	-190*	0*	30*	60*	Z*	90	90*	Z*	55 (16)					
8	90*	30*	Z*	30	65*	Z*	Z*	Z*	65*	60*	90	240	130	255*	Z*	Z*	Z*	Z*	Z*	Z*	Z*	300*	270*	Z*	125 (4)					
9	Z*	Z*	Z*	Z*	Z*	Z*	60	90*	Z*	Z*	300*		Z*	Z*	180*	120	120	95	120	120	120	60	90	60	95 (10)					
10	60	60	60	60	65*	60*	60*	60	60	60	60	60*	65*	60*	60*	60*	60*	60	60	60	60	60	60	30	60 (15)					
11	0	0	30	30	30	30	30	30	60	60	90	90	90	120	120	120*	120*	120*	120*	-65*	Z*	Z*	Z*	Z*	60 (16)					
12	30*	60*	60	Z*	120	Z*	60	60	60	60	90*	Z*	Z*	240*	Z*	130*	150*	150	Z*	60	60	60	120	240	95 (12)					
13	Z*	Z*	150	30	30	30	30	30	30	30	60	60	60	60	60	120	60	30	30	60	60	60	60	30	55 (21)					
14	30	30	30	30	30	60	60	60	60	60	60	30*	60*	60	60*	90*	90	90	90	120	120*	120*	90	60	60 (17)					
15	90	90	90*	65*	120*	Z*	65*	120*	60*	60*	60	90	90	120	120	90	90	90	90	60	90	90	90	90	90 (16)					
16	90	90	90	90	90	120	150	150	120	150	120	60*	90*	120*	120*	150	150	150	180	150	180	180	180	180	135 (19)					
17	120	120	120*	120*	120	90	90*	90	90	90	120	120	90	90	90	90	120	120	120	90	120	90	90	90	105 (21)					
18	120	270	300	450	510	630	420	360	390	240	240	180	150	150	150	150	180	150	150	150	120	150	90*	90	250 (23)					
19	90*	90	90	90	90	90*	90*	120*	120*	120*	90*	60*	60*	90	90	120	120*	120*	120*	120*	90	90	120*	95 (9)						
20	120	150	150	150	150	120	120	90	90	90	120	150	150	180	210	270	270	240	270	300	270	240	240	240	185 (24)					
21	150	120	120	90	90	65*	0*	90*	Z*	90*	60*	60*	60*	30*	30*	30*	30*	60*	60*	120	150	90	90	90	110 (10)					
22	60	60	90	60	60	60	90	90	30	30	30	30	30	30	30	60	60	150	180	120	90	90*	120*	65 (22)						
23	210	210	180	240	240	210	210	150	120	90*	30*	30	30	60	90	60	60	60	60	90	90	90	90	60	120 (22)					
24	30	30	60	90	90	60	60	90	60	60	90	90	120	120	90	60	90	60*	60*	90*	60	60*	60*	-385*	75 (18)					
25	-510*	-320*	-450*	-575*	30*	60*	60*	30*	60*	60*	30*	30*	30*	30*	30*	60*	60*	60*	60*	90	90	90	60	60	80 (5)					
26	60	90	60	60	60	90	60	60	60	60	120	120	120	120	90	90	90	120	90	120	120	90	90	90	90 (24)					
27	60	90*	90	60	60*	60	60	60	60	60	60	60	60	60	60	30	30	60	30	30	30	30	30	0	50 (22)					
28	0	0	0	30	30	30	30	30	60	60	60	60	60	60	60	60	60	90	90	90	90	60*	60*	60	50 (22)					
29	60	60	60	60*	90*	90*	30	Z*	30*	60	90	90	90	90	90	90	90	90	90	90	90*	90*	90	60	80 (18)					
30	65*	60*	30	30	30	60	60	60	60*	60	60	60*	90*	90*	90	95	90*	90	90	90*	90*	90	60	60	65 (15)					
Mean	70 (22)	80 (21)	80 (23)	85 (21)	100 (22)	110 (19)	90 (21)	85 (20)	80 (19)	75 (21)	80 (21)	95 (17)	90 (17)	90 (20)	95 (19)	100 (19)	100 (19)	95 (21)	100 (20)	100 (23)	100 (21)	90 (23)	90 (21)	85 (22)	90 (492)					
Mean for 0a days																									[110 (11)]					

POTENTIAL GRADIENT (reduced to open level surface)
Mean values for periods of sixty minutes between exact hours

20 LERWICK													Factor 0.95 (metre ⁻¹)												DECEMBER 1958		
	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		
volts per metre																											
1	80	80	-	-	-*	-	-*	-*	-*	-*	-	Z+	Z+	120*	120	160	30*	-300*	Z-	Z+	Z+	0	30	-60*	80 (6)		
2	25	25	25	25	25	55	55	25	55	25	25	25*	25*	25*	25*	55	25	25	-30	-30	0*	0*	25*	25 (16)			
3	25	25	55	55	55	25	25*	25	55*	55*	55*	55*	55	55	60*	55	30*	25*	30	60*	55*	55*	55*	45 (12)			
4	30*	30	55*	55*	55	55	60	60	90	Z+	Z+	Z+	Z+	135	120*	Z+	Z-	Z+	135*	Z+	80*	55	25	60 (6)			
5	25*	25*	25*	55*	110*	80	80*	Z-	120*	55*	55	55	55	55	55*	55	55	25	55	55	55*	25	25	50 (12)			
6	55	55	55	55	25	25	25	25	25	25	25*	55	80	80*	80	80*	80	80	110	110	110	80*	55*	55	60 (19)		
7	55	30*	Z-	30*	55	55	-30*	Z-	-60*	0	30*	25*	-120*	110*	120*	Z+	Z+	110	110	80	Z+	80	Z+	Z+	80 (7)		
8	Z+	Z+	80*	110*	135	Z-	80*	80	Z+	110*	110	110*	110	110	110	80	80	110	110	80	80	55	55	55	90 (15)		
9	Z+	80*	80*	55	55	55	80	55	80	55	80	Z+	110*	Z+	215*	Z-	Z+	Z+	135	Z+	110*	Z+	55	55	70 (10)		
10	80*	135*	55*	55	55	Z+	Z-	55	80*	135*	Z-	135	135	Z+	Z+	460	Z+	Z+	245	190	160	325*	Z+	80*	165 (9)		
11	110	110	110*	80*	215*	Z+	Z-	160	80	135	215	270	Z+	245	245	215	135	215	565	Z+	Z+	350	110	110	205 (16)		
12	110	110	110	110	110*	80*	110	80	110	100	60*	160*	215*	190*	110*	240*	60*	30*	110*	135*	135*	80*	80*	55*	105 (8)		
13	60*	-60*	0	Z+	60*	Z+	80*	80*	80*	55*	30*	-420*	Z+	160*	160*	160*	110*	110*	110*	135*	325*	135*	160*	135*	- (0)		
14	300*	120*	135*	190*	160*	110*	110	80	55*	80	80*	55	110*	215*	Z+	120	135	80	80	80	80	110	80	80	90 (13)		
15	55	55	55	55	55	80	80	110	110	110	110	110	110	110*	80*	80	80*	80	80	80	80	80	80	55	80 (21)		
16	55	55	55	55	55*	55*	55	80	80	80	110	110	110	110	80	80	80	80	80	80	80	80	55	80 (22)			
17	80	55	55	55	55	55	80	80	110	110*	110*	110	110	110*	80	110	110*	80	55	55	55	55	55	55	70 (19)		
18	80	Z+	Z+	55	55	55	55	55	55	25*	25*	25	25	55	25	25	25	25	55	55	55	55	55	55	45 (20)		
19	25	25	25	55	55	55	80	80	110	80	110	110	135	110	110	110	60*	80*	80*	-30*	Z+	0*	Z*	-300*	80 (16)		
20	-240*	-150*	-180*	Z+	150*	Z+	350*	270*	215*	295	120*	150*	135	190	245	215	190	245	270	160	215	190	110*	80*	215 (11)		
21	55	110	160	135	190*	245	245	325	325	350	295	270	270	325	325	380	430	405	430	430	485	405	295	270	305 (23)		
22	270	160	110	135	110	135	110	110	80	110	110	110	110	110	135	160	160	190	160	215	245	325	295	215	160 (24)		
23	190	160	135	160	135	160	190	215	325	325	405		405	405	350	405	380	270	110	80	135	135	80	80	225 (24)		
24	110	Z-	55	55	Z-	55*	55*	Z+	Z+	25	55	55	55	55	55	55	55	55	55*	-60*	90	25*	0	25	55 (15)		
25	25	25	25	0	0	25	25	55	55	80	110	110	135	135	135	160	135	135	110	110	135	110*	110*	-*	80 (21)		
26	-	-	-*	-*	-*	-*	-*	-*	-	-*	-360*	60*	160*	245	190	110	90	110*	110*	55	60*	55*	25	60*	120 (6)		
27	55*	25	25	25	55	80	80	110*	Z+	135*	80	110	120*	Z-	110*	Z-	Z+	60*	110	110*	110*	110*	110*	110	75 (11)		
28	80*	55	80	80	80	110	Z-	-360*	-60*	Z+	Z-	110*	Z+	160*	Z+	215*	Z+	Z+	Z-	Z+	Z+	Z+	Z+	7+	105 (6)		
29	135	160	160	Z+	135*	135*	160	Z+	110	135	Z+	Z+	215	405	Z+	Z+	245*	Z-	Z+	Z+	Z+	Z+	Z+	Z+	195 (7)		
30	180	Z+	Z+	Z+	55	Z+	Z+	110*	Z+	Z+	Z+	Z+	Z+	Z+	Z+	Z+	Z+	Z+	Z+	Z+	Z+	215	135	Z+	145 (4)		
31	160	80	135	Z+	215*	180	Z+	Z+	Z+	(135)*	55	55	80	80	80	80	80	55	55	-	80	80	55*	55	85 (16)		
Mean	95 (20)	75 (19)	80 (17)	70 (17)	60 (18)	85 (17)	90 (17)	95 (18)	105 (14)	125 (16)	125 (15)	125 (17)	130 (17)	165 (17)	140 (17)	170 (19)	125 (17)	125 (18)	145 (20)	105 (19)	125 (17)	150 (15)	90 (17)	80 (17)	110 (415)		
																							Mean for 0a days			[140 (7.)]	
Annual Mean	120 (231)	115 (227)	115 (220)	110 (219)	115 (214)	125 (215)	130 (217)	135 (218)	145 (207)	135 (210)	140 (196)	135 (213)	135 (205)	140 (220)	140 (216)	135 (227)	140 (216)	145 (215)	140 (231)	140 (234)	150 (226)	150 (227)	140 (217)	130 (212)	135 (5233)		
																							Annual mean for 0a days			[135]	

21 LERWICK

	JANUARY		FEBRUARY		MARCH		APRIL		MAY		JUNE	
	Character	Duration of negative potential gradient	Character	Duration of negative potential gradient	Character	Duration of negative potential gradient	Character	Duration of negative potential gradient	Character	Duration of negative potential gradient	Character	Duration of negative potential gradient
1	1c	hr.	-	hr.	1a	hr.	0a	hr.	1b	hr.	0a	hr.
2	1c	0.9	-	-	(1a)	0.5	0a	...	1b	0.5	-	...
3	1b	2.7	(1c)	-	(1a)	(0.2)	0a	...	1b	0.1	-	...
4	1b	0.2	1a	0.7	1b	1.7	1b	0.2	1b	0.7	0b	...
5	2b	7.7	2b	10.7	1b	2.7	0a	...	0a	...	1b	0.3
6	2c	12.7	1c	2.1	1c	0.9	0a	...	-	-	-	-
7	1c	0.7	1c	1.7	1c	0.6	1b	1.7	2c	17.3	(0a)	(...)
8	1c	2.3	0a	...	-	-	1b	1.0	1b	1.2	0a	...
9	1c	0.4	1b	0.7	1b	0.2	1b	0.2	2b	7.7	1a	0.4
10	2c	4.3	1c	1.5	(2c)	(3.1)	1a	0.1	1b	0.5	1b	1.9
11	2b	11.7	1b	1.4	-	-	0a	...	1c	1.8	1b	2.8
12	1b	2.5	2c	3.6	-	-	0a	...	1b	1.6	0a	...
13	1b	0.1	1b	2.3	0a	...	0a	...	1b	0.5	0a	...
14	(1a)	(0.3)	1a	0.2	1b	0.7	0a	...	1a	0.2	0a	...
15	1b	2.6	1a	0.1	1a	0.2	1b	1.2	1b	0.8	1a	0.2
16	1a	0.4	1a	0.2	0a	...	1c	0.7	-	-	2b	3.4
17	1c	0.4	1c	2.5	0a	...	0b	...	1c	2.3	1a	1.7
18	-	-	1c	1.7	(0b)	(...)	2a	3.8	1c	2.0	1a	0.7
19	-	-	1b	0.7	1c	1.6	2b	4.0	-	-	1a	0.9
20	1c	0.6	0a	...	1c	1.8	1a	2.7	(1b)	2.1	0a	...
21	1c	0.6	(1b)	-	0a	...	1b	0.6	1a	1.3	1a	1.0
22	1c	2.5	-	-	0a	...	1a	1.1	-	-	1a	0.2
23	2c	3.5	1c	1.0	0a	...	0a	...	-	-	0a	...
24	1c	2.1	1b	1.2	0a	...	(2c)	(5.5)	-	-	0a	...
25	1b	0.6	1c	1.0	0a	...	0a	...	-	-	0a	...
26	2c	7.3	1c	1.3	0a	...	1b	1.1	1b	1.7	0a	...
27	1b	0.7	2c	3.5	0a	...	1b	0.6	0a	...	2a	6.1
28	1a	0.1	-	-	0a	...	1a	0.2	2b	3.7	1a	2.6
29	0a	...	1a	0.7	0a	...	1b	1.0	1b	1.5	1a	1.6
30	-	-	-	-	0a	...	1b	0.5	2b	3.2	1a	2.3
31	0a	...	-	-	-	-	0a	...	1b	1.8	1a	0.1
31	(0a)	(...)	-	-	1b	0.4	-	-	2b	3.3	-	-
Total	-	67.9	-	38.8	-	14.6	-	26.2	-	55.8	-	26.2
No. of days used	-	28	-	23	-	27	-	30	-	24	-	28
Mean	-	2.4	-	1.7	-	0.5	-	0.9	-	2.3	-	0.9

	JULY		AUGUST		SEPTEMBER		OCTOBER		NOVEMBER		DECEMBER	
	Character	Duration of negative potential gradient	Character	Duration of negative potential gradient	Character	Duration of negative potential gradient	Character	Duration of negative potential gradient	Character	Duration of negative potential gradient	Character	Duration of negative potential gradient
1	0b	hr.	0a	hr.	1c	hr.	1a	hr.	2b	hr.	2c	hr.
2	0a	...	1a	0.2	0a	1.6	1b	0.4	1b	3.1	1a	-
3	0a	...	-	-	0a	...	1b	0.8	1a	0.9	1a	1.5
4	1a	0.6	-	-	0b	...	1b	0.5	1a	0.2	1a	0.6
5	0a	...	2b	10.8	0a	...	0a	4.3	0a	...	1c	1.2
6	0a	...	-	-	-	-	-	-	2b	4.7	1c	0.3
7	0a	...	1a	1.3	0c	...	1b	0.4	1b	1.8	0a	...
8	0a	...	2c	4.3	1b	0.5	1c	2.3	1b	1.8	2c	3.5
9	0a	...	0a	...	1b	2.9	1c	1.3	1c	1.1	1b	0.3
10	1a	0.6	0a	...	1a	1.3	1c	0.6	1c	0.5	1c	0.8
11	0a	...	-	-	0a	...	2b	3.1	1a	0.2	1c	0.9
12	0a	...	-	-	0a	...	1c	1.3	2b	4.3	1b	0.9
13	2b	8.9	0b	...	0a	...	1b	1.1	1c	0.8	1b	0.8
14	0a	...	1a	0.3	0a	...	2c	4.9	1b	0.1	2b	4.5
15	1a	0.5	1b	0.9	1b	0.4	2b	3.4	1a	0.2	1b	0.8
16	0a	...	0a	...	1a	0.6	2c	3.0	1b	1.1	0a	...
17	0a	...	1a	2.2	1a	1.3	1c	1.6	0a	...	0a	...
18	0a	...	0a	...	1a	0.3	1a	0.7	0a	...	0a	...
19	0a	...	0a	...	0a	...	1a	0.3	0a	...	1b	0.4
20	0b	...	1b	2.3	2c	(8.9)	1a	2.2	0a	...	2b	3.8
21	0b	...	2b	5.9	1a	1.4	2b	3.4	0a	...	1c	2.8
22	0a	...	0a	...	0a	...	1a	0.4	1b	1.1	0a	...
23	1b	1.2	1b	0.9	1a	1.6	0a	...	0a	...	0a	...
24	1a	1.6	1b	1.7	(0a)	...	-	-	0a	...	0a	...
25	1a	0.2	1a	1.5	2c	3.5	-	-	1b	0.8	1b	2.0
26	0a	...	0a	...	1b	2.0	-	-	2a	4.2	(1a)	-
27	1a	1.1	0a	...	0a	...	-	-	0a	...	-	-
28	0a	...	0a	...	0a	...	-	-	0a	...	1b	1.4
29	1a	0.7	(1c)	0.3	0a	...	-	-	0a	...	2c	4.3
30	2b	7.5	-	-	1b	1.4	0a	...	1b	1.5	1c	1.4
31	-	-	0b	...	2c	4.5	1c	1.5	1a	0.3	1c	1.8
31	0a	...	0b	...	-	-	1b	1.4	-	-	1b	0.2
Total	-	22.9	-	32.6	-	32.2	-	38.9	-	28.7	-	34.2
No. of days used	-	30	-	26	-	30	-	24	-	30	-	28
Mean	-	0.8	-	1.3	-	1.1	-	1.6	-	1.0	-	1.2

Annual values: Character 0 1 2
No. of days used 113 176 43

Duration: Total 419.0 hr.
No. of days 328
Mean 1.28 hr.

ESKDALEMUIR

MAGNETIC DECLINATION (WEST)
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

23		ESKDALEMUIR (D)												10° +												JANUARY 1958											
		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	Sum 900·0+										
1	d	31·1	33·6	41·6	26·0	25·9	29·9	40·9	39·3	37·3	37·7	37·5	39·2	43·2	43·3	42·0	42·5	44·8	48·6	51·0	51·9	40·8	39·8	34·7	33·2	39·0	35·8										
2		30·6	27·6	32·2	35·2	39·0	42·5	41·2	40·9	40·4	41·5	43·1	43·7	43·9	48·0	48·0	45·9	43·2	42·6	42·2	41·3	40·8	40·2	38·8	38·6	40·5	71·4										
3	q	37·7	39·0	39·4	39·8	40·0	40·5	39·7	38·9	38·1	37·7	37·0	37·6	41·1	44·7	43·7	43·5	43·6	44·0	43·4	42·9	41·4	41·2	40·1	39·5	40·6	75·4										
4	q	40·2	39·2	40·2	40·7	40·1	39·3	39·1	38·6	37·8	37·4	39·0	39·6	40·6	43·5	43·7	42·6	42·5	42·6	42·3	41·8	41·0	40·7	40·6	40·5	40·6	73·6										
5	q	38·7	36·6	36·1	38·2	38·7	39·2	38·7	38·3	37·9	39·1	40·3	40·5	42·9	45·6	44·8	43·4	43·5	43·6	43·3	42·3	41·5	41·3	40·5	39·7	40·6	74·7										
6		38·9	39·5	41·2	41·3	40·7	40·6	40·4	40·3	40·0	39·3	40·3	41·5	43·6	46·3	45·1	45·1	45·0	43·4	42·8	41·8	40·8	40·0	39·1	37·8	41·5	94·8										
7	q	37·6	39·3	40·4	40·1	41·8	40·7	40·0	39·0	38·9	39·4	40·4	42·3	44·7	46·0	45·8	45·1	44·3	44·3	43·2	42·4	41·2	40·4	40·1	38·6	41·5	96·0										
8	q	38·2	39·0	39·3	40·5	40·0	40·4	40·7	40·4	39·2	38·4	38·7	42·1	44·2	46·6	47·3	43·6	46·1	45·0	43·1	41·8	41·0	40·8	40·6	40·4	41·6	97·4										
9		40·1	39·6	41·1	40·1	40·1	39·6	39·6	39·5	38·6	39·1	40·0	41·0	44·6	47·9	48·9	52·6	53·1	52·3	46·9	41·4	43·5	42·2	37·2	35·0	42·7	124·0										
10		33·9	29·8	31·1	37·5	39·6	39·3	40·3	40·1	39·0	38·5	39·2	41·1	44·9	46·4	44·0	44·1	45·1	45·0	42·7	43·4	41·7	39·9	39·4	40·7	40·3	66·7										
11		39·1	37·3	36·1	38·6	40·5	39·3	40·5	39·3	38·8	40·1	39·9	38·8	41·3	43·5	42·5	43·8	44·2	45·3	49·0	47·7	41·4	40·8	40·4	39·4	41·1	87·6										
12		40·2	38·2	35·7	32·8	33·3	36·7	39·4	38·8	38·8	39·3	40·5	42·7	46·5	48·6	46·6	46·4	46·7	44·2	44·7	44·3	41·4	41·7	40·6	38·9	41·1	87·0										
13		38·8	36·8	37·5	38·7	39·6	38·8	39·2	38·6	37·6	39·2	40·4	40·7	43·9	46·0	45·5	43·6	44·9	43·0	43·7	45·3	34·8	36·0	39·0	40·2	40·5	71·8										
14		40·8	40·3	41·5	40·3	40·1	39·8	38·9	38·0	37·9	42·3	41·8	44·4	45·7	46·0	45·9	44·3	45·8	46·4	44·5	41·2	41·5	28·2	34·8	40·5	41·3	90·9										
15		41·3	40·3	39·6	38·4	37·7	38·7	37·8	35·7	34·7	37·9	40·0	41·4	47·5	49·0	49·1	46·5	46·5	44·8	42·9	42·4	39·2	38·0	37·7	39·1	41·1	86·2										
16		39·8	39·6	39·5	39·9	39·9	38·5	37·5	37·3	36·4	37·9	39·5	41·9	44·8	46·3	46·8	44·8	46·2	44·6	44·5	43·8	42·6	41·2	38·6	33·0	41·0	84·9										
17	d	38·5	40·9	39·7	37·9	37·2	37·7	37·9	37·9	36·3	36·5	42·2	43·6	46·5	46·3	48·4	43·6	46·4	44·0	44·6	44·0	40·1	27·7	32·8	34·8	40·2	65·5										
18	d	26·1	30·5	33·0	28·7	28·5	33·3	35·0	35·1	42·6	45·1	40·1	42·3	47·5	50·1	49·4	47·3	53·5	53·8	51·2	45·0	42·0	40·4	39·9	36·2	40·7	76·6										
19		34·3	37·5	38·0	38·4	40·4	38·6	38·2	38·2	37·2	37·8	39·3	41·1	44·8	46·6	45·8	46·2	46·0	47·0	45·4	40·9	39·9	39·3	39·0	38·5	40·8	78·4										
20		39·3	39·9	39·2	40·9	40·1	40·4	39·3	38·2	36·5	37·7	40·5	41·5	43·4	46·4	48·4	44·9	44·3	47·5	48·3	46·4	42·8	36·0	29·2	31·6	40·9	82·7										
21	d	21·9	23·5	23·8	24·6	37·7	35·8	37·7	37·5	36·2	36·3	38·8	39·8	43·1	45·3	43·6	43·1	42·9	45·7	46·8	47·4	44·1	42·2	40·8	39·9	38·3	18·5										
22		39·0	38·7	39·3	40·4	39·7	40·1	39·3	38·7	37·0	37·9	39·3	40·8	46·5	48·3	46·5	45·4	45·4	44·6	45·4	42·0	40·0	39·7	39·8	39·6	41·4	93·4										
23	d	38·7	35·5	36·6	36·1	37·0	37·7	38·7	38·5	38·1	37·9	38·6	42·1	46·0	47·6	48·6	47·1	45·9	44·6	38·8	38·8	38·9	39·1	40·0	40·1	40·5	71·0										
24		40·2	40·0	39·9	39·7	40·4	40·0	39·1	38·3	37·7	38·2	40·3	42·7	45·9	46·0	46·1	43·8	42·2	42·9	42·3	41·8	40·8	40·3	40·1	40·0	41·2	88·7										
25		39·2	39·0	38·8	35·8	37·5	38·4	39·0	38·2	37·6	38·0	38·7	42·4	45·7	49·7	49·6	49·3	51·1	50·3	42·6	40·1	38·2	38·7	39·4	39·4	41·5	96·7										
26		40·5	40·6	38·8	35·9	33·3	32·9	36·0	36·9	36·4	36·8	39·0	41·7	42·8	44·7	44·6	44·8	44·1	45·4	44·2	40·7	38·4	36·8	38·9	33·6	39·5	47·8										
27		36·6	38·4	38·1	37·0	36·4	37·7	38·2	38·1	37·4	38·4	40·1	42·0	42·4	43·4	44·4	44·3	43·8	44·6	43·6	42·6	41·0	40·8	30·3	37·6	39·9	57·2										
28		40·6	40·4	40·1	39·6	39·5	39·3	39·7	39·0	38·9	37·9	39·3	41·5	42·1	44·0	43·4	42·6	42·9	43·3	42·1	42·0	41·2	41·2	40·8	39·7	40·9	81·1										
29		40·0	38·4	36·4	40·3	33·0	35·6	38·6	40·5	40·3	40·2	40·9	42·2	43·8	44·1	43·8	43·2	43·5	43·5	42·4	34·7	34·0	38·4	40·8	40·5	40·0	59·1										
30		39·4	39·7	39·3	39·6	39·5	39·3	39·0	38·4	38·2	39·0	39·8	40·8	42·4	42·6	42·7	41·5	43·0	42·7	42·3	40·8	39·4	39·9	39·8	39·8	40·4	68·9										
31		40·3	37·3	38·8	40·4	41·1	41·4	40·5	40·0	39·3	39·3	41·6	42·6	43·7	42·9	42·7	42·3	42·5	42·4	42·5	42·7	40·8	40·4	40·1	36·4	40·9	82·0										
Mean		37·5	37·3	37·8	37·5	38·0	38·5	39·0	38·6	38·1	38·8	39·9	41·5	44·2	46·0	45·7	44·7	45·3	45·2	44·3	42·8	40·5	39·1	38·5	38·1	40·7											
Sum 1100·0+		61·6	56·0	72·3	63·4	79·2	92·0	110·1	96·5	81·1	101·8	136·1	185·6	270·0	325·7	317·7	287·2	303·0	302·0	272·7	225·6	156·2	113·3	93·9	82·8		Grand Total 30285·6										

24	ESKDALEUIR (Z)												45,000γ (0.45 C.G.S. unit) +												JANUARY 1958		
	Hour G.M.T.																									Sum	
	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	7000+	
1 d	γ	316	299	212	267	251	266	271	279	297	314	318	317	314	324	336	333	325	330	360	400	423	387	387	362	320	688
2	351	351	330	309	304	295	303	308	312	312	313	321	321	328	335	338	337	332	328	327	329	329	323	316	323	752	
3 q	310	312	313	312	309	309	313	315	315	316	316	313	305	313	320	320	319	317	317	321	322	322	322	318	315	569	
4 q	313	311	310	310	310	310	311	312	313	308	307	310	309	308	314	314	310	309	309	310	310	310	310	311	310	449	
5 q	310	314	310	309	308	305	305	308	307	304	305	308	303	304	306	310	309	309	308	308	308	309	309	309	308	385	
6	309	309	306	304	298	298	298	299	297	297	298	299	299	306	309	311	311	310	310	309	308	309	309	306	305	309	
7 q	305	304	304	302	299	300	302	302	301	298	298	297	298	307	310	308	309	310	310	310	310	310	308	306	305	308	
8 q	302	300	299	297	298	298	298	298	298	299	299	298	297	302	310	312	312	314	316	314	310	308	307	306	304	292	
9	307	305	302	299	299	299	299	299	298	295	295	298	295	304	314	313	314	327	334	331	324	331	339	337	311	458	
10	332	309	302	302	302	303	305	306	306	307	304	305	299	309	311	305	309	314	314	312	311	310	308	309	308	394	
11	313	310	308	305	305	306	306	306	304	304	309	309	302	304	313	309	309	309	313	338	347	329	322	319	312	499	
12	316	314	315	311	308	302	304	306	306	307	308	301	299	307	310	310	314	316	315	314	315	314	317	320	310	449	
13	313	309	309	309	306	299	299	301	302	309	310	304	297	302	311	312	308	313	312	312	317	317	317	316	309	404	
14	313	312	309	310	309	309	310	310	312	309	310	309	308	310	314	314	314	314	321	320	319	334	319	315	313	524	
15	312	312	311	308	306	304	294	295	305	309	312	311	306	319	322	325	322	322	322	323	327	324	326	321	314	538	
16	317	316	314	312	311	310	310	313	316	314	309	308	305	309	312	311	306	306	309	319	332	330	327	322	314	538	
17 d	317	315	314	310	283	284	294	302	309	313	312	310	310	305	323	331	322	322	328	326	328	331	322	321	314	532	
18 d	310	304	305	284	285	280	292	301	298	296	300	305	303	315	328	328	323	330	338	344	344	335	329	326	313	503	
19	320	317	314	313	310	309	309	311	311	314	317	320	317	318	332	329	325	326	335	334	324	320	320	314	319	659	
20	313	312	311	310	310	309	309	310	314	308	304	306	305	309	313	316	309	308	316	315	317	322	324	331	313	501	
21 d	299	252	249	227	229	254	289	303	305	305	309	314	316	317	322	322	316	314	318	320	322	324	320	318	299	164	
22	317	318	317	315	312	309	310	311	310	310	312	314	317	337	337	331	326	326	324	325	321	318	317	320	319	654	
23 d	316	309	312	311	287	280	280	290	299	308	312	311	312	316	322	329	332	330	338	341	337	330	322	322	314	546	
24	317	316	317	316	315	315	314	316	314	308	306	308	313	312	315	317	321	316	315	314	312	312	311	311	314	531	
25	312	313	310	302	303	302	304	306	305	306	306	304	304	312	322	326	347	362	352	337	329	321	317	312	317	614	
26	312	313	311	294	271	252	264	291	304	314	314	315	314	316	320	322	326	333	333	331	325	323	323	314	310	435	
27	314	316	317	312	309	308	309	313	314	316	318	317	311	311	312	315	314	314	315	316	316	316	320	309	314	532	
28	307	309	309	311	310	311	309	309	312	316	315	314	310	305	309	310	310	310	311	313	312	310	309	309	310	450	
29	308	305	303	286	279	274	274	281	287	287	294	302	304	305	309	312	316	317	321	326	316	304	305	306	301	221	
30	305	304	302	304	302	302	299	299	302	305	308	306	304	308	310	310	307	308	310	312	312	312	310	308	306	349	
31	298	294	297	298	298	298	298	300	300	299	300	300	298	299	304	305	308	308	308	309	314	314	311	304	303	262	
Mean	313	309	305	302	298	297	299	303	306	307	308	308	306	311	317	318	317	319	321	324	324	321	320	317	311		
Sum 9000+	704	584	442	359	226	200	282	400	473	507	538	554	495	641	825	848	830	876	960	1031	1041	965	910	818		Grand Tot 231,509	

DAILY EXTREMES OF TERRESTRIAL MAGNETIC ELEMENTS, MAGNETIC CHARACTER FIGURES (K AND C) AND TEMPERATURE IN MAGNET HOUSE

25		ESKDALEUIR												JANUARY 1958			
		TERRESTRIAL MAGNETIC ELEMENTS										3-hr. range indices K	Sum of K indices	Magnetic character of day (0.2)	Temperature in magnet house 200 + °A.		
		Horizontal force			Declination			Vertical force									
		Maximum 16,000γ +	Minimum 16,000γ +	Range	Maximum 10° +	Minimum 10° +	Range	Maximum 45,000γ +	Minimum 45,000γ +	Range							
		h. m. γ	γ h. m.	γ	h. m.	γ h. m.	γ	h. m. γ	γ h. m.	γ							
1	d	19 45	751	531 01 35	220	19 50	64.9	21.5 03 10	43.4	20 21	449	178 02 42	271	5,5,4,3,3,3,5,3	31	1	85.3
2		00 15	722	631 01 18	91	14 04	49.3	24.2 01 35	25.1	00 45	362	293 05 30	69	4,3,3,3,3,2,2,1	21	1	85.2
3	q	00 28	718	679 12 25	39	13 20	45.3	36.3 00 37	9.0	20 20	324	304 12 38	20	2,1,0,1,1,1,0,0	6	0	85.2
4	q	22 41	737	690 12 45	47	13 48	44.1	37.2 09 00	6.9	15 15	315	303 13 00	12	1,0,0,0,1,1,1,2	6	0	85.0
5	q	19 24	731	693 01 27	38	14 08	46.5	34.2 01 00	12.3	01 25	316	302 12 32	14	3,1,1,1,2,1,1,0	10	0	84.8
6		04 15	748	695 12 28	53	13 15	49.3	37.6 23 10	11.7	16 42	313	295 10 00	18	1,2,1,2,2,2,1,1	12	0	84.9
7	q	07 38	738	696 14 06	42	12 57	47.8	35.8 00 20	12.0	17 40	312	294 11 30	18	1,1,1,1,2,1,1,1	9	0	84.6
8	q	05 58	744	697 13 42	47	14 18	48.6	37.1 00 19	11.5	18 30	316	295 12 42	21	1,1,1,1,2,2,1,0	9	0	84.5
9		19 23	748	687 14 08	61	17 15	54.1	33.0 23 54	21.1	19 02	347	293 09 48	54	1,1,1,2,2,2,4,3	16	1	84.5
10		01 48	739	674 11 28	65	13 21	48.4	24.0 01 59	24.4	00 00	336	298 12 40	38	3,1,1,2,2,1,1,1	12	0	84.5
11		18 22	743	675 19 35	68	19 24	52.2	33.5 02 06	18.7	20 02	356	299 12 38	57	3,2,1,2,2,2,4,2	18	1	84.5
12		20 35	741	695 23 17	46	12 45	50.2	30.7 04 23	19.5	23 21	323	297 12 14	26	3,3,2,2,2,2,2,2	18	1	84.5
13		20 32	759	677 21 44	82	13 14	46.7	27.8 20 54	18.9	20 16	320	297 12 25	23	3,3,2,1,2,2,4,3	20	1	-
14		20 08	741	678 21 35	63	14 06	47.7	20.7 21 38	27.0	21 36	341	306 12 34	35	1,1,1,2,2,2,3,4	16	1	84.5
15		21 00	738	678 12 16	60	12 38	52.9	34.1 08 16	18.8	20 20	330	292 07 05	38	1,2,3,2,2,3,3,3	19	1	84.5
16		18 59	747	680 10 57	67	15 03	49.2	30.3 23 19	18.9	20 56	334	302 12 32	32	1,1,2,2,2,3,3,3	17	0	84.8
17	d	04 30	759	657 10 58	102	14 05	52.0	22.1 21 16	29.9	21 15	338	280 04 40	58	2,3,3,2,3,3,3,4	23	1	84.8
18	d	03 25	753	635 13 24	118	14 17	55.2	23.3 00 18	31.9	20 14	348	279 05 16	69	4,3,3,3,3,3,3,3	25	1	84.6
19		17 55	730	659 12 27	71	17 58	50.2	32.6 00 37	17.6	18 32	337	308 06 50	29	2,2,1,1,3,2,3,2	16	0	84.6
20		21 50	782	666 11 23	116	14 35	52.0	22.0 23 56	30.0	23 05	333	301 10 54	32	1,0,1,2,3,3,3,5	18	1	84.3
21	d	01 12	771	592 03 41	179	19 45	48.8	14.7 03 18	34.1	14 43	326	212 04 07	114	5,5,2,3,2,2,2,2	23	1	84.3
22		18 22	738	658 13 55	80	12 44	53.9	36.0 07 23	17.9	13 35	339	306 11 15	33	2,2,2,3,4,2,2,2	19	1	84.1
23	d	04 54	753	646 12 52	107	14 16	50.7	32.8 01 32	17.9	18 43	346	278 05 58	68	3,3,2,2,3,3,3,3	22	1	84.4
24		18 59	733	665 11 55	68	13 58	47.5	37.1 09 05	10.4	16 12	322	302 10 56	20	1,1,1,3,3,3,2,1	13	0	84.4
25		05 17	738	669 17 27	69	17 01	54.9	36.7 09 07	18.2	17 29	372	299 03 06	73	2,2,2,3,3,4,3,1	20	1	84.4
26		04 35	760	669 10 40	91	17 13	46.3	28.7 05 01	17.6	17 43	337	247 05 42	90	2,4,2,1,1,2,2,3	17	1	84.1
27		22 38	761	695 11 02	66	17 34	45.3	23.7 22 36	21.6	22 20	321	304 23 54	17	2,1,1,0,0,1,2,4	11	0	84.2
28		07 38	743	689 11 40	54	14 27	45.6	36.2 09 05	9.4	09 56	318	304 13 25	14	1,0,2,2,1,2,1,1	10	0	84.0
29		06 19	757	694 19 12	63	03 16	46.6	31.5 04 05	15.1	19 23	330	272 05 20	58	2,4,3,2,1,2,3,2	19	1	84.0
30		07 48	750	701 15 04	49	12 32	44.9	37.4 09 52	7.5	19 52	314	297 07 50	17	1,2,2,2,2,2,1,1	13	0	83.8
31		23 45	761	710 20 41	51	12 32	44.7	33.1 23 41	11.6	20 40	318	291 01 04	27	2,1,1,1,1,1,2,3	12	0	83.8
Mean		- -	746	670 - -	77	- -	49.5	30.5 - -	19.0	- -	335	288 - -	47	-	-	0.55	84.5

TERRESTRIAL MAGNETIC FORCE: HORIZONTAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

22	ESKDALEUIR (H)												16,000γ (0.16 C.G.S. unit) +												FEBRUARY				1958
	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	Sum 13,000+			
1	725	720	726	730	731	737	737	737	721	716	712	712	708	710	710	710	711	718	724	731	730	718	722	730	722	4326			
2	735	740	732	730	734	739	749	745	738	730	710	710	710	709	711	715	717	719	723	730	732	732	731	732	727	4453			
3 q	732	733	734	735	738	737	740	741	735	724	722	722	724	712	713	714	718	726	732	738	739	738	734	730	730	4511			
4	748	732	734	739	741	742	744	741	737	734	729	714	710	731	722	709	717	730	734	708	690	705	714	710	726	4415			
5	701	699	699	708	722	720	727	725	720	720	719	714	686	701	714	724	713	709	717	722	723	685	690	718	711	4076			
6 d	692	688	699	703	710	722	701	719	720	724	712	690	702	705	694	690	689	718	717	716	721	711	734	722	708	3999			
7	693	691	704	717	713	701	707	719	713	704	710	695	693	703	711	711	687	710	713	737	748	721	712	708	709	4021			
8	708	731	711	704	721	728	721	713	713	689	709	704	710	719	729	710	691	712	718	722	701	699	709	713	712	4085			
9	696	708	705	700	710	710	709	704	705	695	690	691	694	713	717	714	692	696	719	730	696	693	696	682	703	3865			
10	684	715	704	710	713	709	716	709	707	701	692	695	701	709	718	722	728	749	709	691	694	681	681	703	706	3941			
11 d	698	669	700	560	638	560	425	279	186	186	326	404	674	597	642	641	651	645	652	701	700	649	617	622	559	422			
12 d	638	630	649	640	654	669	681	656	652	641	627	630	633	633	644	656	688	698	705	677	681	696	686	694	661	2858			
13	705	706	694	694	697	697	697	696	698	681	691	693	673	685	690	698	705	698	708	707	704	701	697	692	696	3707			
14	705	716	716	688	681	732	709	690	681	674	678	675	691	696	689	700	712	710	701	712	708	707	718	713	700	3802			
15 q	711	706	710	710	710	713	714	719	718	713	701	692	693	696	697	700	704	724	732	736	736	729	730	740	714	4134			
16	736	727	727	728	729	733	733	732	729	720	718	714	697	699	704	715	711	725	733	739	732	725	738	744	725	4388			
17 d	748	740	738	719	701	710	719	725	722	714	719	724	723	725	701	699	716	705	712	723	714	697	704	712	717	4210			
18 d	715	712	717	695	704	703	706	708	701	694	671	694	697	690	693	694	703	703	722	721	704	714	716	704	703	3881			
19	715	704	706	708	713	719	711	712	704	696	689	692	689	698	708	716	712	713	717	713	719	724	714	708	708	4000			
20	701	711	712	717	719	728	719	716	714	709	700	708	708	715	703	700	714	715	713	708	677	678	697	712	708	3994			
21	709	701	693	706	712	710	721	700	703	705	701	695	679	691	687	706	706	707	704	695	706	705	702	704	702	3848			
22	702	696	695	701	701	706	715	718	716	718	702	698	697	695	703	707	704	711	736	715	712	724	728	722	709	4022			
23	696	708	699	710	711	710	714	714	706	693	695	685	699	700	699	696	720	715	726	722	731	720	716	721	709	4006			
24 q	723	718	721	713	716	719	721	718	706	700	688	686	695	702	706	715	713	716	729	728	726	725	727	727	714	4138			
25 q	727	725	726	726	729	724	718	727	719	704	698	702	704	703	707	710	714	722	731	736	732	735	734	737	720	4290			
26 q	737	734	732	734	736	734	738	736	728	719	714	704	707	708	711	717	721	725	730	732	735	729	729	729	726	4419			
27	721	730	725	733	737	739	736	733	731	726	721	713	712	708	714	722	727	724	735	724	714	722	713	725	724	4385			
28	723	728	730	720	730	729	731	728	719	704	706	691	676	709	719	712	714	718	721	733	734	733	731	727	719	4266			
Mean	712	711	712	706	713	714	709	702	694	687	687	687	696	699	702	704	707	713	718	719	716	711	711	714	706				
Sum 19,000+	924	918	938	778	951	980	859	660	442	234	250	247	485	562	656	723	798	961	1113	1147	1039	896	920	981		Grand Total 474,462			

MAGNETIC DECLINATION (WEST)
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

23	ESKDALEUIR (D)												10° +												FEBRUARY				1958	
	Hour G.M.T.																												Sum	
	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	800.0+				
1	33.9	37.8	38.9	39.5	39.6	39.8	39.7	38.8	39.2	41.3	41.8	44.0	46.0	43.4	44.5	45.0	44.4	42.9	41.8	41.1	40.7	38.7	39.3	39.5	40.9	181.6				
2	39.7	36.3	38.3	40.3	40.8	41.1	42.5	40.0	39.6	40.6	43.2	44.6	44.4	45.9	44.7	43.6	42.6	42.7	43.1	41.7	41.0	40.7	40.0	40.4	41.6	197.8				
3 q	40.0	40.2	40.3	40.3	41.0	40.7	40.4	39.9	38.9	39.2	41.2	42.0	43.3	42.4	42.8	42.9	42.5	42.1	42.3	41.8	41.0	40.5	39.3	38.1	41.0	183.1				
4	36.3	38.9	39.6	40.4	40.5	39.9	39.5	38.9	38.2	38.0	39.9	40.4	43.8	46.8	45.8	46.6	45.3	45.2	47.1	37.9	39.2	41.9	40.7	36.6	41.1	187.4				
5	31.7	30.9	29.1	34.1	33.6	36.3	38.1	37.6	37.8	39.7	43.2	44.0	47.1	45.0	46.5	49.8	47.6	48.8	46.3	42.8	27.9	30.7	37.1	35.1	39.2	140.8				
6 d	34.4	33.7	35.0	36.4	35.8	37.7	35.0	35.2	37.9	40.4	42.3	43.0	42.9	47.9	47.2	48.2	45.3	42.2	40.3	39.3	40.0	37.5	33.2	36.7	39.5	147.5				
7	32.9	35.0	36.7	34.6	33.9	36.9	37.8	37.2	37.9	37.8	40.3	45.0	44.2	44.2	46.1	45.3	41.5	41.8	41.5	37.7	33.7	34.4	36.0	35.2	38.7	127.6				
8	34.9	38.6	32.3	37.1	37.5	32.8	33.8	36.3	39.9	42.9	41.5	39.8	45.4	48.5	45.2	42.9	42.8	38.6	42.3	43.4	38.9	33.9	38.6	37.5	39.4	145.4				
9	37.8	40.4	38.5	38.6	38.1	37.5	37.6	37.8	39.8	41.1	43.1	45.1	44.8	47.0	46.9	44.4	43.4	43.1	40.2	39.2	37.7	37.1	38.1	39.7	40.7	177.0				
10	45.0	44.7	42.0	36.2	34.3	40.1	38.9	39.4	41.4	42.9	43.3	44.4	46.5	47.0	46.4	44.4	42.5	41.0	40.8	42.3	41.3	41.4	36.7	38.9	41.7	201.8				
11 d	41.3	40.0	122.9	22.1	35.9	40.3	27.9	46.8	43.9	34.5	37.2	40.8	52.0	48.9	50.9	43.2	45.5	44.4	45.2	49.1	44.0	39.5	25.8	22.5	43.5	244.6				
12 d	31.3	34.1	38.7	37.2	33.3	31.7	34.1	33.7	35.0	38.6	41.9	42.6	44.4	44.0	43.0	40.5	40.7	38.8	25.1	33.1	36.3	39.3	39.3	40.6	37.4	97.3				
13	40.4	40.3	38.9	38.5	38.9	38.9	39.0	38.8	39.2	41.1	43.0	41.0	46.1	45.5	47.7	43.8	42.7	43.1	38.8	36.7	37.8	37.7	35.7	34.4	40.3	168.0				
14	38.5	36.1	29.3	31.2	35.6	33.3	35.9	36.0	37.2	42.1	44.5	45.0	46.1	47.5	47.3	48.1	39.2	40.6	41.6	40.7	40.6	40.0	37.5	39.1	39.7	153.0				
15 q	39.3	38.9	38.8	37.8	38.5	38.7	38.3	39.0	39.0	39.4	40.5	40.3	42.6	42.9	43.8	42.7	41.8	42.6	43.0	42.4	41.7	40.8	40.1	38.6	40.5	171.5				
16	41.8	38.9	39.0	38.6	38.5	38.3	38.7	38.8	38.9	39.3	40.8	43.5	43.2	45.9	46.2	49.0	48.4	46.8	46.4	44.9	42.6	41.1	39.7	40.1	42.1	209.4				
17 d	40.8	37.7	37.9	35.8	33.3	34.1	37.4	36.7	38.2	39.0	41.8	45.8	47.5	51.8	47.9	43.2	46.5	44.3	45.8	41.8	33.1	36.2	36.1	38.0	40.4	170.7				
18 d	40.4	35.8	33.8	36.1	38.0	33.2	37.1	40.4	39.4	40.5	44.2	47.4	49.3	45.2	45.8	42.7	43.2	43.0	37.9	34.2	35.6	36.2	32.4	33.6	39.4	145.4				
19	39.3	39.4	36.3	36.2	37.4	36.1	36.8	35.5	35.7	36.9	39.1	42.5	44.9	44.4	44.3	44.4	43.0	41.7	41.5	40.3	35.8	33.7	38.0	36.8	39.2	140.0				
20	30.9	36.8	35.6	33.6	33.9	34.1	36.3	36.6	36.7	36.8	38.1	41.3	43.2	47.1	46.9	45.1	45.4	44.1	41.7	36.2	34.1	35.3	31.5	33.5	38.1	114.8				
21	37.5	36.6	34.2	36.2	31.1	38.9	38.1	38.9	39.5	38.4	38.9	43.1	44.3	49.2	47.5	49.8	47.7	46.0	36.9	35.6	36.8	32.3	28.5	35.2	39.2	141.2				
22	36.2	40.2	38.1	33.8	33.1	37.3	37.6	38.6	39.9	39.9	38.8	42.5	44.9	43.2	39.5	45.4	43.8	40.1	38.1	41.7	36.8	38.5	35.9	31.1	38.9	134.5				
23	31.2	35.6	37.1	36.9	35.8	37.1	37.3	40.2	42.8	42.7	43.0	43.4	42.8	43.0	43.4	40.5	38.8	36.2	40.5	41.8	41.9	38.8	38.1	37.9	39.5	146.8				
24 q	38.5	39.5	37.0	39.6	39.6	38.0	37.6	37.3	37.3	39.4	42.1	39.1	45.9	44.0	44.4	39.2	38.1	41.1	38.1	40.8	41.5	40.5	40.0	39.7	39.9	158.3				
25 q	39.2	39.0	38.8	38.7	37.7	37.2	40.2	38.9	37.5	38.6	42.6	45.0	45.2	43.9	43.3	41.9	41.7	41.7	41.8	41.3	40.7	40.1	39.9	39.9	40.6	174.8				
26 q	38.7	37.0	38.1	39.4	39.4	38.6	38.5	40.2	38.9	40.1	40.8	42.2	43.5	43.2	42.5	41.6	41.3	41.7	41.7	41.2	41.0	39.9	39.4	38.9	40.3	167.8				
27	36.3	39.6	38.1	38.9	38.9	38.1	37.8	37.8	38.4	39.7	41.4	42.5	44.2	44.3	43.8	42.5	41.7	40.7	41.3	41.4	38.9	33.2	37.6	38.7	39.8	155.8				
28	39.9	40.4	39.9	38.6	36.1	35.8	36.3	36.7	38.1	39.2	43.1	45.0	45.5	46.6	45.6	42.8	41.6	41.7	39.2	39.9	40.7	40.0	39.6	38.1	40.4	170.4				
Mean	37.4	37.9	40.1	36.7	36.8	37.2	37.4	38.3	38.8	39.7	41.5	43.1	45.1	45.7	45.3	44.3	43.2	42.4	41.1	40.4	38.6	37.9	36.9	36.9	40.1					
Sum 1000.0+	48.1	62.4	123.2	26.7	30.1	42.5	48.2	72.0	86.2	110.1	161.6	205.3	264.0	278.7	269.9	239.5	208.5	187.0	150.3	130.3	81.3	59.9	34.1	34.4		Grand Total 26954.3				

TERRESTRIAL MAGNETIC FORCE: VERTICAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

24 ESKDALEMUIR (Z)		45,000γ (0.45 C.G.S. unit) +																				FEBRUARY 1958									
	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	Sum 7000+				
		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		297	302	303	302	302	302	302	304	306	304	300	296	299	303	306	308	311	314	313	311	310	313	313	308	305	329				
2		299	291	292	295	298	298	294	294	296	301	308	307	306	309	313	310	310	310	309	308	308	306	306	305	303	273				
3 q		304	303	300	300	299	299	300	300	300	300	300	301	304	303	299	300	302	300	300	300	302	301	300	299	301	216				
4		288	290	294	295	295	295	294	294	291	287	283	287	286	285	296	309	308	305	312	357	349	347	345	345	306	337				
5		334	324	317	306	289	295	294	295	299	296	293	296	298	304	302	310	322	322	326	333	329	321	330	312	310	447				
6 d		313	317	314	315	305	289	294	294	292	296	300	306	308	311	332	341	344	338	336	326	318	322	315	287	313	513				
7		306	310	300	296	294	294	302	303	301	304	303	303	308	310	314	327	345	335	327	322	300	296	300	303	308	403				
8		302	287	298	294	282	284	285	290	292	299	303	303	302	309	331	346	350	347	328	323	331	333	323	320	311	462				
9		321	314	315	310	307	310	311	310	305	310	310	310	307	305	311	323	337	347	345	318	314	326	329	325	317	620				
10		298	292	291	305	311	308	306	307	308	314	317	317	314	317	326	337	357	362	366	368	344	349	354	330	325	798				
11 d		332	281	-189	75	194	177	205	261	243	227	341	386	425	422	430	417	401	383	397	460	487	424	410	379	315	568				
12 d		355	360	352	333	345	346	342	344	344	337	338	343	341	337	344	350	347	356	378	356	344	338	337	327	346	1294				
13		315	312	320	322	323	327	328	327	323	322	321	321	330	336	329	346	357	347	346	341	332	330	331	327	330	913				
14		321	314	303	288	283	274	281	296	303	306	306	314	321	323	322	325	363	366	343	332	329	329	321	318	316	581				
15 q		319	321	320	319	318	317	317	315	315	313	320	325	328	326	322	321	320	315	312	311	312	315	315	306	318	622				
16		302	300	305	305	305	304	304	304	306	315	315	311	315	317	320	322	320	323	324	322	322	323	322	321	314	527				
17 d		317	314	310	310	309	305	303	302	303	307	308	306	316	329	340	343	341	344	346	340	339	337	329	329	322	727				
18 d		323	311	302	294	286	299	303	300	298	302	303	303	313	329	334	342	344	343	347	332	325	321	307	302	315	563				
19		275	286	304	306	310	303	301	309	315	317	311	311	315	325	325	326	332	327	334	340	337	327	321	315	315	572				
20		316	318	318	318	311	307	307	309	310	305	302	298	298	308	326	324	325	332	340	360	365	317	321	323	319	658				
21		323	323	319	305	293	272	276	278	295	303	303	302	308	314	329	333	338	346	380	369	358	334	307	317	318	625				
22		318	293	277	300	311	313	309	310	311	311	314	315	317	324	323	326	324	327	327	332	340	326	318	296	315	562				
23		298	299	297	290	302	310	314	311	313	320	323	324	319	317	322	332	340	341	333	330	319	313	317	317	317	601				
24 q		315	315	315	314	312	314	314	313	313	312	314	313	315	318	311	311	312	317	320	316	315	317	315	315	314	546				
25 q		314	314	315	315	314	313	310	306	310	311	309	306	306	309	313	314	315	314	312	312	313	312	311	310	312	478				
26 q		309	309	308	306	305	306	307	306	305	307	309	310	310	311	312	312	312	310	311	312	311	313	314	312	309	427				
27		305	304	308	309	308	307	309	309	309	308	307	306	306	310	311	314	315	317	315	322	333	320	315	314	312	481				
28		315	313	310	304	307	310	311	313	312	313	307	309	311	310	318	328	332	323	325	322	317	315	312	312	315	549				
Mean		312	308	290	297	301	299	301	304	304	305	310	312	315	319	324	329	333	333	334	335	332	326	323	317	315					
Sum 8000+		734	617	118	331	418	378	423	504	518	547	668	729	826	921	1061	1197	1324	1311	1352	1375	1303	1125	1038	874		Grand Total 211,692				

DAILY EXTREMES OF TERRESTRIAL MAGNETIC ELEMENTS, MAGNETIC CHARACTER FIGURES (K AND C) AND TEMPERATURE IN MAGNET HOUSE

25		ESKDALEMUIR										FEBRUARY 1958							
		TERRESTRIAL MAGNETIC ELEMENTS										3-hr. range indices K	Sum of K indices	Magnetic character of day (0-2)	Temperature in magnet house 200 +				
		Horizontal force			Declination			Vertical force											
		Maximum 16,000γ +	Minimum 16,000γ +	Range	Maximum 10° +	Minimum 10° +	Range	Maximum 45,000γ +	Minimum 45,000γ +	Range									
		h. m.	γ	h. m.	γ	h. m.	γ	h. m.	γ	h. m.	γ				°A.				
1		00 00	742	699 12 10	43	12 38	46.9	33.1	00 10	13.8	21 48	317	294	00 10	23	2, 1, 1, 2, 2, 1, 1, 2	12	0	83.6
2		06 48	758	701 12 54	57	13 10	46.6	34.6	01 17	12.0	14 25	315	289	01 13	26	2, 1, 2, 2, 2, 0, 1, 0	10	0	83.6
3	q	20 16	749	702 12 54	47	12 38	44.8	37.0	23 05	7.8	00 00	305	298	24 00	7	1, 0, 1, 1, 2, 1, 2, 2	10	0	-
4		18 11	759	676 20 17	83	13 13	51.0	23.0	19 39	28.0	19 40	375	281	13 08	94	2, 0, 0, 2, 3, 3, 5, 4	19	1	83.6
5		20 38	760	652 21 34	108	15 00	53.7	22.5	21 09	31.2	20 03	344	287	04 34	57	3, 3, 3, 3, 4, 3, 4, 4	27	1	83.6
6	d	23 17	766	659 11 34	107	13 29	52.8	29.1	22 28	23.7	15 50	352	276	23 28	76	3, 3, 3, 3, 3, 4, 2, 4	25	1	83.6
7		20 04	774	668 16 13	106	14 47	48.2	26.9	20 53	21.3	16 30	349	290	05 06	59	3, 3, 3, 3, 2, 3, 4, 3	24	1	83.6
8		01 55	745	676 09 19	69	13 42	51.1	29.1	21 00	22.0	17 06	353	281	04 11	72	3, 3, 3, 2, 3, 3, 4, 3	24	1	83.0
9		19 30	768	668 20 38	100	14 07	48.6	32.6	20 13	16.0	18 22	356	304	04 00	52	3, 2, 2, 2, 2, 3, 4, 3	21	1	83.0
10		17 12	835	623 19 40	212	19 34	56.4	32.3	23 14	24.1	17 04	389	282	02 03	107	4, 3, 1, 2, 2, 5, 5, 4	26	1	83.6
11	d	02 06	1382	-1380 02 01	2762	02 32	178.0	-7.6	03 48	185.6	20 20	502	-468	02 05	970	9, 7, 8, 7, 8, 4, 5, 5	53	2	83.6
12	d	18 21	777	575 07 25	202	12 21	49.3	15.1	18 14	34.2	18 12	403	321	23 54	82	4, 5, 5, 3, 3, 4, 5, 3	32	1	83.6
13		19 56	729	649 13 03	80	14 42	51.0	30.2	19 51	20.8	16 20	359	310	01 28	49	3, 1, 2, 3, 3, 2, 3, 2	19	1	83.5
14		06 18	745	663 11 37	82	14 09	50.4	24.2	02 53	26.2	16 41	376	271	05 25	105	4, 4, 3, 2, 3, 4, 2, 3	25	1	-
15	q	23 21	787	687 11 17	100	13 34	45.7	37.1	23 48	8.6	13 00	329	298	23 35	31	1, 0, 1, 1, 2, 3, 2, 4	14	0	83.6
16		22 33	756	688 16 20	68	15 52	50.2	37.0	23 10	13.2	18 43	326	295	01 00	31	3, 1, 1, 3, 2, 3, 3, 3	19	1	-
17	d	13 29	769	669 14 22	100	13 25	57.7	30.7	20 38	27.0	19 56	349	299	07 31	50	3, 3, 3, 3, 3, 4, 3, 4	26	1	83.6
18	d	19 10	816	650 10 44	166	12 08	52.7	26.8	20 03	25.9	18 37	360	282	04 31	78	3, 3, 3, 3, 3, 3, 5, 3	26	1	83.6
19		21 12	744	675 13 06	69	13 01	47.1	29.9	24 00	17.2	20 44	344	263	00 48	81	3, 3, 3, 3, 3, 3, 3, 3	24	1	83.6
20		21 59	752	628 21 34	124	14 08	50.0	23.1	20 46	26.9	20 22	378	282	22 00	96	3, 3, 2, 3, 3, 3, 4, 5	26	1	83.6
21		21 58	776	644 22 15	132	13 33	52.2	17.0	21 51	35.2	18 54	391	268	05 35	123	3, 2, 3, 3, 3, 3, 4, 5	26	1	83.6
22		23 09	769	661 13 12	108	12 50	47.9	24.5	23 52	23.4	20 32	351	271	02 07	80	3, 3, 3, 3, 3, 3, 4, 4	26	1	83.6
23		20 26	766	672 11 24	94	12 17	46.2	24.9	00 00	21.3	16 58	345	286	03 06	59	3, 3, 2, 3, 3, 3, 3, 3	23	1	83.6
24	q	18 44	740	676 11 09	64	12 36	47.1	36.0	08 34	11.1	18 20	322	311	15 00	11	2, 2, 1, 1, 2, 1, 2, 1	12	0	-
25	q	19 05	741	693 10 32	48	12 28	45.6	36.8	05 35	8.8	16 29	316	305	12 42	11	1, 1, 2, 1, 1, 1, 1, 1	9	0	83.6
26	q	07 52	744	695 11 32	49	12 44	45.4	36.2	01 50	9.2	22 00	315	303	09 07	12	2, 1, 2, 2, 2, 1, 1, 1	12	0	83.6
27		21 22	761	698 21 56	63	12 41	46.0	26.8	21 16	19.2	20 36	335	300	01 12	35	2, 1, 1, 1, 2, 2, 3, 4	16	0	83.6
28		03 27	746	661 12 07	85	13 42	49.5	35.2	05 34	14.3	16 11	334	303	03 36	31	2, 2, 2, 3, 3, 2, 2, 2	18	1	83.6
Mean		- -	784	594 - -	190	- -	54.0	28.0 - -	26.0	- -	353	264 - -	90	-	-	-	0.75	-	83.5

TERRESTRIAL MAGNETIC FORCE: HORIZONTAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

22	ESKDALEMUIR (H)												16,000γ (0.16 C.G.S. unit) +												MARCH 1958	
	Hour G.M.T.																									Sum
	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	16,000+
1 q	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	
2 q	741	716	721	720	722	721	722	720	711	698	698	698	696	701	704	713	716	723	724	726	724	719	718	728	716	1180
3	725	725	726	728	732	733	742	728	723	720	713	704	703	702	704	710	714	719	726	733	737	737	737	735	723	1356
4	730	733	733	733	734	735	736	743	736	724	718	707	693	714	718	733	737	744	709	728	720	708	692	716	724	1374
5 d	673	678	687	717	712	706	703	721	724	718	703	701	709	716	714	710	716	715	714	707	737	727	716	711	710	1035
6	707	702	715	716	726	717	732	681	695	694	686	686	683	693	698	705	700	709	713	726	715	716	737	720	707	972
7	703	675	687	703	696	704	698	699	696	693	695	673	678	687	714	707	712	711	713	735	710	726	704	708	701	827
8	719	720	720	708	742	718	714	694	678	673	671	673	672	679	700	706	735	714	716	722	712	700	719	720	705	925
9	739	728	708	716	720	717	701	701	673	673	661	653	670	687	698	702	713	716	720	727	720	720	715	713	704	891
10	714	710	709	706	707	715	710	706	701	676	663	663	683	695	712	704	708	715	722	735	742	727	723	724	707	970
	730	747	711	711	720	721	718	712	703	684	669	668	679	691	709	713	724	738	726	724	723	707	718	717	711	1063
11	699	710	715	719	718	719	716	712	706	698	696	705	701	693	699	729	733	735	743	721	699	701	694	702	711	1063
12 d	676	643	617	658	694	690	664	637	654	662	647	639	634	631	659	684	694	689	703	705	694	697	698	690	669	59
13 d	696	707	709	715	696	713	711	675	662	639	636	648	658	696	713	733	712	724	716	708	682	695	696	700	693	640
14	706	699	700	701	701	701	694	687	681	673	665	660	678	687	712	709	707	723	732	733	743	741	733	735	704	901
15	735	730	734	736	730	736	745	725	697	689	687	677	686	701	712	710	712	722	710	712	713	713	712	716	714	1140
16 q	732	707	698	694	716	717	707	701	690	680	658	655	665	676	693	697	715	727	728	720	726	728	711	710	702	851
17	711	723	722	719	722	716	702	717	681	664	679	674	673	682	687	698	712	736	724	727	707	714	716	716	705	922
18	718	713	710	715	712	718	706	714	739	693	681	673	692	673	698	750	729	738	745	731	698	706	697	713	711	1062
19 d	714	706	688	686	707	709	697	711	707	690	680	662	643	660	714	748	749	686	690	703	699	692	664	676	695	681
20 d	724	698	685	698	712	714	707	702	677	677	662	663	686	700	709	688	716	737	724	720	708	683	671	701	698	762
21	724	710	705	719	714	709	716	711	678	673	660	670	684	701	724	749	766	765	719	712	711	718	715	676	710	1029
22	695	647	676	675	698	701	697	692	679	658	645	641	647	664	689	696	708	711	717	719	726	725	709	712	689	527
23	720	708	700	718	738	721	714	711	693	679	649	674	675	684	697	705	737	728	719	742	727	724	718	721	708	1002
24	711	714	718	717	731	718	734	718	698	682	671	684	680	706	722	730	765	797	739	722	718	701	698	696	715	1170
25	688	685	698	715	717	722	720	697	698	694	688	669	684	686	706	735	830	769	749	751	759	753	748	734	721	1295
26	732	715	729	729	731	737	739	739	733	718	708	697	683	710	754	746	767	699	730	733	723	725	718	719	726	1414
27	710	714	722	718	716	725	727	720	694	686	671	662	663	672	680	689	715	718	738	737	739	728	732	718	708	994
28 q	722	721	717	720	729	731	733	730	705	685	670	668	673	683	696	707	741	736	737	734	735	740	729	724	715	1166
29 q	726	723	724	725	731	735	740	735	720	694	679	674	676	686	705	719	742	739	725	743	741	745	741	751	722	1319
30	745	740	741	743	740	743	743	736	700	684	670	680	682	705	712	701	765	752	717	709	706	709	701	705	718	1229
31	710	701	700	707	705	718	718	709	699	680	668	662	667	689	705	730	718	739	739	747	735	727	726	718	709	1017
Mean	715	708	707	712	718	719	716	709	698	685	676	673	677	689	705	715	729	728	723	725	720	718	713	714	708	
Sum 20,000+	2175	1948	1925	2085	2269	2280	2206	1984	1631	1251	947	863	996	1350	1857	2156	2608	2574	2427	2492	2329	2252	2106	2125		Grand Total 526,836

MAGNETIC DECLINATION (WEST)
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

23	ESKDALEMUIR (D)												10° +												MARCH		1958
	Hour G.M.T.																									Sum	
	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	800.0+	
1 q	34.9	35.5	37.7	38.2	37.4	37.2	36.7	36.5	36.7	37.8	41.7	44.7	47.0	47.2	45.4	43.7	42.7	42.6	41.7	41.0	40.6	39.1	38.9	36.5	40.1	161.4	
2 q	37.1	38.7	39.2	38.9	38.3	38.4	41.0	38.6	38.7	41.4	44.3	44.9	45.1	44.2	43.5	41.9	40.7	40.7	40.9	40.9	40.7	40.7	40.8	38.1	40.7	177.7	
3	38.3	38.6	38.8	38.6	39.1	39.0	38.2	38.9	37.4	38.1	42.2	46.5	45.1	45.3	43.7	42.1	42.3	45.9	38.7	41.9	36.3	31.9	34.8	33.3	39.8	155.0	
4	28.6	31.1	34.0	29.5	27.3	30.3	36.7	37.5	38.6	38.3	40.7	45.1	45.2	46.4	44.9	43.8	45.0	40.3	37.1	39.2	34.1	36.3	37.0	36.2	37.6	103.2	
5 d	35.8	35.5	34.8	36.5	36.3	34.5	39.8	39.1	37.6	36.9	38.1	42.6	42.5	45.0	45.2	45.1	42.8	42.6	42.1	39.8	38.4	33.5	32.1	32.4	38.7	129.0	
6	35.3	38.3	42.5	28.9	33.3	32.4	36.7	36.3	36.3	36.9	41.0	43.4	44.8	47.5	47.6	45.0	40.5	41.7	39.7	33.8	38.3	26.5	35.2	38.0	38.3	119.9	
7	39.6	42.3	37.5	38.2	38.6	35.1	34.0	33.6	34.6	35.3	38.3	46.4	50.1	49.9	51.8	48.1	44.6	42.4	43.5	41.8	38.0	37.8	38.3	38.8	40.8	178.6	
8	36.6	34.1	27.6	32.6	33.9	35.2	35.6	35.2	34.9	37.1	40.1	42.6	43.0	48.1	45.8	44.5	42.9	41.7	41.6	41.5	37.6	36.8	37.8	35.5	38.4	122.3	
9	32.6	31.7	30.0	36.8	36.9	38.7	42.4	38.3	37.2	38.5	42.1	46.4	45.5	48.0	51.6	47.5	43.3	42.1	40.9	37.2	36.4	38.7	40.3	40.2	40.1	163.3	
10	38.5	38.5	33.7	33.4	39.0	36.4	36.6	35.7	35.0	36.5	39.7	45.6	49.0	48.6	49.6	47.8	46.1	43.3	41.2	41.2	40.1	36.7	36.9	35.4	40.2	164.5	
11	27.7	30.7	37.4	38.4	37.7	38.3	37.6	36.8	37.6	39.3	40.4	47.2	48.7	50.6	48.9	51.0	47.3	45.1	45.4	42.1	40.1	37.3	28.2	29.8	40.1	163.6	
12 d	21.4	15.7	17.0	20.7	19.9	24.6	30.2	38.0	42.6	38.2	41.4	48.9	50.4	50.4	49.1	46.7	44.2	38.7	35.0	38.7	37.7	36.7	33.9	36.0	35.7	56.1	
13 d	39.9	33.4	34.2	39.9	38.4	45.4	49.8	41.5	43.6	37.3	44.0	45.3	46.0	47.6	46.5	46.4	46.9	46.2	40.3	43.9	41.9	39.7	40.9	39.3	42.4	218.3	
14	38.3	36.9	36.2	38.4	37.3	37.0	36.5	36.5	36.2	37.3	39.5	41.9	48.1	45.3	49.9	47.6	44.4	46.7	46.1	45.4	44.8	43.3	41.4	39.8	41.5	194.8	
15	38.0	37.7	37.7	37.1	39.9	41.6	41.0	36.9	37.4	42.1	41.1	45.9	50.6	51.6	51.0	50.2	46.3	45.4	41.8	41.5	40.0	39.3	39.3	39.2	42.2	212.6	
16 q	40.8	38.2	29.0	32.7	35.3	33.9	35.3	33.7	34.3	38.1	40.3	43.6	46.1	47.5	47.1	44.5	42.7	42.4	42.4	42.3	42.0	37.5	34.6	36.7	39.2	141.0	
17	37.2	40.0	39.6	37.6	37.2	34.6	39.3	37.2	33.7	39.4	39.5	43.3	47.4	50.5	51.5	47.9	45.0	44.5	39.7	34.7	35.2	38.7	39.5	39.6	40.5	172.8	
18	39.8	37.5	40.3	38.0	35.9	34.1	34.0	37.4	35.4	37.5	39.5	42.3	49.0	49.1	46.6	47.1	45.1	46.2	42.8	35.9	40.7	37.8	38.4	38.2	40.4	168.6	
19 d	38.5	36.1	32.4	34.3	32.2	32.9	38.4	36.4	34.6	35.8	39.0	42.7	48.4	52.3	54.8	51.3	51.1	47.5	44.0	39.1	29.6	34.0	32.7	27.4	39.4	145.6	
20 d	28.4	30.3	28.9	40.9	35.0	36.2	37.5	35.1	33.9	34.0	37.1	40.9	47.5	50.5	51.6	48.4	46.9	40.4	42.9	39.2	24.8	23.2	26.1	33.4	37.2	93.1	
21	37.6	35.6	36.0	37.5	30.3	34.2	33.8	34.3	32.2	33.6	36.7	39.9	44.7	48.1	50.8	49.8	47.8	45.3	40.9	38.8	41.2	38.2	33.6	25.6	38.6	126.5	
22	36.9	17.8	26.1	33.2	35.4	36.5	36.7	34.8	34.2	34.4	36.7	40.0	45.2	48.4	48.5	45.6	43.5	41.3	39.2	37.2	39.4	38.8	33.0	32.1	37.3	94.9	
23	32.4	31.4	33.8	35.3	36.0	36.4	34.9	32.5	32.1	33.3	33.9	41.8	46.0	49.3	50.9	49.3	46.2	44.7	40.9	38.5	40.5	36.7	38.2	36.8	38.8	131.8	
24	33.2	34.9	37.3	35.0	33.0	32.8	33.6	33.1	32.6	36.8	38.9	44.8	46.5	51.1	51.8	49.5	45.5	40.0	42.3	39.3	33.9	39.1	30.0	27.1	38.4	122.1	
25	29.4	30.1	28.5	33.3	33.7	34.0	36.8	32.5	34.1	32.4	36.6	40.5	47.8	48.2	50.0	48.1	55.2	48.9	50.7	51.4	48.2	45.4	42.9	40.1	40.8	178.8	
26	40.9	39.1	39.3	37.8	37.5	37.4	36.2	34.9	34.6	35.4	38.6	42.3	46.5	48.3	49.6	47.0	45.5	44.4	44.8	43.5	37.5	41.7	40.0	42.6	41.1	185.4	
27	45.9	40.8	40.3	38.7	37.4	36.9	36.2	33.4	31.4	32.4	37.2	39.5	42.3	45.1	46.1	45.7	43.8	42.5	41.5	39.0	41.3	39.1	34.3	37.3	39.5	148.1	
28 q	38.3	38.4	37.8	39.7	36.7	35.6	35.0	33.6	32.5	34.4	36.8	39.6	42.9	45.7	46.5	45.3	43.9	38.9	39.1	41.7	42.0	41.1	35.7	37.4	39.1	138.6	
29 q	39.8	32.5	35.0	35.1	35.7	36.7	36.6	34.5	32.2	32.3	36.1	40.9	45.5	47.6	47.5	45.2	42.9	39.9	39.1	40.8	41.9	42.1	40.3	39.3	39.1	139.5	
30	38.5	38.8	38.6	38.7	37.9	37.1	35.8	33.4	31.9	37.8	37.3	46.9	52.8	55.9	53.0	51.1	48.9	42.4	38.0	41.0	40.5	39.1	37.0	39.7	41.3	192.1	
31	39.2	37.2	35.6	34.2	32.9	32.6	34.2	31.8	32.0	35.8	39.4	43.5	48.6	48.8	47.7	47.8	43.5	42.7	41.9	40.5	40.7	41.5	41.8	41.1	39.8	155.0	
Mean	36.1	34.7	34.7	35.7	35.3	35.7	37.0	35.7	35.4	36.6	39.3	43.5	46.7	48.5	48.7	46.9	45.1	43.1	41.5	40.4	38.9	37.7	36.6	36.2	39.6		
Sum 1000.0	119.4	77.4	76.8	108.1	95.4	106.0	147.1	108.1	96.1	134.4	218.2	349.9	448.3	502.1	508.5	455.0	397.5	337.4	286.2	252.8	204.4	168.3	133.9	122.9		Grand Total 29454.2	

TERRESTRIAL MAGNETIC FORCE: VERTICAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

75

24 ESKDALEUIR (Z)		45,000 γ (0.45 C.G.S. unit) +																				MARCH 1958																		
	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	Sum 7000+												
1	q	γ	300	γ	302	γ	306	γ	309	γ	311	γ	312	γ	315	γ	316	γ	315	γ	314	γ	307	γ	302	γ	300	303	309	310	311	311	315	315	453					
2	q	γ	310	γ	310	γ	311	γ	311	γ	310	γ	310	γ	300	γ	295	γ	294	γ	294	γ	295	γ	299	γ	300	306	311	313	312	310	309	310	306	348				
3	q	γ	309	γ	306	γ	305	γ	304	γ	305	γ	305	γ	305	γ	304	γ	306	γ	305	γ	304	γ	305	γ	311	310	315	317	320	319	360	352	362	315	559			
4		γ	296	γ	288	γ	283	γ	291	γ	292	γ	293	γ	290	γ	291	γ	295	γ	300	γ	306	γ	310	γ	318	329	332	325	329	345	349	345	324	305	305	319	311	460
5	d	γ	325	γ	325	γ	310	γ	310	γ	294	γ	294	γ	289	γ	276	γ	271	γ	283	γ	302	γ	306	γ	312	319	326	327	329	334	331	332	334	332	296	292	310	449
6		γ	292	γ	283	γ	225	γ	253	γ	280	γ	296	γ	299	γ	302	γ	311	γ	315	γ	311	γ	313	γ	319	324	346	357	367	346	341	337	337	329	307	310	313	500
7		γ	308	γ	299	γ	297	γ	286	γ	268	γ	276	γ	290	γ	299	γ	304	γ	308	γ	308	γ	302	γ	310	318	320	327	344	347	337	338	344	337	326	314	313	507
8		γ	298	γ	283	γ	273	γ	262	γ	269	γ	279	γ	292	γ	303	γ	306	γ	307	γ	307	γ	305	γ	306	313	325	326	326	322	318	315	321	323	319	320	305	318
9		γ	311	γ	302	γ	287	γ	301	γ	309	γ	305	γ	297	γ	302	γ	310	γ	312	γ	311	γ	310	γ	319	318	329	340	336	325	323	323	317	308	308	309	313	512
10		γ	309	γ	318	γ	285	γ	295	γ	290	γ	323	γ	305	γ	313	γ	314	γ	306	γ	303	γ	298	γ	302	310	315	334	334	352	365	344	340	340	336	329	319	660
11		γ	333	γ	317	γ	317	γ	319	γ	319	γ	321	γ	320	γ	313	γ	303	γ	300	γ	295	γ		303	311	317	330	330	365	388	393	369	344	348	335	305	329	884
12	d	γ	261	γ	234	γ	235	γ	118	γ	175	γ	223	γ	248	γ	272	γ	280	γ	298	γ	321	γ	330	γ	340	352	375	383	371	385	388	364	360	350	327	314	304	304
13	d	γ	298	γ	264	γ	274	γ	250	γ	232	γ	241	γ	251	γ	280	γ	286	γ	301	γ	323	γ	346	γ	370	414	447	464	462	452	428	376	371	356	346	345	341	1177
14		γ	332	γ	325	γ	326	γ	330	γ	332	γ	331	γ	332	γ	334	γ	335	γ	336	γ	335	γ	329	γ	324	319	314	346	361	340	331	330	328	327	329	327	331	953
15		γ	321	γ	321	γ	320	γ	317	γ	315	γ	308	γ	299	γ	306	γ	314	γ	315	γ	311	γ	313	γ	318	339	355	361	369	369	362	340	328	322	322	320	328	865
16	q	γ	299	γ	277	γ	268	γ	277	γ	276	γ	287	γ	299	γ	311	γ	317	γ	319	γ	314	γ	315	γ	305	304	306	314	314	319	325	324	320	321	324	317	306	352
17		γ	313	γ	311	γ	308	γ	312	γ	312	γ	310	γ	305	γ	298	γ	297	γ	298	γ	294	γ	292	γ	299	312	330	338	350	372	381	370	342	332	324	321	322	721
18		γ	316	γ	316	γ	304	γ	279	γ	296	γ	302	γ	302	γ	292	γ	292	γ	298	γ	299	γ	300	γ	301	312	326	322	390	366	380	377	371	376	361	341	326	819
19	d	γ	328	γ	318	γ	307	γ	285	γ	294	γ	290	γ	292	γ	303	γ	314	γ	315	γ	313	γ	317	γ	327	333	356	408	427	413	412	379	353	343	308	283	334	1018
20	d	γ	264	γ	284	γ	276	γ	263	γ	285	γ	301	γ	306	γ	314	γ	316	γ	316	γ	314	γ	305	γ	298	304	325	335	343	352	342	350	355	332	317	303	313	500
21		γ	256	γ	271	γ	278	γ	267	γ	280	γ	299	γ	305	γ	313	γ	321	γ	323	γ	327	γ	317	γ	307	308	325	340	374	381	392	368	348	345	318	305	319	668
22		γ	258	γ	226	γ	259	γ	264	γ	292	γ	312	γ	319	γ	323	γ	326	γ	328	γ	324	γ	317	γ	310	316	325	325	323	326	330	331	323	322	317	280	307	376
23		γ	281	γ	284	γ	288	γ	289	γ	277	γ	286	γ	294	γ	306	γ	311	γ	312	γ	312	γ	308	γ	311	317	328	340	356	359	362	358	336	329	328	322	316	594
24		γ	321	γ	320	γ	320	γ	319	γ	296	γ	296	γ	297	γ	305	γ	309	γ	305	γ	296	γ	292	γ	300	298	314	337	362	388	392	382	363	312	320	292	322	736
25		γ	262	γ	244	γ	248	γ	284	γ	306	γ	309	γ	308	γ	309	γ	309	γ	309	γ	302	γ	301	γ	302	321	338	349	376	388	354	340	334	334	322	317	315	566
26		γ	317	γ	302	γ	296	γ	310	γ	316	γ	316	γ	320	γ	321	γ	321	γ	317	γ	313	γ	314	γ	310	307	321	353	384	383	363	370	367	343	336	317	330	917
27		γ	273	γ	285	γ	304	γ	315	γ	319	γ	320	γ	322	γ	324	γ	323	γ	313	γ	313	γ	310	γ	308	309	308	313	322	324	325	334	329	330	319	314	315	556
28	q	γ	316	γ	316	γ	309	γ	301	γ	306	γ	310	γ	316	γ	321	γ	323	γ	318	γ	311	γ	303	γ	296	296	300	309	316	342	339	332	324	319	323	322	315	568
29	q	γ	304	γ	290	γ	300	γ	302	γ	306	γ	305	γ	313	γ	319	γ	319	γ	312	γ	304	γ	297	γ	297	299	304	310	317	327	326	320	317	316	316	312	310	432
30		γ	311	γ	311	γ	311	γ	309	γ	309	γ	310	γ	313	γ	316	γ	312	γ	304	γ	302	γ	293	γ	293	315	351	361	388	414	395	366	364	350	333	326	332	957
31		γ	321	γ	314	γ	315	γ	311	γ	309	γ	296	γ	285	γ	297	γ	305	γ	310	γ	311	γ	311	γ	305	302	309	327	333	336	341	340	340	336	333	328	317	615
Mean		γ	301	γ	295	γ	292	γ	289	γ	293	γ	299	γ	301	γ	306	γ	309	γ	309	γ	309	γ	308	γ	310	317	329	340	352	356	355	346	339	331	323	313	318	
Sum 8000+		γ	1343	γ	1146	γ	1045	γ	943	γ	1080	γ	1264	γ	1329	γ	1485	γ	1569	γ	1594	γ	1593	γ	1555	γ	1621	1838	2202	2541	2911	3035	3009	2731	2522	2262	2006	1720		Grand Total 236,344

DAILY EXTREMES OF TERRESTRIAL MAGNETIC ELEMENTS, MAGNETIC CHARACTER FIGURES (K AND C) AND TEMPERATURE IN MAGNET HOUSE

25		ESKDALEUIR											MARCH 1958							
		TERRESTRIAL MAGNETIC ELEMENTS											3-hr. range indices K	Sum of K indices	Magnetic character of day (0-2)	Temperature in magnet house 200 + °A.				
		Horizontal force			Declination			Vertical force												
		Maximum 16,000γ +	Minimum 16,000γ +	Range	Maximum 10° +	Minimum 10° +	Range	Maximum 45,000γ +	Minimum 45,000γ +	Range										
		h. m.	γ	γ	h. m.	γ	h. m.	γ	h. m.	γ	γ	h. m.	γ							
1	q	00 34	756	692	11 27	64	13 48	48.8	28.2	00 50	20.6	21 24	321	295	00 42	26	4, 1, 1, 2, 2, 1, 1, 2	14	0	83.6
2	q	06 41	753	696	13 11	57	11 56	46.4	36.3	23 43	10.1	16 02	314	293	09 52	27	1, 1, 2, 2, 1, 1, 1, 2	11	0	83.6
3		15 40	775	654	24 00	121	11 47	48.6	22.3	21 09	26.3	20 18	387	285	23 56	102	1, 1, 1, 3, 3, 4, 4, 4	21	1	83.6
4		20 18	755	644	00 07	111	11 44	48.5	24.2	00 20	24.3	18 26	351	242	02 38	109	4, 3, 3, 2, 3, 3, 4, 3	25	1	83.6
5	d	06 19	779	654	07 17	125	06 48	50.2	24.8	23 13	25.4	19 42	339	264	08 04	75	3, 3, 5, 3, 3, 3, 3, 4	27	1	83.6
6		19 23	748	649	01 55	99	14 04	50.7	18.8	21 35	31.9	16 14	377	212	02 24	165	4, 4, 3, 3, 3, 3, 3, 4	27	1	83.6
7		04 43	767	658	12 33	109	14 13	52.9	30.5	07 12	22.4	16 49	356	264	04 54	92	3, 4, 3, 3, 3, 3, 3, 3	25	1	83.6
8		00 33	748	642	10 54	106	13 28	49.5	24.1	02 20	25.4	16 20	327	257	03 38	70	4, 3, 3, 3, 3, 2, 3, 3	24	1	83.6
9		20 42	756	646	11 12	110	14 16	53.6	25.6	01 44	28.0	15 50	344	284	02 17	60	4, 2, 3, 3, 3, 2, 3, 2	22	1	83.6
10		01 18	764	662	10 27	102	14 57	52.9	30.5	24 00	22.4	18 28	368	281	02 02	87	4, 3, 2, 2, 3, 3, 3, 3	23	1	83.6
11		19 39	816	641	19 49	175	19 46	57.6	22.2	22 51	35.4	18 42	406	276	24 00	130	4, 1, 0, 2, 3, 3, 5, 4	22	1	83.6
12	d	04 37	734	514	02 59	220	13 11	52.2	6.0	02 12	46.2	17 52	401	56	03 08	345	6, 5, 4, 3, 3, 4, 3, 3	31	2	83.6
13	d	19 08	789	607	10 42	182	14 34	53.9	30.6	19 04	23.3	15 42	472	225	04 13	247	4, 4, 4, 3, 4, 4, 5, 2	30	1	83.6
14		15 52	777	616	12 14	161	12 26	57.8	34.5	02 01	23.3	16 12	367	310	14 00	57	3, 1, 1, 1, 5, 5, 2, 2	20	1	83.6
15		06 43	762	641	10 04	121	13 16	52.9	34.0	08 41	18.9	17 54	374	295	06 48	79	2, 3, 4, 4, 2, 3, 2, 2	22	1	83.5
16	q	00 23	758	647	11 20	111	12 58	48.9	26.6	02 27	22.3	18 45	326	259	02 04	67	4, 3, 2, 3, 2, 3, 2, 3	22	1	83.5
17		19 28	770	638	09 08	132	14 27	54.3	20.8	19 50	33.5	19 28	394	288	11 16	106	2, 2, 3, 4, 3, 4, 4, 1	23	1	83.6
18		16 01	831	639	13 23	192	15 37	55.3	30.9	18 56	24.4	16 11	407	274	03 27	133	2, 3, 3, 2, 4, 5, 4, 3	26	1	83.6
19	d	15 28	777	609	23 51	168	14 23	56.3	15.3	23 55	41.0	16 48	436	278	03 23	158	4, 3, 3, 3, 4, 5, 5, 5	32	1	83.6
20	d	00 08	769	649	10 07	120	13 52	53.9	14.0	21 01	39.9	20 32	361	251	00 21	110	4, 4, 4, 3, 3, 4, 5, 5	32	1	83.6
21		17 08	812	646	10 33	166	15 02	54.3	20.6	23 32	33.7	19 32	405	247	00 18	158	4, 4, 3, 2, 4, 5, 3, 4	29	1	83.6
22		00 38	758	581	01 22	177	14 04	49.5	3.9	01 29	45.6	19 17	333	201	01 25	132	5, 4, 2, 2, 3, 2, 2, 4	24	1	83.6
23		20 04	800	611	10 17	189	20 30	55.1	26.7	00 01	28.4	18 18	363	269	00 03	94	4, 3, 2, 4, 2, 3, 5, 2	25	1	83.9
24		17 12	856	665	10 44	191	13 51	53.1	18.2	20 38	34.9	18 39	399	249	24 00	150	2, 3, 3, 2, 3, 5, 5, 4	27	1	-
25		16 20	867	656	01 56	211	16 40	62.0	24.3	02 12	37.7	17 12	406	221	01 50	185	4, 2, 3, 2, 3, 5, 4, 4	27	1	83.8
26		16 08	791	668	12 12	123	13 48	50.7	31.8	09 18	18.9	17 13	388	290	02 12	98	3, 2, 2, 3, 4, 5, 3, 3	25	1	83.8
27		22 18	774	658	11 27	116	00 17	49.8	25.6	22 08	24.2	19 38	336	258	00 43	78	3, 2, 3, 2, 2, 3, 2, 4	21	1	83.9
28	q	17 07	788	661	10 36	127	15 02	47.2	29.8	08 14	17.4	17 37	350	294	12 52	56	2, 2, 3, 2, 2, 4, 3, 3	21	1	83.9
29	q	23 05	760	665	13 46	95	13 48	48.9	31.5	01 18	17.4	17 42	330	286	01 10	44	2, 2, 2, 2, 3, 3, 3, 2	19	0	83.8
30		17 08	829	637	15 29	192	13 40	60.4	28.2	08 31	32.2	16 57	421	290	11 25	131	1, 1, 3, 3, 5, 6, 3, 3	25	1	83.8
31		19 59	769	654	12 24	115	13 22	51.4	30.0	07 18	21.4	20 20	343	280	06 06	63	2, 3, 2, 2, 3, 3, 3, 3	21	1	84.0
Mean		- -	780	642 - -	138	- -	52.5	24.9 - -	27.6	- -	37.1	261 - -	111	-	-	-	-	0.94	-	83.7

TERRESTRIAL MAGNETIC FORCE: HORIZONTAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

22 ESKDALEMUIR (H)		16,000γ (0.16 C.G.S. unit) +																								APRIL 1958	
	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	Sum 16,000+
1	γ	728	707	716	710	710	708	699	675	686	677	662	664	672	686	718	731	733	730	750	754	748	725	721	725	710	1035
2 d	γ	726	724	724	722	727	732	726	705	705	675	648	631	657	664	690	703	715	740	754	741	734	724	713	700	707	980
3	γ	709	726	712	728	725	718	700	705	694	682	676	674	678	690	692	712	726	736	742	747	763	730	727	734	714	1126
4 d	γ	722	726	717	728	740	724	723	715	706	684	671	672	703	721	737	740	749	769	769	719	714	721	708	713	720	1291
5	γ	682	669	675	696	719	701	675	672	670	655	640	638	660	674	690	700	699	724	724	726	732	729	722	698	690	570
6	γ	677	715	707	714	714	714	722	710	697	678	664	667	672	679	714	738	721	726	744	735	731	720	728	726	709	1013
7	γ	711	718	716	703	707	716	710	704	686	668	650	652	669	692	697	714	719	733	758	731	729	730	728	716	707	957
8	γ	709	712	713	725	719	725	725	716	700	675	657	650	660	675	698	715	735	726	723	742	748	728	726	724	709	1026
9	γ	725	718	720	714	724	722	725	722	709	689	674	673	683	696	705	714	733	747	757	756	745	722	715	719	717	1207
10 q	γ	718	723	723	722	724	726	728	724	709	686	669	664	674	687	707	721	728	737	737	745	754	753	744	743	719	1246
11 q	γ	747	746	746	754	746	743	740	741	734	712	693	677	680	690	709	721	726	733	742	748	751	753	744	748	730	1524
12 q	γ	748	747	746	746	742	741	742	742	741	730	721	704	703	713	726	737	742	755	756	759	752	755	752	752	740	1752
13 q	γ	746	747	746	741	735	735	737	735	726	722	713	710	708	720	723	730	739	745	747	756	750	751	750	750	736	1662
14	γ	745	741	742	741	745	740	743	746	746	738	711	701	714	750	726	740	750	733	756	749	745	740	738	730	738	1710
15	γ	734	722	733	717	737	731	722	690	682	694	685	678	665	690	697	710	720	741	755	748	756	729	724	728	716	1188
16 d	γ	714	721	720	733	720	724	706	707	716	689	675	669	687	693	701	712	734	766	746	771	748	721	717	746	718	1236
17 d	γ	712	661	685	699	719	710	718	698	685	688	685	673	681	684	706	805	765	773	779	758	719	714	714	718	715	1149
18 d	γ	697	715	699	686	694	693	686	677	662	659	642	641	691	681	694	737	780	762	763	738	726	690	680	708	700	801
19	γ	722	715	714	712	710	709	700	702	684	643	647	659	687	707	742	745	737	748	732	763	739	718	728	731	712	1094
20	γ	722	720	718	713	706	703	714	718	715	706	694	686	685	709	715	718	734	752	751	753	745	762	733	721	721	1293
21	γ	732	726	728	727	726	725	724	724	713	700	692	697	693	711	739	762	757	769	740	738	741	758	757	711	729	1490
22 q	γ	719	723	722	723	724	728	730	728	721	700	692	689	696	701	717	720	733	735	742	740	745	739	734	733	722	1334
23	γ	733	733	733	730	730	730	726	722	715	709	707	711	711	715	726	758	765	733	739	752	752	740	733	734	731	1537
24	γ	729	724	732	724	714	720	716	698	696	699	698	689	692	675	710	716	742	731	751	755	754	746	741	739	720	1291
25	γ	742	739	767	733	728	730	728	721	713	708	696	692	701	701	712	726	747	744	751	756	753	751	751	750	731	1540
26	γ	747	743	743	741	743	743	739	730	717	704	697	691	698	702	723	761	773	745	783	767	753	750	740	743	737	1676
27	γ	739	736	735	733	732	733	731	724	722	714	695	682	681	688	704	722	748	777	781	769	755	743	733	727	729	1504
28	γ	723	709	728	714	716	717	724	722	714	709	707	692	692	694	693	734	720	720	786	756	737	728	728	713	720	1276
29	γ	705	709	726	715	698	712	713	698	684	660	658	655	660	689	690	688	753	745	760	775	767	746	733	724	711	1063
30	γ	733	726	715	731	724	713	715	716	680	689	674	671	694	695	718	743	773	768	769	766	750	748	727	714	723	1352
Mean		723	721	723	723	723	722	720	713	704	691	680	675	685	696	711	729	740	745	753	750	745	735	730	727	719	
Sum 20,000+		1696	1641	1701	1675	1698	1666	1587	1387	1128	742	393	252	547	872	1319	1873	2196	2343	2587	2513	2336	2064	1889	1818		Grand Total 517,923

MAGNETIC DECLINATION (WEST)
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

23	ESKDALEMUIR (D)												10° +												APRIL 1958																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
	Hour G.M.T.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			

24	ESKDALEMUIR (Z)												45,000γ (0·45 C.G.S. unit) +																APRIL 1958	
	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	Sum 7000+				
	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	316	307	296	293	295	298	312	312	307	304	302	300	304	311	320	336	344	340	338	345	327	323	325	316	315	571				
2 d	313	315	315	312	294	290	287	292	292	287	280	286	289	300	314	322	321	323	321	321	327	338	335	318	308	392				
3	303	290	270	272	275	282	294	299	302	302	302	303	304	311	317	326	333	332	327	323	322	313	311	310	305	323				
4 d	312	306	296	298	300	302	303	307	308	304	297	297	294	319	355	368	380	397	402	391	388	364	298	303	329	889				
5	296	288	271	281	287	283	296	300	301	304	311	314	322	326	338	347	362	361	359	350	340	329	324	321	317	611				
6	311	289	305	316	319	319	314	315	312	305	306	304	297	300	313	340	361	377	377	367	354	342	355	275	324	773				
7	290	309	309	306	298	289	298	300	300	305	306	300	299	313	338	350	359	360	361	340	334	327	325	324	318	640				
8	321	321	315	302	310	315	322	326	325	317	309	302	300	300	307	317	328	334	330	324	327	324	321	324	318	621				
9	324	322	316	316	299	303	312	316	314	308	304	293	286	289	296	300	308	318	327	330	338	344	343	334	314	540				
10 q	331	326	323	322	320	317	319	317	311	310	307	300	294	296	302	305	308	313	313	312	312	315	316	313	313	502				
11 q	309	310	309	304	307	308	307	307	304	305	302	299	297	296	300	301	304	309	309	309	308	309	310	309	305	332				
12 q	309	309	310	310	311	311	311	309	302	298	290	284	281	286	293	300	308	315	316	316	315	312	311	309	305	316				
13 q	308	307	309	310	312	314	313	311	302	295	293	289	286	290	299	301	305	310	312	311	313	310	309	307	305	316				
14	305	305	304	306	305	307	309	308	304	299	300	294	288	295	316	317	326	331	330	346	337	332	333	321	313	518				
15	286	284	290	289	271	284	293	299	293	291	294	290	292	296	310	316	323	321	330	340	335	315	300	302	302	257				
16 d	301	289	282	277	296	297	298	290	289	290	285	286	291	306	315	320	338	359	371	381	330	326	315	266	308	398				
17 d	238	233	248	256	245	252	265	281	286	290	298	304	314	323	328	388	398	386	391	367	338	332	287	280	305	328				
18 d	284	269	228	240	258	286	297	300	307	308	315	315	329	358	355	365	384	384	361	337	323	317	304	266	312	490				
19	296	281	291	303	310	308	316	321	320	316	309	304	304	312	323	336	348	349	338	332	318	308	289	289	313	521				
20	302	313	313	300	291	301	307	309	305	303	302	296	300	312	323	327	326	334	341	336	328	313	294	339	313	515				
21	312	315	315	308	300	302	308	309	305	301	298	289	287	292	303	320	336	340	343	330	325	316	286	288	309	428				
22 q	302	311	314	315	312	306	296	294	284	283	287	291	293	301	309	313	316	321	323	320	316	315	315	314	306	351				
23	315	315	314	315	315	316	315	311	305	295	288	283	286	294	306	319	335	353	355	346	340	334	332	314	317	601				
24	311	312	307	300	296	275	284	292	291	289	285	280	286	300	315	326	336	344	340	335	331	330	325	317	309	407				
25	312	311	296	288	292	297	297	293	289	283	279		278	289	298	302	308	315	315	313	312	311	311	311	300	197				
26	311	312	313	313	313	312	308	304	302	294	288	283	285	289	300	304	329	324	334	339	338	322	319	317	311	453				
27	316	315	315	315	317	319	321	319	312	302	301	295	287	292	300	304	316	326	341	347	351	327	320	321	316	579				
28	320	319	305	300	290	292	304	306	309	301	296	298	303	321	344	357	372	368	372	367	354	346	332	315	325	791				
29	319	332	294	281	286	252	266	286	294	293	292	297	303	321	330	329	341	367	359	343	342	330	317	312	312	486				
30	309	282	288	289	292	298	302	308	307	309	309	308	308	321	321	331	347	370	360	357	341	320	273	275	314	525				
Mean	306	303	299	298	297	298	303	305	303	300	298	295	296	305	316	326	337	343	343	339	332	325	315	307	312					
Sum 8000+	1182	1097	961	937	916	935	1074	1145	1086	997	939	863	887	1159	1488	1787	2100	2281	2296	2175	1964	1744	1450	1208		Grand Total 224, 671				

DAILY EXTREMES OF TERRESTRIAL MAGNETIC ELEMENTS, MAGNETIC CHARACTER FIGURES (K AND C) AND TEMPERATURE IN MAGNET HOUSE

25		ESKDALEUIR											APRIL 1958				
		TERRESTRIAL MAGNETIC ELEMENTS											3-hr. range indices K	Sum of K indices	Magnetic character of day (0-2)	Temperature in magnet house +	
		Horizontal force			Declination			Vertical force									
		Maximum 16,000γ +	Minimum 16,000γ +	Range	Maximum 10° +	Minimum 10° +	Range	Maximum 45,000γ +	Minimum 45,000γ +	Range							
		h. m.	γ	h. m.	γ	h. m.	γ	h. m.	γ	h. m.	γ						
1		20 21	786	650 10 56	136	14 33	54·4	28·7 03 33	25·7	19 34	347	290 03 42	57	3,3,2,2,3,3,4,3	23	1	84·2
2	d	17 58	793	612 10 53	181	15 10	52·4	22·2 07 04	30·2	22 04	343	280 10 26	63	3,3,4,4,4,5,3,3	29	1	84·2
3		20 43	811	669 11 55	142	12 56	49·5	28·9 05 32	20·6	16 24	335	261 02 31	74	3,3,2,2,2,3,4,4	23	1	84·2
4	d	18 30	857	654 11 52	203	14 22	60·3	26·2 23 53	34·1	18 30	418	269 22 21	149	3,3,3,3,4,4,6,5	31	1	84·2
5		20 31	741	627 10 54	114	13 17	51·6	19·2 03 04	32·4	16 38	363	263 02 47	100	3,4,3,2,3,3,3,3	24	1	84·2
6		20 02	756	645 11 02	111	14 54	51·9	27·3 01 54	24·6	17 37	378	269 23 52	109	3,2,2,3,3,3,3,4	23	1	84·2
7		18 30	777	644 11 24	133	13 29	53·2	29·5 03 26	23·7	18 18	370	271 00 00	99	3,3,2,2,3,3,3,3	22	1	84·3
8		20 48	765	647 11 31	118	13 48	51·1	29·0 08 39	22·1	17 10	335	298 12 48	37	2,2,2,2,2,2,3,3	18	0	84·3
9		19 32	761	668 11 14	93	14 36	48·3	30·5 02 44	17·8	21 52	346	286 12 32	60	2,2,1,2,2,3,3,3	17	0	84·3
10	q	21 03	761	660 10 55	101	13 42	47·3	30·1 07 39	17·2	00 01	332	290 12 43	42	2,1,2,2,2,2,2,2	15	0	84·3
11	q	21 37	777	673 11 56	104	14 38	47·0	31·5 08 22	15·5	21 58	312	294 13 22	18	2,2,0,2,2,2,2,3	15	0	84·3
12	q	17 23	770	699 12 37	71	13 27	47·7	34·4 07 38	13·3	17 57	317	281 12 03	36	0,1,1,2,2,3,2,2	13	0	84·3
13	q	19 24	759	702 11 52	57	13 29	45·3	31·4 06 54	13·9	05 22	315	286 12 24	29	1,2,1,2,1,2,2,2	13	0	84·3
14		16 03	797	683 11 14	114	16 00	52·5	30·6 09 18	21·9	19 28	350	286 12 04	64	2,1,2,3,4,4,3,2	21	1	84·2
15		00 38	787	655 11 36	132	13 48	48·8	22·3 02 25	26·5	20 06	346	267 00 48	79	5,4,3,2,2,3,3,3	25	1	-
16	d	19 11	814	653 10 44	161	14 37	55·0	20·2 23 04	34·8	19 16	407	260 23 57	147	3,2,3,3,4,4,4,4	27	1	84·3
17	d	15 42	855	591 23 00	264	14 43	56·8	11·3 23 08	45·5	15 49	420	197 00 52	223	5,3,3,3,4,5,5,6	34	1	84·3
18	d	18 20	854	619 10 34	235	12 45	53·2	21·8 04 04	31·4	16 49	389	206 03 18	183	4,4,3,3,4,4,5,4	31	1	84·3
19		19 46	784	629 10 18	155	14 22	52·3	26·1 23 24	26·2	17 13	353	273 22 59	80	3,3,3,3,4,4,4,4	28	1	84·4
20		21 52	787	678 11 43	109	14 11	49·5	27·2 21 44	22·3	18 29	342	286 04 42	56	2,3,3,3,3,3,4,3	24	1	84·4
21		22 04	782	679 12 03	103	12 40	48·9	28·9 21 51	20·0	18 02	341	275 22 59	66	2,3,2,2,2,3,3,2,4	21	1	84·3
22	q	18 48	747	682 11 36	65	14 12	46·0	29·5 07 38	16·5	18 40	324	281 08 53	43	2,2,2,2,1,2,1,0	12	0	-
23		16 21	777	702 10 40	75	15 21	48·4	30·9 22 29	17·5	18 05	358	282 11 10	76	0,0,1,2,2,3,2,3	13	0	84·3
24		21 07	763	685 11 56	78	14 13	51·7	23·8 03 22	27·9	17 25	345	274 05 37	71	3,3,3,2,2,3,2,2	20	1	84·3
25		02 42	775	682 13 47	93	13 12	53·6	26·7 03 29	26·9	18 10	317	276 11 42	41	3,3,2,2,3,2,1,0	16	0	84·2
26		18 23	826	685 10 54	141	15 36	45·9	32·4 08 14	13·5	19 06	343	282 11 28	61	0,0,1,2,2,5,4,2	16	1	84·4
27		18 21	794	677 12 31	117	15 36	46·7	29·7 20 31	17·0	20 26	359	286 12 52	73	0,1,1,3,2,4,3,3	17	1	84·4
28		18 47	794	659 11 53	135	13 38	51·9	26·8 21 59	25·1	18 43	375	283 04 52	92	3,3,2,3,3,3,3,4	24	1	-
29		20 06	786	631 11 12	155	12 43	50·9	25·0 03 11	25·9	17 37	372	243 05 18	129	4,4,3,3,3,4,3,3	27	1	84·4
30		16 43	797	648 10 58	149	12 54	53·1	28·4 07 38	24·7	17 17	373	251 22 55	122	4,3,3,3,3,4,4,4	28	1	84·4
Mean		- -	788	660 - -	128	- -	50·8	27·0 - -	23·8	- -	354	271 - -	83	-	-	0·70	84·3

q denotes an international quiet day and d an international disturbed day.

TERRESTRIAL MAGNETIC FORCE: HORIZONTAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

22	ESKDALEMUIR (H)												16,000γ (0.16 C.G.S. unit) +												MAY 1958	
	Hour G.M.T.																								Mean	Sum 16,000+
	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		
1	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	
2	713	726	718	705	711	717	711	700	686	668	672	674	671	688	701	726	769	758	793	760	747	738	733	727	717	1212
3	725	736	739	731	726	708	703	700	704	691	675	661	658	673	690	716	731	737	753	764	758	733	736	735	716	1183
4	730	734	726	726	720	724	718	705	693	680	675	669	684	696	716	722	734	749	750	753	759	743	740	745	720	1291
5	758	730	728	727	729	737	727	711	706	693	677	670	677	699	726	741	743	752	754	749	754	755	735	731	725	1409
6	728	736	733	722	729	728	720	707	702	686	682	683	691	704	724	727	757	775	781	773	764	760	736	734	728	1482
7	736	738	718	723	727	730	732	731	714	689	673	671	677	690	713	715	737	746	747	754	756	750	745	740	723	1352
7 q	742	737	735	740	739	743	743	741	727	720	707	699	692	706	713	723	737	743	750	756	765	763	763	756	735	1640
8	756	756	758	756	756	754	749	744	734	719	718	714	714	727	752	718	727	744	758	770	772	774	758	736	744	1864
9	741	742	744	751	755	755	746	741	726	714	704	712	724	723	737	739	741	742	752	752	760	762	761	760	741	1784
10	755	739	739	745	750	749	748	733	740	735	718	701	690	712	722	741	718	758	768	786	753	746	744	731	738	1721
11	733	735	736	737	737	736	723	693	689	687	695	702	702	699	710	728	747	772	775	766	750	744	742	742	728	1480
12	741	741	739	739	741	739	733	724	715	707	705	703	710	732	739	742	775	781	772	795	762	743	740	737	740	1755
13 d	728	719	727	728	728	731	727	716	715	709	700	698	713	712	765	781	804	805	783	792	755	721	705	726	737	1688
14 d	698	695	682	699	718	712	684	673	674	683	668	678	697	712	745	762	769	767	773	787	748	735	724	725	717	1208
15	729	725	709	716	718	677	705	688	690	692	686	688	692	710	726	750	799	819	815	751	719	727	743	730	725	1404
16	720	730	719	715	718	720	715	728	693	666	672	676	683	711	737	753	800	768	741	734	746	736	741	743	724	1365
17	731	736	726	734	725	731	723	711	712	705	693	692	695	707	739	745	764	777	791	761	742	745	758	756	733	1599
18	727	721	727	715	724	719	732	697	692	685	676	677	699	719	732	752	810	804	774	757	740	737	736	738	729	1490
19	730	728	732	730	717	716	722	709	698	681	676	668	689	719	727	756	770	774	774	770	747	750	732	727	727	1442
20 q	737	747	734	735	736	730	723	716	696	676	669	672	693	716	732	747	762	768	760	751	747	741	746	752	729	1486
21	744	757	733	727	734	733	727	715	696	680	666	665	677	698	716	736	749	763	759	751	751	750	749	748	726	1424
22 q	749	749	744	743	750	747	736	720	707	695	690	692	700	709	721	749	761	760	759	767	765	764	762	760	737	1699
23 q	756	738	742	749	751	751	740	730	719	710	708	709	713	723	734	759	771	771	770	759	766	762	756	756	743	1843
24 q	755	754	754	755	758	759	753	740	728	712	698	696	705	727	731	740	746	760	764	762	760	755	757	755	743	1824
25	755	757	756	760	761	756	744	732	721	713	711	713	717	726	742	759	766	794	813	802	789	795	764	762	755	2108
26 d	759	749	711	729	740	736	732	720	695	680	684	710	700	713	830	825	850	770	745	744	737	740	741	722	740	1762
27	719	717	721	712	709	702	691	676	670	678	687	672	662	696	724	708	730	757	789	779	765	757	734	724	716	1179
28	692	695	728	719	717	707	698	689	687	691	689	692	695	704	719	755	740	755	778	778	766	753	741	750	722	1338
29 d	776	748	716	689	735	724	691	670	644	626	617	676	716	759	711	723	701	760	744	744	739	727	726	726	712	1088
30	727	712	696	715	723	719	704	690	689	684	701	683	693	698	700	714	734	766	757	759	758	754	732	726	718	1234
31 d	719	721	711	698	714	720	710	704	693	669	665	672	693	723	689	711	738	884	844	783	730	575	648	524	706	938
Mean	736	734	728	728	732	729	723	711	702	691	686	687	694	711	728	741	757	770	771	765	754	743	740	733	729	
Sum 21,000+	1809	1748	1581	1570	1696	1610	1410	1054	755	424	257	288	522	1031	1563	1963	2480	2879	2886	2709	2370	2035	1928	1724		Grand Total 542,292

MAGNETIC DECLINATION (WEST)
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

23	ESKDALEMUIR (D)												10° +												MAY 1958	
	Hour G.M.T.																									Sum
	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	800.0+
1	36.2	38.5	32.4	32.8	34.2	34.9	33.0	30.3	31.3	33.9	38.1	41.1	44.1	46.1	45.9	44.5	42.0	38.6	35.2	35.6	37.3	38.3	41.5	36.6	37.6	102.4
2	38.0	38.5	36.2	31.3	29.2	30.3	29.0	30.5	28.6	30.8	33.6	37.1	40.6	43.6	43.5	43.1	41.4	39.4	38.9	34.1	36.0	38.5	38.9	37.7	36.2	68.8
3	38.3	38.6	37.5	37.5	36.6	34.3	31.3	29.6	29.8	32.5	37.8	42.0	45.2	47.5	47.2	45.7	44.5	43.0	40.3	39.6	39.0	38.4	39.4	39.0	38.9	134.6
4	35.8	34.1	36.1	34.4	33.9	31.2	28.8	28.8	31.6	35.0	38.2	42.8	45.4	46.6	47.5	46.3	43.8	41.7	40.5	39.7	39.3	39.4	32.8	34.8	37.9	108.5
5	35.2	33.9	31.0	30.2	31.6	30.6	28.6	29.0	30.5	31.5	34.6	38.8	42.6	44.9	45.8	43.8	43.0	43.3	42.9	39.5	39.6	38.3	37.9	37.4	36.9	84.5
6	37.4	32.3	31.7	32.7	33.0	33.1	30.2	28.1	28.7	31.8	36.7	41.6	45.4	46.4	46.5	42.8	41.7	39.6	38.2	38.6	37.9	39.3	39.8	39.1	37.2	92.6
7 q.	37.3	36.3	36.1	34.8	34.1	32.9	30.3	29.8	28.6	31.1	35.0	40.9	44.0	46.3	46.1	44.8	42.9	40.3	39.2	39.8	40.1	37.0	36.1	36.7	37.5	100.5
8	38.5	38.3	38.6	38.4	38.3	35.5	32.9	31.3	31.4	34.1	37.5	41.9	46.4	49.2	49.3	46.6	43.6	41.0	39.3	37.9	39.6	36.8	31.9	34.9	38.9	133.2
9	37.2	36.5	36.6	36.5	35.2	33.0	31.3	33.6	35.1	36.8	39.3	41.1	44.6	46.5	45.8	44.0	42.1	41.1	40.1	39.6	39.7	38.9	38.6	38.3	38.8	131.5
10	40.0	36.7	36.6	37.3	37.3	39.5	38.7	36.9	37.6	35.9	39.3	43.6	46.6	46.3	44.9	44.7	42.9	42.5	35.8	35.6	39.2	39.3	38.7	38.3	39.8	154.2
11	37.9	37.4	36.9	36.2	35.0	33.1	31.9	33.6	35.6	39.1	42.4	43.5	44.9	44.9	44.6	43.9	42.6	41.0	37.8	37.4	38.7	40.2	40.5	40.3	39.1	139.4
12	39.2	38.2	37.2	36.3	34.8	32.9	32.1	32.8	35.2	38.8	42.2	44.4	46.3	45.9	45.8	44.6	43.9	43.9	41.0	40.4	36.6	37.4	33.9	34.4	39.1	138.2
13 d	32.7	33.7	34.8	33.8	32.3	32.1	30.3	29.6	32.6	33.9	38.2	43.3	45.5	48.8	51.0	50.7	46.3	46.1	44.7	39.6	41.9	37.7	39.1	37.2	39.0	135.9
14 d	39.3	29.2	24.1	30.9	33.8	29.4	24.8	28.6	33.1	34.7	38.9	43.3	46.9	49.8	46.9	44.7	45.4	43.7	40.9	36.0	39.3	39.3	37.8	41.8	37.6	102.6
15	38.0	32.5	34.5	36.2	40.5	36.3	33.1	31.6	34.7	36.4	40.3	43.1	46.4	48.9	48.1	46.6	43.3	42.0	38.5	37.0	39.1	41.2	36.7	34.3	39.1	139.3
16	33.9	34.7	33.7	35.6	34.9	33.0	31.1	29.4	29.3	33.9	37.6	41.7	44.9	46.8	47.4	45.3	42.5	40.0	37.8	38.9	39.4	38.0	39.0	38.8	37.8	107.6
17	39.3	41.4	41.7	40.6	36.3	30.1	28.6	27.0	27.4	28.9	33.3	38.4	43.0	44.3	44.8	44.5	44.4	42.0	38.3	37.1	37.5	39.0	38.0	37.6	37.6	103.5
18	33.3	37.6	37.8	33.5	34.1	32.7	31.7	30.5	32.7	33.6	36.6	40.2	45.2	47.4	48.1	46.7	44.3	43.5	40.0	39.5	40.3	39.3	37.4	38.6	38.5	124.6
19	37.6	37.4	37.7	38.0	40.3	39.3	35.6	30.3	29.9	33.8	37.9	43.4	48.4	50.1	49.9	48.0	44.4	41.6	38.6	37.7	40.3	39.1	36.7	38.1	39.8	154.1
20 q	40.3	38.2	36.4	35.9	35.0	33.1	30.8	31.2	30.5	34.6	38.8	43.5	48.4	49.6	48.6	46.0	42.5	40.1	38.6	37.4	38.6	39.3	40.0	39.0	39.0	136.4
21	36.3	35.5	31.5	33.8	35.1	32.0	30.0	28.9	31.4	33.8	39.2	44.3	48.8	50.2	48.7	46.4	42.8	40.2	38.6	38.8	39.2	39.9	39.4	39.0	38.5	123.8
22 q	38.8	38.5	37.8	37.2	36.1	33.0	29.7	28.4	29.0	31.4	36.2	41.5	47.3	50.0	48.7	45.9	42.6	40.7	40.0	40.3	40.5	40.9	40.0	41.2	39.0	135.7
23 q	38.0	36.3	35.6	35.7	34.4	32.8	31.5	32.0	33.2	37.2	41.1	45.6	49.5	50.0	48.1	45.6	43.6	41.1	40.1	40.5	40.4	39.8	40.0	40.0	39.7	152.1
24 q	39.1	38.3	37.5	36.3	34.0	33.1	31.5	30.8	31.2	32.6	37.1	42.4	46.5	48.6	47.3	44.7	41.7	40.2	38.8	38.7	39.1	39.7	39.9	39.1	38.7	128.2
25	38.6	38.1	37.5	37.2	34.4	32.8	31.6	31.7	33.1	35.1	38.6	42.8	46.3	47.4	47.6	47.4	46.1	45.3	44.8	44.0	43.6	44.0	38.2	32.5	39.9	158.7
26 d	36.8	30.2	24.8	28.5	28.3	28.7	28.3	29.5	30.3	39.0	42.5	46.2	46.4	54.2	59.0	52.6	50.7	45.9	43.4	42.7	43.0	42.6	37.7	40.3	39.7	151.6
27	39.5	36.6	35.2	33.1	33.0	33.2	32.0	31.6	32.6	36.5	40.4	44.7	46.6	47.7	47.9	44.2	43.5	42.0	40.5	38.4	39.1	37.2	39.2	34.1	38.7	128.8
28	33.1	34.3	36.9	35.0	31.5	31.3	30.7	32.5	34.1	36.4	40.1	42.9	45.9	46.4	46.3	46.2	42.8	41.2	40.7	40.3	40.9	39.5	40.5	40.3	38.7	129.8
29 d	37.6	33.6	27.0	33.7	31.7	27.1	26.9	34.0	25.8	35.7	41.9	47.1	52.5	55.4	49.8	50.5	44.3	43.9	40.0	37.6	42.4	43.1	41.8	41.7	39.4	145.1
30	41.7	40.4	38.7	33.1	28.1	27.5	25.6	25.2	26.6	30.5	36.0	40.1	42.8	45.3	45.2	43.2	40.9	39.2	40.8	41.0	41.3	37.3	35.2	34.8	36.7	80.5
31 d	35.4	34.2	31.7	36.7	29.4	29.5	28.5	29.4	28.6	31.7	36.1	41.2	44.1	45.8	44.8	45.0	44.1	51.0	48.7	37.7	34.3	47.1	36.9	34.0	37.7	105.9
Mean	37.4	36.1	34.9	34.9	34.1	32.5	30.7	30.5	31.3	34.2	38.2	42.4	45.9	47.8	47.5	45.8	43.6	42.1	40.1	38.7	39.5	39.5	38.2	37.7	38.5	
Sum 900.0+	260.3	220.0	181.8	183.2	156.4	108.3	50.4	46.5	70.1	161.0	285.5	414.5	521.5	580.9	571.1	519.0	450.6	405.1	343.0	301.0	323.2	325.8	283.5	269.9		Grand Total 28632.6

TERRESTRIAL MAGNETIC FORCE: VERTICAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

79

24 ESKDALEUIR (Z)		45,000γ (0.45 C.G.S. unit) +																								MAY 1958	
	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	Sum 7000+
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	
1	295	267	279	295	296	301	310	313	308	301	296	300	302	312	322	330	345	351	355	344	333	328	301	301	312	312	484
2	311	301	283	281	280	292	301	302	307	306	305	304	299	302	306	310	315	319	323	331	325	320	313	312	306	348	
3	313	314	315	314	310	313	317	316	309	300	292	293	292	292	295	299	302	308	316	316	316	319	317	315	308	393	
4	297	302	310	313	311	304	305	305	301	297	293	293	297	296	298	306	309	313	315	316	316	317	321	311	306	346	
5	312	308	297	297	310	317	320	316	310	308	302	292	290	291	296	304	311	315	327	335	336	324	314	314	310	446	
6	313	308	298	304	315	315	314	311	305	297	289	286	292	302	314	319	316	317	319	319	319	320	317	315	315	309	420
7 q	315	315	315	314	315	314	312	308	305	293	280	272	273	280	289	298	305	311	313	309	308	309	309	308	303	270	
8	306	305	307	309	310	312	312	308	302	296	289	281	274	281	300	312	319	319	320	321	320	313	309	305	305	330	
9	305	309	313	314	314	313	312	307	306	299	291	282	281	285	289	295	302	308	313	314	312	311	309	307	304	291	
10	301	297	298	304	308	308	304	304	298	294	290	287	289	297	311	323	327	326	344	341	335	327	318	310	310	441	
11	313	314	315	316	316	315	311	305	293	287	281	280	282	289	300	313	315	323	336	336	331	322	316	314	309	423	
12	313	314	314	315	315	316	314	312	307	296	289	284	287	293	298	301	314	327	331	337	341	329	313	293	311	453	
13 d	285	300	310	315	316	316	313	308	298	289	288	287	299	302	312	331	386	401	378	376	357	331	262	258	317	618	
14 d	238	227	244	254	259	266	273	284	288	292	291	293	301	322	363	379	370	361	353	352	335	324	321	304	304	294	
15	265	264	261	252	263	262	285	296	301	302	301	297	302	318	332	335	347	346	347	344	334	323	314	300	304	291	
16	293	268	277	279	299	312	319	321	320	318	312	307	302	301	315	326	343	347	339	326	318	320	317	314	312	493	
17	313	307	297	285	284	294	302	308	309	300	296	292	295	308	327	331	335	339	347	342	330	321	309	285	311	456	
18	279	270	267	285	295	304	304	303	300	286	288	287	287	297	309	324	338	351	353	345	332	322	313	298	306	337	
19	302	311	313	312	300	284	280	287	288	286	288	292	293	302	313	316	321	324	326	330	321	315	317	316	306	337	
20 q	311	298	300	305	310	314	316	316	313	309	297	292	289	296	301	308	316	321	324	324	326	323	316	313	309	309	423
21	304	290	289	295	296	307	312	314	311	304	295	290	288	293	299	306	315	318	320	317	315	312	311	311	305	312	
22 q	312	312	314	315	316	318	316	315	311	301	286	273	275	289	295	305	316	320	318	315	315	312	309	308	307	366	
23 q	303	302	305	310	311	311	310	307	301	291	285	284	289	296	304	310	315	321	321	319	314	315	311	311	306	346	
24 q	311	311	312	312	312	313	312	307	298	294	289	285	286	286	292	303	307	314	319	316	312	309	307	308	305	315	
25	309	309	310	312	313	315	311	304	296	291	281	270	281	286	290	298	300	302	306	314	318	313	307	295	307	231	
26 d	290	283	281	290	296	305	307	302	292	286	284	289	300	314	351	428	439	428	382	353	338	333	320	313	325	804	
27	311	309	302	312	317	317	319	317	310	298	293	296	300	298	306	320	319	328	343	356	347	333	299	286	314	536	
28	257	262	270	265	277	293	300	300	298	300	294	291	294	305	312	323	336	338	336	336	331	324	317	302	303	261	
29 d	273	228	228	217	252	275	283	267	262	270	285	307	375	427	440	408	411	393	379	373	335	317	313	319	318	637	
30	323	327	323	300	297	312	316	315	305	307	301	299	302	313	327	334	340	347	340	338	335	328	312	306	319	648	
31 d	312	309	301	267	267	282	294	301	301	300	295	292	309	331	339	328	324	346	401	407	370	198	215	169	302	258	
Mean	299	295	295	295	299	304	307	306	302	297	292	290	294	303	314	323	331	335	337	336	328	316	308	301	309		
Sum 8000+	1285	1141	1148	1158	1280	1420	1504	1479	1353	1198	1046	977	1125	1404	1745	2023	2258	2382	2444	2404	2173	1802	1542	1317		Grand Total 229,608	

DAILY EXTREMES OF TERRESTRIAL MAGNETIC ELEMENTS, MAGNETIC CHARACTER FIGURES (K AND C) AND TEMPERATURE IN MAGNET HOUSE

25		ESKDALEUIR												MAY 1958						
		TERRESTRIAL MAGNETIC ELEMENTS										3-hr. range indices K		Sum of K indices	Magnetic character of day (0-2)	Temperature in magnet house 200 +				
		Horizontal force			Declination			Vertical force												
		Maximum 16,000γ +	Minimum 16,000γ +	Range	Maximum 10° +	Minimum 10° +	Range	Maximum 45,000γ +	Minimum 45,000γ +	Range										
		h. m.	γ	γ	h. m.	γ	h. m.	γ	h. m.	γ	γ	h. m.	γ			°A.				
1		18 32	822	640	10 54	182	22 32	48.1	27.6	07 50	20.5	18 09	357	256	01 17	101	3, 2, 2, 3, 2, 4, 4, 4	24	1	84.4
2		20 12	785	653	12 03	132	14 06	44.2	27.8	06 27	16.4	19 42	332	280	04 15	52	2, 3, 2, 2, 2, 2, 3, 2	18	0	84.4
3		24 00	770	661	11 52	109	13 44	48.3	28.9	08 02	19.4	21 12	321	290	10 51	31	1, 2, 1, 2, 2, 2, 2, 3	15	0	84.4
4		00 03	771	669	11 44	102	15 04	48.1	28.0	06 17	20.1	22 29	322	290	11 05	32	3, 2, 2, 2, 3, 2, 1, 3	18	0	84.4
5		17 59	800	677	10 27	123	14 25	46.1	28.0	07 03	18.1	19 52	346	289	12 41	57	2, 2, 1, 1, 2, 4, 3, 4	19	1	84.4
6		20 42	760	669	11 33	91	14 22	47.4	27.5	07 23	19.9	15 28	320	286	11 15	34	3, 1, 2, 2, 2, 2, 2, 1	15	0	84.4
7	q	20 46	771	687	12 17	84	13 23	46.8	28.2	08 24	18.6	01 31	316	269	11 52	47	1, 1, 2, 2, 1, 1, 2, 3	13	0	84.4
8		19 27	784	701	15 13	83	14 12	49.5	29.6	02 27	19.9	19 51	321	273	12 36	48	1, 1, 1, 2, 3, 3, 3, 3	17	1	84.4
9		21 42	770	694	11 38	76	13 26	47.5	27.6	06 54	19.9	18 53	315	279	12 27	36	2, 1, 3, 3, 3, 2, 2, 2	18	0	84.4
10		19 22	810	673	12 33	137	12 43	47.3	31.8	18 44	15.5	18 44	351	284	11 58	67	3, 3, 2, 4, 3, 4, 4, 3	26	1	84.4
11		18 00	783	679	09 06	104	13 05	46.1	30.4	06 28	15.7	19 32	338	279	10 50	59	1, 1, 3, 3, 3, 3, 3, 1	18	0	84.4
12		17 11	827	696	12 17	131	12 32	47.3	27.2	22 44	20.1	20 48	344	281	11 50	63	1, 1, 2, 1, 2, 4, 4, 3	18	1	-
13	d	17 11	840	665	22 55	175	16 18	56.4	27.2	07 27	29.2	17 26	403	159	22 53	244	3, 2, 3, 2, 4, 4, 4, 4	26	1	84.4
14	d	19 17	818	658	10 31	160	13 22	51.3	22.0	06 48	29.3	15 15	381	209	01 17	172	4, 3, 4, 3, 4, 3, 4, 3	28	1	-
15		17 31	839	652	05 04	187	13 32	49.8	28.0	06 59	21.8	16 38	353	248	03 10	105	3, 4, 3, 3, 3, 4, 5, 3	28	1	84.4
16		16 39	821	660	09 27	161	13 42	48.4	28.1	08 19	20.3	16 44	349	263	01 25	86	3, 2, 2, 2, 3, 4, 2, 2	20	1	84.4
17		18 50	814	672	13 13	142	15 53	46.8	25.9	07 28	20.9	18 30	349	274	24 00	75	2, 3, 2, 3, 3, 3, 4, 3	23	1	84.4
18		16 45	834	661	10 44	173	14 32	49.8	27.8	06 54	22.0	18 04	355	264	02 29	91	3, 2, 2, 2, 3, 4, 3, 3	22	1	84.4
19		19 20	781	665	11 14	116	13 20	51.0	28.2	08 03	22.8	19 08	332	275	06 19	57	2, 3, 3, 2, 3, 2, 3, 2	20	0	-
20	q	17 17	770	663	10 49	107	14 05	50.6	30.0	08 17	20.6	19 43	327	288	12 20	39	2, 1, 1, 1, 2, 2, 2, 3	14	0	84.4
21		17 48	769	661	11 12	108	13 10	50.6	27.4	07 17	23.2	18 06	320	284	01 58	36	3, 2, 2, 2, 3, 2, 2, 1	17	0	84.4
22	q	16 12	774	684	11 38	90	13 22	50.4	28.2	07 40	22.2	17 30	320	271	11 51	49	1, 1, 2, 2, 3, 3, 1, 1	14	0	84.4
23	q	18 14	778	705	10 56	73	13 10	50.5	31.0	06 27	19.5	18 20	323	283	11 31	40	3, 1, 1, 1, 1, 2, 2, 1	12	0	84.4
24	q	18 07	767	694	11 32	73	13 28	49.0	30.5	07 18	18.5	18 29	319	284	11 42	35	0, 1, 1, 2, 2, 2, 1, 1	10	0	84.3
25		18 08	836	708	10 12	128	15 23	48.1	30.6	23 23	17.5	20 48	318	269	11 34	49	1, 1, 1, 1, 2, 4, 4, 4	18	1	84.2
26	d	14 48	892	661	13 13	231	14 47	65.1	21.9	02 18	43.2	16 57	443	279	02 17	164	4, 3, 2, 3, 6, 5, 2, 4	29	1	84.3
27		19 22	799	638	12 38	161	14 37	45.4	29.1	06 53	16.3	19 15	357	274	24 00	83	2, 2, 2, 3, 4, 4, 3, 4	24	1	84.3
28		18 19	792	658	01 04	134	14 40	47.9	25.9	00 37	22.0	17 13	339	249	00 53	90	4, 2, 2, 2, 3, 3, 3, 3	22	1	84.3
29	d	01 06	803	596	10 24	207	13 36	58.3	20.9	08 46	37.4	14 04	448	208	03 33	240	4, 4, 4, 4, 5, 4, 4, 2	31	1	84.3
30		17 27	775	672	10 42	103	14 09	45.9	23.9	07 09	22.0	17 21	350	289	03 56	61	3, 3, 2, 2, 3, 3, 1, 3	19	0	84.3
31	d	17 08	969	355	21 43	614	21 47	136.2	19.5	21 18	116.7	19 14	426	-38	21 44	464	2, 3, 1, 3, 4, 6, 7, 7	33	2	84.3
Mean		- -	804	659	- -	145	- -	52.2	27.4	- -	24.8	- -	348	258	- -	91	-	-	0.58	84.4

TERRESTRIAL MAGNETIC FORCE: HORIZONTAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

22	ESKDALEMUIR (H)												16,000γ (0.16 C.G.S. unit) +												JUNE 1958																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
	Hour	G.M.T.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		

MAGNETIC DECLINATION (WEST)
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

23	ESKDALEMUIR (D)												10° +												JUNE 1958	
	Hour G.M.T.																									Sum
	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	800.0+
1 d	47.7	19.1	28.6	32.0	31.6	32.0	31.5	31.9	33.8	35.7	38.3	41.8	46.1	48.0	48.2	46.2	45.4	45.1	40.5	34.8	41.4	40.4	39.3	40.5	38.3	119.9
2	38.6	38.0	33.9	33.1	29.0	30.2	28.5	27.2	28.8	32.4	38.4	41.9	47.4	48.5	50.2	47.9	46.9	42.6	39.1	40.6	40.2	40.2	40.1	40.1	38.5	123.8
3 q	40.3	40.5	39.2	36.2	34.1	31.0	28.7	28.6	30.7	34.6	38.6	43.5	47.3	48.3	47.4	44.9	42.6	38.0	37.6	38.1	39.2	39.3	39.7	39.5	38.7	127.9
4 q	39.4	40.2	39.4	39.7	37.1	34.2	30.9	31.4	32.3	34.4	38.1	42.1	45.2	46.0	45.4	44.4	42.2	40.2	38.7	38.2	38.5	38.5	38.1	38.2	38.9	132.8
5	38.6	38.4	37.8	37.3	36.4	34.4	31.2	29.5	29.5	30.5	37.8	41.6	46.4	49.2	49.4	48.0	46.0	40.5	39.5	39.5	39.8	40.0	40.0	39.9	39.2	141.2
6	39.2	38.6	37.6	37.1	34.0	31.4	31.3	30.6	32.0	33.8	37.7	39.9	42.7	43.4	43.6	43.2	42.8	42.6	41.0	39.5	40.2	41.6	31.6	34.4	37.9	109.8
7 d	33.6	29.4	8.6	22.3	30.4	28.2	32.6	30.7	32.0	37.2	46.1	45.6	46.4	46.0	42.3	38.9	39.8	40.2	39.5	37.0	40.5	40.7	38.3	40.8	36.1	67.1
8	38.9	38.2	36.6	35.0	33.0	32.3	31.7	31.6	33.2	36.7	39.5	41.9	43.6	43.2	43.0	43.0	42.6	42.1	41.1	40.4	37.8	40.5	40.8	37.9	38.5	124.6
9	35.5	30.6	29.9	27.8	26.0	25.9	28.0	31.1	33.8	36.6	40.3	44.0	47.4	48.4	49.2	48.9	48.6	46.0	43.6	41.4	37.7	33.3	36.6	33.4	37.7	104.0
10	29.8	30.9	33.0	28.9	29.0	31.6	30.4	26.9	28.5	32.7	38.3	42.1	46.1	48.7	46.4	46.5	45.0	44.3	41.7	41.0	41.5	37.5	35.1	36.6	37.2	92.5
11	37.4	36.4	31.1	28.4	30.8	33.2	30.0	29.4	29.6	29.9	34.3	40.1	45.6	47.4	47.6	46.5	46.2	41.0	40.2	38.4	39.8	38.6	38.2	38.0	37.4	98.1
12	37.2	37.5	36.7	36.1	39.4	33.9	29.2	27.5	30.6	34.4	36.6	40.5	43.8	45.5	45.6	46.4	43.0	41.2	41.5	39.3	39.2	41.3	41.6	38.4	38.6	126.4
13	38.8	39.0	36.7	34.8	31.7	33.6	31.4	30.2	31.0	34.6	37.1	40.5	44.7	45.1	45.2	44.0	43.2	42.5	38.5	41.7	41.8	40.8	38.9	39.3	38.5	125.1
14	39.3	36.4	34.3	33.6	32.4	30.2	29.2	30.0	32.2	34.7	39.1	44.6	46.6	45.7	43.8	42.8	41.8	40.4	42.0	42.8	37.2	38.6	41.6	35.0	38.1	114.3
15	34.3	35.9	35.6	33.9	33.5	24.9	28.2	25.1	32.2	35.9	42.0	43.7	46.5	47.7	46.7	44.1	42.8	39.8	38.1	38.7	39.7	39.8	39.4	38.6	37.8	107.1
16	39.9	39.2	36.4	35.8	33.4	33.0	33.2	36.5	36.4	36.5	39.6	43.5	45.5	45.9	43.4	43.5	41.5	40.9	39.3	38.4	39.2	39.1	39.0	37.3	39.0	136.4
17 q	37.1	36.5	36.4	34.3	33.8	31.8	31.4	31.7	33.1	35.2	39.6	44.4	46.1	46.2	45.6	43.5	42.2	40.3	39.2	39.7	39.5	38.1	38.9	38.8	38.5	123.4
18 q	37.9	37.4	35.8	34.5	32.8	30.5	29.3	29.7	31.8	35.9	40.4	44.6	48.2	49.9	48.1	46.4	44.8	44.3	42.6	41.1	40.5	38.8	38.9	38.9	39.3	143.1
19	38.2	37.8	37.5	35.6	35.3	32.9	32.0	31.3	32.6	35.4	38.7	42.1	43.7	45.7	46.9	46.1	47.2	44.2	42.0	41.2	39.5	40.4	39.5	36.9	39.3	142.7
20 q	36.3	36.7	33.5	32.7	31.4	29.4	28.8	30.1	30.5	32.8	36.4	40.5	42.5	43.0	44.1	43.8	42.4	42.0	40.8	40.0	40.3	40.9	38.1	35.1	37.2	92.1
21 d	36.9	35.5	40.2	27.9	28.7	25.6	27.2	25.4	23.0	30.1	32.1	38.4	50.0	51.2	55.1	54.9	49.2	45.8	44.8	43.5	39.1	35.1	26.6	29.0	37.3	95.3
22	32.7	32.5	40.9	38.0	32.8	32.6	30.0	30.3	33.9	38.9	41.2	44.1	47.9	48.6	48.0	46.4	44.5	42.5	40.0	40.2	40.3	42.2	34.8	32.4	39.0	135.7
23	33.0	31.8	36.2	35.8	35.4	34.3	31.0	29.1	29.9	32.4	37.1	42.6	44.5	45.9	46.2	43.4	42.1	40.6	38.9	39.1	40.3	40.8	40.9	39.3	37.9	110.6
24	40.7	38.1	33.2	30.6	32.0	32.1	30.8	28.5	34.7	33.9	37.7	41.3	44.6	47.8	47.3	45.7	44.5	42.3	42.3	41.5	40.1	37.5	37.7	36.5	38.4	121.4
25	39.0	38.7	37.2	35.9	32.6	29.4	28.2	29.2	30.7	35.4	39.9	42.6	43.5	43.8	44.6	43.2	43.6	42.7	41.9	39.2	40.1	41.0	41.6	36.6	38.4	120.6
26	34.9	35.5	32.0	30.1	29.3	30.1	29.4	28.7	30.4	31.2	34.3	37.1	39.2	41.0	42.8	41.7	41.8	41.8	39.2	39.4	39.8	40.1	40.2	37.4	36.1	67.4
27	34.9	33.7	34.1	34.9	34.5	31.9	30.9	31.5	34.5	34.7	37.8	41.2	45.8	48.2	47.5	46.8	43.8	42.0	41.3	41.6	41.3	40.5	41.0	34.8	38.7	129.2
28 d	35.1	36.3	36.8	36.9	35.0	31.8	28.9	26.8	31.4	31.7	35.8	41.4	45.9	47.2	47.9	46.5	45.1	45.6	50.3	38.0	42.3	34.0	35.2	29.4	38.1	115.3
29 d	19.2	23.6	24.7	30.2	38.1	34.6	33.2	36.2	36.3	40.4	43.5	45.9	46.0	45.3	43.4	43.2	43.9	42.8	41.6	41.8	40.4	42.8	42.0	41.0	38.4	120.1
30	39.5	39.1	37.9	34.4	31.4	30.4	29.7	31.2	32.6	35.4	38.5	41.6	44.7	45.3	45.4	44.4	43.0	42.4	39.0	39.2	40.0	40.9	39.2	37.4	38.4	122.6
Mean	36.8	35.4	34.4	33.5	32.8	31.3	30.2	29.9	31.7	34.5	38.5	42.2	45.5	46.5	46.3	45.2	43.9	42.2	40.9	39.8	39.9	39.4	38.8	37.1	38.2	
Sum 900.0+	203.9	161.5	131.8	103.8	84.9	37.4	6.8	-2.1	52.0	134.0	254.8	365.1	463.9	496.1	490.3	455.2	418.5	366.7	325.8	295.3	297.2	283.3	252.9	211.4		Grand Total 27490.5

TERRESTRIAL MAGNETIC FORCE: VERTICAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

81

24	ESKDALEMUIR (Z)												45,000γ (0.45 C.G.S. unit) +												JUNE 1958	
	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	Sum 7000+
1 d	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	
2	102	166	219	229	313	319	296	328	343	343	344	341	335	338	349	344	344	351	384	400	367	356	336	288	314	535
3 q	316	326	285	298	298	289	298	305	315	317	310	309	319	339	365	389	407	404	380	350	336	327	325	325	331	932
4 q	325	326	328	330	331	331	324	321	313	305	301	301	303	310	315	323	338	348	347	339	330	325	323	322	323	759
5	321	321	322	323	323	324	328	331	328	321	319	315	316	320	326	331	332	340	340	331	326	324	322	321	325	797
6	320	320	323	323	323	322	323	324	321	302	295	286	285	289	300	315	330	347	343	334	325	320	317	316	317	603
7 d	316	316	317	319	320	326	320	315	310	301	293	285	289	298	305	313	315	317	330	334	336	323	296	287	312	481
8	249	48	63	73	243	297	301	301	300	312	328	329	330	336	351	380	380	387	380	374	356	348	335	330	297	131
9	331	328	329	330	330	330	328	328	325	314	311	309	306	315	326	327	330	334	340	347	348	339	327	308	327	840
10	276	293	294	302	307	312	316	308	301	294	285	286	293	309	323	342	353	355	350	341	336	326	290	275	311	467
11	271	250	207	239	278	295	320	336	340	329	321	316	317	329	361	370	359	354	359	354	341	327	313	310	317	596
12	312	302	281	276	292	315	327	330	334	327	318	312	304	313	319	323	334	346	343	342	333	330	323	322	319	658
13	320	320	320	320	312	288	295	310	313	308	305	302	301	305	312	321	342	347	343	339	337	321	305	310	317	596
14	313	312	311	311	311	310	314	319	312	302	296	292	292	296	308	315	319	324	336	331	326	324	323	316	313	513
15	313	311	312	313	315	315	315	316	314	307	285	273	278	288	299	312	315	318	316	316	330	332	316	302	309	411
16	302	307	310	307	292	291	276	281	275	271	273	284	294	307	317	326	328	336	336	329	323	320	319	318	305	322
17 q	316	301	304	308	311	314	314	309	304	296	296	298	304	320	331	332	334	327	330	331	323	321	320	317	315	561
18 q	315	314	315	319	313	303	305	311	308	301	296	289	287	292	304	312	316	319	317	313	315	315	315	314	309	408
19 q	314	313	313	315	316	316	316	311	309	300	296	293	296	302	308	315	321	324	327	331	330	327	319	316	314	528
20 q	315	314	313	315	315	315	316	316	308	307	297	293	292	296	304	312	312	324	321	319	326	320	317	313	312	480
21 d	313	311	309	311	315	316	312	302	297	292	288	284	287	289	294	302	302	305	309	312	309	306	302	307	303	274
22	302	300	269	248	250	254	267	285	286	282	277	274	293	312	339	362	391	412	372	362	361	326	312	305	310	441
23	232	270	236	222	194	219	263	284	302	308	318	328	337	341	337	335	341	346	344	334	327	319	306	296	297	139
24	286	275	276	277	288	285	300	319	324	318	308	298	295	298	307	319	324	327	333	332	328	323	319	320	307	379
25	307	289	289	289	295	294	293	301	304	307	296	295	310	323	340	344	343	342	333	331	331	321	304	303	312	484
26	308	307	303	284	282	294	304	304	304	296	290	279	281	290	302	313	317	330	340	343	331	324	317	316	307	359
27	316	313	306	310	317	315	308	309	311	311	302	290	286	292	302	309	307	312	324	325	323	321	317	316	310	442
28 d	310	310	313	315	315	313	311	308	307	304	296	285	288	293	304	312	320	326	327	321	319	323	325	321	311	466
29 d	317	318	315	293	289	304	311	308	299	298	294	290	290	298	307	314	323	333	334	354	345	328	224	231	305	320
30	205	230	198	89	61	108	164	218	274	327	351	352	366	397	450	521	537	519	487	430	396	370	362	348	323	760
	337	340	337	336	341	345	346	344	343	342	341	339	339	341	347	347	345	341	344	342	333	335	333	333	340	1171
Mean	296	292	287	284	293	298	304	309	311	308	304	301	304	313	325	336	342	347	346	341	335	327	315	310	314	
Sum 8000+	880	751	617	524	795	948	1107	1282	1326	1241	1130	1031	1113	1376	1752	2080	2259	2395	2369	2241	2047	1821	1462	1306		Grand Total 225,853

DAILY EXTREMES OF TERRESTRIAL MAGNETIC ELEMENTS, MAGNETIC CHARACTER FIGURES (K AND C) AND TEMPERATURE IN MAGNET HOUSE

25		ESKDALEMUIR											JUNE 1958				
		TERRESTRIAL MAGNETIC ELEMENTS											3-hr. range indices K	Sum of K indices	Magnetic character of day (0-2)	Temperature in magnet house 200 +	
		Horizontal force			Declination			Vertical force									
		Maximum 16,000γ +	Minimum 16,000γ +	Range	Maximum 10° +	Minimum 10° +	Range	Maximum 45,000γ +	Minimum 45,000γ +	Range							
		h. m.	γ	h. m.	γ	h. m.	γ	h. m.	γ	h. m.	γ						
1	d	19 28	803	44 00 30	759	00 30	73.9	9.7 01 15	64.2	19 03	412	-29 00 33	441	8,6,4,3,3,4,4,3	35	2	84.2
2		17 43	763	620 11 44	143	14 56	53.0	24.3 07 11	28.7	17 11	411	275 02 28	136	3,3,3,4,4,4,3,1	25	1	-
3	q	16 54	765	655 09 44	110	13 11	49.2	27.4 07 00	21.8	17 31	349	298 11 05	51	1,1,2,1,2,3,2,1	13	0	84.0
4	q	18 20	771	680 10 44	91	13 04	46.4	30.3 06 59	16.1	18 32	342	313 10 13	29	1,2,1,2,1,2,2,1	12	0	84.0
5		16 27	820	677 12 47	143	14 54	50.1	27.6 09 01	22.5	17 31	347	282 12 10	65	1,1,2,2,3,4,2,1	16	1	84.0
6		20 24	814	684 09 25	130	21 35	45.8	28.6 22 11	17.2	20 30	337	278 23 10	59	1,2,3,3,2,4,3,4	22	1	84.0
7	d	19 52	784	480 01 50	304	09 57	49.4	-7.8 02 53	57.2	17 14	389	-16 01 40	405	7,6,5,5,4,3,4,3	37	2	84.0
8		19 07	821	682 09 02	139	12 47	43.9	30.9 07 41	13.0	20 14	350	278 24 00	72	1,1,1,2,2,4,4,3	18	1	84.0
9		18 44	829	640 23 57	189	15 32	50.7	25.3 04 30	25.4	16 57	362	266 23 57	96	4,2,3,3,3,4,4,5	28	1	-
10		22 00	802	585 01 47	217	13 52	50.6	23.6 07 27	27.0	15 04	373	193 02 09	180	4,4,3,3,4,3,3,5	29	1	84.0
11		20 50	784	658 09 55	126	13 24	49.1	26.3 07 02	22.8	17 28	347	274 03 32	73	3,3,2,3,3,3,3,3	23	1	83.9
12		19 14	792	679 10 52	113	15 56	47.6	27.1 07 29	20.5	17 41	349	284 05 41	65	1,3,2,3,3,4,2,2	20	1	83.9
13		17 39	792	691 09 31	101	14 50	45.8	28.8 06 07	17.0	18 31	336	290 12 52	46	2,2,2,2,2,3,3,2	18	0	83.9
14		18 35	859	702 10 11	157	12 28	47.7	28.4 06 27	19.3	21 10	336	271 11 28	65	2,1,2,2,3,1,5,3	19	1	83.9
15		06 15	782	674 09 14	108	14 08	48.7	19.8 07 20	28.9	18 30	338	269 09 28	69	2,3,4,4,3,2,2,1	21	1	-
16		18 51	770	687 09 16	83	13 27	47.0	31.2 06 08	15.8	15 58	335	295 10 28	40	3,2,3,3,3,2,2,1	19	0	-
17	q	20 26	770	695 08 36	75	13 42	46.4	30.7 05 55	15.7	17 34	320	287 12 40	33	1,2,2,2,1,2,2,1	13	0	83.9
18	q	19 20	805	706 09 48	99	13 18	50.3	28.7 06 41	21.6	20 06	333	291 11 30	42	1,0,1,2,3,3,3,2	15	0	84.0
19		17 14	812	692 11 47	120	14 48	47.8	30.2 07 00	17.6	17 42	328	290 11 58	38	1,2,1,2,3,4,3,2	18	1	84.0
20	q	18 27	792	704 13 32	88	14 55	44.9	28.4 06 05	16.5	05 33	318	284 11 30	34	2,0,1,1,3,2,2,3	14	0	84.0
21	d	17 32	921	604 11 43	317	14 06	61.3	18.5 08 22	42.8	17 19	439	243 03 27	196	3,4,3,5,6,6,5,4	36	2	84.0
22		19 56	795	614 00 06	181	14 00	50.8	25.6 01 05	25.2	17 42	348	191 04 06	157	5,4,4,4,4,3,4,4	32	1	83.9
23		19 10	784	671 11 11	113	13 59	47.2	27.6 06 17	19.6	18 28	334	272 02 50	62	3,3,2,2,3,3,3,2	21	1	83.9
24		21 08	796	670 10 07	126	14 01	49.8	28.2 07 26	21.6	14 56	346	286 03 05	60	3,3,3,3,3,3,3,4	25	1	83.9
25		19 43	819	648 10 12	171	14 22	45.4	26.9 06 21	18.5	19.32	346	275 11 55	71	3,2,2,3,4,4,4,3	25	1	83.9
26		17 33	786	676 09 24	110	14 27	43.5	27.8 07 22	15.7	19 50	326	285 12 30	41	2,2,2,2,3,3,2,2	18	0	83.9
27		20 38	791	680 11 28	111	13 34	48.9	29.2 06 45	19.7	18 09	328	283 11 39	45	2,2,2,2,2,2,2,3	17	0	83.9
28	d	18 23	963	577 22 40	386	18 23	56.1	14.6 21 41	41.5	21 31	382	198 22 25	184	2,2,4,3,3,5,6,6	31	1	83.9
29	d	16 11	822	396 04 20	426	04 22	57.1	8.6 03 30	48.5	16 31	546	14 04 22	532	6,7,5,3,6,4,5,2	38	2	83.9
30		18 16	789	656 10 18	133	14 33	46.3	28.8 04 05	17.5	18 50	348	332 04 03	76	2,2,2,2,2,3,3,2	18	0	83.9
Mean		- -	807	628 - -	179	- -	49.8	24.5 - -	25.3	- -	359	245 - -	113	-	-	0.80	84.0

TERRESTRIAL MAGNETIC FORCE: HORIZONTAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

22 ESKDALEMUIR (H)													16,000γ (0.16 C.C.S. unit) +													JULY 1958	
	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	Sum 14,000+	
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	
1	745	717	700	732	726	717	717	730	710	687	684	685	693	701	704	742	736	745	765	767	765	750	738	734	725	3390	
2 q	728	728	730	729	731	731	726	716	721	686	677	687	699	717	746	751	753	768	779	768	770	765	747	745	733	3598	
3	746	737	732	732	730	730	725	725	723	719	710	696	699	706	707	743	790	787	781	768	767	757	747	745	738	3702	
4	738	734	740	742	744	747	746	715	677	685	678	685	719	739	764	740	795	803	794	778	767	748	727	725	739	3730	
5	729	735	732	732	738	740	736	726	719	716	715	708	719	724	721	737	746	753	758	765	764	779	749	750	737	3691	
6 q	745	747	747	738	736	736	728	718	709	702	702	703	706	720	726	736	758	766	766	761	760	757	755	748	736	3670	
7	748	749	747	745	743	748	747	738	728	711	704	709	733	740	732	757	748	769	817	781	773	772	759	749	748	3947	
8 d	736	723	719	733	737	738	719	669	539	694	682	559	745	798	1009	1592	1456	1009	973	772	715	16	249	494	753	4076	
9 d	458	494	504	508	504	515	529	519	563	566	563	607	649	652	645	675	710	739	696	692	698	709	732	703	610	630	
10	664	638	664	688	660	686	686	683	664	664	663	668	685	710	709	712	715	722	755	747	742	740	737	724	697	2726	
11	711	695	696	705	710	712	703	694	678	657	648	651	686	703	707	707	725	716	732	756	773	756	732	733	708	2986	
12	755	742	744	725	719	719	713	698	669	673	682	691	695	710	712	741	735	772	750	752	752	743	736	730	723	3358	
13	729	726	711	707	724	724	712	712	696	674	663	663	688	711	715	730	767	762	744	740	738	742	761	756	721	3295	
14	750	744	742	739	744	740	725	706	679	683	690	708	707	709	719	735	757	731	754	754	743	739	735	729	728	3462	
15 q	723	718	721	728	733	734	725	715	700	688	689	696	711	722	742	737	740	754	763	756	748	751	743	735	728	3472	
16 q	737	722	724	730	724	729	719	715	703	697	695	702	714	721	731	753	772	765	763	759	752	745	739	732	731	3543	
17	733	731	744	750	747	743	744	718	706	691	684	695	707	725	737	748	741	735	740	745	747	744	739	737	730	3531	
18 d	734	734	737	752	750	731	714	683	713	709	718	717	690	739	719	723	769	765	780	765	754	760	745	731	735	3632	
19	727	726	724	723	725	731	704	655	692	688	685	679	680	686	715	727	751	751	761	790	759	735	715	713	718	3242	
20	717	727	710	707	720	703	722	697	680	672	673	655	666	688	695	752	787	751	735	739	751	748	743	740	716	3178	
21 d	731	732	722	727	730	726	728	717	705	690	676	673	693	702	718	725	791	862	860	840	756	765	751	734	740	3754	
22	745	740	745	748	738	740	734	718	704	683	686	698	730	738	708	712	742	737	751	762	752	744	736	736	730	3527	
23 q	729	730	729	733	733	729	721	717	704	700	697	698	704	710	706	721	732	737	749	745	745	746	742	734	725	3391	
24	740	734	736	720	728	729	726	726	717	702	687	689	714	699	741	766	756	810	769	771	754	754	751	736	736	3655	
25	741	742	742	745	742	738	719	702	697	680	679	666	698	732	742	751	779	796	798	779	741	745	730	730	734	3614	
26	705	719	726	723	725	718	702	681	668	658	665	681	696	710	715	731	742	743	756	766	768	749	743	739	718	3229	
27 d	739	739	743	748	748	753	724	698	686	700	697	683	704	710	768	793	800	804	807	778	753	726	719	718	739	3738	
28	702	696	720	718	727	724	715	694	668	660	664	664	667	678	700	723	739	742	747	749	758	756	746	748	713	3105	
29	742	738	740	737	733	730	719	712	706	697	686	682	698	714	724	741	744	746	766	752	765	748	747	754	730	3521	
30	748	744	748	748	754	752	746	737	727	712	695	692	684	678	713	732	789	787	784	770	764	754	744	746	739	3748	
31	745	748	738	744	746	744	728	715	705	691	680	666	677	690	709	762	826	831	776	763	747	755	761	754	738	3701	
Mean	723	720	721	724	724	724	716	702	689	685	681	679	699	712	729	764	780	773	773	762	753	726	726	729	726		
Sum 21,000+	1420	1329	1357	1436	1449	1437	1202	749	356	235	117	56	656	1082	1599	2695	3191	2958	2969	2630	2341	1498	1498	1582		Grand Total 539,842	

MAGNETIC DECLINATION (WEST)
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

23	ESKDALEMUIR (D)												10° +												JULY 1958																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
	Hour G.M.T.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						</

TERRESTRIAL MAGNETIC FORCE: VERTICAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

83

24	ESKDALEUIR (Z)												45,000γ (0.45 C.G.S. unit) +												JULY 1958			
	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	Sum 7000+		
	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	333	313	312	314	321	311	309	307	313	320	323	324	328	335	344	351	359	351	350	344	340	340	335	330	329		907	
2 q	328	327	328	328	324	324	326	324	321	317	313	313	316	324	325	334	332	331	335	335	338	338	332	324	327		837	
3	319	324	328	326	326	327	324	321	319	315	311	311	317	321	325	330	339	357	362	365	359	347	336	330	331		939	
4	327	327	327	326	326	326	326	324	318	316	322	315	313	330	353	365	361	388	385	375	360	338	316	321	337		1085	
5	324	324	324	327	327	325	323	323	317	307	299	298	307	322	342	342	334	332	335	335	329	327	324	321	324		768	
6 q	319	317	313	313	321	326	331	330	321	315	315	309	304	308	315	323	326	327	323	323	324	324	322	321	320		670	
7	321	320	321	321	316	314	314	313	308	301	296	289	288	290	302	312	318	314	313	327	329	323	318	317	312		485	
8 d	316	309	297	294	305	311	316	321	331	292	286	308	279	317	393	527	426	383	395	438	432	182	255	321	335		1034	
9 d	293	284	246	234	232	225	239	291	319	328	333	369	405	432	441	412	394	394	373	363	357	347	342	322	332		975	
10	282	254	258	297	303	316	332	340	341	338	336	331	334	345	349	346	346	345	354	359	357	346	333	321	328		863	
11	310	308	288	302	323	335	344	344	344	335	325	315	309	323	337	340	346	349	341	336	349	343	330	327	329		903	
12	316	320	323	326	328	331	333	332	328	317	316	316	312	320	326	336	347	359	374	365	353	346	336	331	333		991	
13	330	330	326	311	317	316	319	325	327	318	307	304	301	304	317	331	351	352	339	335	333	328	324	325	324		770	
14	314	315	320	309	288	296	307	314	317	313	311	310	311	315	320	336	357	359	347	347	346	338	335	334	323		759	
15 q	331	330	329	327	323	324	326	326	323	319	310	312	315	319	330	337	346	350	351	347	344	338	332	329	330		918	
16 q	323	324	327	326	324	320	321	319	316	315	311	301	301	314	325	338	353	359	357	354	349	339	334	326	328		876	
17	321	309	311	316	319	296	296	312	320	313	308	305	305	310	315	320	327	328	328	327	327	326	325	324	316		588	
18 d	324	320	309	300	301	312	311	308	296	300	300	293	294	301	326	330	330	347	346	351	342	328	313	285	315		567	
19	302	316	320	323	321	321	318	314	296	301	300	296	301	305	314	321	324	327	330	331	346	328	304	280	314		539	
20	302	286	269	277	305	310	298	307	310	315	315	307	309	319	329	343	365	360	347	335	324	324	324	320	317		600	
21 d	317	315	309	312	312	316	315	318	320	316	309	307	299	299	311	321	323	328	348	346	354	341	298	307	318		641	
22	325	321	313	320	327	331	331	331	331	329	327	321	321	323	347	347	338	334	328	330	328	324	323	323	328		873	
23 q	323	323	323	324	327	329	328	324	325	318	313	309	305	312	317	321	324	327	327	327	327	324	323	322	322		722	
24	323	314	302	307	314	317	320	318	319	315	299	289	290	298	302	318	326	339	356	347	343	333	320	320	318		629	
25	321	319	320	320	324	325	327	328	321	311	307	308	307	331	361	365	378	382	379	362	349	336	327	308	334		1016	
26	301	304	285	294	314	327	332	332	330	318	313	307	305	309	320	328	339	344	343	339	336	327	324	323	321		694	
27 d	324	317	307	304	308	306	300	304	309	309	307	298	301	317	357	394	402	404	397	395	378	366	349	340	337		1093	
28	344	338	312	321	327	330	326	330	333	330	320	311	307	310	314	316	324	327	330	326	324	323	324	324	324		771	
29	326	326	325	327	328	329	328	325	319	316	313	313	302	307	311	321	330	331	327	327	329	328	327	325	323		740	
30	324	324	323	322	327	331	330	328	327	321	309	304	305	312	323	337	349	372	377	367	351	336	327	324	331		950	
31	321	321	321	325	328	315	335	332	326	320	309	301	308	317	322	328	354	397	383	354	338	329	325	324	331		933	
Mean	319	315	310	312	316	317	319	321	321	316	312	309	310	319	333	344	347	351	351	349	345	330	324	321	325			
Sum 9000+	884	779	616	673	786	822	885	965	945	798	663	594	599	889	1313	1670	1768	1897	1880	1812	1695	1217	1037	949		Grand Totals 242,136		

DAILY EXTREMES OF TERRESTRIAL MAGNETIC ELEMENTS, MAGNETIC CHARACTER FIGURES (K AND C) AND TEMPERATURE IN MAGNET HOUSE

25	ESKDALEUIR										JULY 1958								
	TERRESTRIAL MAGNETIC ELEMENTS										3-hr. range indices K	Sum of K indices	Magnetic character of day (0-2)	Temperature in magnet house 200 +					
	Horizontal force			Declination			Vertical force												
	Maximum 16,000γ +	Minimum 16,000γ +	Range	Maximum 10° +	Minimum 10° +	Range	Maximum 45,000γ +	Minimum 45,000γ +	Range										
	h. m.	γ	γ	h. m.	γ	h. m.	γ	h. m.	γ	γ				°A.					
1	19 47	770	672	12 10	98	01 18	46.6	30.1	02 33	16.5	16 32	360	296	02 02	64	4.3.3.2.3.3.2.2	22	1	83.9
2	18 49	786	671	10 22	115	13 08	45.7	29.9	07 47	15.8	20 53	340	311	11 09	29	1.1.1.1.3.2.3.2	14	0	83.9
3	16 47	823	689	11 44	134	16 44	44.2	28.6	05 52	15.6	19 10	368	308	11 18	60	2.1.2.2.3.4.3.2	19	1	83.9
4	16 53	841	656	11 00	185	16 30	48.5	27.7	07 27	20.8	17 45	391	308	12 19	83	2.2.3.3.4.5.4.3	26	1	83.9
5	21 52	783	700	11 57	83	13 24	44.8	30.7	22 45	14.1	14 56	347	298	11 46	49	2.2.2.2.3.2.3.4	20	0	83.9
6	18 15	772	698	09 57	74	13 32	44.9	26.1	06 11	18.8	07 03	332	301	12 44	31	2.1.1.1.1.2.1.0	9	0	83.9
7	18 37	849	679	10 52	170	15 37	48.1	29.1	06 44	19.0	19 50	331	284	12 57	47	1.2.2.3.4.4.4.3	23	1	-
8	16 37	1935	273	21 53	2208	21 06	180.1	3.2	10 50	183.3	15 27	67.1	122	21 27	549	2.2.7.7.8.9.9.9	53	2	83.9
9	16 57	790	242	00 44	548	00 44	59.2	9.2	03 26	50.0	14 11	447	192	00 41	255	7.5.5.5.5.5.3.5	40	2	83.9
10	22 26	769	615	01 59	154	13 03	47.8	25.5	06 28	22.3	19 23	362	212	02 02	150	4.4.2.2.3.2.2.3	22	1	-
11	20 12	789	635	11 00	154	13 48	48.2	25.2	07 07	23.0	20 48	355	277	02 47	78	3.2.2.3.3.3.4.3	23	1	83.9
12	17 28	795	631	09 08	164	12 07	49.4	28.1	06 33	21.3	18 50	379	308	01 02	71	4.3.3.4.3.4.3.2	26	1	84.1
13	17 04	811	654	10 58	157	03 00	46.2	23.7	08 22	22.5	16 54	357	300	11 58	57	3.3.3.2.2.4.1.3	21	1	84.6
14	16 12	769	669	08 59	100	14 46	45.2	26.9	05 55	18.3	17 17	361	285	04 36	76	3.3.3.3.2.3.2.1	20	1	84.6
15	18 47	767	681	09 38	86	12 24	41.7	29.7	06 34	12.0	18 19	352	309	10 43	43	1.2.1.2.2.1.2.2	13	0	84.7
16	16 53	781	693	10 12	88	15 23	48.2	28.7	06 21	19.5	17 40	361	297	12 08	64	2.2.2.1.2.2.1.3	15	0	-
17	00 59	771	671	09 50	100	05 09	46.4	26.9	08 59	19.5	16 53	330	289	05 50	41	3.4.4.3.2.3.2.0	21	1	84.3
18	16 43	816	662	12 20	154	16 38	54.8	21.8	07 17	33.0	19 23	356	282	23 16	74	2.3.4.3.5.5.4.3	29	1	84.3
19	19 52	808	636	07 37	172	14 24	47.5	27.3	06 32	20.2	20 22	351	270	23 02	81	2.3.4.3.3.2.4.4	25	1	84.3
20	16 23	811	636	11 18	175	13 47	50.3	26.1	02 47	24.2	16 37	366	263	02 56	103	4.4.3.3.3.4.3.2	26	1	84.3
21	16 41	988	664	10 54	324	16 55	55.5	23.8	22 28	31.7	18 46	382	272	22 54	110	3.3.3.3.3.6.6.5	32	1	-
22	13 03	783	673	09 33	110	01 37	49.4	24.4	07 32	25.0	15 03	354	310	02 09	44	4.3.2.3.5.4.3.2	26	1	84.3
23	19 03	755	684	11 12	71	13 37	45.6	27.6	06 17	18.0	05 42	330	302	12 27	28	1.1.2.2.3.1.2.2	14	0	84.3
24	17 38	841	681	10 25	160	14 53	49.0	27.7	08 33	21.3	18 30	360	285	12 21	75	2.2.2.2.4.5.3.3	23	1	84.3
25	18 40	827	649	11 31	178	14 31	48.5	27.2	07 08	21.3	18 16	388	293	24 00	95	2.2.3.3.4.4.4.3	25	1	84.3
26	20 18	778	650	09 43	128	14 00	47.4	27.5	07 13	19.9	17 25	345	277	02 44	68	4.3.2.2.2.1.3.1	18	1	84.3
27	18 39	831	659	11 06	172	14 22	49.8	23.3	07 02	26.5	17 10	405	292	11 29	113	2.3.3.3.4.2.4.3	24	1	84.3
28	20 11	771	659	09 00	112	13 32	48.1	24.5	07 20	23.6	00 54	349	304	12 41	45	3.2.2.1.2.2.3.3	18	0	-
29	18 46	811	679	10 45	132	13 40	45.1	29.8	06 30	15.3	17 06	332	301	12 32	31	2.2.1.2.3.3.4.2	19	0	84.3
30	17 07	815	678	12 50	137	14 20	46.9	28.1	09 00	18.8	18 32	378	302	11 58	76	2.2.3.3.3.4.3.3	23	1	84.3
31	17 12	855	660	11 46	195	15 34	48.9	31.0	17 43	17.9	17 38	405	300	11 31	105	2.1.1.3.2.5.3.2	19	1	-
Mean	- -	842	621 - -	221	- -	52.3	25.6 - -	26.7	- -	372	282 - -	90	-	-	-	-	0.83	-	84.2

TERRESTRIAL MAGNETIC FORCE: HORIZONTAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

22	ESKDALEUIR (H)												16,000γ (0.16 C.G.S. unit) +												AUGUST 1958	
	Hour G.M.T.																								Mean	Sum
	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		16,000+
1	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	
2	741	739	742	740	744	741	727	710	704	702	693	664	666	700	716	729	731	743	760	782	753	754	747	746	728	1474
3	747	742	738	742	739	741	735	721	698	691	684	697	677	702	697	731	752	764	768	782	760	749	748	751	731	1556
4	752	749	737	737	740	721	722	717	698	691	684	685	693	703	735	734	739	753	750	743	742	741	742	736	727	1444
5 q	738	741	741	742	738	741	734	713	697	683	672	674	683	694	715	732	759	763	764	759	754	752	752	747	729	1488
6 q	744	741	742	742	745	745	732	720	709	701	696	687	693	715	725	725	740	744	764	763	759	758	757	753	733	1600
7	746	745	742	747	752	748	741	730	717	701	694	690	697	713	733	749	751	753	758	764	768	760	751	745	737	1695
8	746	750	749	755	757	757	746	731	707	687	682	693	709	698	715	728	742	769	768	773	754	749	743	744	735	1652
9 q	744	746	741	750	749	745	733	717	706	696	687	692	702	727	725	721	741	755	761	761	762	759	759	756	735	1635
10	754	742	729	730	743	741	735	721	707	701	696	696	703	713	726	754	756	753	758	762	772	755	742	746	735	1635
11	749	743	754	748	753	751	738	746	733	717	699	687	696	708	731	758	770	753	756	782	773	774	762	760	743	1841
12	749	744	735	733	735	740	748	734	712	703	675	685	708	714	730	736	758	755	751	769	770	766	765	752	736	1667
13	745	742	739	741	732	724	728	721	705	688	689	699	707	715	725	732	736	742	754	760	777	775	762	763	733	1601
14	764	748	734	733	732	729	716	724	704	688	670	685	693	705	718	729	731	739	756	753	750	748	742	758	727	1449
15	739	739	740	741	739	736	721	708	683	675	674	679	691	701	718	738	756	780	773	764	767	762	756	753	731	1533
16	726	730	732	739	735	744	736	718	698	682	681	683	694	710	716	718	746	753	757	768	755	755	753	754	728	1483
17	765	760	729	732	737	733	722	704	685	673	676	687	697	725	721	758	783	740	768	766	755	746	743	743	731	1548
18 d	745	744	744	742	746	743	743	707	675	690	685	705	734	732	773	820	845	905	830	768	709	694	699	672	744	1850
19	692	720	722	706	705	676	690	686	673	660	651	654	656	678	690	711	726	728	736	733	734	728	730	729	701	814
20 q	728	727	714	713	717	710	699	685	668	655	646	670	683	694	703	719	746	760	760	754	742	742	744	740	713	1119
21	741	740	735	734	733	727	720	709	691	682	675	673	678	701	713	737	752	764	746	744	745	746	746	742	724	1374
22 d	738	742	739	741	744	738	731	720	707	694	685	694	705	707	720	746	757	749	763	759	761	757	761	748	734	1606
23	751	747	784	747	734	715	696	717	714	696	689	670	675	688	715	748	738	745	746	753	752	746	738	738	727	1442
24 d	738	738	738	733	722	718	725	716	708	701	694	696	702	706	707	719	731	737	744	758	748	752	750	741	726	1422
25	741	777	706	635	588	677	708	689	661	648	652	674	653	679	743	729	716	727	741	731	734	732	729	724	700	794
26	730	739	746	721	733	738	723	713	708	700	673	673	698	707	713	732	730	726	726	740	735	738	736	735	721	1313
27	739	734	733	728	718	722	704	677	676	654	637	642	664	689	696	715	719	724	725	750	742	738	733	733	708	992
28 d	728	723	726	746	704	682	628	599	606	630	672	693	706	708	722	710	743	755	785	731	740	716	726	724	704	903
29	715	716	718	719	721	715	710	688	666	651	650	668	686	705	723	732	747	770	760	759	735	735	730	726	714	1145
30	718	723	732	735	725	719	708	707	680	665	672	687	711	720	732	733	731	734	733	747	752	740	743	752	721	1299
31	735	735	743	742	742	731	727	717	699	685	681	687	714	739	716	737	737	734	740	743	753	756	746	739	728	1478
Mean	742	737	738	738	742	739	726	717	710	695	683	684	702	713	728	754	750	723	737	744	742	742	741	740	728	1467
Sum 20,000+	2930	2943	2842	2732	2644	2587	2352	1982	1505	1185	997	1153	1476	1909	2340	2814	3159	3340	3438	3465	3295	3165	3076	2990		Grand Total 540,319

MAGNETIC DECLINATION (WEST)
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

23	ESKDALEUIR (D)												10° +												AUGUST												1958	
	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	Sum 800.0+												
1	36.9	35.1	34.7	33.0	32.7	30.9	28.5	28.3	30.5	31.2	35.2	40.4	43.8	46.3	46.5	45.5	42.5	40.4	39.4	37.7	37.7	36.2	36.2	37.7	37.0	87.3												
2	37.7	37.0	36.4	36.3	36.7	36.5	33.0	33.0	33.4	35.6	37.2	42.4	44.8	45.3	44.9	44.5	41.4	37.1	36.1	35.8	37.2	38.6	38.8	39.2	38.3	118.9												
3	40.0	44.8	40.4	37.7	38.0	34.1	31.3	28.6	27.9	30.1	33.5	38.4	40.8	43.8	43.8	43.2	40.7	37.8	36.8	36.6	36.7	37.3	37.9	37.9	37.4	98.1												
4 q	38.4	38.2	38.9	39.6	35.8	33.9	31.8	30.9	30.5	31.4	35.6	41.3	45.0	46.2	46.6	45.3	43.2	40.8	39.5	38.7	39.5	39.4	39.3	38.9	38.7	128.7												
5 q	38.5	38.2	37.8	36.7	35.7	33.4	31.4	31.2	33.6	34.8	37.2	40.5	44.4	45.2	43.3	42.6	39.7	38.6	39.1	38.9	38.8	38.4	38.8	38.6	38.1	115.4												
6 q	37.5	37.7	36.1	35.2	33.8	31.2	30.4	29.4	29.5	31.2	33.3	38.1	43.5	46.4	46.2	44.8	42.0	40.2	39.2	38.9	38.7	38.5	37.1	38.0	37.4	96.9												
7	37.5	36.6	35.8	34.5	33.4	32.0	30.2	29.4	30.8	33.9	39.8	44.1	47.7	46.4	46.8	46.4	43.8	41.5	38.6	37.7	37.0	38.0	38.2	37.4	38.2	117.5												
8 q	36.6	35.1	34.4	35.2	33.4	31.8	30.2	29.4	31.2	32.4	36.8	42.2	47.7	51.7	50.0	45.2	42.6	40.0	39.7	40.2	39.9	39.1	38.8	39.2	38.5	122.8												
9	37.8	34.8	33.5	35.0	35.6	32.6	29.9	29.3	30.7	31.9	34.6	39.6	44.6	48.2	48.7	47.7	44.2	41.5	40.8	40.3	40.2	37.5	35.8	37.5	38.0	112.3												
10	37.4	36.1	34.2	32.9	32.8	29.2	27.0	28.6	29.4	31.9	38.4	40.9	44.1	47.0	47.3	45.4	42.3	39.9	37.5	38.5	37.9	39.4	36.5	32.8	37.0	87.4												
11	34.8	36.3	37.5	37.8	34.0	33.0	30.2	31.9	34.8	36.6	39.8	43.3	45.2	46.0	44.9	42.8	40.5	36.6	37.0	39.9	40.1	38.0	35.3	36.0	38.0	112.3												
12	35.8	36.5	36.6	36.2	34.8	35.6	34.5	31.3	30.6	32.9	37.1	40.4	44.6	44.6	43.3	41.5	39.4	38.3	38.6	39.5	39.7	38.7	38.2	37.8	37.8	106.5												
13	34.8	33.3	32.3	32.2	30.1	29.2	36.1	35.7	32.4	35.6	39.8	42.2	42.9	43.2	42.5	40.9	38.9	38.6	38.6	38.5	38.7	38.4	38.0	37.4	37.1	90.3												
14	36.7	36.4	35.2	36.3	34.0	31.9	29.5	28.9	30.3	33.0	37.0	42.0	45.9	47.1	45.8	43.0	40.4	37.9	34.1	36.1	38.2	37.8	38.0	32.7	37.0	88.2												
15	33.5	35.0	34.1	32.3	32.0	32.3	29.9	29.3	29.0	32.4	37.4	41.6	44.9	46.6	45.5	42.5	40.7	39.1	38.6	38.3	38.8	38.4	38.2	37.2	37.0	87.6												
16	34.8	29.9	28.1	34.4	31.4	27.1	27.1	27.4	30.0	33.2	38.2	43.2	46.6	48.5	47.1	46.2	45.1	39.2	38.4	37.4	38.5	38.0	37.2	36.5	36.8	83.5												
17 d	36.1	36.0	35.7	34.8	33.7	32.3	29.6	25.4	28.3	35.5	41.5	44.2	45.7	47.0	47.1	46.7	42.7	37.3	35.2	31.4	34.1	31.2	35.9	33.2	36.7	80.6												
18 d	36.0	36.8	33.8	30.6	32.0	32.3	28.2	27.2	30.4	33.7	38.9	43.5	45.8	46.2	44.3	42.6	40.7	38.6	38.3	37.1	36.8	38.7	37.7	36.5	36.9	86.7												
19	38.4	38.0	38.6	37.7	32.7	30.8	29.0	27.8	29.5	32.7	38.6	43.4	47.8	48.6	46.6	42.9	40.2	36.0	35.1	36.5	38.4	38.5	39.6	38.4	37.7	105.8												
20 q	38.2	37.1	35.2	34.3	33.8	32.5	29.7	27.9	29.9	32.9	37.1	41.8	46.0	47.4	45.0	42.7	40.5	39.4	38.1	38.7	38.5	37.9	37.7	36.6	37.4	98.9												
21	36.6	36.5	36.4	35.9	34.9	32.0	29.5	28.7	29.5	31.8	35.9	41.2	46.3	47.3	45.3	43.5	41.9	39.8	40.0	38.6	39.4	39.3	39.8	37.5	37.8	107.6												
22 d	35.5	34.6	34.4	24.8	28.2	15.0	20.5	28.1	26.2	29.0	34.5	40.2	44.5	45.3	45.1	46.3	40.3	39.0	37.1	39.8	39.3	38.1	36.7	36.1	34.9	38.6												
23	34.9	34.6	34.4	33.8	31.0	28.6	32.1	30.4	33.1	34.8	37.5	40.8	42.8	44.0	43.6	43.0	41.8	40.5	39.0	37.6	34.9	35.4	36.9	35.1	36.7	80.6												
24 d	33.1	39.6	36.5	15.6	20.5	24.8	29.3	29.5	30.7	35.3	39.0	37.4	41.8	47.9	46.9	43.4	41.0	40.0	34.6	35.9	37.0	39.4	39.4	37.0	35.7	55.6												
25	36.9	38.0	37.4	37.9	41.7	35.9	34.3	33.3	31.3	32.7	36.6	40.8	44.5	46.0	45.0	42.7	39.1	37.1	36.4	35.5	36.5	37.5	37.2	37.0	38.0	111.3												
26	37.2	37.3	36.6	34.6	36.6	36.9	34.4	32.2	31.2	31.8	34.2	41.5	46.0	46.2	45.2	43.3	40.4	37.5	35.0	35.0	37.2	37.8	37.3	37.9	37.6	103.3												
27 d	36.2	38.4	40.2	42.0	43.5	39.9	29.2	30.9	43.4	38.0	46.2	48.6	50.5	50.2	47.8	41.6	41.3	38.4	33.1	32.0	28.5	35.2	33.9	34.0	39.3	143.0												
28	35.0	35.7	35.4	35.6	35.0	33.4	29.9	27.1	26.8	30.4	36.8	43.0	46.7	47.4	44.3	40.2	37.9	33.7	30.9	31.0	34.8	35.6	36.7	37.4	35.8	60.7												
29	37.4	37.5	38.0	37.8	34.7	33.2	31.4	30.6	31.7	37.0	41.0	46.8	49.9	49.8	47.5	40.7	36.5	33.6	32.0	33.9	36.1	37.2	37.8	37.1	37.7	105.9												
30	37.3	35.4	35.9	37.3	36.6	32.1	31.0	31.8	31.9	34.2	36.0	41.9	46.9	48.0	42.3	40.2	36.6	35.3	35.9	37.0	36.2	37.2	37.3	35.8	37.1	90.1												
31	36.4	36.6	37.7	37.6	34.6	33.3	31.7	30.1	36.9	35.6	38.8	42.8	46.4	48.2	45.3	41.6	36.4	34.8	35.4	36.5	37.6	37.6	37.3	36.9	37.8	106.1												
Mean	36.6	36.5	35.9	34.7	34.0	31.9	30.3	29.8	31.1	33.3	37.5	41.9	45.4	46.8	45.6	43.5	40.8	38.3	37.0	37.1	37.5	37.7	37.5	36.8	37.4													
Sum 900.0+	233.9	233.1	212.2	175.6	153.7	87.7	40.8	23.6	65.4	133.5	263.5	398.5	508.1	550.9	512.3	448.9	364.7	288.5	248.1	249.5	262.9	268.3	263.6	241.3		Grand Total 27828.5												

TERRESTRIAL MAGNETIC FORCE: VERTICAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

8:

24	ESKDALEMUIR (Z)												45,000γ (0.45 C.G.S. unit) +												AUGUST 1958	
	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	Mean	Sum 7000+
	0-1	1-2																								
1	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	
2	323	320	319	324	328	331	325	317	311	312	307	302	294	302	314	321	327	332	332	331	335	330	327	324	320	688
3	319	316	321	322	325	324	326	326	324	315	302	297	297	302	317	327	343	349	347	342	339	327	323	319	323	749
4	317	305	285	304	309	316	321	323	316	310	309	304	303	311	328	334	337	340	342	338	334	328	326	324	319	664
5	321	321	321	319	320	324	326	325	319	312	309	297	301	305	310	323	329	333	337	334	329	325	322	321	320	683
6	321	321	320	323	323	325	327	328	319	312	306	301	296	309	321	326	327	329	328	327	325	323	320	319	320	676
7	315	314	316	319	324	327	324	320	314	308	298	289	282	287	297	307	314	317	317	317	319	318	320	317	312	480
8	315	313	312	312	316	319	320	320	316	311	308	304	307	308	311	316	321	330	338	336	335	328	323	320	318	639
9	319	318	319	318	319	322	326	325	321	317	311	301	296	301	316	325	326	331	328	325	324	321	320	319	319	648
10	315	308	313	313	307	312	319	321	315	305	301	297	293	296	302	310	320	330	323	315	317	324	324	320	313	501
11	318	317	313	316	319	321	322	313	307	297	291	294	290	292	313	333	343	345	339	331	331	319	317	313	316	594
12	315	315	315	305	306	305	304	305	304	301	302	297	297	307	319	327	332	342	342	304	327	326	319	315	314	531
13	315	317	317	318	321	320	309	313	316	309	301	291	294	307	314	319	320	317	315	313	314	316	319	317	313	512
14	309	306	312	316	320	318	311	311	319	310	302	304	312	316	322	325	324	321	321	321	322	321	321	321	316	585
15	320	319	319	316	321	324	325	324	321	312	302	298	296	296	305	312	317	326	340	337	330	326	315	302	317	603
16	298	309	318	319	317	315	321	323	316	312	305	296	293	297	307	313	314	315	313	317	317	316	315	315	312	481
17	312	298	300	307	313	319	318	316	315	312	309	308	300	298	316	331	343	354	342	334	327	324	321	320	318	637
18	319	319	319	320	319	319	315	313	308	292	286	285	286	301	321	366	405	401	351	362	334	354	348	347	329	890
19	271	297	311	329	331	313	321	326	323	318	318	315	318	323	330	335	339	340	335	334	333	328	327	326	323	741
20	317	316	320	321	326	332	334	335	329	322	319	312	313	316	327	331	334	341	341	337	330	328	325	320	326	826
21	321	321	323	326	327	328	328	327	321	311	304	305	304	304	305	311	319	322	326	324	322	321	321	322	318	643
22	321	321	321	321	323	326	327	327	321	313	305	296	292	298	305	310	316	322	323	326	326	324	315	309	316	588
23	312	310	283	231	204	236	251	265	289	298	303	304	308	313	311	313	333	339	344	335	330	327	326	323	299	188
24	322	323	322	322	323	323	315	314	316	315	312	302	301	302	313	315	317	322	324	327	332	325	321	319	318	627
25	313	299	181	75	98	196	294	328	329	317	317	324	340	338	356	363	356	349	362	352	339	331	330	329	301	216
26	327	319	293	289	284	286	302	315	320	324	324	321	312	321	326	330	332	334	335	338	335	332	330	328	319	657
27	326	324	321	322	324	302	302	310	311	312	313	316	321	332	341	344	344	342	342	343	335	331	328	326	325	812
28	324	320	308	288	274	256	270	277	255	247	280	297	316	330	351	379	376	396	409	374	357	347	324	321	320	676
29	331	334	335	335	336	334	332	335	331	319	309	307	312	330	351	370	371	381	380	367	346	340	338	332	340	1156
30	331	330	328	326	330	332	334	332	324	319	311	313	317	329	338	345	347	347	347	343	336	335	332	326	331	952
31	319	324	326	326	326	330	333	335	333	331	321	303	301	315	332	342	343	338	335	332	331	327	326	327	327	856
Mean	317	316	311	307	308	312	317	319	316	310	307	303	303	310	321	331	336	340	339	334	330	327	326	326	319	
Sum 9000+	832	798	634	503	537	661	812	881	789	617	504	395	407	609	956	1252	1429	1539	1499	1351	1241	1149	1049	967		Grand Total 237,411

DAILY EXTREMES OF TERRESTRIAL MAGNETIC ELEMENTS, MAGNETIC CHARACTER FIGURES (K AND C) AND TEMPERATURE IN MAGNET HOUSE

25 ESKDALEMUIR		TERRESTRIAL MAGNETIC ELEMENTS												AUGUST 1958			
		Horizontal force			Declination			Vertical force			3-hr. range indices K	Sum of K indices	Magnetic character of day (0-2)	Temperature in magnet house 200 +			
		Maximum 16,000γ +	Minimum 16,000γ +	Range	Maximum 10° +	Minimum 10° +	Range	Maximum 45,000γ +	Minimum 45,000γ +	Range							
		h. m. γ	γ h. m.	γ	h. m. °	° h. m.	°	h. m. γ	γ h. m.	γ				°A.			
1		19 18 800	633 12 13	167	14 04	47.8	27.1 06 53	20.7	20 17 336	289 12 46	47	2, 1, 1, 4, 4, 3, 4, 3	22	1	84.3		
2		19 41 788	667 12 04	121	13 26	46.7	31.3 07 06	15.4	17 28 350	293 11 13	57	2, 2, 2, 3, 4, 3, 3, 2	21	1	84.3		
3		17 45 782	673 10 40	109	01 40	47.3	26.5 08 04	20.8	18 30 342	282 02 22	60	3, 3, 2, 2, 3, 2, 2, 1	18	1	84.3		
4	q	18 02 772	667 11 12	105	14 22	47.1	30.0 07 47	17.1	18 30 338	297 11 48	41	1, 2, 2, 2, 2, 2, 2, 1	14	0	-		
5	q	18 06 771	679 11 58	92	13 47	45.3	31.0 06 33	14.3	17 14 330	294 12 13	36	1, 1, 1, 2, 3, 2, 2, 1	13	0	-		
6	q	20 04 775	686 11 22	89	13 48	47.0	28.8 08 08	18.2	05 30 327	281 12 32	46	1, 1, 1, 2, 1, 2, 2, 2	12	0	84.3		
7		18 03 789	669 12 56	120	12 30	49.2	28.5 07 42	20.7	18 31 339	300 12 16	39	1, 1, 3, 2, 4, 3, 3, 1	18	1	84.3		
8	q	20 02 766	683 11 29	83	13 40	52.3	29.0 07 26	23.3	17 25 331	293 12 39	38	1, 1, 1, 2, 2, 3, 1, 1	12	0	84.7		
9		20 50 778	690 11 33	88	13 54	49.7	28.0 06 59	21.7	17 40 331	293 12 12	38	2, 2, 1, 1, 2, 3, 2, 2	15	0	84.7		
10		15 38 804	671 11 28	133	13 23	49.8	26.0 06 07	23.8	17 30 347	286 13 22	61	2, 1, 3, 3, 3, 4, 4, 3	23	1	84.7		
11		18 57 792	661 11 13	131	13 13	46.6	28.6 06 41	18.0	17 20 342	292 11 40	50	3, 2, 3, 3, 2, 3, 3, 3	22	1	84.7		
12		20 40 793	675 10 26	118	13 12	45.8	29.6 08 02	16.2	04 43 323	290 11 43	33	2, 2, 2, 3, 2, 1, 3, 2	17	0	84.7		
13		00 21 785	652 10 38	133	14 10	43.7	28.1 05 24	15.6	15 03 326	297 10 28	29	3, 2, 3, 3, 2, 3, 2, 1	19	0	84.7		
14		17 40 791	675 09 01	116	13 27	47.5	28.3 06 58	19.2	18 49 343	294 12 58	49	2, 1, 2, 1, 1, 3, 2, 3	15	0	84.7		
15		19 27 775	672 11 03	103	13 44	47.6	27.3 07 28	20.3	06 59 324	293 12 15	31	2, 3, 2, 2, 2, 3, 2, 2	18	0	84.7		
16		18 59 793	666 09 54	127	13 38	49.7	25.6 07 27	24.1	17 20 357	294 01 49	63	4, 2, 2, 2, 3, 4, 3, 1	21	1	84.7		
17	d	14 46 987	556 23 44	431	14 48	60.1	21.3 07 58	38.8	16 56 422	234 23 57	188	1, 1, 5, 4, 4, 6, 6, 5	34	1	84.7		
18	d	18 09 744	599 00 00	145	12 37	47.0	21.2 06 57	25.8	17 03 343	262 00 00	81	5, 3, 3, 3, 3, 3, 2, 2	24	1	84.8		
19		19 04 770	626 10 15	144	13 28	49.8	25.4 07 40	24.4	17 50 343	310 11 32	33	2, 3, 3, 3, 2, 3, 3, 2	21	0	84.7		
20	q	17 43 767	667 11 12	100	13 03	48.0	26.7 07 37	21.3	05 20 329	301 10 45	28	1, 1, 2, 2, 3, 3, 2, 1	15	0	84.7		
21		18 25 772	673 11 28	99	13 06	47.6	28.4 07 37	19.2	19 50 328	290 12 31	38	1, 1, 1, 3, 2, 3, 2, 3	16	0	84.7		
22	d	02 30 840	647 11 47	193	15 11	47.9	10.7 05 34	37.2	18 26 347	189 04 38	158	4, 4, 4, 4, 3, 3, 3, 1	26	1	84.7		
23		19 49 770	683 11 04	87	13 54	44.7	25.0 05 50	19.7	20 28 332	298 11 40	34	1, 3, 3, 3, 3, 3, 3, 3	22	1	84.7		
24	d	01 40 872	470 04 37	402	02 19	55.1	5.3 03 32	49.8	16 46 368	42 03 28	326	6, 6, 5, 6, 5, 4, 3, 2	37	1	84.7		
25		12 57 773	666 11 05	107	13 00	50.6	29.1 08 23	21.5	19 15 338	278 04 42	60	3, 3, 3, 3, 4, 2, 3, 1	22	1	-		
26		19 10 753	629 11 37	124	13 29	47.4	30.6 08 46	16.8	15 50 345	300 05 45	45	2, 3, 3, 3, 3, 2, 3, 2	21	0	85.4		
27	d	18 20 890	546 08 47	344	12 40	53.8	15.6 06 35	38.2	18 19 454	239 09 25	215	3, 4, 5, 5, 4, 4, 6, 3	34	1	85.4		
28		18 56 790	639 10 27	151	12 59	49.2	24.6 08 13	24.6	18 46 384	304 10 50	80	1, 1, 3, 3, 3, 3, 3, 2	19	0	85.4		
29		23 48 767	656 10 04	111	12 55	51.1	29.1 07 57	22.0	18 56 348	309 11 02	39	2, 2, 2, 3, 3, 3, 3, 3	21	0	85.4		
30		20 58 762	677 10 23	85	13 18	49.4	30.3 06 27	19.1	15 41 344	297 12 00	47	2, 2, 2, 2, 3, 3, 2, 2	18	0	85.4		
31		15 56 767	676 11 06	91	13 37	48.5	29.7 07 42	18.8	16 30 361	314 12 10	47	1, 1, 1, 1, 2, 3, 1, 0	10	0	85.4		
Mean		- - 793	649 - -	143	- - 48.8	26.0 - -	22.8	- - 347	279 - -	69	-	-	0.45		84.8		

TERRESTRIAL MAGNETIC FORCE: HORIZONTAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

22	ESKDALEMUIR (H)												16,000γ (0.16 C.G.S. unit) +												SEPTEMBER 1958												
	Hour G.M.T.																								Mean	Sum 15,000+											
	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													
1	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ											
2	737	736	734	734	734	732	723	706	686	681	689	709	729	745	747	739	737	728	739	745	750	750	748	747	729	2505											
3	744	741	738	736	738	740	734	724	709	701	691	691	694	701	718	724	733	744	749	754	756	752	749	753	730	2514											
3 d	748	739	735	738	744	744	733	727	717	682	676	693	698	746	713	706	771	792	779	754	744	675	656	662	724	2372											
4 d	660	681	685	713	719	716	702	685	670	669	668	665	673	710	780	968	1414	944	982	697	511	165	219	323	692	1619											
5 d	330	468	426	481	549	639	666	638	626	633	626	636	637	662	654	676	691	702	738	726	712	698	704	705	626	23											
6	692	689	689	688	690	698	692	686	677	667	648	639	651	667	685	689	705	721	721	722	722	723	721	721	692	1603											
7	721	720	720	719	719	711	705	704	690	675	657	665	670	691	722	736	743	753	728	737	755	710	706	708	711	2065											
8	712	715	737	698	709	714	712	703	688	672	660	668	684	700	708	730	710	723	727	736	735	748	785	722	712	2096											
9	727	715	722	722	723	725	719	704	695	684	675	681	688	742	737	700	707	724	732	729	730	723	742	735	716	2181											
10	725	728	726	727	729	722	717	706	693	676	668	673	682	705	701	724	744	740	734	733	733	740	732	753	717	2211											
11	728	732	736	733	729	726	720	708	700	685	664	673	685	700	719	721	725	728	740	746	742	741	737	739	719	2257											
12	742	732	738	739	732	730	721	708	695	682	677	686	696	705	715	724	732	739	742	743	742	742	742	743	723	2347											
13 q	740	740	741	744	744	740	733	721	702	681	675	677	697	719	728	737	740	738	742	745	755	749	750	747	729	2485											
14 q	745	746	745	747	745	745	738	725	706	673	674	691	715	722	729	743	746	752	744	753	745	748	748	747	732	2572											
15	748	749	746	747	748	746	738	725	707	683	673	678	696	717	728	741	749	760	756	756	756	760	762	770	735	2639											
16 d	761	754	750	754	761	765	743	724	707	699	696	705	718	761	719	730	803	759	747	733	719	713	706	702	735	2629											
17	723	735	721	726	717	710	707	692	672	657	656	658	664	673	700	702	714	722	731	738	736	736	734	735	707	1959											
18 q	734	734	732	728	725	721	711	699	704	677	674	678	687	703	714	719	726	732	741	746	741	737	739	739	718	2241											
19	737	737	736	736	737	737	735	726	711	691	680	687	687	698	709	723	734	741	746	755	754	745	746	748	727	2436											
20	747	746	743	749	748	745	742	736	723	707	695	692	699	711	723	733	742	745	753	760	754	754	752	745	735	2644											
21 q	746	745	744	743	744	742	739	732	722	712	700	702	700	710	720	733	742	747	752	752	753	751	751	751	735	2633											
22 q	748	743	743	744	744	744	742	738	726	713	702	694	705	713	723	733	736	745	753	755	753	752	752	750	735	2651											
23	750	747	750	751	745	746	753	748	738	726	708	707	714	719	724	732	737	740	748	753	756	759	755	753	740	2759											
24	761	750	750	750	749	748	743	735	723	720	707	703	713	713	726	734	735	745	753	753	754	754	758	752	739	2729											
25 d	748	740	746	748	741	760	675	696	668	663	667	659	663	717	773	798	730	715	698	710	707	687	638	672	709	2019											
26	695	686	686	699	703	696	701	676	673	678	664	662	667	668	665	681	702	706	712	718	718	718	724	734	693	1632											
27	719	720	721	720	719	721	717	706	695	681	664	664	672	683	695	711	717	726	730	732	731	726	716	729	709	2015											
28	722	717	730	735	724	720	730	730	707	691	671	671	684	693	706	705	718	731	737	737	740	738	738	739	717	2214											
29	740	740	741	740	740	737	731	731	721	700	679	674	678	693	712	723	730	736	742	743	744	740	742	740	725	2397											
30	738	744	743	743	745	745	746	740	729	710	698	698	693	698	704	720	746	743	733	738	736	721	716	729	727	2456											
Mean	719	722	722	724	727	729	722	713	699	686	676	679	688	706	717	731	755	744	748	740	733	715	716	720	718												
Sum 20,000+	1568	1669	1654	1732	1794	1865	1668	1379	980	569	282	379	639	1185	1497	1935	2659	2321	2429	2199	1984	1455	1468	1593		Grand Total 516,903											

MAGNETIC DECLINATION (WEST)
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

23 ESKDALEMUIR (D)													10° +												SEPTEMBER					1958
	Hour G.M.T.																									Sum				
	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	700.0+				
1	36.5	36.3	35.6	35.2	34.1	33.0	32.3	31.7	32.3	35.6	40.3	45.9	48.2	48.8	45.3	42.3	39.5	37.8	37.8	37.7	36.4	37.4	37.5	37.4	38.1	214.9				
2	37.6	37.5	37.8	35.9	34.2	32.0	29.9	28.6	29.7	33.5	39.2	43.6	46.9	47.5	45.6	43.0	40.5	37.9	36.9	37.7	38.1	38.1	37.9	38.4	37.8	208.0				
3 d	36.3	33.3	32.0	33.9	33.7	32.0	31.4	29.6	28.6	29.0	37.7	45.4	49.7	51.9	52.1	59.0	57.2	50.7	48.8	42.9	43.2	33.3	32.3	29.8	39.7	253.8				
4 d	25.7	26.9	25.7	27.1	31.8	29.7	29.3	28.9	30.3	33.0	38.2	40.9	44.1	48.3	52.5	53.3	72.2	48.9	57.4	49.5	42.9	31.0	25.6	0.1	37.2	193.3				
5 d	16.0	14.0	6.7	17.4	32.5	28.7	26.6	27.6	28.1	30.1	35.8	39.8	41.5	39.9	38.0	36.4	36.0	36.8	37.7	27.8	30.3	36.1	36.6	35.4	30.7	35.8				
6	34.9	34.9	35.1	35.7	34.5	33.4	29.0	27.5	29.7	31.7	34.8	38.4	41.3	42.7	42.2	39.5	37.7	36.3	35.3	34.5	35.3	36.8	37.0	36.7	35.6	154.9				
7	37.2	37.0	36.5	34.7	34.4	31.3	30.5	30.9	30.3	32.9	38.1	42.4	44.3	46.0	47.0	41.7	39.9	36.4	38.2	34.6	32.0	35.6	33.4	33.0	36.6	178.3				
8	33.3	35.3	30.6	29.6	30.3	30.7	29.1	29.1	29.7	32.9	37.6	41.6	43.8	44.6	43.1	42.4	39.5	39.0	38.0	38.6	38.1	37.2	30.7	29.7	35.6	154.5				
9	31.9	28.0	27.8	31.7	31.1	31.5	30.9	29.8	29.4	31.2	37.1	42.9	45.7	50.4	46.9	40.3	37.2	37.1	36.9	36.2	35.6	34.8	34.8	33.8	35.5	153.0				
10	34.7	39.0	36.2	33.2	33.0	31.8	30.8	30.2	31.2	33.9	38.4	43.8	47.0	48.7	43.2	41.4	38.6	35.7	36.6	38.4	38.6	38.4	37.0	37.4	37.4	197.2				
11	34.6	34.6	34.8	34.8	32.7	31.5	28.8	28.4	28.9	31.5	35.9	42.6	47.0	46.2	45.0	41.3	39.0	37.5	37.2	37.8	36.9	36.4	36.8	36.9	36.5	177.1				
12	35.4	34.5	34.9	32.6	33.0	31.6	31.0	29.1	29.9	33.0	37.8	42.4	44.9	45.4	44.1	41.2	38.8	37.6	37.9	37.4	38.4	37.3	36.7	35.4	36.6	180.3				
13 q	35.8	35.9	35.4	35.0	34.5	33.4	32.2	30.4	30.9	32.5	36.6	40.9	45.2	46.9	45.8	41.5	37.8	36.8	37.4	37.2	37.4	35.4	35.5	36.3	36.9	186.7				
14 q	36.8	36.7	36.4	35.6	34.8	33.6	31.5	29.9	29.4	30.3	35.8	41.5	46.3	47.4	45.2	42.0	39.1	38.0	38.1	38.1	37.3	37.9	38.1	37.2	37.4	197.0				
15	36.9	36.4	36.2	35.7	34.6	33.5	31.2	29.7	29.6	32.0	36.3	43.4	49.7	51.1	48.1	43.6	40.2	38.8	39.0	40.2	39.2	38.7	37.8	34.9	38.2	216.8				
16 d	30.2	31.4	30.4	31.3	28.9	25.8	26.6	28.1	28.2	29.9	35.2	41.4	46.1	54.1	48.3	45.6	45.9	40.1	33.8	39.2	34.3	27.4	27.3	30.0	35.0	139.5				
17	30.7	33.6	32.9	32.7	32.0	33.4	33.5	32.7	32.2	36.2	40.7	44.0	48.2	46.4	45.4	41.0	38.5	36.4	36.4	37.4	37.5	36.9	37.6	36.8	37.2	193.1				
18 q	36.3	35.8	35.4	34.6	33.8	32.8	30.9	29.2	29.7	33.5	42.0	42.2	44.6	44.3	42.5	40.8	39.7	37.8	38.1	34.8	36.1	36.7	36.7	36.4	36.9	184.7				
19	36.5	36.1	35.1	34.5	33.9	33.3	32.3	31.5	30.3	32.0	35.5	40.8	44.5	44.0	43.1	41.4	39.2	37.9	37.9	38.3	37.8	37.1	37.2	37.1	37.0	187.3				
20	36.6	35.8	35.3	34.9	34.1	33.2	32.7	30.9	30.6	32.2	35.3	39.7	43.2	44.3	43.5	42.1	39.9	38.4	38.0	38.8	38.3	38.4	36.2	35.8	37.0	188.2				
21 q	36.5	35.6	34.8	34.9	34.9	34.1	33.1	30.9	30.4	31.2	33.3	37.2	40.8	42.7	42.4	40.8	39.3	38.5	38.6	37.7	37.7	37.2	37.8	37.1	36.6	177.5				
22 q	35.4	34.9	35.3	35.1	35.0	34.4	33.1	31.3	30.0	30.2	33.6	37.6	42.3	44.1	44.2	41.8	39.5	39.0	38.7	37.9	38.0	37.8	37.2	37.1	36.8	183.5				
23	36.8	35.6	35.0	32.9	32.6	32.3	32.2	33.0	32.7	33.4	34.7	38.3	42.3	44.4	44.0	42.7	41.0	39.4	39.1	38.9	38.7	37.9	36.9	38.8	37.2	193.6				
24	37.4	35.6	34.2	33.7	33.6	33.2	32.4	31.0	30.4	32.5	36.5	39.0	42.6	43.8	43.8	42.6	40.6	39.9	39.4	38.5	38.2	38.1	37.5	41.2	37.3	195.7				
25 d	33.4	30.5	33.0	28.2	29.8	30.5	31.5	40.0	40.3	33.9	43.4	45.9	45.6	46.7	45.3	43.2	36.6	38.9	34.5	36.3	32.0	34.8	43.3	41.2	37.1	189.5				
26	26.0	23.9	29.1	28.0	31.8	34.3	35.4	36.4	38.4	36.0	37.9	40.2	43.3	42.9	43.0	41.2	39.9	36.6	36.3	36.2	33.4	33.3	35.1	34.4	35.5	153.0				
27	32.6	34.1	34.1	34.4	34.8	35.0	33.4	32.8	31.2	32.0	35.2	39.4	41.7	43.4	42.2	39.2	38.0	37.1	34.9	35.1	35.9	32.5	33.8	35.2	35.7	158.0				
28	30.3	36.0	36.1	34.2	36.3	37.7	36.6	33.6	33.5	34.6	37.2	42.6	44.2	44.0	43.1	41.5	39.9	38.2	37.4	37.1	36.7	35.8	35.4	35.5	37.4	197.5				
29	35.6	35.9	35.8	35.7	35.1	34.6	34.8	32.0	29.9	29.8	33.1	39.9	43.0	44.6	43.9	42.2	40.3	38.4	37.5	37.5	37.9	36.7	36.3	36.0	36.9	186.5				
30	36.0	36.3	35.6	35.8	35.6	34.9	34.1	32.6	31.0	31.2	34.7	42.8	47.4	50.0	49.0	47.9	43.8	43.9	37.1	33.8	37.4	30.9	26.3	33.8	37.5	201.9				
Mean	33.8	33.7	33.1	33.0	33.4	32.6	31.6	30.9	30.9	32.4	36.9	41.5	44.9	46.2	44.9	42.8	41.2	38.9	38.4	37.5	37.0	35.9	35.4	34.3	36.7					
Sum 900.0+	113.9	111.4	93.8	89.0	101.4	77.2	47.1	28.0	26.8	71.7	207.9	346.5	445.4	485.5	447.8	382.9	335.3	265.8	250.9	226.1	209.6	175.9	162.4	128.8		Grand Total 26431.1				

TERRESTRIAL MAGNETIC FORCE: VERTICAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

23 ESKDALEMUIR (Z)												45,000γ (0.45 C.G.S. unit) +												SEPTEMBER 1958										Mean	Sum 7000+
	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																							
1	326	327	329	330	331	332	334	334	332	320	309	298	298	308	324	338	341	340	330	329	328	327	324	323	325										812
2	322	323	323	321	324	329	330	327	319	317	314	309	308	318	321	330	335	332	326	324	323	321	321	320	322										737
3 d	319	319	317	319	320	323	326	326	319	302	298	288	305	337	362	358	377	411	422	404	399	334	319	289	337										1093
4 d	295	348	327	342	340	343	347	347	339	335	334	334	332	336	389	513	550	502	489	497	431	363	212	115	365										1760
5 d	141	194	117	39	131	307	366	384	374	370	371	372	377	394	402	405	394	373	372	413	385	362	355	347	323										745
6	343	348	349	348	350	350	358	355	347	344	344	344	339	336	338	344	347	347	350	354	352	346	343	339	346										1315
7	344	336	336	338	340	342	342	339	336	328	321	316	314	321	343	376	400	404	382	370	347	330	317	311	343										1233
8	322	324	281	314	334	342	347	347	340	335	330	324	319	326	334	341	342	335	333	333	335	334	296	285	327										853
9	312	291	302	323	328	333	337	338	334	326	325	320	315	332	366	378	359	343	344	350	346	343	325	308	332										978
10	321	314	308	321	327	332	337	340	336	330	326	319	324	336	345	348	351	357	345	336	333	332	334	316	332										968
11	323	326	324	321	326	331	336	338	331	326	319	309	307	314	324	335	332	333	332	331	335	333	331	330	327										847
12	327	331	329	328	330	331	335	335	330	325	313	304	310	318	324	329	331	329	327	330	330	330	330	330	327										836
13 q	330	330	330	330	328	330	331	329	325	323	313	302	301	310	316	323	324	323	321	324	324	327	327	326	323										747
14 q	326	327	327	327	328	329	331	331	323	312	307	295	293	303	311	317	323	323	321	322	324	324	324	326	320										674
15	324	324	325	326	324	327	330	330	326	321	312	300	300	304	316	323	323	321	321	321	320	320	321	321	320										680
16 d	316	318	319	319	311	293	296	306	309	309	300	289	281	290	314	315	342	384	404	386	393	346	330	328	325										798
17	322	313	330	335	334	335	335	340	338	338	330	319	322	326	334	342	343	341	338	335	331	330	329	329	332										969
18 q	330	330	331	332	333	335	336	334	331	320	310	304	309	310	317	322	324	329	328	335	333	330	326	326	326										815
19	326	326	327	327	328	327	327	328	324	321	315	302	298	298	308	314	316	319	320	321	324	325	325	323	320										669
20	323	324	324	321	321	322	324	325	321	316	310	304	304	307	310	314	316	318	320	321	323	324	324	324	318										640
21 q	321	322	323	323	323	324	326	326	321	319	314	304	302	304	307	312	315	316	319	321	321	321	321	320	318										624
22 q	320	320	320	319	319	320	321	322	320	319	312	304	299	302	308	313	315	315	317	321	321	321	320	320	316										588
23	320	321	320	316	316	317	317	315	317	316	308	297	296	299	302	313	319	321	323	321	320	319	319	314	314										546
24	299	307	313	314	314	315	317	320	318	311	304	301	301	304	312	324	330	329	330	331	326	328	325	313	316										586
25 d	300	310	308	292	265	238	250	248	267	290	313	355	397	453	496	528	488	458	419	419	401	345	265	227	347										1332
26	295	306	289	238	280	304	312	320	326	334	339	347	357	370	370	378	374	376	370	357	351	343	341	333	334										1010
27	327	330	330	332	332	336	340	339	340	341	341	341	343	343	343	354	360	354	351	350	344	340	335	327	340										1164
28	320	318	316	318	317	317	319	330	332	327	327	323	322	328	334	341	341	336	334	332	331	332	331	330	327										856
29	329	329	327	327	328	329	329	330	330	324	318	316	316	319	321	327	330	329	328	328	328	328	327	327	326										824
30	327	324	324	323	323	323	324	326	327	324	311	304	313	320	325	336	356	369	395	376	360	352	354	338	336										1054
Mean	315	319	314	312	317	324	329	330	328	324	320	315	317	325	337	350	353	352	350	350	344	334	322	312	329										
Sum 9000+	450	560	425	363	505	712	856	910	831	722	588	444	502	766	1116	1491	1598	1567	1511	1492	1319	1010	650	365											Grand Total 236,753

DAILY EXTREMES OF TERRESTRIAL MAGNETIC ELEMENTS, MAGNETIC CHARACTER FIGURES (K AND C) AND TEMPERATURE IN MAGNET HOUSE

25	ESKDALEMUIR												SEPTEMBER 1958						
	TERRESTRIAL MAGNETIC ELEMENTS												3-hr. range indices K	Sum of K indices	Magnetic character of day (0-2)	Temperature in magnet house 200 +			
	Horizontal force			Declination			Vertical force												
	Maximum 16,000γ +	Minimum 16,000γ +	Range	Maximum 10° +	Minimum 10° +	Range	Maximum 45,000γ +	Minimum 45,000γ +	Range										
	h. m.	γ	γ	h. m.	γ	h. m.	γ	h. m.	γ	γ	h. m.	γ							
1	13 17	756	677	10 08	79	13 16	49.8	31.4	07 33	18.4	16 57	343	297	12 09	46	0, 0, 2, 3, 2, 3, 1, 1	12	0	85.4
2	20 35	758	686	10 51	72	13 01	48.0	27.8	07 38	20.2	16 40	335	304	12 08	31	1, 1, 2, 2, 2, 2, 1, 1	12	0	85.4
3 d	18 06	811	534	22 46	277	15 34	62.1	10.1	22 33	52.0	18 43	424	198	22 44	226	2, 1, 3, 4, 6, 5, 5, 6	32	1	85.4
4 d	16 37	1664	-141	21 40	1805	16 56	131.9	-34.9	22 59	166.8	16 17	678	-34	22 28	712	4, 3, 3, 3, 6, 9, 9, 8	45	2	85.4
5 d	18 42	785	61	01 07	724	04 11	47.5	-18.2	01 56	65.7	19 49	439	-7	03 26	446	9, 7, 4, 4, 3, 3, 5, 2	37	2	85.4
6	18 02	736	633	11 27	103	14 02	42.9	27.0	07 10	15.9	07 01	359	334	13 35	25	2, 2, 1, 2, 2, 3, 2, 1	15	0	85.5
7	20 11	789	652	10 27	137	14 11	48.6	25.2	20 04	23.4	17 22	408	293	23 48	115	1, 2, 2, 2, 3, 3, 4, 4	21	1	85.5
8	22 23	824	652	10 36	172	13 15	45.8	21.3	23 01	24.5	07 23	349	263	23 07	86	4, 3, 2, 3, 2, 4, 2, 5	25	1	-
9	22 39	781	654	10 48	127	13 15	52.8	24.6	01 56	28.2	15 13	384	277	01 57	107	3, 2, 3, 3, 4, 4, 3, 4	26	1	85.5
10	23 18	769	661	10 02	108	13 33	40.5	29.1	08 13	11.4	17 06	359	303	02 14	56	3, 2, 2, 2, 3, 3, 2, 3	20	0	85.5
11	19 51	753	658	10 46	95	12 22	48.0	27.8	01 01	20.2	07 29	339	304	12 07	35	2, 2, 1, 2, 2, 2, 2, 1	14	0	85.6
12	00 19	752	670	10 29	82	13 05	45.8	28.3	07 56	17.5	07 13	338	302	11 31	36	2, 2, 1, 2, 1, 2, 1, 0	11	0	85.6
13 q	20 53	758	670	10 59	88	13 47	47.1	29.6	07 43	17.5	06 30	331	298	12 07	33	1, 1, 2, 1, 2, 2, 2, 1	12	0	85.6
14 q	19 28	758	671	09 26	87	13 14	48.0	27.8	09 00	20.2	07 12	331	290	11 58	41	0, 1, 3, 3, 2, 2, 2, 1	14	0	85.6
15	18 03	785	668	10 17	117	13 22	51.4	28.8	07 50	22.6	06 43	331	297	11 58	34	0, 1, 2, 2, 2, 3, 3, 2	15	0	85.7
16 d	15 19	827	657	09 32	170	13 46	63.1	21.0	21 27	42.1	20 22	422	280	12 09	142	3, 3, 3, 4, 5, 5, 5, 4	32	1	85.6
17	01 13	764	647	10 49	117	12 20	49.3	28.0	00 20	21.3	15 16	343	301	00 51	42	3, 3, 3, 2, 3, 2, 1, 1	18	0	85.6
18 q	19 49	756	672	11 12	84	13 02	45.0	28.9	08 09	16.1	06 20	337	304	11 57	33	1, 2, 1, 1, 2, 2, 2, 1	13	0	85.6
19	20 08	760	673	10 56	87	12 06	45.9	29.0	08 15	16.9	07 32	329	296	12 07	33	1, 0, 2, 2, 3, 1, 1, 1	11	0	85.6
20	20 14	764	692	10 39	72	13 12	45.0	29.0	07 49	16.0	23 29	325	303	12 45	22	0, 1, 1, 1, 1, 1, 2, 2	9	0	85.6
21 q	19 04	765	692	12 22	73	14 20	43.1	29.5	08 33	13.6	06 28	327	301	11 54	26	1, 1, 1, 1, 1, 2, 2, 1	10	0	85.6
22 q	18 44	762	689	11 28	73	13 36	45.1	29.5	08 57	15.6	07 48	324	298	12 17	26	1, 0, 1, 2, 1, 2, 2, 1	10	0	85.6
23	24 00	767	705	11 12	62	13 56	44.9	31.5	05 57	13.4	18 07	324	294	12 08	30	2, 1, 1, 2, 2, 1, 1, 3	13	0	85.6
24	00 09	775	695	11 08	80	13 15	44.6	29.9	08 39	14.7	19 05	332	296	24 00	36	3, 1, 0, 1, 2, 2, 1, 2	12	0	85.6
25 d	15 18	838	515	22 53	323	22 50	75.3	12.0	20 47	63.3	15 42	556	107	22 47	449	3, 4, 4, 4, 5, 6, 5, 6	37	2	85.6
26	23 42	752	645	14 17	107	13 21	44.8	22.7	01 38	22.1	15 26	381	212	03 13	169	4, 3, 3, 2, 3, 3, 2, 3	23	1	85.6
27	23 36	753	657	10 46	96	13 47	44.9	29.0	21 37	15.9	15 57	364	315	23 52	49	1, 1, 1, 2, 2, 2, 2, 3	14	0	85.6
28	20 12	741	668	10 56	73	13 09	45.0	28.8	00 44	16.2	16 10	343	313	02 03	30	3, 3, 2, 2, 2, 2, 1, 0	15	0	85.6
29	20 28	745	669	12 12	76	12 58	45.2	28.4	09 08	16.8	07 37	331	314	11 43	17	1, 1, 2, 2, 2, 0, 0, 0	8	0	-
30	18 14	777	664	18 40	113	13 28	50.9	19.6	21 56	31.3	18 26	406	304	11 16	102	1, 1, 1, 3, 3, 3, 5, 4	21	1	85.6
Mean	- -	801	611 - -	189	- -	51.4	22.7 - -	28.7	- -	373	265 - -	108	-	-	-	-	0.43	-	85.6

TERRESTRIAL MAGNETIC FORCE: HORIZONTAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, G.M.T

22	ESKDALEMUIR (H)												16,000γ (0.16 C.G.S. unit) +												OCTOBER		1958
	Hour G.M.T.																								Mean	Sum	
	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		16,000+	
1	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		
2	731	730	730	734	741	756	756	744	730	709	682	674	676	691	711	722	731	737	738	752	739	728	742	738	726	1422	
3	717	710	721	721	746	729	722	727	725	706	685	678	681	688	708	717	726	733	740	741	745	741	769	740	721	1316	
4	738	738	741	752	748	742	741	724	715	701	686	684	688	715	720	740	739	732	713	718	735	739	742	743	726	1434	
5	742	741	742	741	742	745	745	740	728	713	699	691	696	701	706	712	726	733	741	743	743	748	750	750	730	1518	
6	741	723	736	740	742	740	737	736	725	712	695	687	686	708	725	733	734	757	747	748	738	742	732	738	729	1502	
7	742	740	738	740	736	744	738	736	727	718	705	699	707	716	716	738	745	749	742	753	750	737	741	748	734	1605	
8	745	743	752	750	752	737	740	748	738	711	705	696	691	701	712	731	733	735	735	732	744	747	725	715	730	1518	
9	738	746	736	729	741	730	738	729	718	715	702	695	697	701	711	721	732	737	741	745	743	744	747	748	729	1484	
10	745	741	741	748	743	743	745	740	729	713	693	693	699	707	715	727	741	747	749	749	748	746	748	749	733	1599	
11	748	746	748	745	745	746	746	743	731	716	704	697	703	713	723	737	746	753	749	755	750	753	752	758	738	1707	
12	755	747	746	747	749	745	745	741	731	715	705	692	694	704	717	732	738	747	760	758	748	767	760	751	737	1694	
13	749	749	750	750	750	749	747	740	728	709	693	689	702	713	721	731	741	749	755	760	755	756	753	756	737	1695	
14	753	755	755	757	758	754	759	754	740	712	698	688	704	707	721	725	733	744	738	748	753	756	757	752	738	1721	
15	752	751	751	753	757	756	753	745	728	713	697	691	708	716	728	741	740	747	755	758	760	758	753	754	740	1765	
16	752	746	751	752	756	755	756	751	733	713	696	701	718	728	738	742	744	748	756	759	752	753	755	753	742	1808	
17	750	753	756	750	758	739	740	738	723	704	694	687	696	709	722	732	741	747	750	756	752	753	754	754	736	1658	
18	751	745	747	747	759	753	743	733	722	703	687	683	689	705	720	732	740	761	755	751	747	753	757	765	735	1648	
19	747	747	749	752	746	752	743	736	717	702	694	690	695	712	724	737	737	743	749	754	757	754	758	758	736	1653	
20	751	750	747	748	750	751	751	746	732	716	702	701	693	706	728	745	747	730	738	743	742	750	743	745	736	1655	
21	757	750	747	743	742	746	745	740	729	713	699	693	698	711	727	733	742	748	753	752	754	757	765	755	737	1699	
22	752	748	748	759	754	749	749	740	729	716	710	704	703	708	722	725	733	742	740	749	750	749	749	751	737	1679	
23	754	754	751	767	778	740	741	698	687	695	684	685	680	681	693	725	739	702	700	694	668	678	686	694	711	1074	
24	685	703	713	720	706	704	718	686	660	663	666	658	663	663	702	697	709	709	689	667	676	674	693	670	687	494	
25	684	704	668	705	729	721	692	667	634	617	605	600	636	680	674	697	701	701	672	668	655	660	643	624	668	37	
26	676	682	677	679	683	686	690	694	687	668	647	641	644	658	667	679	692	705	707	708	712	715	717	716	685	430	
27	719	718	718	721	723	728	721	720	704	697	682	675	672	682	691	707	703	714	705	722	704	701	708	715	706	950	
28	717	717	720	721	720	729	727	727	717	705	699	690	694	709	708	722	734	736	756	753	651	680	674	694	713	1100	
29	710	704	702	705	709	720	725	741	722	690	682	696	683	691	693	709	697	720	706	702	717	707	724	713	707	968	
30	712	705	706	709	717	717	717	720	705	693	677	681	686	687	701	709	715	729	735	729	732	723	710	716	710	1031	
31	723	726	721	724	730	732	728	732	711	703	687	672	686	694	713	720	722	720	714	727	736	720	731	728	717	1200	
31	729	732	731	737	746	738	740	738	729	707	692	681	701	704	719	735	727	741	743	747	744	746	750	752	730	1509	
Mean	734	734	733	737	741	738	737	731	717	702	689	684	689	700	712	724	730	735	735	737	732	733	735	734	724		
Sum 21,000+	1765	1744	1739	1846	1956	1876	1838	1654	1234	768	352	192	369	709	1076	1453	1628	1796	1771	1841	1700	1735	1788	1743		Grand Total 538,573	

MAGNETIC DECLINATION (WEST)
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

23	ESKDALEMUIR (D)												10° +												OCTOBER					1958
	Hour G.M.T.																									Sum				
	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	700.0+				
1	34.9	35.9	35.6	36.0	35.0	35.2	37.0	38.5	32.9	32.3	33.1	36.9	40.3	42.0	43.1	41.9	41.0	40.1	39.7	39.2	38.7	35.1	33.2	27.0	36.9	184.6				
2	23.8	24.8	29.4	31.8	31.2	30.6	33.3	33.0	30.5	30.2	32.5	35.9	40.5	42.0	43.1	42.3	40.4	39.3	39.1	38.3	38.4	37.8	33.1	31.8	34.7	133.1				
3	33.0	32.3	32.6	29.5	27.6	35.0	32.9	32.1	30.9	31.1	34.4	42.1	47.5	49.7	48.7	47.1	43.3	43.3	35.9	34.9	35.4	35.6	35.2	35.6	36.9	185.7				
4 q	35.4	35.5	36.1	35.1	34.9	34.6	33.6	33.3	31.9	32.2	34.8	38.6	42.8	44.0	43.7	41.8	39.6	38.6	38.0	36.9	37.2	37.6	37.6	37.2	37.1	190.8				
5	25.6	27.2	33.0	34.1	33.8	33.5	32.7	32.2	31.4	32.2	35.3	39.2	42.4	45.8	45.6	43.1	40.4	40.2	40.2	41.5	39.4	37.9	33.3	35.2	36.5	175.2				
6	35.5	35.8	34.6	34.4	34.8	34.8	32.8	31.7	31.1	32.9	34.7	37.7	42.1	46.2	44.0	42.6	40.7	39.0	38.2	38.6	38.3	36.1	36.6	36.3	37.1	189.5				
7	35.9	33.4	32.2	32.3	31.5	32.3	35.3	34.8	33.8	32.1	34.8	39.8	42.3	43.3	43.1	43.4	41.8	38.8	38.1	37.9	36.9	33.9	24.8	24.6	35.7	157.1				
8	28.5	25.8	23.9	29.9	29.5	33.0	32.8	31.5	30.9	32.1	34.2	38.2	41.6	42.3	42.2	40.8	39.1	38.6	38.3	37.8	37.5	37.2	36.4	32.6	34.8	134.7				
9 q	35.5	34.5	34.3	34.5	34.1	33.8	33.8	32.5	31.2	31.4	34.7	37.5	40.2	42.2	42.3	41.6	39.5	38.8	38.5	38.6	38.4	36.8	36.9	36.5	36.6	178.1				
10 q	35.8	35.5	34.6	34.2	34.4	34.3	33.7	32.2	30.0	29.4	31.9	35.2	39.0	41.0	42.0	41.7	40.3	39.5	38.5	38.4	37.5	37.2	36.9	36.6	36.2	169.8				
11 q	33.3	34.0	35.0	35.3	34.6	34.4	33.8	31.9	29.9	30.1	33.8	36.4	40.8	42.6	42.7	42.1	40.2	39.2	38.8	39.2	38.0	34.4	33.2	33.1	36.1	166.8				
12 q	34.6	35.0	35.3	35.2	35.1	34.5	33.9	32.5	30.8	30.8	33.6	38.2	42.8	44.5	44.3	43.1	41.8	40.1	38.6	38.1	37.6	35.9	36.2	36.6	37.0	189.1				
13	36.5	35.9	35.8	36.0	35.9	35.1	35.8	33.2	31.4	31.9	35.3	40.9	47.0	47.4	47.2	43.5	40.8	39.3	38.3	38.4	38.3	37.4	37.2	36.1	38.1	214.6				
14	36.0	34.9	35.0	36.4	35.6	36.5	35.0	33.0	30.9	31.3	33.5	38.4	43.2	45.6	45.1	44.3	41.4	40.1	39.7	39.0	37.8	37.4	35.0	34.8	37.5	199.9				
15	33.1	34.5	36.1	35.1	34.5	35.5	34.0	32.7	31.8	32.3	35.1	39.2	42.8	42.9	43.6	42.8	42.0	40.5	40.0	39.3	37.2	34.7	35.9	35.4	37.1	191.0				
16	36.4	35.5	35.0	34.0	33.0	31.0	34.6	32.9	31.5	31.6	34.0	38.4	42.7	45.0	43.9	42.6	40.8	40.0	39.5	39.1	38.7	37.4	36.9	35.8	37.1	190.3				
17	35.6	34.5	35.4	33.5	35.3	33.0	31.6	31.9	29.6	30.0	33.7	39.2	42.7	44.3	43.5	42.0	40.2	39.5	39.4	38.3	36.6	36.8	34.4	33.0	36.4	174.0				
18	34.8	33.5	35.7	34.6	34.2	32.7	32.7	30.3	29.1	30.0	32.8	37.8	41.1	43.4	43.0	42.8	40.1	37.3	38.7	38.7	38.2	36.7	34.1	34.9	36.1	167.2				
19	35.5	36.1	36.9	36.4	35.9	34.7	33.9	32.0	30.8	32.0	35.9	42.1	44.2	45.2	46.3	46.3	40.3	40.9	40.8	38.9	38.2	36.3	33.8	35.0	37.9	208.4				
20	33.8	33.8	33.8	35.3	35.0	35.0	34.0	32.8	30.7	31.0	34.0	39.2	41.9	43.5	42.9	41.4	40.3	39.3	39.3	38.8	38.2	37.7	32.7	36.4	36.7	180.8				
21	34.1	35.8	34.8	32.8	33.3	33.8	33.7	32.3	30.3	30.7	35.0	39.8	42.4	43.4	43.4	40.6	38.3	38.1	38.5	38.9	38.2	37.2	36.0	36.5	36.6	177.9				
22 d	36.4	36.6	35.8	35.6	34.9	36.6	42.8	39.1	34.0	33.6	34.4	39.0	43.2	44.4	43.8	44.7	44.6	35.7	40.8	35.6	24.3	29.0	26.9	28.2	36.7	180.0				
23 d	30.5	30.3	32.6	34.8	34.8	35.3	34.5	36.8	33.7	33.9	36.8	39.2	39.3	38.4	38.6	36.4	38.5	43.1	40.4	31.3	30.2	28.9	29.7	27.7	33.5	35.2	144.2			
24 d	26.0	24.6	26.2	30.8	32.0	36.2	38.8	34.2	35.8	30.0	33.5	37.4	42.3	46.2	47.5	44.3	38.8	28.6	36.2	24.8	21.6	29.6	17.3	23.4	32.8	86.1				
25	29.6	32.4	33.9	34.0	33.8	33.0	32.5	31.6	30.3	30.5	31.3	33.5	36.3	38.2	38.3	38.6	38.4	37.3	36.8	36.3	35.9	35.8	34.5	35.0	34.5	127.8				
26	35.6	35.3	35.2	35.4	35.2	34.9	34.7	35.3	34.2	33.9	34.8	38.9	40.8	41.5	42.0	40.2	39.9	42.1	38.4	31.7	31.3	31.2	31.4	32.1	36.1	166.0				
27 d	32.5	33.2	37.4	36.1	36.8	34.8	33.4	32.7	30.9	31.3	35.8	40.1	41.1	42.4	41.2	41.0	40.8	41.6	32.0	38.2	26.3	22.4	30.0	30.2	35.1	142.2				
28 d	31.3	34.6	35.5	35.4	35.6	34.5	33.4	31.8	32.0	33.5	36.6	44.5	44.1	42.9	43.1	44.0	43.8	36.4	35.6	35.2	35.5	28.2	26.9	29.2	36.0	163.6				
29	30.7	32.6	35.1	35.2	35.3	34.9	33.4	31.8	31.0	32.7	33.0	37.2	39.9	40.4	39.7	39.1	36.8	35.7	37.9	36.9	20.6	21.2	27.2	32.0	33.8	110.9				
30	33.7	33.3	34.9	34.0	34.2	33.8	33.9	33.4	31.4	33.8	36.4	39.5	43.1	44.2	41.9	40.2	40.0	37.2	38.6	36.5	36.5	29.6	20.2	33.8	35.6	154.1				
31	34.6	36.0	36.1	35.8	35.7	35.3	35.3	33.6	33.0	32.9	36.3	39.2	41.8	42.1	42.1	41.7	38.7	39.4	39.0	38.6	36.0	35.5	36.2	36.1	37.1	191.0				
Mean	33.2	33.4	34.1	34.3	34.1	34.3	34.3	33.1	31.5	31.7	34.4	38.7	42.0	43.5	43.3	42.2	40.4	38.9	38.5	37.2	35.3	34.1	32.6	33.4	36.2					
Sum 900.0+	128.5	135.8	157.8	163.5	157.5	162.6	163.6	127.4	77.7	83.7	166.0	299.2	402.2	447.0	441.9	408.0	352.6	307.6	291.8	253.9	192.9	158.5	110.3	134.5		Grand Total 26924.5				

TERRESTRIAL MAGNETIC FORCE: VERTICAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

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24 ESKDALEMUIR (Z)		45,000γ (0.45 C.G.S. unit) +																						OCTOBER 1958			
	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	Sum 7000+
		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		335	334	332	331	330	327	326	324	327	331	325	324	324	323	323	328	329	330	330	330	338	348	338	300	329	887
2		304	298	293	288	294	308	312	319	321	324	321	314	309	313	319	328	329	327	326	328	329	330	316	315	315	565
3		319	320	320	307	308	300	301	315	327	333	330	317	317	330	327	343	361	379	401	377	355	343	336	329	333	995
4	q	326	326	322	323	326	326	328	327	326	328	325	320	318	319	322	325	329	328	330	331	329	327	327	324	325	812
5		312	305	316	320	323	325	327	326	329	327	320	315	312	310	314	320	325	325	334	333	338	337	342	334	324	769
6		331	327	327	326	325	317	320	323	320	318	315	311	309	312	313	315	320	323	326	326	327	335	331	328	322	725
7		327	326	324	320	317	316	313	312	314	318	315	311	311	312	312	319	340	343	338	340	335	328	327	313	322	731
8		304	298	294	298	293	307	313	318	323	321	320	316	316	317	320	321	324	323	321	323	323	323	323	323	315	562
9	q	321	321	320	316	315	317	319	323	325	320	315	313	313	313	315	317	319	320	320	321	323	325	324	324	319	659
10	q	321	321	320	320	319	319	321	325	326	327	321	316	313	312	312	315	317	320	323	323	324	322	321	320	320	678
11	q	320	320	320	320	319	320	321	324	325	324	312	308	305	306	309	313	316	317	318	320	323	321	315	317	317	613
12	q	319	320	320	320	320	319	320	321	323	317	307	301	297	300	307	309	312	313	314	315	317	319	320	318	315	548
13		317	316	316	315	313	313	310	313	312	313	304	298	299	300	298	308	319	323	326	323	320	319	318	320	313	513
14		318	319	318	315	314	314	316	321	322	321	313	297	293	298	308	314	318	315	315	316	317	319	321	320	314	542
15		319	318	319	319	316	315	316	317	317	314	307	304	305	304	309	318	323	319	315	320	324	321	320	319	316	578
16		317	317	315	313	308	309	311	316	324	331	324	314	308	308	310	315	320	320	320	320	321	321	321	320	517	603
17		320	320	318	318	313	310	317	324	330	332	322	314	312	308	311	318	321	321	325	328	329	326	323	316	320	676
18		316	320	319	313	319	320	324	330	332	330	325	312	309	311	316	324	326	327	324	324	323	325	323	318	321	710
19		317	317	318	317	316	317	320	324	324	319	312	307	308	309	313	321	342	349	344	339	336	332	330	326	323	757
20		313	316	319	320	321	321	322	326	327	324	312	303	301	304	308	313	315	317	317	320	320	319	317	312	316	587
21		315	315	317	310	307	309	312	320	324	320	310	308	312	312	315	324	326	324	326	323	321	323	323	321	317	617
22	d	316	315	315	312	302	301	294	299	306	312	317	321	330	333	336	346	387	417	408	397	372	360	338	355	337	1089
23	d	313	298	298	274	267	259	263	284	301	312	334	353	386	394	407	405	396	423	442	424	377	337	340	316	342	1203
24	d	302	308	285	234	269	281	300	320	325	343	373	375	415	449	449	450	469	463	423	411	372	389	322	277	359	1604
25		315	349	354	354	353	352	351	355	358	362	361	357	354	351	348	347	347	346	343	344	344	342	342	342	349	1371
26		341	340	340	338	337	335	336	336	338	338	335	332	336	337	343	354	360	363	370	364	346	347	349	347	344	1262
27	d	342	338	324	315	313	315	327	331	335	328	322	325	329	333	339	340	351	365	425	476	401	359	334	285	344	1252
28	d	307	332	341	343	343	342	340	337	334	333	330	326	332	343	347	363	382	386	366	377	367	348	316	304	343	1239
29		303	323	337	339	341	336	338	336	337	336	336	337	340	344	349	358	362	347	342	345	355	335	330	301	338	1107
30		286	293	316	330	332	332	332	333	336	336	332	331	336	342	358	359	358	362	366	357	345	342	342	330	337	1086
31		330	331	332	332	331	331	331	332	332	332	327	324	321	326	330	331	330	327	327	328	332	331	329	327	329	904
Mean		318	319	320	316	316	317	319	323	326	327	323	319	322	325	329	334	341	344	345	345	338	334	328	319	327	
Sum 9000+		846	901	909	800	804	813	881	1011	1100	1124	1022	904	970	1073	1187	1361	1573	1662	1705	1703	1483	1353	1158	901		Grand Total 243,244

DAILY EXTREMES OF TERRESTRIAL MAGNETIC ELEMENTS, MAGNETIC CHARACTER FIGURES (K AND C) AND TEMPERATURE IN MAGNET HOUSE

25 ESKDALEMUIR														OCTOBER 1958						
	TERRESTRIAL MAGNETIC ELEMENTS										3-hr. range indices K	Sum of K indices	Magnetic character of day (0-2)	Temperature in magnet house 200 +						
	Horizontal force			Declination			Vertical force													
	Maximum 16,000γ +	Minimum 16,000γ +	Range	Maximum 10° +	Minimum 10° +	Range	Maximum 45,000γ +	Minimum 45,000γ +	Range											
	h. m.	γ	h. m.	γ	h. m.	γ	h. m.	γ	h. m.	γ				°A.						
1	23 00	803	669	11 33	134	14 15	43.5	22.1	24 00	21.4	21 24	350	291	23 24	59	1, 3, 3, 3, 3, 2, 3, 5	23	1	85.6	
2	22 12	792	674	11 21	118	14 40	43.6	21.5	00 03	22.1	21 58	331	278	02 58	53	3, 3, 2, 2, 2, 1, 1, 3	17	0	85.6	
3	15 29	759	673	12 40	86	12 56	52.3	25.9	03 46	26.4	18 17	413	292	05 58	121	2, 3, 3, 2, 3, 3, 3, 1	20	1	85.6	
4 q	23 37	757	688	12 27	69	13 59	46.0	30.8	08 58	15.2	19 30	331	318	12 00	13	1, 0, 1, 1, 2, 2, 1, 2	10	0	85.6	
5	17 49	768	668	11 52	100	13 25	46.8	22.9	00 21	23.9	22 37	345	299	01 13	46	3, 1, 2, 3, 3, 3, 3, 3	21	1	85.6	
6	20 18	763	688	13 43	75	13 10	49.6	29.8	08 31	19.8	21 12	338	308	12 35	30	1, 2, 1, 3, 3, 2, 3, 3	18	0	-	
7	02 40	760	680	12 47	80	13 27	45.1	20.8	22 48	24.3	16 53	350	304	24 00	46	2, 3, 2, 2, 3, 3, 3, 4	22	1	85.6	
8	01 33	760	688	12 33	72	12 19	43.1	22.5	02 09	20.6	16 25	324	289	04 13	35	3, 3, 2, 2, 2, 1, 1, 2	16	0	85.6	
9 q	18 56	756	691	10 38	65	13 58	43.1	30.6	09 04	12.5	08 30	326	311	10 56	15	1, 1, 1, 2, 2, 2, 1, 1	11	0	85.6	
10 q	17 40	760	694	11 36	66	15 48	42.7	29.0	09 28	13.7	09 20	329	311	14 55	18	1, 1, 1, 1, 2, 2, 2, 1	11	0	-	
11 q	21 47	777	688	11 38	89	14 01	43.6	29.4	09 02	14.2	08 04	327	303	11 51	24	2, 1, 2, 2, 1, 1, 2, 3	14	0	85.7	
12 q	19 24	761	688	11 38	73	13 40	45.1	30.2	08 57	14.9	08 20	325	297	12 40	28	0, 0, 0, 1, 1, 2, 1, 1	6	0	85.8	
13	06 38	763	679	11 13	84	12 44	48.2	30.9	08 40	17.3	18 30	326	297	10 59	29	0, 1, 1, 3, 2, 2, 2, 1	12	0	-	
14	23 03	766	680	11 39	86	14 02	49.8	29.9	08 56	19.9	08 29	324	292	12 22	32	1, 2, 1, 2, 3, 2, 1, 2	14	0	85.8	
15	07 01	768	684	10 39	84	12 26	46.0	29.6	07 41	16.4	20 22	325	303	11 21	22	2, 1, 2, 2, 2, 2, 2, 2	15	0	85.8	
16	20 00	761	683	11 32	78	13 17	46.7	30.1	08 47	16.6	09 51	331	306	12 53	25	2, 3, 2, 2, 2, 2, 1, 1	15	0	85.8	
17	23 12	775	678	11 28	97	13 42	45.9	28.9	08 54	17.0	09 20	333	306	05 04	27	1, 2, 2, 2, 2, 3, 3, 2	17	0	85.8	
18	03 03	771	687	11 33	84	13 28	44.9	28.4	08 29	16.5	08 48	332	309	12 32	23	2, 2, 2, 1, 2, 2, 1, 2	14	0	85.7	
19	16 28	755	689	12 17	66	14 33	47.6	29.8	08 40	17.8	16 43	351	304	11 10	47	1, 1, 1, 2, 2, 3, 2, 2	14	0	85.7	
20	22 12	775	690	12 08	85	13 44	44.0	30.1	22 08	13.9	08 50	329	301	11 59	28	2, 0, 1, 1, 2, 2, 2, 3	13	0	-	
21	03 12	763	700	12 41	63	14 18	44.3	28.4	08 52	15.9	16 20	327	305	04 40	22	2, 2, 1, 1, 1, 1, 1, 1	10	0	85.7	
22 d	16 30	817	631	19 51	186	16 40	61.9	18.2	22 29	43.7	16 56	439	284	06 35	155	1, 4, 4, 3, 3, 5, 5, 5	30	1	85.7	
23 d	17 51	751	625	23 33	126	17 53	52.2	22.2	00 07	30.0	18 34	451	256	05 21	195	4, 4, 4, 2, 4, 4, 4, 4	30	1	85.7	
24 d	17 19	825	558	23 19	267	14 05	52.1	-1.0	22 16	53.1	17 23	550	219	03 15	331	4, 4, 5, 3, 4, 6, 5, 5	36	1	85.7	
25	23 56	721	635	11 12	86	16 17	38.9	26.7	00 00	12.2	09 50	364	276	00 00	88	3, 2, 3, 2, 1, 2, 1, 1	15	1	85.7	
26	19 45	748	665	12 34	83	17 47	43.0	27.9	20 37	15.1	18 23	372	331	11 00	41	1, 1, 2, 1, 2, 2, 4, 3	16	1	85.7	
27 d	18 28	831	570	20 46	261	19 19	49.6	6.3	21 02	43.3	19 35	530	262	23 32	268	3, 2, 1, 2, 2, 3, 6, 4	23	1	-	
28 d	07 43	793	652	12 44	141	12 12	51.4	17.9	22 03	33.5	17 37	401	292	00 00	109	3, 2, 4, 4, 4, 4, 4, 4	29	1	85.7	
29	20 39	767	672	10 26	95	12 38	41.3	14.6	20 31	26.7	16 09	367	280	23 45	87	3, 3, 2, 2, 1, 3, 5, 4	23	1	85.7	
30	22 38	752	659	11 46	93	13 00	45.8	13.6	22 24	32.2	18 27	370	281	00 48	89	3, 2, 2, 3, 3, 3, 3, 4	23	1	85.7	
31	22 23	759	671	11 35	88	12 58	43.2	30.9	07 59	12.3	07 58	335	319	12 40	16	2, 2, 2, 2, 2, 4, 1, 2	17	1	85.7	
Mean	-	-	770	668	-	-	46.5	24.5	-	22.0	-	-	363	294	-	69	-	-	0.45	85.7

TERRESTRIAL MAGNETIC FORCE: HORIZONTAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

22	ESKDALEMUIR (H)												16,000γ (0.16 C.G.S. unit) +												NOVEMBER 1958											
	Hour G.M.T.																									Sum										
	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	17,000+										
1	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											
2 d	744	742	741	741	743	746	748	744	723	701	701	701	708	723	738	755	756	754	753	751	753	745	746	746	738	703										
3 d	745	743	743	743	748	750	751	749	740	727	712	719	730	734	746	749	763	761	684	730	725	729	729	727	737	677										
4	727	720	727	727	720	709	716	716	719	705	695	698	703	698	722	727	728	726	731	736	736	741	736	742	721	305										
5 q	738	734	729	724	735	738	731	733	727	714	711	716	713	718	729	734	737	738	741	748	741	746	740	739	731	554										
	740	742	741	742	743	741	740	737	729	713	708	706	709	716	727	730	737	739	743	746	747	750	749	745	734	620										
6 q	744	744	744	746	748	747	746	741	731	720	713	712	719	728	738	740	746	749	751	753	754	751	751	747	740	763										
7	748	746	746	745	746	747	748	744	739	727	716	715	718	724	724	719	731	739	743	748	751	746	743	747	737	700										
8 q	748	746	745	747	749	753	753	750	736	716	700	697	704	713	725	732	738	745	749	748	750	750	747	749	737	690										
9	748	749	748	751	758	762	765	757	743	724	711	705	710	720	731	741	752	757	758	765	766	769	767	765	747	922										
10 d	764	763	763	766	768	777	783	781	761	739	708	694	707	704	712	729	748	749	736	739	734	730	734	738	743	827										
11 d	738	735	714	720	729	753	745	733	723	716	700	693	698	711	723	735	738	741	743	744	745	745	741	740	729	503										
12	740	740	741	738	737	747	744	743	738	731	723	717	712	724	711	733	738	742	745	739	741	727	731	740	734	622										
13	740	729	733	742	748	750	744	735	727	721	712	715	725	728	733	733	736	739	748	747	749	750	747	749	737	680										
14	747	747	749	743	748	751	746	743	735	726	716	711	715	728	735	735	742	748	753	753	755	755	734	741	740	756										
15	745	744	749	750	750	753	753	750	739	734	727	715	714	723	734	741	747	751	752	756	758	760	758	756	744	859										
16	754	746	752	756	758	761	760	752	742	734	719	715	711	717	725	724	738	728	751	752	750	749	752	752	742	798										
17	750	748	750	750	752	758	748	753	732	730	724	716	719	730	734	736	739	743	748	750	757	756	757	754	743	834										
18	750	751	750	752	755	757	759	750	733	726	718	717	712	723	727	728	733	739	738	730	729	725	735	739	737	676										
19	745	745	746	747	748	747	747	749	743	729	718	710	714	718	719	723	735	741	744	745	746	747	745	743	737	694										
20	745	746	749	754	751	752	753	746	743	736	729	717	723	730	729	731	734	745	750	754	753	752	750	751	743	823										
21	752	757	752	755	757	759	757	749	746	741	730	722	729	737	738	733	734	745	754	756	754	754	752	750	746	913										
22 q	752	753	747	750	753	756	754	753	748	739	729	726	724	731	741	746	753	756	759	760	759	758	758	756	748	961										
23	756	752	752	756	760	763	764	761	754	756	747	738	729	725	726	731	736	740	748	748	749	746	741	747	747	925										
24	750	751	752	752	753	753	751	744	731	723	723	726	720	704	710	721	732	736	735	736	736	738	748	746	736	671										
25	743	742	741	749	752	754	752	747	744	734	732	727	729	735	735	729	723	717	706	701	705	706	717	717	731	537										
26	721	726	736	726	730	732	734	732	730	722	714	710	708	711	714	716	722	724	733	748	744	742	740	733	727	448										
27	738	742	745	744	739	754	739	741	742	728	704	704	714	722	719	724	725	727	742	742	726	730	724	728	731	543										
28 d	732	740	747	763	761	738	748	749	747	739	724	722	717	709	733	736	738	745	744	739	737	734	731	736	738	709										
29	739	745	756	750	754	762	754	752	732	721	724	718	705	712	715	704	717	732	740	743	745	743	744	744	735	651										
30 q	742	743	743	741	739	739	742	739	734	732	728	726	727	733	734	736	739	745	748	751	751	751	750	749	740	762										
Mean	744	744	744	746	748	750	749	746	737	727	717	714	715	721	728	732	738	741	742	745	745	744	743	744	738											
Sum 21,000+	1325	1311	1331	1370	1432	1509	1475	1373	1111	804	516	408	466	629	827	951	1135	1241	1270	1358	1346	1325	1297	1316		Grand Total 531,126										

MAGNETIC DECLINATION (WEST)
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

23	ESKDALEMUIR (D)												10° +												NOVEMBER 1958	
	Hour G.M.T.																									Sum
	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	800.0+
1	35.6	35.9	35.5	35.8	35.9	35.7	35.3	34.1	31.8	31.0	33.6	37.6	40.2	41.9	41.7	41.6	41.2	41.4	41.5	39.6	38.6	35.6	33.8	36.0	37.1	90.9
2 d	35.7	35.0	34.5	35.0	35.2	34.9	34.8	34.2	33.1	33.3	35.1	40.1	43.1	44.7	46.9	47.0	47.7	51.0	39.5	36.1	35.8	35.8	34.0	32.0	38.1	114.5
3 d	29.8	32.0	35.6	30.8	33.5	34.3	34.4	33.9	32.7	32.8	34.1	37.5	40.6	41.7	43.9	43.0	41.9	41.0	39.2	38.4	38.4	35.3	34.6	32.1	36.3	71.5
4	32.7	34.1	31.9	34.5	33.2	32.9	33.7	33.7	33.3	33.8	35.9	39.3	41.7	40.5	40.0	38.5	38.2	37.8	38.6	37.9	35.4	33.4	35.9	36.2	36.0	63.1
5 q	35.9	35.0	35.4	35.5	35.3	35.0	34.2	33.8	32.3	32.3	34.5	37.7	40.2	40.7	40.6	39.1	38.5	38.0	37.4	37.4	36.7	36.1	35.2	35.6	36.3	72.4
6 q	36.1	35.7	35.3	35.3	34.9	34.6	34.1	33.6	32.3	32.2	34.4	36.8	39.1	39.5	39.9	39.1	38.9	39.2	39.5	38.6	37.9	37.2	33.8	35.9	36.4	73.9
7	35.8	35.0	35.1	34.8	34.6	33.8	33.9	33.5	33.0	33.5	35.5	39.0	42.7	44.7	44.5	44.4	41.2	38.8	38.1	37.6	37.1	33.5	33.6	34.8	37.0	88.5
8 q	35.8	36.1	35.5	35.4	34.9	34.2	33.9	33.4	32.2	32.2	34.1	37.5	40.4	41.6	41.7	39.8	39.0	38.8	38.1	37.5	36.4	36.2	35.1	35.2	36.5	75.0
9	35.3	36.1	36.4	36.4	36.3	36.2	34.3	33.7	32.0	32.0	34.3	37.0	39.0	40.4	40.7	40.0	39.3	38.8	38.3	38.1	37.7	37.3	37.1	36.9	36.8	83.6
10 d	36.9	37.0	37.2	37.3	37.0	37.6	36.9	35.7	34.3	33.5	38.3	37.0	39.1	41.3	40.9	40.0	40.3	42.0	41.8	40.1	34.9	35.7	34.3	33.5	37.6	102.6
11 d	30.1	23.0	21.9	31.8	30.5	35.0	37.3	34.6	33.7	34.4	35.4	38.3	39.6	39.8	39.7	38.7	38.9	38.5	38.2	38.1	37.0	35.5	35.3	35.2	35.0	40.5
12	35.1	35.5	34.9	34.6	34.6	34.8	34.4	34.3	34.0	34.0	35.6	37.8	39.8	41.8	38.3	38.5	38.6	38.9	39.5	33.9	34.5	32.8	33.3	34.3	36.0	63.8
13	34.0	32.8	32.7	32.1	32.2	31.7	32.7	34.4	34.8	34.5	36.5	38.8	39.9	40.2	38.8	38.4	38.2	38.2	38.1	37.5	36.7	36.1	35.7	35.6	35.9	60.6
14	35.1	35.4	34.8	35.4	35.3	34.9	34.2	33.5	32.8	33.0	34.3	36.5	38.2	39.1	38.6	38.5	38.5	38.4	38.0	37.7	37.1	36.4	32.0	34.4	35.9	62.1
15	32.0	34.3	34.8	35.3	33.7	33.8	34.2	33.9	33.8	34.8	36.4	39.5	40.8	41.6	40.6	39.7	39.0	38.1	38.0	37.2	36.5	35.9	35.2	35.0	36.4	74.1
16	33.7	33.5	34.5	35.0	34.8	33.8	35.0	34.3	33.0	33.8	35.7	40.0	42.0	42.7	44.7	42.6	40.2	38.5	37.8	37.0	36.7	36.3	35.4	34.2	36.9	85.2
17	34.0	34.0	34.6	34.8	35.4	34.4	35.5	35.4	33.9	35.1	37.1	38.6	39.8	40.8	40.2	39.6	39.2	37.8	37.7	36.7	35.6	33.4	34.7	33.2	36.3	71.5
18	34.7	35.1	35.3	34.9	35.6	35.3	35.0	34.3	34.8	34.5	37.3	39.4	40.4	42.5	43.9	42.7	42.2	38.8	39.0	36.7	32.8	31.3	32.3	34.3	36.8	83.1
19	35.3	35.7	35.5	35.9	35.8	34.9	34.8	34.4	33.8	35.5	37.0	39.5	40.7	41.7	40.1	38.5	37.6	36.6	35.6	35.8	36.0	35.9	35.7	36.5	77.1	
20	36.0	35.5	37.1	34.8	34.2	34.0	34.1	33.8	33.5	33.7	35.0	37.2	39.5	40.3	40.9	40.5	39.9	38.2	37.3	36.8	36.4	36.2	35.9	35.6	36.5	76.4
21	35.9	33.9	35.0	35.4	35.2	34.6	34.7	34.7	34.4	34.8	36.4	38.0	40.9	41.3	41.3	41.8	40.7	38.3	36.8	36.8	36.7	36.2	35.8	35.0	36.9	84.6
22 q	34.1	33.0	33.2	33.8	34.4	34.6	34.5	34.0	34.0	34.6	36.3	38.4	39.2	38.4	39.4	39.4	38.2	37.5	37.4	37.3	36.7	36.2	36.0	35.1	36.1	65.7
23	34.9	34.1	34.5	35.4	35.9	35.2	35.1	35.2	35.3	35.9	35.5	38.3	38.6	39.1	38.5	38.3	39.1	38.7	37.3	36.9	36.3	35.8	35.4	35.6	36.5	74.9
24	36.0	36.1	36.1	36.0	35.9	35.7	35.7	36.7	36.2	34.8	37.7	41.2	40.4	40.8	39.5	37.8	36.1	35.2	35.1	35.3	33.0	33.5	34.7	34.8	36.4	74.3
25	35.0	35.0	35.1	34.6	34.8	34.8	34.8	34.6	34.3	34.7	36.4	38.2	39.6	41.5	41.4	42.8	39.9	38.1	37.8	35.3	34.0	32.6	30.6	26.3	35.9	62.2
26	31.0	33.4	34.0	36.0	35.8	35.6	34.8	34.1	33.0	33.8	35.9	37.6	38.8	40.2	41.4	42.2	41.5	41.5	37.7	35.2	36.4	35.1	33.8	31.6	36.3	70.4
27	33.3	34.2	34.4	35.1	36.6	36.5	34.4	34.4	34.1	34.0	37.1	38.2	39.6	41.3	41.2	40.9	41.8	37.2	37.0	38.7	36.3	33.4	32.8	29.6	36.3	72.1
28 d	32.1	34.6	35.4	32.5	30.8	33.2	35.1	39.9	38.9	35.9	38.4	39.8	43.2	40.8	40.6	39.3	38.1	37.7	37.4	36.9	35.4	34.1	30.4	32.3	36.4	72.8
29	33.6	35.5	33.1	31.0	32.7	35.1	34.9	35.1	34.3	35.8	36.6	36.9	39.8	42.1	43.2	43.0	39.2	37.1	36.2	35.5	35.1	35.0	34.9	34.1	36.2	68.8
30 q	34.9	35.5	35.4	35.0	34.7	35.0	35.1	35.1	34.7	35.4	36.4	38.2	39.2	38.9	39.0	38.7	38.1	37.6	37.0	36.7	36.3	35.8	35.4	35.2	36.4	73.3
Mean	34.3	34.4	34.5	34.7	34.7	34.7	34.7	34.6	33.8	33.9	35.8	38.3	40.2	41.0	41.1	40.5	39.7	39.0	38.1	37.1	36.1	35.1	34.4	34.2	36.5	
Sum 1000.0+	30.4	32.0	34.7	40.2	39.7	42.1	41.8	36.7	14.9	17.9	74.3	147.4	204.9	230.9	233.7	216.0	192.1	168.7	141.9	113.1	84.2	53.7	32.9	25.3		Grand Total 26249.5

TERRESTRIAL MAGNETIC FORCE: VERTICAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

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24 ESKDALEUIR (Z)												45,000γ (0.45 C.G.S. unit) +												NOVEMBER 1958																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
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DAILY EXTREMES OF TERRESTRIAL MAGNETIC ELEMENTS, MAGNETIC CHARACTER FIGURES (K AND C) AND TEMPERATURE IN MAGNET HOUSE

25 ESKDALEUIR												NOVEMBER 1958											
	TERRESTRIAL MAGNETIC ELEMENTS											3-hr. range indices K	Sum of K indices	Magnetic character of day (0.2)	Temperature in magnet house 200 +								
	Horizontal force			Declination			Vertical force																
	Maximum 16,000γ +	Minimum 16,000γ +	Range	Maximum 10° +	Minimum 10° +	Range	Maximum 45,000γ +	Minimum 45,000γ +	Range														
	h. m.	γ	γ	h. m.	γ	h. m.	γ	h. m.	γ	γ	h. m.	γ				°A.							
1	14 57	761		693	10 44	68		14 58	43.2		29.9	09 03	13.3	21 50	338	315	12 40	23	1, 1, 3, 2, 3, 2, 2, 2	16	0	85.7	
2 d	16 26	790		648	18 17	142		17 49	57.6		32.3	08 28	25.3	17 41	471	307	11 30	164	1, 1, 1, 2, 2, 5, 4, 3	19	1	85.6	
3 d	21 30	749		686	13 43	63		14 17	46.0		28.9	01 00	17.1	16 33	342	325	05 20	17	3, 3, 2, 2, 3, 2, 2, 2	19	0	85.7	
4	19 27	752		704	12 30	48		12 02	48.5		30.7	21 10	17.8	20 54	334	311	04 56	23	2, 2, 1, 3, 3, 1, 3, 3	18	0	-	
5 q	21 36	751		699	10 19	52		13 17	41.3		31.4	09 03	9.9	08 22	332	311	12 55	21	1, 0, 1, 1, 1, 1, 1, 1	7	0	-	
6 q	22 53	760		708	11 22	52		14 22	40.3		31.3	22 44	9.0	22 42	332	315	12 40	17	0, 0, 1, 1, 2, 1, 1, 2	8	0	-	
7	20 19	755		707	11 15	48		15 18	45.7		31.1	21 37	14.6	21 30	332	313	11 57	19	1, 1, 1, 2, 2, 2, 1, 2	12	0	85.6	
8 q	21 12	756		694	11 10	62		14 21	42.2		31.4	09 08	10.8	09 10	332	321	05 58	11	0, 1, 1, 2, 1, 1, 1, 1	8	0	85.6	
9	21 45	770		704	11 34	66		14 38	41.2		31.4	08 29	9.8	08 37	328	312	12 46	16	0, 2, 2, 2, 2, 2, 1, 1	12	0	85.6	
10 d	05 55	787		685	11 02	102		13 56	44.1		32.5	23 35	11.6	20 42	352	304	07 20	48	1, 2, 2, 3, 2, 3, 3, 2	18	1	-	
11 d	05 43	774		688	11 43	86		13 34	42.1		14.2	02 08	27.9	00 12	344	303	02 05	41	4, 3, 3, 2, 2, 1, 1, 1	17	1	85.6	
12	20 15	760		692	14 16	68		13 36	44.0		29.8	19 32	14.2	21 37	343	320	12 03	23	1, 2, 1, 2, 3, 2, 3, 2	16	0	85.6	
13	04 09	757		710	11 31	47		13 17	40.9		29.7	04 08	11.2	15 12	333	316	05 44	17	2, 2, 2, 1, 1, 1, 1, 1	11	0	-	
14	21 26	757		709	11 43	48		13 37	39.5		31.0	22 20	8.5	22 32	332	317	13 30	15	2, 1, 1, 0, 2, 1, 0, 3	10	0	85.7	
15	22 21	760		708	12 28	52		13 08	44.9		30.6	00 08	14.3	09 04	328	317	06 48	11	2, 1, 1, 1, 2, 1, 0, 0	8	0	85.7	
16	04 50	770		703	13 03	67		14 33	45.5		30.8	08 51	14.7	15 55	330	316	10 02	14	2, 3, 2, 2, 2, 2, 0, 1	14	0	85.7	
17	21 04	768		707	11 49	61		14 04	41.3		32.0	08 53	9.3	17 12	328	311	05 30	17	1, 2, 2, 2, 2, 2, 1, 2	14	0	-	
18	05 59	760		704	21 13	56		14 17	44.4		26.8	20 42	17.6	19 57	344	313	00 54	31	1, 0, 2, 1, 2, 2, 3, 3	14	0	85.7	
19	08 06	752		708	11 36	44		14 57	42.1		33.4	09 22	8.7	15 07	330	316	11 00	14	1, 1, 1, 1, 1, 2, 0, 0	7	0	85.7	
20	03 15	758		711	11 51	47		14 24	41.4		33.1	08 26	8.3	16 12	327	314	03 18	13	1, 1, 1, 1, 2, 1, 0, 0	7	0	85.7	
21	00 59	761		721	11 22	40		15 28	42.4		33.2	01 17	9.2	16 57	328	315	03 01	13	1, 0, 1, 1, 2, 2, 0, 0	7	0	85.7	
22 q	22 09	762		721	12 35	41		14 37	39.9		32.6	01 29	7.3	21 15	323	315	14 20	8	1, 1, 0, 0, 1, 0, 0, 0	3	0	85.7	
23	05 44	765		713	13 49	52		13 03	41.8		33.7	01 08	8.1	17 29	328	304	10 03	24	1, 0, 0, 2, 2, 1, 1, 1	8	0	85.7	
24	22 21	757		698	13 22	59		13 37	42.3		31.8	20 56	10.5	15 07	338	316	11 23	22	0, 0, 1, 2, 3, 2, 2, 2	12	0	-	
25	04 01	757		689	19 18	68		15 37	45.1		23.6	23 22	21.5	19 18	373	312	10 20	61	1, 1, 1, 1, 2, 3, 3, 3	15	1	85.7	
26	19 13	759		701	11 29	58		16 58	43.5		27.7	00 01	15.8	17 53	346	313	02 28	33	3, 1, 1, 1, 1, 2, 3, 2	14	0	85.7	
27	05 33	760		699	11 22	61		13 07	42.6		28.8	23 36	13.8	17 50	346	308	05 40	38	1, 2, 1, 2, 2, 3, 3, 2	16	0	85.7	
28 d	04 31	778		696	13 29	82		12 32	46.1		28.6	04 01	17.5	00 00	332	297	03 41	41	3, 3, 3, 3, 3, 2, 2, 2	21	1	85.6	
29	05 35	767		695	15 31	72		15 20	44.8		28.8	02 51	16.0	15 58	340	294	02 32	46	3, 2, 2, 2, 1, 3, 1, 1	15	0	85.6	
30 q	20 13	753		721	11 42	32		12 43	40.4		34.3	08 37	6.1	00 42	326	319	12 04	7	0, 1, 0, 1, 1, 0, 0, 0	3	0	85.6	
Mean	- -	762		701	- -	61		- -	43.5		30.2	- -	13.3	- -	340	312	- -	28	-	-	0.17		85.7

TERRESTRIAL MAGNETIC FORCE: HORIZONTAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

22	ESKDALEMUIR (H)												16,000γ (0.16 C.G.S. unit) +												DECEMBER 1958											
	Hour G.M.T.																									Sum										
	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	16,000+										
1 q	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	1929									
2	747	748	748	747	749	751	752	748	743	738	735	735	736	737	738	741	748	754	760	756	756	756	755	751	747	735	1640									
3	752	750	748	747	747	745	746	750	750	751	740	723	726	714	716	719	720	755	714	719	723	724	728	733	735	1598										
4 d	726	721	727	725	732	731	728	726	725	723	722	721	721	725	730	735	742	746	751	749	748	750	748	746	733	706	941									
5 d	755	759	749	751	753	761	756	756	746	713	701	721	708	701	699	697	707	720	654	609	626	641	670	588	706	363										
	668	634	624	647	663	661	662	671	676	678	679	677	671	676	681	690	706	710	714	715	716	715	720	709	682											
6	710	711	715	723	725	726	723	722	719	710	690	695	709	699	708	704	694	708	716	720	727	721	708	718	713	1101										
7 q	724	729	733	737	745	746	735	725	722	714	709	712	714	716	719	723	731	740	743	745	742	744	742	739	730	1529										
8	739	740	740	740	740	741	741	739	736	735	728	723	732	736	730	730	734	741	747	741	740	736	738	736	737	1683										
9	737	721	716	718	725	727	735	725	725	721	716	712	722	723	735	738	747	745	745	748	750	750	747	744	732	1572										
10 q	743	739	740	736	735	730	735	731	724	720	718	721	730	737	740	739	742	743	746	747	747	749	749	750	737	1691										
11	750	751	747	748	754	750	751	746	745	746	746	742	740	739	740	742	745	748	753	755	751	744	745	742	747	1920										
12 q	747	744	747	739	742	745	746	744	741	739	731	731	729	733	735	736	742	747	748	753	751	739	731	732	741	1772										
13 d	753	727	736	735	740	749	747	753	756	747	742	744	751	731	723	720	756	732	731	683	702	714	694	696	732	1562										
14	694	699	708	715	723	711	717	720	719	717	711	705	709	700	692	686	703	702	705	721	692	710	740	718	709	1017										
15	723	724	724	727	732	734	732	731	729	730	728	720	717	727	728	731	727	737	744	745	752	740	741	748	732	1571										
16	752	747	750	729	742	755	748	752	748	739	744	747	735	735	733	727	732	739	750	749	750	748	748	745	743	1844										
17 d	742	743	743	744	747	753	754	753	745	739	733	739	734	734	732	736	754	733	735	727	716	702	695	592	730	1525										
18 d	610	642	612	701	714	713	709	712	712	711	704	695	699	703	702	711	719	727	732	735	729	723	718	722	702	855										
19	718	724	707	728	705	717	728	730	719	687	704	703	693	692	704	699	712	723	718	731	733	736	735	734	716	1180										
20	733	735	726	733	748	757	752	738	724	715	714	705	714	720	724	727	716	726	733	735	737	741	737	739	730	1529										
21	739	735	741	742	744	741	741	736	726	723	716	717	717	725	727	724	726	731	731	739	743	743	744	739	733	1590										
22	731	746	738	738	747	753	749	747	737	724	716	721	723	729	722	728	736	743	741	718	738	752	741	742	736	1660										
23	742	739	742	742	749	753	757	761	744	738	734	729	720	726	718	728	744	721	726	724	730	731	726	739	736	1663										
24	740	744	738	739	741	744	742	739	735	730	726	720	720	718	728	739	743	745	747	751	752	750	754	746	739	1731										
25 q	748	749	748	749	751	753	754	753	748	736	727	730	728	734	735	734	738	742	746	749	754	753	755	761	745	1875										
26	754	752	750	745	751	752	753	752	748	738	736	741	739	726	742	741	739	723	730	749	750	744	730	729	742	1814										
27	735	742	740	742	749	744	748	738	731	721	714	712	721	725	733	738	727	738	744	749	748	748	745	746	737	1678										
28	746	739	739	737	746	752	761	748	742	736	727	726	731	735	730	719	736	745	741	754	741	735	752	748	740	1766										
29	753	738	736	736	739	748	742	740	738	733	730	727	726	731	734	744	741	749	742	737	732	741	726	731	737	1694										
30	734	738	743	740	742	746	751	744	736	731	729	730	731	744	754	744	745	747	736	735	733	742	752	743	740	1770										
31	745	754	746	743	746	752	752	748	743	739	729	723	724	736	746	748	750	751	754	749	759	758	756	753	746	1904										
Mean	732	731	729	733	738	740	740	738	733	727	722	721	722	723	725	726	732	736	735	733	735	735	735	728	731											
Sum 22,000+	690	664	601	723	866	941	947	878	732	522	379	347	370	407	478	518	702	811	777	737	768	780	770	559		Grand Total 543,967										

MAGNETIC DECLINATION (WEST)
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

23 ESKDALEMUIR (D)													10° +													DECEMBER 1958												
	Hour G.M.T.																										Sum											
	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	700.0+												
1 q	35.1	35.4	35.4	35.1	35.4	35.3	35.0	34.5	34.4	34.6	35.5	36.6	37.3	38.1	38.2	38.8	38.8	38.3	38.2	37.2	36.2	35.8	35.5	35.3	36.3	170.0												
2	35.2	34.5	33.2	33.3	33.3	34.5	34.6	35.0	35.2	35.3	36.1	38.7	41.0	42.3	42.8	47.3	46.7	48.0	45.6	37.4	38.7	27.9	30.5	34.0	37.5	201.1												
3	33.0	29.6	26.0	31.9	34.5	34.0	35.2	35.0	35.8	36.2	37.8	38.9	39.8	39.7	39.1	39.0	39.1	38.2	37.7	36.9	36.3	36.0	35.8	35.4	35.9	160.9												
4 d	35.5	35.5	34.5	34.4	35.0	34.6	34.2	33.9	33.8	33.5	36.3	40.4	42.3	42.5	43.1	39.3	43.6	48.6	30.9	22.5	33.3	30.8	20.4	21.9	35.0	141.0												
5 d	13.3	-1.9	18.5	20.4	29.8	33.2	34.0	35.9	36.6	35.8	36.6	37.0	37.4	37.7	37.4	37.1	37.6	37.3	36.9	36.7	35.2	33.6	34.2	34.8	31.9	65.1												
6	34.1	33.7	34.1	34.1	33.8	33.8	33.7	34.0	33.7	34.9	35.3	38.9	41.1	39.8	41.9	41.8	43.2	37.6	37.0	36.4	35.3	34.6	31.0	31.1	36.0	164.9												
7 q	35.2	35.2	35.2	35.5	34.5	34.6	34.8	33.7	33.5	33.3	35.1	36.6	38.3	39.0	38.7	37.9	37.8	37.2	36.8	36.0	35.6	35.6	35.9	34.7	35.9	160.7												
8	35.2	35.1	34.6	34.5	34.6	34.5	34.3	34.2	34.4	34.6	35.9	38.3	39.1	40.6	40.8	41.5	42.4	38.0	37.4	38.9	30.3	34.9	34.8	30.1	36.2	169.0												
9	30.3	28.6	31.0	34.4	35.4	35.0	33.2	36.2	36.3	34.9	36.4	38.6	38.6	38.6	39.1	38.6	38.2	37.3	36.6	35.9	35.5	35.4	35.8	35.4	35.6	155.3												
10 q	35.3	35.2	34.6	32.9	31.9	32.6	33.0	34.1	33.7	34.2	36.3	38.4	39.0	39.0	38.7	37.9	37.1	36.7	36.4	36.2	35.5	35.4	35.4	35.5	35.6	154.7												
11	35.6	34.9	34.7	33.8	32.5	33.7	33.8	33.5	33.7	35.4	36.9	38.2	38.5	39.6	38.2	38.3	38.3	37.8	37.6	37.3	36.9	36.2	27.6	34.4	35.7	157.4												
12 q	34.9	33.6	30.5	31.9	34.0	34.2	34.3	34.2	34.1	34.6	35.1	36.8	42.5	39.5	39.0	38.5	37.5	36.9	37.9	37.6	36.3	33.8	29.9	32.7	35.2	145.3												
13 d	30.3	27.3	25.1	19.3	27.8	29.9	32.7	33.4	34.0	35.2	37.1	39.0	37.8	44.6	42.7	43.5	47.6	52.1	53.6	42.2	38.1	30.4	25.5	31.5	36.1	165.7												
14	32.2	34.5	35.6	36.0	36.5	35.1	34.5	34.3	34.6	36.1	36.8	36.9	37.2	37.1	38.3	38.8	40.4	40.6	39.0	32.3	31.8	32.9	31.1	29.1	35.5	151.7												
15	33.5	34.3	34.5	34.5	34.7	34.8	34.4	34.3	34.4	34.2	36.3	37.4	37.2	38.6	39.0	40.4	39.6	35.6	38.6	37.2	35.2	34.8	32.8	33.2	35.8	159.5												
16	34.2	33.7	32.9	33.9	35.6	32.4	34.1	34.5	34.8	34.3	35.7	39.7	38.7	39.5	39.2	37.4	36.9	36.9	37.4	36.2	35.5	34.9	34.9	34.9	35.8	158.2												
17 d	35.0	35.5	35.9	36.1	36.2	36.0	35.6	35.1	34.9	35.1	36.3	37.4	37.1	37.9	38.4	38.1	39.3	42.4	25.2	33.8	34.1	32.5	33.6	21.7	35.1	143.2												
18 d	23.2	16.3	17.5	31.8	34.3	36.8	33.8	33.8	33.9	34.3	34.7	36.0	36.8	36.4	36.6	36.9	36.6	36.2	35.5	35.9	35.4	32.4	32.7	33.9	33.0	91.7												
19	33.5	23.2	20.4	27.8	30.7	34.2	37.4	35.9	35.2	34.9	35.0	37.2	37.1	37.5	37.8	37.6	34.0	37.6	36.0	34.8	30.0	33.0	33.8	34.1	33.7	108.7												
20	33.8	34.9	35.3	37.8	35.0	36.4	36.8	35.6	33.8	33.4	36.3	37.6	38.9	41.0	39.2	37.5	36.2	36.7	37.2	35.0	29.8	30.9	34.8	34.8	35.8	158.7												
21	34.6	34.4	35.3	33.3	34.1	34.5	35.2	34.5	32.9	34.2	35.3	36.2	38.4	39.3	39.9	38.0	37.1	36.7	36.3	31.8	34.5	34.7	33.7	33.3	35.3	148.2												
22	34.5	37.4	34.8	35.0	34.8	35.0	35.4	35.0	33.7	33.8	34.3	36.1	37.1	38.5	38.0	37.8	37.9	37.3	37.7	32.9	34.5	32.7	32.9	34.2	35.5	151.3												
23	34.7	35.3	35.6	35.4	35.0	35.1	34.9	34.3	35.1	35.7	38.0	38.4	38.9	40.4	40.9	37.4	37.7	34.6	30.3	35.5	33.7	32.6	30.6	33.7	35.6	153.8												
24	34.0	33.7	34.4	34.6	36.3	36.1	34.8	34.3	32.6	32.4	34.0	35.5	38.6	39.6	39.1	38.4	37.3	37.2	35.7	35.6	34.7	34.9	31.9	33.1	35.4	148.8												
25 q	34.5	35.1	35.4	35.7	35.6	35.4	34.8	33.8	32.7	33.3	33.7	34.8	36.8	38.8	39.0	37.2	37.6	37.0	36.9	35.9	35.2	35.0	34.8	34.8	35.6	154.8												
26	34.9	33.3	33.4	32.8	34.3	33.9	34.7	34.1	33.4	34.2	35.8	37.3	39.2	39.6	39.0	38.9	40.0	40.8	36.0	35.6	35.3	29.2	25.7	31.1	35.1	142.5												
27	31.9	33.3	33.3	32.8	32.0	33.9	34.4	33.7	33.5	34.7	36.4	36.2	38.0	41.1	39.4	38.1	37.2	37.7	36.8	35.8	35.3	34.8	34.4	33.8	35.4	148.5												
28	27.9	32.0	31.6	34.0	33.8	34.5	35.2	34.2	35.3	35.8	37.7	36.9	38.8	40.8	40.7	38.9	39.1	37.4	36.7	31.9	32.9	33.0	33.2	31.3	35.1	143.6												
29	33.8	33.8	34.4	34.8	34.8	33.8	35.0	34.0	33.3	34.2	34.7	35.1	37.6	41.1	39.5	39.0	39.7	39.2	37.7	35.7	37.8	32.9	29.9	29.3	35.5	151.1												
30	30.4	33.6	34.3	34.8	35.4	35.0	34.3	34.4	34.7	35.0	35.7	38.1	41.2	39.9	40.4	40.0	38.9	39.4	38.5	36.0	32.8	33.4	34.6	31.8	35.9	162.6												
31	34.9	36.5	35.4	35.8	34.6	33.5	33.3	33.1	33.0	33.1	34.6	36.4	39.7	40.6	39.2	38.4	38.5	38.0	37.8	35.1	35.8	35.5	35.6	35.2	36.0	163.6												
Mean	32.7	31.9	32.2	33.2	34.1	34.4	34.6	34.4	34.2	34.5	35.9	37.4	38.7	39.7	39.5	39.0	39.1	38.9	37.2	35.4	34.8	33.6	32.4	32.6	35.4													
Sum 900.0+	114.2	87.5	97.4	128.4	156.2	166.3	171.4	166.5	161.0	171.2	211.7	259.6	300.0	329.7	323.3	308.3	311.9	305.3	251.9	198.2	177.7	140.5	103.3	110.1		Grand Total 26351.6												

TERRESTRIAL MAGNETIC FORCE: VERTICAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, G.M.T.

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24 ESKDALEMUIR (Z)														45,000 γ (0.45 C.G.S. unit) +														DECEMBER 1958									
	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	Sum 7000+											
	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 q	321	321	320	320	320	320	320	320	320	322	323	320	319	317	318	319	322	323	321	320	320	320	320	320	320	320	686										
2	320	321	321	321	320	320	319	317	316	316	316	321	326	335	343	343	353	355	381	381	379	372	355	341	337	1092											
3	339	340	335	331	328	327	327	327	325	324	325	326	326	326	327	327	325	325	326	326	326	326	325	324	324	328	861										
4 d	323	320	321	320	320	319	319	318	320	326	332	332	335	364	382	404	419	483	506	411	400	427	369	313	362	1683											
5 d	253	247	301	308	333	342	347	350	353	356	355	351	353	353	351	350	349	347	346	344	346	347	346	350	337	1078											
6	349	347	346	343	341	339	339	339	339	340	339	336	339	346	351	354	363	365	361	355	349	347	352	347	347	1326											
7 q	337	335	333	332	329	326	327	331	332	331	327	327	326	330	332	332	332	332	332	332	332	332	333	334	331	946											
8	332	331	330	329	328	328	328	328	328	327	326	327	327	327	331	340	338	338	335	341	349	342	340	344	333	994											
9	337	331	334	338	336	336	332	331	327	326	322	323	326	326	328	331	331	329	330	331	331	330	330	332	330	928											
10 q	332	332	332	332	331	331	330	329	332	330	324	324	327	326	328	331	331	330	330	329	329	328	328	328	329	904											
11	327	327	327	326	323	323	323	324	320	320	321	322	327	327	329	331	330	329	328	329	331	334	336	330	327	844											
12 q	327	329	327	328	326	325	324	324	324	320	319	318	318	317	320	324	327	326	326	327	331	338	338	331	326	814											
13 d	304	312	286	281	301	310	314	317	315	310	307	307	311	330	349	363	401	393	472	454	419	393	374	360	345	1283											
14	349	344	335	338	337	340	340	339	338	336	335	335	335	338	350	360	367	369	372	392	381	374	344	332	349	1380											
15	342	342	342	339	336	335	335	334	332	332	327	327	326	328	332	336	339	342	335	335	335	336	338	332	335	1037											
16	330	329	327	330	326	321	323	323	323	323	316	311	320	323	324	331	334	332	330	330	329	328	327	326	326	816											
17 d	325	324	323	323	323	323	324	325	329	328	327	324	322	322	327	330	331	344	410	445	396	388	400	308	343	1221											
18 d	187	224	139	254	303	326	337	340	339	335	338	342	339	338	338	342	340	340	340	342	344	348	360	357	316	592											
19	346	308	282	277	301	313	311	321	332	338	338	341	340	354	355	356	356	349	353	347	346	338	335	335	332	972											
20	332	324	320	319	319	319	320	323	330	327	326	326	320	328	339	341	347	348	346	344	346	341	333	332	331	950											
21	327	328	327	326	326	327	328	330	332	334	336	339	339	336	342	345	344	342	344	345	339	336	335	333	335	1040											
22	329	317	320	327	328	328	329	330	332	330	330	327	326	326	330	333	332	332	334	347	342	333	332	332	330	926											
23	331	330	328	328	325	324	323	324	326	326	328	331	331	338	340	342	339	347	355	349	348	346	345	339	335	1043											
24	335	330	327	326	325	326	328	332	332	330	327	326	327	332	332	333	332	332	331	331	332	331	331	331	330	919											
25 q	330	329	329	328	327	326	326	327	328	327	332	326	320	321	327	331	332	330	330	330	330	328	328	326	328	868											
26	327	328	327	327	325	324	324	326	326	327	327	324	317	332	332	329	333	342	352	338	334	336	339	335	330	931											
27	330	327	328	329	320	316	317	324	329	330	330	332	330	335	341	339	343	341	337	335	333	333	334	332	331	945											
28	330	328	328	328	328	327	324	326	326	326	324	327	325	330	338	343	339	336	338	338	336	337	333	332	331	947											
29	323	320	328	331	332	331	331	332	332	331	332	327	318	324	332	333	334	334	336	343	343	343	345	343	332	978											
30	338	333	331	330	329	329	328	330	330	330	328	320	316	324	325	326	330	332	339	342	344	342	336	335	331	947											
31	331	321	320	324	326	326	326	324	324	324	325	326	324	330	330	330	328	328	330	332	330	327	326	326	327	840											
Mean	324	322	319	322	325	326	327	328	329	329	328	327	327	332	336	340	343	345	352	350	346	345	341	333	333												
Sum 9000+	1043	979	874	993	1072	1107	1123	1165	1191	1183	1163	1145	1135	1283	1423	1529	1621	1695	1906	1845	1730	1680	1566	1340		Grand Total 247,791											

326 at 0-1h. January 1, 1959.

DAILY EXTREMES OF TERRESTRIAL MAGNETIC ELEMENTS, MAGNETIC CHARACTER FIGURES (K AND C) AND TEMPERATURE IN MAGNET HOUSE

25 ESKDALEMUIR												DECEMBER 1958				
	TERRESTRIAL MAGNETIC ELEMENTS											3-hr. range indices K	Sum of K indices	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 10 $^{\circ}$ +	Minimum 10 $^{\circ}$ +	Range	Maximum 45,000 γ +	Minimum 45,000 γ +	Range							
	h. m.	γ	γ h. m.	γ	h. m.	γ	h. m.	γ	h. m.	γ	γ h. m.				$^{\circ}$ A.	
1 q	18 06	767	730 11 23	37	15 55	39.4	25.9 07 41	13.5	10 11	324	316 13 10	8	0,0,0,1,1,2,1,1	6	0	-
2	17 52	783	682 18 37	101	18 04	63.0	9.3 21 53	53.7	18 41	393	312 10 09	81	1,1,1,3,4,4,5,5	24	1	85.6
3	18 46	753	716 11 16	37	12 12	40.5	24.7 02 04	15.8	01 34	341	321 08 56	20	3,3,1,2,1,1,1,0	12	0	85.5
4 d	22 18	792	552 23 04	240	17 23	64.6	0.0 18 51	64.6	18 40	557	286 23 14	265	3,2,3,4,4,5,6,6	33	2	85.5
5 d	22 25	743	585 00 12	158	13 02	39.5	-17.4 01 17	56.9	09 50	358	185 01 26	173	6,4,3,2,2,2,1,3	23	1	85.5
6	20 22	730	678 16 41	52	16 33	45.3	23.8 22 59	21.5	16 53	367	335 11 08	32	1,1,1,2,3,3,2,3	16	0	85.5
7 q	05 29	755	706 11 42	49	13 02	40.5	32.7 09 07	7.8	00 00	341	324 12 22	17	2,2,2,1,1,2,0,1	11	0	85.5
8	18 59	756	715 15 17	41	16 07	45.0	21.5 20 40	23.5	20 39	356	324 10 44	32	0,0,1,2,2,3,4,3	15	0	-
9	17 31	754	702 11 13	52	11 41	42.0	26.9 01 11	15.1	00 00	344	320 10 58	24	3,2,3,2,2,2,1,1	16	0	85.5
10 q	22 30	752	716 10 26	36	13 00	39.2	31.5 04 52	7.7	08 41	333	323 10 42	10	1,2,2,1,1,1,0,0	8	0	85.5
11	22 38	778	717 22 16	61	13 21	42.4	18.9 22 27	23.5	22 26	340	320 09 52	20	1,2,1,2,2,1,1,4	14	0	85.5
12 q	19 36	759	708 12 59	51	12 59	40.8	28.8 22 36	12.0	22 24	339	315 13 11	24	2,2,0,1,2,2,2,2	13	0	85.2
13 d	16 06	814	642 19 15	172	16 20	67.7	11.2 21 01	56.5	18 41	505	273 02 36	232	4,4,2,3,4,5,6,5	33	1	85.1
14	22 29	779	632 19 42	147	16 58	45.1	22.6 22 51	22.5	19 48	410	321 23 09	89	3,2,1,2,3,3,4,4	22	1	85.2
15	20 23	777	708 12 08	69	14 53	40.7	31.4 09 38	9.3	17 12	343	325 12 56	18	1,1,1,3,2,2,3,2	15	0	-
16	02 04	773	718 14 48	55	11 50	42.3	29.7 05 17	12.6	16 43	334	308 11 17	26	3,3,2,3,3,2,2,1	19	1	85.2
17 d	18 25	820	503 23 55	317	17 25	45.7	1.4 18 48	44.3	19 44	475	145 24 00	330	1,1,1,2,2,4,6,6	23	1	85.2
18 d	02 48	740	458 02 13	282	13 08	39.5	0.2 02 43	39.3	22 43	362	55 02 28	307	6,4,2,2,3,2,1,3	23	1	85.2
19	20 33	748	668 13 22	80	13 52	40.2	17.0 02 19	23.2	16 06	361	269 03 42	92	4,3,2,3,3,3,3,2	23	1	85.2
20	05 58	767	696 11 14	71	13 22	43.0	26.8 21 04	16.2	17 33	349	315 03 47	34	2,3,3,2,2,3,3,3	21	1	85.2
21	21 38	750	708 11 31	42	12 42	40.4	30.5 19 41	9.9	19 15	348	325 05 05	23	2,2,2,2,1,1,2,2	14	0	85.2
22	21 37	763	708 19 30	55	13 20	41.3	29.8 21 33	11.5	19 48	350	310 01 50	40	3,1,1,1,1,2,2,3,2	15	0	-
23	07 08	765	707 18 02	58	12 51	43.1	25.1 18 09	18.0	18 25	358	321 05 32	37	1,1,2,2,3,3,3,2	17	1	85.2
24	22 43	759	714 13 44	45	13 18	40.9	30.8 22 35	10.1	00 08	336	323 04 45	13	2,1,2,2,2,1,1,2	13	0	85.2
25 q	23 36	778	721 12 13	57	13 42	40.3	32.4 09 04	7.9	10 40	332	318 12 58	14	0,0,0,1,1,1,1,2,3	8	0	85.2
26	00 00	763	697 17 49	66	17 22	43.5	23.8 22 07	19.7	18 09	357	316 12 30	41	2,1,1,1,1,3,3,4,3	18	1	85.1
27	04 27	761	700 11 43	61	13 52	44.0	30.5 03 03	13.5	16 29	344	315 05 45	29	2,2,2,2,3,3,1,1	16	0	84.9
28	06 14	768	708 15 18	60	13 59	43.6	25.7 00 28	17.9	15 17	345	323 06 19	22	3,2,3,2,3,3,3,2	21	1	84.8
29	00 14	761	719 12 11	42	13 28	42.0	28.0 23 21	14.0	22 50	347	316 12 56	31	2,2,1,1,2,1,3,3	15	0	-
30	14 30	767	723 12 38	44	12 56	47.3	29.1 00 08	18.2	21 03	346	316 12 32	30	2,1,2,1,3,3,2,2	16	0	84.6
31	20 17	761	719 11 48	42	13 32	41.7	32.1 08 55	9.6	19 49	335	320 02 10	15	2,1,1,1,2,1,2,1	11	0	84.6
Mean	- -	766	679 - -	87	- -	44.3	22.1 - -	22.3	- -	365	297 - -	69	-	-	0.45	85.2

MEAN MONTHLY AND ANNUAL VALUES OF TERRESTRIAL MAGNETIC ELEMENTS
For all, *a*, quiet, *q*, and disturbed, *d*, days for *H*, *D* and *Z* and for all days for *N*, *W*, *I* and *F*

26 ESKDALENIIR

	Horizontal (H) force			Declination (D) (west)			Vertical (Z) force			North component (X) all days	West component (-Y) all days	Inclination (I) (north) all days	Total force (F) all days
	a	q	d	a	q	d	a	q	d				
	16,000γ +			10° +			45,000γ +						
	γ	γ	γ	°	°	°	γ	γ	γ	γ	γ	°	°
Jan.	710	715	690	40·7	41·0	39·7	311	308	312	16421	3096	69 45·4	48294
Feb.	706	721	670	40·1	40·5	40·0	315	311	322	16417	3093	69 45·8	48296
Mar.	708	716	693	39·6	39·7	38·7	318	310	320	16420	3091	69 45·7	48300
Apr.	719	729	712	38·7	39·1	38·5	312	307	312	16432	3088	69 44·8	48298
May	729	737	722	38·5	38·8	38·7	309	306	313	16441	3089	69 44·1	48298
June	725	736	699	38·2	38·5	37·6	314	315	310	16438	3087	69 44·5	48302
July	726	731	715	37·8	37·7	39·3	326	325	328	16438	3086	69 44·7	48313
Aug.	726	732	715	37·4	38·0	36·7	319	318	314	16440	3084	69 44·5	48307
Sept.	718	730	697	36·7	36·9	35·9	329	320	339	16422	3079	69 45·3	48313
Oct.	724	735	697	36·2	36·6	35·1	319	345	327	16438	3077	69 44·9	48314
Nov.	738	740	734	36·5	36·3	36·7	325	323	329	16452	3081	69 43·9	48316
Dec.	731	740	710	35·4	35·7	34·2	333	327	341	16446	3075	69 44·5	48322
Year	722	730	705	38·0	38·2	37·6	319	318	322	16435	3085	69 44·8	48306

DAILY RANGE AND MEAN MONTHLY VALUES

27 ESKDALEMUIR

	Mean absolute daily range						Mean daily range expressed as percentage of yearly mean					
	1958			Mean 1932-53			1958			Mean 1932-53		
	H	D	Z	H	D	Z	H	D	Z	H	D	Z
January	77	92	47	78	83	47	56	81	58	76	90	75
February	190	126	90	84	89	53	138	111	111	82	97	84
March	138	134	111	126	113	85	100	118	137	124	123	135
April	128	116	83	125	103	77	93	102	102	123	112	122
May	145	121	91	116	91	71	105	106	112	114	99	113
June	179	123	113	105	84	55	130	108	140	103	91	87
July	221	130	90	110	85	56	160	114	111	108	92	89
August	143	111	69	113	93	68	104	97	85	111	101	108
September	189	139	108	117	106	81	136	122	133	115	116	129
October	103	107	69	107	102	76	75	94	85	105	111	121
November	61	65	28	73	79	47	44	57	35	72	86	75
December	87	108	69	66	74	42	63	95	85	65	80	67
Winter	104	98	75	75	81	47	75	86	73	74	88	75
Equinox	139	124	119	119	106	80	101	109	115	117	115	127
Summer	172	121	111	111	88	63	125	106	112	109	96	100
Year	138	114	102	102	92	63	..	..	..	..	..	..

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

FREQUENCY DISTRIBUTION OF DAILY RANGE

28 ESKDALEMUIR

[illegible]

Q-INDICES OF GEOMAGNETIC ACTIVITY

Q-indices for 4 consecutive intervals of 15 minutes centred at the full hour, 15 minutes later, etc.

29 ESKDALEUIR

JANUARY 1958

	Hour G.M.T.																							
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	4433	3344	4333	4433	3333	3333	3323	2222	1122	2111	1211	1111	1110	2111	0111	0011	2222	2223	3333	3334	4311	1022	1123	2222
2	2333	3333	2332	2221	1000	1222	2211	2221	1111	1111	2121	0201	2220	2212	2112	2211	1100	0000	0110	0000	0000	0000	0000	0000
3	1111	1100	0000	0001	1000	0000	0000	0000	0000	0000	0000	1111	1010	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
4	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	1111	1011	1011
5	0012	2221	1221	1110	0000	0000	0000	0000	0000	0000	0000	0000	0000	0001	1100	1110	0011	1000	0000	0000	0000	0000	0000	0000
6	0000	0000	0000	0000	1111	0000	0000	0000	0000	0000	1001	0000	0101	2211	0011	1121	2211	1100	0000	0000	0010	0000	0000	0001
7	1110	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0001	0011	1100	0000	0000	0000	0000	0000	0000	0000	0000	0000
8	0110	0000	0000	0010	0000	0000	0000	0000	0000	0000	0100	0000	0000	1111	2221	0110	0111	1110	0000	0000	0001	1110	0000	0000
9	0000	0000	0000	0000	0000	0000	0000	0000	0000	0011	1000	0000	0011	1122	1222	2333	3333	3333	2222	2222	1111	1111	0112	2122
10	2222	2233	3331	1111	0000	0000	0000	0000	0000	0000	0000	1110	1011	1110	0010	0000	0011	1110	0111	1110	0000	0000	0000	0000
11	0022	2112	2222	1110	0000	0010	0000	0000	0000	0000	0000	1111	1110	0001	1110	0001	1101	0112	2233	3232	2210	1102	2111	0110
12	0010	1101	2222	2332	3332	2121	1110	0100	0000	0000	0000	1221	2322	2222	2111	0001	0000	0001	1111	2211	1122	1111	1000	1211
13	1001	2210	0110	1001	1100	2210	0100	0000	0111	0000	0000	0000	0000	0101	0110	1111	0122	2122	1112	2221	2333	3322	2100	0001
14	1000	0011	1111	1111	1111	1111	1000	0000	0011	1100	1111	0011	0100	0000	0002	2212	2122	2111	1111	1111	2221	2344	4222	1011
15	1110	0000	0000	0111	0000	0000	1110	1110	1111	1000	0011	0002	2233	2222	2222	2211	1122	2210	0000	0111	0011	2211	0111	0000
16	0000	0000	0000	0000	0000	0000	0001	0000	0000	0000	0101	1000	0221	0111	1222	2211	1221	1101	1122	2222	1321	0110	2112	2332
17	1110	0000	0000	1100	1222	1011	1111	2110	1112	2211	2222	2112	2222	1111	2222	2111	2222	2123	2211	2201	1222	3441	3332	2223
18	4443	3333	3332	3334	4333	3322	2222	2222	2212	2232	2222	2221	2233	3332	2221	1011	2223	3332	3322	1111	0100	0000	0000	0022
19	2222	1220	1101	1100	0000	1111	1000	0011	1111	1101	1112	2222	2222	2222	2111	1111	0111	0222	2221	2211	0001	1100	0000	1110
20	0000	0000	0100	0000	0000	0010	0010	0000	0000	0000	0011	2221	1000	0112	2222	1022	2222	3333	3332	2322	2222	2333	3333	2223
21	4444	4433	3333	3444	4331	2222	2222	2222	2112	0012	2222	1112	2222	2122	1001	0110	0000	1011	1220	1122	1112	0101	0000	0000
22	0001	1110	0001	0001	0011	0111	1012	0121	0000	0000	0000	2222	2223	2232	3222	1100	0100	0101	1221	1111	2111	1011	1110	1000
23	0101	1222	1111	2221	2323	3222	2222	1000	0011	1000	0011	1212	2223	2200	2222	2212	1111	1110	1123	2221	2212	2001	1000	0000
24	0000	0000	0000	0000	0000	1000	0000	0000	0000	0002	2002	2221	1111	1011	1111	1000	1100	0000	0000	0000	0000	0000	0000	0000
25	0000	0000	0011	2222	1101	0110	0000	0000	0000	0110	0011	2221	1222	2222	2233	2232	2333	3332	2200	0000	0111	1000	0000	0111
26	1000	0111	1222	1122	2333	3222	1121	1111	0000	0001	1111	0000	0000	0001	0110	1100	0000	0111	1100	0111	1122	2222	1110	2332
27	2111	0000	0011	0112	2111	1100	0000	0000	0111	1000	0000	0000	0000	0000	0000	0000	0000	0111	0000	0110	0001	1000	1333	3200
28	0100	0000	0000	0000	0000	0000	0000	0111	1000	1100	0100	0111	0000	0000	0010	0000	0000	1001	0000	0000	1000	0000	0000	0001
29	0000	0002	2222	2222	3332	2222	1221	1101	1222	2200	2000	0100	0000	0000	0000	1111	2222	2211	2211	2233	3332	2211	0000	0000
30	0000	0000	0000	0000	0010	0010	0111	1111	0000	0001	1000	0000	0100	0000	0000	1100	0000	0000	0000	0000	0001	1000	0000	0000
31	0112	2200	1000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0001	1000	0000	0000	0000	0000	1111	0000	0000	0022

Q-INDICES OF GEOMAGNETIC ACTIVITY

Q-indices for 4 consecutive intervals of 15 minutes centred at the full hour, 15 minutes later, etc.

29 ESKDALEUIR

FEBRUARY 1958

	Hour G. M. T.																							
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	2222	2100	0000	0000	0000	0000	0000	0000	0000	0000	0000	0011	0111	1000	0000	0000	0100	0000	0000	0000	0000	0011	1100	0000
2	0001	2221	0000	0000	0000	0000	0111	1000	0000	0011	0111	1000	0000	1000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
3	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	1112	0000	0001	1111	0011	1100	0000	0000	0100	0000	0000	1001
4	1222	2100	0000	0000	0000	0000	0000	0000	0000	0000	0100	0111	1000	0221	1112	1122	2211	2112	2222	2334	3333	2211	1101	2122
5	3323	3233	3353	3222	2222	2122	2221	1111	1100	0011	2102	1222	2122	2211	2111	2222	1122	2222	2211	2122	3333	4433	3321	2232
6	2322	2232	2222	2112	2221	1122	2212	2211	2231	0112	2222	1123	2222	1222	1222	2222	2222	2222	2222	0122	1111	1122	3333	3333
7	3222	1122	2011	2221	2222	2112	1101	0200	1012	1111	1100	2220	0001	1111	1211	1122	2211	2100	0000	2223	3333	3222	2221	2212
8	2221	2222	2222	2211	1112	3222	2222	2111	1101	2222	1111	1122	0222	2222	2223	2221	1112	2211	0011	1122	2122	2222	1001	1211
9	1211	2220	0011	1000	0111	1111	0000	0000	0100	0000	0000	0111	1122	2222	2222	2222	1010	0011	1233	3332	3332	1221	1111	0000
10	3332	2133	3201	2222	2222	2201	1111	1110	0000	0000	0000	0001	1121	1222	2222	2222	2222	4433	2220	1244	3112	2212	2222	2332
11	2111	1145	8766	5544	4544	5455	4556	5656	6667	6666	6655	5554	4456	5444	4433	2343	3333	3334	3333	3333	3333	3333	3445	4444
12	4344	3333	3243	2333	3333	3333	3333	3333	3333	3333	3333	3322	2233	3333	3222	2222	2112	2223	3444	3233	3222	0231	2100	0011
13	0122	2221	0000	0000	0000	0000	0000	0000	0021	1111	0021	2221	1122	2222	1122	1111	1111	0001	1221	1123	3200	0111	1112	2221
14	0012	1023	3233	3332	2223	3332	2222	2222	2222	1122	1000	0010	0221	2122	2210	1222	1233	3220	1000	0000	0000	0000	0221	1100
15	0000	1000	0000	0000	0000	0000	0000	0000	0000	0100	0010	0100	0000	0010	0001	0011	0121	0010	0111	1111	1112	0000	1000	0332
16	1211	1000	0000	0000	0000	0000	0000	0000	0000	0211	0001	2201	1110	0111	1110	0011	2223	2112	2211	1101	0001	1000	0122	1222
17	2222	2332	2222	1212	2222	2222	2111	1222	1111	1122	1222	2222	2332	1232	2222	3222	2112	2122	2222	2111	3333	3321	1221	1111
18	1221	2022	1122	1122	2221	2122	2221	1211	1111	1121	1222	2211	2221	2121	1001	1110	0110	1111	2134	3423	3311	1122	2222	2222
19	2322	2220	1111	1111	1112	1011	2212	0122	1231	1122	1211	0110	0111	1211	1000	0011	1100	1100	2221	0010	1123	3322	1011	0222
20	3222	2211	1012	2221	1222	2221	0100	1111	0000	0000	2211	2122	2222	1222	2211	1100	0000	0001	1002	2333	0334	3344	4333	3322
21	2212	2222	3322	2222	3333	3211	1221	1111	1121	0111	2222	2121	1221	2222	1212	2122	2110	0001	1233	3322	2332	2234	4443	3321
22	0222	2221	1221	1223	3233	2211	2221	2232	2101	0121	1211	2201	2212	2320	0122	2111	2111	1122	2223	2210	1233	2122	2123	3333
23	3332	2222	1122	2222	2222	2221	2222	1100	1101	1100	1121	1010	1221	1111	1111	1111	1122	2222	2111	0112	2132	2220	0000	0000
24	1101	1001	1000	0001	1101	0000	0000	0000	0000	0000	1111	1111	1122	1000	0000	0000	0000	0001	1221	0000	0000	0000	0000	0000
25	0000	0000	0000	0000	0000	0000	0111	0000	0000	0000	0000	0000	0011	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
26	0001	1111	1111	0000	0000	0011	1111	0000	0011	1000	0001	1110	0001	0000	0000	0000	0000	0000	0000	0000	0000	0000	1000	0000
27	1221	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0100	0011	2111	2222	2332	2110	0000
28	0000	1111	1000	1121	1001	1010	0001	0100	0012	1001	1121	0112	2211	0222	1222	2101	1100	0000	0122	1101	0000	0000	1110	1000

Q-INDICES OF GEOMAGNETIC ACTIVITY

97

Q-indices for 4 consecutive intervals of 15 minutes centred at the full hour, 15 minutes later, etc.

29 ESKDALEUIR

MARCH 1958

	Hour G.M.T.																							
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	2223	3210	0000	0000	0000	0000	0000	0000	0000	0100	0010	1100	0000	0000	0000	1000	0000	0000	0000	0000	0000	1100	0111	1011
2	1000	0000	0000	0000	0000	0000	0122	1000	0000	0000	0101	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0001
3	1000	0000	0000	0100	0000	0000	0000	0000	0000	0021	1111	1221	2222	0000	0111	2023	2022	3322	2222	3212	2233	3323	3332	2333
4	3333	3323	3332	2333	3333	3333	2222	2020	2111	1010	0000	2211	1112	1111	2101	1000	0112	2100	2221	2222	3322	2212	2222	1012
5	1111	2211	2111	1112	2221	1112	2333	3333	3232	2222	2102	1222	2100	1100	1222	2211	2211	1322	1010	0222	2111	2233	2332	3421
6	1221	2223	3222	2233	3222	2222	2222	1222	2121	2110	0122	0111	1111	1111	2222	2220	2121	0111	2012	2332	2220	2344	3321	1111
7	1112	3222	2201	1023	2233	3222	2122	2222	2222	2220	0001	1100	1111	1111	2100	0000	1222	2110	0001	1001	2221	1222	2111	1001
8	0222	2222	3333	2233	2222	2221	1121	1122	1122	1221	1122	1211	1010	2112	1110	0000	0001	0000	0000	0000	0012	2220	0110	1112
9	2222	2233	3333	2110	1110	0011	1122	2100	1101	1011	1022	2211	2122	2112	2211	0011	0000	0000	0001	1122	2222	1111	0000	0000
10	0000	2222	2222	2222	2222	0001	1100	0000	0010	1100	0010	0001	1111	1000	1002	2112	2122	2112	2232	1000	0001	2222	1110	0012
11	3332	3322	1000	0000	0000	0000	0000	0000	0000	0000	0000	1212	0111	2111	2221	1102	1111	0112	2322	2245	3322	2332	3344	3333
12	3443	4444	5554	5444	3344	4432	2234	4443	3333	2222	2222	2111	1121	1222	2102	2210	0211	1123	3222	1210	1100	0002	2221	1100
13	1123	2222	2222	2222	3322	2333	2333	3322	2222	3323	3233	2221	2220	2223	2233	3333	3123	3331	2244	4433	3220	1100	1110	0000
14	1221	0001	1100	0000	0000	0001	0011	1111	1111	0000	0000	0000	0432	2233	3223	3213	3223	1021	2110	0220	0121	1111	0000	1100
15	0111	1111	1111	2211	2121	1222	2223	2101	1123	1111	3221	2211	1101	0101	0121	1111	0111	1211	1111	0000	0000	0000	0000	0001
16	1232	2222	2333	3321	1111	1121	0000	1111	1000	1110	0011	1111	1100	0010	0000	0011	0111	2211	2220	0000	0100	0121	2222	2220
17	0101	1111	1101	0100	0111	1111	0122	2111	2122	2332	1132	2222	2221	1111	2211	1222	1122	2222	2121	1244	3322	2000	0000	0000
18	0000	0000	0101	1000	1111	1222	2211	2321	1111	1000	0000	1111	2210	1331	1110	1234	4312	1332	2223	3333	2222	2222	2222	1221
19	0122	2211	2222	3222	3222	2211	2222	2112	2111	2212	2121	1112	2233	3322	3122	2333	3333	2222	2222	2212	3443	3223	3333	3444
20	5322	3323	2333	3322	2111	1212	2210	0102	2221	1112	2220	1101	2232	2012	2211	2222	1112	1231	0111	1210	2344	4433	3333	3223
21	3333	2322	2220	1222	0322	2111	1210	2120	2222	3242	0000	0012	1123	3223	2123	4422	3323	3122	2221	2211	2211	1233	2343	
22	3334	4555	4433	3322	2222	1111	1110	0021	0000	0000	0000	0011	1110	0001	0001	0000	0000	0000	0001	1210	0000	0000	0222	3323
23	3321	1222	2111	1112	3322	2220	0001	1110	0000	0000	2331	1011	1111	0010	1011	0001	1222	2210	1110	1111	3344	2111	1000	0000
24	1222	1110	0111	0000	2221	0001	1221	1110	0000	0000	0001	1000	0112	2100	0001	1121	0233	4433	3221	2211	2244	2233	3223	3333
25	3333	3333	3322	2211	1000	0000	1122	2212	1000	0000	0000	0222	2111	2321	0112	2224	4444	4323	3323	3322	2222	1121	1123	3211
26	1222	2233	2111	1111	1111	1100	0000	1001	1111	1222	2211	2100	2222	1222	2222	3213	3332	2333	3222	2212	2222	1222	2321	2222
27	3332	2121	1210	1000	0001	0111	1122	2221	1010	0000	0110	0000	0001	0100	1111	0011	1212	0012	1222	2211	2112	2112	3331	0110
28	0000	0000	0000	1210	0111	2221	1122	2222	2100	0000	0110	0000	0000	0000	0000	0010	0033	3322	1221	0000	1000	0111	1011	1000
29	1222	2222	1000	1000	0000	1100	0110	0000	0000	0000	0000	0000	0010	0002	0000	0000	1222	2121	1111	0011	0000	0011	1000	2111
30	0000	0000	0000	0000	0000	0000	0001	1122	2222	1112	2222	2322	2222	3234	3222	2343	2234	4412	2222	2112	2122	2311	3323	2221
31	1111	1022	2111	1111	1122	2222	2211	1221	0000	0001	0000	0011	1121	0110	1102	2221	1211	1012	2111	1122	2211	1001	1101	1111

1st: 0915 Q = 1, Q' = 0

28th: 1030 Q = 1, Q' = 0

9th: 1545 Q = 1, Q' = 0

29th: 1345 Q = 0, Q' = 0; 1630 Q = 2, Q' = 2

23rd: 1015 Q = 3, Q' = 0

21st: [] interpolated; no record on Slow Run or Supplementaries.

Q-INDICES OF GEOMAGNETIC ACTIVITY

Q-indices for 4 consecutive intervals of 15 minutes centred at the full hour, 15 minutes later, etc.

29 ESKDALEUIR

APRIL 1958

	Hour G. M. T.																								
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1	2222	2222	2233	3332	3322	2211	2221	1100	0001	1100	0901	1111	1111	0110	0222	1222	2221	1112	2212	2223	3333	3121	1122	2211	
2	0012	2122	2222	2222	3332	1111	2222	3322	2121	1111	1113	3222	2213	3233	2332	2232	2111	2132	3322	2211	1111	1111	2212	2222	
3	2221	1001	2222	2212	2222	2222	2211	2000	1100	0111	0000	0000	0000	1000	1111	1102	1001	1110	1210	0111	1123	3232	2210	0000	
4	0022	2222	2222	2222	1211	1001	1001	1220	1011	1111	1000	1111	1222	2222	2322	3322	2233	2332	3342	2333	3333	4322	2433	3444	
5	4333	3333	3444	4444	4333	3333	3333	3222	1111	1100	0000	1111	2110	1211	1112	2011	2221	1111	1222	2223	3222	1111	1010	2222	
6	2222	2123	3221	1000	0000	0011	1101	1000	0000	0000	0112	2111	1110	1121	0102	2222	0011	1000	0111	1002	2211	2111	1112	3233	
7	2322	2222	2222	3332	2222	2211	2110	1111	0000	0000	0110	0110	1101	0000	0111	1100	0000	0012	2332	2222	2211	0000	0002	2222	
8	2211	1101	1100	1100	0000	0111	1111	1100	0000	0000	0000	0111	1111	1111	1111	1111	2222	2100	0000	1111	1122	3222	1000	0000	
9	0111	1211	2222	2222	1001	1100	0000	0000	0000	0000	0000	0000	0000	0000	0000	1000	0011	1122	2222	2222	1101	1111	1122	1111	
10	1110	0000	0000	0000	0000	0000	0000	0011	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0001	1101	1221	1111	
11	0001	1000	0000	1110	0000	0000	0000	0000	0000	1100	0000	0001	1111	1112	1110	1100	1001	1100	0000	0010	0011	0022	2000	0000	
12	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0001	0000	0011	1111	0000	0100	0000	1220	0001	0000	0111	0011	1111	0100	
13	0000	0000	1100	0000	0111	1100	0001	1100	0000	0000	0000	0000	0000	0000	0101	1100	0000	0010	0011	1000	0000	0000	0010	0011	
14	0000	0000	0000	0000	0000	0000	0000	0011	1121	2232	2211	1012	2022	1333	3322	2213	3322	2221	1222	2222	2222	1211	1222	2223	
15	3333	3333	3443	3333	2222	3322	2223	3322	2121	2110	1111	1100	0122	2101	2110	0000	1000	0122	2222	2222	2211	3333	2111	1100	0222
16	2222	2202	2222	1222	2101	1111	1122	2222	2110	1112	2022	1110	1322	2211	2322	1112	2211	3332	2222	3434	4333	3333	3333	4433	
17	3333	3344	4444	3332	3233	3233	3222	2222	2211	1112	2222	2311	1212	2212	2233	3445	4432	3333	3343	4433	3222	2233	3334	5533	
18	3333	3232	2208	2233	4432	2222	2222	2331	2211	1111	1222	1211	2333	2122	2111	2332	3443	3333	3442	2222	2322	2233	3333	3322	
19	2211	1102	2111	1112	1111	2121	1111	1100	0011	1111	0212	1012	2222	2222	3333	3323	3212	3332	2211	2333	3333	3222	3312	2333	
20	2221	1110	1110	1211	2211	2222	2111	1111	0210	0110	0000	0001	0111	1110	1000	1221	0001	2122	2222	2222	1111	2233	3222	2110	
21	0001	0000	0000	2222	2211	0000	0010	0111	1100	1122	1101	0111	1112	1100	0122	2222	2222	2222	2111	1110	1111	1233	3332	2322	
22	1111	0000	0000	0000	0000	0000	1100	1111	1000	0000	0000	0000	0000	0000	0110	0000	0011	1100	0111	0000	0111	1000	0000	0000	
23	0000	0000	0000	0000	0000	0000	0000	0011	0000	0000	0001	1100	0001	0000	0000	2222	2222	1111	1111	1111	2111	1001	1233	3222	
24	2222	2222	2222	3333	3333	1222	2222	2221	1111	0000	0010	0000	0000	0011	0000	0112	1222	0000	0111	1111	1111	1200	1110	0000	
25	0000	0011	2333	2222	2111	1112	0000	0000	0000	0000	0000	0000	0000	1222	2211	1100	0100	0000	0000	0000	0000	0000	0000	0000	
26	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0002	1011	0112	0133	4432	2222	2331	1233	1100	1111	1122	2221	
27	1111	1110	0000	0000	0000	0011	1100	1100	0000	0000	0000	0011	1001	1111	1110	0022	2222	2333	3333	3322	2232	2211	1121	1110	
28	0001	2111	1122	2222	2221	1112	0111	0012	1111	0100	1111	1112	2112	1112	2233	2111	2110	0001	3333	3221	1211	0013	3321	1222	
29	2221	2333	3233	3333	3222	1233	2222	1221	2221	1111	1111	1111	2211	1111	1111	1111	3333	3133	3332	3333	3333	2332	2222	2222	
30	2222	2233	3210	2222	2222	3222	2210	2122	2111	1211	1112	2211	1111	1012	2012	2221	1233	2222	2122	2223	3222	2101	3320	1210	

Q-INDICES OF GEOMAGNETIC ACTIVITY

Q-indices for 4 consecutive intervals of 15 minutes centred at the full hour, 15 minutes later, etc.

29 ESKDALEMUIR

MAY 1958

	Hour G. M. T.																							
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	1212	3222	2222	2211	0110	1111	1100	1122	1111	1111	0011	2122	1111	1000	0001	0013	3333	2222	3443	3222	2211	1000	1233	2210
2	0001	1001	1111	0122	2221	2222	2222	2221	1000	0000	0000	0000	0000	0000	0101	0010	0111	0000	0112	2222	2311	1000	0100	0011
3	0000	1110	0000	0001	0011	1100	0000	0000	0000	0000	0000	1011	2100	0000	0000	0000	0000	0011	1110	0001	2221	1100	0000	0002
4	2222	2211	1000	0111	0000	0111	2211	1111	1100	0000	0000	0000	0000	0000	0011	2111	1000	0011	1000	0000	0011	1111	1222	2111
5	1100	0111	2222	2222	1100	0000	0000	0000	0000	0000	0000	0000	0000	0001	1100	0011	2221	1223	3322	2321	1122	1113	3221	0000
6	0000	1222	2222	2111	0010	0001	1000	1111	0000	0000	0000	0000	0000	0001	1110	0011	0000	0000	0110	0000	0111	0000	0000	0000
7	0000	0011	1111	1110	0111	1000	0000	0011	0000	0000	0000	0000	1110	0000	0000	0000	0000	0000	0000	0000	0011	1022	2210	0100
8	0001	0000	0011	0010	1112	2111	0000	0000	0110	0000	0000	0000	0001	2111	2222	2221	2221	0000	0011	1221	1112	2222	3332	2211
9	1011	0000	0000	0000	0000	0110	1012	2113	1100	0000	0000	1212	2221	2010	0010	0001	1100	1111	1101	1110	0000	0001	1000	0000
10	1001	1112	2212	1111	1111	1122	1111	1111	1100	0111	0001	0122	2222	2111	0000	2323	2211	1222	2223	3332	2220	1011	1111	2210
11	0000	0000	0000	0000	0000	0000	0110	1222	1111	1111	1101	1122	1110	1001	0100	1221	0122	2222	3222	2221	1100	0000	0000	0000
12	0000	0000	0000	0000	0000	0000	0000	0000	0001	0000	0000	0000	0100	0011	1000	1111	1222	3332	1232	2333	3223	3100	0023	3222
13	2212	2200	0000	0000	0001	1111	2010	1110	1100	0001	0001	1111	1111	0122	1133	3233	2333	3233	4433	1133	3233	2111	1232	2334
14	2333	3333	3333	3233	2211	2322	2333	3333	2222	2211	1221	0111	1122	2212	2223	3322	3332	2222	2233	3322	2100	1110	1011	1221
15	2211	2222	2222	0011	0222	3332	2212	2221	2100	0120	0210	0121	1211	1211	1102	1122	3433	3444	4434	3320	2111	1112	2222	2222
16	2222	2221	1101	1101	1111	1122	2000	0000	0021	2221	1110	0000	0000	1022	2222	2223	3344	3322	2111	1000	0011	1000	0011	1111
17	0012	2222	2322	2222	2221	0011	0011	1110	0000	0001	0000	0111	1100	2222	2221	2212	3312	2222	3323	3221	1111	0111	0222	2222
18	2222	2112	2111	0112	1000	0000	0101	1221	1110	0000	0121	0011	1121	2321	1232	1123	3344	4333	3232	2211	1000	0001	2112	2200
19	1010	0000	0110	0011	2222	2222	3221	0100	1000	0000	0011	1000	0011	1211	2110	1222	2222	2222	2222	2222	1000	0111	0000	0000
20	0001	1211	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0010	1111	2111	1112	2222	2222	2111	1100	0000	0000	0011	1221
21	1111	2222	2222	2220	0001	1000	0000	1100	0011	0000	0000	0000	0000	0000	0000	0110	0000	1122	1100	0000	0000	0000	0000	0000
22	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0011	0000	0000	1211	1112	2210	0000	0000	0000	0000	0001	1000	0111
23	1100	0112	1100	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0111	2111	1111	1110	0000	0000	0000	0000	0000
24	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	1121	1100	0000	0000	0000	1000	0000	0000	0000	0000	0000
25	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0111	0010	0223	3332	2222	3321	2332	2212	2222
26	1102	2222	2333	3221	2221	0100	0001	1000	0211	2220	0001	2222	2211	2342	3445	5444	4444	4322	1101	1000	0000	0011	2221	1122
27	1122	0111	1110	1101	1002	0122	1111	2111	1100	0011	1222	1222	2233	1110	1113	2222	0012	2222	3333	3333	3332	2233	2442	2222
28	3333	3332	0111	1111	2222	1222	1221	1112	2111	1001	0100	0100	0000	0100	0022	2222	2100	0022	3333	2333	2222	2122	1002	2122
29	2333	3322	3333	3333	1223	3233	3322	2333	3343	3333	3333	2232	3322	3334	3222	1132	2322	2332	2222	2233	2111	1210	0000	0111
30	0111	1111	2222	2212	2222	1122	2122	2222	1122	0000	0001	1000	0000	0011	0122	2111	0001	2222	2211	1122	2222	2322	1222	1001
31	0000	0011	0022	2322	1111	0000	0000	0000	0000	0121	0000	0001	1001	2222	3222	1100	1101	5545	5554	4332	2323	4556	5444	5556

Q-INDICES OF GEOMAGNETIC ACTIVITY

Q-indices for 4 consecutive intervals of 15 minutes centred at the full hour, 15 minutes later, etc.

29 ESKDALEMUIR

JUNE 1958

	Hour G. M. T.																							
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	5664	5544	4455	5432	2222	2334	4333	3332	1222	2211	2100	2221	1112	1221	1112	2111	2222	3333	3333	3332	1111	2111	2111	
2	1100	1102	2211	0111	1211	1011	1112	2221	1111	0000	1011	1233	3222	2222	3222	3222	1212	2122	1333	2222	2211	1000	0000	0000
3	0000	0000	0000	0000	0000	0000	0000	1000	0001	1000	0000	0000	0111	1101	0000	0101	1112	2221	1111	1000	0000	0000	0000	0000
4	0000	0000	0000	0001	1000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0001	1001	0110	0000	0000	0000	0000	0000
5	0000	0000	0000	0000	0001	1100	0000	0001	0000	0001	0000	0000	0000	0011	1112	3322	3443	2112	2211	1111	0000	0000	0000	0000
6	0000	0000	0000	0000	0000	1111	1000	0012	2100	0120	0000	0100	1100	0000	0000	0012	1100	0233	3333	3333	3333	3332	3333	2222
7	2333	4455	5555	5554	3332	2333	3332	3344	5455	5554	5543	3332	1222	2322	2223	3332	2222	2111	2121	2222	2211	1100	0011	2211
8	1000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0111	0000	0000	0000	1001	1110	1001	2233	2333	3332	2222	1112	2222	1022
9	2333	2111	1100	0000	0000	0001	2222	1100	0000	0000	0011	0022	1111	0122	2222	2233	3332	1112	2334	3333	3333	3332	2122	2223
10	3323	2344	4443	3333	2222	1111	2222	1221	1101	1112	2222	1110	1013	2233	3112	2110	0222	1111	0111	2201	0122	2123	4432	1111
11	1102	2221	2222	2232	2110	0111	1111	2100	1100	0000	0110	2201	2212	3221	0102	1010	2221	1112	2222	2212	1223	2222	2101	0000
12	0000	0000	0000	0000	1222	2210	1111	1111	1111	1122	2201	1012	2210	0000	1211	0112	3222	2222	2122	2221	2222	2111	1110	0000
13	0000	0001	1001	0000	1112	1011	1001	0000	0000	0000	0110	0111	1100	0001	1111	0010	1222	2200	1110	0101	1100	1001	0110	0000
14	0000	0011	1111	0000	0000	0000	0000	0000	0000	0000	0000	1220	1121	0000	0011	1112	2222	2222	2243	2333	3121	0211	1122	2112
15	2210	0000	0010	1111	1221	2332	2322	2332	1122	2332	1001	1100	0210	0000	0102	2222	1112	2100	0111	1100	0000	0000	0000	0000
16	0002	2200	0000	0000	1111	1001	1222	1111	1100	0001	0010	0001	1111	2222	1111	1111	2122	2210	0001	1000	0000	0000	0000	0000
17	0000	0000	0000	0000	0111	0000	0010	0000	0000	0000	0000	1110	0000	0000	0000	0200	0000	0111	1110	0000	0000	0000	0010	0010
18	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	1121	2212	2210	0112	1011	1221	2112	2222	2221	1111	2110	2210	2210
19	0000	0000	0010	0000	0000	0000	0000	0000	0000	0000	0000	1000	0000	1101	2112	2100	3333	3321	1101	1122	0100	0011	0011	0011
20	0000	0011	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0022	2100	0000	0000	0111	1220	1001	1111	1112	2222	2222
21	0011	1111	1211	2333	3333	3332	2003	3321	2333	2222	2333	3334	4432	2212	4333	3233	3323	4455	4433	3333	2322	3333	3333	3333
22	4433	3332	3333	3333	3322	2222	2333	3333	3322	2222	2211	1223	3212	2111	1111	1000	0100	1022	1122	2333	3322	3332	3322	3322
23	1222	2222	2221	1111	2210	1112	1210	1000	0000	0000	1010	0111	0100	0100	1012	1011	2110	0022	2111	2222	2210	0000	0011	0001
24	0112	2221	1222	2222	2222	2221	1111	2222	1100	1200	1100	1211	1100	1011	2112	2200	0111	0000	0122	1222	2221	3322	1111	1111
25	2122	1100	0011	1100	0011	1000	0110	0010	0001	1111	1210	2222	2322	1100	2111	2220	1122	2333	3333	3333	2221	1112	2222	2222
26	0110	1111	0000	0111	0000	0000	0100	0000	0000	0110	0000	0010	0000	0111	0221	1011	1111	2222	1000	0000	0110	0011	1110	1110
27	2111	1111	1000	0000	0000	0000	0000	0000	0000	0000	0110	0111	1010	1110	0000	0122	1000	0000	0011	1122	2222	0122	0122	0122
28	1211	1000	0000	1111	0001	1110	0000	0321	1000	0010	1111	2122	2012	2111	0222	2201	1122	3324	4555	5454	3333	3454	4445	4445
29	4556	6655	4454	4655	5665	6666	6544	4444	4455	4444	4444	4444	4444	3333	3233	4333	3432	2332	1012	1222	2202	1011	1110	1110
30	0011	1001	1110	0000	2100	0000	0000	0110	0001	0000	0000	0000	0000	0110	0100	0002	2121	2212	2211	1100	0010	1100	0100	0100

99

29 ESK DALE MUIR

JULY 1958

Q-INDICES OF GEOMAGNETIC ACTIVITY

29 ESK DAL FMUI R

AUGUST 1958

7th: 1515 $Q = 1, Q' = 0$

Date: centre of interval $Q = \dots$, $Q' = \dots$

Q-indices for 4 consecutive intervals of 15 minutes centred at the full hour, 15 minutes later, etc.

29 ESKDALEMUIR													SEPTEMBER 1958											
	Hour G.M.T.																							
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0012	1222	2222	3332	2222	2211	0011	0111	0000	0000	0011	0000	0000	0000
2	0000	0000	0011	0000	0000	0000	0000	0011	1111	1000	0000	0000	0000	0000	0111	0000	0000	0000	0000	0000	0000	0000	0000	1111
3	0000	0001	1111	0000	0000	0000	0000	1000	0003	2223	3222	3221	1332	3333	3444	3333	3333	3333	3332	3222	3333	4344	3355	4343
4	3334	4333	3323	3322	2112	2112	1100	1111	2122	1210	1132	3322	1111	2124	4345	6666	5777	6555	5576	6446	5556	7888	7788	7777
5	6677	7766	6666	6666	6543	3222	2233	2213	3221	2222	2211	1320	1201	1221	1112	2122	1112	2222	3244	3334	4421	1010	1111	0221
6	1000	0000	1000	0000	0000	0110	0111	2111	1000	0000	0000	0000	0000	0000	0001	0010	1001	0011	2100	0000	0010	0000	0000	0000
7	0001	1000	1011	1001	0001	1111	1001	1000	0001	1110	0110	0110	0000	0111	2222	2333	3333	3333	2222	1233	3332	2102	3322	2221
8	2111	1113	3332	2111	0110	0111	1110	0000	1001	0001	1010	1121	2112	2211	2211	2223	3110	0010	0000	0111	0000	2222	2443	3332
9	1122	2223	3222	2211	2111	1011	1211	2011	1212	1111	1221	2002	2112	3334	3332	2222	2111	0110	2221	2111	1012	2221	1233	3221
10	0010	1222	2200	0111	1111	1111	1110	0100	0100	1000	0110	1100	1111	2222	1012	1222	1223	2211	1110	0100	0000	1111	0000	2221
11	1000	0000	0111	1111	1100	0000	0001	0000	0000	0001	0111	1010	1101	0011	1111	1111	0011	1000	1110	0011	1000	0010	0000	0000
12	1210	0000	0011	1121	1001	1111	1000	0000	0000	0000	0010	0000	0000	0000	0000	0000	1111	1100	0000	0000	0000	0000	0000	0000
13	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	1111	0000	0000	0000	0010	0000	0000	0011	1110	0000	0000
14	0000	0000	0000	0000	0000	0000	0000	0000	0001	2000	0000	0012	2111	1100	0000	1101	1000	0111	0100	0000	0000	0000	0000	0000
15	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	1110	0001	1100	1210	0000	0000	1001	0112	2100	0000	0000	0001	1110	1122
16	2222	2222	2222	1122	1222	2233	3212	2222	2222	2132	3312	2232	2222	2244	3211	1123	3444	3323	3332	1100	2323	3343	3333	3323
17	3332	3322	2222	2222	2222	1111	1111	0110	1111	1001	0101	1101	1101	2110	0101	1100	1000	0000	0010	1000	0000	0000	0000	0000
18	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0001	0001	1110	1011	1221	1001	0000	0000	0000
19	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	1001	2200	0100	0000	0000	0000	0000	0000	0110	1100	0000	0000	0000
20	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0001	0000	0011	1110	0000	0110	0001
21	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	1000	0100	0010	0000	0000	0001	0110	0000	0001	1100	0010	0000	0000	0000
22	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0001	0100	1011	1100	0000	0000	0000	0000
23	0000	0000	0000	0000	0000	0000	0000	0001	0000	0100	0100	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0022
24	2111	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0001	1100	1001	1000	0000	0000	1000	0000	0000	0010	0011	1001	2222
25	2222	2222	2222	2333	3333	3333	3333	3332	3333	3222	2333	2221	1212	2334	4444	4554	4334	3222	3211	2121	1134	3222	3345	5444
26	3333	3333	3333	3333	3322	1211	1211	1111	1121	1100	0110	0010	1100	0122	2221	1012	2021	1011	1010	0000	0012	2210	0000	1122
27	1111	0000	0000	0000	0000	1111	0000	0000	0000	0010	0000	0000	0001	1001	0111	0011	1010	0100	0011	1100	0000	0122	2211	1122
28	2222	1100	0011	1111	0001	1112	2111	1111	1000	0010	0000	0000	0000	0011	1111	1100	0000	0000	0000	0000	0000	0000	0000	0000
29	0000	0000	0000	0000	0000	0001	1111	1000	0101	0111	1010	0001	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
30	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	1210	1100	0011	0000	0011	0001	1111	1110	0123	3224	4332	1123	3233	4332
1st: 1045 Q = 2, Q' = 1 7th: 1445 Q = 2, Q' = 2																								

O-INDICES OF GEOMAGNETIC ACTIVITY

0-indices for 4 consecutive intervals of 15 minutes centred at the full hour, 15 minutes later, etc.

29	ESKDAL EMUIR												OCTOBER 1958											
	Hour G.M.T.																							
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	0000	0000	0001	1001	1111	1122	2122	2221	0011	0110	0000	0000	0000	0000	0111	1211	2212	2211	1112	2222	2210	0000	0012	3333
2	3333	3332	2321	1111	2121	2221	1111	1111	1000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	2332	1222
3	2101	1111	1122	2223	3332	2112	2111	1001	0110	1101	1111	1100	0012	2111	1101	1222	1120	1221	2222	2222	1111	1100	0100	0000
4	0000	0000	0000	0000	0000	0000	0000	0000	1000	1000	0000	0000	0000	1001	1101	1100	0000	0000	0000	0000	0000	0011	1111	1111
5	2333	3332	1000	0000	0000	0010	0001	1110	0000	0000	0001	1102	2211	0100	0111	1111	1011	1222	2001	2110	1001	1000	0222	2100
6	0001	0000	0000	0000	1010	1100	0000	0000	0000	0011	0000	1101	1110	2211	1100	0011	1011	1022	1000	0001	1112	2211	1211	0000
7	0000	0120	1122	2222	2222	2221	1111	0100	0100	0121	1111	0001	0111	1100	1110	0022	2211	0011	0000	1000	0112	2222	3333	3333
8	2222	2333	3333	3322	2221	1000	0000	0001	1100	0001	0001	0000	1000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	2211
9	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	1000	0000	0000	0000	0000	1000	0000	0000	0000	0000	0000
10	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0012	0012	2122	0000	0011	0000	0000	0000	0011
11	1211	1100	0000	0000	0000	0000	0000	0000	0001	0000	0000	0001	0000	0000	0000	0000	0000	0000	0000	0000	1111	0022	1110	0111
12	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0010	0000	0000	0000	0000	0000	0000	0000	0000
13	0000	0000	0000	0000	0000	0000	0011	0000	0000	0010	1000	1100	0001	0000	0000	1000	0000	0000	0000	0110	0000	0000	0000	0010
14	0000	0000	0000	0000	0000	0110	0110	0000	0000	0000	1110	0011	1100	0001	2111	0011	1000	1000	0000	0000	0000	0000	0000	1000
15	1111	1000	1000	0000	0000	0000	0000	1111	1000	0000	0011	0011	1221	1111	1111	2111	1000	0000	0001	1101	1001	1011	1000	0000
16	0000	0000	1110	0000	0111	1112	1100	0000	0100	0000	1000	0000	0001	0100	1000	0000	0000	1010	0000	0000	0000	0000	0000	0110
17	0000	1000	0000	0000	1122	2101	1100	0000	0000	0000	0000	0000	0000	0010	0000	0001	1012	2222	2111	1011	1110	1100	1121	2211
18	1000	0011	1001	2200	0000	0100	1000	0000	0000	0000	0000	0000	0000	0000	0000	0100	0000	1221	0000	0000	0000	0001	1022	1100
19	0000	0000	0000	0001	1000	0000	0000	0000	0000	0000	0100	0010	1111	1100	0111	0122	2222	2111	0000	0100	0001	0011	1111	1101
20	1221	1111	1011	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0110	0111	0001	1000	0000	0021	2221	1001
21	1100	0000	0000	1112	1110	0000	0000	0000	0100	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
22	0000	0000	0000	1322	3322	2113	2332	2333	3333	3311	0222	2222	2211	1121	1222	1233	3344	3322	1112	2334	3434	3333	3343	3233
23	3333	2112	2222	2223	2212	2222	2222	2223	2333	3222	2111	1221	2111	2222	3322	1111	1112	3333	3332	2333	3222	2343	2222	2343
24	3332	3333	3333	3222	2211	1112	2222	2243	4443	2222	2332	2332	2122	2333	3323	3342	2333	3543	3221	2334	4443	3222	4544	4442
25	2222	1110	1011	1111	1100	0111	1212	2002	2210	0000	0000	0000	0010	1001	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
26	0000	0000	0000	0010	0000	0100	1001	0001	2101	0000	0000	0000	0001	0000	1001	1111	1011	2122	2100	0122	2222	2221	1111	1110
27	1100	0000	0222	1022	1122	1110	0000	0000	0000	0011	0000	1000	1100	0000	0000	0022	2221	2122	2344	4454	3445	5433	3333	3332
28	2222	1122	2222	2221	1111	1000	0003	3233	3222	1212	1112	2223	4422	2132	2221	1232	2222	2133	3432	3322	1111	3334	4333	3223
29	3222	2211	1100	0000	1100	0111	1101	1100	1100	0001	1010	0011	1010	0000	0001	0122	2101	0000	0011	0001	2444	4443	3223	3222
30	2211	2200	0000	0010	0000	0000	0000	0101	1110	0011	1001	0011	1012	2001	0122	2221	2112	1232	1221	1111	1111	1223	4443	2211
31	0110	0000	0000	0000	0111	1111	1000	0000	1000	0000	0000	1122	1011	0010	1101	1111	2311	1100	0000	0001	0111	1110	0110	0000
13th: 1115 Q = 1, Q' = 1																								

Q-INDICES OF GEOMAGNETIC ACTIVITY

101

Q-indices for 4 consecutive intervals of 15 minutes centred at the full hour, 15 minutes later, etc.

29 ESKDALEMUIR

NOVEMBER 1958

	Hour G.M.T.																							
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	0000	0000	0000	0000	0000	0000	0000	0000	1111	1000	1100	1100	0000	0000	0001	2211	1111	1110	0010	1000	0000	0110	2110	0000
2	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	1101	1000	0000	0000	0011	1210	2232	2334	4443	2222	2100	0000	0000	0111
3	1112	2100	1110	0112	1101	0001	0000	0000	0000	0000	1111	1100	0111	0112	2200	0010	1100	1000	0000	1000	0010	0021	0001	1111
4	1111	0000	0011	0000	1001	1100	0000	0000	0000	0000	0000	0000	0002	0110	0000	0000	0000	0000	0000	1010	0002	2220	0000	0000
5	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
6	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0122	1000	
7	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	1100	0001	1000	0000	0111	1000	0000	0000	0000	0000	0222	1111	0000
8	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
9	0000	0000	0000	0000	0011	1011	1110	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
10	0000	0000	0000	0000	0000	0011	1111	1101	0000	0100	1111	2100	1000	0111	1111	1111	1222	2221	1100	1010	1111	1001	1001	1100
11	1222	3333	4433	2211	1222	1123	2211	1100	0000	0110	0000	0000	0000	1020	0000	0001	1000	0000	0000	0000	0000	0000	0000	0000
12	0000	0000	0000	0000	0010	0000	0000	0000	0000	0010	0100	0002	1121	1122	2221	1100	0000	0000	0111	1222	1111	1111	2110	0000
13	0000	0011	1111	0122	2211	1221	1110	0000	1011	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
14	0000	0001	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	1222	1211
15	2211	0000	0000	0000	0000	0000	0000	0000	1100	0000	0000	0000	0000	1111	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
16	0011	1000	0211	0000	0021	1111	0000	0001	0111	1011	1111	0000	0000	0100	0011	1100	0000	0000	0000	0000	0000	0000	0000	0110
17	0110	1100	0010	0000	0110	1110	0011	1110	0111	0000	0000	0010	0000	0000	0000	0110	0000	0000	0000	0000	0001	1111	0001	1000
18	0000	0000	0000	0000	0000	0000	0000	0001	1110	0000	0000	0000	0011	1000	0000	0100	1110	0100	0001	1122	2233	2332	2221	1100
19	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
20	0000	0000	0011	1110	0000	0000	0000	0000	0000	0000	0000	0011	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
21	0001	1110	0000	0000	0000	0000	0000	0000	0000	0000	0000	0100	0000	0000	0000	1111	1000	0000	0000	0000	0000	0000	0000	0000
22	0000	0011	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
23	0100	0000	0000	0000	0000	0000	0000	0220	0000	0000	0100	0000	0000	1102	2100	0000	0000	0000	0000	0000	0000	0000	0110	0000
24	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	1011	1111	1101	1222	2111	1110	0000	0000	0100	0000	0112	1010	0110	0000
25	0000	0000	0001	0000	0000	0000	0000	0000	0000	0000	0000	0000	0011	0002	2122	2223	3212	2222	3232	3332	2222	2222	2112	2332
26	2200	0001	1210	0011	1000	0000	0000	0000	0000	0100	0000	0101	0010	0000	0000	1111	1111	2221	0111	2221	1000	0000	1111	1111
27	1000	0000	0000	0000	0001	1111	0111	1000	0000	0110	1110	0000	0001	1000	0000	0000	1111	1121	2111	1112	2211	1111	1111	2222
28	2122	1100	1112	2222	2222	1111	1111	2222	2222	0111	1110	2211	2122	1222	1100	1211	0001	2201	0110	0000	0000	0001	1212	2100
29	0000	1111	1112	2211	1111	1111	0000	0111	0001	1100	1110	0112	0111	1011	0111	1222	2111	0000	0000	0000	0000	0000	0000	0100
30	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000

5th: 1015 Q = 0, Q' = 0

Q-INDICES OF GEOMAGNETIC ACTIVITY

Q-indices for 4 consecutive intervals of 15 minutes centred at the full hour, 15 minutes later, etc.

29 ESKDALEMUIR

DECEMBER 1958

	Hour G.M.T.																							
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0001	1100	0000	0000	0000	0000	0000
2	0000	0000	1010	0000	0100	0000	0000	0000	0000	0001	1101	2111	1011	1112	3322	2222	2222	2233	4332	2100	1111	2234	4322	1211
3	1100	0012	2222	2110	0001	1000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
4	0022	0121	1101	1100	0000	1111	1000	1210	0002	2123	3010	1222	2312	2233	2223	3232	2223	3443	3345	5444	4443	4443	5434	5444
5	4555	5655	4444	4444	3322	2222	2222	1000	0011	0010	0110	0011	2110	1000	0000	0000	0111	1100	0000	0000	0000	0000	0221	1101
6	1000	0000	0000	0000	0000	0000	0000	1000	0000	0000	0122	2111	1111	0112	2122	2222	2233	2211	1111	1100	0000	0000	1123	3200
7	0010	0000	0000	0110	1111	1122	1100	0000	0000	0000	0000	0110	0100	1000	0000	0000	0000	0010	0000	0000	0000	0000	0000	0000
8	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0001	1110	0000	0000	1011	1222	2211	1001	0001	1100	1233	2110	0001	1232
9	3122	3332	2222	2200	0011	1000	0122	1112	2110	0000	0000	2112	1000	0000	0110	0001	0011	0010	0000	0000	0000	0000	0000	0000
10	0000	0000	0001	1111	1122	1110	1011	1000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
11	0000	0000	0000	0011	1111	1000	0000	0000	0000	0011	0110	0000	0000	1111	0000	0000	0000	0000	0000	0001	0000	0011	2333	2100
12	0000	0001	1222	2211	1100	0000	0000	0000	0000	0000	0000	0000	0000	0000	0010	0000	0000	0000	0000	0011	0110	0111	2222	1112
13	3233	3332	2333	4444	3322	3321	2111	1101	1000	0010	0000	0111	2233	3322	3332	3222	3543	3344	4443	4443	3333	4433	3333	3332
14	2333	3222	3221	1121	0000	2211	1100	0000	0000	0000	0001	0000	1111	1320	1122	2222	2222	2212	2222	3334	3222	2112	2333	2222
15	1000	0000	0000	0000	0010	0000	0000	0000	0000	0022	1100	0000	1110	0000	0000	0000	1011	1111	1110	0001	0221	2121	0011	1101
16	1122	1100	2221	2111	2111	2210	0000	0000	1110	0000	0111	2222	2110	0001	0012	2110	0100	0000	0210	0000	0000	0000	0000	0000
17	0100	0000	0000	0000	0000	0000	0000	0000	0000	0000	1000	0111	1000	0000	0000	0001	1123	3332	3545	4333	2212	2223	3133	3355
18	5554	4434	5655	4333	2211	1221	1110	0110	1110	1021	2111	0000	0012	2010	2000	0000	0000	0000	0000	0000	1000	0012	2112	2100
19	0001	1333	3433	3223	3222	1121	1111	1100	1010	0222	2111	1010	1212	2331	1101	1122	2221	0000	1221	0011	2332	2110	1000	0100
20	0001	1000	0100	1221	1122	2222	2221	1110	1100	1000	0111	1101	2200	0211	1101	1100	2122	1111	0001	0101	1233	3321	1100	0001
21	1000	0000	1000	0001	1001	1000	0000	0110	0000	0000	0000	0011	0001	0000	0000	0100	0000	0000	0000	1222	2110	0011	1010	0000
22	0000	0222	1000	0000	0001	1110	0001	0000	0000	0000	0000	0000	0000	0010	0112	1110	0000	0000	0001	1222	2110	2222	1011	0000
23	1000	0000	0000	0000	0000	0000	0001	1111	0000	0100	0000	0000	0012	1000	1111	1121	2112	1122	3332	1100	0012	2112	2221	1110
24	0010	0112	0000	0000	0000	0000	0000	0000	0001	0001	0000	0000	1000	1111	0011	0000	0000	0000	0000	0000	0000	0000	0111	1100
25	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0100	0001	1100	0000	0000	0000	0000	0000	0000	0001	0000	0100
26	2101	1100	0011	1111	1000	1000	0000	0000	0000	0000	0000	0011	1121	1221	0100	0011	0112	2233	3221	0001	0021	1123	3322	2111
27	0000	0111	1111	1111	1221	1111	1121	1101	1000	0000	1111	0012	1011	1112	2100	0011	2210	1100	0000	0000	0000	0110	0000	0000
28	2332	2211	1222	2100	1111	1111	1211	1100	0011	0000	0111	1100	0000	0111	2021	1221	1110	0001	1000	1222	2121	1000	1112	2100
29	2221	1100	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0001	1112	1110	0011	1221	1112	1111	0011	0122	1110	1222	2221
30	2211	0001	0110	0000	0000	0000	0011	0000	0000	1000	0000	0001	1111	2111	1122	2112	1100	0000	1112	1012	2122	2110	1000	0121
31	0000	2111	0000	0000	0001	0000	1110	0000	0000	0000	0000	0000	0000	0000	0001	0000	0000	0000	0000	1112	2100	0000	0000	0000

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)

30 ESKDALEUIR

	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
NORTH COMPONENT																									
Jan.	γ	+2.4	+3.9	+3.0	+5.2	+11.9	+12.1	+10.9	+8.5	+1.0	-7.2	-13.2	-18.1	-22.9	-18.3	-13.0	-7.4	-3.4	+0.5	+4.3	+6.7	+8.4	+9.6	+7.6	+7.6
Feb.	γ	+7.9	+7.2	+6.0	+3.3	+9.4	+10.0	+5.6	-2.3	-10.2	-18.5	-19.4	-21.0	-14.5	-12.4	-8.7	-5.4	-1.7	+4.6	+11.2	+12.9	+10.9	+6.5	+8.2	+10.2
Mar.	γ	+10.2	+4.3	+3.5	+7.7	+13.9	+13.9	+10.4	+4.5	-6.4	-19.5	-31.6	-38.1	-36.7	-27.0	-11.2	-0.1	+15.9	+16.6	+13.4	+16.4	+12.6	+11.3	+7.6	+8.5
Apr.	γ	+6.3	+4.9	+7.5	+7.5	+8.2	+7.6	+5.5	-0.7	-9.6	-24.7	-38.8	-47.3	-41.2	-32.3	-17.3	+2.3	+15.1	+21.8	+31.5	+30.2	+25.3	+16.5	+11.3	+10.2
May	γ	+7.7	+6.9	+2.7	+2.5	+7.1	+5.9	+1.1	-10.0	-20.2	-33.3	-42.3	-44.9	-40.7	-26.3	-9.2	+5.0	+23.4	+37.5	+39.4	+35.2	+23.7	+13.0	+10.8	+4.7
June	γ	-11.9	-3.9	-2.5	+0.8	+4.8	-1.1	-5.2	-16.6	-28.0	-37.1	-40.8	-39.9	-32.1	-22.7	-7.3	+6.4	+19.6	+34.2	+45.0	+46.1	+38.5	+27.8	+16.7	+9.1
July	γ	-1.4	-3.8	-1.7	+1.8	+2.9	+3.6	-2.5	-16.4	-30.5	-35.8	-41.8	-47.1	-31.9	-19.8	-3.6	+31.4	+48.8	+42.9	+43.9	+34.0	+25.5	-1.9	-0.3	+3.6
Aug.	γ	+13.9	+14.4	+11.8	+9.3	+7.3	+7.4	+1.1	-10.0	-26.3	-38.5	-48.2	-47.2	-40.0	-27.7	-12.8	+4.0	+17.4	+25.4	+29.7	+30.4	+24.8	+20.5	+17.7	+15.7
Sept.	γ	+3.6	+6.9	+7.1	+9.8	+11.5	+14.3	+9.0	0.0	-13.0	-28.0	-41.3	-42.3	-36.7	-20.1	-8.7	+7.6	+32.7	+23.6	+27.7	+21.0	+14.4	-2.0	-1.1	+4.1
Oct.	γ	+13.0	+12.1	+11.3	+14.7	+18.2	+15.5	+14.3	+9.5	-2.4	-17.3	-32.9	-41.8	-39.3	-29.7	-18.0	-5.0	+2.1	+8.8	+8.4	+11.7	+9.2	+11.2	+14.3	+12.1
Nov.	γ	+8.3	+7.7	+8.5	+9.5	+11.5	+13.9	+12.9	+9.7	+1.8	-8.4	-19.6	-25.3	-25.1	-20.5	-14.0	-9.5	-2.9	+1.4	+3.1	+6.9	+7.5	+7.6	+7.2	+8.1
Dec.	γ	+3.1	+3.2	+0.9	+3.8	+7.6	+9.7	+9.6	+7.7	+3.2	-3.9	-9.4	-11.8	-12.4	-11.9	-9.5	-7.9	-2.1	+1.5	+1.9	+2.3	+3.9	+5.2	+6.1	-0.8
Year	γ	+5.3	+5.3	+4.8	+6.3	+9.5	+9.5	+6.0	-1.4	-11.8	-22.7	-31.6	-35.4	-31.2	-22.4	-11.1	+1.7	+13.7	+18.3	+21.6	+21.2	+17.0	+10.4	+8.8	+7.7
Winter	γ	+5.5	+5.5	+4.7	+5.4	+10.1	+11.4	+9.7	+5.9	-1.1	-9.5	-15.4	-19.1	-18.7	-15.8	-11.3	-7.6	-2.5	+1.9	+5.1	+7.2	+7.7	+7.2	+7.3	+6.3
Equinox	γ	+8.3	+7.1	+7.3	+9.9	+13.0	+12.8	+9.8	+3.4	-7.9	-22.4	-36.1	-42.3	-38.4	-27.3	-13.8	+1.2	+16.5	+17.7	+20.3	+19.8	+15.4	+9.2	+8.1	+8.7
Summer	γ	+2.1	+3.4	+2.6	+3.6	+5.5	+3.9	-1.3	-13.2	-26.3	-36.2	-43.2	-44.8	-36.2	-24.1	-8.2	+11.7	+27.3	+35.1	+39.5	+36.4	+28.1	+14.8	+11.2	+8.3
WEST COMPONENT																									
Jan.	γ	-15.5	-16.2	-13.7	-14.7	-10.9	-8.9	-6.1	-8.9	-12.7	-10.9	-6.7	+0.4	+13.0	+22.7	+22.4	+18.6	+21.9	+22.5	+18.5	+11.4	+0.6	-5.9	-9.5	-11.2
Feb.	γ	-11.8	-9.4	+1.1	-16.4	-14.7	-12.4	-12.1	-9.4	-8.5	-5.7	+3.2	+10.5	+22.2	+25.2	+24.3	+19.6	+14.8	+12.2	+6.9	+3.7	-5.3	-10.0	-14.2	-13.8
Mar.	γ	-15.3	-23.2	-23.3	-17.6	-18.4	-16.7	-10.9	-18.2	-22.1	-18.5	-7.4	+12.5	+28.4	+38.8	+42.8	+36.3	+30.2	+20.7	+11.9	+7.1	-1.3	-7.3	-13.5	-15.1
Apr.	γ	-12.1	-15.3	-17.5	-22.8	-22.5	-27.6	-31.7	-30.0	-20.2	-7.6	+11.9	+32.7	+43.7	+44.7	+40.1	+30.9	+21.4	+14.1	+7.1	+1.8	-0.5	-4.1	-11.1	-11.1
May	γ	-3.7	-10.4	-17.2	-17.1	-20.4	-28.4	-38.5	-41.3	-39.4	-27.3	-9.1	+10.9	+28.8	+41.0	+42.7	+37.0	+29.6	+24.9	+15.4	+7.9	+9.3	+7.7	+0.5	-2.8
June	γ	-9.1	-14.6	-19.2	-23.2	-25.6	-34.6	-40.3	-43.9	-37.2	-25.3	-6.1	+12.2	+30.0	+37.1	+39.0	+35.8	+32.2	+26.4	+21.7	+16.9	+15.8	+11.5	+4.4	-3.9
July	γ	-5.7	-8.4	-14.8	-19.7	-23.2	-28.8	-37.7	-42.4	-36.6	-29.1	-17.9	-0.1	+23.6	+33.0	+37.6	+42.7	+37.2	+27.0	+23.8	+17.7	+12.1	+10.9	+2.1	-3.6
Aug.	γ	-1.5	-1.5	-5.4	-11.6	-15.5	-26.1	-34.7	-39.5	-35.9	-27.3	-8.4	+13.4	+32.1	+41.3	+37.9	+31.0	+20.1	+9.4	+3.8	+4.1	+5.1	+5.3	+3.9	+0.1
Sept.	γ	-13.8	-13.6	-16.4	-16.7	-14.4	-17.8	-23.8	-28.7	-31.3	-26.7	-6.6	+16.1	+33.5	+43.2	+39.1	+31.4	+28.3	+15.1	+13.4	+8.1	+4.1	-4.6	-6.7	-11.2
Oct.	γ	-12.5	-11.5	-8.1	-6.5	-6.9	-6.6	-13.3	-23.5	-25.3	-15.1	+4.5	+21.5	+30.4	+31.8	+28.7	+21.3	+15.3	+12.7	+7.3	-2.9	-8.0	-15.1	-11.7	-11.7
Nov.	γ	-8.9	-8.7	-8.2	-7.1	-6.8	-5.9	-6.1	-7.6	-12.7	-14.1	-6.9	+4.2	+13.6	+18.8	+20.5	+18.4	+15.8	+12.7	+8.5	+4.5	-0.2	-5.2	-8.7	-9.8
Dec.	γ	-12.8	-17.0	-15.9	-10.4	-5.3	-3.2	-2.4	-3.6	-5.3	-5.0	+0.4	+7.7	+14.0	+18.8	+18.2	+16.1	+17.8	+17.4	+9.0	+0.5	-2.5	-8.2	-14.0	-14.2
Year	γ	-10.2	-12.5	-13.2	-15.3	-15.4	-17.9	-20.6	-24.1	-24.6	-19.7	-7.4	+8.7	+24.4	+32.9	+33.4	+29.6	+25.0	+18.7	+13.3	+8.1	+3.1	-1.2	-6.2	-9.0
Winter	γ	-12.2	-12.8	-9.2	-12.1	-9.4	-7.6	-6.7	-7.4	-9.8	-9.0	-2.5	+5.7	+15.7	+21.3	+21.3	+18.2	+17.5	+16.2	+10.7	+5.0	-1.9	-7.3	-11.6	-12.2
Equinox	γ	-13.4	-15.9	-16.3	-15.9	-15.5	-16.6	-17.2	-22.9	-26.7	-22.7	-9.2	+11.2	+28.9	+38.9	+39.6	+34.1	+27.7	+18.1	+13.0	+7.5	+0.4	-5.1	-9.8	-12.3
Summer	γ	-5.0	-8.7	-14.2	-17.9	-21.2	-29.5	-37.8	-41.8	-37.3	-27.3	-10.4	+9.1	+28.6	+38.2	+39.3	+36.7	+29.8	+21.9	+16.2	+11.7	+10.6	+8.8	+2.7	-2.5
VERTICAL COMPONENT																									
Jan.	γ	+1.8	-1.9	-6.6	-9.3	-13.6	-14.3	-11.8	-8.0	-5.6	-4.4	-3.5	-3.0	-4.9	-0.1	+5.7	+6.5	+5.9	+7.5	+10.1	+12.4	+12.7	+10.4	+8.5	+5.5
Feb.	γ	-3.1	-7.3	-25.1	-17.5	-14.4	-15.9	-14.2	-11.3	-10.8	-9.7	-5.4	-3.3	+0.2	+3.6	+8.6	+13.5	+18.0	+17.4	+19.0	+19.8	+17.3	+10.9	+7.8	+1.9
Mar.	γ	-16.3	-22.7	-25.8	-29.2	-24.8	-18.8	-16.8	-11.7	-8.9	-8.2	-8.2	-9.4	-7.3	-0.3	+11.5	+22.3	+34.3	+38.4	+37.4	+28.5	+21.8	+13.3	+5.1	-4.2
Apr.	γ	-6.0	-8.8	-13.4	-14.1	-14.8	-14.3	-9.5	-7.2	-9.2	-12.1	-14.1	-16.6	-15.9	-6.7	+4.2	+14.2	+24.7	+30.6	+31.2	+27.2	+20.0	+12.8	+2.9	-5.1
May	γ	-9.1	-13.8	-13.5	-13.2	-9.2	-4.7	-2.1	-2.8	-6.9	-11.9	-16.8	-19.1	-14.2	-5.2	+5.8	+14.7	+22.2	+26.3	+28.3	+27.0	+19.6	+7.5	-0.8	-8.1
June	γ	-17.7	-22.0	-26.5	-29.5	-20.5	-15.4	-10.1	-4.3	-2.8	-5.7	-9.4	-12.6	-9.9	-1.2	+11.4	+22.3	+28.3	+32.8	+31.9	+27.8	+21.2	+13.7	+1.7	-3.5
July	γ	-6.6	-10.0	-15.2	-13.5	-9.8	-8.6	-6.6	-4.0	-4.6	-9.4	-13.7	-16.0	-15.8	-6.5	+7.3	+18.7	+21.9	+26.1	+25.5	+23.3	+19.6	+4.1	-1.6	-4.6
Aug.	γ	-1.9	-3.0	-8.3	-12.6	-11.5	-7.6	-2.6	-0.4	-3.3	-8.9	-12.5	-16.0	-15.6	-9.1	+2.1	+11.6	+17.3	+20.8	+19.6	+14.8	+11.3	+8.3	+5.1	+2.4
Sept.	γ	-13.8	-10.2	-14.6	-16.7	-12.0	-5.2	-0.3	+1.5	-1.1	-4.8	-9.2	-14.0	-12.1	-3.4	+8.4	+20.9	+24.5	+23.3	+21.6	+20.9	+15.2	+4.8	-7.1	-16.6
Oct.	γ	-9.4	-7.5	-7.3	-10.9	-10.6	-10.4	-8.3	-4.0	-1.1	-0.4	-3.6	-7.5	-5.3	-2.1	+1.7	+7.3	+14.1	+17.0	+18.4	+18.3	+11.3	+7.1	+0.7	-7.5
Nov.	γ	+0.7	-1.1	-3.1	-3.4	-4.7	-5.4	-5.3	-3.9	-1.9	-3.0	-5.1	-5.8	-5.3	-3.4	+0.6	+4.1	+6.3	+8.1	+7.1	+5.8	+6.8	+5.3	+4.4	+2.2
Dec.	γ	-9.1	-11.1	-14.5	-10.7	-8.1	-7.0	-6.6	-5.1	-4.3	-4.6	-5.2	-5.8	-6.1	-1.4	+3.2	+6.5	+9.6	+12.0	+18.7	+16.8	+13.1	+11.4	+7.8	+0.5
Year	γ	-7.5	-9.9	-14.5	-15.1	-12.8	-10.6	-7.9	-5.1	-5.0	-6.9	-8.9	-10.8	-9.3	-3.0	+5.9	+13.5	+18.9	+21.7	+22.4	+20.2	+15.8	+9.1	+2.9	-3.1
Winter	γ	-2.4	-5.3	-12.4	-10.2	-10.2	-10.7	-9.5	-7.1	-5.7	-5.4	-4.8	-4.5	-4.0	-0.3	+4.5	+7.7	+9.9	+11.3	+13.7	+13.7	+12.5	+9.5	+7.1	+2.5
Equinox	γ	-11.4	-12.3	-15.3	-17.7	-15.5	-12.2	-8.7	-5.3	-5.1	-6.4	-8.8	-11.9	-10.1	-3.1	+6.5	+16.2	+24.4	+27.4	+27.1	+23.7	+17.1	+9.5	+0.4	-8.3
Summer	γ	-8.8	-12.2	-15.9	-17.2	-12.7	-9.1	-5.3	-2.9	-4.4	-9.0	-13.1	-15.9	-13.9	-5.5	+6.7	+16.8	+22.4	+26.5	+26.3	+23.2	+17.9	+8.4	+1.1	-3.5

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

ALL DAYS

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

31 ESKDALEMUIR

	Hour G.M.T.												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	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12												
DECLINATION (measured positive towards the west)																								
Jan.	-3.23	-3.42	-2.89	-3.17	-2.67	-2.26	-1.66	-2.11	-2.61	-1.93	-0.84	+0.76	+3.49	+5.28	+5.02	+4.05	+4.55	+4.52	+3.58	+2.05	-0.19	-1.56	-2.20	-2.56
Feb.	-2.68	-2.17	0.00	-3.44	-3.32	-2.88	-2.67	-1.82	-1.32	-0.46	+1.38	+2.93	+5.03	+5.56	+5.24	+4.16	+3.05	+2.28	+0.97	+0.26	-1.49	-2.26	-3.18	-3.17
Mar.	-3.48	-4.84	-4.85	-3.84	-4.25	-3.91	-2.59	-3.84	-4.23	-3.00	-0.29	+3.97	+7.13	+8.86	+9.07	+7.35	+5.49	+3.55	+1.90	+0.82	-0.74	-1.90	-3.01	-3.37
Apr.	-2.69	-3.28	-3.82	-4.89	-4.87	-5.40	-5.78	-6.38	-5.69	-3.15	-0.07	+4.21	+8.17	+10.05	+9.69	+8.02	+5.67	+3.49	+1.64	+0.29	-0.59	-0.73	-1.26	-2.63
May	-1.05	-2.36	-3.58	-3.55	-4.40	-5.96	-7.82	-7.96	-7.19	-4.26	-0.24	+3.91	+7.37	+9.28	+8.97	+7.28	+5.09	+3.61	+1.62	+0.25	+0.98	+1.05	-0.30	-0.74
June	-1.38	-2.80	-3.79	-4.72	-5.35	-6.94	-7.95	-8.25	-6.45	-3.71	+0.31	+3.99	+7.28	+8.36	+8.16	+6.99	+5.77	+4.03	+2.68	+1.66	+1.73	+1.26	+0.25	-1.13
July	-1.11	-1.56	-2.93	-4.05	-4.80	-5.95	-7.53	-7.94	-6.24	-4.53	-2.04	+1.76	+5.97	+7.48	+7.73	+7.45	+5.67	+3.84	+3.15	+2.30	+1.48	+2.28	+0.44	-0.87
Aug.	-0.83	-0.85	-1.53	-2.70	-3.41	-5.55	-7.05	-7.61	-6.27	-4.06	+0.12	+4.49	+8.01	+9.40	+8.15	+6.11	+3.40	+0.93	-0.36	-0.32	+0.10	+0.29	+0.12	-0.58
Sept.	-2.91	-3.00	-3.58	-3.74	-3.33	-4.14	-5.14	-5.78	-5.82	-4.32	+0.22	+4.85	+8.14	+9.47	+8.22	+6.05	+4.47	+2.15	+1.65	+0.83	+0.28	-0.85	-1.30	-2.42
Oct.	-3.01	-2.78	-2.07	-1.87	-2.08	-1.91	-1.88	-3.05	-4.65	-4.46	-1.80	+2.50	+5.82	+7.26	+7.10	+6.00	+4.22	+2.76	+2.26	+1.04	-0.94	-2.04	-3.60	-2.82
Nov.	-2.11	-2.05	-1.97	-1.79	-1.80	-1.72	-1.72	-1.90	-2.63	-2.53	-0.65	+1.80	+3.70	+4.57	+4.66	+4.07	+3.29	+2.50	+1.60	+0.64	-0.32	-1.33	-2.03	-2.28
Dec.	-2.70	-3.56	-3.25	-2.25	-1.35	-1.02	-0.85	-1.02	-1.19	-0.87	+0.44	+2.00	+3.29	+4.25	+4.04	+3.56	+3.68	+3.46	+1.74	+0.01	-0.66	-1.85	-3.06	-2.84
Year	-2.26	-2.72	-2.85	-3.33	-3.47	-3.97	-4.39	-4.81	-4.52	-3.11	-0.29	+3.10	+6.12	+7.49	+7.17	+5.92	+4.53	+3.09	+1.87	+0.82	-0.03	-0.64	-1.59	-2.12
Winter	-2.68	-2.80	-2.03	-2.66	-2.29	-1.97	-1.73	-1.71	-1.94	-1.45	+0.08	+1.87	+3.88	+4.91	+4.74	+3.96	+3.64	+3.19	+1.97	+0.74	-0.67	-1.75	-2.62	-2.71
Equinox	-3.02	-3.47	-3.58	-3.59	-3.63	-3.84	-3.85	-4.76	-5.10	-3.73	-0.49	+3.88	+7.31	+8.91	+8.52	+6.85	+4.96	+2.99	+1.86	+0.75	-0.50	-1.38	-2.29	-2.81
Summer	-1.09	-1.89	-2.96	-3.75	-4.49	-6.10	-7.59	-7.94	-6.54	-4.14	-0.46	+3.54	+7.16	+8.63	+8.25	+6.96	+4.98	+3.10	+1.77	+0.97	+1.07	+1.22	+0.13	-0.83
INCLINATION																								
Jan.	+0.08	-0.10	-0.19	-0.39	-1.00	-1.03	-0.93	-0.65	-0.04	+0.50	+0.86	+1.11	+1.22	+0.92	+0.71	+0.41	+0.10	-0.12	-0.26	-0.28	-0.25	-0.30	-0.17	-0.23
Feb.	-0.45	-0.53	-1.02	-0.45	-0.79	-0.89	-0.57	-0.01	+0.51	+1.04	+1.10	+1.17	+0.68	+0.59	+0.48	+0.45	+0.37	-0.03	-0.35	-0.41	-0.22	-0.03	-0.19	-0.45
Mar.	-0.88	-0.55	-0.57	-1.01	-1.30	-1.17	-0.96	-0.36	+0.48	+1.31	+1.96	+2.11	+1.88	+1.29	+0.50	+0.11	-0.57	-0.40	-0.11	-0.46	-0.27	-0.32	-0.21	-0.48
Apr.	-0.41	-0.35	-0.60	-0.55	-0.63	-0.54	-0.25	+0.26	+0.78	+1.57	+2.29	+2.55	+1.91	+1.42	+0.68	-0.30	-0.77	-0.94	-1.48	-1.40	-1.19	-0.76	-0.62	-0.66
May	-0.69	-0.67	-0.30	-0.28	-0.44	-0.15	+0.35	+1.10	+1.64	+2.23	+2.47	+2.34	+1.96	+1.09	+0.22	-0.43	-1.36	-2.12	-2.08	-1.74	-1.19	-0.76	-0.73	-0.47
June	+0.46	-0.11	-0.25	-0.49	-0.50	+0.12	+0.59	+1.52	+2.23	+2.61	+2.52	+2.15	+1.49	+1.00	+0.27	-0.31	-0.99	-1.77	-2.43	-2.55	-2.20	-1.63	-1.11	-0.63
July	0.00	+0.09	-0.08	-0.21	-0.15	-0.09	+0.47	+1.51	+2.33	+2.48	+2.63	+2.70	+1.41	+0.73	-0.05	-2.13	-3.12	-2.51	-2.53	-1.88	-1.34	+0.09	-0.05	-0.31
Aug.	-0.94	-1.00	-0.91	-0.78	-0.57	-0.35	+0.29	+1.13	+2.09	+2.65	+2.96	+2.54	+1.85	+1.09	+0.43	-0.36	-0.96	-1.27	-1.51	-1.68	-1.41	-1.21	-1.08	-0.97
Sept.	-0.41	-0.54	-0.62	-0.85	-0.87	-0.85	-0.30	+0.39	+1.21	+2.05	+2.57	+2.23	+1.70	+0.70	+0.29	-0.37	-1.89	-1.16	-1.45	-0.96	-0.62	+0.31	-0.02	-0.53
Oct.	-0.93	-0.84	-0.82	-1.15	-1.37	-1.19	-1.06	-0.56	+0.42	+1.44	+2.26	+2.50	+2.18	+1.52	+0.83	+0.15	-0.05	-0.35	-0.25	-0.41	-0.29	-0.46	-0.73	-0.83
Nov.	-0.42	-0.43	-0.53	-0.62	-0.78	-0.97	-0.90	-0.64	-0.01	+0.65	+1.24	+1.46	+1.35	+1.03	+0.68	+0.50	+0.15	-0.05	-0.13	-0.36	-0.32	-0.30	-0.26	-0.36
Dec.	-0.27	-0.27	-0.22	-0.38	-0.63	-0.77	-0.76	-0.59	-0.25	+0.20	+0.49	+0.54	+0.49	+0.52	+0.48	+0.48	+0.16	-0.02	+0.23	+0.25	+0.09	+0.04	-0.04	+0.24
Year	-0.41	-0.44	-0.51	-0.60	-0.75	-0.65	-0.33	+0.26	+0.95	+1.56	+1.95	+1.95	+1.51	+0.99	+0.46	-0.15	-0.74	-0.90	-1.03	-0.99	-0.77	-0.44	-0.43	-0.47
Winter	-0.27	-0.33	-0.50	-0.46	-0.80	-0.92	-0.79	-0.47	+0.05	+0.60	+0.92	+1.07	+0.94	+0.77	+0.59	+0.46	+0.19	-0.05	-0.13	-0.20	-0.17	-0.15	-0.16	-0.20
Equinox	-0.66	-0.57	-0.66	-0.89	-1.04	-0.93	-0.64	-0.07	+0.72	+1.59	+2.27	+2.35	+1.92	+1.23	+0.57	-0.10	-0.82	-0.71	-0.83	-0.81	-0.59	-0.31	-0.40	-0.63
Summer	-0.29	-0.41	-0.38	-0.44	-0.41	-0.12	+0.42	+1.31	+2.08	+2.49	+2.64	+2.43	+1.68	+0.97	+0.22	-0.81	-1.61	-1.92	-2.15	-1.96	-1.54	-0.87	-0.74	-0.60
HORIZONTAL FORCE																								
Jan.	-0.5	+0.8	+0.4	+2.4	+9.7	+10.2	+9.6	+6.7	-1.4	-9.1	-14.2	-17.7	-20.1	-13.8	-8.6	-3.8	-0.7	-4.6	-7.6	-8.7	-8.4	-8.3	-5.7	-5.4
Feb.	+5.6	+5.3	+6.1	+0.3	+6.5	+7.5	+3.3	+4.0	-11.6	-19.2	-18.5	-18.7	-10.1	-7.5	-4.0	-1.7	+1.1	+6.8	+12.3	+13.4	+9.7	+4.5	+5.4	+7.5
Mar.	+7.2	-0.1	-0.9	+4.3	+10.3	+10.6	+8.2	+1.1	-10.4	-22.6	-32.4	-35.1	-30.8	-19.4	-3.1	+6.6	+21.2	+20.1	+15.4	+17.4	+12.1	+9.7	+5.0	+5.6
Apr.	+3.9	+2.0	+4.1	+3.1	+4.0	+2.8	+0.3	-6.5	-15.0	-28.0	-39.5	-44.3	-34.4	-23.7	-8.7	+9.7	+20.6	+25.4	+33.6	+31.0	+25.2	+16.1	+10.3	+8.0
May	+6.9	+4.9	-0.5	-0.7	+3.2	+0.5	-6.0	-17.5	-27.1	-37.8	-43.2	-42.1	-34.6	-18.2	-1.1	+11.8	+28.5	+41.4	+41.6	+36.0	+25.0	+14.2	+10.7	+4.1
June	-13.4	-6.5	-6.0	-3.5	0.0	-7.5	-12.6	-24.4	-34.4	-41.1	-41.2	-36.9	-26.0	-15.4	+0.2	+12.9	+25.2	+38.5	+48.2	+48.4	+40.7	+29.4	+17.2	+8.2
July	-2.4	-5.3	-4.4	-1.9	-1.4	-1.8	-9.4	-24.0	-36.7	-40.6	-44.4	-46.3	-27.0	-13.3	+3.4	+38.8	+54.8	+47.2	+47.6	+36.7	+27.3	+0.1	+0.1	+2.9
Aug.	+13.4	+13.9	+10.6	+7.0	+4.3	+2.4	-5.3	-17.1	-32.5	-42.9	-48.9	-43.9	-33.4	-19.6	-5.6	+9.7	+20.8	+26.7	+29.9	+30.6	+25.3	+21.1	+18.1	+15.4
Sept.	+1.0	+4.3	+3.9	+6.5	+8.6	+10.8	+4.4	-5.3	-18.6	-32.4	-41.8	-38.6	-29.9	-11.8	-1.3	+13.3	+37.4	+26.0	+29.7	+22.1	+14.9	-2.8	-2.3	+1.9
Oct.	+10.5	+9.8	+9.6	+13.2	+16.6	+14.0	+12.8	+6.9	-6.7	-21.7	-35.1	-40.2	-34.6	-23.6	-11.8	+0.4	+6.0	+11.5	+10.6	+12.9	+8.5	+9.5	+11.2	+9.7
Nov.	+6.5	+6.0	+6.8	+8.0	+10.0	+12.6	+11.5	+8.1	-0.6	-10.9	-20.5	-24.1	-22.2	-16.7	-10.0	-6.0	+0.1	+3.7	+4.6	+7.6	+7.3	+6.5	+5.5	+6.2
Dec.	+0.7	0.0	-2.0	+1.8	+6.5	+8.9	+9.0	+6.9	+2.2	-4.7	-9.2	-10.2	-9.6	-8.3	-6.0	-4.8	+1.2	+4.7	+3.5	+2.4	+3.4	+3.6	+3.4	-3.4
Year	+3.3	+2.9	+2.3	+3.4	+6.5	+5.9	+2.1	-5.8	-16.1	-25.9	-32.4	-33.2	-26.1	-15.9	-4.7	+7.2	+18.1	+21.4	+23.7	+22.3	+17.3	+10.0	+7.5	+5.9
Winter	+3.1	+3.0	+2.9	+3.1	+8.2	+9.8	+8.3	+4.4	-2.9	-11.0	-15.6	-17.7	-15.5	-11.6	-7.1	-4.1	+0.8	+4.9	+7.0	+8.0	+7.2	+5.7	+5.0	+3.9
Equinox	+5.7	+4.0	+4.2	+6.8	+9.9	+9.5	+6.4	-0.9	-12.7	-26.2	-37.2	-39.5	-32.4	-19.6	-6.2	+7.5	+21.3	+20.7	+22.4	+20.9	+15.2	+8.1	+6.1	+6.3
Summer	+1.1	+1.7	-0.1	+0.2	+1.5	-1.6	-8.3	-20.7	-32.7	-40.6	-44.4	-42.3	-30.3	-16.6	-0.8	+18.3	+32.3	+38.5	+41.8	+37.9	+29.6	+16.2	+11.5	+7.7

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

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)

32 ESKDALEUIR

	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
NORTH COMPONENT																								
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
Jan.	+5.4	+1.6	+2.7	+4.1	+7.0	+10.1	+10.2	+10.1	+7.1	+0.9	-5.0	-12.0	-18.7	-19.9	-16.9	-10.2	-7.3	-5.2	+1.6	+5.5	+6.1	+7.5	+8.0	+7.5
Feb.	+6.4	+3.8	+5.4	+4.0	+6.0	+6.2	+6.7	+8.5	+2.3	-7.5	-16.8	-20.4	-19.1	-18.9	-16.4	-10.4	-7.2	+0.5	+9.1	+12.0	+11.9	+10.4	+10.5	+12.9
Mar.	+14.7	+5.4	+5.1	+4.2	+12.9	+14.6	+15.4	+10.9	-1.4	-17.3	-31.6	-38.0	-37.5	-31.7	-20.7	-10.3	+7.2	+11.9	+11.3	+13.8	+15.1	+17.5	+12.8	+15.6
Apr.	+7.1	+8.3	+7.5	+9.1	+7.3	+8.4	+10.7	+10.7	+2.6	-15.3	-29.6	-41.0	-40.7	-32.8	-18.6	-7.9	+1.4	+10.2	+14.4	+18.7	+19.1	+19.1	+15.3	+15.9
May	+10.2	+8.6	+6.2	+9.3	+12.9	+13.7	+8.7	-0.2	-14.2	-29.5	-41.2	-46.7	-43.8	-30.0	-19.1	0.0	+14.2	+21.1	+22.2	+20.7	+21.9	+18.7	+18.7	+17.7
June	+6.8	+8.0	+6.4	+10.8	+10.3	+11.6	+3.1	-10.5	-24.1	-33.9	-38.6	-38.1	-35.1	-26.9	-15.9	-2.0	+9.5	+18.1	+32.1	+30.6	+27.1	+22.7	+18.1	+10.2
July	+1.4	-0.6	+1.1	+3.7	+3.8	+7.1	+0.7	-7.2	-16.9	-31.5	-37.0	-35.1	-28.5	-18.4	-6.3	+3.5	+16.0	+23.9	+30.3	+25.1	+22.5	+20.6	+13.6	+8.2
Aug.	+11.0	+11.5	+9.8	+12.9	+14.8	+14.4	+7.0	-6.1	-20.8	-33.4	-44.2	-50.1	-46.9	-29.7	-16.6	-4.3	+13.5	+22.2	+25.5	+25.2	+24.6	+22.4	+20.7	+16.5
Sept.	+13.3	+12.5	+12.3	+12.8	+12.5	+11.3	+7.0	-0.9	-11.3	-33.2	-43.5	-43.5	-34.7	-23.6	-13.3	-1.0	+6.1	+11.7	+15.2	+19.7	+18.9	+17.1	+17.7	+16.7
Oct.	+14.0	+11.1	+11.5	+12.5	+12.3	+12.3	+12.9	+9.4	-0.3	-16.3	-33.1	-42.5	-39.7	-32.7	-24.1	-12.1	-0.1	+8.1	+13.8	+16.1	+12.5	+18.8	+17.6	+18.0
Nov.	+6.1	+6.7	+5.2	+6.4	+7.6	+8.5	+8.9	+6.1	-1.4	-12.9	-22.9	-27.4	-25.9	-18.7	-10.3	-5.6	+0.6	+5.0	+8.5	+10.4	+11.6	+12.0	+11.9	+9.9
Dec.	+2.6	+2.5	+4.5	+3.0	+5.6	+6.1	+5.6	+1.7	-2.5	-8.8	-15.2	-14.8	-14.1	-11.5	-9.2	-7.3	-1.7	+3.8	+7.2	+9.1	+9.8	+8.7	+7.6	+7.5
Year	+8.3	+6.6	+6.5	+7.8	+9.5	+10.3	+8.1	+2.7	-6.8	-19.9	-29.9	-34.1	-32.0	-24.5	-15.6	-5.7	+4.4	+10.9	+15.9	+17.3	+16.8	+16.3	+14.4	+13.1
Winter	+5.1	+3.6	+4.4	+4.4	+6.6	+7.7	+7.8	+6.6	+1.4	-7.1	-15.0	-18.7	-19.4	-17.2	-13.2	-8.3	-3.9	+1.0	+6.6	+9.3	+9.8	+9.6	+9.4	+9.4
Equinox	+12.2	+9.3	+9.1	+9.6	+11.2	+11.6	+11.5	+7.5	-2.6	-20.5	-34.5	-41.2	-38.2	-30.2	-19.2	-7.8	+3.7	+10.4	+13.7	+17.1	+16.4	+18.2	+15.9	+16.5
Summer	+7.3	+6.8	+5.9	+9.2	+10.5	+12.0	+4.9	-6.0	-19.0	-32.1	-40.3	-42.5	-38.6	-26.2	-14.5	-0.7	+13.3	+21.3	+27.5	+25.5	+24.0	+21.1	+17.8	+13.1
WEST COMPONENT																								
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
Jan.	-11.3	-11.4	-8.8	-4.8	-2.1	-2.8	-4.7	-7.7	-11.5	-12.6	-10.3	-5.0	+5.1	+17.5	+17.1	+11.3	+13.6	+13.5	+10.6	+7.3	+2.4	+0.9	-1.4	-4.7
Feb.	-5.3	-7.0	-8.2	-5.7	-4.9	-7.9	-6.0	-5.3	-10.1	-7.0	+1.7	+2.4	+14.4	+10.4	+11.3	+4.0	+1.7	+6.9	+6.3	+7.4	+5.8	+1.4	-1.6	-4.6
Mar.	-4.5	-13.8	-18.4	-12.7	-12.3	-13.5	-10.6	-19.1	-23.9	-17.4	-5.0	+8.1	+21.0	+27.7	+27.5	+20.2	+15.9	+8.4	+7.0	+11.0	+11.7	+5.5	-5.5	-7.2
Apr.	-3.7	-1.5	-1.0	-5.4	-12.4	-16.1	-23.8	-31.3	-31.1	-23.2	-14.3	-1.2	+15.3	+27.8	+28.6	+23.3	+15.6	+9.3	+7.4	+10.2	+12.0	+11.2	+2.6	+1.8
May	+1.5	-4.6	-9.2	-12.1	-17.6	-26.1	-38.0	-41.3	-43.7	-32.2	-13.4	+11.1	+33.1	+44.5	+40.9	+32.8	+21.9	+12.4	+7.0	+6.7	+8.9	+6.3	+5.6	+5.5
June	-0.2	+0.4	-6.9	-12.9	-21.1	-33.1	-42.3	-42.5	-38.3	-25.7	-6.7	+15.3	+29.8	+35.5	+34.7	+29.9	+23.3	+15.6	+12.4	+10.4	+10.5	+7.4	+4.6	0.0
July	+2.5	-5.4	-8.6	-14.1	-15.8	-31.0	-40.3	-39.8	-36.0	-27.4	-12.3	+5.7	+22.5	+29.7	+30.6	+30.1	+25.1	+21.0	+19.6	+13.8	+11.8	+10.8	+6.9	+0.5
Aug.	+1.2	-1.6	-5.8	-6.6	-14.7	-24.4	-34.9	-42.0	-39.0	-33.5	-18.3	+4.2	+27.3	+40.7	+37.5	+29.4	+20.3	+12.9	+10.3	+10.0	+9.9	+7.3	+5.5	+4.3
Sept.	-1.2	-3.3	-4.9	-6.9	-9.1	-14.0	-22.2	-32.7	-36.0	-32.8	-11.3	+6.6	+27.8	+36.0	+32.7	+21.9	+11.9	+7.7	+9.1	+4.8	+5.4	+3.7	+4.1	+2.7
Oct.	-5.8	-6.4	-5.6	-6.4	-7.6	-9.1	-11.7	-18.9	-29.1	-31.9	-20.3	-5.2	+14.8	+24.8	+27.0	+24.7	+18.1	+14.5	+11.8	+11.0	+7.8	+2.3	+1.0	+0.3
Nov.	-3.7	-5.1	-5.8	-5.4	-6.0	-6.6	-8.1	-10.5	-16.3	-17.3	-10.2	+1.7	+11.4	+13.7	+16.8	+13.2	+11.0	+10.3	+9.2	+7.7	+4.5	+2.0	-3.9	-2.8
Dec.	-3.3	-3.6	-6.5	-6.8	-6.0	-5.3	-5.5	-7.9	-10.5	-10.1	-10.4	+1.8	+7.6	+14.5	+13.2	+10.3	+9.9	+8.1	+8.9	+6.0	+2.1	-1.3	-0.8	-4.1
Year	-2.8	-5.2	-7.5	-8.3	-10.8	-15.8	-20.7	-24.9	-27.1	-22.6	-10.5	+3.8	+19.2	+26.9	+26.5	+20.9	+15.7	+11.7	+10.0	+8.8	+7.8	+4.8	+1.0	-0.7
Winter	-5.9	-6.7	-7.3	-5.7	-4.7	-5.6	-6.1	-7.9	-12.1	-11.8	-6.1	+0.2	+9.6	+14.0	+14.6	+9.7	+9.0	+9.7	+8.8	+7.1	+3.7	+0.8	-3.1	-4.1
Equinox	-3.8	-6.2	-7.5	-7.8	-10.3	-13.1	-17.1	-25.5	-30.0	-26.3	-12.8	+2.1	+19.7	+29.0	+28.9	+22.5	+15.4	+10.0	+8.9	+9.3	+9.2	+5.7	+0.6	-0.6
Summer	+1.2	-2.8	-7.7	-11.4	-17.3	-28.6	-38.9	-41.4	-39.3	-29.7	-12.7	+9.1	+28.2	+37.6	+35.9	+30.6	+22.7	+15.5	+12.3	+10.2	+10.3	+8.0	+5.7	+2.6
VERTICAL COMPONENT																								
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
Jan.	-0.3	-0.2	-1.1	-2.4	-3.6	-3.9	-2.6	-1.4	-1.5	-3.4	-3.3	-3.2	-5.9	-1.6	+3.7	+4.4	+3.4	+3.5	+3.6	+4.2	+3.7	+3.4	+2.9	+1.6
Feb.	+1.4	+1.7	+0.8	+0.1	-1.1	-1.0	-1.1	-2.7	-2.2	-2.1	-0.4	+0.3	+1.8	+2.7	+0.6	+0.9	+1.5	+0.4	+0.3	-0.5	-0.2	+0.9	+0.2	-2.3
Mar.	-3.8	-10.6	-10.8	-9.6	-7.8	-4.9	-1.0	+2.8	+4.0	+1.8	-3.4	-6.4	-10.0	-8.0	-3.6	+1.6	+4.4	+12.1	+13.2	+10.6	+7.8	+7.6	+9.0	+5.0
Apr.	+5.0	+5.8	+6.2	+5.4	+5.6	+4.3	+2.4	+0.8	-6.2	-8.6	-11.0	-14.2	-16.6	-13.0	-6.2	-2.8	+1.4	+6.7	+7.8	+6.8	+6.0	+5.4	+5.4	+3.6
May	+4.4	+1.6	+3.2	+5.2	+6.8	+8.0	+7.2	+4.6	-0.4	-8.4	-18.6	-24.8	-23.6	-16.6	-9.8	-1.2	+5.8	+11.4	+13.0	+11.0	+8.4	+6.2	+3.8	+2.8
June	+2.9	+2.3	+2.6	+4.9	+5.1	+4.1	+2.9	-0.1	-5.2	-11.3	-15.5	-18.3	-16.9	-12.1	-5.4	+1.9	+7.1	+12.5	+13.3	+10.5	+7.2	+4.7	+1.5	+1.3
July	-0.4	-1.0	-1.2	-1.6	-1.4	-0.5	+1.2	-0.6	-4.0	-8.4	-12.8	-16.4	-17.0	-9.8	-2.8	+5.4	+11.0	+13.7	+13.4	+12.0	+11.2	+7.4	+3.4	-0.8
Aug.	+1.6	+1.3	+2.0	+3.3	+4.8	+7.5	+8.4	+7.3	+1.0	-5.7	-12.2	-19.1	-22.0	-16.5	-8.0	+0.7	+5.2	+8.7	+9.4	+7.7	+6.0	+3.9	+2.8	+1.9
Sept.	+5.0	+5.4	+5.8	+5.8	+5.8	+7.2	+8.6	+8.0	+3.6	-1.8	-9.2	-18.6	-19.6	-14.6	-8.6	-3.0	-0.2	+0.8	+0.8	+4.2	+4.2	+4.2	+3.0	+3.2
Oct.	+2.2	+2.3	+1.2	+0.5	+0.6	+0.9	+2.6	+4.7	+5.8	+3.9	-3.2	-7.7	-10.0	-9.3	-6.2	-3.5	-0.6	+0.3	+1.8	+2.7	+4.0	+3.5	+2.2	+1.3
Nov.	+0.7	+0.1	0.0	-0.1	-0.5	-0.7	-0.3	+0.7	+2.8	+2.1	-0.7	-3.3	-5.7	-4.7	-2.8	+1.1	+1.7	+1.7	+1.5	+1.1	+1.6	+1.7	+1.5	+0.5
Dec.	+2.6	+2.4	+1.3	+1.2	-0.2	-1.2	-1.4	-0.6	+0.3	-0.8	-1.8	-3.8	-4.8	-4.6	-1.9	+0.6	+2.0	+1.4	+1.0	+0.8	+1.5	+2.4	+2.6	+1.0
Year	+1.8	+0.9	+0.8	+1.1	+1.2	+1.7	+2.2	+2.0	-0.2	-3.6	-7.7	-11.3	-12.5	-9.0	-4.3	+0.5	+3.6	+6.1	+6.6	+5.9	+5.1	+4.3	+3.2	+1.6
Winter	+1.1	+1.0	+0.3	-0.4	-1.3	-1.7	-1.3	-1.0	-0.1	-1.1	-1.5	-2.5	-3.7	-2.1	-0.1	+1.7	+2.1	+1.7	+1.6	+1.4	+1.7	+2.1	+1.8	+0.2
Equinox	+2.1	+0.7	+0.6	+0.5	+1.1	+1.9	+3.1	+4.1	+1.8	-1.2	-6.7	-11.7	-14.1	-11.2	-6.1	-1.9	+1.3	+5.0	+5.9	+6.1	+5.5	+5.2	+4.9	+3.3
Summer	+2.1	+1.1	+1.7	+2.9	+3.8	+4.8	+4.9	+2.8	-2.1	-8.5	-14.8	-19.7	-19.9	-13.7	-6.5	+1.7	+7.3	+11.6	+12.3	+10.3	+8.2	+5.5	+2.9	+1.3

INTERNATIONAL DISTURBED DAYS

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

33 ESKDALEMUIR

	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
DECLINATION (measured positive towards the west)																								
Jan.	-2.49	-2.36	-1.89	-1.12	-0.68	-0.95	-1.34	-1.94	-2.59	-2.58	-1.89	-0.56	+1.73	+4.30	+4.09	+2.66	+3.02	+2.93	+2.08	+1.26	+0.25	-0.10	-0.59	-1.24
Feb.	-1.32	-1.55	-1.86	-1.30	-1.22	-1.83	-1.46	-1.40	-2.14	-1.13	+0.98	+1.26	+3.64	+2.81	+2.90	+1.20	+0.62	+1.37	+0.92	+1.04	+0.72	-0.11	-0.72	-1.42
Mar.	-1.47	-2.99	-3.92	-2.73	-2.97	-3.29	-2.73	-4.27	-4.78	-2.85	+0.19	+3.09	+5.67	+6.79	+6.34	+4.47	+2.93	+1.25	+0.99	+1.69	+1.78	+0.45	-1.59	-2.05
Apr.	-1.02	-0.62	-0.48	-1.44	-2.78	-3.57	-5.22	-6.74	-6.38	-4.10	-1.76	+1.32	+4.64	+6.86	+6.48	+5.00	+3.10	+1.49	+0.94	+1.34	+1.70	+1.54	-0.06	-0.24
May	-0.08	-1.25	-2.10	-2.79	-4.05	-5.80	-8.01	-8.33	-8.28	-5.39	-1.14	+4.01	+8.36	+10.13	+8.98	+6.63	+3.89	+1.70	+0.57	+0.57	+0.96	+0.57	+0.42	+0.43
June	-0.30	-0.23	-1.64	-3.01	-4.65	-7.12	-8.67	-8.19	-6.82	-3.91	+0.12	+4.53	+7.36	+8.19	+7.62	+6.11	+4.35	+2.46	+1.29	+0.93	+1.10	+0.63	+0.24	-0.39
July	+0.46	-1.06	-1.78	-2.98	-3.34	-6.54	-8.18	-7.78	-6.64	-4.34	-1.08	+2.48	+5.62	+6.70	+6.42	+5.96	+4.46	+3.34	+2.82	+1.84	+1.54	+1.40	+0.88	-0.20
Aug.	-0.18	-0.77	-1.54	-1.82	-3.52	-5.47	-7.32	-8.26	-7.08	-5.49	-2.02	+2.76	+7.30	+9.35	+8.20	+6.10	+3.58	+1.77	+1.10	+1.06	+1.06	+0.63	+0.32	+0.24
Sept.	-0.75	-1.13	-1.46	-1.87	-2.31	-3.25	-4.75	-6.57	-6.84	-5.37	-0.65	+2.97	+6.93	+8.17	+7.10	+4.47	+2.17	+1.11	+1.27	+0.23	+0.38	+0.09	+0.15	-0.09
Oct.	-1.70	-1.72	-1.57	-1.76	-2.00	-2.30	-2.86	-4.18	-5.87	-5.84	-2.86	+0.56	+4.50	+6.24	+6.37	+5.44	+3.66	+2.62	+1.86	+1.62	+1.11	-0.24	-0.46	-0.62
Nov.	-0.97	-1.28	-1.37	-1.34	-1.50	-1.65	-1.98	-2.36	-3.23	-3.00	-1.19	+1.38	+3.29	+3.48	+3.79	+2.88	+2.20	+1.89	+1.54	+1.16	+0.47	-0.04	-1.23	-0.94
Dec.	-0.77	-0.82	-1.49	-1.49	-1.43	-1.30	-1.33	-1.65	-2.03	-1.72	-0.57	+0.93	+2.07	+3.36	+3.01	+2.35	+2.05	+1.50	+1.53	+0.87	+0.05	-0.60	-1.41	-1.11
Year	-0.88	-1.31	-1.76	-1.97	-2.54	-3.59	-4.49	-5.14	-5.22	-3.81	-0.99	+2.06	+5.09	+6.37	+5.94	+4.44	+3.00	+1.95	+1.41	+1.13	+0.93	+0.35	-0.34	-0.64
Winter	-1.39	-1.50	-1.65	-1.31	-1.21	-1.43	-1.53	-1.84	-2.50	-2.11	-0.67	+0.75	+2.68	+3.49	+3.45	+2.27	+1.97	+1.92	+1.52	+1.08	+0.37	-0.21	-0.99	-1.18
Equinox	-1.23	-1.61	-1.86	-1.95	-2.51	-3.10	-3.89	-5.44	-5.97	-4.54	-1.27	+1.99	+5.43	+7.01	+6.57	+4.85	+2.97	+1.62	+1.27	+1.22	+1.24	+0.46	-0.49	-0.75
Summer	-0.03	-0.83	-1.77	-2.65	-3.89	-6.23	-8.05	-8.14	-7.21	-4.78	-1.03	+3.45	+7.16	+8.59	+7.81	+6.20	+4.07	+2.32	+1.45	+1.10	+1.17	+0.81	+0.47	+0.02
INCLINATION																								
Jan.	-0.22	+0.03	-0.09	-0.27	-0.52	-0.72	-0.67	-0.60	-0.36	+0.02	+0.37	+0.77	+1.02	+1.05	+0.99	+0.64	+0.40	+0.26	-0.15	-0.35	-0.34	-0.42	-0.44	-0.39
Feb.	-0.32	-0.12	-0.23	-0.19	-0.36	-0.33	-0.39	-0.56	-0.08	+0.53	+1.07	+1.32	+1.12	+1.18	+0.95	+0.66	+0.49	-0.11	-0.67	-0.89	-0.89	-0.68	-0.66	-0.85
Mar.	-1.00	-0.45	-0.37	-0.36	-0.89	-0.91	-0.90	-0.41	+0.49	+1.39	+2.05	+2.23	+1.96	+1.54	+0.93	+0.47	-0.56	-0.58	-0.50	-0.78	-0.94	-1.03	-0.55	-0.81
Apr.	-0.30	-0.39	-0.33	-0.39	-0.19	-0.25	-0.35	-0.29	+0.06	+1.08	+1.85	+2.35	+2.07	+1.49	+0.71	+0.17	-0.25	-0.62	-0.84	-1.19	-1.25	-1.26	-0.90	-0.97
May	-0.58	-0.47	-0.21	-0.33	-0.46	-0.38	+0.08	+0.65	+1.46	+2.12	+2.42	+2.31	+1.88	+1.01	+0.51	-0.44	-1.06	-1.25	-1.22	-1.17	-1.34	-1.15	-1.20	-1.16
June	-0.37	-0.47	-0.27	-0.43	-0.29	-0.25	+0.39	+1.21	+1.93	+2.27	+2.24	+1.86	+1.52	+1.03	+0.48	-0.19	-0.73	-1.07	-1.93	-1.88	-1.73	-1.47	-1.21	-0.64
July	-0.13	+0.08	0.00	-0.11	-0.09	-0.09	+0.48	+0.95	+1.46	+2.19	+2.26	+1.83	+1.17	+0.60	-0.04	-0.47	-1.09	-1.49	-1.89	-1.52	-1.35	-1.30	-0.89	-0.57
Aug.	-0.70	-0.70	-0.53	-0.68	-0.67	-0.46	+0.18	+1.10	+1.87	+2.47	+2.83	+2.76	+2.20	+1.04	+0.43	-0.06	-1.01	-1.40	-1.57	-1.59	-1.59	-1.47	-1.36	-1.09
Sept.	-0.73	-0.65	-0.61	-0.61	-0.57	-0.39	+0.03	+0.66	+1.28	+2.54	+2.77	+2.31	+1.45	+0.74	+0.26	-0.28	-0.55	-0.84	-1.09	-1.25	-1.21	-1.07	-1.14	-1.05
Oct.	-0.79	-0.59	-0.66	-0.73	-0.70	-0.67	-0.64	-0.26	+0.52	+1.56	+2.34	+2.66	+2.17	+1.61	+1.09	+0.40	-0.23	-0.70	-1.00	-1.13	-0.82	-1.17	-1.11	-1.15
Nov.	-0.34	-0.37	-0.27	-0.36	-0.44	-0.50	-0.48	-0.25	+0.36	+1.11	+1.61	+1.69	+1.41	+0.94	+0.40	+0.23	-0.13	-0.41	-0.64	-0.75	-0.77	-0.77	-0.70	-0.60
Dec.	-0.06	-0.06	-0.18	-0.08	-0.30	-0.36	-0.33	-0.03	+0.30	+0.68	+1.02	+0.85	+0.72	+0.46	+0.39	+0.37	+0.04	-0.31	-0.55	-0.65	-0.63	-0.49	-0.36	-0.41
Year	-0.46	-0.35	-0.31	-0.38	-0.46	-0.44	-0.22	+0.18	+0.78	+1.49	+1.90	+1.91	-1.56	+1.05	+0.59	+0.13	-0.39	-0.71	-1.01	-1.10	-1.07	-1.02	-0.88	-0.81
Winter	-0.23	-0.13	-0.19	-0.23	-0.41	-0.48	-0.47	-0.36	+0.06	+0.58	+1.02	+1.16	+1.06	+0.90	+0.68	+0.47	+0.20	-0.15	-0.50	-0.66	-0.65	-0.59	-0.54	-0.56
Equinox	-0.70	-0.52	-0.49	-0.52	-0.58	-0.55	-0.47	-0.08	+0.59	+1.64	+2.25	+2.39	+1.92	+1.35	+0.75	+0.19	-0.40	-0.69	-0.86	-1.09	-1.05	-1.14	-0.93	-0.99
Summer	-0.44	-0.39	-0.25	-0.39	-0.38	-0.29	+0.28	+0.98	+1.68	+2.26	+2.43	+2.19	+1.69	+0.92	+0.35	-0.29	-0.98	-1.30	-1.65	-1.54	-1.50	-1.35	-1.16	-0.86
HORIZONTAL FORCE																								
Jan.	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
Feb.	+3.2	-0.5	+1.0	+3.1	+6.5	+9.4	+9.1	+8.5	+4.8	-1.5	-6.8	-12.7	-17.4	-16.3	-13.4	-7.9	-4.7	-2.6	+3.5	+6.7	+6.4	+7.5	+7.6	+6.5
Mar.	+5.3	+2.4	+3.8	+2.9	+5.0	+4.6	+5.5	+7.4	+0.4	-8.7	-16.2	-19.6	-16.1	-16.6	-14.0	-9.5	-6.8	+1.8	+10.1	+13.2	+12.8	+10.5	+10.0	+11.8
Apr.	+13.6	+2.8	+1.6	+1.8	+10.4	+11.8	+13.2	+7.2	-5.8	-20.2	-32.0	-35.8	-33.0	-26.0	-15.2	-6.4	+10.0	+13.2	+12.4	+15.6	+17.0	+18.2	+11.6	+14.0
May	+6.3	+7.9	+7.2	+7.9	+4.9	+5.3	+6.1	+4.7	-3.2	-19.3	-31.7	-40.5	-37.1	-27.1	-13.0	-3.5	+4.3	+11.7	+15.5	+20.3	+21.0	+20.9	+15.5	+15.9
June	+10.3	+7.6	+4.4	+6.9	+9.4	+8.6	+1.5	-8.0	-22.0	-34.9	-43.0	-43.8	-36.9	-21.2	-11.2	+6.1	+18.0	+23.0	+23.1	+21.6	+23.2	+19.5	+19.4	+18.4
July	+6.6	+7.9	+5.0	+8.2	+6.2	+5.3	-4.8	-18.2	-30.8	-38.1	-39.2	-34.6	-29.0	-19.9	-9.2	+3.6	+13.6	+20.7	+33.8	+32.0	+28.6	+23.7	+18.6	+10.0
Aug.	+1.8	-1.6	-0.5	+1.0	+0.8	+1.2	-6.8	-14.4	-23.3	-36.0	-38.6	-33.4	-23.8	-12.6	-0.5	+9.0	+20.4	+27.4	+33.4	+27.2	+24.3	+22.2	+14.6	+8.2
Sept.	+11.0	+11.0	+8.6	+11.4	+11.8	+9.6	+0.4	-13.8	-27.6	-39.0	-46.8	-48.4	-41.0	-21.6	-9.4	+1.2	+17.0	+24.2	+27.0	+26.6	+26.0	+23.4	+21.4	+17.0
Oct.	+12.8	+11.7	+11.2	+11.3	+10.6	+8.5	+2.8	-6.9	-17.8	-38.7	-44.8	-41.5	-29.0	-16.5	-7.0	+3.1	+8.2	+12.9	+16.6	+20.3	+19.6	+17.5	+18.2	+16.9
Nov.	+12.7	+9.7	+10.3	+11.1	+10.7	+10.4	+10.5	+5.7	-5.7	-21.9	-36.3	-42.7	-36.3	-27.5	-18.7	-7.3	+3.3	+10.6	+15.7	+17.9	+13.7	+18.9	+17.5	+17.7
Dec.	+5.3	+5.6	+4.0	+5.3	+6.4	+7.2	+7.1	+4.0	-4.4	-15.9	-24.4	-26.6	-23.3	-15.8	-7.0	-3.1	+2.6	+6.8	+10.1	+11.6	+12.2	+12.1	+11.0	+9.2
Year	+1.9	+1.8	+3.2	+1.7	+4.4	+5.0	+4.5	+0.2	-4.4	-10.5	-16.0	-14.2	-12.5	-8.6	-6.6	-5.3	+0.2	+5.2	+8.7	+10.0	+10.0	+8.3	+6.4	+6.6
Year	+7.6	+5.5	+5.0	+6.1	+7.3	+7.2	+4.1	-2.0	-11.7	-23.7	-31.3	-32.8	-27.9	-19.1	-10.4	-1.7	+7.2	+12.9	+17.5	+18.6	+17.9	+16.9	+14.3	+12.7
Winter	+3.9	+2.3	+3.0	+3.3	+5.6	+6.5	+6.5	+5.0	-0.9	-9.1	-15.9	-18.3	-17.3	-14.3	-10.3	-6.4	-2.2	+2.8	+8.1	+10.4	+10.3	+9.6	+8.7	+8.5
Equinox	+11.3	+8.0	+7.6	+8.0	+9.1	+9.0	+8.1	+2.7	-8.1	-25.0	-36.2	-40.1	-33.9	-24.3	-13.5	-3.5	+6.5	+12.1	+15.1	+18.5	+17.8	+18.9	+15.7	+16.1
Summer	+7.4	+6.2	+4.4	+6.9	+7.1	+6.2	-2.4	-13.6	-25.9	-37.0	-41.9	-40.1	-32.7	-18.8	-7.6	+5.0	+17.3	+23.8	+29.3	+26.9	+25.5	+22.2	+18.5	+13.4

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

INTERNATIONAL DISTURBED DAYS

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

34 ESKDALEMUIR

	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
NORTH COMPONENT																								
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
Jan.	-2.5	+1.2	-4.0	-1.4	+21.3	+13.7	+14.4	+11.4	+0.5	-14.7	-23.8	-20.9	-30.6	-26.3	-10.3	-2.0	+5.8	+9.0	+5.8	+10.5	+6.9	+14.6	+9.7	+11.7
Feb.	+30.1	+21.2	+18.0	-0.3	+15.7	+7.2	-17.8	-50.1	-71.3	-75.3	-59.1	-44.1	+9.3	-6.5	-1.3	+3.0	+15.5	+21.4	+32.3	+37.8	+35.6	+25.4	+27.2	+25.9
Mar.	+15.9	+6.3	-1.4	+5.8	+19.9	+19.3	+9.0	-10.6	-13.3	-17.8	-31.0	-37.3	-38.7	-25.7	-3.9	+10.7	+14.3	+12.2	+14.4	+18.1	+10.6	+8.7	+5.6	+9.2
Apr.	+4.8	+2.1	+1.7	+6.5	+14.3	+10.0	+5.6	-5.4	-11.6	-28.8	-48.1	-59.5	-38.2	-34.7	-18.1	+17.5	+29.4	+42.8	+46.4	+34.4	+17.0	+4.8	-2.6	+9.8
May	+15.5	+9.8	-3.6	-8.1	+11.3	+10.5	-3.4	-17.7	-29.8	-44.8	-55.4	-40.0	-25.8	-9.5	+14.7	+28.4	+42.4	+66.8	+50.2	+46.7	+17.7	-25.3	-13.4	-37.5
June	-83.7	-41.6	-26.1	-12.5	-9.9	-39.5	-13.8	-25.1	-46.2	-47.6	-43.4	-48.9	-34.9	-17.4	+20.7	+40.5	+54.6	+83.6	+91.2	+84.9	+59.1	+38.1	+13.4	+4.3
July	-32.5	-27.4	-22.8	-12.5	-12.6	-14.3	-22.5	-46.1	-66.0	-37.1	-42.9	-64.6	-23.7	-2.3	+45.1	+169.5	+176.2	+110.5	+97.5	+47.6	+16.6	-125.3	-75.8	-34.6
Aug.	+17.3	+26.3	+21.6	+6.6	-14.7	-9.1	-13.2	-27.2	-43.9	-47.3	-47.4	-40.7	-37.7	-27.3	+4.8	+21.4	+33.9	+54.2	+52.7	+29.1	+19.9	+8.1	+9.2	+3.6
Sept.	-40.2	-12.7	-19.0	-2.8	+9.6	+33.0	+12.6	+1.3	-14.9	-23.3	-32.0	-31.2	-27.5	+10.7	+20.1	+66.8	+169.3	+77.4	+84.3	+23.5	-18.7	-104.7	-108.1	-73.5
Oct.	+15.9	+21.3	+14.7	+26.4	+30.9	+24.9	+21.6	+6.6	-11.4	-20.4	-29.8	-35.3	-31.8	-19.1	-10.1	+6.3	+12.9	+14.4	+5.5	+1.4	-16.8	-10.4	-5.1	-12.5
Nov.	+10.9	+10.5	+8.6	+13.0	+14.5	+13.1	+15.7	+12.8	+6.3	-5.7	-24.9	-29.5	-26.1	-26.4	-11.3	-2.8	+5.1	+5.8	-8.1	+2.9	+2.2	+3.5	+3.3	+6.3
Dec.	+1.3	+1.2	-10.1	+10.3	+14.2	+16.8	+15.1	+18.1	+16.1	+6.6	-0.4	+1.4	-2.3	-6.4	-7.7	-3.9	+11.7	+5.7	+0.8	-16.3	-13.2	-9.2	-6.4	-43.3
Year	-3.8	+1.5	-1.9	+2.6	+9.5	+7.1	+2.0	-11.0	-23.8	-29.6	-36.5	-37.6	-25.7	-15.9	+3.5	+29.6	+47.5	+42.0	+39.4	+26.6	+11.4	-14.3	-11.9	-10.8
Winter	+10.0	+8.6	+3.1	+5.4	+16.4	+12.7	+6.9	-2.0	-12.1	-22.3	-27.1	-23.3	-12.5	-16.4	-7.6	-1.5	+9.6	+10.5	+7.7	+8.7	+7.9	+8.5	+8.5	+0.2
Equinox	-0.7	+4.2	-1.0	+9.0	+18.6	+21.8	+12.2	-2.0	-12.8	-22.6	-35.3	-40.9	-34.0	-17.1	-2.9	+25.3	+56.5	+36.7	+37.6	+19.2	-2.0	-25.5	-27.6	-16.8
Summer	-20.9	-8.2	-7.7	-6.6	-6.4	-13.0	-13.3	-29.0	-46.4	-44.2	-47.2	-48.5	-30.5	-14.1	+21.4	+65.0	+76.7	+78.7	+72.9	+52.1	+28.3	-26.1	-16.6	-16.0
WEST COMPONENT																								
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
Jan.	-42.3	-34.0	-24.3	-45.1	-28.0	-21.4	-5.6	-8.1	-7.9	-7.9	-5.9	+4.3	+21.5	+28.6	+31.1	+24.3	+35.5	+39.3	+34.4	+30.1	+8.5	-6.6	-8.5	-12.1
Feb.	-6.2	-14.7	+70.7	-32.3	-20.7	-21.6	-31.8	-16.8	-19.1	-21.3	-4.0	+10.8	+37.2	+35.9	+33.9	+17.9	+23.6	+16.4	+0.2	+4.4	-4.3	-6.6	-27.9	-23.6
Mar.	-26.1	-40.7	-45.9	-19.8	-27.5	-16.0	+4.0	-5.2	-3.6	-14.4	+0.3	+19.7	+33.6	+46.9	+52.4	+46.0	+40.7	+24.0	+13.5	+10.6	-18.8	-24.3	-26.4	-22.9
Apr.	-19.9	-25.8	-26.5	-26.4	-33.4	-29.5	-31.2	-34.6	-32.3	-25.9	-3.9	+19.4	+49.4	+57.2	+60.6	+54.9	+41.0	+41.9	+24.5	+2.5	-3.6	-15.0	-17.7	-25.7
May	-8.5	-30.3	-51.1	-31.0	-35.4	-44.1	-54.7	-45.2	-48.1	-26.6	-6.2	+19.9	+36.8	+58.2	+60.3	+54.9	+45.0	+49.5	+33.5	+9.0	+10.8	+11.5	-2.6	-5.5
June	-31.2	-51.5	-53.6	-40.8	-26.0	-42.9	-37.0	-41.5	-40.0	-21.9	-0.7	+15.4	+39.1	+45.6	+51.9	+48.5	+44.9	+46.6	+45.2	+22.7	+26.3	+11.9	-4.3	-6.7
July	-19.7	-21.5	-42.3	-50.9	-48.6	-47.0	-55.9	-69.2	-49.3	-38.2	-31.7	-22.0	+23.3	+38.8	+66.6	+106.7	+91.5	+64.5	+65.9	+39.8	+19.9	+16.1	-8.3	-28.5
Aug.	-3.3	+6.8	+1.1	-34.1	-28.1	-40.6	-48.7	-47.0	-32.5	-20.7	+7.5	+22.5	+37.2	+47.4	+48.1	+40.7	+28.6	+19.8	+4.7	-1.8	-4.0	+0.6	+1.8	-6.0
Sept.	-45.1	-45.4	-54.7	-41.7	-20.9	-26.4	-31.5	-24.3	-26.6	-27.9	+4.5	+27.5	+41.6	+62.4	+59.6	+69.6	+99.1	+49.7	+47.9	+20.2	-0.4	-36.5	-34.5	-66.2
Oct.	-15.8	-9.5	-5.3	+2.0	+4.2	+6.3	+11.2	+0.2	-11.3	-17.0	-4.2	+17.6	+27.9	+34.6	+36.1	+35.5	+32.9	+12.3	+10.3	-10.1	-40.5	-39.0	-45.3	-33.1
Nov.	-16.5	-19.7	-17.0	-13.4	-13.5	-5.9	-1.9	-2.7	-9.4	-14.5	-6.7	+3.7	+17.1	+19.7	+26.2	+23.8	+24.2	+27.6	+11.1	+6.7	-1.5	-6.3	-14.0	-16.9
Dec.	-33.2	-57.6	-41.1	-26.9	-5.3	+2.5	+2.0	+4.4	+5.1	+3.9	+9.7	+18.8	+24.6	+26.5	+25.4	+22.8	+35.4	+46.0	+11.0	-3.1	+2.7	-13.1	-25.6	-35.1
Year	-22.3	-28.7	-24.2	-30.0	-23.5	-23.9	-23.4	-24.1	-22.9	-19.4	-3.5	+13.1	+32.4	+41.8	+46.0	+45.4	+45.2	+36.5	+25.2	+10.9	-0.4	-9.0	-17.8	-23.5
Winter	-24.5	-31.4	-2.9	-29.4	-16.8	-11.6	-9.3	-5.8	-7.9	-9.9	-1.7	+9.4	+25.1	+27.6	+29.1	+22.2	+29.7	+32.3	+14.1	+9.5	+1.3	-8.1	-19.0	-21.9
Equinox	-26.7	-30.4	-33.1	-21.5	-19.4	-16.3	-11.8	-15.9	-18.5	-21.3	-0.9	+21.0	+38.1	+50.3	+52.1	+51.5	+53.4	+32.0	+24.1	+5.8	-15.8	-28.7	-31.0	-37.0
Summer	-15.7	-24.1	-36.5	+39.2	-34.5	-43.7	-49.1	-50.7	-42.5	-26.9	-7.8	+8.9	+34.1	+47.5	+56.8	+62.8	+52.5	+45.1	+37.4	+17.5	+13.3	+10.0	-3.3	-11.7
VERTICAL COMPONENT																								
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
Jan.	-0.4	-16.1	-33.6	+32.1	-44.9	-39.2	-26.7	-16.9	-10.4	-4.7	-1.8	-0.5	+1.0	+3.5	+14.2	+16.7	+11.7	+13.2	+24.5	+34.3	+38.8	+29.5	+24.0	+17.9
Feb.	+5.8	-5.6	-104.4	-56.8	-34.4	-39.1	-32.8	-22.0	-26.2	-28.4	-4.2	+6.6	+18.4	+23.4	+33.8	+36.4	+33.2	+30.5	+38.6	+40.6	+40.4	+26.2	+17.4	+2.6
Mar.	-25.2	-35.4	-40.0	-75.2	-64.4	-50.6	-43.2	-31.4	-27.0	-17.8	-5.8	+0.4	+9.0	+24.0	+45.4	+63.0	+66.0	+66.8	+59.8	+39.8	+34.2	+22.2	-1.6	-13.0
Apr.	-22.9	-30.0	-38.7	-35.9	-33.9	-27.0	-22.5	-18.5	-16.1	-16.6	-17.5	-14.9	-9.1	+8.8	+20.9	+40.1	+51.7	+57.4	+56.7	+46.9	+28.7	+23.0	-4.7	-25.9
May	-33.8	-44.1	-40.6	-44.8	-35.4	-24.7	-19.4	-21.0	-25.2	-26.1	-24.8	-19.8	+3.4	+25.7	+47.6	+61.4	+72.6	+72.3	+65.2	+58.8	+33.6	-12.9	-27.2	-40.8
June	-74.9	-97.5	-97.1	-123.5	-77.9	-56.4	-43.5	-21.3	-7.7	+2.7	+9.7	+8.1	+12.9	+26.3	+49.3	+74.3	+85.1	+90.6	+81.5	+74.1	+55.1	+35.7	+3.9	-9.5
July	-12.8	-18.6	-33.9	-38.8	-36.0	-33.6	-31.4	-19.2	-12.5	-18.6	-20.6	-12.6	-12.0	+5.6	+38.1	+69.2	+47.4	+43.6	+44.2	+51.0	+45.1	-14.8	-16.2	-12.6
Aug.	-6.4	-5.3	-33.8	-65.7	-69.1	-50.2	-24.1	-12.5	-13.4	-19.9	-13.4	-9.3	-0.6	+6.7	+19.6	+36.9	+47.5	+50.8	+45.9	+37.1	+24.4	+23.1	+16.8	+14.9
Sept.	-65.2	-41.6	-61.8	-77.2	-66.0	-38.6	-22.4	-17.2	-17.8	-18.2	-16.2	-11.8	-1.0	+22.6	+53.2	+84.4	+90.8	+86.2	+81.8	+84.4	+62.4	+10.6	-43.2	-78.2
Oct.	-28.9	-26.7	-32.3	-49.3	-46.1	-45.2	-40.1	-30.7	-24.7	-19.3	-9.7	-4.9	+13.5	+25.5	+30.7	+35.9	+52.1	+66.0	+67.9	+72.1	+32.9	+13.7	-14.9	-37.5
Nov.	+4.0	-2.9	-7.4	-9.1	-10.7	-12.0	-13.1	-11.3	-10.0	-9.7	-10.4	-9.5	-7.0	-3.7	+2.4	+5.9	+11.3	+20.2	+15.3	+8.7	+16.2	+13.5	+11.4	+7.9
Dec.	-62.1	-55.0	-66.5	-43.3	-24.5																			

INTERNATIONAL DISTURBED DAYS

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

35 ESKDALEMMUIR

	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
DECLINATION (measured positive towards the west)																								
Jan.	-8.47	-6.93	-4.78	-9.07	-6.47	-4.85	-1.69	-2.07	-1.62	-1.03	-0.29	+1.67	+5.53	+6.79	+6.68	+4.99	+6.97	+7.61	+6.75	+5.69	+1.46	-1.89	-2.09	-2.89
Feb.	-2.40	-3.79	+13.62	-6.53	-4.79	-4.64	-5.75	-1.49	-1.16	-1.45	+1.44	+3.87	+7.18	+7.51	+6.92	+3.51	+4.19	+2.50	-1.19	-0.55	-2.24	-2.31	-6.68	-5.77
Mar.	-5.89	-8.48	-9.23	-4.22	-6.32	-3.97	+0.46	-0.64	-0.23	-2.24	+1.23	+5.40	+8.27	+10.48	+10.75	+8.90	+7.70	+4.39	+2.18	+1.46	-4.21	-5.26	-5.55	-4.98
Apr.	-4.23	-5.29	-5.43	-5.59	-7.29	-6.34	-6.51	-6.79	-6.09	-4.13	+1.05	+6.17	+11.43	+12.87	+12.93	+10.43	+7.17	+6.84	+3.19	-0.77	-1.37	-3.21	-3.47	-5.57
May	-2.31	-6.50	-10.19	-5.96	-7.58	-9.31	-10.92	-8.46	-8.59	-3.68	+0.85	+5.54	+8.41	+12.12	+11.63	+10.02	+7.48	+7.45	+4.86	+0.04	+1.51	+3.28	-0.01	+0.32
June	-3.15	-8.86	-9.87	-7.79	-4.89	-7.20	-6.97	-7.45	-6.35	-2.62	+1.51	+4.97	+9.23	+9.90	+9.73	+8.29	+7.03	+6.26	+5.69	+1.37	+3.09	+0.96	-1.37	-1.51
July	-2.74	-3.29	-7.68	-9.81	-9.33	-8.96	-10.43	-12.23	-7.46	-6.31	-4.78	-1.99	+5.62	+7.93	+11.74	+15.11	+11.79	+8.82	+9.61	+6.23	+3.40	+8.01	+1.20	-4.45
Aug.	-1.33	+0.38	-0.59	-7.14	-5.12	-7.85	-9.34	-8.48	-4.91	-2.40	+3.31	+6.08	+8.95	+10.62	+9.53	+7.42	+4.50	+1.95	-1.04	-1.46	-1.57	-0.18	+0.01	-1.34
Sept.	-7.61	-8.72	-10.37	-8.35	-4.59	-6.60	-6.85	-4.97	-4.83	-4.76	+2.13	+6.75	+9.47	+12.24	+11.31	+11.57	+13.65	+7.14	+6.51	+3.21	+0.61	-3.42	-2.89	-10.63
Oct.	-3.80	-2.73	-1.64	-0.59	-0.31	+0.34	+1.45	-0.21	-1.86	-2.67	+0.28	+4.91	+6.86	+7.73	+7.70	+6.95	+6.17	+1.94	+1.87	-2.11	-7.56	-7.51	-8.98	-6.23
Nov.	-3.76	-4.37	-3.76	-3.20	-3.28	-1.69	-0.98	-1.02	-2.14	-2.71	-0.42	+1.86	+4.44	+4.97	+5.72	+4.92	+4.70	+5.35	+2.54	+1.24	-0.38	-1.41	-2.96	-3.66
Dec.	-6.76	-11.69	-7.92	-5.82	-1.60	-0.13	-0.16	+0.20	+0.42	+0.55	+1.98	+3.74	+5.06	+5.59	+5.42	+4.76	+6.72	+9.09	+2.20	0.00	+1.04	-2.29	-4.94	-5.46
Year	-4.37	-5.86	-4.82	-6.17	-5.13	-5.10	-4.81	-4.47	-3.73	-2.79	+0.69	+4.08	+7.54	+9.06	+9.17	+8.07	+7.34	+5.78	+3.60	+1.20	-0.52	-1.27	-3.14	-4.35
Winter	-5.35	-6.69	-0.71	-6.15	-4.03	-2.83	-2.15	-1.09	-1.13	-1.16	+0.68	+2.79	+5.55	+6.21	+6.19	+4.55	+5.65	+6.14	+2.57	+1.59	-0.03	-1.97	-4.17	-4.45
Equinox	-5.38	-6.31	-6.67	-4.69	-4.63	-4.14	-2.86	-3.15	-3.25	-3.45	+1.17	+5.81	+9.01	+10.83	+10.67	+9.46	+8.67	+5.08	+3.44	+0.45	-3.13	-4.85	-5.22	-6.85
Summer	-2.38	-4.57	-7.08	-7.67	-6.73	-8.33	-9.41	-9.15	-6.83	-3.75	+0.22	+3.65	+8.05	+10.14	+10.66	+10.21	+7.70	+6.12	+4.78	+1.55	+1.61	+3.02	-0.04	-1.75
INCLINATION																								
Jan.	+0.68	-0.05	-0.27	-0.14	-2.15	-1.60	-1.53	-1.06	-0.19	+0.95	+1.59	+1.30	+1.72	+1.45	+0.64	+0.24	-0.53	-0.75	-0.21	-0.22	+0.39	-0.15	+0.06	-0.18
Feb.	-1.75	-1.35	-4.63	-0.98	-1.62	-1.17	+0.76	+2.95	+4.27	+4.51	+3.83	+2.92	-0.62	+0.56	+0.50	+0.47	-0.49	-0.86	-1.17	-1.53	-1.29	-0.94	-1.01	-1.35
Mar.	-1.34	-0.78	-0.32	-1.98	-2.55	-2.31	-1.70	-0.01	+0.25	+0.91	+1.89	+2.21	+2.35	+1.70	+0.72	+0.28	+0.18	+0.55	+0.36	-0.34	+0.38	+0.28	-0.08	-0.64
Apr.	-0.70	-0.56	-0.74	-0.98	-1.36	-0.96	-0.53	+0.33	+0.77	+1.80	+2.77	+3.30	+1.67	+1.79	+0.95	-0.84	-1.17	-1.91	-1.95	-1.07	-0.36	+0.44	+0.27	-0.96
May	-1.75	-1.35	-0.13	-0.19	-1.18	-0.75	+0.43	+1.21	+1.93	+2.63	+3.10	+1.89	+1.32	+0.54	-0.54	-1.03	-1.55	-3.22	-2.10	-1.73	-0.47	+1.20	+0.24	+1.52
June	+4.03	+0.97	-0.01	-1.71	-0.94	+1.74	+0.29	+1.64	+3.34	+3.46	+3.10	+3.22	+2.12	+1.22	-0.79	-1.43	-2.05	-3.84	-4.54	-4.03	-2.85	-1.77	-0.73	-0.43
July	+2.06	+1.61	+1.18	+0.49	+0.54	+0.69	+1.39	+3.41	+4.63	+2.45	+2.70	+4.20	+0.97	-0.19	-2.84	-10.74	-11.53	-6.98	-6.13	-2.36	-0.23	+7.66	+4.68	+2.31
Aug.	-1.25	-1.94	-2.26	-1.63	-0.39	-0.13	+0.88	+2.06	+2.96	+2.87	+2.69	+2.16	+2.00	+1.37	-0.43	-1.00	-1.41	-2.55	-2.39	-0.97	-0.66	+0.03	-0.21	+0.21
Sept.	+1.59	+0.37	+0.40	-1.20	-2.00	-2.79	-0.99	-0.21	+0.87	+1.43	+1.65	+1.42	+1.27	-0.91	-0.74	-3.16	-10.10	-3.57	-4.11	+0.29	+2.77	+7.58	+6.46	+3.71
Oct.	-1.56	-1.94	-1.70	-2.97	-3.21	-2.82	-2.54	-1.19	+0.28	+1.07	+1.77	+1.98	+2.07	+1.45	+0.97	+0.03	+0.03	+0.53	+1.18	+1.81	+2.41	+1.50	+0.52	+0.30
Nov.	-0.42	-0.52	-0.54	-0.91	-1.04	-1.08	-1.33	-1.09	-0.55	+0.31	+1.46	+1.65	+1.33	+1.40	+0.48	+0.03	-0.36	-0.22	+0.77	-0.06	+0.27	+0.18	+0.23	-0.01
Dec.	-1.21	-0.72	-0.47	-1.41	-1.47	-1.54	-1.32	-1.50	-1.35	-0.71	-0.31	-0.55	-0.36	+0.12	+0.41	+0.40	-0.53	+0.07	+1.64	+2.55	+1.83	+1.75	+1.46	+3.21
Year	-0.13	-0.52	-0.77	-1.14	-1.45	-1.08	-0.52	+0.55	+1.43	+1.80	+2.19	+2.15	+1.32	+0.87	-0.06	-1.40	-2.46	-1.90	-1.56	-0.64	+0.19	+1.48	+0.99	+0.64
Winter	-0.68	-0.66	-1.47	-0.86	-1.57	-1.35	-0.86	-0.17	+0.54	+1.26	+1.64	+1.33	+0.52	+0.89	+0.50	+0.29	-0.48	-0.45	+0.26	+0.19	+0.30	+0.21	+0.18	+0.42
Equinox	-0.50	-0.73	-0.53	-1.79	-2.27	-2.28	-1.45	-0.28	+0.54	+1.30	+2.02	+2.23	+1.84	+1.01	+0.48	-0.92	-2.76	-1.10	-1.13	+0.17	+1.30	+2.45	+1.79	+0.60
Summer	+0.78	-0.18	-0.31	-0.76	-0.49	+0.38	+0.75	+2.08	+3.21	+2.85	+2.90	+2.87	+1.61	+0.74	-1.15	-3.55	-4.12	-4.14	-3.79	-2.27	-1.05	+1.78	+0.99	+0.90
HORIZONTAL FORCE																								
Jan.	-10.3	-5.1	-8.4	-9.7	+15.7	+9.5	+13.1	+9.7	-1.0	-15.9	-24.5	-19.7	-26.1	-20.5	-4.4	+2.5	+12.3	+16.1	+12.1	+15.9	+8.4	+13.1	+7.9	+9.3
Feb.	+28.4	+18.1	+30.8	-6.3	+11.6	+3.1	-23.4	-52.3	-73.6	-77.9	-58.8	-41.3	+16.0	+0.3	+5.0	+6.3	+19.6	+24.1	+31.8	+37.9	+34.2	+23.7	+21.6	+21.1
Mar.	+10.8	-1.4	-9.9	+2.0	+14.4	+16.0	+9.6	-11.4	-13.7	-20.2	-30.4	-33.0	-31.8	-16.6	+5.9	+19.0	+21.6	+16.4	+16.6	+19.8	+6.9	+4.0	+0.6	+4.8
Apr.	+2.0	-2.7	-3.2	+1.5	+7.9	+4.4	-0.3	-11.7	-17.4	-33.1	-48.0	-54.9	-28.4	-23.5	-6.6	+27.3	+36.5	+49.8	+50.1	+33.3	+16.0	+1.9	-5.8	+4.9
May	+13.7	+4.0	-13.0	-13.7	+4.6	+2.2	-13.5	-25.8	-38.2	-48.9	-55.6	-35.6	-18.5	+1.4	+25.6	+38.1	+50.0	+74.8	+55.5	+47.6	+19.4	-22.7	-13.6	-37.8
June	-88.0	-50.4	-35.6	-19.8	-14.6	-46.8	-20.4	-32.4	-52.8	-50.8	-42.8	-45.2	-27.0	-8.6	+30.0	+48.8	+62.0	+90.8	+98.0	+87.6	+63.0	+39.6	+12.4	+3.0
July	-35.6	-30.9	-30.2	-21.7	-21.4	-22.7	-32.4	-58.1	-74.0	-43.5	-48.0	-67.5	-19.0	+4.9	+56.6	+186.3	+190.0	+120.5	+108.0	+54.1	+20.0	-120.1	-76.0	-39.3
Aug.	+16.4	+27.1	+21.4	+0.2	-19.6	-16.5	-22.0	-35.4	-49.2	-50.3	-45.2	-35.8	-30.2	-18.1	+13.6	+28.6	+38.6	+56.9	+52.6	+28.2	+18.8	+8.1	+9.4	+2.4
Sept.	-47.8	-20.8	-28.7	-10.4	+5.6	+27.6	+6.6	-3.2	-19.5	-28.0	-30.6	-25.6	-19.4	+22.0	+30.7	+78.4	+184.6	+85.2	+91.6	+26.8	-18.5	-109.6	-112.6	-84.4
Oct.	+12.7	+19.2	+13.5	+26.3	+31.1	+25.6	+23.3	+6.5	-13.3	-23.2	-30.1	-31.5	-26.1	-12.4	-3.3	+12.7	+18.7	+16.4	+7.3	-0.5	-23.9	-17.4	-13.3	-18.3
Nov.	+7.7	+6.7	+5.3	+10.3	+11.7	+11.8	+15.1	+12.1	+4.5	-8.3	-25.7	-28.3	-22.5	-22.3	-6.3	+1.7	+9.5	+10.8	-5.9	+4.1	+1.9	+2.3	+0.7	+3.1
Dec.	-4.8	-9.4	-17.5	+5.2	+13.0	+17.0	+15.2	+18.6	+16.7	+7.2	+1.4	+4.8	+2.2	-1.4	-2.9	+0.4	+18.0	+14.0	+2.8	-16.6	-12.5	-11.4	-11.0	-49.0
Year	-7.9	-3.8	-6.3	-3.0	+5.0	+2.6	-2.4	-15.3	-27.6	-32.7	-36.5	-34.5	-19.2	-7.9	+12.0	+37.5	+55.1	+48.0	+43.4	+28.2	+11.1	-15.7	-15.0	-15.0
Winter	+5.3	+2.6	+2.5</																					

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

The ranges are derived from the diurnal inequalities printed in Tables 30 to 35

36 ESKDALEMUIR

	All days			Quiet days			Disturbed days			All days			Quiet days			Disturbed days		
	N	W	Z	N	W	Z	N	W	Z	D	I	H	D	I	H	D	I	H
Jan.	35.0	38.9	27.0	30.1	30.1	10.3	51.9	84.4	83.7	8.70	2.25	30.3	6.89	1.77	26.8	16.68	3.87	42.2
Feb.	33.9	41.6	44.9	33.3	24.5	5.4	113.1	103.0	145.0	9.00	2.19	32.6	5.78	2.21	32.8	20.30	9.14	115.8
Mar.	54.7	66.1	67.6	55.5	51.6	24.0	58.6	98.3	142.0	13.92	3.41	56.3	11.57	3.26	54.0	19.98	4.90	54.6
Apr.	78.8	76.4	47.8	60.1	59.9	24.4	105.9	95.2	96.1	16.43	4.03	77.9	13.60	3.61	61.5	20.22	5.25	105.0
May	84.3	84.0	47.4	68.9	88.2	37.8	122.2	115.0	117.4	17.24	4.59	84.8	18.46	3.76	67.0	23.04	6.32	130.4
June	86.9	82.9	62.3	70.7	78.0	31.6	174.9	105.5	214.1	16.61	5.16	89.6	16.86	4.20	73.0	19.77	8.57	186.0
July	95.9	85.1	42.1	67.3	70.9	30.7	301.5	175.9	108.1	15.67	5.82	101.1	14.88	4.15	72.0	27.34	19.19	310.1
Aug.	78.6	80.8	36.8	75.6	82.7	31.4	101.6	96.8	119.9	17.01	4.64	79.5	17.61	4.42	75.4	19.96	5.51	107.2
Sept.	75.0	74.5	41.2	63.2	72.0	28.2	277.4	165.3	169.0	15.29	4.46	79.2	15.01	4.02	65.1	24.28	17.68	297.2
Oct.	60.0	57.1	29.3	61.3	58.9	15.8	66.2	81.4	121.4	11.91	3.87	56.8	12.24	3.83	61.6	16.71	5.62	62.6
Nov.	39.2	34.6	13.9	39.4	34.0	8.5	45.2	47.3	33.3	7.29	2.43	36.7	7.02	2.46	38.8	10.09	2.98	43.4
Dec.	22.1	35.8	33.2	25.0	25.0	7.4	61.4	103.6	140.8	7.81	1.31	19.2	5.39	1.67	26.0	20.78	4.75	67.6
Year	57.0	58.0	37.5	51.4	54.0	19.1	85.1	76.0	108.9	12.30	2.98	56.9	11.59	3.01	51.4	15.34	4.65	91.6
Winter	30.5	34.1	26.1	29.2	26.7	5.8	43.5	63.7	91.2	7.71	1.99	27.5	5.99	1.82	28.7	12.90	3.21	43.2
Equinox	62.6	66.3	45.1	59.4	59.0	20.2	97.4	90.4	128.5	14.01	3.39	61.9	12.98	3.53	59.0	17.68	5.21	101.6
Summer	84.3	81.1	43.7	70.0	79.0	32.2	127.2	113.5	132.5	16.57	4.79	86.2	16.73	4.08	71.2	20.07	7.35	139.2

NON-CYCLIC CHANGE

37 ESKDALEMUIR

	All days			Quiet days			Disturbed days		
	H	D	Z	H	D	Z	H	D	Z
Jan.	+3.8	+0.17	-1.1	+3.0	+0.74	-0.6	+13.7	+3.06	+6.1
Feb.	0.0	+0.05	+0.2	+7.2	-0.52	-6.6	-7.0	-0.71	-11.3
Mar.	-0.4	+0.05	+0.5	+2.6	-0.05	+1.0	+3.1	+1.64	-5.9
Apr.	-0.3	-0.05	-1.2	+9.4	+0.77	-1.4	-11.5	-1.73	-7.0
May	-9.1	+0.14	-4.8	+7.5	-0.44	-3.6	-74.7	+4.02	-25.0
June	+10.5	-0.11	+6.6	+5.3	-0.21	-2.7	+50.3	+0.94	+43.3
July	0.0	-0.04	-0.3	+5.2	-0.72	-3.2	-18.1	-1.53	-5.8
Aug.	-0.3	+0.01	-0.1	+3.8	-0.12	-1.6	-10.4	-0.09	+5.4
Sept.	-0.3	-0.08	+0.3	+2.8	+0.43	-2.2	-34.3	-2.62	-2.7
Oct.	+0.6	+0.05	-0.3	+2.2	-0.32	-2.8	-21.2	-2.46	-12.7
Nov.	0.0	-0.02	-0.2	+3.8	+0.17	-1.1	-4.5	-0.62	+0.8
Dec.	+0.1	0.00	+0.2	+7.3	+0.03	-5.9	-22.4	-0.38	+17.8
Year	+0.4	+0.01	0.0	+5.0	-0.02	-2.6	-11.4	-0.04	+0.3
Winter	+1.0	+0.05	-0.2	+5.3	+0.11	-3.5	-5.1	+0.34	+3.3
Equinox	-0.1	-0.01	-0.2	+4.3	+0.21	-1.3	-16.0	-1.29	-7.1
Summer	+0.3	0.00	+0.3	+5.5	-0.37	-2.8	-13.2	+0.83	+4.5

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

AVERAGE RANGE OF DIURNAL INEQUALITY 1932-53
WITH 1958 AS PERCENTAGE OF THIS

38 ESKDALEMUIR

		All days			International quiet days			International disturbed days		
		Z	H	D	Z	H	D	Z	H	D
Year	1932-53	28.7	37.8	8.66	13.7	34.4	8.43	82.1	53.9	11.93
	1958(%)	131	151	142	139	149	137	133	170	129
Winter	1932-53	21.2	19.3	6.95	5.9	16.2	4.44	66.5	34.4	11.45
	1958(%)	123	142	111	98	177	135	137	126	113
Equinox	1932-53	37.1	43.1	10.18	14.8	39.7	9.69	108.9	75.4	15.11
	1958(%)	122	144	138	136	149	134	118	135	117
Summer	1932-53	33.9	59.7	11.84	21.9	50.4	11.76	82.4	83.7	13.11
	1958(%)	129	144	140	147	141	142	161	166	153

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

	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
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
	ALL DAYS																							
Jan.	+11.2	+4.3	-7.7	-2.6	+1.6	-1.4	-0.2	-0.2	-10.1	-14.8	-4.6	+5.7	-0.7	-1.8	+2.2	+2.1	+2.4	-11.2	+1.0	-2.9	+1.2	+0.2	-1.4	+0.5
Feb.	+13.2	-2.0	-6.3	+0.8	-0.3	-2.0	+2.3	+1.6	-12.9	-11.1	+2.1	+7.1	-1.3	+0.4	+0.2	+3.3	-0.7	-17.9	-2.1	-3.0	+1.0	-1.1	+1.1	-0.3
Mar.	+17.9	-3.5	-15.5	+0.9	+5.3	-1.4	0.0	-0.9	-17.4	-21.5	+0.1	+11.1	-1.1	-6.3	+2.0	+1.9	-3.8	-26.5	-9.7	-5.0	+3.1	+1.5	+0.5	-1.4
Apr.	+22.7	-9.6	-18.6	-1.1	+3.5	+0.8	-1.0	+1.2	-14.8	-27.2	+5.5	+12.5	-2.0	-5.2	+0.6	+1.1	+3.2	-19.8	-10.4	-2.9	+2.4	+2.3	-0.6	+0.7
May	+21.7	-18.9	-20.0	+1.2	+2.9	+0.7	+2.0	+0.4	-8.7	-31.4	+7.4	+12.7	-4.5	-4.4	+0.8	+0.2	+1.8	-17.8	-13.0	-2.7	+1.8	-0.7	-0.4	+1.1
June	+21.0	-19.1	-19.1	+0.5	-3.4	-0.7	0.0	+1.0	-9.4	-33.4	+7.3	+9.7	-4.8	-3.1	+0.4	-0.6	-3.9	-20.7	-10.9	-5.1	+4.1	+0.4	+0.2	-0.1
July	+15.1	-22.9	-23.0	+9.2	+4.5	+1.9	+2.0	-1.4	-5.8	-33.4	+3.7	+12.6	-2.0	-3.5	-0.3	+0.3	+1.2	-16.3	-11.0	-1.6	+3.3	+1.2	-1.0	+0.8
Aug.	+27.5	-13.5	-15.9	+4.0	+2.8	-1.1	+0.0	+1.3	-6.7	-23.6	+11.9	+14.2	-5.0	-5.3	-0.2	+0.7	+3.9	-12.0	-7.7	-2.1	+5.1	+0.9	-0.1	+0.5
Sept.	+16.7	-8.3	-20.2	+6.8	+5.1	+0.7	+1.2	+1.2	-13.6	-23.6	+4.5	+12.9	-5.3	-5.9	+2.5	+1.5	-3.3	-13.9	-12.2	-1.7	+3.2	+0.8	-2.2	+1.6
Oct.	+21.7	+2.7	-13.7	+0.4	+5.5	-1.5	-1.0	+0.1	-9.9	-15.2	-2.4	+13.2	-2.8	-5.4	+2.3	+3.5	-0.9	-11.4	-5.7	-3.3	+0.4	+2.6	-1.6	+0.5
Nov.	+14.0	+4.4	-8.7	-1.7	+2.9	-1.3	-0.4	+0.9	-7.6	-10.8	-1.6	+7.1	-1.2	-2.8	+1.3	+1.8	+2.4	-5.7	-1.7	-1.0	+1.4	+0.6	-0.7	-0.4
Dec.	+6.6	+3.3	-5.5	-2.3	+1.1	-1.2	+0.4	+0.1	-12.3	-9.0	-3.6	+4.5	-0.6	-1.8	+2.2	+0.1	+0.6	-11.5	-4.6	-4.3	-0.1	-1.1	-0.3	-0.8
Year	+17.5	-6.9	-14.4	+1.4	+2.6	-0.5	+0.6	+0.5	-10.8	-21.2	+2.6	+10.3	-2.6	-3.8	+1.1	+1.3	+0.2	-15.4	-7.3	-3.0	+2.2	+0.7	-0.6	+0.3
Winter	+11.3	+2.5	-7.0	-1.4	+1.3	-1.4	+0.5	+0.6	-10.7	-11.4	-1.9	+6.1	+1.0	-1.5	+1.5	+1.8	+1.2	-11.6	-1.8	-2.9	+0.9	-0.3	-0.3	-0.2
Equinox	+19.7	-4.7	-17.0	+1.8	+4.8	-0.3	-0.1	+0.4	-13.9	-21.9	+1.9	+12.4	-2.8	-5.7	+1.8	+2.0	-1.2	-17.9	-9.5	-3.2	+2.3	+1.7	-1.0	+0.4
Summer	+21.3	-18.6	-19.5	+3.7	+1.7	+0.2	+1.3	+0.3	-7.7	-30.3	+7.7	+12.5	-3.9	-4.1	+0.2	-0.1	+0.8	-16.7	-10.6	-2.9	+3.6	+0.5	-0.5	+0.7
	QUIET DAYS																							
Year	+19.5	-1.8	-11.9	-0.9	+2.7	-1.2	+0.1	+0.9	-3.7	-18.1	+4.3	+9.3	-3.7	-4.3	+0.8	+1.5	+5.1	-2.5	-4.7	-1.5	+1.8	+0.2	-0.6	-0.3
Winter	+11.7	+3.1	-6.4	-2.8	+1.6	-0.5	-0.1	+1.																

	North component								West component								Vertical component							
	c ₁	α ₁	c ₂	α ₂	c ₃	α ₃	c ₄	α ₄	c ₁	α ₁	c ₂	α ₂	c ₃	α ₃	c ₄	α ₄	c ₁	α ₁	c ₂	α ₂	c ₃	α ₃	c ₄	α ₄
	γ	°	γ	°	γ	°	γ	°	γ	°	γ	°	γ	°	γ	°	γ	°	γ	°	γ	°	γ	°
	ALL DAYS																							
Jan.	12·0	72	8·1	258	2·1	141	0·3	235	17·9	217	7·3	327	2·0	211	3·0	59	11·4	171	3·1	167	1·2	88	1·5	301
Feb.	13·3	102	6·4	283	2·0	198	2·8	68	17·0	233	7·4	23	1·4	297	3·3	16	17·9	185	3·6	221	1·5	147	1·2	120
Mar.	18·2	104	15·5	280	5·5	114	0·9	191	27·7	222	11·1	7	6·4	200	2·7	60	26·7	191	10·9	249	3·5	74	1·5	175
Apr.	24·7	116	18·7	273	3·6	87	1·5	333	31·0	212	13·7	30	5·6	211	1·3	42	20·1	174	10·8	261	3·3	57	0·9	331
May	28·8	134	20·0	280	3·0	86	2·0	91	32·6	199	14·7	37	6·3	236	0·8	90	17·9	177	13·3	265	1·9	120	1·2	355
June	28·4	135	20·1	278	3·5	269	1·0	11	34·7	199	12·1	43	5·7	247	0·7	160	21·1	194	12·0	251	4·1	94	0·2	128
July	27·4	150	24·8	298	4·9	76	2·4	138	33·9	193	13·1	23	4·0	219	0·5	321	16·3	179	11·1	268	3·5	79	1·3	320
Aug.	30·7	119	16·3	291	3·0	120	1·7	49	24·6	199	18·5	46	7·3	233	0·7	357	12·6	165	7·9	261	5·2	89	0·5	3
Sept.	18·7	120	21·3	295	5·1	92	1·7	57	27·2	213	13·6	26	7·9	232	2·9	71	14·3	197	12·3	269	3·3	86	2·7	319
Oct.	21·8	86	13·7	278	5·7	115	1·0	290	18·1	216	13·4	356	6·1	217	4·2	46	11·5	188	6·6	246	2·6	17	1·7	303
Nov.	14·7	76	8·8	266	3·1	123	1·0	348	13·2	219	7·3	353	3·0	213	2·2	49	6·2	161	2·0	245	1·5	77	0·8	251
Dec.	7·4	67	5·9	254	1·6	146	0·4	83	15·2	237	5·8	328	1·9	207	2·2	101	11·5	180	6·3	233	1·1	196	0·8	212
Year	18·8	115	14·5	282	2·7	111	0·8	63	23·8	210	10·6	21	4·6	223	1·7	55	15·4	182	7·9	254	2·3	83	0·7	308
Winter	11·6	81	7·2	265	1·9	147	0·8	52	15·6	226	6·4	349	1·8	222	2·3	52	11·6	177	3·4	219	0·9	120	0·4	246
Equinox	20·3	107	17·1	282	4·9	104	0·4	353	25·9	216	12·5	15	6·3	216	2·7	55	17·9	187	10·1	258	2·9	62	1·0	303
Summer	28·3	134	19·8	287	1·7	93	1·3	87	31·3	197	14·7	38	5·7	233	0·2	129	16·7	181	11·0	261	3·6	92	0·9	337
	QUIET DAYS																							
Year	19·6	98	11·9	272	3·0	123	0·9	19	18·5	195	10·3	31	5·6	230	1·7	40	5·7	120	4·9	229	1·8	93	0·6	255
Winter	12·1	78	6·9	253	1·7	118	1·1	7	9·9	204	4·1	354	3·3	237	1·9									

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

40 ESKDALEMUIR

Number of cases per month

Range interval	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
5' to 15'	116	212	275	197	150	145	139	101	114	121	46	88	1704
15' to 30'	12	21	24	11	6	18	12	25	9	16	1	17	172
>30'	0	12	2	0	1	8	13	1	15	2	0	10	64

41 ESKDALEMUIR

Hourly distribution

Range interval	Hour (G.M.T.) ending at																							
	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'	78	74	72	69	68	63	55	67	58	62	124	122	73	50	46	55	72	64	58	60	63	83	86	82
15' to 30'	7	9	6	9	5	4	9	8	1	4	0	3	5	2	3	1	3	8	13	19	17	13	14	9
>30'	4	4	6	4	3	2	1	1	1	2	2	1	1	0	0	1	3	2	4	4	4	6	7	1

NOTEWORTHY MAGNETIC DISTURBANCES AT ESKDALEMUIR

42 ESKDALEMUIR

(a) Disturbances without S.C.'s

Serial Number	From		To		Range (γ)			Notes
	Date	Hour	Date	Hour	H	D	Z	
1a	Mar. 11	10	Mar. 14	03	302	225	416	
2a	Mar. 18	00	Mar. 22	08	250	229	235	
3a	Mar. 24	10	Mar. 25	05	200	154	178	
4a	Apr. 4	05	Apr. 6	04	230	180	155	
5a	Apr. 14	08	Apr. 21	02	264	199	223	
6a	May 12	11	May 20	03	188	150	244	
7a	May 25	15	May 30	12	296	193	240	
8a	June 6	17	June 8	01	334	275	405	
9a	June 8	17	June 12	00	244	115	180	
10a	June 20	21	June 23	21	317	210	248	
11a	Aug. 27	02	Aug. 28	01	344	186	215	
12a	Dec. 12	18	Dec. 14	05	172	275	232	

(b) Disturbances with a S.C.

Serial Number	Date	Time of S.C.	End of Disturbance		With initial reversed stroke			Magnitude main stroke of S.C.			Range of following disturbance (γ)		
			Date	Hour	H	D	Z	H	D	Z	H	D	Z
1b	Jan. 25	10.50			No	Yes	No	γ	γ	γ			
2b	Feb. 11	01.25	Feb. 13	03	No	No	No	+16	+17	-3	2762	811	970
3b	Feb. 16	16.42			Yes	No	-	+572	-790	-23			
4b	Mar. 3	09.31			Yes	Yes	-	+36	-11	0			
5b	Mar. 14	12.12			Yes	Yes	Yes	-14	+22	0			
6b	Mar. 17	07.50			Yes	No	-	+93	-50	-4			
7b	Mar. 25	15.41			Yes	No	-	-24	+17	0			
					No	No	No	+111	-33	-2			

(b) Disturbances with a S.C. (contd.)

Serial Number	Date	Time of S.C.	End of Disturbance		With initial reversed stroke			Magnitude main stroke of S.C.			Range of following disturbance (γ)		
			Date	Hour	H	D	Z	H	D	Z	H	D	Z
8b	Apr. 26	12.47			Yes	No	-	γ +17	γ -5	γ 0		Small	
9b	May 31	16.53	June 2	23	Yes	Yes	No	+174	-62	-7	925	607	464
10b	June 14	18.28			Yes	Yes	No	+105	-19	-7		Small	
11b	June 28	07.13	See 12b		Yes	Yes	Yes	-43	+62	+3		Small	
12b	June 28	17.42	June 30	06	Yes	Yes	No	+69	-19	-2	567	233	532
13b	July 8	07.49	July 10	15	Yes	Yes	Yes	Illegible			2208	891	549
14b	July 21	16.37	July 22	22	Yes	Yes	Yes	+296	-79	-10	315	154	110
15b	July 31	15.29			Yes	Yes	Yes	+112	-24	-6		Small	
16b	Aug. 17	06.22	Aug. 20	19	Yes	Yes	Yes	-21	-61	-9	431	189	188
17b	Aug. 22	02.27			Yes	Yes	No	+96	-59	-12		Small	
18b	Aug. 24	01.40	Aug. 25	21	No	No	No	+117	-50	-14	402	242	326
19b	Sept. 3	08.43	Sept. 6	02	Yes	Yes	Yes	+17	+47	-6	1805	810	712
20b	Sept. 16	09.30			Yes	Yes	Yes	-33	+37	-6		Small	
21b	Sept. 25	04.09	Sept. 27	01	No	Yes	No	+39	-39	-6	323	308	449
22b	Sept. 30	10.05			Yes	Yes	No	+30	+14	-6		Small	
23b	Oct. 22	03.14	See 24b		Yes	Yes	No	+19	-42	-3	192	212	232
24b	Oct. 24	07.28	Oct. 25	15	Yes	Yes	Yes	-104	+61	+9	267	258	274
25b	Oct. 27	15.22	Oct. 31	02	Yes	Yes	-	+11	-4	0	261	219	268
26b	Dec. 4	00.36	Dec. 5	14	No	Yes	No	+31	-21	-6	240	399	366
27b	Dec. 13	00.01	Dec. 15	01	No	No	No	+26	-10	-12	182	271	232
28b	Dec. 17	15.48	Dec. 18	15	Yes	Yes	-	+12	-5	0	362	275	420

(c) Disturbances due to Solar Flare

Serial Number	Date	Commence-ment	Max.	End	Movement (γ)			K	K'	Flare or S.F.E.
					H	D	Z			
1c	Mar. 1	09.13	09.20	09.22	-6	+2	0	2	2	S.E.A., S.W.F.
2c	Mar. 9	15.41	15.45	15.50	+16	-7	0	2	2	S.E.A.
3c	Mar. 23	09.53	10.15	11.10	-65	+33	+6	4	2	S.E.A.
4c	Mar. 28	10.34	10.37	10.41	-12	-7	0	2	2	S.E.A.
5c	Mar. 29	13.41	13.46	13.55	-24	-8	+3	3	2	Very clear. S.E.A.
6c	Mar. 29	16.29	16.34	16.39	-11	-4	0	3	3	S.E.A.
7c	June 3	15.11	15.13	15.25	-5	-2	0	3	3	Class 2 flare, S.E.A.
8c	Aug. 7	15.01	15.09	15.23	+4	-12	0	3	3	Class 3 flare, S.E.A.
9c	Sept. 1	10.37	10.40	10.55	+11	-3	-3	3	3	
10c	Sept. 7	14.48	14.50	14.52	-4	-2	0	3	3	S.E.A.
11c	Oct. 13	11.05	11.10	11.50	-14	0	0	3	2	S.E.A., S.W.F.
12c	Nov. 5	10.15	10.20	10.25	-8	0	0	1	1	S.E.A., S.W.F.
13c	Dec. 9	13.01	13.06	13.15	-11	+13	0	2	2	S.E.A.
14c	Dec. 12	12.57	13.01	13.20	-23	-13	+3	2	3	S.E.A.

S.E.A. = Sudden enhancement atmospherics
S.W.F. = Short wave fade out

POTENTIAL GRADIENT (reduced to open level surface)
Mean values for periods of sixty minutes between exact hours

43 ESKDALEMUIR		Factor 9.72 (metre ⁻¹)																						JANUARY 1958				
	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	
	volts per metre																											
1	100	140	180	165	135	155	160	140	120	115	125	120	120	120	125	135	130	150	165	140	130	60	45	35	45	122	(24)	
2	55	45	45	45	50	50	45	50	50	55	65	120	140	140	135	155	120	160	195	195	135	100	120	95	120	98	(24)	
3	105	85	75	65	65	60	65	80	70	75	95	100	100	120	115	110	110	130	100	100	110	130	125	125	115	97	(24)	
4	95	70	60	50	60	55	60	40	40	40	40	50	40	60	45	20	-10	20	-115*	Z*	Z*	Z*	-35*	Z*	42	(18)		
5	Z†	Z*	Z†	Z*	Z†	Z†	Z†	Z*	Z*	Z*	Z*	Z*	Z*	Z*	Z*	Z*	Z*	Z*	Z*	Z*	Z*	Z*	Z*	Z*	Z*	Z*	(-)	
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
7	85	70	75	70	80	130	95	75	95	135	120	145	160	150	145	110	100	150	130	140	150	155	155	75	75	117	(4)	
8	75	60	75	60	50	-90*	Z*	5	65*	70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
9	(50)*	Z*	90*	45*	40	Z*	-20*	-45*	45*	Z*	60	55*	90	95	115	115	130	135	135	145	165	150	100	80	111	(14)		
10	95	70	40	-190*	-90*	-95*	-85*	Z*	Z*	Z*	Z*	Z*	Z*	Z*	Z*	Z*	Z*	Z*	Z*	Z*	Z*	Z*	Z*	Z*	Z*	119	(7)	
11	40*	Z*	Z*	110	130	135	115	115	105	130	135	165	150	150	155	130	150	145	155	165	165	165	170	150	100	139	(21)	
12	110	105	100	115	110	85	95	(100)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	103	(8)	
13	-	-	-	-	-	-	-	-	75	95	125	135	(120)	135	125	160	95	70	100	50	55	90	80	80	99	(16)		
14	75	65	40	45	30	65	40	0*	0*	70	60	100*	80*	140*	200*	175*	415*	315*	45*	0	40	110	175	260	77	(14)		
15	265	210	75	30	100	95	100	110	55	135	160	235	185	55	135	100	175	145	75	115	150	110	85	85	124	(24)		
16	75	40	20	65	135	95*	55	50*	125	130*	100	95	85	80*	130	60	135*	95*	45*	175*	110*	95*	125*	115	85	(13)		
17	95	110	100	95	110	110	95	95	100	95	125	180	165	165	150	95*	120	140	155	145	130	90	60	65	117	(23)		
18	85	95	25*	85*	Z*	Z*	Z*	45*	-45*	40*	Z*	80	90*	0	95	Z*	Z*	Z*	Z*	Z*	Z*	200	115*	Z†	-40*	93	(6)	
19	Z*	-	-	60	65	80	145	245	185	175	240	215	210	245	225	195	195	190	195	195	215	240	185	350	380	202	(21)	
20	305	170	110	130	130	175	200	180	185	225	225	310	100	135	95	65	-	-	-	-	-	-	-	-	-	171	(16)	
21	-	-	-	-	-	-	-	-	-	-	-	(310)	295*	395	215*	255	360	685	525	375	280	320	370	410	365	(12)		
22	370	210	185	195	290	280	240	380	325	305*	295	310	260	370	295	370	395	505	360	315	280	270	255	205	303	(23)		
23	150	175	280	375	185	260	250	260	275	330	250	275	320	660*	Z†	225*	320	150	330	410	455	510	345	270	294	(21)		
24	280	160	175	145	120	160	110	100	120	140	175	185	215	190	260	485	355	240	325	325	260	250	425	230	226	(24)		
25	245	200	275	Z*	Z†	535*	280*	Z*	265*	Z*	Z*	Z*	Z*	Z*	Z*	Z*	-50	240	270	295	340	325	Z*	Z*	238	(9)		
26	-325*	45	-55	60	60	45	55*	45	85	75	140	130	85	70	40	45	60	125	85	100*	35*	50*	100*	165*	67	(17)		
27	165*	240*	225*	155*	140*	130	150	185	70*	55*	100	140	135	130	95	100	130	185	240	160	185	175	170	130	149	(17)		
28	95	35*	110	125	150*	145	30*	-180*	-345*	15*	-110*	-165*	-110*	-20*	20*	85*	110*	50*	165*	130*	135*	130	130	130	124	(7)		
29	135	110	75	95	145	145	115	170	205	240	180*	230*	250	210*	230	195	190	185	150	100	145	165	165	195	162	(21)		
30	165	150	145	200	375	210	120	50	60	185	165	130	160	185	145	210	245	115	255	260	315	195	180	150	182	(24)		
31	105	120	140*	140*	205	165	85	75*	140*	235	160	135	185	160	220	350	260	260	185	130	120	110	105	90	169	(20)		
Mean	144 (22)	114 (22)	104 (21)	110 (21)	121 (22)	130 (21)	117 (20)	134 (18)	126 (18)	138 (19)	145 (22)	159 (21)	156 (21)	153 (20)	148 (21)	166 (20)	173 (21)	199 (21)	202 (21)	182 (22)	189 (22)	178 (23)	171 (21)	156 (22)	151 (502)			
Mean for 0a days																												160 (7)

POTENTIAL GRADIENT (reduced to open level surface)
Mean values for periods of sixty minutes between exact hours

43 ESKDALEMUIR		Factor 9.63 (metre ⁻¹)																				FEBRUARY 1958							
	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		
volts per metre																													
1	80	80	55	50	55	50	35	45	55	-30	20	-75*			0*	-40*	25*	15*	20*	40*	35	60	75	65	70	70	51	(17)	
2	55	40	45	55	50	50	65	(75)	-	-	-	-			-	-	-	-	-	-	-	-	-	-	(115)	80	63	(10)	
3	95	105	95	65	70	55	55	55	85	120	140	170			150	120	110	125	85	100	95	40	60	95	150*	115*	95	(22)	
4	Z*	130	55	100	85	60	85*	45*	5*	Z*	70*	Z*			Z*	Z*	10*	Z*	Z*	Z*	85*	35*	55*	85*	35*	Z*	86	(5)	
5	Z*	Z*	20	40	70	90	110	80	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	68	(6)	
6	-	-	-	-	-	-	-	-	-	-	190	190	180		260	250	205	135	105	135	95	150	165	120	120	110	161	(15)	
7	130	105	95	70	55	55	100	75	130	105	165	155		160	170	165	170	165*	145*	190	245	195*	120	185	230*	132	(20)		
8	745*	Z*	Z*	Z*	Z*	Z*	Z*	Z*	Z*	Z*	Z*	160*		130*	-20*	60	0	155	55	140	-85	-270	-80	305	355	63	(10)		
9	220	175	205	200	215	145	130	125	100	105	110	135*		Z*	Z*	Z*	Z*	Z*	Z*	-600*	-335*	-260*	5*	5*	15	82	(14)		
10	-40	-50	75	95	130	190	145	150	130	Z-	Z-	15		-10	Z*	Z*	Z*	Z*	Z*	Z*	Z*	90*	Z*	Z*	145	81	(12)		
11	105	75*	35*	165	165	150	130	150	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	144	(6)	
12	-	80	90	35	40	20*	-	-	-	Z*	100	105		110	Z*	130	130	100	115	150	175	145	155	105	105	110	(17)		
13	55	50	65	60	60	100	135	165	175	180	165	250		260	260	230	180	110	95	70	20	-20	35	-95*	-90*	123	(22)		
14	-50*	Z*	Z*	Z*	Z*	Z*	Z*	Z*	Z*	Z*	Z*	Z*		-560*	Z*	Z*	Z*	135	170	Z*	Z*	90*	110	20*	45	115	(4)		
15	110*	110*	50*	80*	115	130*	110	125	150	130	50	0		50	55*	-35*	40*	60*	150	110	150	150	120	130	55	106	(15)		
16	35*	55	70	Z*	Z*	Z*	80	100	105	85	110	75		-70*	75	120	140	115	75*	150	140	130	105	70	0	96	(18)		
17	-5*	70	85	85	100	75	100	165	165	200	185	165		110	115	125	140	100	95	110	55	25	35	165	95	112	(23)		
18	85	90	90	90	90	100	85	100	125	120	110	100		100	100	130	145	95	60	95	80	85	120	120	115	101	(24)		
19	90	105	75	70	50	90	100	100	85	85	105	105		105	95	45	90	70	75	85	95	105	105	95	85	88	(24)		
20	75	60	65	55	60	50	40	80	-90*	75	95	100		(70)	-	-	-	-	-	-	-	-	-	-	-	69	(12)		
21	-	-	-	-	-	-	-	-	-	-25*	-95*	45*	-105*		30*	55	90	70	95	15	-20	10	30	40	55	70	46	(11)	
22	50	50	35	35	45	35	30	35	40	50	60	60		55	65	65	55	55	35	30	55	35	25*	30	50	46	(23)		
23	95*	105*	135	80	180*	245*	Z*	Z*	Z*	Z*	155*	265*		80	30	50	35	60	40	45	80	60	155	165	210	87	(14)		
24	190	200*	185*	65*	145*	70*	35*	60*	190	160	-100	-15		-80	-245	-75*	540*	100*	5*	80*	-60*	-270*	-	-	-	14	(7)		
25	-	120*	95	90	95	105	80	100	120	135	130	115		135	135	205	280	255	405	560	410	620	590	655	705	274	(22)		
26	775	645	535	165	260	560	405	295	210	205	180	295		320	355	180	170*	185	220	155	125	130	125	130	105	285	(23)		
27	110	115	105	35	210*	Z*	Z*	Z*	Z*	Z*	-300*	-470*		-190*	-60	35	5	50	35	60	130	130	80	80	70	65	(15)		
28	75	80	75	105	55	15*	Z*	85	40	80	125	75		40*	-100*	-485*	495*	Z*	Z*	165*	115*	50*	-200*	-25*	80*	79	(10)		
Mean	134	110	103	83	93	115	107	111	119	117	108	115		117	101	122	113	111	113	120	84	77	116	153	131	111	(421)		
	(16)	(18)	(21)	(21)	(20)	(17)	(18)	(19)	(16)	(17)	(18)	(17)		(16)	(15)	(16)	(15)	(16)	(16)	(18)	(19)	(18)	(18)	(17)	(19)				
																									Mean for 0a days			139	(4)

POTENTIAL GRADIENT (reduced to open level surface)
Mean values for periods of sixty minutes between exact hours

113

43 ESKDALEMUIR		Factor 9.73 (metre ⁻¹)																						MARCH 1958																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
	Hour G.M.T.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						</

POTENTIAL GRADIENT (reduced to open level surface)
Mean values for periods of sixty minutes between exact hours

43 ESKDALEMUIR		Factor 10.03 (metre ⁻¹)																				APRIL 1958				
	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	
	volts per metre																									
1	10	10	30	30	25	50	50	25	50	50	105	95	70	85	75	60	70	45	-30	-60	-5	30	45	30	39 (24)	
2	20	130	85	80	180	155	125	140	110	110	120	115	150	160	165	205	Z+	Z+	Z+	125	140	105	70	75	122 (21)	
3	75	55	45	75	40	-180	Z+	Z+	Z+	Z+	Z+	Z+	Z-	Z-	Z+	Z+	Z+	Z-	80*	70	Z-	Z+	Z+	26 (7)		
4	20	40	85	-10	Z+	Z+	Z+	Z+	-	-	-	-	Z-	Z-	Z+	Z+	Z+	Z-	-80	150	195*	180	205	145	82 (9)	
5	145	115	115	95*	115*	75*	95	145	105	85	95	105	90	125	95*	95	115	105	105	105	95	105	85	70	105 (20)	
6	75	70	65	70	75	80	85*	90	70	70	70	65	50	60	80	75	70	60	65	65	60	70	50	45	67 (23)	
7	20	20	20	20	20	25	30	50	150	130	80	40	50	50	30	10	20	20	10	15	30	60	75	105	45 (24)	
8	125	105	10	30	50	50	50	70	80	105	110	85	60	70	70	65	75	70	20	20	15	10	10	95	60 (24)	
9	95	100	50	50	20	30	50	70	85	70	10	40	50	75	45	45	55	75	20	30	30	10	30	15	48 (24)	
10	20	20	25	70	30	40	55	60	45	15	50	60	70	75	95	95	95	95	95	60	60	20	50	60	57 (24)	
11	50	50	45	40	30	25	30	50	75	75	75	60	80	95	85	95	95	80	10	10	-10	-10	10	10	48 (24)	
12	20	15	20	15	20	20	40	60	60	60	75	85	70	70	60	65	50	30	20	10	30	30	5	5	39 (24)	
13	10	20	20	20	20	15	20	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19 (8)	
14	-	-	-	-	-	-	-	-	70	65	55	60	75	85	80	80	40	60	45	50	40	30	25	5	54 (16)	
15	25	30	50	60	55	40	45	60	70	35	90	Z±	60	100	70	85	60	65	25	40	70	60	45	60	57 (23)	
16	60	50	45	75	60	30	55	85	70	65	45	60	40	70	50	25	20	40	30	30	50	50	30	10	48 (24)	
17	-220*	145*	400*	-60*	-20*	-140*	Z-	10*	85*	10	80*	155*	75	100	50*	-60*	85	65	25	80	95	110	125	125	81 (11)	
18	70	55	40	35	5	45*	50*	40*	30*	65*	15*	Z-	55	60*	30*	30*	-185*	45*	40*	55	55	25	15*	35	47 (9)	
19	40	45	75	65	55	85	65	80	75	75	80	60	100	75	20	Z-	135	95	70	75	40	Z±	55	75	70 (22)	
20	80	10*	-60*	-35*	40	70	65	75	60	40	50	60	50	Z-	95	75	75	-10*	80	75	50	60	65	65	65 (19)	
21	45	45	50	45	40	60	55	50	95	60	60	40	70	75	70	50	60	60	95	95	60	50	50	70	60 (24)	
22	60	40	40	30	25	15	40	60	70	85	110	90	135	100	80	85	65	-	-	-	-	-	-	-	66 (17)	
23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(-)	
24	-	-	-	-	-	-	-	-	75	75	Z-	120	125	110	85	120	Z±	-	-	-	-	-	-	-	101 (7)	
25	65	90	80	90	85	95	80	80	70	60	-	Z±	Z-	Z-	Z-	Z±	Z-	50*	40	60*	Z-	35*	Z-	30*	76 (11)	
26	60	40	60	60	40	75	80	75	75	Z±	10*	Z±	Z-	85	Z+	Z-	20*	Z±	100	130	125	100	115	95	82 (16)	
27	95	85	85	85	80	95	75	90	95	95	100	95	85	75	90	65	80	70	75	75	70	70	50	60	81 (24)	
28	75*	-*	-*	-*	-*	-	-	-	85	55	65	70	80	75	70	85	100	90	95	95	100	80	15	30	74 (16)	
29	50	50	40	40	40	70	70	30	50	85	70	50	60	70	85	70	85	100	70	70	105	60	60	30	63 (24)	
30	25	50	30	20	20	15	-10	10	40	60	70	45	50	50	70	75	70	65	65	30	30	45	20	35	41 (24)	
Mean	54 (25)	55 (24)	50 (24)	48 (23)	48 (22)	44 (22)	55 (21)	67 (22)	76 (24)	68 (24)	75 (21)	71 (21)	75 (24)	84 (23)	75 (21)	77 (21)	72 (21)	68 (19)	46 (23)	60 (24)	59 (24)	59 (23)	56 (23)	56 (24)	62 (543)	
																							Mean for 0a days			[59 (3)]

POTENTIAL GRADIENT (reduced to open level surface)
Mean values for periods of sixty minutes between exact hours

43 ESKDALEMUIR		Factor 10·20 (metre ⁻¹)																						MAY 1958			
	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	
volts per metre																											
1	20	30	65	35	60	55	90	125	165	90	90	90	90	90	95	95	115	105	80	50	20	20	20	20	25	69 (24)	
2	30	30	30	25	30	30	35	20	20	60	70	70	70	80	25	20	20	-10	-15	40	30	20	30	45	45	33 (24)	
3	50	40	30	35	40	40	45	55	60	60	50	60	60	65	70	65	65	70	70	40	20	30	15	20	20	46 (24)	
4	20	20	10	15	20	20	20	-5	30	135	70	60	60	40	30	40	70	90	90	60	45	25	30	30	10	41 (24)	
5	90	140	50	35	25	25	45	60	60	55	70	2*	2*	-*	-*	-*	-*	-*	-*	-*	-*	-*	-*	-*	-*	60 (11)	
6	-	-	-*	-*	-*	-*	-*	-*	335*	55*	100	80*	80*	95	105	115	125	135	100	115	80	95	75	60	90	99 (13)	
7	80	65	50	30	30	40	60	70	85	95	90	-125*	-125*	-380*	30*	70*	70*	50*	40*	21*	2*	85*	21*	295*	63 (11)		
8	390*	375	285	230	185	170	200	210	-	-	-	-	-	-	-	-	-	-	-	-	-	-*	-*	-*	-*	236 (7)	
9	-	-	-	-	-	-	-	-	70	70	80	70	70	55	40	30	25	20	25	20	10	25	15	20	20	37 (16)	
10	10	10	15	25	10	25	30	50	50	50	20	20	20	30	15	25	30	30	25	30	30	30	20	20	20	26 (24)	
11	10*	20*	20	30	25	45	45	65	70	60	60	55	55	40	2*	180*	21*	-65	60	70	50	-5	-80	21*	33 (18)		
12	21*	-315*	2*	-135*	-55*	-170*	-205*	-235	-245	-625*	-160	35	25	-130	-205*	2*	-50	55	65	45	30	25	30	20	-35	-35 (14)	
13	20	20	25	25	20	50	50	70	70	70	70	75	55	55	40	50	30	30	30	10	75	40	20	30	43 (24)		
14	20	10	30	30	30	0	2*	-190*	-160*	-5*	85*	60*	30*	-120*	-70*	40	25	5	40	40	50	35	25	50	29 (15)		
15	30	25	10	20	20	25	25	30	40	45	25	30	40	40	45	55	60	70	50	45	25	70	-10	0	30	34 (24)	
16	10	20	40	50	50	40	50	45	60	50	45	40	20	20	25	40	20	40	40	45	45	70	125	105	95	49 (24)	
17	30	45	25	35	35	40	60	80	-	-	-	-*	-*	-*	-*	-	-	65	2*	80	80	70	80	80	70*	57 (14)	
18	50	50	40	35	25*	-30*	-50*	50	50	50	45	45	45	65	70	70	80	70	65	75	60	45	45	35*	5*	56 (19)	
19	10*	35*	30*	80*	105	95	105	105	80	85*	70*	35	35	5	35	20	-40*	2*	2*	75	80	45	21*	60	45*	65 (13)	
20	35	20*	-50*	2*	60	2*	-65*	45	25	55	40	40	40	21*	2*	50*	21*	2*	21*	2*	25*	2*	2*	-30*	43 (7)		
21	35	40	2*	55	60	55	-25	95	2*	65	60	60	55	60	2*	55	2+	70	2*	21*	60	70	85	70	57 (18)		
22	65	40	40	30	30	40	70	80	90	70	55	21*	21*	21*	80	90	70	60	40	2+	-295*	2*	21*	2*	-240*	59 (16)	
23	-60	95*	95	115	105	70	75	40	-30	-135	2*	21*	21*	21*	21*	21*	21*	21*	21*	21*	21*	21*	21*	21*	48 (14)		
24	45	25	30	35	120	2*	2*	2*	60*	21*	21*	2*	2*	2*	21*	-5	60*	2*	0	2*	45	75*	90	140	120	59 (11)	
25	80	100	70*	21*	21*	55*	21*	21*	21*	21*	21*	-45*	0*	80	80	70	60	60	65	65	70	50	45	60	25	65 (14)	
26	60	45	50	30	35	45	45	65	85	85	70	85	55	60	70	21*	21*	2*	55	75	60	50	70	45	59 (21)		
27	40	45	105	100	90	75	75	80	2*	2*	21*	21*	21*	2*	55	225	2*	2*	2*	2*	40	30	45	40	75 (14)		
28	40	40	30	60	65	45	45	65	70	70	230	21*	21*	21*	60	50	35	25	40	35	60	35	35	25	50	55 (22)	
29	30	25	25	25	35	55	75	80	80	90	90	90	90	85	70	50	30	10	-20	25	20	20	10	-20	20	42 (24)	
30	25	5	10	25	20	15	5	-5*	2*	-200*	-60*	55*	80*	125*	105	165	25	25	25	35*	0	2*	10	65*	33 (14)		
31	80	115	60	170	260	130	115	105	155	190	120	70	70	60	2*	21*	-75*	80*	65	80	90	45	45	45	40	102 (20)	
Mean	37	57	49	52	60	51	58	58	52	66	63	57	57	56	47	63	62	46	46	53	48	44	39	38	43	52 (538)	
	(25)	(24)	(24)	(25)	(26)	(24)	(23)	(25)	(22)	(21)	(22)	(18)	(19)	(19)	(21)	(20)	(18)	(19)	(23)	(23)	(22)	(24)	(24)	(25)	(21)		
Mean for 0a days																										[- (0)]	

POTENTIAL GRADIENT (reduced to open level surface)
Mean values for periods of sixty minutes between exact hours

43 ESKDALEMUIR		Factor 10·11 (metre ⁻¹)																						JUNE 1958			
	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
volts per metre																											
1	30	25	30	30	5	5	10	95	140	75	55	45	40	25	55	65	45	35	40	75	95	45	-35	-15*	45	(23)	
2	25	25	15	15	75	120	130	110	85	90	100	95	70	75	80	55	80	55	55	21*	-185*	-130*	2*	21*	71	(19)	
3	21*	2*	-120*	21*	21*	110*	130*	280*	250	100	70	70	40	0*	0*	75	110	115	65	75	50	40	35	40	82	(13)	
4	40	45	50	50	40	90	65	55	50	40	55	45	40	(40)	-	40	30	30	30	25	15	15	15	20	40	(23)	
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25	(1)	
6	15	20	40	70	70	75	25	25	0	40	30	50	40	30	30	55	55	80	115	20	0	-20	20	135	43	(24)	
7	55	30	75	25	55	40	35	40	45	15	-25	-5*	2*	21*	-30*	90	110	15	25	95	0	35	10	0	39	(20)	
8	0	40	50	5	25	35	75	205	115	95	75	55	65	75	55	45	35	55	40	20	60	65	50	20	57	(24)	
9	0	10	20	0	40	40	10	35	-60	-40	-5	130*	65	65	0	-10	-15	-55*	0*	-120*	55*	40	-10	0	10	(19)	
10	0	-15*	25*	10*	55*	100*	90*	85*	105*	40*	40*	-10*	25*	100*	210*	-*	21*	21*	225*	195	210	45*	40*	30*	135	(3)	
11	60*	-50	50*	65	100	100	60	85	30	-	50	40	45	25	35	75	30	25	5	5*	25*	-185*	-240*	-130*	45	(16)	
12	-90*	100*	0*	-285*	-110*	2*	365*	190*	95	140	100	80	95	50	55	15	20	40	50	15	25	30	35	30	55	(16)	
13	30	20	55	70	100	30	60	75	75	75	75	70	90	65	85	95	105	90	90	60	55	55	40	55	67	(24)	
14	30	35	55	75	95	40	75	60	90	75	120	95	95	95	95	90	95	65	50	35	45	50	40	50	69	(24)	
15	50	30	20	15	25	30	25	30	45	50	65	75	80	75	75	85	95	55	95	55	60	20	35	40	51	(24)	
16	5	40	15	15	40	135*	220*	190*	205*	150*	130*	60*	-295*	-40*	260	125	45*	35*	75*	55*	-30*	-380*	30*	30*	71	(7)	
17	30*	55	50	60	90	130	135	95	95	70	55	50	40	35	35	25	35	35	45	50	40	55	45	50	60	(23)	
18	50	40	40	40	35	55	95	80	75	70	75	65	55	75	65	50	75	135	95	75	45	40	55	30	63	(24)	
19	2*	2*	-480*	2*	2*	65*	40*	60*	115*	205*	180*	335	175*	180*	185	165*	155*	80*	75	140*	245*	80*	60*	-85*	198	(3)	
20	30*	240	135	75	210	275	210	75	165	115*	80*	40	45	20	40	40	15*	15	35	20	-25*	-5	20	40	89	(19)	
21	30	40	30	25	45	50	55	45	35	55	55	35	40	45	50	40	30*	45	55	50	35	35	30	30	42	(23)	
22	30	40	35	30	55*	65	45*	120	140	95	75	90	90	105	105	100	90	80	55	55	40	35	-65	-40*	67	(21)	
23	35	30	25	25	30	50	80	65	65	2*	65	80	2*	21*	160	70	21*	2*	55	40	35	25	20	15	51	(19)	
24	25	15	10	2+	2+	145	150	2*	2*	21*	21*	2+	2+	2-	21*	75	65	45	40	70	65	70	65	70	65	(12)	
25	65	60	50	50	55	145	135	120	140	155	130	105	80	2*	-480*	-40	35	-25*	90*	2-	-30*	2*	2*	2+	86	(15)	
26	21*	21*	21*	-5*	110*	140*	35*	65	100	-45	21*	21*	-5	60*	75	25	5	15	20	20	25	35	35	15	27	(14)	
27	35	-10	30	5	40	95	75	2*	2*	-130*	135*	120	-*	-*	-	-	-*	-*	-*	-*	-*	-*	-*	-*	49	(8)	
28	-*	-	-	-	-	-	-	-	-	-	-	75	40	75	100	70	35	25	40	35	40	15	15	20	45	(13)	
29	20	10	40	40	40	70	80	90	100	45	100	100	135	-	-	-	15	30	40	15	30	15	20	20	50	(21)	
30	10	15	20	-5	25	20	10	15	40	35	50	50	70	50	15*	20*	40	25	40	20	30	45	95	75	35	(22)	
Mean	28	35	40	35	59	74	76	79	76	69	67	81	62	57	82	56	54	52	53	50	46	34	26	37	55	(517)	
	(21)	(23)	(22)	(22)	(21)	(21)	(21)	(22)	(22)	(20)	(21)	(23)	(22)	(18)	(20)	(23)	(21)	(22)	(24)	(22)	(21)	(22)	(22)	(21)			

POTENTIAL GRADIENT (reduced to open level surface)
Mean values for periods of sixty minutes between exact hours

115

43 ESKDALPMUIR		Factor 9.76 (metre ⁻¹)																							JULY 1958	
	Hour G.M.T.		2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	volts per metre												Mean	
	0-1	1-2											12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24		
1	25	30	45	80	100	30	35	45	25	35	65	20	20	0	30	10*	20	20	20	40	100	120	140	250	56 (23)	
2	175	225	240	Z±	Z±	Z±	390	125	120	55	35	85	70	70	90	70	75	40	25	65	40	60	80	105 (21)		
3	70	30	30	20	45	40	40	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	37 (8)		
4	-	-	-	-	-	-	-	-	80	85	60	70	60	70	60	65	65	60	40	55	35	20	15	35	55 (16)	
5	30	20	10	-10	20	40	65	60	65	65	75	75	65	75	75	60	30	35	-65	-115	-55	-20	-35	65	26 (24)	
6	30	35	55	45	35	40	.5	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	42 (8)	
7	-	-	-	-	-	-	-	-	-	-	35	40	55	55	75	50	55	40	35	35	120	20	40	75	52 (14)	
8	85	90	100	90	150	320	245	175	210	130	90	90	165	110	65	85	20	-20	-35	10	45	30	20	20	95 (24)	
9	90*	65	10	75*	110	195	165	230	155	55*	70*	95	55*	75	-105*	55	-60*	35	65	65	85	85	65	55	95 (17)	
10	45	55	65	55	70	55	65	75	65	65	30	30	25	25	50	35	55	65	65	85	80	45	35	35	53 (24)	
11	55	45	25	35	45	55	70	85	85	85	90	65	90	115	90	90	55	85	100	80	65	35	30	35	67 (24)	
12	35	25*	30*	70	75	Z±*	-90*	Z±*	-50*	-5*	125	130*	130*	135*	155	115	95	100	105	90	55	55	35	-35	77 (14)	
13	-45*	-30*	90	90*	Z±*	Z±*	280*	Z±*	185*	40*	135	220	-60	Z±*	Z±*	25	5*	Z±*	Z±*	Z±*	20*	40*	-10*	20*	82 (5)	
14	75	115	110	70	80	85	90	100	90	60	55	65	-70*	50	30	Z±*	60	100	90	125	155	125	65	80	85 (22)	
15	55	25	75	70	70*	95	100	95	100	80	85	135	Z±*	95	Z±*	Z±*	Z±*	Z±*	-30*	35*	35*	90	90	105	86 (15)	
16	90	110	65	60	60	150	160	150	140	50	115	65	20	55	55	15	185	25	Z±*	Z±*	Z±*	Z±*	Z±*	55*	87 (18)	
17	55	45	45	100	105	105	185	140	140	115	90	100	110	90	0	90	85	90	105	90	70	85	65	55	90 (24)	
18	35	30	35	20	25	35	55	70	90	30	35	75*	95*	185*	185*	90*	55*	70*	175	90	45*	-20*	-105*	-95*	56 (13)	
19	65	65	65	50	80	105	140	130	150	80	135	120	80	90	65	50	20	20	35	40	400	25	15	Z±	88 (23)	
20	Z±*	-35*	35	-40*	5*	Z±*	Z±*	Z±*	195*	145	70	75	35*	55	35	75	70	75	80	90	130	170	80	90	85 (15)	
21	75	90	65	85	110	120	90	100	90	90	70	75	85	85	95	90	75	80	85	80	85	90	65	55	85 (24)	
22	35	25*	30*	20*	-5*	30*	-170*	45*	-160*	115	80	115	35	Z±*	75	75	40	65	Z±*	Z±*	165	40	35	80	73 (13)	
23	125	110	100	85	65	100	130	110	100	130	145	155	100	45	50	30	55	85	75	60	55	65	75	85	89 (24)	
24	75	65	45	65	85	85	120	140	115	120	90	70	70	75	65	55	55	70	75	35	45	40	35	35	72 (24)	
25	40	35	70	85	75	120	175	140	130	120	125	90	85	75	85	90	85	75	55	45	35	20	20	20	79 (24)	
26	-50*	35*	Z±*	-145*	-135*	155*	Z±*	Z±*	185	155	70	70*	75*	Z±*	230*	250*	60*	25*	55	55	110	-325*	-10*	105*	105 (6)	
27	130*	75*	150	155	70	65	45	120	220	65	140	75	80	75	60	75	90	75	45	45	30	45	30	50	82 (22)	
28	130*	115	145*	140*	Z±*	Z±*	Z±*	Z±*	Z±*	Z±*	-95*	Z±*	100*	Z±*	55*	55*	80	20	90*	80*	65	10	75	85	64 (7)	
29	135*	150	135	110	125	85	75	85	120	125	100	75	75	75	65	90	90	110	110	120	110	90	45	97 (23)		
30	Z±*	Z±*	Z±*	70*	120	170*	Z±*	130	35	Z±*	55*	Z±*	Z±*	Z±*	Z±*	Z±*	Z±*	Z±*	Z±*	Z±*	130	95	70	75	94 (7)	
31	100	115	85	75	65	100	160	100	140	100	65	55	85	75	85	85	90	90	60	60	50	30	35	30*	83 (23)	
Mean	65	76	73	67	78	96	120	108	115	91	84	87	66	70	67	66	67	61	62	56	90	59	50	64	77 (549)	
	(21)	(22)	(24)	(21)	(22)	(21)	(22)	(23)	(23)	(23)	(25)	(25)	(20)	(22)	(22)	(22)	(23)	(24)	(23)	(23)	(23)	(25)	(25)	(23)		
Mean for 0a days																									[65 (7)]	

POTENTIAL GRADIENT (reduced to open level surface)
Mean values for periods of sixty minutes between exact hours

43 ESKDALEMUIR		Factor 9.62 (metre ⁻¹)																							AUGUST 1958	
	Hour G.M.T.		2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	volts per metre												Mean	
	0-1	1-2											12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24		
1	40	35	65	75	Z±*	Z±*	Z±*	Z±*	125*	160	Z±*	85	Z±*	Z±*	-165*	100*	195*	Z±*	190	340*	Z±*	Z±*	50*	70	90 (8)	
2	95	185	155	120	130	150	40*	5*	Z±*	20	Z±*	Z±*	Z±*	Z±*	Z±*	95	Z±*	Z±*	Z±*	130	210	185	125	133 (12)		
3	85	65	60	80	90	115	120	145	135	145	115	65	35*	65*	80	70	45*	90*	115*	115*	120*	50*	65*	120*	98 (14)	
4	55*	105*	160	60	80	75*	105*	115*	Z±*	100*	195*	Z±*	70*	105*	85*	30*	25*	35*	50*	40	35	35*	55*	65*	75 (5)	
5	65*	55*	-75*	100	65	85	85	25	90	120	115	120	105	120	110	115	100	80	95	95	85	45	35	35	87 (21)	
6	-	-	-	-	-	-	60	90	90	50	60*	25*	-40*	80	90	75	65	85	85	90	110	125	70	75	83 (15)	
7	90	65	45	55	60	145	130	110	115	75	75	55	Z±*	75	100	55*	110	85	70	85	75	45	40	35	79 (22)	
8	35	35	40	45	40	55	65	55	35	35	10	15	35	35	35	55	35	20	10	20	70	35	55	65	39 (24)	
9	20	20	20	20	20	35	55	55	65	65	30*	70*	180*	210*	90*	90*	100*	100*	100*	120*	190*	230*	125*	10*	37 (10)	
10	70*	35*	35*	70*	70*	40*	65	275	125	125	90	85	70	80	90	80	90	Z±*	Z±*	Z±*	-20*	20*	210	255	126 (13)	
11	165	180*	215*	145	155*	100*	180*	110*	210	135	90	100	100	95	110	110	145	165	125	110	50	70	120	70*	120 (17)	
12	110	110	90	35*	40*	35	85	105	85	90	65	55	70	90	65	90	100	90	95	125	135	130	90	85	91 (22)	
13	45	55	85	70	90	85	105	125	100	65*	-25*	-245*	-110*	-90*	50*	-20*	165*	85	70	105	125	135	125	125	96 (16)	
14	70	65*	50*	35*	80*	110	100	135	90	85	45	85	85	85	85	85	90	80	90	90	85	80	65	45	84 (20)	
15	55	40	45	20	95	70	-	-	80	65*	105*	80*	60*	80*	160	160	90	125*	120	65*	110	90*	185	100	95 (14)	
16	100	90	45	25	40	65	55	65	115	90	65	90	90	95	90	100	100	95	90	100	60	45	35	25	74 (24)	
17	20	25	25	20	20	20	20	15	35	45	85	90	55	90	110	100	60	0	35	35	30	45	20	15	42 (24)	
18	25	55	55	50	65	90	95	140	115	105	80	80	80	75	80	20	10	10*	20*	-20*	20	65	-35	-85*	63 (20)	
19	80*	10*	-115*	25	45	85*	80*	50	45	25	25	20	35	15	20	50	40	35	30	45	35	20	-20	20	29 (19)	
20	Z±*	Z±*	0*	-	-	-	-	-	Z±*	Z±*	-	-	60	105	Z±*	Z±*	Z±*	Z±*	Z±*	Z±*	Z±*	-	-	-	-	83 (2)
21	-	-	-	-	-	155	230	100	25	25	45	65	50	55	65	80	80	70	230	Z±*	Z±*	50	35	60	84 (17)	
22	110	55	65	45	60	90	100	60	65	45	60	45	45	35	60	40	-105	Z±*	Z±*	Z±*	65	185*	-245*	-65*	50 (19)	
23	-40*	45	55	45*	0	-135*	65*	-25*	90*	55	65	65	80	65	70	80	80	80	65	65	65	45	55	55	61 (18)	
24	35	40	40	50	80	85	55	80	90	110	90	70	55	65	75	60	65	80	50	20	25	25	20	20	58 (24)	
25	30	0	25	-	-	-	-	-	45	50	50	50	50	70	55	60	-	-	65	50	25	65	40	50	25	46 (17)
26	30	20	20	50	45	55	100	105	90	135	170	155	80	65	80	65	65	110	90	75	20	25	25	40	71 (24)	
27	55	-5	20*	85*	60*	45*	110	95	155	160	145	135	75	85	95	95	65	40	-5*	160*	90	45	50*	100	97 (15)	
28	90	65	45	Z±*	Z±*	-245*	Z±*	Z±*	90	70*	105	110	80	130	155	130	130	100	150	135	160	140	150	90	114 (18)	
29	55	45	80	100	105	120	120	145	120	110	100	65	70	80	130	135	110	120	120	90	115	100	120	120	103 (24)	
30	115	100	90	85	80	120	145	110	80	105	90	45	115	100	65	40*	45	100	110	65	40	25	20	10	81 (23)	
31	20	15	15	20	20	30	110	115	-	-	-	-	60	70	70	95	80	85	25	15	20	0	0	5	43 (20)	
Mean	65 (23)	53 (22)	60 (22)	60 (21)	61 (20)	86 (20)	96 (21)	100 (22)	92 (25)	87 (25)	81 (22)	76 (23)	70 (22)	77 (24)	86 (25)	85 (24)	72 (23)	82 (19)	91 (22)	70 (21)	73 (25)	68 (22)	69 (24)	67 (24)	76 (541)	
																							Mean for 0a days		[82 (6)]	

POTENTIAL GRADIENT (reduced to open level surface)
Mean values for periods of sixty minutes between exact hours

43 ESKDALEMUIR													Factor 9.47 (metre ⁻¹)													SEPTEMBER 1958	
	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		
volts per metre																											
1	5	10	10	10	10	25	35	45	70	90	70	55	80	90	90	85	90	80	65	30	20	25	20	15	47 (24)		
2	10	25	20	10	10	20	60	60	60	80	95	115	90	110	115	60	135	95	30	45	25	30	20	15	56 (24)		
3	10	10	5	0	-5	5	0	0	10	25	35	30	45	25	25	20	20	-	-	-	-	-	-	-	15 (17)		
4	-	-	-	-	-	-	-	-	-	30	90	145	95	85	75	30	15	5	10	35	35	35	35	20	49 (15)		
5	25	60	-35	Z±*	-250	0	105	60	70	35	25	35	30	55	-	-	50	35	55	55	90	140	175	55	41 (21)		
6	65	105	160	90	70	35	-20	120	95	155	20*	Z±	Z+	Z*	Z±*	Z±*	150	140	Z*	135	135	135	180	230	116 (17)		
7	Z±	195	95	90	105	85	75	140	135	110	5	35	Z+	Z*	90*	95	90	90*	120	110	125	115	105	60	99 (19)		
8	-60*	55*	70*	75*	-160*	-55*	175*	110*	170	55*	85*	120	70	55	Z±*	Z±*	Z+	175	300	90	95	105	95	65	122 (11)		
9	55	60	50	45	60	60	90	115	170	125	65	45	60	95	60*	-10*	35	35	25	25	25	25	35	25	60 (22)		
10	25	20	15	20	20	20	25	40	55	60	60	60	70	45	70	70	60	45	20	30	35	20	20	30	39 (24)		
11	20	-	-	-	-	-	35	70	45	80	55	30	60	50	60	65	45	25	45	50	55	25	20	25	45 (19)		
12	20	20	20	20	20	25	55	70	135	125	125	140	125	135	115	105	110	105	95	45	35	5	-25	-60	65 (24)		
13	55	-	-	-	-	-	-	35	60	105	90	85	45	30	25	25	10	10	10	5	10	-	-	15	38 (16)		
14	10	20	40*	35*	30	65	60	35	45	40	30	50	25*	25	25	30	45	50	55	20	-	-	-	-	37 (17)		
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
16	-	-	-	-	-	-	-	-	45	55	70	95	85	Z+	Z±*	55	30	15	-	-	-	-	-	-	56 (8)		
17	-	-	-	-	-	-	-	85	-	100	90	90	115	120	95	80	90	50	-	-	-	-	-	-	91 (10)		
18	-	-	-	-	-	-	-	-	55	45	60	75	35	35	-20	15	-35*	Z*	0*	70*	65*	105*	90*	150*	37 (8)		
19	95*	40*	55*	30*	20*	135*	205*	205*	135*	130*	-240*	-285*	-95*	25*	160	215	125	10*	45*	-55*	-190*	-125*	105*	175	169 (4)		
20	Z±*	35*	20	95	95	120	240	215	160	165	Z*	Z*	Z*	160	125*	130	Z+	Z*	Z±*	Z±*	Z±*	-20*	20*	Z±*	140 (10)		
21	65*	105	120	135	115	80	105	65	15*	25*	35	65	Z±*	Z±*	Z*	85	Z±*	105	65	375	Z±*	50	35*	25	102 (10)		
22	75	35	95	115	85	65	50	265	-115*	95*	145	90*	70*	0*	Z±*	Z*	80	90	55	65	60	100	65	70	89 (17)		
23	65	65	35	35	50	55	55	50	55	60	70	90	85	15*	-70*	145*	175*	70*	Z±*	Z±*	Z±*	Z±*	Z±*	Z±*	59 (13)		
24	Z±*	Z±*	Z±	90	90	85	60	55	55	75	80	120	Z±*	Z±*	Z±*	Z±*	Z±*	Z±	Z±	Z±	Z±	-165*	Z±*	Z±*	79 (9)		
25	-125*	-55*	20	-45*	20	35	30	20	35	25	25	40	35	130	90	125	130	140	140	150	170	140	110	170	85 (21)		
26	125	90	55	45	20	10	10	30	140	90	65	65	85	90	95	75	105	-	-	-	-	-	-	-	70 (17)		
27	-	-	-	-	-	-	-	-	20	25	75	75	50	5	0	-30	-10	-25	-5	-10	-	-	-	-	14 (12)		
28	-	-	-	-	-	-	-	-	-	-	-	-	-*	-	-	-	-	-	-	-	-	-	-	-	-		
29	-*	-*	-*	-*	-*	-*	-*	-*	-*	-*	-*	-*	-*	-	-	-*	100	130*	135	210*	Z±*	Z±*	Z±*	20*	117 (2)		
30	75*	55*	70*	55	40	60	55	40	65	70	75	55	55	85	95	110	105	85	90	75	Z*	Z±*	Z±*	Z±*	71 (17)		
Mean	40	59	46	57	33	47	59	77	80	77	67	75	69	75	70	72	73	66	73	74	65	68	66	58	65 (433)		
	(14)	(14)	(15)	(15)	(18)	(18)	(19)	(21)	(22)	(23)	(23)	(23)	(19)	(19)	(16)	(20)	(22)	(19)	(18)	(18)	(14)	(14)	(13)	(16)			
Mean for 0a days																										58 (6)	

POTENTIAL GRADIENT (reduced to open level surface)
Mean values for periods of sixty minutes between exact hours

43 ESKDALEMUIR													Factor 9.46 (metre ⁻¹)													OCTOBER 1958	
	Hour G.M.T.		2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12														Mean	
	0-1	1-2											volts per metre														
1	80	120	120	110	70	60	100	125	160	125	120	140	140	115	115	Z-	Z-	Z±	Z-	90	190	155	85	50	113 (20)		
2	50	35	25	15	15	15	15	35	0*	5*	50*	20	-25*	75*	70*	-50*	70*	130	140	145	110	80	60	45	58 (16)		
3	-15*	50	50*	-15*	45	90	75	115	-15*	-70*	-435*	Z*	-	20*	180	165*	50*	95	105	140*	Z*	Z*	Z*	-35*	94 (8)		
4	-45*	-145*	-35*	105*	85	-110*	-110*	-55*	-	-	-	-	-	-	-	-	120	Z*	-40*	Z*	Z*	Z*	-155*	-85*	103 (2)		
5	45*	85	25*	0*	10*	85	140	120	155	105	95	90	85	45*	110	95	95	105	105	145	180	125	75	60	103 (19)		
6	60	50	45	45	55	40	70	95	130	125	65	140	Z-	Z*	Z*	Z*	135	Z*	Z*	Z*	Z*	Z*	Z*	45	79 (14)		
7	60	70	70	75	200	200	140	145	215	200	95	45*	120	130	95*	130	145	130	115	90	60	50	35	43	115 (22)		
8	60	75	65	60*	140*	140*	170*	140*	55*	85*	95*	110*	130	80*	95	120	145	145	145	140	140	140	140	150	121 (14)		
9	130	125	105	95	105	105	100	110	125	145	155	Z*	Z*	Z*	140	140	165	150	145	165	105	155	110	Z-	129 (20)		
10	110	90	85	95	100	130	100	90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100 (8)		
11	-	-	-	-	-	-	-	-	120	115	90	85	90	125	120	170	175	140	125	120	80	75	70	55	110 (16)		
12	70	135	205	125	65	70	165	185	195*	120*	200	100	120	30	50	45	50	60	25*	120	110	Z*	Z*	Z*	107 (19)		
13	Z*	Z*	-100*	35*	125	130	100	105	95	70	55	50	-	-	-	-	-	-	-	-	-	-	-	-	94 (7)		
14	-	-	-	-	-	-	-	-	70	55	110	105*	35*	150	190*	235	105	40*	70*	100	120	95	75	80	109 (11)		
15	75	40	65	55*	70	60*	Z*	65	95	100	120*	80*	120	115	60*	75	20	0*	160*	120	Z±	115	Z*	Z*	83 (13)		
16	Z*	85	Z-	95	65	60	75	75	70	110	105	120	135	-	-	-	-	-	-	-	-	-	-	-	90 (11)		
17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	85	85	65	90	100	-35*	105*	115	75	130	93 (8)	
19	85	15*	110*	105*	60	45	60	90	70	70	60	60	35	45	50*	45*	15*	95	145	145	110	95	75	60	78 (18)		
20	15	5*	-	-	10*	55	80*	90	90	90	90	105	-	-	-	-	-	-	-	-	-	-	-	-	74 (6)		
21	-	-	-	-	-	-	-	-	-	-	-	20	-10	60	120	65	30	85	35	125	95	85	90	160	74 (13)		
22	160	90	50	55	35	50	85	95	55	55	85	70	75	25	25	110	145	60	45	45	45	80	35	25	67 (24)		
23	35	35	60	75	50	25	35	75	70	110	95	70	60	145	125	60	60	85	130	165	110	60	75	95	79 (24)		
24	45	105	95	50	75	110	60	60	30	70	75	85	85	120	160	225	145	60	145	25	180	170	165	130	103 (24)		
25	215	125	95	40	75	60	55	75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	93 (8)		
26	-	-	-	-	-	-	-	-	25	35	35	35	75	100	80	75	50	35	35	35	110	15	-5	-40	43 (16)		
27	-10	0*	10*	45	25	75	85	110	125	95	75*	60	60	80	95	130	130	180	180	145	75	115	85	98 (21)			
28	75	70	45	60	35	45	75	130	110	75	50	70	110	95	110	110	145	105	95	140	70	25	0	15	77 (24)		
29	25	25	45	60	70	125	60	45	35	110	80	60	145	170	105	90	105	125	115	50	65	60*	-50*	-335*	81 (21)		
30	Z*	-40*	-215*	-600*	-145*	30*	65	-	-	145	120	90	65	85	50	100	85	85	-	50	-70*	-	-	-	85 (11)		
31	-	-	-	-	55*	Z*	-135	55	85*	110	90	90	95	100	110	100	90	25	70	50	40	40	15	15	56 (17)		
Mean	74 (18)	78 (18)	78 (15)	69 (15)	71 (20)	80 (19)	72 (22)	95 (21)	97 (19)	103 (21)	93 (20)	78 (20)	91 (19)	99 (17)	104 (18)	114 (19)	105 (21)	99 (20)	110 (18)	107 (21)	109 (19)	92 (19)	72 (18)	67 (18)	90 (455)		
																							Mean for 0a days		101 (2)		

POTENTIAL GRADIENT (reduced to open level surface)
Mean values for periods of sixty minutes between exact hours

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43	ESKDALEMUIR												Factor 9.55 (metre ⁻¹)												NOVEMBER 1958											
	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											
	volts per metre																																			
1	20	15	15	10	10	10	10	10	20	-	-	-	-	75	-145*	-95*	2*	2*	2*	-390*	75*	50*	20*	10*	19	(10)										
2	10*	60*	125	125	75	75	65	40	85	95	90	80	55	80	75	85	70	70	60	50	-155*	50	25	10	70	(21)										
3	15	20	10	20	25	35	35	50	60	85	75	75	70	60	50	60	60	55	40	35	40	40	25	45	(24)											
4	35	25	25	25	25	35	35	45	60	90	85	60	55	75	70	60	70	70	45	15	15	15*	-85*	35*	50	(21)										
5	-85*	-170*	-60*	-180*	-285*	-85*	245*	70*	50*	85*	50	40	75	75	55	70	70	55	50	70	50	25	35	40	63	(12)										
6	15*	15*	35	20*	10*	10*	45*	20*	-	*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	35	(1)										
7	-	-	-	-	-	-	-	-	-	40	50	50	45	70*	40*	35*	50*	85	90	115	160	100	90	135	87	(11)										
8	5	0	15	20	35	45	35	35	35	115	100	70	30*	-155*	2*	35	90	-55*	85*	75	95	120	120	75	59	(19)										
9	45	50	40	40	35	35	45	45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	42	(8)										
10	-	-	-	-	-	-	-	-	-	85	85	80	85	75	35	35	30	35	70	65	50	30	20	15	53	(15)										
11	15	25	45	40	50	60	40	40	50	15	30	35	35*	30	40	2*	2*	21*	2*	2*	2*	165*	55*	75	39	(15)										
12	80	90	70	65	45*	55	70	65	110	90	55	115	110	165*	125	135	21*	90*	85	90	60	-50	2*	80	79	(19)										
13	50	115	160	120	70	65	55	55	85	-	-	-	-	-	-	95	90	130	55	50	90	130	70	110	89	(18)										
14	70	60	60	110	25	40	60*	60*	55*	110*	160*	40*	85*	110*	165	145	70	25	110	190	35*	110*	40*	55*	89	(12)										
15	145	230	145	140	160	80	85	140	190	165	135	185	160	110	50	80	75	95	60	40	40	15	35	45	109	(24)										
16	-10	50*	15	100*	70*	35	50*	120*	170	135*	130*	80*	130*	145*	175	160	100	60	90	110	125	60	85	85	90	(14)										
17	35	70	50	65	35	30	40	45	-	*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	46	(8)										
18	-	-	-	-	-	0	25	5	35	5	55	85	80	50	50	30	45	85	0	35	20	70	15	50	39	(19)										
19	45	30	35	30	25	-	-	-	-	-	55	50	45	50	60	50	55	70	70	50	30	30	35	35	45	(19)										
20	35	25	30	30	35	20	35	35	60	40	45	50	20	45	10	35	40	50*	35*	35	40*	40*	120*	20*	35	(18)										
21	15*	25*	55	120	140	120	135	135	145	185	205	145	145	135	125	140	120	105	60	40	70	35	25	25	110	(22)										
22	20	25	15	50	45	50	35	50	150	160	245	125	80	115	70	35	75	85	55	55	70	75	50	50	74	(24)										
23	50	25	40	50	60	50	45	40	50	35	15	15	15	30	20	30	25	35	40	45	40	40	10	55	36	(24)										
24	50	35	30	35	35	55	50	55	85	120	120	185	135	190	200	150	40	95	240	230	120	135	195	105	112	(24)										
25	85	85	100	75	85	75	75	60	110	110	210	140	110	75	145	105	50	70	105	85	85	70	95	75	95	(24)										
26	45	60	40	125	40	100	75	80	35	70	50	35	40	35	65	35	40	80	60	60	50	110	85	75	62	(24)										
27	70	55	60	35	35	245	120	80	100	160	160	210	295	315	425	285	80	170	75	70	0	120	110	60	139	(24)										
28	40	-15	50	40	50	-25	55	25	50	45	50	70	35	50	40	50	35	25	-40	-35	-10	35	95	-25	29	(24)										
29	-25	-85	50	100	60	95	60	65	85	75	85	95	95	75	60	60	50	50	35	50	55	40	75	45	56	(24)										
30	35	60	40	-35*	-260*	-205*	70	75	85	85	90	110	130	95	105	90	125	125	135	110	85	70	50	50	87	(21)										
Mean	42	45	52	64	53	58	57	55	84	89	93	92	90	88	96	86	65	76	69	69	61	61	65	56	69	(545)										
	(23)	(22)	(26)	(23)	(22)	(24)	(23)	(23)	(22)	(21)	(23)	(23)	(21)	(21)	(23)	(24)	(23)	(22)	(23)	(25)	(22)	(22)	(21)	(23)												
	Mean for 0a days																							45	(2)											

POTENTIAL GRADIENT (reduced to open level surface)
Mean values for periods of sixty minutes between exact hours

43	ESKDALEMUIR												Factor 9.57 (metre ⁻¹)												DECEMBER 1958											
	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											
	volts per metre																																			
1	60	40	45	50	45	40	25	30	25	50	90	105	90	75	50	45	50	35	20	15	-	-	-	-	49 (20)											
2	-	-	-	-	-	-*	-*	-*	-*	50	40	70	100	90	85	65	55	95	90	80	90	65	65	75	74 (15)											
3	60	50	40	45	40	35	40	35	45	65	60	90	105	85	80	40	60	160	140	85	40	110	205	135	77 (24)											
4	150	175	160	110	160	175	140	90	75	75	90	95	90	105	125	85	60	85	75	50	60	60	50	50	100 (24)											
5	35	25	35	55	60	-	-	-	-	70	90	145	85	75	75	70	55	70	50	60	50	75	70	60	65 (20)											
6	65	70	60	60	45	50	50	40	50	60	120	125	115	75	70	50	40	50	40	50	65	60	40	40	62 (24)											
7	25	25	25	25	25	15	40	15	25	35	15*	-10*	0	-50	10	-40	85	20	50	85	175	160	160	125	47 (22)											
8	115	80	85	90	2*	2*	180	175	150	85	2*	2*	40*	2*	110*	2*	170	2*	145*	255	160	135	165	160	143 (14)											
9	180	190	125	85	105	95	75	75	75	65	110	140	125	125	90	110	110	125	135	165	95	100	85	75	111 (24)											
10	40	45	100	135	135	90	70	85	110	130	190	200	230	115	110	135	135*	90*	125	180*	260*	275*	-	-	120 (17)											
11	-*	-*	210*	-*	50*	70*	105*	110	140*	105	135	30	180*	70	100	115	65	40	65	85	75	105	85	-100	85 (14)											
12	2*	2*	2*	-180*	110	200	215	260	195	2*	2*	2*	2*	2*	2*	2*	115	45	2*	2*	180*	2*	2*	163 (7)												
13	30*	120	90	245	205	140	2*	120	90	95	115	125	115	115	105	120	250	210	310	285	310	220	235	220	175 (22)											
14	250	325	350	350	355	295	245	200*	165	150*	90*	60	60	110	110	160	100	75	75	75	125	60	15	35	162 (21)											
15	2*	2*	2*	-5	-5	-45*	15*	2*	95	70	-25*	2*	85	120	110*	105	290*	20	2*	180*	-65*	75	65	25*	63 (10)											
16	-85	2*	-75*	2*	50*	95	120	95	100	105*	110	110	2*	2*	-75*	115	105	60	-10	2*	80*	55	60	65*	72 (13)											
17	35	-15	55	30	35	75*	60*	115*	75	90	105	90	90	85	75	85	90	105	100	95	85	160	65	50	75 (21)											
18	35	20	25	35	2*	2*	2*	2*	2*	285	2*	135	215	230*	90	90*	35	120	120	20	35	45	-45	-105*	78 (15)											
19	-255*	2*	2*	-155*	-70	-125*	2*	2*	2*	2*	2*	30*	-10	2*	2*	55*	85*	105	165	135	125	135	-	-	84 (7)											
20	-	-	-	-	-	-	55	5	2*	2*	2*	95*	2*	2*	2*	-35*	90	105	105	105	55*	-70*	2*	2*	80 (6)											
21	2*	85	2*	70	70	75	65	2*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	73 (5)											
22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(-)											
23	-*	-*	-*	-	-*	-*	-*	-*	-*	-*	-*	135	125	105	235	85	-	-	-	240	135	320	95	65	154 (10)											
24	125	195*	195	165*	225	80	125	35	165	105*	165	260	375	410	125	240	245	195	85	90	65	35	25	25	157 (21)											
25	35	35	25	35	35	0	-15*	20*	-200*	-370*	2*	2*	2*	2*	2*	2*	-35*	20*	25*	25*	5*	2*	2*	2*	27 (6)											
26	90	60*	2*	2*	2*	45*	2*	75	90	130	150	105	90	90	100*	35*	40	55	65	55	45	15	5	60	73 (16)											
27	25	40*	15*	-195*	-160*	-15*	25*	30*	10*	60*	50*	40	40*	50	85	75	70	35	45	25	50	60	35	35	48 (13)											
28	25*	50*	40*	35*	100*	110*	55*	135*	110*	75*	70	85	115	2*	85	110	2*	2*	105	105	2*	2*	105	120	100 (9)											
29	125	105	70	65	40	50	70	55	85	-5*	75*	65	65	2*	2*	2*	2*	2*	95	95	110	85	65	60	77 (17)											
30	65	60	60	35	45	40	50	55	65	70	80	115	105	95	120	125	125	65	2*	200	140	130	70	2*	87 (22)											
31	2*	2*	2*	30*	70*	60	30	45	125	105	95	2*	90	115	110	2*	125	2*	2*	45*	210	150	45*	135	107 (13)											
Mean	75 (19)	84 (17)	91 (17)	84 (18)	87 (19)	90 (17)	94 (17)	78 (18)	95 (19)	91 (18)	107 (17)	111 (22)	112 (22)	103 (20)	97 (20)	95 (20)	97 (20)	88 (22)	91 (23)	107 (23)	107 (21)	105 (23)	78 (22)	85 (18)	94 (472)											
																						Mean for 0a days			[85 (4)]											
Annual Mean	71 (247)	70 (247)	67 (254)	66 (248)	71 (255)	78 (248)	79 (250)	84 (254)	89 (252)	90 (255)	89 (258)	91 (260)	89 (249)	87 (244)	92 (241)	90 (250)	86 (253)	85 (248)	87 (257)	82 (262)	85 (257)	82 (257)	77 (272)	77 (250)	82 (6048)											
																						Annual mean for 0a days			[85]											

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	JANUARY		FEBRUARY		MARCH		APRIL		MAY		JUNE	
	Character	Duration of negative potential gradient	Character	Duration of negative potential gradient	Character	Duration of negative potential gradient	Character	Duration of negative potential gradient	Character	Duration of negative potential gradient	Character	Duration of negative potential gradient
1	0a	hr.	2a	hr.	2b	hr.	2a	hr.	1a	hr.	1a	hr.
2	0a	...	(0a)	(...)	(0a)	(...)	0b	...	1a	0.1	2b	2.5
3	0a	...	1a	0.1	(1a)	(0.4)	2c	5.0	1a	1.5	1c	3.5
4	2b	6.4	2c	10.0	1a	1.7	2c	-	1a	0.1	1c	2.2
5	(2c)	-	(1b)	-	1b	1.9	1a	0.1	1a	0.9	(0a)	(...)
6	(2c)	-	(0a)	(...)	0a	...	(2b)	-	(1a)	-	(1a)	-
7	1a	0.1	1a	0.2	0a	...	1a	0.1	(1a)	-	1a	2.3
8	2c	-	2c	7.0	1b	1.8	1a	0.3	2b	5.1	2b	3.6
9	2b	3.5	2c	6.4	1b	1.7	1a	0.9	(2b)	-	1a	0.5
10	2c	12.1	2c	11.3	(1a)	(0.1)	1a	0.5	(1a)	-	2a	9.2
11	1b	2.0	2c	...	1b	0.4	1a	0.7	1a	1.3	1b	2.2
12	(0a)	(...)	(2b)	-	(1b)	-	1a	1.9	1b	3.0	2b	3.9
13	(1a)	(0.2)	(2b)	-	(1b)	-	1a	0.5	2b	11.4	2b	4.1
14	1a	2.3	2a	3.1	(1b)	1.9	(0a)	(...)	1a	0.4	1a	0.3
15	1a	0.2	2c	14.9	1a	1.3	(0a)	(...)	2b	5.2	1a	0.6
16	1a	0.1	1a	1.5	0a	...	1b	0.5	1a	0.9	1a	0.5
17	1a	0.1	1b	2.6	1a	0.1	1a	0.6	1a	0.3	2a	4.4
18	2b	6.3	1a	0.7	(0a)	(...)	2b	5.9	(1a)	-	1a	0.1
19	1b	0.6	1a	0.1	(1a)	-	1b	2.1	1a	0.8	0a	...
20	(1a)	-	1a	0.1	1a	0.6	1b	1.1	2b	3.9	2b	5.6
21	(2b)	-	(1b)	-	0a	...	1b	2.5	2b	7.9	1a	2.1
22	0a	...	(2a)	-	1a	0.5	1a	0.1	1b	1.9	0a	...
23	1b	0.1	0a	...	0a	...	(0a)	(...)	2b	5.1	1a	1.3
24	0a	...	1b	(2.2)	0a	...	(2b)	-	2c	4.9	2b	(3.5)
25	2b	9.0	2b	(9.8)	0a	...	(2b)	-	2c	6.7	2c	(5.1)
26	1a	2.6	(1a)	(1.1)	2a	5.7	2c	7.9	2c	3.8	(2c)	(5.0)
27	1a	0.1	0a	...	2a	11.2	1c	2.6	1b	1.3	(2b)	(4.7)
28	2a	6.7	2b	10.3	2b	8.1	1a	0.1	2c	4.6	(2b)	-
29	1a	0.2	2b	6.9	2c	(4.4)	(1a)	-	1b	1.9	(1a)	-
30	1a	0.1	2c	...	2b	9.8	1a	0.2	1a	1.2	(1a)	(0.1)
31	0a	...	2c	7.3	1a	7.3	1a	1.5	2b	4.4	1a	1.3
31	0a	...	2a	6.7	2a	6.7	1b	1.4	1b	1.4		
Total	-	52.7	-	92.2	-	70.0	-	38.2	-	80.0	-	68.6
No. of days used	-	26	-	23	-	28	-	26	-	26	-	27
Mean	-	2.0	-	4.0	-	2.5	-	1.5	-	3.1	-	2.5

	JULY		AUGUST		SEPTEMBER		OCTOBER		NOVEMBER		DECEMBER	
	Character	Duration of negative potential gradient	Character	Duration of negative potential gradient	Character	Duration of negative potential gradient	Character	Duration of negative potential gradient	Character	Duration of negative potential gradient	Character	Duration of negative potential gradient
1	1a	hr.	2c	hr.	1a	hr.	1b	hr.	2b	hr.	(1a)	hr.
2	1b	1.5	2c	4.7	0a	0.1	1a	1.1	1a	6.0	(1a)	(0.1)
3	(0a)	...	2c	5.7	0a	...	1a	2.5	1a	0.9	(1a)	-
4	(1a)	(...)	1a	0.3	(1a)	(0.8)	1c	4.9	0a	...	1a	0.7
5	(1a)	(0.1)	1b	1.8	(0a)	(...)	(2c)	(13.8)	1a	1.7	0a	...
6	2a	6.1	1a	0.5	(2b)	(3.1)	1a	1.2	2a	5.2	(0a)	(...)
7	(0a)	(...)	1a	1.0	2c	5.3	2c	4.3	1a	-	0a	...
8	(1a)	(0.9)	1b	0.8	1b	1.3	1a	0.1	(1a)	(0.1)	2a	3.3
9	2a	3.3	1a	0.4	2b	3.4	1a	0.3	1b	2.5	2c	4.2
10	1a	1.2	1a	1.3	1a	0.4	1b	1.2	(1a)	-	0a	...
11	0a	...	1b	2.1	0a	...	(2c)	-	(1a)	-	(1a)	-
12	0a	...	0a	...	0a	...	(0a)	(...)	2b	4.7	(1a)	(2.7)
13	2b	3.9	0a	...	1a	2.2	1b	2.5	1b	1.5	2c	7.2
14	2c	7.1	2a	3.7	(1a)	(1.9)	(2b)	-	(1a)	(0.3)	1b	0.8
15	1b	1.4	0a	...	(1a)	(0.7)	(1a)	(0.4)	1a	1.7	1a	0.4
16	2b	3.2	(1a)	(0.9)	(1a)	-	1b	2.7	1a	0.4	2b	5.7
17	2b	3.1	1a	0.1	(1b)	-	(1b)	(0.4)	1a	1.0	2b	5.9
18	1a	0.5	1a	0.6	(0a)	(...)	(0a)	(...)	1a	-	1a	1.0
19	1a	1.5	2a	3.5	2b	-	(1a)	(0.8)	(1a)	(2.8)	2c	4.9
20	1a	0.6	2a	3.1	2a	5.9	1a	0.8	(0a)	(...)	2c	8.7
21	2b	3.2	2c	4.5	2c	4.9	2c	-	1a	1.3	2c	-
22	0a	...	(1b)	(0.8)	1c	2.0	(1a)	(0.9)	1a	0.5	1b	-
23	2b	4.3	2b	4.0	1b	2.0	1a	0.3	1a	0.1	(1a)	(0.1)
24	1a	0.6	1a	2.4	2c	-	1a	0.4	1a	0.5	(2a)	-
25	0a	...	1a	0.1	2c	-	1a	0.6	1a	0.3	1a	0.1
26	1a	0.3	(1a)	(0.9)	1a	1.8	(0a)	(...)	1a	0.1	2c	10.2
27	2b	6.0	0a	...	(0a)	(...)	(1a)	(1.7)	1a	0.7	1b	2.4
28	1a	0.5	1b	1.9	(1a)	-	1a	1.7	1a	0.9	1a	1.8
29	2b	7.7	2b	3.1	(1a)	-	1a	1.2	2a	6.1	1b	1.4
30	0a	...	1a	0.1	2b	-	1a	2.3	1a	2.3	2b	3.9
31	2c	8.2	0a	...	2b	2.4	(2a)	(4.5)	1a	1.4	1b	0.9
31	1a	0.2	(0a)	(...)			(1a)	-			2b	4.0
Total	-	67.8	-	48.3	-	38.2	-	50.6	-	43.0	-	70.4
No. of days used	-	31	-	31	-	22	-	27	-	26	-	26
Mean	-	2.2	-	1.6	-	1.7	-	1.9	-	1.7	-	2.7

Annual values: Character 0 1 2
No. of days used 54 197 114

Duration: Total 720.0 hr.
No. of days 319
Mean 2.26 hr.

KEW

POTENTIAL GRADIENT (reduced to open level surface)
Mean values for periods of sixty minutes between exact hours

45	KEW OBSERVATORY												Factor 4.45 (metre ⁻¹)												JANUARY 1958											
	Hour G.M.T.																								Mean											
	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												
													volts per metre																							
1	295*	265*	230*	200*	160*	170*	210*	245*	330*	330	-	-	895	800	705	710	515*	-	-	-	-	-	-	-	234	(9)										
2	-	-	-	-	-	-	-	-	-	-	-	875	-	-	-	-	-	-	-	-	-	-	-	-	797	(5)										
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	695	635	455	420	505	-	-	542	(5)										
4	-	-	-	-	-	-	150*	190*	235*	190*	95*	95*	-	-	-	Z*	-	160*	235*	255	235	210	65	75	170	(10)										
5	-	-	-	-	-	-	285*	Z*	520*	295*	350*	350*	340*	360	-	-	-	-	-	-	-	-	-	-	360	(1)										
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-										
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-										
8	-	-	-	-	-	-	-	-	-	-	-	530	435	435	425	400	435	455	340	325*	125*	20*	-40*	-200*	432	(8)										
9	-30*	-20*	85	135	140	190	150	245	340	380	325*	200	255	265*	295	330	340	380	380	360	420	425	360	330	287	(20)										
10	360	370	340	285	295	285	265	295	340	295*	-	-	-305*	-85*	-180*	-55*	-10*	-75*	-250*	110*	170	315*	-95*	-95*	301	(10)										
11	215	305	290	235	-95	55*	180	305	370	270*	200	295	370	335	470	Z*	Z*	250	250	380	505	560	550	540	325	(20)										
12	430	360	325	305	325	350	340	370	495	595	595	560	415	440	380	305	290	280	415	395	405	305	270	405	390	(24)										
13	395	305	270	235	225	250	395	425	450	450	550	505	440	475	440*	380	495	360	395	385	425	250	135	190	365	(23)										
14	115	125	225	125	180	270	260	360	520	-	-	-	620	665	575	575	475	560	495	295	340	460	450	620	396	(21)										
15	700*	575	575	505	415	340*	315*	270*	235*	405*	630	565	290	335	405*	335*	110*	360*	160	-125	225	-125	295	380	336	(14)										
16	260	315	350	205	145	225	90	190	515*	430*	440*	295*	305*	370*	295*	485*	550*	395	460	655	440	350	360	415	324	(15)										
17	385	250	235	215	70	200	145	200	460	460	495	585*	395*	215*	215	215	340	340	560	430	505	415	440	485	336	(21)										
18	250	305	380	450	430	440	505	595	675	650	505	560	540	430	260	245*	80*	90	100	125	115*	260	295	325	389	(21)										
19	155*	180	155	225	235	250	290	350	470	515	520	550	450	360	370	505	530	560	610	720	685	650	540	505	444	(23)										
20	530	470	360	360	370	360	380	475	675	845	820	790	610	610	475	575	550	630	665	560	700	495	485	295	546	(24)										
21	280	360	460	605	565	595	485	Z*	Z*	Z*	515	740	880	970	980	1150	1125	1145	1035	1010	1010	865	575	295	745	(21)										
22	430	200	-50	-75	-30	145	200	235	325*	405*	360	560	585	595	1035	665	845	900	785	720	730	700	650	700	493	(22)										
23	755	710	585	530	550	650	820	920	880	1115	775	720	Z*	Z*	Z*	Z*	145	470	675	Z*	Z*	Z*	-735	-295	545	(17)										
24	20	-95	45	35	90	215	190	190	610	395*	550*	560	755	745	655	575	720	595	610	875	945	755	560	325	453	(22)										
25	305	405	325	235	250	235	280	360	405	385	290	190	55	170	360	380	360	325	405	370	295	280	170*	115*	303	(22)										
26	135*	100*	0*	-30*	-40*	45	35*	20*	-155*	-325*	-440*	-335*	-325*	-30*	110*	215*	180*	290*	380	395	475	560	520*	485*	371	(5)										
27	350*	270	225	295	290	115	215	145	215	235	225	235	290	350	485	520	360	385	415	385	370	315	260	260	298	(23)										
28	260	245	225	235	290	315	335	350	380	335*	155*	90*	200*	110*	135*	65*	190*	-105*	-135*	-145*	-210*	-295*	-170*	-30*	293	(9)										
29	65*	65*	45*	0*	25*	Z*	65*	45*	155*	205*	100*	370*	290*	315*	430	560	710	695	700	550	610	560	560	485	586	(10)										
30	575	505*	450*	415*	585*	605*	1150*	1135*	890*	910*	990*	-	-	-	-	-	-	-	-	-	-	-	-	-	575	(1)										
31	-	-	-	-	-	-	-	-	-	-	-	520	520	755	685	650	505	640	655	380	415	395	235	315	513	(13)										
Mean	345	311	282	267	245	279	294	339	470	513	470	527	494	519	518	531	514	507	445	456	492	438	334	350	411	(439)										
	(17)	(19)	(20)	(20)	(20)	(19)	(20)	(19)	(16)	(12)	(14)	(17)	(17)	(17)	(17)	(16)	(16)	(20)	(22)	(21)	(21)	(21)	(19)	(19)												
Mean for selected quiet days																									400	(9)										

POTENTIAL GRADIENT (reduced to open level surface)
Mean values for periods of sixty minutes between exact hours

45	KEW OBSERVATORY												Factor 4.40 (metre ⁻¹)												FEBRUARY 1958											
	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											
													volts per metre																							
1	250	160	160	215	215*	340*	275*	260*	455*	465	445	445	410	375	410	390	435	480	500	570	605	365	285	320	383	(19)										
2	35	115	410	320	375	570*	470	580	820*	615	630	170	230	340	455	465	465	465	465	470	500	480	420	330*	404	(21)										
3	275	180	90	115	100	125	390	750	925	935	890	720	890	710	585	525	375	265	265	230	400	140	0	285	424	(24)										
4	365	140	275	320	260	230	310	260*	355	125*	55*	225	240*	215	305	385	400	385	320	240	115*	180	180	125	273	(20)										
5	60	70	55	45	45	100	80	105	125*	90*	140	215	Z†	Z†	205	390	390	375	320	240	505	185	185	320	201	(20)										
6	425	340	410	355	385	230	545	705	925	980	995	900	755	705	640	580	580	750	625	455	720	515	545	340	600	(24)										
7	260	260	365	445	490	420	435	365	490	665	730	Z†	Z†	Z†	535*	390*	435*	375*	205*	260*	115*	70*	-55*	-40	407	(12)										
8	60	215	285	550*	215	225	195	195*	10*	265	265	285	320	310	240*	Z†	250	465	465	480	385	500	630	580	337	(19)										
9	570	570	535	545	515	515	500	675	355*	305*	-40*	-225	115	195	150*	160*	150	160	240	160	180	215	-375*	-535*	330	(17)										
10	-265*	0*	55	80	125	140	170	240	400	310	330	250	215	375*	215	140*	35*	195	345*	385*	295*	265*	275*	265	214	(14)										
11	230	180	140*	135*	150	185	195	250	320	375	365	330*	Z†	385	410	355	Z†	Z†	340	285	285	455	310	195	293	(18)										
12	160	135	115	135	140	170	215	295	375	410	375	355	345	345	365	365	355	355	490	535	695	720	675	660	366	(24)										
13	560	695	630	500	390	240	425	410	470	330	340	390	345*	265*	170*	100*	225*	45	Z†	Z†	-30*	180*	125	105	377	(15)										
14	100	70	115	90	125	125	105	125	135*	160*	180	215	215	215	225	225	215	250	205	185	160	70	60	90	153	(22)										
15	100	100	125	125	125	135	170	230	295	275	225	215	180	230	305	320	330	320	250	230	275	180	80	45	203	(24)										
16	35*	60*	55*	70*	Z†	Z†	140*	0*	125	185	230	310	320	345	320	240	320	410	425	550	455	390	375	340	334	(16)										
17	345	285	240	185	215	180	225	295*	265*	285	275	500	425	215	390	365	355	365	515	365	385	385	515	505	342	(22)										
18	330	340	375	390	385	345	305	465	550	570	470	435	345	320	320	365	355	285	215	170	180	185	265	275	343	(24)										
19	330	295	-20	100	230	260	340	425	455	515	465	355*	340*	195*	-40*	Z†	55*	105*	125*	100	135*	140	125	140	260	(15)										
20	90	55	105	135	105	140	180	265	275*	285	355	345	125	105	265	295*	185*	170	305	285	285	250	250	150	202	(21)										
21	125	150	150	125	140	180	185*	265*	410*	355	230*	-340*	-115*	-385*	-140*	Z†	Z†	Z†	-415*	-490*	-480*	-385*	-190	-115	102	(9)										
22	140	205	150	125*	70*	60	180	125	400	375	265*	285*	265	35*	215*	70*	55*	60*	-105*	-835*	-810*	-20*	170*	135*	180	(7)										
23	195*	150*	0*	-95*	-190*	-55*	-30*	45*	10	25	55	90	90	180	170	230	230	205	195	240	275	265	225	180	167	(16)										
24	310	170	35	55	60*	-55*	-170*	-130*	-180*	-215*	180*	215*	215*	420*	515*	465*	Z†	Z†	705*	340*	330	320	265	230	214	(8)										
25	185	160	160*	70*	55*	Z†	Z†	Z†	Z†	Z†	Z†	Z†	230*	-180*	60*	90	-75*	-55	-85	-55*	Z†	Z†	-95	-55	9	(6)										
26	-170	-95	-140	-115	-20	25	10	80	60	-20	-45	160	230	260	275	240	355	320	305	215	70	225	420	125	115	(24)										
27	-85	60	90	90	115	115	160	275	320	310	435	455	410	375	330*	230*	265	375*	310*	320	345	375	365	345	257	(20)										
28	260	250	230	90	225	205	230	275	365	295	410	320	285	265	260	340*	355*	295	580	275	320	215	225*	55*	283	(20)										
Mean	212 (25)	204 (25)	202 (24)	197 (22)	220 (22)	198 (22)	265 (22)	349 (19)	402 (17)	401 (21)	389 (22)	323 (21)	323 (19)	321 (19)	340 (18)	363 (15)	343 (17)	310 (21)	347 (20)	314 (21)	368 (20)	307 (22)	262 (23)	225 (24)	294 (501)											
	Mean for selected quiet days																				303	(10)														

POTENTIAL GRADIENT (reduced to open level surface)
Mean values for periods of sixty minutes between exact hours

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45 KEW OBSERVATORY												Factor 4.35 (metre ⁻¹)												MARCH 1958	
	Hour G.M.T.																								Mean
	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	
	volts per metre																								
1	115*	80*	-25*	20*	35*	70*	70*	195*	130*	140*	165*	175	230	230	265	350	370	325	275	280	420	315*	80*	80*	292 (10)
2	175*	230*	240	160	20	25	25	10	-10	115	245	335	360	335	325	310	350	370	460	485	605	580	590	555	295 (22)
3	545	430	405	510	310	255*	245	325	500	635	750	640	535	475	475	360	325	385	370	395	530*	500	150	80	425 (22)
4	105	70	220	230	240	240	255	335	495	450	510	570	495	530	460	345	315	380	325	370	350	345	325	300	344 (24)
5	280	350	280	255	240	210	280	345	395*	350*	280	185	160	165	185	160	230	230	300	175	130	95*	115*	-130*	234 (19)
6	70*	90	210	195	240	245	315	335	395	370	290*	300*	385	300	280	240	Z±	415	350	395	380	420	395	360	316 (20)
7	350	360	315	335	300	300	315	450	535	430	370	350	315	315	300*	Z±	Z±	-80*	Z±	Z±	200	140	Z±	130*	336 (16)
8	300	275	315	300	300	265	230	Z±	465*	545*	530*	385*	Z±	350	450	510	350	Z±	Z±	Z±	Z±	105	140	299 (13)	
9	210	20	130	55	70	70	160	175	290	335	385	405	420	360	335	310	245	315	345	370	245	280*	195*	90	243 (22)
10	185	240	185	275	280	230	345	495	670	545	475	685	870	810	670	495*	495*	580	625	565	Z±	Z±	Z±	150	467 (19)
11	280	240	245	245	210	280	265	460	415	-	-	-	385	300	275	315	300	300	370	280	405	45	60	195	280 (21)
12	230	230	195	220	245	500	695	680	650*	535	350	115*	210*	265	265	245*	230*	Z±	-10*	-80	-25*	-320*	185	460	332 (15)
13	195	140	210	265	300	310	360*	420	465	380	275	310	280	280	310*	345	335	370	385	275	345	350	230	275	306 (22)
14	280	175	45	35	105	300	495	660	785	765	600	570	580	475	475	565	580	570	440	335	300	520	810	730	466 (24)
15	705	530	405	450	350	300	380	475	640	600	440	370	310	240	230	275	315	280	325	370	405	370	350	345	394 (24)
16	310	275	195	210	255	290	275	300	280	245	290	300	265	275	280	245	-100	10	-135	-120	0	130	125	230	185 (24)
17	185	115	195	175	185	130	70	175	395	415	485	570	465	405	385	450	460	535	570	465	420	370	310	275	342 (24)
18	245	265	230	175	175	220	315	535	555	565	520	565	535	475	555	475	570	670	625	625	415	405	465	590	449 (24)
19	460	420	420	325	350	415	500	640	810	860	510	535	650	460	430	500	520	485	475	790	715	825	940	845	578 (24)
20	535	415	310	275	255	325	615	880	995	810	660	580	670*	475	535	Z±	Z±	680	775	755	705	670	685	705	602 (21)
21	635	615	580	440	315	265	385	565	905	935	740	635	650	590	535	755	545	300*	405*	175*	405	300	35	210	526 (21)
22	450	385	350	175	230	240	275	315	300	310	325	315	325	275	280	310	345	360	345	450	510	450	415	345	337 (24)
23	280	210	195	210	220	275	230	240	230	210	255	265	280	230	240	210	160	70	245	315	420	405	385	335	255 (24)
24	345	290	240	310	315	315	350	450	590	615	580	565	570	545	580	485	325*	-80*	-145*	-20*	-75*	-10*	60*	-35	418 (17)
25	60	140	90	165	220	210	300	420*	660*	660*	280*	430*	440*	460	230*	590*	Z±	565*	405*	530*	460*	230*	350	420	241 (10)
26	310*	-90*	220*	245*	150*	-35*	-455*	-55*	605	600*	640	810	600	650	485	300*	275	335	370	360	380	300	405	350	469 (14)
27	115*	430	125*	370	430	265	275	405	360	275	300	310	245	300	255	185*	-165*	90*	80*	140	150*	175	245	275	297 (17)
28	230*	-45*	200*	210*	210	220	255	300	350	350	265*	-20*	Z±	Z±	-75*	-25*	140*	-55*	Z±	-130*	-120*	Z±	Z±	-75*	281 (6)
29	35*	70	45	95	90	Z±	60*	90*	160*	160	175	245	230	210	210	245	275	335	385	460	465	495	485	460	270 (19)
30	530	405	385	290	265	440*	280	385	380*	335	405	Z±	Z±	Z±	Z±	35	-285*	70*	-20*	90*	0*	300	Z±	329 (11)	
31	140*	245	115	245	150	160	95	165	325	Z±	580	590	510	555	415	465	420	450	-75*	-100*	-65*	Z±	Z±	-65*	343 (16)
Mean	335 (23)	275 (27)	250 (27)	250 (28)	237 (29)	254 (26)	305 (27)	405 (26)	495 (24)	469 (24)	446 (25)	453 (24)	426 (25)	391 (29)	380 (26)	374 (22)	328 (22)	384 (22)	392 (21)	368 (23)	391 (21)	390 (20)	363 (23)	347 (25)	359 (589)
Mean for selected quiet days																							[384 (10)]		

POTENTIAL GRADIENT (reduced to open level surface)
Mean values for periods of sixty minutes between exact hours

45 KEW OBSERVATORY												Factor 4.37 (metre ⁻¹)												APRIL 1958		
	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	
	volts per metre																									
1	105*	Z+	Z±	Z+	90*	105	140	335	565	600	565	675	675	620	520	600	630	680	480	480	575	565	635	710	534 (19)	
2	565	480	445	415	480	515	595	745	715	565	-	-	-	-	-	-	-	-	-	-	-	-	-	-	552 (10)	
3	-	-	-	-	-	-	-	-	-	-	610	645	790	770	700	675	665	725	655	610	485	275	55	0*	589 (13)	
4	0*	0	95	170	125	125	125	170	170	195	175	175	175	170	195	175	160	125	125	90	Z±	Z±	20*	460*	144 (19)	
5	185*	290*	Z±	Z±	Z±	Z±	Z±	Z±	Z±	Z±	Z±	Z±	Z±	Z±	Z±	-35*	70	0	210	370*	250*	-100*	-120*	-180*	93 (3)	
6	-10*	0*	-25*	0*	55*	20*	20*	-20*	-10*	135	220	135	35	170	185	290	265	195	250	300	310	310	335	210	223 (15)	
7	160	115	45*	35	80	90	105	220	230	250	300	250	250	355	300*	285	355	355	175	255	240	495	435	345	245 (22)	
8	205	150	95	80	135	170	210	255	285	275	230	255	230	265*	300*	195*	300*	230	370	345	505	495	370	390	264 (20)	
9	355	210	115	125	125	90	95	175	220	265	290	275	285*	345*	Z±	Z±	125*	275*	415*	290	365*	300	275	170	211 (16)	
10	160	125*	95	160	160	185	240	335	390	320	300	230	185	210	275	300	285	405	700	675	630	655	450	495	341 (23)	
11	345	265	170	170	125	135	150	220	370	515*	485*	300*	495*	480*	505	655	495*	530	630	675	620	690	620	515	411 (18)	
12	495	300	220	230	160	230	345	445	435	480	435	370	400	380	370	335	335	355	515	540	610	620	550	655	409 (24)	
13	690	515	320	285	265	230	230	230	285	310	300	300	275	285	275	265	240	285	320	460	520	460	370	405	335 (24)	
14	300	150	-10	-20	-70	-80	-200*	-120*	445*	460	-	-	-	-	-	-	-	415	195	25	70	435	250	160	163 (14)	
15	195	160	160	150	70	140	230	355	495	520	400	230	195	170	105	135	95	390	Z±	Z±	150*	-45*	20	140	218 (20)	
16	265	450	450	255	310	285	335	320	425	285	285	290	255	250	210	240	265	310	390	495	495	435	255	95	319 (24)	
17	150	80	95	125	90	115	175	285	275*	300	250	140*	140*	230*	45*	10*	140	195*	255	230*	70*	230*	115*	105	167 (13)	
18	185	195	185	175	185	175	230	310	275	265	210	210	175	160	170	150*	205*	290*	250	240	220	185	185	220	210 (21)	
19	210	175	150	140	140	140	160	210	240	255	205	170	135	150	175	185	210	210	240	255	285	320	355	380	212 (24)	
20	400	300	140	240	185	275*	290	285	310	275	205	125	115	140	140	140	150	170	210	275	345	345	265	220	229 (23)	
21	205	140	150	160	125	185	250	380	435	390	325	275	230	195	150	170	160	170	250	290	485	370	140	175	242 (24)	
22	320	255	125	160	285	320	310	435	470	600	505	425	250	230	275	355	470	565	565	480	325	320	135	195	349 (24)	
23	140	95	115	230	135	240	230	220	290	160	175	140	140	150	140	150	140	160	195	210	185	250	210	210	180 (24)	
24	170	195	185	175	185	175	210	205	185	170	185	135*	45*	160*	195*	140*	140*	240*	230*	265*	285*	170*	175*	170*	184 (12)	
25	150	150	195	195	220	275	365	370	325	250	-	195	210	Z±	250*	105*	250	250	250	250	230*	-90*	-10*	0*	244 (16)	
26	90*	60	55	125*	140*	35*	115*	210	185*	230*	210*	160*	210*	195*	175	185	205	195*	300*	Z±	210*	Z±	135	195	153 (8)	
27	175	185	170	135	140	170	175	175	210	195	185	185	160	150	135*	170*	140	170	220	240	240	210	230	210	185 (22)	
28	205	185	175*	160*	70*	175*	90*	170	320	230	250	210	210	230	230	230	220	240	205	250	160*	265*	230	150	221 (17)	
29	140	125	115	140	195	210	275	355	310	230	230	175	170	175	170	170	135	95	135	140	140	125	115	125	175 (24)	
30	135	95	125	125	135	140*	210	320	310	310	-	-	-	-	135	125	125	125	125	115	105	175	140	150	162 (19)	
Mean	263 (24)	201 (25)	165 (24)	169 (24)	166 (24)	184 (23)	237 (24)	297 (26)	342 (24)	318 (26)	298 (23)	270 (22)	250 (21)	261 (19)	255 (20)	283 (20)	248 (23)	298 (24)	317 (25)	333 (24)	369 (20)	383 (21)	282 (24)	272 (25)	268 (555)	
	Mean for selected quiet days																				[225 (10)]					

POTENTIAL GRADIENT (reduced to open level surface)
Mean values for periods of sixty minutes between exact hours

45 KEW OBSERVATORY												Factor 4.22 (metre ⁻¹)												MAY 1958		
	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	
													volts per metre													
1	145	140	140	130	130	130	205	320	495	510	390	345	275	285	345	310	275	285	305	370	380	275	285	95	274 (24)	
2	175	105	205	145	155	145	205	380	355	425	415	320	330	285	260	235	225	235	215	155	155	215	80	270	237 (24)	
3	190	130	120	190	120	120	270	370	425	435	415	405	415	310	250	205	165	175	175	260	260	260	200	140	250 (24)	
4	70	50	70	80	110	80	180	140	120	175	130	85	85	155	175	180	200	180	215	165	145	130	165	155	135 (24)	
5	85	85	85	25	95	70	95	165	10	140	140	145	155	175	155	175	155	145	140	95	80	85	145	175	123 (19)	
6	165	145	110	105	120	155	225	205	225	155	165	120	Z±	50	Z±	120	205	205	200	205	240	205	205	190	178 (16)	
7	215	205	145	175	155	175	270	235	165	140	130	165	180	140	180	190	175	180	120	145	180	190	145	130	174 (18)	
8	50	50	80	80	105	105	155	175	215	225	190	165	180	180	175	Z±	95	110	175	225	250	240	205	145	178 (17)	
9	140	145	145	155	155	165	225	240	215	225	190	165	155	175	165	190	205	175	180	240	270	250	270	250	201 (21)	
10	200	175	165	190	180	155	165	205	200	190	175	110	120	105	95	130	120	130	140	155	155	105	80	70	146 (24)	
11	85	50	45	10	80	105	120	165	205	175	155	140	130	130	120	110	130	140	175	200	70	45	145	165	126 (22)	
12	175	175	180	200	200	260	285	310	250	205	-	-	140	140	80	70	105	120	155	200	180	155	175	155	180 (21)	
13	145	145	140	180	215	205	285	295	270	215	175	175	105	70	80	110	120	140	140	120	145	155	145	215	166 (24)	
14	140	Z±	-20	0	50	80	80	130	165	180	190	140	215	180	130	155	155	165	190	240	45	130	145	105	164 (13)	
15	110	110	95	105	110	120	140	120	95	240	205	225	240	175	145	175	140	105	140	180	Z±	Z±	Z±	Z±	157 (16)	
16	Z±	140	190	-105	155	365	270	10	-355	-100	-25	70	110	205	260	355	365	345	310	295	320	180	155	215	271 (14)	
17	200	190	180	155	190	250	275	370	250	215	225	180	105	80	70	140	70	180	200	205	285	205	200	175	199 (19)	
18	140	105	95	105	70	110	120	175	140	165	190	180	145	145	130	140	145	175	205	205	225	180	175	165	151 (24)	
19	140	140	140	130	130	140	235	200	225	205	175	130	155	180	190	180	165	145	105	155	110	180	310	240	171 (24)	
20	205	205	175	240	205	205	235	250	235	215	175	140	140	140	145	155	140	120	110	130	180	200	215	200	182 (24)	
21	175	130	110	140	120	145	155	205	190	155	130	105	85	105	85	85	105	120	110	180	250	260	250	180	149 (24)	
22	200	155	120	200	205	215	310	345	240	175	155	120	120	105	105	145	120	175	130	140	215	275	240	175	195 (20)	
23	130	105	110	120	140	Z±	Z-	-60	165	205	225	110	Z±	Z±	190	205	205	215	240	240	205	70	140	240	192 (13)	
24	225	200	175	155	140	140	140	145	175	175	175	140	140	130	120	110	120	145	180	215	225	235	250	235	172 (23)	
25	190	155	140	155	140	105	105	120	105	105	80	120	120	120	110	110	120	110	155	250	275	295	165	70	143 (24)	
26	110	60	Z±	Z±	Z±	Z±	-125	-105	Z±	Z±	-265	110	15	95	110	105	105	120	120	105	130	165	165	155	154 (13)	
27	140	130	140	120	105	105	235	310	330	270	165	130	120	120	110	140	-10	Z±	Z±	Z±	-10	155	285	215	160 (20)	
28	155	155	200	190	130	205	390	370	400	205	165	130	110	120	105	120	110	105	110	140	175	175	310	330	192 (24)	
29	250	225	80	-410	-800	345	310	-195	-45	-170	-170	-205	Z±	Z-	-605	25	Z-	Z±	Z±	Z±	Z±	Z±	Z±	Z±	165 (2)	
30	225	270	145	110	155	35	85	205	240	240	235	175	165	175	140	165	200	180	175	205	295	260	235	175	180 (21)	
31	95	180	165	155	155	180	225	205	225	175	165	175	175	190	205	190	205	205	175	175	130	110	205	260	182 (20)	
Mean	159 (26)	140 (22)	131 (25)	142 (25)	143 (26)	154 (27)	212 (26)	243 (23)	243 (23)	231 (23)	201 (25)	171 (23)	162 (24)	160 (25)	155 (26)	164 (27)	161 (27)	171 (25)	173 (28)	196 (28)	202 (28)	193 (27)	196 (29)	182 (29)	178 (616)	
																					Mean for selected quiet days				185 (10)	

POTENTIAL GRADIENT (reduced to open level surface)
Mean values for periods of sixty minutes between exact hours

45	KEW OBSERVATORY												Factor 4.04 (metre ⁻¹)												JUNE 1958	
	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	
													volts per metre													
1	295	330	175	155	210	225	Z ⁺	Z ⁺	Z ⁺	Z ⁺	-230	190	210	155	130	150	150	Z ⁺	Z ⁺	190 [*]	215	225	350	355	220	(16)
2	470	435	280	285	590	435 [*]	425	295	495	550	470 [*]	225 [*]	Z ⁺	Z ⁺	Z ⁺	Z ⁺	Z ⁺	295 [*]	-90 [*]	-25 [*]	150	200	120	140	341	(13)
3	45	85	115	120	140	185	245	270	225	200	190	175 [*]	165 [*]	175 [*]	200	175	165	175	175	190	280	210	210	190	180	(21)
4	190	120	115	140	155	175	190	190	190	175	175	190	130	120	105	105	95	95	80	85	115	85	80	130	135	(24)
5	130	150	280	390	320	280	315	390	305	210	190	175	150	130	130	130	120	140	140	150	175	200	225	235	211	(24)
6	225	190	175	225	210	185	175	270	320	375	350	270	280	315	280	260	225	250	235	185	-60 [*]	Z ⁺	350	305	257	(22)
7	210	190	185	155	175	190	190	150	150	140 [*]	175 [*]	155 [*]	120	120	140	120	-195 [*]	-55 [*]	120	175	185	155	185	175	166	(18)
8	140	95	80	95	85	95	115	120	120	120	130	140	140	130	105	105	80	105	165	155	215	250	305	200	137	(24)
9	175	155	185	175	210	270	285	350	350	305	225	155	190	190	130	120	120	120	120	155	120	200 [*]	115 [*]	-20 [*]	195	(21)
10	150 [*]	140 [*]	150 [*]	115 [*]	25 [*]	-55 [*]	105 [*]	Z ⁺	Z ⁺	Z ⁺	165	150	175	190	280	175	175	235 [*]	225 [*]	200	140	190 [*]	Z ⁺	-35 [*]	183	(9)
11	175	175	175	175	140	120	140	185	200	190	200	200	190	175	175	200	190	215	270	185	165	185	175	140	181	(24)
12	60	80	115	190	225	295	350	400 [*]	185 [*]	330 [*]	280 [*]	315 [*]	355 [*]	435	425	420	295	190	165	190	130	185	155	175	227	(18)
13	210	250	175	215	215	250	225	215	210 [*]	215	215	200	190	175	150	140	140	130	105	50	85	120	120	150	171	(23)
14	115	130	140	165	165	150	150	140	155	115	155	190	190	200	210	200	215	210	250	235	140	215	260	200	179	(24)
15	165	155	155	120	80	70	95	130	190	140	95	105	85	115	95	85	95	105	105	120	105	130	185	215	123	(24)
16	200	210	185	210	210	165	175	235	330	270	175	140	115	115	105	95	115	115	105	105	105	105	95	105	158	(24)
17	105	85	130	155	115	85	60	60	70	80	105 [*]	45 [*]	-55 [*]	-20	200 [*]	365 [*]	365 [*]	400	295	285	235	210	215	295	159	(18)
18	280	245	210	200	210	260	315	450	550	410	330	270	175	140	140	115	95	115	105	95	105	120	95	80	213	(24)
19	85	70	95	105	105	95	115	200 [*]	210 [*]	210 [*]	190	175	175	140	120	105	95	165 [*]	Z ⁺	Z ⁺	105 [*]	150 [*]	130 [*]	50	115	(15)
20	50	120	235 [*]	250 [*]	175 [*]	115 [*]	165 [*]	210	200 [*]	140 [*]	130 [*]	130 [*]	150	150	165	165	150	130	140	165	140	185	225	140	152	(15)
21	70 [*]	70 [*]	70 [*]	95	15 [*]	85 [*]	80 [*]	165 [*]	150	165	165	155 [*]	115 [*]	155	155	210 [*]	Z ⁺	Z ⁺	280	155	200	225	210	176	(12)	
22	190	190	155	165	200	175	155	155	Z ⁺	Z ⁺	Z ⁺	Z ⁺	35 [*]	285 [*]	Z ⁺	210 [*]	245	Z ⁺	Z ⁺	Z ⁺	130	225	140	95	171	(13)
23	50 [*]	50	70	70	50	105	115	Z ⁺	320	200	215	200	210	175	280	185 [*]	Z ⁺	Z ⁺	155	140	140 [*]	85 [*]	95	155	153	(17)
24	120	95	105	120	155	175	210	315	305	260	115	140 [*]	-25	295 [*]	Z ⁺	Z ⁺	Z ⁺	175	235	150	165	225	330	270	184	(19)
25	190	120	140	175	210	235	215	175	165	120	150	150	120 [*]	120	150 [*]	185 [*]	175 [*]	Z ⁺	Z ⁺	Z ⁺	175 [*]	85 [*]	0	-205 [*]	167	(13)
26	115	115	120	120	120	155	185	235	245	245	190	175	150	165	140	120	120	120	105	-10 [*]	Z ⁺	Z ⁺	Z ⁺	Z ⁺	155	(19)
27	Z ⁺	Z ⁺	Z ⁺	Z ⁺	Z ⁺	Z ⁺	-570 [*]	-215 [*]	0	-20 [*]	85	85	130 [*]	120 [*]	115 [*]	130 [*]	120 [*]	115 [*]	260 [*]	50 [*]	95 [*]	120 [*]	85 [*]	85 [*]	85	(2)
28	85 [*]	80	85	85	85	85	95	95	165	105	105	95	105	95	105	95	105	105	115	115	115	120	115	120	101	(23)
29	120	120	120	140	140	155	175	165	175	155	165	150	140	150	140	140	130	120	140	130	140	120	155	150	143	(24)
30	140	140	140	140	140	140	150	165	185	175	165	140	155 [*]	155	155	155 [*]	155 [*]	165 [*]	165 [*]	175	200 [*]	190 [*]	155 [*]	140 [*]	154	(15)
Mean	168	155	150	162	179	173	195	218	245	217	180	169	155	160	169	153	149	159	164	156	153	175	192	178	174	(558)
	(25)	(27)	(26)	(27)	(26)	(25)	(25)	(23)	(21)	(22)	(23)	(21)	(21)	(25)	(24)	(21)	(21)	(19)	(22)	(23)	(23)	(21)	(23)	(24)		
	Mean for selected quiet days																				152	(10)				

POTENTIAL GRADIENT (reduced to open level surface)
Mean values for periods of sixty minutes between exact hours

123

45 KEW OBSERVATORY												Factor 7.91 (metre ⁻¹)†												JULY 1958	
	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	Mean
	0-1	1-2																							
													<i>volts per metre</i>												
1	140	140	130*	120	130	130	150	155	165	155	140*	140*	120*	120*	120*	120	120	120*	115*	115*	130	115*	115*	120	137 (13)
2	130	130	120	140*	120*	120*	120*	120*	105*	105*	115*	120*	140	140	165	155	175	190	190	200	200	210	225	235	174 (15)
3	245	270	295	270	280	285	365	320	295	225	215	225	245	Z±	Z±	Z±	105	Z±	190	250	235	175	210	235	247 (20)
4	245	225	235	250	280	285	390	330	305	330	365	220	220	215	215	180	170	230	200	200	190	140	155	135	238 (24)
5	180	165	140	165	180	190	190	205	200	235*	180*	180*	190*	170	125	180	180	180*	200*	190	200*	205*	235*	235	180 (15)
6	205	150*	185*	165	180	180	165*	165*	150*	180*	185	190	180	180	165	165	170	180	180	190	180	180	190	190	181 (18)
7	190	190	170	140	120	135	150	155	180	140	135	135	140	140	170	165	190	200	205	205	185	190	190	190	167 (24)
8	180	180	180	180	165	170	185	185	200	215	170	180	185	185	185	165	140	135	140	170	190	190	180	180	176 (24)
9	150	135	150	165	165	135	170	190	205	230	205	190	185	205	190	200	165	135	120	110	165	110	135	135	164 (24)
10	135	110	120	120	135	135	265	265	265	205	185	165	155	165	125	120	105	90	90	120	150	165	105	80	149 (24)
11	80	65	50	125	90	75	125	170	235	190	180	165	150	140	120	135	150	125	135	135	205	105	125	105	133 (24)
12	80	65	90	105	60	120	150*	135*	180	165*	Z±	120*	155	140*	150	90	135	135*	120*	Z±	Z±	230	180	150	128 (14)
13	65	60*	60*	80	80*	65*	105*	105*	95*	110*	120*	65*	95	135*	120	120	120	135	170	165	180	155	180	170	135 (13)
14	140	125	120	120	120	140	190	205	205	205	180	140	140	135*	150	150	135	120	105	90	120	140	120	105	142 (23)
15	105	105	150	180	250	155	265	310	340	245	245	215	180	220	280	265	250	190	235	215	165	110	80	90	202 (24)
16	190	110	120	75	80	140	190	220*	205*	295*	Z±*	Z±*	150*	215*	Z±*	Z±*	Z±*	Z±*	0*	75*	120	105	150	135	129 (11)
17	165	180	150	155	150	215	245	275	295	280	220	215	155	135	165	140	140	140	165	165	210	190	190	165	188 (24)
18	165	190	190	210	235	285	380	400	380	330	260	190	210	210	190	140	120	95	95	140	285	210	260	235	225 (24)
19	285	235	235	285	285	330	305	400	380	285	210	190	190	190	190	165	190	190	235	235	305	380	380	425	271 (24)
20	470	450	425	Z±*	Z±*	305*	95*	235	285	210	235	Z±*	235*	140	95	95	95	95	95	95	95	120	140	140	195 (18)
21	120	120	95	95	120	140	210	260	190*	210*	235*	260	190	140*	120	120*	120	120	120	45*	95*	140*	165	165	151 (16)
22	190	190	190*	190	190	235*	190*	380*	285	285	-	165	140	Z±*	Z±*	Z±*	235	210	140	120	120	120	120	140	177 (16)
23	140	120	140	140	165	190	210	235	235	190	140	140	45*	Z±*	95	120	140	95	95	120	140	140	140	120	148 (22)
24	140	140	95	140	165	210	260	260	210	210	190	140	140	120	95	95	70	70	70	95	45	25	45	95	130 (24)
25	165	140	140	210	140	190	210	235	235	210	190	140	165	140*	120*	165*	190*	210*	235*	190*	140*	235*	190	140	180 (15)
26	190	140*	95*	7±*	190*	210*	260	260	235	235	235	235	235	235	285	260	235	190	210	210	190	235*	260	260	234 (18)
27	210	235	190	260	235	330	260	260	285	235	260	260	210	210	285*	330*	380*	330*	425*	330*	305*	305*	305*	305	250 (15)
28	260	235	235*	260*	235	235*	260*	260	285	285*	305	305	285	260	285	285	260	235*	260*	260*	285*	260*	260	260	270 (14)
29	235*	235	285	285	285	285	305	330	330	305	285	210	210	210*	285*	235	210	210	210	235	355	330	305	285	273 (21)
30	285	260	285	260*	260	260	260	305	285	285	235	210	190	190	190	165	140	140	70	70*	190	190	210	235	220 (22)
31	285	235	235	260	235	235	285	285	285	260	210	190	140	165	95	95	95	95	120	165	190	210	235	235	202 (24)
Mean	184	178	176	173	183	198	243	260	261	237	219	195	178	181	165	160	156	147	149	166	182	172	183	184	188 (607)
	(30)	(28)	(25)	(26)	(27)	(25)	(24)	(25)	(26)	(23)	(23)	(24)	(26)	(20)	(24)	(25)	(28)	(23)	(24)	(23)	(25)	(24)	(28)	(31)	
Mean for selected quiet days																									176 (10)

POTENTIAL GRADIENT (reduced to open level surface)
Mean values for periods of sixty minutes between exact hours

45	KEW OBSERVATORY												Factor 7.73 (metre ⁻¹)†												AUGUST 1958																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
	Hour G.M.T.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			

POTENTIAL GRADIENT (reduced to open level surface)
Mean values for periods of sixty minutes between exact hours

45	KEW OBSERVATORY												Factor 4.83 (metre ⁻¹)												SEPTEMBER 1958											
	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											
													volts per metre																							
1	175	175	175	165	165	175	175	185	185	185	150	150	150	165	175	165	185	185*	185	185	175	185	195	205	175	(23)										
2	225	225	225	240	205	165	165	165	165	165	185	185	205	220*	205	185*	240	270	290*	270*	270*	270*	270*	270*	220	(24)										
3	255	240	270	240	240	240	240	240	270	240	205	240	270*	270*	170*	185*	185*	205	220*	170*	205*	185*	220*	205*	240	(13)										
4	Z±	185*	270*	205	185*	170*	220*	220*	220*	240	240	220	205	205	185	170	205	220	240	240	205	240	205	205	214	(16)										
5	185	170	205	185	185	240*	185*	185	205	220	170	170	155	170	205	185	205	155*	120*	185*	170	185	185	205	187	(19)										
6	205	205	205	155	70	120	185	185	170*	170	170	150	205	225	240	305	300	290	315	335	380	290	290	260	228	(23)										
7	260	240	205	205	205	225	225	205	205	215	225	240	240	225*	225	215	260	260	260	280	300	280	230	205	235	(23)										
8	185	175	160	165	165	185	185	225	225	205	225	240	225	95*	185*	225	250	270	260	270	280	260	240	230	220	(22)										
9	215	205	225	230	225	240	290	290	260	215	185	225	225	240	260	225	240	240	225	215	185	205	205	205	228	(24)										
10	205	215	225	205	225	240	260	240	225	225	225	250	240	260	260	305	315	345	335	300	300	290	280	261	(24)											
11	300	300	280	260	240	250	300	335	300	290	290	280	290	280	335	370	370	335	325	355	355	335	335	325	310	(24)										
12	270	240	260	225	205	240	300	260	260	230	175	215	300	290	335	355	240	510	355	240	205	260	280	300	273	(24)										
13	300	300	300	290	300	315	290	300	300	300	240	260	280	260	280	250	260	260	300	300	280	270	260	260	281	(24)										
14	240	225	225	225	225	225	205	205	175	165	185	215	225	240	230	250	240	240	240	240	185	225	240	230	221	(24)										
15	Z±	Z±	110*	175	130*	160*	150	130	110*	110*	130	165	165	150	150	185	185	195	175	175	165	160	150	150	162	(17)										
16	160	160	110	140	150	120*	75	65	75	85	165	205	205	225	260	270	290	290	280	260	260	240	240	225	193	(23)										
17	205	205	215	215	215	225	225	250	240	260	270	250	260	270	300	315	305	280	260	270	260	260	290	315	256	(24)										
18	315	315	345	345	335	345	315	315	260	230	215	195	205	205	225	215	205	185*	205*	225*	195*	165	150*	120*	264	(18)										
19	110	110	110	85	85	85	95	110	110	100	100	120	225	315	300	290	290	280*	240*	185*	120*	165*	150*	150*	155	(17)										
20	Z±	Z±	100*	150	165	185	240	250	260	335	335	280	225	270	260	260	240	270	355	390	370	230*	130*	290*	269	(18)										
21	280*	270*	225*	205*	225*	185*	30*	205*	250*	260	250	305	315	315	300	Z±	Z±	205*	420	455	410	370	365	345	343	(12)										
22	315	300	300	315	300	300*	355	465	335	300	290	300	Z±	300*	Z±	225*	Z±	Z±	Z±	95*	225	250	225	302	(15)											
23	215	225	225	205	225	230	300	335	250*	165	240	300	270*	205*	335*	165*	175*	Z±	55*	100*	280*	75*	75*	75*	242	(11)										
24	75*	75*	75	75*	75	110	150	165	175	215	240	280	280	280	260	260	300	300	365	370	300	225	195	185	229	(21)										
25	175	165	175	165	165	165	230	260	260	240	250	260	225*	260	280*	280	260*	365	335	355	345	300	290	225	251	(21)										
26	205	195	195	205	205	205	315	430	550	500	370	300	290	300	300	300	300	315	325	300	215	195	225	205	289	(24)										
27	215	185	215	225	185	185*	225	345	400	300	215	225	205	215	195	185	230	240	260	305	230	305	355	Z±	248	(22)										
28	Z±	Z±	Z±	175	205	205	225	225	250	260	250	215	205	225	225	225	225	225*	240	315	260	205	175	165	224	(20)										
29	140	140	160	160	150*	150*	110*	75*	65*	35*	65*	95*	75*	65*	75*	85*	85*	120	160	160*	175	185	195	185	162	(10)										
30	185	175	150	150	150*	140*	130*	120*	165*	175*	185*	175*	165	150*	Z±	175	315	370	290	290	185	205	240	230	223	(14)										
Mean	219	212	209	204	199	208	229	245	247	234	221	230	228	243	248	247	258	281	283	292	257	245	248	235	238	(594)										
	(24)	(24)	(25)	(28)	(25)	(21)	(25)	(26)	(23)	(27)	(28)	(28)	(25)	(23)	(23)	(25)	(24)	(22)	(24)	(23)	(26)	(26)	(25)	(24)												
	Mean for selected quiet days																				[244	(10)]														

POTENTIAL GRADIENT (reduced to open level surface)
Mean values for periods of sixty minutes between exact hours

45	KEW OBSERVATORY												Factor 4.77 (metre ⁻¹)												OCTOBER 1958	
	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	
													volts per metre													
1	200	185	220*	190	185*	200*	240	275	255	190*	110*	Z±	Z±	Z±	130	190	240	285	300	320	295	330	340	285	254 (16)	
2	265	230	185	175	155	165	210	185*	145*	100*	75*	145*	275	265	245	240*	340	220	465	530	550	550	495	410	318 (18)	
3	310	275	255	-	-	-	240	155*	100*	175	145*	90*	145	130	210	230	220	240	240	130*	Z±	165	165	145	210 (15)	
4	80*	80*	20*	110*	Z±	Z±	145*	185*	145*	Z±	Z±	145*	175*	Z±	Z±	Z±	Z±	185	300	300	340	285	230	185	261 (7)	
5	175	165	185	185	185	185	200	200	185*	185	210*	165*	130*	Z±	Z±	100*	135*	145*	110*	120*	255	365	430	440	243 (13)	
6	385	385	375	330	295	350	420	530	585*	505	330	255	255	240	255	245	285	295	340	405	410*	405	320	310	342 (22)	
7	230	200	185	175	185	200	240	310	350	350	330	310	295	265*	220*	255*	135*	275*	255*	255*	145*	155*	185*	165*	258 (13)	
8	165*	155	145	145*	135*	145*	155	185*	190*	145	75	75	75	75*	75	75	75	55	55	55	65	65	75	75	89 (17)	
9	75	75	75	75	80	80*	100	110	120	100	145	285	275	245	110	275	275	240	190	185	245	300	245	255	177 (23)	
10	200	295	245	190	145	135	165*	200	185*	90	90	90*	110*	175*	230*	275*	295	420	685	730	770	695	440	350	351 (17)	
11	245	240	145	100	145	130*	130	110	135	485	395	275	220	295	245	230	405	450	440	365	355	405	510	485	296 (23)	
12	310	320*	Z±	190*	Z±	100*	145	155	320	330	575	355	455	320	295	200*	405	395	145	130	145*	230	245	185	294 (17)	
13	120	200	220	240	25*	Z±	Z±	Z±	145*	35*	80*	75*	110*	90*	90*	90*	120*	120*	110*	130	130	110*	110*	110	164 (7)	
14	130	130*	90	130	185	255	275	330	430	365	330	330	320	275	255	285	255	245	245	185	220	245	220	185	256 (23)	
15	190	210	220	220	255	255	275	405	475	395	340	320	255	285	330	320	365	430	375	330	295	240	285	220	304 (24)	
16	220	200	220	165	135	175	240	330	375	375	320	295	275	295	255	255	300	365	310	275	255	245	210	175	261 (24)	
17	155	145	135	145	210	210	265	310	405	455	365	405	365	265	185*	165*	240	230	240	240	340	265	255	145	263 (22)	
18	145	165	185	145	145	100	200	275	405	450	330	310	255	275	330	310	265	295	275	245	265	185	165	200	247 (24)	
19	220	210	130	75	135	145	220	200	210	220	240	240	255	155	220	265	295	295	310	385	405	395	365	365	248 (24)	
20	285	230	185	200	165	200*	210*	245	300*	310*	185*	175*	200	175	185	185	220	240	275	320	295*	245	220	210	223 (17)	
21	185	145	175	185	185	185	190	230	295	310	285	255	245	255	255	285	245	255	275	255	255	240	200*	155*	236 (22)	
22	165*	185*	185*	245*	165*	230	240*	285*	295	255*	220	255	295	285	295	275	275	295	330	330	355	295	240	245	282 (16)	
23	220	240	210	220	165	220	275	350	410	450	385	365	330	350	355	355	350	255	310	300	255	295	330	330	305 (24)	
24	365	285	245	220	220	210	220	220	275	285	295	295	355	350	365	355	365	330	320	405	405	365	405	310	308 (24)	
25	285	310	175	255	285	275	310	330	375*	365	375	375	330	355	340	310	255	190	165	230	265	220	240	190	280 (23)	
26	220	210	240	220	200	200	200	200	255	255	255	255	295	265	295	295	245	285	265	275	300	275	275	320	254 (24)	
27	245	245	190	185	130	135	145	240	275	295	310	285	265	285	265	265	240	240	255	210	255	550	550	495	273 (24)	
28	465	430	475	585	585	605*	585	620	805*	785	730	310	385	420	440	455	385	385	350	365	350*	440	475	560	487 (21)	
29	595	585	620	550	550	520*	485	475	410*	355	330	330	330	365	365	330	365	295*	310	350	530	715	440	365	445 (21)	
30	220	230	295	295	240	310	350	330	365	440	385	405*	450	420	385	275*	340*	475	355	385	420*	285*	-30*	-75*	349 (17)	
31	35*	165*	0*	75*	165*	265	330	455	585	560	420	375	330	295	340	465	650	Z±*	Z±*	310	350	420	405	365	407 (17)	
Mean	247 (27)	240 (26)	223 (26)	218 (25)	217 (23)	210 (20)	256 (26)	297 (25)	325 (19)	351 (25)	328 (24)	298 (22)	290 (26)	286 (24)	274 (25)	284 (22)	302 (26)	293 (26)	301 (27)	305 (28)	323 (24)	337 (28)	318 (27)	283 (28)	284 (599)	
	Mean for selected quiet days																				[304 (10)]					

POTENTIAL GRADIENT (reduced to open level surface)
Mean values for periods of sixty minutes between exact hours

125

45 KEW OBSERVATORY													Factor 4.82 (metre ⁻¹)													NOVEMBER 1958	
	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	Mean		
	0-1	1-2											volts per metre														
1	365	310	255	300	300	300*	375	420	750	770	730	585	420	300	295	365	420	410	510	540	455*	340	165*	55*	438 (20)		
2	-170*	-95*	-40*	55*	-20*	20*	110*	90*	-40*	75*	100*	10*	-65*	340*	330*	275*	185*	110*	245	265	135	100	55	35*	160 (5)		
3	80*	165*	130*	Z†	Z†	190	155	285	300	295	245	285	300	275*	350	355	365	385	340	220	185	240	295	240	279 (18)		
4	185	130	145	165	240	245	245	330	295	365	355	330	365	365	310	295	355	365	475	430	430	385	385	240	310 (24)		
5	255	200	130*	-440*	10*	145	65*	-170*	-230*	-160*	285*	310	365	405	620	640	605	585	510	350	350	405	240	220	388 (16)		
6	100	-155	-40	295	275	295*	255*	155*	-105*	45*	165*	230*	135*	275	350*	220*	230	240*	240	310	350	245	285	330	211 (13)		
7	420	405	310	330	200*	230*	190*	340*	330	255	275	275	295	330	245*	240*	300	240*	255	275	330	265	245	295	305 (17)		
8	210	165	110	35*	0	-115	145	275	365	550	550	550	385	405	365	310	285	330	330	330	330	255	190	165	282 (23)		
9	175	185	185	145	175	165*	165	255	405	410	285	265	275	275	330	385	385	185	310	110*	Z†	Z†	440	-40	260 (20)		
10	Z†	130	200	145	155	220	310	495	585	640	565	540	495	475	420	455	495	465	450	440	455	420	310	310	399 (23)		
11	185	145	220	240	310	440	350	565	705	785	705	695	565	385	365	420	585	860	675	715	860	785	465	530	523 (24)		
12	330	405	275	240	240	155*	130*	-190*	-155*	Z-*	Z-*	Z-*	Z†	-170*	275*	495	585	620	630	1155	1190*	1465	1320	1245	693 (13)		
13	935	20*	35*	715	605	0	240	585	990*	695	330	510	455	385	455	495	475	510	540	620	465	450	385	275	506 (20)		
14	200	255	200	55	25	130	185	420	595	540	640	815	935	785	675	640	585	440	585	565	320	75	275	310	427 (24)		
15	110	240	650	805	495	935	630	420	615	675	715	785	675	495	405	405	385	300	310*	385*	455*	295*	295	330	518 (20)		
16	200	185	185	220	145	285	295	365	530*	990	925	950	395	255	220	295	350	475	285	465	475*	110	540	1045	417 (22)		
17	1465	1375	510	880	Z+	Z+	90	-40	365*	785	980	970	1060	1025	905	1080	1025	1080	1050	940	740	475	285	285	808 (21)		
18	375	295	240	245	275	375	295	245	475	510	565	585	640	550	695	615	510	620	740	730	685	705	715	660	514 (24)		
19	550	550	510	385	495	465*	355	465	695*	860	730	440*	530*	385	430	420	385	385	420	475	510	265	465	210	463 (20)		
20	320	365	330	465	825	695*	330	90	585	585	495	440	410	420	365	365	405	420	175	0	365	365	300	145	372 (23)		
21	240	55	75	120	130	200	200	295	230	405	510		475	455	455	440	730	805	805	760	585	440	230	175	376 (24)		
22	90	90	100	120	165	165	80	130	240	295	200	295	210*	135	200	255	55	165	405	300	405	330	295	255	207 (23)		
23	240	190	120	110	110	75	0	35*	35*	75*	75	265	410	265*	75*	35*	20	145	45	-20	55	55	90	80	115 (18)		
24	110	110	55	75	75	110	35	25	135*	220	135	75	200	110	455	420	550	565	355	550	420	495	430	255	253 (23)		
25	130	80	130	75	80	80	55	55	55	55	55	120	130	75	55	45	45	55	75	25	35	-135	0	200	66 (23)		
26	275	120	165	245	350	365	185	165	255	130	350	715	365	300	385*	385*	275*	405*	510*	330*	615	715	395	405	340 (18)		
27	230	145	45	130	35	350	440*	530*	495*	585*	585	310	565*	540*	550*	475*	455*	495	510	560	420*	310*	210*	310*	309 (11)		
28	350*	365*	175*	245*	185*	165	330	365	440	530	520	520	585	240	75	185	110	100	120	220	90	130	0	130	256 (19)		
29	90	130	65	-20	-85	75	55	0	-20	220	80	55	495	255	285	450	510	330	565	605	575	365	575	405	253 (24)		
30	405	365	200	130	65	130	190	240	245	255	385	255	695	455	220	75	220	130	55	165	90	230	200	120	230 (24)		
Mean	315	249	210	265	229	228	221	276	414	485	457	462	475	382	389	413	406	432	418	444	391	369	347	327	360 (597)		
	(26)	(26)	(25)	(25)	(24)	(20)	(24)	(23)	(18)	(24)	(26)	(26)	(24)	(25)	(23)	(24)	(27)	(26)	(28)	(27)	(24)	(27)	(28)	(27)			
Mean for selected quiet days																									[388 (9)]		

POTENTIAL GRADIENT (reduced to open level surface)
Mean values for periods of sixty minutes between exact hours

45	KEW OBSERVATORY												Factor 4.71 (metre ⁻¹)												DECEMBER 1958				
	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			
	volts per metre																												
1	-20	70	80	270	280	210	260	355	420	485	420	375	420	375	425	350	365	365	225	150	50	-10	175	190		262	(24)		
2	210	350	245	295	260	505	385	330	330	400	385	530	445	385	350	375	385	450	750	785	765	645	820	750		464	(24)		
3	315	315	-170	70	130	185	225	385	590	625	680	590	350	295	460	445	420	435	350	215	155	375	225	190		327	(24)		
4	210	645	515	820	625	765	820	1045	1165*	1115	1025	825	985	940	930	940	895	855	730	880	705*	575	600	505		784	(22)		
5	730	515	285	270	190	185	225	385	495*	680	435	435	35	130	185	155	70	295	320	155	130	175	140	215		276	(23)		
6	215	105	250	225	140	210	210	295	330	435	625	765	685	470	610	285	270	50	520	610	385	400	670	765		397	(24)		
7	95	-55	85	225	385	520	445	190	245	350	330	280	330	375	340*	445*	470	505	315*	250	350	540	765	750		354	(21)		
8	610	590	445	520	485	435	340	400	555	600	695	585	520	555	610	750	625	505	420	280	320	245	280	245		484	(24)		
9	21*	21*	225	215	225	225	315	495	750	740	680	600	730	750	720	740	730*	330*	-170*	-180*	-255*	21*	21*	21*		529	(14)		
10	-110	-165*	-180*	0*	70	210	250	295*	505	515	540	450	540	575	480	505	470*	245*	175*	21*	-200*	-35*	21*	-110*		377	(12)		
11	190	150	140	150	210	260	350	625	765	800	670	810	435	280	190	340	250	295	350	505	520	295	280	470		389	(24)		
12	355	21*	21*	21*	21*	470	485	480	625	905	835	610*	-45*	21*	-190*	-135*	315*	435	330	470	680	715	600	470		561	(14)		
13	495	470	505	620	635	625*	800	485*	21*	210	365		250*	-20*	575	645	645	625	825	920	21*	21*	21*	21*		596	(14)		
14	21*	21*	21*	21*	-20	-80	-170	50	155	225	280	295	260	330	410	610	715	765	755	905	835	835	610	765		427	(20)		
15	685	670	410	410	480	785*	705*	680	590*	765	800	730*	-400*	-335*	21*	460*	505	210	385*	140*	480*	660*	660*	660		570	(11)		
16	485	0	385	715	645	790	575	425	400*	505	400	320	425	400	295	185	450	505	280	190	515	350	460	400		422	(23)		
17	105	250	155	315	270	225*	385	470	420	625	520	505	365	425	340	385	385	445	470	21*	21*	520*	21*	21*		380	(18)		
18	21*	485*	21*	215*	21*	21*	105*	21*	315*	540	505	505	450	385	340	420	-70*	280	400	305	165	85	-35*	-165*		365	(12)		
19	-270*	-120*	-45*	-125*	21*	15	105	105	155*	165*	245	225	245	190	225*	21*	210	70	85	35	-10	10	130	210		125	(15)		
20	150	150	130	150	150	120	140	120	80*	130	175	190	215	210	200	185	210	250	320	350	315	250	270	295		203	(23)		
21	260	260	245	210	225	245*	260	320	470*	385	400	315	250	285	260	315	350	245	315	330	210	235	340	365		290	(22)		
22	280	420	420	295	260	270*	260	210*	295	305	245	210	295	270	295	385	445	365*	385	400	470	400	390	420		340	(21)		
23	365	375	295	315	295	330	385	505	590	565	245	400*	-65	-270	-70	85	410	420	485	495	460	-25	140	50		277	(23)		
24	70	150	285	305	270	190	-45	295	305	660	785	435	-55	120	350	550	790	715	520	765	1255	930	730	1270		485	(24)		
25	(1355)	1115	695	400	305	765	515	730	955	920	1045	920	600	485	445	555	730	810	485	565*	280*	295*	130*	200*		728	(19)		
26	115*	185*	95*	95	95	140	150	210	215	225	245	175*	190*	155*	140	150	315	330	175	225	450	70*	165*	80*		211	(15)		
27	70*	175*	155*	120*	50*	95*	105*	80	35*	50*	70	140	200	245	260	225	175	140	185	210	245	225	165	175		183	(15)		
28	70*	155*	80*	0*	60	45	50*	35	50	105	85	140	165	190	185	140	210	210	270	235	190	365	375	400		182	(19)		
29	250	245	235	215	225	245	295	435	610	680	555	600	555	425*	210*	21*	21*	21*	21*	315*	895	530	520	200		429	(17)		
30	295	210	85	175	190	250	330	400	565	410	610	785	765	750	620	420	375	420	330	-70	50*	140*	95	130		370	(22)		
31	155	140	120*	95*	150*	140*	105*	140*	70*	-90*	-20*	140*	260	365	435	485	550	530	540	520	225	260	320	305		364	(14)		
Mean	323 (24)	325 (22)	270 (22)	317 (23)	273 (26)	304 (23)	319 (26)	379 (26)	464 (20)	544 (27)	491 (30)	469 (26)	385 (27)	366 (26)	386 (26)	409 (26)	432 (26)	413 (27)	416 (26)	405 (25)	416 (23)	366 (23)	396 (23)	425 (24)		389 (597)			
																				Mean for selected quiet days				[360 (8)]					
Annual Mean	247 (299)	226 (299)	209 (296)	216 (297)	210 (293)	218 (267)	251 (285)	296 (279)	340 (251)	348 (274)	326 (283)	312 (278)	294 (277)	287 (273)	285 (272)	289 (266)	282 (284)	299 (281)	305 (291)	304 (291)	309 (280)	298 (289)	277 (300)	267 (310)		278 (6815)			
																				Annual mean for selected quiet days				[278]					

46 KEW OBSERVATORY

	JANUARY		FEBRUARY		MARCH		APRIL		MAY		JUNE	
	Character	Duration of negative potential gradient	Character	Duration of negative potential gradient	Character	Duration of negative potential gradient	Character	Duration of negative potential gradient	Character	Duration of negative potential gradient	Character	Duration of negative potential gradient
		hr.		hr.		hr.		hr.		hr.		hr.
1	-	-	0	0.0	1	1.5	1	0.7	0	0.0	2	3.2
2	-	-	1	0.8	1	1.0	0	0.0	1	0.3	2	4.1
3	0	0.0	1	1.1	1	0.6	1	0.5	0	0.0	1	0.1
4	-	-	1	0.4	1	0.1	1	2.4	0	0.0	0	0.0
5	-	-	1	1.3	1	0.8	2	8.8	1	0.9	0	0.0
6	-	-	0	0.0	1	0.6	2	4.1	1	1.6	1	1.3
7	-	-	1	2.7	1	2.9	1	0.1	0	0.0	1	0.9
8	1	2.2	1	0.7	1	2.0	0	0.0	1	0.2	0	0.0
9	1	1.4	1	2.8	1	0.4	1	0.6	0	0.0	1	0.6
10	2	6.5	1	2.0	1	1.1	0	0.0	0	0.0	2	3.3
11	1	1.1	1	0.6	1	0.3	0	0.0	1	0.8	0	0.0
12	0	0.0	0	0.0	2	3.2	0	0.0	1	0.2	1	0.3
13	1	0.1	1	2.1	1	0.1	0	0.0	1	0.1	1	0.2
14	1	0.2	0	0.0	1	0.7	2	6.0	1	2.3	0	0.0
15	1	2.0	0	0.0	0	0.0	1	2.7	1	2.5	0	0.0
16	1	0.2	1	1.3	2	4.1	0	0.0	2	3.6	0	0.0
17	1	0.4	0	0.0	1	0.2	1	1.5	1	0.1	1	1.4
18	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
19	0	0.0	1	1.4	0	0.0	0	0.0	0	0.0	1	1.8
20	0	0.0	1	0.3	0	0.0	0	0.0	0	0.0	0	0.0
21	1	1.2	2	11.7	1	0.2	0	0.0	0	0.0	1	1.7
22	1	1.9	2	4.3	1	0.1	0	0.0	1	0.2	2	5.4
23	2	5.0	2	3.9	1	0.1	0	0.0	2	3.0	1	1.2
24	1	1.8	2	5.7	2	4.2	1	0.2	0	0.0	1	2.8
25	1	0.5	2	12.3	1	0.6	1	1.8	1	0.2	1	2.2
26	2	8.3	2	5.9	1	2.7	1	0.8	2	6.7	1	2.5
27	0	0.0	1	1.1	1	1.9	0	0.0	1	2.1	2	8.7
28	2	6.6	1	0.1	2	6.8	1	0.1	0	0.0	0	0.0
29	1	2.2			1	0.8	0	0.0	2	13.9	0	0.0
30	-	-			2	7.0	0	0.0	1	0.4	0	0.0
31	-	-			2	4.1			1	0.2		
Total	-	41.7	-	62.5	-	48.1	-	30.3	-	39.3	-	41.7
No. of days used	-	23	-	28	-	31	-	30	-	31	-	30
Mean	-	1.8	-	2.2	-	1.6	-	1.0	-	1.3	-	1.4

	JULY		AUGUST		SEPTEMBER		OCTOBER		NOVEMBER		DECEMBER	
	Character	Duration of negative potential gradient	Character	Duration of negative potential gradient	Character	Duration of negative potential gradient	Character	Duration of negative potential gradient	Character	Duration of negative potential gradient	Character	Duration of negative potential gradient
		hr.		hr.		hr.		hr.		hr.		hr.
1	0	0.0	1	2.0	0	0.0	1	1.6	1	0.2	1	1.8
2	1	0.5	1	0.7	0	0.0	1	0.1	2	5.6	0	0.0
3	1	2.0	0	0.0	1	0.7	1	0.2	1	1.0	1	1.5
4	0	0.0	0	0.0	1	0.7	1	1.8	0	0.0	1	0.3
5	0	0.0	1	0.2	0	0.0	1	0.7	2	3.8	1	0.8
6	0	0.0	0	0.0	0	0.0	0	0.0	2	3.2	1	0.6
7	0	0.0	1	0.3	0	0.0	1	0.3	1	0.1	1	1.1
8	0	0.0	0	0.0	1	0.2	0	0.0	1	1.5	0	0.0
9	0	0.0	0	0.0	0	0.0	0	0.0	1	1.7	2	5.0
10	0	0.0	0	0.0	0	0.0	0	0.0	1	0.7	2	6.3
11	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1
12	1	0.6	1	1.2	0	0.0	1	1.4	2	4.7	2	5.9
13	0	0.0	0	0.0	0	0.0	1	2.4	1	1.3	2	3.2
14	0	0.0	0	0.0	0	0.0	0	0.0	1	0.8	2	4.8
15	0	0.0	0	0.0	1	0.5	0	0.0	1	0.4	1	2.7
16	2	3.2	0	0.0	0	0.0	0	0.0	1	0.5	1	1.0
17	0	0.0	0	0.0	0	0.0	1	0.3	1	1.9	1	2.7
18	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	5.0
19	0	0.0	0	0.0	0	0.0	0	0.0	1	0.2	2	5.6
20	1	1.2	1	0.2	1	0.8	0	0.0	1	1.2	1	0.1
21	1	0.3	0	0.0	1	1.3	0	0.0	1	0.3	0	0.0
22	1	1.0	1	0.6	1	1.9	0	0.0	1	0.4	0	0.0
23	1	0.7	0	0.0	1	1.0	0	0.0	1	1.4	2	3.6
24	1	0.3	1	0.1	0	0.0	0	0.0	1	0.3	1	1.9
25	0	0.0	1	0.2	0	0.0	0	0.0	1	2.0	0	0.0
26	1	0.5	0	0.0	0	0.0	0	0.0	1	0.2	1	0.7
27	0	0.0	0	0.0	1	0.4	0	0.0	1	0.6	1	0.2
28	0	0.0	1	0.3	1	1.0	0	0.0	1	2.0	1	0.6
29	0	0.0	0	0.0	1	0.2	0	0.0	2	3.2	1	2.9
30	1	0.3	0	0.0	1	0.2	1	1.2	1	1.1	1	1.1
31	0	0.0	0	0.0			1	2.1			1	1.8
Total	-	10.6	-	5.8	-	8.9	-	12.1	-	40.3	-	61.3
No. of days used	-	31	-	31	-	30	-	31	-	30	-	31
Mean	-	0.3	-	0.2	-	0.3	-	0.4	-	1.3	-	2.0

Annual values: Character 0 1 2
No. of days 144 171 42

Duration: Total 402.6
No. of days 357
Mean 1.13 hr.

ELECTRICAL OBSERVATIONS, UNDERGROUND LABORATORY, WILSON METHOD

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Mean value for periods of twenty minutes about 14h. 30m.

F = Potential gradient, unit 1 v.cm.^{-1} $\lambda+$ = Conductivity due to positive ions, unit $10^{-10} \text{ ohm.}^{-1} \text{ cm.}^{-1}$
 i = Air-earth current, unit $10^{-10} \text{ amp. cm.}^{-2}$

47 KEW OBSERVATORY

	JANUARY			FEBRUARY			MARCH			APRIL			MAY			JUNE		
	F	i	$\lambda+$	F	i	$\lambda+$	F	i	$\lambda+$	F	i	$\lambda+$	F	i	$\lambda+$	F	i	$\lambda+$
1	...	...	...	...	...	...	...	...	...	5.40	306	57	3.77	208	55	...	...	...
2	...	...	...	...	...	...	...	...	...	4.31	238	55	2.56	241	94	...	...	...
3	7.47	118	16	6.17	160	26	4.31	179	42	...	...	...	...	...	...	2.20	240	109
4	...	...	...	...	...	...	4.69	205	44	...	...	...	...	...	...	1.04	91	87
5	...	...	...	...	...	...	1.91	191	60	...	...	...	1.63	186	114	1.32	137	104
6	...	...	...	6.37	183	29	3.23	117	36	...	...	...	...	...	...	...	...	...
7	...	...	...	...	...	...	3.26	129	40	...	...	...	1.79	158	88	...	...	...
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	3.50	147	42	...	...	...	...	...	...	...	...	...	1.50	165	110	1.15	146	127
10	...	...	...	...	...	...	5.26	176	33	3.16	240	76	...	...	...	2.08	147	71
11	...	...	...	...	...	...	2.98	121	41	...	...	...	...	...	...	...	...	...
12	...	...	...	3.49	146	42	2.57	127	49	...	...	...	...	...	...	...	...	...
13	4.82	135	28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
14	5.61	175	31	...	...	...	5.40	184	34	4.45	293	66	1.93	108	56	...	...	...
15	...	...	...	...	...	...	...	...	...	0.54	56	104	...	...	...	...	...	...
16	...	...	...	...	...	...	...	...	...	2.16	160	74	...	...	...	0.94	121	129
17	2.55	99	39	3.63	163	45	3.82	312	82	...	...	...	...	...	...	...	...	...
18	...	...	...	3.09	111	36	5.67	217	38	2.21	163	74	...	...	...	1.18	122	103
19	...	...	...	...	...	...	4.58	232	51	...	...	...	1.83	178	97	1.09	147	135
20	5.00	142	29	3.18	114	36	...	...	...	...	...	...	1.55	116	75	1.72	206	120
21	9.39	202	22	...	...	...	6.64	235	35	1.60	126	79	0.91	104	114	...	...	...
22	6.86	159	23	...	...	...	...	...	...	2.66	191	72	...	...	...	...	...	...
23	...	...	...	...	...	...	...	...	...	1.45	146	101	1.78	165	93	2.64	234	89
24	6.81	163	24	...	...	...	6.08	285	47	...	...	...	...	...	...	...	...	...
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
26	...	...	...	2.95	97	33	...	...	...	...	...	...	...	...	...	1.15	144	125
27	4.90	197	40	3.43	111	32	2.69	204	76	...	...	...	1.07	128	120	...	...	...
28	...	...	...	2.37	122	51	...	...	...	2.42	270	112	1.02	113	111	...	...	...
29	...	...	...	...	...	...	...	...	...	1.49	138	93	...	...	...	...	...	...
30	...	...	...	...	...	...	...	...	...	1.24	85	69	1.55	163	105	1.54	163	106
31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Mean	5.69	154	29	3.85	134	37	4.21	194	47	2.55	186	79	1.76	156	95	1.50	158	109
No. of days used	10	10	10	9	9	9	15	15	15	13	13	13	13	13	13	12	12	12

	JULY			AUGUST			SEPTEMBER			OCTOBER			NOVEMBER			DECEMBER		
	F	i	$\lambda+$	F	i	$\lambda+$	F	i	$\lambda+$	F	i	$\lambda+$	F	i	$\lambda+$	F	i	$\lambda+$
1	...	...	...	2.53	253	100	1.56	185	119	...	...	...	...	...	...	4.42	217	49
2	1.78	207	116	...	...	...	2.77	166	60	2.40	198	83	...	...	...	...	...	...
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	2.05	231	113	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5	...	...	...	1.88	225	120	...	...	...	...	...	...	7.88	328	42	1.53	77	50
6	...	...	...	...	...	...	...	...	...	2.76	188	68	...	...	...	...	...	...
7	1.46	165	113	...	...	...	...	...	...	...	...	...	3.68	229	62	...	...	...
8	1.49	220	148	...	...	...	...	...	...	...	...	...	...	...	...	6.30	263	42
9	2.28	251	110	...	...	...	...	...	...	2.97	204	69	...	...	...	7.04	218	31
10	1.31	169	129	...	...	...	2.74	328	120	...	...	...	3.98	283	71	4.52	218	48
11	1.45	197	136	2.13	272	128	3.51	258	74	...	...	...	3.29	259	79	2.76	123	45
12	...	...	...	...	...	...	4.17	306	73	...	...	...	...	...	...	...	...	...
13	...	...	...	...	...	...	...	...	...	...	...	...	4.29	239	56	...	...	...
14	1.56	203	130	...	...	...	...	...	...	2.86	202	71	5.48	254	46	...	...	...
15	3.18	206	65	2.31	329	142	...	...	...	3.31	226	68	...	...	...	...	...	...
16	...	...	...	...	...	...	3.52	309	88	...	...	...	...	...	...	...	...	...
17	...	...	...	...	...	...	2.49	209	84	...	...	...	...	...	...	...	...	...
18	1.42	205	144	...	...	...	1.47	199	135	...	...	...	6.70	259	39	3.77	227	60
19	...	...	...	1.72	236	137	2.31	322	139	...	...	...	4.24	260	61	2.63	204	78
20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.40	262	77
23	1.69	187	111	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
24	1.54	172	112	...	...	...	2.19	225	103	...	...	...	...	...	...	...	...	...
25	...	...	...	1.92	207	108	...	...	...	...	...	...	...	...	...	...	...	...
26	...	...	...	2.38	223	94	2.55	248	97	...	...	...	...	...	...	...	...	...
27	...	...	...	1.87	228	122	...	...	...	...	...	...	...	...	...	2.85	161	56
28	...	...	...	1.51	312	207	...	...	...	...	...	...	...	...	...	...	...	...
29	...	...	...	2.17	268	123	...	...	...	4.68	199	43	...	...	...	...	...	...
30	1.64	181	110	...	...	...	...	...	...	3.97	193	49	...	...	...	5.94	265	45
31	1.48	234	158	...	...	...	...	...	...	3.14	201	64	...	...	...	4.27	190	44
Mean	1.74	202	121	2.04	255	128	2.66	250	99	3.26	201	64	4.94	264	57	4.12	202	52
No. of days used	14	14	14	10	10	10	11	11	11	8	8	8	8	8	8	12	12	12
Year: Mean										3.09	195	78						
No. of days used										135	135	135						

Complete days only

	Hour G.M.T.																								Mean	No. of days used	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
	milligrams per cubic metre																										
Jan.	0.15	0.12	0.11	0.11	0.11	0.10	0.12	0.14	0.18	0.21	0.23	0.20	0.21	0.19	0.19	0.22	0.24	0.28	0.31	0.33	0.30	0.26	0.20	0.17	0.20	24	
Feb.	0.13	0.11	0.10	0.08	0.08	0.08	0.09	0.11	0.13	0.14	0.13	0.12	0.11	0.11	0.13	0.14	0.14	0.23	0.25	0.23	0.21	0.17	0.15	0.13	0.14	26	
Mar.	0.19	0.15	0.13	0.12	0.13	0.13	0.15	0.18	0.18	0.17	0.17	0.16	0.16	0.16	0.16	0.17	0.18	0.23	0.28	0.30	0.29	0.27	0.23	0.21	0.19	31	
Apr.	0.09	0.07	0.07	0.07	0.08	0.08	0.08	0.09	0.08	0.07	0.07	0.07	0.07	0.07	0.08	0.08	0.08	0.09	0.11	0.13	0.15	0.15	0.11	0.09	0.09	30	
May	0.05	0.05	0.05	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.06	0.06	0.06	0.05	0.05	0.05	31	
June	0.05	0.05	0.05	0.05	0.05	0.06	0.06	0.06	0.06	0.06	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	30	
July	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	31	
Aug.	0.06	0.06	0.06	0.06	0.06	0.07	0.06	0.06	0.06	0.06	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.06	30	
Sept.	0.06	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.07	0.07	0.07	0.07	0.06	0.06	0.06	30	
Oct.	0.10	0.09	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.07	0.08	0.08	0.09	0.10	0.10	0.13	0.16	0.19	0.22	0.22	0.21	0.17	0.15	0.13	0.12	29
Nov.	0.19	0.18	0.17	0.16	0.14	0.14	0.14	0.15	0.17	0.17	0.19	0.18	0.15	0.14	0.17	0.19	0.22	0.27	0.28	0.29	0.31	0.27	0.24	0.21	0.20	30	
Dec.	0.13	0.12	0.12	0.11	0.10	0.10	0.10	0.12	0.14	0.15	0.15	0.16	0.16	0.17	0.17	0.17	0.19	0.21	0.21	0.23	0.21	0.20	0.19	0.13	0.16	30	
Year	0.10	0.09	0.09	0.09	0.08	0.09	0.09	0.10	0.11	0.11	0.11	0.10	0.10	0.10	0.10	0.11	0.11	0.12	0.15	0.16	0.17	0.16	0.15	0.13	0.11	0.11	352
Winter	0.15	0.13	0.13	0.11	0.11	0.11	0.11	0.13	0.15	0.17	0.17	0.17	0.16	0.15	0.17	0.18	0.20	0.25	0.26	0.27	0.26	0.23	0.19	0.16	0.17	110	
Spring	0.14	0.11	0.10	0.09	0.11	0.11	0.11	0.13	0.13	0.13	0.12	0.12	0.11	0.11	0.11	0.12	0.13	0.13	0.16	0.19	0.21	0.22	0.21	0.17	0.15	0.14	61
Autumn	0.08	0.08	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.08	0.08	0.09	0.11	0.13	0.14	0.15	0.14	0.12	0.11	0.09	0.09	59
Summer	0.05	0.05	0.05	0.05	0.05	0.06	0.06	0.06	0.06	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	122	