

METEOROLOGICAL OFFICE

THE
OBSERVATORIES'
YEAR BOOK
1960

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

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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 dealt with site, instruments, procedure and tabulations included in the volume for 1938 served as the standards of reference up to 1956; only important departures from these standards were mentioned explicitly in subsequent Year Books. The space devoted to the discussion of observations was reduced and the monthly tables of individual hourly values of meteorological elements were discontinued, but summaries of the daily mean values (or totals), monthly means (or totals) of the hourly values and some maximum and minimum values were given. The diary of cloud, weather and visibility, and, after 1939, the aerological and seismological tables were also discontinued but no major changes were made in the tables of atmospheric electricity and terrestrial magnetism.

Another major review of the contents of the *Observatories' Year Book* was then carried out and a number of important changes made, commencing with the volume for 1957. The meteorological data for Kew and Eskdalemuir were omitted; a punched card system of recording such data centrally, at the Meteorological Office, Bracknell, has been adopted. It was also 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 were also some changes in the terrestrial magnetism and atmospheric electricity tables; full details of the new tables are given in the Introduction to this volume.

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 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, London Road, Bracknell, Berkshire.

Lerwick Observatory

Full hourly synoptic observations of the weather. Continuous recording and hourly tabulations of pressure, wind, rainfall, sunshine, temperature, humidity, total and diffuse solar radiation on a horizontal surface, daylight illumination on a horizontal surface. Daily measurements of evaporation and atmospheric pollution.

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.

Eskdalemuir Observatory

Full hourly synoptic observations 06-21h. G.M.T. Continuous recording and hourly tabulations of pressure, wind, rainfall, sunshine, temperature, humidity, total and diffuse solar radiation on a horizontal surface, daylight illumination on a horizontal surface. Daily measurements of evaporation, atmospheric pollution and soil temperatures (at depths of 30 and 122 cm.). 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. Sampling for radioactivity of particulate matter in the air near the surface.

Kew Observatory

Three-hourly synoptic observations 06-21h. G.M.T. Continuous recording and 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, atmospheric pollution and soil temperatures (at depths of 10, 20, 30 and 122 cm.). Records from a set of Galitzin seismographs (3 components) and a short period vertical seismograph.

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ERRATA IN PREVIOUS VOLUMES

Observatories' Year Books 1947 and 1948

Page 39. Table 63. For entries under North component substitute the following:-

	1947	1948
	γ	γ
Jan.	14086	14098
Feb.	14085	14096
Mar.	14071	14094
Apr.	14090	14099
May	14097	14098
June	14098	14112
July	14102	14112
Aug.	14089	14094
Sept.	14072	14099
Oct.	14078	14087
Nov.	14091	14106
Dec.	14099	14119
Year	14088	14101

Observatories' Year Book, 1953

Page 39. Table 63. Heading of Declination. For " 11° +" read " 10° +".

Observatories' Year Book, 1955

Page 6. Table 5(c). Heading of last column. For "Flare of S.F.E." read "Flare or S.F.E."

Observatories' Year Book, 1957

Page 7. Introduction, line 16. For " α_n " at beginning of line and in following mathematical expression read " a_n ".

Page 7. Introduction, line 16. For " δ_n " read " α_n "

Page 7. Introduction, line 17. For " δ_n " read " α_n "

Page 7. Introduction, line 18. For " δ_n " read " α_n "

Page 10. First complete para. line 3. For "1938" read "1933"

Page 12. Second table. Heading. Below "Eskdalemuir Z-Abinger Z" add "or Hartland"

Page 18. First complete para. Line 3. After "1430" add "h."

Page 20. Table 2. Heading. After "LERWICK" add "(D)"

Page 29. Footnote. After "quiet" insert "day"

Page 44. Table 5. Heading. For "N, W," read "X, -Y,"

Page 49. Table 10. Above second table insert "DECLINATION"

Page 72. Table 22. Heading. After "ESKDALEMUIR" add "(H)"

Page 90. Table 26. Heading. For "N" read "X"

Page 97. Heading. For "Diurnal Inequalities of the Geographical Components of Magnetic Force" read "Diurnal Inequalities of the magnetic elements, Declination, Inclination and Horizontal Force"

Pages 98 and 99. These two pages should be transposed

Page 100. Table 37. Footnote. For "may" read "May"

Page 113. Table 45. Footnote, last line. Before "of days" insert "is the number".

ERRATA IN PREVIOUS VOLUMES - *continued**Observatories' Year Book 1958*

Page vi, Contents, Kew Observatory, Table 47. Last word. For "changes" read "charges"

Page 15. First line. After "volts" insert "per metre"

Page 17. Line 28. For " 10^{18} " read " 10^{-18} "

Page 44. Table 5. Heading. For "N, W," read "X, -Y,"

Page 44. Table 6. Heading to table. Delete "absolute"

Page 92. Below Table 22 insert "751 at 0-1h. January 1, 1959"

Page 92. Below Table 23 insert "35.0 at 0-1h. January 1, 1959"

Page 94. Table 26. Heading. For "N, W," read "X, -Y,"

Page 94. Table 27. Heading to table. Delete "absolute"

Page 105. Table 33. Heading. For "DISTURBED" read "QUIET"

Observatories' Year Book 1959

Page 18. Line 16 For " 10^{18} " read " 10^{-18} "

Page 88. Table 25. Heading. For "N, W," read "X, -Y,".

INTRODUCTION

DESCRIPTION OF OBSERVATORIES

Lerwick Observatory, Shetland (60°08'N, 1°11'W)

The Observatory is set on a ridge of high ground about 85 m. above M.S.L. and about 2½ km. to the south-west of the port 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.

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°19'N, 3°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 White 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.

General views of the observatory and its neighbourhood and of the observatory grounds are given in Figs. 6 and 8 respectively; Fig. 7 is a site plan and Fig. 5 is a contour 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°28'N, 0°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. 9, 10, 11 and 12 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.

-
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. long and each is supported by a single quartz fibre. The Z magnet is larger: it is supported by knife-edges resting on agates and is enclosed in a sealed vessel. Detailed descriptions of these variometers are given in publications of the Danish Meteorological Institute *Communications Magnétiques*, No.11 (for H) and No.8 (for Z) and in *Observations Faites à Thule: Première Partie: Magnétisme Terrestre* (for D).

The recording apparatus is so designed that 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 virtual light sources.

Scale values of H and Z are measured by passing a current through Helmholtz-Gaugain coils placed over the variometers, the resulting deflections 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 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 $1'/\text{mm.}$ 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 magnetograph house at Lerwick, which contains the La Cour magnetographs, is above ground and is made of non-magnetic concrete: its internal dimensions are 4.9 m. by 3 m. and the walls are 76 cm. thick. An electric heater, controlled by a thermostat, enables the temperature to be kept reasonably constant for periods of up to a few months at a time but the power is insufficient to maintain the same temperature throughout the year. The thermostat is re-set 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 therefrom, 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 portion of the outer containing shell is covered with a thick layer of earth which forms a mound. Electrical heating, thermostatically controlled, was introduced in 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 house at both Lerwick and Eskdalemuir is read daily at 09h. and the readings are given in Table 4 (for Lerwick) and Table 24 (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 magnetograms 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 Z variometer is not quite perfect and a baseline change of 2 or 3γ may occur when the room 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 1γ steps at eight or twelve hourly intervals.

TABULATIONS

Table 1 and 21 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 22, give similar information for declination (D) and Tables 3 and 23 for the vertical component (Z). Tables 4 and 24 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 house.

Tables 1-4 are subdivided into monthly sections and the same monthly parts of each table are grouped together on facing pages. Tables 21-24 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 Tables 16 and 38 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 1000γ for Lerwick and 750γ for Eskdalemuir.

Tables 5 (for Lerwick) and 25 (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 26 and 27 (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.

The next set of tables (8-15 for Lerwick and 28-36 for Eskdalemuir) gives 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 13 and 35.

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:

$$\begin{aligned}\delta X &= \cos D \cdot \delta H - \frac{\pi}{180 \times 60} H \sin D \cdot \delta D \\ -\delta Y &= \sin D \cdot \delta H + \frac{\pi}{180 \times 60} H \cos D \cdot \delta D \\ \delta I &= \frac{180 \times 60}{\pi} \cos I \left[\frac{\delta Z \cos I - \delta H \sin I}{H} \right]\end{aligned}$$

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 25.

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 37, 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 $\sum c_n \sin (15nt^\circ + \alpha_n)$. In the former series t is reckoned in hours from midnight G.M.T., whilst the published values of α_n refer to local mean time. The harmonic coefficients have been computed from the inequalities as given in Tables 28-33 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 0.1 γ .

Tables 16 and 38 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 with sudden commencement (ssc) and those which can be recognised as being solar flare effects (sfe). 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". 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. Doubtful cases are not included. 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 Eskdalemuir tables, even if the disturbances at one of the stations is relatively small.

The details of irregular changes in declination at Eskdalemuir which previously were given (for example, see Tables 40 and 41 of 1958 *Observatories' Year Book*) were prepared for the benefit of mine surveyors but were no longer required by them after 1958 and have therefore been omitted.

NOTES ON THE RESULTS

Comparing mean values on all days of 1960 with those of 1959 at Lerwick H increased by 15γ , D (west) decreased by $5'$ and Z increased by 28γ . The changes deduced in X , Y , I and F are $+18\gamma$, -18γ , $-0.5'$ and $+31\gamma$. The ranges between the extreme values recorded during 1960 were H 3835γ , D $8^{\circ}17.8'$ and Z 2114γ . The range of $8^{\circ}17.8'$ in declination corresponded to a range of 2106γ in the component of force perpendicular to the magnetic meridian.

Similarly at Eskdalemuir H increased by 19γ , D (west) decreased by $6'$ and Z increased by 26γ . The changes deduced in X , Y , I and F are $+24\gamma$, -25γ , $-0.7'$ and $+29\gamma$. The ranges between the extreme values recorded during 1960 were H 3283γ ; D $4^{\circ}30.4'$ and Z 1151γ . The range of $4^{\circ}30.4'$ in declination corresponded to a range of 1320γ in the component of force perpendicular to the magnetic meridian.

ABSOLUTE STANDARDS OF MAGNETIC FORCE AT LERWICK AND ESKDALEMUIR

Vertical Component

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.

Measurements of vertical component at Eskdalemuir are also made regularly with a Copenhagen Balance Magnetometer (B.M.Z. No.35). Details of various inter-Observatory comparisons using a B.M.Z. as an intermediary instrument were given in the Introduction to the 1958 *Observatories' Year Book*. These, however, were not very satisfactory because of the

liability of the B.M.Z. instruments to changes in calibration.

Until June, 1960, the standard instrument for determining vertical component at Eskdalemuir was a Schulze Dip Inductor (No.102), the use of which is described in the 1959 *Observatories' Year Book*, (pp.7,8).

During 1960 proton (sometimes called nuclear) precession magnetometers were installed at Lerwick and at Eskdalemuir. The proton magnetometer replaced the Schulze dip inductor for deduction of the absolute standard of vertical component at Eskdalemuir. The principle of these instruments has been described by Packard and Varian¹ and Waters and Francis².

They enable the free precession frequency (f) of the proton to be measured; this is related to the total magnetic field F at the proton sample by the relation

$$f = \frac{\gamma_p F}{2\pi}$$

where f is in cycles per seconds and γ_p is the gyromagnetic ratio of the proton. The value adopted for γ_p is 2.67513×10^4 radians gauss⁻¹ sec⁻¹⁽⁵⁾; this is the value as measured by Driscoll and Bender^(3,4) and recommended provisionally at the meeting of the International Association of Geomagnetism and Aeronomy in Helsinki in 1960⁽⁵⁾.

The proton sample used at Lerwick and Eskdalemuir is distilled water contained in a polythene bottle placed on the axis of a solenoid. This solenoid serves firstly to provide a strong polarising field and then as a pick-up coil to detect the small precession signal. After amplification the signal is passed to a counter unit to enable its periodicity to be determined. This is done by measuring the time, in units of 10 microseconds, for a given number of cycles of precession. Usually 2048 cycles are counted; this gives an accuracy of 1 part in 10^5 (or 0.5γ) when measuring the total field or the vertical component in the British Isles, because the value of f for these fields is close to 2000 cycles per second and the counting time is therefore about 1 second.

The amplifier unit used must be placed within about 8 m. of the pick-up coil to avoid excessive attenuation in the precession signal but a careful investigation of the field due to this amplifier was made, and at the distances finally used (about 5.5 m. at Lerwick and 6.1 m. at Eskdalemuir) the effect of the disturbing field at the coil was completely negligible (<0.1γ). The power supplies and counter unit were placed at a great distance (at Eskdalemuir in the main office building, 230 m. away; at Lerwick in the East hut, 100 m. away). It was also proved by experiment that there was no magnetic effect associated with the pick-up coil.

The instruments have been used initially to measure the total field F , and from that to deduce the vertical component assuming the Observatory H record is correct. The equation used is

$$Z = \sqrt{F^2 - H^2}$$

1. PACKARD, M. and VARIAN, R.; Free nuclear induction in the Earth's magnetic field. *Phys. Rev.*, 93, p.941, 1954.
2. WATERS, G.S. and FRANCIS, P.D.; A nuclear magnetometer. *J. Sci. Instr.*, 35, pp.88-93, 1958.
3. DRISCOLL, R.L. and BENDER, P.L.; Proton gyromagnetic ratio, *Phys. Rev. Letters*, 1, pp.413-414, 1958.
4. BENDER, P.L. and DRISCOLL, R.L.; A free precession determination of the proton gyromagnetic ratio. *I.R.E. Trans. on Instrumentation*, 1-7, pp.176-180, 1958.
5. NELSON, J.H.; The gyromagnetic ratio of the proton. *J. Atmosph. Terr. Phys.*, 19, p.292, 1960.

and it is easily shown that the error ΔZ in Z caused by an error ΔH in the H measurements is given by

$$\Delta Z = - \left(\frac{H}{Z} \right) \Delta H$$

The ratio (H/Z) at Eskdalemuir and Lerwick is about $\frac{1}{5}$. Since we believe that the systematic errors in H do not exceed 6γ (and may well be much less) the corresponding error in Z is small (2γ or less). The 1960 comparison over a period of two months (May-June, Eskdalemuir; June-July Lerwick) of the proton magnetometer Z values (denoted here by Z_{pm}) with the Z values obtained by using the Schulze dip inductor (Eskdalemuir, denoted here Z_{DIP}) and B.M.Z.83 (Lerwick) yield the following mean results.

$$\text{Eskdalemuir} \quad Z_{\text{pm}} - Z_{\text{DIP}} = 0\gamma$$

$$\text{Lerwick} \quad Z_{\text{pm}} - Z_{\text{BMZ83}} = -8.5\gamma$$

As a test before installation at Eskdalemuir and Lerwick the proton magnetometer was taken to Hartland in April 1960. The total field as measured with this instrument was compared with the total field as computed from measurements with the Hartland H and Z standard instruments (Schuster-Smith and Dye coils respectively). The mean result obtained (after testing of the instrument, one day only was available for measurement but it was magnetically quiet) was as follows:-

$$F_{\text{pm}} - F_{\text{Hartland}} = 5\gamma$$

An upper limit to the magnitude of the random errors of the proton magnetometer can be estimated from the constancy of the Z baseline measurements. Over a period of 2 months at Lerwick comprising observations on 33 days the standard deviation of a single observed Z baseline about a mean value was 1.7γ . This of course includes the variability of both the Z and H baselines of the variometers and the errors in reading two sets of ordinates from the charts; the effect of these cannot be estimated accurately but must certainly account for the greater part of the observed variability of the baseline measurements. It is seen that the random error of the proton magnetometer appears to be limited solely by the short term random error of the frequency measuring apparatus (1 part in 10^5 , as mentioned earlier).

The instrument is now being developed further into a proton vector magnetometer, by the construction of a Helmholtz-Gauguin coil system at the centre of which the water bottle is placed. The final form of this will enable the coils to be rotated about a horizontal axis through the centre of the coil system and perpendicular to the main axis. In this way an artificial magnetic field of adjustable magnitude and direction can be created at the bottle, and in particular it can be arranged that either the horizontal or the vertical component can be exactly cancelled. In these cases the proton magnetometer will then measure the remaining field, that is, either the vertical or horizontal component respectively.

A full description of this instrument and the results obtained will be given in a later volume of the *Observatories' Year Book* but results have been obtained at Eskdalemuir with an experimental instrument which had only a fixed Helmholtz-Gauguin coil with a horizontal axis. This could be used for measuring Z directly; over a period 3 months the difference between Z as measured directly by the proton magnetometer (Z_{pvm}) and Z as measured using the total field measurement in conjunction with the Eskdalemuir H standard (Z_{pm}) was zero within a probable error of 1γ ; that is,

$$Z_{\text{pvm}} = Z_{\text{pm}} \pm 1\gamma$$

The first proton magnetometer (and proton vector magnetometer) measurements at Eskdalemuir thus do not confirm the tentative suggestion (at the top of p.12 in the 1958 *Observatories' Year Book*) that there was an error of some 14-16 γ in the Eskdalemuir Z measurements, possibly caused by an error of 6 γ in the H measurements. The interpretation of the previous comparisons with Hartland and Abinger must be that the B.M.Z. is not a suitable instrument to use when the accuracy desired is of the order 1-2 γ .

It is seen that the difference (Eskdalemuir Z - Lerwick Z) in 1960 was in fact -8.5 γ . When this is compared with the first table on p.11 of the 1958 *Observatories' Year Book* the unreliability of B.M.Z. comparison is again suggested.

It seems probable that the proton vector magnetometer will be designated the standard absolute instrument at Lerwick and Eskdalemuir; the decision as to what, if any, discontinuities in the magnetic field measurements this will involve and the exact relation between the Eskdalemuir and Lerwick Z standard on the one hand and the Hartland Z standard on the other will be made later after full trials of the instruments.

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 13 γ low. This was generally confirmed when it was installed at Lerwick in 1939 as it then gave results 11 γ 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 + 11 γ) 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 value + 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 value + 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 value + 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.Ms, 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.Ms 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 +13
Sept. 1946	Q.H.M. 89	+11
Apr. 1948	Q.H.M. 89	+13.5
June-Sept. 1950	Q.H.M. 90, 91, 92	+12
May-June 1957	Q.H.M. 119A, 120, 121A	+15
Apr. 1959	Q.H.M. 119A, 120, 121A	+11
June 1960	Q.H.M. 119A, 120	+14

*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 0
Jan. 1933	Travelling Kew instrument	-5
Sept. 1946	Q.H.M. 89	+6
Apr. 1948	Q.H.M. 89	+6
May-Nov. 1950	Q.H.M. 91, 92	+10
July 1954	Q.H.M. 120	+5
May 1959	Q.H.M. 119A, 120, 477, 478, 479	+4
Apr. 1960	Q.H.M. 119A, 120	+6

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 in 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.

Further evidence about the accuracy of the Eskdalemuir H standard can be obtained from the preliminary measurements made by the proton magnetometer mentioned above. From the measurements of Z_{pvm} and the total field F it is possible to calculate H by means of the equation

$$H = \sqrt{F^2 - Z^2}$$

The results show that the two ways of measuring H agree within a probable error of $\pm 3\gamma$; that is,

$$H_{\text{Esk}} = H_{\text{pm}} \pm 3\gamma$$

The improved Helmholtz-Gauguin system to enable H to be measured directly should enable more precision to be obtained.

These preliminary proton magnetometer and proton vector magnetometer measurements do not confirm the tentative suggestion on p.12 of the 1958 *Observatories' Year Book* that the Eskdalemuir Schuster-Smith coil reads 6γ high.

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 $3.5'$ in 1923 to $4.4'$ 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.

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.

A brief account of the results obtained is given in Table 17. All dates, on which the sky remained completely overcast throughout the night 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 $\cdot\cdot$. 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 18 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. A detailed examination of the tables for 1957 and 1958 has been made by B. McInnes and K.A. Robertson in a paper published in the *Journal of Atmospheric and Terrestrial Physics*, 19, 1960, p.115.

ATMOSPHERIC ELECTRICITY

The programme at Lerwick and Eskdalemuir is to maintain a continuous record of 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 below.

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 millimetre, which, combined with an exposure factor of between 1.0 and 1.3, 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 and normally 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, have been made frequently. 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 7 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 approximately 1.6 volts per millimetre during 1960 and this, combined with an exposure factor of about 9, means that one millimetre on the record corresponded to approximately 14 volts per metre in the potential gradient over an open level surface.

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.

Valve voltmeters were constructed on the pattern described by A.W. Brewer (*Journal of Scientific Instruments*, 30, 1953, p.91) and have been recording continuously at Kew since May, 1958, at Eskdalemuir since April 1959 and at Lerwick since June 1959. These give pen records and will eventually replace existing electrographs.

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 deflection 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 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.

*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.

TABULATIONS

Table 19 (for Lerwick), 39 (for Eskdalemuir) and 41 (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 20, 40 and 42 (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 43 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. These changes appear to be linked with the deposition on the ground of radioactive debris from nuclear weapon tests; they are discussed by K.H. Stewart in the *Quarterly Journal of the Royal Meteorological Society*, 86, 1960, p.399.

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 44. 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 1960 the highest estimate of pollution was 1.7 mg.m^{-3} , this value occurring on January 7, from 07h. to 08h. There were four days on which the mean hourly concentration of pollution reached 1.0 mg.m^{-3} ; the number of hours credited with 1.0 mg.m^{-3} or more was eleven, of which ten were in January and one in December.

NOTE ON THE TABLES: Where figures are in italics they are maximum and/or minimum values.

LERWICK OBSERVATORY

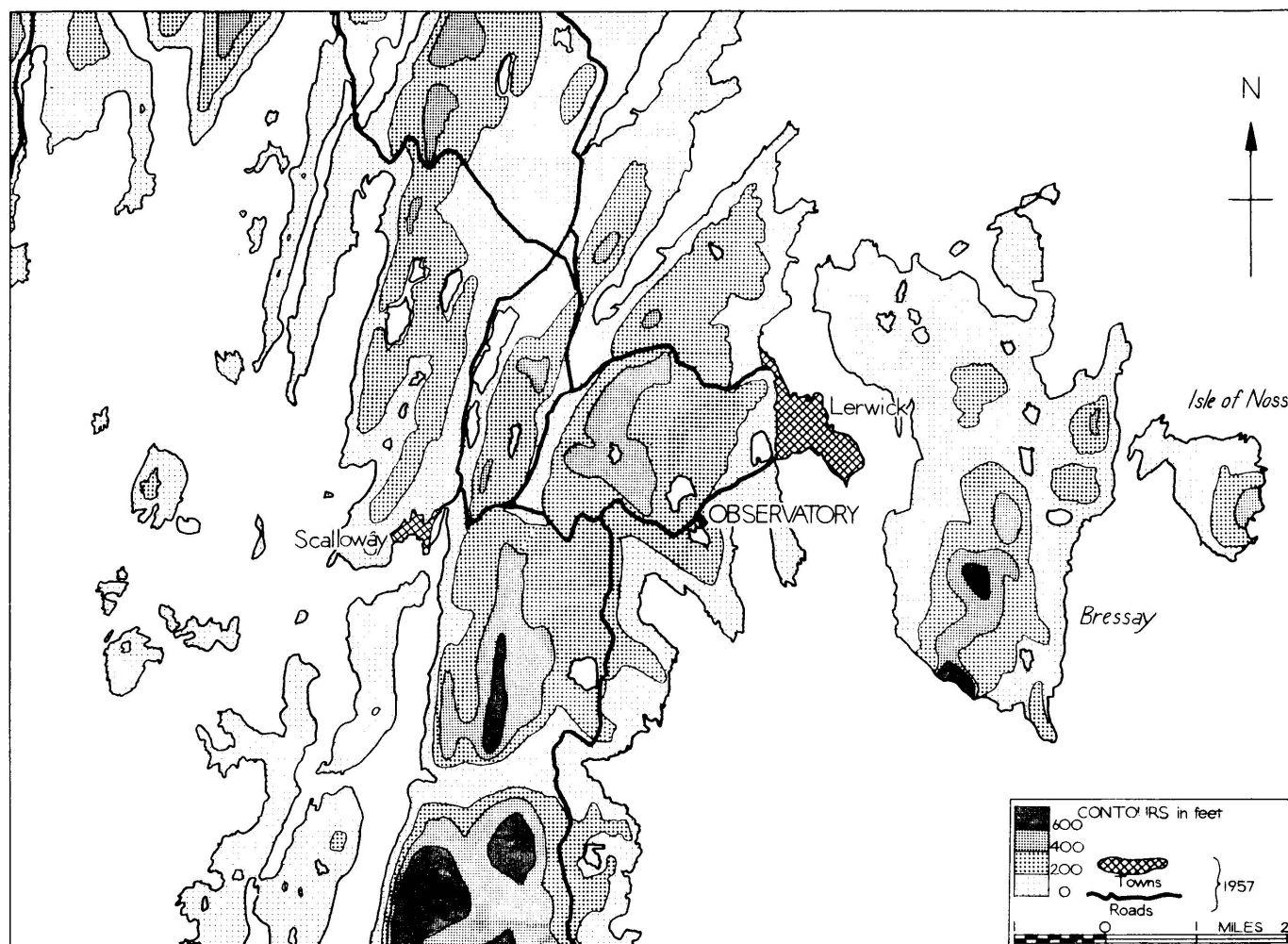


FIG.1 - Contour map of surroundings



FIG.2 - General view from the south - Loch Trebister in the foreground, July 1961

LERWICK OBSERVATORY

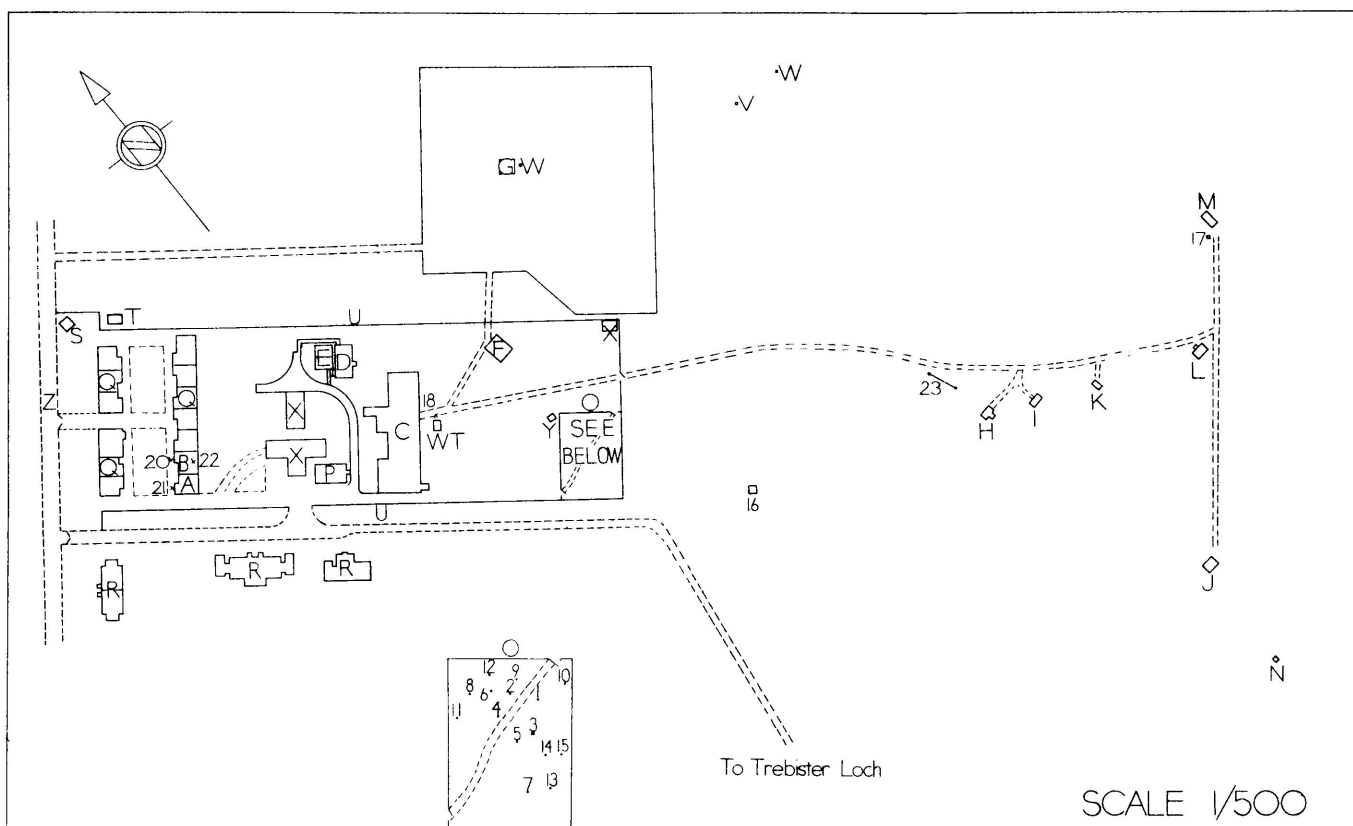


FIG.3 - Site plan, 1961



FIG.4 - View from the north-west, showing instruments and huts, July 1961

INSTRUMENTS

1. Small thermometer screen
2. Rain-gauge
3. Sunshine recorder (Campbell-Stokes type)
4. Recording rain-gauge
5. Large thermometer screen
6. Grass minimum thermometer
7. Total radiation solarimeter
8. Diffuse radiation solarimeter
9. Meteorological Office tilting-siphon rain recorder
10. Apparatus for the chemical sampling of air and precipitation
11. Daylight illuminometer
12. Evaporation pan (American class 'A' type) with water-surface maximum and minimum thermometers
13. Bi-metallic radiation recorder
14. Rain-gauge (turf walled)
15. Gravity Station
16. Electrical (cup generator) anemograph (from 4 May, 1961)
17. Cloud searchlight

18. Alidade for cloud searchlight
19. Boom for electrograph†
20. Boom for electrograph†
21. Boom for Benndorf electrograph†
22. Direct-reading pressure-tube anemograph
23. Site for absolute measurements of electrical potential gradient

BUILDINGS

- A. Observatory offices†
- B. Radio-sonde offices†
- C. New Observatory building (constructed 1960-61)*
- D. Boiler house (constructed 1961)
- E. Fuel tanks (constructed 1961)
- F. Radar house
- G. Balloon filling shed
- H. Old absolute hut - containing declinometer and proton magnetometer
- I. New absolute hut - containing Schuster-Smith coil
- J. West hut - containing B.M.Z.

- K. Magnetograph house - containing standard and quick-run La Cour variometers
- L. Old magnetograph hut - containing supplementary variometers
- M. East hut - containing spectrophotometer for ozone measurements, and atmospheric pollution meter
- N. Azimuth pillar
- O. Instrument enclosure
- P. Power house - containing emergency generators
- Q. Residential quarters
- R. Site of residential quarters to be constructed 1961-62
- S. Aurora hut
- T. Transformer house
- U. Fence
- V. Floodlight
- WT. Water tower
- W. Radio-sonde launching masts
- X. Various sheds for stores, etc.
- Y. Underground petrol store
- Z. Main road - NE to Lerwick, SW to Sumburgh

*From 13 July, 1961 †Up to 13 July, 1961

ESKDALEMUIR OBSERVATORY

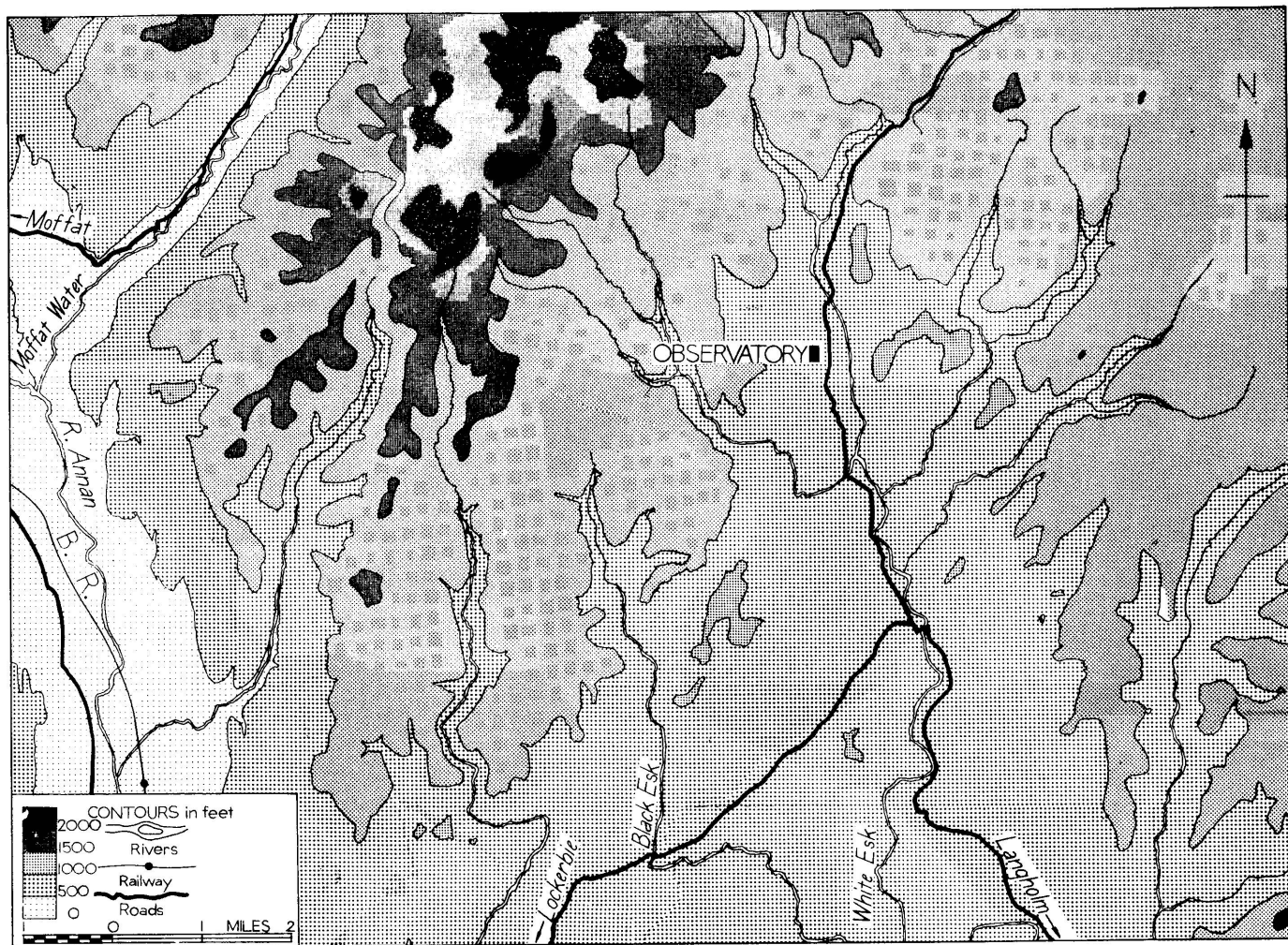


FIG.5 - Contour map of surroundings

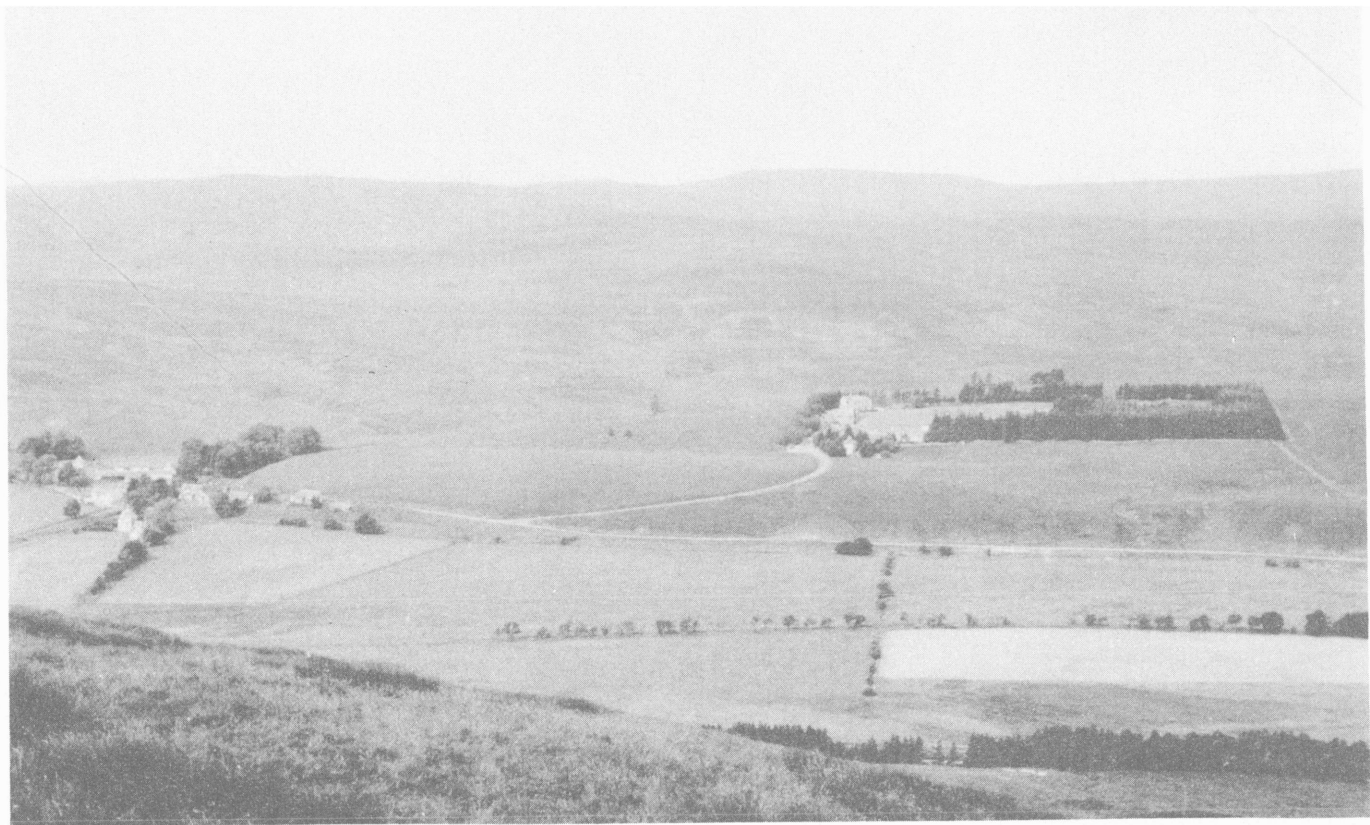


FIG.6 - The Observatory and Davington village looking westwards from Dumfries Hill, July 1961

ESKDALEMUIR OBSERVATORY

INSTRUMENTS

1. West hut for absolute magnetic observations including those East hut with proton magnetometer
2. Underground magnetograph chambers
3. Meteorological Office tilting-siphon rain recorders (turf walled)
4. Standard 8-inch rain gauge (turf walled)
5. Fues snow recorder (turf walled)
6. Fues rain recorder (turf walled)
7. Experimental snow-gauges
8. Canadian snow-gauge
9. Evaporation pan (American class 'A' type) with water-surface maximum and minimum thermometers
10. Apparatus for the chemical sampling of air and precipitation
11. Cup counter anemometer Mk. II
12. 4-foot earth thermometer
13. Standard 8-inch rain-gauge
14. Bi-metallic radiation recorder
15. Total radiation solarimeter
16. Diffuse radiation solarimeter
17. Daylight illuminometer
18. Sunshine recorder (Campbell-Stokes)
19. Direct-reading pressure-tube anemograph
20. Atmospheric electricity absolute observation pit
21. Boom for electrograph
22. Air pollution sampling unit
23. Atmospheric radioactivity sampling unit
24. Cloud searchlight
25. Ozone spectrophotometer hut
26. Large thermometer screen
27. Louvered hut - containing standard thermometers and photothermograph

BUILDINGS

- A. Main observatory building
- B. Schuster house
- C. Rayleigh house
- D. Glazebrook house
- E. Shaw house
- F. Cottage
- a. Reservoir
- b. Tennis court
- c. Old ozone spectrophotometer hut
- d. Garage and battery room
- e. Recreation room
- f. Reserve petrol store

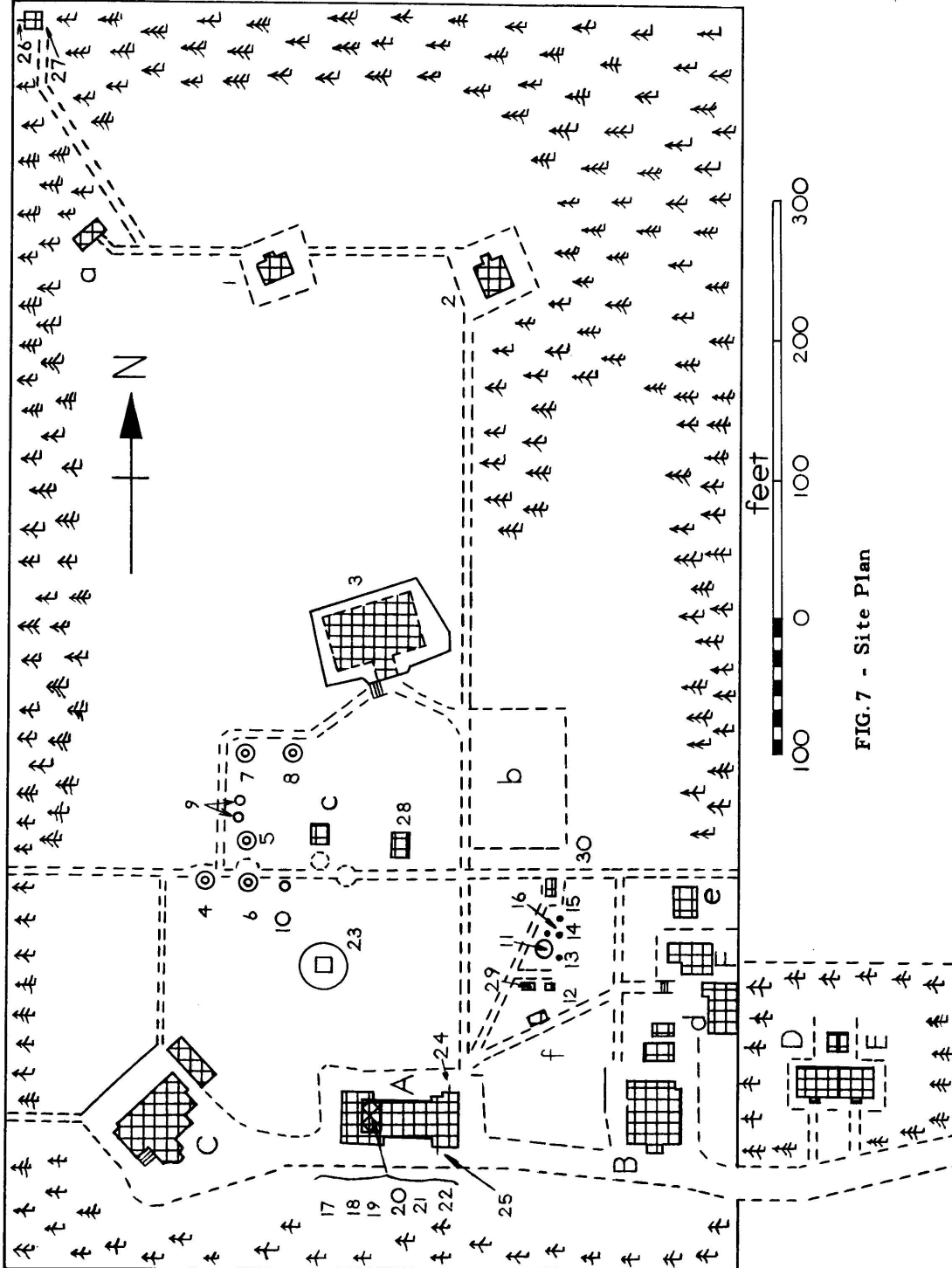


FIG. 7 - Site Plan

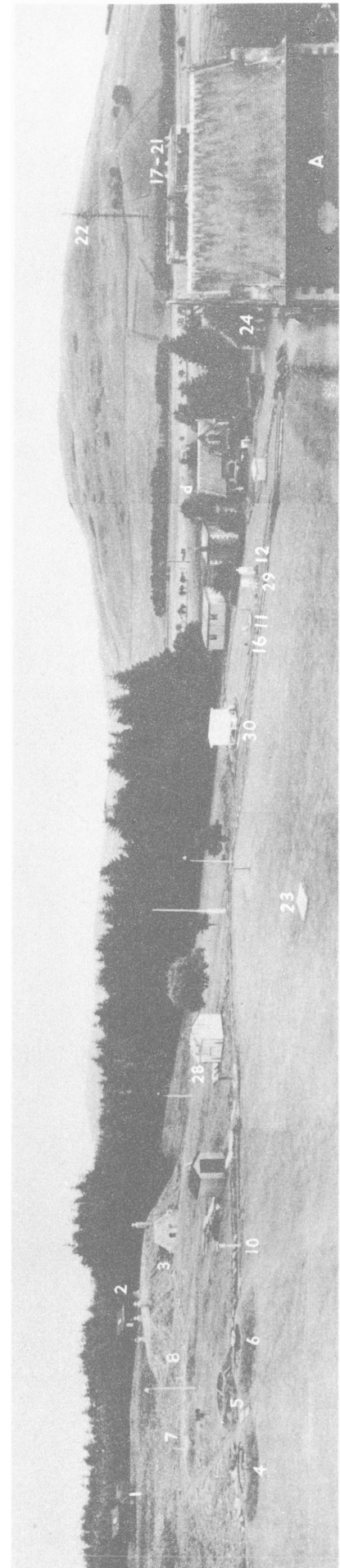


FIG. 8 - General view of the Observatory looking northwards (on the left) to south-eastwards (on the right), July 1961

KEW OBSERVATORY

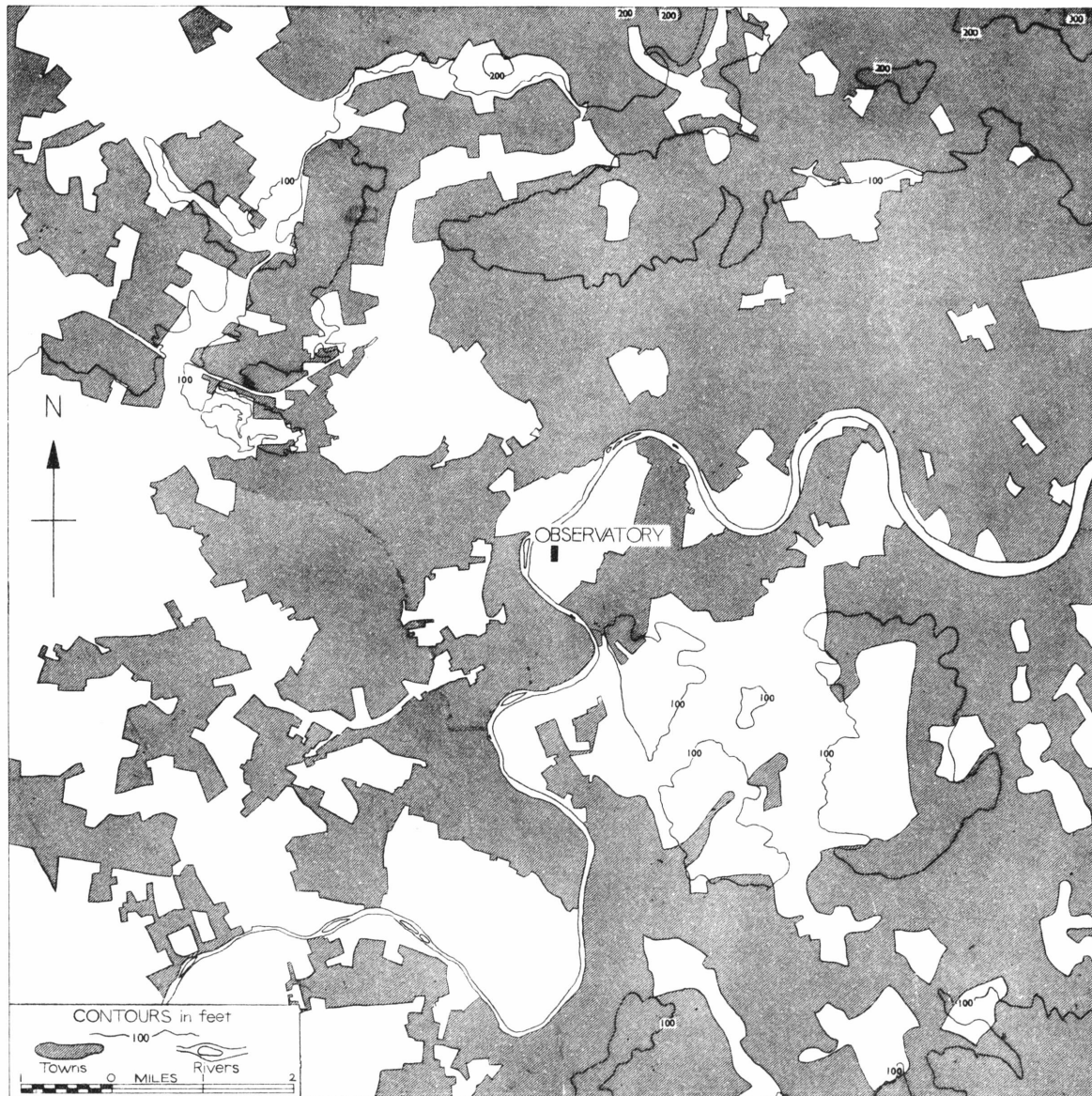


FIG.9 - Contour and built-up area map

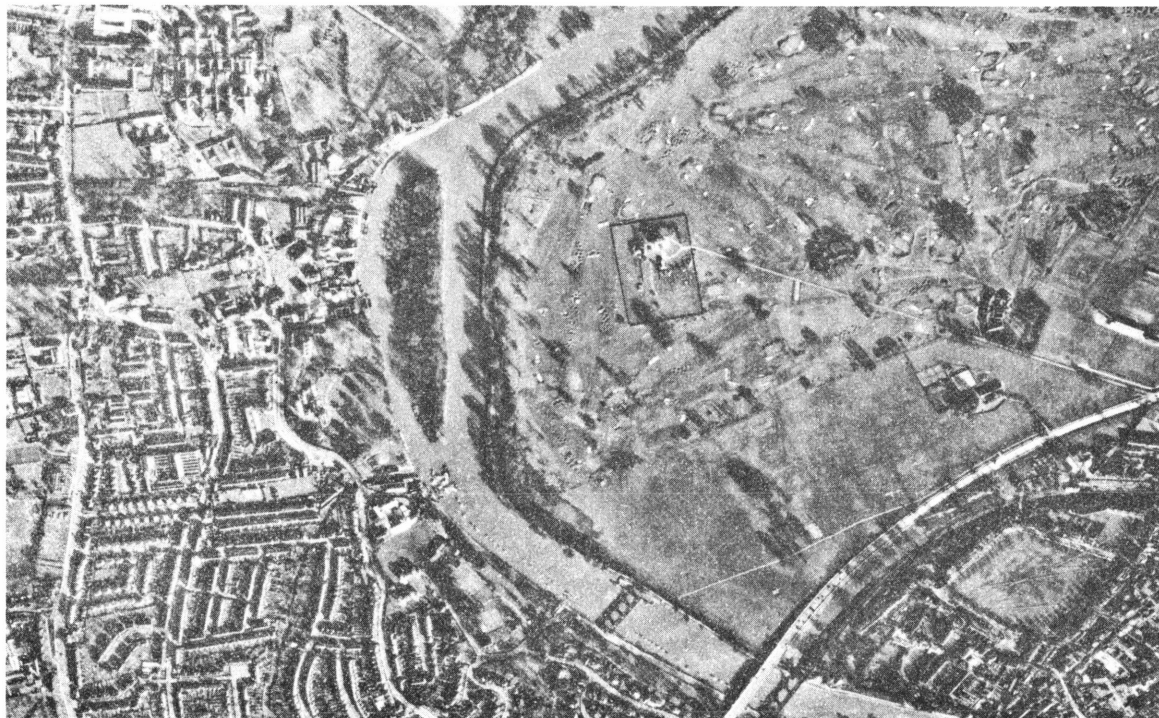


FIG.10 - Aerial view, February 1961

KEW OBSERVATORY

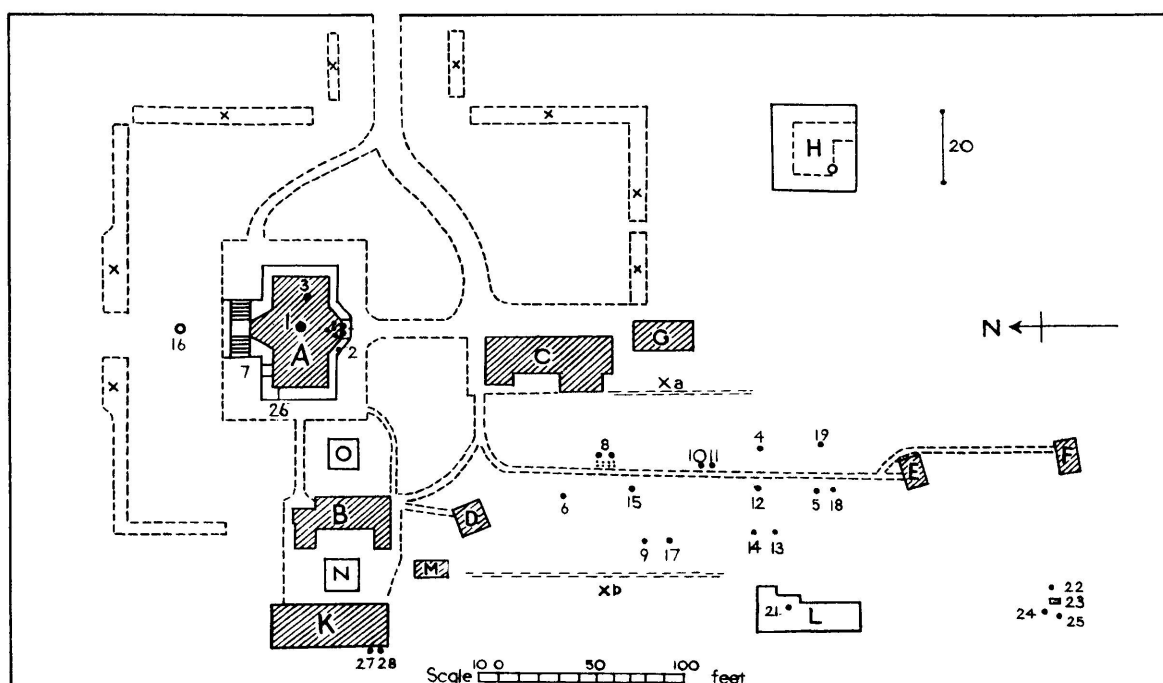


FIG.11 - Site plan, 1961



FIG.12 - General view from south-south-west, August 1961

INSTRUMENTS

1. Direct-reading pressure-tube anemograph
2. Sunshine recorder (Campbell-Stokes type)
3. Solarimeters and Daylight illuminometers (Installed in this position 1954)
4. Radiation balance meter (Installed 1953)
5. Bi-metallic radiation recorders (Installed 1948)
6. Large thermometer screen
7. North-wall screen
8. Earth thermometers
9. Grass minimum thermometer
10. 8-inch rain-gauge
11. 5-inch rain-gauge
12. Meteorological Office tilting-siphon rain recorder
13. Storm gauge
14. Rainfall chronograph
15. Pillar
16. Modified Jardi rate of rainfall recorder (Modified 1951)
17. Experimental recording resistance psychrometer
18. Theodolite pillar
19. Pollution gauge
20. Posts for stretched wire apparatus
21. Photobarograph
22. Meteorological Office evaporation tank recorder
23. Meteorological Office standard evaporation tank
24. Evaporation Pan (American Class 'A' Type) with water-surface maximum and minimum thermometers
25. Cup counter anemometer
26. Electrograph collector (Moved from Clinical house 1939)
27. Owen's air filter and pollution gauge (Moved from Clinical house 1953)
28. Smoke filter (Installed 1948 - removed from Clinical house 1953)

BUILDINGS

- A. Main observatory building
- B. Clinical house
- C. Workshops
- D. Experimental hut
- E. Store
- F. Atmospheric electricity laboratory
- G. Carpenter's shop
- H. Underground laboratory
- K. Calibration hut (Erected 1941)
- L. Underground seismological house
- M. Greenhouse
- N. Hot water storage cylinders (Erected 1953)
- O. Static water tank (Erected 1942)
- X. Shrubberies, or hedges - thickness, length and height reduced considerably in 1949-50

LERWICK

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 1960	
	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 12,000+
1 q	544	543	543	546	551	549	555	549	547	538	528	525	526	524	526	532	539	543	542	541	543	543	541	540	540	958
2 q	542	543	541	544	548	549	557	558	555	543	532	522	513	522	529	535	532	539	538	534	539	539	537	539	539	930
3	538	536	535	535	547	559	561	559	557	544	532	528	529	527	535	541	536	538	545	548	550	548	545	547	543	1020
4	542	535	540	543	552	550	547	551	554	554	545	543	549	539	547	549	547	551	552	551	551	547	546	548	547	1133
5	544	539	529	526	523	560	560	550	540	520	521	515	509	517	531	528	529	538	539	546	551	557	564	533	536	869
6	527	528	518	520	525	532	533	534	533	533	533	535	533	532	532	527	532	538	538	543	542	544	540	536	533	788
7	538	537	535	535	541	543	550	548	540	535	536	527	532	533	536	541	546	553	549	545	545	545	545	544	541	979
8	543	543	539	540	540	541	543	545	544	543	542	536	531	532	535	539	546	549	552	555	551	548	539	543	542	1019
9 q	543	542	543	543	543	547	547	547	549	549	547	544	544	547	547	547	550	550	550	550	551	548	541	542	546	1111
10 d	541	542	546	546	550	553	561	556	551	540	521	508	516	529	548	555	776	550	522	544	574	510	502	510	548	1151
11 d	519	490	504	493	522	525	529	527	502	499	512	517	520	526	560	537	548	545	535	532	533	534	532	538	524	579
12	514	506	531	533	535	535	536	530	532	532	529	525	518	516	523	529	525	527	532	535	514	524	518	525	526	624
13	528	529	533	529	538	545	545	543	535	531	529	532	532	530	527	528	529	532	532	543	532	540	533	537	534	812
14 d	532	410	430	506	516	540	550	556	536	532	540	533	524	533	536	535	535	544	562	670	613	412	333	538	521	516
15 d	543	361	335	404	513	521	532	533	529	516	510	510	510	515	519	519	513	521	526	523	524	529	529	526	503	61
16	530	532	531	530	529	535	535	532	529	526	527	528	531	526	524	525	528	529	537	542	540	539	525	510	530	720
17	524	531	536	543	546	541	547	546	542	541	539	533	541	558	549	552	545	552	554	558	562	560	558	554	546	1112
18	549	545	550	553	556	562	562	576	538	514	532	525	511	532	536	528	532	533	536	533	539	526	526	520	538	914
19	518	528	538	543	545	550	543	541	540	531	525	523	525	528	530	538	538	544	545	546	548	548	554	548	538	917
20	544	547	549	552	560	560	551	543	550	544	539	515	525	533	541	556	531	534	539	548	542	535	537	540	542	1015
21 d	529	445	452	499	526	539	547	533	532	529	525	515	536	518	531	529	549	635	592	610	504	500	498	518	529	691
22	497	509	494	510	510	528	540	531	528	514	513	493	513	520	530	535	524	530	534	539	542	544	535	537	523	550
23	534	536	537	535	533	542	543	538	533	528	517	520	518	516	536	531	541	542	534	535	528	520	529	530	531	756
24	528	526	528	535	545	540	535	535	525	522	511	515	529	534	539	536	534	540	544	536	535	533	540	542	533	787
25	539	544	544	541	543	546	543	544	537	531	526	524	527	530	522	533	540	541	543	542	545	547	544	547	538	923
26	550	545	543	543	542	547	548	545	546	532	523	528	526	524	529	531	540	538	542	543	547	547	543	544	539	946
27	543	541	544	548	544	545	555	552	548	539	528	525	524	524	528	528	533	539	544	548	550	550	547	543	540	970
28	541	546	546	550	550	550	550	549	547	540	529	524	524	519	527	533	536	542	549	554	555	554	554	554	543	1023
29	558	558	562	548	550	547	550	555	566	552	543	526	520	535	532	535	539	542	545	552	558	557	551	552	547	1133
30 q	551	550	551	551	554	557	558	557	553	541	524	515	517	524	531	538	543	547	551	554	557	556	554	552	545	1086
31 q	550	550	552	554	558	563	563	563	560	547	535	525	526	532	541	547	549	550	554	556	557	558	558	558	550	1206
Mean	536	523	525	531	540	545	548	546	541	533	529	524	525	528	534	536	545	544	544	550	546	537	532	539	537	
Sum 16,000+	623	217	259	478	735	901	976	926	778	540	393	234	279	375	557	617	885	856	857	1056	922	642	498	695		Grand Total 399,299

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

2	LERWICK (D)												9° +												JANUARY 1960											
	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 q	45.7	48.4	47.2	45.2	45.1	46.4	46.5	45.1	45.0	44.7	44.6	47.2	48.8	49.6	49.4	48.6	47.9	47.4	46.9	46.1	45.9	45.0	44.2	45.0	46.5	115.9										
2 q	44.6	45.5	46.1	46.1	46.5	46.5	46.3	45.5	45.2	45.2	45.3	46.1	48.4	51.3	50.0	49.0	49.4	49.3	47.9	46.2	45.2	44.8	43.1	42.9	46.5	116.4										
3	42.0	47.1	47.7	46.5	45.1	44.3	45.1	45.1	44.9	44.8	45.2	47.8	51.0	52.8	52.7	54.5	55.4	51.7	48.4	46.5	46.0	45.5	45.3	44.2	47.5	139.6										
4	41.7	42.2	39.4	41.7	40.3	42.7	43.7	44.3	43.8	44.3	44.6	47.7	50.9	51.3	52.8	53.2	48.9	49.5	49.4	47.7	46.2	45.7	42.5	40.3	45.6	94.8										
5	40.9	42.9	42.7	31.9	37.7	41.7	43.3	44.3	43.6	44.6	47.7	50.3	52.3	55.5	52.9	52.9	50.8	50.7	50.7	50.0	49.6	47.0	44.3	30.9	45.8	99.2										
6	39.4	43.9	40.1	41.0	43.4	44.4	45.5	45.5	46.5	47.3	47.7	48.4	49.8	49.7	49.6	49.2	48.8	50.7	49.4	47.5	46.5	45.5	44.1	43.4	46.1	107.3										
7	44.6	43.8	43.9	42.5	43.6	42.7	43.6	45.9	46.5	46.5	46.8	46.2	48.1	50.0	49.4	49.9	49.4	52.1	52.5	50.8	49.4	47.0	46.3	45.5	47.0	127.0										
8	43.6	39.6	39.7	43.1	44.6	46.0	45.5	45.7	45.5	45.9	46.0	46.8	47.5	47.9	47.9	48.6	48.9	49.0	49.4	49.8	49.4	45.9	44.3	44.1	46.0	104.7										
9 q	43.9	43.6	43.8	44.8	46.2	45.0	45.5	45.8	45.9	46.3	46.9	47.8	49.2	50.0	49.2	49.0	50.0	49.4	48.7	48.0	47.8	47.2	46.9	46.0	47.0	126.9										
10 d	45.1	44.6	46.0	46.0	47.0	46.0	46.5	44.6	46.7	47.7	49.5	53.7	52.7	55.7	54.5	56.9	52.8	47.9	48.9	43.1	18.2	23.5	31.9	38.5	45.3	88.0										
11 d	39.5	40.0	42.0	43.1	44.6	45.5	46.3	47.7	46.7	49.8	49.4	50.9	49.4	53.2	46.5	49.4	47.9	48.1	47.3	47.7	46.7	46.1	45.3	45.5	46.6	118.6										
12	47.7	47.9	43.9	43.3	44.8	45.0	44.9	44.6	45.2	46.2	47.5	46.0	47.7	48.9	47.0	39.8	46.0	48.3	46.0	44.0	42.7	29.7	40.7	42.7	44.6	70.5										
13	44.3	45.9	47.2	48.2	46.0	45.9	46.0	45.8	46.7	48.1	47.7	49.2	49.4	49.4	48.6	49.1	48.4	47.3	44.6	37.7	35.7	38.5	39.1	42.7	45.5	91.5										
14 d	45.9	50.5	34.7	34.6	38.4	42.4	42.7	43.6	46.7	46.8	49.3	50.9	50.8	49.8	49.4	47.7	47.7	48.8	51.7	58.0	46.5	28.3	35.0	37.4	44.9	77.6										
15 d	37.9	39.1	18.9	24.1	35.9	42.9	42.7	44.6	47.0	44.9	45.3	46.0	47.0	46.7	47.5	48.4	47.7	48.7	47.9	44.6	44.3	43.1	44.2	44.2	42.7	23.6										
16	43.1	44.1	43.6	45.2	46.5	45.5	45.1	44.4	44.8	45.1	45.5	45.9	47.7	46.9	46.2	46.1	47.1	45.3	46.0	46.5	46.7	45.5	44.8	35.9	45.1	83.5										
17	40.7	44.0	42.3	43.1	44.6	47.8	48.1	46.8	45.9	47.5	48.4	48.4	50.8	50.8	54.4	51.1	52.7	52.3	51.5	51.1	48.9	48.1	48.4	47.5	46.7	48.0	151.1									
18	45.5	45.1	45.9	46.5	46.9	47.7	47.5	48.4	47.9	53.2	50.6	50.1	51.5	51.3	48.9	46.5	46.5	46.9	48.4	45.9	45.9	40.3	39.4	42.2	47.0	129.0										
19	43.6	39.2	40.4	41.0	43.3	44.6	45.1	45.2	45.2	45.1	45.5	47.0	49.6	49.1	47.9	48.9	48.8	47.3	46.0	47.9	46.8	46.2	46.7	45.5	45.7	95.9										
20	44.4	42.2	44.0	42.7	44.9	44.6	46.0	44.6	46.7	48.1	49.4	52.3	50.3	48.9	49.9	52.5	57.5	52.3	47.1	46.0	46.7	44.2	41.4	45.7	47.2	132.2										
21 d	44.5	25.1	38.8	41.1	42.2	44.4	48.2	52.9	50.0	48.9	49.7	53.6	53.6	50.1	51.9	50.0	50.1	38.5	44.2	33.3	38.1	39.2	33.3	37.4	44.1	59.1										
22	39.0	41.2	46.8	45.7	47.8	47.5	48.1	47.2	48.7	50.7	51.3	48.4	50.6	50.0	50.4	48.9	47.3	46.9	47.1	45.3	44.0	38.8	41.9	40.9	46.4	114.5										
23	44.2	46.1	45.1	45.1	44.6	48.4	45.3	45.7	44.6	45.8	47.9	49.8	52.1	53.6	51.8	47.8	45.3	39.6	44.8	43.0	35.7	37.9	32.1	39.8	44.8	76.1										
24	43.2	47.8	45.5	42.5	47.5	45.7	46.8	47.2	47.9	46.9	47.0	48.2	50.3	50.3	44.4	46.8	46.2	37.7	44.2	44.8	42.4	41.2	43.2	45.5	45.5	93.2										
25	45.8	46.1	46.5	44.6	45.5	44.6	45.5	46.2	44.6	44.1	45.9	47.1	48.7	49.9	48.0	46.2	46.0	41.7	40.3	46.0	46.0	45.9	44.0	43.8	45.5	93.0										
26	45.1	44.8	45.3	45.5	46.7	45.5	46.1	45.9	45.1	44.2	46.0	47.9	48.4	49.4	49.6	47.7	47.8	47.3	46.5	45.1	44.6	43.4	45.0	45.5	46.2	108.4										
27	46.5	45.9	43.2	42.7	41.7	45.8	46.1	44.9	43.9	43.1	44.8	46.2	48.4	50.5	49.7	47.7	46.5	47.5	47.7	46.8	46.0	45.5	45.1	43.9	45.8	100.1										
28	45.2	47.5	49.6	46.2	45.8	46.2	45.5	45.1	43.8	43.0	44.9	46.8	48.7	49.4	50.5	49.8	48.0	47.7	47.5	46.5	43.1	45.4	45.7	44.3	46.5	116.2										
29	45.8	45.9	44.1	41.9	41.1	43.3	44.1	43.9	44.4	44.1	46.5	47.5	48.8	52.7	52.3	51.1	48.9	48.0	47.7	46.8	46.1	45.5	43.1	43.0	46.1	106.6										
30 q	44.6	45.3	45.8	46.0	46.0	45.5	45.5	45.0	43.8	43.0	44.1	45.5	47.5	48.5	48.8	49.1	48.8	47.8	47.7	47.5	46.8	45.8	45.5	45.2	45.3	46.1	106.4									
31 q	45.3	45.0	45.5	45.8	45.9	45.7	45.5	45.1	44.6	44.5	44.8	46.3	49.4	49.9	50.8	49.6	48.7	48.9	48.2	47.7	46.9	46.0	45.7	45.5	46.7	121.3										
Mean	43.7	43.9	43.1	42.8	44.2	45.2	45.6	45.7	45.7	46.1	46.9	48.3	49.7	50.5	49.7	49.3	48.9	47.5	47.5	46.3	44.3	42.6	42.6	42.7	46.0											
Sum 1300.0+	53.3	60.3	35.7	27.7	70.2	100.7	112.6	116.6	117.8	130.4	154.8	196.0	240.4	267.0	239.7	227.3	214.8	173.7	174.0	135.0	73.0	21.7	21.3	24.2		Grand Total 34188.2										

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 1960						
	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 6000+		
1 q	289	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	300	1189	
2 q	292	289	289	296	296	296	292	292	291	291	295	301	300	295	298	304	309	311	318	323	313	305	299	286	299	1188		
3	275	267	274	281	281	281	283	286	287	289	293	296	291	296	300	304	316	326	320	311	306	302	302	298	294	1065		
4	298	295	282	282	282	285	290	291	289	289	291	292	289	292	298	308	313	311	311	311	311	313	309	298	297	1130		
5	279	275	261	249	268	235	253	267	287	303	302	301	314	330	335	324	315	311	331	325	325	331	342	305	299	1168		
6	313	316	312	294	301	308	308	309	305	300	300	299	298	301	305	309	307	306	306	305	306	305	308	310	305	1331		
7	307	304	302	301	296	294	292	294	294	297	298	302	300	301	300	298	296	297	305	314	321	316	309	307	302	1245		
8	304	303	299	294	295	296	296	296	298	296	298	299	300	301	300	298	296	296	296	298	308	311	311	311	300	1200		
9 q	307	305	300	301	298	296	294	294	292	292	293	294	292	293	295	294	294	295	295	296	298	302	309	310	297	1139		
10 d	311	305	300	294	291	287	281	280	282	287	295	311	322	348	385	399	426	428	366	374	282	230	289	286	319	1659		
11 d	306	305	292	294	294	300	302	300	311	331	320	315	325	335	400	361	371	361	340	324	328	326	320	300	323	1761		
12	252	231	275	292	298	302	298	299	302	304	302	305	307	309	317	337	330	327	322	320	323	276	281	293	300	1202		
13	299	293	279	280	281	292	294	296	294	294	292	294	298	302	309	315	324	324	323	322	318	324	313	267	268	300	1201	
14 d	296	198	175	236	263	281	285	292	295	289	294	315	327	318	315	308	305	300	298	305	294	307	227	313	285	836		
15 d	307	309	243	177	256	300	316	309	309	316	316	315	320	320	320	337	342	341	336	337	320	302	289	291	305	1328		
16	298	302	301	299	298	300	304	302	304	302	301	302	305	308	307	304	309	314	310	302	301	301	283	287	302	1244		
17	288	280	267	273	277	279	276	283	287	287	289	296	294	291	294	294	302	300	303	304	302	300	300	301	290	967		
18	300	297	294	292	292	291	289	283	294	294	292	304	323	322	316	311	309	309	316	316	309	309	300	292	302	1254		
19	225	224	252	270	279	283	289	294	295	298	301	300	298	299	300	302	302	309	314	307	305	302	298	303	290	949		
20	307	307	303	299	296	294	299	302	297	298	300	309	302	301	302	310	337	335	327	316	313	316	318	307	308	1395		
21 d	279	114	181	231	249	274	287	294	293	300	313	324	376	353	337	330	389	505	460	409	270	276	281	237	307	1362		
22	256	272	266	267	278	282	286	300	312	312	319	335	328	329	320	325	327	333	324	323	320	314	302	315	306	1345		
23	313	309	305	302	294	274	274	292	302	308	314	316	318	327	344	342	339	345	337	334	310	297	285	289	311	1470		
24	285	278	255	259	261	273	289	301	311	313	319	319	319	326	337	331	327	335	326	320	318	313	311	305	305	1331		
25	301	290	280	285	289	287	292	296	304	300	302	305	307	312	318	316	310	314	316	307	302	300	299	294	301	1226		
26	289	292	296	296	292	290	287	291	293	302	302	300	304	304	305	310	311	309	306	304	301	300	304	300	299	1188		
27	289	266	274	268	276	280	283	289	298	293	296	296	299	300	304	307	308	300	296	296	294	293	294	296	291	995		
28	296	289	285	285	292	292	292	292	293	297	298	298	299	300	300	303	305	302	299	294	296	294	292	291	295	1084		
29	285	285	282	277	272	280	285	285	282	287	287	292	296	294	293	302	304	302	300	296	292	290	298	291	290	957		
30 q	289	292	294	296	294	293	292	292	292	290	289	287	287	283	285	289	293	294	292	292	291	289	286	287	290	968		
31 q	287	289	289	289	289	290	290	289	290	292	293	291	286	283	283	289	293	293	292	292	292	289	289	287	289	946		
Mean	291	280	277	279	285	287	290	293	296	298	300	304	307	309	314	315	320	324	319	315	306	301	297	295	300			
Sum 8000+	1022	672	601	655	824	911	994	1088	1180	1246	1306	1416	1528	1580	1733	1777	1918	2041	1895	1782	1480	1323	1199	1152		Grand Total 223,323		

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

4 LERWICK		TERRESTRIAL MAGNETIC ELEMENTS											JANUARY 1960						
		Horizontal force			Declination			Vertical force			3-hr. range indices K	Sum of K indices	Magnetic character of day, C (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	h. m.	γ	γ								
1 q	06 44	557	522	11 51	35	14 07	50.3	43.4	22 25	6.9	18 55	314	283	01 50	31	2,1,1,1,1,1,1,1	9	0	79.1
2 q	06 51	560	511	12 14	49	13 44	51.9	41.7	23 12	10.2	19 05	326	279	24 00	47	1,0,1,2,2,1,1,2	10	0	78.8
3	06 30	564	523	13 50	41	16 31	56.6	40.0	00 24	16.6	17 27	328	261	01 44	67	2,2,0,2,1,2,1,1	11	0	78.3
4	08 41	564	528	01 03	36	15 33	56.5	37.8	02 25	18.7	16 43	316	279	02 22	37	2,1,2,2,2,2,1,2	14	0	78.9
5	22 47	591	492	12 58	99	13 36	57.3	23.6	23 39	33.7	22 42	359	225	05 30	134	3,3,3,2,3,3,2,4	23	1	79.1
6	21 03	547	510	00 00	37	17 57	51.8	32.5	00 09	19.3	00 02	327	287	03 43	40	3,2,1,1,2,1,2,1	13	0	78.8
7	17 35	559	524	11 49	35	17 50	54.5	41.5	03 40	13.0	20 37	322	291	07 02	31	1,1,2,1,1,2,2,1	11	0	78.8
8	19 46	559	529	12 32	30	20 14	50.8	38.5	01 50	12.3	21 07	318	291	03 48	27	2,2,1,1,1,1,2,2	12	0	78.9
9 q	20 23	555	536	24 00	19	13 24	50.4	42.9	02 23	7.5	24 00	313	290	09 05	23	1,1,1,0,1,0,0,1	5	0	78.8
10 d	16 40	1367	483	21 11	884	16 52	70.9	2.8	21 17	68.1	16 32	490	165	21 18	325	1,1,1,3,4,8,5,5	30	2	78.3
11 d	16 51	623	474	01 30	149	14 14	63.8	34.4	00 11	29.4	16 52	446	267	23 58	179	3,3,3,3,4,4,2,3	25	1	78.4
12	06 37	543	488	21 00	55	13 16	54.4	22.1	21 08	32.3	15 28	342	216	01 21	126	3,2,1,2,2,3,3,4	20	1	78.4
13	22 06	562	516	22 41	46	03 20	51.6	31.6	20 36	20.0	20 45	330	242	22 37	88	2,2,1,1,2,1,3,4	16	1	78.2
14 d	20 10	844	166	22 48	678	19 30	61.1	9.3	21 50	51.8	23 45	389	46	02 01	343	6,4,3,3,2,2,7,7	34	2	78.1
15 d	00 35	571	128	01 22	443	01 42	69.0	6.2	02 25	62.8	01 14	372	147	03 01	225	7,5,2,2,2,2,2,2	24	1	78.0
16	21 23	547	494	23 08	53	22 29	50.3	32.5	23 20	17.8	17 50	319	265	22 52	54	1,1,0,0,1,1,1,3	8	0	78.0
17	13 05	579	515	00 05	64	13 07	60.4	37.3	02 41	23.1	19 31	308	253	02 38	55	3,3,2,1,3,2,1,1	16	1	77.9
18	07 35	587	494	09 11	93	09 58	55.4	35.9	21 50	19.5	12 35	328	275	07 45	53	1,1,4,3,2,1,2,3	17	1	77.5
19	22 15	560	494	00 08	66	12 45	51.5	36.3	01 07	15.2	18 30	318	187	01 02	131	4,2,1,1,1,1,2,1	13	0	76.5
20	04 44	573	500	11 29	73	16 12	62.0	39.2	22 39	22.8	16 44	347	289	05 12	58	2,2,2,3,2,3,2,2	18	1	77.6
21 d	19 45	810	318	01 26	492	01 23	64.2	-9.2	19 50	73.4	17 10	533	22	01 48	511	6,3,3,3,3,5,6,4	33	2	77.6
22	21 34	557	470	11 06	87	10 00	58.6	33.9	21 30	24.7	11 28	343	231	00 01	112	3,3,3,3,2,2,2,3	21	1	78.0
23	19 46	563	494	13 51	69	13 06	57.6	28.2	22 39	29.4	17 26	353	260	22 00	93	2,3,3,2,3,3,3,3	22	1	78.5
24	18 02	558	497	10 50	61	13 26	53.4	31.9	17 40	21.5	17 50	342	244	02 37	98	3,3,2,2,3,3,2,2	20	1	78.4
25	04 57	555	517	14 15	38	02 04	51.7	33.3	18 01	18.4	18 14	323	274	02 31	49	2,2,1,1,2,3,3,1	15	1	78.6
26	21 57	557	517	13 02	40	11 54	51.2	41.9	21 59	9.3	15 43	313	285	06 04	28	1,1,1,2,2,2,1,2	12	0	78.5
27	06 55	560	520	12 55	40	13 06	52.4	37.5	04 03	14.9	15 45	311	256	01 12	55	3,2,1,1,1,1,1,1	11	0	78.2
28	19 22	566	517	13 32	49	02 30	52.6	41.8	20 10	10.8	16 58	307	276	02 53	31	2,2,1,1,2,1,2,1	12	0	78.0
29	02 10	570	512	12 20	58	13 55	54.6	39.1	04 46	15.5	16 06	309	266	04 11	43	2,2,3,2,2,2,2,1	16	1	78.1
30 q	06 53	560	509	11 41	51	15 25	49.7	42.9	09 08	6.8	04 21	297	282	13 30	15	0,0,1,2,1,1,1,0	6	0	78.0
31 q	05 52	567	520	12 01	47	14 35	51.5	44.1	10 06	7.4	10 46	298	282	14 26	16	0,1,0,2,1,0,1,1	6	0	77.6
Mean	- -	608	478	- -	130	- -	55.7	32.1	- -	23.6	- -	343	242	- -	101	-	-	0.61	78.3

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 1960						
	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	12,000+						
	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							
1	558	558	557	558	560	572	571	565	556	540	528	525	536	524	517	531	531	540	544	551	554	558	554	552	547	1140						
2	550	547	547	546	543	547	549	551	548	539	533	526	529	546	563	558	590	574	675	782	576	544	539	522	563	1524						
3	537	532	529	527	540	538	534	534	529	521	516	515	512	518	536	554	553	558	529	540	535	526	518	465	529	696						
4	524	538	538	535	536	539	537	540	525	512	513	511	512	516	522	528	537	551	551	554	549	554	544	539	534	805						
5	535	540	536	537	537	538	543	550	539	539	540	516	512	547	551	561	547	525	548	555	543	545	534	515	539	933						
6	509	508	425	454	529	535	530	524	535	529	527	519	519	531	540	547	565	543	539	541	545	544	548	551	527	637						
7 q	543	539	532	536	538	542	550	553	546	534	528	523	520	524	531	536	540	544	547	548	550	551	552	550	540	957						
8	548	548	550	550	551	552	550	551	557	547	533	532	516	521	532	538	541	551	547	545	549	551	549	548	544	1057						
9 q	543	547	539	545	548	550	550	551	549	543	532	529	531	536	539	545	551	556	558	555	554	558	560	559	547	1128						
10 q	557	557	560	561	564	558	560	563	554	548	545	542	538	541	541	539	544	548	550	554	555	556	554	555	552	1244						
11	554	554	555	555	557	559	561	563	558	549	540	535	531	532	540	545	555	557	543	539	533	529	543	542	547	1129						
12	536	544	541	544	549	552	549	554	547	533	527	523	524	521	532	536	544	550	555	557	556	555	552	552	543	1033						
13	555	556	557	559	561	563	568	566	562	554	541	537	543	538	542	543	548	552	555	552	549	527	419	370	538	917						
14 d	413	498	489	529	545	532	543	547	554	538	538	519	529	537	538	540	531	541	564	612	538	513	527	537	531	752						
15	539	538	538	539	541	543	539	538	535	529	523	522	525	533	534	528	532	528	541	532	541	547	545	545	536	855						
16 d	543	547	539	533	534	538	535	533	535	544	558	544	538	557	555	527	534	539	539	546	546	541	540	532	541	977						
17 d	520	541	527	541	544	547	549	518	521	537	542	541	536	541	535	530	549	575	566	551	564	572	563	529	543	1039						
18 d	564	545	423	500	532	522	523	531	534	526	509	513	514	523	530	548	525	537	526	526	538	538	538	543	525	608						
19	543	540	539	536	536	541	547	542	547	537	537	535	523	534	538	544	542	554	560	560	529	509	512	488	536	873						
20	435	466	495	508	497	536	544	547	546	536	529	531	526	522	528	534	526	541	544	550	551	549	558	557	527	656						
21 d	545	544	538	527	551	551	539	551	550	540	509	517	525	533	530	539	535	552	546	547	564	552	545	547	541	977						
22	548	545	547	547	548	549	547	547	548	547	539	533	530	531	535	541	536	545	548	554	554	551	546	549	544	1065						
23	548	547	548	552	550	543	547	552	550	540	532	529	526	524	531	532	540	539	539	544	549	547	550	552	542	1011						
24 q	550	551	549	551	548	552	556	555	550	545	540	535	536	539	542	540	542	545	551	553	557	553	551	551	548	1142						
25 q	551	548	551	550	552	552	555	554	547	538	531	528	531	535	539	545	548	549	554	560	555	550	563	558	548	1144						
26	559	558	557	555	556	557	557	554	549	541	533	532	534	539	548	560	558	551	558	559	560	556	554	550	551	1235						
27	545	539	509	503	509	529	561	567	550	541	535	529	529	541	540	560	546	554	544	554	560	557	568	563	543	1033						
28	555	555	555	560	562	557	554	552	540	529	525	523	531	535	543	545	548	553	554	557	559	560	561	563	549	1176						
29	561	552	529	554	561	560	562	558	539	530	520	520	530	530	560	550	544	552	554	559	561	558	551	547	548	1142						
Mean	537	541	531	538	544	547	549	549	545	537	531	527	527	533	538	542	544	548	553	560	551	547	543	536	541							
Sum 15,000+	568	682	399	592	779	854	910	911	800	586	403	284	286	449	612	724	782	904	1029	1237	974	851	738	531		Grand Total 376,885						

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

2 LERWICK (D)													9° +													FEBRUARY 1960							
	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	46.1	46.0	46.2	46.5	47.8	46.0	44.8	44.8	44.9	45.5	48.8	52.0	53.0	52.9	52.0	52.3	50.3	48.9	47.7	47.0	45.5	45.1	45.3	45.5	47.7	144.9							
2	45.3	44.2	43.9	43.9	45.0	43.9	43.1	43.2	43.4	44.2	47.0	47.8	51.5	54.0	54.9	56.3	61.7	62.1	58.6	59.4	45.1	44.9	41.2	33.7	48.3	158.3							
3	39.8	42.6	42.2	40.7	41.2	39.5	41.7	42.6	42.5	43.3	45.5	50.5	51.8	51.8	55.8	56.9	51.3	54.7	52.3	44.6	44.3	43.1	43.4	36.9	45.8	99.0							
4	35.4	40.9	40.9	42.3	40.8	46.7	40.9	42.0	43.0	47.1	44.9	47.9	50.1	50.7	49.4	48.8	48.4	51.7	52.7	47.7	47.3	39.1	42.9	45.1	45.3	86.7							
5	45.3	45.3	44.6	44.8	43.9	43.6	43.1	43.9	44.7	43.1	48.4	49.9	56.6	59.7	59.7	58.2	53.8	51.9	51.8	51.3	48.4	43.4	32.3	31.5	47.5	139.2							
6	35.2	34.6	39.0	40.5	33.7	34.0	39.5	46.3	48.1	43.8	46.5	48.1	50.8	52.5	54.4	54.8	56.4	53.7	50.7	47.2	45.3	45.3	45.2	45.0	45.4	90.6							
7 q	43.3	44.1	46.5	47.5	45.7	45.7	45.7	46.0	44.6	43.5	44.9	47.0	48.1	49.0	49.6	49.0	47.8	47.1	46.5	46.5	45.9	45.7	45.7	45.7	46.3	111.1							
8	45.6	45.5	45.7	45.7	45.3	45.1	44.1	44.9	45.5	44.2	44.8	49.2	51.0	50.5	51.6	50.8	50.0	50.6	49.4	46.8	46.9	45.5	45.3	45.2	47.1	129.2							
9 q	41.4	40.2	45.2	43.9	44.3	44.0	43.8	43.6	43.3	43.2	44.6	47.0	49.4	50.3	50.1	50.3	50.3	49.8	48.4	46.9	46.5	46.5	45.9	46.5	46.1	105.4							
10 q	46.5	46.3	46.9	47.7	47.1	47.0	46.1	45.8	44.8	44.6	45.8	50.1	50.9	51.0	50.6	48.7	47.5	46.7	46.7	46.2	46.0	45.5	45.3	45.3	47.0	129.1							
11	46.0	46.5	46.2	45.8	45.7	45.5	45.1	44.6	44.1	44.1	45.2	46.9	48.7	49.6	49.8	49.4	49.7	50.5	51.3	45.7	43.3	39.4	42.4	44.6	46.3	110.1							
12	42.2	35.3	38.3	45.5	46.5	46.2	45.5	44.1	43.4	44.0	46.5	47.5	48.9	49.4	49.6	48.7	47.7	46.8	46.2	46.1	45.7	45.5	45.5	45.3	45.4	90.4							
13	45.5	45.5	45.5	45.7	45.7	45.5	45.3	45.1	44.3	43.8	44.8	47.0	48.9	49.4	49.7	49.1	47.7	46.5	47.0	48.0	47.1	41.7	25.9	25.8	44.6	70.5							
14 d	32.9	43.1	44.3	40.5	36.4	43.1	47.1	45.5	45.3	46.0	48.0	52.0	53.9	55.5	56.1	57.5	52.7	50.1	50.8	49.0	27.5	37.9	34.5	37.4	45.3	87.1							
15	42.2	43.3	44.0	44.2	43.4	43.7	43.6	43.6	43.6	43.8	44.3	45.8	48.4	51.3	53.7	49.7	48.9	39.5	47.9	47.7	47.0	46.5	46.0	44.3	45.7	96.4							
16 d	41.4	45.7	37.9	38.6	40.4	43.0	41.3	41.9	42.1	43.3	47.7	50.6	48.7	52.9	54.6	55.5	49.2	50.1	47.5	47.5	46.5	44.6	49.4	46.0	46.1	106.4							
17 d	42.3	42.5	40.4	41.7	42.2	42.9	45.0	46.1	43.9	46.9	51.8	52.3	53.1	52.8	52.5	49.9	50.0	54.9	53.0	54.2	52.1	46.0	37.1	37.6	47.1	131.2							
18 d	36.4	40.0	40.2	39.2	37.6	48.2	52.7	47.1	45.1	48.6	49.6	52.5	52.7	51.8	49.7	48.6	46.2	46.1	37.4	35.9	44.6	45.3	44.6	41.7	45.1	81.8							
19	40.1	43.6	43.3	42.7	43.3	43.1	43.2	44.1	46.5	46.7	46.8	50.6	49.4	49.0	48.9	50.6	49.7	38.8	31.1	33.0	33.1	26.0	34.4	45.5	42.6	23.5							
20	28.1	44.9	33.1	39.1	39.8	43.3	46.2	46.8	46.7	47.2	48.0	48.8	49.9	49.9	49.8	49.4	43.6	44.9	46.0	45.4	45.5	44.8	40.2	45.1	44.4	66.5							
21 d	43.1	43.4	46.8	43.4	43.5	41.0	46.0	48.8	46.5	48.0	47.9	48.9	49.5	50.1	49.4	47.7	41.1	38.6	46.6	44.5	36.7	42.0	44.2	44.9	45.1	82.6							
22	45.0	45.5	45.0	44.9	44.9	44.0	44.0	44.7	44.6	44.5	46.5	48.5	49.4	48.6	50.1	49.2	48.3	47.0	47.0	45.5	34.6	40.5	44.1	45.6	45.5	92.0							
23	45.2	44.8	46.2	43.1	43.9	45.5	46.4	45.2	44.1	43.9	44.8	47.9	49.5	49.6	50.8	48.6	45.8	37.0	46.4	46.5	45.7	43.0	43.2	44.9	45.5	92.0							
24 q	45.2	44.9	44.7	45.4	46.1	46.0	45.2	44.9	44.6	43.9	45.6	47.1	49.2	49.9	50.0	48.4	47.2	47.0	46.6	46.2	46.2	46.0	45.1	45.1	46.3	110.5							
25 q	43.0	43.4	44.2	44.1	44.3	44.1	43.4	43.0	42.6	42.9	44.3	47.5	49.4	51.5	51.3	49.4	47.8	47.7	47.2	46.6	46.6	45.2	43.8	45.2	45.8	98.5							
26	45.5	45.5	45.1	45.0	44.5	44.1	43.4	43.0	43.0	43.3	45.7	49.5	50.5	51.9	52.2	52.7	52.5	50.9	48.9	47.7	46.7	46.0	44.3	43.4	46.9	125.3							
27	40.5	40.0	40.7	43.1	44.2	41.7	40.7	41.6	42.7	43.1	46.5	50.7	53.2	56.6	53.7	51.8	48.2	47.7	39.7	44.1	46.5	44.6	44.1	45.8	45.5	91.5							
28	45.3	45.8	45.5	45.3	44.4	44.1	44.0	43.9	43.6	44.1	43.1	49.3	52.3	52.8	52.3	49.8	47.9	48.7	48.0	47.1	46.3	45.8	45.3	45.5	46.7	120.2							
29	42.2	37.1	47.5	44.6	41.4	40.7	46.9	40.2	40.4	41.5	44.5	47.6	51.7	51.6	57.5	56.3	51.7	50.3	48.9	49.1	49.9	39.8	37.8	41.5	45.9	100.7							
Mean	41.9	43.1	43.5	43.6	43.2	43.8	44.4	44.4	44.2	44.6	46.3	49.0	50.7	51.6	52.1	51.3	49.4	48.3	47.7	46.7	44.6	43.3	42.2	42.6	45.9								
Sum 1200' 0+	16.0	50.5	60.0	65.4	53.0	71.2	87.8	87.3	81.9	92.1	142.8	220.5	270.5	296.6	309.8	288.4	233.4	200.3	182.3	153.4	92.8	54.7	24.4	35.6		Grand Total 31970.7							

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

23

3 LERWICK (Z)

47,000y (0.47 C.G.S. unit) +

FEBRUARY 1950

	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 6000+
			γ	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			286	287	287	287	285	276	279	283	288	291	295	292	290	298	304	311	321	319	318	312	302	295	292	292	295	1090
2			291	294	294	293	296	296	296	296	298	297	295	294	287	287	289	294	298	364	412	381	392	353	318	287	313	1502
3			302	305	304	292	270	282	297	302	308	308	308	306	312	317	317	332	348	347	376	348	336	322	283	196	309	1418
4			244	267	263	285	292	260	272	285	294	287	292	301	302	301	304	308	307	312	328	340	346	381	349	321	302	1241
5			309	296	301	301	303	302	302	299	303	301	296	309	311	309	316	359	368	338	350	359	351	344	334	304	319	1665
6			294	293	263	196	236	258	274	276	268	280	290	295	303	305	305	311	316	336	333	322	315	313	308	302	291	992
7 q			298	294	288	283	277	283	287	290	297	303	304	305	301	301	301	297	299	299	297	300	301	301	300	301	296	1107
8			299	298	299	297	297	294	292	291	287	290	297	295	306	308	309	313	323	337	345	333	315	308	304	302	306	1339
9 q			287	274	274	276	288	293	292	292	293	296	299	299	293	293	294	294	292	290	292	292	293	293	292	296	291	977
10 q			295	297	293	288	286	284	282	282	285	287	287	289	290	293	299	302	300	298	294	293	290	289	291	290	291	984
11			291	291	291	291	290	287	285	282	282	282	283	287	291	291	291	294	299	308	351	349	353	349	333	309	303	1260
12			289	262	259	275	283	287	290	288	290	295	294	293	293	298	295	298	297	294	293	291	291	291	292	292	289	930
13			292	291	293	292	291	290	284	284	282	282	284	283	280	282	285	289	294	293	291	297	335	315	272	266	289	947
14 d			226	239	222	197	232	251	257	280	284	287	287	296	296	307	331	358	364	360	381	416	360	261	283	294	294	1067
15			298	295	301	304	304	301	301	299	298	298	298	298	294	301	325	341	338	360	349	347	320	305	299	297	311	1471
16 d			298	283	240	263	280	284	284	287	287	280	271	275	280	283	306	356	338	321	313	306	304	311	251	173	286	874
17 d			209	264	286	294	295	292	292	289	277	271	276	282	289	303	315	318	311	317	392	389	373	369	356	290	306	1349
18 d			290	309	214	150	187	188	220	257	282	297	299	301	308	319	314	324	332	330	362	362	312	304	300	281	285	842
19			280	290	293	292	292	292	289	289	288	290	293	296	296	296	302	316	325	340	340	354	335	237	256	247	297	1128
20			163	171	181	243	240	266	288	295	294	297	296	299	300	305	305	312	327	321	310	306	303	304	275	263	278	664
21 d			276	282	255	228	239	261	270	266	277	281	298	312	311	309	326	332	349	335	310	305	294	288	292	292	291	988
22			290	289	290	291	291	291	292	288	290	291	290	292	295	290	292	294	297	297	295	298	314	288	296	296	293	1037
23			290	290	288	286	286	284	277	279	284	288	288	289	290	295	300	299	316	332	312	299	296	298	297	297	294	1060
24 q			297	297	294	290	289	282	280	282	284	285	284	288	284	283	289	292	292	291	289	289	290	291	295	294	289	931
25 q			292	292	290	291	290	288	286	286	290	290	286	286	284	286	287	290	292	289	288	288	289	295	279	278	288	912
26			284	290	290	290	290	289	288	288	290	286	281	280	284	286	292	298	304	298	296	293	290	292	294	287	290	960
27			259	247	230	203	235	237	225	241	265	277	281	288	288	294	309	309	309	305	328	315	302	300	271	257	274	575
28			270	287	291	291	289	288	288	286	291	292	291	287	288	295	295	298	295	295	294	293	291	289	288	286	290	958
29			279	262	280	276	284	282	265	261	277	284	287	284	282	287	292	316	315	309	315	313	346	357	342	341	297	1136
Mean			279	281	274	271	276	278	281	284	287	289	291	293	294	297	303	312	316	318	326	324	319	308	298	284	295	
Sum 7000+			1078	1136	954	845	1017	1068	1134	1223	1333	1393	1430	1499	1528	1622	1789	2055	2166	2235	2454	2390	2239	1943	1642	1231		Grand Total 205,404

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

4 LERWICK

FEBRUARY 1960

	TERRESTRIAL MAGNETIC ELEMENTS										3-hr. range indices K	Sum of K indices	Magnetic character of day, C (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.	γ	h. m.	γ	h. m.	γ								
1	05 27	575	507	14 00	68	13 08	57.6	43.0	08 28	14.6	16 31	324	275	05 20	49	0,1,1,2,3,2,2,1	12	0	77.5
2	19 42	890	478	22 51	412	19 12	66.9	31.0	23 05	35.9	18 36	439	263	22 47	176	1,1,0,2,3,4,6,4	21	1	77.9
3	17 51	568	419	23 19	149	18 06	64.2	25.6	23 47	38.6	18 18	393	156	23 12	237	2,2,2,3,3,3,4,5	24	1	78.4
4	19 10	607	503	13 02	104	12 40	55.1	30.0	00 00	25.1	21 21	399	213	00 07	186	3,3,3,2,2,2,4,4	23	1	78.8
5	16 02	591	497	11 39	94	15 17	65.5	27.0	22 54	38.5	16 14	387	292	10 40	95	1,0,1,3,3,3,2,4	17	1	78.9
6	16 27	587	336	02 57	251	16 49	58.6	31.3	05 14	27.3	17 33	340	159	03 30	181	5,5,3,2,2,3,2,1	23	1	78.8
7 q	07 22	558	519	12 39	39	14 50	50.1	42.6	00 15	7.5	11 48	307	275	04 31	32	2,2,1,1,1,0,0,0	7	0	78.8
8	08 06	561	503	12 33	58	14 27	54.6	42.2	10 08	12.4	18 14	349	283	08 08	66	0,0,1,2,2,2,2,1	10	0	78.7
9 q	18 25	566	527	10 51	39	13 27	50.8	38.3	01 05	12.5	11 10	303	257	01 42	46	3,2,0,1,0,1,1,1	9	0	79.0
10 q	04 31	569	534	12 28	35	11 57	54.2	43.7	09 30	10.5	15 24	304	280	06 25	24	0,1,1,2,1,1,1,0	7	0	79.1
11	17 03	568	521	21 02	47	18 29	54.2	37.5	21 51	16.7	18 35	367	281	10 43	86	0,0,0,2,1,2,3,3	11	0	78.4
12	19 43	560	516	13 13	44	13 35	50.2	29.7	01 26	20.5	00 02	304	248	02 00	56	3,2,1,1,1,1,0,0	9	0	78.0
13	21 08	634	269	23 45	365	21 10	54.6	19.4	23 52	35.2	20 55	354	215	22 56	139	0,0,2,1,1,1,3,6	14	1	77.8
14 d	20 04	734	351	00 01	383	15 45	60.1	7.5	20 30	52.6	20 04	462	188	03 33	274	5,3,3,2,3,3,6,3	28	1	77.4
15	23 12	549	516	16 00	33	14 40	55.5	37.0	17 27	18.5	17 23	369	293	01 51	76	1,0,1,1,3,3,3,1	13	0	77.6
16 d	22 17	600	480	22 53	120	15 14	67.2	33.8	02 28	33.4	15 45	375	155	23 38	220	4,2,2,3,4,4,2,5	26	1	77.7
17 d	22 11	596	494	24 00	102	18 03	64.2	32.6	22 27	31.6	18 39	430	173	00 00	257	4,2,3,2,3,3,4,4	25	1	77.5
18 d	00 36	670	368	02 11	302	06 19	57.5	29.0	19 05	28.5	18 59	392	128	03 24	264	6,4,4,2,2,3,4,2	27	1	77.3
19	19 15	603	404	24 00	199	11 20	52.2	18.8	20 51	33.4	17 44	376	175	24 00	201	2,1,2,2,2,4,4,5	22	1	77.2
20	22 57	580	368	00 05	212	01 37	55.1	17.7	00 45	37.4	16 46	335	137	00 28	198	5,3,2,1,2,3,1,3	20	1	77.0
21 d	20 54	573	493	10 43	80	07 14	52.2	27.6	16 56	24.6	16 52	370	212	03 09	158	3,3,3,3,2,4,3,3	24	1	77.7
22	21 03	581	525	11 30	56	11 54	53.1	30.3	20 20	22.8	20 18	325	281	21 18	44	1,1,2,2,2,2,3,3	16	0	77.6
23	16 09	560	518	13 28	42	14 02	52.3	34.1	17 19	18.2	17 17	339	273	06 52	66	1,2,1,2,2,3,2,2	15	1	77.8
24 q	06 56	561	533	11 33	28	13 00	50.7	43.2	09 17	7.5	00 45	298	277	06 45	21	1,1,1,0,1,1,1,0	6	0	77.6
25 q	22 48	569	526	11 26	43	13 48	52.5	39.5	22 44	13.0	21 36	300	272	22 34	28	1,0,1,2,1,1,1,2	9	0	77.7
26	15 24	579	525	10 47	54	15 25	55.1	42.6	23 23	12.5	16 40	307	275	24 00	32	1,0,0,2,1,3,1,2	10	0	77.9
27	07 04	580	486	04 08	94	13 15	57.8	32.8	18 40	25.0	18 37	341	177	03 05	164	4,3,3,3,2,2,3,3	23	1	78.0
28	23 37	566	518	11 08	48	13 31	53.8	42.5	08 04	11.3	15 30	301	254	00 00	47	3,1,2,2,1,1,1,0	11	0	78.2
29	06 48	576	510	10 53	66	14 32	59.3	33.6	21 43	25.7	21 55	375	246	06 51	129	3,3,3,2,2,2,3,3	21	1	78.8
Mean	- -	597	474 - -	123	- -	56.4	32.5 - -	23.8	- -	354	231 - -	122	-	-	-	-	0.55	-	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 1960	
	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 11,000+
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ		
1	549	538	534	533	552	546	545	553	546	534	530	535	529	517	527	547	560	561	589	611	563	544	548	550	548	2141
2 d	543	523	513	540	536	531	535	539	511	515	517	520	510	516	515	547	563	558	571	551	551	548	547	538	535	1838
3 d	531	544	542	538	531	541	549	525	535	519	509	528	522	554	555	545	543	568	566	551	548	546	547	555	541	1992
4	543	534	543	545	545	547	544	543	537	533	527	516	516	520	563	596	577	585	546	543	552	543	540	530	545	2068
5	544	543	541	537	532	540	550	532	529	534	528	527	527	534	525	552	560	564	569	567	559	527	534	563	542	2018
6	547	544	544	548	542	548	562	556	548	536	521	532	531	535	539	550	560	547	555	548	544	542	550	548	545	2077
7 q	548	549	551	551	556	558	558	555	547	532	523	519	523	533	540	544	544	549	557	559	562	559	560	559	547	2136
8	560	559	560	562	565	569	546	553	555	536	522	515	518	515	529	522	523	533	541	547	556	554	551	549	543	2040
9	552	553	555	554	554	560	555	554	549	539	519	516	518	527	545	530	543	557	534	537	559	558	555	555	545	2078
10	556	554	559	556	558	556	556	556	523	466	483	503	510	507	522	536	548	539	555	543	543	547	552	553	537	1881
11 d	545	540	546	545	549	534	559	559	542	527	524	481	501	518	534	541	587	596	544	535	547	541	538	535	540	1968
12	533	535	540	542	545	547	548	537	528	513	513	515	513	520	531	537	541	543	548	554	553	553	556	549	537	1894
13 q	545	545	544	549	552	549	555	542	533	518	504	504	510	520	530	542	545	556	553	557	556	550	559	556	541	1974
14	550	554	552	551	552	558	556	551	543	520	514	520	523	531	539	557	551	561	564	567	568	567	566	571	549	2186
15	562	562	559	558	555	557	559	556	547	534	526	524	539	547	566	588	597	616	699	617	579	595	579	482	567	2603
16 d	318	189	216	293	284	336	525	542	513	514	509	509	506	498	513	521	568	564	610	672	566	538	399	480	466	183
17	530	501	512	495	517	543	546	532	507	520	511	505	502	514	524	533	550	548	547	546	551	543	544	547	528	1668
18	545	541	529	540	540	539	531	553	543	531	527	521	521	516	531	542	546	551	551	553	555	558	563	558	541	1985
19	545	553	546	545	549	553	556	556	546	522	512	503	513	522	530	543	521	543	551	554	553	556	556	556	541	1984
20 q	554	547	548	548	547	543	554	553	546	536	524	524	529	536	542	546	548	553	557	558	561	561	559	559	547	2133
21	559	557	556	552	555	557	559	556	547	539	528	521	530	530	531	537	548	553	554	557	558	552	552	554	548	2142
22 q	550	545	546	550	554	558	556	545	541	529	518	521	526	524	539	546	551	556	559	561	560	561	561	560	547	2117
23 q	564	558	559	556	555	553	559	554	543	531	515	514	522	532	541	552	554	556	559	561	564	565	570	559	550	2196
24	555	541	553	568	568	568	566	558	545	535	522	520	523	533	541	578	561	562	574	575	559	569	568	558	554	2300
25	553	555	555	558	560	565	567	564	556	539	525	528	531	532	539	543	546	554	571	565	562	561	563	565	552	2257
26	531	547	549	554	554	555	560	555	556	524	522	526	531	530	539	546	551	556	567	566	567	565	565	564	549	2180
27	562	558	563	561	548	553	559	559	538	523	512	505	509	518	526	533	542	550	559	566	568	567	566	563	546	2108
28	560	560	559	559	557	566	566	560	546	522	509	500	504	528	539	559	574	541	568	597	564	556	556	523	549	2173
29	434	426	482	501	530	543	551	525	511	525	514	506	507	516	524	333	541	555	561	561	560	564	562	566	525	1598
30	521	561	547	551	551	545	546	548	541	527	510	515	533	523	560	603	642	613	642	622	597	545	473	511	555	2327
31 d	504	513	491	500	523	523	522	504	489	492	480	430	526	539	564	633	1080	1010	816	838	734	403	-2	-306	534	1806
Mean	535	530	532	537	539	543	552	548	537	525	516	513	519	525	537	551	570	574	575	572	565	550	530	526	542	
Sum 15,000+	1593	1429	1494	1640	1716	1841	2100	1975	1641	1265	998	903	1103	1285	1643	2082	2665	2798	2837	2739	2519	2038	1437	1310		Grand Total 403,051

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

2 LERWICK (D)													9° +													MARCH 1960	
	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 800.0+	
1	44.2	43.2	41.8	40.5	39.1	38.5	43.7	42.1	44.1	43.9	46.1	50.1	51.6	51.2	51.9	53.5	53.8	51.8	57.4	49.9	37.1	38.7	39.4	44.0	45.7	297.6	
2 d	43.6	39.5	25.7	39.4	40.1	41.4	43.2	43.6	45.3	47.8	47.1	52.1	53.5	54.7	51.7	52.5	52.6	46.9	46.7	45.0	45.0	43.7	33.8	40.5	44.8	275.4	
3 d	40.6	41.5	37.4	36.8	42.1	40.0	40.2	43.1	48.3	48.7	47.7	52.5	53.5	55.1	56.5	55.6	49.4	50.1	42.7	46.0	43.9	44.1	44.0	36.4	45.7	296.2	
4	39.2	40.3	42.4	41.2	43.5	43.4	42.2	42.0	42.3	43.3	46.1	49.6	51.8	54.7	59.7	52.5	57.5	58.7	50.0	45.8	44.2	45.9	40.0	39.3	46.5	315.6	
5	40.1	40.5	41.4	41.1	42.2	41.2	39.4	41.3	46.3	45.5	47.7	50.8	52.7	56.2	53.5	53.0	52.7	51.2	51.5	50.2	44.0	47.0	41.9	39.0	46.3	310.4	
6	41.0	42.8	42.2	42.0	44.0	45.9	44.3	43.3	42.9	44.2	45.3	47.7	51.7	52.6	51.7	49.8	48.9	47.4	46.0	41.4	33.7	43.1	45.1	43.9	45.0	280.9	
7 q	43.9	45.1	45.0	45.1	44.2	43.9	43.8	42.6	41.4	42.0	44.7	48.9	51.8	53.2	53.1	50.7	48.6	48.0	48.1	47.4	47.0	46.0	45.0	45.3	46.5	314.8	
8	46.0	45.7	46.2	45.4	45.0	43.1	44.9	49.8	46.8	43.3	45.3	50.7	56.5	56.7	56.5	53.0	49.8	47.6	46.3	45.9	46.0	45.6	43.4	39.3	47.5	338.8	
9	42.2	45.0	44.2	45.9	45.9	43.9	44.8	43.9	42.4	43.0	45.9	48.9	52.1	53.1	53.7	49.8	48.8	47.7	47.0	46.7	46.3	45.4	44.9	45.8	46.6	317.3	
10	46.3	45.9	45.6	44.8	43.6	43.1	42.7	43.1	42.1	46.3	51.3	51.0	53.9	54.2	52.9	52.8	49.7	45.9	45.1	32.4	39.8	43.3	45.3	46.4	46.1	307.5	
11 d	45.2	47.8	41.2	42.7	43.3	49.1	46.7	46.0	44.9	44.2	47.5	47.7	50.8	53.0	53.8	50.8	49.4	44.6	39.1	44.9	42.9	44.1	45.0	47.0	46.3	311.7	
12	47.1	48.9	46.3	45.0	42.7	42.3	42.3	42.9	44.1	45.0	45.9	49.2	51.7	51.9	50.8	49.9	45.7	43.8	46.9	46.0	46.0	44.8	41.1	42.5	45.9	302.8	
13 q	43.8	44.2	46.6	45.0	44.5	44.2	43.3	41.7	40.1	40.2	42.2	46.8	51.1	53.0	51.8	49.6	46.2	45.0	42.3	44.4	43.5	44.4	43.2	45.1	45.1	282.2	
14	45.9	45.2	44.5	44.2	44.1	44.1	43.3	42.1	40.8	42.7	46.2	48.7	51.8	52.8	51.7	51.6	48.7	48.3	47.9	47.9	47.6	46.5	45.9	45.5	46.6	318.0	
15	45.0	44.5	44.2	44.1	43.9	43.6	42.7	41.1	40.0	40.2	42.8	47.1	52.7	55.5	58.1	60.2	64.9	59.7	60.5	41.5	49.0	45.8	43.8	35.3	47.8	346.2	
16 d	19.1	16.7	-9.2	-17.1	11.7	17.5	41.4	40.7	41.1	46.6	47.7	48.9	52.1	51.7	51.9	49.8	48.9	46.1	45.5	41.1	33.3	37.9	36.4	48.9	35.4	48.7	
17	42.2	46.1	45.2	45.0	46.0	42.2	41.1	40.3	41.2	40.5	44.6	48.4	51.1	52.4	53.0	52.6	48.3	47.0	44.8	41.7	34.8	38.7	43.3	45.3	44.8	275.8	
18	46.1	49.0	47.1	44.9	41.0	43.3	45.6	42.9	42.0	40.7	42.9	46.7	49.8	51.1	50.1	48.2	46.1	45.2	45.8	45.6	45.6	45.1	43.6	37.8	45.3	286.2	
19	46.4	46.8	42.1	42.1	42.9	43.1	42.9	42.1	40.7	44.1	45.3	48.8	52.5	54.9	54.7	54.2	50.8	47.2	45.7	44.8	44.1	45.9	46.1	46.0	46.4	314.2	
20 q	45.9	46.2	45.0	44.0	44.1	44.4	43.8	41.4	40.3	41.5	43.6	46.7	49.3	50.8	50.0	48.2	47.1	46.0	46.0	46.0	45.5	45.3	45.7	45.9	45.4	292.7	
21	44.9	45.0	44.7	43.9	43.8	42.7	42.1	40.3	39.2	41.1	42.8	45.9	51.3	50.8	50.9	49.9	48.6	47.0	46.5	45.9	45.3	45.3	45.3	45.1	45.3	288.3	
22 q	44.7	44.7	44.3	43.9	44.9	42.7	41.9	40.5	39.9	40.2	41.8	46.1	50.8	51.7	50.8	49.8	48.8	47.7	46.9	46.9	45.8	45.4	45.1	47.5	45.5	292.8	
23 q	48.1	45.8	44.1	43.0	43.0	43.2	43.0	41.8	41.6	42.4	45.0	48.8	52.5	54.7	53.5	51.8	49.9	48.1	47.7	47.1	46.9	46.3	39.2	41.1	46.2	308.6	
24	42.1	50.3	45.5	39.5	40.0	39.0	40.5	40.6	42.1	43.7	45.5	48.7	51.1	52.4	52.0	53.6	50.3	47.8	49.0	43.7	43.7	45.5	47.1	45.5	45.8	299.2	
25	45.3	44.6	44.8	44.7	43.5	42.7	42.6	41.1	41.4	41.7	44.3	47.8	51.1	52.0	49.6	47.9	45.8	44.5	44.4	44.3	45.0	45.0	45.6	40.0	45.0	279.7	
26	38.0	39.5	44.4	42.6	42.0	41.6	40.6	39.9	40.5	42.7	43.8	47.6	50.2	52.1	49.9	49.2	46.6	47.2	46.6	45.8	46.2	46.2	46.0	44.8	44.7	274.0	
27	44.4	44.3	43.8	41.7	42.6	42.7	41.5	39.0	38.7	40.1	43.8	48.6	52.8	53.8	53.3	51.2	49.2	47.4	46.7	46.4	46.2	46.4	46.1	45.6	45.7	296.3	
28	45.0	44.0	43.6	43.1	42.4	41.6	42.1	41.4	40.6	42.4	46.8	54.8	55.2	55.2	54.8	54.6	53.1	48.1	48.2	48.1	31.0	31.5	38.6	39.0	45.2	285.2	
29	36.7	28.2	36.9	35.4	39.3	42.4	39.5	38.0	41.9	42.7	43.0	46.5	50.1	51.7	51.4	49.5	47.4	46.5	45.5	46.5	47.3	46.4	47.0	51.7	43.8	251.5	
30	45.6	39.4	38.5	40.8	39.5	38.9	41.1	39.6	38.5	40.4	44.4	48.7	55.1	54.7	56.8	55.1	54.6	53.2	56.2	51.0	49.1	38.1	33.7	36.6	45.4	289.6	
31 d	30.1	23.2	23.4	27.3	34.4	34.6	38.8	40.7	39.5	38.9	36.8	35.8	55.7	61.0	68.4	73.1	91.5	55.8	66.2	75.2	60.7	52.1	32.3	21.8	46.1	307.3	
Mean	42.5	42.4	40.6	40.3	41.6	41.6	42.5	41.9	42.0	42.9	45.0	48.1	52.2	53.5	53.5	52.4	51.4	48.4	48.0	46.3	44.1	44.2	42.7	42.5	45.4		
Sum 1200.0+	118.7	113.9	58.9	48.0	89.3	90.3	116.0	98.9	101.0	130.0	193.9	290.6	417.9	458.9	458.5	424.0	393.7	301.5	289.2	235.5	166.5	169.5	122.9	117.9		Grand Total 33805.5	

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 1960			
	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	299	294	264	246	268	281	287	286	283	283	279	281	289	292	297	301	319	339	355	389	358	306	301	307	300	2204	
2 d	γ	304	272	198	259	280	272	275	281	291	293	288	287	305	306	303	302	321	336	355	377	352	332	312	290	300	2191	
3 d	γ	278	259	272	279	266	232	250	276	273	286	288	288	305	324	332	344	336	339	371	348	343	322	312	284	300	2207	
4	γ	284	284	284	288	294	289	294	296	302	304	299	299	301	315	331	386	363	395	426	379	344	330	287	268	318	2642	
5	γ	272	283	286	290	286	260	264	279	279	286	289	291	291	295	298	295	300	304	317	341	356	275	236	240	288	1913	
6	γ	255	283	273	283	272	270	281	289	292	297	298	291	292	298	306	308	315	320	310	321	322	306	298	297	295	2077	
7 q	γ	293	295	296	297	293	293	293	297	300	301	298	295	291	290	296	301	301	295	294	294	294	296	295	295	296	2093	
8	γ	291	292	291	287	285	283	289	276	275	282	285	287	292	309	316	325	328	322	315	302	294	296	296	285	296	2103	
9	γ	290	290	290	286	286	284	286	285	289	290	293	289	289	290	293	310	300	300	297	206	293	292	293	290	292	2001	
10	γ	291	291	287	291	289	289	289	289	295	307	287	292	298	294	300	320	356	356	360	380	330	305	294	291	308	2381	
11 d	γ	285	244	258	284	291	282	272	284	291	296	291	319	349	329	325	327	339	429	408	351	306	298	301	264	309	2423	
12	γ	262	257	277	295	300	300	298	298	298	298	301	301	303	311	310	318	330	329	313	306	304	301	293	292	300	2195	
13 q	γ	287	289	297	294	298	300	294	297	298	295	294	291	291	292	300	307	311	313	312	306	304	285	276	282	296	2113	
14	γ	291	293	298	299	298	294	295	295	294	296	294	290	293	294	298	301	302	296	295	293	291	291	291	290	295	2072	
15	γ	295	295	298	300	300	299	299	299	296	295	297	295	287	284	289	298	316	354	408	476	396	382	373	373	308	326	2813
16 d	γ	291	306	251	100	29	52	166	277	304	316	322	324	332	333	330	331	344	402	423	396	373	330	210	158	279	1700	
17	γ	239	267	244	267	267	261	303	311	313	313	314	313	316	317	324	328	351	347	348	332	318	309	299	284	304	2285	
18	γ	282	278	286	293	293	298	295	294	301	301	301	302	299	302	307	315	320	311	306	306	303	301	291	267	298	2152	
19	γ	275	267	282	290	294	294	296	297	298	302	300	300	295	300	316	333	338	322	312	310	310	302	299	296	301	2228	
20 q	γ	293	294	294	296	300	299	298	301	303	304	304	299	298	298	298	302	301	300	300	299	300	301	299	297	299	2178	
21	γ	292	292	293	294	294	294	293	295	298	298	299	296	298	313	315	307	298	294	293	294	297	291	295	295	297	2128	
22 q	γ	291	291	291	295	291	291	295	298	305	301	299	292	290	297	299	294	292	290	291	294	296	298	294	286	294	2061	
23 q	γ	270	283	286	289	290	287	287	287	289	291	295	287	284	284	286	289	291	292	291	293	292	293	284	269	287	1889	
24	γ	269	262	215	225	244	262	269	277	280	280	284	279	277	278	291	298	327	322	319	325	316	297	289	294	282	1779	
25	γ	296	295	295	292	289	289	286	286	286	291	290	286	286	287	287	290	293	290	289	293	291	290	287	270	289	1934	
26	γ	262	271	284	284	290	290	290	286	287	283	279	276	280	285	297	294	300	292	289	287	285	284	284	286	285	1845	
27	γ	287	290	283	287	288	280	277	280	287	286	286	282	281	278	284	285	289	289	285	285	284	284	284	286	284	1827	
28	γ	290	291	293	291	291	287	286	285	285	284	287	284	279	285	294	303	340	352	320	330	288	245	249	225	290	1964	
29	γ	203	162	180	215	251	283	284	281	270	273	283	284	283	291	296	300	298	298	300	300	294	294	283	205	267	1411	
30	γ	163	191	252	279	285	286	284	285	285	285	284	278	280	286	286	315	353	362	403	439	412	347	299	264	300	2203	
31 d	γ	229	205	184	200	241	240	231	240	256	272	292	319	339	345	313	329	206	8	325	99	232	304	434	-72	240	771	
Mean	γ	275	273	270	273	275	275	281	287	290	293	293	293	297	300	304	312	317	318	332	322	315	303	295	264	294		
Sum 8000+	γ	509	466	382	475	513	521	726	904	1002	1091	1098	1089	1190	1307	1426	1674	1816	1852	2298	1971	1764	1378	1138	193		Grand Total 218,783	

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

4 LERWICK

MARCH 1960

	TERRESTRIAL MAGNETIC ELEMENTS										3-hr. range indices K	Sum of K indices	Magnetic character of day, C (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	20 02	714	504	03 04	210	18 53	64.3	29.2	20 18	35.1	20 03	443	232	03 19	211	3,3,2,2,3,3,5,3	24	1	79.0
2 d	18 50	593	487	02 01	106	13 28	57.4	21.5	02 10	35.9	19 20	391	179	02 17	212	4,3,3,3,2,3,3,4	25	1	79.0
3 d	23 18	577	494	10 09	83	15 08	61.4	27.6	23 15	33.8	18 33	384	223	05 05	161	3,3,3,3,3,3,3,3	24	1	79.0
4	14 51	615	506	23 11	109	17 48	66.8	31.3	22 38	35.5	18 07	453	223	05 06	230	2,2,2,2,4,4,4,4	24	1	79.0
5 d	20 59	593	510	21 47	83	13 46	58.4	34.5	22 57	23.9	20 52	366	217	22 08	149	2,2,3,1,3,2,3,4	20	1	78.8
6	16 55	566	515	10 08	51	13 47	53.3	30.8	20 25	22.5	20 00	338	247	00 15	91	3,2,2,2,2,2,3,2	18	1	78.8
7 q	20 43	564	515	11 50	49	13 44	54.2	40.7	08 20	13.5	15 55	304	288	13 31	16	1,1,1,2,1,1,1,0	8	0	78.7
8	05 44	572	508	11 47	64	12 37	58.5	35.9	23 42	22.6	15 48	332	271	08 00	61	0,1,2,2,2,2,2,2	13	0	78.3
9	20 51	572	508	11 18	64	14 34	55.6	38.2	00 01	17.4	15 10	311	281	05 42	30	2,1,2,2,3,3,2,2	16	0	78.0
10	16 08	574	446	09 41	128	09 57	56.4	30.6	19 52	25.8	19 24	389	282	10 12	107	1,2,3,4,2,3,4,2	21	1	78.0
11 d	17 39	641	438	11 40	203	12 04	56.1	31.4	18 01	24.7	17 42	467	222	01 31	245	3,3,3,4,3,5,5,3	29	1	78.2
12	22 19	566	509	13 22	57	13 12	53.5	40.0	22 43	13.5	16 32	334	251	01 41	83	3,1,2,2,2,2,2,2	16	0	78.2
13 q	21 02	574	500	11 03	74	13 35	53.7	39.2	08 42	14.5	18 05	317	272	22 50	45	2,1,1,1,1,2,2,2	12	0	78.3
14	23 15	574	510	10 00	64	15 28	53.7	38.3	08 09	15.4	16 03	309	284	00 00	25	1,1,2,1,1,3,0,1	10	0	78.3
15	19 06	745	321	24 00	424	18 48	70.5	23.0	23 57	47.5	19 00	516	264	23 39	252	1,0,1,1,2,4,5,6	20	1	78.7
16 d	20 02	713	45	01 50	668	23 16	63.0	-48.6	03 49	111.6	18 52	450	-64	04 16	514	6,6,5,2,3,4,5,6	37	2	78.4
17	15 58	590	472	03 36	118	14 21	54.6	20.3	20 12	34.3	20 05	362	215	00 08	147	3,3,3,3,2,3,4,3	24	1	78.8
18	23 02	587	510	13 38	77	13 34	52.0	34.2	23 28	17.8	16 05	323	258	23 09	65	2,2,3,2,2,1,0,3	15	0	78.5
19	14 43	566	487	11 49	79	13 51	57.1	39.2	08 39	17.9	16 03	344	264	01 33	80	3,1,1,2,3,3,1,1	15	0	78.5
20 q	21 06	563	522	10 42	41	13 18	51.5	38.7	08 49	12.8	10 13	307	287	00 07	20	1,1,2,0,1,1,0,1	7	0	78.5
21	05 58	563	501	13 01	62	13 39	54.9	38.2	08 31	16.7	13 56	322	289	01 43	33	1,1,1,2,3,2,0,0	10	0	78.7
22 q	23 02	566	512	13 20	54	12 59	53.8	37.8	09 18	16.0	08 42	308	277	23 50	31	0,0,0,1,2,1,1,2	7	0	78.8
23 q	22 20	578	511	10 29	67	13 55	55.0	36.3	22 45	18.7	21 22	298	262	23 53	36	2,1,0,0,1,0,1,0,3	8	0	78.7
24	15 45	613	514	10 54	99	01 45	59.0	37.6	03 58	21.4	19 09	338	210	02 23	128	4,3,2,1,1,4,3,2	20	1	78.7
25	23 48	587	520	10 26	67	13 12	53.4	32.1	23 48	21.3	01 03	298	240	23 53	58	1,1,1,1,2,1,2,3	12	0	79.0
26	18 54	572	513	00 26	59	13 35	53.2	33.5	00 01	19.7	16 40	301	246	00 00	55	3,1,1,2,2,1,1,1	12	0	78.8
27	20 13	569	495	11 08	74	13 33	54.3	37.6	08 19	16.7	01 40	293	276	13 28	17	1,2,2,2,1,1,0,1	10	0	78.8
28	19 50	623	470	24 00	153	16 05	56.5	21.6	20 21	34.9	19 41	365	202	23 52	163	1,1,2,3,2,3,5,4	21	1	78.8
29	23 10	585	393	00 52	192	23 36	55.0	19.4	01 42	35.6	18 27	303	150	01 06	153	4,4,3,2,1,2,1,4	21	1	78.9
30	18 27	654	443	22 36	211	14 41	58.0	23.4	23 28	34.6	19 09	456	150	00 24	306	4,2,2,2,3,4,4,5	26	1	78.5
31 d	16 41	1488	-843	23 49	2331	16 44	121.8	-45.7	23 32	167.5	22 35	743	-459	23 39	1202	4,3,3,5,4,8,7,9	43	2	78.6
Mean	- -	628	430 - -	197	- -	58.9		27.3 - -	31.6	- -	370		211 - -	159	-	-	0.58		78.6

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 1960	
	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					
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	γ			
2	-114	308	491	-363	-147	429	521	516	542	617	578	719	1229	1197	1424	1246	946	660	391	174	-41	57	80	94	481	2554			
3	-13	-106	321	407	376	377	406	385	414	503	489	523	538	504	502	497	490	494	512	522	527	526	527	529	427	1250			
3 d	531	324	400	323	219	356	306	411	508	516	492	489	482	484	494	503	530	538	547	534	528	522	519	518	461	2074			
4	519	516	521	521	518	522	523	522	513	497	488	488	481	497	497	532	526	575	565	540	539	353	516	537	513	3306			
5	536	528	540	557	530	531	530	534	529	500	494	486	489	510	568	730	664	591	566	532	535	532	537	535	545	4084			
6	532	529	527	527	524	526	522	522	512	504	497	501	509	516	537	518	552	565	552	568	564	536	537	531	529	3708			
7	513	506	495	524	518	533	536	527	518	505	497	498	504	515	533	572	574	685	777	690	563	521	504	537	548	4145			
8	527	483	433	454	515	535	529	515	514	495	501	503	497	511	521	538	563	570	550	559	553	549	548	548	521	3511			
9 q	553	525	514	491	523	536	536	536	520	511	517	513	501	511	515	522	529	546	556	560	556	557	557	556	531	3741			
10	552	555	559	561	552	548	559	553	536	518	508	507	507	511	531	552	552	574	608	581	549	400	136	72	503	3081			
11	420	456	502	542	540	544	540	540	524	510	494	490	496	518	545	573	549	578	602	581	559	543	513	454	526	3613			
12	366	410	458	507	528	530	530	514	461	497	497	495	509	530	513	531	530	585	582	563	554	548	563	561	515	3362			
13	537	530	453	507	531	491	508	517	505	509	500	496	505	521	522	534	545	571	571	566	565	556	549	533	526	3622			
14	500	505	543	549	541	545	549	543	526	511	499	490	494	515	522	541	552	568	585	573	566	554	560	561	537	3892			
15	559	529	536	558	521	469	545	542	538	518	510	498	507	515	531	552	556	571	578	574	567	563	558	561	540	3956			
16	546	536	541	541	546	553	556	549	534	518	506	507	531	597	675	675	731	718	602	571	576	547	539	419	567	4614			
17	484	522	383	463	529	547	547	538	521	489	485	483	498	521	521	539	567	591	623	622	594	536	511	536	527	3650			
18	516	298	441	533	553	548	524	523	530	512	481	485	494	497	514	543	568	590	566	561	556	556	555	562	521	3506			
19 q	547	545	537	537	533	542	541	530	518	508	503	500	511	514	516	529	542	550	554	558	555	552	553	551	534	3826			
20 q	551	551	550	550	552	552	545	530	518	507	496	496	507	517	525	537	547	553	556	559	559	556	555	557	539	3926			
21 q	556	556	556	556	553	552	546	537	524	512	510	504	507	518	535	544	556	571	572	574	570	568	571	575	547	4123			
22 q	571	562	560	559	559	563	556	552	543	531	529	526	530	538	549	553	556	564	574	572	571	568	567	567	555	4320			
23	567	567	563	563	559	559	556	542	529	516	515	518	525	540	545	557	571	573	581	597	597	564	473	235	538	3912			
24 d	109	-123	27	155	218	448	494	487	506	504	508	492	528	627	623	613	597	640	715	598	451	203	276	297	416	993			
25	69	280	415	533	533	497	501	515	477	468	497	482	496	556	673	662	715	662	629	598	472	389	438	466	501	3023			
26	448	414	505	545	553	545	528	512	496	486	491	493	508	527	544	585	616	616	609	583	556	544	529	496	530	3729			
27	511	545	542	544	533	524	523	515	514	505	499	496	511	530	548	556	559	567	584	582	559	468	284	-2	500	2997			
28 d	-181	22	-2	120	454	499	409	284	378	415	482	544	595	681	687	733	818	892	900	627	550	524	463	388	470	2282			
29	279	-64	448	516	394	240	407	420	484	485	499	504	523	510	550	549	586	568	609	575	530	530	522	403	461	2067			
30 d	444	501	76	113	424	506	458	449	485	491	497	491	565	972	1331	1050	1023	578	617	645	513	459	507	433	568	4628			
Mean	418	410	448	450	476	505	511	505	507	505	502	507	536	567	603	605	607	597	594	565	530	496	485	454	516				
Sum 12,000+	535	310	1435	1493	2282	3147	3331	3160	3217	3158	3059	3217	4077	5000	6091	6166	6210	5904	5833	4939	3893	2881	2547	1610		Grand Total 371,495			

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

2 LERWICK (D)													9° +													APRIL 1960		
	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	-33.9	16.0	31.1	-20.4	-9.3	22.0	20.8	21.5	21.0	29.0	51.2	38.0	19.8	20.0	22.0	49.7	80.6	132.7	66.1	60.2	92.1	52.0	22.9	41.1	35.3	46.2		
2	6.9	30.3	7.8	29.0	50.5	47.9	41.4	42.8	37.5	31.1	31.9	36.9	42.1	47.6	47.6	45.5	44.5	43.1	42.1	42.6	43.1	43.1	41.5	42.5	38.3	119.3		
3 d	39.7	10.9	32.0	34.9	33.0	30.2	55.0	49.3	40.5	40.0	42.8	43.7	47.9	47.4	46.2	43.8	45.3	44.0	45.6	44.4	44.2	42.7	42.1	41.8	41.1	187.4		
4	41.2	40.6	40.0	39.6	39.2	38.6	37.6	35.8	34.7	39.2	42.3	45.0	46.8	47.7	46.3	46.3	44.0	42.6	42.5	44.4	44.0	40.7	35.6	40.6	41.5	195.3		
5	43.7	45.0	37.5	40.8	40.4	41.2	40.2	35.9	37.7	41.0	43.7	47.9	50.1	53.2	53.6	39.2	47.5	50.0	48.1	46.5	47.4	45.0	43.8	43.6	44.3	263.0		
6	44.0	42.9	41.6	40.7	39.9	39.1	39.2	37.8	38.7	40.7	43.4	46.9	50.4	50.8	50.1	47.9	47.2	47.3	46.4	45.4	38.3	29.6	39.7	45.8	43.1	233.8		
7	46.4	45.0	39.6	37.7	36.4	38.3	35.9	36.6	36.8	38.9	42.1	45.8	49.2	51.0	51.7	52.1	51.9	53.2	58.2	41.4	37.3	39.2	31.3	40.7	43.2	236.7		
8	43.1	44.5	43.6	44.7	39.6	36.7	36.6	38.8	36.8	40.7	43.9	49.8	51.7	51.9	50.5	47.8	43.6	37.7	43.5	44.4	44.5	44.8	44.4	43.1	43.6	246.7		
9 q	42.1	40.5	44.3	44.4	43.8	41.8	44.5	41.4	41.4	45.5	44.6	48.4	50.3	51.1	49.3	47.3	45.8	44.7	45.0	45.5	45.4	45.0	45.2	45.0	45.1	282.3		
10	43.6	44.3	40.9	38.8	37.3	36.6	41.2	43.6	41.8	44.4	47.9	50.3	54.0	56.2	60.9	58.6	52.9	50.2	38.0	33.4	42.0	30.3	34.2	4.2	42.7	225.6		
11	27.9	30.2	33.8	34.9	39.6	44.0	42.1	38.0	38.9	40.6	44.3	46.9	50.5	52.1	52.1	50.8	47.4	47.4	43.5	41.9	44.3	40.2	42.4	36.2	42.1	210.0		
12	42.0	32.2	33.5	34.7	37.1	38.9	38.7	42.4	41.7	40.4	41.4	45.0	49.0	48.5	48.9	47.8	45.4	45.5	42.8	43.5	45.3	39.9	40.0	47.2	42.2	211.8		
13	41.4	40.9	46.0	40.8	39.2	48.9	51.4	52.2	45.8	41.9	43.8	47.5	49.8	49.4	47.9	46.7	46.0	44.7	46.7	44.0	43.1	45.0	45.4	46.9	45.6	295.4		
14	47.9	43.8	40.7	40.2	41.4	39.9	42.3	39.8	37.6	37.7	40.7	45.6	48.8	50.4	49.6	48.4	47.1	44.2	41.2	44.7	45.6	40.2	43.6	42.6	43.5	244.0		
15	38.0	39.2	42.6	40.2	46.0	53.2	38.7	35.9	37.8	39.2	42.6	47.3	50.0	52.2	51.3	51.1	48.4	47.9	48.1	48.2	46.5	46.2	45.0	43.5	45.0	279.1		
16	43.6	41.4	42.4	40.6	39.7	38.7	39.2	37.0	36.8	39.7	44.0	49.3	54.1	58.2	53.0	57.9	58.2	49.2	50.3	49.2	38.7	41.7	45.4	39.2	45.3	287.5		
17	35.9	41.6	40.7	36.1	36.7	39.4	38.8	35.6	37.8	40.6	43.7	47.3	51.0	54.0	52.9	51.2	51.2	52.1	49.2	46.9	46.9	33.5	36.2	41.2	43.4	240.5		
18	43.1	49.2	38.3	41.7	40.9	39.6	42.5	42.3	39.7	40.7	44.4	46.2	50.2	51.5	50.8	49.1	47.4	43.7	44.0	45.6	45.5	45.2	44.4	42.9	44.5	268.9		
19 q	43.5	43.5	42.5	42.4	42.3	39.2	36.8	35.4	36.0	38.3	41.2	43.8	47.9	49.2	48.4	47.4	46.3	45.5	44.8	44.7	44.8	44.6	44.0	43.7	43.2	236.2		
20 q	43.1	43.1	43.1	42.0	41.0	40.0	36.8	35.9	35.8	36.9	40.5	44.5	48.9	50.4	49.6	48.6	47.6	47.9	47.1	46.3	45.7	45.5	45.0	44.4	43.8	43.6	245.9	
21 q	43.5	43.0	42.6	41.6	40.5	38.8	36.7	34.9	35.7	37.7	41.4	45.6	50.2	51.7	51.2	50.3	50.1	48.5	47.4	47.4	46.8	46.2	46.0	44.8	44.3	262.6		
22 q	41.6	43.6	42.6	41.9	40.7	40.7	40.7	40.2	41.8	43.6	46.9	50.3	51.3	52.2	50.3	47.9	46.3	45.4	46.2	45.9	46.4	46.3	45.7	46.4	45.2	284.9		
23	45.5	44.8	43.6	41.6	41.7	41.2	37.0	34.2	33.7	35.9	40.7	46.9	50.3	51.9	53.0	51.5	50.4	48.6	46.8	48.6	48.8	45.0	33.5	34.2	43.9	254.6		
24 d	4.7	-32.7	9.9	15.1	24.6	29.6	28.1	28.9	33.3	39.4	45.4	51.7	55.8	57.1	53.1	55.1	53.3	54.3	51.0	47.9	47.2	44.5	28.5	24.3	35.4	50.1		
25	28.3	21.2	20.5	34.9	35.8	34.1	40.7	38.1	34.0	44.2	48.4	49.3	54.9	58.1	53.2	57.7	52.9	50.3	53.2	51.3	47.7	42.9	40.4	33.7	42.7	225.8		
26	46.4	36.0	34.0	34.9	40.4	39.7	40.2	41.0	45.0	45.5	45.5	49.3	52.4	54.1	54.0	51.3	51.2	50.3	47.4	45.5	43.5	41.9	42.3	48.4	45.0	280.2		
27	44.5	42.5	43.4	41.8	39.9	38.3	36.4	35.9	36.8	39.6	45.5	49.8	52.3	55.2	54.3	53.2	49.8	46.4	46.6	45.5	51.1	51.7	37.7	19.4	44.1	258.7		
28 d	-2.6	10.7	-9.6	-7.7	28.0	33.0	34.7	38.8	33.9	45.8	46.3	48.2	53.2	54.4	54.5	66.7	71.5	74.4	89.1	50.8	41.7	46.5	44.7	41.1	41.3	192.1		
29	44.5	45.4	17.1	33.9	33.7	41.8	42.8	38.0	41.9	43.7	44.9	45.7	45.9	49.4	51.5	51.3	50.7	47.8	48.1	53.6	44.0	45.2	41.0	44.6	43.6	246.5		
30 d	42.1	38.3	6.3	11.4	17.8	33.0	26.0	27.5	32.3	34.5	38.2	43.8	21.4	37.2	39.5	64.9	103.5	132.6	89.2	94.8	73.7	32.2	40.0	39.8	46.7	320.5		
Mean	35.4	35.3	33.7	33.8	36.6	38.7	38.7	37.8	37.5	40.0	43.7	46.7	48.4	50.5	50.0	50.9	52.2	53.7	49.9	47.8	47.2	42.5	40.4	39.7	43.0			
Sum 1000.0+	61.7	57.9	12.4	13.3	97.3	160.2	160.2	135.0	125.4	201.2	309.8	400.1	451.8	515.2	500.9	526.0	566.5	609.6	497.4	433.9	415.4	276.3	211.8	192.3		Grand Total 30931.6		

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 1960											
	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 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 d	354	325	337	534	264	161	291	310	282	244	262	294	164	63	199	-142	-130	+6	208	394	636	543	402	256	262	1297											
2	219	239	151	199	234	240	262	316	334	374	405	403	372	349	332	333	336	338	335	333	332	316	292	307	2380												
3 d	246	224	219	171	101	155	198	210	289	300	316	330	339	333	326	325	323	329	329	335	327	323	321	322	279	1691											
4	317	319	319	318	321	322	322	321	320	325	327	322	322	319	325	329	345	352	359	344	315	202	250	290	317	2605											
5	306	268	250	259	252	266	296	307	306	313	316	318	321	313	327	416	402	386	387	369	329	324	306	309	319	2646											
6	309	315	315	316	315	314	313	310	312	310	309	305	313	330	333	329	313	317	318	314	341	314	309	313	316	2587											
7	279	262	251	256	261	276	295	306	312	314	309	306	302	301	306	322	357	425	415	414	373	286	264	294	312	2486											
8	309	288	214	214	260	299	303	299	299	308	320	317	317	313	316	323	351	373	339	318	321	315	311	299	305	2326											
9 q	289	274	262	255	230	254	262	271	290	302	305	309	311	310	310	313	314	311	312	312	315	313	307	305	293	2036											
10	299	299	295	303	303	299	294	289	294	295	295	297	310	332	333	346	363	373	419	363	331	220	382	274	317	2608											
11	130	196	239	279	299	313	317	321	323	322	329	325	329	319	317	334	351	339	377	364	349	312	256	188	301	2228											
12	111	74	99	163	206	266	289	290	303	307	310	314	321	349	353	341	335	335	365	351	331	294	237	196	273	1540											
13	244	254	221	234	262	219	210	209	262	290	299	302	305	310	321	322	324	325	319	321	324	315	310	268	282	1770											
14	226	222	276	293	301	301	299	302	309	315	314	316	318	315	317	318	322	331	339	338	321	308	279	260	302	2240											
15	265	276	278	273	282	150	214	264	282	292	298	305	299	307	307	318	331	325	314	313	313	311	313	295	289	1925											
16	273	230	254	268	293	299	301	301	301	300	299	300	309	343	399	452	500	455	409	362	362	309	289	188	325	2796											
17	148	254	166	152	242	260	280	307	317	327	333	316	305	301	305	307	313	331	365	387	374	342	289	292	292	2013											
18	262	91	119	220	262	286	296	302	303	313	329	336	329	327	325	327	333	351	339	327	319	311	307	284	292	1998											
19 q	291	297	296	305	308	310	315	317	316	317	312	308	307	307	305	299	301	304	303	307	307	309	309	309	307	2359											
20 q	309	307	305	306	305	305	308	307	301	298	297	295	293	294	294	294	296	298	299	302	305	306	305	304	301	2233											
21 q	305	304	303	304	303	304	304	305	304	305	299	291	283	286	286	290	289	294	297	295	301	301	299	298	298	2150											
22 q	292	295	296	297	298	295	295	292	292	292	286	282	282	286	292	303	307	309	304	305	300	299	299	299	296	2097											
23	300	300	302	300	299	294	292	292	292	288	281	276	274	280	288	288	295	305	306	300	303	291	249	295	291	1990											
24 d	264	347	460	332	258	210	248	277	303	315	321	337	330	387	404	379	363	377	411	373	307	124	81	101	305	2309											
25	216	113	114	218	274	273	289	308	319	321	321	351	346	361	403	390	421	365	373	398	318	211	177	177	294	2057											
26	143	174	186	226	266	284	299	313	326	321	321	316	313	321	343	375	394	404	394	373	353	330	305	182	303	2262											
27	217	284	309	316	319	315	315	317	313	310	304	295	294	307	325	349	362	354	344	349	309	375	349	190	313	2521											
28 d	121	390	200	105	257	305	292	239	253	308	341	358	369	418	431	439	478	464	441	423	368	336	290	200	326	2826											
29	131	-18	154	265	234	203	176	242	276	302	313	334	365	359	363	363	361	377	373	322	327	333	286	179	276	1620											
30 d	147	192	-8	-119	65	103	184	223	236	271	300	320	353	456	481	388	223	130	143	199	319	540	362	361	234	609											
Mean	244	247	239	252	263	263	279	289	299	307	312	316	313	320	332	326	329	325	341	340	338	314	292	261	298												
Sum 7000+	322	395	182	562	874	881	1359	1667	1969	2199	2371	2478	2395	2596	2966	2770	2873	2761	3239	3207	3131	2429	1759	820		Grand Total 214,205											

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

4 LERWICK														APRIL 1960					
TERRESTRIAL MAGNETIC ELEMENTS														3-hr. range indices K	Sum of K indices	Magnetic character of day, C (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									
1 d	h. m.	γ	h. m.	γ	h. m.	γ	h. m.	γ	h. m.	γ	h. m.	γ	h. m.	γ			°A.		
1	14 07	1768	-1408	03 51	3176	16 58	189.1	-233.9	03 51	423.0	03 54	1191	-518	15 50	1709	9,9,5,7,8,9,8,8	63	2	79.0
2	12 20	566	-295	01 24	861	01 36	73.4	-29.4	00 17	102.8	10 08	419	65	02 35	354	8,5,4,4,4,2,2,3	32	2	78.8
3	18 40	578	17 01	39	561	06 12	69.5	-54.1	01 40	123.6	12 30	347	18 04	56	329	7,7,6,3,3,3,3,2	34	2	78.8
4	17 53	594	131 21	32	463	21 29	86.9	16.8	21 15	70.1	18 32	366	-12 21	29	378	2,3,2,3,3,4,4,7	28	1	78.5
5	15 38	821	476 13	00	345	15 06	57 0	22.2	15 30	34.8	15 41	462	198	01 59	264	4,4,3,1,5,6,3,2	28	1	78.9
6	16 30	608	488 11	39	120	12 41	51.3	24.9	21 38	26.4	20 50	360	293 21	42	67	1,1,2,2,2,4,4,4	20	1	79.1
7	18 58	821	431 22	00	390	18 10	60.7	22.8	22 26	37.9	19 41	448	198	22 09	250	3,3,2,1,2,5,6,4	26	1	79.2
8	17 30	597	411 02	40	186	12 21	53.1	32.8	17 27	20.3	17 17	385	202 02	20	183	4,4,2,2,3,3,3,2	23	1	79.0
9	18 55	566	477 03	37	89	13 00	51.7	34.6	05 03	17.1	16 12	318	217 04	45	101	3,3,3,2,1,2,1,0	15	0	79.1
10	18 40	631	-460 23	09	1091	14 21	62.7	-19.7	23 05	82.4	23 13	633	58 24	00	575	2,2,2,1,3,4,5,8	27	1	79.2
11	18 31	613	271 24	00	342	15 18	53.8	11.1	00 00	42.7	18 47	393	53 00	04	340	5,4,3,2,3,3,3,6	29	1	79.1
12	17 44	607	257 00	12	350	00 02	54.2	21.0	01 33	33.2	18 27	375	48 01	50	327	6,5,4,3,3,4,3,5	33	1	79.2
13	17 58	582	414 02	47	168	06 58	55.8	36.1	04 20	19.7	19 49	331	185 02	32	146	4,4,4,2,2,3,3,3	25	1	79.0
14	18 42	594	466 00	59	128	13 29	51.0	31.2	21 55	19.8	18 09	344	198 01	02	146	4,2,2,3,2,2,2,3	20	1	79.5
15	18 41	586	318 05	10	268	05 11	67.5	33.1	06 38	34.4	16 46	337	113 05	40	224	3,6,4,2,2,3,2,2	24	1	79.0
16	16 56	867	306 23	49	561	13 45	65.5	22.3	23 59	43.2	16 45	519	120 24	00	399	3,3,2,2,5,5,4,6	30	1	79.0
17	20 33	642	257 02	47	385	13 40	55.8	11.1	00 17	44.7	19 33	413	81 03	08	332	6,5,3,2,2,3,4,4	29	1	78.8
18	17 37	606	221 01	40	385	01 20	61.8	30.3	02 31	31.5	17 19	356	6 01	44	350	6,4,3,3,2,3,2,2	25	1	79.1
19	19 21	559	496 11	24	63	12 42	50.0	34.7	07 50	15.3	07 20	321	286 00	00	35	2,2,2,1,2,2,0,1	12	0	79.3
20	19 42	562	493 10	42	69	13 48	51.1	34.8	08 09	16.3	07 01	312	292 15	06	20	0,1,2,1,1,1,1,0	7	0	79.2
21	23 56	587	497 11	42	90	13 33	52.1	34.4	07 56	17.7	00 48	307	280 12	13	27	0,1,1,1,2,2,1,2	10	0	79.2
22	00 00	582	519 11	04	63	13 20	52.7	38.7	07 25	14.0	17 27	311	278 11	42	33	2,1,2,1,2,2,1,1	12	0	79.2
23	20 06	606	156 24	00	450	13 20	53.4	10.2	24 00	43.2	23 29	374	202 23	03	172	1,2,2,2,2,2,2,7	20	1	79.1
24	18 50	760	-307 01	28	1067	21 21	89.1	-101.3	01 40	190.4	02 01	577	-66 21	36	643	7,7,4,3,5,4,7,7	44	2	79.0
25	16 15	749	-174 00	56	923	01 08	69.3	-4.2	00 54	73.5	16 41	453	-15 01	35	468	8,4,4,3,5,4,7,5	40	2	78.8
26	16 48	635	370 01	33	265	13 50	55.5	29.2	01 50	26.3	17 14	409	124 01	10	285	5,4,3,2,3,3,3,5	28	1	79.0
27	20 03	637	-189 23	14	826	23 11	82.6	-24.2	23 53	106.8	21 45	454	-92 23	11	546	5,2,1,2,3,2,5,8	28	2	79.3
28	18 10	956	-470 00	18	1426	18 45	97.3	-54.5	02 45	151.8	01 44	574	-87 00	09	661	8,7,5,5,5,5,7,7	47	2	79.5
29	19 34	659	-371 01	19	1030	01 09	98.4	-2.9	02 10	101.3	18 57	384	-126 01	18	510	8,6,5,4,4,4,5,5	41	2	81.0
30	14 35	1750	-333 02	36	2083	16 52	186.2	-25.6	12 52	211.8	21 30	690	-352 17	37	1042	8,8,4,4,4,9,9,7,6	55	2	81.2
Mean	- -	723	115 - -	607	- -	71.9	-0.6 - -	72.5	- -	439	75 - -	364	-	-	-	-	1.13	-	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) +																							MAY 1960	
	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 11,000+	
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ		
1 d	382	357	424	484	499	507	530	518	502	467	474	471	467	505	530	530	518	520	533	538	534	512	510	516	493	828
2	515	501	490	490	467	515	516	516	509	504	501	482	513	526	514	542	550	546	546	560	550	538	531	534	519	1456
3	535	534	534	536	532	538	534	518	508	512	496	503	502	517	537	544	571	562	563	568	555	552	548	547	535	1846
4 q	547	547	546	544	543	544	540	533	525	516	508	508	510	515	528	546	554	566	577	585	573	553	542	548	542	1998
5	550	550	546	551	557	559	551	540	526	519	510	511	519	516	528	538	559	572	581	565	578	564	553	556	546	2099
6 d	557	561	551	561	566	561	548	534	516	496	483	515	563	564	625	677	682	742	688	544	571	338	227	292	540	1962
7 d	276	256	311	368	492	517	570	568	551	531	521	526	569	568	565	582	697	719	684	601	555	525	446	464	519	1462
8 d	514	548	536	525	449	493	526	539	510	434	522	548	542	559	975	1366	936	635	626	571	537	533	519	537	603	3480
9	524	521	526	529	533	525	522	515	507	493	501	495	507	536	536	538	568	577	555	551	549	548	544	544	531	1744
10	544	544	540	544	539	533	533	524	510	509	514	514	514	528	548	558	569	562	577	589	573	568	545	542	543	2021
11	537	537	509	553	558	487	540	519	437	522	544	535	520	501	501	524	544	566	587	593	572	568	530	548	535	1832
12	540	535	526	516	458	451	497	507	504	510	493	501	533	540	556	543	580	562	570	576	568	564	559	557	531	1746
13	557	550	545	546	546	533	530	522	514	507	499	504	517	538	560	562	584	588	582	589	581	544	507	511	542	2016
14	539	539	548	551	542	526	529	533	510	488	488	488	507	505	530	564	574	570	574	573	569	563	561	557	539	1928
15	556	555	555	553	547	544	541	531	510	497	505	493	485	514	529	532	559	550	567	566	565	558	552	551	538	1915
16	550	548	548	551	551	543	537	532	519	495	478	490	502	531	600	648	647	616	608	614	612	617	622	578	564	2537
17	564	575	567	567	567	560	555	555	545	533	519	521	511	518	505	553	562	566	581	567	564	562	559	560	551	2236
18 q	558	553	543	542	549	546	542	536	528	520	511	513	521	533	545	562	577	588	587	575	571	568	564	567	550	2199
19 q	558	551	550	550	554	551	540	534	522	511	512	513	520	539	555	564	577	575	584	585	574	568	567	562	551	2216
20 q	563	561	559	563	564	563	554	537	525	521	522	528	537	552	558	565	566	572	571	575	575	569	571	571	556	2342
21	574	571	566	566	566	565	555	544	532	524	528	536	548	578	552	559	570	578	585	585	574	570	562	564	561	2452
22 q	563	562	563	564	565	562	554	544	533	520	510	509	526	542	559	569	578	584	592	593	589	581	577	579	559	2418
23	581	580	577	577	577	577	574	562	548	542	536	540	553	569	617	637	601	598	596	601	595	568	574	563	577	2843
24	565	554	546	526	538	538	432	510	519	513	525	533	532	564	587	603	585	591	606	604	582	559	515	521	548	2148
25	448	455	507	523	525	529	540	533	520	509	508	514	532	557	549	584	587	627	623	587	573	563	542	505	539	1940
26	435	509	494	505	521	526	529	511	520	503	497	491	510	529	539	552	603	617	606	595	574	562	536	460	530	1724
27	472	477	408	486	535	548	536	521	498	485	484	497	510	529	529	561	561	577	602	592	579	568	559	560	528	1674
28	555	547	544	556	556	545	533	521	513	507	508	509	513	526	532	545	557	566	569	574	605	585	593	559	547	2118
29 d	155	174	434	540	547	547	536	532	518	518	520	524	540	558	553	599	571	587	625	618	624	559	558	565	521	1502
30	577	581	574	574	566	556	547	540	519	524	531	536	531	580	619	667	653	615	578	561	561	556	553	552	569	2651
31	548	550	551	554	558	558	555	549	541	532	526	517	536	543	557	555	575	578	594	598	591	599	574	553	558	2392
Mean	514	516	523	535	538	537	536	531	517	509	509	512	522	538	565	596	594	589	591	580	573	554	539	536	544	
Sum 15,000+	939	983	1218	1595	1667	1647	1626	1478	1039	762	744	865	1190	1680	2518	3469	3415	3272	3317	2993	2773	2182	1700	1623		Grand Total 404,725

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

2 LERWICK (D)		9° +																						MAY 1960			
	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 d	35.7	28.3	34.4	29.4	28.9	24.9	25.1	25.6	25.1	35.2	37.1	41.3	44.1	43.8	45.3	45.6	43.4	41.9	40.6	38.0	38.9	39.1	42.9	41.8	36.5	76.4	
2	42.4	44.7	46.3	42.8	39.9	37.1	36.2	33.2	34.4	35.1	39.0	42.2	45.3	47.2	46.8	46.3	44.3	43.4	42.9	41.5	37.3	41.9	43.6	43.9	41.6	197.7	
3	42.9	42.6	42.6	42.6	42.0	40.9	39.2	38.6	41.5	42.9	41.9	44.8	48.5	50.1	49.6	48.6	47.2	44.7	44.3	44.1	43.8	44.3	44.5	43.4	44.0	255.6	
4 q	43.4	44.3	42.8	41.0	39.3	38.2	37.1	37.1	37.0	38.1	39.8	42.8	45.8	48.7	49.5	49.1	47.8	46.3	44.9	45.6	44.5	38.1	38.9	41.1	42.5	221.2	
5	42.8	43.2	42.4	40.5	39.0	38.6	36.7	37.2	37.0	38.1	41.8	45.8	48.4	49.7	49.1	49.5	48.2	46.7	45.6	44.8	39.3	38.5	42.6	41.1	42.8	226.6	
6 d	41.8	42.9	40.9	43.2	38.0	37.1	34.9	37.1	37.1	41.0	44.8	54.5	59.2	59.5	60.2	60.3	59.9	60.7	49.5	49.0	45.7	55.1	32.1	26.7	46.3	311.2	
7 d	25.3	41.3	30.4	29.4	29.5	32.8	34.7	33.8	32.6	37.0	42.9	46.3	48.8	51.1	49.0	50.7	56.8	50.9	44.8	42.8	43.9	45.8	43.7	47.5	41.3	191.8	
8 d	44.7	43.8	41.7	41.7	49.5	40.5	40.5	39.2	40.0	31.8	50.6	51.5	54.4	43.9	31.4	23.2	64.9	58.5	50.2	53.7	51.8	46.8	42.4	54.9	45.5	291.6	
9	44.1	40.0	38.0	37.3	38.4	37.0	36.6	39.5	41.0	45.7	49.4	53.7	52.6	49.1	47.6	46.5	43.9	44.1	44.8	45.7	44.3	44.1	44.2	44.3	43.8	251.9	
10	44.3	44.1	45.4	42.4	39.9	38.2	38.1	39.8	41.7	41.7	44.8	48.2	48.7	48.7	50.5	47.5	45.2	45.8	44.7	43.6	45.3	44.6	43.1	42.4	44.2	260.7	
11	42.1	41.8	43.4	38.8	42.0	51.3	45.3	50.5	51.1	50.1	46.3	47.4	47.2	48.5	47.7	44.9	44.8	45.0	45.8	46.0	44.3	45.8	44.7	39.9	45.6	294.7	
12	40.2	41.0	39.9	39.3	40.8	43.4	41.3	38.4	37.1	38.2	37.1	44.7	46.0	46.5	48.2	48.9	49.6	48.5	47.0	47.4	47.2	45.6	46.3	44.3	43.6	246.9	
13	41.3	41.2	39.5	40.0	40.0	38.1	39.1	40.1	40.0	42.0	47.5	49.6	51.5	52.4	51.7	50.2	47.6	48.6	47.7	45.8	43.2	43.4	36.1	36.1	43.9	252.7	
14	40.5	41.8	44.8	44.6	43.8	46.5	44.3	44.3	43.6	43.9	47.0	50.5	53.4	53.3	52.5	51.4	48.6	47.2	46.7	46.3	45.8	42.1	44.8	45.5	46.4	313.2	
15	45.0	44.7	44.1	44.1	40.5	37.4	35.4	34.7	36.5	38.8	42.0	46.3	52.3	53.3	51.7	49.6	45.9	42.8	43.4	44.1	44.8	45.5	44.5	45.3	43.9	253.7	
16	45.3	43.4	42.0	40.5	39.3	38.6	37.8	37.1	37.0	39.0	42.7	46.6	51.5	53.0	58.4	59.7	71.7	54.9	49.4	49.5	48.0	47.4	48.7	44.7	46.9	326.2	
17	45.8	44.8	42.8	41.8	40.5	38.7	36.9	36.7	34.3	36.7	41.0	45.2	49.1	51.3	49.1	48.5	45.9	44.2	44.7	44.8	44.9	44.6	42.9	43.8	43.3	239.0	
18 q	44.1	43.6	44.8	42.4	40.1	39.0	37.2	35.7	36.1	37.2	40.0	42.7	45.3	46.7	47.1	46.5	45.8	45.6	45.7	45.1	45.7	46.6	46.3	45.3	43.1	234.5	
19 q	43.7	42.8	41.7	39.0	36.9	35.7	36.9	36.1	39.1	40.9	41.7	45.1	47.2	48.2	46.7	45.3	43.8	42.2	42.9	44.3	44.1	44.8	46.9	46.8	42.6	222.8	
20 q	46.3	45.3	43.9	41.9	42.2	38.0	34.7	35.2	37.0	40.8	42.9	46.7	49.1	49.0	48.2	46.8	45.1	43.2	43.9	43.9	44.3	44.3	45.0	45.8	46.3	43.6	246.6
21	46.7	45.3	42.1	40.3	39.1	37.2	38.9	40.5	41.1	44.7	46.8	50.9	53.3	53.0	50.7	48.5	46.5	45.7	46.3	46.7	46.5	45.3	44.7	43.7	45.2	284.5	
22 q	43.3	43.2	42.4	41.3	40.0	37.8	37.0	36.7	37.2	39.7	44.0	48.5	51.6	52.4	52.6	53.5	50.1	48.1	46.7	46.1	46.5	45.5	45.0	44.3	44.7	273.5	
23	44.6	42.8	41.9	40.9	39.4	38.0	37.1	37.0	38.2	42.1	46.5	51.1	53.5	55.3	56.3	56.1	53.3	50.7	47.0	46.8	46.6	44.6	44.7	43.7	45.9	302.6	
24	47.6	37.6	34.3	43.4	44.3	43.9	47.7	47.6	41.9	43.2	45.8	50.8	53.5	54.4	55.4	53.8	50.6	49.6	50.1	41.9	37.6	43.6	38.3	32.1	45.4	289.0	
25	34.7	33.8	35.0	34.3	37.6	36.9	36.6	36.2	36.2	39.7	45.2	49.8	54.5	56.1	55.0	53.5	52.5	51.5	45.6	46.3	48.8	48.9	47.0	41.8	44.1	257.5	
26	44.8	33.7	31.8	33.8	36.1	36.2	34.0	37.0	39.0	39.7	41.7	45.0	49.1	49.6	50.5	48.8	47.9	41.8	44.7	46.7	45.8	41.9	40.9	36.9	41.6	197.4	
27	41.0	30.3	37.1	20.8	34.7	35.2	34.3	34.5	36.5	38.8	42.7	46.5	49.6	50.6	50.0	49.1	48.2	48.1	47.6	42.9	44.7	45.3	42.1	37.2	41.2	187.8	
28	40.8	39.3	41.9	41.1	39.3	37.3	37.0	38.2	40.9	42.1	45.1	48.2	50.4	51.1	51.4	50.7	48.9	47.7	46.3	46.3	40.9	41.1	44.1	44.3	43.9	254.4	
29 d	36.9	27.3	-6.9	24.2	32.3	31.3	32.4	34.9	36.9	39.8	43.4	46.7	50.3	53.4	51.9	50.1	48.6	46.7	48.9	49.1	48.7	45.0	46.6	46.1	40.2	164.6	
30	45.0	43.4	43.1	41.8	39.3	39.5	39.1	41.9	44.4	48.4	47.1	45.3	45.1	47.0	44.1	40.9	43.2	43.4	43.9	45.0	46.8	47.9	47.5	46.6	44.1	259.3	
31	44.3	44.6	47.6	47.3	44.1	41.0	36.3	35.7	37.4	38.1	42.3	46.5	50.7	53.4	54.4	51.1	50.7	49.4	48.8	48.2	48.6	41.4	43.0	42.3	45.3	287.2	
Mean	42.3	40.9	39.4	39.1	39.3	38.3	37.4	37.7	38.3	40.3	43.6	47.3	50.0	50.7	50.1	48.9	49.4	47.4	46.0	45.6	44.9	44.6	43.5	42.7	43.6		
Sum 1100.0+	211.4	166.9	122.1	111.9	116.7	86.3	58.4	70.1	88.9	150.5	250.9	365.2	450.0	470.3	452.6	415.2	430.9	368.6	325.4	312.4	292.6	281.5	249.9	224.1		Grand Total 32472.8	

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 1960

	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	6000+
1 d	341	317	248	296	344	352	347	342	335	322	308	315	328	332	327	332	342	341	343	356	358	281	299	319	326	1825
2	321	319	301	299	303	325	332	339	339	335	333	331	325	332	333	327	340	340	334	333	340	328	320	316	327	1845
3	315	314	319	320	317	315	320	320	313	312	320	317	313	314	322	327	327	338	332	327	328	327	323	320	321	1700
4 q	320	317	316	320	321	320	320	315	315	311	308	307	307	307	312	315	315	317	321	326	332	322	309	307	316	1580
5	313	319	319	317	315	316	314	313	312	310	307	303	305	308	305	309	307	309	317	323	315	307	304	286	311	1453
6 d	239	243	283	290	287	300	308	309	310	307	301	287	301	347	393	401	406	395	313	282	349	415	280	234	316	1580
7 d	212	280	222	228	263	293	321	329	327	329	327	327	328	368	421	413	407	492	468	402	347	313	231	175	326	1823
8 d	208	265	286	304	246	161	223	259	272	326	341	327	361	410	547	384	476	487	442	388	359	333	330	288	334	2023
9	309	320	327	328	327	330	327	327	320	313	313	317	332	347	368	361	366	355	350	333	327	321	321	321	332	1960
10	321	323	320	323	327	327	323	323	321	314	319	326	329	340	343	359	373	366	355	346	337	323	301	292	330	1931
11	265	266	241	280	288	240	208	240	269	254	282	297	310	331	338	349	353	341	327	326	335	320	245	283	291	988
12	305	313	317	320	301	251	248	281	299	313	330	327	343	367	367	358	349	345	331	320	315	312	305	284	317	1601
13	286	303	311	318	319	315	313	311	307	301	298	293	290	301	319	333	339	335	334	333	327	291	266	260	308	1403
14	282	287	294	296	304	284	261	271	287	300	296	306	310	321	326	336	355	350	334	330	326	319	311	312	308	1398
15	312	312	314	316	316	316	314	314	313	312	310	315	320	329	344	342	347	347	332	326	324	319	315	311	322	1720
16	306	308	312	314	316	317	321	322	313	302	304	296	292	294	297	319	373	429	377	375	348	296	319	298	323	1748
17	293	276	305	318	319	321	319	311	311	313	309	307	309	313	319	321	348	345	330	322	317	315	316	312	315	1569
18 q	309	310	309	304	309	305	304	305	308	304	303	304	304	306	311	313	318	324	325	323	318	316	311	308	310	1451
19 q	290	291	304	312	315	314	310	309	303	299	297	297	295	296	302	307	311	317	317	321	323	319	311	307	307	1367
20 q	309	310	310	309	306	301	308	307	301	294	289	291	295	297	302	303	308	306	304	304	303	304	303	303	303	1268
21	297	295	302	307	303	301	301	296	290	284	282	278	276	279	299	301	306	309	309	308	308	306	305	304	298	1146
22 q	306	306	306	304	303	303	302	303	299	296	290	280	274	280	288	289	291	295	295	297	297	299	299	300	296	1102
23	298	301	303	303	300	297	299	300	300	290	285	277	277	286	280	297	324	338	352	333	285	258	289	291	298	1163
24	254	215	238	247	210	223	238	182	234	266	283	297	322	335	345	359	387	392	365	368	275	282	236	177	280	730
25	123	167	196	258	289	282	283	295	299	299	293	295	307	329	356	355	360	362	395	355	325	325	307	271	297	1126
26	159	196	208	188	264	283	298	301	288	289	290	292	298	317	323	322	337	364	348	330	323	309	272	199	283	798
27	121	152	110	149	261	303	324	331	329	322	313	303	297	301	307	315	326	323	329	342	322	307	291	297	282	775
28	297	299	303	303	311	315	312	314	313	309	301	291	292	297	305	307	315	315	315	309	289	280	276	276	302	1244
29 d	230	-13	40	170	262	304	314	317	320	314	303	298	296	297	309	349	359	347	333	332	323	322	317	309	281	752
30	297	294	299	305	311	311	309	303	307	296	295	309	330	351	385	416	432	411	378	356	339	329	323	315	333	2001
31	304	293	289	290	290	292	301	307	305	298	289	282	276	282	284	294	298	302	301	303	300	296	296	290	294	1062
Mean	275	274	276	288	298	297	301	303	305	304	304	303	308	320	335	336	348	353	342	333	323	313	298	286	309	
Sum 8000+	542	498	552	936	1247	1217	1322	1396	1459	1434	1419	1392	1542	1914	2377	2413	2795	2937	2606	2329	2014	1694	1232	865		Grand Total 230,132

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

4 LERWICK

MAY 1960

	TERRESTRIAL MAGNETIC ELEMENTS										3-hr. range indices K	Sum of K indices	Magnetic character of day, C (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							
1 d	05 12	648	233 01 10	415	21 55	54.3	2.7 05 15	51.6	01 05	397	190 01 58	207	6,6,3,4,4,3,2,4	32	2	81.0
2	16 13	582	442 04 22	140	02 03	49.5	30.4 09 19	19.1	16 43	349	288 03 49	61	3,4,2,2,3,3,3,2	22	1	81.4
3	16 31	579	486 10 39	93	13 40	50.9	37.3 07 25	13.6	17 38	340	308 09 04	32	1,1,2,2,2,2,2,1	13	0	80.5
4 q	19 22	594	503 10 30	91	13 52	49.8	31.4 21 54	18.4	20 28	335	303 23 24	32	1,0,1,1,2,1,2,3	11	0	80.8
5	18 26	587	501 10 42	86	13 20	51.1	33.3 21 09	17.8	19 31	328	243 24 00	85	1,2,2,2,2,2,3,3	17	0	81.0
6 d	17 40	815	16 21 50	799	17 40	77.8	15.5 23 42	62.3	21 46	547	176 23 33	371	3,3,2,4,4,5,6,7	34	2	81.4
7 d	17 57	764	157 01 56	607	16 32	62.6	16.0 00 30	46.6	17 52	528	124 23 29	404	6,6,3,4,5,5,5,5	39	2	81.7
8 d	15 20	1639	250 09 14	1389	16 27	86.8	-10.5 15 08	97.3	14 36	622	140 05 17	482	4,6,5,6,8,9,5,5	48	2	82.0
9	16 53	595	476 09 36	119	00 00	58.5	30.4 05 14	28.1	14 44	379	295 00 03	84	4,3,3,3,3,3,2,2	23	1	82.0
10	19 42	609	494 12 19	115	14 34	51.4	35.6 06 36	15.8	16 36	374	272 24 00	102	2,2,2,2,3,2,3,3	19	1	82.0
11	19 35	618	377 08 23	241	05 29	60.7	34.3 04 36	26.4	16 03	360	195 06 28	165	3,5,5,3,3,3,3,4	29	1	82.3
12	16 22	602	437 04 56	165	16 08	51.6	31.9 08 48	19.7	14 34	372	239 06 17	133	2,4,4,3,4,3,2,2	24	1	82.5
13	19 17	598	469 22 54	129	13 35	53.9	33.3 23 30	20.6	16 07	343	244 23 23	99	3,2,1,2,3,3,2,4	20	1	82.8
14	16 04	599	477 09 42	122	12 41	54.5	38.8 00 00	15.7	16 37	364	259 06 12	105	3,3,3,2,2,3,1,2	19	1	82.8
15	18 24	578	465 12 03	113	12 43	54.3	32.5 06 50	21.8	17 01	354	305 10 17	49	0,2,2,3,3,2,2,0	14	0	82.8
16	15 42	751	469 10 40	282	16 58	76.0	34.6 08 22	41.4	17 16	466	266 21 07	200	1,1,2,2,4,5,4,4	23	1	82.8
17	01 02	588	484 14 00	104	13 17	53.4	28.2 06 33	25.2	16 43	360	264 01 08	96	3,2,3,3,4,3,2,1	21	1	84.2
18 q	16 56	594	508 11 13	86	14 08	47.9	34.3 07 54	13.6	18 05	329	302 10 52	27	2,2,2,1,1,2,2,1	13	0	84.4
19 q	19 28	594	507 10 05	87	22 57	49.0	33.9 07 33	15.1	20 23	325	278 00 50	47	2,1,2,1,2,1,1,2	12	0	84.2
20 q	19 10	578	518 09 58	60	12 33	49.7	34.3 06 03	15.4	02 06	313	288 10 43	25	1,2,1,1,1,1,1,1	9	0	84.0
21	19 01	595	519 09 30	76	12 59	54.3	36.5 05 35	17.8	17 24	312	276 12 23	36	2,1,1,2,3,2,2,1	14	0	84.1
22 q	19 03	600	503 11 23	97	14 46	55.0	36.1 07 17	18.9	03 04	307	273 12 42	34	0,1,1,1,3,2,1,1	4	0	84.3
23	14 49	726	529 20 36	197	15 16	58.9	34.9 07 12	24.0	18 55	358	206 20 56	152	1,1,1,2,5,4,5,4	23	1	84.2
24	14 57	630	391 06 33	239	06 53	58.1	25.1 23 24	33.0	17 23	403	133 22 56	270	4,4,5,3,4,3,5,4	32	1	84.0
25	18 03	640	405 00 30	235	14 07	58.1	20.7 00 56	37.4	18 17	415	102 00 20	313	4,3,2,2,3,3,4,4	25	1	83.8
26	17 37	643	380 23 51	263	00 31	53.7	27.3 02 24	26.4	17 23	376	91 24 00	285	5,4,3,2,2,4,3,5	28	1	83.4
27	18 36	611	352 02 48	259	13 27	51.5	14.2 03 32	37.3	19 29	346	70 02 52	276	5,5,2,2,2,2,2,3	23	1	84.0
28	20 22	657	504 09 46	153	20 22	53.7	32.0 20 42	21.7	17 02	318	247 24 00	71	2,2,2,1,2,2,2,4	19	0	83.9
29 d	15 18	651	-147 01 18	798	13 18	56.1	-20.4 02 15	76.5	00 29	393	-137 01 15	530	8,5,3,3,4,4,3,3	33	2	84.0
30	15 35	683	510 08 53	173	09 15	51.5	37.6 04 39	13.9	16 12	438	288 09 46	150	2,2,2,3,4,4,3,2	22	1	84.0
31	21 28	628	510 11 33	118	14 24	55.3	34.9 07 56	20.4	07 53	309	270 12 23	39	2,2,2,2,3,3,2,3	19	0	84.1
Mean	- -	664	410 - -	253	- -	56.4	27.0 - -	29.4	- -	379	219 - -	160	-	-	0.81	82.9

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) +													JUNE 1960	
	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		11,000+		
	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			
1	562	549	520	528	542	469	498	497	472	439	468	484	536	551	558	555	563	572	578	592	581	578	567	562	534	1821		
2 q	561	556	555	557	559	559	550	537	529	521	511	516	521	526	544	553	563	579	585	579	573	570	567	562	551	2233		
3	562	559	555	555	555	551	545	538	533	521	518	523	536	540	546	552	563	610	613	621	606	588	551	536	557	2377		
4 d	520	533	515	540	432	397	401	435	501	530	535	527	540	549	573	562	592	581	604	569	574	584	548	574	530	1716		
5	468	424	343	364	391	468	455	484	490	466	478	480	531	520	533	568	603	579	587	606	595	565	565	556	505	1119		
6	507	489	399	456	489	521	511	517	511	514	501	484	539	551	535	574	555	561	559	570	575	575	572	568	526	1633		
7	548	541	503	520	558	561	554	551	542	521	525	542	526	542	538	549	564	587	614	613	603	591	577	564	556	2334		
8	559	545	527	495	436	530	527	525	514	529	520	511	534	556	570	562	568	601	633	630	593	547	495	529	543	2036		
9	493	451	540	545	471	480	519	524	508	512	503	503	537	576	563	571	566	588	637	605	578	563	559	555	539	1947		
10 q	553	548	542	549	552	549	540	530	514	506	506	512	519	534	551	566	571	580	592	600	596	577	558	558	550	2203		
11 q	560	557	537	559	565	557	541	523	518	516	515	524	537	548	548	561	576	578	588	578	578	570	567	565	553	2266		
12 q	564	560	563	563	563	556	552	538	524	511	504	511	534	539	549	560	570	590	607	591	579	576	575	576	556	2355		
13	572	567	565	565	567	568	563	559	548	535	531	522	519	534	553	550	572	606	603	599	591	578	572	576	563	2515		
14	578	581	574	578	576	567	557	549	546	535	527	552	528	560	542	558	563	578	582	617	601	586	578	578	566	2591		
15	570	572	561	570	572	570	557	551	520	525	533	536	536	527	542	563	600	602	605	611	594	581	581	587	565	2566		
16 q	571	565	569	562	565	571	554	562	547	534	523	518	517	523	537	559	570	589	575	577	575	573	572	574	558	2382		
17	574	553	549	562	563	560	559	552	547	536	525	523	528	532	549	577	608	582	572	577	576	581	578	573	560	2436		
18	566	553	553	570	568	562	555	548	537	518	521	505	529	555	545	558	578	612	602	598	603	589	592	582	562	2499		
19	574	580	580	566	567	548	538	534	514	507	527	528	540	586	569	570	586	615	637	633	601	578	562	548	566	2588		
20	543	538	539	540	556	556	551	541	523	509	508	517	545	562	558	571	564	581	592	597	592	586	576	570	555	2315		
21	563	560	568	543	502	530	533	529	505	496	499	512	526	552	563	589	601	620	650	622	602	585	554	555	557	2359		
22	560	554	551	539	553	543	543	536	522	515	515	530	541	535	547	562	559	569	575	594	600	595	569	552	552	2259		
23	473	474	521	553	548	549	555	549	535	522	515	533	551	574	555	589	601	610	602	595	586	574	572	566	554	2302		
24	559	553	559	554	562	558	548	530	526	536	540	524	536	539	534	568	582	615	610	624	607	583	578	566	562	2491		
25	572	553	563	560	562	553	543	530	519	511	516	532	550	563	584	635	665	714	695	660	639	544	493	519	574	2775		
26	504	457	459	503	542	513	491	507	515	521	520	518	534	539	553	569	576	607	611	600	604	586	575	559	540	1963		
27 d	533	544	505	252	304	300	478	525	523	484	506	506	513	521	541	558	641	698	672	673	608	503	381	537	513	1306		
28 d	580	577	567	564	566	565	567	540	524	511	522	516	496	513	525	540	593	666	654	646	579	533	504	491	556	2339		
29 d	517	512	482	476	543	535	538	497	523	524	512	506	507	515	536	554	572	599	594	614	631	617	443	129	520	1476		
30 d	93	265	18	137	461	555	578	553	522	510	496	515	530	525	541	585	632	703	646	633	618	580	559	571	493	826		
Mean	532	529	513	514	526	530	533	530	522	514	514	517	531	543	549	566	584	606	609	607	595	575	551	545	547			
Sum 15,000+	959	870	382	425	790	901	1001	891	652	415	420	510	916	1287	1482	1988	2517	3172	3274	3224	2838	2236	1540	1338		Grand Total 394,028		

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

2 LERWICK (D)		9° +																				JUNE 1960						
	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			41·8	41·1	32·5	39·8	29·7	33·8	45·3	42·0	39·2	38·2	44·0	45·8	47·7	48·1	47·8	52·5	52·3	51·1	49·5	48·2	46·3	44·9	45·9	44·8	43·8	152·3
2	q		43·4	41·7	41·9	40·5	39·0	37·1	36·2	35·3	34·9	37·5	41·2	45·5	48·7	49·5	49·3	48·7	48·6	47·7	47·7	46·7	45·9	45·0	44·8	44·6	43·4	141·4
3			43·8	42·7	41·5	40·5	39·1	37·1	35·7	34·3	34·5	37·8	41·9	44·9	47·7	50·4	50·6	50·7	50·5	52·0	50·6	51·1	50·1	41·7	46·6	44·7	44·2	160·5
4	d		40·5	36·1	31·7	20·8	14·9	12·7	20·7	18·7	46·3	39·8	47·4	47·5	50·8	52·4	53·6	55·8	54·9	51·1	51·3	49·6	47·7	49·4	44·8	46·8	41·1	85·3
5			35·7	31·3	32·3	43·9	38·8	42·8	40·0	42·0	43·9	41·9	40·5	41·8	45·5	50·5	51·1	51·1	48·5	47·6	47·7	43·1	46·1	48·6	48·2	48·2	43·8	151·1
6			40·2	45·3	38·2	43·4	37·6	34·7	35·2	33·4	37·1	39·0	42·4	46·8	51·5	51·5	50·6	49·7	45·9	44·8	44·7	45·7	44·1	45·3	46·3	47·5	43·4	140·9
7			41·5	44·8	41·0	37·6	34·7	35·1	34·7	35·0	34·4	38·3	46·3	48·1	49·6	52·0	49·4	49·6	48·7	46·7	45·7	41·8	46·7	47·2	45·9	45·3	43·3	140·1
8			44·8	43·4	44·5	44·3	43·8	39·1	33·8	32·3	37·1	40·9	42·8	48·2	49·3	50·5	51·4	51·5	49·6	48·0	46·6	44·8	45·8	42·9	37·2	38·6	43·8	151·2
9			41·9	36·7	39·1	42·9	44·7	44·3	39·3	36·0	35·7	40·9	42·3	47·7	49·6	52·0	50·4	50·1	47·2	46·3	43·8	41·5	45·7	45·7	45·3	44·7	43·9	153·8
10	q		44·0	43·6	42·9	39·5	38·1	37·0	35·3	35·2	35·4	38·4	42·8	47·8	49·7	48·8	48·4	47·2	48·2	46·6	46·7	46·7	46·3	43·9	45·7	45·8	43·5	144·0
11	q		45·5	46·3	45·3	38·6	37·6	35·2	34·9	35·6	36·7	40·5	45·5	49·1	51·1	50·6	50·4	49·8	49·4	47·7	47·7	45·9	45·9	45·9	46·1	45·7	44·5	167·0
12	q		44·3	42·8	41·8	40·5	38·3	36·2	36·1	36·5	37·4	39·2	42·8	46·3	48·7	50·1	50·6	50·6	50·6	50·6	50·6	48·2	45·8	45·5	45·3	45·3	44·3	164·1
13			44·7	45·8	42·9	39·1	35·3	35·2	35·4	35·7	38·2	37·5	39·7	42·9	45·7	47·7	48·5	48·6	49·4	51·4	49·1	48·6	47·7	47·5	46·6	46·5	43·7	149·7
14			45·4	47·5	46·0	40·5	37·2	37·6	40·1	42·9	40·5	40·0	41·0	42·7	45·6	47·9	52·0	52·0	51·1	49·4	47·6	45·8	47·2	45·2	46·6	45·8	44·9	177·6
15			45·1	47·3	45·7	40·8	38·1	36·4	36·0	38·6	39·1	42·9	44·8	46·9	48·8	51·5	51·1	50·4	48·7	47·2	47·8	46·6	45·8	45·8	45·9	47·2	44·9	178·5
16	q		46·6	44·8	44·6	44·8	40·8	38·6	40·1	38·6	37·6	38·2	40·9	44·3	46·0	45·7	46·3	47·7	46·5	44·3	44·9	46·2	45·9	45·7	45·8	46·5	43·8	151·4
17			46·6	45·3	40·1	39·1	38·9	38·0	37·1	37·2	37·0	38·0	41·1	45·7	48·6	49·5	49·3	47·6	46·5	43·1	45·9	46·8	47·7	47·2	47·5	45·3	43·7	149·1
18			45·9	46·9	46·8	41·6	39·1	39·8	38·1	37·0	36·7	39·7	41·1	44·8	50·5	51·3	51·4	49·5	48·8	48·5	46·5	47·0	46·8	46·8	46·8	46·4	44·9	177·8
19			43·1	45·3	46·9	37·9	36·1	36·3	41·8	45·7	43·4	43·1	43·7	47·2	49·7	50·7	48·8	48·6	46·6	45·6	46·0	47·0	45·7	41·8	45·6	42·4	44·5	169·0
20			40·9	40·0	40·1	44·8	39·0	35·7	34·9	35·2	34·7	38·2	42·1	45·8	48·2	50·6	50·7	47·6	44·3	44·8	45·8	47·1	47·0	47·9	45·7	44·1	43·1	135·2
21			40·5	38·2	37·1	40·9	43·4	38·4	40·0	39·5	39·0	42·4	44·8	50·5	53·4	55·1	54·7	53·5	51·3	47·2	50·6	48·6	50·1	51·3	47·7	42·4	45·9	200·6
22			41·1	38·6	37·6	41·0	31·5	32·8	37·8	37·0	38·1	41·2	44·8	49·7	53·5	54·5	54·5	51·9	50·0	48·2	47·4	48·7	46·7	44·8	44·0	44·4	44·2	159·8
23			31·2	31·9	26·3	30·5	30·2	31·7	34·2	35·3	37·3	39·3	42·0	45·9	50·3	53·0	53·2	54·3	50·6	49·8	50·3	49·5	48·4	46·6	46·6	45·7	42·3	114·1
24			42·0	42·4	38·6	36·2	35·2	33·3	32·3	35·1	39·1	39·9	42·6	45·9	48·9	51·5	50·6	50·7	50·1	50·7	49·3	43·4	43·1	46·9	44·8	39·0	43·0	131·6
25			32·6	34·1	42·5	38·8	37·1	34·6	35·3	35·9	39·1	42·7	44·8	47·7	52·2	52·6	54·5	57·2	50·7	54·9	55·9	56·1	52·5	51·5	51·1	37·5	45·5	191·8
26			35·5	35·3	37·2	31·9	31·5	31·1	38·6	37·0	35·2	40·9	42·2	45·5	46·7	46·7	47·8	48·7	49·7	49·5	48·7	48·5	45·3	42·4	43·2	43·8	41·8	102·9
27	d		45·6	41·1	44·7	17·0	37·1	28·6	38·0	32·5	29·9	31·4	36·1	38·2	41·9	44·8	46·6	48·1	51·7	54·2	55·5	49·5	45·8	47·2	42·1	32·3	40·8	79·9
28	d		36·5	36·2	34·7	36·0	35·7	34·2	30·4	29·5	29·5	39·1	40·0	43·9	52·0	54·4	53·9	52·2	51·6	51·7	47·8	46·0	45·6	41·0	38·1	41·1	41·1	101·1
29	d		41·5	38·2	42·9	36·7	36·1	36·1	33·5	31·6	36·1	37·1	40·5	44·1	47·4	48·7	48·9	48·2	47·4	46·9	45·8	48·5	52·4	48·0	45·3	31·3	42·2	113·2
30	d		20·1	13·3	36·2	24·9	39·3	33·5	33·3	32·3	35·2	39·2	40·9	41·9	46·6	49·1	50·5	52·4	50·6	51·3	52·5	52·7	51·3	44·7	44·1	42·9	39·7	52·2
Mean			41·1	39·4	40·1	37·8	36·6	35·2	36·1	35·8	37·3	39·4	42·4	45·8	48·9	50·4	50·6	50·5	49·3	48·6	48·3	47·3	47·1	45·9	45·3	43·5	43·5	
Sum 1000·0+			232·3	181·4	203·6	134·8	97·9	57·0	84·0	72·9	118·3	183·2	273·0	373·1	465·9	511·7	516·9	516·5	480·0	458·9	450·0	419·9	411·4	378·3	359·6	306·6		Grand Total 31287·2

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 1960	
	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		
1		268	214	196	133	155	180	202	242	272	270	293	321	347	371	373	323	309	304	309	315	321	325	317	308	278	1668	
2	q	304	308	309	309	310	311	312	312	309	310	310	303	301	297	300	303	303	305	307	311	310	309	308	305	307	2366	
3		305	305	308	308	308	307	309	310	313	309	303	302	297	296	295	297	296	296	290	306	320	325	312	277	283	303	2269
4	d	262	249	240	171	82	78	154	186	199	249	277	315	348	344	370	364	374	392	382	363	343	316	291	314	278	1663	
5		249	193	118	138	88	135	192	233	249	279	323	360	388	386	355	340	380	394	370	380	348	330	322	313	286	1863	
6		263	283	197	158	168	236	273	296	310	313	326	346	346	368	346	332	352	341	337	326	320	320	320	310	299	2187	
7		271	273	223	203	258	288	302	298	302	314	303	303	314	314	332	337	335	336	344	356	334	327	322	318	304	2307	
8		311	310	290	213	198	223	277	296	308	306	306	308	296	303	308	314	316	315	334	348	313	293	214	223	288	1923	
9		216	124	212	247	243	221	263	293	305	299	302	303	303	324	356	346	338	326	310	306	310	315	314	312	287	1888	
10	q	310	308	307	303	311	310	308	307	310	301	294	293	294	300	309	321	322	318	314	314	315	316	310	300	308	2395	
11	q	300	299	275	279	300	312	315	314	308	305	297	288	283	288	295	302	312	312	306	308	309	307	304	303	301	2221	
12	q	305	309	308	308	308	309	310	317	314	303	290	277	271	276	283	294	303	307	310	318	319	310	303	300	302	2252	
13		300	298	292	290	299	303	306	309	307	296	294	293	290	286	289	308	316	321	328	322	316	310	303	299	303	2275	
14		298	295	296	296	303	303	298	296	296	298	298	297	318	340	357	336	324	316	316	319	326	326	318	308	312	2478	
15		307	309	301	302	307	312	310	304	306	293	296	295	298	301	300	307	320	335	347	350	337	323	316	306	312	2482	
16	q	305	301	294	291	277	287	296	298	303	303	305	300	295	292	294	298	302	308	316	312	314	312	308	304	301	2215	
17		288	277	281	293	300	306	342	307	306	306	304	301	299	296	292	305	319	356	342	320	310	307	308	305	307	2370	
18		301	288	257	269	296	305	303	311	309	304	300	301	290	302	325	318	308	302	322	312	306	303	298	298	301	2228	
19		300	292	277	249	237	252	249	243	252	263	273	292	300	311	338	351	350	350	341	338	337	336	310	285	297	2126	
20		281	263	261	227	235	258	270	284	295	296	295	289	296	313	318	324	330	322	317	322	327	320	302	294	293	2039	
21		277	262	263	260	193	189	215	239	255	262	267	261	270	283	292	308	329	368	364	365	337	320	294	277	281	1750	
22		285	296	292	247	258	282	283	296	298	292	290	290	296	305	298	296	302	302	304	298	312	322	308	280	293	2032	
23		229	202	246	285	292	282	272	279	288	290	287	287	293	302	308	300	329	348	345	335	320	307	302	291	292	2019	
24		288	279	279	285	292	298	301	298	289	288	292	294	294	308	298	298	310	316	340	334	300	297	288	283	298	2149	
25		270	285	288	290	301	304	306	308	306	297	283	280	292	310	322	331	362	327	342	356	338	272	180	237	299	2187	
26		215	164	110	150	197	237	251	269	295	307	309	296	298	316	322	317	314	302	303	310	315	310	270	270	269	1447	
27	d	272	243	136	-39	32	72	165	248	276	306	309	312	306	304	301	304	297	326	348	366	341	279	131	201	243	836	
28	d	271	296	305	310	314	313	300	300	300	288	282	303	323	315	310	322	335	368	366	331	297	263	263	257	305	2332	
29	d	255	257	242	201	250	249	275	296	289	298	302	302	303	306	308	312	315	323	330	322	316	239	136	260	279	1686	
30	d	110	64	-33	-14	92	215	300	324	324	322	331	346	326	325	316	319	338	340	333	327	305	306	277	289	258	1182	
Mean		274	261	246	232	240	256	275	287	293	295	298	302	306	313	317	317	325	329	331	330	321	308	284	288	293		
Sum 6000+		2216	1846	1370	962	1203	1679	2260	2616	2789	2861	2940	3053	3174	3381	3512	3526	3740	3870	3933	3904	3621	3232	2514	2633		Grand Total 210,835	

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

4 LERWICK

JUNE 1960

	TERRESTRIAL MAGNETIC ELEMENTS												3-hr. range indices K	Sum of K indices	Magnetic character of day, C (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					
1	19 44	599	417 09 25	182	03 16	53.2	25.5 04 32	27.7	14 07	385	105 03 37	280	4,4,4,4,3,3,2,1	25	1	84.2
2 q	18 31	588	510 10 51	78	13 33	50.4	34.2 08 10	16.2	19 50	314	294 13 59	20	1,0,1,1,2,2,2,0	9	0	84.1
3	17 49	632	512 11 10	120	17 49	52.9	33.3 07 46	19.6	21 33	328	261 22 02	67	0,0,1,2,2,3,2,4	14	0	84.5
4 d	14 33	637	302 00 50	335	16 04	59.1	-3.4 04 53	62.5	14 54	400	-5 04 55	405	3,6,5,4,4,4,3,3	32	1	85.1
5	20 04	632	220 02 13	412	03 47	53.5	18.8 01 05	34.7	12 47	409	56 04 15	353	6,5,4,4,3,4,3,3	32	1	85.3
6	15 52	606	337 02 45	269	13 03	54.3	30.4 07 37	23.9	13 38	380	150 03 35	230	5,5,3,3,4,3,2,2	27	1	85.6
7	18 38	630	466 02 54	164	13 16	53.0	32.2 08 55	20.8	19 12	368	171 02 50	197	4,4,2,3,3,2,3,2	23	1	86.7
8	18 28	651	399 04 37	252	14 03	53.5	28.6 07 54	24.9	19 24	365	172 22 28	193	3,5,3,3,3,3,3,5	28	1	86.4
9	18 40	658	384 01 10	274	13 10	53.4	29.3 01 33	24.1	14 50	366	86 01 19	280	5,4,4,2,4,3,4,1	27	1	86.3
10 q	20 03	611	501 09 54	110	12 24	50.6	33.3 08 06	17.3	16 11	328	290 12 10	38	1,0,1,2,2,2,2,2	12	0	86.2
11 q	18 33	592	509 10 42	83	12 34	51.5	33.8 06 42	17.7	06 22	318	261 02 53	57	3,3,2,2,1,2,1,1	15	0	86.4
12 q	18 26	614	501 10 43	113	17 35	51.5	35.0 06 12	16.5	20 06	322	269 12 26	53	1,1,2,2,1,3,2,1	13	0	86.3
13	17 28	626	513 12 27	113	17 29	53.5	34.7 04 32	18.8	18 11	334	285 13 30	49	2,2,1,1,2,3,2,1	14	0	86.3
14	19 59	629	504 14 01	125	14 41	53.5	36.4 05 04	17.1	14 01	372	289 11 33	83	1,2,2,3,4,3,3,2	20	1	86.2
15	19 06	644	503 08 35	141	13 40	51.5	35.1 08 20	16.4	18 36	357	290 09 17	67	2,1,3,2,3,3,2,2	18	0	86.1
16 q	17 32	596	513 12 13	83	02 11	48.1	36.2 08 22	11.9	18 47	318	272 04 15	46	2,2,2,1,1,2,1,1	12	0	86.0
17	16 48	627	522 11 17	105	14 08	49.9	36.1 08 45	13.8	17 37	362	273 01 47	89	2,1,1,1,2,3,3,1	14	0	86.0
18	17 40	633	491 11 30	142	13 55	54.4	35.1 08 51	19.3	14 36	334	251 02 42	83	3,3,2,3,3,3,3,2	22	0	86.0
19	18 32	643	498 09 38	145	13 39	52.6	33.4 04 52	19.2	16 01	355	231 04 42	124	3,3,2,3,3,3,3,3	23	0	85.9
20	19 22	601	502 09 56	99	14 07	51.7	34.0 08 21	17.7	15 53	338	214 03 38	124	3,3,2,1,3,3,1,2	18	0	86.0
21	18 52	665	469 04 20	196	13 46	56.1	33.2 04 48	22.9	19 15	376	160 04 52	216	3,4,3,2,2,3,3,3	23	0	85.5
22	20 44	607	505 10 12	102	14 02	55.4	30.3 04 53	25.1	21 27	328	229 03 38	99	2,3,2,2,2,2,3,3	19	0	86.0
23	16 21	618	425 01 07	193	15 34	55.4	22.5 02 04	32.9	17 26	351	181 01 11	170	4,2,2,2,3,3,2,2	20	0	86.2
24	17 42	640	508 12 02	132	13 31	53.2	27.5 19 53	25.7	19 43	350	267 24 00	83	2,2,2,3,3,3,4,3	22	0	86.3
25	17 07	729	380 22 53	349	22 43	75.7	26.4 22 08	49.3	20 33	384	100 22 41	284	3,2,2,3,3,4,5,5	27	1	86.2
26	17 51	629	399 02 50	230	21 12	51.5	27.6 05 08	23.9	15 12	324	82 02 38	242	5,5,3,2,2,3,2,3	25	1	86.2
27 d	17 19	752	166 05 12	586	18 58	61.9	3.6 05 11	58.3	19 59	396	-97 03 19	493	6,5,5,3,2,5,5,6	37	1	86.4
28 d	17 26	690	477 11 57	213	17 28	57.1	21.7 08 24	35.4	18 00	390	227 00 02	163	4,3,3,4,2,5,4,4	29	1	86.1
29 d	21 06	657	-45 23 51	702	23 44	75.5	2.6 23 32	72.9	23 44	452	110 22 49	342	4,4,3,2,2,3,3,8	29	1	86.0
30 d	17 55	768	-361 02 16	1129	02 36	84.4	-35.2 01 27	119.6	21 06	354	-179 02 50	533	8,8,4,3,3,5,5,4	40	2	85.7
Mean	- -	640	401 - -	239	- -	55.9	25.7 - -	30.2	- -	359	177 - -	182	-	-	0.50	85.9

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) +												JULY 1960	
	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 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	
1	565	547	480	483	547	559	511	494	546	525	510	504	517	531	548	537	566	579	665	662	602	572	553	550	548	3153
2	536	504	545	536	544	548	552	533	553	544	521	509	511	549	541	566	565	577	593	590	581	577	565	555	550	3195
3	553	553	553	548	552	557	552	547	543	529	517	508	540	551	553	567	592	603	607	623	608	570	568	559	561	3453
4	557	493	541	544	524	530	544	540	527	512	502	503	509	533	552	558	633	611	619	601	602	578	566	563	552	3242
5	557	555	534	546	565	576	565	542	529	497	498	514	516	527	529	573	571	582	602	623	606	583	570	558	555	3318
6	527	511	530	551	559	564	555	540	520	498	477	472	506	537	534	547	573	578	583	583	577	566	559	558	542	3005
7 q	556	559	559	560	560	556	548	535	520	509	506	516	529	532	551	562	571	591	592	590	589	578	575	570	555	3314
8 q	565	563	558	557	561	561	552	541	530	519	515	522	528	543	551	566	581	589	594	593	587	578	572	569	558	3395
9 q	565	565	566	570	572	571	567	554	542	526	528	520	528	535	545	560	575	585	592	596	594	591	587	580	563	3514
10	576	568	552	558	568	574	573	565	552	546	533	518	523	540	557	564	555	585	604	616	609	594	576	564	565	3570
11	564	554	553	563	572	576	579	569	559	551	534	530	537	546	552	573	594	587	607	606	611	584	569	572	568	3642
12	573	571	563	568	574	570	548	553	557	541	536	531	557	557	576	565	570	578	587	592	589	589	579	570	566	3594
13	576	560	554	561	565	565	567	572	553	530	527	538	548	555	562	569	604	583	596	594	609	587	580	575	568	3630
14 d	570	564	565	566	569	554	569	566	541	515	509	524	548	565	566	600	620	728	661	625	650	630	599	607	584	4011
15 d	596	587	589	594	582	578	563	562	550	524	527	552	586	628	763	945	975	782	673	526	217	268	-98	-153	538	2916
16 d	-298	-179	141	35	403	463	391	370	400	461	496	516	611	567	590	670	795	728	660	602	548	532	456	385	431	343
17	223	235	411	465	472	485	477	473	458	478	486	497	503	523	537	573	626	653	608	587	558	561	536	495	497	1920
18	522	517	516	524	550	535	526	523	522	510	506	522	502	530	575	572	557	558	573	574	578	576	567	557	541	2992
19 d	554	554	558	559	560	552	537	488	473	441	487	487	549	533	538	561	543	590	611	639	565	552	554	497	541	2982
20	480	514	515	537	549	548	541	521	509	491	496	497	520	542	584	569	572	592	636	625	574	552	563	531	544	3058
21	540	537	544	542	499	480	531	528	512	502	501	501	528	541	538	559	570	586	579	573	569	566	565	569	539	2933
22	560	554	547	541	519	516	528	529	522	515	514	515	528	543	550	556	556	580	589	601	595	575	556	541	547	3130
23	479	546	547	554	550	548	538	535	535	524	514	515	526	532	542	545	557	564	569	581	571	569	569	567	545	3077
24	569	560	559	559	546	546	552	547	548	552	546	544	526	517	517	526	544	561	581	587	588	574	570	568	554	3287
25 q	558	558	556	553	553	556	556	546	532	521	513	523	535	544	554	561	561	569	579	577	581	576	568	567	554	3297
26	562	560	559	561	562	560	553	548	539	528	529	541	546	552	546	560	567	577	599	605	589	577	537	514	557	3371
27 q	538	557	563	565	567	559	549	540	535	526	513	509	511	518	522	531	546	563	574	577	579	575	574	570	548	3161
28	564	563	564	564	563	557	548	539	534	529	532	545	534	533	544	557	571	578	585	601	598	590	585	590	561	3468
29	584	560	525	485	502	510	541	559	549	535	524	525	527	550	563	653	733	787	716	677	605	581	579	554	580	3924
30	377	400	510	552	536	550	556	555	545	541	539	545	515	541	569	589	585	586	583	590	587	577	578	571	545	3077
31 d	548	480	354	552	545	515	494	504	481	474	489	507	541	557	558	580	647	653	612	578	573	561	551	535	537	2889
Mean	509	509	523	531	545	546	541	533	526	516	514	518	532	543	558	581	602	609	607	600	577	566	543	529	548	
Sum 15,000+	797	770	1211	1453	1890	1919	1763	1518	1316	994	925	1050	1485	1825	2307	3014	3675	3863	3829	3594	2889	2539	1828	1408		Grand Total 407,861

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

2 LERWICK (D)												9° +												JULY 1960			
	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	43.9	41.2	43.9	39.2	33.6	36.4	38.1	38.1	41.0	38.9	39.1	41.9	46.5	48.2	46.3	41.8	40.5	41.7	46.8	45.3	44.3	45.1	43.3	44.3	42.1	209.4	
2	47.2	44.2	44.7	44.8	43.2	43.1	40.5	38.9	38.9	36.5	38.0	41.0	45.3	48.1	49.6	48.2	46.5	44.7	44.6	44.8	45.2	44.0	45.2	43.8	43.8	251.0	
3	43.7	44.3	44.3	44.8	41.5	38.6	39.0	35.7	35.2	36.7	38.6	43.0	44.3	46.5	48.3	47.5	45.2	44.8	46.7	47.3	47.3	39.9	43.7	43.8	42.9	230.7	
4	45.7	39.1	35.8	39.1	41.5	40.9	39.9	34.3	38.6	35.2	42.0	44.1	47.8	49.6	49.9	50.6	50.6	47.2	47.6	46.6	46.0	45.9	46.5	44.3	43.7	248.8	
5	47.2	47.5	41.5	33.8	35.7	35.4	38.4	42.4	41.5	41.8	45.3	46.4	49.0	50.1	50.8	49.5	46.5	44.7	44.8	44.9	44.1	44.3	44.0	42.7	43.8	252.3	
6	42.2	34.3	31.5	35.7	35.6	34.7	34.3	35.2	37.7	40.9	42.9	51.0	54.2	52.4	50.1	46.3	45.4	45.0	45.7	47.0	46.9	45.9	44.9	44.7	42.7	224.5	
7 q	43.0	42.4	41.3	40.5	40.5	39.5	36.7	37.1	37.5	40.2	44.4	46.4	48.7	49.5	48.2	46.1	45.8	46.7	47.5	47.2	46.7	46.5	45.3	43.1	43.8	250.8	
8 q	43.9	43.7	41.5	38.6	36.1	34.5	33.4	34.1	37.1	40.5	42.4	45.6	49.5	50.8	51.1	50.6	49.6	47.7	46.3	45.7	45.3	45.2	45.8	45.4	43.5	244.4	
9 q	44.8	45.0	44.8	41.5	38.3	35.2	34.3	35.5	37.7	40.5	43.8	49.0	51.6	53.5	54.3	52.0	49.5	47.6	45.9	45.8	45.8	46.5	46.7	44.5	44.8	274.1	
10	41.7	42.9	45.8	39.2	36.6	35.6	35.2	36.2	37.3	38.6	40.9	44.8	50.5	53.9	55.4	55.1	52.3	48.9	46.8	47.5	46.6	46.5	47.4	45.9	44.7	271.6	
11	43.9	41.9	38.6	35.6	32.6	30.9	34.1	33.8	35.3	38.4	41.0	45.8	50.5	52.5	52.4	50.0	49.0	47.7	46.7	45.4	46.4	39.1	44.9	44.8	42.6	221.3	
12	43.6	45.8	44.3	42.9	39.9	41.5	43.3	41.5	38.1	39.0	39.5	45.3	48.9	49.6	51.3	49.0	47.6	48.1	46.6	45.8	45.5	46.1	46.2	46.5	44.8	275.9	
13	46.4	45.8	39.9	37.8	35.2	39.9	40.5	39.9	39.5	40.5	43.0	46.0	49.1	50.8	52.6	51.5	51.7	48.0	47.4	46.7	46.8	43.1	45.3	46.3	44.7	273.7	
14 d	46.5	44.8	42.9	40.1	40.9	46.7	43.8	39.1	38.1	42.8	43.7	45.9	48.6	51.5	48.8	48.6	49.6	57.3	49.7	52.5	51.5	52.6	48.2	44.7	46.6	318.9	
15 d	41.0	39.2	40.3	43.0	47.2	45.9	44.7	47.4	46.3	47.2	49.1	45.3	44.4	36.5	38.3	47.0	68.9	63.7	60.2	53.0	56.8	42.1	22.8	26.3	43.1	234.0	
16 d	-23.6	6.7	30.7	32.1	30.9	35.2	33.4	35.2	36.2	38.6	41.5	41.5	39.8	45.8	47.2	48.2	52.5	51.5	50.6	48.9	42.9	40.1	32.4	33.7	36.3	72.0	
17	34.5	31.9	42.8	37.5	37.1	33.8	39.8	36.7	35.7	41.7	43.2	44.7	46.9	48.5	49.6	49.5	48.2	45.5	48.1	46.3	46.8	47.0	43.8	48.2	42.8	227.8	
18	39.8	36.3	38.1	37.2	35.5	33.8	34.3	40.0	38.6	38.8	42.9	44.9	46.9	50.6	53.0	47.7	49.1	47.0	47.7	48.0	44.8	44.5	44.8	43.6	42.8	227.9	
19 d	41.5	40.5	39.1	38.2	36.2	37.1	38.3	43.6	42.8	39.2	40.8	48.9	54.3	56.3	56.1	52.3	49.5	48.2	47.4	39.1	49.0	45.9	43.9	48.5	44.9	276.7	
20	47.7	41.5	36.2	34.0	34.0	33.5	32.5	33.2	34.7	39.9	43.9	47.7	50.5	50.6	53.0	49.9	47.2	48.9	46.1	45.3	44.8	46.7	37.6	41.7	42.5	221.1	
21	40.2	39.4	39.1	37.8	36.9	36.7	35.2	35.7	37.6	40.1	43.8	45.9	48.2	50.1	47.7	45.7	45.8	46.7	41.9	44.7	46.5	46.1	45.8	44.3	42.6	221.9	
22	42.8	38.6	38.1	38.1	38.6	39.8	42.3	39.7	39.8	40.8	42.9	47.2	51.5	53.5	53.3	51.5	49.6	48.7	48.2	47.7	47.5	46.7	46.3	45.3	44.9	278.5	
23	36.9	34.3	37.1	37.1	35.3	33.8	33.4	34.2	35.7	39.0	41.9	44.3	47.4	48.9	49.2	47.8	46.3	44.7	44.3	44.1	44.7	44.7	44.8	43.9	41.4	193.8	
24	47.4	43.8	41.8	39.7	39.0	38.3	37.0	35.7	36.2	41.2	43.9	47.5	48.6	51.1	51.3	50.4	50.2	47.5	45.6	44.2	44.7	43.1	41.1	41.0	43.8	250.3	
25 q	41.5	41.9	41.0	39.9	38.1	37.6	37.1	36.3	36.9	38.9	41.5	44.5	47.5	49.1	49.7	49.6	48.6	47.2	46.6	45.6	44.9	43.9	42.9	42.7	43.1	233.5	
26	41.9	41.8	40.9	40.0	40.9	39.1	38.1	38.0	38.0	41.0	44.8	48.5	52.0	52.2	52.4	53.5	52.2	48.7	45.8	46.3	45.7	46.5	38.2	35.9	44.3	262.4	
27 q	37.2	39.8	38.6	35.3	34.4	33.8	31.9	35.2	38.8	38.7	40.5	44.2	46.9	48.0	48.4	46.9	44.5	42.2	43.6	44.5	45.3	44.8	44.3	43.2	41.3	191.0	
28	42.0	41.5	40.5	39.8	37.6	34.4	33.0	34.9	36.9	39.0	42.9	47.2	50.4	50.6	51.8	53.9	52.0	50.3	48.6	48.5	46.8	45.1	45.2	40.2	43.9	253.1	
29	38.8	36.6	42.0	42.7	42.6	49.4	42.8	37.4	37.6	40.9	45.3	47.2	49.6	52.3	53.0	52.6	53.4	61.0	53.9	55.4	49.1	50.4	49.6	46.0	47.5	339.6	
30	32.4	24.7	24.9	38.6	45.7	41.5	39.3	37.1	38.2	40.2	40.5	43.4	45.7	50.1	50.1	49.8	47.5	46.8	45.3	43.0	45.8	44.8	45.6	44.7	41.9	205.7	
31 d	43.1	28.6	17.4	29.9	37.1	38.9	36.1	40.5	39.7	44.3	42.8	47.2	48.6	47.0	50.0	48.6	49.1	44.6	45.3	46.6	45.3	41.9	42.4	44.8	41.7	199.8	
Mean	40.3	39.3	39.0	38.5	38.0	37.9	37.4	37.5	38.2	40.0	42.5	45.7	48.2	49.9	50.4	49.4	49.2	48.2	47.2	46.6	46.5	45.0	43.5	41.5	43.3		
Sum 1100.0+	148.8	120.0	109.4	94.5	78.3	75.5	60.7	62.6	83.2	140.0	216.8	316.3	393.7	448.2	463.2	431.7	424.4	393.3	362.3	343.7	339.8	295.0	248.9	186.2		Grand Total 3236.5	

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

33

LERWICK (Z)			47,000γ (0·47 C.G.S. unit) +																				JULY 1950			
	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	281	268	235	203	263	285	296	291	277	300	309	314	310	310	327	354	356	350	326	347	346	335	314	290	304	287
3	275	214	247	275	279	285	283	304	306	322	322	327	326	308	316	309	316	323	323	322	322	322	316	310	302	253
4	307	300	295	276	262	287	296	300	302	304	301	300	293	296	300	304	320	336	332	328	325	320	306	304	304	294
5	288	177	215	231	257	257	261	282	294	302	298	300	305	318	332	342	350	368	336	334	336	342	327	316	299	168
6	302	268	235	228	249	277	290	294	296	310	304	303	318	326	332	326	331	321	319	323	330	321	302	290	300	195
7	265	195	203	257	288	300	308	313	316	320	327	309	302	308	312	322	329	328	315	306	302	306	306	308	298	145
7 q	309	312	312	311	306	300	300	302	302	300	300	297	292	291	294	306	308	304	304	302	303	306	304	307	303	272
8 q	306	307	308	308	308	304	303	303	306	289	282	280	288	295	296	301	303	305	306	306	306	307	303	302	301	222
9 q	302	302	300	302	304	303	300	296	294	285	276	271	265	269	276	282	295	306	308	308	303	301	297	295	293	40
10	297	299	300	275	286	293	299	301	299	289	292	293	289	287	298	317	326	314	320	317	313	310	297	282	300	193
11	268	253	269	284	287	285	287	290	292	298	301	302	298	298	309	314	316	332	326	326	315	325	290	296	298	161
12	291	297	286	287	293	305	313	309	307	311	311	312	317	326	333	348	350	339	328	325	319	317	311	305	314	540
13	284	283	279	284	290	296	292	293	298	301	299	304	307	315	325	337	340	359	339	332	309	305	311	306	308	388
14 d	303	298	299	305	307	300	288	296	303	297	305	311	326	333	339	343	357	368	401	365	379	334	299	303	323	759
15 d	305	297	299	296	299	295	303	299	303	313	308	319	377	477	538	508	425	379	351	344	233	74	86	306	322	734
16 d	337	397	116	-24	119	206	260	295	313	333	351	371	419	418	409	407	423	413	417	379	348	348	284	220	315	559
17	193	166	184	176	204	259	272	284	319	311	326	335	333	346	362	365	385	377	366	358	347	327	321	237	298	153
18	268	273	291	266	292	291	295	291	297	311	311	303	310	312	330	370	355	332	319	319	323	331	325	319	310	434
19 d	316	313	312	312	307	303	304	307	299	317	317	364	353	325	324	357	373	365	351	303	251	306	273	240	316	592
20	190	240	258	292	313	323	325	323	323	319	307	317	326	330	327	347	344	331	339	337	328	304	258	251	306	352
21	270	284	297	311	297	232	270	299	314	322	317	311	317	324	315	310	313	326	339	332	317	311	306	290	305	324
22	273	278	286	302	303	290	279	289	299	297	298	305	310	309	311	312	318	319	325	325	323	311	301	269	301	232
23	191	200	259	291	305	309	313	311	305	305	305	307	301	301	305	305	309	317	319	319	317	311	305	303	296	113
24	283	274	297	303	309	305	305	305	303	297	296	291	285	282	291	300	306	312	315	318	316	314	303	291	300	201
25 q	297	303	306	310	308	305	306	311	306	301	293	286	286	291	291	293	299	302	304	306	305	299	297	297	300	202
26	299	300	303	307	310	307	306	310	311	305	303	303	304	306	309	303	304	312	321	325	323	304	292	260	305	327
27 q	271	299	310	311	313	317	317	313	309	279	279	279	276	285	300	306	309	312	312	309	305	303	301	302	301	217
28	303	304	305	308	310	311	310	305	293	286	281	280	289	294	291	289	288	293	299	299	307	313	304	277	297	139
29	273	231	180	137	184	198	202	240	273	290	296	303	309	308	323	355	439	472	446	408	406	358	339	307	303	277
30	137	144	161	236	271	285	290	304	305	304	311	330	343	339	326	329	338	338	339	340	333	326	317	305	294	51
31 d	277	164	19	121	210	232	246	266	301	309	345	331	364	371	368	372	369	410	369	350	339	324	288	282	293	27
Mean	276	266	257	261	279	285	291	298	302	304	305	308	314	319	326	333	339	341	336	329	320	310	296	289	304	
Sum 7000+	1561	1240	966	1081	1633	1845	2019	2226	2365	2427	2471	2558	2738	2898	3109	3333	3494	3563	3414	3213	2929	2615	2183	1970		Grand Total 225,851

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

4 LERWICK

JULY 1960

	TERRESTRIAL MAGNETIC ELEMENTS												3-hr. range indices K	Sum of K indices	Magnetic character of day, C (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					
1	18 45	684	417 02 51	267	18 33	50·7	30·9 04 02	19·8	15 48	362	179 03 05	183	5,5,4,2,3,3,4,3	29	1	85·3
2	18 32	608	474 01 09	134	00 42	54·4	33·3 09 10	21·1	12 18	332	194 01 08	138	4,3,3,3,3,2,2,2	22	0	85·7
3	16 51	632	498 11 26	134	19 35	49·0	33·8 08 07	15·2	18 19	341	256 04 17	85	2,3,2,2,2,3,3,3	20	0	85·3
4	16 56	660	446 01 29	214	16 38	52·5	29·4 01 53	23·1	17 36	380	135 01 32	245	5,3,3,3,3,4,3,2	26	1	85·5
5	19 45	636	473 09 59	163	13 11	52·1	31·8 03 57	20·3	16 21	336	210 03 07	126	4,3,3,3,3,2,3,3	24	0	85·7
6	18 19	586	458 11 07	128	12 18	54·8	28·4 02 16	26·4	10 38	334	179 01 58	155	4,3,2,3,3,2,2,1	20	0	85·7
7	17 45	600	504 10 20	96	13 19	49·7	35·6 06 46	14·1	02 03	314	288 14 06	26	1,2,1,2,1,2,1,1	11	0	85·9
8 q	18 29	597	512 10 33	85	15 02	51·5	32·4 06 50	19·1	02 50	312	277 11 07	35	1,1,1,1,1,1,1,1	8	0	85·9
9 q	19 35	599	515 11 29	84	14 22	54·8	33·7 06 07	21·1	18 10	310	263 12 33	47	1,2,1,2,1,2,1,1	11	0	86·0
10 q	19 52	625	515 11 27	110	14 40	55·6	33·8 06 58	21·8	16 12	328	264 03 13	64	3,3,1,2,2,3,2,2	18	0	86·0
11	16 53	628	525 11 23	103	13 30	53·8	29·4 05 03	24·4	17 28	338	248 01 29	90	3,2,1,2,2,3,2,3	18	0	86·1
12	19 09	601	525 10 52	76	14 05	54·4	35·2 08 44	19·2	15 22	356	283 02 34	73	2,2,3,2,3,2,1,2	17	0	86·2
13	20 28	624	520 10 30	104	16 23	54·6	33·9 04 36	20·7	17 17	366	240 00 28	126	3,2,2,2,2,3,3,2	19	0	86·2
14 d	17 20	822	494 10 03	328	17 22	67·0	36·2 08 59	30·8	17 51	423	282 06 27	141	2,3,3,3,3,5,4,4	27	1	86·2
15 d	16 29	1251	-628 23 53	1879	16 40	111·8	-67·6 23 52	179·4	14 58	580	-36 20 49	616	2,3,2,4,6,7,8,8	40	2	86·3
16 d	16 12	849	-733 00 38	1582	01 56	72·7	-58·3 00 48	131·0	16 12	623	-131 03 35	754	9,8,4,4,4,6,5,6	46	2	86·3
17	17 13	674	113 01 14	561	23 08	55·2	23·2 01 32	32·0	16 49	404	111 01 13	293	6,4,3,3,2,4,3,4	29	1	86·2
18	15 00	620	490 12 21	130	14 51	54·1	31·6 05 54	22·5	15 38	383	256 00 01	127	2,3,2,3,4,4,2,1	21	1	86·4
19 d	19 37	685	410 23 46	275	12 00	60·0	32·4 19 36	27·6	11 53	384	147 23 59	237	1,2,3,4,4,4,5,5	28	1	86·2
20	18 43	651	446 00 00	205	00 11	56·4	17·5 22 28	38·9	15 46	359	145 00 01	214	4,3,2,2,4,4,4,4	27	0	86·1
21	17 14	604	434 05 03	170	13 50	51·5	33·8 07 11	17·7	18 23	342	219 05 22	123	3,4,3,1,3,2,2,2	20	0	86·0
22	19 38	604	498 24 00	106	13 23	55·2	36·2 03 06	19·0	18 28	329	238 23 59	91	2,3,2,2,2,2,2,4	19	0	86·2
23	19 25	585	419 00 31	166	14 08	50·4	21·4 00 54	29·0	18 06	320	153 00 48	167	5,2,2,1,2,1,2,1	16	0	86·1
24	19 02	605	502 13 28	103	13 48	53·3	33·2 08 12	20·1	18 58	325	262 01 03	63	2,3,2,2,3,3,2,2	19	0	86·0
25 q	21 01	592	510 10 26	82	15 29	50·5	34·8 05 15	15·7	07 37	312	284 12 09	28	2,1,1,1,1,1,1,2	10	0	86·1
26	19 18	618	502 23 13	116	15 18	54·1	34·2 23 18	19·7	19 39	331	249 23 54	82	1,1,1,2,2,2,2,4	15	0	86·0
27 q	19 07	581	507 12 04	74	14 05	48·9	29·5 06 35	19·4	06 50	321	252 00 01	69	3,2,3,1,2,1,1,0	13	0	86·0
28	19 32	607	514 13 04	93	15 46	54·3	31·9 06 55	22·4	21 18	317	273 23 24	44	0,1,2,2,2,1,2,3	13	0	86·0
29	17 47	829	464 02 54	365	17 34	65·1	34·1 04 13	31·0	17 58	485	122 03 12	363	5,4,4,2,3,5,5,4	32	1	86·3
30	15 03	616	210 00 20	406	15 15	51·5	17·0 01 23	34·5	12 09	350	52 00 14	298	6,4,2,3,4,3,2,2	26	1	86·3
31 d	17 13	686	262 02 15	424	22 40	53·3	0·9 02 53	52·4	17 34	436	-22 02 11	458	6,5,4,4,4,3,4,3,3	32	1	86·3
Mean	- -	663	381 - -	283	- -	56·6	24·0 - -	32·6	- -	369	189 - -	179	-	-	0·42	86·0

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) +												AUGUST 1960				
	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+		
	γ	γ	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	522	541	552	552	525	535	545	531	529	533	528	518	544	551	580	549	561	574	591	584	578	571	568	549	550	550	3211		
2	544	526	541	524	524	557	560	546	525	528	520	528	526	540	552	545	572	614	609	579	571	571	557	534	550	550	3193		
3	542	546	556	561	559	553	540	530	524	522	521	526	542	543	561	551	579	590	582	581	572	563	559	555	552	552	3258		
4 q	550	544	558	560	557	549	555	552	534	505	507	518	531	536	556	560	566	577	578	581	573	565	558	555	551	551	3225		
5 q	560	559	557	556	558	555	550	548	541	532	529	533	546	556	561	555	563	566	576	579	573	573	567	566	566	556	3349		
6	564	565	562	566	566	565	562	557	541	521	523	526	541	553	562	581	590	574	573	581	583	582	575	571	562	3484			
7	573	559	544	566	563	563	562	558	543	529	528	528	528	536	552	563	575	573	581	581	582	576	573	571	559	3407			
8	571	570	569	569	567	566	561	525	508	517	521	520	544	553	566	609	636	628	608	601	573	534	492	474	558	3382			
9	423	544	561	560	560	508	497	513	525	526	524	506	509	520	528	545	583	571	580	566	567	562	559	566	538	2903			
10	569	568	569	575	575	565	561	539	505	525	545	532	539	536	538	547	558	622	629	607	588	571	561	561	562	3485			
11	558	557	552	477	480	553	563	547	526	512	512	493	521	530	584	566	552	558	597	590	582	573	570	575	547	3128			
12	572	557	555	566	567	516	524	497	505	509	513	513	497	489	525	544	550	567	568	580	585	578	572	565	542	3014			
13	562	557	553	558	558	557	555	544	523	499	489	491	504	520	546	562	564	569	571	576	569	569	562	545	546	3103			
14	547	550	547	537	552	561	556	545	530	513	504	501	507	513	535	558	566	611	635	620	611	585	579	576	556	3339			
15	536	565	561	556	569	569	567	557	540	517	516	513	527	533	538	548	555	572	581	577	582	579	577	574	555	3309			
16 d	579	569	564	562	564	559	553	550	542	527	516	509	516	540	675	829	985	935	841	646	549	525	532	485	611	4652			
17 d	169	91	117	95	309	154	492	452	361	439	484	498	512	561	520	618	828	938	759	628	524	485	288	480	450	802			
18	553	530	539	544	548	530	512	501	491	469	471	492	503	519	531	543	555	553	569	571	564	556	555	552	531	2751			
19	550	543	542	547	550	544	535	524	506	489	480	493	516	540	534	525	569	598	627	630	568	525	427	535	537	2897			
20	544	551	554	551	532	477	412	433	471	500	493	495	525	526	530	539	562	596	596	600	574	559	547	537	529	2704			
21 d	510	531	530	532	532	541	532	518	482	470	510	526	539	558	566	561	572	627	647	607	562	561	558	558	547	3130			
22	521	422	527	543	542	539	536	522	503	493	507	522	530	530	533	539	569	561	570	588	562	558	554	542	534	2813			
23	529	547	551	540	548	552	545	539	530	513	502	502	510	527	539	549	572	562	572	561	561	561	551	559	543	3032			
24 q	558	549	553	558	563	558	545	521	511	502	507	524	526	541	550	564	578	584	574	569	566	563	559	559	549	3182			
25 q	559	561	559	558	556	550	542	527	513	501	498	502	511	530	551	571	566	572	570	577	575	573	573	571	549	3166			
26 q	571	569	569	566	564	561	553	541	528	513	505	507	526	537	553	561	561	557	572	585	581	568	571	564	553	3283			
27	562	557	554	566	568	568	566	548	534	525	520	523	535	551	568	575	597	631	610	587	577	583	571	571	564	3547			
28	567	564	558	522	511	526	536	532	529	511	502	502	525	521	526	534	560	578	567	567	565	563	562	561	541	2989			
29 d	567	563	581	595	578	447	505	525	523	514	503	496	506	511	546	568	581	582	590	598	562	498	401	441	533	2781			
30 d	262	410	370	204	374	326	351	409	444	493	508	521	602	613	621	625	583	596	596	565	557	559	550	542	487	1681			
31	530	535	537	481	520	554	540	541	511	487	497	504	504	522	523	539	542	555	572	561	559	562	550	550	532	2776			
Mean	527	529	534	524	537	525	533	525	512	507	509	512	525	537	553	569	592	606	603	588	571	559	541	547	544				
Sum 15,000+	1324	1400	1542	1247	1639	1258	1513	1272	878	734	783	862	1292	1636	2150	2623	3350	3791	3694	3217	2695	2345	1787	1944		Grand Total 404,976			

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

2 LERWICK (D)		9° +												AUGUST 1960														
	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	45.3	42.4	40.1	39.9	43.4	39.3	37.9	38.6	38.1	39.4	39.8	44.7	49.1	48.0	46.3	48.2	48.6	47.8	46.6	44.9	45.3	45.0	40.5	42.1	43.4	141.3		
2	40.5	40.1	41.0	45.3	46.7	40.8	37.6	37.6	41.4	40.6	41.9	44.1	48.7	51.3	51.7	49.8	47.7	46.8	44.7	44.7	44.9	44.1	37.9	41.1	43.8	151.0		
3	36.3	37.9	39.9	38.7	39.3	39.3	37.8	38.9	40.0	40.5	43.4	45.9	47.7	48.7	48.9	47.7	44.3	46.2	45.4	45.7	45.3	43.8	43.8	45.4	42.9	130.8		
4 q	45.7	46.0	41.7	39.3	40.0	43.0	37.7	38.0	39.2	40.5	43.4	44.4	46.3	49.0	48.9	47.0	45.9	45.3	44.8	45.5	44.6	44.6	43.1	42.9	43.6	146.8		
5 q	42.3	42.9	40.9	40.1	39.5	39.2	38.9	38.4	39.1	41.5	43.9	46.7	49.4	50.0	47.5	46.7	45.8	44.6	44.6	44.7	44.8	45.0	45.2	45.6	43.6	147.3		
6	44.9	43.1	41.7	40.8	39.2	38.2	39.2	39.3	39.1	40.5	44.2	46.8	50.1	52.2	49.8	48.2	47.1	44.5	44.8	46.5	45.3	43.9	41.0	41.8	43.8	152.2		
7	43.8	45.3	47.2	39.7	36.4	36.5	37.3	37.2	37.8	40.1	41.4	43.3	47.4	50.9	51.7	50.4	48.9	46.7	46.4	46.5	46.0	45.1	44.2	43.5	43.9	153.7		
8	43.5	43.2	43.6	41.8	39.2	36.3	36.3	35.9	40.5	39.1	43.3	49.0	50.7	53.9	52.0	52.6	51.3	48.0	46.0	43.2	40.8	40.5	45.3	41.8	44.1	157.8		
9	41.8	37.2	39.5	37.8	42.1	54.3	53.7	46.8	37.3	37.3	41.1	43.2	46.0	49.0	48.9	46.6	44.9	44.1	44.7	43.8	44.8	45.2	43.9	44.8	44.1	158.8		
10	44.6	38.3	40.1	39.0	36.3	36.2	36.7	37.4	40.8	44.7	45.0	48.7	50.8	52.3	52.0	50.4	46.9	47.1	47.9	46.6	43.6	46.7	44.8	44.3	44.2	161.2		
11	42.2	41.6	43.0	49.7	35.1	32.7	32.6	33.8	37.5	39.9	44.7	47.8	49.0	52.6	54.1	51.8	50.3	49.1	48.8	44.9	46.3	45.8	44.9	46.3	44.4	164.5		
12	40.5	38.4	35.7	37.0	40.5	43.4	41.8	43.0	48.9	45.9	42.8	44.9	48.0	51.5	51.7	49.5	45.7	43.7	46.1	45.2	45.5	43.6	40.5	40.5	43.9	154.3		
13	41.8	41.5	44.1	41.3	41.2	38.9	35.7	34.1	35.4	39.7	44.1	48.6	52.8	52.9	51.3	48.9	45.9	44.3	44.1	44.8	45.1	45.7	43.8	42.1	43.7	148.1		
14	43.3	43.1	44.9	45.3	41.7	38.6	36.4	33.8	34.5	38.0	41.5	44.9	49.3	52.9	51.8	51.3	49.0	47.4	47.5	49.7	43.2	43.7	46.3	45.9	44.3	164.0		
15	45.6	40.7	41.0	46.3	40.0	38.8	36.5	34.2	35.7	42.4	44.7	47.8	49.1	49.8	47.9	45.1	43.2	43.8	44.0	44.8	46.0	44.5	44.5	44.1	43.4	140.5		
16 d	44.0	42.3	41.2	39.3	37.8	36.3	35.7	35.6	37.4	41.5	45.0	48.9	52.5	54.3	54.3	52.0	55.2	58.2	61.7	55.4	44.5	44.1	45.9	47.7	46.3	210.8		
17 d	51.5	14.5	9.3	6.0	35.9	39.3	37.3	33.0	41.8	48.9	45.9	48.6	49.7	49.5	50.8	48.7	48.2	58.7	56.4	52.4	47.2	45.6	28.3	36.0	41.0	83.5		
18	39.0	44.1	39.4	38.8	35.6	35.3	39.7	42.0	41.7	43.0	48.2	50.6	51.5	51.4	49.7	46.8	47.8	44.2	41.2	41.2	44.7	44.8	45.6	44.5	43.4	146.4		
19	41.9	42.7	41.5	37.6	36.4	34.4	34.5	34.1	34.7	39.8	45.6	49.5	53.8	54.9	52.7	50.5	49.7	42.8	46.5	48.6	49.9	43.0	34.2	41.5	43.4	140.9		
20	42.0	41.0	39.6	37.0	35.9	29.6	45.8	37.6	34.7	37.1	42.4	45.9	48.7	48.1	47.4	45.8	45.5	44.1	44.8	40.9	44.8	41.9	41.8	38.0	41.7	100.4		
21 d	37.8	36.4	34.2	33.0	31.4	31.5	36.2	38.1	38.6	44.7	48.7	51.8	53.9	53.9	52.5	47.8	46.8	48.2	41.0	46.7	46.9	44.8	44.8	46.3	43.2	136.0		
22	38.9	41.1	38.6	36.1	35.1	36.6	34.5	35.0	36.0	40.1	44.3	50.7	53.9	53.3	49.5	46.7	44.8	44.1	43.2	36.5	42.3	44.0	44.1	46.5	42.3	115.9		
23	43.6	41.9	40.1	40.2	38.5	36.2	34.3	34.6	35.2	37.5	41.2	46.8	51.1	51.3	50.1	48.6	46.3	41.2	36.7	41.7	42.9	42.6	43.3	43.8	42.1	110.1		
24 q	45.0	44.6	44.1	39.6	37.2	36.2	35.3	35.2	35.1	38.5	45.5	51.1	51.7	52.1	50.3	48.2	45.9	44.0	42.9	43.6	42.9	43.9	43.3	42.6	43.3	138.8		
25 q	42.4	41.9	41.0	40.3	39.0	37.1	35.2	34.6	34.6	37.8	43.3	48.8	51.3	52.0	51.3	49.8	47.2	47.0	48.4	48.4	46.9	44.8	44.8	43.8	43.8	151.7		
26 q	42.8	42.2	41.5	40.5	39.3	37.6	36.3	35.7	36.3	39.5	44.3	50.7	54.4	54.3	51.5	48.2	45.8	44.6	44.7	45.8	45.3	45.8	44.8	42.4	43.9	154.3		
27	39.0	37.1	39.3	36.6	34.3	33.8	34.2	36.2	37.0	40.1	45.8	50.5	53.7	55.3	55.1	53.9	52.4	47.2	44.7	46.8	39.9	40.0	43.4	43.9	43.3	140.2		
28	42.3	41.3	41.2	45.8	40.3	36.7	34.1	33.9	36.5	39.3	42.2	46.5	51.6	51.9	51.8	48.9	42.4	43.6	43.6	44.0	44.7	45.3	45.0	44.2	43.2	137.1		
29 d	47.9	38.9	34.5	35.7	41.8	40.2	26.3	30.7	36.4	39.3	43.9	46.7	47.9	48.2	47.2	47.7	47.4	45.3	42.9	38.1	38.8	35.7	22.6	32.7	39.9	56.8		
30 d	36.6	31.3	32.8	32.4	46.7	67.7	50.1	38.9	39.0	43.9	46.3	47.2	46.7	44.7	46.3	45.8	42.9	41.9	38.1	41.0	40.0	37.2	40.5	39.4	41.6	98.4		
31	45.7	37.6	38.4	42.8	41.8	40.2	41.0	38.1	40.0	44.2	46.3	47.4	48.7	49.2	48.7	46.7	44.9	42.6	42.1	45.1	44.3	36.4	41.3	42.2	43.2	135.7		
Mean	42.7	39.4	39.4	38.8	38.9	38.9	37.7	36.8	38.1	40.8	44.0	47.5	50.2	51.3	50.4	48.7	46.9	45.9	45.3	45.2	44.4	43.5	42.0	42.8	43.3			
Sum 1100.0+	222.5	121.6	121.1	103.7	107.6	104.3	67.0	40.3	80.3	165.3	264.1	372.5	455.5	489.4	463.7	410.3	355.1	324.1	305.3	301.2	277.6	247.9	202.3	226.6		Grand Total 32229.3		

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 1960			
	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 6000+
	γ	γ	γ	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	274	274	295	292	271	252	272	281	290	303	313	319	309	325	343	325	310	311	313	325	325	319	301	292	301		1234	
2	284	264	259	253	212	245	277	298	303	305	308	311	317	319	325	337	332	335	357	345	331	313	270	266	299		1166	
3	252	264	285	293	304	305	306	306	306	306	310	310	305	317	319	325	331	332	331	325	323	319	315	305	308		1394	
4 q	291	270	250	270	280	274	282	293	299	310	303	307	310	311	314	323	326	325	325	317	317	313	313	314	302		1237	
5 q	311	309	311	313	311	311	305	305	303	300	296	293	297	299	309	315	315	315	314	316	315	311	310	309	308		1393	
6	309	306	311	311	311	306	303	299	301	299	296	293	291	298	300	308	311	319	311	301	305	311	317	310	305		1327	
7	305	303	266	258	270	276	279	285	291	291	291	292	299	301	305	311	311	315	314	309	305	303	303	303	295		1086	
8	304	305	304	302	303	299	301	307	298	280	279	280	283	293	315	319	370	416	420	382	350	305	200	143	307		1358	
9	98	205	280	305	305	272	212	236	274	295	300	323	325	308	309	316	331	345	338	337	323	311	306	301	290		955	
10	280	255	282	298	311	307	299	306	307	289	281	285	284	296	310	322	337	351	393	385	353	319	322	311	312		1483	
11	307	305	301	256	160	232	277	295	305	306	298	312	325	313	315	347	345	328	314	335	331	323	312	300	302		1242	
12	249	230	252	269	260	251	258	282	284	285	300	325	345	350	351	349	343	332	312	312	318	323	311	300	300		1191	
13	307	307	300	292	306	308	316	322	321	317	313	306	315	327	333	339	336	324	312	316	323	319	312	310	316		1581	
14	305	306	306	299	293	298	309	316	317	316	312	314	316	318	325	330	329	318	342	352	343	350	336	312	319		1662	
15	247	283	287	283	300	313	319	329	326	329	325	317	305	310	319	321	325	319	319	319	312	313	313	310	310		1446	
16 d	305	299	305	311	312	316	312	312	310	299	299	296	291	304	308	403	420	390	428	415	321	319	325	300	329		1900	
17 d	66	279	-217	259	99	64	141	264	295	274	291	312	336	338	336	340	403	388	352	368	452	350	223	205	259		218	
18	279	291	299	318	318	321	306	306	312	327	319	318	330	342	363	364	369	371	357	338	331	321	310	310	326		1820	
19	303	305	310	312	313	318	320	320	320	319	330	323	319	314	329	326	325	364	365	375	345	313	196	278	318		1642	
20	300	319	325	325	325	300	226	181	224	268	292	293	299	322	319	318	319	339	355	372	351	327	312	305	305		1316	
21 d	271	257	270	278	278	308	316	316	319	325	317	312	310	316	338	361	357	371	392	348	335	312	281	224	313		1512	
22	200	154	208	281	302	318	325	325	321	312	300	293	293	297	307	317	328	336	331	336	323	313	311	282	296		1113	
23	268	286	300	307	308	317	318	317	313	303	293	293	294	294	300	306	316	336	339	323	311	308	305	304	307		1359	
24 q	297	292	292	297	304	307	312	310	300	298	292	285	285	287	297	300	312	321	329	319	313	307	305	305	303		1266	
25 q	305	304	306	312	313	313	312	312	310	301	299	292	287	291	299	306	313	312	310	306	312	312	305	304	306		1336	
26 q	304	304	305	307	310	312	313	315	312	303	291	278	272	279	292	306	312	310	304	308	314	319	309	289	303		1268	
27	221	212	234	257	285	299	300	302	302	299	293	293	288	286	299	306	318	367	411	371	360	312	313	306	301		1234	
28	305	305	299	282	224	246	279	299	302	306	306	306	306	323	331	338	351	342	331	326	320	313	310	305	306		1355	
29 d	266	214	265	279	272	122	123	237	278	286	306	309	309	311	311	317	332	338	355	381	324	252	157	186	272		530	
30	102	36	-77	-83	-23	27	157	247	304	331	353	374	376	409	436	454	395	378	390	363	338	303	308	310	259		280	
31	277	264	275	238	203	241	270	285	307	323	321	323	324	323	336	336	336	336	334	322	320	316	293	295	300		1198	
Mean	264	268	258	277	269	270	279	294	302	303	304	306	308	314	322	332	337	341	345	340	331	315	294	287	302			
Sum 7000+	1192	1307	988	1574	1340	1378	1645	2108	2354	2405	2427	2487	2545	2721	2993	3285	3458	3584	3698	3547	3244	2749	2104	1897			Grand Total 225,030	

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

4 LERWICK

AUGUST 1960

	TERRESTRIAL MAGNETIC ELEMENTS												3-hr. range indices K	Sum of K indices	Magnetic character of day, C (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	γ	h. m.	γ			°A.			
1	14 06	620	508	00 46	112	13 00	51.5	35.6	06 01	15.9	14 23	349	241	05 14	108	3,3,2,2,4,3,2,2	21	0	86.8	
2	18 07	643	481	04 08	162	04 09	54.4	32.5	22 27	21.9	18 41	364	195	04 23	169	2,4,3,2,2,4,3,3	23	0	86.7	
3	17 55	594	517	10 31	77	14 07	49.9	32.5	00 32	17.4	16 26	333	244	00 22	89	3,2,1,1,2,2,2,2	15	0	86.5	
4 q	17 42	585	496	09 36	89	13 42	49.9	35.7	06 59	14.2	16 43	330	245	02 33	85	3,2,2,2,1,1,1,1	13	0	86.8	
5 q	18 52	580	528	10 09	52	13 10	50.6	37.5	06 50	13.1	17 01	317	292	11 04	25	1,1,1,0,2,1,1,0	7	0	86.8	
6	16 40	596	517	09 31	79	13 18	52.6	37.5	05 59	15.1	17 41	322	291	12 03	31	1,0,1,1,1,3,2,2	11	0	86.9	
7	16 51	613	522	12 01	91	14 19	52.6	35.3	04 23	17.3	17 33	319	249	03 20	70	3,2,2,1,2,3,1,0	14	0	86.7	
8	16 12	655	425	23 52	230	13 48	56.2	32.4	23 04	23.8	18 16	438	77	24 00	361	1,2,3,2,3,4,4,5	24	1	86.6	
9	16 58	600	380	00 33	220	05 41	63.2	33.4	01 08	29.8	17 26	351	55	00 12	296	5,4,4,3,2,3,2,2	25	1	86.6	
10	17 43	641	491	08 36	150	14 05	53.2	34.3	06 03	18.9	18 46	405	244	01 20	161	3,2,3,3,3,4,3,2	23	0	86.6	
11	18 40	618	424	03 42	194	03 40	55.8	28.8	04 40	27.0	15 41	359	123	04 09	236	2,5,3,3,4,4,3,2	26	1	86.5	
12	20 50	593	470	13 29	123	14 00	53.2	31.5	00 52	21.7	14 49	357	210	00 58	147	3,4,3,3,3,3,2,2	23	0	86.4	
13	19 01	583	481	11 09	102	12 55	54.2	32.5	08 06	21.7	15 51	344	284	03 21	60	2,2,2,2,2,2,2,2	16	0	86.1	
14	18 35	645	495	13 11	150	15 19	55.2	32.2	08 19	23.0	19 20	356	285	23 56	71	2,2,2,1,2,4,3,3	19	0	85.9	
15	18 09	587	508	11 11	79	00 16	52.8	33.3	07 40	19.5	09 05	331	215	00 37	116	3,3,2,1,2,2,1,1	15	0	86.0	
16 d	17 11	1207	118	23 59	1089	23 59	72.3	30.0	20 25	42.3	15 51	500	177	23 59	323	1,1,1,2,5,7,7,7	31	1	85.9	
17 d	17 28	1114	-794	02 56	1908	00 34	106.2	-64.2	02 54	170.4	20 54	573	-561	02 51	1134	9,8,6,5,4,7,7,7	53	2	86.0	
18	19 22	576	453	10 00	123	12 33	52.4	33.2	05 27	19.2	17 24	376	259	00 00	117	3,2,2,3,3,2,2,1	18	0	85.9	
19	18 53	640	346	22 11	294	22 56	60.3	18.3	22 19	42.0	19 10	384	160	22 21	224	1,0,2,2,3,4,4,6	22	1	85.9	
20	19 08	626	391	06 22	235	06 26	58.2	23.6	07 52	34.6	19 52	389	161	07 07	228	3,4,5,3,3,3,3,3	27	1	86.0	
21 d	18 57	662	456	09 37	206	13 08	56.4	27.3	04 37	29.1	18 24	411	198	24 00	213	3,3,3,4,3,4,4,4	28	1	86.0	
22	19 28	611	342	01 31	269	12 37	54.9	28.5	19 17	26.4	19 08	354	130	01 20	224	5,3,2,3,2,3,3,3	24	1	86.0	
23	16 25	581	492	10 48	89	12 31	52.4	32.3	06 39	20.1	18 01	345	265	00 04	80	3,2,2,2,1,3,3,1	17	0	86.1	
24 q	17 09	591	497	09 46	94	11 47	52.9	34.0	08 07	18.9	18 41	331	283	12 49	48	1,1,2,3,1,2,2,1	13	0	86.3	
25 q	15 32	586	497	10 40	89	13 33	52.3	33.5	08 04	18.8	16 15	317	284	12 39	33	0,1,1,2,2,2,2,1	11	0	86.4	
26 q	19 36	589	503	10 50	86	12 45	55.6	35.2	07 06	20.4	21 26	323	271	12 32	52	0,0,1,2,2,2,2,3	12	0	86.6	
27	17 45	656	510	11 03	146	13 14	56.1	32.2	05 45	23.9	18 30	436	192	01 00	244	4,3,2,2,2,4,4,3	24	1	86.5	
28	17 03	589	497	04 17	92	03 36	54.2	28.5	06 33	25.7	16 42	353	213	04 26	140	2,4,3,1,2,3,1,1	17	0	86.5	
29 d	19 06	617	263	24 00	354	00 50	54.2	11.2	22 45	43.0	19 36	396	62	05 35	334	4,6,5,3,3,3,4,6	34	1	86.6	
30 d	15 05	654	-52	03 30	706	05 20	71.8	-1.8	01 17	73.6	15 14	474	-196	03 28	670	6,7,6,4,4,4,2,2	37	2	86.4	
31	21 40	579	440	03 45	139	03 56	51.6	28.5	21 35	23.1	17 58	342	186	04 10	156	3,4,3,2,2,2,2,3	21	0	86.4	
Mean	-	-	646	394	-	253	-	57.0	26.9	-	30.1	-	374	172	-	201	-	-	0.45	86.4

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 1960														
	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 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	γ	γ	
1	q	546	546	545	543	542	539	534	527	520	519	520	524	531	531	535	535	539	546	555	560	562	561	562	556	541	3978	
2		554	554	552	550	549	544	543	534	517	510	515	518	549	564	572	564	578	571	596	576	574	568	448	427	543	4027	
3	d	370	297	529	547	510	471	433	504	521	519	518	518	523	544	536	543	562	573	574	572	563	557	553	554	516	3391	
4	d	548	552	556	570	554	556	541	431	436	440	488	545	568	568	670	561	567	698	694	429	429	43	114	-97	478	2461	
5	d	-349	4	24	155	179	279	373	336	245	351	448	544	539	543	614	687	620	621	641	571	552	525	344	407	386	253	
6		368	480	501	500	526	508	402	453	486	493	485	482	490	503	521	541	534	546	552	560	553	545	490	356	495	2875	
7	d	521	521	522	535	538	529	517	511	508	505	501	518	542	550	616	539	567	585	581	560	539	538	544	533	538	3920	
8		517	526	520	523	530	542	543	523	493	488	489	494	524	558	551	558	612	580	557	566	557	555	556	554	538	3916	
9		558	553	512	482	502	535	532	520	512	495	491	487	515	526	540	555	561	579	576	557	557	554	545	545	533	3789	
10		550	549	552	555	554	546	542	541	528	513	498	482	491	509	532	583	597	590	597	580	557	555	549	536	545	4086	
11		532	516	509	547	554	561	558	546	534	524	509	504	515	504	524	526	576	580	584	561	567	556	522	523	539	3932	
12		526	519	538	549	549	554	551	525	509	495	494	498	497	506	540	539	544	552	565	564	560	554	557	561	535	3846	
13		559	550	535	533	475	560	535	511	503	490	477	482	513	516	526	544	541	549	554	572	566	545	513	485	526	3634	
14		403	521	547	546	520	548	554	535	523	505	500	491	506	513	529	525	538	554	561	568	565	558	557	555	530	3722	
15	q	554	552	554	553	554	549	552	544	528	511	507	503	513	518	537	547	555	557	561	566	570	565	564	566	545	4080	
16	q	563	565	564	559	558	556	551	539	523	513	504	502	505	519	536	551	555	557	567	568	569	568	561	561	546	4114	
17		562	562	564	558	558	551	546	539	528	517	508	507	516	527	538	536	556	570	572	582	597	579	555	519	548	4147	
18		454	451	439	532	532	542	541	536	520	507	495	514	522	528	546	542	555	557	562	565	561	558	554	561	528	3674	
19	q	557	550	549	551	549	547	544	535	523	511	504	505	514	522	532	538	550	555	561	564	564	563	562	561	542	4011	
20		561	558	557	557	556	555	551	542	528	517	509	509	516	527	539	546	547	552	562	567	573	580	576	563	548	4148	
21		565	568	563	560	561	559	557	547	536	523	510	509	513	512	540	554	556	555	565	566	560	563	561	560	548	4163	
22		546	546	549	550	544	551	547	546	533	518	506	507	521	528	553	569	569	569	568	580	569	560	561	535	547	4125	
23		502	509	524	566	559	554	562	539	532	532	513	510	512	517	522	542	551	557	569	573	573	568	573	574	543	4033	
24		529	510	385	475	558	562	529	496	502	488	487	503	518	514	529	541	584	577	550	551	566	554	550	551	525	3609	
25	q	547	547	546	546	546	546	544	539	526	514	503	504	510	521	530	542	551	556	565	565	558	558	555	558	541	3977	
26		555	542	544	557	560	559	560	551	532	520	512	512	518	528	539	551	557	562	568	574	564	546	492	394	537	3897	
27		344	420	510	532	532	558	550	524	513	513	506	503	504	509	520	535	542	558	568	556	551	550	554	558	521	3510	
28		555	553	551	554	556	558	558	558	550	523	510	512	521	532	543	535	547	557	558	554	558	557	557	552	546	4109	
29		554	554	554	554	556	557	555	549	537	529	525	527	529	554	533	510	551	554	565	564	561	509	443	430	536	3854	
30	d	399	482	471	520	543	567	563	542	532	520	520	522	539	530	564	572	565	591	594	575	524	452	528	535	531	3750	
Mean		485	505	512	529	530	538	532	521	509	503	502	508	519	527	547	550	561	570	575	562	557	535	520	502	529		
Sum 14,000+		550	1157	1366	1859	1904	2143	1968	1623	1278	1103	1052	1236	1574	1821	2407	2511	2827	3108	3242	2866	2719	2044	1600	1073		Grand Total 381,031	

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

2 LERWICK (D)													9° +													SEPTEMBER 1960																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
	Hour G.M.T.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					

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					1960	
	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 6000+	
	γ	γ	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	304	310	309	309	310	311	312	311	310	309	305	302	298	302	309	310	308	304	304	304	305	308	304	304	307	1362		
2	305	305	308	306	307	306	305	303	303	296	292	294	296	313	338	372	361	332	347	373	334	309	238	241	312	1484		
3 d	155	94	201	223	227	207	237	226	258	276	282	288	309	330	349	335	323	325	343	338	325	324	316	305	275	596		
4 d	278	284	286	289	273	234	246	279	289	309	342	355	375	429	423	456	390	411	424	286	364	261	23	92	308	1398		
5 d	294	-28	-115	83	50	185	256	311	380	398	410	410	403	408	444	508	459	421	421	351	354	316	204	138	294	1061		
6	173	241	267	284	289	313	282	252	286	313	318	320	328	336	343	354	358	355	352	341	319	313	252	118	296	1107		
7 d	208	270	303	316	323	326	330	330	326	318	323	322	345	362	356	363	342	361	390	352	324	305	299	297	325	1791		
8	219	242	281	264	277	279	297	310	329	328	320	322	328	345	358	356	384	394	366	337	332	322	315	311	317	1616		
9	282	257	242	244	233	270	297	309	315	320	321	323	323	337	344	344	345	343	355	363	339	324	306	305	310	1441		
10	284	298	312	318	314	318	318	317	322	318	320	323	318	323	330	354	396	408	414	413	374	343	313	297	335	2045		
11	296	240	198	257	297	311	313	323	330	333	321	315	316	324	324	333	339	354	369	366	335	305	286	223	309	1408		
12	258	270	269	279	299	309	311	315	316	316	317	323	325	324	332	355	358	349	338	336	337	329	319	315	317	1599		
13	309	256	240	212	194	193	248	279	295	311	323	323	321	330	333	337	326	318	317	316	330	319	287	238	290	955		
14	140	233	298	303	271	260	284	297	306	311	316	317	312	315	318	325	316	312	311	316	320	323	318	316	297	1138		
15 q	316	316	312	311	308	310	304	310	316	316	311	307	303	303	304	310	315	320	322	316	313	316	314	304	312	1477		
16 q	305	303	305	309	310	310	311	313	316	315	309	304	304	303	303	305	311	310	305	308	309	311	315	315	309	1409		
17	313	312	311	305	301	306	310	310	310	310	309	307	299	298	304	304	299	305	309	309	305	276	252	239	300	1198		
18	195	210	241	246	246	279	290	298	305	310	315	312	313	317	318	328	324	328	324	318	317	316	316	309	295	1075		
19 q	298	306	313	312	312	313	312	315	317	316	315	313	308	305	305	309	307	312	310	310	309	309	309	309	310	1444		
20	309	311	312	312	312	311	312	312	312	310	308	305	299	303	306	309	312	316	311	309	303	302	302	260	307	1358		
21	240	278	294	303	305	306	305	307	303	299	298	298	301	308	317	335	354	358	355	347	324	312	295	244	308	1386		
22	246	280	297	298	298	300	304	303	305	305	305	305	305	310	310	316	326	331	329	320	325	324	319	285	306	1346		
23	222	213	233	252	283	302	303	304	298	292	303	298	300	303	310	311	311	313	310	309	309	311	292	225	288	907		
24	178	218	193	174	263	280	288	271	266	284	291	303	300	305	305	312	334	396	358	337	315	297	303	304	286	875		
25 q	309	310	312	315	316	317	318	318	320	318	316	312	310	309	309	310	310	310	310	316	325	316	311	307	313	1524		
26	305	303	286	296	303	306	309	311	313	309	305	303	301	302	303	305	306	306	309	312	324	322	274	116	297	1129		
27	32	66	191	241	257	263	280	303	315	311	315	318	312	311	309	312	315	314	323	351	342	324	311	298	280	714		
28	305	309	304	303	305	305	309	307	309	318	318	315	312	309	318	330	325	330	332	336	330	319	311	310	315	1569		
29	308	305	305	305	305	309	309	309	311	303	303	299	303	310	324	324	330	346	357	367	341	304	211	169	307	1357		
30 d	119	144	180	184	199	241	265	290	299	306	306	316	325	345	370	403	383	404	390	389	309	229	265	284	289	945		
Mean	250	249	260	272	276	286	295	301	309	313	315	315	316	324	331	341	339	343	343	335	326	310	283	259	304			
Sum 7000+	505	456	788	1153	1287	1580	1865	2043	2280	2377	2435	2450	2492	2719	2916	3225	3167	3286	3305	3046	2792	2289	1480	778		Grand Total 218,714		

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

4 LERWICK														SEPTEMBER 1960					
	TERRESTRIAL MAGNETIC ELEMENTS												3-hr. range indices K	Sum of K indices	Magnetic character of day, C (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				°A.			
1 q	22 11	566	517	09 26	49	12 33	48.8	36.6	07 24	12.2	07 45	314	297	12 37	17	1, 1, 1, 2, 1, 1, 0, 2	9	0	86.1
2	18 16	637	296	22 51	341	14 02	57.9	-4.2	23 01	62.1	19 07	381	194	22 49	187	1, 1, 2, 2, 3, 3, 3, 6	21	1	86.0
3 d	18 50	590	65	01 05	525	07 12	58.2	19.9	01 35	38.3	14 22	357	14	01 32	343	7, 4, 5, 3, 3, 3, 3, 2	30	1	85.7
4 d	17 49	867	-249	21 46	1116	22 10	156.2	-55.2	23 44	211.4	21 36	556	245	22 10	801	2, 4, 5, 5, 6, 6, 7, 9	44	2	85.5
5 d	15 30	732	-710	00 14	1442	00 34	81.2	-77.4	01 43	158.6	00 02	719	278	01 29	997	8, 7, 6, 6, 4, 5, 5, 7	48	2	85.5
6	20 04	579	198	00 03	381	23 05	62.3	1.6	00 04	60.7	16 16	361	79	23 33	282	6, 4, 5, 2, 2, 2, 3, 6	30	1	85.3
7 d	14 33	640	437	00 00	203	12 05	56.7	22.7	18 31	34.0	18 27	410	180	00 11	230	4, 2, 2, 3, 4, 3, 4, 3	25	1	85.4
8	16 25	624	475	09 46	149	13 08	53.6	26.5	00 33	27.1	16 55	396	197	00 17	199	4, 3, 3, 3, 3, 4, 3, 1	24	0	85.6
9	17 39	590	460	03 37	130	13 51	54.4	25.7	02 06	28.7	19 35	368	214	04 22	154	4, 4, 2, 2, 2, 2, 3, 3	22	0	85.3
10	17 59	609	473	11 37	136	14 56	52.2	34.0	23 36	18.2	18 43	426	277	00 17	149	3, 1, 1, 2, 3, 4, 3, 3	20	0	86.1
11	18 26	602	435	02 19	167	14 08	50.2	27.5	21 30	22.7	18 52	375	173	02 18	202	4, 4, 2, 1, 2, 3, 3, 4	23	0	86.0
12	19 37	568	491	10 21	77	14 34	50.6	35.5	00 01	15.1	15 35	364	246	00 01	118	3, 2, 2, 2, 3, 2, 2, 1	17	0	86.0
13	19 54	580	356	23 58	224	13 15	52.1	27.4	03 45	24.7	21 00	343	169	05 23	174	4, 5, 4, 2, 2, 2, 2, 5	26	1	86.0
14	19 16	570	285	00 11	285	00 14	51.7	16.8	00 59	34.9	15 23	328	102	00 10	226	6, 3, 3, 2, 1, 2, 1, 1	19	0	85.9
15 q	20 13	574	500	11 23	74	13 20	49.4	35.5	09 13	13.9	18 18	322	298	23 32	24	1, 1, 2, 1, 2, 1, 1, 1	10	0	86.2
16 q	20 04	573	496	11 15	77	14 19	50.4	35.1	07 51	15.3	09 01	318	299	01 28	19	2, 0, 1, 1, 2, 1, 1, 1	9	0	86.1
17	20 39	621	488	23 56	133	14 22	52.3	24.5	20 54	27.8	00 06	315	220	23 59	95	1, 1, 1, 1, 2, 2, 4, 4	16	0	86.0
18	19 29	572	395	02 16	177	14 19	51.4	15.0	01 09	36.4	15 07	330	172	01 06	158	4, 3, 2, 2, 2, 1, 1, 2	17	0	86.2
19 q	19 08	568	500	10 57	68	13 18	48.5	36.3	08 49	12.2	08 42	318	296	00 12	22	2, 1, 1, 1, 1, 1, 0, 0	7	0	86.2
20	21 17	583	504	10 58	79	13 49	49.3	36.0	07 48	13.3	17 14	317	218	23 58	99	1, 0, 1, 1, 1, 1, 1, 4	10	0	86.4
21	19 46	572	504	13 31	68	14 03	54.7	27.1	23 43	27.6	16 56	362	218	00 05	144	4, 1, 1, 2, 2, 2, 3, 4	19	0	86.0
22	19 40	589	503	10 58	86	15 13	54.3	28.4	24 00	25.9	17 47	335	232	00 01	103	3, 1, 1, 1, 2, 2, 3, 3	16	0	86.0
23	23 40	590	486	00 41	104	08 55	52.5	21.3	02 15	31.2	17 10	316	169	23 59	147	3, 3, 3, 3, 1, 2, 1, 5	21	0	86.2
24	16 53	600	220	02 44	380	16 51	51.8	18.9	02 02	32.9	17 27	410	129	03 20	281	6, 5, 3, 3, 2, 4, 4, 2	29	1	86.1
25 q	20 50	574	498	10 53	76	12 56	48.3	30.2	20 46	18.1	20 05	331	305	00 01	26	0, 0, 1, 1, 1, 1, 3, 2	9	0	86.0
26	19 43	581	346	23 36	235	14 02	48.9	22.6	22 28	26.3	21 05	339	67	23 48	272	2, 2, 2, 2, 1, 1, 3, 6	19	1	85.9
27	18 22	572	294	00 36	278	12 55	49.2	11.2	02 39	38.0	19 52	362	-33	00 46	395	6, 3, 3, 2, 1, 2, 2, 2	21	1	85.7
28	07 02	563	506	11 01	57	10 48	48.8	37.5	23 27	17.3	19 44	337	302	03 05	35	0, 1, 1, 2, 1, 2, 1, 1	9	0	85.8
29	14 01	577	411	23 20	166	14 01	54.5	14.2	22 21	40.3	19 02	376	155	23 12	221	1, 0, 2, 1, 4, 3, 3, 5	19	1	85.6
30 d	18 57	689	317	00 32	372	14 48	55.6	12.1	20 30	43.5	17 31	423	54	00 48	369	5, 4, 3, 2, 3, 3, 5, 5	30	1	85.6
Mean	- -	605	350 - -	255	- -	56.9	18.1 - -	38.8	- -	373	157 - -	216	-	-	-	-	0.47	-	85.9

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) +																							OCTOBER 1960		
	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 9000+
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	γ	
2	536	492	505	438	472	503	508	496	499	500	497	523	530	569	593	595	601	555	530	531	509	496	540	529	523	3547	
3	513	471	412	480	545	530	483	470	496	502	498	533	629	611	701	640	512	590	536	527	528	531	537	520	533	3795	
4	526	536	537	537	542	545	543	543	541	524	494	506	506	525	530	542	540	542	547	553	552	547	548	543	535	3849	
5	546	546	546	550	553	554	557	550	543	528	517	513	517	524	563	644	739	762	696	540	556	549	289	451	556	4333	
6	453	444	489	532	519	494	523	538	527	520	524	527	527	537	549	551	549	571	556	556	563	547	356	403	515	3355	
7 d	515	496	236	376	382	438	456	508	548	542	562	560	580	696	988	1046	1182	865	538	494	-20	41	-323	-404	471	2302	
8	-386	-193	206	-114	2	111	376	424	461	386	396	545	589	669	832	893	779	650	554	536	428	547	392	255	389	338	
9	372	226	478	509	529	529	528	527	508	503	478	500	512	534	526	526	534	548	551	527	493	464	448	488	493	2838	
10	499	490	432	475	481	488	480	525	528	517	503	506	524	569	569	591	564	573	544	552	529	509	365	460	511	3273	
11	499	483	443	466	521	535	535	532	526	516	508	506	509	516	524	529	537	546	541	541	531	531	528	500	517	3403	
12 q	502	522	541	545	558	556	528	506	529	514	506	511	515	529	559	543	528	534	541	544	541	546	543	541	533	3782	
13 q	543	542	542	543	549	549	550	543	534	519	503	501	506	515	525	534	542	551	562	557	556	562	574	560	540	3962	
14 q	555	556	557	555	555	546	548	551	542	527	520	515	519	531	538	542	551	556	560	562	563	563	565	562	547	4139	
15	561	560	560	560	560	558	558	556	545	531	523	520	524	527	537	544	552	557	562	564	565	567	563	562	551	4216	
16	558	559	561	560	564	565	567	566	560	550	546	544	527	533	516	542	577	659	665	639	547	527	530	536	562	4498	
17	552	547	540	542	546	547	548	546	539	523	513	509	513	522	517	532	544	552	555	556	557	558	555	552	540	3965	
18	547	544	550	552	554	554	558	554	544	532	520	517	514	522	524	542	548	554	553	551	552	555	552	548	543	4041	
19	541	525	500	522	550	566	558	514	521	526	514	508	514	539	550	540	548	602	663	525	387	445	513	531	529	3702	
20	535	539	538	533	534	533	544	549	538	528	523	520	510	518	532	545	541	546	545	543	539	528	531	545	535	3837	
21	547	543	541	537	547	548	547	552	546	528	526	517	518	529	538	552	533	535	547	551	554	547	528	521	539	3932	
22 q	535	543	544	547	550	555	554	537	528	527	521	523	526	533	531	538	545	551	548	548	548	551	540	547	540	3970	
23 q	554	553	553	554	554	554	557	555	546	535	525	518	521	527	534	543	549	556	562	562	563	563	563	562	548	4163	
24	560	560	561	562	565	563	562	559	551	535	528	528	535	543	556	554	558	562	566	565	573	565	562	562	556	4335	
25 d	558	559	556	556	558	559	558	555	547	539	533	530	530	534	551	577	698	859	659	646	560	538	531	543	576	4834	
26 d	543	547	549	550	548	548	521	489	462	438	439	509	541	657	655	782	1103	985	740	635	256	445	413	102	561	4457	
27	245	179	251	359	474	473	476	515	487	465	500	560	603	621	658	581	551	542	538	527	522	517	460	510	484	2614	
28	429	428	463	485	506	537	543	544	530	516	473	496	518	537	565	550	625	556	540	524	517	414	429	506	510	3231	
29	517	462	493	523	544	517	482	508	505	499	514	526	632	593	597	632	600	594	530	518	534	520	547	527	538	3914	
30	479	469	534	551	548	533	525	509	503	508	491	490	535	565	538	550	603	555	556	541	536	462	440	510	522	3531	
31	528	499	484	523	547	538	523	507	514	510	511	532	518	538	569	550	559	550	544	535	526	535	530	475	527	3645	
Mean	483	515	527	513	532	554	550	525	538	525	505	517	530	529	544	549	533	550	542	525	536	531	532	516	529	3701	
Sum 14,000+	945	742	1229	1421	1989	2180	2346	2353	2286	1920	1707	2107	2572	3192	4009	4379	4925	4708	3671	3075	1701	1801	681	563		Grand Total 392,502	

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

2 LERWICK (D)		9° +													OCTOBER 1960												
	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		600.0+	
1 d	35.2	31.9	14.6	31.0	43.4	48.1	55.1	51.8	42.0	48.4	48.5	49.3	49.6	49.8	47.1	48.4	42.9	42.9	37.5	36.0	38.3	23.4	36.7	35.0	41.1	386.9	
2	31.9	28.9	33.8	29.5	38.1	49.2	59.0	57.9	50.1	45.8	46.2	47.7	43.9	46.8	39.6	41.7	38.6	35.2	34.7	42.3	42.9	42.4	42.0	35.7	41.8	403.9	
3	40.6	39.1	40.0	40.6	41.0	41.4	43.4	42.4	38.9	41.8	41.7	46.6	46.8	48.1	47.7	45.5	42.7	40.7	42.7	42.5	41.7	38.6	39.4	40.4	42.3	414.3	
4	37.2	39.7	41.4	41.6	42.0	41.9	41.6	42.5	43.3	42.6	44.3	47.3	50.2	50.6	53.6	49.2	56.4	55.9	33.9	47.9	39.1	41.5	44.1	44.6	44.7	472.4	
5	34.1	38.9	43.9	35.7	38.5	49.4	42.1	42.0	40.7	39.3	42.3	45.8	47.4	49.2	48.5	48.1	44.4	35.8	42.2	44.6	43.6	41.7	26.9	21.3	41.1	386.4	
6 d	33.7	35.5	38.6	39.0	46.3	30.0	39.0	42.5	43.6	45.3	47.6	48.5	51.1	53.5	40.3	57.8	75.4	92.1	20.2	60.3	56.6	25.0	51.3	-47.5	42.7	425.7	
7 d	-40.3	6.2	-5.7	-34.6	-15.0	13.6	44.1	40.0	32.6	45.0	50.0	49.9	50.5	43.9	38.5	35.7	43.6	34.5	40.4	41.7	49.4	36.7	18.4	29.1	27.0	48.2	
8	29.0	46.3	40.7	34.6	32.8	38.7	37.5	36.9	35.8	39.5	40.2	44.9	48.0	45.6	43.6	44.8	42.6	38.6	40.0	27.1	32.4	27.7	33.3	36.5	38.2	317.1	
9	24.3	30.6	25.6	33.5	41.8	40.0	46.8	43.4	38.1	40.4	42.6	43.3	46.8	48.7	46.1	39.9	43.9	42.9	42.7	32.8	36.2	35.7	37.2	29.0	38.8	332.1	
10	30.9	30.0	29.5	39.6	39.6	38.6	38.6	38.5	37.6	38.7	40.4	43.9	46.0	46.9	45.8	43.7	42.2	40.7	39.1	40.5	38.1	31.6	29.8	33.5	38.5	323.8	
11	44.4	40.0	39.1	36.4	35.7	42.3	41.8	45.6	44.5	40.4	42.4	46.1	48.7	51.8	50.6	49.8	47.3	43.9	42.9	43.1	38.1	34.0	40.5	42.0	43.0	431.4	
12 q	41.5	42.2	41.5	41.5	40.5	40.8	40.2	38.6	37.6	39.1	41.5	46.3	47.8	49.0	48.1	46.8	45.3	45.3	45.4	44.4	44.4	40.5	33.5	43.2	42.7	425.0	
13 q	41.5	41.6	41.0	40.5	40.5	40.0	39.8	39.1	37.6	37.8	39.4	42.0	44.7	47.5	48.5	47.4	46.1	45.3	44.6	44.2	43.8	43.3	43.0	42.4	42.6	421.6	
14 q	41.5	41.6	41.5	41.4	40.6	40.5	40.4	39.6	38.4	37.7	40.5	44.1	47.3	48.7	48.5	47.1	45.4	44.8	44.6	44.3	43.5	43.5	42.9	42.4	42.9	430.8	
15	41.5	40.4	39.1	40.0	38.9	38.9	39.3	39.6	38.6	39.5	43.1	48.2	50.8	54.0	52.8	54.1	58.4	54.9	55.0	44.8	39.5	35.4	32.6	34.3	43.9	453.7	
16	35.7	38.9	37.5	40.1	39.6	39.6	39.5	38.9	38.1	38.6	40.6	44.4	49.0	51.8	48.2	46.3	45.0	44.4	43.9	43.4	43.2	43.1	39.8	38.5	42.0	408.1	
17	36.2	38.6	40.5	40.4	41.0	40.6	40.5	39.8	38.4	39.8	42.2	44.8	46.5	48.9	46.5	45.3	44.0	43.5	43.8	40.0	41.5	41.5	41.2	37.6	41.8	403.1	
18	36.8	35.7	39.8	32.4	34.3	41.6	42.2	45.0	41.5	42.0	44.4	47.2	49.3	50.6	51.4	47.2	44.8	48.4	49.2	40.5	30.7	31.9	32.7	35.2	41.5	394.8	
19	35.6	37.5	39.1	38.6	40.5	42.4	48.6	38.6	37.9	38.7	42.0	46.3	47.0	47.7	46.8	45.3	43.7	43.9	44.6	41.2	37.1	25.3	30.9	38.3	40.3	367.6	
20	41.3	41.5	42.3	42.6	40.8	38.6	41.6	40.0	41.3	41.0	44.3	48.1	50.2	51.1	51.2	52.5	47.1	44.6	42.5	41.5	41.7	38.6	28.5	34.8	42.8	427.7	
21	37.2	39.7	40.5	39.7	40.0	39.6	39.8	39.6	42.0	42.9	43.9	45.9	47.0	48.1	45.8	44.1	42.7	43.1	43.4	43.3	40.3	31.9	37.4	40.5	41.6	398.4	
22 q	41.1	41.5	41.6	41.3	41.5	41.7	40.5	39.1	38.2	38.6	42.0	44.7	47.0	48.2	47.2	45.8	44.6	44.5	44.3	43.6	42.9	42.4	42.3	42.0	42.8	426.6	
23 q	41.5	41.4	40.7	41.3	41.2	40.7	40.5	39.8	39.3	39.8	42.0	45.3	47.7	47.5	47.0	45.3	44.5	44.8	45.9	45.7	42.9	41.7	41.5	40.7	42.9	428.7	
24	39.8	39.6	40.1	40.0	40.5	40.2	40.0	39.7	39.4	40.2	43.3	47.0	49.1	49.2	49.5	50.0	51.8	51.8	47.2	44.8	42.4	38.6	39.8	38.6	43.4	442.6	
25 d	39.6	40.5	40.6	41.0	41.0	41.5	41.4	60.4	52.5	46.0	52.1	50.0	50.0	56.6	52.7	46.5	57.3	95.8	78.4	40.7	21.4	24.7	31.6	32.4	47.3	534.4	
26 d	20.6	30.4	20.6	30.7	41.0	51.1	41.5	45.3	46.3	44.4	45.1	47.2	47.1	45.4	49.2	42.3	44.5	42.4	41.0	39.4	40.0	37.4	38.5	36.8	40.3	368.2	
27	30.6	36.8	37.7	34.7	36.6	40.4	42.0	41.7	39.8	41.5	41.5	42.6	47.7	47.4	47.1	41.2	40.6	37.4	32.6	41.4	29.1	28.5	39.9	30.2	38.7	329.0	
28	39.0	41.2	43.4	30.1	38.5	41.6	54.8	49.2	48.6	45.0	45.6	43.6	45.8	45.4	49.4	49.5	44.6	32.2	35.7	42.2	37.9	38.2	40.6	42.8	42.7	424.8	
29	35.2	41.9	39.7	39.6	39.8	41.4	43.4	47.3	45.4	43.1	44.6	43.7	49.3	47.2	43.1	47.0	42.3	35.9	33.8	37.8	36.4	39.8	40.0	34.6	41.3	392.3	
30	39.1	45.3	49.5	42.4	40.8	40.7	43.4	44.6	41.7	42.4	42.1	41.6	49.2	50.6	46.5	47.9	37.4	36.2	41.5	34.8	30.0	35.2	37.8	45.8	41.9	406.5	
31	42.4	37.4	37.4	40.9	42.4	41.6	41.7	41.9	42.0	42.5	44.5	43.4	49.3	45.8	43.4	45.8	41.8	31.4	22.1	40.2	32.8	38.8	38.4	40.7	40.4	368.6	
Mean	34.1	37.5	36.6	35.7	38.2	40.5	42.6	42.9	41.0	41.5	43.6	45.8	48.1	48.9	47.2	46.5	46.2	45.6	41.8	41.8	39.3	36.1	37.2	34.6	41.4		
Sum 1000.0+	58.7	160.8	135.6	106.1	184.2	256.7	320.1	331.3	271.8	287.8	350.9	419.6	490.8	515.6	464.3	442.0	431.9	413.6	295.8	297.0	217.6	118.6	152.5	71.4		Grand Total 30794.7	

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

39

3 LERWICK (Z)		47,000γ (0.47 C.G.S. unit) +																						OCTOBER 1960				
	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 6000+	
	γ	γ	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	243	212	181	115	159	172	209	237	281	330	320	337	349	375	429	397	420	388	375	324	284	149	264	269	284	819		
2	246	201	115	110	159	194	212	227	262	346	373	371	423	403	424	417	427	353	345	330	315	310	296	246	296	1105		
3	252	290	307	312	309	309	310	306	311	318	324	349	350	351	343	334	331	339	337	322	315	316	322	313	298	319	1659	
4	287	304	312	315	315	314	312	315	312	318	324	324	325	323	335	403	480	514	366	384	315	366	183	140	329	1886		
5	229	216	248	276	277	265	285	302	311	318	318	315	318	337	361	364	355	377	354	334	329	291	85	151	292	1016		
6 d	250	261	139	-52	-82	88	187	252	301	304	328	426	413	410	477	268	162	101	84	296	358	464	496	120	252	51		
7 d	480	326	101	50	210	91	89	237	295	358	351	353	375	396	422	463	487	442	375	377	222	209	163	132	292	1004		
8	75	68	130	205	252	291	318	332	341	335	350	351	350	368	386	376	376	388	378	377	299	252	197	194	291	989		
9	220	162	104	119	159	212	242	260	314	329	345	354	350	365	389	408	387	398	404	344	317	282	162	171	283	797		
10	233	222	188	229	289	316	332	339	341	342	340	334	327	327	329	338	341	342	355	365	360	315	271	250	309	1425		
11	240	214	272	298	303	302	310	319	317	330	333	335	335	339	368	363	350	343	339	339	342	330	322	317	319	1660		
12 q	308	317	325	326	327	327	328	334	337	336	333	328	324	320	318	322	326	324	326	334	339	327	299	295	324	1780		
13 q	311	317	319	320	320	325	322	321	325	325	322	320	315	309	307	311	313	317	318	320	321	323	322	322	319	1645		
14 q	324	322	321	320	320	320	319	320	321	327	321	315	312	311	315	317	317	317	318	320	321	326	324	319	1665			
15	325	324	322	322	320	317	315	313	313	315	313	315	324	328	334	332	355	457	445	442	368	320	281	258	336	2058		
16	299	320	324	324	322	324	322	322	324	326	327	328	333	340	339	332	328	324	322	322	322	324	326	322	325	1796		
17	306	317	320	324	324	322	317	318	322	326	328	328	330	328	337	340	335	331	337	341	339	330	322	309	326	1831		
18	298	239	219	208	258	269	279	296	305	320	331	340	341	342	364	378	380	432	460	389	258	237	299	307	315	1549		
19	311	317	326	330	326	308	299	312	321	322	322	324	330	332	332	339	351	346	347	355	341	327	306	315	327	1839		
20	320	320	319	318	316	316	316	315	317	323	326	331	337	345	352	374	396	363	338	330	325	328	329	311	332	1965		
21	290	299	321	330	330	326	324	325	324	322	324	324	324	327	330	330	330	330	335	339	335	302	309	315	323	1745		
22 q	316	319	324	325	325	324	322	322	324	323	324	320	317	316	320	322	324	322	320	320	319	318	317	317	321	1700		
23 q	318	316	316	317	318	318	318	317	318	318	316	311	311	312	315	320	322	318	319	320	315	317	318	317	317	1605		
24	317	318	318	321	322	321	319	319	318	316	313	312	312	312	321	343	443	389	455	480	373	342	317	298	342	2199		
25 d	312	318	322	322	322	324	330	277	252	279	315	349	361	377	408	430	201	142	264	422	348	253	253	85	303	1266		
26 d	1	73	98	193	193	230	275	322	335	363	376	398	420	422	442	448	424	413	370	273	290	311	204	234	296	1108		
27	228	168	184	220	275	305	320	328	337	343	370	389	388	374	396	406	449	455	384	349	365	250	194	263	323	1740		
28	277	217	150	173	237	260	239	288	320	343	398	425	466	423	435	496	497	432	376	375	317	284	278	301	334	2007		
29	261	146	255	294	305	309	311	314	328	338	365	390	377	416	404	372	365	422	376	319	333	294	222	260	328	1876		
30	273	278	244	265	296	311	316	326	339	352	375	412	387	371	400	415	415	376	377	381	350	322	310	235	339	2126		
31	140	218	266	279	295	298	311	331	331	336	344	348	349	368	383	386	375	381	383	332	294	300	316	279	318	1643		
Mean	267	256	248	252	271	281	291	305	316	329	338	347	351	353	368	369	370	361	351	350	323	304	277	257	314			
Sum 7000+	1290	939	690	808	1401	1709	2004	2451	2804	3187	3474	3757	3874	3959	4406	4441	4470	4174	3866	3846	3029	2420	1600	955		Grand Total 233,554		

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

4 LERWICK		TERRESTRIAL MAGNETIC ELEMENTS												OCTOBER 1960						
		Horizontal force						Declination			Vertical force			3-hr. range indices K	Sum of K indices	Magnetic character of day, C (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	h. m.	γ	h. m.	γ	h. m.	γ	h. m.	γ				
1 d	16 16	638	362	03 45	276	06 54	58.6	6.9	21 24	51.7	14 32	451	68	21 20	383	4, 5, 4, 3, 4, 4, 5, 5	34	1	85.2	
2	16 48	795	389	02 49	406	06 55	62.5	22.8	17 43	39.7	16 47	503	71	02 51	432	5, 4, 4, 4, 5, 5, 4, 3	34	1	85.3	
3	20 01	561	478	10 12	83	14 21	49.0	36.1	24 00	12.9	10 54	358	239	00 02	119	4, 2, 2, 3, 2, 2, 1, 3	19	0	85.6	
4	18 07	989	65	22 42	924	23 20	79.6	2.7	18 21	76.9	17 11	561	-44	22 57	605	3, 0, 1, 2, 3, 6, 7, 7	29	2	85.7	
5	17 06	590	144	22 22	446	05 30	54.9	-7.8	23 07	62.7	17 31	392	-6	22 20	398	4, 4, 3, 2, 3, 3, 3, 7	29	1	85.9	
6 d	16 25	1396	-1431	22 40	2827	22 53	211.6	-129.5	23 37	341.1	22 41	1080	-403	18 01	1483	7, 6, 6, 5, 7, 9, 9, 9	58	2	85.9	
7 d	14 52	1115	-840	00 32	1955	01 15	263.9	-136.6	01 37	400.5	01 18	990	-206	03 06	1196	9, 8, 6, 6, 7, 7, 6, 7	56	2	85.9	
8	18 41	560	10	01 11	550	01 30	63.4	18.3	19 30	45.1	19 20	398	-49	02 09	447	7, 4, 3, 3, 3, 3, 5, 4	32	1	85.8	
9	15 13	621	270	22 32	351	06 40	51.2	12.1	23 11	39.1	15 12	428	81	02 29	347	5, 5, 4, 2, 4, 4, 4, 6	34	1	85.5	
10	17 42	552	403	02 56	149	13 30	47.2	22.4	01 41	24.8	19 59	371	173	02 35	198	4, 4, 1, 1, 0, 1, 2, 4	17	0	85.7	
11	14 15	572	492	00 43	80	14 00	54.9	25.3	21 15	29.6	14 40	382	197	01 13	185	4, 3, 3, 2, 3, 3, 3, 3	24	0	85.3	
12 q	22 12	584	497	11 18	87	13 23	49.2	28.5	22 00	20.7	19 57	347	288	23 30	59	2, 0, 2, 2, 0, 2, 2, 3	13	0	84.9	
13 q	21 55	573	513	11 25	60	14 34	49.0	36.8	08 40	12.2	08 52	327	303	00 00	24	2, 1, 1, 1, 1, 1, 0, 1	8	0	84.5	
14 q	21 35	569	516	11 02	53	14 26	49.1	37.2	09 33	11.9	09 28	328	311	13 40	17	1, 0, 1, 1, 0, 1, 0, 1	5	0	84.9	
15	19 10	765	487	22 26	278	18 42	69.2	21.3	22 42	47.9	17 26	493	242	22 58	251	1, 1, 1, 2, 3, 5, 6, 4	23	1	84.8	
16	22 41	564	504	10 57	60	13 24	55.2	32.3	00 15	22.9	13 52	344	279	00 00	65	3, 1, 1, 1, 2, 2, 0, 2	12	0	84.9	
17	06 22	561	510	13 07	51	13 26	50.2	34.0	01 02	16.2	14 51	345	302	00 27	43	2, 1, 1, 1, 2, 1, 2, 2	12	0	84.8	
18	18 49	732	233	20 30	499	18 09	56.9	5.8	20 51	51.1	17 57	495	99	21 00	396	4, 4, 3, 2, 3, 5, 7, 5	33	1	84.7	
19	07 39	553	503	12 04	50	12 47	49.1	21.1	21 25	28.0	19 32	360	285	06 00	75	2, 3, 3, 2, 1, 1, 3, 4	19	0	84.7	
20	15 11	559	507	12 08	52	15 33	54.0	22.9	22 10	31.1	16 28	402	296	24 00	106	1, 2, 1, 2, 2, 3, 2, 3	16	0	84.7	
21	21 23	569	518	11 18	51	13 19	49.5	26.6	21 19	22.9	19 30	341	284	00 29	57	3, 1, 2, 1, 2, 1, 2, 3	15	0	84.7	
22 q	21 01	565	517	11 29	48	13 07	48.9	37.7	08 30	11.2	04 47	327	313	00 06	14	1, 0, 1, 1, 0, 1, 0, 0	4	0	85.0	
23 q	20 54	584	524	11 11	60	12 14	48.8	38.0	20 56	10.8	19 48	324	307	20 57	17	1, 0, 0, 0, 1, 1, 2, 2	7	0	84.6	
24	17 26	971	523	11 43	448	16 56	69.2	30.0	20 11	39.2	16 44	514	285	17 33	229	0, 0, 0, 1, 3, 7, 5, 3	19	1	84.7	
25 d	16 04	1592	-181	20 40	1773	18 10	141.2	-27.8	20 29	169.0	15 00	488	-196	16 08	684	2, 2, 4, 5, 5, 8, 9, 7	42	2	84.6	
26 d	14 35	737	-107	01 15	844	14 25	60.2	-11.3	01 09	71.5	14 50	504	-71	01 03	575	7, 5, 4, 5, 5, 4, 5, 5	40	2	84.5	
27	16 44	722	267	22 01	455	14 04	54.8	4.5	20 54	50.3	16 50	517	138	01 59	379	5, 4, 2, 3, 3, 5, 5, 6	33	1	84.9	
28	17 12	730	440	06 00	290	06 04	61.3	16.4	18 03	44.9	15 52	537	121	02 30	416	5, 5, 4, 4, 4, 5, 4, 3	34	1	84.9	
29	16 24	723	376	00 51	347	13 12	54.7	22.8	18 31	31.9	16 24	536	126	01 32	410	5, 2, 3, 3, 4, 5, 4, 5	31	1	84.5	
30	14 29	600	356	23 58	244	23 55	59.5	23.3	20 12	36.2	16 22	430	154	23 58	276	3, 3, 3, 4, 4, 3, 4, 5	29	1	84.2	
31	14 43	567	377	00 00	190	00 00	52.8	11.7	17 53	41.1	17 47	432	115	00 17	317	5, 3, 3, 3, 3, 5, 5, 3	30	1	84.1	
Mean	- -	716	265	- -	451	- -	70.3	9.2	- -	61.1	- -	461	133	- -	329	- -	- -	0.74	-	85.0

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) +												NOVEMBER				1960
	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+			
	γ	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	533	532	538	538	534	547	559	546	540	533	525	520	525	537	549	538	543	550	553	553	546	517	536	547	539	4939			
2	547	546	542	551	555	561	562	547	521	514	511	517	529	525	533	542	541	543	549	548	552	563	533	526	540	4958			
3	516	501	536	540	556	558	564	558	540	519	513	524	539	521	530	535	549	548	554	551	557	501	361	375	523	4546			
4 d	264	391	234	381	521	478	512	524	537	494	489	514	526	556	642	627	568	566	573	532	531	527	506	430	497	3923			
5	502	547	546	517	527	552	551	547	532	534	524	526	532	542	557	558	556	553	549	547	547	547	546	548	541	4987			
6	549	549	551	552	553	557	558	550	548	537	536	535	534	529	545	551	552	555	556	551	561	547	551	550	548	5157			
7 q	553	540	538	550	557	563	564	562	553	541	534	527	523	526	534	542	546	551	555	558	558	559	559	559	548	5152			
8 q	558	558	558	561	565	568	566	562	554	540	530	527	530	540	544	551	555	558	558	559	558	550	540	546	551	5236			
9 q	556	547	554	552	551	565	565	559	558	547	541	530	532	539	543	551	556	557	560	561	560	558	554	555	552	5251			
10	557	557	558	560	564	565	566	570	571	559	537	531	533	540	551	559	566	569	577	576	579	576	576	570	561	5467			
11	570	566	572	572	582	587	587	565	560	557	537	512	520	537	540	546	549	552	555	561	564	562	555	551	557	5359			
12	545	551	555	560	565	568	566	561	555	548	544	540	544	551	593	579	587	758	1009	896	758	111	96	328	561	5468			
13 d	172	164	63	22	105	-136	-684	-765	344	760	1093	632	586	593	720	364	698	663	733	595	562	354	148	311	379	1097			
14 d	-121	-39	452	511	514	522	514	519	520	511	511	505	498	517	514	531	528	547	541	507	521	490	491	463	461	3067			
15 d	469	501	505	522	522	512	508	504	520	516	520	524	520	644	716	776	947	844	733	500	491	426	217	31	540	4968			
16 d	-489	-454	-739	-331	214	503	476	476	444	461	527	549	568	634	598	601	537	534	530	538	535	538	534	518	346	302			
17	496	478	502	518	527	534	537	542	536	531	531	536	535	542	545	534	560	548	520	536	537	533	529	521	529	4708			
18 q	517	518	544	530	528	533	535	535	529	524	523	527	530	531	537	543	545	548	551	551	550	549	547	545	536	4870			
19 q	545	545	547	549	551	559	559	559	559	549	549	553	548	548	543	547	549	553	556	558	559	562	559	559	553	5265			
20	559	552	559	561	568	568	554	553	546	534	540	538	547	548	531	549	546	555	555	556	556	556	553	555	552	5239			
21	556	557	559	560	559	551	563	523	537	521	534	538	547	550	579	656	795	785	797	605	533	521	431	483	577	5840			
22	469	424	387	493	528	514	541	541	518	527	522	511	521	530	540	550	543	549	540	543	545	546	546	540	519	4468			
23	545	543	545	544	554	558	546	552	545	543	534	529	534	541	538	546	552	547	548	549	540	544	540	519	543	5036			
24	511	517	537	550	560	564	568	555	554	551	548	543	547	551	551	557	562	561	563	565	561	543	472	508	546	5099			
25	522	528	522	449	504	551	560	554	510	534	526	522	539	550	551	565	567	537	524	531	487	454	479	522	525	4588			
26	540	537	540	540	515	542	549	541	515	524	531	539	526	541	546	541	549	551	554	552	528	544	543	550	539	4938			
27	560	554	549	551	557	561	562	560	549	551	543	541	541	545	529	545	555	586	554	534	546	546	522	530	549	5171			
28	496	526	543	557	545	544	560	551	540	524	534	536	539	541	555	550	555	555	560	557	555	552	551	550	545	5076			
29	554	538	552	554	557	559	563	564	555	551	544	530	537	545	553	550	553	560	562	555	550	551	547	545	551	5229			
30	550	544	549	550	566	567	563	562	559	550	546	544	544	544	548	549	557	560	550	568	570	514	467	532	548	5153			
Mean	457	464	467	489	520	526	510	503	532	539	549	532	536	548	562	591	579	581	587	563	553	515	486	496	529				
Sum 13,000+	701	918	998	1664	2604	2775	2294	2077	2949	3185	3477	3000	3074	3438	3855	4733	4366	4443	4619	3893	3597	2441	1589	1867		Grand Total 380,557			

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

2 LERWICK (D)													9° +													NOVEMBER 1960																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
	Hour G.M.T.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						

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

41

47,000γ (0.47 C.G.S. unit) +													NOVEMBER 1960															
3 LERWICK (2)	Hour G.M.T.																								Mean	Sum 7000+		
	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			
1	271	293	305	298	300	307	307	318	327	329	333	335	343	343	349	356	350	340	335	334	345	317	288	303	322	726		
2	318	323	312	286	296	298	299	307	318	326	334	333	347	373	356	347	346	335	330	332	333	282	272	273	320	676		
3	234	167	207	279	299	308	310	313	318	322	325	337	314	336	331	329	327	332	333	340	328	304	243	184	297	120		
4 d	186	125	130	131	119	172	215	278	306	327	314	342	371	370	435	436	410	432	425	349	333	326	280	222	293	34		
5	222	299	313	303	280	289	300	308	316	315	323	333	341	358	370	359	347	339	335	330	326	325	323	321	320	675		
6	319	321	322	324	324	321	318	317	313	314	310	315	327	326	323	325	325	328	333	326	327	321	313	322	717			
7 q	301	302	284	262	289	295	292	294	303	308	311	317	321	323	326	327	327	323	322	321	319	317	315	315	309	414		
8 q	315	316	317	317	317	316	318	321	325	324	321	317	318	319	321	321	322	322	323	323	323	327	325	306	320	674		
9 q	282	291	297	305	309	307	311	315	316	321	319	319	313	313	316	321	323	323	323	322	323	321	319	315	313	524		
10	313	313	315	312	313	315	315	315	315	315	320	311	306	301	301	311	312	315	316	320	321	322	317	315	314	529		
11	315	312	306	305	303	301	298	309	313	312	317	324	322	322	323	323	321	319	319	315	318	319	321	307	314	544		
12	307	309	310	315	312	311	310	313	318	317	318	318	319	319	310	313	311	357	-14	86	365	412	362	379	303	277		
13 d	683	303	254	291	-143	-166	354	549	378	534	690	625	470	460	447	375	539	444	325	192	324	218	137	171	352	1454		
14 d	220	138	252	325	345	359	367	366	366	367	365	365	360	357	371	372	363	374	369	297	307	301	317	304	330	927		
15 d	277	317	313	323	337	337	320	337	343	343	343	350	357	399	486	529	523	476	420	258	292	301	122	37	339	1140		
16 d	324	174	595	256	-15	206	286	317	343	331	337	373	392	455	440	458	399	384	372	363	338	330	343	333	339	1134		
17	269	250	286	325	333	342	342	339	343	343	344	346	357	371	373	379	375	375	389	362	334	353	357	347	343	1234		
18 q	341	323	320	329	335	339	343	343	344	345	345	346	349	351	353	352	349	345	342	340	339	341	341	342	342	1197		
19 q	343	344	344	343	341	337	334	332	330	330	329	326	328	331	337	341	339	339	337	334	333	330	331	330	335	1043		
20	327	327	323	322	320	317	322	321	325	326	325	329	334	343	357	355	354	349	346	341	338	337	337	330	334	1005		
21	329	330	331	331	330	309	266	291	311	336	347	355	399	397	391	500	575	504	337	434	387	339	179	156	353	1464		
22	224	222	182	218	264	295	314	320	333	340	340	345	352	361	369	386	415	418	401	375	359	351	266	290	323	740		
23	315	323	313	306	315	322	326	312	322	328	333	336	337	343	353	355	359	357	354	350	355	344	338	321	334	1017		
24	278	276	267	315	327	330	329	332	335	335	333	334	332	333	339	337	339	344	346	353	356	337	289	182	320	678		
25	227	264	267	146	124	176	246	284	313	334	343	394	383	361	412	426	437	406	392	379	357	306	234	226	310	437		
26	289	307	301	289	281	287	310	328	341	348	349	350	362	364	355	347	342	339	337	343	375	352	337	323	331	956		
27	286	294	313	320	317	311	310	314	323	328	329	335	341	344	359	365	391	448	407	377	345	301	330	282	336	1070		
28	209	236	303	309	306	266	280	301	319	330	343	345	343	362	368	349	343	339	335	337	339	341	339	339	320	681		
29	318	326	317	325	325	321	319	321	324	325	326	333	337	337	339	343	337	332	334	342	349	343	319	305	329	898		
30	319	319	321	325	302	309	313	319	323	323	328	329	329	332	336	337	335	339	359	361	368	329	284	354	329	893		
Mean	299	281	301	295	273	285	309	325	327	336	343	347	347	353	361	366	371	366	339	328	339	325	296	284	325			
Sum 8000+	961	444	1020	835	205	537	1274	1734	1804	2076	2294	2417	2404	2604	2846	2974	3135	2975	2177	1843	2155	1753	886	525		Grand Total 233,878		

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

4 LERWICK														NOVEMBER 1960									
TERRESTRIAL MAGNETIC ELEMENTS														3-hr. range indices K	Sum of K indices	Magnetic character of day, C (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	γ	h. m.	γ								
1	06 38	563	468	21 57	95	12 13	49.3	31.0	22 40	18.3	15 12	360	247	21 57	113	3, 2, 2, 2, 2, 2, 4	19	0	84.3				
2	21 19	587	504	11 34	83	12 51	53.8	22.8	21 14	31.0	13 27	375	254	24 00	121	2, 2, 3, 2, 3, 2, 3, 3	20	0	83.8				
3	20 12	580	234	23 50	346	12 25	49.4	1.7	23 54	47.7	11 46	353	146	23 48	207	4, 3, 2, 2, 3, 2, 3, 6	25	0	84.3				
4	14 50	781	130	02 43	651	14 52	58.5	-3.9	02 05	62.4	15 06	486	75	01 59	411	6, 6, 5, 3, 6, 5, 5, 5	41	1	82.0				
5	15 40	564	417	00 01	147	03 54	48.2	36.4	00 16	11.8	14 26	372	178	00 12	194	5, 3, 2, 2, 2, 2, 1, 1	18	0	81.8				
6	20 37	574	524	13 25	50	11 36	47.2	30.2	20 84	17.0	20 12	337	309	24 00	28	0, 1, 1, 2, 2, 1, 3, 2	12	0	81.4				
7	05 13	568	520	12 57	48	02 54	46.8	38.3	03 30	8.5	15 48	329	255	03 18	74	3, 3, 2, 1, 1, 0, 0, 1	11	0	81.0				
8	05 51	569	521	11 13	48	13 57	46.2	34.3	23 11	11.9	22 07	329	288	24 00	41	0, 0, 1, 1, 1, 1, 0, 3	7	0	80.8				
9	06 49	568	526	11 59	42	13 26	49.0	36.5	21 45	12.5	18 18	325	280	00 26	45	2, 2, 1, 2, 1, 1, 0, 2	11	0	80.5				
10	20 09	581	525	12 03	56	15 15	56.1	37.6	08 41	18.5	21 19	325	298	14 13	27	0, 0, 1, 2, 2, 3, 1, 0	9	0	80.8				
11	06 11	600	501	12 00	99	11 51	51.8	29.0	23 40	22.8	23 02	327	295	23 29	32	1, 2, 2, 3, 3, 2, 2, 3	18	0	81.0				
12	18 30	1191	-350	22 31	1541	19 12	118.7	-17.8	18 06	136.5	21 51	597	-356	19 01	953	3, 1, 1, 1, 4, 7, 8, 9	34	2	81.5				
13	10 24	2240	-1595	07 09	3835	03 39	88.0	-128.4	10 50	216.4	00 49	1130	-463	05 57	1593	8, 9, 9, 9, 8, 9, 7, 8	67	2	81.8				
14	19 01	594	-745	01 00	1339	19 03	66.2	-4.4	00 34	70.6	00 48	491	4	01 35	487	9, 3, 3, 3, 2, 4, 5, 4	33	1	81.9				
15	16 44	1347	-176	23 41	1523	18 50	151.6	-17.3	22 50	168.9	16 35	603	-168	18 50	771	4, 3, 3, 2, 6, 8, 6, 8	40	2	82.0				
16	13 22	736	-1404	02 57	2140	02 27	147.3	-90.0	02 12	237.3	02 58	1596	-273	01 10	1869	9, 9, 4, 5, 5, 5, 3, 3	43	2	81.9				
17	16 28	589	464	01 22	125	00 34	51.2	22.4	17 11	28.8	18 32	395	244	00 55	151	3, 2, 2, 2, 2, 4, 4, 2	21	0	81.6				
18	02 17	567	495	01 11	72	02 31	46.2	35.0	00 08	11.2	15 10	354	314	02 35	40	3, 2, 0, 1, 0, 1, 0, 1	8	0	81.3				
19	21 50	568	536	12 23	32	12 12	46.0	38.7	08 23	7.3	01 21	346	323	11 39	23	0, 1, 1, 1, 2, 1, 0, 1	7	0	81.1				
20	05 40	574	525	14 14	49	10 36	47.5	38.4	23 27	9.1	16 06	362	314	05 27	48	1, 1, 1, 1, 2, 2, 1, 1	10	0	81.2				
21	18 23	940	381	22 32	559	18 39	73.2	22.1	23 26	51.1	15 56	638	125	22 45	513	1, 3, 4, 3, 4, 6, 7, 6	34	1	81.1				
22	22 23	567	315	01 56	252	02 18	66.5	27.2	03 39	39.3	17 45	423	132	02 44	291	5, 5, 3, 2, 2, 3, 3, 4	27	1	81.1				
23	05 11	561	497	24 00	64	06 55	51.0	34.2	24 00	16.8	16 49	362	301	24 00	61	2, 2, 3, 1, 2, 1, 2, 3	16	0	81.2				
24	19 25	575	407	22 40	168	12 55	47.3	6.0	23 11	41.3	20 12	364	164	23 28	200	3, 2, 2, 1, 1, 2, 2, 5	18	0	81.6				
25	16 25	592	313	20 17	279	04 45	59.5	16.5	16 56	43.0	16 33	454	56	03 50	398	3, 5, 4, 4, 3, 5, 6, 5	35	1	81.7				
26	24 00	574	494	04 21	80	04 26	49.1	33.0	00 03	16.1	20 27	386	264	00 00	122	3, 3, 3, 2, 2, 2, 3, 3	21	0	81.8				
27	17 18	633	498	24 00	135	15 55	48.2	12.1	18 13	36.1	17 19	489	231	23 56	258	3, 2, 2, 2, 2, 4, 5, 4	24	1	81.1				
28	06 26	572	473	00 49	99	00 44	57.7	20.6	00 12	37.1	14 01	380	158	00 48	222	5, 4, 3, 2, 3, 2, 0, 1	20	0	81.0				
29	00 09	573	522	11 41	51	14 31	47.3	29.8	00 40	17.5	20 16	351	298	23 16	53	3, 1, 1, 2, 1, 1, 2, 3	14	0	81.2				
30	19 13	596	313	22 34	283	23 00	58.7	7.6	22 05	51.1	23 09	381	238	22 25	143	2, 2, 1, 0, 1, 1, 3, 6	16	0	80.9				
Mean	-	-	704	228	-	-	62.6	12.7	-	-	49.9	-	-	467	151	-	-	-	0.47	81.6			

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 1960				
	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 11,000+
	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	
1 d	581	540	494	155	470	433	497	476	527	507	503	503	561	572	628	886	1001	739	651	575	495	416	283	410	538	1903
2 d	486	510	491	510	524	535	532	539	532	520	507	527	545	548	542	543	539	541	551	549	558	554	535	535	531	1753
3	540	541	540	533	526	558	563	557	543	526	525	526	531	532	543	549	548	549	552	551	553	553	551	552	543	2042
4 q	552	552	551	554	558	561	560	557	555	554	550	544	544	535	551	544	545	549	549	544	552	549	548	551	550	2209
5	551	550	550	550	549	562	566	561	558	558	556	544	528	539	545	542	551	547	558	555	558	559	560	561	552	2258
6	561	561	563	566	566	566	580	573	565	553	549	557	556	546	563	573	648	741	725	648	547	406	525	538	574	2776
7	535	536	532	538	534	556	562	555	547	535	532	532	530	519	545	545	539	538	562	576	576	462	515	513	538	1914
8	516	493	501	499	500	541	558	564	552	545	528	528	536	543	551	548	551	551	555	555	555	554	556	554	539	1934
9	553	550	540	541	556	548	543	550	545	529	535	531	538	549	549	558	551	551	545	560	545	541	547	561	547	2116
10	558	544	539	550	554	554	556	556	550	549	543	537	538	541	545	548	552	546	555	553	556	569	561	559	551	2213
11 q	557	555	558	558	561	565	562	564	557	548	544	540	543	535	541	539	556	561	561	562	550	544	540	545	552	2246
12	564	548	552	551	555	563	568	561	559	548	549	533	530	537	533	545	551	569	547	513	543	530	517	460	543	2026
13	504	516	522	526	550	548	545	550	547	540	542	539	527	533	545	551	552	549	550	552	551	554	555	557	542	2005
14 q	557	558	561	563	564	567	569	572	566	566	564	571	572	570	568	562	561	561	561	560	554	561	565	567	564	2540
15 d	569	576	575	577	577	566	554	543	538	541	543	549	571	610	770	818	867	852	704	582	437	177	75	119	554	2290
16 d	128	180	129	289	454	450	457	474	510	491	491	509	559	553	544	548	545	550	551	552	556	546	538	542	464	146
17 q	545	544	543	545	547	550	540	550	553	551	547	545	544	545	545	544	549	553	557	553	547	550	551	552	548	2150
18	557	558	553	564	566	565	542	520	554	549	520	546	561	549	559	576	612	591	562	519	542	535	535	541	553	2276
19	535	537	548	549	553	567	564	549	551	549	536	539	543	552	547	552	542	554	557	557	549	576	559	547	551	2212
20	533	544	539	539	541	567	563	554	544	524	535	540	554	555	554	555	549	553	557	549	566	510	516	542	545	2083
21	506	443	532	561	562	557	555	556	563	561	561	564	566	565	566	529	541	555	560	557	549	563	529	558	548	2159
22	517	531	545	552	549	556	553	561	555	546	546	550	558	556	561	551	532	544	554	557	558	567	565	517	549	2181
23	533	553	546	553	555	555	553	555	554	551	548	544	548	538	561	553	554	554	556	556	565	566	563	555	553	2267
24	551	553	553	557	563	561	561	562	562	558	560	565	565	550	545	557	561	536	547	561	558	550	567	543	556	2346
25 q	552	539	553	561	561	562	561	563	560	557	553	559	561	560	554	557	560	561	557	557	563	558	557	560	558	2386
26	543	535	553	565	573	563	581	573	559	557	565	568	553	558	558	561	561	568	571	573	576	575	570	566	564	2525
27 d	565	564	558	572	574	581	574	565	576	561	561	550	534	549	583	833	633	780	857	446	544	395	497	516	582	2968
28	509	509	532	535	541	550	553	544	534	527	528	531	547	560	540	545	560	539	541	558	538	540	546	547	540	1954
29	529	515	526	541	550	556	557	546	549	548	535	542	552	549	557	565	567	555	548	546	547	550	549	548	547	2127
30	554	550	549	552	546	554	564	561	544	535	538	532	545	538	539	543	553	549	542	544	552	560	555	555	548	2154
31	557	553	556	551	552	540	555	559	538	541	545	543	539	545	560	543	554	561	567	554	556	556	550	556	551	2231
Mean	529	527	529	528	546	550	553	551	550	543	540	541	548	549	561	579	583	582	578	554	548	523	522	527	548	
Sum 16,000+	398	338	384	357	931	1057	1148	1070	1047	825	739	788	979	1031	1392	1963	2085	2047	1908	1174	996	226	180	327		Grand Total 407,390

538 at 0-1h. January 1, 1961.

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

2	LERWICK (D)													9° +													DECEMBER 1960									
	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	41.6	36.3	30.1	-6.7	39.5	47.6	36.8	40.6	38.2	39.2	39.7	43.3	48.8	41.5	47.5	52.8	62.8	58.2	45.4	31.3	21.7	35.3	-9.5	16.9	36.6	78.9										
2 d	37.7	39.7	40.4	41.6	38.8	40.7	39.2	40.5	40.2	40.5	39.1	45.3	45.0	42.2	48.3	48.8	44.6	42.2	36.9	37.7	33.8	31.1	37.7	35.2	40.3	167.2										
3	39.9	40.5	41.8	42.8	46.1	42.3	42.5	42.4	42.3	41.3	41.3	43.7	45.3	44.4	44.6	43.2	41.8	39.0	42.0	41.8	40.9	40.2	40.1	38.4	42.0	208.6										
4 q	39.8	41.6	41.6	41.7	41.3	41.4	40.9	40.6	40.3	41.3	42.7	42.9	45.0	44.5	46.1	42.6	41.6	43.8	41.8	40.3	39.8	39.5	40.3	40.3	41.7	201.7										
5	39.4	40.8	41.5	41.0	43.2	43.7	43.7	43.7	42.8	44.2	45.0	45.5	46.9	45.6	48.6	45.1	46.4	42.6	43.1	43.2	42.7	41.8	40.3	40.1	43.4	240.9										
6	40.7	40.9	40.8	41.3	42.3	44.2	43.6	44.7	43.2	44.2	46.0	45.5	52.4	47.6	49.5	56.2	59.6	60.0	60.6	45.1	41.7	35.1	35.0	37.7	45.7	297.9										
7	37.9	38.9	40.8	38.9	41.3	41.8	39.9	42.3	41.3	40.8	42.7	44.4	45.6	44.9	46.5	49.3	47.4	44.7	44.9	43.7	28.1	28.2	38.1	26.4	40.8	178.8										
8	37.5	38.7	37.5	39.8	40.6	46.8	46.9	45.8	43.8	42.7	40.3	41.4	42.9	43.8	46.2	44.0	42.3	41.9	41.8	41.7	40.7	41.3	41.1	41.1	42.1	210.6										
9	41.3	41.2	41.0	44.7	42.6	39.7	41.7	42.8	43.2	42.3	44.7	43.9	46.1	43.7	42.6	40.1	43.7	41.4	36.5	31.2	37.9	38.6	37.1	35.5	41.0	183.5										
10	39.9	38.4	39.4	44.5	40.7	41.8	41.3	41.5	41.5	41.7	41.8	42.3	42.3	44.2	43.9	43.6	40.8	40.8	41.3	40.1	30.3	36.0	42.1	42.2	40.9	182.4										
11 q	41.8	41.9	41.8	41.3	41.8	41.7	42.6	44.5	42.3	41.3	42.3	42.8	44.9	47.0	45.7	44.2	43.7	43.0	42.6	41.9	37.8	29.8	36.5	35.6	41.6	198.8										
12	38.8	37.9	37.7	37.7	40.9	41.6	41.8	42.8	44.2	42.9	43.6	46.5	47.1	47.3	46.6	45.6	50.5	50.2	42.7	31.1	38.9	31.2	25.5	23.6	40.7	176.7										
13	37.2	39.9	43.2	37.0	34.8	39.8	43.7	42.5	41.9	44.5	43.5	44.2	46.2	44.7	44.3	42.3	41.6	41.5	41.3	40.9	39.8	40.5	40.9	40.9	41.5	197.1										
14 q	41.8	41.9	42.1	42.3	42.5	42.1	42.5	42.0	42.1	41.8	42.3	44.6	47.3	46.7	45.1	43.2	42.5	42.6	42.3	41.3	39.8	40.2	41.1	41.0	42.5	221.1										
15 d	41.8	38.3	40.8	43.2	43.8	45.5	46.2	43.2	40.9	41.3	43.8	48.9	49.9	49.7	42.6	57.0	59.3	68.4	58.9	45.6	37.3	22.6	19.7	8.9	43.2	237.6										
16 d	5.6	6.1	8.1	6.2	18.9	48.6	46.6	46.3	45.1	43.7	46.1	42.6	43.8	43.2	44.7	44.6	44.9	45.1	43.7	41.2	41.8	40.8	35.9	37.1	36.3	70.7										
17 q	39.2	40.3	40.5	40.2	39.6	40.8	41.1	42.3	44.0	42.3	42.2	42.5	43.2	43.3	44.0	43.1	42.2	42.5	42.7	42.1	38.8	40.8	39.9	38.4	41.5	196.3										
18	40.3	39.2	41.2	39.4	40.1	44.5	49.9	49.3	43.7	43.2	51.4	50.9	48.7	45.1	46.3	44.7	43.5	44.9	35.0	28.8	33.2	39.0	37.1	43.3	42.6	222.4										
19	36.5	37.5	39.9	37.9	42.0	42.5	43.7	44.2	43.6	43.2	41.7	43.5	44.2	44.9	44.3	42.7	39.4	40.2	42.7	43.0	40.1	22.6	35.9	39.8	40.7	176.0										
20	37.5	39.9	37.5	43.2	43.0	42.5	42.8	43.2	43.0	44.2	43.7	44.2	45.5	44.1	42.7	40.7	39.8	40.5	39.0	20.9	23.7	36.5	34.2	40.3	39.7	152.6										
21	39.4	36.8	40.3	38.7	40.3	41.7	42.5	42.4	43.6	43.2	42.7	42.9	43.7	44.2	45.6	42.5	41.9	48.5	46.1	41.3	25.4	23.5	41.6	42.6	40.9	181.4										
22	43.5	43.7	37.8	37.0	40.8	43.2	48.4	43.6	42.5	44.0	42.6	43.7	43.7	41.9	40.9	40.8	37.9	39.4	41.5	40.3	37.1	34.0	37.8	45.3	41.3	191.4										
23	41.8	38.0	37.9	37.0	38.4	42.8	44.6	45.4	46.4	46.3	46.7	45.1	45.1	42.6	42.8	44.6	42.6	42.3	42.1	40.7	40.6	40.1	41.8	40.1	40.7	213.9										
24	39.2	38.7	40.7	40.2	40.9	42.6	42.8	43.0	44.1	44.8	44.6	45.6	44.9	43.7	42.4	40.9	43.2	37.3	40.6	43.2	42.6	38.9	39.6	39.0	41.8	203.2										
25 q	37.0	38.5	40.5	38.0	40.1	40.8	41.4	41.8	42.8	43.9	43.2	44.1	42.8	41.4	41.2	41.8	42.5	42.5	42.3	41.7	41.4	41.3	38.3	39.5	41.2	188.8										
26	41.5	31.5	36.6	39.2	39.0	45.6	40.2	46.5	46.8	46.5	46.6	46.7	45.7	43.9	42.8	42.1	41.9	42.8	42.6	42.0	42.7	43.2	42.7	41.3	42.5	220.4										
27 d	39.9	38.8	39.0	40.9	35.2	39.7	45.4	52.6	53.2	46.7	45.7	46.5	48.6	48.7	52.9	38.6	47.5	37.8	45.4	39.5	33.9	32.6	28.5	29.8	42.0	207.4										
28	26.9	37.7	40.1	41.8	40.7	41.2	42.5	41.9	44.9	44.6	44.7	42.5	42.9	45.5	46.5	38.9	47.2	44.9	36.8	28.5	36.1	37.7	39.1	39.8	40.6	173.4										
29	36.9	34.7	34.6	37.0	40.0	40.1	43.6	24.7	44.5	43.8	44.8	45.4	46.2	43.5	44.7	42.5	38.7	47.5	43.9	41.1	40.4	39.9	40.7	37.7	40.7	176.9										
30	37.3	39.2	40.4	39.6	40.2	39.9	40.5	41.4	42.4	43.2	44.8	44.6	44.2	44.6	43.9	43.5	42.5	36.0	30.5	43.7	40.6	39.3	42.2	39.9	41.0	184.4										
31	40.3	38.9	42.0	41.5	41.5	45.9	42.3	44.7	44.9	43.6	43.8	45.3	46.2	44.7	44.0	39.6	45.3	41.3	39.2	37.3	38.8	37.7	38.6	39.4	41.9	206.8										
Mean	38.1	37.9	38.6	37.7	40.0	42.7	42.9	43.0	43.3	43.1	43.7	44.6	45.7	44.6	45.1	44.2	44.8	44.3	42.4	39.1	37.0	36.2	36.1	36.7	41.3											
Sum 11,000+	79.9	76.4	97.6	68.9	140.9	223.1	231.6	233.2	243.7	236.9	254.1	281.3	315.1	283.1	297.8	269.6	289.3	273.6	214.8	112.1	47.9	21.0	18.2	37.7		Grand Total 30747.8										

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					1960
	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 6000+
	γ	γ	γ	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	355	340	299	3	61	121	204	230	289	305	336	357	397	424	454	451	456	513	510	405	352	242	208	204	313	1516		
2 d	258	292	286	325	318	312	337	340	344	347	354	349	375	409	377	382	395	397	375	359	317	280	280	307	338	2115		
3	314	320	323	318	300	300	315	320	359	332	337	340	339	337	343	346	348	350	343	343	339	335	330	330	332	1961		
4 q	330	329	332	333	333	329	329	329	325	322	325	329	335	341	343	359	367	370	369	369	355	347	337	327	340	2164		
5	324	327	330	330	330	310	310	317	318	318	320	325	330	333	351	356	360	377	372	364	347	336	330	330	335	2045		
6	331	331	331	329	329	323	313	315	317	319	319	324	351	366	375	399	494	533	484	477	354	246	304	333	358	2597		
7	339	337	320	317	319	303	313	322	327	331	329	331	331	357	355	357	367	368	357	391	386	348	211	278	333	1994		
8	299	268	266	244	252	243	270	294	312	326	336	337	332	337	339	336	337	338	336	335	334	334	333	333	311	1471		
9	329	328	321	302	286	302	318	319	320	327	331	333	339	355	384	382	367	368	364	344	327	333	307	297	333	1983		
10	301	312	307	299	312	319	324	329	331	335	337	337	336	336	338	338	344	344	341	341	345	327	327	332	329	1892		
11 q	327	331	326	327	327	324	327	323	325	331	331	332	336	336	343	345	357	347	337	335	336	342	364	331	309	334	2018	
12	312	324	317	311	316	317	318	325	331	331	331	337	339	345	355	357	377	398	405	381	384	345	258	299	335	2043		
13	233	247	276	258	276	286	290	301	322	335	342	348	359	351	350	341	339	339	339	335	337	335	334	334	317	1607		
14 q	332	331	331	326	324	324	324	324	327	327	329	322	319	324	324	327	329	326	327	327	331	327	320	313	326	1815		
15 d	301	292	285	281	285	296	304	312	322	329	337	356	390	432	493	501	463	380	386	424	467	309	138	32	338	2115		
16 d	42	-12	41	55	75	89	180	215	264	302	310	319	351	341	337	343	350	346	346	345	345	356	366	359	253	65		
17 q	350	347	347	343	338	335	333	325	317	319	323	327	333	339	345	343	341	339	338	344	358	357	350	346	339	2137		
18	339	338	333	293	292	299	293	300	303	321	341	375	380	377	385	433	490	459	437	390	350	339	336	286	354	2489		
19	272	290	318	328	333	326	325	326	321	328	339	346	343	349	347	345	354	352	337	336	339	327	314	319	330	1914		
20	333	329	319	315	299	307	319	325	326	334	337	338	351	358	355	359	364	361	359	359	289	276	233	282	326	1827		
21	265	185	238	304	324	327	333	333	331	331	331	332	333	331	339	404	404	381	373	357	361	323	313	327	328	1880		
22	287	266	308	316	318	306	317	319	325	333	338	342	340	340	346	347	367	362	351	345	347	334	326	303	328	1883		
23	266	286	307	314	323	323	321	325	362	333	333	341	353	371	368	364	353	347	347	346	337	327	331	335	334	2013		
24	333	326	319	325	325	327	328	332	333	334	333	332	333	349	355	347	347	378	369	345	341	345	327	303	337	2086		
25 q	323	311	302	313	320	323	327	329	331	333	333	333	333	333	334	334	333	333	334	335	333	333	331	317	328	1861		
26	293	288	313	317	311	293	280	295	309	319	323	329	334	332	326	326	327	325	325	325	329	333	333	334	317	1619		
27 d	333	331	326	298	290	303	299	284	262	287	305	326	366	393	422	466	516	493	401	278	343	192	182	254	331	1950		
28	246	278	301	329	338	333	333	341	344	356	365	388	371	363	384	420	428	404	375	348	345	340	335	330	350	2395		
29	310	292	255	292	316	324	324	332	336	343	348	348	350	352	355	391	479	428	380	369	357	349	343	330	346	2303		
30	324	328	335	332	330	328	326	328	335	338	338	343	348	351	358	357	353	358	396	389	364	355	344	339	346	2297		
31	338	332	328	333	322	312	313	322	334	336	339	336	349	366	362	392	385	392	362	362	362	359	359	353	348	2348		
Mean	301	297	301	294	297	299	308	314	323	328	333	339	348	356	363	373	383	381	370	358	349	324	305	303	331			
Sum 9000+	339	224	340	110	222	264	547	731	1002	1162	1331	1516	1776	2035	2244	2560	2881	2796	2473	2104	1817	1053	471	405		Grand Total 246,403		

345 at 0-1h. January 1, 1961.

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

4 LERWICK

DECEMBER 1960

	TERRESTRIAL MAGNETIC ELEMENTS										3-hr. range indices K	Sum of K indices	Magnetic character of day, C (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							
1 d	16 15	1196	-214 03 19	1410	16 08	90.5	-45.1 03 21	135.6	18 08	548	-185 03 18	733	7,8,5,4,5,7,6,6	48	2	81.4
2 d	20 16	587	458 02 08	129	14 26	50.8	20.2 21 03	30.6	13 10	434	243 00 00	191	3,3,3,3,4,3,4,4	27	0	81.8
3	06 18	567	511 04 07	56	04 12	51.0	37.7 17 24	13.3	16 55	355	284 04 43	71	2,3,2,1,1,2,1,1	13	0	81.3
4 q	05 30	563	527 13 20	36	14 34	46.5	36.8 16 00	9.7	17 49	375	321 09 11	54	1,0,1,1,2,2,2,2	11	0	81.2
5	19 46	569	525 12 19	44	14 18	50.4	38.8 00 45	11.6	17 53	386	305 05 41	81	1,2,1,2,2,2,3,1	14	0	81.0
6	18 01	796	253 21 20	543	18 08	68.9	22.5 20 36	46.4	17 30	544	153 21 15	391	0,2,1,2,3,5,7,6	26	1	81.1
7	20 43	638	387 21 51	251	22 10	59.9	-3.9 20 58	63.8	20 49	427	118 22 05	309	2,3,2,2,3,2,5,6	25	1	81.0
8	07 48	580	457 04 24	123	06 45	51.3	31.4 00 01	19.9	15 39	345	228 05 09	117	4,4,3,3,2,2,0,1	19	0	80.9
9	19 34	577	514 09 34	63	10 29	49.1	23.8 18 58	25.3	14 48	419	281 04 40	138	2,3,2,3,4,3,4,3	24	0	81.0
10	20 59	587	527 12 09	60	03 25	46.6	20.5 20 55	26.1	20 38	349	286 00 00	63	3,2,1,1,1,2,4,3	17	0	81.1
11 q	05 29	567	532 13 30	35	13 10	47.8	24.6 21 26	23.2	21 39	371	298 23 38	73	0,0,1,1,2,2,3,3	12	0	80.9
12	00 30	596	443 23 59	153	16 42	55.5	11.5 22 14	44.0	18 21	444	216 23 42	228	3,2,1,2,2,3,4,5	22	1	80.5
13	23 26	561	446 00 00	115	12 34	49.4	25.9 00 00	23.5	12 32	364	221 00 00	143	4,3,3,2,2,1,1,1	17	0	81.1
14 q	12 57	584	553 20 24	31	12 54	49.4	38.9 20 03	10.5	20 26	333	308 23 50	25	0,0,1,2,2,1,1,2	9	0	80.9
15 d	15 40	988	-130 23 54	1118	17 19	90.8	-21.9 22 06	112.7	20 07	612	-103 23 38	715	3,2,2,3,6,6,7,7	36	2	80.8
16 d	12 23	576	0 00 54	576	07 00	54.9	-21.8 01 43	76.7	22 00	371	-98 01 44	469	6,6,5,3,3,2,1,3	29	2	80.8
17 q	18 17	561	533 06 19	28	08 20	45.1	36.5 20 40	8.6	21 04	365	315 08 30	50	1,1,2,3,2,1,2,2	14	0	81.2
18	16 29	625	485 19 40	140	10 55	56.9	20.8 19 59	36.1	16 30	503	245 24 00	258	3,3,3,3,3,4,4,4	27	1	81.6
19	21 18	590	524 00 40	66	11 49	48.8	12.9 21 15	35.9	16 55	365	245 00 20	120	4,3,2,2,2,3,3,4	23	0	81.1
20	20 22	589	479 22 14	110	12 28	47.5	2.5 19 57	45.0	19 32	377	214 22 39	163	3,3,3,3,2,2,5,4	25	1	80.8
21	23 41	579	404 01 52	175	15 05	52.0	15.5 21 20	36.5	15 48	438	156 01 29	282	5,3,2,2,2,4,4,4	26	1	80.6
22	22 42	587	505 00 17	82	06 33	52.4	28.3 21 19	24.1	16 45	373	247 01 09	126	3,3,3,2,2,3,2,2	26	1	80.3
23	21 14	576	512 00 39	64	13 10	49.5	34.8 01 12	14.7	13 40	383	260 00 43	123	3,2,2,2,3,2,2,2	18	0	80.1
24	22 35	616	523 23 19	93	22 48	51.4	26.2 22 02	25.2	17 40	391	266 22 44	125	2,2,1,1,3,3,3,4	19	0	80.8
25 q	20 07	574	524 01 38	50	10 50	44.8	35.2 01 21	9.6	20 04	337	303 23 45	34	2,2,1,1,2,0,2,2	12	0	80.6
26	06 35	588	520 00 58	68	05 28	49.0	27.9 01 26	21.1	12 46	336	270 06 00	66	3,3,3,2,2,1,1,1	16	0	80.8
27 d	15 26	1113	170 19 26	943	19 08	69.6	-12.2 19 18	81.8	16 49	560	83 19 23	477	1,3,3,3,4,7,8,6	35	2	81.0
28	16 32	576	484 11 15	92	16 45	51.4	22.4 00 48	29.0	16 30	440	237 00 08	203	4,2,2,3,3,3,4,2	23	0	80.0
29	15 59	592	480 01 53	112	17 02	49.2	26.3 16 09	22.9	16 25	514	244 02 22	270	3,3,2,2,2,5,3,2	22	0	80.0
30	21 44	546	528 11 50	41	14 12	46.5	22.6 18 20	23.9	18 20	413	321 01 09	92	2,2,2,1,2,4,4,3	20	0	80.0
31	18 15	600	526 12 47	74	16 27	50.6	30.5 18 12	20.1	18 02	405	304 05 35	101	1,2,2,2,2,3,3,2	17	0	80.1
Mean	- -	641	419 - -	222	- -	54.1	18.4 - -	35.7	- -	415	212 - -	203	-	-	0.48	80.8

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 X , $-Y$, I and F

5 LERWICK

	Horizontal (<i>H</i>) force			Declination (<i>D</i>) (west)			Vertical (<i>Z</i>) force			North component (<i>X</i>) all days	West component (<i>-Y</i>) all days	Inclination (<i>I</i>) (north) all days	Total force (<i>F</i>) all days
	<i>a</i>	<i>q</i>	<i>d</i>	<i>a</i>	<i>q</i>	<i>d</i>	<i>a</i>	<i>q</i>	<i>d</i>				
	14,000γ +			9° +			47,000γ +						
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
January	537	544	525	45.9	46.6	44.7	300	295	308	14326	2466	72 55.0	49484
February	541	547	536	45.9	46.3	45.7	295	291	293	14331	2467	72 54.6	49480
March	542	546	523	45.4	45.8	43.7	294	294	286	14331	2464	72 54.5	49479
April	516	541	479	43.0	44.3	40.0	297	299	281	14308	2450	72 56.3	49475
May	544	551	535	43.7	43.3	42.0	309	306	317	14335	2457	72 54.7	49494
June	547	554	522	43.5	43.9	41.1	293	304	273	14338	2457	72 54.1	49480
July	548	556	527	43.3	43.3	42.5	304	300	314	14339	2457	72 54.3	49490
August	544	552	525	43.3	43.7	42.4	303	304	286	14335	2456	72 54.5	49488
September	529	543	490	41.4	42.3	38.8	304	310	298	14322	2445	72 55.6	49485
October	528	549	485	41.4	42.8	39.7	314	320	285	14320	2445	72 55.9	49494
November	529	548	445	40.4	41.5	33.7	325	324	331	14322	2441	72 56.0	49505
December	548	554	534	41.3	41.7	39.7	331	333	315	14340	2448	72 54.9	49516
Year	538	549	511	43.2	43.8	41.2	306	307	299	14329	2454	72 55.0	49489

DAILY RANGE AND MEAN MONTHLY VALUES

6 LERWICK

	Mean daily range						Mean daily range expressed as percentage of yearly mean					
	1960			Mean 1932-53			1960			Mean 1932-53		
	H	D	Z	H	D	Z	H	D	Z	H	D	Z
January	130	100	101	100	102	104	45	62	48	63	90	78
February	123	101	122	124	113	123	42	62	58	78	100	92
March	197	134	159	216	149	176	68	83	75	135	132	132
April	607	307	364	204	120	163	209	190	173	128	106	122
May	253	124	160	195	111	141	87	77	76	122	98	106
June	239	128	182	150	94	109	82	79	86	94	83	82
July	283	138	179	158	96	110	97	85	85	99	85	83
August	253	127	201	178	111	135	87	78	95	111	98	101
September	255	164	216	209	133	170	88	101	102	131	118	128
October	451	258	329	188	129	164	155	159	156	118	114	123
November	476	211	316	107	101	112	164	130	150	67	89	84
December	222	151	203	89	93	96	76	93	96	56	82	72
Winter	238	141	185	105	103	109	82	87	88	66	91	82
Equinox	377	216	267	204	134	168	130	133	127	128	119	126
Summer	257	129	181	170	103	123	88	80	86	106	91	92
Year	291	162	211	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, 1960			Percentage distribution					
	H	D	Z	1960		1960		1960	
				H	D	H	D	H	D
γ				%	%	%	%	%	%
0 - 9	0	0	0	0.0	0.0	0.0	0.0	0.0	0.3
10 - 19	1	0	9	0.3	1.4	0.0	0.4	2.5	6.8
20 - 29	2	2	24	0.6	4.9	0.6	2.3	6.6	10.5
30 - 39	14	9	24	3.8	6.3	2.5	4.0	6.6	9.3
40 - 49	22	13	21	6.0	7.5	3.6	7.3	5.7	7.2
50 - 59	23	27	16	6.3	9.3	7.4	10.0	4.4	6.2
60 - 69	27	26	17	7.4	9.1	7.1	12.3	4.6	5.1
70 - 79	19	37	9	5.2	8.6	10.1	10.5	2.5	4.4
80 - 89	24	35	16	6.6	7.4	9.6	9.2	4.4	3.9
90 - 99	20	27	12	5.5	5.8	7.4	7.0	3.3	3.4
100 - 109	13	27	8	3.6	4.3	7.4	5.6	2.2	3.3
110 - 119	14	17	6	3.8	3.5	4.7	4.0	1.7	2.9
120 - 129	14	11	16	3.8	2.9	3.0	3.6	4.4	2.6
130 - 139	9	13	6	2.5	2.2	3.6	3.1	1.7	2.6
140 - 149	11	18	12	3.0	2.4	4.9	2.9	3.3	2.3
150 - 159	5	14	9	1.4	1.6	3.8	1.8	2.5	2.0
160 - 169	9	10	9	2.5	1.5	2.7	1.9	2.5	1.8
170 - 179	4	6	5	1.1	1.1	1.7	1.4	1.4	1.4
180 - 189	2	9	6	0.6	1.1	2.5	1.5	1.7	1.4
190 - 199	7	4	7	1.9	1.0	1.1	1.1	1.9	1.5
200 +	126	61	134	34.4	18.3	16.7	10.1	36.6	21.1
Days omitted	0	0	0	-	-	-	-	-	-

ALL DAYS

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

8 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
n.	-0.5	-13.5	-12.2	-5.2	+3.1	+8.5	+11.0	+9.3	+4.5	-3.2	-7.9	-12.9	-11.6	-8.5	-2.6	-0.7	+8.1	+7.0	+7.1	+13.5	+9.2	+0.2	-4.5	+1.8
b.	-4.7	-0.7	-10.5	-3.8	+2.6	+5.3	+7.1	+7.2	+3.3	-4.1	-10.4	-14.5	-14.4	-8.8	-3.2	+0.7	+2.7	+6.9	+11.2	+18.4	+9.3	+5.1	+1.2	-5.9
r.	-6.4	-11.8	-9.6	-5.0	-2.5	+1.6	+9.8	+5.9	-4.9	-17.1	-25.6	-28.8	-22.2	-16.5	-4.8	+9.3	+28.0	+32.4	+33.7	+30.4	+23.4	+7.9	-11.6	-15.6
y	-98.1	-105.7	-68.1	-66.2	-39.9	-11.0	-5.0	-10.7	-8.7	-10.7	-13.9	-8.8	+20.0	+50.7	+87.1	+89.5	+91.0	+80.9	+78.4	+48.6	+13.9	-20.0	-31.0	-62.3
ne	-29.8	-28.2	-20.7	-8.7	-6.4	-7.0	-7.7	-12.5	-26.5	-35.5	-35.1	-32.2	-21.8	-5.9	+21.2	+51.8	+50.0	+45.0	+46.9	+36.4	+29.4	+10.3	-5.3	-7.7
ly	-15.3	-18.2	-34.6	-33.0	-21.0	-17.2	-13.9	-17.5	-25.6	-33.4	-33.3	-30.2	-16.8	-4.3	+2.1	+19.1	+36.6	+58.5	+61.8	+60.3	+47.3	+27.3	+4.0	-2.7
g.	-38.7	-39.5	-25.3	-17.4	-3.4	-2.4	-7.5	-15.4	-21.9	-32.3	-34.5	-30.4	-16.4	-5.5	+10.1	+32.9	+54.2	+60.3	+59.2	+51.7	+28.9	+17.6	-5.4	-18.9
pt.	-17.7	-15.3	-10.7	-20.3	-7.6	-19.8	-11.6	-19.4	-32.1	-36.8	-35.2	-32.7	-18.8	-7.7	+8.9	+24.2	+47.6	+61.9	+58.7	+43.2	+26.5	+15.2	-2.8	+2.3
t.	-44.2	-24.0	-17.0	-0.6	+0.9	+8.8	+3.1	-8.4	-19.9	-25.8	-27.5	-21.3	-10.1	-1.8	+17.7	+21.2	+31.7	+41.0	+45.5	+33.0	+28.1	+5.6	-9.2	-26.8
v.	-45.4	-52.1	-36.3	-30.0	-11.8	-5.7	-0.2	-0.1	-2.2	-14.0	-20.9	-7.9	+7.0	+27.1	+53.3	+65.3	+83.0	+75.9	+42.4	+23.3	-21.1	-17.9	-53.9	-57.8
c.	-71.9	-64.6	-62.0	-39.7	-8.4	-2.8	-18.7	-25.9	+3.0	+11.0	+20.6	+4.8	+7.2	+19.4	+33.2	+62.6	+50.4	+52.8	+58.8	+34.6	+24.6	-13.8	-42.3	-32.9
	-18.6	-20.5	-19.1	-20.0	-1.3	+2.6	+5.6	+3.1	+2.3	-4.9	-7.5	-6.1	+0.1	+1.9	+13.4	+31.9	+35.9	+34.6	+30.1	+6.5	+0.7	-24.2	-25.6	-20.9
ar	-32.6	-32.8	-27.2	-20.8	-8.0	-3.3	-2.3	-7.0	-10.7	-17.2	-19.3	-18.4	-8.1	+3.3	+19.7	+34.0	+43.3	+46.4	+44.5	+33.3	+18.3	+1.1	-15.5	-20.6
nter	-23.9	-24.8	-25.9	-17.2	-1.0	+3.4	+1.3	-1.6	+3.3	-0.3	-1.3	-7.2	-4.7	+1.0	+10.2	+23.6	+24.3	+25.3	+26.8	+18.3	+10.9	-8.2	-17.8	-14.5
uinox	-48.5	-48.4	-32.7	-25.5	-14.4	-1.6	+1.9	-3.3	-8.9	-16.9	-22.0	-16.7	-1.3	+14.9	+38.3	+46.3	+58.4	+57.5	+50.0	+33.8	+11.1	-6.1	-26.4	-40.6
mmer	-25.4	-25.3	-22.8	-19.9	-9.6	-11.6	-10.2	-16.2	-26.5	-34.5	-34.5	-31.4	-18.5	-5.9	+10.6	+32.0	+47.1	+56.4	+56.7	+47.9	+33.0	+17.6	-2.4	-6.7
DECLINATION																								
n.	-2.30	-2.08	-2.86	-3.12	-1.75	-0.78	-0.38	-0.25	-0.21	+0.18	+0.98	+2.31	+3.74	+4.59	+3.72	+3.32	+2.91	+1.58	+1.60	+0.34	-1.66	-3.32	-3.33	-3.23
b.	-4.01	-2.81	-2.49	-2.30	-2.73	-2.10	-1.53	-1.54	-1.74	-1.37	+0.36	+3.05	+4.77	+5.68	+6.12	+5.39	+3.49	+2.36	+1.73	+0.74	-1.36	-2.66	-3.72	-3.33
r.	-2.90	-3.06	-4.82	-5.18	-3.85	-3.81	-2.99	-3.54	-3.46	-2.54	-0.48	+2.65	+6.75	+8.07	+8.07	+6.95	+5.97	+3.01	+2.60	+0.87	-1.35	-1.26	-2.77	-2.93
y	-7.57	-7.70	-9.21	-9.18	-6.38	-4.29	-4.29	-5.13	-5.45	-2.92	+0.70	+3.71	+5.43	+7.55	+7.07	+7.91	+9.26	+10.69	+6.95	+4.84	+4.22	-0.42	-2.57	-3.22
ne	-1.35	-2.77	-4.23	-4.55	-4.40	-5.37	-6.28	-5.89	-5.30	-3.30	-0.07	+3.62	+6.35	+7.01	+6.43	+5.24	+5.73	+3.73	+2.33	+1.92	+1.27	+0.92	-0.10	-0.94
ly	-2.38	-4.07	-3.33	-5.63	-6.85	-8.22	-7.33	-7.69	-6.17	-4.02	-1.02	+2.31	+5.41	+6.93	+7.11	+7.10	+5.87	+5.18	+4.88	+3.87	+3.60	+2.49	+1.86	+0.10
g.	-3.05	-3.97	-4.32	-4.80	-5.32	-5.41	-5.88	-5.83	-5.16	-3.33	-0.85	+2.37	+4.85	+6.61	+7.10	+6.08	+5.85	+4.84	+3.84	+3.24	+3.12	+1.68	+0.18	-1.84
pt.	-0.66	-3.91	-3.93	-4.48	-4.37	-4.47	-5.67	-6.54	-5.25	-2.50	+0.68	+4.19	+6.86	+7.95	+7.12	+5.40	+3.62	+2.62	+2.01	+1.89	+1.12	+0.16	-1.31	-0.53
t.	-5.65	-6.86	-6.63	-5.55	-4.41	-2.81	-3.08	-2.62	-2.53	-1.13	+2.06	+5.17	+7.91	+8.56	+8.39	+5.64	+4.02	+3.24	+1.62	+1.32	+0.68	-0.50	-2.06	-4.78
v.	-7.24	-3.94	-4.76	-5.72	-3.19	-0.85	+1.19	+1.56	-0.36	+0.15	+2.19	+4.39	+6.70	+7.50	+5.85	+5.13	+4.80	+4.21	+0.41	+0.44	-2.11	-5.31	-4.21	-6.83
c.	-3.60	-3.52	-2.09	-0.91	-0.01	-0.34	+0.05	-2.27	-1.46	-1.23	-0.36	+3.00	+4.18	+5.42	+5.47	+3.40	+3.22	+1.71	-2.22	+1.24	-0.78	-1.24	-3.49	-4.17
	-3.27	-3.38	-2.69	-3.62	-1.30	+1.35	+1.62	+1.68	+2.03	+1.80	+2.35	+3.23	+4.32	+3.29	+3.77	+2.85	+3.49	+2.98	+1.08	-2.23	-4.29	-5.17	-5.26	-4.63
ar	-3.67	-4.01	-4.28	-4.59	-3.71	-3.09	-2.88	-3.17	-2.92	-1.68	+0.55	+3.33	+5.61	+6.60	+6.35	+5.37	+4.85	+3.85	+2.24	+1.54	+0.21	-1.22	-2.23	-3.03
nter	-3.29	-2.95	-2.53	-2.49	-1.45	-0.47	-0.06	-0.59	-0.35	-0.15	+0.83	+2.90	+4.25	+4.75	+4.77	+3.74	+3.28	+2.16	+0.55	+0.02	-2.02	-3.10	-3.95	-3.84
uinox	-5.84	-5.39	-6.35	-6.41	-4.46	-2.94	-2.29	-2.43	-2.95	-1.61	+1.12	+3.98	+6.70	+7.92	+7.35	+6.41	+6.01	+5.29	+2.89	+1.87	+0.36	-1.87	-2.90	-4.44
mmer	-1.86	-3.68	-3.95	-4.87	-5.23	-5.87	-6.29	-6.49	-5.47	-3.29	-0.31	+3.12	+5.87	+7.13	+6.94	+5.95	+5.27	+4.09	+3.27	+2.73	+2.28	+1.31	+0.16	-0.80
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
n.	-9.1	-20.5	-22.6	-21.0	-15.6	-12.6	-10.1	-7.0	-4.0	-1.9	+0.1	+3.5	+7.3	+8.8	+13.9	+15.2	+19.7	+23.8	+19.0	+15.3	+5.7	+0.5	-3.4	-5.0
b.	-16.5	-14.6	-20.8	-24.6	-18.7	-17.0	-14.6	-11.5	-7.8	-5.8	-4.4	-2.0	-1.0	+2.1	+8.0	+17.1	+21.0	+23.2	+30.9	+28.7	+23.5	+13.2	+2.9	-11.3
r.	-19.6	-21.0	-23.6	-20.7	-19.5	-19.1	-12.6	-6.9	-3.6	-0.8	-0.6	-0.8	+2.4	+6.1	+10.1	+18.0	+22.5	+23.8	+38.1	+27.5	+21.0	+8.4	+0.7	-29.8
y	-53.4	-51.0	-58.2	-45.4	-35.0	-34.8	-18.9	-8.6	+1.4	+9.1	+14.9	+18.4	+15.7	+22.4	+34.6	+28.2	+31.6	+27.9	+43.8	+42.7	+40.1	+16.8	-5.5	-36.8
ne	-33.8	-35.2	-33.4	-21.0	-11.0	-12.1	-8.6	-6.2	-4.2	-5.0	-5.5	-6.3	-1.5	+10.5	+25.4	+26.6	+38.9	+43.4	+32.8	+23.9	+13.7	+3.4	-11.5	-23.3
ly	-19.0	-31.3	-47.1	-60.8	-52.7	-36.8	-17.6	-5.6	+0.2	+2.5	+5.2	+9.0	+12.9	+19.9	+24.3	+24.6	+31.9	+36.2	+38.2	+37.3	+27.9	+14.8	-9.0	-5.0
g.	-27.3	-37.8	-46.6	-42.8	-25.1	-18.3	-12.6	-6.0	-1.5	+0.6	+1.9	+4.8	+10.5	+15.8	+22.5	+29.7	+35.0	+37.1	+32.3	+26.0	+16.7	+6.6	-7.3	-14.2
pt.	-38.2	-34.5	-44.7	-25.9	-33.5	-32.1	-23.6	-8.7	-0.7	+0.9	+1.6	+3.6	+5.4	+11.1	+20.0	+29.3	+34.9	+39.0	+42.6	+37.7	+28.1	+12.0	-8.8	-15.5
t.	-53.6	-55.3	-44.1	-32.0	-27.6	-17.7	-8.3	-2.4	+5.6	+8.8	+10.7	+11.3	+12.6	+20.2	+26.8	+37.0	+35.1	+39.2	+39.7	+31.1	+22.7	+5.8	-21.1	-44.5
v.	-46.5	-57.9	-65.8	-62.0	-42.9	-33.1	-23.4	-9.0	+2.4	+14.6	+24.0	+33.1	+36.9	+39.5	+54.0	+55.2	+56.1	+46.5	+36.6	+36.0	+9.6	-10.1	-36.5	-57.3
c.	-26.2	-43.3	-24.1	-30.4	-51.3	-40.2	-15.8	-0.3	+2.0	+11.0	+18.3	+22.4	+21.9	+28.7	+36.7	+40.9	+46.4	+41.0	+14.3	+3.3	+13.7	+0.2	-28.6	-40.6
	-33.1	-33.5	-29.8	-37.1	-33.6	-32.2	-23.1	-17.1	-8.5	-3.2	+2.2	+8.2	+16.5	+25.0	+31.6	+41.9	+52.2	+49.5	+39.0	+27.2	+17.8			

DIURNAL INEQUALITIES OF THE TERRESTRIAL MAGNETIC ELEMENTS

INTERNATIONAL QUIET 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																								
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.	+1.9	+1.5	+1.9	+3.5	+6.7	+9.0	+11.9	+10.7	+8.7	-0.5	-10.9	-17.9	-18.9	-14.3	-9.3	-4.3	-1.5	+1.8	+2.9	+2.9	+5.3	+4.7	+2.1	+2.1
Mar.	+2.0	+1.6	-0.6	+1.8	+3.2	+4.0	+7.5	+8.4	+2.4	-5.2	-11.6	-15.4	-15.6	-11.8	-8.4	-5.8	-1.8	+1.7	+5.2	+7.2	+7.4	+6.8	+9.2	+7.8
Apr.	+5.9	+2.5	+3.3	+4.5	+6.5	+5.9	+10.1	+3.5	-4.3	-17.1	-29.5	-29.9	-24.3	-17.3	-7.9	-0.3	+2.1	+7.7	+10.7	+12.9	+14.3	+12.9	+15.5	+12.3
May	+14.5	+6.7	+2.2	-2.5	+2.9	+7.8	+3.7	-4.1	-16.6	-27.3	-30.1	-33.4	-29.9	-21.5	-13.2	-4.1	+4.9	+15.6	+21.3	+23.5	+21.0	+19.1	+19.5	+20.0
June	+6.3	+3.4	+0.7	+1.2	+3.6	+1.7	-5.4	-14.6	-24.9	-33.8	-38.9	-37.2	-28.7	-15.2	-2.5	+9.8	+19.0	+25.5	+30.8	+31.2	+24.9	+16.4	+12.7	+14.0
July	+8.2	+3.5	-0.4	+4.3	+7.1	+4.8	-6.3	-15.7	-27.2	-36.1	-41.8	-37.5	-28.0	-19.7	-7.8	+6.1	+16.3	+29.6	+35.7	+31.3	+26.6	+19.5	+14.2	+13.3
Aug.	+0.7	+4.7	+4.7	+5.3	+6.9	+5.0	-1.3	-12.5	-23.8	-35.5	-40.7	-37.6	-29.5	-21.3	-11.0	+0.3	+11.1	+23.8	+30.5	+30.9	+30.4	+23.9	+19.5	+15.5
Sept.	+7.9	+4.7	+7.5	+7.9	+7.9	+2.8	-2.7	-13.9	-26.3	-41.1	-42.5	-34.9	-23.7	-11.7	+2.5	+10.5	+15.1	+19.4	+22.9	+25.3	+21.9	+15.5	+13.7	+11.3
Oct.	+10.4	+9.0	+8.6	+7.4	+6.8	+4.4	+2.0	-6.2	-19.0	-29.4	-35.4	-35.4	-28.4	-20.8	-9.0	-0.4	+7.0	+11.2	+18.8	+21.6	+21.6	+20.0	+17.8	+17.4
Nov.	+6.2	+5.7	+6.1	+6.4	+8.1	+5.6	+6.5	+4.3	-4.8	-19.1	-28.6	-32.1	-27.4	-19.9	-10.4	-5.1	+1.9	+8.0	+13.9	+13.5	+15.6	+15.5	+17.0	+13.1
Dec.	-2.3	-6.5	0.0	+0.3	+2.3	+9.5	+9.7	+7.3	+2.4	-7.9	-12.7	-15.3	-15.5	-11.3	-8.0	-1.3	+2.1	+5.3	+7.9	+9.3	+8.8	+7.5	+3.7	+4.7
Year	-1.8	-4.9	-1.2	+1.8	+3.8	+6.5	+4.0	+6.8	+3.8	+0.7	-2.8	-2.6	-1.6	-5.5	-2.6	-5.2	-0.2	+2.5	+2.6	+0.8	-1.2	-2.1	-2.2	+0.6
Winter	+5.0	+2.7	+2.7	+3.5	+5.5	+5.6	+3.3	-2.2	-10.8	-21.0	-27.1	-27.4	-22.6	-15.9	-7.3	0.0	+6.3	+12.7	+16.9	+17.5	+16.4	+13.3	+11.9	+11.0
Equinox	-0.1	-2.1	0.0	+1.9	+4.0	+7.3	+8.3	+8.3	+4.3	-3.2	-9.5	-12.8	-12.9	-10.7	-7.1	-4.1	-0.3	+2.8	+4.7	+5.1	+5.1	+4.2	+3.2	+3.8
Summer	+9.3	+6.0	+5.1	+3.9	+6.1	+5.9	+5.6	-0.6	-11.2	-23.2	-30.9	-32.7	-27.5	-19.9	-10.1	-2.5	+4.0	+10.6	+16.2	+17.9	+18.1	+16.9	+17.5	+15.7
Year	+5.8	+4.1	+3.1	+4.7	+6.4	+3.6	-3.9	-14.2	-25.5	-36.6	-41.0	-36.8	-27.5	-17.0	-4.7	+6.7	+15.4	+24.6	+30.0	+29.7	+25.9	+18.8	+15.0	+13.5
DECLINATION																								
Jan.	-1.74	-0.99	-0.88	-0.98	-0.62	-0.63	-0.70	-1.26	-1.66	-1.81	-1.42	+0.02	+2.10	+3.37	+3.14	+2.44	+2.20	+1.99	+1.28	+0.40	-0.24	-0.85	-1.54	-1.62
Feb.	-2.41	-2.51	-0.78	-0.57	-0.79	-0.93	-1.45	-1.63	-2.30	-2.67	-1.25	+1.45	+3.11	+4.05	+4.04	+2.87	+1.83	+1.37	+0.79	+0.19	-0.04	-0.51	-1.13	-0.73
Mar.	-0.48	-0.56	-0.76	-1.56	-1.62	-2.07	-2.60	-4.16	-5.10	-4.50	-2.30	+1.70	+5.34	+6.92	+6.08	+4.26	+2.36	+1.21	+0.44	+0.60	-0.02	-0.28	-2.12	-0.78
Apr.	-1.50	-1.53	-1.24	-1.81	-2.61	-4.16	-5.17	-6.71	-6.12	-3.87	-1.34	+2.25	+5.46	+6.65	+5.50	+4.03	+3.01	+1.98	+1.67	+1.57	+1.52	+1.15	+0.80	+0.47
May	+0.84	+0.52	-0.21	-2.20	-3.62	-5.58	-6.74	-7.16	-6.05	-3.98	-1.64	+1.84	+4.48	+5.68	+5.49	+4.92	+3.20	+1.90	+1.50	+1.76	+1.69	+0.66	+1.26	+1.44
June	+0.86	-0.06	-0.60	-3.12	-5.14	-7.07	-7.38	-7.66	-7.50	-5.14	-1.26	+2.70	+4.94	+5.04	+5.10	+4.90	+4.76	+3.49	+3.62	+2.84	+2.06	+1.30	+1.64	+1.68
July	-1.20	-0.72	-1.85	-4.12	-5.80	-7.16	-8.60	-7.64	-5.69	-3.52	-0.76	+2.66	+5.56	+6.90	+7.05	+5.76	+4.32	+3.00	+2.70	+2.48	+2.31	+2.10	+1.72	+0.50
Aug.	-0.02	-0.13	-1.82	-3.70	-4.66	-5.03	-6.98	-7.28	-6.80	-4.09	+0.42	+4.68	+6.96	+7.83	+6.24	+4.32	+2.46	+1.45	+1.42	+1.94	+1.24	+1.17	+0.58	-0.20
Sept.	-0.83	-1.29	-2.23	-2.45	-2.77	-3.35	-4.03	-5.05	-5.59	-4.33	-1.25	+2.47	+5.25	+5.79	+5.21	+3.85	+3.01	+2.45	+2.51	+2.37	+0.81	+0.25	-0.61	-0.19
Oct.	-1.35	-1.12	-1.51	-1.57	-1.91	-2.04	-2.49	-3.53	-4.55	-4.18	-1.69	+1.71	+4.13	+5.40	+5.09	+3.71	+2.41	+2.16	+2.19	+1.67	+0.73	-0.50	-2.13	-0.63
Nov.	-2.14	-0.92	+0.07	-1.18	-0.60	-1.04	-0.50	-1.12	-1.71	-1.76	+0.22	+1.78	+3.22	+3.46	+2.91	+1.72	+1.08	+0.96	+0.46	+0.22	-0.09	-1.34	-1.84	-1.86
Dec.	-1.80	-0.89	-0.42	-1.02	-0.66	-0.37	-0.02	+0.52	+0.58	+0.39	+0.82	+1.66	+2.92	+2.85	+2.70	+1.26	+0.84	+1.15	+0.62	-0.26	-2.20	-3.41	-2.50	-2.76
Year	-0.98	-0.85	-1.02	-2.02	-2.57	-3.29	-3.89	-4.39	-4.37	-3.29	-0.95	+2.08	+4.46	+5.33	+4.88	+3.67	+2.62	+1.93	+1.60	+1.31	+0.65	-0.02	-0.49	-0.39
Winter	-2.02	-1.33	-0.50	-0.94	-0.67	-0.74	-0.67	-0.87	-1.27	-1.46	-0.41	+1.23	+2.84	+3.43	+3.20	+2.07	+1.49	+1.37	+0.79	+0.14	-0.64	-1.53	-1.75	-1.74
Equinox	-1.04	-1.13	-1.43	-1.85	-2.23	-2.91	-3.57	-4.86	-5.34	-4.22	-1.65	+2.03	+5.05	+6.19	+5.47	+3.96	+2.70	+1.95	+1.70	+1.55	+0.76	+0.15	-1.01	-0.28
Summer	+0.12	-0.10	-1.12	-3.29	-4.81	-6.21	-7.43	-7.43	-6.51	-4.18	-0.81	+2.97	+5.49	+6.36	+5.97	+4.97	+3.69	+2.46	+2.31	+2.25	+1.83	+1.31	+1.30	+0.85
VERTICAL 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.	-2.5	-2.0	-2.1	+0.4	-0.7	-0.8	-2.7	-2.2	-2.9	-2.8	-1.3	-0.8	-2.3	-4.4	-2.1	+1.4	+4.3	+5.2	+6.3	+7.2	+4.5	+2.0	+0.7	-2.4
Mar.	+2.9	-0.2	-3.1	-5.3	-4.9	-5.0	-5.5	-4.5	-1.1	+1.2	+1.1	+2.5	-0.5	+0.2	+3.1	+4.1	+4.1	+2.4	+1.1	+1.5	+1.7	+2.8	+0.5	+0.9
Apr.	-7.7	-4.0	-1.7	-0.2	-0.1	-0.4	-1.1	+1.6	+4.5	+4.0	+3.5	-1.6	-3.7	-2.2	+1.3	+4.2	+4.7	+3.6	+3.1	+2.8	+2.7	+0.2	-4.9	-8.6
May	-1.7	-3.6	-6.5	-5.6	-10.2	-5.3	-2.2	-0.6	+1.7	+3.8	+0.9	-2.0	-3.7	-2.4	-1.5	+0.8	+2.4	+4.3	+4.0	+5.2	+6.7	+6.6	+4.9	+4.0
June	+0.4	+0.4	+2.6	+3.4	+4.4	+2.2	+2.4	+1.4	-1.2	-5.6	-9.0	-10.6	-11.4	-9.2	-3.4	-1.0	+2.2	+5.4	+6.0	+7.8	+8.2	+5.6	+0.4	-1.4
July	+1.0	+1.3	-5.2	-5.7	-2.5	+2.0	+4.5	+5.9	+5.0	+0.7	-4.6	-11.5	-15.0	-13.1	-7.6	-0.1	+4.7	+6.2	+6.9	+8.9	+9.6	+7.1	+2.8	-1.3
Aug.	-2.6	+5.0	+7.6	+8.8	+8.2	+6.1	+5.6	+5.4	+3.8	-8.8	-13.6	-17.0	-18.2	-13.4	-8.2	-2.0	+5.9	+11.4	+12.4	+12.3	+9.0	+10.0	+8.3	+4.2
Sept.	-2.5	-8.4	-11.4	-4.3	-0.6	-0.8	+0.7	+2.8	+0.6	-1.7	-8.0	-13.2	-13.9	-10.8	-2.0	+5.9	+11.4	+12.4	+12.3	+9.0	+10.0	+8.3	+4.2	0.0
Oct.	-3.8	-1.1	+0.1	+1.0	+1.1	+2.1	+1.2	+3.3	+5.7	+4.6	+1.1	-2.5	-5.6	-5.7	-4.1	-1.4	+0.1	+1.1	0.0	+0.7	+2.1	+1.8	+0.5	-2.3
Nov.	-4.5	-1.8	+1.1	+1.6	+2.0	+2.9	+1.8	+2.8	+5.1	+5.8	+3.3	-1.2	-4.1	-6.4	-4.9	-1.6	+0.4	-0.3	0.0	+2.4	+2.9	+1.2	-3.5	-5.0
Dec.	-7.3	-8.6	-11.4	-12.5	-5.6	-5.0	-4.1	-2.8	-0.2	+1.9	+1.2	+1.2	+2.1	+3.6	+6.8	+8.7	+8.2	+6.6	+5.7	+4.2	+3.6	+3.5	+2.4	-2.2
Year	-0.9	-3.5	-5.7	-4.9	-4.9	-6.2	-5.3	-7.3	-8.3	-6.9	-4.9	-3.9	-2.1	+2.7	+4.9	+10.7	+10.1	+7.8	+7.3	+8.9	+10.5	+12.3	+0.5	-10.9
Winter	-2.4	-2.2	-3.0	-1.9	-1.1	-0.7	-0.4	+0.5	+1.1	-0.3	-2.5	-5.1	-6.5	-5.1	-1.5	+2.5	+4.7	+5.1	+5.0	+5.4	+5.6	+4.6	+0.8	-2.3
Equinox	-1.9	-3.6	-5.6	-5.6	-4.0	-4.3	-4.4	-4.2	-3.1	-1.7	-1.0	-0.3	-0.7	+0.5	+3.2	+6.2	+6.7	+5.5	+5.1	+5.5	+5.1	+5.1	+1.0	-3.7
Summer	-4.4	-2.6	-1.7	-0.8	-1.8	-0.2	-0.1	+1.8	+4.3	+4.5	+2.2	-1.8	-4.3	-4.2	-2.3	+0.5	+1.9	+2.2	+1.8	+2.8	+3.6	+2.5	-0.7	-3.0
Year	-0.9	-0.4	-1.6	+0.5	+2.4	+2.4	+3.3	+3.9	+2.1	-3.9	-8.8	-13.1	-14.6	-11.6	-5.3	+0.7	+5.4	+7.5	+8.1	+8.1	+8.1	+6.1	+2.1	-0.4

"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

47

INTERNATIONAL DISTURBED DAYS

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
an.	+7.8	-75.4	-71.5	-35.4	+0.4	+10.6	+18.8	+16.0	+5.1	-1.8	-3.4	-8.4	-3.8	-0.8	+13.9	+10.0	+59.2	+34.0	+22.4	+50.8	+24.7	-28.0	-46.2	+1.0
eb.	-19.3	-1.2	-33.1	-10.3	+4.0	+1.8	+1.5	-0.3	+2.5	+0.8	-5.1	-9.5	-7.9	+2.0	+1.3	+0.5	-1.5	+12.6	+11.9	+20.1	+13.7	+7.0	+6.3	+1.3
ar.	-35.0	-61.5	-61.6	-40.0	-38.6	-30.3	+14.8	+10.6	-5.2	-9.9	-15.4	-29.6	-10.2	+1.7	+13.0	+34.2	+145.0	+135.9	+98.2	+106.2	+66.0	-8.1	-117.4	-162.8
pr.	-321.6	-273.1	-281.0	-409.8	-245.8	-31.9	-41.8	-50.0	+4.4	+29.1	+32.0	+67.6	+200.4	+312.7	+432.4	+349.6	+303.4	+182.1	+154.6	+36.2	-79.2	-126.5	-110.4	-133.4
ay	-158.5	-156.1	-84.0	-39.7	-24.7	-10.3	+6.7	+2.9	-15.8	-46.1	-31.3	-18.5	+0.9	+15.5	+114.4	+215.5	+145.5	+105.3	+95.9	+39.1	+29.0	-41.9	-83.3	-60.5
une	-73.6	-36.0	-104.8	-128.4	-61.0	-51.7	-9.8	-12.2	-3.6	-10.4	-8.0	-8.2	-5.0	+2.4	+21.0	+37.6	+83.8	+127.3	+111.8	+104.8	+79.8	+41.2	-35.2	-61.8
uly	-132.2	-124.9	-84.8	-65.0	+5.6	+6.3	-15.4	-28.2	-37.2	-43.1	-24.6	-9.0	+40.8	+43.9	+76.8	+145.0	+189.9	+170.0	+117.2	+67.8	-15.5	-17.6	-113.8	-152.0
ug.	-108.0	-92.6	-92.9	-127.8	-54.0	-120.0	-38.8	-34.6	-54.9	-36.8	-21.2	-15.4	+9.6	+31.2	+60.3	+114.8	+184.4	+210.2	+161.2	+83.4	+25.5	+0.2	-59.6	-24.2
ept.	-192.0	-118.6	-69.4	-24.4	-25.0	-9.3	-4.4	-25.0	-41.4	-22.8	+5.2	+39.6	+52.4	+57.2	+110.2	+90.6	+86.4	+123.9	+127.0	+51.6	+31.6	-66.8	-73.2	-103.4
ct.	-194.9	-181.3	-136.0	-163.7	-109.9	-70.9	-18.1	+0.9	+6.0	-19.3	-6.7	+53.9	+83.1	+156.9	+259.8	+293.9	+357.7	+233.9	+94.5	+59.1	-146.4	-76.3	-189.1	-287.1
ov.	-385.7	-332.0	-341.7	-223.6	-69.4	-68.9	-179.4	-193.0	+28.3	+103.8	+183.3	+100.2	+94.9	+144.2	+193.3	+335.2	+211.0	+186.1	+177.4	+89.8	+83.3	+22.4	-65.5	-94.0
ec.	-68.1	-59.8	-84.4	-113.3	-14.0	-20.8	-11.1	-14.4	+2.8	-9.9	-12.8	-6.2	+20.1	+32.6	+79.6	+191.7	+183.2	+158.6	+128.9	+7.0	-15.8	-116.3	-148.2	-109.4
ear	-140.1	-126.0	-120.4	-115.1	-52.6	-32.9	-23.1	-27.3	-9.1	-5.5	+7.7	+13.0	+39.6	+66.6	+114.7	+151.5	+162.3	+140.0	+108.4	+59.7	+8.1	-34.2	-86.3	-98.9
inter	-116.3	-117.1	-132.7	-95.7	-19.5	-19.3	-42.5	-47.9	+9.7	+23.2	+40.5	+19.0	+25.8	+44.5	+72.0	+134.3	+113.0	+97.8	+85.1	+41.9	+26.5	-28.7	-63.4	-50.3
quinox	-185.9	-158.6	-137.0	-159.5	-104.8	-35.6	-12.4	-15.9	-9.1	-5.7	+3.8	+32.9	+81.4	+132.1	+203.9	+192.1	+223.1	+169.0	+118.6	+63.3	-32.0	-69.4	-122.5	-171.7
ummer	-118.1	-102.4	-91.6	-90.2	-33.5	-43.9	-14.3	-18.0	-27.9	-34.1	-21.3	-12.8	+11.6	+23.3	+68.1	+128.2	+150.9	+153.2	+121.5	+73.8	+29.7	-4.6	-73.0	-74.6
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
an.	-2.15	-4.86	-8.65	-6.94	-3.10	-0.49	+0.56	+1.96	+2.69	+2.90	+3.91	+6.30	+5.97	+6.38	+5.23	+5.76	+4.52	+1.67	+3.28	+0.62	-5.97	-8.68	-6.79	-4.12
eb.	-6.52	-2.81	-3.82	-5.06	-5.72	-2.11	+0.68	+0.14	-1.16	+0.81	+3.26	+5.52	+5.84	+6.87	+6.72	+6.10	+2.10	+2.21	+1.32	+0.48	-4.26	-2.59	-3.78	-4.22
ar.	-7.94	-9.92	-19.96	-17.84	-9.34	-7.15	-1.60	-0.84	+0.16	+1.58	+1.70	+1.74	+9.46	+11.44	+12.80	+12.70	+14.70	+5.03	+4.38	+6.78	+1.50	+0.72	-5.36	-4.74
pr.	-29.97	-31.33	-26.03	-33.31	-21.15	-10.40	-7.05	-6.77	-7.77	-2.23	+4.81	+5.11	-0.53	+3.25	+4.07	+16.07	+30.87	+47.64	+28.23	+19.65	+19.81	+3.61	-4.23	-2.35
ay	-5.09	-5.24	-13.86	-8.39	-6.32	-8.64	-8.45	-7.84	-7.62	-4.01	+1.80	+6.10	+9.39	+8.38	+5.60	+4.01	+12.76	+8.78	+4.83	+4.56	+3.84	+4.39	-0.42	+1.44
une	-4.26	-13.43	-3.06	-14.02	-8.48	-12.07	-9.92	-12.18	-5.70	-3.77	-0.12	+2.02	+6.64	+8.79	+9.60	+10.24	+10.14	+9.95	+9.48	+8.16	+7.46	+4.97	+1.78	-2.22
uly	-12.81	-10.55	-8.44	-5.85	-4.05	-1.75	-3.25	-1.35	-1.90	-0.09	+1.07	+3.25	+2.63	+4.91	+5.56	+6.43	+11.41	+10.55	+8.13	+5.51	+6.58	+2.01	-4.57	-13.43
ug.	+1.18	-13.50	-11.98	-13.10	-3.66	+0.63	-5.26	-7.12	-3.74	+1.28	+3.58	+6.26	+7.76	+7.74	+7.84	+6.02	+5.72	+8.09	+5.64	+4.34	+1.10	-0.90	-5.96	-1.96
ept.	-11.39	-19.68	-14.49	-12.70	-8.38	+0.89	-0.02	+0.34	+0.95	+0.26	+5.67	+9.98	+12.53	+12.10	+13.01	+7.26	+5.90	+6.25	-2.40	+0.48	+0.03	+2.60	-0.19	-7.10
ct.	-21.93	-10.80	-17.95	-18.28	-8.35	-2.84	+4.53	+8.30	+3.71	+6.12	+8.97	+9.28	+9.97	+10.14	+5.87	+6.44	+13.05	+21.84	+3.81	+3.92	+1.39	-10.26	-4.39	-22.54
ov.	-7.70	-13.79	-13.15	-0.54	+2.37	-1.67	-1.78	-15.61	-4.99	-4.64	-8.29	+1.01	+4.14	+11.63	+11.37	+4.18	+11.13	+8.43	+2.00	+3.15	+4.65	+2.26	+2.07	+3.77
ec.	-6.36	-7.84	-8.01	-14.64	-4.44	+4.74	+3.16	+4.96	+3.83	+2.60	+3.20	+5.64	+7.54	+5.38	+7.51	+8.68	+12.14	+10.66	+6.38	-0.62	-5.99	-7.20	-17.22	-14.10
ear	-9.58	-11.98	-12.45	-12.56	-6.72	-3.41	-2.37	-3.00	-1.95	+0.07	+2.46	+5.18	+6.78	+8.08	+7.93	+7.82	+11.20	+11.76	+6.26	+4.75	+2.51	-0.76	-4.09	-5.96
inter	-5.68	-7.33	-8.41	-6.79	-2.72	+0.12	+0.65	-2.14	+0.09	+0.42	+0.52	+4.62	+5.87	+7.57	+7.71	+6.18	+7.47	+5.74	+3.25	+0.91	-2.89	-4.05	-6.43	-4.67
quinox	-17.81	-17.93	-19.61	-20.53	-11.81	-4.87	-1.03	+0.26	-1.21	+1.43	+5.29	+6.53	+7.86	+9.23	+8.94	+10.62	+16.13	+20.19	+8.51	+7.71	+5.68	-0.83	-3.54	-9.18
ummer	-5.25	-10.68	-9.33	-10.34	-5.63	-5.46	-6.72	-7.12	-4.74	-1.65	+1.58	+4.41	+6.61	+7.45	+7.15	+6.67	+10.01	+9.34	+7.02	+5.64	+4.75	+2.62	-2.29	-4.04
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
an.	-8.1	-61.7	-69.6	-61.5	-37.3	-19.5	-13.7	-12.9	-9.8	-3.3	-0.3	+8.1	+26.1	+26.9	+43.6	+39.1	+58.7	+79.1	+52.1	+41.9	-9.0	-19.7	-26.7	-22.5
eb.	-32.8	-17.3	-49.3	-66.2	-46.1	-37.5	-28.0	-16.9	-11.3	-9.4	-6.5	+0.1	+4.2	+11.5	+25.7	+45.0	+46.1	+39.9	+59.0	+62.9	+35.9	+14.0	+3.7	-26.7
ar.	-8.3	-28.6	-53.2	-61.3	-64.4	-70.2	-46.9	-14.2	-2.8	+6.9	+10.4	+21.6	+40.3	+41.6	+34.8	+40.9	+23.4	+17.0	+90.7	+28.4	+35.4	+31.5	+28.0	-101.0
pr.	-54.7	-14.5	-39.5	-76.5	-92.1	-94.3	-38.5	-29.3	-8.5	+6.5	+26.9	+46.7	+29.9	+50.3	+87.1	-3.3	-29.7	-63.9	+25.3	+63.7	+110.3	+92.1	+10.1	-33.1
ay	-70.7	-98.3	-100.9	-59.1	-36.3	-34.6	-14.1	-5.5	-3.9	+2.9	-0.7	-5.9	+6.1	+34.1	+82.7	+59.1	+81.3	+95.8	+63.1	+35.3	+30.5	+16.1	-25.3	-51.7
une	-38.5	-50.7	-94.5	-146.7	-118.5	-87.0	-33.7	-1.7	+5.1	+20.1	+27.7	+43.1	+48.7	+46.3	+48.5	+51.7	+59.3	+77.4	+79.3	+69.3	+47.9	+8.1	-52.9	-8.3
uly	-6.3	-20.2	-104.9	-111.9	-65.5	-46.8	-33.7	-21.3	-10.1	-0.2	+11.3	+25.3	+53.9	+70.8	+81.7	+83.5	+75.5	+73.0	+63.9	+34.3	-3.9	-36.8	-67.9	-43.7
ug.	-84.4	-69.4	-177.2	-77.6	-98.8	-119.0	-76.6	-11.2	+14.8	+16.6	+26.8	+34.2	+38.0	+49.2	+59.4	+88.6	+95.0	+86.6	+97.0	+88.6	+67.6	+20.8	-27.6	-41.4
ept.	-87.4	-145.5	-127.2	-79.3	-83.9	-59.6	-31.5	-11.1	+12.2	+23.1	+34.4	+39.9	+53.2	+76.5	+90.2	+114.7	+81.1	+86.2	+95.3	+44.9	+37.0	-11.3	-76.8	-75.1
ct.	-28.2	-47.4	-117.2	-159.8	-125.0	-104.4	-67.4	-20.4	+7.4	+41.4	+52.6	+87.2	+98.2	+110.6	+150.2									

RANGE OF MEAN DIURNAL INEQUALITIES FOR THE
MONTHS SEASONS AND YEAR OF 1960

AVERAGE DEPARTURE

The ranges are derived from the diurnal inequalities
printed in Tables 8-10

Arithmetical average of diurnal inequalities in
Tables 8-10 taken regardless of sign

11 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.	27.0	7.92	46.4	30.8	5.18	11.6	134.6	15.06	148.7
Feb.	32.9	10.13	55.5	24.8	6.72	9.6	53.2	13.39	129.1
Mar.	62.5	13.25	67.9	45.4	12.02	13.3	307.8	34.66	191.7
Apr.	196.7	19.90	102.0	56.9	13.36	16.9	842.2	80.95	204.6
May	87.3	13.29	78.6	70.1	12.84	19.6	374.0	26.62	196.7
June	96.4	15.33	99.0	77.5	12.76	24.6	255.7	24.26	226.0
July	99.8	12.98	83.7	71.6	15.65	27.0	341.9	24.84	195.4
Aug.	98.7	14.49	87.3	67.8	15.11	26.3	338.0	21.59	274.2
Sept.	89.7	15.42	95.0	57.0	11.38	11.4	319.0	32.69	260.2
Oct.	140.8	14.74	121.9	49.1	9.95	12.2	644.8	44.38	310.0
Nov.	134.5	9.64	97.7	25.2	5.60	21.2	720.9	27.24	318.2
Dec.	61.5	9.58	89.3	12.3	6.33	23.2	339.9	29.36	243.6
Year	79.2	11.19	74.3	44.9	9.72	12.1	302.4	24.32	166.5
Winter	52.7	8.72	64.6	21.2	5.45	12.3	267.0	16.12	184.1
Equinox	106.9	14.33	87.4	50.8	11.53	8.9	409.0	40.72	184.8
Summer	91.2	13.62	81.8	71.0	13.79	22.7	271.3	20.69	202.6

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.	6.9	2.11	11.1	6.5	1.41	2.7	22.9	4.31	31.3
Feb.	6.7	2.81	14.2	6.3	1.64	2.5	7.3	3.50	29.0
Mar.	15.2	3.75	14.9	10.9	2.41	3.0	52.1	7.06	37.6
Apr.	46.7	5.69	29.0	15.2	3.01	3.8	175.4	15.26	46.9
May	24.3	3.71	18.2	16.8	3.10	4.4	64.2	6.32	42.3
June	26.4	4.73	23.7	18.4	3.74	5.5	50.8	7.44	52.7
July	26.2	4.15	20.0	17.8	3.92	7.0	71.9	5.67	47.8
Aug.	24.0	3.63	22.2	16.4	3.39	6.5	73.4	5.60	65.3
Sept.	19.7	4.05	25.5	15.3	2.83	2.2	64.6	6.44	65.7
Oct.	31.4	3.71	37.0	12.3	2.43	2.8	133.3	9.78	67.1
Nov.	31.9	2.31	25.1	6.7	1.34	5.0	162.8	6.01	72.9
Dec.	14.1	2.99	25.9	2.8	1.36	6.3	67.0	7.20	68.5
Year	20.3	3.37	21.7	11.2	2.38	2.9	72.6	6.23	48.8
Winter	12.4	2.27	18.4	5.2	1.38	3.7	61.1	4.26	47.1
Equinox	26.0	4.16	26.3	13.2	2.63	2.3	101.7	9.03	50.6
Summer	25.1	4.01	20.7	17.3	3.49	5.1	63.4	6.10	50.7

NON-CYCLIC CHANGE

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.	+0.5	+0.01	-0.1	-0.3	+0.12	-2.1	-11.8	-1.30	-13.7
Feb.	-0.3	-0.10	+1.2	+3.7	+0.83	-4.0	+28.4	+1.87	+10.9
Mar.	+24.5	-1.58	-5.8	+5.3	+0.05	-5.8	-125.0	+1.62	-50.6
Apr.	+20.6	+1.46	+7.0	+3.2	+0.89	+4.0	+131.8	+13.22	+44.8
May	+4.8	+0.14	-2.3	+6.4	+0.41	-5.3	+59.2	+3.47	+11.0
June	+0.3	+0.04	+0.2	+3.1	+0.08	-4.3	+3.0	-0.53	+4.6
July	-1.3	+0.05	-0.2	+12.7	+1.27	+5.7	-53.3	-1.12	-42.7
Aug.	+0.6	-0.10	+0.7	+3.4	-0.80	-6.9	-14.4	-1.07	-27.0
Sept.	-0.4	-0.09	-1.2	+4.7	+0.26	+1.6	-39.3	+0.41	+34.4
Oct.	-0.4	+0.02	+0.4	+5.5	-0.07	+2.7	-46.7	-1.96	-35.4
Nov.	+1.1	+0.11	+2.7	+8.9	+0.87	-1.7	+75.7	+4.66	-38.6
Dec.	-0.3	-0.10	-0.2	+4.3	-0.06	-13.9	-19.3	-2.30	-16.0
Year	+4.1	-0.01	+0.2	+5.1	+1.07	-2.5	+5.6	+1.41	-9.9
Winter	+0.3	-0.02	+0.9	+4.1	+0.44	-5.4	+18.3	+0.73	-14.3
Equinox	+11.1	-0.05	+0.1	+4.7	+2.53	+0.6	-0.1	+3.32	-1.7
Summer	+1.1	+0.03	-0.4	+6.4	+0.24	-2.7	-1.4	+0.19	-13.5

AVERAGE RANGE OF DIURNAL INEQUALITY 1932-53
WITH 1960 AS PERCENTAGE OF THIS

14 LERWICK

		All days			International quiet days			International disturbed days		
		H	D	Z	H	D	Z	H	D	Z
		γ	γ	γ	γ	γ	γ	γ	γ	γ
Year	1932-53	49.4	9.36	53.3	37.4	8.68	10.3	131.6	14.22	131.1
	1960(%)	160	120	139	120	112	117	230	171	127
Winter	1932-53	24.4	7.87	41.1	15.1	4.65	7.7	85.0	13.84	116.6
	1960(%)	216	111	157	140	117	160	314	116	158
Equinox	1932-53	59.2	10.94	68.8	42.3	9.54	12.9	193.4	18.89	168.9
	1960(%)	181	131	127	120	121	69	211	216	109
Summer	1932-53	72.6	12.72	53.0	57.5	12.77	17.0	156.9	15.61	134.0
	1960(%)	126	107	154	123	108	134	173	133	151

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

RATIO OF RANGE OF INEQUALITY AT LERWICK TO THAT AT ESKDALEMUIR 1960

15 LERWICK

Type of day	Element	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
q	H	0.97	1.03	1.09	1.16	1.34	1.12	1.17	1.16	1.04	1.02	0.91	0.69
d	H	2.90	1.99	2.47	1.88	4.01	2.22	2.83	2.34	3.32	2.45	2.09	5.21
q	D	0.93	1.00	1.04	1.04	1.05	1.02	1.09	1.08	1.02	0.98	0.92	1.24
d	D	1.23	1.27	1.46	1.59	1.61	1.31	1.83	1.30	1.77	1.78	1.73	1.58
q	Z	0.93	0.81	0.86	0.70	0.73	0.81	0.87	0.87	0.55	0.87	2.26	1.73
d	Z	2.30	2.60	1.15	0.70	1.34	1.84	1.30	1.36	1.65	1.10	1.14	1.33

16 LERWICK

(a) Disturbances without sudden commencement

Serial Number	From		To		Range (γ)			Notes
	Date	Hour	Date	Hour	H	D	Z	
1a	Jan. 20	01	Jan. 23	01	492	310	511	
2a	Mar. 15	12	Mar. 18	18	700	504	580	
3a	Mar. 29	08	Apr. 2	19	3176	1789	1709	
4a	Apr. 23	03	Apr. 27	02	1067	805	643	
5a	May 5	16	May 8	01	799	264	423	
6a	July 28	22	Aug. 3	03	619	272	507	
7a	Sept. 2	09	Sept. 6	13	1577	988	997	
8a	Sept. 29	08	Oct. 3	24	478	235	449	
9a	Oct. 4	11	Oct. 10	09	2827	1694	1483	
10a	Nov. 3	20	Nov. 5	16	651	264	411	
11a	Nov. 21	04	Nov. 22	24	625	216	513	
12a	Dec. 14	24	Dec. 16	24	1118	477	715	
13a	Dec. 27	02	Dec. 30	24	943	346	477	

(b) Disturbances with a sudden commencement (ssc)

Serial Number	Date	Time of sudden commencement	End of disturbance		With initial reversed stroke			Magnitude of main stroke			Range of following disturbance (γ)		
			Date	Hour	H	D	Z	H	D	Z	H	D	Z
1b	Jan. 10	07.19	Jan. 12	04	Yes	Yes	Yes	γ +45	γ +37	γ +20	893	288	325
2b	Jan. 13	19.00	Jan. 15	24	Yes	No	Yes	+12	+14	+6	716	266	343
3b	Apr. 2	23.13	See 4b		No	Yes	Yes	+24	-16	-7	804	596	474
4b	Apr. 5	12.59	Apr. 5	24	Yes	Yes	Yes	+47	-12	+19			
5b	Apr. 7	15.11	-	-	Yes	Yes	Yes	+56	-14	+10		Small	
6b	Apr. 10	01.28	Apr. 18	20	No	Yes	-	+9	-10	0	1327	369	627
7b	Apr. 27	20.00	See 8b		Yes	No	Yes	+60	-16	-20	2220	1018	1042
8b	Apr. 30	01.32	May 2	24	No	No	No	+26	-24	-27			
9b	May 8	04.22	May 9	19	Yes	Yes	Yes	-86	-142	-56	1389	412	482
10b	May 11	04.35	May 12	24	No	Yes	Yes	+35	-65	-14		Small	
11b	May 16	13.51	May 17	20	Yes	Yes	Yes	+69	-41	+23		Small	
12b	May 28	20.19	May 30	22	No	No	Yes	+78	-32	-33	830	324	575
13b	June 27	01.45	See 14b		No	No	-	+22	-36	0	1129	506	1631
14b	June 29	19.39	July 2	22	No	No	Yes	+36	-24	-10			
15b	July 14	04.48	-	-	No	Yes	-	+8	-17	0	1984	759	754
16b	July 14	17.01	July 18	23	Yes	Yes	Yes	+158	-37	-20			
17b	Aug. 16	14.09	Aug. 19	01	Yes	Yes	Yes	+173	-59	+39	2001	721	1134
18b	Aug. 19	16.16	-	-	Yes	Yes	Yes	+73	-22	-23		Small	
19b	Aug. 29	00.22	Aug. 31	23	Yes	Yes	Yes	+59	-30	-26	706	311	670
20b	Oct. 24	14.51	Nov. 1	03	Yes	Yes	Yes	+40	-32	+8	1773	715	733
21b	Nov. 12	13.49	See 22b		Yes	Yes	-	+81	-85	0	3835	1184	2059
22b	Nov. 15	13.04	Nov. 17	04	Yes	Yes	No	+110	+53	+31			
23b	Nov. 30	19.10	Dec. 3	06	No	No	Yes	+37	-8	-17	1410	574	733
24b	Dec. 7	18.04	Dec. 8	18	Yes	No	Yes	+30	-6	-13	251	270	309

(c) Disturbances due to solar flare (sfe)

Serial Number	Date	Commence-ment	Max.	End	Movement (γ)			K	K'	Notes
					H	D	Z			
1c	Apr. 6	11.32	11.38	11.45	-9	0	+3	2	2	S.E.A.
2c	Aug. 5	14.29	14.32	14.55	+11	-3	-3	2	2	From I.A.G.A. list
3c	Aug. 14	13.10	13.11	13.20	-11	-10	+7	2	2	S.E.A.

S.E.A. = Sudden enhancement of atmospherics

**Night
commencing**

[illegible]

AURORAL LOG

In the interests of brevity there have been omitted from Table 17 all dates on which the sky throughout the night 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 \odot . 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 $\cdot\cdot$; in the latter case also, remarks on the weather are added to assist the reader in judging how far the fact of no observation of aurora may be taken as indicating that there was not actual aurora.

a = 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.

18 BRITISH ISLES

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.)				
4-5	57	G,S,R	0055-0700	65	29-30	54	HA,RA	2150-0300	57	29-30	59	HA,RA,RB	2045-0350	66
5-6	57	HA,R	1800-0455	66	30-1	51	RA	2100-0300	54	30-1	59	HA,RA,RB	2050-0450	65
10-11	60	G	2345											
13-14	60	G	2345											
14-15	56	HA,RA	1730-0255	62										
16-17	61	G	2200-2325		MAY					OCTOBER				
18-19	62	G	2240											
19-20	62	G,RA	2350		1-2	61	G	2240-0040		1-2	61	HA,F	1940-0350	66
20-21	61	G	2300-0055		6-7	55	HA,RA	2130-0140	59	4-5	58	HA,RB	1925-2230	64
21-22	59	G	2245-0545		7-8	58	R	2130-2310		6-7	51	HA,RA,PA,F	1905-0430	56
22-23	62	G	2300-0045		10-11	60	G	2215		7-8	58	RA	1950-0050	
23-24	60	G	2155-0255		16-17	58	HA	2130-2330		8-9	63	R	0100-0400	
24-25	60	G	2040-2315		23-24	59	G	2300-0200		9-10	59	R	1925-2245	
					24-25	60	G	2335		10-11	60	G	2050-2340	
					26-27	60	G	2335		11-12	63	G	1940	
					28-29	52	HA,RA	2340-0240	62	12-13	59	R	2050-0001	
					29-30	59	G	2345		13-14	56	HA,RA	2050-2315	
FEBRUARY										15-16	57	HA,RA	1825-2220	65
2-3	56	HA,RA,RB	1755-2350	63						17-18	63	R	2140-0340	
3-4	60	G,RB	2140-0550							18-19	60	RA,RB,F	1842-2340	63
4-5	61	HA,RA	1910-2240	68	JUNE					19-20	62	G	2000-0350	
5-6	58	HB,RA,RB,F	2120-0600	64						20-21	61	G	2240-0140	
13-14	57	G	1800-2030		4-5	60	R	2300		24-25	58	HA,RA	1800-0050	
14-15	58	HA,HB,RB	1820-0150	63	26-27	59	G	0150		25-26	56	HA,RA	1950-0450	62
15-16	61	RA	2250-2259		27-28	59	G	0001-0200		26-27	59	RA	2250	66
16-17	60	R,F	2015-0200	64	29-30	55	G,R	0050		27-28	56	R	2145-2310 and 0450	
17-18	58	HA,RA	1900-0540	64										
18-19	61	G	2200-0100							28-29	62	R	0050-0150	
19-20	57	HA,RA,RB	2000-0500	64						29-30	59	R	1825-2152	63
20-21	60	G,R	2140-0400		JULY					30-31	62	R	0005	
26-27	59	G	0300							31-1	61	R	2010-2017	
27-28	60	HA,RA	2050-0300	66	15-16	51	RA,RB,F	2250-0200	57					
28-29	61	G	2300-0200		17-18	60	RB	0030-0130						
29-1	58	G	0001-0400		26-27	60	G	2320-2330						
					28-29	58	G	0115		NOVEMBER				
					29-30	56	RA	2210-2350						
					30-31	58	G	2315		3-4	59	R	2000-0050	65
MARCH										6-7	61	G	1940	
1-2	59	HA	1905-0600	67						8-9	62	RA	2350	
2-3	59	R	1900-0500		AUGUST					11-12	58	G	1800-2400	
3-4	60	RA	2300-0200	67						12-13	50	HA,RA,F	1733-0500	53
4-5	62	G	0500		11-12	63	R	0025-0115		13-14	52	HA,RA,F	1730-0550	60
15-16	Auroral activity completely obscured by overcast skies over whole region. Active aurora seen in geomagnetic latitude 52° in Western Atlantic.				14-15	58	G	2050-2345		14-15	54	HA,R	1940-0540	
					16-17	53	RA,RB	2100-0305	61	15-16	51	HA,RA,F	1750-0600	57
					17-18	54	RA	2115-0150		16-17	60	HA,R	1750-0350	
					19-20	57	R	2115-0250		17-18	60	HA	1840-0440	
16-17	61	R	2240-2400		20-21	59	HA	2110-0150	65	21-22	60	G	1815-2350	
25-26	63	G	2200 and 0100		21-22	63	R	0230		22-23	61	G	2040-2240	
					24-25	63	G	2150		23-24	60	G	1925-0340	
28-29	59	HA,RA,F	1930-0400	64	26-27	63	G	0050		24-25	60	G,R	2140-0540	
29-30	60	R	2130-0253	65	27-28	61	G	2150-2250		25-26	60	HA,R,F	1950-2250	63
30-31	58	HA,RA,S,F	2040-0400	62	28-29	59	G	2143-0150		27-28	59	G,R	1715-1905 and 2010-2400	
31-1	52	HA,RA,S,F	2015-0400	57	29-30	54	R	2100-2330					2150	65
										30-1	61	R		
APRIL					SEPTEMBER					DECEMBER				
1-2	52	HA,RA,P	2025-0300	56	2-3	60	HB,RB	2200-0300	64					
2-3	55	G,R	0050-0500		4-5	56	RA,RB	2015-0250	60	1-2	58	G	1720-1724	
6-7	60	HA,HB,R,F	2055-0200	62	5-6	59	RA,RB,F	2100-0040	63	6-7	56	G	1750-2400	
7-8	59	G	2045-2100		7-8	60	R	2130	64	7-8	57	HA,RA	1940-0140	62
10-11	57	RA,RB,S	2000-0300	62	10-11	63	RB	2225-2230		9-10	61	G	1740-0340	
11-12	58	R	2035-2210		11-12	59	HA,RA	2050-0040		10-11	61	G	1750-1950	
13-14	60	HB	2300-0100	64	12-13	61	RA	0250-0330	67	11-12	60	G	1950-0050	
14-15	57	G	2100-2300		13-14	60	HA,RA	0010-0125		12-13	60	G	1700-0550	
15-16	60	G	2040-0249		17-18	61	HA	2350-0050		14-15	62	G	0150	
16-17	58	HA,RA	2140-0159	64	20-21	60	HB,RB	2245-0030		15-16	57	R	1648-0340	
17-18	58	G	2005-2350		21-22	60	G	2150-0250		18-19	58	HA,R,S	1650-0350	
23-24	53	HA,RA,RB	2120-0345	56	22-23	59	HA	2000-0400		19-20	60	G	2050-0300	
24-25	54	RA,RB	2130-0300	61	23-24	56	G	1915-0350		20-21	58	G,HA	1750-0500	
25-26	56	HA,R,FS	2145-0200	65	24-25	60	R	2000-2150		21-22	58	G,HA,RA	1715-0518	
26-27	59	HA,RA,RB	2050-0300		25-26	60	HB	2000 and 0220-0330		24-25	59	G,S	2200-0100	
27-28	52	HA,PA,HB,RA,RB,F	2030-0300	59						27-28	54	HB,RA,RB	1715-2230	62
28-29	55	HA,RA,RB,F	2150-0300	60	26-27	59	HA,RA	2040-0340		30-31	60	G	2245	

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)
 an 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 \pm 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																													
19 LERWICK		Factor 1.07 (metre ⁻¹)																								APRIL 1960			
	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	55*	85	110	110	140	110	110	110	110	110	85	85	85	85	55	55	85	85	110	85	55	55	79 (23)		
2	90	120	120	120	90	90	90	90	120	120	120	150	150	150	150	150	120	120	60	90	90	120	60*	-60*	-360*	-150*	113 (20)		
3	-180*	210*	270	300	270	270	270	330	390	330	240	210	210	210	210	180	150	120	150	180	210	210	210	210	210	180	229 (22)		
4	150	150	150	150	150	150	150	120	150	120	150	120	120	90	120*	-30*	60*	-30*	360*	150*	90*	120*	150*	180*	150*	120*	137 (12)		
5	150*	150*	150*	-90*	120*	30*	60*	120*	-240*	150*	180*	210	210	210	300	360	360	390	360	390	360	420	420	300	210*	30*	335 (12)		
6	-60*	Z-*	Z-*	Z-*	Z-*	330	300	180	270	270	300	330	330	330	390	420	330	180	-90*	30*	180	120	120	90	90	90	235 (17)		
7	85	85	85	85	85	85	110	195	110	110	110	110	140	140	140	110	110	140	110	110	310	390	280	250*	110*	142 (22)			
8	-60*	-120*	180*	180	180	270	300	300	300	360	420	480	480	480	300*	210*	90*	150*	240	300	300	210*	240*	120	180*	180*	288 (13)		
9	150*	150*	120*	180*	240*	90*	-30*	-270*	-120*	-240*	-360*	-480*	-480*	-480*	Z-*	Z-*	-300*	120*	120	150	150	150	120	150	150	120	139 (8)		
10	90	120	120	120	90	120	120	120	150	150	240	240	240	240	270	240	120	120	90	120	120	Z+*	-540*	Z-*	Z-*	-360*	145 (19)		
11	-960*	-780*	-840*	-600*	-870*	-360*	-180*	0*	-30*	0*	30	30*	30*	30*	30*	-90*	-150*	-180*	-330*	-270*	-750*	-90*	90	90	90	90	78 (5)		
12	90	90	90	60	60	90	120	150	120	150	150	-60*	-60*	-60*	-450*	-90*	120*	150	150	150	180	180	120*	Z-*	Z-*	125 (17)			
13	Z-*	60*	-360*	Z-*	-30*	90*	120	150	150	120	90	120*	120*	120*	Z+*	120*	60	(60)	90	90	90	60*	120*	120*	60*	60*	102 (10)		
14	Z+*	60*	90*	90*	60*	180*	120	120	120	120	120	120	120	120	120	150	270*	210*	90*	330*	180*	150*	300*	60*	90*	60*	124 (7)		
15	150*	Z+*	Z+*	180*	150*	Z+*	120*	Z+*	240*	120	120*	120*	120*	120*	120	120	120	150*	120*	120*	120	120	120	150	150	120	126 (10)		
16	120*	120	120	120	120*	120	120	120*	120*	120	(120)*	(180)	(150)	(150)	(150)	(150)	(150)	150	120	120	120	120	150	180	180	141 (19)			
17	140	140	140	140	140	140	140	140	140	170	170	140	110	110	110	140	140	170	195	195	225	225	195	195	195	163 (24)			
18	250	195	170	140	140	110*	140	110	110	110	110	110	110	110	85	85	110	170	195	170	170	195	225	195	170	170	153 (23)		
19	140	140	110	110	85	85	85	85	110	110	110	110	140	140	110	110	85	110	170	170	170	225	250	140	170	195	133 (24)		
20	180	180	180	60*	60*	-510*	120*	120*	Z+*	360*	Z+*	-180*	180*	270*	150*	150	150	150	150	150	150	120*	120*	150*	120*	120*	161 (8)		
21	120	90*	120*	90*	90	90*	-30*	30*	90*	60*	60*	60*	60*	60*	60*	90*	90*	90*	90*	90*	150*	150*	120*	120*	120	120	113 (4)		
22	85	85	85*	110*	110	110	110	110	110	110	110	110	110	110	110	110*	110*	110	110	140	140	140	110	85*	110*	110	112 (19)		
23	150*	90*	120*	120	90*	90*	120*	150*	90*	90	60	60	60	60	90	90	120	90	90	90	90	90*	90*	60*	90	90	90 (13)		
24	85	85	85	85	85	85	85	85	85	110*	110	110	110	110	140	140	110	110	110	110	110	85	85	55	55	55*	95 (22)		
25	60*	60*	60	90*	30*	120*	90*	90*	90	150	180	180	180	180	180	180	150	150	120*	120*	90*	30*	60*	30*	90*	120*	147 (9)		
26	60*	120*	120	150	120	120	120	120	150	90	0*	90*	90*	90*	90*	120	120*	0*	120*	150	150	120	120	120	120	90	124 (16)		
27	90	120	90	90	60	60	90	90	90	90	120	90	90	90	90	120	120	90	120	120	120	150	150	150	120	150	107 (24)		
28	120	90*	60*	60*	60	60	90	90	90	90	60	60	60	60	60	60	30	90	60	60	60	90	90	120	90	120	79 (21)		
29	85	85	85	140	310	250	170	110	140	140	140	140	110	110	85	85	110	140	110	55	85	110	85	85	85*	85	122 (23)		
30	60	60	-270*	-210*	-30*	90*	90	90	90*	90	90	90	90	90	90*	120*	90*	330*	90*	270*	90	Z+*	120*	150*	90*	Z+*	83 (8)		
Mean	111 (17)	113 (16)	121 (18)	126 (17)	125 (17)	140 (18)	139 (22)	138 (21)	151 (21)	146 (23)	143 (23)	156 (22)	151 (20)	156 (20)	136 (20)	137 (21)	135 (21)	144 (22)	145 (25)	166 (20)	169 (19)	149 (18)	128 (16)	127 (17)	141 (474)				
																								Mean for 0a days		125 (8)			

Daily, monthly and annual means are computed excluding hours with precipitation and, of course, all indeterminate entries. The number of hours or days used in computing each mean is shown in round brackets. Entries in square brackets are means for 0a days (see Introduction) and the figure in round brackets is the number of days used in computing this mean.

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

57

Factor 1.01 (metre⁻¹)

19 LERWICK

JULY 1960

	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	30*	-85*	55*	85	85	85	85	85	55	55	55	55	55	55	55	55	55*	55	55	85	85	85	85	85	70 (20)
2	70	70	70	50*	50*	70*	70*	70*	50	50	95	95	70	95	120	120	120	120	120	70	70	70	70	70	88 (19)
3	70	50	50	50	50	50	50	50	70	70	70	70	70	70	95	95	70	95	95	95	120	120	120	95	77 (24)
4	95	95	95	95	70	95	95	95	95	70	70	70	70	70	70	70	70	70	95	70	95	95	70	70	81 (24)
5	85	55	55	55	85	85	85	110	140	110	110	110	110	140	140	140	140	170	170	30	0*	-110*	55*	0*	106 (20)
6	140	110	110	85	110	110	55*	55*	110*	85	55	85	170	140	110	170	170	170	170	170	170	110	85	55	123 (21)
7	55	30	30	55	30	55	55	55	110	140	140	170	140	110	170	55	55	55*	55*	110*	-30*	110*	110*	110*	86 (17)
8	85	85*	55*	110*	110	170	170*	365*	195	85	55	55	30	55*	30*	85	85	110	110	110	110	85	85	85	97 (17)
9	85	85	85	85	85	55	85	85	85*	85*	110	110	55*	30	85	85	140	170	140	85	55	55	85	110	91 (21)
10	70	95	95	70*	50	50	70	95	95	95	70	95	70	95	95	95	70	120	120	95	70	95	95	170	90 (23)
11	70	95	95	190	145	120	70	145	145	145	120	70	70	70	70	95	70	70	70	120	70	70	50	70	96 (24)
12	55	55	55	55	55	55	55	55	55*	55*	85*	85*	85	85*	85*	110	85	85	110	170	195	195	170	170	101 (18)
13	120	95	95	95	120*	170*	215	265	410	265	310	865	530	890	790	670	505	Z+	240	145*	265*	290*	335	310*	394 (17)
14	335*	475	670	755	225*	505*	700	390	250	195	280	225	310	225	280	250	170	55*	55	55	85	195	110	110	289 (20)
15	140	140	110	30	0	140	450	225	225	225	195	250	450	225	310	390	365	280	390	310	250	195	225	420	247 (24)
16	385	530	505	385	310	410	430	550	670	290	310	310	410	215	120	145	145	335	335	240	170	120	145	265	322 (24)
17	195	225	195	140	170	110	85	85	85	55*	30*	55*	-30*	0*	195	-30*	170*	390*	420*	310*	-110*	-140*	170*	280*	149 (10)
18	335*	365	365	225*	195*	110	170	140	85*	85	85	225	310	280	170*	-110*	0*	30*	30	30*	55*	30*	30*	30*	197 (11)
19	30*	0*	30*	30*	0*	30*	195	365	140	85	55*	55	55*	55*	30*	55*	85	85*	85*	110	85*	110*	85	55	131 (9)
20	85	85	55	55	55*	85*	140	110*	30*	170	170	110	110	170	140	170	170	140	110	110	110	85	85	85	118 (20)
21	85	85	85	110	195	280	280	250	195	140	140	140	85	170	170	250	225	140	140	85	110	85	55*	30*	157 (22)
22	Z+*	85	85	85	85	85	110	110	85	85	110	110	110	110	85	110	85	110	140	110	85	85	85	110	98 (23)
23	110	55	0	55	85	140	140	140	170	140	110	85	85	85	55	85	85	85	85	85	110	140	140	98 (24)	
24	110	110	110	140	140	140	250	280	225	195	195*	420*	85*	55*	85*	250*	195*	-55*	85*	55*	85	85	85	85	146 (14)
25	85	85	110	110	110	110	280*	450*	250	(195)	170	195	140	110	110	110	140	85	140	140	140	85	30	55	123 (22)
26	30	30	30	55	55	55*	85*	225*	170*	225	170	140	170	140	140	170	140	140	170	170	170	140	110	85	124 (20)
27	70	70	50	70	95	120	95	95	95	190	170	95*	120*	120	145	145	145	170	170	190	240	190	145	120	132 (22)
28	110	170	195	225	250	335	280	335	(280)	280	280	280	250	250	110	55	110	140	85	110	110*	-*	-*	-*	205 (20)
29	-*	-*	-	-	-*	-*	-	335	310	335	280	365	365	785	810	615	505	475	Z*	505	505	505	310	170*	467 (15)
30	170	120	70	70	265*	240	310	290	265	310	335	310	290	310	430	Z+	Z+	Z+	Z+	Z+	Z+	265	170	120	240 (17)
31	145	145	170	145	120*	120*	50	95*	95*	(120)	120	215	120	170	310	310	215	240	265	Z+	265	290	240	120	192 (19)
Mean	109	134	135	131	108	137	181	191	194	158	155	180	180	197	200	178	161	155	144	140	145	142	129	120	155 (601)
	(25)	(27)	(27)	(25)	(22)	(23)	(25)	(24)	(24)	(28)	(27)	(27)	(26)	(26)	(26)	(26)	(26)	(23)	(25)	(24)	(23)	(24)	(25)	(23)	
	Mean for 0a days																								146 (9)

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

Factor 1.01 (metre⁻¹)

19 LERWICK

AUGUST 1960

	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	80	50	80	50	50	50	235	285	365	Z+	Z+	Z+	285	210	105	105*	-50*	-105*	0*	-25*	-80*	130*	235*	155	154 (13)	
2	155*	180*	105*	50*	25*	50	50	80	130	(105)	105	80	80	105	80	105	155	180	155	235	105	50	80	50	104 (19)	
3	80	80	80	105	80	210	235	365	210	130	130	180	130	105	80	25	50	-50	25	50	155	50	25	25	106 (24)	
4	25*	105*	25	0	50	50	50	235*	50*	-*	50*	-210*	-310*	Z**	310*	-130	Z*	130	80*	260*	155*	155*	130	50	39 (9)	
5	-25	-25	0	50	50*	80*	210*	180	80	50	50	50	25	25	25	50*	50*	25*	25*	0	0	25	25*	0*	34 (15)	
6	25*	25*	0*	25*	50*	50	50	50	155	130	80	25	50	25	50	80	105	105	105	25	25	0	0*	0*	65 (17)	
7	25*	50*	50	50	50	80	155	105	105	105	105	130	105	105	80	80*	80*	130	105	105	25	25	25*	25*	90 (18)	
8	0*	-25*	-25*	-25	0	25	105	80	80	130	130	130	105	155	105	105	80	50	50	105*	80*	130	50	50	81 (19)	
9	50	80	80	50	80	180	180	180	25*	80	80	50	80	105	130	155	155	155	80	-	-	-	-*	-*	108 (18)	
10	-	-	-	-	-	-*	-*	-*	-*	50*	25*	0	25	-25	50	-50*	0	25	25	0	0	25	25	25	15 (12)	
11	50*	25*	50*	50	50*	50*	80	80	105*	(105)	(105)*	(105)*	(105)*	105*	105	80*	130*	130	25*	105*	80	165*	105	105	93 (9)	
12	105	80	80	80	50	50	80	105	105*	105	105*	105	105	105	-105*	-25*	50*	0*	50	50	50	25	25	72 (18)		
13	50	50	25	50	50	50	50	80	80	105	80	80	80	80	105	130	80	80	50*	50*	105	105	80*	50	75 (21)	
14	80	80	50	50	50	50	105	105	105	130	130	105	130	155	130	Z+	Z**	Z**	130	130	155	105	Z-	Z-	104 (19)	
15	155	180	105	80	80	105	180	180	105	80	80	80	80	80	50*	-25*	50*	80*	155*	155*	105	105	80	50	106 (18)	
16	80	80	80	80	80	130	105	105	105	105	105	105	105	105	105	80	105	80	80	80	80	80	80	50	91 (24)	
17	50	50	50	80	-25*	80*	105*	130	80	50	50	80	50*	80*	80	50*	50*	50*	50*	25	50	50	50	50	62 (15)	
18	50	50	50	50	50	50	80	80	80	50	80	80	25	50	80	80	50	80	50	50*	25*	0*	25*	50*	60 (19)	
19	50	50	50*	25*	25*	25*	50	50	80	50*	50*	105	80*	80*	50*	25*	25*	80	50	25	50	50	50	50	57 (13)	
20	50	50	50	50*	25*	50*	80	105	105*	80*	470*	80	50	50	50	80	80	50	80	50*	50	50	50	50	62 (17)	
21	50	50	50	50	50	50	50	80	50	50	50	50	50	50	80	80	130	130	130	130	105	155	105	77 (24)		
22	285	260*	260*	130*	180	155*	0*	-25*	50*	80*	50	180	310	105*	-155*	-285*	105	Z+	675	390	235	155	80	80	227 (12)	
23	50	80	105	180	130	105*	80*	25*	105*	105	155	130	130	130	130	155	155	180	180	210	180	130	105	130	137 (20)	
24	110	110	110	90	65	45	65	90	110	130	175	130	155	175	155	155	155	155	155	175	175	175	155	110	130 (24)	
25	90	65	65	65	65	65	65	90	90	90	110	90	90	110	110	90	90	90	45	65	90	90	65	45	80 (24)	
26	25	25	25	0*	0*	25	0	25*	50*	50*	50*	25*	50*	50*	50*	25*	25*	25*	25*	25*	25*	50*	50	50	29 (7)	
27	80	80	50	50	50	50	50	50	-50*	(50)*	50	50*	25*	80*	155	105	180	180	365	310	260	180	105	105	129 (19)	
28	45	45	45	20	90	175	175	175	200	175	130	110	155	130	155	110	110	110	90	90	110	90	65	90	112 (24)	
29	155	80	25	25	25	25	25	50	80	80*	50*	50*	50	50*	50*	50	50	80	105	80	105	105	105	67 (19)		
30	80	105	50*	25*	80	80*	80*	105*	105*	105	50*	80	80*	130	130	130	130*	130*	130	130	130	105*	105	130	113 (13)	
31	90	90	90	65	90	65	90	90	90	65*	65*	65*	90*	90*	65	90*	65	90	90*	130*	110*	110	110	90	86 (15)	
Mean	80 (24)	69 (23)	60 (23)	58 (23)	68 (22)	74 (22)	96 (25)	119 (25)	117 (20)	102 (21)	96 (20)	92 (24)	104 (23)	98 (22)	97 (24)	88 (18)	97 (19)	100 (22)	129 (22)	117 (20)	101 (24)	85 (24)	80 (23)	73 (25)	91 (538)	
																							Mean for 0a days			102 (4)

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

19 LERWICK		Factor 0.99 (metre ⁻¹)																				SEPTEMBER 1960									
	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	volts per metre																		
													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			
1	110*	80*	80	55*	80	80	80	110	80*	80	80*	80*	80	110	110	110	110	135	80*	110*	25*	80	80	80*	95	(14)					
2	65	65*	65*	65	65*	65*	90	65*	65	65	65	65	45	45	45	90	90	65	90	130	45	45	45	66	(19)						
3	45	45	45	45	45	45	90	130	110	110	110	110	110	130	130	110	130	90	90	65	65	65	65	85	(24)						
4	80	80	80	80	80	55*	2+*	0*	160	55*	110*	80	110*	80*	80*	2-*	55*	80*	80	80	80*	110	80	80*	90	(11)					
5	80	80	80	80*	80*	80*	55*	25*	80*	(55)*	80*	80	80	80	110*	110*	135*	135*	110	135	135	110	135	110	101	(12)					
6	90	65	65	65	65	65	130	200	200	110	65	65	90	110	130	110	110	90	90	90	90	110	155	110	103	(24)					
7	80	25*	25	25	55	55	80	110	135	135	80	110	80	80	110	135	110	55	80	110	135	190	190	135	100	(23)					
8	190	160	80	135	160	190	135*	160*	160*	110*	135	215	380	350	405	Z+	Z+	Z+	Z+	Z+	Z+	245	245	55*	222	(13)					
9	-215*	-215*	160*	80	55	55	110	80	80*	80	80	80	110	135	135	135	135	135	160	190	160	135	135	135	116	(20)					
10	65	90	65	65	65	45	45	45	90*	110*	175	155	240	200	220	265	440	Z+	Z+	Z+	Z+	Z+	Z+	130	144	(16)					
11	110	80*	80*	25*	80*	160	215*	215*	160*	160	80*	110*	110*	25*	55*	80	80*	55*	25*	0*	-80*	-55*	-55*	80*	127	(4)					
12	110	160	160	160	160	160	215	160	135	110	110	110	110	135	135	135	160	190	215	215	160	80*	55*	80*	153	(21)					
13	110*	80	80	80	80	80	135*	80*	160*	135	135	160	135	135	135	135	135	135	135	135	160	215	160	160	130	(20)					
14	325	245	430	405	350	190*	-25*	325*	215*	-*	110*	190*	295*	215*	245*	190*	190*	190*	160*	245*	Z+	190*	190*	215*	351	(5)					
15	215*	245	245	160	160	215	135*	-55*	110*	80*	160	110*	Z+	25*	-25*	190*	110*	110*	190	190	350	Z+	270	245	221	(11)					
16	215	135	80	80	110*	110*	160	135	160*	55*	110*	135	110*	135*	80	135	135	135	80	80	135	190	215	215	138	(17)					
17	215	215	215	215	160	135	190	135	190	160	160	135	160	190	190	160	160	190	160	80	80*	80*	110*	80*	171	(20)					
18	90*	155*	130*	130*	130*	130	175	175	285	285	350	440	550	460	395	485	550	530	375	330	265	310	220	200	343	(19)					
19	205	90	45	205	275	160	205	185	160	255	160	115	90	160	25	25	25	25	25	25	25	25	25	25	107	(24)					
20	25	25	25	25	25	25	25	25	25	-45	-90	-45	-25	0	0	25	45	45	45	70	70	45	45	45	18	(24)					
21	25	25	25	25	25	25	45	45*	70*	70*	45*	45*	45*	45	0	0*	25	25	25	25	45	45	45*	70*	29	(15)					
22	25*	70*	25*	25*	90*	70*	160	115	115	140*	185	230	160*	25*	160*	205*	185	70	70	70	70	45	45	25	107	(13)					
23	20	20	45	45	20	20	65	110	130	90	90	90	110	90	90	90	90	110	155	130	155*	155*	155*	90*	81	(20)					
24	70*	90*	70*	70*	0*	-90*	25*	0*	-45*	-45*	0*	-25*	-45*	-45*	-25*	-45*	-25*	-25*	0*	25*	70	45*	90	140*	80	(2)					
25	80*	105	80*	80*	80	80	Z-*	105	105*	105	130*	130*	130	130	130	130	130	130	130	130	155	130	105	105	117	(17)					
26	65	45	45	45	45	45	45	65*	90*	130*	110	110	110	110	110	130	110*	155	155	200	220	130	110	130	106	(20)					
27	110	110	110	90	90	90	110	130	130	130	130	130	130	130	130	130	130	130	130	130	155	155	155	130	110	124	(24)				
28	110	110	110	90	65	110	130	110	110	130	130	130	130	110	110	130	155	130	130	130	130	110	65	45	112	(24)					
29	50	50	50	50	50	50	50	105	235	130	130	130	130	130	130	155	130	105	105	105	180	130	210	210	-	116	(23)				
30	-	-	-	-	-	-	-	130	130	110	130	130	130	130	130	110	110	130*	155	175	200	200	155	175	110	143	(16)				
Mean	109	104	99	102	100	92	110	121	145	123	124	129	140	139	134	136	150	129	125	132	134	129	130	112	123	(515)					
	(21)	(21)	(22)	(22)	(22)	(22)	(20)	(19)	(16)	(19)	(21)	(23)	(22)	(23)	(23)	(22)	(21)	(22)	(24)	(24)	(22)	(22)	(23)	(19)							
																								Mean for 0a days		[129	(9)]				

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

19	LERWICK													Factor 0.90 (metre ⁻¹)													OCTOBER 1960																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
	Hour		G.M.T.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	

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

59

19	LERWICK													Factor 0.83 (metre ⁻¹)													NOVEMBER				1960
	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	140*	140	140	115	115*	115*	140	140	115	70*	45*	25*	(140)*	(140)*	(160)*	(115)*	115	140	205	205	160	160	160	-25*	-25*	-90*	126 (7)				
2	-70*	Z+	-185*	-45*	-25*	-25*	25*	25*	25*	90*	(90)*	(90)*	(140)*	(140)*	(160)*	(115)*	115	140	205	205	160	160	160	-230*	Z+	164 (7)					
3	-160*	-45*	-185*	-115*	-255*	-90*	25*	25*	25*	45*	45*	-45*	70*	115*	160	185	185	230	255	275	255	205	255	160*	223 (9)						
4	140	140	140	140*	115*	-320*	90*	Z+	-45*	90	115	90	115	90*	-45*	90*	115*	25*	90*	90	115	115	90	70	109 (12)						
5	70	70	45*	115*	90	90	90	115*	90*	70*	70*	45*	0*	70*	70*	-115*	160*	160*	115	255	140	140*	90	70	108 (10)						
6	115*	90*	25*	25*	115*	115	275*	90*	90*	90	70	70*	70	90	90*	115	70	140	115	140	115*	115	115	90	103 (13)						
7	80	60	60	60	80	80	60	80	80	100	100	80	80	100	80	100	100	140	100	120	180	120	80	60	90 (24)						
8	40	40	40	40	40	40	20	40	40	(60)	(60)	80	80	100	120	100	100	160	120	120	120	100	80	40	74 (24)						
9	25	25	25	45	70*	25*	-90*	-25*	-255*	70*	0*	90	90	140	140*	Z+	Z+	370	370	Z+	Z+	Z+	90	90*	127 (10)						
10	140	90*	90*	70*	90	90*	70*	70*	115	(90)*	115*	140	160	185	205	205	160*	230	255	230	185	185*	90*	90*	178 (12)						
11	45*	-70*	115*	185	160	185	185	230*	160	185	185*	185*	185	185	70*	90*	140*	0*	25*	230	205	230	230	Z+	194 (12)						
12	Z+	Z+	205	230	230	230	255	255	230*	Z+	Z+	Z+	230	230	255	185*	230	230	205	230	230*	230	205*	160*	232 (14)						
13	185*	185*	185	90*	115*	Z+	140	Z+	Z+	185	155*	45*	140*	160*	160	160	205	230	255	275	300	230*	160*	-*	209 (10)						
14	-*	-*	-*	-*	-*	-*	-*	-*	90*	-*	185	205	160	185	185	255	230	205	230	230	230	185	160	140	200 (13)						
15	205	205	205	185	205	-45*	Z+	0*	230	230	185	160	160	160	160	160	160	185	185	185	185	185	115*	115	183 (20)						
16	Z+	185	230	-45	205	(205)	(230)	(185)	-*	160	185	115*	230*	320*	Z+	205*	370	Z+	-320*	-230*	25*	70*	255	160*	197 (11)						
17	90	90	70	115*	115	140	205	255	Z+	Z+	Z+	-90*	Z+	-415*	70*	140	-300*	25*	160	185	205	185	185	140	155 (14)						
18	140	160	160	140	255	255	320	255	230*	-	-	-	140*	-90	255*	Z+	370	Z+	185	140	140	140	140	140	178 (16)						
19	115	140	115	115	300*	115*	115	115	115	90	140	160	185	185	160*	90*	185	185	140	140	140	140	90	115	139 (20)						
20	115	70	70	70	70	70	70	70	255	Z+	Z+	-45*	185	230	230	140	140	140	185	160	140	90*	Z+	Z+	134 (18)						
21	115*	90*	115	115	90	70	90*	45*	70	(-45)*	-160*	-140*	-230*	-230*	45*	45*	25*	70	70	45	45	45*	0*	-115	57 (10)						
22	45*	45*	-90*	-45*	-90*	-160*	-300*	-70*	25*	(0)*	25*	45*	70*	0*	70	45	45*	25*	-25*	70*	160*	300*	140*	-115*	57 (2)						
23	-300*	0*	115*	140	140	160	160	90*	185	205	205*	185*	140*	160	205	230	255	320*	230*	255*	140*	45*	70*	70*	184 (10)						
24	45*	70	70	90	115	115	115	140	140	(140)	140	140	160	205	300	230	230	230	255*	230*	300*	275	275		171 (20)						
25	255	140	160	-140*	70	-25*	-90*	-115*	-140*	70*	90*	-205*	-25*	115*	90*	115	-115*	70*	-115*	140	140	70	90	45	123 (10)						
26	70	45	45	25	70	45	45	25	90	90	45*	115	70	90*	90	90	115	275	115	115	Z+	Z+	140*	70*	85 (18)						
27	90	45*	45*	230*	185*	Z+	205*	Z+	115*	Z+	185	205	370	115	255*	255*	205*	90	90	90*	115	345*	45*	25*	157 (8)						
28	140*	90*	Z+	115	Z+	Z+	Z+	Z+	115*	Z+	Z+	Z+	-25*	115	-70*	25*	115	115	45	115	115	90	90	90	101 (10)						
29	90	70	45	70	70	45	45	25	45	70	115	115	160	185	140	115	115	115	90*	-70*	-185*	-160*	-160*	115*	91 (18)						
30	160*	160	140	90	90	-140*	-275*	90*	115	90	70	-45*	25*	255	230	185	300	390	390	390	300	205	230	185*	205*	203 (16)					
Mean	111	106	117	99	121	123	137	132	125	127	124	132	154	152	173	149	192	195	186	175	163	154	145	91	144 (398)						
	(15)	(17)	(19)	(18)	(18)	(15)	(16)	(12)	(14)	(14)	(11)	(12)	(16)	(18)	(15)	(18)	(19)	(20)	(22)	(23)	(20)	(16)	(16)	(14)							
Mean for 0a days																										[82 (2)]					

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

19	LERWICK												Factor 0.85 (metre ⁻¹)												DECEMBER				1960
	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	145	95	95	95	95	70	95	95	95	95	120	50*	50	70	145*	95*	120*	Z+*	-145*	-240*	-25*	-50*	70*	-50*	93 (13)				
2	95	95	70*	70	70*	70*	50	70	50	50	50	70	70	95	95	70	70	95	95	120	120*	70*	95	95	79 (19)				
3	50	-50*	-215*	-310*	-265*	25*	145	50*	50*	170	Z+*	Z+*	385	Z+*	Z+*	Z+	Z+*	290	Z+	505	170	95	190*	Z+*	226 (8)				
4	Z+	Z+*	Z+*	Z+*	Z+*	Z+*	120	190	Z+	120*	-*	-*	120*	120*	170*	Z+*	190*	120*	120*	145	170	120	95	120	137 (7)				
5	70	70	70	95	95	70*	95	120	95	95	-95*	70	95	120	145	145	120	120	120	120	95	95	70	70	100 (22)				
6	70	70	70	50	50	50	50	50	70	70	120	120	190	215	170	145	385	530	625	430	240	70*	95*	170*	180 (21)				
7	145	120	95	70	95	95	95	95	70*	70*	120	120	190*	Z+*	95*	Z+*	70*	455	Z+*	Z+*	215	145	Z+*	Z+*	143 (13)				
8	Z+*	120	120	95	50*	25*	95	95	70	95	95	120	120	145	Z+*	215*	145	170	145	145	145	120	120	120	121 (19)				
9	105	85	85	105	105	105	105	85	85	85	105	85	105	125	125	125	125	125	125	125	125	125	105	105	108 (24)				
10	120	120	120	95	95	50	50	50	50	70	95	70	120*	190	190	190	215	190	145	190	190	145	145	145	127 (23)				
11	65	105	85	65	85*	65*	85*	85	85	85	85	85	105	125	105	105	105	105	65	65	85	105	85	105*	90 (20)				
12	Z+*	-385*	50*	50*	70*	265	95	265*	95	95	70	95	215*	120	120	120	120*	120*	170	-	-	-*	-*	-	125 (10)				
13	-	-	-*	-*	-	-	-	-	-	-	-	145	215	240	385	430	360	410	480	335	170*	265*	170	120	286 (12)				
14	-*	-	-	95	120	120	120	120	120	120	120	120	95*	145*	145	170*	-*	Z+*	95	Z+	Z+*	335*	170	120*	122 (12)				
15	95	25*	120	145*	95*	120	120	120	120	120	120	145	145	145	145	120*	145*	95	120	-	-	-*	-*	-*	124 (14)				
16	-*	-*	-*	-*	-*	-*	-	-	-*	145	145	145	145	145	145	170	170	145	95	95	70*	70*	50	95*	133 (12)				
17	120*	120*	95*	120*	95*	25*	25	50	50	0	-*	-	-	-	-*	-	-	-	-	95	120	120*	95	95	66 (8)				
18	120*	120*	95*	95	145	170	Z+*	Z+*	70*	120	145	215	170	290*	190*	170*	Z+*	145*	Z+*	Z+*	Z+*	Z+*	-25*	-25*	151 (7)				
19	70	70	Z+	Z+*	70	95	95	120	95	170	215	240	215	120	120	120	120	145	120	120	70	95	120	120	124 (22)				
20	95	95	95	95	70	95	-50*	95*	95	120	120	120	120	145	145	145	145	120	120	120	120	145*	120*	120	115 (20)				
21	95	70	95	70	70	0*	0*	120	145	120	95	95	95	95	95	70*	70*	170	Z+*	25*	Z+*	385*	170*	95	102 (15)				
22	95	95	240	25*	70	190	-25*	95	120	Z+*	Z+*	95*	120	70	190*	335	95	95	120	95	170	265	240	120*	148 (17)				
23	-50*	-215*	-360*	-480*	-550*	-480*	Z-*	-70*	120*	190	240	170	170	170	170	120	95*	95*	70*	-120*	-25*	-25*	70*	95*	176 (7)				
24	95*	95	70	70	95	95	95	70	50*	50*	95*	170*	360	190*	215*	145	190	145*	95	120	95	120*	-70*	-25*	123 (13)				
25	-335*	25*	-120*	-120*	95*	120	120	95*	145	145	215*	Z+*	170*	145	170	Z+*	120*	95*	120*	-120*	0*	70*	190*	95	134 (7)				
26	215	170	265	-360*	95*	50*	120	95	120	120	120	145	145	120	145	170	145*	120*	145*	120	120*	70*	95*	Z+*	148 (14)				
27	70*	Z+*	Z+*	410*	170*	170	360*	Z+*	Z+*	145*	145*	145	145	170	170	145	145	215*	170	145	145	145	120	95	147 (13)				
28	95	95	95	95	120	120*	145*	170	215	170	170	265	265	240	240	190	190	215	335	Z+*	480*	Z+*	120	Z+*	183 (18)				
29	Z+*	95	Z+*	Z+*	Z+*	Z+*	Z+*	95*	145	70	190	240	Z+*	310*	190*	Z+*	360*	410	215	240	265	190*	215*	170	204 (10)				
30	Z+	Z+*	190*	170*	190*	95*	0*	25*	-145*	-95*	-170*	-190*	-120*	0*	Z+*	Z+*	240	310	430	360	575	Z+*	190	170	325 (7)				
31	215	190	170	170	215	215	240	215	170	170*	(215)*	335*	145	Z+*	170*	215*	Z+*	Z+*	290	240	265	Z+	290	310	223 (15)				
Mean	108 (17)	103 (18)	118 (16)	89 (16)	101 (15)	127 (16)	102 (19)	105 (20)	106 (21)	110 (23)	127 (21)	138 (22)	163 (22)	143 (21)	159 (19)	169 (17)	176 (16)	221 (19)	199 (21)	187 (21)	181 (18)	135 (11)	134 (17)	128 (16)	140 (442)				
																							Mean for 0a days			[99 (2)]			
Annual Mean	119 (223)	116 (234)	124 (242)	114 (233)	113 (229)	123 (230)	132 (242)	138 (235)	147 (234)	142 (248)	140 (242)	141 (247)	152 (251)	156 (251)	158 (252)	160 (244)	164 (241)	155 (247)	157 (263)	160 (253)	164 (242)	148 (237)	137 (237)	126 (229)	141 (5786)				
																							Annual mean for 0a days			[130]			

20 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	1a	hr. (0.1)	1c	hr. 2.0	2b	hr. 3.1	0a	hr. 0.0	1b	hr. 0.5	1a	hr. 0.1
2	1a	1.1	2c	5.2	1a	1.3	1b	2.4	2b	7.1	1a	0.4
3	1a	-	(2c)	-	1b	2.1	1a	0.7	2c	4.9	0a	0.0
4	1b	-	(1a)	-	0a	0.0	1b	1.1	1a	0.1	0a	0.0
5	1c	2.0	1b	0.2	0a	0.0	1b	2.3	1b	1.7	0a	0.0
6	1a	0.8	0a	0.0	0a	0.0	2c	4.4	0a	0.0	1a	0.5
7	1a	0.6	0a	0.0	0a	0.0	0a	0.0	0a	0.0	2c	4.8
8	1a	(1.2)	0a	0.0	0a	0.0	1b	1.4	1b	0.1	2b	4.5
9	0a	0.0	1a	0.5	1c	1.7	2b	7.9	0a	0.0	2c	4.0
10	1a	2.3	1c	1.2	0a	0.0	2b	4.0	0a	0.0	2b	4.5
11	1b	1.0	2c	3.5	1a	0.3	2a	15.4	0a	0.0	1b	3.0
12	1b	2.9	1c	0.6	1a	0.1	2b	4.1	0a	0.0	2b	3.4
13	1b	(0.4)	1c	0.9	1a	0.1	2b	(5.8)	1a	0.2	1b	2.8
14	1a	0.1	1c	-	1b	0.5	1c	(2.2)	1b	0.9	1a	0.3
15	1a	0.5	1c	1.4	1b	0.4	1c	(1.6)	1b	1.0	1a	0.5
16	1b	1.1	1c	(2.3)	0a	0.0	1a	0.1	1a	1.2	1b	1.1
17	1b	0.6	1c	1.6	0a	0.0	0a	0.0	0a	0.0	1a	2.3
18	0a	0.0	1b	1.9	0a	0.0	0a	0.0	1a	0.5	2a	4.1
19	0a	0.0	2c	5.2	0a	0.0	0a	0.0	1a	2.5	2a	4.7
20	0a	0.0	1c	2.5	1a	0.3	1b	2.1	1a	0.1	1a	0.5
21	1a	2.7	1c	1.9	2a	3.6	1a	0.8	1a	0.5	1a	0.7
22	1b	0.6	0a	0.0	1a	1.6	0a	0.0	1a	0.1	0a	0.0
23	2c	4.3	1b	0.3	1b	0.1	1b	0.3	2c	8.9	0a	0.0
24	1a	0.2	0a	0.0	0a	0.0	0a	0.0	2b	5.1	0b	0.0
25	1a	0.2	2c	4.8	0a	0.0	1a	0.7	1a	0.3	1a	0.5
26	1a	0.1	2b	4.0	0a	0.0	1a	(1.2)	1b	0.3	0a	0.0
27	1a	0.1	2c	9.3	1a	0.8	1a	0.2	1b	2.5	1b	0.5
28	1b	1.2	1b	1.1	1a	1.4	1a	0.3	1b	0.8	1b	1.8
29	1c	0.7	1b	1.6	1a	0.4	0a	0.0	0a	0.0	1a	0.3
30	1c	1.2			1a	0.3	1b	2.5	1a	0.4	1a	2.1
31	1b	0.3			1a	0.1			0a	0.0		
Total	-	26.3	-	52.0	-	18.2	-	61.5	-	39.7	-	47.4
No. of days used	-	29	-	26	-	31	-	30	-	31	-	30
Mean	-	0.9	-	2.0	-	0.6	-	2.1	-	1.3	-	1.6

	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	1b	hr. 0.6	2b	hr. 3.1	1a	hr. 0.4	1b	hr. 1.5	2a	hr. 4.5	2b	hr. 3.7
2	0a	0.0	1a	0.2	0a	0.0	1a	0.6	2b	7.1	1b	0.5
3	0a	0.0	1a	1.1	0a	0.0	2b	4.2	2b	6.7	2c	4.7
4	0a	0.0	2c	5.1	1b	1.6	1a	1.5	1b	2.7	1c	1.3
5	1a	2.4	1a	2.4	1a	0.7	2a	4.9	1b	1.7	1a	0.5
6	1a	0.1	1a	1.6	0a	0.0	0a	0.0	1b	1.1	1a	0.4
7	1a	0.5	1a	0.6	1a	0.1	0a	0.0	0a	0.0	1c	1.3
8	1b	0.1	1a	2.0	1b	0.2	1b	2.8	0a	0.0	1b	0.9
9	1a	0.1	1a	-	1b	2.1	1a	0.8	2c	3.4	0a	0.0
10	0a	0.0	2a	-	0b	0.0	1a	1.0	1b	1.1	1a	0.1
11	0a	0.0	1a	0.5	1a	2.9	1a	1.6	1b	2.5	0a	0.0
12	1a	0.1	1a	1.4	1a	0.5	1a	1.5	1b	1.2	(1b)	-
13	0b	0.0	1a	0.1	1a	0.1	2a	4.5	1b	1.3	(1a)	-
14	1b	0.1	1b	1.9	1b	2.0	1a	0.2	(1b)	-	(1b)	-
15	1b	0.6	1a	0.5	2b	3.8	0a	0.0	1b	1.2	(1b)	-
16	0a	0.0	1a	0.1	1a	0.1	1a	0.1	2c	4.0	(1b)	-
17	2a	3.7	1a	0.5	1a	0.1	0a	0.0	2b	4.1	(1a)	(0.8)
18	1b	1.7	1a	0.4	0a	0.0	0a	0.0	1c	1.9	1c	2.8
19	1a	1.9	1a	0.1	1b	1.0	0a	0.0	1b	0.3	1b	0.1
20	1a	0.3	1b	0.2	2a	4.9	1a	0.8	1b	1.5	1a	0.3
21	1a	0.3	1a	0.1	1a	1.3	1a	2.1	2a	6.4	1c	1.9
22	1b	0.1	1b	3.0	1a	0.6	1b	2.0	2b	7.7	1b	1.4
23	1a	0.4	1b	0.5	0a	0.0	0a	0.0	1a	1.8	2b	9.2
24	1b	1.5	0a	0.0	2a	9.9	1a	1.1	1a	0.1	1a	1.4
25	1b	0.3	0a	0.0	1b	0.5	2a	11.6	2b	6.1	2c	4.2
26	1b	0.2	1a	1.2	0a	0.0	2b	3.7	1b	1.0	1b	1.9
27	0a	0.0	1a	0.3	0a	0.0	1a	1.2	1c	2.3	1c	0.9
28	1b	-	0a	0.0	0a	0.0	1a	0.4	1c	2.9	1b	0.7
29	(1b)	-	1a	0.1	1a	0.1	0a	0.0	2b	3.2	2c	4.6
30	0a	0.0	1a	0.2	0a	0.0	1a	0.3	1a	2.1	2c	8.1
31	0a	0.0	0a	0.0			1b	1.1			1b	0.5
Total	-	15.0	-	27.2	-	32.9	-	49.5	-	79.9	-	52.2
No. of days used	-	29	-	29	-	30	-	31	-	29	-	26
Mean	-	0.5	-	0.9	-	1.1	-	1.6	-	2.8	-	2.0

Annual values: Character 0 1 2
No. of days used 82 229 55

Duration: Total 501.8 hr.
No. of days 351
Mean 1.43 hr.

ESKDALEMUIR

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

21	ESKDALEMUIR (H)												16,000γ (0.16 C.G.S. unit) +												JANUARY 1960		
	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 17,000+	
	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		
1 q	766	769	768	770	773	773	780	773	769	757	747	747	747	748	747	752	758	762	764	762	764	764	764	762	762	762	1286
2 q	764	764	764	766	771	774	783	783	779	766	753	740	733	743	750	755	754	760	756	755	763	762	759	761	761	761	1258
3	761	764	760	758	770	781	784	784	781	762	754	750	753	749	754	757	757	757	766	772	774	774	768	767	765	1357	
4	764	760	765	768	775	774	771	776	780	779	772	771	776	767	771	764	767	774	775	774	773	769	768	774	771	1507	
5	771	768	769	757	754	794	784	776	760	738	741	736	724	717	723	735	744	756	757	768	771	770	763	752	755	1128	
6	741	748	739	747	745	750	755	754	755	755	755	756	754	751	747	744	753	757	758	766	764	765	761	758	753	1078	
7	759	760	757	755	763	766	777	771	761	757	759	745	754	755	761	765	768	774	770	765	765	768	771	767	763	1313	
8	765	764	761	763	763	765	768	769	769	770	765	762	756	757	757	760	769	772	776	777	772	775	761	766	766	1382	
9 q	768	766	767	767	769	773	772	773	776	775	773	772	772	774	772	770	773	773	775	774	775	772	763	765	771	1509	
10 d	766	766	770	772	778	780	793	779	778	766	739	733	731	725	720	722	745	708	728	726	778	724	712	730	749	969	
11 d	730	724	736	735	747	748	751	751	724	715	733	733	735	731	732	735	732	755	753	749	748	750	751	763	740	761	
12	763	754	751	755	756	757	759	751	752	754	751	746	740	739	740	741	741	743	750	752	733	759	738	746	749	971	
13	750	755	761	758	742	766	766	765	760	756	751	752	752	749	743	742	745	750	751	762	740	750	759	759	753	1084	
14 d	751	739	712	741	743	759	771	774	761	756	756	743	736	744	748	754	757	767	781	750	723	697	691	680	743	834	
15 d	699	684	665	714	724	734	744	749	742	729	723	720	722	729	732	719	723	734	739	735	743	752	754	748	727	457	
16	751	752	752	753	755	757	756	754	751	749	747	744	746	743	745	748	746	747	761	764	762	761	750	735	751	1029	
17	747	757	763	765	769	771	774	770	766	767	759	753	764	781	774	778	766	775	777	781	784	781	780	775	770	1477	
18	772	769	775	779	783	789	789	806	765	749	750	738	725	743	753	748	751	756	753	754	763	748	746	749	761	1253	
19	765	762	762	765	765	772	761	762	760	744	740	739	747	746	750	755	757	765	767	770	770	770	777	769	760	1240	
20	765	767	772	775	785	782	774	764	775	766	760	736	757	765	768	767	743	755	762	774	765	759	760	765	765	1361	
21 d	764	763	718	741	761	763	774	765	757	746	738	718	720	721	730	739	723	727	730	738	740	733	726	750	741	785	
22	728	738	743	751	750	756	766	752	729	735	726	701	724	728	745	747	739	748	756	760	765	762	761	760	745	870	
23	758	759	760	760	744	778	768	762	755	745	735	734	737	729	748	746	752	756	754	753	752	751	757	755	752	1048	
24	754	760	763	766	775	763	761	760	750	741	729	735	745	744	753	751	752	753	762	758	758	757	765	767	755	1122	
25	765	772	775	765	768	769	768	769	761	759	752	752	753	751	744	755	758	756	765	768	771	773	770	770	763	1309	
26	774	768	768	770	771	775	775	772	771	755	749	753	748	748	753	750	758	757	765	766	770	767	766	768	763	1317	
27	772	768	770	774	768	773	781	777	772	763	748	748	747	747	748	748	753	762	767	771	774	774	770	766	764	1341	
28	766	772	776	774	775	774	775	774	770	763	756	749	745	744	750	755	757	765	771	779	779	776	779	776	767	1400	
29	785	784	790	779	775	770	774	784	789	775	761	745	742	758	753	753	762	765	768	775	780	779	773	776	771	1495	
30 q	775	774	775	777	780	782	784	784	780	767	755	745	745	752	761	765	767	770	774	778	779	779	778	775	771	1501	
31 q	774	774	776	779	784	788	788	788	782	768	756	745	751	760	768	771	770	774	779	780	780	780	782	782	774	1579	
Mean	759	759	757	761	764	769	772	770	764	756	749	743	745	746	750	751	753	757	762	763	764	761	759	759	758		
Sum 23,000+	533	524	483	599	681	856	926	871	680	427	233	41	81	138	240	291	340	473	610	656	678	601	523	536		Grand Total 564,021	

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

22	ESKDALEMUIR (D)												10° +												JANUARY					1960	
	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	600.0+					
1 q	28.4	30.7	30.1	28.9	28.7	29.5	29.5	28.4	27.8	27.5	28.2	30.6	32.2	32.8	32.8	32.2	31.3	30.4	29.7	29.4	28.7	28.2	27.7	28.3	29.7	112.0					
2 q	28.2	28.7	29.5	29.7	30.3	29.9	29.3	28.6	27.8	27.1	27.9	29.3	31.9	34.0	33.0	32.5	32.3	32.0	30.8	29.4	28.4	28.1	26.9	26.5	29.7	112.1					
3	26.1	29.4	30.3	30.2	28.9	27.7	27.9	28.1	27.4	26.6	28.0	31.2	33.4	34.9	35.5	35.7	36.4	34.2	31.5	29.8	29.1	28.3	28.1	27.5	30.3	126.2					
4	25.2	26.4	24.4	25.9	25.0	26.7	27.4	27.6	26.9	26.9	27.4	30.0	33.3	33.1	34.3	34.3	31.5	31.7	31.4	30.1	29.0	28.3	26.4	24.3	28.6	87.5					
5	24.6	25.8	25.8	19.3	23.9	24.7	26.4	26.9	26.9	28.2	30.6	32.7	34.1	37.5	35.2	34.8	32.9	32.6	32.7	31.4	30.5	29.1	26.2	15.9	28.7	88.7					
6	23.9	26.8	24.1	24.3	26.7	27.7	28.4	28.7	29.2	30.3	30.5	31.7	32.8	32.8	32.8	32.4	31.8	32.9	32.0	30.4	29.6	28.6	27.4	27.1	29.3	102.9					
7	27.8	27.4	27.2	26.3	26.9	26.3	26.5	28.3	28.8	29.2	29.5	29.1	31.5	32.8	32.2	32.3	31.9	33.9	34.0	32.6	31.9	30.0	29.3	28.7	29.8	114.4					
8	27.4	24.6	24.2	26.9	27.8	29.1	28.8	28.8	28.5	28.4	28.7	29.6	30.1	30.6	30.9	31.4	31.5	31.3	31.5	31.5	31.1	28.9	27.7	27.6	29.0	96.9					
9 q	27.3	27.0	27.2	27.9	29.1	28.1	28.3	28.5	28.7	28.9	29.2	30.2	31.0	31.9	31.6	31.4	32.1	31.9	31.4	30.5	30.3	29.8	29.5	29.1	29.6	110.9					
10 d	28.4	28.1	29.4	29.1	30.1	28.9	29.5	27.3	29.7	29.8	32.1	35.4	34.6	37.1	36.1	37.3	31.6	29.9	31.0	27.5	8.0	13.4	19.3	23.5	28.6	87.1					
11 d	24.7	26.0	26.5	28.2	28.4	29.2	29.1	30.2	29.2	32.0	32.4	33.0	32.6	35.2	30.8	31.5	30.8	30.5	30.2	30.2	29.4	29.1	28.4	27.6	29.8	115.2					
12	29.3	29.4	27.3	27.1	28.1	28.2	28.2	27.6	27.6	28.3	29.6	29.3	30.6	31.3	30.2	25.9	28.9	31.0	29.0	27.4	25.7	17.8	24.5	26.4	27.9	68.7					
13	27.5	28.7	29.7	30.9	28.9	28.9	28.8	28.4	29.0	30.3	30.2	31.6	32.2	32.3	31.3	31.9	31.3	30.2	27.7	22.5	20.4	22.0	22.6	26.1	28.5	83.4					
14 d	28.6	31.7	20.3	22.2	24.2	27.2	27.0	27.3	29.9	29.9	32.2	33.0	33.9	33.5	32.2	30.7	30.5	31.2	33.4	35.7	27.4	15.5	17.5	21.0	28.2	76.0					
15 d	21.1	24.6	13.6	14.8	22.7	26.6	26.8	28.0	28.9	27.7	28.3	29.2	30.6	29.9	30.2	30.8	30.8	31.9	30.4	27.6	27.7	26.6	27.4	27.6	26.8	43.8					
16	27.0	27.6	27.3	28.4	29.1	28.8	28.2	27.5	27.8	28.0	28.5	29.2	30.9	30.3	29.6	29.5	30.3	28.9	29.5	29.4	29.3	28.4	27.1	21.9	28.4	82.5					
17	25.5	27.4	26.6	27.0	27.8	30.4	30.0	29.2	28.6	29.1	29.7	30.3	32.7	35.5	32.7	33.3	32.8	32.8	32.3	30.4	29.6	29.5	28.7	28.2	30.0	120.1					
18	27.5	27.4	28.1	28.4	29.1	29.6	29.2	30.6	30.1	34.8	32.0	31.3	33.3	33.4	31.1	29.2	29.3	29.6	30.4	28.6	28.2	24.3	24.0	25.8	29.4	105.3					
19	26.2	23.1	24.3	25.0	26.7	27.0	27.6	27.4	27.3	27.8	28.5	30.3	32.8	32.6	31.6	31.6	31.4	30.3	29.4	30.2	29.4	29.0	29.2	28.3	28.6	87.0					
20	27.7	26.3	27.7	26.4	28.1	27.9	28.8	27.7	29.3	28.7	31.5	34.0	32.6	31.6	32.7	34.0	31.8	33.9	30.3	29.4	29.2	27.6	25.9	28.1	29.9	118.2					
21 d	27.2	11.2	24.9	26.0	27.1	28.0	30.4	34.3	31.6	32.2	32.4	36.0	37.2	33.5	34.7	32.5	32.7	24.4	27.0	16.8	23.2	23.5	19.2	21.9	27.8	67.9					
22	23.8	25.4	30.1	29.1	31.0	29.8	30.0	29.5	31.1	31.8	32.6	31.8	33.9	33.2	33.3	31.6	30.2	30.2	30.2	28.4	27.5	24.1	25.6	25.7	29.6	109.9					
23	27.8	29.0	28.3	28.0	28.0	29.5	27.5	28.6	27.4	28.5	30.5	32.4	34.7	35.4	33.7	30.3	28.3	24.0	28.0	26.0	26.1	22.9	19.1	24.2	28.3	78.2					
24	26.9	30.0	27.6	25.7	28.9	28.2	29.0	29.2	29.9	29.1	29.6	31.0	33.4	34.0	29.1	29.7	29.1	23.1	27.8	27.9	26.5	25.5	27.5	28.6	28.6	87.3					
25	28.7	29.0	29.0	27.5	28.2	27.4	28.4	28.4	27.4	27.2	28.6	30.2	31.6	33.2	31.7	29.9	29.2	25.8	25.2	29.0	28.7	28.5	27.1	27.2	28.6	87.1					
26	27.7	27.9	28.4	28.9	29.4	28.2	28.9	28.1	27.6	26.6	28.0	29.4	30.5	32.2	32.0	30.3	30.3	29.7	29.2	28.1	27.5	26.6	26.5	28.1	28.8	90.1					
27	28.5	27.4	26.5	25.9	26.0	28.6	28.2	27.3	26.3	25.7	27.1	29.1	31.2	33.0	32.7	31.3	30.1	30.5	30.3	29.5	28.7	28.3	27.9	26.9	28.6	87.0					
28	28.0	29.4	31.1	28.9	28.7	28.7	28.3	27.6	26.6	25.5	27.1	29.3	31.4	32.4	33.4	32.5	30.6	30.2	30.2	29.3	27.0	28.2	28.2	27.2	29.2	99.8					
29	28.8	28.1	27.0	26.0	24.8	27.0	27.2	27.2	26.8	26.0	28.4	29.6	31.6	34.6	34.3	33.5	31.6	30.5	30.2	29.5	28.8	27.9	26.3	26.5	28.8	91.4					
30 q	27.5	28.0	28.4	28.6	28.8	28.8	28.3	27.7	26.3	24.9	26.0	27.9	30.0	30.1	31.5	31.7	31.1	30.5	30.4	29.9	29.5	28.5	28.0	27.8	27.8	87.8					
31 q	27.8	27.9	28.5	28.7	28.7	28.5	28.4	28.1	27.3	26.6	27.0	28.9	31.8	32.7	33.2	31.8	31.3	31.1	30.5	30.1	29.3	28.3	28.1	27.8	29.3	102.4					
Mean	26.9	27.1	26.9	26.8	27.7	28.2	28.4	28.4	28.3	28.5	29.4	30.9	32.4	33.2	32.5	31.9	31.3	30.3	30.2	29.0	27.6	26.3	26.0	26.2	28.9						
Sum 800.0+	34.3	40.4	33.4	30.2	60.0	75.1	80.3	81.1	77.7	84.6	112.3	156.6	204.4	228.8	206.6	187.2	171.1	141.0	137.1	98.1	54.7	14.3	7.1	11.4		Grand Total 21527.8					

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

63

23 ESKDALEMUIR (Z)

45,000γ (0.45 C.G.S. unit) +

JANUARY 1960

	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		8000+	
1 q	359	356	355	358	358	355	354	355	355	354	354	352	352	354	359	363	365	365	365	364	363	361	360	358	358	594	
2 q	358	357	358	358	357	355	353	352	353	351	355	358	355	353	358	363	365	366	369	370	367	364	363	360	359	618	
3	355	349	349	352	353	353	352	352	352	352	353	352	353	354	361	364	366	370	370	367	364	362	361	361	357	577	
4	362	361	356	354	353	353	354	353	352	353	355	355	353	352	356	361	364	366	364	366	365	366	365	363	358	602	
5	354	352	344	345	348	333	335	340	349	359	358	355	356	366	375	375	372	375	378	376	375	377	382	382	361	661	
6	376	372	372	365	366	368	368	369	366	364	363	361	360	363	366	368	366	366	366	365	366	365	366	366	366	793	
7	364	364	363	363	360	359	358	358	356	355	356	360	359	359	359	358	359	358	362	365	366	366	364	363	361	654	
8	363	364	361	358	357	356	357	356	355	358	360	360	355	355	359	359	360	359	359	360	363	364	366	366	360	630	
9 q	364	363	360	360	359	358	357	356	355	354	353	352	349	352	355	356	358	359	359	360	360	362	365	365	358	591	
10 d	365	363	359	355	352	349	346	345	347	349	352	355	362	372	395	405	454	427	400	404	386	359	375	372	373	948	
11 d	375	372	364	360	359	363	364	365	369	370	369	364	368	376	406	395	395	393	383	378	378	378	375	369	375	988	
12	351	339	351	358	360	360	360	363	363	363	364	364	366	365	370	383	378	377	375	377	379	367	363	366	365	762	
13	366	363	355	353	353	358	359	359	358	354	354	357	359	365	369	372	375	372	374	373	379	375	362	355	363	719	
14 d	363	335	324	343	348	352	356	359	353	351	356	363	371	375	377	373	367	364	363	413	439	397	375	399	367	816	
15 d	421	359	329	320	349	366	372	371	372	375	374	374	375	375	379	388	389	388	386	387	382	375	370	369	373	945	
16	370	371	371	368	366	366	368	368	367	365	369	371	370	370	370	368	367	373	370	367	366	366	366	369	368	842	
17	366	361	353	354	354	352	350	352	352	359	363	366	362	358	360	359	363	365	368	370	368	367	368	370	361	660	
18	370	369	364	363	360	359	358	353	358	356	363	367	371	374	377	375	372	371	375	375	373	375	374	370	368	822	
19	348	343	350	356	359	360	363	365	366	363	364	363	357	363	364	365	364	366	369	365	364	362	359	360	361	658	
20	363	365	363	359	355	355	355	358	358	359	356	359	354	356	359	367	374	373	372	368	367	368	370	363	362	696	
21 d	355	314	319	332	338	348	352	353	355	355	363	366	383	351	378	378	399	446	439	435	379	371	375	356	368	840	
22	354	358	349	349	352	353	356	363	366	366	367	372	369	375	374	375	375	378	375	376	372	371	368	369	366	782	
23	368	366	365	363	359	349	348	355	360	363	366	369	366	375	386	386	386	389	383	382	376	369	363	360	369	852	
24	358	352	344	343	342	349	355	362	367	366	369	368	367	375	381	378	375	378	374	371	370	368	365	361	364	738	
25	360	354	349	352	352	353	354	356	358	358	355	358	360	362	366	366	365	369	370	364	363	360	360	359	359	623	
26	355	355	356	355	353	353	353	355	358	363	359	359	359	356	360	366	369	369	366	366	364	365	365	363	360	642	
27	359	349	349	347	349	349	352	355	359	356	352	353	353	353	357	361	363	359	356	359	359	359	359	360	355	527	
28	359	354	349	352	353	353	353	354	356	358	355	353	353	352	353	358	360	359	358	357	358	358	356	358	355	529	
29	352	351	348	346	343	345	347	347	348	351	347	350	350	351	352	355	359	357	355	356	354	355	359	357	351	435	
30 q	356	355	354	354	353	353	352	352	353	352	344	340	338	338	343	347	340	352	353	353	353	353	353	353	350	394	
31 q	353	354	353	353	352	352	352	351	354	357	355	351	344	342	344	350	355	354	353	353	354	353	353	353	352	445	
Mean	363	356	353	353	354	354	355	357	358	358	359	360	360	361	367	369	372	373	371	372	370	366	365	364	362		
Sum 0,000+	1242	1040	936	948	972	987	1013	1052	1090	1109	1123	1147	1149	1187	1368	1437	1519	1563	1509	1542	1472	1358	1325	1295		Grand Total 269,383	

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

24 ESKDALEMUIR

JANUARY 1960

JANUARY 1900																
	TERRESTRIAL MAGNETIC ELEMENTS												3-hr. range indices K	Sum of K indices	Magnetic character of day, C (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	γ h. m.	γ	h. m. γ	γ h. m.	γ							°A.
1 q	06 43 781	737 12 15	44	14 09 32.9	27.0 09 22	5.9	18 51 366	350 12 00	16	1,1,1,2,1,1,1,1	9	0	82.5			
2 q	06 33 785	731 12 12	54	13 16 34.3	26.1 23 10	8.2	19 03 371	349 09 38	22	1,1,1,3,2,1,2,1	12	0	82.4			
3	06 30 787	743 13 45	44	16 31 36.9	25.0 00 18	11.9	17 46 371	347 01 42	24	2,2,1,2,2,2,2,1	14	0	82.4			
4	08 41 793	749 15 42	44	12 27 37.2	22.8 00 36	14.4	17 20 367	352 13 23	15	2,1,3,3,3,3,1,2	18	1	82.6			
5	05 26 802	699 12 58	103	13 22 39.6	12.8 23 38	26.8	22 47 389	330 05 30	59	3,4,3,2,3,3,3,4	25	1	82.4			
6	19 10 773	726 00 10	47	14 19 34.2	19.3 00 10	14.9	00 00 378	359 12 20	19	3,2,1,1,2,2,2,2	15	0	82.5			
7	17 20 779	742 11 09	37	18 04 35.2	25.4 03 39	9.8	20 40 368	353 08 49	15	1,1,2,2,1,2,1,1	11	0	82.5			
8	19 45 781	750 13 50	31	20 13 32.1	23.5 02 16	8.6	21 07 367	353 12 45	14	2,2,1,1,1,2,2,2	13	0	82.6			
9 q	09 05 780	759 23 59	21	17 00 32.4	26.2 02 21	6.2	22 51 366	349 12 52	17	1,1,2,1,1,1,1,1	9	0	82.5			
10 d	16 45 883	668 21 55	215	13 10 42.3	-0.6 20 26	42.9	16 46 508	341 07 19	167	2,1,4,4,4,6,5,5	31	2	82.6			
11 d	23 45 791	690 09 11	101	14 07 41.8	20.9 01 09	20.9	14 35 412	354 03 53	58	3,2,4,4,4,4,3,3	27	1	82.6			
12	00 24 793	713 20 59	80	13 15 36.6	11.3 21 08	25.3	15 32 387	336 00 22	51	3,2,2,2,3,3,3,4	22	1	82.6			
13	22 19 782	721 20 21	61	02 19 33.4	17.5 20 37	15.9	20 38 382	351 23 27	31	2,2,1,1,2,1,3,3	15	1	82.6			
14 d	18 39 809	652 23 39	157	18 53 38.3	5.3 21 49	33.0	20 17 467	291 02 00	176	4,4,3,3,3,3,5,4	29	2	82.6			
15 d	22 04 766	622 02 01	144	14 42 33.7	9.7 02 10	24.0	00 02 433	285 02 55	148	5,4,3,3,3,3,2,2	25	1	82.6			
16	22 24 769	718 23 07	51	13 01 31.6	19.9 23 15	11.7	17 42 375	364 22 50	11	1,1,0,1,1,2,2,3	11	0	82.6			
17	13 04 806	738 00 01	68	13 03 40.2	23.3 02 40	16.9	18 29 371	347 06 13	24	3,3,2,2,4,3,2,2	21	1	82.5			
18	07 46 821	710 12 34	111	09 09 37.4	21.5 21 48	15.9	22 48 379	351 07 44	28	2,1,4,3,3,2,3,3	21	1	82.5			
19	22 14 788	736 12 13	52	12 43 34.8	20.7 01 09	14.1	18 30 370	335 00 59	35	3,2,1,2,2,2,1,2	15	0	82.5			
20	04 44 799	717 11 22	82	16 11 40.7	24.5 22 38	16.2	16 19 376	352 12 57	24	1,3,2,4,3,3,2,2	20	1	82.4			
21 d	19 56 843	685 11 57	158	12 12 44.0	-8.0 19 49	52.0	20 47 466	295 01 33	171	6,3,3,4,4,4,6,5	35	2	82.4			
22	22 19 783	671 11 03	112	09 55 38.7	20.9 00 16	17.8	17 09 381	345 02 42	36	3,2,3,4,3,3,2,3	23	1	82.3			
23	05 55 795	709 13 50	86	13 07 39.2	15.4 20 32	23.8	17 23 393	344 05 53	49	2,3,3,2,3,3,4,3	23	1	82.3			
24	04 31 784	714 10 50	70	13 23 36.5	19.8 17 39	16.7	14 40 383	341 02 38	42	2,3,3,3,3,3,2,2	21	1	82.1			
25	04 58 783	737 14 14	46	13 41 34.2	20.0 17 56	14.2	18 17 373	348 02 30	25	2,2,2,2,2,3,3,1	17	1	82.0			
26	23 59 796	741 10 32	55	14 08 33.1	25.5 21 55	7.6	16 29 370	352 06 02	18	1,1,1,2,2,2,2,2	13	0	82.1			
27	00 02 797	740 10 13	57	13 07 34.8	22.6 04 02	12.2	16 12 364	347 01 08	17	3,3,1,2,2,2,1,2	16	0	82.1			
28	19 20 801	736 12 50	65	14 55 34.7	24.6 09 29	10.1	16 41 362	347 02 45	15	2,1,1,2,2,1,3,1	13	0	82.3			
29	02 11 800	730 12 19	70	14 42 36.3	23.7 04 45	12.6	22 42 361	341 04 10	20	2,3,3,3,3,2,2,2	20	1	82.1			
30 q	07 15 786	738 11 41	48	14 24 32.0	24.6 09 29	7.4	01 30 356	337 12 39	19	0,0,1,2,1,1,1,0	6	0	81.7			
31 q	05 50 792	742 10 46	50	14 50 33.5	26.3 09 58	7.2	09 50 359	341 13 40	18	0,1,1,2,2,1,1,1	9	0	81.7			
Mean	- - 794	718 - -	76	- - 36.2	19.3 - -	16.9	- - 386	341 - -	45	-	-	0.65	82.3			

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

21	ESKDALEMUIR (H)												16,000γ (0.16 C.G.S. unit) +												FEBRUARY 1960			
	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 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	1428		
2	779	779	779	783	789	795	794	783	776	756	747	744	752	743	737	745	742	756	762	772	781	783	776	775	768	1377		
3	773	769	770	769	767	772	775	774	771	761	755	747	756	774	776	785	789	760	769	761	744	757	762	741	766	987		
4	753	752	749	753	764	758	754	756	747	741	733	736	723	734	751	755	761	756	738	757	752	756	764	744	749	1073		
5	754	763	765	754	761	776	759	761	747	742	737	730	731	740	744	748	739	765	764	761	760	749	761	762	753	1119		
6	761	763	759	760	760	761	765	775	769	768	762	730	730	762	763	746	740	743	750	753	756	755	752	736	755	1157		
7	738	737	727	753	762	760	754	757	769	755	753	746	742	754	762	763	772	753	756	763	766	766	774	775	757	1357		
q	766	764	759	767	767	766	776	781	772	757	752	747	747	751	754	760	763	766	769	771	775	776	777	774	765	1389		
8	770	770	772	773	774	777	774	778	783	775	758	752	739	747	754	757	753	762	760	767	773	775	773	773	766	1521		
9	768	771	768	768	770	772	775	776	775	763	755	752	759	765	766	771	778	779	782	777	780	783	783	785	772	1651		
q	782	782	785	788	792	785	787	788	779	774	769	767	766	769	767	762	765	772	775	780	780	780	779	778	777	1464		
11	778	780	780	780	782	784	788	790	788	777	767	759	754	756	764	768	775	768	765	754	741	736	762	768	769	1414		
12	762	774	765	767	775	774	775	779	772	757	751	748	750	747	755	758	766	773	777	780	779	778	775	777	767	1410		
13	779	780	781	784	790	788	795	793	792	782	771	765	772	767	767	768	768	776	778	770	743	721	689	691	767	1085		
d	736	755	755	770	769	759	768	768	776	764	762	741	751	752	743	743	743	754	755	747	736	741	745	752	754	1122		
15	757	757	757	759	763	765	762	761	757	752	745	742	749	751	739	739	743	737	752	754	769	772	771	769	755	1404		
16	765	785	769	759	758	765	762	760	764	774	789	774	769	777	760	723	752	756	763	773	769	762	792	784	767	1319		
17	d	754	762	754	765	771	772	777	751	758	774	774	766	762	765	754	749	767	781	750	755	769	768	762	759	1080		
d	777	762	761	775	771	769	760	754	751	739	732	732	733	740	748	754	738	751	728	744	765	764	763	769	753	1178		
19	762	761	760	758	760	765	772	768	774	758	759	757	749	757	756	751	758	754	765	745	741	755	738	755	757	1157		
20	734	752	745	746	740	758	760	767	767	756	753	752	745	742	749	751	739	739	743	737	752	754	769	772	771	1293		
21	d	764	765	767	769	785	773	764	780	774	767	728	734	744	749	739	751	735	769	767	768	786	775	769	771	1448		
22	771	769	769	770	772	772	771	775	775	774	769	759	755	760	760	765	761	768	772	776	772	769	772	772	769	1411		
23	775	772	777	776	775	771	775	781	779	767	760	757	753	749	752	758	746	755	764	774	774	772	775	777	767	1604		
24	q	776	776	775	778	774	782	784	782	779	775	771	765	771	772	772	766	767	771	778	778	782	778	776	775	1572		
25	q	776	772	776	776	778	779	782	781	773	765	761	757	758	763	768	772	772	775	778	783	780	773	790	784	774	1634	
26	782	782	781	780	782	783	784	782	774	767	762	762	763	765	769	778	779	779	780	783	782	781	779	775	776	1509		
27	775	773	763	758	758	770	796	796	774	764	755	752	754	756	759	777	766	773	760	778	782	779	799	792	771	1557		
28	775	777	778	784	789	782	781	781	762	752	748	748	753	754	770	769	774	778	779	782	784	784	784	789	773	1461		
29	784	775	761	778	788	784	799	783	760	749	738	747	754	754	778	782	770	776	771	784	766	754	759	767	769			
Mean	766	768	766	769	772	773	775	775	770	762	756	751	751	756	758	759	759	764	765	767	768	766	768	767	765			
Sum 21,000+	1226	1279	1207	1300	1386	1417	1468	1461	1337	1105	916	768	784	915	976	1012	1023	1165	1174	1256	1259	1214	1281	1255		Grand Total 532,181		

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

22	ESDALEMUIR (D)												10° +												FEBRUARY 1960									
	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	600.0+								
1	28.3	28.4	28.8	29.1	30.0	28.2	27.3	27.3	27.3	27.8	30.9	33.4	34.4	34.1	34.1	34.6	32.7	31.4	30.4	29.5	28.4	27.9	28.1	28.3	30.0	120.7								
2	28.1	27.4	27.0	26.9	28.1	27.1	26.4	26.4	26.0	25.9	29.1	30.1	33.8	36.3	36.3	37.6	40.2	41.0	39.0	36.7	27.9	27.9	23.5	19.9	30.4	128.6								
3	24.2	26.2	25.6	24.3	23.8	25.3	25.6	25.9	25.5	25.8	28.0	32.5	33.7	34.6	37.6	37.6	33.4	35.0	33.8	28.4	27.3	26.6	25.8	21.4	28.6	86.1								
4	20.5	24.4	24.3	25.9	24.4	28.3	24.8	25.2	25.7	28.3	30.8	30.2	32.6	33.0	32.2	31.8	31.5	33.1	33.8	30.1	30.2	24.4	26.8	27.9	28.3	80.2								
5	28.1	28.0	27.7	27.9	27.3	27.1	26.9	27.0	27.4	26.1	30.1	32.3	38.4	40.3	40.3	39.0	35.5	33.9	33.7	32.8	30.8	27.6	19.3	18.8	30.3	126.3								
6	20.5	20.5	27.2	24.7	19.1	20.3	24.3	29.0	29.0	26.5	28.3	29.8	32.8	34.8	35.7	36.0	36.2	34.1	32.7	29.9	28.3	28.1	28.1	27.9	28.5	83.8								
7 q	26.7	27.3	29.4	30.0	28.6	28.6	28.4	28.4	27.4	26.4	27.7	29.4	31.3	32.3	32.9	31.9	31.0	30.2	29.6	29.4	29.1	28.7	28.5	28.6	29.2	101.8								
8	28.4	28.7	28.8	28.8	28.3	28.1	27.3	27.7	27.5	26.8	27.1	30.8	32.3	32.5	33.8	33.4	32.3	33.5	31.3	30.0	29.4	28.3	28.2	28.0	29.6	111.3								
9 q	25.2	23.7	27.9	27.1	27.7	27.4	27.1	27.0	26.6	26.4	27.5	29.6	31.8	33.1	33.0	32.8	32.8	32.1	31.0	29.6	29.2	29.4	28.7	29.1	29.0	95.8								
10 q	29.2	29.2	29.6	30.4	29.5	29.5	28.6	28.0	27.0	26.8	28.1	32.2	32.8	33.0	32.7	31.4	30.4	29.6	29.3	28.8	28.7	28.5	28.2	28.3	29.6	109.8								
11	28.8	29.2	29.0	28.8	28.7	28.4	27.9	27.6	27.0	26.8	27.9	29.3	31.2	32.4	32.5	32.2	31.9	31.4	32.5	29.3	27.3	24.3	26.5	27.7	29.1	98.6								
12	25.6	21.4	23.9	29.1	29.6	29.2	28.5	27.4	26.6	26.7	28.6	30.3	32.0	32.2	32.4	31.9	31.1	30.1	29.4	29.0	28.7	28.6	28.6	28.7	28.7	89.6								
13	28.9	29.0	29.0	29.2	29.0	28.9	28.6	28.4	27.6	26.8	27.4	29.5	31.5	32.3	32.5	31.9	31.0	30.1	29.7	30.1	29.4	23.4	14.1	17.6	28.2	75.9								
14 d	20.5	27.3	28.0	24.2	22.3	27.9	29.3	28.6	28.4	28.6	29.9	33.8	36.1	36.1	36.8	37.4	34.5	32.8	32.3	30.5	14.9	22.6	20.9	23.2	28.6	86.9								
15	26.3	26.8	27.7	27.9	27.4	27.3	27.2	27.1	26.9	26.6	27.4	29.0	31.8	33.9	35.6	32.6	31.8	25.2	30.4	30.5	30.0	29.3	29.1	27.7	29.0	95.5								
16 d	26.0	27.8	22.9	23.8	25.0	26.2	25.1	26.1	26.1	26.8	29.7	32.0	31.9	35.4	36.1	37.2	32.7	32.5	30.8	29.2	29.1	28.1	28.4	27.0	29.0	95.9								
17 d	25.6	27.1	27.0	26.8	27.0	27.4	28.3	28.9	27.4	28.5	33.0	33.8	34.7	34.6	34.3	33.1	32.9	35.9	34.4	35.6	34.3	29.1	23.0	23.0	30.2	125.7								
18 d	21.3	23.7	27.4	22.3	22.5	30.0	33.0	29.9	28.4	31.2	31.8	34.2	35.4	35.2	33.1	32.0	29.8	29.5	22.4	23.0	28.5	28.7	28.2	25.4	29.0	86.9								
19	25.1	27.7	27.4	27.0	27.4	27.3	27.0	28.0	29.2	29.1	29.5	32.5	31.8	32.3	32.0	32.8	32.4	23.9	18.8	19.7	19.8	14.9	20.9	27.0	26.8	43.5								
20	19.4	27.8	20.0	24.7	26.9	27.9	29.2	29.4	29.2	29.6	30.4	30.7	32.0	33.1	32.8	32.4	32.4	28.7	29.5	28.7	28.5	28.1	23.9	26.9	28.4	82.2								
21 d	27.1	27.2	29.6	27.1	26.3	25.1	28.5	30.3	28.4	29.7	30.2	32.4	32.1	32.1	31.5	30.7	26.0	24.5	29.2	28.1	23.0	26.4	27.6	28.0	28.4	81.1								
22	27.9	28.2	28.0	28.0	27.9	27.7	27.4	28.1	27.8	27.1	28.8	30.5	31.4	31.4	32.6	31.5	30.9	30.0	29.6	28.2	20.9	24.3	27.9	28.4	28.5	84.5								
23	28.0	27.7	28.9	26.8	27.4	28.7	29.0	27.8	27.0	26.6	27.3	30.2	31.5	32.1	33.4	31.8	28.8	23.3	29.5	29.6	28.8	26.9	27.3	28.1	28.6	86.5								
24 q	28.1	27.9	28.0	28.6	29.1	28.4	28.0	27.5	27.3	26.5	27.5	29.9	31.6	31.7	32.0	31.1	30.0	29.7	29.3	28.9	28.8	28.6	28.1	28.0	28.9	94.6								
25 q	26.6	26.8	27.3	27.4	27.4	27.2	26.6	26.1	25.3	24.9	26.6	29.6	31.9	33.8	33.8	32.3	30.4	30.5	30.1	29.4	29.1	28.2	27.3	28.2	28.6	86.8								
26	28.3	28.3	28.2	28.0	27.8	27.5	26.9	26.3	25.9	25.2	27.3	31.4	32.9	34.1	34.9	34.6	34.2	33.2	31.2	30.3	29.4	28.8	27.8	26.8	29.6	109.3								
27	24.3	24.4	26.6	27.4	29.1	26.5	24.1	24.7	25.6	25.8	28.4	33.0	34.7	38.0	36.2	34.4	31.3	30.2	24.6	27.9	29.0	27.4	27.2	27.9	28.7	88.7								
28	28.0	28.7	28.5	28.4	27.8	27.3	27.1	26.3	25.7	26.6	29.7	31.5	34.6	35.6	35.7	32.9	31.0	31.2	30.9	29.9	29.0	28.5	28.0	28.1	29.6	111.0								
29	26.0	22.1	30.0	27.6	25.2	24.7	28.2	23.1	23.5	24.4	26.7	29.9	33.5	34.0	39.0	37.4	33.8	32.3	31.5	31.3	31.7	24.9	23.0	25.2	28.7	89.0								
Mean	25.9	26.7	27.4	27.2	26.9	27.3	27.5	27.4	27.0	27.0	28.8	31.2	33.0	33.9	34.3	33.7	32.2	31.0	30.4	29.5	27.9	26.8	26.0	26.2	29.0									
Sum 700.0+	51.0	72.9	93.7	88.2	80.6	91.7	96.6	93.5	82.7	84.3	135.7	203.8	256.5	284.3	295.8	276.3	232.9	198.9	180.7	154.4	109.5	78.5	53.0	61.1		Grand Total 20156.0								

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

65

23	ESKDALEUIR (Z)												45,000γ (0.45 C.G.S. unit) +												FEBRUARY 1960				
	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 8000+			
	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	501			
2	352	352	352	351	349	344	344	346	348	349	349	348	352	352	352	360	369	370	368	365	362	358	355	354	354	747			
3	354	357	356	356	357	356	356	356	358	353	349	347	343	344	349	349	355	375	399	433	411	387	378	369	364	751			
4	366	365	363	360	349	352	355	358	360	358	358	355	358	360	363	375	386	382	389	385	381	374	364	335	365	630			
5	348	352	349	354	358	343	347	351	354	351	348	352	351	351	355	360	363	366	371	379	381	393	383	370	360	785			
6	364	359	359	359	359	359	358	355	353	353	346	353	352	358	361	380	389	378	382	386	382	382	383	375	366	523			
7 q	369	367	348	316	335	343	347	343	340	346	347	347	349	353	356	360	368	375	375	372	371	369	365	362	355	530			
8	363	360	355	352	348	352	353	353	358	360	358	352	349	350	352	353	356	358	358	359	359	358	357	357	355	586			
9 q	356	355	354	353	353	353	353	349	348	351	352	349	348	348	354	360	369	375	377	374	368	364	363	360	358	411			
10 q	359	352	348	347	352	353	353	353	352	353	351	346	342	343	347	348	348	349	350	353	353	353	353	353	350	406			
	352	351	349	347	345	345	344	344	346	349	352	349	349	349	353	354	355	355	353	353	353	353	353	353	350	580			
11	352	351	349	350	349	348	348	346	346	347	345	347	348	348	349	353	359	364	378	381	386	389	380	367	357	437			
12	363	352	346	347	349	351	352	352	353	353	349	345	344	348	352	354	355	354	353	353	353	353	353	353	352	449			
13	353	353	352	350	349	348	346	343	343	343	344	338	338	341	343	347	351	353	352	354	376	387	385	360	352	620			
14 d	332	339	332	323	333	333	336	346	348	351	351	349	348	358	370	382	386	386	392	406	413	366	369	369	359	734			
15	366	364	364	364	364	361	360	358	355	355	355	353	351	355	370	349	378	393	383	380	370	364	361	361	364	485			
16 d	364	356	342	346	352	352	352	351	351	347	340	340	342	344	360	378	372	367	366	363	362	366	348	324	354	654			
17 d	330	345	355	359	358	355	352	350	345	340	338	344	347	353	361	362	363	371	393	393	390	390	390	370	361	492			
18 d	368	370	334	309	314	309	317	335	348	351	349	348	355	362	363	374	378	377	390	389	369	364	362	357	354	752			
19	357	359	360	360	359	359	357	358	355	358	358	356	358	360	364	372	375	387	388	395	391	359	359	348	365	422			
20	322	317	315	336	335	342	351	354	357	357	351	351	351	352	357	365	376	374	367	365	363	363	355	346	351	513			
21 d	350	352	340	330	332	340	341	338	342	342	348	357	359	362	371	375	386	382	368	365	363	356	357	357	355	494			
22	355	354	353	354	354	354	354	352	351	352	348	345	346	347	348	351	354	359	359	361	371	361	359	352	354	520			
23	357	355	352	352	352	351	347	348	350	351	346	343	347	347	352	354	370	380	368	362	359	360	359	358	355	475			
24 q	358	357	355	353	352	348	347	348	351	352	348	347	347	346	348	354	358	358	357	358	358	358	359	358	353	420			
25 q	357	356	352	352	351	351	351	352	356	353	347	344	344	342	346	347	353	351	351	352	354	357	351	350	351	407			
26	351	351	351	351	351	351	351	351	356	353	344	338	339	339	347	356	356	350	352	351	351	354	357	356	350	284			
27	346	339	334	319	324	327	322	327	339	346	346	344	342	345	353	358	362	360	371	366	360	361	350	343	345	407			
28	345	351	353	352	351	351	350	347	350	351	348	346	349	350	349	352	354	352	351	351	351	351	351	351	350	501			
29	351	347	347	345	348	347	336	338	346	350	347	345	343	344	350	361	359	359	362	361	374	387	385	369	354				
Mean	354	353	349	346	348	348	348	348	350	351	349	347	348	350	355	360	366	368	370	371	370	367	364	356	356				
Sum 10,000+	260	238	119	47	82	80	80	102	159	175	112	78	91	151	295	443	603	660	723	765	735	637	544	337		Grand Total 247,516			

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

24 ESKDALEUIR													FEBRUARY 1960			
	TERRESTRIAL MAGNETIC ELEMENTS												3-hr. range indices K	Sum of K indices	Magnetic character of day, C (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	05 10	801	731 14 02	70	13 07	38.6	26.0 09 00	12.6	16 50	371	343 07 12	28	0,2,2,2,3,2,2,1	14	0	81.6
2	16 05	801	717 20 00	84	19 13	43.4	17.7 23 21	25.7	19 48	462	341 12 33	121	1,1,1,2,3,4,4,4	20	1	81.5
3	22 55	802	689 12 38	113	18 05	40.0	15.1 23 51	24.9	18 31	390	326 23 18	64	2,2,2,3,3,3,3,4	22	1	81.4
4	19 17	795	701 12 54	94	12 39	36.7	16.8 00 00	19.9	21 31	398	336 05 40	62	3,3,2,2,2,2,4,3	21	1	81.5
5	07 30	785	707 11 30	78	14 33	43.1	16.8 23 17	26.3	16 17	393	345 10 32	48	2,1,2,4,4,3,2,3	21	1	81.4
6	16 35	789	710 02 53	79	16 52	37.5	18.3 04 45	19.2	18 03	376	309 03 16	67	3,4,3,1,2,3,2,2	20	1	81.4
7 q	07 22	784	744 12 40	40	14 50	33.3	25.9 09 14	7.4	00 31	364	348 04 30	16	2,2,2,1,1,0,0,1	9	0	81.5
8	08 05	789	721 12 28	68	14 27	36.6	24.6 10 07	12.0	18 08	377	347 13 10	30	1,1,2,3,3,2,2,1	15	0	81.5
9 q	18 24	796	750 11 22	46	14 13	33.5	22.5 01 45	11.0	01 05	360	341 12 29	19	3,1,1,1,1,2,2,1	12	0	81.6
10 q	04 32	797	760 11 43	37	11 58	35.4	26.0 09 27	9.4	17 12	356	343 06 18	13	1,2,2,2,2,1,1,0	11	0	81.4
11	08 00	791	728 18 38	63	18 30	34.0	23.4 21 33	10.6	20 50	390	343 10 43	47	0,0,1,2,1,3,3,3	13	0	81.6
12	01 39	785	741 13 13	44	13 34	33.0	18.5 01 23	14.5	00 00	366	343 12 23	23	3,1,2,1,2,1,1,0	11	0	81.7
13	07 50	799	669 22 28	130	14 38	33.3	12.1 22 54	21.2	21 59	397	332 23 47	65	0,0,1,2,2,1,3,5	14	1	81.7
14 d	20 49	809	705 20 27	104	14 51	38.7	2.6 20 28	36.1	20 06	448	318 03 32	130	4,3,2,3,3,3,5,3	26	1	81.6
15	21 28	777	727 17 10	50	14 32	36.8	23.3 17 35	13.5	17 35	396	349 12 40	47	1,0,1,1,3,3,2,1	12	0	81.6
16 d	22 24	832	696 14 54	136	15 14	46.6	19.1 02 25	27.5	15 41	381	318 23 47	63	4,2,2,3,5,4,3,4	27	1	81.7
17 d	17 35	790	731 18 10	59	18 03	39.4	19.2 22 15	20.2	22 08	404	320 00 00	84	3,2,3,3,3,3,3,4	24	1	81.5
18 d	00 40	829	704 18 56	125	12 42	38.1	17.9 04 03	20.2	18 59	405	302 03 27	103	5,4,3,3,3,3,4,2	27	1	81.6
19	17 57	782	719 20 18	63	11 45	34.0	10.9 20 48	23.1	17 48	399	330 24 00	69	2,1,3,3,2,4,4,4	23	1	81.7
20	22 16	803	719 16 24	84	13 09	35.4	13.6 00 41	21.8	16 43	378	306 01 52	72	4,3,2,2,3,3,2,3	22	1	81.8
21 d	04 30	802	707 16 37	95	12 03	34.6	17.9 16 55	16.7	16 55	393	326 03 09	67	2,3,3,4,3,4,3,3	25	1	81.7
22	21 05	799	747 12 16	52	11 53	34.5	18.6 20 16	15.9	20 30	374	342 11 53	32	1,1,2,2,2,2,3,3	16	0	81.7
23	08 40	784	730 17 00	54	14 02	34.7	21.7 17 10	13.0	17 23	382	342 11 12	40	2,2,2,2,3,2,2,2	17	1	81.7
24 q	06 56	787	763 11 33	24	14 19	32.7	26.0 08 53	6.7	22 40	359	346 12 32	13	0,2,1,0,2,0,1,0	6	0	81.6
25 q	22 29	795	756 12 23	39	14 17	34.9	24.0 09 19	10.9	21 40	358	341 13 30	17	1,0,0,0,1,1,1,3	7	0	81.6
26	15 25	801	755 10 46	46	15 23	37.4	24.8 09 27	12.6	15 28	358	334 11 00	24	0,0,0,2,2,3,2,1	10	0	81.7
27	06 10	815	721 04 08	94	13 06	39.6	19.9 00 37	19.7	18 35	375	316 03 07	59	3,4,3,3,3,3,3,3	25	1	81.6
28	23 20	792	738 10 52	54	13 19	36.3	24.8 08 48	11.5	16 30	355	341 00 00	14	2,2,2,2,2,2,0,1	13	0	81.5
29	06 40	812	731 10 29	81	14 22	40.3	19.4 01 42	20.9	22 02	392	333 06 48	59	4,2,3,2,2,3,2,3,3	22	1	81.5
Mean	- -	797	725 - -	73	- -	37.0	19.6 - -	17.4	- -	385	333 - -	52	-	-	0.55	81.6

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

21	ESKDALEMUIR (E)													16,000γ (0.16 C.G.S. unit) +													MARCH 1960	
	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	γ	1410	
2 d	773	770	778	773	775	770	776	783	778	764	756	758	751	746	752	768	771	767	783	778	755	757	762	766	767	767	1410	
3 d	765	766	767	759	763	760	766	770	743	748	747	742	720	732	742	768	770	772	768	753	758	765	771	762	757	757	1177	
4	759	769	763	763	774	780	776	751	766	744	736	750	734	753	753	746	758	770	761	762	758	766	768	774	760	760	1234	
5	767	759	766	765	771	772	767	766	758	755	751	738	731	728	757	769	770	764	743	759	768	766	773	756	759	759	1219	
6	766	764	763	762	765	775	777	755	763	761	753	751	751	752	748	774	781	784	780	774	763	779	771	787	767	767	1399	
7 q	773	769	774	775	777	778	785	782	776	763	747	759	759	758	757	770	772	763	776	765	768	768	775	773	769	769	1462	
8	772	773	773	775	779	783	783	779	770	757	750	747	750	759	762	767	772	777	782	784	787	785	786	784	772	772	1536	
9	786	784	787	788	792	797	775	794	788	766	750	740	742	739	747	736	748	759	766	776	783	782	777	776	770	770	1478	
10	779	781	784	785	783	789	783	786	777	768	744	748	750	757	766	755	772	779	778	783	785	785	780	782	774	774	1579	
11 d	782	780	785	782	782	782	784	786	747	706	724	734	734	735	747	745	743	753	755	747	768	773	778	780	760	760	1232	
12	775	783	775	770	777	776	787	785	764	753	751	687	704	739	749	755	780	737	739	755	777	766	765	778	759	759	1227	
13 q	770	773	768	769	769	773	778	765	754	740	737	735	735	738	752	753	753	762	773	778	778	778	778	774	762	762	1283	
14	773	768	772	775	776	776	782	768	761	747	734	731	736	748	756	764	766	775	778	780	778	781	786	781	766	766	1392	
15	775	779	777	777	780	785	784	779	772	747	744	753	750	759	766	783	779	788	791	795	795	793	793	799	777	777	1643	
16 d	790	787	785	784	782	784	787	785	773	761	751	746	759	767	776	792	786	790	778	774	759	763	759	724	773	773	1542	
17	674	666	644	703	720	713	755	737	735	719	710	705	698	705	723	735	755	736	751	731	740	751	751	766	722	722	323	
18	752	746	753	751	757	763	769	758	731	740	726	720	714	728	736	746	755	766	763	766	774	764	769	774	751	751	1021	
19	769	770	762	766	766	766	766	785	771	759	751	741	741	739	751	762	767	775	778	778	781	782	790	786	767	767	1402	
20 q	775	783	772	771	776	782	785	787	778	756	743	728	739	742	751	753	747	770	778	780	778	782	783	782	768	768	1421	
21	780	776	775	775	773	773	783	782	776	763	750	749	754	758	765	769	773	778	782	784	785	785	784	785	773	773	1557	
22 q	783	783	780	778	781	782	785	783	775	769	758	752	748	744	754	765	776	780	782	783	784	785	785	783	774	774	1578	
23 q	784	780	777	781	785	784	785	778	771	758	749	754	756	751	766	775	780	783	784	786	784	786	787	793	776	776	1617	
24	793	785	785	781	781	782	787	785	778	764	747	748	754	763	773	781	784	782	786	786	789	792	795	791	779	779	1692	
25	783	787	795	801	795	792	792	786	776	766	750	756	761	766	772	793	769	783	788	795	781	797	793	780	782	782	1757	
26	779	780	782	785	787	792	794	795	785	765	754	759	761	764	771	774	775	781	797	785	789	787	790	792	780	780	1723	
27	769	773	777	781	780	782	786	783	765	754	752	757	758	772	761	774	776	784	792	791	792	791	791	790	776	776	1631	
28	787	785	790	787	777	785	787	786	766	759	742	739	738	751	757	762	770	777	786	791	793	791	791	787	774	774	1584	
29	785	785	784	784	785	794	796	791	778	754	735	734	746	761	764	776	769	753	791	793	791	786	778	774	774	774	1587	
30	749	756	756	755	764	769	779	765	757	750	734	734	732	741	748	759	769	779	785	785	789	796	820	765	765	765	1356	
31 d	792	777	766	773	776	772	778	778	770	754	741	746	756	753	785	800	817	786	804	774	759	749	731	761	771	771	1498	
Mean	772	771	770	772	775	777	780	776	765	753	742	738	741	748	757	767	780	779	777	784	777	775	770	772	767	767	1417	
Sum 22,000+	1920	1902	1859	1924	2008	2076	2182	2059	1729	1326	1009	871	986	1180	1480	1786	2178	2156	2100	2312	2096	2042	1874	1922			Grand Total 570,977	

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

22	ESKDALEUIR (D)													10° +													MARCH 1960	
	Hour G.M.T.																										Mean	Sum 500.0+
	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	27.2	26.8	25.7	25.2	23.2	23.4	27.0	25.1	26.3	26.4	28.4	31.9	33.5	33.4	34.5	36.4	35.8	33.8	37.1	30.4	21.6	23.2	23.9	27.2	28.6	187.4		
2	27.0	24.5	14.9	23.7	24.1	25.1	26.5	25.8	26.8	29.3	28.7	33.3	35.3	36.8	34.4	35.0	33.9	29.7	29.2	28.3	27.8	26.7	20.4	24.6	28.0	171.8		
3 d	25.0	24.8	23.1	22.4	25.9	23.7	23.3	26.5	29.0	30.2	29.7	34.4	35.9	37.8	38.6	36.7	31.8	31.7	27.0	29.0	27.7	27.4	27.3	21.9	28.8	190.8		
4	24.1	25.1	25.9	25.1	27.2	26.6	26.0	25.6	25.7	26.4	28.4	31.3	34.2	36.9	41.4	35.7	37.6	37.1	32.6	29.4	27.8	28.7	23.0	23.9	29.4	205.7		
5	24.3	24.6	25.2	24.7	26.1	24.5	23.3	25.0	28.4	26.8	28.9	32.2	34.5	37.6	35.3	35.2	34.1	32.6	32.6	31.8	27.4	28.7	25.2	23.4	28.9	192.4		
6	24.6	26.3	25.8	26.1	28.2	28.6	27.0	26.3	25.0	26.2	27.3	29.7	33.1	35.0	34.5	32.7	31.5	30.3	28.8	25.1	20.7	27.1	27.9	27.1	28.1	174.9		
7 q	27.4	27.9	27.9	27.9	27.5	27.3	27.1	25.7	24.3	24.4	26.5	30.7	33.8	35.7	35.6	33.6	31.9	30.8	30.7	29.7	29.6	29.0	28.1	28.3	29.2	201.4		
8	28.5	28.4	28.9	28.6	27.9	26.6	28.2	30.9	27.3	24.7	26.8	32.0	37.9	37.9	37.9	35.3	32.7	30.1	29.5	28.8	28.7	28.7	26.9	24.1	29.9	217.3		
9	26.2	27.7	27.5	28.6	28.4	26.7	27.6	26.2	24.9	25.0	27.4	30.8	34.4	35.4	35.9	32.8	32.0	30.2	29.8	29.1	28.8	28.4	28.0	28.5	29.2	200.3		
10	28.8	28.6	28.1	27.6	26.8	26.3	26.2	26.0	24.5	29.2	30.9	31.9	35.6	36.3	36.0	35.6	32.6	30.1	27.8	19.2	24.6	27.1	28.5	28.9	29.1	197.2		
11 d	28.2	28.5	25.1	26.6	27.5	31.9	29.0	28.6	27.2	26.7	29.0	31.1	35.1	36.2	36.5	33.6	31.4	26.5	23.8	27.8	26.4	27.5	27.7	28.3	29.2	200.2		
12	28.7	30.0	28.7	27.8	25.9	25.7	25.4	25.3	25.9	26.7	28.2	31.7	34.0	34.7	33.7	32.8	29.5	27.8	29.7	28.8	28.7	27.8	25.0	26.4	28.7	188.9		
13 q	26.8	27.4	29.4	28.0	27.9	27.3	26.5	24.8	22.9	22.6	24.5	28.9	34.1	35.8	35.0	32.7	29.7	28.1	26.3	27.4	26.8	26.8	26.4	27.8	28.1	173.9		
14	28.6	28.1	27.8	27.6	27.5	27.4	26.7	25.0	23.9	24.4	28.7	30.9	34.1	35.0	34.1	34.1	31.4	30.3	30.1	29.9	29.5	28.7	28.2	28.0	29.2	200.0		
15	27.5	27.1	27.1	27.2	27.0	26.9	26.2	24.6	22.9	23.0	25.4	29.5	34.3	37.1	38.6	40.5	43.0	38.7	32.3	23.7	30.3	26.5	25.1	19.4	29.3	203.9		
16 d	8.6	11.4	0.5	-3.1	7.5	14.0	24.1	24.0	24.5	27.5	28.5	30.4	33.7	34.5	35.3	33.2	31.9	28.2	27.5	20.7	18.7	25.8	19.4	27.8	22.3	34.6		
17	25.8	29.9	28.9	29.7	29.0	26.0	25.5	24.8	24.6	24.0	26.8	31.1	34.6	35.9	36.4	35.4	31.9	30.3	28.3	25.7	21.2	24.1	26.6	27.6	28.5	184.1		
18	28.3	27.1	30.0	28.2	25.9	27.6	29.9	26.3	24.7	23.7	24.7	28.4	31.6	33.5	33.3	31.8	29.9	28.2	28.2	28.1	28.1	27.8	26.5	22.2	28.1	174.0		
19	28.8	28.0	25.8	25.9	26.4	26.5	26.5	25.2	23.5	25.9	27.1	30.0	33.6	36.5	36.4	35.5	32.9	30.0	28.5	27.7	27.3	28.2	28.4	28.1	28.9	192.7		
20 q	27.7	28.3	27.3	26.9	27.1	27.8	26.9	24.6	23.3	24.0	26.0	29.0	32.2	33.3	32.9	31.7	30.4	29.0	28.9	28.9	28.5	28.2	28.4	28.2	28.3	179.5		
21	27.6	27.7	27.5	27.2	27.0	26.3	25.9	24.0	22.9	23.6	25.0	28.4	32.5	33.5	33.7	32.9	31.4	29.6	28.9	28.7	28.0	28.0	28.0	27.9	28.2	176.2		
22 q	27.4	27.3	27.1	27.0	27.7	25.8	25.5	24.0	23.2	23.1	25.1	29.0	32.8	34.0	33.5	32.7	31.8	30.3	29.6	29.6	28.7	28.5	28.2	29.6	28.4	181.5		
23 q	29.3	28.3	27.0	26.4	26.6	26.9	26.6	25.5	23.9	24.7	26.8	30.6	33.9	36.6	35.8	34.1	31.9	30.3	30.0	29.2	29.0	28.7	24.0	25.0	28.8	191.1		
24	25.7	31.9	27.5	23.8	23.1	23.1	24.0	23.8	24.6	25.3	26.7	29.7	32.0	34.5	34.6	35.0	32.7	30.9	31.3	27.1	27.2	28.6	29.3	28.5	28.4	180.9		
25	28.1	27.9	28.0	27.7	27.0	26.9	26.7	25.2	24.7	24.4	26.8	30.9	34.0	34.9	33.2	31.4	29.2	28.0	27.3	27.1	27.8	27.9	28.4	23.9	28.2	177.4		
26	23.7	24.5	27.7	26.3	25.9	25.8	24.6	23.6	23.5	25.0	26.9	30.7	33.3	35.4	33.4	32.6	30.1	29.9	29.5	28.6	28.7	28.5	28.5	27.7	28.1	174.4		
27	27.5	27.3	26.9	25.7	26.5	26.2	25.2	22.6	22.2	22.9	26.1	30.9	35.0	36.9	36.7	34.8	32.5	31.0	29.8	29.2	28.9	28.9	28.7	28.3	28.0	190.7		
28	27.8	27.1	26.9	26.4	25.8	25.2	25.5	24.1	22.7	23.9	30.0	35.3	36.0	36.7	36.9	37.1	34.8	31.1	30.5	29.1	16.0	17.0	22.2	23.0	28.8	171.1		
29	24.1	18.8	21.8	21.2	24.0	25.9	23.6	22.2	24.6	23.4	25.4	29.9	33.6	35.4	35.4	33.2	31.1	29.6	28.6	29.1	29.8	28.9	28.8	30.1	27.4	158.5		
30	26.8	22.2	23.1	25.2	24.0	23.9	25.3	23.6	22.2	23.0	26.4	30.5	37.3	37.2	39.6	37.9	35.8	33.6	33.8	30.1	29.1	20.4	19.7	20.3	28.0	171.0		
31 d	17.8	11.4	11.4	14.7	19.0	19.1	21.8	23.9	21.9	22.1	22.3	18.6	38.2	39.5	45.5	49.7	64.6	41.0	43.7	43.5	34.8	26.0	13.0	5.7	27.9	169.2		
Mean	26.1	26.0	25.1	25.0	25.6	25.7	25.9	25.1	24.6	25.1	27.1	30.4	34.3	35.8	35.9	34.9	33.6	30.9	30.1	28.4	27.0	27.0	25.8	25.5	28.4			
Sum 700.0+	107.9	104.9	78.5	76.3	93.6	95.0	103.6	78.8	62.0	78.5	139.4	243.7	364.1	409.9	414.6	381.7	341.8	258.8	231.7	180.8	138.2	137.8	99.7	91.7		Grand Total 21113.0		

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

67

23 ESKDALEMUIR (Z)		45,000γ (0.45 C.G.S. unit) +																								MARCH 1960		
	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 8000+
		γ	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		361	357	347	337	343	345	345	344	344	341	341	337	339	340	344	352	364	372	375	391	392	374	367	364	355	516	
2	d	361	352	330	340	346	344	342	342	346	346	344	337	346	350	350	356	369	375	383	391	386	378	370	359	356	543	
3	d	355	346	349	350	343	328	329	337	337	340	345	343	349	358	364	371	372	378	392	383	380	372	367	359	356	547	
4		355	355	352	355	355	352	353	357	360	360	355	349	350	357	368	401	392	402	410	396	384	376	363	353	367	810	
5		353	355	355	356	352	341	340	345	343	346	349	346	345	346	350	357	361	362	366	374	381	361	342	340	353	466	
6		341	351	348	350	343	340	345	352	355	356	355	346	340	344	355	358	366	366	362	367	372	361	357	356	354	486	
7	q	355	353	353	353	352	351	352	356	357	357	353	346	345	345	350	356	357	352	351	351	352	354	352	352	352	455	
8		350	350	348	347	345	345	348	341	343	346	348	343	342	348	353	363	367	367	364	360	356	356	359	356	352	445	
9		355	352	352	350	349	348	349	349	349	351	350	348	338	338	339	346	355	352	356	355	355	355	354	356	352	350	404
10		350	349	348	348	348	349	349	350	355	352	343	339	340	343	347	362	382	380	384	393	373	362	356	352	356	554	
11	d	351	335	338	346	348	340	339	345	354	350	345	350	360	357	359	366	382	421	411	386	368	360	360	345	359	616	
12		342	337	341	347	351	352	351	352	350	354	348	344	345	354	356	361	371	371	362	360	358	356	356	354	353	473	
13	q	351	350	351	350	351	350	349	354	355	355	348	342	340	343	353	359	364	364	361	360	359	353	348	347	352	457	
14		349	351	353	354	351	347	350	354	351	349	346	344	345	348	352	355	355	351	350	349	349	349	350	351	349	350	403
15		352	351	351	351	350	349	349	349	351	348	344	339	338	342	349	362	377	398	429	420	400	403	400	395	367	797	
16	d	377	309	266	252	225	239	287	343	360	364	370	377	381	380	378	379	393	410	424	452	429	396	361	325	353	477	
17		345	348	352	345	344	356	360	365	366	365	362	360	362	366	368	371	385	382	382	375	373	367	361	355	363	715	
18		351	350	351	354	354	355	352	355	356	357	356	352	352	355	362	370	373	368	364	362	361	360	357	349	357	576	
19		348	345	351	354	355	354	352	353	351	349	348	345	344	345	356	368	368	368	366	363	362	354	356	354	355	509	
20	q	355	355	354	356	356	356	356	359	362	360	356	354	354	356	359	363	362	361	359	356	356	356	356	355	357	572	
21		352	351	351	353	352	353	354	355	356	356	354	348	345	354	360	360	360	359	356	355	356	355	355	354	354	504	
22	q	353	351	352	351	349	349	351	355	355	351	348	339	334	339	343	346	348	349	349	350	353	353	352	346	349	366	
23	q	339	343	344	345	345	345	345	348	348	348	345	337	330	331	339	345	349	350	350	351	351	353	350	344	345	275	
24		342	334	318	320	325	331	336	342	343	338	337	328	325	331	339	349	366	365	364	369	366	358	351	355	343	232	
25		355	354	353	351	349	349	351	354	354	355	352	343	340	340	345	349	351	354	355	356	355	355	354	350	351	424	
26		344	347	348	349	350	350	351	354	354	345	339	332	335	344	351	351	355	351	351	351	349	349	349	350	348	349	
27		350	350	348	348	348	343	343	348	349	347	341	331	327	329	336	344	349	349	349	350	350	350	351	351	345	281	
28		352	354	354	354	351	349	348	349	348	344	337	333	332	336	344	357	378	378	368	377	368	352	345	340	352	448	
29		326	305	312	325	334	344	347	344	338	336	339	335	333	338	350	356	359	360	360	356	355	355	353	325	341	185	
30		305	314	333	343	348	348	344	345	345	343	337	330	332	339	347	368	395	408	411	423	417	416	385	354	360	630	
31	d	352	341	329	329	336	334	325	325	330	335	333	348	344	355	357	371	488	690	508	586	511	416	331	55	376	1029	
Mean		349	345	343	344	343	343	345	349	351	350	347	343	343	347	353	361	371	381	377	380	373	365	357	342	354		
Sum 10,000+		827	695	632	663	648	636	692	821	867	843	766	635	632	752	930	1181	1510	1817	1671	1768	1577	1315	1071	595		Grand Total 263,544	

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

24 ESKDALEMUIR

MARCH 1960

	TERRESTRIAL MAGNETIC ELEMENTS												3-hr. range indices K	Sum of K indices	Magnetic character of day, C (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	19 57	804	730	20 41	74	18 51	40.5	16.1	20 18	24.4	20 15	408	334	03 19	74	2,3,3,2,3,3,5,3	24	1	81.5
2 d	22 24	790	705	12 51	85	13 32	39.1	12.4	02 30	26.7	19 22	392	328	02 20	64	4,3,3,3,3,3,3,4	26	1	81.5
3 d	23 20	798	720	12 20	78	15 08	41.7	16.5	23 15	25.2	18 39	396	328	05 07	68	3,3,3,3,3,3,3,3	24	1	81.5
4	22 13	815	718	13 05	97	14 58	46.7	19.5	22 36	27.2	18 14	413	349	12 22	64	2,2,2,2,4,4,3,4	23	1	81.5
5	21 04	813	736	14 20	77	13 47	40.0	20.8	22 59	19.2	20 38	383	338	23 28	45	2,2,3,1,3,3,3,4	21	1	81.6
6	06 40	793	737	10 07	56	13 46	35.4	18.4	20 24	17.0	20 19	375	338	00 12	37	2,2,2,3,2,2,3,2	18	1	81.8
7 q	20 23	792	743	11 45	49	13 44	36.4	23.6	08 19	12.8	09 17	358	344	13 07	14	1,1,1,2,1,1,1,0	8	0	81.4
8	05 10	799	730	15 45	69	12 37	39.1	21.6	23 41	17.5	16 57	369	340	07 40	29	0,2,3,2,2,2,2,3	7	0	81.5
9	20 52	801	736	11 06	65	14 34	37.3	22.8	08 23	14.5	17 29	357	334	11 57	23	1,1,2,3,2,3,2,2	16	0	81.3
10	07 38	797	677	09 23	120	15 02	39.3	15.7	19 50	23.6	19 28	395	337	11 45	58	2,2,3,4,3,4,4,2	24	1	81.4
11 d	20 24	797	646	11 40	151	12 08	38.7	17.2	17 59	21.5	17 53	434	331	01 30	103	3,3,3,4,3,4,4,2	26	1	81.4
12	22 20	788	727	13 23	61	15 05	36.1	24.3	22 32	11.8	17 10	373	334	01 43	39	2,1,2,2,3,3,1,2	16	0	81.4
13 q	21 04	800	729	11 05	71	13 34	36.2	22.2	09 17	14.0	17 09	366	339	12 18	27	2,1,2,1,1,3,2,2	14	0	81.5
14	16 25	810	736	09 55	74	15 27	36.1	22.3	08 09	13.8	16 02	356	344	11 57	12	1,1,1,2,2,3,1,2	13	0	81.5
15	17 54	827	665	24 00	162	16 10	44.9	8.2	24 00	36.7	19 11	454	336	12 32	118	2,0,1,1,3,4,4,5	20	1	81.6
16 d	23 07	812	592	02 33	220	14 43	36.8	14.4	02 44	51.2	20 04	473	213	04 18	260	5,5,3,3,3,3,5,4	31	1	81.5
17	20 26	804	700	12 10	104	13 59	37.6	13.5	20 09	24.1	16 12	388	339	04 03	49	3,3,3,3,3,3,4,3	25	1	81.6
18	23 05	816	732	12 42	84	13 59	34.2	19.9	23 28	14.3	16 05	373	348	23 09	25	2,2,3,2,3,1,1,3	17	0	81.4
19	07 14	793	716	11 50	77	13 50	38.7	21.9	08 37	16.8	15 52	372	343	11 22	29	2,1,2,3,3,3,1,1	16	0	81.5
20 q	21 07	789	746	11 31	43	13 18	33.7	21.7	08 46	12.0	15 29	365	351	12 02	14	1,2,2,1,2,2,0,1	11	0	81.5
21	22 30	789	717	13 01	72	13 38	36.3	22.0	08 29	14.3	14 23	361	344	12 01	17	1,1,1,2,3,2,0,1	11	0	81.5
22 q	23 30	797	740	13 20	57	14 02	36.0	21.6	09 18	14.4	07 51	355	333	12 12	22	1,1,1,2,3,1,1,2	12	0	81.5
23 q	00 15	805	742	10 28	63	13 57	36.8	22.2	22 43	14.6	21 20	354	328	13 11	26	2,1,0,1,2,1,2,2	10	0	81.6
24	15 40	832	743	10 54	89	15 39	38.0	21.7	03 56	16.3	19 21	372	316	02 11	56	4,2,2,2,2,4,3,3	22	1	81.5
25	23 50	814	751	10 22	63	13 12	36.1	17.3	23 47	18.8	19 20	357	337	13 10	20	1,1,2,2,2,1,2,3	14	0	81.4
26	18 36	796	744	09 52	52	13 33	36.2	18.9	00 00	17.3	16 20	356	331	11 45	25	3,1,1,2,2,1,1,0	11	0	81.5
27	02 21	799	727	11 07	72	13 31	37.2	21.4	08 17	15.8	24 00	352	327	13 00	25	1,2,1,2,2,1,0,1	10	0	81.5
28	19 52	817	722	11 08	95	16 03	38.3	12.6	20 26	25.7	19 41	383	331	12 32	52	0,1,1,3,3,4,4,4	20	1	81.4
29	23 13	834	722	10 57	112	14 21	36.6	15.2	01 41	21.4	17 28	355	298	01 07	57	4,3,3,3,2,2,2,3	22	1	81.5
30	00 00	829	712	22 40	117	14 40	40.6	12.0	21 44	28.6	21 42	427	302	00 28	125	4,2,1,2,3,4,4,4	24	1	81.3
31 d	19 40	1249	253	23 50	996	16 38	79.5	-31.9	22 28	111.4	17 15	772	-70	23 46	842	4,3,3,6,5,8,8,8	45	2	81.3
Mean	- -	819	703	- -	116	- -	39.4	16.0	- -	23.3	- -	395	317	- -	78	-	-	0.55	81.4

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

21	ESKDALEMUIR (H)												16,000y (0.16 C.G.S. unit) +												APRIL 1960			
	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 d	266	449	699	100	495	682	722	741	775	845	792	815	1134	1165	1205	1472	1467	1159	738	636	333	371	545	600	759		2206	
2	546	504	658	635	650	669	638	616	631	664	657	699	733	715	715	712	709	712	729	739	743	742	749	768	681		333	
3 d	780	683	713	710	671	667	661	700	729	732	711	693	680	693	706	718	746	751	757	747	747	738	738	738	717		1209	
4	740	737	743	744	739	743	743	744	736	719	707	706	701	718	720	747	737	771	760	757	768	718	759	757	738		1714	
5	761	779	767	792	764	753	753	758	754	721	710	699	703	726	753	803	800	766	756	751	761	756	760	759	754		2105	
6	756	751	751	751	749	751	751	750	739	738	726	726	725	726	749	741	788	783	773	788	769	753	754	758	752		2046	
7	761	754	753	761	756	763	761	755	744	732	725	725	733	742	760	776	772	809	818	752	746	754	750	758	757		2160	
8	749	741	740	747	746	754	756	743	738	715	719	716	712	730	737	747	754	768	767	776	771	773	772	775	748		1946	
9 q	780	764	761	750	775	770	775	770	749	736	738	732	741	731	739	744	752	764	775	779	776	780	780	780	760		2241	
10	779	787	783	785	779	773	790	784	764	749	739	733	726	725	752	763	758	775	781	788	790	759	660	677	758		2199	
11	739	737	755	756	760	759	759	758	744	729	709	709	713	739	763	781	765	792	788	782	774	771	760	741	753		2083	
12	754	768	749	773	758	757	757	749	707	728	718	713	716	726	733	751	755	790	778	770	772	780	803	798	754		2103	
13	764	763	751	761	777	768	780	780	741	738	722	720	725	736	741	757	770	791	792	783	782	780	775	782	762		2279	
14	776	764	770	775	770	772	783	772	753	734	715	706	714	731	746	762	770	778	792	785	787	780	792	791	763		2318	
15	778	763	770	785	770	768	780	776	769	745	730	717	727	730	749	763	769	794	799	795	786	784	780	785	767		2412	
16	781	777	773	769	771	782	788	780	768	749	733	725	736	752	795	781	779	783	765	775	762	772	769	751	767		2416	
17	753	756	743	756	764	779	771	760	745	713	705	706	719	740	744	757	783	791	803	793	777	764	753	761	756		2136	
18	771	754	752	774	780	771	755	753	761	728	696	695	711	718	733	756	777	788	781	783	782	782	779	785	757		2165	
19 q	773	772	768	764	765	768	766	758	746	740	731	728	735	737	745	757	771	776	780	781	779	776	777	775	761		2268	
20 q	776	775	776	776	777	779	771	765	758	746	731	730	737	744	754	766	776	780	783	784	783	780	780	783	767		2410	
21 q	781	782	783	782	780	780	773	767	756	741	742	737	742	752	767	776	788	794	796	798	791	791	795	796	775		2590	
22 q	796	787	785	785	784	789	785	784	776	767	761	762	768	773	777	776	778	787	795	792	795	793	791	793	782		2779	
23	795	791	788	791	788	789	784	771	761	749	752	756	759	769	776	785	793	793	797	816	814	782	738	702	777		2639	
24 d	653	514	532	635	681	727	734	711	715	708	702	681	714	737	761	779	791	801	807	781	761	736	728	731	713		1120	
25	651	756	735	753	758	732	726	726	685	684	695	667	695	734	768	793	801	830	798	773	744	736	751	752	739		1743	
26	757	726	770	767	772	765	755	734	719	710	707	713	727	736	743	766	789	783	790	778	768	763	762	789	754		2089	
27	762	763	763	766	761	753	749	737	736	726	724	723	738	748	759	763	771	777	794	788	821	780	753	660	755		2115	
28 d	600	541	612	624	713	719	695	618	632	632	657	698	713	755	771	789	817	865	836	757	746	748	740	755	710		1033	
29	730	673	728	745	717	665	718	687	716	709	714	698	699	715	736	754	775	768	792	801	750	760	768	751	732		1569	
30 d	759	770	679	708	733	772	715	707	724	716	713	700	703	893	1004	901	1202	1399	876	1053	799	561	702	674	811		3463	
Mean	729	723	738	727	743	751	750	742	736	728	719	718	736	755	773	791	810	817	787	783	759	745	752	751	753			
Sum 21,000+	867	681	1150	820	1303	1519	1494	1254	1071	843	581	528	1079	1636	2201	2736	3303	3518	2596	2481	1777	1363	1563	1525		Grand Total 541,889		

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

22	ESKDALEMUIR (D)												10° +												APRIL 1960	
	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	400.0+
1 d	-39.9	3.4	12.3	-6.6	13.7	15.3	13.1	13.7	10.7	16.2	32.8	29.3	27.4	25.5	22.4	31.9	49.3	62.3	27.2	23.4	54.6	15.9	15.5	18.1	20.3	87.5
2	12.6	22.3	6.3	18.0	32.6	30.3	27.8	30.2	25.9	20.0	20.9	25.2	28.1	31.5	31.5	29.5	28.4	27.5	26.5	26.5	26.6	26.6	25.5	26.6	25.3	206.9
3 d	24.0	12.1	24.5	28.4	31.1	24.3	42.2	33.2	24.4	24.0	25.6	26.6	29.7	30.2	29.2	28.2	28.7	27.5	28.1	27.8	27.5	26.6	26.0	25.9	27.3	255.8
4	25.3	24.8	24.3	23.7	24.0	23.6	22.5	20.3	19.4	22.4	25.4	28.0	29.7	31.5	30.5	30.4	27.7	26.3	25.5	28.0	26.6	23.9	21.6	25.1	25.4	210.5
5	27.5	27.3	22.4	24.4	25.3	25.4	24.7	20.4	21.6	23.0	26.2	30.2	33.3	36.4	37.4	26.1	29.0	30.2	29.7	29.9	30.1	28.2	27.0	27.0	27.6	262.7
6	27.2	26.4	25.7	25.1	24.5	24.0	23.7	21.6	21.7	24.0	26.3	30.5	34.1	34.4	33.3	30.9	30.5	29.9	28.1	27.9	22.5	16.8	24.3	28.8	26.8	242.2
7	28.9	28.4	23.6	22.0	21.6	22.3	20.5	20.8	20.6	22.2	25.3	29.0	32.8	34.3	35.4	35.2	33.6	32.0	30.6	18.1	20.0	22.8	18.0	25.2	26.0	223.2
8	26.9	28.8	28.2	29.0	24.5	22.4	22.3	23.4	21.5	23.2	27.5	32.6	34.4	34.9	33.7	31.8	27.7	23.3	26.8	26.9	27.3	27.7	27.5	26.4	27.4	258.7
9 q	25.2	24.5	27.9	29.9	27.2	25.6	27.0	24.2	24.4	27.5	27.4	31.4	33.8	34.7	33.2	31.5	30.1	28.9	28.4	28.3	28.2	28.2	28.4	28.0	28.5	283.9
10	26.8	27.6	24.6	23.7	22.3	22.6	25.2	25.4	23.4	25.6	28.4	31.9	36.4	39.0	41.7	39.6	35.0	32.5	23.0	19.4	24.4	16.0	16.0	12.9	26.8	243.4
11	16.4	17.8	20.0	20.6	25.2	28.2	26.2	22.4	22.1	22.7	26.5	29.5	33.6	35.8	35.8	33.9	31.0	30.0	26.1	25.6	27.6	23.9	25.3	23.3	26.2	229.5
12	27.2	21.2	18.4	20.2	23.1	26.5	23.1	25.0	24.7	22.5	23.7	27.3	32.3	32.8	32.2	30.9	28.8	27.9	25.7	26.5	28.3	24.1	23.2	26.9	25.9	222.5
13	24.9	25.3	31.1	26.6	25.2	32.1	32.6	32.5	27.5	24.6	26.4	30.7	33.6	34.1	33.1	31.5	30.0	28.2	28.8	26.9	26.4	27.8	28.0	28.5	29.0	296.4
14	30.9	28.5	25.1	24.8	26.0	24.4	25.7	22.6	20.4	20.6	24.0	29.1	31.9	34.2	33.7	32.4	30.9	28.0	25.5	27.6	28.1	24.5	27.1	25.5	27.1	251.5
15	22.6	24.3	26.4	24.0	31.0	35.9	22.5	20.9	20.9	21.8	24.9	29.5	32.9	34.8	35.3	34.8	32.2	30.8	30.2	29.9	29.0	28.9	28.1	26.8	28.3	278.4
16	27.0	25.1	26.0	25.0	25.4	24.4	23.7	20.9	20.6	22.2	26.3	32.0	37.4	41.2	38.1	42.2	40.1	29.5	30.8	30.1	22.5	25.8	27.8	24.8	28.7	288.9
17	21.2	26.1	29.1	24.1	22.9	23.8	22.2	20.1	20.8	23.1	26.3	29.2	33.8	37.1	36.3	34.8	34.2	33.2	30.3	28.4	27.4	20.3	21.5	25.3	27.1	251.5
18	27.6	34.4	25.2	26.2	24.7	23.8	25.8	25.7	23.0	23.9	27.7	30.3	33.7	35.1	34.4	32.8	31.3	27.5	27.0	28.0	28.1	28.0	27.3	25.8	28.2	277.4
19 q	26.2	26.6	26.1	26.2	26.7	23.7	21.4	19.8	19.7	21.4	24.3	27.2	31.2	32.7	32.5	31.1	30.1	28.8	28.0	27.9	28.1	28.0	27.7	27.2	26.8	242.6
20 q	26.9	26.6	26.5	25.9	25.1	24.1	21.1	20.0	18.8	19.6	22.7	27.8	32.1	33.8	33.2	32.4	31.3	29.7	28.8	28.2	28.1	28.0	27.5	27.2	26.9	245.4
21 q	26.8	26.3	26.1	25.3	24.5	23.0	20.6	19.4	19.4	21.5	25.1	28.7	33.1	34.7	34.3	33.5	33.1	30.9	29.7	29.8	29.5	28.9	28.8	27.8	27.5	260.8
22 q	25.3	26.7	26.2	25.8	25.1	25.0	24.5	23.3	24.0	25.2	28.1	31.4	33.4	34.8	33.4	31.3	30.0	28.7	28.5	28.2	28.9	28.9	28.3	28.9	28.1	273.9
23	28.3	27.7	26.9	25.9	25.5	21.6	18.9	18.1	19.4	23.8	28.7	31.9	34.4	35.7	34.4	33.3	31.6	29.7	29.6	30.4	29.8	25.8	19.3	20.9	27.1	251.4
24 d	1.4	-14.8	1.7	14.5	21.8	17.2	14.8	14.7	18.7	21.9	29.1	33.8	38.6	40.8	37.1	36.7	34.1	33.4	27.2	23.9	25.4	23.1	16.5	17.1	22.0	128.7
25	24.7	16.4	15.6	21.0	20.5	20.1	26.0	21.6	20.2	25.8	30.0	32.6	36.9	40.9	38.1	38.5	34.1	28.5	30.2	29.3	27.3	26.1	23.3	19.7	27.0	247.4
26	27.8	23.7	21.2	21.1	24.5	23.3	24.3	24.3	26.9	27.3	27.1	30.7	35.0	36.8	37.0	35.1	33.9	31.9	28.9	26.5	25.6	25.1	26.0	28.0	28.0	272.7
27	26.8	26.3	26.9	26.0	24.4	23.1	21.0	20.8	21.2	22.8	27.8	31.6	35.4	38.0	37.7	35.9	33.1	30.0	28.9	27.8	30.8	27.5	16.1	8.4	27.0	248.3
28 d	2.2	6.2	5.8	2.7	17.5	18.7	21.4	28.1	22.1	32.6	33.0	33.9	38.3	39.2	41.9	47.4	46.4	43.3	42.6	28.1	22.5	28.8	27.9	25.9	27.4	256.5
29	28.4	26.6	12.4	19.9	24.4	34.1	24.6	25.5	25.4	26.9	27.3	29.3	31.2	32.5	35.0	34.4	33.0	31.1	29.1	29.9	26.7	28.1	24.9	28.8	27.9	269.5
30 d	25.4	23.7	14.3	11.0	11.6	18.3	14.6	17.1	18.3	18.0	22.1	26.9	19.5	37.3	39.1	56.2	86.2	101.4	44.0	45.0	41.1	30.0	22.5	25.8	32.1	369.4
Mean	21.7	22.3	21.7	21.8	24.1	24.2	23.5	22.5	21.6	23.2	26.6	29.9	32.9	35.2	34.7	34.5	34.5	33.4	29.1	27.8	28.3	25.5	24.2	24.6	27.0	
Sum 600.0+	52.5	70.3	50.8	54.4	121.9	127.1	104.0	76.0	47.7	69.1	196.9	298.1	388.0	454.7	441.0	434.2	435.4	402.9	273.8	234.2	249.0	164.3	126.9	137.3		Grand Total 19437.5

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

69

23 ESKDALEUIR (Z)		45,000γ (0.45 C.G.S. unit) +																								APRIL 1960	
	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 8000+	
	γ	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	33	256	364	99	90	288	366	367	352	351	355	393	506	513	574	623	536	565	496	394	167	280	294	310	357	572	
2	281	211	309	351	337	325	345	368	381	412	431	434	423	401	394	393	394	391	393	390	390	389	385	372	371	900	
3 d	355	321	324	284	246	278	279	287	336	363	371	378	379	381	380	383	385	389	389	389	385	384	383	384	351	433	
4	383	383	381	382	383	383	385	384	382	379	375	368	367	368	372	378	390	401	408	391	384	352	365	371	380	1115	
5	372	358	355	347	341	349	365	371	368	373	374	367	367	365	380	441	444	427	417	400	385	382	377	374	379	1099	
6	374	377	378	378	378	378	377	375	372	362	366	361	371	374	382	381	377	378	377	377	392	395	382	376	377	1038	
7	363	356	349	350	350	356	365	371	371	365	356	354	353	354	359	376	391	427	476	494	433	389	377	374	380	1109	
8	375	366	334	329	349	368	372	371	367	365	360	362	364	362	370	379	393	404	389	378	379	377	374	371	369	858	
9 q	366	359	351	345	335	344	345	352	358	362	361	356	355	357	361	366	367	368	370	371	372	371	368	368	359	628	
10	366	364	362	364	366	362	361	360	361	355	349	348	348	362	367	374	385	394	420	408	395	367	305	211	361	654	
11	305	332	345	360	364	366	371	377	376	374	376	370	367	368	373	383	388	387	404	401	389	383	365	342	369	866	
12	297	287	285	303	316	339	350	351	354	358	359	357	360	378	379	379	379	385	400	393	381	373	356	331	352	450	
13	343	348	331	333	343	322	311	310	331	345	350	351	359	362	366	369	372	375	377	377	378	374	373	359	352	459	
14	343	339	358	364	366	368	367	372	373	368	363	360	360	362	366	369	374	379	386	385	375	371	359	353	366	780	
15	354	355	355	351	355	297	322	345	354	355	356	354	348	354	360	367	374	374	372	368	367	367	367	363	356	534	
16	357	340	344	349	357	361	364	365	362	360	353	348	349	364	405	420	449	477	433	402	406	380	369	338	377	1052	
17	321	346	312	305	338	348	355	367	368	368	366	359	354	354	358	366	373	385	404	410	406	396	375	369	363	703	
18	359	286	290	326	343	356	360	361	362	365	363	366	363	366	371	381	387	399	391	382	377	374	371	363	361	662	
19 q	362	365	364	367	368	372	375	377	368	363	359	356	355	355	356	359	362	366	366	367	367	367	366	366	365	748	
20 q	366	366	366	366	366	366	367	365	359	354	345	343	339	342	350	355	360	362	365	367	367	367	367	366	360	636	
21 q	366	366	365	364	365	366	366	364	359	352	343	337	328	331	340	345	348	355	359	359	360	361	361	360	355	520	
22 q	357	356	356	357	359	360	359	356	353	348	339	331	331	336	348	358	362	366	364	364	361	360	360	359	354	500	
23	359	359	360	359	359	355	355	355	351	345	334	325	327	334	344	349	355	360	361	355	363	369	370	325	351	428	
24 d	274	187	201	257	236	297	326	342	356	359	364	371	370	402	420	418	411	420	450	442	398	279	281	293	340	154	
25	234	218	277	327	347	345	352	369	370	366	362	372	372	383	424	432	458	448	437	435	409	352	344	337	365	770	
26	318	320	324	336	348	358	364	373	375	373	368	365	362	369	381	398	412	422	423	416	403	390	379	336	371	913	
27	337	359	367	371	371	370	371	371	366	362	351	341	344	356	369	381	389	391	390	391	375	369	343	233	361	668	
28 d	152	144	166	195	302	354	344	308	315	333	360	377	397	443	451	469	505	528	544	494	443	408	385	351	365	768	
29	314	201	307	350	327	274	291	310	333	348	357	366	353	384	393	393	402	407	415	402	389	386	374	333	350	409	
30 d	315	328	227	153	241	267	299	316	327	340	344	347	364	446	608	558	541	299	518	511	535	492	520	454	390	1350	
Mean	323	318	327	324	331	342	351	355	359	361	360	361	365	374	390	398	402	401	410	400	384	373	367	348	364		
Sum 9000+	701	553	807	722	946	1272	1529	1660	1760	1823	1810	1817	1935	2226	2701	2943	3063	3029	3294	3013	2531	2204	1995	1442		Grand Total 261,776	

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

24 ESKDALEUIR

APRIL 1960

	TERRESTRIAL MAGNETIC ELEMENTS										3-hr. range indices K	Sum of K indices	Magnetic character of day, C (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	γ h. m.	γ	h. m. γ	γ h. m.	γ									
1 d	16 57	2030	-562	03 47	2592	16 50	86.5	-69.7	00 15	156.2	15 50	778	-231	03 46	1009	9,9,6,6,7,8,9,8	62	2	81.2
2	23 20	783	455	01 28	328	04 33	36.9	-4.5	02 27	41.4	11 43	439	182	01 26	257	7,5,4,5,4,3,3,3	34	2	80.9
3 d	00 15	800	568	04 20	232	06 13	51.4	-3.7	01 40	55.1	18 49	394	228	04 48	166	6,6,5,4,3,3,4,3	34	2	81.0
4	17 53	781	641	21 32	140	21 32	35.3	13.6	21 50	21.7	18 13	412	316	21 33	96	2,3,2,3,4,4,3,5	26	1	80.9
5	15 52	847	692	11 20	155	14 09	39.2	17.1	07 57	22.1	15 45	470	337	04 31	133	4,4,3,2,4,5,3,2	27	1	81.0
6	16 32	858	711	13 00	147	13 42	35.0	12.7	21 37	22.3	20 58	401	360	11 25	41	1,1,2,2,3,5,4,4	22	1	80.8
7	17 50	842	721	10 33	121	15 16	37.8	14.6	22 30	23.2	19 06	517	347	03 50	170	3,3,1,1,3,4,5,3	23	1	80.8
8	17 42	793	699	12 32	94	13 41	35.3	19.4	08 24	15.9	17 27	406	325	03 29	81	3,3,2,2,3,3,2,2	20	1	80.7
9 q	03 34	791	719	12 12	72	14 29	35.1	20.0	05 03	15.1	20 28	373	332	04 37	41	3,4,2,3,2,2,2,1	19	1	80.7
10	19 17	805	584	23 12	221	14 10	43.6	4.9	23 42	38.7	18 42	433	147	23 10	286	3,3,2,2,3,3,4,6	26	1	80.9
11	17 48	815	692	10 07	123	13 50	37.9	9.0	00 00	28.9	18 49	412	285	00 00	127	4,4,2,3,3,3,3,4	26	1	81.0
12	22 49	849	683	08 16	166	00 01	37.9	11.8	02 19	26.1	18 25	401	269	02 07	132	5,4,4,3,2,3,3,4	28	1	80.8
13	06 52	815	714	11 16	101	06 16	35.6	23.2	04 19	12.4	19 52	379	304	06 48	75	3,4,4,2,2,3,3,2	23	1	80.7
14	22 07	806	696	11 50	110	13 28	34.7	19.0	08 58	15.7	18 48	388	332	01 02	56	3,2,3,3,2,2,2,3	20	1	80.8
15	05 37	815	700	05 07	115	05 11	48.5	18.8	07 46	29.7	16 44	376	286	05 29	90	3,5,3,3,3,3,3,2	25	1	81.4
16	16 53	818	708	13 08	110	15 33	46.1	16.5	20 40	29.6	17 11	494	310	03 59	184	2,3,2,2,4,4,4,4	25	1	80.7
17	18 32	819	697	09 45	122	13 34	38.7	8.7	00 17	30.0	19 42	414	278	02 58	136	5,3,3,3,3,4,4,3	28	1	80.7
18	17 38	805	676	10 52	129	01 06	38.4	22.2	08 12	16.2	17 33	400	264	01 43	136	4,2,3,4,2,3,2,3	23	1	80.8
19 q	00 32	785	727	11 22	58	13 53	33.1	18.9	07 50	14.2	07 11	378	354	12 44	24	2,2,1,1,2,2,0,0	10	0	80.8
20 q	19 20	785	727	11 45	58	13 28	34.1	18.3	09 12	15.8	06 56	367	337	12 32	30	0,1,1,1,2,1,0,1	7	0	80.8
21 q	23 50	811	734	11 40	77	13 21	35.0	19.0	07 55	16.0	00 41	367	327	12 50	40	1,0,0,1,1,2,1,2	8	0	80.7
22 q	18 32	801	755	11 03	46	13 15	35.3	21.9	07 24	13.4	17 23	366	331	11 57	35	2,1,1,2,1,3,1,1	12	0	80.6
23	20 09	824	689	23 15	135	13 18	36.0	11.6	24 00	24.4	22 11	378	305	23 39	73	1,2,2,2,2,2,3,5	19	1	80.8
24 d	22 15	835	343	01 53	492	12 47	43.5	-29.5	01 44	73.0	19 01	458	133	01 43	325	7,6,3,4,4,3,4,5	35	2	80.7
25	17 10	853	600	00 45	253	14 03	45.0	10.0	01 29	35.0	16 52	469	182	01 00	287	6,4,4,4,5,4,5,4	36	2	80.9
26	23 20	827	702	01 34	125	13 49	38.1	19.8	03 28	18.3	18 01	424	310	01 08	114	4,2,3,2,3,3,3,4	24	1	80.8
27	20 06	884	513	23 30	371	14 09	38.5	-11.3	23 37	49.8	17 11	393	194	23 20	199	2,2,2,1,2,3,5,6	23	1	80.6
28 d	17 56	891	428	01 46	463	15 59	51.7	-9.2	02 49	60.9	18 27	562	72	01 48	490	5,6,5,5,4,5,5,3	29	2	80.8
29	19 52	893	629	05 42	264	01 11	41.5	3.5	02 08	38.0	18 47	419	160	01 24	259	6,5,4,4,4,4,5,4	36	1	80.9
30 d	17 02	2010	284	21 00	1726	17 11	157.3	-7.3	12 47	164.6	14 37	744	127	17 14	617	6,5,4,4,8,8,8,8	51	2	80.8
Mean	- -	902	597 - -	305	- -	44.8	7.3 - -	37.5	- -	440	250 - -	190	-	-	-	-	1.10	-	80.8

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

21 ESKDALEUIR (H)														16,000y (0.16 C.G.S. unit) +														MAY 1960	
	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 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	γ	20		
2	635	624	689	673	694	713	726	722	714	696	698	688	677	703	733	733	726	734	742	737	738	760	730	735	709	740	760		
3	737	733	731	725	695	733	736	733	729	716	715	697	728	738	736	768	761	766	766	772	766	761	759	759	740	740	759		
4 q	761	759	760	761	759	763	758	746	742	737	720	727	731	740	753	766	788	778	783	784	776	774	773	771	759	740	1210		
5	771	773	768	767	768	770	767	762	756	751	742	739	741	744	754	771	781	787	793	798	790	774	769	771	767	740	1407		
6	772	773	773	776	780	780	776	768	757	751	745	743	745	743	760	768	785	791	795	784	797	786	776	791	771	740	1515		
6 d	799	790	772	786	788	784	773	763	743	733	728	753	774	761	788	814	824	885	914	803	772	727	700	691	778	740	1665		
7 d	714	722	729	714	742	750	766	771	764	745	739	749	772	744	737	768	827	796	799	780	768	763	765	771	758	740	1195		
8 d	763	768	763	753	763	779	780	784	768	691	730	759	723	724	806	976	884	753	744	754	732	749	741	786	770	740	1473		
9	748	746	748	752	753	748	745	737	732	728	727	717	715	736	732	747	765	776	763	771	767	767	764	765	748	740	949		
10	767	767	766	763	758	758	755	748	735	736	736	731	736	741	754	753	769	775	787	798	785	789	775	777	761	740	1259		
11	776	771	762	775	798	753	794	768	702	763	762	748	736	712	716	736	762	785	803	802	780	789	783	765	764	740	1341		
12	762	760	756	748	717	726	743	738	729	725	702	712	722	737	745	748	783	779	789	798	789	785	785	787	753	740	1065		
13	779	775	769	772	771	764	759	753	749	743	737	737	751	767	773	773	793	803	796	798	796	777	753	751	768	740	1439		
14	764	765	778	779	774	772	773	771	742	721	723	713	727	728	753	777	779	785	793	790	786	786	783	780	764	740	1342		
15	778	778	778	777	774	771	769	759	744	724	723	711	707	731	741	754	769	769	785	786	784	780	775	776	760	740	1243		
16	776	771	771	775	774	768	762	758	755	732	716	729	736	751	810	860	827	774	808	815	830	842	846	826	784	740	1812		
17	801	801	788	788	789	783	781	781	769	753	739	738	735	742	735	769	766	784	797	788	786	785	782	784	773	740	1564		
18 q	782	778	770	770	774	773	768	761	757	750	743	741	747	759	769	785	794	801	800	792	792	791	789	791	774	740	1577		
19 q	788	777	774	773	780	776	769	761	758	751	748	749	754	767	781	786	794	791	799	799	791	789	792	788	776	740	1635		
20 q	788	786	784	788	791	789	779	768	759	759	757	757	766	775	779	785	786	792	793	796	796	792	796	796	782	740	1757		
21	801	797	789	788	790	789	780	771	764	762	766	775	784	801	778	789	793	797	806	803	798	793	789	789	787	740	1892		
22 q	788	787	788	789	791	789	781	770	764	755	750	753	764	772	791	799	804	809	815	815	813	808	802	804	788	740	1901		
23	807	803	800	802	805	806	798	785	774	774	773	779	787	793	813	848	810	808	799	812	834	801	800	792	800	740	2203		
24	811	798	781	774	799	788	729	777	767	745	746	743	742	759	777	784	767	781	799	794	808	782	783	791	776	740	1625		
25	743	749	766	760	762	770	769	758	742	742	747	746	749	759	747	786	790	817	804	795	772	784	775	760	766	740	1392		
26	766	762	762	766	752	760	757	744	751	736	730	721	730	741	755	772	798	808	808	809	796	785	781	773	765	740	1363		
27	783	753	762	757	761	760	746	728	710	706	709	720	733	746	754	775	777	795	809	799	797	793	788	784	760	740	1245		
28	781	776	773	783	782	769	758	747	737	734	739	742	741	749	757	769	776	787	789	796	848	816	816	808	774	740	1573		
29 d	739	744	786	776	762	753	749	736	731	736	742	747	761	778	773	777	770	797	830	823	821	774	778	789	770	740	1472		
30	805	807	797	796	789	784	774	770	750	761	759	750	739	773	788	806	793	788	784	776	780	778	778	778	779	740	1703		
31	778	778	781	783	789	789	780	774	772	766	765	757	766	770	782	778	795	803	819	820	817	819	804	788	786	740	1873		
Mean	770	767	768	767	769	768	765	759	747	739	737	738	743	751	763	785	788	790	797	793	791	784	778	778	768	740	740		
Sum 22,000+	1863	1771	1814	1789	1824	1810	1700	1512	1166	922	856	871	1019	1284	1670	2320	2436	2494	2711	2587	2505	2299	2130	2117			Grand Total 571,470		

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

22	ESKDALEUIR (D)													10° +													MAY 1960	
	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		500·0+		
1 d	26·3	23·3	21·3	19·1	17·9	15·2	13·8	13·2	13·4	19·5	21·9	26·0	28·7	28·9	29·1	28·7	27·4	26·4	24·8	22·0	22·4	21·6	26·0	25·7	22·6	42·6		
2	26·3	27·9	28·6	26·7	25·8	23·2	22·0	19·4	19·6	19·8	23·4	26·6	29·4	30·2	29·9	29·2	27·1	26·4	25·7	24·5	22·0	25·4	26·7	26·6	25·5	112·4		
3	26·1	25·8	25·8	26·1	26·0	24·5	23·2	22·8	24·7	25·2	25·2	27·6	31·4	33·2	32·9	31·4	29·4	27·4	26·8	26·5	26·8	27·3	27·3	26·5	27·1	149·9		
4 q	26·3	27·0	25·7	25·2	24·0	22·8	21·5	20·7	20·4	20·5	21·6	25·4	28·6	30·7	31·6	31·6	30·5	28·9	27·6	27·3	26·9	22·5	23·3	25·1	25·7	115·7		
5	26·2	26·3	25·8	24·5	23·7	23·2	20·9	20·5	20·2	21·5	25·1	28·9	31·9	32·7	31·8	31·3	30·5	28·8	27·7	27·9	23·6	22·8	25·9	24·5	26·1	126·2		
6 d	24·5	25·4	24·6	26·2	21·7	21·2	19·8	21·3	20·6	22·8	28·4	34·4	40·4	41·0	41·2	39·6	38·7	36·5	24·2	22·7	22·8	24·2	15·6	19·2	27·4	157·0		
7 d	19·5	32·9	21·8	21·4	18·1	18·2	19·5	18·9	18·0	20·0	25·3	27·3	31·5	33·4	32·5	33·8	35·7	31·0	24·5	24·0	25·2	27·6	30·5	29·1	25·8	119·7		
8 d	28·1	26·3	25·5	26·2	32·8	25·2	24·6	23·4	21·8	21·7	30·9	31·0	35·7	32·1	32·7	24·4	39·3	37·1	30·8	32·6	32·2	29·0	26·2	32·7	29·3	202·3		
9	26·5	24·0	22·8	22·2	22·9	21·3	20·1	22·2	23·9	26·8	30·1	34·0	34·5	32·9	31·4	30·1	27·7	26·6	27·1	27·6	26·9	26·9	27·1	27·0	26·8	142·6		
10	27·2	27·1	27·8	26·0	23·9	22·7	21·8	22·5	23·7	24·0	27·1	30·8	31·9	32·2	33·0	30·5	28·3	28·2	26·6	25·5	26·8	27·6	25·7	25·3	26·9	146·2		
11	24·6	25·1	26·7	23·2	26·1	33·0	26·2	30·1	31·1	29·1	27·0	28·5	29·3	30·6	30·1	28·7	28·3	28·1	27·9	26·9	26·3	26·8	25·4	23·7	27·6	162·8		
12	24·4	24·8	24·3	24·2	27·1	28·0	24·3	21·3	19·6	20·1	21·5	27·8	29·6	31·7	31·6	32·2	31·8	30·5	29·1	28·9	28·8	27·7	28·2	26·6	26·8	144·1		
13	24·6	25·1	23·9	24·4	23·8	22·6	22·6	22·7	22·1	24·0	28·6	30·7	33·3	33·9	33·9	32·5	30·7	29·9	28·9	27·2	25·5	25·3	21·0	21·8	26·6	139·0		
14	24·8	25·8	28·2	27·5	27·6	29·2	26·2	25·5	24·9	25·9	28·7	32·2	36·2	35·9	34·9	33·9	31·4	30·0	29·1	28·5	28·2	25·9	27·4	27·8	29·0	195·7		
15	27·5	27·5	27·1	27·1	24·8	21·8	19·3	18·6	19·4	22·2	25·1	29·1	34·5	36·0	35·4	33·2	30·0	26·8	26·3	26·9	27·3	27·9	28·0	27·9	27·1	149·7		
16	27·5	26·6	26·2	24·9	24·3	23·3	21·9	19·9	18·9	20·0	24·8	28·8	33·2	35·6	40·7	41·0	49·2	34·9	31·0	31·0	29·1	28·3	30·0	26·3	29·1	197·4		
17	27·4	26·3	25·6	25·7	24·2	22·8	20·1	19·7	17·3	19·9	24·1	28·1	31·6	33·4	32·0	31·4	29·6	27·8	27·3	27·4	27·8	27·5	26·5	27·0	26·3	130·5		
18 q	26·9	27·0	28·2	26·4	24·8	22·7	21·0	19·8	20·0	20·7	23·3	25·7	28·7	30·4	29·7	29·3	28·2	28·2	28·0	27·2	27·9	28·6	28·4	27·7	26·2	128·8		
19 q	26·5	26·0	25·3	23·8	22·4	20·4	20·7	19·7	21·1	22·5	24·2	27·4	29·6	31·4	30·6	28·8	26·9	25·6	25·8	26·9	27·2	27·5	28·9	29·0	25·8	118·2		
20 q	28·7	28·1	27·3	26·1	25·9	21·5	19·0	18·7	20·3	23·1	26·1	29·9	32·9	33·1	31·8	30·3	28·6	27·1	27·0	27·3	27·2	27·5	28·3	28·7	26·9	144·5		
21	29·0	27·8	25·7	24·9	23·8	21·9	22·6	23·4	23·9	26·1	29·1	31·8	34·7	35·0	32·3	30·5	28·5	27·5	27·8	28·4	28·5	27·8	27·5	26·9	27·7	165·4		
22 q	26·6	26·7	26·2	25·4	24·4	22·4	20·8	20·7	21·3	23·0	27·2	30·2	33·3	35·0	35·4	35·6	32·4	30·3	29·0	28·6	28·5	27·8	27·8	27·4	27·7	166·0		
23	27·7	26·3	26·1	25·1	23·7	21·9	21·2	21·5	22·0	24·9	28·7	31·9	35·3	37·2	38·1	37·1	34·5	32·3	28·8	28·1	29·0	25·1	26·9	26·1	28·3	179·5		
24	28·3	20·5	19·9	28·5	26·5	25·5	31·9	27·9	25·3	27·2	28·9	33·6	37·1	37·1	37·6	35·4	33·2	32·0	30·9	23·7	21·8	25·7	22·1	17·2	28·2	177·8		
25	19·5	21·0	20·9	20·5	24·7	22·4	20·6	19·6	19·1	21·8	26·9	31·2	36·4	38·6	37·7	36·2	34·9	32·4	26·9	27·3	29·0	29·2	28·3	25·3	27·1	150·4		
26	27·5	19·0	19·7	19·1	22·6	20·7	18·5	20·1	21·2	21·2	24·1	27·7	32·6	33·6	33·6	32·3	30·6	25·7	26·2	27·7	27·2	24·6	24·1	23·1	25·1	102·7		
27	23·9	18·1	23·7	14·3	20·7	20·0	19·0	18·3	19·3	21·6	25·3	29·0	32·1	33·5	33·3	32·8	31·4	30·6	29·4	25·8	26·3	27·1	25·1	22·5	25·1	103·1		
28	24·5	23·9	26·6	25·5	23·6	21·6	20·6	21·8	23·2	24·7	27·6	30·6	33·4	34·3	34·7	34·0	32·5	31·2	29·0	28·4	25·0	24·4	26·6	27·5	27·3	155·2		
29 d	30·7	10·1	-3·0	13·0	17·7	16·6	18·3	19·1	20·6	23·2	25·9	29·1	33·2	35·7	34·6	33·5	31·7	29·9	30·0	29·5	26·6	26·4	28·7	28·6	24·6	89·7		
30	27·9	26·8	27·0	25·6	23·5	23·0	22·1	23·6	26·2	29·2	29·2	29·4	29·9	31·8	29·3	26·6	27·7	26·8	26·4	27·1	28·9	29·3	29·3	29·0	27·3	155·6		
31	27·6	27·8	30·1	29·9	26·9	24·4	20·2	19·3	20·4	20·8	24·2	28·1	32·7	34·8	35·6	33·0	32·6	31·1	30·4	29·6	29·7	24·5	25·5	25·3	27·7	164·5		
Mean	26·2	25·0	24·4	24·1	24·1	22·7	21·4	21·2	21·4	23·0	26·1	29·5	32·7	33·7	33·5	32·2	31·6	29·5	27·8	27·2	26·8	26·5	26·4	26·0	26·8			
Sum 600·0+	213·1	176·3	155·4	148·7	145·9	103·2	64·3	56·2	63·5	113·0	209·5	312·8	413·6	445·9	439·0	398·9	379·3	316·0	261·0	243·0	231·4	219·8	218·3	207·1		Grand Total 19935·2		

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

71

23 ESKDALEUIR (Z)

45,000γ (0.45 C.G.S. unit) +

MAY 1960

	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	R000+
1 d	421	385	377	401	410	420	428	420	412	392	385	384	389	397	410	413	414	409	407	414	414	384	380	385	402	1651	
2	385	383	374	372	370	382	389	395	394	394	391	386	384	388	386	388	390	394	391	394	396	387	382	379	386	1274	
3	379	379	379	379	378	378	378	378	377	372	371	366	362	366	373	379	384	389	388	385	383	382	379	378	378	1062	
4 q	378	377	377	378	379	379	378	374	373	370	365	365	366	363	366	371	377	379	383	383	385	385	378	373	375	1002	
5	373	374	375	374	377	377	374	373	372	371	364	360	360	362	360	364	371	377	379	378	378	374	371	367	371	905	
6 d	347	343	357	360	360	363	367	366	363	358	348	342	349	370	390	413	427	443	459	429	437	366	331	343	376	1031	
7 d	329	298	295	321	343	351	371	382	380	375	371	371	369	386	406	408	425	465	477	442	416	395	367	335	378	1078	
8 d	343	360	367	371	343	305	327	339	337	349	366	363	373	398	485	702	580	492	457	428	408	399	396	377	403	1665	
9	383	385	385	385	384	382	382	382	377	367	359	363	368	384	397	397	404	403	398	390	386	383	383	381	384	1208	
10	381	381	379	380	383	383	381	379	378	371	367	366	370	379	385	396	401	398	399	397	390	385	379	373	383	1181	
11	363	360	348	362	364	336	321	333	339	341	356	365	366	373	381	387	388	389	387	387	390	383	362	368	365	749	
12	373	375	375	376	363	339	340	352	360	359	360	358	368	379	391	393	393	389	384	379	377	375	373	367	371	898	
13	366	371	373	373	374	371	367	362	358	349	344	341	344	351	366	375	383	385	383	384	382	370	365	361	367	798	
14	364	366	365	364	367	358	346	348	349	354	349	350	351	358	368	379	391	391	386	382	378	375	372	372	366	783	
15	373	373	373	373	375	374	373	368	366	363	356	355	352	361	373	378	387	389	385	379	378	375	373	373	372	925	
16	371	371	373	373	374	377	378	373	364	355	344	340	340	348	358	373	387	418	406	401	389	372	373	368	372	926	
17	368	360	368	373	377	379	378	371	368	364	358	348	348	356	362	373	388	385	383	377	373	372	372	369	370	870	
18 q	367	368	368	367	372	368	366	366	362	356	355	353	355	357	367	374	379	383	383	379	377	373	372	368	368	835	
19 q	365	363	367	373	378	378	374	371	361	355	354	350	349	354	363	371	378	379	379	379	378	374	371	367	368	831	
20 q	367	367	368	370	371	369	368	366	360	349	345	343	346	356	360	363	367	371	371	370	369	367	366	366	363	715	
21	362	361	362	367	367	368	367	363	354	345	343	341	339	345	356	361	368	372	373	372	369	367	367	367	361	656	
22 q	366	366	366	366	367	367	367	367	367	364	358	344	332	328	336	348	350	354	360	361	362	362	362	362	357	577	
23	361	361	362	362	362	362	366	367	365	359	345	336	336	345	352	364	374	383	391	386	371	360	367	367	363	704	
24	350	339	345	344	327	329	331	310	328	339	343	347	360	373	387	395	402	409	404	410	383	375	366	340	360	636	
25	318	322	331	347	355	354	357	362	362	355	344	342	349	368	385	390	396	402	419	404	388	383	379	369	366	781	
26	329	336	337	326	348	359	367	367	362	351	345	340	347	365	368	371	389	402	401	391	385	381	368	347	362	682	
27	314	321	302	309	344	368	376	379	376	368	355	345	346	356	363	371	378	378	383	393	383	375	369	371	359	623	
28	368	367	366	366	370	373	372	373	371	365	355	343	340	349	356	361	369	373	373	371	362	360	360	359	363	722	
29 q	269	195	247	309	343	364	366	365	359	354	347	343	345	346	356	381	388	390	390	390	396	385	375	371	349	374	
30	367	366	367	368	370	371	368	366	355	349	347	354	362	381	406	424	439	433	416	399	387	381	377	373	380	1126	
31	371	366	363	362	364	366	367	367	362	358	345	339	339	343	348	356	362	366	367	367	366	366	363	362	360	635	
Mean	360	356	358	363	366	366	367	367	365	360	355	353	355	364	377	391	395	397	396	390	385	377	371	366	371		
Sum 10,000+	1171	1039	1091	1251	1359	1350	1390	1384	1308	1165	1021	931	1000	1293	1672	2121	2233	2296	2263	2102	1936	1671	1498	1358		Grand Total 275,903	

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

24 ESKDALEUIR

MAY 1960

	TERRESTRIAL MAGNETIC ELEMENTS												3-hr. range indices K	Sum of K indices	Magnetic character of day, C (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	h. m.	γ	h. m.	γ	γ			
1 d	02 33	789	532 01 14	257	01 08	38.2	-0.7 05 11	38.9	06 19	433	355 02 48	78	6,6,5,3,4,4,3,4	35	2	80.8	
2	15 57	793	672 04 18	121	13 27	31.6	16.7 09 19	14.9	20 02	401	368 04 27	33	2,4,3,3,3,3,2,2	23	1	80.8	
3	19 01	795	712 10 22	83	13 42	33.8	22.0 07 23	11.8	17 20	390	362 12 39	28	1,2,2,2,2,3,2,1	15	0	81.0	
4 q	19 19	813	734 12 18	79	15 03	32.5	18.1 21 52	14.4	19 56	387	373 23 27	14	1,1,1,2,2,1,2,3	13	0	80.9	
5	20 40	806	735 10 40	71	13 19	33.6	18.9 06 40	14.7	18 48	379	355 24 00	24	2,2,2,2,2,2,3,3	18	0	81.1	
6 d	18 00	962	654 22 19	308	17 38	45.3	4.6 21 57	40.7	17 57	475	284 22 00	191	3,3,2,4,3,5,6,5	31	1	80.8	
7 d	16 29	875	676 00 59	199	16 31	39.5	12.2 09 31	27.3	18 22	488	263 01 58	225	4,4,3,4,6,5,4,5	35	2	80.9	
8 d	15 06	1055	469 09 16	586	16 28	52.2	0.1 09 18	52.1	15 20	778	301 05 17	477	2,5,6,7,7,7,5,6	45	2	81.2	
9	16 56	793	694 10 48	99	12 01	36.1	16.6 05 12	19.5	17 02	406	355 10 33	51	3,3,3,4,3,3,2,2	23	1	80.9	
10	19 43	819	716 12 20	103	14 34	34.0	19.8 06 33	14.2	16 32	402	365 11 09	37	2,2,2,2,2,2,3,3	18	1	80.9	
11	04 37	837	650 08 17	187	05 29	40.3	19.6 04 35	20.7	20 09	391	315 06 21	76	4,5,5,3,4,4,4,3	32	1	81.2	
12	16 25	807	691 10 49	116	16 08	33.7	16.1 08 48	17.6	15 11	397	337 05 43	60	2,3,3,3,4,4,2,2	23	1	81.2	
13	20 35	820	732 11 03	88	13 33	35.9	20.0 23 29	15.9	20 15	388	339 11 08	49	2,2,2,2,3,3,3,3	20	1	81.2	
14	16 00	802	706 11 49	96	13 09	37.2	23.3 06 39	13.9	16 53	394	344 06 50	50	2,2,3,3,3,3,2,2	20	1	81.2	
15	18 20	801	689 12 00	112	13 07	36.8	17.1 06 50	19.7	16 58	390	351 12 23	39	0,2,2,4,3,3,2,1	17	0	81.3	
16	15 43	955	689 14 53	266	16 32	52.9	17.5 08 22	35.4	17 38	429	339 11 55	90	2,1,2,2,5,6,6,5	29	1	81.2	
17	01 01	827	709 13 49	118	13 09	36.9	13.0 06 33	23.9	16 45	390	344 11 58	46	3,2,3,4,4,3,2,2	23	1	81.4	
18 q	16 56	809	734 11 12	75	13 45	30.8	18.9 07 52	11.9	17 40	384	352 11 37	32	2,2,2,2,2,2,2,2	16	0	81.3	
19 q	19 30	808	742 10 06	66	13 31	32.1	18.1 07 31	14.0	17 45	381	349 12 09	32	2,1,2,2,1,2,2,2	14	0	81.6	
20 q	23 42	802	754 11 26	48	13 29	33.5	18.2 07 15	15.3	17 55	372	341 11 40	31	1,2,1,1,1,2,1,2	11	0	81.5	
21	18 58	816	758 09 31	58	13 34	35.6	21.2 05 29	14.4	18 11	373	337 12 22	36	2,1,1,2,3,2,2,1	14	0	81.5	
22 q	14 45	831	746 10 23	85	14 46	38.0	20.2 07 14	17.8	05 18	368	326 12 10	42	1,1,0,1,3,2,2,2	12	0	81.5	
23	14 50	965	764 21 50	201	14 45	42.3	19.6 07 12	22.7	18 45	394	333 11 59	61	1,1,2,2,5,5,4,3	23	1	81.6	
24	20 20	835	684 06 23	151	14 55	38.9	13.4 23 29	25.5	19 27	414	304 07 01	110	4,4,5,3,3,4,4,3	30	1	81.5	
25	17 44	830	723 00 32	107	13 28	39.8	14.3 01 00	25.5	18 22	423	314 00 26	109	4,3,2,2,3,4,3,3	24	1	81.6	
26	17 39	832	709 11 05	123	13 02	34.2	16.2 01 49	18.0	18 10	405	312 00 32	93	4,3,3,3,2,4,2,3	24	1	81.5	
27	18 37	816	701 10 07	115	13 32	34.4	11.8 03 31	22.6	19 28	394	286 02 57	108	4,3,2,2,3,3,3,2	22	1	81.7	
28	20 22	940	732 08 33	208	20 32	36.9	18.8 20 53	18.1	05 28	374	338 12 10	36	2,1,1,2,2,2,5,4	19	1	81.6	
29 d	18 20	859	698 01 20	161	00 30	48.2	-8.8 02 20	57.0	20 48	402	164 01 19	238	6,4,3,3,5,5,4,4	34	2	81.7	
30	15 30	824	725 12 35	99	13 51	32.6	20.7 06 58	11.9	16 30	440	344 10 42	96	3,2,3,4,3,3,2,2	22	1	81.7	
31	21 28	837	746 12 51	91	14 22	36.2	18.3 07 55	17.9	00 00	373	338 12 19	35	2,2,2,2,3,4,3,3	21	1	81.8	
Mean	- -	844	699 - -	144	- -	37.5	15.3 - -	22.2	- -	413	329 - -	85	-	-	0.84	81.2	

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

21	ESKDALEMUIR (H)												16,000γ (0.16 C.G.S. unit) +												JUNE 1960	
	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 18,000+
	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	
1	798	796	781	805	788	737	769	744	724	712	706	704	728	735	750	774	789	796	801	808	797	796	791	786	767	415
2 q	786	780	779	780	782	780	774	767	761	751	739	745	749	752	768	781	789	800	807	797	794	792	791	788	776	632
3	784	782	779	779	779	777	773	768	763	757	753	754	757	769	774	782	791	829	828	831	820	806	785	773	783	793
4 d	766	773	767	816	766	743	704	712	757	747	730	718	718	727	747	751	769	773	796	789	791	803	780	786	760	229
5	769	744	750	739	770	770	735	745	735	711	694	687	707	714	743	782	778	770	794	795	805	789	788	788	754	102
6	761	754	754	772	756	759	752	747	742	741	714	699	747	741	749	782	763	776	777	792	798	796	794	797	761	263
7	789	777	778	774	782	780	777	778	768	746	754	761	746	756	751	770	780	795	808	820	816	807	801	789	779	703
8	785	777	778	784	755	773	755	753	745	761	757	747	766	776	786	781	784	813	826	828	808	784	773	775	778	670
9	767	769	780	782	736	750	745	747	732	734	727	730	757	775	761	782	780	806	845	814	790	782	781	779	769	451
10 q	778	775	777	777	778	779	771	756	742	737	736	742	748	758	772	782	797	800	810	815	810	793	782	785	775	600
11 q	785	787	783	784	787	774	760	745	740	739	743	751	763	770	777	786	796	804	813	800	798	792	790	788	777	655
12 q	786	783	788	791	792	787	777	759	749	745	742	751	771	770	781	788	792	811	824	806	797	800	801	802	783	793
13	798	798	793	792	793	795	790	782	775	765	756	751	753	766	774	775	796	820	818	818	810	802	799	803	788	922
14	802	807	801	802	802	799	790	781	773	762	759	767	745	751	754	778	793	803	808	825	810	795	795	792	787	894
15	785	790	783	785	783	778	775	771	749	755	759	758	761	758	777	792	805	806	806	811	807	797	798	803	783	792
16 q	788	790	792	787	788	790	778	778	772	754	740	741	743	753	768	783	790	803	794	797	795	793	794	797	779	708
17	801	783	775	782	783	783	780	774	768	760	752	748	750	758	775	792	810	779	786	798	797	801	798	796	780	729
18	792	787	793	793	790	789	778	768	760	750	745	730	759	773	764	781	797	827	806	819	817	809	814	805	785	846
19	797	805	811	800	799	778	780	783	753	745	757	749	758	774	766	769	789	808	829	826	803	784	782	778	784	823
20	772	774	776	791	788	777	771	761	747	739	738	746	765	770	775	782	784	797	807	807	805	802	797	796	778	667
21	797	791	793	777	784	786	778	766	736	735	737	749	755	771	782	795	799	799	826	808	807	797	785	786	781	739
22	784	780	786	795	782	772	766	753	747	746	747	759	765	759	777	788	790	791	798	817	813	806	791	790	779	702
23	767	772	764	777	777	780	782	769	757	744	742	758	769	785	780	807	803	808	804	802	801	790	797	792	780	727
24	783	786	784	783	787	782	772	762	760	763	766	753	758	757	769	788	794	819	807	828	818	799	799	795	784	812
25	794	777	792	785	786	778	766	749	742	741	749	763	760	763	791	831	832	895	868	840	836	784	787	756	790	965
26	763	768	746	775	775	740	736	734	733	736	731	740	748	746	758	776	791	820	821	815	812	801	803	783	769	451
27 d	774	786	828	677	712	698	747	753	736	698	707	710	738	732	753	771	846	858	871	845	810	782	771	784	766	387
28 d	787	790	780	775	775	786	791	768	751	747	738	709	703	727	744	749	785	821	816	839	805	775	751	749	769	461
29 d	766	755	755	754	787	782	759	736	755	754	743	734	727	732	753	768	786	805	809	836	847	871	794	727	772	535
30 d	727	736	712	720	774	772	764	751	728	714	693	699	728	728	746	783	808	871	837	838	838	795	781	785	764	328
Mean	781	779	779	778	778	773	767	759	750	743	739	738	748	755	765	782	793	810	815	815	809	797	790	785	776	
Sum 22,000+	1431	1372	1358	1333	1336	1174	995	760	500	289	154	153	442	646	965	1449	1806	2303	2440	2464	2255	1923	1693	1553		Grand Total 558,794

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

22 ESKDALEMUIR (D)													10° +													JUNE 1960		
	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	500.0+		
1	24.0	21.8	18.5	20.7	15.3	21.1	27.2	25.2	23.7	23.5	28.6	31.2	32.6	32.7	31.9	34.1	33.6	33.1	31.5	29.6	28.2	27.7	28.2	27.4	27.1	151.4		
2 q	26.6	25.7	25.7	24.8	23.5	21.8	20.1	19.0	18.7	20.8	23.6	27.3	30.4	31.5	31.9	31.8	31.4	30.5	30.0	28.9	28.5	27.8	27.8	27.2	26.5	135.3		
3	26.7	26.1	25.4	24.7	23.3	21.5	19.7	18.5	18.4	21.4	24.6	28.1	30.6	32.8	33.4	33.2	32.6	33.2	31.6	31.7	30.6	23.9	27.3	27.1	26.9	146.4		
4 d	24.3	20.2	19.1	12.1	9.2	9.1	10.5	10.0	26.5	22.4	28.2	30.0	33.2	34.6	36.9	37.2	35.9	33.9	33.1	31.4	29.1	29.4	26.5	28.7	25.5	111.5		
5	21.3	19.4	21.6	30.5	22.7	25.2	24.4	26.4	27.1	25.5	24.7	26.6	30.3	33.7	33.2	32.5	30.6	29.4	29.1	25.2	27.1	29.5	29.1	29.6	27.3	154.7		
6	23.4	29.0	24.9	24.5	20.6	19.5	19.8	18.4	21.5	22.7	27.1	31.6	35.4	34.9	33.5	33.1	29.6	27.7	27.5	27.9	26.8	27.5	28.3	29.3	26.9	144.5		
7	24.6	27.1	24.6	22.1	19.5	19.9	19.6	18.6	21.3	27.4	30.2	32.7	34.6	32.8	32.4	31.6	29.4	27.8	24.5	27.4	27.6	27.4	27.4	26.2	129.1			
8	27.0	26.8	27.7	28.0	29.3	21.4	18.6	17.5	20.8	24.0	26.8	30.5	31.4	33.2	33.6	33.8	32.0	30.1	27.6	25.5	25.2	24.2	21.5	23.6	26.7	140.1		
9	27.2	23.5	24.2	26.5	28.9	27.8	24.0	19.3	20.1	23.1	27.0	30.2	33.1	35.6	34.7	33.5	30.7	28.8	25.3	23.4	27.0	27.8	27.9	27.5	27.4	157.1		
10 q	27.4	26.9	26.9	24.0	23.0	20.8	19.3	19.1	19.6	22.1	26.2	29.9	31.7	32.4	32.4	31.2	30.6	28.9	28.7	27.9	27.2	25.6	27.6	27.9	26.6	137.3		
11 q	27.9	28.7	28.0	23.5	22.6	20.0	19.1	19.0	19.7	23.0	27.3	31.4	33.4	33.9	33.5	32.7	31.4	29.6	28.9	27.9	28.1	28.0	28.3	28.1	27.3	154.0		
12 q	27.2	26.4	25.9	25.2	23.4	21.0	20.1	20.1	20.3	21.8	24.5	27.2	30.7	32.1	33.8	33.4	33.1	32.5	32.2	29.9	28.2	28.0	27.9	27.9	27.2	152.8		
13	27.4	28.1	25.8	23.7	20.9	20.4	19.8	19.6	20.7	20.4	23.0	26.4	28.1	30.0	30.7	31.0	31.8	32.9	31.1	29.6	29.1	29.0	28.3	28.8	26.5	136.6		
14	28.0	29.1	28.6	24.5	22.3	21.7	23.2	24.6	21.9	22.5	23.9	26.4	29.3	32.2	34.5	33.7	33.0	31.4	29.4	27.3	28.1	26.9	28.2	27.6	27.4	158.3		
15	27.6	29.1	28.4	25.0	22.7	20.8	20.1	21.7	22.8	25.3	26.4	28.9	31.7	33.2	33.1	32.4	31.2	30.1	29.7	28.4	27.4	27.7	28.3	28.9	27.5	160.9		
16 q	28.5	27.2	27.2	28.4	24.5	22.4	23.3	21.2	20.5	20.9	23.6	26.9	28.7	28.7	29.6	30.4	29.4	27.5	27.5	28.3	28.2	28.0	28.6	28.7	26.6	138.2		
17	27.8	27.6	24.5	24.1	23.5	22.5	21.6	21.3	20.8	21.9	25.2	28.7	31.8	32.5	32.5	30.9	29.5	27.3	29.1	28.9	29.3	29.3	29.4	28.0	27.0	147.9		
18	28.6	29.0	29.0	25.1	22.8	23.5	22.1	20.7	20.8	22.7	24.7	28.7	33.5	34.1	33.6	32.1	31.1	29.8	28.9	29.2	28.7	28.7	29.1	28.4	27.7	164.9		
19	26.5	28.0	28.0	22.0	20.3	21.7	24.5	26.3	24.9	25.3	26.4	29.7	32.3	33.8	32.5	31.7	29.9	27.8	27.2	27.3	26.3	24.2	27.5	25.9	27.1	150.0		
20	24.4	24.3	24.9	27.2	22.5	19.5	18.4	18.6	18.5	21.6	25.7	28.9	32.3	34.3	33.9	31.5	28.6	28.1	27.9	28.8	28.9	29.4	28.0	27.0	26.4	133.2		
21	24.4	23.0	22.7	24.7	26.3	22.5	22.4	21.7	21.5	24.6	27.8	31.5	34.1	36.4	36.2	35.2	32.9	30.8	31.6	29.2	30.5	30.9	29.3	25.6	28.2	175.8		
22	24.7	23.1	22.6	24.4	17.1	18.3	21.2	20.6	21.9	25.5	28.3	32.2	35.5	36.8	35.8	34.3	32.0	30.7	30.4	30.6	28.4	27.3	26.5	26.7	27.3	154.9		
23	19.8	19.2	15.4	18.3	17.5	17.4	18.1	19.2	20.8	22.6	24.6	28.6	33.2	36.1	35.2	35.2	32.5	32.0	31.6	30.8	29.7	28.3	28.5	27.5	25.9	122.1		
24	25.7	25.5	23.0	21.6	21.0	18.4	17.5	19.7	21.8	22.5	26.1	28.3	31.7	33.9	32.8	33.1	32.6	32.5	31.1	26.0	25.8	28.5	27.4	23.6	26.3	130.1		
25	18.6	20.4	26.1	23.3	22.3	19.1	19.3	19.9	22.1	25.4	27.5	30.8	35.2	35.8	36.6	37.8	32.7	33.4	33.4	33.0	29.9	30.4	27.9	23.4	27.7	164.3		
26	21.8	22.2	21.6	18.0	17.6	18.4	23.0	20.6	19.8	23.0	24.9	27.8	29.6	30.3	31.0	32.0	32.2	31.4	30.8	29.9	27.1	24.8	25.6	26.9	25.4	110.3		
27 d	28.6	25.3	26.7	15.2	24.2	22.1	22.2	18.1	15.6	17.6	19.8	22.1	25.6	28.5	30.1	31.0	34.3	34.2	33.6	27.9	26.2	29.2	26.0	19.2	25.1	103.3		
28 d	21.6	20.9	20.2	21.8	21.2	20.0	15.9	14.3	14.5	21.9	24.2	28.3	33.7	36.8	36.7	35.0	34.4	32.9	28.5	25.4	24.9	22.5	22.7	25.6	25.2	103.9		
29 d	25.2	23.4	26.8	22.7	21.2	20.2	19.0	17.8	19.7	20.8	23.6	26.9	29.9	32.1	32.7	32.2	30.5	29.7	28.7	30.5	32.2	29.8	26.4	20.7	25.9	122.7		
30 d	15.3	3.6	24.6	17.5	23.3	19.0	17.3	17.2	19.1	22.5	24.0	26.4	29.5	31.7	32.6	34.6	32.5	32.8	31.8	32.8	29.9	25.4	26.7	26.0	24.8	96.1		
Mean	25.1	24.3	24.6	23.1	21.7	20.6	20.4	19.8	20.8	22.6	25.5	28.7	31.7	33.3	33.4	33.1	31.8	30.7	29.9	28.6	28.1	27.6	27.4	26.7	26.7			
Sum 500.0+	252.1	230.6	238.6	194.1	152.5	117.0	111.3	94.2	122.7	178.6	265.7	361.7	451.2	499.2	501.6	493.0	454.2	422.4	395.6	357.7	344.0	327.3	322.2	300.2		Grand Total 19187.7		

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

73

23 ESKDALEUIR (Z)

45,000γ (0.45 C.G.S. unit) +

JUNE 1960

	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 8000+
	γ	γ	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	357	335	328	300	304	304	304	304	322	329	307	323	344	363	379	383	374	373	373	373	378	378	375	372	368	348	346
2 q	368	369	369	371	374	374	372	367	365	365	358	355		351	355	357	360	364	372	372	373	372	369	368	367	366	787
3	367	368	368	368	368	369	368	367	364	359	350	343		346	350	354	356	357	359	373	379	381	380	363	361	363	718
4 d	356	352	346	319	283	249	271	288	291	316	344	357		368	381	394	395	403	409	407	395	389	383	378	379	352	453
5	362	345	299	296	268	288	307	321	333	336	350	368		391	402	404	399	415	420	413	417	403	390	384	380	362	691
6	367	367	324	303	305	334	349	360	369	368	364	369		375	387	382	384	393	390	387	380	378	376	375	372	365	758
7	361	357	338	329	349	364	369	367	365	365	357	355		357	366	374	378	380	386	394	401	390	385	379	376	368	842
8	374	374	366	333	316	330	349	357	361	360	349	346		351	359	368	374	375	379	393	398	395	385	356	348	362	696
9	341	310	332	342	337	329	350	361	364	367	362	357		358	368	384	385	384	382	386	386	380	377	375	374	362	691
10 q	373	371	369	369	372	372	370	370	367	362	356	347		345	357	367	376	376	377	375	378	380	380	375	369	369	853
11 q	369	368	358	361	368	373	374	373	372	364	350	345		346	350	359	365	370	370	370	369	369	369	368	368	365	748
12 q	369	369	369	369	368	369	371	373	370	360	340	323		327	339	347	359	367	369	370	373	373	369	367	364	361	674
13	364	363	362	362	364	365	366	367	364	364	356	346		341	344	348	358	365	372	380	376	372	368	364	364	362	695
14	364	363	363	365	368	366	365	365	368	363	353	350		364	375	381	384	381	381	385	386	384	374	370	371	371	899
15	369	368	368	369	372	374	370	366	363	358	357	351		352	355	360	367	380	390	395	396	387	380	373	369	370	889
16 q	368	366	364	363	359	364	365	364	363	357	356	353		347	345	351	361	363	370	373	369	373	370	368	365	362	697
17	360	356	358	364	368	371	372	370	369	366	361	353		351	351	351	364	375	391	385	373	369	368	369	367	366	782
18	364	361	347	353	361	364	363	365	365	358	352	349		345	357	367	364	365	370	379	370	369	366	363	363	362	680
19	363	361	354	346	341	344	339	334	335	337	341	345		351	365	376	387	391	397	398	402	399	395	379	368	365	748
20	364	358	351	337	341	350	353	356	356	352	350	346		350	361	363	369	375	375	375	378	380	377	370	368	361	655
21	359	352	351	349	320	315	320	329	330	332	333	327		335	350	358	368	377	397	404	405	392	383	370	364	355	520
22	363	364	362	341	346	352	350	353	353	355	353	358		357	358	358	359	363	367	368	367	375	378	376	367	360	643
23	356	341	351	361	366	359	358	358	359	349	341	345		350	354	353	354	374	383	385	381	376	369	367	363	361	653
24	363	357	357	358	358	362	360	358	352	354	357	348		353	359	358	362	368	374	387	386	378	370	363	362	363	704
25	359	362	358	359	363	363	362	363	359	357	347	339		344	359	365	375	393	395	403	405	400	374	336	346	366	786
26	345	322	293	298	316	333	335	347	355	358	351	347		352	363	370	374	371	370	370	371	377	376	359	355	350	408
27 d	354	343	300	216	227	229	268	319	340	347	354	358		358	358	364	369	374	397	403	417	412	378	309	336	339	130
28 d	363	369	371	374	377	377	369	365	354	344	339	340		351	357	364	370	381	409	419	410	391	374	365	358	370	891
29 d	353	355	343	323	341	337	350	351	354	350	345	347		351	360	367	372	376	384	386	382	377	358	324	277	353	463
30 d	226	258	202	173	248	316	360	375	375	377	374	374		371	371	376	381	400	405	405	390	391	387	369	370	345	274
Mean	357	353	344	336	338	343	349	354	355	354	351	349		353	361	367	371	378	384	387	386	383	376	365	362	361	
Sum 10,000+	721	604	321	71	148	296	479	631	664	607	523	485		601	835	1003	1143	1329	1513	1609	1590	1492	1293	958	858		Grand Total 259,774

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

24 ESKDALEUIR

JUNE 1960

	TERRESTRIAL MAGNETIC ELEMENTS												3-hr. range indices K	Sum of K indices	Magnetic character of day, C (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							
1	h. m. γ	γ h. m.	γ	h. m.	h. m.		h. m. γ	γ h. m.	γ							
2 q	03 29 829	690 09 25	139	13 49 35.4	12.2 04 20	23.2	14 21 386	294 03 59	92	3,5,3,3,3,2,2,1	22	1	81.6			
3	18 12 811	736 10 50	75	14 59 32.5	17.9 08 09	14.6	06 00 375	350 12 30	25	2,1,2,1,3,2,2,1	14	0	81.6			
4 d	17 50 859	746 11 07	113	17 48 34.1	17.7 07 45	16.4	21 29 384	340 11 53	44	0,0,2,2,2,4,3,4	17	1	81.8			
5	21 25 855	664 06 55	191	14 32 39.8	2.5 04 51	37.3	17 01 413	241 05 38	172	4,5,5,3,5,4,4,5	35	1	81.8			
6	20 07 836	657 11 15	179	03 47 37.9	12.2 00 49	25.7	17 12 424	259 04 06	165	4,5,3,4,3,4,4,2	29	1	82.2			
7	19 53 803	660 11 15	143	12 24 37.0	16.1 07 27	20.9	16 11 396	299 04 12	97	4,3,3,4,3,3,3,2	25	1	81.9			
8	19 25 827	732 14 22	95	13 07 35.4	16.4 07 50	19.0	19 16 403	326 02 50	77	3,3,3,3,3,3,3,2	23	1	81.9			
9	19 45 855	723 11 16	132	14 02 35.6	13.9 07 52	21.7	19 28 401	315 04 42	86	2,4,3,4,3,3,4,3	26	1	81.8			
10 q	18 41 866	715 10 59	151	13 09 36.1	17.1 08 03	19.0	19 13 390	303 01 24	87	3,4,3,2,4,3,4,1	24	1	82.1			
11 q	20 05 824	734 09 54	90	14 00 33.0	17.8 08 04	15.2	21 10 383	342 12 08	41	1,1,1,2,2,3,2,2	14	0	82.2			
12 q	18 04 818	735 09 28	83	13 49 34.4	18.1 06 40	16.3	05 51 375	345 11 27	30	2,1,2,2,2,2,2,1	14	0	82.1			
13	18 25 832	738 10 37	94	14 57 34.1	19.1 06 10	15.0	20 06 375	322 11 50	53	1,1,2,2,2,3,3,1	15	0	82.2			
14	17 29 845	747 12 27	98	17 18 34.3	19.1 07 06	15.2	18 19 380	339 12 41	41	1,2,1,2,2,4,2,1	15	0	82.2			
15	19 59 833	709 13 47	124	14 39 35.4	20.9 05 03	14.5	19 54 387	346 11 12	41	2,2,2,3,4,3,3,1	20	1	82.3			
16 q	18 56 827	733 08 32	94	14 02 33.7	19.0 08 14	14.7	18 33 397	349 11 36	48	2,1,3,3,3,3,3,2	20	0	82.4			
17	17 26 810	736 11 20	74	15 12 30.6	19.8 08 20	10.8	17 59 375	344 13 12	31	2,2,3,2,2,2,1,2	16	0	82.5			
18	16 31 823	746 11 36	77	14 23 32.7	20.4 08 43	12.3	17 30 392	348 13 53	44	3,1,2,1,3,4,3,2	19	0	82.5			
19	17 33 841	718 11 13	123	13 55 35.8	19.8 08 10	16.0	18 37 379	341 12 27	38	3,2,2,3,3,3,3,3	22	1	82.6			
20	18 32 839	738 09 37	101	13 39 35.8	18.3 04 51	17.5	19 41 403	331 07 36	72	3,3,3,3,3,3,4,3	25	1	82.5			
21	19 21 811	733 09 57	78	14 01 35.0	17.6 08 19	17.4	20 28 380	334 03 35	46	3,3,1,1,3,3,1,1	16	0	82.7			
22	18 50 834	727 08 40	107	14 47 37.0	19.8 04 47	17.2	19 03 414	310 05 00	104	3,4,3,3,3,3,3,3	25	1	82.6			
23	19 32 827	739 10 13	88	13 34 37.5	16.2 04 53	21.3	21 33 381	335 03 39	46	3,3,1,3,3,3,3,3	22	1	82.5			
24	15 37 829	735 10 36	94	13 40 36.8	13.6 02 05	23.2	18 06 385	340 01 10	45	4,3,3,2,3,4,2,2	23	1	82.5			
25	20 01 847	735 13 49	112	13 30 36.0	16.1 06 55	19.9	19 52 389	347 11 49	42	2,2,2,3,3,3,4,3	22	1	82.7			
26	17 22 918	715 23 00	203	14 20 38.8	16.1 01 10	22.7	19 11 408	319 22 47	89	3,2,2,3,3,5,4,5	27	1	82.6			
27 d	17 52 842	719 07 59	123	15 31 33.4	15.3 05 06	18.1	20 46 381	282 02 47	99	4,4,3,2,3,4,3,3	26	1	82.5			
28 d	18 43 917	626 04 59	291	16 39 37.1	10.3 03 50	26.8	20 03 426	209 03 32	217	5,5,4,3,2,5,5,4	33	2	82.6			
29 d	19 23 870	672 11 57	198	15 51 37.7	8.4 08 23	29.3	18 43 421	335 10 36	86	3,3,4,4,4,4,3,3	29	1	82.7			
30 d	21 49 917	696 23 56	221	21 09 37.1	11.9 07 02	25.2	18 10 388	243 23 52	145	3,4,4,2,3,4,5,6	31	1	82.7			
	17 47 923	653 03 10	270	17 24 36.1	4.9 01 30	41.0	18 07 412	141 03 17	271	6,5,3,3,3,5,5,3	33	2	82.7			
Mean	- - 846	714 - -	132	- - 35.5	15.3 - -	20.2	- - 393	311 - -	83	-	-	0.77	82.3			

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

21	ESKDALEMUIR (H)													16,000γ (0.16 C.G.S. unit) +													JULY 1960	
	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 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	γ		
2	796	785	770	763	775	783	744	751	773	744	724	718	729	741	748	736	766	780	860	844	799	780	774	778	769	2461		
3	783	765	777	774	776	785	784	766	779	765	744	726	732	765	759	783	777	788	803	799	796	791	784	778	774	2579		
4	778	781	783	788	786	781	778	768	764	751	741	731	758	768	772	779	792	803	815	827	818	789	788	784	780	2723		
5	791	786	774	780	764	775	779	762	745	730	731	733	736	743	755	766	816	800	825	810	808	787	786	787	774	2569		
6	791	793	786	786	791	794	788	771	751	728	728	739	733	741	744	778	778	795	810	828	813	795	794	784	777	2639		
7	775	771	766	775	779	784	774	755	735	717	689	706	738	764	763	765	785	791	801	803	798	785	781	782	766	2382		
8	779	781	781	783	786	785	772	759	744	735	731	741	753	759	775	782	795	813	812	809	805	796	796	791	778	2663		
9	789	787	783	782	785	786	776	767	757	751	746	751	763	767	773	789	801	808	814	812	805	799	797	794	783	2782		
10	791	793	796	798	799	799	793	780	768	763	763	757	768	771	780	791	797	804	810	813	813	810	810	805	791	2972		
11	800	794	788	791	795	801	796	788	780	778	760	745	753	766	776	785	778	809	818	830	823	811	801	791	790	2957		
12	797	791	785	791	800	804	804	794	783	780	763	751	758	770	775	786	806	795	816	817	825	798	795	797	791	2981		
13	797	796	795	797	799	794	775	781	778	763	756	749	766	761	775	773	781	791	805	808	807	809	801	796	786	2853		
14	803	791	786	791	793	795	796	795	780	760	757	758	766	771	778	785	802	789	803	807	830	799	800	799	789	2934		
15	795	791	790	791	796	789	801	788	766	752	736	743	751	761	769	805	815	875	824	823	826	843	828	832	795	3090		
16	821	814	811	821	809	803	791	792	782	759	766	759	740	747	783	852	917	907	854	788	763	730	603	581	783	2793		
17	524	496	655	656	731	725	647	636	638	664	686	679	712	705	732	788	856	814	814	804	768	750	724	710	705	914		
18	691	696	760	757	737	729	730	707	679	712	705	710	713	722	731	759	781	816	808	790	775	783	762	770	743	1823		
19	760	753	754	770	773	764	755	752	740	728	731	736	726	745	765	762	762	777	792	794	794	789	783	780	762	2285		
20	778	777	779	782	785	784	752	723	710	678	696	690	738	752	750	740	738	781	800	850	797	765	779	771	758	2195		
21	764	763	755	758	762	759	750	736	718	710	713	704	725	753	782	762	782	804	825	822	779	758	799	763	760	2246		
22	763	765	765	765	752	750	758	743	724	717	720	723	738	733	760	781	789	796	787	789	791	786	787	795	762	2277		
23	790	779	771	765	756	754	761	750	742	742	733	732	747	761	769	776	777	796	802	812	808	794	786	787	770	2490		
24	777	783	772	774	774	772	760	761	762	747	736	737	748	758	764	771	780	782	787	796	789	790	793	791	771	2504		
25	805	789	782	784	774	776	777	775	779	786	775	773	766	756	758	766	784	788	807	808	806	790	792	794	783	2790		
26	782	782	782	781	782	783	779	767	757	755	749	755	762	768	781	789	786	794	801	799	802	799	794	792	780	2721		
27	788	786	786	786	789	788	783	778	766	761	757	764	769	771	772	790	800	800	813	817	809	808	770	760	784	2811		
28	769	782	785	790	792	785	769	766	754	746	746	747	753	757	760	772	781	792	805	807	804	800	800	796	777	2658		
29	790	789	790	790	792	786	777	769	767	768	766	769	758	765	780	790	802	806	809	822	817	812	812	817	789	2943		
30	810	817	792	786	778	787	802	794	777	768	749	748	748	766	777	830	847	851	830	830	785	796	800	794	794	3062		
31	775	738	777	782	780	784	785	781	774	771	765	750	734	759	786	795	785	792	790	797	799	797	802	800	779	2698		
Mean	794	785	752	794	785	765	741	742	713	720	715	724	734	737	751	775	822	802	808	793	790	785	787	772	766	2386		
Sum 22,000+	2046	1899	2028	2131	2175	2149	1877	1597	1285	1049	877	848	1115	1403	1743	2201	2678	2939	3148	3148	2842	2524	2308	2171		Grand Total 576,181		

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

22	ESKDALEMUIR (D)													10° +													JULY 1960				
	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 500.0+					
1	26.3	25.0	29.5	24.5	20.4	22.0	22.8	22.5	22.6	20.8	21.8	23.8	29.3	30.6	29.8	26.5	25.8	26.3	27.8	24.9	25.0	27.2	26.7	26.8	25.4	108.7					
2	29.1	27.8	27.6	28.1	26.8	27.4	23.2	22.9	22.0	20.7	21.9	24.7	28.1	30.1	31.9	31.2	30.1	28.3	27.5	27.2	27.4	26.8	27.5	26.6	26.9	144.9					
3	26.9	27.1	27.5	27.5	25.1	23.4	23.1	19.8	19.1	19.8	22.1	25.5	26.7	28.8	30.3	30.4	28.8	27.8	29.2	28.4	27.2	23.0	26.2	26.7	25.9	120.4					
4	27.6	23.0	21.6	23.6	26.2	25.0	22.8	19.0	21.8	20.0	19.4	25.6	30.7	32.8	33.1	33.3	33.0	29.4	28.8	28.0	27.7	27.1	28.3	27.5	26.5	135.3					
5	29.0	28.7	24.5	19.9	21.1	20.3	22.1	25.1	23.2	23.8	27.1	28.5	32.1	32.8	33.1	31.9	29.2	27.3	27.4	26.5	25.5	26.4	26.5	26.1	26.6	138.1					
6	26.3	20.3	19.7	21.9	21.0	19.4	19.0	19.3	21.6	24.3	28.0	34.7	36.5	35.3	32.9	30.2	29.3	28.3	28.3	28.4	28.6	28.0	27.4	27.3	26.5	136.0					
7 q	26.5	26.3	25.7	25.2	24.7	23.5	20.0	20.4	20.9	22.1	25.7	28.3	31.1	32.2	32.0	29.4	28.2	28.3	28.3	28.3	28.3	28.2	26.5	26.6	138.4						
8 q	26.9	26.9	25.7	23.5	21.1	19.4	18.5	18.5	20.3	22.2	24.4	28.3	32.4	34.0	33.7	33.0	32.5	30.0	28.3	27.2	26.8	27.3	28.2	28.0	26.5	137.1					
9 q	27.5	27.9	28.0	25.7	23.4	20.3	19.1	19.3	20.7	23.0	26.1	30.5	32.9	35.5	36.5	34.3	32.1	30.3	29.0	28.1	27.8	28.2	28.4	27.0	27.6	161.6					
10	25.2	26.4	29.1	23.1	22.1	21.1	20.3	20.8	20.5	20.3	22.6	28.0	32.4	35.5	37.3	37.0	35.1	32.0	29.5	28.5	27.3	27.5	28.1	27.5	27.4	157.2					
11	25.4	24.7	23.2	21.3	18.8	16.7	18.5	18.1	18.5	20.1	23.0	27.5	31.3	33.3	33.9	32.5	31.6	31.1	28.3	27.5	27.5	22.6	27.0	26.7	25.4	109.1					
12	26.2	27.5	26.5	26.3	23.9	25.3	26.2	24.1	21.6	22.5	23.5	27.5	31.0	32.7	33.5	31.9	30.9	30.3	28.6	27.9	27.5	28.3	28.3	28.1	27.5	160.1					
13	27.8	27.9	23.9	22.9	21.4	25.3	25.3	23.8	21.7	22.9	26.1	28.3	30.9	32.4	33.3	32.9	33.4	30.6	29.3	28.7	28.0	25.2	27.7	28.2	27.4	157.9					
14 d	28.2	27.3	26.1	24.3	25.2	29.3	25.5	21.8	21.1	24.7	25.4	28.1	30.1	33.0	30.6	30.3	31.0	35.0	30.1	30.8	30.7	32.9	29.0	27.2	28.2	177.7					
15 d	24.4	22.7	23.5	26.1	29.0	27.1	26.8	28.9	27.6	28.1	30.8	29.6	25.2	28.6	32.5	33.1	36.9	32.9	32.3	28.3	26.0	22.9	12.6	-4.5	26.3	131.4					
16 d	-8.5	16.7	25.3	26.1	17.8	20.5	22.6	23.8	22.7	22.8	26.0	27.0	28.1	32.4	31.9	32.4	28.0	26.8	28.7	25.3	23.4	22.5	19.3	21.7	23.5	63.3					
17	20.7	23.5	24.7	23.1	22.1	21.1	23.5	21.1	21.5	23.2	25.1	27.1	30.1	31.9	32.4	32.3	31.6	27.1	27.9	27.5	28.3	28.0	26.0	28.6	26.2	128.4					
18	23.4	20.6	22.8	21.1	20.3	19.1	18.9	22.6	21.1	21.3	24.3	27.2	29.0	33.7	36.0	32.1	31.6	29.8	29.3	29.1	26.8	26.8	27.2	26.5	25.9	120.6					
19 d	25.1	24.1	23.3	22.8	20.7	20.8	21.3	25.7	25.4	25.4	25.4	31.9	34.1	35.9	36.0	33.8	31.5	29.7	27.4	21.2	27.0	27.4	25.7	32.8	27.3	154.4					
20	29.3	24.7	20.7	20.3	19.5	18.4	17.6	17.1	19.0	22.7	26.9	31.1	33.7	33.4	34.7	31.6	29.8	30.1	26.5	25.6	25.7	27.5	19.9	24.4	25.4	110.2					
21	23.7	23.5	23.1	21.9	22.0	21.9	19.3	20.1	20.8	23.8	27.8	29.3	31.7	32.5	30.5	28.9	29.3	28.5	25.7	27.3	28.0	28.0	27.6	25.7	25.9	120.9					
22	24.6	22.8	22.3	23.0	23.9	23.6	24.4	22.5	22.1	23.1	26.0	30.0	34.7	36.1	35.0	33.5	31.5	31.1	30.2	28.5	28.0	27.6	28.3	27.9	27.5	160.7					
23	25.2	19.1	21.8	21.9	20.3	18.7	18.5	18.4	19.2	22.0	24.2	27.6	30.7	32.2	32.9	31.1	28.9	27.0	26.5	26.2	26.5	26.7	26.7	26.2	24.9	98.5					
24	27.7	25.7	24.6	23.1	23.4	22.9	21.3	19.9	19.9	23.1	25.7	28.9	32.5	33.3	34.2	33.7	32.3	29.8	27.0	25.7	26.1	25.3	23.9	24.0	26.4	134.0					
25 q	24.6	24.7	24.1	23.5	22.3	21.2	20.7	19.9	19.4	20.7	23.1	26.1	29.3	31.1	31.7	31.2	30.3	29.4	28.1	27.1	26.5	25.6	25.5	25.3	25.5	111.4					
26	24.7	24.4	23.9	23.9	24.4	22.6	21.4	21.4	21.6	23.3	27.1	30.7	33.6	34.0	33.7	34.4	32.9	30.0	27.6	27.5	27.1	27.0	21.4	19.9	26.6	138.5					
27 q	21.6	23.1	22.6	20.1	19.8	18.7	16.5	19.0	21.4	22.5	24.0	27.4	29.8	31.9	32.8	31.9	29.4	27.2	26.8	26.5	26.6	26.6	26.5	25.6	24.9	98.3					
28	24.5	24.1	23.9	23.2	21.8	18.7	17.5	19.0	19.7	21.4	25.7	28.9	31.1	31.9	33.6	34.7	33.4	31.4	29.7	29.2	28.0	26.5	26.5	22.9	26.1	127.3					
29	21.7	26.5	25.6	26.1	27.4	29.9	24.2	20.3	21.1	23.4	27.0	29.2	31.9	34.7	35.5	34.8	33.7	36.3	31.6	31.3	29.2	31.1	30.7	27.1	28.8	190.3					
30	19.8	13.8	13.6	24.1	28.0	23.6	21.8	19.6	20.7	22.9	23.2	26.8	29.4	32.3	32.2	31.9	29.9	28.7	27.8	25.8	27.6	30.9	27.6	27.1	25.4	109.1					
31 d	26.3	18.2	17.2	16.2	20.7	21.8	21.6	23.5	24.4	27.5	26.7	29.8	30.7	30.9	32.5	31.5	30.6	26.3	27.0	27.9	27.0	25.3	25.7	27.2	25.7	116.5					
Mean	24.4	24.0	23.9	23.4	22.7	22.2	21.4	21.2	21.4	22.7	25.0	28.3	31.0	32.8	33.2	32.2	31.1	29.6	28.4	27.4	27.2	26.9	26.1	25.4	26.3						
Sum 600.0+	157.7	145.0	141.6	124.3	104.6	89.0	64.3	58.2	63.2	104.4	176.1	277.9	361.1	415.8	430.0	397.7	362.6	317.1	280.5	250.4	243.1	234.5	208.6	188.6		Grand Total 19596.3					

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

75

23 ESKDALEMUIR (Z)		45,000γ (0.45 C.G.S. unit) +																				JULY 1960					
	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 8000+
	γ	γ	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	366	362	342	325	354	363	362	358	358	365	371	369	368	368	374	385	391	397	398	416	415	398	379	369	373	953	
2	361	341	348	358	357	364	359	364	370	374	374	369	370	369	371	372	378	382	386	386	382	382	376	374	369	867	
3	371	370	369	360	354	365	369	371	369	365	357	352	368	370	374	368	376	385	386	389	392	388	376	373	372	917	
4	366	330	339	339	346	348	353	363	363	355	348	347	351	359	371	378	394	406	399	397	394	393	382	377	367	798	
5	370	356	346	340	347	359	365	365	369	369	363	356	358	364	369	375	383	387	387	392	396	389	377	370	369	852	
6	358	335	335	349	362	369	371	376	369	366	364	346	345	350	359	371	381	382	380	375	371	373	371	370	364	728	
7 q	370	370	371	371	370	370	369	368	365	362	354	346	345	348	354	365	370	370	370	371	370	370	370	370	365	759	
8 q	369	369	370	370	371	370	373	374	367	351	347	343	340	348	358	363	366	373	375	371	371	370	369	368	364	746	
9 q	366	365	364	365	369	368	365	364	359	348	340	331	323	328	336	346	359	370	375	373	370	369	365	365	358	583	
10	365	365	363	357	362	364	365	365	365	359	356	353	346	341	346	357	363	370	370	377	376	377	376	368	363	704	
11	357	348	352	358	359	358	358	362	364	363	360	357	354	349	356	365	372	380	380	381	377	381	370	364	364	725	
12	363	363	358	358	360	366	369	370	373	373	369	370	371	374	380	392	394	389	382	381	377	371	370	368	373	941	
13	359	358	359	359	361	363	365	365	364	359	353	351	358	368	370	374	382	393	392	384	377	376	371	369	368	830	
14 d	365	364	365	369	370	363	357	358	353	353	354	357	370	382	389	389	399	411	427	411	408	392	377	374	377	1057	
15 d	374	370	370	368	369	366	365	364	363	359	357	370	389	422	452	509	542	515	460	439	370	317	242	198	385	1250	
16 d	95	70	138	167	228	308	324	336	354	375	387	398	423	427	437	446	492	501	481	455	433	424	397	369	353	465	
17	336	305	309	317	325	347	355	362	374	367	370	367	370	377	389	398	417	433	420	409	397	388	388	358	370	878	
18	365	366	369	359	371	366	370	368	366	366	364	365	366	369	382	399	391	385	385	382	385	388	384	381	375	992	
19 d	380	378	377	376	374	372	374	373	365	366	369	368	381	378	383	402	409	411	415	405	377	381	371	357	381	1142	
20	327	347	354	367	378	383	385	383	381	371	364	362	361	365	377	392	392	391	402	408	400	383	367	358	375	998	
21	361	365	369	375	365	335	351	366	372	369	365	357	361	366	366	373	378	383	389	385	375	374	372	368	368	840	
22	360	362	363	368	365	361	358	362	357	352	358	358	358	363	365	371	373	378	381	385	384	380	373	363	367	798	
23	334	334	350	363	370	374	376	375	371	367	363	358	358	359	364	365	370	376	377	380	376	373	370	370	366	773	
24	361	357	363	366	369	366	369	368	365	362	352	345	347	347	354	365	369	376	380	382	379	380	374	369	365	765	
25 q	369	370	371	371	373	370	373	374	370	362	351	346	347	351	358	359	363	366	370	373	374	370	369	369	365	769	
26	369	369	369	371	373	373	371	370	366	358	358	360	361	361	363	359	357	368	380	382	381	374	374	365	368	832	
27 q	363	370	371	374	376	376	377	376	373	367	363	358	353	353	361	367	371	376	374	371	370	369	369	370	369	848	
28	370	370	371	371	374	373	371	367	360	357	350	346	342	345	350	353	359	364	367	370	371	374	370	363	363	708	
29	360	342	323	299	311	310	309	324	341	340	345	350	352	359	370	386	427	467	473	447	430	400	388	382	368	835	
30	335	324	325	341	351	360	363	364	364	359	359	364	367	370	377	386	390	391	391	390	384	377	372	369	366	773	
31 d	362	331	273	299	324	329	333	339	351	358	359	368	380	394	399	403	408	428	413	398	391	384	369	363	365	756	
Mean	353	346	347	349	356	360	362	364	364	362	359	357	361	365	373	382	391	397	396	392	386	379	370	363	368		
Sum 10,000+	927	726	746	830	1038	1159	1224	1294	1295	1214	1141	1080	1178	1329	1565	1839	2123	2304	2272	2164	1954	1764	1470	1246		Grand Total 273,882	

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

24 ESKDALEMUIR														JULY 1960			
TERRESTRIAL MAGNETIC ELEMENTS														3-hr. range indices K	Sum of K indices	Magnetic character of day, C (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	h. m.	γ				
1	18 39	879	710	11 33	169	12 46	32.6	17.1 04 01	15.3	20 06	422	317 03 04	105	4,3,4,3,3,3,4,3	27	1	82.7
2	18 31	817	708	11 18	109	14 05	32.6	18.0 08 10	14.6	18 59	387	340 01 09	47	3,3,3,4,3,2,3,1	22	1	82.6
3	19 33	844	721	11 12	123	14 27	31.1	17.9 08 05	13.2	20 42	394	351 11 02	43	2,2,3,3,3,3,3,3	22	1	82.7
4	18 39	837	715	11 01	122	15 27	34.7	15.1 07 25	19.6	17 22	409	319 01 37	90	3,3,3,3,3,4,3,2	24	1	82.9
5	19 40	848	709	09 58	139	13 11	34.1	18.9 05 34	15.2	20 33	397	338 03 43	59	3,2,3,3,3,2,3,3	22	1	82.9
6	19 09	810	675	10 50	135	12 38	37.5	17.2 02 01	20.3	17 10	383	330 02 00	53	3,3,3,3,3,3,1,1	20	0	82.7
7 q	17 33	823	729	10 37	94	14 10	32.4	19.4 06 44	13.0	17 54	373	343 11 59	30	1,1,2,2,2,3,2,1	14	0	82.7
8 q	18 22	816	741	10 34	75	13 43	34.3	17.4 06 47	16.9	18 15	376	340 12 15	36	2,1,1,1,2,2,1,1	11	0	82.8
9 q	20 40	817	753	11 31	64	14 19	37.1	18.7 06 05	18.4	18 30	375	320 12 24	55	1,1,1,2,2,1,2,1	11	0	83.1
10	19 56	842	741	11 17	101	15 06	37.8	18.5 07 03	19.3	18 45	380	340 12 19	40	3,2,1,3,2,3,3,2	19	0	83.0
11	20 10	839	748	11 22	91	14 18	34.7	15.8 05 18	18.9	21 30	382	346 01 29	36	3,3,1,3,2,3,3,3	21	1	83.1
12	19 09	817	738	13 10	79	14 03	35.4	19.4 08 43	16.0	16 13	396	357 03 28	39	2,3,3,2,3,3,2,2	20	1	83.2
13	20 37	847	752	10 30	95	16 23	35.2	20.5 04 27	14.7	17 29	394	351 11 14	43	3,3,3,2,3,4,3,2	23	1	83.5
14 d	17 21	1011	720	10 05	291	17 21	41.4	20.1 08 59	21.3	17 58	432	348 09 10	84	1,3,3,3,4,6,4,5	29	1	83.3
15 d	16 36	1059	497	23 53	562	16 34	46.9	17.3 23 58	64.2	17 08	574	104 23 57	470	3,3,3,3,4,6,6,7	35	2	83.3
16 d	16 40	890	341	01 47	549	01 38	37.8	16.8 00 05	54.6	17 50	507	86 01 45	593	7,5,4,4,3,5,4,3	35	2	83.5
17	17 23	828	664	08 27	164	02 00	35.1	18.4 08 06	16.7	17 08	438	290 01 29	148	5,3,3,2,2,4,3,3	25	1	83.7
18	20 50	801	708	12 13	93	14 50	36.9	17.3 05 52	19.6	15 31	404	353 03 26	51	2,2,2,3,3,3,2,1	18	1	83.5
19 d	19 41	912	643	11 31	269	14 06	38.5	16.5 19 35	22.0	19 09	422	323 24 00	99	1,2,3,4,4,4,5,4	27	1	83.4
20	22 34	859	690	11 54	169	14 50	36.5	9.4 22 26	27.1	18 55	414	318 00 11	96	3,1,2,3,4,4,4,5	26	1	83.5
21	17 17	811	716	13 08	95	13 38	33.4	18.2 07 11	15.2	18 31	392	330 05 21	62	2,3,2,2,3,3,2,2	19	1	83.4
22	19 37	817	717	10 58	100	13 23	37.1	20.7 07 50	16.4	19 48	397	350 09 17	47	3,3,2,2,3,2,2,3	20	0	83.5
23	01 03	820	733	10 41	87	14 01	33.8	12.0 00 55	21.8	19 22	382	324 00 45	58	4,1,2,1,2,2,2,2	16	0	83.5
24	19 03	825	740	13 28	85	14 37	35.3	17.4 08 10	17.9	19 13	383	342 11 42	41	3,2,3,2,4,3,3,2	22	1	83.6
25 q	21 03	813	747	10 41	66	14 20	31.9	18.9 07 15	13.0	20 13	375	346 11 50	29	1,2,1,1,1,2,2,2	12	0	83.6
26	19 15	833	751	23 12	82	15 05	34.9	17.8 23 20	17.1	19 32	383	357 16 21	26	1,2,1,1,3,2,3,4	17	0	83.7
27 q	18 20	812	741	09 38	71	14 00	33.0	14.9 06 32	18.1	06 50	380	352 12 36	28	3,1,2,2,3,2,1,1	15	0	83.9
28	23 08	829	744	13 02	85	15 34	35.0	16.7 06 53	18.3	05 01	375	342 12 36	33	0,1,2,2,3,2,2,3	15	0	84.0
29	17 37	881	732	12 36	149	17 20	38.6	19.3 07 23	19.3	17 54	488	295 03 52	193	4,4,3,3,3,5,5,3	30	1	84.1
30	00 12	829	713	12 08	116	15 03	33.6	9.3 01 20	24.3	19 30	393	317 01 52	76	4,4,2,4,4,3,3,3	27	1	84.2
31 d	16 23	838	690	08 46	148	15 10	34.9	6.3 02 55	28.6	17 34	433	265 02 18	168	5,4,3,4,3,4,3,4	30	1	84.2
Mean	- -	849	701 - -	148	- -	35.6	14.6 - -	21.0 - -	- -	408	312 - -	96	-	-	0.71	83.3	

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

21	ESKDALEMUIR (H)												16,000γ (0.16 C.G.S. unit) +																AUGUST 1960	
	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 17,000+				
	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					
1	768	772	777	781	769	779	781	766	759	757	747	740	764	760	776	773	787	797	807	798	795	793	795	780	776	1621				
2	774	771	778	769	786	790	786	770	755	755	747	747	748	755	768	762	788	817	801	789	789	798	793	771	775	1607				
3	774	773	781	783	781	779	770	763	753	748	747	753	769	764	778	773	793	801	795	799	793	789	788	787	776	1634				
4 q	786	787	793	788	785	786	778	777	761	735	746	748	758	763	776	778	786	796	797	802	793	789	783	783	778	1674				
5 q	788	786	784	781	784	783	780	774	764	761	766	769	775	784	788	780	784	789	797	793	795	793	793	792	783	1783				
6	793	793	788	793	794	793	789	784	769	753	756	760	776	786	789	803	809	792	798	808	807	803	799	798	789	1933				
7	802	794	796	799	791	791	788	783	769	763	760	758	756	761	772	786	800	791	803	806	806	801	799	797	786	1872				
8	799	798	799	800	798	793	787	752	744	753	757	752	776	778	780	822	814	802	789	793	788	778	772	774	783	1798				
9	766	778	781	780	791	773	764	758	749	756	745	714	735	751	753	766	788	781	791	784	793	789	787	794	769	1467				
10	801	801	795	800	798	799	789	766	739	765	776	764	768	759	754	763	769	815	804	800	799	794	786	788	783	1792				
11	784	784	787	761	773	789	789	771	749	739	740	726	736	750	792	764	766	786	817	803	804	797	796	803	775	1606				
12	813	793	791	796	802	770	772	741	750	746	742	719	704	709	736	754	759	786	796	804	805	798	798	791	770	1475				
13	789	786	789	788	788	788	783	769	753	731	721	714	719	731	764	776	785	793	802	800	794	796	789	776	772	1524				
14	778	781	780	776	787	793	788	774	761	746	735	728	731	739	757	781	794	825	839	827	825	799	803	808	781	1755				
15	796	789	789	791	791	793	788	775	761	741	738	746	762	765	765	770	774	794	802	800	808	803	802	798	781	1741				
16 d	804	795	790	786	788	784	780	777	770	759	753	745	748	763	856	901	896	886	858	804	754	739	749	751	793	2036				
17 d	742	672	682	676	684	704	747	679	619	692	705	698	705	746	730	784	865	969	867	816	744	736	749	751	740	762				
18	769	767	757	768	766	764	748	735	722	690	696	716	720	733	731	746	756	753	776	787	784	782	783	781	751	1030				
19	779	772	772	773	773	766	759	746	728	707	703	724	744	759	743	748	787	789	822	815	788	777	776	765	763	1315				
20	773	774	778	776	769	733	731	716	729	729	728	728	747	732	752	762	784	794	789	779	781	779	776	772	759	1211				
21 d	772	767	769	768	765	763	756	742	707	696	739	757	766	778	773	760	784	811	814	806	784	786	792	807	769	1462				
22	781	767	772	768	766	763	754	740	723	718	733	750	760	766	763	765	783	776	784	800	783	784	782	783	765	1364				
23	770	778	778	770	776	775	768	763	754	746	738	739	744	761	769	775	791	776	786	783	786	785	786	785	770	1482				
24 q	789	781	784	788	788	783	769	749	740	733	742	753	762	773	778	791	799	798	789	790	790	788	784	783	776	1624				
25 q	783	785	783	783	781	777	769	753	738	731	725	730	742	761	777	791	788	796	795	803	801	798	797	796	774	1583				
26 q	796	794	794	791	788	785	775	764	754	744	740	746	760	769	780	783	784	784	800	808	804	790	797	793	780	1723				
27	811	795	794	793	789	791	789	775	763	754	749	751	766	781	791	799	811	818	785	797	790	811	796	798	787	1897				
28	794	793	789	776	774	766	765	756	757	736	728	726	742	732	738	749	776	792	787	786	788	789	789	788	767	1416				
29 d	824	806	807	823	808	789	774	753	746	742	724	719	727	731	761	781	791	791	788	776	767	748	728	741	769	1445				
30 d	727	762	771	681	765	714	669	657	666	691	687	699	743	737	752	747	766	773	767	770	773	781	769	766	735	633				
31	776	764	772	757	784	787	767	766	729	708	716	727	732	741	741	754	761	771	789	786	781	787	781	777	761	1254				
Mean	784	779	781	776	780	776	769	755	741	736	736	737	748	755	767	777	791	801	801	797	790	787	784	783	772					
Sum 22,000+	2301	2158	2200	2063	2182	2043	1852	1394	981	825	829	846	1185	1418	1783	2087	2518	2842	2834	2712	2492	2380	2317	2277		Grand Total 574,519				

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

22	ESKDALEMUIR (D)													10° +													AUGUST					1960	
	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 500.0+							
1	27.9	25.2	24.0	23.8	26.3	22.1	21.0	21.9	21.6	22.0	22.9	27.5	31.1	31.4	30.1	31.0	30.6	29.2	27.6	26.8	27.1	26.5	23.2	24.3	26.0	125.1							
2	23.9	24.0	24.6	28.1	28.5	22.9	21.4	21.0	23.5	22.9	24.5	26.8	31.0	33.2	33.7	32.4	30.4	28.9	26.2	26.1	26.4	26.0	21.4	23.5	26.3	131.3							
3	20.7	21.7	23.5	22.8	23.3	22.7	21.2	21.5	22.0	22.9	26.4	28.2	30.5	31.8	31.8	30.1	26.8	28.0	27.1	27.1	26.9	26.4	26.4	27.0	25.7	116.8							
4 q	27.4	27.7	23.8	22.8	23.4	25.4	20.6	21.3	22.3	23.7	25.9	27.0	29.7	31.8	32.0	30.2	28.5	27.4	26.4	26.4	26.1	26.2	25.9	25.6	26.1	127.5							
5 q	25.0	25.1	24.0	23.6	22.8	22.3	21.7	21.1	21.8	23.8	25.2	28.2	30.9	31.3	29.8	29.2	27.6	26.6	26.2	26.4	26.6	26.8	27.1	27.2	25.8	120.3							
6	26.6	25.5	24.5	23.8	22.8	21.7	22.0	21.6	21.4	22.9	26.4	29.7	32.8	33.7	31.8	30.2	28.9	26.4	26.7	27.9	27.2	25.9	24.1	24.4	26.2	128.9							
7	25.9	27.2	28.9	22.5	20.5	20.1	20.2	19.4	19.8	21.8	22.9	25.3	29.7	33.3	33.6	32.3	31.0	28.2	28.0	27.5	26.9	26.5	26.0	25.6	26.0	123.1							
8	25.8	25.6	25.6	24.6	23.6	20.2	19.2	18.9	21.2	20.5	26.0	30.8	32.6	35.1	34.1	34.2	32.4	29.7	27.3	23.6	22.4	22.7	25.6	23.6	26.1	125.3							
9	24.5	21.5	22.9	21.9	24.8	35.1	30.7	26.5	18.7	18.8	23.3	27.7	28.3	30.6	30.9	29.4	27.9	26.9	26.9	26.4	26.5	26.6	26.0	26.6	26.2	129.4							
10	26.2	21.5	23.2	22.7	20.6	20.1	19.7	19.2	21.4	24.5	26.0	28.6	31.5	33.2	33.6	33.1	30.3	29.7	29.1	26.9	25.2	27.5	27.0	26.5	26.1	127.3							
11	24.8	24.2	25.4	33.6	22.3	18.0	17.4	17.8	20.4	23.2	27.9	31.2	33.0	34.2	35.6	33.7	32.7	31.6	30.3	27.3	28.2	27.5	27.1	27.8	27.3	155.2							
12	22.5	20.8	20.5	22.0	23.4	27.1	24.7	25.8	29.2	26.0	24.9	28.4	31.8	34.2	33.8	31.8	28.8	27.6	27.8	27.1	27.1	25.7	23.4	24.1	26.6	138.5							
13	24.7	24.4	26.3	24.1	24.5	21.7	19.4	17.2	17.9	21.6	25.7	30.2	35.9	36.0	34.1	31.0	28.3	25.9	26.0	26.4	26.9	27.2	25.3	24.7	26.1	125.4							
14	25.6	25.7	27.2	27.6	24.4	21.5	20.1	17.6	18.6	21.6	24.2	27.6	31.7	35.4	35.1	34.6	32.4	29.7	28.5	29.3	24.3	25.0	27.6	27.8	26.8	143.1							
15	28.2	23.8	24.7	27.9	23.4	22.8	20.1	18.0	18.7	24.2	27.0	29.4	31.6	32.5	30.5	28.4	26.9	26.6	26.3	26.9	27.9	26.9	26.7	26.5	26.1	125.9							
16 d	25.9	24.9	24.1	23.3	22.0	20.2	19.1	19.3	20.8	23.8	26.9	31.6	35.7	37.3	38.0	36.2	34.7	30.2	28.8	27.4	20.2	25.1	27.4	30.4	27.2	153.3							
17 d	31.2	10.4	7.9	9.3	26.9	28.2	16.6	17.8	27.7	30.2	28.7	31.6	33.2	33.4	32.4	31.8	28.3	25.0	24.2	23.4	25.8	24.2	15.7	22.0	24.4	85.9							
18	22.8	25.9	22.8	22.5	20.1	19.9	22.2	24.2	23.8	25.6	30.5	31.7	32.9	33.6	31.9	29.2	26.9	24.2	24.0	26.0	26.4	26.9	25.7	25.3	26.0	125.0							
19	24.0	24.2	23.8	21.4	20.2	18.7	18.1	17.4	18.0	21.5	27.9	31.5	35.2	36.9	35.5	33.3	32.4	26.0	26.9	26.7	25.7	22.4	17.9	24.2	25.4	109.8							
20	24.6	23.9	22.8	20.5	19.8	16.1	17.3	21.0	19.8	21.5	25.1	28.7	31.7	31.4	30.1	29.1	28.1	26.2	25.6	25.2	21.1	25.8	23.9	24.2	21.3	24.6	91.6						
21 d	24.2	20.4	19.0	18.4	17.0	20.6	19.7	20.6	23.2	28.2	32.0	33.6	35.0	35.4	34.4	30.3	29.2	28.7	21.5	25.2	28.0	26.9	26.0	25.2	25.9	122.7							
22	21.7	27.2	20.6	20.5	20.0	20.7	18.6	18.4	19.4	23.7	28.2	33.7	36.8	36.0	32.8	30.1	28.2	27.1	25.4	21.0	24.6	26.1	26.3	27.4	25.6	114.5							
23	26.5	24.8	23.3	24.2	22.6	20.7	19.2	18.3	17.9	19.8	24.2	29.6	33.4	33.9	33.0	31.6	28.7	24.5	20.8	24.6	25.5	25.2	25.6	25.8	25.2	103.7							
24 q	26.3	26.6	26.4	23.0	21.6	20.2	18.8	17.5	17.6	21.6	28.0	33.4	33.4	33.9	32.8	30.5	28.1	26.0	25.1	25.6	25.3	26.2	25.6	25.1	25.8	118.6							
25 q	24.8	24.3	23.8	23.5	22.5	20.6	19.0	17.6	17.4	20.2	26.1	30.8	33.5	34.1	34.1	32.3	29.3	28.7	29.4	29.5	28.2	26.9	26.5	25.7	26.2	128.8							
26 q	26.1	24.6	24.2	23.8	22.8	21.2	20.1	19.1	19.4	22.2	27.7	33.5	36.1	35.4	33.6	30.7	27.9	26.9	27.7	26.9	26.6	26.7	26.3	24.5	26.4	134.0							
27	21.3	19.7	22.5	20.2	18.9	17.9	17.7	18.8	19.5	22.7	27.9	32.7	35.5	35.9	37.7	35.8	33.5	28.0	26.0	28.3	23.3	23.2	25.8	25.7	25.8	118.5							
28	24.7	23.9	23.7	28.4	24.0	20.4	18.1	18.2	19.8	22.3	25.7	30.0	34.2	34.5	34.5	31.6	26.1	26.1	25.8	26.1	26.6	27.0	26.7	26.4	26.0	124.8							
29 d	29.1	20.5	18.8	20.2	25.3	23.3	13.4	15.2	20.2	22.8	25.8	28.6	31.0	31.0	31.5	30.8	30.3	27.2	25.1	21.5	19.3	18.1	10.5	21.6	23.4	61.1							
30 d	25.1	8.0	21.6	28.7	29.2	40.8	35.0	23.8	24.1	26.5	29.6	31.6	31.5	30.3	30.5	29.2	26.4	23.3	19.8	23.3	23.1	20.9	23.4	23.0	26.2	128.5							
31	26.8	21.8	22.1	28.7	23.2	22.0	22.0	20.1	22.3	26.6	27.6	29.7	31.0	32.2	31.2	29.8	28.1	26.1	25.1	27.0	26.5	20.8	24.3	24.7	25.8	119.7							
Mean	25.3	23.1	23.1	23.5	22.9	22.4	20.8	19.9	20.9	23.2	26.5	30.0	32.7	33.6	33.1	31.4	29.3	27.3	26.2	26.0	25.7	25.3	24.5	25.3	25.9								
Sum 600.0+	184.8	115.0	116.5	128.4	110.7	95.2	44.3	16.1	49.4	119.6	221.1	328.7	412.2	442.9	425.4	373.9	309.7	246.6	211.6	206.7	196.6	183.9	160.7	183.5		Grand Total 19283.5							

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

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23	ESKDALEMUIR (Z)												45,000γ (0.45 C.G.S. unit) +																AUGUST 1960	
	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 8000+				
	γ	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	357	357	364	363	354	343	348	351	352	357	358	358	358	364	378	373	372	377	382	385	385	380	374	367	365	757				
2	363	354	352	347	329	342	357	365	367	369	367	364	362	369	376	378	385	394	405	397	388	379	365	360	368	834				
3	354	357	361	367	371	374	376	375	370	366	362	359	362	368	374	377	385	388	387	382	381	378	377	371	372	922				
4 q	365	357	348	354	359	356	362	364	365	366	359	362	363	363	371	380	382	382	385	379	379	376	376	375	368	828				
5 q	372	371	371	374	375	376	371	373	371	370	359	348	351	360	368	371	377	378	377	376	376	375	374	373	370	887				
6	371	370	371	370	371	374	372	370	369	365	362	354	348	352	363	371	376	380	374	370	370	374	377	376	369	850				
7	371	370	350	351	355	357	358	359	360	363	360	358	355	358	365	370	374	376	374	370	371	370	370	370	364	735				
8	370	370	368	367	368	369	369	369	357	343	340	341	342	352	370	377	401	423	431	424	410	388	354	330	372	933				
9	303	336	362	372	369	355	331	340	358	354	352	362	360	362	371	377	389	394	392	389	382	376	375	373	364	734				
10	367	357	362	368	374	375	375	373	371	363	359	348	347	355	369	378	388	397	413	411	399	381	378	374	374	982				
11	374	371	369	351	313	335	357	363	366	362	355	358	364	365	373	386	382	377	376	381	376	374	370	368	365	766				
12	354	346	346	350	345	340	339	350	344	347	351	360	367	372	381	392	392	386	379	376	377	378	375	371	363	718				
13	369	369	363	361	366	368	371	374	368	362	355	348	354	366	375	385	386	383	373	374	376	376	374	371	369	867				
14	370	370	369	365	367	369	371	372	371	365	363	362	359	358	366	369	370	376	389	391	390	391	383	373	372	929				
15	350	361	363	357	367	374	382	388	385	370	358	350	348	354	365	370	376	374	374	372	367	366	365	365	367	801				
16 d	363	360	362	365	368	369	369	370	367	365	358	346	342	355	374	427	514	561	541	495	468	416	400	385	402	1640				
17 d	259	204	125	73	229	175	277	341	344	338	348	365	384	396	390	411	486	571	542	507	455	428	366	365	349	379				
18	382	377	381	386	390	390	381	377	377	385	376	372	375	387	400	407	412	415	409	400	394	390	386	383	389	1332				
19	381	381	381	382	385	389	392	392	386	381	377	371	370	373	382	384	387	408	415	423	421	411	367	377	388	1316				
20	382	387	388	388	388	380	342	324	327	341	351	353	365	381	383	388	392	403	412	423	409	400	391	388	379	1086				
21 d	375	369	368	369	367	376	380	380	375	366	362	359	362	370	384	397	397	413	431	415	394	384	374	352	380	1119				
22	344	312	330	360	371	376	381	382	377	367	360	356	356	355	364	376	387	389	388	396	383	380	377	369	368	836				
23	362	366	371	373	375	380	380	380	377	370	357	350	351	358	366	371	382	390	396	383	377	376	376	376	373	943				
24 q	371	369	369	369	371	375	376	374	368	359	348	348	354	357	365	372	380	385	385	377	376	374	374	374	370	870				
25 q	371	370	371	371	374	375	375	373	370	363	354	349	347	351	363	374	376	375	371	370	371	374	371	370	368	829				
26 q	370	370	370	371	373	375	376	376	371	362	349	335	334	342	358	371	376	374	369	374	376	378	375	370	366	795				
27	344	336	339	347	359	366	369	369	364	359	354	352	350	354	365	373	382	409	424	401	400	382	377	373	369	848				
28	371	371	370	358	337	342	359	368	366	363	357	352	355	366	374	381	392	392	385	381	377	373	370	370	368	830				
29 d	352	338	352	355	353	293	283	324	346	353	355	358	360	365	371	376	382	389	396	414	403	382	352	346	358	598				
30 d	293	284	232	186	192	223	271	315	346	361	384	390	407	429	438	453	431	424	435	412	398	384	381	382	352	451				
31	368	365	366	348	331	345	358	365	373	376	377	367	366	370	377	380	381	386	389	381	379	381	371	369	370	869				
Mean	358	354	351	349	353	353	358	364	365	362	359	357	359	365	375	384	393	402	403	398	391	383	374	370	370					
Sum 10,000+	1098	975	894	818	946	936	1108	1296	1308	1231	1127	1055	1118	1327	1619	1895	2192	2469	2499	2329	2108	1875	1595	1466		Grand Total 275,284				

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

24 ESKDALEUIR														AUGUST 1960			
TERRESTRIAL MAGNETIC ELEMENTS														3-hr. range indices K	Sum of K indices	Magnetic character of day, C (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	γ h. m.	γ	h. m. γ	γ h. m.	γ	h. m. γ	γ h. m.	γ						
1	18 05	810	727 13 18	83	13 00	33.5	19.3 06 00	14.2	20 00	386	340 05 10	46	2,3,2,3,4,3,2,3	22	1	84.3	
2	21 59	838	738 10 57	100	04 04	36.6	17.7 22 25	18.9	18 22	406	322 04 22	84	2,4,2,2,3,4,3,4	24	1	84.5	
3	16 46	807	742 11 18	65	14 05	32.8	18.2 00 30	14.6	18 02	389	352 01 01	37	3,2,1,2,3,3,2,1	17	0	84.2	
4 q	17 38	807	726 09 26	81	14 18	32.6	19.2 06 58	13.4	18 29	386	347 02 17	39	2,3,1,3,2,2,2,1	16	0	84.3	
5 q	14 32	799	758 09 35	41	13 08	31.9	20.6 07 30	11.3	17 27	379	347 11 48	32	1,2,1,2,2,2,1,1	12	0	84.2	
6	20 54	819	749 09 32	70	13 17	34.4	20.4 05 57	14.0	17 13	382	347 12 09	35	1,1,2,2,2,3,3,3	17	0	84.2	
7	16 54	843	749 12 01	94	14 15	34.8	18.6 07 45	16.2	17 40	377	347 03 12	30	3,2,1,2,2,4,2,0	16	0	84.2	
8	15 26	848	734 08 12	114	13 47	37.6	17.0 07 11	20.6	18 18	434	306 24 00	128	1,2,3,3,4,4,3,3	23	1	83.9	
9	24 00	805	700 11 39	105	05 40	39.6	16.8 08 55	22.8	17 12	397	294 00 18	103	3,5,4,3,3,3,3,2	26	1	84.3	
10	17 43	827	726 08 31	101	14 05	35.0	18.2 07 03	16.8	18 48	416	346 12 00	70	3,2,3,3,4,4,3,2	24	1	83.7	
11	18 43	841	697 11 12	144	14 36	37.2	14.6 07 24	22.6	15 30	388	306 04 20	82	2,4,3,3,4,4,3,3	26	1	83.9	
12	00 53	825	684 12 01	141	14 00	35.6	15.8 00 56	19.8	16 30	393	334 05 58	59	3,4,4,4,3,3,2,2	25	1	84.4	
13	18 44	815	708 11 33	107	12 53	37.3	15.5 08 06	21.8	16 30	388	347 11 13	41	2,2,2,2,3,2,2,2	17	0	83.9	
14	18 02	850	717 13 12	133	15 16	38.8	16.4 08 15	22.4	21 12	394	357 13 32	37	2,3,2,2,3,4,3,3	22	1	84.0	
15	00 03	816	735 10 17	81	00 14	33.7	17.1 08 10	16.6	07 53	389	342 00 35	47	3,2,2,2,3,3,2,1	18	0	83.8	
16 d	17 04	968	718 23 58	250	14 17	46.5	6.4 20 23	40.1	17 22	638	335 24 00	303	2,1,1,3,6,5,5,5	28	1	84.2	
17 d	17 29	1031	451 02 56	580	00 01	44.9	-1.8 03 25	46.7	17 36	597	-13 03 23	610	7,6,6,4,4,7,6,5	45	2	84.5	
18	19 18	792	673 09 58	119	12 30	33.9	18.7 05 25	15.2	17 20	416	370 11 46	46	3,2,3,3,3,3,2,2	21	0	84.4	
19	16 18	852	690 09 59	162	12 51	39.3	7.6 22 22	31.7	20 03	429	357 22 45	72	2,1,2,3,3,5,4,4	24	1	84.5	
20	17 31	823	692 07 48	131	06 26	34.7	9.9 07 51	24.8	19 23	426	323 07 38	103	2,4,5,2,3,4,3,3	26	1	84.4	
21 d	18 59	850	681 09 20	169	13 07	37.7	13.2 04 35	24.5	18 39	438	346 24 00	92	3,3,4,4,4,4,4,3	29	1	84.3	
22	19 31	830	711 09 11	119	12 36	37.7	15.5 19 17	22.2	19 14	399	296 01 42	103	4,2,2,4,3,3,2,4,2	22	1	84.3	
23	16 24	801	731 11 05	70	13 06	34.5	16.9 07 35	17.6	18 22	397	348 11 49	49	2,2,2,2,2,3,3,2	18	0	84.4	
24 q	17 08	811	727 09 46	84	11 45	35.0	16.7 07 40	18.3	17 59	388	347 10 54	41	2,1,2,3,2,2,2,1	15	0	84.8	
25 q	19 30	808	722 10 38	86	14 52	34.4	16.7 08 03	17.7	15 50	377	346 13 00	31	1,0,2,1,1,2,3,2,1	12	0	84.5	
26 q	18 46	811	737 10 33	74	12 43	37.1	18.8 08 00	18.3	21 22	381	331 11 58	50	0,1,1,2,2,2,2,2,2	12	0	84.5	
27	17 45	843	739 11 00	104	14 22	38.1	16.4 06 44	21.7	18 29	427	334 01 02	93	3,2,2,2,2,4,4,3	22	1	84.7	
28	00 38	806	720 11 00	86	14 27	35.4	13.7 06 31	21.7	16 52	397	335 04 49	62	2,3,3,2,3,3,1,2	19	1	84.7	
29 d	00 29	888	682 22 39	206	14 36	36.5	6.2 22 46	30.3	19 53	416	271 05 55	145	5,5,3,3,5,4,3,4	32	1	84.7	
30 d	04 29	804	590 03 32	214	05 30	44.7	5.3 01 42	39.4	15 31	458	167 03 44	291	5,6,5,4,4,3,3,2	32	1	84.7	
31	21 49	807	704 09 05	103	13 30	33.2	16.4 21 35	16.8	18 12	390	325 04 12	65	3,3,3,3,3,4,4,3	26	1	85.1	
Mean	- -	835	705 - -	130	- -	36.6	14.9 - -	21.7	- -	415	318 - -	98	-	-	0.65	84.3	

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

21	ESKDALEMUIR (H)												16,000 γ (0.16 C.G.S. unit) +												SEPTEMBER 1960	
	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	775	775	774	774	774	765	762	757	754	747	746	755	760	760	759	757	762	769	778	780	782	780	782	778	767	2405
2	778	778	775	777	774	770	767	762	746	744	754	756	780	780	777	769	788	798	800	782	801	805	774	742	774	2577
3 d	751	765	783	790	760	767	713	767	764	749	744	742	742	747	739	757	774	778	770	774	774	772	772	775	761	2269
4 d	779	773	783	789	781	797	766	670	684	684	715	735	740	737	806	730	766	801	816	747	711	730	666	614	743	1820
5 d	577	621	651	598	667	662	664	602	495	551	613	694	723	731	738	736	751	767	779	764	751	759	744	759	683	397
6	707	749	761	757	756	751	702	721	713	713	708	710	713	721	733	751	748	759	767	777	782	776	779	749	742	1803
7 d	770	755	760	765	768	763	750	744	742	739	727	740	737	760	801	767	795	793	785	783	775	772	773	778	764	2342
8	778	760	758	777	773	773	767	745	713	711	714	714	739	754	758	775	798	775	777	790	781	781	783	781	761	2275
9	787	784	764	745	768	773	761	751	741	718	712	710	731	739	757	771	777	790	781	770	780	776	779	774	760	2239
10	780	776	776	779	779	773	770	766	752	736	719	700	718	731	750	771	778	777	782	771	775	779	779	767	762	2284
11	769	778	773	772	773	782	782	766	752	735	730	721	732	730	746	752	782	776	779	776	792	787	764	776	764	2325
12	766	767	780	783	772	778	780	755	741	729	719	719	721	730	753	745	758	772	786	783	781	781	784	788	761	2271
13	789	802	779	787	758	808	767	750	731	712	701	709	732	730	744	759	765	775	781	794	784	773	760	745	760	2235
14	771	752	764	772	773	784	784	767	752	734	724	718	736	744	757	754	772	782	787	790	786	781	782	782	765	2348
15 q	780	779	780	781	784	778	761	767	753	739	734	734	752	755	769	774	781	782	784	792	796	790	790	794	772	2529
16 q	789	794	790	785	785	783	778	768	751	740	733	733	736	749	766	778	781	786	797	796	795	794	789	790	774	2586
17	790	789	792	789	785	778	772	767	761	752	741	741	750	757	765	769	787	795	798	807	816	812	788	770	778	2671
18	754	749	756	788	780	777	772	765	747	734	726	743	747	754	768	765	777	777	786	789	787	784	782	790	767	2397
19 q	783	776	776	778	777	774	771	761	751	740	733	735	748	760	768	771	780	782	790	790	791	790	789	788	771	2502
20	787	786	785	784	784	782	777	770	758	747	742	746	752	761	769	774	773	779	792	797	803	808	803	814	778	2673
21	798	791	787	784	786	784	782	776	768	756	743	738	741	742	759	767	766	767	778	786	782	787	789	801	773	2558
22	773	774	777	777	775	775	774	772	762	748	739	737	749	757	781	790	787	787	790	801	792	784	784	777	773	2562
23	765	764	773	791	779	777	789	770	769	760	735	742	743	746	748	766	776	783	795	798	797	791	804	810	774	2571
24	779	759	754	778	774	783	759	746	747	722	722	729	738	735	752	763	782	755	766	773	787	778	774	775	760	2230
25 q	771	771	770	770	771	771	770	764	752	736	724	725	733	743	754	767	775	780	788	785	779	781	779	781	764	2340
26	779	775	779	783	785	786	787	779	758	748	738	738	742	753	764	775	783	788	791	794	783	771	755	748	770	2482
27	737	748	756	772	765	786	775	745	744	743	730	720	726	730	744	757	765	779	782	767	769	772	778	782	757	2172
28	778	777	778	779	781	783	785	787	778	748	737	736	746	757	759	753	767	772	775	774	780	782	782	777	770	2471
29	779	781	780	780	782	782	783	778	769	765	758	759	760	768	743	743	768	767	773	769	776	755	736	731	766	2385
30 d	764	769	772	788	789	794	788	765	754	746	747	740	751	737	756	751	761	767	770	759	755	737	770	775	763	2305
Mean	766	767	769	772	772	775	765	753	740	731	727	731	741	747	759	762	774	779	784	782	781	779	774	770	763	
Sum 21,000+	1983	2017	2086	2172	2158	2239	1958	1603	1202	926	808	919	1218	1398	1783	1857	2223	2358	2523	2458	2443	2368	2213	2111		Grand Total 549,024

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

22	ESKDALEMUIR (D)												10° +												SEPTEMBER 1960											
	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	400.0+										
1 q	24.3	23.9	23.3	23.5	22.5	21.5	20.5	20.2	20.9	22.3	25.5	28.6	30.8	30.5	29.9	28.3	26.8	26.2	26.5	26.4	26.2	25.3	23.7	24.6	25.1	202.2										
2	25.4	24.8	24.3	23.2	22.5	21.8	20.5	19.9	21.2	24.4	28.5	32.0	36.1	37.4	37.1	32.3	29.7	30.2	27.9	25.8	27.9	28.4	18.7	9.4	26.2	229.4										
3 d	18.7	27.5	17.4	16.6	23.6	31.1	27.0	26.9	20.3	20.8	26.3	30.1	31.5	32.0	29.6	27.6	25.0	24.2	21.3	21.0	24.3	23.6	24.8	24.9	24.8	196.1										
4 d	22.8	22.6	22.9	20.1	23.9	26.5	24.3	22.2	28.5	28.1	33.5	35.8	35.6	36.5	38.6	31.0	26.6	22.9	9.7	18.1	19.2	26.5	21.8	9.4	25.3	207.1										
5 d	-0.8	-7.8	-4.0	1.9	12.2	21.5	23.4	22.3	24.4	25.1	32.0	33.8	36.5	35.0	35.3	29.2	26.1	27.6	13.8	18.1	25.4	26.0	16.1	9.6	20.7	82.7										
6	17.5	23.5	23.0	18.4	19.4	23.4	28.5	27.3	22.5	23.0	25.3	29.3	30.5	30.9	30.4	28.0	26.4	25.1	24.2	21.3	24.5	26.6	29.6	27.4	25.3	206.0										
7 d	21.7	21.8	24.4	22.7	22.1	20.8	20.6	20.3	20.5	22.9	25.9	30.6	34.8	32.3	33.1	27.8	27.8	26.0	17.8	24.6	23.7	20.3	24.5	25.1	24.7	192.1										
8	16.9	17.6	23.9	24.6	22.3	20.0	20.5	21.3	22.5	24.3	27.3	30.6	34.5	35.3	32.2	30.6	24.7	24.0	26.1	26.4	26.4	25.9	25.5	24.7	25.3	208.1										
9	21.4	16.2	19.4	23.8	23.2	20.8	19.6	19.7	20.8	23.3	27.7	30.9	34.7	36.2	34.7	29.4	25.9	24.3	23.5	25.1	26.0	22.4	24.7	24.1	24.9	197.8										
10	22.2	23.8	23.2	22.4	20.3	21.2	21.1	20.3	20.3	22.5	26.0	29.2	32.4	33.2	33.1	31.0	27.2	26.5	25.2	23.9	25.4	26.0	23.4	20.3	25.0	200.1										
11	24.5	25.2	17.8	19.8	21.4	21.0	20.9	18.6	17.7	19.9	22.9	26.9	31.1	31.8	31.7	29.0	27.2	25.7	26.5	26.5	26.2	18.9	20.7	20.6	23.9	172.5										
12	25.2	28.0	25.9	23.4	21.8	21.0	22.1	23.0	24.2	24.7	25.5	28.9	31.9	32.9	32.8	28.8	28.0	26.2	25.6	23.9	23.7	26.1	26.6	26.5	26.1	226.7										
13	26.3	26.0	18.6	19.1	23.4	19.6	19.3	22.9	21.2	22.9	27.2	28.7	32.7	33.8	30.7	27.6	25.6	24.6	24.5	24.6	23.9	19.9	19.3	17.8	24.2	180.2										
14	20.0	19.9	22.2	22.7	26.5	22.2	20.6	19.9	19.7	23.0	27.1	30.7	33.0	33.2	31.7	28.3	26.6	25.6	25.0	24.7	25.2	25.2	25.4	25.5	25.2	203.9										
15 q	25.4	24.5	24.0	23.8	23.5	23.5	22.5	21.1	18.9	19.8	23.4	27.0	29.8	30.6	30.2	29.0	28.3	27.8	27.5	28.0	27.5	26.5	25.8	26.2	25.6	214.6										
16 q	25.1	24.9	23.4	23.1	23.2	22.7	21.2	19.3	18.7	19.9	23.9	27.5	30.1	31.8	32.9	30.6	29.2	28.3	28.3	27.7	26.9	26.5	25.7	25.6	25.7	216.5										
17	24.7	24.1	23.7	23.9	22.1	21.8	20.9	19.9	18.7	19.8	22.5	26.5	30.4	31.9	32.9	31.3	30.0	28.3	27.8	27.6	22.9	15.3	17.1	17.0	24.2	181.1										
18	16.1	12.2	19.3	19.7	20.3	23.9	21.1	20.3	19.5	22.1	24.4	28.7	31.1	31.9	31.9	29.3	27.6	27.3	27.3	27.3	26.8	26.5	25.6	24.0	24.3	184.2										
19 q	23.9	23.8	22.6	22.2	21.6	21.4	21.6	20.3	20.0	21.3	24.7	28.5	30.1	30.1	29.2	27.5	27.2	27.2	27.5	27.3	26.8	26.0	26.5	25.0	25.1	202.3										
20	24.5	24.4	23.9	23.4	23.1	22.6	22.1	21.0	20.7	22.4	26.4	29.7	31.1	31.5	30.9	29.1	28.0	26.6	26.5	26.5	26.7	27.3	25.9	27.5	25.9	221.8										
21	23.9	22.9	22.4	22.4	22.1	22.1	21.1	20.1	19.3	22.1	26.5	31.1	33.8	34.0	35.4	34.5	33.5	30.5	28.7	27.8	25.3	24.6	22.6	18.2	26.0	224.9										
22	15.9	20.7	22.3	22.4	23.3	22.1	23.0	21.6	20.7	21.1	24.1	28.3	31.7	32.0	34.2	33.5	32.1	32.2	30.4	28.3	24.3	24.5	21.3	17.1	25.3	207.1										
23	13.4	13.1	13.6	16.7	20.3	21.3	20.6	22.3	28.1	25.2	24.9	27.6	31.1	32.4	31.4	31.1	29.7	28.6	28.4	27.5	26.8	26.5	25.4	15.1	24.2	181.1										
24	10.3	11.0	18.6	17.3	17.5	18.0	20.7	26.0	27.3	24.1	26.6	26.4	31.3	32.4	32.7	31.9	31.9	28.2	28.3	26.9	22.3	23.0	23.4	23.9	24.2	180.0										
25 q	23.7	23.7	23.3	23.1	23.0	22.8	22.1	20.6	19.7	20.2	23.4	27.6	31.1	31.2	29.9	28.4	27.5	27.5	27.3	25.3	21.6	23.3	23.6	24.4	24.8	194.3										
26	24.6	26.3	25.3	23.2	22.9	22.4	22.1	21.6	23.5	24.4	24.5	28.3	30.2	30.4	31.1	29.7	28.3	27.7	26.8	26.2	24.5	20.4	17.2	17.5	25.0	199.1										
27	18.2	15.3	10.4	18.0	22.2	21.1	22.1	21.7	24.7	24.3	26.0	27.5	29.3	30.9	31.1	29.3	27.2	26.1	25.4	23.8	23.7	23.1	24.7	25.2	23.8	171.3										
28	25.2	24.9	25.2	23.9	23.2	22.9	22.5	22.3	22.6	23.4	29.0	29.1	29.4	30.5	31.1	29.1	27.5	25.5	25.7	25.7	25.0	24.7	24.6	23.4	25.7	216.4										
29	25.2	25.0	24.2	24.2	23.9	23.4	22.9	22.1	22.7	25.1	26.5	29.3	30.4	33.9	33.6	29.9	29.3	27.7	26.1	23.9	22.6	17.3	9.1	15.3	24.7	193.6										
30 d	22.5	15.1	18.9	19.0	15.3	19.4	20.3	20.7	20.3	23.4	26.9	30.6	32.9	34.9	34.9	32.1	29.8	28.1	25.2	20.9	12.1	15.3	22.6	26.2	23.6	167.4										
Mean	21.0	20.8	20.8	20.9	21.7	22.1	21.9	21.5	21.7	22.9	26.1	29.3	32.0	32.7	32.5	29.8	28.0	26.9	25.2	25.0	24.5	23.7	22.9	21.4	24.8											
Sum 600.0+	28.7	24.9	23.4	28.5	52.6	63.8	55.7	45.7	50.1	85.8	184.4	279.8	359.9	381.4	374.3	295.2	240.7	206.7	154.8	151.1	133.8	111.9	85.9	41.5		Grand Total 17860.6										

SEPTEMBER 1960

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

SEPTEMBER 1960

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.

21		ESKDALEUIR (H)												16,000γ (0.16 C.G.S. unit) +												OCTOBER 1960			
		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 15,000+
1	d	787	772	772	762	763	762	786	755	726	716	734	731	736	736	731	755	754	752	752	753	750	772	772	766	767	754	3090	
2		766	749	761	782	793	777	747	728	725	699	702	719	737	756	789	770	766	767	743	751	758	761	774	769	754	3089		
3		762	758	759	761	765	770	766	766	760	738	700	719	722	747	753	761	752	762	772	777	773	769	770	772	756	3154		
4		771	770	771	776	777	779	780	772	763	751	737	735	739	749	771	787	800	774	781	743	736	742	742	782	764	3328		
5		732	755	759	763	751	747	753	765	749	748	744	747	749	744	753	757	766	768	778	781	784	783	747	723	756	3146		
6	d	747	754	734	807	785	726	715	729	744	756	741	675	688	790	830	883	937	1134	731	727	281	337	203	318	699	1772		
7	d	-56	222	567	366	380	593	679	650	658	592	618	709	739	783	826	848	788	765	739	732	759	784	714	688	631	143		
8		726	700	745	752	747	744	737	737	716	718	684	705	710	722	721	732	739	742	753	740	734	727	734	759	730	2524		
9		754	757	744	744	765	744	738	756	741	730	703	707	731	754	747	768	756	756	745	776	754	752	738	744	746	2904		
10		742	748	735	741	752	753	752	751	745	734	726	724	732	740	748	749	753	761	752	754	749	759	764	750	746	2914		
11		764	770	767	769	777	782	753	737	752	734	725	725	728	742	752	754	753	760	766	769	767	772	768	769	756	3155		
12	q	770	766	766	769	774	774	776	769	757	743	731	727	733	746	756	764	768	777	786	781	782	791	798	789	766	3393		
13	q	779	781	782	781	778	772	776	778	769	754	747	741	747	761	771	775	779	784	787	788	791	787	791	789	775	3588		
14	q	786	786	786	786	786	786	787	785	774	759	751	747	752	757	766	772	778	784	788	791	792	792	788	789	778	3668		
15		785	785	786	786	791	792	796	797	791	783	769	761	742	747	740	764	775	769	771	763	768	769	780	773	774	3583		
16		771	767	764	766	770	772	774	774	769	756	740	734	734	740	744	759	770	777	780	781	781	782	777	780	765	3362		
17		774	769	776	776	778	780	785	781	769	756	742	739	737	747	748	765	769	776	772	771	776	780	781	776	768	3423		
18		774	781	772	783	780	797	786	768	754	753	742	732	739	749	746	746	755	754	736	726	729	728	744	759	756	3133		
19		760	761	759	757	761	767	771	774	762	755	751	745	737	744	756	763	757	766	764	761	761	759	762	771	759	3224		
20		773	772	772	768	778	773	775	778	770	751	747	738	737	742	751	756	742	759	775	779	780	770	757	756	762	3299		
21		771	772	769	771	775	781	780	765	758	750	741	741	749	753	754	762	767	773	767	770	771	782	765	773	765	3360		
22	q	779	778	778	780	780	781	783	781	771	760	746	742	747	754	763	770	775	785	788	789	789	788	788	786	774	3581		
23	q	785	786	786	788	791	790	790	786	778	761	754	756	764	774	785	782	784	790	793	790	799	790	788	786	782	3776		
24		782	783	781	782	785	785	785	782	775	766	760	756	757	765	778	783	787	784	753	746	776	762	763	771	773	3547		
25	d	768	774	778	777	778	775	753	763	725	691	679	708	715	760	752	811	917	871	780	691	675	716	700	704	753	3061		
26	d	694	712	668	708	751	743	708	725	704	677	691	704	712	746	729	740	725	734	754	781	749	753	760	758	726	2426		
27		731	748	739	741	739	756	766	766	751	732	669	687	709	738	741	731	738	751	745	728	735	737	734	748	736	2660		
28		758	755	780	768	773	757	744	739	731	709	699	700	721	733	736	730	728	746	734	740	771	760	781	761	744	2854		
29		758	777	761	775	772	760	755	742	730	729	691	681	731	726	740	754	728	746	762	766	751	743	747	756	745	2881		
30		763	751	754	758	771	762	751	733	733	726	710	710	721	739	752	735	751	765	753	747	752	762	763	766	747	2928		
31		783	760	758	751	759	781	771	745	760	749	720	738	744	732	748	754	751	752	755	755	777	756	761	766	755	3126		
Mean		737	746	756	755	759	763	762	757	749	735	722	725	733	749	757	767	771	780	763	760	747	751	743	748	751			
Sum 22,000+		839	1119	1429	1394	1525	1661	1618	1477	1210	776	394	483	739	1216	1477	1780	1908	2184	1655	1547	1150	1265	1048	1198		Grand Total 559,091		

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

22 ESKDALEUIR (D)													10° +												OCTOBER 1960	
	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		300.0+
1 d	20.9	20.8	7.6	20.6	25.6	28.1	30.4	32.8	25.9	30.4	29.2	31.0	30.8	32.1	29.4	29.8	24.3	24.8	19.7	20.4	20.2	9.8	21.2	19.4	24.4	285.2
2	17.4	17.9	22.5	17.9	21.5	30.1	37.0	37.6	31.4	28.8	30.0	31.4	28.8	29.6	23.3	23.4	20.3	16.5	15.8	25.0	25.5	25.0	24.3	19.6	25.0	300.6
3	23.1	22.8	22.9	24.2	23.9	23.9	25.3	24.1	21.8	23.7	25.2	29.7	30.1	30.6	29.9	28.2	25.4	24.0	25.0	24.6	24.1	22.6	22.7	22.6	25.0	300.4
4	20.9	23.1	23.9	24.4	24.6	24.3	23.9	24.0	23.8	23.8	25.6	28.7	31.9	32.3	34.2	31.4	32.3	30.5	8.3	23.5	15.8	22.6	19.4	24.9	24.9	298.1
5	18.5	24.3	24.8	19.9	22.3	30.6	25.0	23.3	22.4	20.8	24.4	28.3	29.6	31.0	31.1	29.9	26.9	19.0	25.1	26.3	25.4	23.3	13.0	9.9	24.0	275.1
6 d	18.8	21.5	27.1	21.7	31.1	18.3	23.3	25.2	24.2	26.0	28.6	32.8	34.5	37.7	32.6	37.1	42.2	39.3	-0.6	26.9	4.4	8.1	13.9	-36.8	22.4	237.9
7 d	-39.7	14.6	-6.4	-17.6	4.4	9.1	23.1	22.6	18.0	32.3	34.0	32.3	32.7	28.0	25.3	17.0	23.3	14.3	19.7	22.2	26.2	18.3	9.4	21.7	16.0	84.8
8	15.3	30.4	23.3	18.4	17.5	21.8	20.6	19.4	18.6	21.5	23.0	27.7	30.6	29.5	27.7	28.4	26.4	22.5	22.4	14.1	16.2	14.3	18.8	18.9	22.0	227.3
9	14.5	17.0	15.5	18.9	25.0	24.0	28.9	24.6	21.0	22.4	25.2	26.9	29.5	31.0	27.5	24.1	26.0	24.2	24.9	17.0	19.2	18.9	22.8	15.2	22.7	244.2
10	17.6	15.2	18.8	24.3	23.3	22.1	22.0	21.7	20.8	22.4	25.1	27.0	29.2	30.0	29.1	27.4	25.6	24.1	22.5	23.1	21.7	17.7	16.8	20.5	22.8	248.0
11	27.9	21.7	21.8	20.7	20.2	25.1	24.8	27.8	24.3	21.3	24.4	27.9	30.7	33.5	32.6	31.3	29.3	26.3	25.6	25.4	22.4	19.2	23.6	24.1	25.5	311.9
12 q	23.8	24.2	24.1	24.2	23.4	23.5	22.8	21.4	20.2	21.4	22.6	28.0	29.9	31.2	30.8	29.6	27.6	27.4	27.2	26.0	26.3	24.1	18.1	24.5	25.1	302.3
13 q	23.9	24.0	23.7	23.5	22.9	22.7	22.8	21.6	19.7	19.7	21.5	24.3	27.6	29.9	30.4	29.1	27.6	27.1	26.4	26.0	25.6	25.6	25.0	24.6	24.8	295.2
14 q	24.0	24.1	24.1	23.8	23.4	23.1	22.9	22.2	20.3	19.7	22.6	26.0	29.6	30.9	31.0	29.3	27.6	26.7	26.4	26.0	25.6	25.3	24.8	24.6	25.2	304.0
15	23.7	22.8	22.0	22.6	21.7	21.5	22.0	22.0	20.7	20.9	23.8	28.6	31.8	35.1	33.3	34.6	36.1	32.8	33.3	23.8	21.6	20.8	17.0	17.1	25.4	309.6
16	19.5	22.0	20.9	23.3	22.4	22.2	22.0	21.6	20.3	20.8	22.8	26.9	30.5	32.9	30.5	29.2	27.5	26.8	26.0	25.6	25.5	25.0	22.5	21.6	24.5	288.3
17	19.8	22.2	23.2	23.3	23.5	23.3	23.0	22.2	20.4	21.2	23.3	26.0	28.3	31.4	29.8	28.4	26.5	25.9	25.4	23.4	24.4	23.9	23.8	21.2	24.3	283.8
18	20.9	20.0	23.5	17.7	19.2	23.4	23.9	26.4	24.1	24.3	26.6	29.0	31.0	32.3	33.0	28.8	26.5	28.7	28.9	22.2	18.4	17.1	18.3	19.6	24.3	283.8
19	20.2	21.0	22.4	22.4	23.8	25.1	22.3	21.4	20.3	20.6	23.3	27.5	28.8	29.5	29.0	27.3	26.0	25.8	26.2	23.3	20.9	13.2	17.4	22.4	23.3	260.1
20	24.0	24.2	24.6	25.6	23.6	22.5	24.3	22.2	22.2	22.0	25.2	28.9	31.4	33.2	33.2	33.2	29.2	27.4	25.6	24.3	24.4	22.4	14.3	19.6	25.3	307.5
21	20.6	22.4	23.1	22.8	23.0	22.6	22.4	22.0	23.0	23.0	25.0	27.8	29.7	30.5	28.8	27.2	25.8	25.6	25.4	25.4	23.4	17.6	21.5	23.3	24.2	281.9
22 q	23.6	24.1	24.3	24.2	24.2	24.2	22.9	21.4	20.2	20.5	23.5	26.1	29.2	30.7	29.8	28.2	27.2	26.8	26.2	25.6	25.8	24.6	24.4	24.2	25.1	301.9
23 q	23.8	23.7	23.3	23.8	23.8	23.4	23.0	22.5	21.4	21.0	23.4	27.0	29.6	29.6	29.2	27.0	26.4	26.9	27.2	26.8	24.4	24.2	24.1	23.2	24.9	298.7
24	22.7	22.4	22.8	23.1	23.4	23.1	22.8	22.1	21.4	22.0	24.6	28.7	31.0	31.0	31.7	31.3	34.8	34.2	27.4	27.1	24.4	22.8	22.8	22.0	25.8	319.6
25 d	22.6	22.0	23.1	23.4	23.8	24.1	23.8	36.1	32.4	28.0	35.2	33.6	33.2	39.2	33.6	29.5	13.2	29.7	27.4	20.6	0.1	13.8	17.2	15.6	24.8	296.2
26 d	19.5	20.5	16.0	22.3	25.2	21.6	26.0	28.8	28.7	28.2	28.7	29.7	29.7	28.0	29.6	24.2	26.4	25.5	23.7	21.5	21.6	20.9	22.3	20.3	24.5	288.9
27	18.4	21.4	23.3	20.2	23.4	24.0	24.6	24.3	22.4	23.3	25.1	27.7	31.1	29.6	29.3	24.6	23.5	20.1	17.1	22.8	13.4	19.8	22.1	15.7	22.8	247.2
28	21.6	24.2	23.3	17.0	21.7	26.8	34.0	30.6	30.0	27.7	28.9	28.7	30.5	28.3	30.6	30.6	27.4	16.1	17.1	25.1	21.5	20.8	22.4	24.2	25.4	309.1
29	19.8	22.9	22.3	22.4	22.5	23.8	25.6	27.9	26.7	25.6	28.0	28.4	31.4	28.6	26.3	28.4	22.5	19.8	17.8	19.7	19.0	23.3	22.5	20.2	24.0	275.4
30	22.0	26.9	29.0	23.8	24.3	23.3	25.8	26.3	23.9	24.2	25.2	26.9	32.2	31.8	27.9	25.0	21.0	20.4	23.4	18.9	16.3	19.7	21.3	27.8	24.5	287.3
31	23.9	20.7	21.0	25.1	25.3	23.8	23.8	24.4	23.7	24.0	25.7	27.2	31.0	28.3	27.1	28.5	25.0	17.1	10.0	21.5	18.1	21.6	21.2	23.8	23.4	261.8
Mean	19.1	22.1	21.3	20.9	22.7	23.4	24.7	24.9	23.0	23.6	25.8	28.4	30.5	31.2	29.9	28.5	26.8	25.0	22.3	23.4	20.7	20.2	20.3	19.2	24.1	
Sum 500.0+	93.5	185.0	161.8	147.9	203.9	225.4	265.0	270.5	214.2	231.5	299.7	380.7	445.9	467.3	427.6	382.0	329.8	276.3	191.5	224.1	141.8	126.3	128.9	95.5		Grand Total 17916.1

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

81

23 ESKDALEUIR (Z)

45,000γ (0.45 C.G.S. unit) +

OCTOBER 1960

	Hour G.M.T.																								Mean	Sum 8000+
	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	363	343	338	307	297	303	308	323	346	364	362	373	381	400	425	427	439	422	421	404	389	346	365	366	367	812
2	358	338	296	288	304	315	318	325	340	368	384	393	431	435	469	462	459	438	417	394	384	381	376	362	376	1035
3	357	369	376	376	376	376	376	381	383	380	389	389	389	387	387	388	392	389	382	380	381	383	382	377	381	1145
4	371	373	376	376	376	375	376	377	380	379	377	375	371	371	382	419	458	503	513	448	458	431	353	320	397	1538
5	351	338	349	365	364	352	361	369	372	375	374	372	376	385	398	404	400	414	399	388	387	381	322	328	372	924
6 d	360	363	284	209	186	247	286	323	354	364	372	408	433	451	553	614	687	655	487	467	231	230	132	50	364	746
7 d	48	202	220	104	138	176	263	323	365	381	386	415	437	465	519	564	559	499	444	432	370	359	342	292	342	207
8	292	250	301	332	353	367	382	388	391	386	391	391	394	440	420	417	418	426	419	421	396	379	358	345	377	1057
9	354	331	301	298	305	326	335	349	375	383	387	390	391	406	422	437	427	430	423	406	394	383	327	331	371	911
10	357	350	337	341	366	380	388	392	393	392	389	384	380	379	384	392	396	399	403	406	406	394	378	366	381	1152
11	354	342	364	373	376	373	379	381	383	387	383	380	381	385	400	403	399	395	395	394	395	392	387	384	383	1185
12 q	381	383	385	387	387	387	387	389	391	388	381	375	375	372	376	380	383	383	384	388	389	387	378	371	383	1187
13 q	376	378	380	381	382	383	381	382	382	380	376	371	370	368	368	372	377	379	380	381	381	380	380	381	378	1069
14 q	381	380	380	379	379	379	377	378	380	383	375	370	366	366	371	376	379	379	380	381	381	382	382	378	378	1065
15	382	381	381	380	377	377	376	375	375	374	370	370	371	376	377	379	396	438	446	464	424	399	388	375	390	1351
16	381	383	386	384	383	384	382	382	382	377	373	371	376	380	383	383	383	383	382	383	382	383	388	387	382	1161
17	381	381	381	381	381	381	377	381	384	384	381	377	376	376	382	387	388	387	388	393	391	388	387	382	383	1195
18	377	354	337	332	353	354	357	364	370	376	376	379	381	389	403	409	411	427	464	437	389	381	393	389	383	1202
19	387	386	387	388	384	376	375	380	383	385	383	381	378	383	388	395	400	395	396	401	399	396	387	383	387	1296
20	383	383	381	380	377	381	380	382	384	385	383	381	382	390	398	406	412	403	394	389	388	392	395	389	388	1318
21	378	377	382	386	385	383	382	382	383	383	382	380	377	380	383	384	387	387	388	389	389	383	381	381	383	1192
22 q	380	381	382	382	381	380	377	381	383	380	375	366	366	369	372	377	379	377	377	377	377	377	377	377	377	1050
23 q	378	377	376	376	376	376	375	376	376	375	369	364	365	367	372	376	376	376	376	377	376	377	377	378	374	987
24	380	380	377	377	376	376	376	376	375	372	369	366	369	371	377	393	436	523	461	456	416	400	389	380	395	1471
25 d	382	383	383	382	381	382	384	357	346	353	354	372	394	428	449	499	564	677	659	510	434	403	384	296	423	2156
26 d	274	246	260	289	312	333	355	378	387	393	406	427	446	468	485	480	456	437	417	387	378	389	350	357	380	1110
27	352	325	329	341	362	375	383	388	395	395	400	410	412	412	427	435	457	460	434	421	422	381	343	372	393	1431
28	373	348	321	337	346	354	340	363	376	383	400	418	447	447	452	471	476	460	432	416	398	383	376	377	396	1494
29	366	322	357	372	376	379	381	381	386	388	394	406	408	430	425	417	457	441	426	398	402	386	352	364	392	1414
30	370	368	350	360	372	378	381	387	395	395	403	423	415	410	427	430	435	417	415	417	410	395	389	364	396	1506
31	320	343	361	365	372	375	380	390	392	388	390	394	398	408	418	419	414	418	422	403	387	383	388	375	388	1303
Mean	350	350	349	346	351	357	364	371	378	381	382	386	391	400	413	422	432	436	423	410	391	381	365	354	383	
Sum 10,000+	851	858	818	728	883	1083	1278	1503	1707	1796	1834	1971	2136	2394	2792	3095	3400	3517	3124	2708	2104	1803	1306	981		Grand Total 284,670

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

24 ESKDALEUIR

OCTOBER 1960

	TERRESTRIAL MAGNETIC ELEMENTS										3-hr. range indices K	Sum of K indices	Magnetic character of day, C (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	h. m.	γ	h. m.	γ	h. m.	γ				
1 d	06 30	808	678	09 52	130	14 04	36.2	-4.4	21 15	40.6	16 26	444	280	04 02	164	4, 5, 4, 4, 4, 3, 4, 5	33	1	84.5
2	17 01	846	681	12 08	165	07 38	38.9	8.2	17 43	30.7	14 20	480	277	02 52	203	3, 4, 4, 3, 5, 5, 4, 3	31	1	84.7
3	23 49	786	685	10 24	101	13 10	31.0	19.2	23 59	11.8	16 53	395	354	00 29	41	2, 2, 2, 3, 3, 3, 2, 2	19	0	84.7
4	18 12	872	696	19 13	176	16 46	41.9	-20.6	18 27	62.5	18 20	613	273	23 01	340	2, 1, 2, 2, 3, 5, 6, 5	26	2	84.6
5	22 10	800	669	22 54	131	05 16	34.0	-0.5	23 11	34.5	17 38	421	303	22 46	118	4, 4, 3, 2, 3, 4, 3, 5	28	1	84.7
6 d	17 56	1786	-190	22 54	1976	22 55	85.7	-62.2	18 06	147.9	16 43	801	-313	22 55	1114	4, 6, 5, 6, 7, 8, 8, 9	53	2	84.5
7 d	14 57	987	-1253	01 05	2240	01 17	164.7	-105.7	00 31	270.4	15 56	617	-240	00 32	857	9, 8, 6, 6, 6, 6, 5, 6	52	2	84.5
8	23 28	774	626	10 29	138	01 29	35.1	8.5	19 30	26.6	19 18	428	234	01 22	194	5, 2, 3, 4, 3, 3, 4, 4	28	1	84.5
9	19 37	823	685	10 49	138	06 39	32.2	7.2	23 13	25.0	15 12	445	295	03 07	150	3, 4, 3, 3, 4, 3, 4, 5	29	1	84.5
10	22 29	777	723	11 20	54	13 29	30.2	12.5	01 40	17.7	19 58	407	331	03 07	76	3, 3, 2, 0, 1, 1, 2, 3	15	0	84.4
11	21 19	787	712	11 12	75	14 17	35.9	14.3	21 13	21.6	14 57	405	335	01 09	70	3, 3, 3, 2, 2, 2, 2, 3	20	0	84.4
12 q	22 14	811	723	11 42	88	13 22	31.6	15.6	22 03	16.0	20 57	392	369	23 30	23	1, 1, 1, 2, 1, 2, 2, 3	13	0	84.6
13 q	22 37	797	739	11 27	58	14 31	31.1	18.9	09 50	12.2	05 49	383	367	13 02	16	1, 2, 1, 2, 2, 0, 1, 1	10	0	84.5
14 q	21 36	797	741	11 01	56	14 26	31.4	19.1	09 31	12.3	09 29	384	365	13 08	19	1, 1, 1, 2, 1, 0, 0, 1	7	0	84.3
15	18 27	818	720	14 20	98	18 41	39.1	11.4	22 41	27.7	19 13	493	368	10 07	125	1, 2, 2, 2, 3, 3, 4, 4	21	1	84.5
16	23 52	788	727	12 58	61	13 23	35.6	17.2	00 01	18.4	22 30	388	370	11 29	18	2, 1, 2, 2, 2, 2, 0, 2	13	0	84.5
17	06 23	789	731	12 19	58	13 25	32.3	18.7	01 00	13.6	19 52	393	374	13 13	19	2, 1, 1, 2, 2, 1, 2, 2	13	0	84.5
18	05 11	803	670	21 10	133	13 50	34.6	7.0	20 54	27.6	18 54	491	327	03 08	164	3, 3, 3, 2, 3, 3, 5, 5	27	1	84.4
19	07 38	778	727	12 02	51	12 43	30.5	10.0	21 25	20.5	19 32	403	371	06 00	32	3, 2, 3, 2, 2, 2, 4, 2	20	0	84.1
20	20 02	787	727	12 06	60	15 27	33.7	12.5	22 10	21.2	16 19	415	377	04 32	38	1, 2, 2, 2, 2, 3, 2, 3	17	0	84.3
21	21 22	800	735	10 37	65	13 19	31.9	12.4	21 19	19.5	20 38	391	376	01 18	15	2, 1, 2, 2, 2, 0, 2, 4	15	0	84.4
22 q	19 23	792	740	11 30	52	13 39	31.0	19.7	09 26	11.3	08 30	383	366	11 58	17	0, 0, 1, 1, 1, 1, 1, 0	5	0	84.3
23 q	20 33	808	750	11 10	58	12 14	30.5	20.4	09 11	10.1	24 00	380	364	11 57	16	1, 0, 1, 1, 1, 1, 2, 2	9	0	83.9
24	14 56	825	725	19 17	100	16 58	46.2	16.7	20 10	29.5	17 43	568	365	11 20	203	1, 1, 1, 2, 3, 5, 4, 2	19	1	84.1
25 d	16 06	1659	583	20 33	1076	16 08	59.6	-18.7	20 31	78.3	17 16	754	265	23 58	489	2, 2, 4, 4, 5, 8, 7, 5	37	2	84.2
26 d	19 57	826	595	02 22	231	14 24	37.3	5.3	00 31	32.0	14 58	520	232	01 35	288	6, 5, 4, 4, 4, 4, 4, 3	34	2	84.1
27	21 24	781	654	10 48	127	14 03	34.8	0.8	20 53	34.0	16 53	490	317	01 59	173	4, 3, 2, 4, 3, 4, 5, 5	30	1	84.4
28	17 45	826	680	10 53	146	06 02	39.9	3.0	18 04	36.9	17 19	495	312	02 25	183	3, 5, 3, 4, 3, 5, 4, 3	30	1	83.8
29	01 08	827	646	10 52	181	13 12	35.0	9.9	18 32	25.1	16 31	479	314	01 33	165	4, 3, 3, 4, 4, 4, 4, 4	30	1	84.3
30	23 44	788	684	11 36	104	23 54	36.8	10.9	20 08	25.9	16 20	441	330	24 00	111	4, 3, 3, 4, 4, 4, 4, 4	30	1	84.4
31	20 34	812	703	10 47	109	12 54	33.1	2.5	17 53	30.6	17 48	432	314	00 24	118	4, 3, 3, 3, 3, 3, 5, 3	29	1	84.4
Mean	- -	870	604 - -	266	- -	41.3	2.9 - -	38.5	- -	469	289 - -	179	-	-	-	-	0.74	-	84.3

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

21	ESKDALEUIR (H)												16,000γ (0.16 C.G.S. unit) +												NOVEMBER 1960	
	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	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	
1	770	764	770	774	765	755	787	767	761	755	747	744	747	757	762	753	764	772	778	772	768	768	769	773	764	4342
2	771	772	779	783	783	790	787	772	747	732	728	736	737	736	749	758	760	768	773	770	780	794	767	767	764	4339
3	779	788	774	767	782	783	789	783	764	741	735	737	749	748	755	760	773	769	775	770	772	740	715	733	762	4281
4 d	712	745	683	763	799	747	767	750	714	707	718	721	723	749	762	785	754	747	755	757	752	756	757	735	744	3858
5	774	768	769	759	768	779	774	771	758	757	744	740	740	740	757	767	772	772	770	771	771	770	767	771	764	4329
6	772	772	775	777	779	782	784	779	775	762	759	752	753	755	770	772	775	776	776	771	780	770	776	776	772	4518
7 q	778	768	775	783	784	791	797	791	780	765	763	751	747	751	757	764	769	777	780	783	784	785	784	785	775	4592
8 q	784	783	783	786	790	794	792	788	778	761	752	750	755	763	768	776	779	784	784	785	784	775	769	775	777	4638
9 q	784	772	779	779	780	791	791	787	784	771	767	755	760	769	769	772	775	776	780	780	779	779	777	776	776	4632
10	778	777	779	782	786	787	790	797	791	781	758	749	754	763	779	779	790	791	799	797	799	798	798	792	783	4794
11	792	788	796	795	806	814	810	789	783	780	752	736	748	760	759	762	770	774	775	784	784	784	773	777	779	4691
12	765	769	774	780	785	789	789	783	778	772	766	760	764	780	805	800	809	850	1032	998	766	691	572	664	785	4841
13 d	78	599	548	579	616	490	83	-13	521	654	745	671	712	699	765	936	689	747	815	778	715	705	665	673	603	470
14 d	538	603	679	717	717	719	721	723	724	714	717	706	707	725	712	734	734	737	748	737	738	726	725	718	709	3019
15 d	722	729	739	740	735	733	733	725	733	734	735	732	726	774	787	801	800	766	772	740	744	692	736	621	740	3749
16 d	227	501	270	496	663	702	698	670	660	697	718	725	721	746	747	748	744	738	740	749	751	753	747	752	665	1963
17	755	737	734	744	747	750	755	760	753	751	752	752	745	748	750	737	761	751	728	752	751	743	741	743	747	3940
18 q	739	746	761	748	745	747	748	746	741	734	736	739	740	742	748	754	759	764	765	767	765	764	763	763	751	4024
19 q	762	763	765	769	770	779	779	779	780	769	772	773	767	770	760	764	766	769	772	775	775	782	776	779	771	4515
20	778	773	780	782	788	787	776	774	764	756	760	757	764	763	748	762	762	771	772	774	775	772	771	775	770	4484
21	772	775	779	780	780	786	800	748	755	734	744	736	720	730	755	749	759	741	749	717	740	750	747	754	754	4100
22	729	719	744	740	751	739	760	760	752	744	737	718	725	732	743	749	741	746	751	762	766	766	793	760	747	3927
23	763	765	772	772	776	779	772	781	770	767	755	752	755	759	752	760	764	763	765	767	760	764	759	747	764	4339
24	752	753	769	767	779	784	788	772	774	771	767	763	767	770	769	779	780	783	784	782	767	729	782	771	4511	
25	756	756	760	767	775	784	781	775	732	751	735	721	737	747	721	735	739	744	733	737	721	726	753	762	748	3948
26	757	761	770	770	752	769	767	760	737	737	745	748	733	748	757	756	765	769	771	764	739	759	762	770	757	4166
27	784	771	767	769	779	787	780	782	769	771	764	759	760	759	738	752	751	743	745	744	765	772	748	767	764	4326
28	765	752	761	776	771	786	783	776	763	741	752	755	753	745	762	766	772	774	779	774	774	771	771	768	766	4390
29	779	764	775	775	777	782	782	786	778	773	767	753	759	764	769	767	772	780	779	771	770	768	775	772	772	4537
30	775	769	769	771	791	785	787	782	779	772	767	767	766	765	765	765	774	775	763	782	776	759	763	762	772	4529
Mean	716	743	739	753	764	763	752	741	750	749	749	742	745	752	758	769	764	767	777	774	764	758	752	753	754	
Sum 21,000+	490	1302	1178	1590	1919	1890	1550	1243	1498	1454	1457	1258	1334	1557	1740	2062	1922	2014	2307	2212	1926	1749	1548	1592		Grand Total 542,792

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

22 ESKDALEUIR (D)													10° +													NOVEMBER 1960																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
	Hour G.M.T.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																

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

23	ESKDALEUIR (Z)												45,000γ (0.45 C.G.S. unit) +												NOVEMBER 1960										
	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 8000+									
	γ	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	371	375	377	375	376	377	377	384	388	387	382	384	388	393	399	400	398	395	392	393	398	391	380	383	386	1263									
2	385	385	381	371	372	372	372	376	381	385	387	384	391	398	395	396	398	392	389	391	393	378	373	372	384	1217									
3	354	325	331	358	368	372	375	377	381	382	383	388	393	389	388	388	389	392	392	396	400	399	373	348	377	1041									
4 d	308	312	288	280	295	309	326	356	369	380	373	384	400	410	440	464	441	441	442	413	404	399	386	361	374	981									
5	345	377	383	377	366	372	375	376	382	385	386	389	396	410	418	415	407	399	395	392	389	388	389	388	387	1299									
6	387	388	387	387	386	383	383	381	381	381	377	380	387	387	389	392	391	389	391	391	391	391	387	384	386	1271									
7 q	381	380	371	366	372	372	371	372	376	381	377	381	383	384	387	388	389	387	385	384	383	382	382	382	380	1116									
8 q	382	382	383	382	383	383	383	385	388	383	377	376	376	378	383	387	386	385	383	383	383	387	388	383	383	1189									
9 q	377	377	376	383	377	377	378	381	383	380	377	374	371	371	377	380	384	383	383	382	383	383	385	380	379	1102									
10	378	377	377	378	378	378	379	378	377	374	367	364	361	360	365	373	376	377	377	374	381	381	378	377	374	985									
11	376	376	374	372	370	368	367	371	373	371	369	370	370	372	378	383	383	383	382	381	380	380	382	381	375	1012									
12	381	377	377	377	376	376	376	376	377	376	377	379	379	378	376	375	372	419	613	646	544	241	279	334	395	1481									
13 d	338	311	269	228	160	110	-29	62	364	541	663	549	490	485	493	717	559	496	514	425	458	410	322	348	387	1279									
14 d	251	191	338	391	410	415	417	416	416	417	415	415	411	407	413	421	417	423	423	389	397	394	398	389	391	1374									
15 d	382	393	389	392	399	398	390	396	396	396	392	393	396	432	482	508	565	561	523	427	427	400	318	219	416	1974									
16 d	-90	38	-19	105	210	335	370	387	388	377	393	413	423	458	458	468	439	426	421	420	412	404	406	402	335	44									
17	379	365	375	388	394	400	399	400	401	399	394	394	403	411	412	418	425	422	425	416	406	412	412	407	402	1657									
18 q	404	398	395	394	396	399	399	400	399	398	398	399	402	404	406	406	406	403	401	400	400	400	400	400	400	1607									
19 q	399	399	398	398	396	394	393	391	390	389	386	383	383	387	393	394	395	395	395	394	394	393	393	392	393	1424									
20	389	388	386	384	383	383	383	384	387	389	386	392	393	400	405	405	403	400	399	399	396	396	395	394	392	1419									
21	394	393	392	391	389	377	359	369	381	390	393	399	418	423	431	469	519	534	546	483	433	410	371	352	477	2016									
22	361	358	323	342	365	374	379	384	392	397	394	396	399	405	414	421	430	434	427	417	410	408	381	381	391	1392									
23	388	390	387	383	386	387	385	379	382	388	389	388	394	400	406	407	410	406	405	403	404	400	399	393	394	1459									
24	381	376	369	383	383	389	388	388	388	388	388	386	387	389	392	394	395	395	395	398	399	399	389	355	387	1294									
25	353	361	362	327	302	314	341	358	372	380	387	398	401	408	429	444	447	439	428	427	418	399	377	367	385	1239									
26	377	383	380	374	369	372	382	387	389	391	390	392	397	404	404	403	400	399	398	400	411	406	399	391	392	1398									
27	378	377	383	386	385	381	381	383	387	387	384	387	389	395	404	411	422	446	439	420	411	394	388	382	396	1500									
28	354	357	378	382	378	361	366	373	381	387	391	389	391	403	408	402	399	395	394	395	397	398	396	394	386	1269									
29	388	388	383	385	387	386	385	384	384	383	382	383	387	389	394	395	394	392	392	396	401	399	394	385	389	1336									
30	387	386	387	386	376	379	381	382	383	382	381	380	380	383	388	392	394	394	402	403	410	403	388	402	389	1329									
Mean	355	356	356	361	363	366	364	371	385	391	395	393	395	400	408	421	418	417	422	411	407	391	380	374	387										
Sum 10,000+	638	683	680	825	887	993	931	1136	1536	1744	1838	1785	1839	2013	2227	2616	2533	2502	2651	2338	2213	1725	1408	1226		Grand Total 278,967									

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

24 ESKDALEUIR													NOVEMBER 1960					
	TERRESTRIAL MAGNETIC ELEMENTS												3-hr. range indices K	Sum of K indices	Magnetic character of day, C (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. °	° h. m.	°		h. m. γ	γ h. m.	γ							
1	06 40	790	732 11 59	58	12 13	31.1	16.6	22 42	14.5	15 08	404	369	00 00	35	2,2,2,2,2,2,4	18	0	84.3
2	20 55	817	722 12 15	95	12 50	34.0	10.5	21 14	23.5	16 09	400	364	24 00	36	2,2,3,2,3,1,4,3	20	1	84.5
3	01 47	802	684 23 51	118	12 25	30.4	1.9	23 14	28.5	21 12	401	315	01 55	86	3,3,2,2,3,2,3,4	22	1	84.5
4	04 14	823	651 02 38	172	14 51	35.2	6.5	01 58	28.7	15 09	484	253	02 57	231	5,5,3,3,4,5,4,4	33	2	84.5
5	06 01	787	729 13 38	58	03 51	28.8	20.2	00 36	8.6	14 40	421	330	00 09	91	3,3,2,2,2,1,0,1	14	0	84.4
6	20 40	793	748 11 55	45	12 44	27.8	15.8	20 33	12.0	20 10	395	377	10 35	18	1,1,2,2,1,1,3,2	13	0	84.4
7	06 51	799	745 12 41	54	13 40	27.0	19.1	09 30	7.9	16 30	389	364	03 15	25	2,2,2,2,1,1,0,1	11	0	84.4
8	05 50	796	744 11 15	52	13 55	28.0	17.9	23 10	10.1	08 21	391	375	11 02	16	0,1,1,2,1,1,1,2	9	0	84.6
9	06 49	794	753 11 55	41	13 27	30.0	18.4	00 30	11.6	16 11	387	370	13 03	17	2,2,2,2,2,1,0,2	13	0	84.5
10	20 08	803	741 12 03	62	15 14	37.3	20.9	08 55	16.4	21 13	382	357	13 49	25	0,0,2,3,3,2,1,1	12	0	84.5
11	06 13	824	729 12 00	95	11 50	33.0	16.3	23 40	16.7	23 07	384	365	09 43	19	2,3,3,3,3,2,3,3	22	1	84.6
12	19 02	1329	222 22 33	1107	21 11	57.4	-0.6	21 48	58.0	19 21	753	77	21 33	676	2,1,1,1,4,5,7,8	29	2	84.7
13	15 43	1290	-817 07 18	2107	00 50	96.8	-105.5	10 50	202.3	15 44	838	-209	06 48	1047	9,8,9,7,8,7,7,5	60	2	84.8
14	19 27	826	422 00 45	404	19 37	35.0	5.4	18 19	29.6	17 38	431	90	01 11	341	7,3,4,3,3,4,5,3	32	2	84.7
15	22 08	874	526 23 58	348	14 44	44.0	7.7	22 55	36.3	16 54	619	172	23 42	447	4,3,3,3,5,5,5,7	35	2	84.8
16	13 26	848	-185 00 45	1033	02 54	71.0	-24.4	00 45	95.4	15 08	484	-272	02 48	756	9,7,4,4,6,4,3,3	40	2	84.8
17	19 50	803	705 18 14	98	01 40	30.2	10.7	17 11	19.5	16 09	429	359	01 49	70	3,2,2,3,3,4,4,2	23	1	84.6
18	02 17	786	728 00 34	58	12 20	26.7	18.8	00 11	7.9	15 31	406	389	02 33	17	4,1,1,2,1,1,1,0	11	0	84.5
19	21 50	790	755 14 04	35	12 12	27.9	21.3	09 26	6.6	00 12	400	380	11 42	20	0,2,2,2,3,1,1,2	13	0	84.5
20	05 05	795	740 14 06	55	13 15	28.4	21.7	23 26	6.7	16 04	411	381	05 29	30	2,2,2,2,3,2,1,2	16	0	84.5
21	06 38	818	680 15 36	138	07 01	39.7	9.5	19 15	30.2	18 24	637	347	23 44	290	1,3,5,3,3,5,6,5	31	1	84.5
22	22 24	821	698 01 56	123	02 17	43.2	14.8	00 35	28.4	17 39	436	308	02 39	128	5,3,3,3,3,2,4,4	25	1	84.4
23	07 10	792	740 24 00	52	06 50	30.5	18.1	23 45	12.4	16 29	410	376	07 14	34	2,2,3,2,2,1,2,2	16	0	84.4
24	23 21	816	702 22 34	114	13 38	29.6	-4.6	23 13	34.2	20 11	401	343	23 51	58	3,2,2,1,2,2,3,5	20	0	84.5
25	05 07	804	678 20 18	126	03 13	34.7	7.7	16 55	27.0	16 49	453	290	03 52	163	3,3,4,4,3,4,4,4	29	1	84.4
26	24 00	798	722 12 25	76	12 48	30.1	17.6	00 01	12.5	20 33	417	354	23 59	63	2,3,3,3,3,1,3,3	21	0	84.5
27	23 46	802	710 17 21	92	14 32	29.6	1.7	18 10	27.9	18 09	456	364	23 52	92	3,2,2,2,3,4,4,4	24	1	84.4
28	05 43	794	728 13 30	66	05 02	35.4	10.5	00 11	24.9	14 14	412	336	00 49	76	4,4,3,3,3,2,2,2	23	0	84.4
29	00 10	803	744 11 38	59	14 30	28.8	15.4	00 38	13.4	20 50	402	381	23 16	21	3,1,1,2,2,2,2,3	16	0	84.4
30	19 15	835	734 21 47	101	14 27	29.0	4.7	22 09	24.3	20 05	411	371	22 40	40	2,3,2,1,2,2,4,5	21	1	84.4
Mean	- -	842	607 - -	235	- -	36.4	7.2 - -	29.2	- -	455	289 - -	166	-	-	-	0.70	-	84.5

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

21	ESKDALEMUIR (H)												16,000γ (0.16 C.G.S. unit) +												DECEMBER 1960	
	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 d	775	759	752	725	806	727	732	722	742	726	719	723	722	715	734	788	765	700	754	694	726	711	674	698	733	589
2 d	738	737	736	739	756	755	746	758	746	733	725	741	727	738	746	746	741	750	760	766	778	783	760	753	748	958
3	763	762	765	764	770	783	781	776	765	749	745	746	750	754	760	766	764	769	771	771	773	773	772	771	771	1363
4 q	773	775	774	777	782	785	784	780	782	780	772	766	762	758	767	755	761	763	764	761	771	769	771	774	771	1506
5	774	773	774	774	777	793	792	785	784	782	782	766	754	763	761	761	765	756	772	774	782	784	784	784	775	1596
6	784	786	788	792	792	799	808	800	790	779	776	775	763	758	755	757	756	741	728	734	762	731	757	759	770	1470
7	758	762	769	769	766	790	784	779	769	762	761	760	756	735	757	759	755	761	786	767	761	746	783	759	765	1354
8	755	760	760	754	762	796	794	793	775	762	750	755	762	765	769	772	775	774	779	780	781	780	781	778	771	1512
9	777	775	770	783	789	772	770	782	773	761	766	765	757	762	747	770	764	767	762	786	771	765	776	785	771	1495
10	779	770	769	781	777	778	778	778	773	768	765	760	762	764	763	767	771	768	777	771	773	793	782	782	773	1549
11 q	779	778	781	782	784	788	787	791	782	770	767	759	761	755	760	757	780	784	784	784	771	763	768	772	774	1587
12	785	769	776	775	779	788	793	784	784	775	774	760	759	760	753	763	761	768	749	733	755	760	768	745	767	1416
13	767	763	763	772	774	774	778	774	765	763	762	757	744	757	768	771	773	770	774	777	776	777	779	782	769	1460
14 q	782	784	787	789	790	792	794	798	792	793	789	799	803	795	795	784	797	785	784	784	780	787	791	792	790	1966
15 d	796	802	802	806	804	792	787	772	779	762	758	755	754	760	746	771	754	782	739	675	652	647	663	676	751	1034
16 d	682	692	682	706	756	764	750	731	744	723	729	729	746	762	758	760	757	766	768	769	772	760	752	758	742	816
17 q	765	765	765	767	769	772	764	774	776	777	774	769	766	765	763	765	769	773	777	770	764	769	772	772	769	1462
18	779	779	783	793	791	797	777	756	779	773	744	753	760	753	752	745	733	753	744	727	762	758	758	784	764	1333
19	769	765	769	769	775	792	786	774	772	770	753	759	769	772	768	773	761	781	782	781	772	791	784	773	773	1560
20	762	769	774	775	779	792	785	776	768	748	755	760	767	770	773	773	768	768	771	761	801	745	767	763	770	1470
21	765	749	772	776	780	777	777	777	783	780	779	781	790	787	780	737	764	770	778	775	763	774	749	772	772	1535
22	767	775	766	777	779	780	780	783	775	766	765	770	779	776	784	771	750	765	777	781	777	789	785	773	775	1590
23	776	777	770	776	777	780	780	782	778	774	773	760	765	749	769	764	770	773	777	780	788	791	785	779	775	1593
24	777	779	784	782	789	787	786	785	784	777	784	791	788	768	769	780	780	749	773	787	784	773	805	765	780	1726
25 q	779	772	781	784	784	787	786	787	784	780	776	781	784	784	781	781	782	783	779	780	787	784	781	784	782	1771
26	784	764	775	791	799	798	805	796	799	780	788	789	775	784	785	785	787	791	794	796	799	797	794	791	789	1946
27 d	791	789	783	806	800	811	804	807	809	787	781	765	738	732	753	786	730	730	734	719	722	740	747	749	767	1413
28	745	740	752	753	759	772	772	761	752	744	734	734	763	772	742	745	750	757	760	783	764	765	772	772	757	1163
29	769	753	778	765	770	780	780	768	772	766	756	764	769	769	772	752	745	752	766	765	771	772	773	774	767	1401
30	777	773	773	779	769	780	788	784	765	760	762	754	756	765	756	765	773	767	752	757	772	779	777	778	769	1461
31	781	777	780	777	784	776	779	783	763	758	762	764	750	754	766	740	756	757	781	766	764	764	765	769	767	1416
Mean	769	767	769	773	780	783	781	777	774	765	762	762	761	761	763	765	763	764	768	763	767	765	767	767	768	
Sum 23,000+	853	773	853	958	1168	1257	1207	1096	1004	728	626	610	601	601	652	709	657	673	796	654	774	720	775	766		Grand Total 571,511

765 at 0-1h. January 1, 1961.

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

22 ESKDALEMUIR (D)													10° +												DECEMBER 1960										
	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	500.0+									
1 d	22.8	19.7	21.0	12.1	22.6	29.3	21.2	24.0	22.4	22.7	23.6	26.1	30.3	25.9	28.6	29.0	30.5	29.9	23.8	12.6	9.4	16.6	-7.8	8.8	21.0	5.1									
2 d	21.0	22.4	23.3	24.6	23.4	23.3	22.4	23.3	23.2	23.1	22.6	26.9	27.5	26.1	29.1	29.1	26.3	24.2	20.2	21.3	16.6	16.3	19.9	19.3	23.1	55.4									
3	22.3	22.9	24.1	25.1	28.3	24.2	24.1	23.8	23.7	22.8	23.9	25.7	27.1	26.4	26.6	25.3	23.9	22.1	23.8	23.6	22.9	22.6	22.4	21.4	24.1	79.0									
4 q	22.5	23.6	23.8	23.8	23.8	23.6	22.9	22.5	22.4	22.8	24.1	24.6	26.4	26.1	27.2	25.3	24.5	25.7	24.3	23.0	22.1	22.0	22.2	22.5	23.8	71.7									
5	21.9	22.9	23.7	23.6	25.4	24.7	24.7	24.7	24.6	25.6	26.5	27.4	28.6	28.1	29.3	27.5	27.7	25.2	25.2	24.8	24.3	23.7	22.6	22.7	25.2	105.4									
6	22.8	23.1	23.5	23.7	24.3	25.6	24.6	25.4	24.8	26.0	26.4	27.2	32.3	29.2	30.5	33.3	37.8	35.7	32.8	22.4	21.4	22.6	19.0	21.2	26.5	135.6									
7	21.2	22.0	23.4	22.0	23.8	23.3	22.3	23.8	22.8	22.8	24.5	26.1	27.0	27.4	28.9	29.6	28.2	26.9	27.4	25.6	10.7	15.6	18.0	12.4	23.2	55.7									
8	18.8	20.1	21.3	22.0	25.3	27.7	27.8	26.4	25.1	24.8	22.9	23.6	25.1	25.8	28.0	25.7	24.6	24.1	24.0	23.5	22.8	22.9	23.2	23.2	24.1	78.7									
9	23.4	23.5	23.8	26.3	24.2	22.5	24.2	24.6	24.7	24.2	27.1	26.3	27.8	26.2	25.4	23.1	25.1	24.1	19.8	17.0	21.2	21.3	20.3	19.2	23.6	65.3									
10	22.1	21.2	22.5	25.1	23.2	23.8	23.6	23.4	23.2	23.7	24.4	24.6	25.1	27.0	27.6	26.7	24.8	24.6	25.0	23.9	17.9	20.9	24.8	24.9	23.9	74.0									
11 q	24.6	24.6	24.4	24.4	25.0	24.4	25.3	26.1	24.4	23.8	25.2	25.7	27.3	28.8	28.7	27.0	26.7	25.8	25.2	24.9	21.2	16.2	20.4	20.0	24.6	90.1									
12	21.2	21.8	21.6	21.9	24.6	24.9	24.9	25.5	25.8	26.0	26.0	28.6	28.8	29.8	29.3	28.0	31.3	30.5	23.2	18.5	23.1	16.8	14.0	11.4	24.1	77.5									
13	19.4	24.6	25.4	21.6	20.3	23.2	25.3	25.7	25.3	27.0	26.7	27.0	28.8	28.5	27.6	25.9	25.2	25.0	24.8	24.7	23.6	24.1	24.2	24.3	24.9	98.2									
14 q	24.8	24.9	25.1	25.3	25.7	25.7	25.8	25.6	25.6	25.1	25.0	27.1	29.0	29.0	27.5	25.7	24.7	25.3	25.3	24.5	23.7	23.9	24.5	24.0	25.5	112.8									
15 d	24.4	21.7	23.8	25.3	26.1	27.7	28.8	26.6	25.9	25.6	27.0	30.9	31.7	31.6	26.7	34.4	33.0	35.8	25.4	19.9	19.8	6.1	9.2	1.1	24.5	88.5									
16 d	1.1	-0.1	8.5	8.5	10.0	25.4	27.9	29.3	27.1	25.4	28.5	24.7	26.8	26.0	25.7	25.8	26.7	26.7	25.3	23.1	23.4	22.8	19.3	20.4	21.2	8.3									
17 q	21.9	22.3	22.7	22.5	22.2	23.0	23.1	23.4	24.7	23.9	23.6	23.9	25.1	25.7	25.9	25.1	24.7	24.2	24.5	23.8	21.7	22.9	22.0	21.6	23.5	64.4									
18	23.0	22.2	23.6	22.1	22.6	25.9	29.0	29.6	25.4	25.4	30.0	30.9	29.5	27.0	27.1	25.4	24.6	25.0	18.2	14.7	17.6	21.5	21.0	22.7	24.3	84.0									
19	19.2	20.9	22.3	21.4	24.2	24.5	25.0	25.9	24.8	24.7	23.5	25.4	25.5	26.6	25.9	25.0	22.6	22.6	24.3	24.1	21.9	12.4	19.1	21.4	23.1	53.2									
20	20.8	22.0	20.9	24.9	25.1	24.1	24.1	24.1	24.4	25.4	25.7	26.3	27.0	25.3	24.6	23.4	22.7	22.9	21.9	8.5	8.7	18.4	17.6	23.0	22.2	31.8									
21	22.7	23.3	22.7	21.9	23.1	24.1	24.3	24.2	25.1	24.6	24.4	24.9	25.7	25.1	25.8	22.7	23.6	30.0	27.7	24.1	13.0	10.4	20.0	24.6	23.3	58.0									
22	25.6	24.9	21.9	21.7	23.9	25.4	28.3	25.6	25.4	26.4	26.2	26.4	26.4	24.7	24.2	23.8	22.0	22.8	24.0	23.3	21.5	17.6	22.0	26.2	24.2	80.2									
23	23.7	21.5	21.5	21.5	22.3	25.1	26.1	26.9	27.7	27.9	28.5	27.1	27.9	25.1	25.5	26.2	25.3	24.8	24.5	23.5	23.3	23.9	23.2	23.3	24.8	96.3									
24	22.3	22.0	22.9	23.3	23.7	24.7	24.9	25.1	26.2	26.8	26.9	28.2	27.4	25.6	24.6	24.1	25.5	20.9	24.8	25.4	24.8	22.8	20.3	21.5	24.4	84.7									
25 q	21.4	22.6	26.0	21.9	23.3	23.7	24.0	24.1	25.0	26.3	25.7	26.6	26.3	24.6	23.8	24.5	25.1	25.0	24.9	24.3	24.2	23.7	22.2	22.1	24.2	81.3									
26	25.1	18.6	21.5	23.0	22.8	26.5	23.1	26.8	28.0	28.2	28.2	28.6	27.8	26.9	25.4	24.8	24.8	25.1	24.9	24.5	24.6	25.1	24.7	23.9	25.1	102.9									
27 d	22.9	22.3	22.4	22.9	20.1	23.0	26.4	32.0	30.6	27.9	27.7	28.7	30.6	31.8	33.9	21.0	28.5	23.1	26.2	17.6	17.4	18.5	13.4	15.3	24.3	84.2									
28	13.5	22.7	23.4	25.0	24.0	24.0	25.0	25.0	27.4	27.7	27.9	26.4	26.7	28.3	27.7	23.1	28.9	26.3	23.1	15.3	20.2	21.5	22.5	22.9	24.0	76.5									
29	20.7	19.9	19.0	21.7	23.3	23.3	25.5	26.9	26.4	26.6	27.6	28.1	28.5	26.7	27.2	26.4	23.8	29.0	25.9	24.5	23.6	23.0	23.6	21.0	24.7	92.2									
30	21.5	22.5	23.7	22.9	23.7	23.4	23.1	23.4	24.0	25.2	26.5	27.1	27.4	28.2	26.5	26.5	25.2	21.9	17.0	26.3	23.4	23.0	24.4	23.0	24.2	79.8									
31	23.3	22.7	24.3	24.2	24.4	27.5	24.5	26.1	26.9	26.4	26.5	27.7	29.0	28.1	27.7	23.6	27.3	24.3	21.0	21.1	22.2	21.3	21.8	22.4	24.8	94.3									
Mean	21.3	21.6	22.5	22.5	23.4	24.8	24.9	25.5	25.5	25.3	25.9	26.7	27.7	27.1	27.2	26.0	26.3	25.8	24.1	21.7	20.4	20.0	19.8	20.4	24.0										
Sum 600.0+	61.9	69.3	98.0	96.2	124.7	167.5	172.2	189.8	183.0	184.8	203.3	228.8	260.4	241.6	242.5	207.0	215.6	199.5	146.4	74.3	32.2	20.4	14.0	31.7		Grand Total 17865.1									

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

85

23 ESKDALEMUIR (Z)													45,000γ (0.45 C.G.S. unit) +													DECEMBER 1960																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
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399 at 0-1h. January 1, 1961.

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

24 ESKDALEMUIR														DECEMBER 1960					
	TERRESTRIAL MAGNETIC ELEMENTS													3-hr. range indices K	Sum of K indices	Magnetic character of day, C (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								
1 d	15 38	853	612	22 49	241	16 09	43.9	-17.0	22 34	60.9	16 16	611	157	03 18	454	5,6,5,4,4,6,5,6	41	1	84.4
2 d	20 18	801	708	12 51	93	14 25	31.2	9.7	21 00	21.5	13 05	445	372	00 48	73	3,3,3,3,4,3,4,4	27	1	84.4
3	06 18	786	734	09 44	52	04 10	31.9	20.9	23 40	11.0	16 58	406	374	04 25	32	2,3,2,2,1,2,1,1	14	0	84.5
4 q	05 30	787	747	13 19	40	13 48	28.0	21.3	15 57	6.7	18 30	413	382	10 58	31	1,0,1,2,2,2,2,1	11	0	84.4
5	05 39	796	750	12 19	46	14 18	30.3	21.6	00 44	8.7	17 52	416	377	05 35	39	1,2,1,3,2,2,3,2	16	0	84.5
6	06 35	813	708	21 29	105	17 01	41.5	9.8	20 39	31.7	18 28	539	367	21 24	172	1,2,2,2,3,3,5,4	22	0	84.4
7	22 08	812	710	21 15	102	21 51	32.8	-8.2	20 58	41.0	20 52	457	360	22 12	97	2,3,2,2,3,1,5,6	24	1	84.4
8	06 01	816	735	03 37	81	06 45	30.6	15.8	00 01	14.8	20 50	456	343	05 12	113	3,4,3,3,2,2,1,2	20	0	84.4
9	23 36	808	723	14 29	85	12 56	30.0	12.7	18 55	17.3	14 54	434	372	04 28	62	2,3,3,3,3,2,4,3	23	1	84.4
10	21 00	811	750	20 33	61	13 51	28.3	11.6	20 45	16.7	20 33	401	377	03 31	24	2,2,2,2,1,1,2,4,3	17	0	84.4
11 q	07 36	793	750	15 11	43	13 55	29.6	13.8	21 26	15.8	21 34	412	382	09 08	30	1,1,1,2,2,2,3,3,3	16	0	84.4
12	00 31	813	687	19 04	126	06 40	34.6	7.8	22 17	26.8	18 26	436	367	23 59	69	3,2,2,2,2,2,4,3	20	1	84.3
13	06 53	795	733	12 46	62	12 33	31.6	12.3	00 01	19.3	12 33	400	358	00 52	42	4,3,3,2,3,1,1,1	18	0	84.4
14 q	11 02	814	772	15 04	42	12 53	31.1	22.8	23 50	8.3	18 19	390	374	12 12	16	0,0,1,3,2,2,1,2	11	0	84.4
15 d	17 53	872	606	20 59	266	15 38	48.7	-11.4	22 05	60.1	18 18	708	243	23 54	465	3,2,2,2,5,5,6,6	31	1	84.5
16 d	05 08	786	638	00 06	148	06 55	33.5	-4.8	00 23	38.3	22 52	412	249	00 01	163	4,4,3,3,3,2,1,3	23	1	84.4
17 q	08 28	781	756	15 06	25	14 00	26.3	19.8	20 39	6.5	20 58	405	378	08 30	27	1,1,3,2,2,2,2,2	15	0	84.4
18	03 50	811	698	19 44	113	10 55	34.4	8.9	19 50	25.5	16 47	461	367	23 58	94	3,3,3,4,2,3,4,3	25	1	84.3
19	22 00	807	744	10 34	63	11 49	29.3	5.8	21 14	23.5	16 52	405	367	00 03	38	3,3,3,3,2,3,3,4	24	1	84.3
20	20 21	826	729	19 30	97	12 28	29.0	-2.6	19 56	31.6	19 28	418	359	22 40	59	3,3,3,3,3,2,2,5,4	25	1	84.2
21	13 52	796	723	15 25	73	15 06	30.8	5.3	21 16	25.5	16 00	430	334	01 52	96	4,2,2,2,3,4,4,5	26	1	84.2
22	22 45	809	734	16 23	75	06 31	32.3	15.0	21 17	17.3	16 37	411	365	01 13	46	3,3,3,3,2,3,2,4	23	1	84.3
23	21 14	801	727	13 17	74	10 00	30.3	19.8	01 04	10.5	13 43	408	365	00 39	43	3,3,2,3,3,2,3,2	21	0	84.2
24	22 39	867	734	17 39	133	11 19	29.1	14.6	22 05	14.5	17 42	412	372	23 01	40	2,2,1,2,3,3,3,5	21	1	84.2
25 q	20 07	807	760	01 37	47	10 50	26.9	19.6	00 58	7.3	18 52	390	376	02 10	14	2,2,2,2,2,1,3,2	16	0	84.2
26	05 43	811	754	01 12	57	12 14	30.0	15.4	01 30	14.6	12 58	389	365	00 49	24	3,3,3,3,2,2,2,2,2	19	0	84.2
27 d	15 36	837	672	19 18	165	15 13	41.3	-0.3	22 17	41.6	19 11	566	350	08 13	216	2,3,3,4,4,5,6,5	32	2	84.1
28	19 19	798	680	11 13	118	16 45	30.7	11.4	00 30	19.3	15 43	435	365	00 40	70	4,2,2,4,3,3,4,2	24	1	84.0
29	05 49	791	707	15 44	84	17 16	29.9	15.3	16 07	14.6	16 46	455	361	02 25	94	3,3,3,2,2,4,2,2	21	1	83.9
30	06 09	792	730	18 15	62	13 49	29.1	12.7	17 57	16.4	18 18	424	377	06 47	47	2,3,3,2,2,4,4,3	23	1	83.9
31	18 16	814	727	15 21	87	12 42	30.4	16.3	18 09	14.1	15 41	424	372	05 32	52	1,2,3,2,3,3,4,2	20	1	83.8
Mean	- -	810	717 - -	93	- -	32.2	10.2 - -	22.0	- -	444	353 - -	92	-	-	-	-	0.61	84.3	

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 X, -Y, I and F

25 ESKDALEMUIR

	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	γ	γ	γ	°	γ
January	758	768	740	28.9	29.4	28.3	362	355	371	16478	3049	69 43.5	48359
February	765	773	760	29.0	29.1	29.0	356	352	356	16485	3050	69 42.9	48355
March	767	773	753	28.4	28.6	27.2	354	351	360	16488	3048	69 42.6	48354
April	753	769	742	27.0	27.5	25.8	364	359	361	16475	3039	69 43.9	48358
May	768	777	757	26.8	26.4	25.9	371	366	382	16490	3040	69 43.0	48370
June	776	778	766	26.7	26.8	25.3	361	365	352	16498	3041	69 42.2	48364
July	774	782	761	26.3	26.2	26.2	368	364	372	16497	3039	69 42.5	48370
August	772	778	761	25.9	26.1	25.4	370	368	368	16495	3037	69 42.7	48371
September	763	770	743	24.8	25.3	23.7	371	370	368	16486	3030	69 43.4	48368
October	751	775	712	24.1	25.0	22.4	383	378	375	16476	3024	69 44.4	48376
November	754	770	692	23.6	23.6	21.3	387	387	380	16479	3022	69 44.4	48381
December	768	777	748	24.0	24.3	22.8	393	390	398	16493	3027	69 43.6	48391
Year	764	774	745	26.3	26.5	25.3	370	367	370	16487	3037	69 43.2	48368

DAILY RANGE AND MEAN MONTHLY VALUES

26 ESKDALEMUIR

	Mean daily range						Mean daily range expressed as percentage of yearly mean					
	1960			Mean 1932-53			1960			Mean 1932-53		
	H	D	Z	H	D	Z	H	D	Z	H	D	Z
	γ	γ	γ	γ	γ	γ	%	%	%	%	%	%
January	76	82	45	78	83	47	50	69	43	76	90	75
February	73	85	52	84	89	53	48	71	50	82	97	84
March	116	114	78	126	113	85	76	96	74	124	123	135
April	305	183	190	125	103	77	199	154	181	123	112	122
May	144	108	85	116	91	71	94	91	81	114	99	113
June	132	99	83	105	84	55	86	83	79	103	91	87
July	148	102	96	110	85	56	97	86	91	108	92	89
August	130	106	98	113	93	68	85	89	93	111	101	108
September	118	114	91	117	106	81	77	96	87	115	116	129
October	266	188	179	107	102	76	174	158	170	105	111	121
November	235	142	166	73	79	47	154	119	158	72	86	75
December	93	107	92	66	74	42	61	90	88	65	80	67
Winter	119	104	89	75	81	47	78	87	85	74	88	75
Equinox	201	150	135	119	106	80	131	126	129	117	115	127
Summer	139	104	91	111	88	63	91	87	87	109	96	100
Year	153	119	105	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

27 ESKDALEMUIR

Range	Number of cases, 1960			Percentage distribution					
	H	D	Z	1960		1932-53		1960	
				1960	1932-53	1960	1932-53	1960	1932-53
	γ	γ	γ	%	%	%	%	%	%
0 - 9	0	0	0	0.0	0.0	0.0	0.0	0.0	2.3
10 - 19	0	0	37	0.0	0.8	0.0	0.4	10.1	14.1
20 - 29	3	1	39	0.8	3.9	0.3	2.5	10.7	19.8
30 - 39	5	13	50	1.4	6.0	3.8	5.0	13.7	16.0
40 - 49	23	11	45	6.3	7.8	3.0	7.4	12.3	10.2
50 - 59	34	25	26	9.3	10.4	6.8	12.1	7.1	7.5
60 - 69	27	32	20	7.4	11.7	8.7	12.9	5.5	5.6
70 - 79	37	52	19	10.1	10.6	14.2	12.3	5.2	3.6
80 - 89	37	42	13	10.1	9.0	11.5	10.7	3.6	3.0
90 - 99	30	26	19	8.2	7.3	7.1	8.3	5.2	2.4
100 - 109	29	31	11	7.9	5.8	8.5	5.9	3.0	2.1
110 - 119	24	25	7	6.6	5.1	6.8	4.0	1.9	1.7
120 - 129	19	22	8	5.2	3.3	6.0	3.5	2.2	1.7
130 - 139	17	18	5	4.6	2.9	4.9	2.6	1.4	1.2
140 - 149	12	13	6	3.3	2.3	3.6	2.2	1.6	0.8
150 - 159	7	5	1	1.9	1.9	1.4	1.7	0.3	0.9
160 - 169	10	4	9	2.7	1.5	1.1	1.6	2.5	0.7
170 - 179	3	6	6	0.8	1.5	1.6	1.2	1.6	0.4
180 - 189	2	5	2	0.5	0.9	1.4	1.0	0.5	0.6
190 - 199	3	7	4	0.8	0.9	1.9	0.8	1.1	0.5
200 +	44	28	39	12.0	6.3	7.7	4.0	10.7	4.8
Days omitted	0	0	0	-	-	-	-	-	-

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)

28 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.	+2.7	+2.3	+1.2	+5.1	+6.8	+11.8	+13.9	+12.1	+6.3	-2.0	-8.9	-16.2	-16.5	-15.3	-11.4	-9.3	-7.2	-2.1	+2.3	+5.0	+6.8	+5.5	+3.3	+3.5
Feb.	+4.5	+5.5	+2.6	+5.9	+9.0	+9.6	+11.4	+11.1	+7.3	-0.7	-8.6	-15.7	-16.7	-13.3	-11.5	-9.7	-8.0	-2.2	-1.3	+2.3	+3.9	+3.2	+6.3	+5.2
Mar.	+6.1	+5.7	+5.1	+7.1	+9.5	+11.5	+14.5	+11.5	+1.5	-11.8	-23.6	-31.0	-30.8	-26.1	-16.6	-5.9	+7.5	+9.3	+8.3	+16.5	+10.9	+9.2	+4.9	+6.8
Apr.	-18.7	-25.3	-9.5	-20.3	-6.5	+0.5	+0.3	-6.7	-11.9	-20.7	-32.3	-37.0	-21.5	-5.3	+13.6	+31.4	+49.9	+57.9	+31.5	+28.9	+5.2	-5.7	+1.9	+0.4
May	+2.2	+0.6	+2.1	+1.6	+2.8	+3.6	+1.2	-4.5	-15.8	-24.9	-29.7	-32.1	-30.3	-22.8	-10.5	+11.3	+15.6	+19.2	+27.7	+24.2	+21.9	+15.7	+10.5	+10.4
June	+6.2	+5.0	+4.3	+4.7	+6.1	+1.8	-3.9	-11.1	-20.5	-29.0	-36.0	-39.0	-32.0	-26.7	-16.3	-0.3	+12.6	+29.8	+35.1	+36.9	+30.5	+20.1	+12.8	+8.8
July	+2.9	-1.4	+2.7	+6.5	+8.5	+8.0	+0.2	-8.5	-18.7	-27.2	-34.6	-38.6	-32.4	-24.8	-14.5	+1.1	+17.2	+26.6	+34.4	+35.2	+25.7	+15.9	+9.8	+6.0
Aug.	+12.0	+9.5	+10.7	+6.1	+10.4	+6.4	+1.8	-12.0	-26.0	-32.9	-35.7	-38.3	-29.8	-23.3	-11.2	-0.1	+15.4	+27.5	+28.2	+24.5	+17.8	+14.6	+13.2	+11.3
Sept.	+6.9	+8.0	+10.4	+13.1	+11.9	+14.2	+5.3	-6.1	-19.3	-29.5	-36.2	-35.3	-27.9	-22.7	-9.8	-5.0	+8.6	+13.9	+20.9	+18.9	+18.9	+17.0	+12.8	+10.8
Oct.	-10.2	-3.9	+6.7	+5.9	+8.5	+12.3	+9.7	+5.0	-1.7	-16.1	-30.1	-29.5	-23.3	-8.8	+0.7	+11.5	+17.0	+27.4	+13.0	+8.6	-1.5	+2.4	-4.5	+1.1
Nov.	-34.7	-8.6	-13.9	-0.9	+9.8	+8.9	-3.1	-12.4	-3.0	-3.8	-4.4	-13.7	-12.2	-5.8	+0.3	+11.9	+18.4	+12.3	+23.5	+20.3	+11.6	+6.7	+0.5	+2.2
Dec.	+3.6	+0.9	+2.6	+6.0	+11.8	+13.5	+11.7	+7.8	+4.9	-3.8	-7.7	-8.8	-10.1	-9.5	-7.9	-5.0	-7.0	-6.0	-0.7	-3.0	+1.9	+0.7	+2.4	+1.6
Year	-1.3	-0.1	+2.1	+3.4	+7.4	+8.5	+5.3	-1.1	-8.1	-16.8	-24.0	-27.9	-23.7	-17.0	-7.9	+2.6	+10.8	+18.1	+18.6	+18.2	+12.8	+8.7	+6.1	+5.7
Winter	-5.9	0.0	-1.9	+4.1	+9.4	+11.0	+8.4	+4.6	+3.9	-2.6	-7.4	-13.6	-13.9	-11.0	-7.7	-3.0	-3.5	+0.5	+6.0	+6.2	+6.0	+4.0	+3.1	+3.2
Equinox	+28.3	+21.9	+33.6	+32.3	+26.0	+27.1	+23.8	+21.3	+18.7	-0.8	-33.2	-60.6	-76.4	-76.3	-60.0	-38.3	-16.1	+3.3	+13.7	+17.5	+15.8	+21.2	+25.7	+31.6
Summer	+5.9	+3.4	+5.0	+4.7	+7.0	+5.0	-0.2	-9.1	-20.2	-28.4	-33.9	-37.0	-31.2	-24.4	-13.1	+3.1	+15.2	+25.8	+31.3	+30.2	+24.0	+16.6	+11.6	+9.1
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.	-9.5	-8.6	-10.0	-9.7	-4.7	-1.3	-0.1	-0.3	-2.0	-2.3	+0.8	+6.6	+14.1	+18.3	+15.4	+12.7	+10.5	+6.6	+6.8	+1.1	-5.5	-12.2	-13.8	-13.1
Feb.	-14.3	-10.5	-7.4	-7.7	-8.4	-6.4	-5.3	-5.9	-8.4	-9.7	-2.3	+8.0	+16.8	+22.2	+24.5	+21.5	+14.4	+9.7	+6.7	+2.9	-4.5	-10.0	-13.5	-12.5
Mar.	-10.4	-11.0	-15.3	-15.3	-12.1	-11.4	-9.4	-14.1	-18.5	18.4	-10.8	+4.5	+23.9	+32.0	+34.6	+31.2	+27.4	+14.4	+9.8	+3.2	-4.6	-5.0	-11.9	-12.9
Apr.	-29.4	-27.7	-28.0	-29.4	-15.7	-13.6	-17.4	-23.4	-29.0	-22.6	-8.1	+7.8	+25.4	+39.5	+40.6	+42.8	+46.4	+42.5	+16.3	+9.4	+7.4	-8.6	-13.3	-11.9
May	-2.4	-8.6	-11.7	-12.8	-13.1	-19.7	-26.4	-28.7	-29.7	-23.4	-8.9	+7.3	+23.7	+30.3	+31.4	+29.0	+26.7	+17.2	+9.9	+6.5	+4.1	+1.2	-0.1	-1.8
June	-6.7	-10.5	-9.3	-16.6	-23.2	-29.8	-31.8	-36.0	-33.0	-25.3	-12.2	+3.1	+19.2	+28.1	+30.4	+32.0	+27.9	+25.8	+22.3	+16.4	+13.0	+8.3	+6.1	+1.7
July	-8.9	-11.7	-11.5	-13.5	-16.3	-18.9	-24.3	-26.9	-27.9	-23.0	-12.8	+2.7	+17.2	+27.3	+31.6	+29.2	+26.5	+21.0	+16.5	+11.9	+9.1	+5.8	+0.5	-3.4
Aug.	-0.8	-12.4	-12.0	-10.9	-12.9	-16.1	-25.2	-32.2	-29.5	-19.5	-3.7	+13.0	+27.9	+34.0	+33.5	+27.3	+19.9	+12.0	+6.5	+5.0	+2.2	-0.4	-4.4	-1.1
Sept.	-17.8	-18.3	-18.1	-16.7	-13.0	-10.7	-13.6	17.4	-19.1	-15.1	0.0	+15.9	+30.6	+35.0	+36.3	+24.1	+17.5	+12.9	+5.6	+4.6	+1.7	-2.2	-7.3	-15.0
Oct.	-26.3	-10.5	-12.3	-14.7	-5.2	-1.1	+4.7	+4.7	-5.5	-5.3	+3.0	+16.0	+27.5	+33.6	+29.0	+23.7	+16.5	+9.8	-6.4	-2.0	-17.0	-18.8	-19.6	-23.9
Nov.	-19.4	-10.9	-5.4	+0.2	+2.6	+2.2	+5.2	-1.6	-5.9	-9.3	-5.3	+8.5	+14.3	+20.4	+21.0	+17.0	+11.2	+6.1	-0.7	-0.7	-6.0	-11.5	-15.2	-16.6
Dec.	-12.5	-11.8	-7.0	-6.6	-1.0	+6.2	+6.6	+8.7	+7.1	+5.8	+8.0	+11.9	+16.7	+13.8	+14.2	+9.1	+10.1	+7.7	+0.2	-11.8	-17.7	-19.7	-20.4	-17.7
Year	-13.2	-12.7	-12.3	-12.8	-10.3	-10.1	-11.4	-14.4	-16.8	-14.0	-4.4	+8.7	+21.4	+27.9	+28.6	+25.0	+21.2	+15.5	+7.8	+3.9	-1.5	-6.1	-9.4	-10.7
Winter	-14.0	-10.5	-7.4	-5.9	-2.9	+0.1	+1.6	+0.2	-2.3	-3.9	+0.3	+8.7	-15.5	+18.7	+18.8	+15.1	+11.5	+7.5	+3.3	-2.1	-8.4	-13.3	-15.7	-15.0
Equinox	-20.9	-16.9	-18.4	-19.0	-11.5	-9.2	-8.9	-12.5	-18.0	-15.3	-4.0	+11.0	+26.8	+35.0	+35.1	+30.5	+26.9	+19.9	+6.4	+3.8	-3.1	-8.6	-13.0	-15.9
Summer	-4.7	-10.8	-11.1	-13.5	-16.4	-21.2	-26.9	-31.0	-30.0	-22.8	-9.4	+6.5	+22.2	+29.9	+31.7	+29.4	+25.2	+19.0	+13.8	+9.9	+7.1	+3.7	+0.5	-1.1
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.	+0.5	-5.9	-9.3	-8.9	-8.2	-7.6	-6.8	-5.6	-4.4	-3.6	-3.3	-2.5	-2.5	-1.1	+4.6	+6.8	+9.5	+11.0	+9.2	+10.2	+8.0	+4.4	+3.2	+2.3
Feb.	-1.8	-2.7	-6.7	-9.2	-7.9	-8.1	-8.0	-7.3	-5.3	-4.8	-6.9	-8.1	-7.6	-5.7	-0.6	+4.5	+10.0	+11.9	+14.2	+15.6	+14.6	+11.1	+8.0	+0.8
Mar.	-5.0	-9.2	-11.2	-10.3	-10.7	-11.1	-9.4	-5.1	-3.7	-4.5	-6.9	-11.2	-11.2	-7.5	-1.6	+6.5	+17.0	+27.0	+22.3	+25.3	+19.3	+10.8	+2.8	-12.4
Apr.	-40.2	-45.2	-36.6	-39.5	-32.1	-21.2	-12.6	-8.3	-4.8	-2.8	-3.3	-3.0	+0.9	+10.6	+26.5	+34.5	+38.5	+37.4	+46.2	+36.8	+20.9	+9.9	+2.9	-15.5
May	-10.5	-14.7	-13.0	-8.0	-4.4	-4.7	-3.5	-3.6	-6.0	-10.7	-15.3	-18.2	-16.1	-6.5	+5.7	+20.1	+23.8	+25.8	+24.7	+19.6	+14.2	+5.6	+0.1	-4.4
June	-3.4	-7.3	-16.8	-25.1	-22.5	-17.7	-11.5	-6.4	-5.3	-7.2	-10.0	-11.3	-7.4	+0.4	+6.0	+10.6	+16.8	+22.9	+26.2	+25.5	+22.3	+15.6	+4.5	+1.1
July	-15.7	-22.1	-21.5	-18.8	-12.0	-8.1	-6.1	-3.8	-3.7	-6.5	-8.7	-10.7	-7.6	-2.6	+5.0	+13.7	+23.0	+28.8	+27.7	+24.3	+17.5	+11.3	+1.9	-5.3
Aug.	-12.0	-16.0	-18.6	-21.0	-16.9	-17.2	-11.7	-5.6	-5.2	-7.7	-11.1	-13.5	-11.4	-4.6	+4.8	+13.7	+23.3	+32.2	+33.2	+27.7	+20.6	+13.1	+4.0	-0.1
Sept.	-21.4	-21.6	-19.0	-16.2	-14.7	-10.4	-6.6	-2.9	-1.5	-2.6	-5.2	-6.4	-4.4	+0.9	+9.4	+17.7	+19.9	+22.4	+25.0	+22.4	+17.8	+7.9	-0.4	-10.1
Oct.	-32.6	-32.4	-33.6	-36.5	-31.5	-25.1	-18.9	-11.5	-5.0	-2.1	-0.9	+3.5	+8.9	+17.2	+30.0	+39.8	+49.6	+53.4	+40.8	+27.3	+7.9	-2.0	-17.9	-28.4
Nov.	-32.8	-31.4	-31.4	-26.7	-24.5	-21.1	-23.0	-16.3	-2.9	+4.0	+7.2	+5.3	+7.2	+12.9	+20.2	+33.0	+40.4	+29.2	+34.3	+23.8	+19.7	+3.3	-7.1	-13.3
Dec.	-11.4	-13.5	-14.9	-20.9	-18.7	-19.0	-16.6	-13.5	-9.5	-7.2	-4.9	-3.3	+1.0	+7.2	+13.6	+23.3	+26.6	+28.6	+30.7	+22.3	+12.2	+2.8	-6.0	-8.9
Year	-15.5	-18.5	-19.4	-20.1	-17.0	-14.3	-11.2	-7.5	-4.8	-4.6	-5.8	-6.6	-4.2	+1.8	+10.3	+18.7	+24.0	+27.5	+27.9	+23.4	+16.3	+7.8	-0.3	-7.9
Winter	-11.4	-13.4	-15.6	-16.4	-14.8	-13.9	-13.6	-10.7	-5.5	-2.9	-2.0	-2.1	-0.5	+3.3	+9.5	+16.9	+19.1	+20.2	+22.1	+18.0	+13.6	+5.4	-0.5	-4.8
Equinox	-24.8	-27.1	-25.1	-25.6	-22.3	-16.9	-11.9	-6.9	-3.7	-3.0	-4.1	-4.3	-1.5	+5.3	+16.1	+24.6	+31.3	+35.1	+33.6	+27.9	+16.5	+6.7	-3.1	-16.6
Summer	-10.4	-15.0	-17.5	-18.2	-13.9	-11.9	-8.2	-4.9	-5.1	-8.0	-11.3	-13.4	-10.6	-3.3	+5.4	+14.5	+21.7	+27.4	+27.9	+24.3	+18.7	+11.4	+2.6	-2.2

"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)

29 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.	-2.03	-1.82	-2.06	-2.15	-1.20	-0.70	-0.54	-0.51	-0.63	-0.39	+0.49	+1.93	+3.46	+4.26	+3.53	+2.92	+2.39	+1.42	+1.29	+0.04	-1.37	-2.66	-2.90	-2.77
Feb.	-3.06	-2.32	-1.59	-1.78	-2.04	-1.66	-1.50	-1.60	-1.97	-1.92	-0.14	+2.20	+4.02	+4.98	+5.38	+4.71	+3.20	+2.04	+1.41	+0.50	-1.05	-2.13	-2.96	-2.72
Mar.	-2.32	-2.42	-3.26	-3.34	-2.78	-2.73	-2.43	-3.26	-3.79	-3.27	-1.30	+2.06	+5.95	+7.42	+7.58	+6.51	+5.23	+2.55	+1.67	+0.03	-1.33	-1.35	-2.58	-2.84
Apr.	-5.24	-4.66	-5.31	-5.18	-2.94	-2.76	-3.52	-4.47	-5.41	-3.79	-0.44	+2.95	+5.93	+8.17	+7.70	+7.47	+7.52	+6.43	+2.13	+0.82	+1.30	-1.52	-2.76	-2.42
May	-0.57	-1.75	-2.43	-2.64	-2.74	-4.11	-5.37	-5.62	-5.40	-3.79	-0.69	+2.66	+5.90	+6.95	+6.72	+5.43	+4.79	+2.76	+0.97	+0.40	+0.02	-0.34	-0.40	-0.75
June	-1.58	-2.30	-2.03	-3.51	-4.90	-6.08	-6.27	-6.84	-5.89	-4.03	-1.13	+2.06	+5.06	+6.66	+6.74	+6.45	+5.16	+4.10	+3.20	+1.94	+1.48	+0.93	+0.76	+0.02
July	-1.90	-2.31	-2.42	-2.97	-3.61	-4.11	-4.91	-5.11	-4.94	-3.62	-1.30	+1.98	+4.66	+6.43	+6.90	+5.84	+4.71	+3.24	+2.06	+1.09	+0.87	+0.58	-0.26	-0.90
Aug.	-0.60	-2.86	-2.81	-2.42	-2.99	-3.48	-5.14	-6.05	-4.97	-2.71	+0.57	+4.04	+6.73	+7.72	+7.16	+5.50	+3.43	+1.40	+0.26	+0.10	-0.22	-0.63	-1.38	-0.65
Sept.	-3.84	-3.98	-4.03	-3.85	-3.06	-2.68	-2.94	-3.29	-3.14	-1.94	+1.34	+4.52	+7.20	+7.90	+7.67	+5.04	+3.21	+2.08	+0.36	+0.23	-0.35	-1.07	-1.95	-3.43
Oct.	-4.93	-1.98	-2.73	-3.19	-1.37	-0.68	+0.60	+0.77	-1.04	-0.48	+1.72	+4.32	+6.43	+7.12	+5.84	+4.37	+2.69	+0.96	-1.77	-0.73	-3.38	-3.88	-3.79	-4.87
Nov.	-2.64	-1.89	-0.57	+0.07	+0.17	+0.11	+1.17	+0.14	-1.09	-1.75	-0.91	+2.21	+3.33	+4.33	+4.23	+3.00	+1.96	+0.77	-1.01	-0.90	-1.64	-2.56	-3.09	-3.44
Dec.	-2.66	-2.42	-1.50	-1.55	-0.63	+0.74	+0.90	+1.47	+1.24	+1.31	+1.90	+2.72	+3.74	+3.14	+3.16	+2.02	+2.30	+1.77	+0.07	-2.26	-3.63	-4.00	-4.20	-3.63
Year	-2.61	-2.56	-2.56	-2.71	-2.34	-2.35	-2.50	-2.86	-3.09	-2.20	+0.01	+2.80	+5.20	+6.26	+6.05	+4.94	+3.88	+2.46	+0.89	+0.11	-0.77	-1.55	-2.13	-2.37
Winter	-2.60	-2.11	-1.43	-1.35	-0.93	-0.38	+0.01	-0.13	-0.61	-0.69	+0.33	+2.27	+3.64	+4.18	+4.07	+3.16	+2.46	+1.50	+0.44	-0.65	-1.92	-2.84	-3.29	-3.14
Equinox	-4.08	-3.26	-3.84	-3.89	-2.54	2.21	-2.07	-2.56	-3.35	-2.37	+0.33	+3.46	+6.38	+7.65	+7.20	+5.85	+4.66	+3.01	+0.60	+0.09	-0.94	-1.95	-2.77	-3.39
Summer	-1.16	-2.31	-2.42	-2.89	-3.56	-4.45	-5.42	-5.91	-5.30	-3.54	-0.64	+2.69	+5.59	+6.94	+6.88	+5.81	+4.52	+2.87	+1.62	+0.88	+0.54	+0.13	-0.32	-0.57
INCLINATION																								
Jan.	-0.05	-0.19	-0.19	-0.44	-0.59	-0.95	-1.08	-0.93	-0.49	+0.07	+0.49	+0.92	+0.85	+0.75	+0.67	+0.62	+0.58	+0.33	-0.01	-0.09	-0.18	-0.11	+0.03	-0.02
Feb.	-0.16	-0.30	-0.25	-0.52	-0.68	-0.75	-0.88	-0.84	-0.50	+0.05	+0.42	+0.73	+0.71	+0.46	+0.44	+0.49	+0.59	+0.32	+0.35	+0.20	+0.16	+0.19	-0.05	-0.17
Mar.	-0.40	-0.47	-0.42	-0.53	-0.74	-0.89	-1.07	-0.71	+0.04	+0.89	+1.51	+1.70	+1.45	+1.14	+0.63	+0.17	-0.41	-0.12	-0.12	-0.50	-0.18	-0.27	-0.10	-0.59
Apr.	+0.59	+0.88	+0.06	+0.71	-0.18	-0.39	-0.12	-0.51	+1.01	+1.57	+2.13	+2.26	+1.13	+0.13	-0.73	-1.72	-2.88	-3.39	-1.12	-1.10	+0.08	+0.73	+0.11	-0.26
May	-0.37	-0.29	-0.32	-0.15	-0.13	-0.12	+0.15	+0.55	+1.25	+1.65	+1.68	+1.57	+1.31	+0.97	+0.45	-0.60	-0.76	-0.83	-1.33	-1.19	-1.14	-0.91	-0.69	-0.77
June	-0.41	-0.38	-0.58	-0.73	-0.68	-0.20	+0.36	+1.00	+1.61	+2.03	+2.26	+2.24	+1.69	+1.42	+0.85	-0.11	-0.75	-1.70	-1.93	-1.99	-1.61	-1.04	-0.80	-0.57
July	-0.47	-0.31	-0.57	-0.73	-0.65	-0.50	+0.13	+0.79	+1.47	+1.90	+2.21	+2.24	+1.73	+1.24	+0.70	-0.08	-0.88	-1.29	-1.77	-1.86	-1.36	-0.84	-0.60	-0.48
Aug.	-1.07	-0.87	-1.02	-0.78	-0.94	-0.65	-0.10	+1.04	+1.93	+2.21	+2.11	+2.02	+1.34	+1.01	+0.45	+0.02	-0.67	-1.16	-1.11	-0.99	-0.69	-0.63	-0.72	-0.73
Sept.	-0.77	-0.84	-0.93	-1.06	-0.99	-1.06	-0.35	+0.54	+1.46	+2.05	+2.25	+1.97	+1.35	+1.09	+0.44	+0.47	-0.28	-0.52	-0.83	-0.74	-0.82	-0.89	-0.76	-0.77
Oct.	+0.19	-0.42	-1.12	-1.11	-1.27	-1.41	-1.16	-0.67	+0.06	+1.07	+1.92	+1.83	+1.42	+0.60	+0.34	-0.06	-0.09	-0.60	+0.23	+0.13	+0.50	+0.02	+0.09	-0.49
Nov.	+1.70	-0.08	+0.20	-0.60	-1.28	-1.13	-0.43	+0.43	+0.20	+0.46	+0.53	+0.92	+0.80	+0.45	+0.22	-0.17	+0.06	-0.16	-0.69	-0.74	-0.20	-0.22	-0.02	-0.27
Dec.	-0.37	-0.25	-0.45	-0.83	-1.22	-1.43	-1.25	-0.95	-0.64	0.00	+0.29	+0.35	+0.49	+0.63	+0.68	+0.79	+0.99	+1.00	+0.79	+0.89	+0.39	+0.26	-0.06	-0.11
Year	-0.13	-0.29	-0.46	-0.56	-0.78	-0.79	-0.48	+0.06	+0.62	+1.16	+1.48	+1.57	+1.19	+0.82	+0.43	-0.01	-0.38	-0.70	-0.60	-0.67	-0.42	-0.31	-0.29	-0.44
Winter	+0.28	-0.20	-0.17	-0.60	-0.94	-1.06	-0.91	-0.57	-0.36	+0.15	+0.43	+0.73	+0.71	+0.57	+0.51	+0.43	+0.56	+0.37	+0.11	+0.06	+0.04	+0.03	-0.03	-0.15
Equinox	-0.10	-0.21	-0.61	-0.50	-0.80	-0.94	-0.67	-0.08	+0.64	+1.39	+1.95	+1.94	+1.34	+0.74	+0.17	-0.29	-0.91	-1.15	-0.46	-0.55	-0.11	-0.11	-0.16	-0.53
Summer	-0.58	-0.46	-0.62	-0.59	-0.60	-0.37	+0.14	+0.85	+1.56	+1.94	+2.06	+2.02	+1.52	+1.16	+0.61	-0.20	-0.77	-1.25	-1.53	-1.50	-1.20	-0.85	-0.70	-0.64
HORIZONTAL FORCE																								
Jan.	+1.0	+0.7	-0.6	+3.3	+5.8	+11.4	+13.7	+11.9	+5.8	-2.4	-8.6	-14.7	-13.6	-11.7	-8.4	-6.8	-5.2	-0.9	+3.5	+5.1	+5.7	+3.2	+0.7	+1.1
Feb.	+1.8	+3.5	+1.2	+4.4	+7.3	+8.3	+10.2	+9.9	+5.6	-2.5	-8.9	-14.0	-13.4	-9.0	-6.8	-5.6	-5.2	-0.4	0.0	+2.8	+3.0	+1.3	+3.7	+2.8
Mar.	+4.1	+3.6	+2.2	+4.2	+7.1	+9.2	+12.6	+8.7	+1.9	-15.0	-25.2	-29.7	-25.9	-19.8	-10.0	-0.1	+12.4	+11.8	+10.0	+16.8	+9.9	+8.1	+2.6	+4.3
Apr.	-23.7	-29.9	-14.4	-25.3	-9.2	-2.0	-2.8	-10.8	-17.0	-24.5	-33.2	-35.0	-16.6	+1.9	+20.7	+38.6	+57.5	+64.7	+33.9	+30.1	+6.5	-7.2	-0.5	-1.8
May	+1.7	-1.0	0.0	-0.7	+0.4	0.0	-3.6	-9.6	-20.9	-28.7	-30.8	-30.3	-25.6	-17.0	-4.7	+16.4	+20.2	+22.0	+29.0	+25.0	+22.3	+15.7	+10.3	+9.9
June	+4.9	+3.0	+2.5	+1.6	+1.8	-3.6	-9.6	-17.4	-26.1	-33.1	-37.6	-37.8	-28.0	-21.2	-10.6	+5.5	+17.4	+34.0	+38.6	+39.3	+32.4	+21.3	+13.7	+9.0
July	+1.3	-3.5	+0.6	+4.0	+5.4	+4.5	-4.2	-13.2	-23.4	-30.9	-36.4	-37.5	-28.8	-19.5	-8.6	+6.3	+21.7	+30.0	+36.8	+36.8	+26.9	+16.7	+9.7	+5.3
Aug.	+11.7	+7.1	+8.4	+4.0	+7.9	+3.4	-2.8	-17.6	-30.9	-35.9	-35.8	-35.3	-24.3	-16.8	-5.0	+4.8	+18.7	+29.2	+28.9	+25.0	+17.9	+14.3	+12.2	+10.9
Sept.	+3.6	+4.6	+7.0	+9.9	+9.4	+12.0	+2.8	-9.1	-22.4	-31.7	-35.6	-31.9	-21.9	-16.0	-3.1	-0.6	+11.6	+16.0	+21.6	+19.4	+18.9	+16.3	+11.3	+7.9
Oct.	-14.8	-5.7	+4.4	+3.1	+7.4	+11.9	+10.4	+5.8	-2.7	-16.8	-29.1	-26.1	-18.0	-2.6	+5.9	+15.6	+19.7	+28.7	+11.6	+8.1	-4.6	-1.0	-8.0	-3.2
Nov.	-37.6	-10.4	-14.6	-0.9	+10.1	+9.1	-2.1	-12.5	-4.0	-5.4	-5.3	-11.9	-9.4	-2.0	+4.1	+14.8	+10.3	+13.2	+23.0	+19.8	+10.3	+4.5	-2.3	-0.8
Dec.	+1.3	-1.2	+1.3	+4.7	+11.4	+14.4	+12.7	+9.2	+6.1	-2.7	-6.1	-6.5	-6.9	-6.8	-5.2	-3.3	-5.1	-4.5	-0.6	-5.1	-1.3	-2.9	-1.3	-1.6
Year	-3.7	-2.4	-0.2	+1.0	+5.4	+6.5	+3.1	-3.7	-11.0	-19.1	-24.4	-25.9	-19.4	-11.7	-2.6	+7.1	+14.5	+20.6	+19.7	+18.6	+12.3	+7.5	+4.3	+3.7
Winter	-8.4	-1.9	-3.2	+2.9	+8.7	+10.8	+8.6	+4.6	+3.4	-3.3	-7.2	-11.8	-10.8	-7.4	-4.1	-0.2	-1.3	+1.9	+6.5	+5.7	+4.4	+1.5	+0.2	+0.4
Equinox	-7.7	-6.9	-0.2	-																				

"Winter" comprises for 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)

30 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.	+2.9	+2.5	+2.7	+4.5	+7.7	+10.5	+13.9	+13.2	+10.8	+1.0	-9.3	-17.7	-19.7	-14.9	-10.8	-7.3	-5.2	-1.5	+0.9	+1.6	+4.6	+4.4	+2.6	+2.5
Feb.	+2.7	+2.3	+0.6	+3.2	+4.2	+4.9	+9.3	+10.4	+5.0	-3.0	-9.4	-15.6	-14.7	-11.7	-10.5	-8.7	-5.1	-1.2	+3.1	+5.1	+6.8	+5.8	+9.1	+7.3
Mar.	+7.7	+3.7	+3.9	+5.2	+6.5	+7.6	+8.3	+27.9	+2.5	-11.0	-24.4	-28.0	-27.2	-23.0	-14.0	-6.0	-0.6	+4.6	+8.5	+10.2	+11.3	+12.6	+15.4	+14.0
Apr.	+13.3	+8.0	+6.3	+3.2	+8.6	+10.9	+9.0	+5.2	-6.3	-18.6	-26.2	-32.3	-28.6	-27.2	-17.6	-9.0	+0.8	+9.3	+15.5	+16.6	+14.5	+14.0	+14.7	+15.8
May	+5.5	+2.4	-0.6	+1.0	+5.3	+5.9	+0.7	-6.9	-13.1	-19.7	-27.1	-30.1	-26.2	-18.7	-7.2	+3.7	+11.7	+16.9	+21.4	+21.4	+17.8	+13.0	+11.3	+11.5
June	+5.6	+4.6	+5.6	+6.9	+10.1	+8.7	-0.5	-10.6	-18.8	-28.1	-36.0	-33.2	-26.8	-21.6	-9.7	+1.1	+10.5	+22.3	+28.5	+22.8	+19.2	+14.9	+12.1	+12.6
July	+1.0	+3.7	+4.6	+7.3	+10.6	+10.8	+2.6	-7.6	-20.2	-27.5	-32.6	-32.5	-25.8	-22.8	-13.9	-2.2	+6.5	+17.8	+24.6	+24.9	+22.9	+17.9	+16.5	+13.5
Aug.	+10.2	+8.5	+10.7	+10.3	+9.9	+8.1	+1.4	-8.6	-20.7	-33.5	-34.3	-32.5	-24.3	-14.5	-4.0	+2.3	+7.9	+13.1	+16.3	+19.9	+17.7	+12.6	+12.2	+11.4
Sept.	+10.4	+10.1	+10.0	+9.6	+10.5	+6.9	+1.9	-1.8	-12.2	-24.8	-34.2	-35.1	-28.0	-21.0	-10.9	-3.4	+3.8	+8.0	+15.5	+17.1	+18.2	+16.8	+16.0	+16.3
Oct.	+5.8	+5.1	+5.5	+6.6	+8.0	+6.8	+9.2	+7.4	-1.0	-15.4	-26.7	-33.1	-29.6	-21.2	-11.3	-5.7	-0.2	+7.0	+11.7	+11.6	+14.9	+14.5	+16.9	+13.2
Nov.	+1.3	-2.5	+3.0	+3.9	+4.1	+10.9	+11.8	+9.3	+4.5	-7.5	-11.3	-17.1	-18.4	-13.8	-12.2	-5.9	-1.7	+2.8	+5.5	+7.5	+7.2	+7.5	+4.7	+6.5
Dec.	-0.7	-1.9	+0.1	+2.9	+4.6	+7.5	+5.5	+8.5	+5.6	+2.4	-2.1	-3.7	-4.5	-8.1	-6.1	-10.0	-0.3	-0.6	-0.3	-1.4	-1.2	-0.8	+1.0	+3.4
Year	+5.4	+3.9	+4.3	+5.4	+7.5	+8.3	+6.4	+2.3	-5.3	-15.5	-22.8	-25.9	-22.8	-18.2	-10.7	-4.3	+2.4	+8.2	+12.6	+13.2	+12.8	+11.1	+11.1	+10.7
Winter	+1.5	+0.1	+1.7	+3.7	+5.2	+8.5	+10.1	+10.4	+6.5	-1.8	-8.0	-13.5	-14.3	-12.2	-9.9	-7.9	-3.1	-0.1	+2.3	+3.2	+4.3	+4.3	+4.3	+5.0
Equinox	+9.3	+6.7	+6.4	+6.1	+8.4	+8.1	+8.2	+4.8	-4.2	-17.4	-27.9	-32.1	-28.4	-23.2	-13.5	-6.0	+0.9	+7.2	+12.8	+13.8	+14.7	+14.4	+15.8	+14.8
Summer	+5.5	+4.9	+5.1	+6.4	+8.9	+8.4	+1.0	-8.5	-18.2	-26.9	-32.5	-32.1	-25.8	-19.5	-8.7	+1.2	+9.2	+17.5	+22.7	+22.2	+19.4	+14.6	+13.0	+12.2
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.	-7.1	-4.1	-2.7	-2.2	0.0	-0.1	-0.5	-3.1	-6.9	-11.6	-10.3	-3.3	+6.3	+13.1	+13.3	+10.7	+9.6	+8.6	+5.6	+2.3	-0.8	-3.6	-6.4	-6.9
Feb.	-9.0	-9.9	-3.0	-1.3	-2.3	-3.3	-4.9	-6.4	-10.7	-14.9	-9.6	+2.4	+11.2	+16.3	+17.0	+12.4	+8.2	+6.5	+4.5	+1.7	+0.8	-0.9	-2.8	-1.8
Mar.	-2.7	-2.9	-3.4	-5.6	-4.8	-6.2	-7.8	-16.5	-24.6	-25.9	-18.3	+0.2	+18.8	+28.1	+27.1	+20.7	+12.7	+6.5	+4.3	+3.9	+1.8	+0.7	-4.8	-1.3
Apr.	-4.9	-5.5	-3.8	-4.0	-7.5	-14.2	-21.4	-29.9	-32.4	-25.8	-15.0	+2.7	+20.3	+27.7	+25.3	+20.2	+16.8	+10.9	+8.4	+7.7	+7.7	+6.8	+5.6	+4.3
May	+3.7	+3.0	+0.4	-5.1	-9.6	-21.1	-28.9	-33.6	-31.3	-25.9	-14.7	+0.8	+15.9	+24.7	+25.4	+23.9	+16.4	+10.9	+9.1	+9.0	+8.7	+4.0	+6.5	+7.8
June	+4.5	+1.7	+0.7	-6.9	-15.1	-26.2	-32.1	-37.3	-38.4	-30.5	-15.4	+2.5	+15.7	+20.4	+25.1	+25.4	+23.6	+18.9	+18.3	+13.0	+9.6	+6.0	+8.3	+8.0
July	-3.8	-1.5	-4.1	-11.7	-17.7	-25.8	-35.6	-35.1	-31.9	-25.6	-13.7	+3.4	+19.4	+29.1	+32.8	+28.0	+22.4	+17.3	+13.8	+10.6	+9.1	+8.1	+8.7	+3.8
Aug.	+1.0	-0.5	-6.2	-11.7	-15.3	-19.1	-29.7	-35.1	-35.5	-24.9	-3.8	+16.3	+28.5	+33.2	+30.9	+22.8	+12.4	+7.6	+7.4	+8.0	+5.6	+4.8	+3.2	-0.2
Sept.	-1.9	-3.5	-7.7	-8.7	-10.4	-12.9	-17.9	-24.9	-30.1	-27.1	-11.6	+6.4	+20.3	+23.9	+23.7	+16.8	+13.3	+12.2	+13.6	+11.5	+6.1	+4.4	+2.0	+2.6
Oct.	-4.9	-4.0	-4.5	-4.3	-5.9	-6.8	-8.9	-14.5	-23.3	-25.4	-16.3	+0.2	+15.2	+23.1	+23.8	+16.9	+11.2	+11.1	+10.4	+7.4	+5.3	+1.4	-5.5	-1.5
Nov.	-10.6	-6.4	-1.8	-4.6	-1.4	-2.1	-1.4	-5.2	-9.9	-14.7	-4.9	+2.5	+10.5	+14.3	+13.3	+10.0	+7.3	+6.5	+4.6	+3.2	+1.7	-2.3	-4.3	-4.2
Dec.	-6.5	-4.0	+0.4	-3.2	-0.8	+0.1	+0.4	+1.6	+1.5	+0.6	+1.5	+5.5	+11.5	+10.9	+10.2	+4.0	+3.9	+4.2	+2.4	-1.4	-8.9	-13.0	-10.1	-10.8
Year	-3.5	-3.1	-3.0	-5.7	-7.5	-11.5	-15.7	-20.0	-22.8	-21.0	-11.0	+3.3	+16.1	+22.1	+22.3	+17.7	+13.2	+10.1	+8.5	+6.4	+3.9	+1.4	+0.1	0.0
Winter	-8.3	-6.1	-1.8	-2.9	-1.1	-1.4	-1.6	-3.3	-6.5	-10.1	-5.8	+1.8	+9.9	+13.6	+13.5	+9.3	+7.3	+6.4	+4.2	+1.4	-1.8	-5.0	-5.8	-5.9
Equinox	-3.6	-4.0	-4.9	-5.7	-7.1	-10.1	-14.0	-21.5	-27.6	-26.0	-15.3	+2.4	+18.7	+25.7	+25.0	+18.7	+13.5	+10.1	+9.2	+7.6	+5.2	+3.3	-0.7	+1.0
Summer	+1.4	+0.7	-2.3	-8.9	-14.4	-23.1	-31.6	-35.3	-34.3	-26.7	-11.9	+5.8	+19.9	+26.8	+28.6	+25.0	+18.7	+13.7	+12.2	+10.1	+8.3	+5.7	+6.7	+4.8
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.	+2.6	+1.7	+0.6	+1.3	+0.4	-0.7	-1.8	-2.1	-1.4	-1.7	-3.2	-4.7	-7.8	-7.5	-3.6	+0.5	+1.2	+3.9	+4.4	+4.7	+4.0	+3.3	+3.4	+2.5
Feb.	+5.8	+3.2	-0.3	-1.8	-2.4	-2.2	-2.4	-2.0	+0.5	+1.4	-0.8	-4.4	-5.8	-6.0	-2.9	-0.8	+2.0	+2.2	+1.8	+3.0	+3.3	+3.8	+2.6	+2.2
Mar.	-0.5	-0.6	-0.3	0.0	-0.4	-0.9	-0.4	+3.4	+4.3	+3.2	-1.1	-7.4	-10.5	-8.2	-2.3	+2.8	+5.0	+4.1	+3.0	+2.6	+3.1	+2.8	+0.5	-2.2
Apr.	+4.8	+3.8	+1.8	+1.2	0.0	+3.0	+3.8	+4.2	+0.8	-2.8	-9.2	-14.0	-17.0	-14.4	-7.6	-2.0	+1.2	+4.8	+6.2	+7.0	+6.8	+6.6	+5.8	+5.2
May	+2.2	+1.9	+2.9	+4.4	+7.1	+5.9	+4.2	+2.5	-2.3	-8.8	-13.7	-17.7	-17.6	-13.1	-5.5	-0.6	+4.7	+8.1	+9.0	+8.3	+7.9	+5.8	+3.5	+0.9
June	+4.8	+3.9	+1.2	+1.9	+3.5	+5.8	+5.7	+4.7	+2.8	-3.1	-12.6	-20.1	-21.4	-15.5	-8.4	-0.5	+3.3	+7.0	+7.3	+7.7	+8.8	+6.7	+4.6	+1.9
July	+3.2	+4.6	+5.2	+6.0	+7.6	+6.5	+7.2	+7.0	+2.6	-6.2	-13.2	-19.4	-22.6	-18.6	-10.8	-4.2	+1.6	+6.7	+8.6	+7.6	+6.8	+5.4	+4.2	+4.2
Aug.	+1.4	-1.0	-2.6	-0.6	+2.0	+2.9	+3.6	+3.6	+0.6	-4.4	-14.6	-20.0	-18.6	-13.8	-3.4	+5.2	+9.8	+10.3	+9.0	+6.8	+7.2	+7.0	+5.6	+4.0
Sept.	+3.1	+3.8	+3.5	+3.6	+4.0	+3.5	+3.4	+5.6	+4.7	+0.4	-6.7	-12.8	-15.3	-13.0	-6.9	-2.0	+0.8	+0.9	+1.2	+3.2	+4.5	+4.8	+3.9	+1.8
Oct.	+1.2	+1.8	+2.7	+3.0	+3.0	+3.0	+1.4	+3.2	+4.5	+3.2	-2.8	-8.8	-9.6	-9.6	-6.1	-1.8	+0.8	+0.8	+1.4	+2.8	+2.9	+2.4	+0.8	-0.2
Nov.	+1.6	+0.2	-2.3	-2.4	-2.2	-2.0	-2.2	-1.2	+0.3	-0.8	-4.0	-4.4	-4.0	-2.2	+2.3	+4.0	+5.0	+3.6	+2.4	+1.6	+1.7	+2.0	+2.6	+0.4
Dec.	+0.8	-0.3	-1.8	-2.3	-2.5	-3.6	-3.3	-4.3	-5.2	-5.9	-4.6	-5.7	-4.4	-0.5	+2.0	+5.7	+5.5	+5.0	+4.7	+5.3	+6.6	+7.5	+3.0	-1.7
Year	+2.6	+1.9	+0.9	+1.2	+1.7	+1.8	+1.6	+2.1	+1.0	-2.1	-7.2	-11.6	-12.9	-10.2	-4.4	+0.5	+3.4	+4.8	+4.9	+5.1	+5.3	+4.8	+3.4	+1.6
Winter	+2.7	+1.2	-0.9	-1.3	-1.7	-2.1	-2.4	-2.4	-1.5	-1.7	-3.1	-4.8	-5.5	-4.1	-0.5	+2.3	+3.4	+3.7	+3.3	+3.7	+3.9	+4.1	+2.9	+0.9
Equinox	+2.1	+2.2	+1.9	+1.9	+1.7	+2.1	+2.1	+4.1	+3.6	+1.0	-4.9	-10.7	-13.1	-11.3	-5.7	-0.7	+1.9	+2.7	+2.9	+3.9	+4.3	+4.1	+2.7	+1.1
Summer	+2.9	+2.3	+1.7	+2.9	+5.1	+5.3	+5.2	+4.5	+0.9	-5.6	-13.5	-19.3	-20.1	-15.3	-7.0	0.0	+4.9	+8.0	+8.5	+7.6	+7.7	+6.2	+4.5	+2.7

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

INTERNATIONAL QUIET DAYS

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

31 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.	-1.53	-0.92	-0.64	-0.61	-0.28	-0.42	-0.61	-1.12	-1.80	-2.37	-1.72	0.00	+2.01	+3.20	+3.08	+2.43	+2.12	+1.78	+1.09	+0.40	-0.34	-0.89	-1.38	-1.48
Feb.	-1.92	-2.09	-0.63	-0.38	-0.61	-0.85	-1.34	-1.67	-2.35	-2.88	-1.59	+1.07	+2.80	+3.71	+3.81	+2.82	+1.85	+1.35	+0.78	+0.15	-0.09	-0.40	-0.91	-0.63
Mar.	-0.84	-0.72	-0.83	-1.32	-1.20	-1.54	-2.04	-3.64	-5.05	-4.80	-2.78	+1.08	+4.80	+6.52	+5.99	+4.40	+2.58	+1.14	+0.54	+0.40	-0.05	-0.32	-1.54	-0.78
Apr.	-1.48	-1.41	-1.00	-0.93	-1.84	-3.27	-4.64	-6.21	-6.30	-4.51	-2.04	+1.75	+5.16	+6.59	+5.76	+4.41	+3.36	+1.85	+1.12	+0.93	+1.00	+0.85	+0.58	+0.27
May	+0.55	+0.52	+0.10	-1.07	-2.14	-4.48	-5.85	-6.52	-5.82	-4.49	-1.96	+1.28	+4.17	+5.68	+5.38	+4.67	+2.88	+1.58	+1.03	+1.02	+1.10	+0.33	+0.90	+1.14
June	+0.70	+0.17	-0.07	-1.64	-3.41	-5.61	-6.44	-7.13	-7.05	-5.10	-1.77	+1.73	+4.16	+4.91	+5.43	+5.08	+4.37	+2.99	+2.64	+1.77	+1.23	+0.66	+1.23	+1.15
July	-0.81	-0.44	-1.00	-2.63	-3.96	-5.60	-7.27	-6.80	-5.68	-4.13	-1.56	+1.90	+4.87	+6.72	+7.12	+5.73	+4.28	+2.82	+1.87	+1.22	+0.98	+0.97	+1.14	+0.26
Aug.	-0.15	-0.42	-1.64	-2.73	-3.46	-4.14	-6.03	-6.76	-6.38	-3.77	+0.50	+4.50	+6.65	+7.22	+6.38	+4.51	+2.20	+1.04	+0.89	+0.88	+0.48	+0.49	+0.20	-0.46
Sept.	-0.77	-1.09	-1.93	-2.11	-2.49	-2.86	-3.67	-4.95	-5.61	-4.55	-1.07	+2.59	+5.13	+5.59	+5.17	+3.51	+2.55	+2.16	+2.17	+1.69	+0.55	+0.27	-0.19	-0.09
Oct.	-1.20	-0.99	-1.12	-1.12	-1.48	-1.63	-2.14	-3.20	-4.66	-4.55	-2.30	+1.26	+4.16	+5.45	+5.22	+3.62	+2.26	+1.97	+1.66	+1.06	+0.52	-0.25	-1.74	-0.80
Nov.	-2.18	-1.19	-0.48	-1.07	-0.44	-0.83	-0.72	-1.39	-2.16	-2.69	-0.58	+1.13	+2.80	+3.39	+3.14	+2.23	+1.54	+1.21	+0.72	+0.37	+0.08	-0.75	-1.04	-1.09
Dec.	-1.29	-0.74	+0.07	-0.76	-0.34	-0.25	-0.12	0.00	+0.09	+0.04	+0.39	+1.24	+2.49	+2.50	+2.29	+1.18	+0.80	+0.87	+0.50	-0.24	-1.75	-2.60	-2.07	-2.30
Year	-0.91	-0.78	-0.76	-1.36	-1.80	-2.62	-3.41	-4.12	-4.40	-3.65	-1.37	+1.63	+4.10	+5.12	+4.90	+3.72	+2.57	+1.73	+1.25	+0.80	+0.31	-0.14	-0.40	-0.40
Winter	-1.73	-1.23	-0.42	-0.71	-0.42	-0.59	-0.70	-1.05	-1.55	-1.97	-0.87	+0.86	+2.53	+3.20	+3.08	+2.17	+1.58	+1.30	+0.77	+0.17	-0.53	-1.16	-1.33	-1.37
Equinox	-1.07	-1.05	-1.22	-1.37	-1.75	-2.33	-3.12	-4.50	-5.41	-4.60	-2.05	+1.67	+4.81	+6.04	+5.53	+3.99	+2.69	+1.78	+1.37	+1.02	+0.51	+0.14	-0.72	-0.35
Summer	+0.07	-0.04	-0.65	-2.02	-3.24	-4.96	-6.40	-6.80	-6.23	-4.37	-1.20	+2.35	+4.96	+6.13	+6.08	+5.00	+3.43	+2.11	+1.61	+1.22	+0.95	+0.61	+0.87	+0.52
INCLINATION																								
Jan.	-0.04	-0.07	-0.13	-0.23	-0.50	-0.70	-0.95	-0.88	-0.66	+0.03	+0.65	+1.09	+1.02	+0.63	+0.46	+0.36	+0.26	+0.09	-0.01	-0.02	-0.19	-0.17	-0.01	-0.02
Feb.	+0.08	+0.05	-0.01	-0.24	-0.31	-0.33	-0.61	-0.66	-0.19	+0.41	+0.71	+0.89	+0.68	+0.42	+0.41	+0.40	+0.28	+0.05	-0.22	-0.28	-0.37	-0.27	-0.50	-0.41
Mar.	-0.49	-0.22	-0.22	-0.27	-0.38	-0.44	-0.72	-0.26	+0.24	+1.11	+1.79	+1.65	+1.29	+0.96	+0.53	+0.21	+0.01	-0.28	-0.53	-0.64	-0.68	-0.77	-0.94	-0.95
Apr.	-0.69	-0.37	-0.32	-0.13	-0.47	-0.47	-0.24	+0.12	+0.83	+1.47	+1.67	+1.74	+1.21	+1.09	+0.66	+0.30	-0.23	-0.62	-0.97	-1.01	-0.88	-0.84	-0.89	-0.96
May	-0.35	-0.15	+0.11	+0.10	-0.06	+0.01	+0.40	+0.92	+1.18	+1.39	+1.62	+1.53	+1.09	+0.60	+0.03	-0.54	-0.85	-1.04	-1.29	-1.31	-1.08	-0.76	-0.73	-0.83
June	-0.30	-0.22	-0.34	-0.32	-0.39	-0.11	+0.56	+1.26	+1.76	+2.13	+2.24	+1.65	+1.04	+0.79	+0.13	-0.39	-0.89	-1.52	-1.91	-1.46	-1.16	-0.88	-0.78	-0.87
July	+0.06	-0.11	-0.13	-0.19	-0.29	-0.24	+0.44	+1.09	+1.77	+1.96	+1.98	+1.61	+0.90	+0.69	+0.25	-0.30	-0.65	-1.21	-1.57	-1.57	-1.45	-1.14	-1.08	-0.83
Aug.	-0.65	-0.58	-0.69	-0.55	-0.42	-0.23	+0.36	+1.08	+1.80	+2.39	+1.93	+1.44	+0.79	+0.21	-0.19	-0.30	-0.43	-0.70	-0.94	-1.23	-1.05	-0.71	-0.70	-0.65
Sept.	-0.58	-0.53	-0.47	-0.44	-0.47	-0.21	+0.17	+0.56	+1.28	+1.96	+2.22	+1.91	+1.22	+0.77	+0.26	-0.03	-0.39	-0.65	-1.15	-1.18	-1.16	-1.04	-0.98	-1.06
Oct.	-0.29	-0.24	-0.24	-0.31	-0.38	-0.29	-0.46	-0.23	+0.46	+1.39	+1.88	+1.95	+1.53	+0.88	+0.30	+0.12	-0.10	-0.57	-0.86	-0.78	-0.97	-0.91	-1.02	-0.85
Nov.	+0.08	+0.25	-0.23	-0.26	-0.31	-0.74	-0.81	-0.58	-0.17	+0.65	+0.70	+0.99	+0.98	+0.68	+0.70	+0.37	+0.15	-0.17	-0.35	-0.49	-0.45	-0.42	-0.19	-0.36
Dec.	+0.15	+0.17	-0.06	-0.21	-0.35	-0.58	-0.45	-0.68	-0.51	-0.31	+0.01	+0.03	+0.05	+0.39	+0.33	+0.75	+0.11	+0.11	+0.11	+0.24	+0.35	+0.39	+0.13	-0.13
Year	-0.25	-0.17	-0.23	-0.26	-0.36	-0.36	-0.19	+0.15	+0.65	+1.21	+1.45	+1.37	+0.98	+0.67	+0.33	+0.08	-0.23	-0.54	-0.81	-0.81	-0.76	-0.63	-0.64	-0.66
Winter	+0.07	+0.10	-0.11	-0.24	-0.37	-0.59	-0.71	-0.70	-0.38	+0.20	+0.52	+0.75	+0.68	+0.53	+0.47	+0.46	+0.20	+0.02	-0.12	-0.14	-0.16	-0.12	-0.14	-0.23
Equinox	-0.51	-0.34	-0.31	-0.29	-0.43	-0.35	-0.31	+0.05	+0.70	+1.49	+1.89	+1.81	+1.31	+0.93	+0.44	+0.15	-0.18	-0.53	-0.87	-0.91	-0.92	-0.89	-0.96	-0.95
Summer	-0.30	-0.27	-0.27	-0.24	-0.29	-0.14	+0.44	+1.09	+1.63	+1.95	+1.94	+1.56	+0.96	+0.58	+0.05	-0.38	-0.71	-1.12	-1.42	-1.39	-1.18	-0.87	-0.82	-0.79
HORIZONTAL FORCE																								
Jan.	+1.6	+1.7	+2.2	+4.0	+7.6	+10.3	+13.6	+12.4	+9.4	-1.1	-11.0	-18.0	-18.2	-12.3	-8.2	-5.2	-3.4	+0.1	+1.8	+2.0	+4.4	+3.7	+1.4	+1.2
Feb.	+1.0	+0.5	0.0	+2.9	+3.7	+4.2	+8.3	+9.1	+3.0	-5.7	-11.0	-14.9	-12.4	-8.5	-7.2	-6.3	-3.5	0.0	+3.9	+5.3	+6.8	+5.5	+8.4	+6.9
Mar.	+7.1	+3.1	+3.2	+4.1	+5.5	+6.3	+10.7	+5.1	-2.0	-15.5	-27.3	-27.5	-23.3	-17.5	-8.8	-2.1	+1.7	-5.7	+9.1	+10.7	+11.4	+12.5	+14.3	+13.5
Apr.	+12.2	+6.9	+5.5	+2.4	+7.1	+8.1	+5.0	-0.3	-12.1	-23.0	-28.5	-31.3	-24.4	-21.7	-12.7	-5.2	+3.9	+11.1	+16.8	+17.7	+15.7	+15.0	+15.5	+16.3
May	+6.1	+2.9	-0.5	+0.1	+3.5	+2.0	-4.5	-12.9	-18.5	-24.1	-29.3	-29.5	-22.9	-13.9	-2.5	+7.9	+14.5	+18.6	+22.7	+22.7	+19.1	+13.5	+12.3	-12.7
June	+6.3	+4.8	+5.6	+5.5	+7.2	+3.8	-6.3	-17.2	-25.4	-33.1	-38.2	-32.2	-23.5	-17.6	-5.0	+5.7	+14.6	+25.4	+31.3	+24.8	+20.6	+15.7	+13.4	+13.8
July	+0.3	+3.4	+3.8	+5.1	+7.2	+6.0	-3.9	-13.8	-25.6	-31.7	-34.6	-31.4	-21.9	-17.2	-7.8	+2.9	+10.4	+20.6	+26.7	+26.4	+24.2	+19.1	+17.8	+14.0
Aug.	+10.2	+8.3	+9.4	+8.0	+7.0	+4.5	-4.0	-14.8	-26.8	-37.5	-34.4	-29.0	-18.8	-8.3	+1.6	-6.4	+10.0	+14.3	+17.4	+21.0	+18.4	+13.3	+12.6	+11.2
Sept.	+9.9	+9.3	+8.4	+7.9	+8.5	+4.5	-1.3	-6.3	-17.4	-29.3	-35.7	-33.3	-23.9	-16.3	-6.4	-0.3	+6.1	+10.1	+17.7	+18.9	+19.0	+17.3	+16.1	+16.5
Oct.	+4.8	+4.3	+4.6	+5.7	+6.8	+5.5	+7.4	+4.7	-5.2	-19.7	-29.2	-32.5	-26.4	-16.7	-6.8	-2.5	+1.8	+8.9	+13.4	+12.7	+15.6	+14.5	+15.6	+12.7
Nov.	-0.6	-3.6	-2.6	+3.0	+3.8	+10.3	+11.4	+8.2	+2.6	-10.0	-12.0	-16.4	-16.2	-11.0	-9.6	-4.0	+3.9	+6.2	+8.0	+7.4	+7.0	+3.8	+5.6	
Dec.	-1.9	-2.6	+0.2	+2.3	+4.4	+7.4	+5.5	+8.6	+5.8	+2.5	-1.8	-2.6	-2.3	-6.0	-4.2	-9.1	+0.4	+0.2	+0.1	-1.6	-2.8	-3.1	-0.8	+1.4
Year	+4.7	+3.3	+3.7	+4.3	+6.0	+6.1	+3.5	-1.4	-9.3	-19.0	-24.4	-24.9	-19.5	-13.9	-6.5	-1.0	+4.7	+9.9	+13.9	+14.1	+13.3	+11.2	+10.9	+10.5
Winter	0.0	-1.0	+1.3	+3.1	+4.9	+8.1	+9.7	+9.6	+5.2	-3.6	-8.9	-13.0	-12.3	-9.5	-7.3	-6.1	-1.7	+1.1	+3.0	+3.4	+3.9	+3.3	+3.2	+3.8
Equinox	+8.5	+5.9	-5.4	+5.0	+7.0	6.1	+5.5	+0.8	-9.2	-21.9	-30.2	-31.1	-24.5	-18.1	-8.7	-2.5	+3.4	+8.9	+14.3	+15.0	+15.4	+14.8	+15.4	+14.7
Summer	+5.7	+4.9	+4.6	+4.7	+6.2	+4.1	-4.7	-14.7	-24.1	-31.3	-34.1	-30.5	-21.8	-14.3	-3.4	+5.7	+12.4	+19.7	+24.5	+23.7	+20.6	+15.4	+14.0	+12.9

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

DIURNAL INEQUALITIES OF THE GEOGRAPHICAL COMPONENTS OF MAGNETIC FORCE

INTERNATIONAL DISTURBED DAYS

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

32 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.	+4.0	-1.3	-14.7	+4.2	+11.9	+16.7	+25.9	+22.1	+10.8	+0.4	-5.0	-15.0	-15.9	-14.9	-11.5	-10.0	-6.6	-3.1	+4.2	+0.1	+10.8	-2.9	-7.7	-2.3
Feb.	+3.6	+8.0	+3.1	+11.3	+14.7	+9.1	+6.4	+2.9	+5.7	+3.7	-4.6	-14.0	-12.5	-8.2	-15.7	-20.1	-14.7	+0.5	-7.8	-2.7	+7.8	+3.9	+9.2	+10.3
Mar.	-1.1	+3.0	-3.6	+5.1	+11.1	+9.5	+18.3	+5.9	-4.9	-16.8	-25.9	-51.5	-44.0	-29.1	-14.6	+1.7	+63.0	+45.9	+8.1	+52.0	+15.5	+0.6	-29.0	-19.4
Apr.	-107.7	-130.7	-80.9	-169.4	-76.0	-21.9	-31.8	-41.8	-20.3	-12.3	-28.8	-27.9	+41.8	+97.1	+137.8	+174.2	+237.9	+224.3	+52.8	+48.6	-71.0	-108.5	-46.8	-38.7
May	-26.3	-24.7	-2.0	-12.0	-3.2	+4.9	+7.8	+4.3	-6.5	-32.0	-29.5	-20.6	-22.3	-21.9	+3.2	+50.4	+40.9	+30.1	+47.3	+21.9	+9.2	-2.0	-13.4	-3.5
June	0.0	+7.6	+3.8	-10.9	+1.5	-3.5	-5.6	-13.2	-15.0	-29.8	-42.1	-52.6	-47.1	-42.9	-24.8	-9.3	+24.9	+52.0	+53.6	+58.4	+48.4	+36.8	+8.7	+1.1
July	-12.5	-24.5	-1.2	+9.9	+22.5	+13.5	-12.5	-23.6	-37.2	-45.7	-41.6	-44.5	-29.1	-26.0	-10.1	+24.6	+62.2	+69.6	+54.9	+48.8	+26.4	+12.9	-13.7	-23.1
Aug.	+10.9	+6.9	+8.9	-9.3	+2.0	-11.2	-11.6	-33.5	-56.6	-45.1	-41.7	-42.1	-29.9	-17.0	+6.0	+27.5	+54.4	+82.2	+58.0	+33.9	+5.0	-0.9	+0.5	+2.9
Sept.	-8.5	+0.9	+13.7	+9.9	+13.8	+13.5	-6.0	-31.6	-53.3	-48.4	-37.6	-19.9	-13.4	-9.5	+15.5	+0.2	+23.2	+36.1	+45.9	+25.0	+12.7	+12.3	+3.7	+1.5
Oct.	-110.2	-62.3	-0.6	-20.7	-20.3	+9.2	+12.9	+5.9	-4.0	-31.4	-27.1	-15.2	-3.2	+40.5	+53.5	+88.9	+106.9	+132.8	+42.9	+24.1	-61.5	-32.2	-77.5	-51.7
Nov.	-229.5	-50.6	-102.9	-34.9	+12.2	-14.4	-96.7	-120.3	-20.0	+13.2	+41.3	+18.5	+24.1	+40.0	+56.4	+104.1	+47.7	+52.0	+75.6	+61.9	+48.2	+35.0	+32.7	+6.3
Dec.	+11.7	+12.3	+5.1	+11.5	+37.5	+18.5	+13.0	+5.8	+12.6	-4.0	-8.6	9.8	-16.6	-11.7	-6.3	+17.0	-4.4	-7.3	+1.4	-19.9	-13.3	13.9	-18.1	-12.6
Year	-38.8	-21.3	-14.3	-17.1	+2.3	+3.6	-6.6	-18.0	-15.7	-20.6	-20.9	-24.5	-14.0	-0.3	+15.7	+37.5	+53.0	+59.6	+36.4	+29.3	+3.2	-4.9	-12.6	-10.7
Winter	-52.5	-7.9	-27.4	-1.9	+19.1	+7.5	-12.9	-22.4	+2.3	+3.3	+5.8	-5.0	-5.1	+1.3	+5.7	+22.8	+5.5	+10.5	+18.4	+9.8	+13.4	+5.5	+4.0	+0.4
Equinox	-56.8	-47.3	-17.9	-43.8	-17.8	+2.6	-1.6	-15.3	-20.6	-27.2	-29.9	-28.6	-4.7	+24.7	+47.9	+66.2	+107.8	+109.8	+37.4	+37.5	-26.1	-32.0	-37.5	-27.0
Summer	-7.0	-8.6	+2.3	-5.5	+5.7	+0.9	-5.5	-16.5	-28.8	-38.2	-38.7	-40.0	-32.1	-26.9	-6.4	+23.3	+45.6	+58.2	+53.5	+40.7	+22.3	+11.6	-4.5	-5.6
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.	-10.4	-19.7	-29.0	-20.0	-6.5	+1.7	+6.3	+9.9	+10.0	+10.3	+15.1	+22.3	+24.5	+24.9	+20.4	+19.5	+13.8	+6.0	+11.4	-3.4	-23.3	-33.4	-30.6	-19.9
Feb.	-23.5	-10.1	-9.3	-18.4	-18.8	-6.5	+0.5	-0.5	-5.0	+0.6	+8.8	+18.6	+22.8	+26.8	+23.8	+21.6	+8.2	+10.3	+2.8	+1.0	-13.5	-9.1	-14.9	-16.2
Mar.	-29.4	-34.6	-61.2	-50.4	-29.7	-20.3	-7.9	-6.1	-7.6	-3.4	-2.7	+2.1	+33.6	+42.9	+50.9	+51.9	+68.6	+29.3	+16.5	+22.7	+2.1	-2.6	-33.4	-31.1
Apr.	-134.7	-121.7	-84.7	-109.5	-47.1	-38.9	-28.6	-29.8	-38.3	-18.5	-8.1	+16.1	+31.9	+61.3	+65.7	+102.7	+158.3	+178.8	+49.3	+27.9	+28.6	-24.6	-29.1	-23.3
May	-5.4	-16.0	-39.4	-25.7	-21.8	-32.0	-31.9	-32.6	-36.1	-28.1	-2.7	+14.2	+35.4	+37.1	+40.7	+39.3	+50.3	+36.5	+13.3	+5.2	+1.3	-1.2	-5.1	+5.0
June	-11.5	-31.5	-8.4	-39.0	-27.0	-36.6	-42.3	-51.2	-33.7	-26.7	-14.4	-2.6	+16.5	+28.9	+37.6	+41.4	+45.3	+46.2	+38.8	+32.0	+24.5	+16.4	+3.3	-6.1
July	-37.5	-26.3	-15.7	-13.5	-13.3	-8.9	-15.3	-11.5	-16.6	-10.8	-4.4	+7.1	+11.7	+24.8	+30.4	+34.5	+38.3	+32.4	+24.6	+11.5	+8.0	+2.4	-21.1	-30.6
Aug.	+10.3	-41.4	-33.9	-28.7	-6.3	+3.9	-25.3	-36.4	-21.5	-4.0	+8.1	+21.7	+33.4	+36.8	+40.5	+36.0	+31.6	+22.4	+3.0	-0.1	-9.7	-12.0	-23.9	-4.4
Sept.	-34.9	-38.8	-36.1	-36.1	-18.7	+3.2	-4.0	-11.9	-14.3	-7.1	+18.9	+38.3	+49.8	+49.9	+55.2	+28.9	+20.8	+16.7	-22.0	-11.1	-11.5	-4.5	-8.0	-22.8
Oct.	-89.6	-24.1	-44.5	-45.2	-5.8	-9.2	+16.6	+34.1	+16.1	+26.6	+38.1	+44.0	+47.6	+59.7	+47.7	+41.4	+36.6	+45.5	-19.2	+3.8	-50.6	-46.8	-42.1	-80.7
Nov.	-61.6	-39.1	-39.7	+6.1	+10.0	+1.7	+18.4	-16.1	-11.6	-22.3	-34.1	+3.1	+10.9	+39.7	+39.2	+34.7	+28.2	+21.1	-3.0	-5.0	+3.1	-1.4	+10.0	+7.8
Dec.	-19.6	-25.7	-14.1	-18.5	-5.1	+17.7	+14.7	+21.8	+17.2	+9.6	+13.5	+21.0	+29.3	+24.7	+28.3	+27.9	+29.6	+23.9	+6.8	-23.2	-29.8	-36.2	-62.9	-51.2
Year	-37.3	-35.8	-34.7	-33.2	-15.8	-10.4	-8.2	-10.9	-11.8	-6.1	+4.3	+17.2	+29.0	+38.1	+40.0	+40.0	+44.2	+39.1	+10.2	+5.1	-5.9	-12.7	-21.5	-22.8
Winter	-28.8	-23.7	-23.1	-12.7	-5.1	+3.7	+9.9	+3.7	+2.7	-0.4	+0.8	+16.3	+21.9	+29.1	+27.9	+26.0	+20.0	+15.3	+4.5	-7.7	-15.9	-20.0	-24.6	-19.9
Equinox	-72.1	-54.8	-56.6	-60.3	-25.3	-16.3	-6.0	-3.4	-11.0	-0.6	+15.6	+25.1	+40.7	+53.5	+54.9	+56.3	+71.1	+67.6	+6.1	+10.8	-7.9	-19.7	-28.1	-39.1
Summer	-11.0	-28.8	-24.4	-26.8	-17.1	-18.4	-28.7	-33.0	-27.0	-17.4	-3.3	+10.1	+24.3	+31.9	+37.3	+37.8	+41.4	+34.3	+19.9	+12.2	+6.0	+1.4	-11.7	-9.0
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.	+4.6	-22.5	-32.2	-29.1	-21.9	-15.6	-13.1	-12.5	-12.0	-11.1	-8.4	-6.7	+0.6	-1.3	+15.8	+16.7	+29.7	+32.4	+23.1	+32.3	+21.6	+4.9	+2.8	+1.5
Feb.	-7.5	-4.0	-15.8	-22.9	-18.6	-18.2	-16.7	-12.4	-9.6	-10.1	-11.2	-8.8	-6.1	-0.6	+8.6	+17.9	+20.6	+20.2	+25.5	+26.8	+23.0	+12.1	+8.8	-1.0
Mar.	-0.9	-23.5	-37.7	-36.7	-40.5	-43.1	-35.7	-21.7	-14.7	-13.1	-12.7	-9.1	-4.1	-0.1	+1.5	+8.5	+40.7	+94.7	+63.5	+79.5	+54.7	+24.3	-2.3	-71.2
Apr.	-134.9	-113.4	-104.3	-163.0	-137.6	-63.9	-37.8	-36.6	-23.5	-11.4	-1.9	+12.6	+42.5	+76.4	+125.9	+129.6	+115.0	+79.5	+118.8	+85.4	+24.9	+8.0	+11.9	-2.1
May	-39.8	-65.5	-53.0	-29.3	-21.9	-21.0	-9.9	-7.3	-11.4	-16.1	-18.2	-21.1	-16.6	-2.3	+27.8	+81.7	+65.2	+58.1	+56.3	+39.0	+32.5	+4.1	-11.8	-19.1
June	-21.3	-16.4	-39.3	-70.8	-56.6	50.1	-28.2	-12.2	-8.9	-5.0	-0.5	+3.4	+8.1	+13.6	+21.3	+25.6	+35.0	+49.1	+52.2	+47.1	+40.2	+24.2	-2.7	-7.1
July	-57.0	-69.7	-67.6	-56.5	-39.2	-24.7	-21.6	-18.3	-15.0	-10.1	-7.0	-0.1	+16.4	+28.3	+39.8	+57.5	+77.8	+80.9	+67.0	+49.3	+23.6	+7.3	-21.0	-40.1
Aug.	-39.8	-57.3	-80.4	-98.6	-66.4	-81.1	-52.2	-22.2	-12.6	-11.7	-6.8	-4.6	+2.8	+14.7	+23.2	+44.6	+73.8	+103.3	+100.8	+80.4	+55.4	+30.5	+6.4	-2.1
Sept.	-74.7	-80.0	-69.9	-55.8	-54.0	-44.3	-29.0	-15.8	-8.3	+0.6	+5.5	+14.0	+22.3	+33.2	+48.3	+63.8	+55.8	+59.3	+77.6	+59.6	+44.9	+0.8	-21.5	-32.4
Oct.	-109.0	-67.9	-78.2	-117.1	-112.5	-87.0	-56.1	-34.5	-15.6	-4.3	+0.8	+23.7	+43.0	+67.1	+111.0	+141.5	+165.7	+162.8	+110.3	+64.7	-14.8	-29.9	-60.6	-103.1
Nov.	-142.7	-131.4	-127.4	-101.3	-85.6	-67.0	-85.7	-57.0	+6.2	+41.7	+66.8	+49.6	+43.5	+58.0	+76.8	+135.1	+103.8	+89.0	+84.1	+34.4	+39.2	+20.9	-14.4	-36.0
Dec.	-34.1	-36.6	-43.9	-80																				

INTERNATIONAL DISTURBED DAYS

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

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	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.	-2.25	-3.93	-5.31	-4.19	-1.75	-0.27	+0.31	+1.17	+1.61	+2.07	+3.23	+5.07	+5.53	+5.59	+4.55	+4.31	+3.03	+1.33	+2.15	-0.69	-5.11	-6.63	-5.89	-3.93
Feb.	-4.87	-2.35	-1.99	-4.13	-4.35	-1.66	-0.13	-0.21	-1.23	-0.01	+1.95	+4.27	+5.07	+5.71	+5.39	+5.11	+2.21	+2.06	+0.85	+0.31	-3.01	-1.99	-3.35	-3.65
Mar.	-5.90	-7.10	-12.23	-10.36	-6.42	-4.46	-2.28	-1.46	-1.35	-0.06	+0.42	+2.34	+8.42	+9.74	+10.83	+10.42	+11.50	+4.20	+3.02	+2.64	-0.15	-0.54	-5.66	-5.56
Apr.	-23.19	-19.70	-14.09	-15.82	-6.68	-7.05	-4.60	-4.46	-6.97	-3.28	+2.71	+4.28	+4.89	+8.78	+8.13	+14.26	+23.12	+27.77	+8.00	+3.82	+8.41	-0.94	-4.13	-3.26
May	-0.11	-2.32	-7.89	-4.75	-4.29	-6.64	-6.73	-6.75	-7.05	-4.48	+0.55	+3.63	+7.97	+8.30	+8.09	+6.07	+8.63	+6.26	+0.93	+0.23	-0.09	-0.16	-0.53	+1.13
June	-2.31	-6.64	-1.83	-7.45	-5.49	-7.24	-8.33	-9.83	-6.23	-4.28	-1.35	+1.43	+5.07	+7.42	+8.49	+8.69	+8.21	+7.38	+5.83	+4.29	+3.15	+1.94	+0.35	-1.27
July	-7.10	-4.39	-3.12	-3.09	-3.51	-2.30	-2.63	-1.45	-1.96	-0.49	+0.66	+3.09	+3.44	+5.97	+6.50	+6.03	+5.40	+3.95	+2.91	+0.50	+0.63	+0.01	-3.74	-5.31
Aug.	+1.67	-8.59	-7.15	-5.45	-1.35	+1.20	-4.67	-6.09	-2.23	+0.87	+3.17	+5.93	+7.85	+8.05	+7.93	+6.23	+4.35	+1.46	-1.55	-1.27	-2.15	-2.39	-4.83	-0.99
Sept.	-6.73	-7.87	-7.80	-7.65	-4.29	+0.15	-0.59	-1.23	-0.92	+0.35	+5.21	+8.47	+10.55	+10.43	+10.58	+5.83	+3.35	+2.05	-6.15	-3.17	-2.78	-1.37	-1.75	-4.67
Oct.	-14.02	-2.56	-8.97	-8.36	-0.42	-2.20	+2.88	+6.66	+3.39	+6.54	+8.70	+9.44	+9.74	+10.56	+7.65	+5.08	+3.44	+4.28	-5.46	-0.12	-7.95	-8.26	-5.64	-14.40
Nov.	-3.97	-6.05	-4.22	+2.53	+1.57	+0.87	+7.31	+1.19	-1.60	-5.01	-8.43	-0.05	+1.31	+6.55	+5.84	+3.17	+3.95	+2.35	-3.41	-3.31	-1.16	-1.59	+0.81	+1.35
Dec.	-4.40	-5.65	-3.04	-4.17	-2.41	+2.90	+2.49	+4.19	+3.00	+2.09	+3.04	+4.61	+6.54	+5.43	+5.96	+5.01	+6.15	+5.10	+1.33	-3.95	-5.52	-6.79	-12.04	-9.87
Year	-6.10	-6.43	-6.47	-6.07	-3.28	-2.23	-1.41	-1.52	-1.79	-0.47	+1.65	+4.38	+6.37	+7.71	+7.49	+6.68	+6.95	+5.68	+0.70	-0.06	-1.31	-2.39	-3.87	-4.20
Winter	-3.87	-4.49	-3.64	-2.49	-1.73	+0.46	+2.49	+1.59	+0.45	-0.21	-0.05	+3.47	+4.61	+5.82	+5.43	+4.40	+3.83	+2.71	+0.23	-1.91	-3.70	-4.25	-5.12	-4.03
Equinox	-12.46	-9.31	-10.77	-10.55	-4.45	-3.39	-1.15	-0.12	-1.46	+0.89	+4.26	+6.13	+8.40	+9.88	+9.30	+8.90	+10.35	+9.57	-0.15	+0.79	-0.62	-2.78	-4.29	-6.97
Summer	-1.96	-5.49	-5.00	-5.19	-3.66	-3.75	-5.59	-6.03	-4.37	-2.09	+0.76	+3.52	+6.08	+7.43	+7.75	+6.75	+6.65	+4.76	+2.03	+0.94	+0.39	-0.15	-2.19	-1.61
INCLINATION																								
Jan.	-0.02	-0.23	+0.53	-0.75	-1.25	-1.50	-2.10	-1.87	-1.12	-0.43	-0.06	+0.55	+0.76	+0.64	+0.90	+0.83	+1.00	+0.92	+0.15	+0.83	+0.10	+0.71	+0.95	+0.44
Feb.	-0.14	-0.52	-0.48	-1.08	-1.19	-0.96	-0.84	-0.49	-0.55	-0.50	-0.08	+0.48	+0.39	+0.20	+0.95	+1.49	+1.37	+0.34	+1.11	+0.83	+0.22	+0.15	-0.20	-0.51
Mar.	+0.41	-0.36	+0.05	-0.63	-1.37	-1.44	-1.99	-0.85	+0.05	+0.82	+1.42	+3.13	+2.38	+1.39	+0.38	-0.53	-3.96	-1.04	+0.83	-1.73	+0.31	+0.59	+2.25	-0.11
Apr.	+5.35	+7.25	+3.76	+8.43	+2.17	+0.34	+1.51	+2.20	+1.22	+0.75	+1.75	+1.94	-2.08	-5.23	-6.74	-9.48	-14.69	-14.92	-1.14	-1.43	+4.93	+7.61	+3.71	+2.77
May	+0.81	+0.20	-0.70	+0.38	-0.07	-0.45	-0.37	-0.07	+0.58	+2.05	+1.52	+0.66	+0.62	+0.93	-0.02	-1.77	-1.68	-0.99	-1.88	-0.54	+0.18	+0.25	+0.65	-0.31
June	-0.39	-0.52	-1.12	-0.57	-1.17	-0.57	+0.18	+1.18	+1.17	+2.15	+2.92	+3.57	+3.09	+2.80	+1.70	+0.75	-1.31	-2.75	-2.69	-3.05	-2.47	-2.01	-0.68	-0.19
July	-0.13	+0.21	-1.40	-1.88	-2.28	-1.39	+0.48	+1.24	+2.27	+2.88	+2.61	+2.83	+2.17	+2.10	+1.27	-0.62	-2.63	-2.97	-2.25	-2.13	-1.25	-0.69	+0.64	+0.90
Aug.	-1.82	-1.36	-2.15	-1.47	-1.69	-1.31	-0.22	+2.09	+3.67	+2.72	+2.47	+2.39	+1.63	+1.04	-0.31	-1.14	-2.13	-3.12	-1.36	-0.24	+1.15	+0.95	+0.41	-0.19
Sept.	-0.86	-1.56	-2.19	-1.59	-2.01	-2.02	-0.27	+1.83	+3.47	+3.28	+2.38	+1.18	+0.83	+0.84	-0.49	+1.21	-0.40	-1.11	-0.84	-0.04	+0.41	-0.73	-0.68	-0.62
Oct.	+5.62	+2.71	-1.35	-0.98	-1.37	-2.63	-2.43	-1.65	-0.32	+1.63	+1.34	+1.05	+0.69	-1.72	-1.35	-2.85	-3.38	-5.25	+0.13	-0.03	+4.28	+1.94	+4.10	+1.83
Nov.	+12.26	+0.54	+4.08	-0.29	-3.03	-0.73	+4.01	+6.68	+1.60	+0.43	-0.65	-0.03	-0.64	-1.66	-2.27	-3.97	-0.90	-1.46	-2.85	-3.15	-2.23	-1.77	-2.62	-1.41
Dec.	-1.37	-1.39	-1.25	-2.50	-3.97	-2.84	-2.09	-1.53	-1.57	-0.32	+0.06	+0.18	+0.96	+1.11	+1.14	+0.49	+1.86	+2.40	+2.37	+3.18	+1.94	+1.27	+1.30	+0.59
Year	+1.65	+0.42	-0.18	-0.25	-1.43	-1.29	-0.35	+0.73	+0.87	+1.28	+1.31	+1.49	+0.90	+0.20	-0.40	-1.30	-2.24	-2.50	-0.71	-0.63	+0.63	+0.69	+0.82	+0.26
Winter	+2.69	-0.39	+0.73	-1.15	-2.36	-1.51	-0.25	+0.70	-0.41	-0.20	-0.19	+0.29	+0.36	+0.07	+0.18	-0.28	+0.83	+0.55	+0.19	+0.42	0.00	+0.09	-0.15	-0.22
Equinox	+2.63	+2.01	+0.07	+1.31	-0.64	-1.44	-0.80	+0.38	+1.11	+1.62	+1.72	+1.83	+0.46	-1.18	-2.05	-2.91	-5.61	-5.58	-0.26	-0.81	+2.48	+2.35	+2.35	+0.94
Summer	-0.38	-0.37	-1.34	-0.88	-1.30	-0.93	+0.02	+1.11	+1.92	+2.45	+2.38	+2.36	+1.88	+1.72	+0.66	-0.69	-1.94	-2.44	-2.05	1.49	-0.60	-0.39	+0.25	+0.05
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.	+2.0	-4.9	-19.8	+0.5	+10.6	+16.7	+26.6	+23.5	+12.4	+2.3	-2.2	-10.7	-11.2	-10.1	-7.6	-6.3	-4.0	-1.9	+6.2	-0.5	+6.4	-8.9	-13.2	-5.9
Mar.	-0.7	+6.0	+1.3	+7.8	+11.0	+7.7	+6.4	+2.8	+4.7	+3.8	-2.9	-10.4	-8.1	-3.2	-11.1	-15.8	-12.9	+2.4	-7.2	-2.5	+5.2	+2.2	+6.3	+7.2
Apr.	-6.4	-3.3	-14.6	-4.1	+5.6	+5.7	+16.6	+4.7	-6.2	-17.1	-26.0	-50.3	-37.2	-20.9	-5.2	+11.1	+74.4	+50.5	+11.0	+55.3	+15.6	+0.1	-34.6	-24.7
May	-130.3	-150.6	-94.9	-186.5	-83.3	-28.6	-36.5	-46.5	-26.9	-15.4	-26.9	-24.5	+46.9	+106.6	+147.5	+189.9	+262.7	+253.0	+60.9	+52.9	-64.7	-111.2	-51.3	-42.3
June	-26.9	-27.2	-9.1	-16.5	-7.1	-1.0	+1.9	-1.7	-12.9	-36.6	-29.5	-17.7	-15.5	-14.8	+10.5	+56.7	+49.3	+36.2	+48.9	+22.5	+9.3	-2.2	-14.1	-2.5
July	-2.1	+1.8	+2.2	-17.7	-3.4	-10.0	-13.1	-22.2	-20.8	-34.1	-44.0	-52.2	-43.3	-37.0	-17.6	-1.7	+32.6	+59.4	+59.7	+63.2	+52.0	+39.1	+9.2	0.0
Aug.	-19.1	-28.9	-4.0	+7.3	+19.7	+11.7	-15.1	-25.3	-39.6	-46.9	-41.7	-42.5	-26.5	-21.1	-4.4	+30.5	+68.1	+74.3	+58.5	+50.1	+27.4	+13.1	-17.3	-28.3
Sept.	+12.6	-0.7	+2.6	-14.3	+0.8	-10.3	-16.0	-39.5	-59.6	-45.1	-39.6	-37.5	-23.4	-10.1	+13.2	+33.5	+59.2	+84.9	+57.6	+33.3	+3.2	-3.1	-3.8	+2.1
Oct.	-14.6	-6.1	+7.0	+3.2	+10.2	+13.9	-6.6	-33.2	-55.0	-48.9	-33.6	-12.6	-4.2	-0.3	+25.2	+5.4	+26.6	+38.5	+41.2	+22.6	+10.4	+11.3	+2.2	-2.6
Nov.	-124.5	-65.6	-8.6	-28.5	-21.0	+7.4	+15.7	+12.0	-1.0	-26.1	-19.8	-7.0	+5.5	+50.6	+61.2	+94.9	+111.8	+138.8	+38.7	+24.4	-69.6	-40.1	-83.8	-65.4
Dec.	-236.7	-56.8	-108.3	-33.2	+13.8	-13.9	-91.8	-121.2	-21.7	+9.0	+34.5	+18.8	+25.7	+46.4	+62.5	+108.6	+52.0	+54.9	+73.8	+60.0	+47.9	+34.2	+33.9	+7.6
Year	+8.0	+7.4	+2.5	+8.0	+36.0	+21.4	+15.4	+9.6	+15.5	-2.2	-6.0	-5.8	11.0	-7.0	-1.1	+21.8	+1.0	-2.8	+2.6	-23.8	-18.5	-20.2	-29.2	-21.6
Year	-44.9	-27.4	-20.3	-22.8	-0.6	+1.7	-8.0	-19.7	-17.6	-21.4	-19.8	-21.0	-8.5	+6.6	+22.7	+44.1	+60.1	+65.7	+37.7	+29.8				

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

RANGE OF MEAN DIRUNAL INEQUALITIES FOR THE MONTHS, YEAR AND SEASONS OF 1960

The ranges are derived from the diurnal inequalities printed in tables 28 to 33

34 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
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
January	30.4	32.1	20.3	33.6	24.9	12.5	41.8	58.3	64.6	7.16	2.00	28.4	5.57	2.04	31.8	12.22	3.10	46.4
February	28.1	38.8	24.8	26.0	31.9	11.8	34.8	50.3	49.7	8.44	1.61	24.2	6.69	1.55	24.0	10.58	2.68	26.8
March	47.5	53.1	39.4	55.9	54.0	15.5	114.5	129.8	166.2	11.37	2.77	46.5	11.57	3.38	41.8	23.73	7.09	124.7
April	94.9	75.8	91.4	48.9	60.1	24.0	407.3	313.5	292.6	13.58	5.65	99.7	12.89	2.75	49.0	50.96	23.35	449.2
May	59.8	61.1	44.0	51.5	59.0	26.7	82.4	89.7	147.2	12.57	3.01	59.8	12.20	2.93	52.2	16.52	3.93	93.3
June	75.9	68.0	51.3	64.5	63.8	30.2	111.0	97.4	123.0	13.58	4.25	77.1	12.56	4.15	69.5	18.52	6.62	115.4
July	73.8	59.5	50.9	57.5	68.4	31.2	115.3	75.8	150.6	12.01	4.10	74.3	14.39	3.55	61.3	13.60	5.85	121.2
August	66.5	66.2	54.2	54.2	68.7	30.3	138.8	81.9	201.9	13.77	3.37	65.1	13.98	3.62	58.5	16.64	6.79	144.5
September	57.1	55.4	46.6	53.3	54.0	20.9	99.2	94.0	157.6	11.93	3.31	57.2	11.20	3.40	54.7	18.45	5.66	96.2
October	57.5	59.9	89.9	50.0	49.2	14.1	243.0	149.3	282.8	12.05	3.33	57.8	10.11	2.97	48.1	24.96	10.87	263.3
November	58.2	40.4	67.1	30.2	29.0	9.4	333.6	101.3	277.8	7.77	2.98	60.6	6.08	1.80	27.8	15.74	16.17	345.3
December	23.6	37.1	51.6	18.5	24.5	13.4	57.4	92.5	183.4	7.94	2.43	21.3	5.10	1.43	17.7	18.58	7.15	65.2
Year	46.5	45.4	48.0	39.1	45.1	18.2	98.4	81.5	148.4	9.35	2.36	46.5	9.52	2.26	39.0	14.18	4.15	110.6
Winter	24.9	34.5	38.5	24.7	23.7	9.6	75.3	57.9	120.5	7.47	1.79	22.6	5.17	1.46	22.7	10.94	5.05	84.0
Equinox	110.0	56.0	62.2	47.9	53.3	17.4	166.6	143.2	192.2	11.73	3.10	61.1	11.45	2.85	46.5	22.81	8.24	189.1
Summer	68.3	62.7	46.1	55.2	63.9	28.6	98.2	74.4	136.7	12.85	3.59	68.5	12.93	3.37	58.6	13.78	4.89	104.2

NON-CYCLIC CHANGE

35 ESKDALEMUIR

	All days			Quiet days			Disturbed days		
	H	D	Z	H	D	Z	H	D	Z
	γ	γ	γ	γ	γ	γ	γ	γ	γ
January	+0.5	-0.01	-0.2	-0.1	+0.06	-1.2	-6.7	-1.03	+0.3
February	-0.4	-0.06	+0.4	+3.1	+0.66	-4.1	+7.2	+1.01	+4.8
March	-1.1	-1.40	-10.4	+4.7	+0.09	-4.1	-57.1	-5.50	+74.7
April	+8.0	+1.44	+13.1	+3.4	+0.84	-1.0	+29.9	+12.66	+97.8
May	+4.5	-0.05	-2.5	+6.6	+0.39	-2.8	+15.4	+0.82	+5.1
June	-0.1	+0.05	+0.3	+5.0	-0.06	-3.3	+4.0	-0.46	+5.1
July	-0.7	+0.05	-0.3	+10.5	+0.84	+0.2	-27.0	-0.18	-11.7
August	+0.2	-0.10	+0.3	+4.2	-0.69	-2.5	-10.8	-1.19	-2.0
September	+0.2	-0.03	-0.1	+3.8	+0.34	-1.9	+7.7	+0.12	+15.0
October	-0.4	-0.03	+0.2	+5.1	-0.06	-0.4	-13.5	-0.79	-16.7
November	0.0	+0.03	+1.0	+7.5	+1.30	-3.7	+82.9	+1.41	+15.9
December	0.0	-0.01	-0.1	+7.6	-0.19	-4.6	-17.4	-2.98	-0.8
Year	+0.9	-0.01	+0.2	+5.1	+0.29	-2.5	+1.2	+0.32	+15.6
Winter	0.0	-0.01	+0.3	+4.5	+0.46	-3.4	+16.5	-0.40	+5.1
Equinox	+1.7	-0.01	+0.7	+4.3	+0.30	-1.9	-8.3	+1.62	+42.7
Summer	+1.0	-0.01	-0.5	+6.6	+0.12	-2.1	-4.6	-0.25	-0.9

"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 1960 AS PERCENTAGE OF THIS

36 ESKDALEMUIR

		All days			International quiet days			International disturbed days		
		H	D	Z	H	D	Z	H	D	Z
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
Year	1932-53	37.8	8.66	28.7	34.4	8.43	13.7	53.9	11.93	82.1
	1960(%)	123	108	167	113	113	133	205	120	181
Winter	1932-53	19.3	6.95	21.2	16.2	4.44	5.9	34.4	11.45	66.5
	1960(%)	117	107	182	140	116	163	244	96	181
Equinox	1932-53	43.1	10.18	37.1	39.7	9.69	14.8	75.4	15.11	108.9
	1960(%)	142	115	168	117	118	118	251	151	177
Summer	1932-53	59.7	11.84	33.9	50.4	11.76	21.9	83.7	13.11	82.4
	1960(%)	115	109	136	116	110	131	124	105	166

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

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(a) Disturbances without sudden commencement

Serial Number	From		To		Range (γ)			Notes
	Date	Hour	Date	Hour	H	D	Z	
1a	Jan. 20	01	Jan. 23	01	172	254	171	
2a	Mar. 15	12	Mar. 18	18	235	289	260	
3a	Mar. 29	08	Apr. 2	19	2592	762	1009	
4a	Apr. 23	03	Apr. 27	02	510	364	336	
5a	May 5	16	May 8	01	308	199	225	
6a	July 28	22	Aug. 3	03	191	158	223	
7a	Sept. 2	09	Sept. 6	13	500	340	475	
8a	Sept. 29	08	Oct. 3	24	168	211	203	
9a	Oct. 4	11	Oct. 10	09	3039	1320	1114	
10a	Nov. 3	20	Nov. 5	16	172	163	231	
11a	Nov. 21	04	Nov. 22	24	141	164	329	
12a	Dec. 14	24	Dec. 16	24	266	293	465	
13a	Dec. 27	02	Dec. 30	24	165	203	216	

(b) Disturbances with a sudden commencement (ssc)

Serial Number	Date	Time of sudden commencement	End of disturbance		With initial reversed stroke			Magnitude of main stroke			Range of following disturbance (γ)		
			Date	Hour	H	D	Z	H	D	Z	H	D	Z
1b	Jan. 10	07.19	Jan. 12	04	Yes	Yes	No	γ +44	γ +46	γ +6	215	209	172
2b	Jan. 13	19.00	Jan. 15	24	Yes	No	-	+13	+16	0	187	161	182
3b	Apr. 2	23.13	See 4b		No	Yes	No	+12	-22	-7)	279	269	242
4b	Apr. 5	12.59	Apr. 5	24	Yes	Yes	No	+58	-15	-3)			
5b	Apr. 7	15.11	-	-	Yes	Yes	No	+43	-13	-3		Small	
6b	Apr. 10	01.28	Apr. 18	20	No	Yes	-	+11	-9	0	265	213	347
7b	Apr. 27	20.00	See 8b		Yes	No	No	+100	-18	-9)	1726	823	672
8b	Apr. 30	01.32	May 2	24	No	No	No	+92	-39	-12)			
9b	May 8	04.22	May 9	19	No	Yes	No	+92	-140	-11	586	254	477
10b	May 11	04.35	May 12	24	No	Yes	No	+50	-66	-4		Small	
11b	May 16	13.51	May 17	20	Yes	Yes	No	+79	-31	-6		Small	
12b	May 28	20.19	May 30	22	No	No	No	+115	-41	-13	242	278	276
13b	June 27	01.45	See 14b		No	No	-	+49	-35	0)	297	208	285
14b	June 29	19.39	July 2	22	No	No	No	+92	-31	-10)			
15b	July 14	04.48	-	-	No	Yes	-	+10	-18	0)	718	313	660
16b	July 14	17.01	July 18	23	Yes	Yes	No	+132	-37	-3)			
17b	Aug. 16	14.09	Aug. 19	01	Yes	Yes	Yes	+193	-64	-9	580	236	651
18b	Aug. 19	16.16	-	-	Yes	Yes	No	+98	-26	-6		Small	
19b	Aug. 29	00.22	Aug. 31	23	Yes	Yes	No	+102	-35	-11	298	192	291
20b	Oct. 24	14.51	Nov. 1	03	No	Yes	Yes	+46	-50	-3	1076	382	522
21b	Nov. 12	13.49	See 22b		Yes	Yes	Yes	+98	-74	-6)	2146	987	1110
22b	Nov. 15	13.04	Nov. 17	04	Yes	Yes	-	+73	+42	0)			
23b	Nov. 30	19.10	Dec. 3	06	No	No	No	+60	-10	-6	241	297	454
24b	Dec. 7	18.04	Dec. 8	18	Yes	No	No	+42	-8	-3	106	200	114

(c) Disturbances due to solar flare (sfe)

Serial Number	Date	Commence-ment	Max.	End	Movement (γ)			K	K'	Notes
					H	D	Z			
1c	Apr. 6	11.32	11.38	11.45	-13	0	0	2	2	S.E.A.
2c	Aug. 5	14.29	14.32	14.55	+8	-4	0	2	2	From I.A.G.A. list
3c	Aug. 14	13.10	13.11	13.20	-13	-9	+2	3	2	S.E.A.

S.E.A. = Sudden enhancement of atmospherics

POTENTIAL GRADIENT (reduced to open level surface)
 an 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 \pm 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.

MARCH 1960

POTENTIAL GRADIENT (reduced to open level surface)																											
Mean values for periods of sixty minutes between exact hours																											
Factor 9.83 (metre ⁻¹)																											
APRIL 1960																											
	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	25	15	-45	-10	-35	30	0	25	55	0	-20	10	30	30	30	50	55	65	60	35	30	15	20	21	(24)		
2	-15	-55*	-50*	-70*	-345*	-70*	-95*	-25*	-90*	-30*	-185*	-245*	-135*	55*	60*	25*	-165*	-240*	55*	100	55*	-100*	-55*	40*	43	(2)	
3	-170*	-25*	-90*	-240*	105*	5*	10*	110*	-70*	-325*	-220*	Z-*	Z-*	Z-*	-170*	-50*	-75*	-155*	20*	-310*	-475*	-360*	-580*	185*	-	(0)	
4	30	100	80	15	45	35	-10	10*	0	55*	5*	125*	120*	65	215	180	160	185	145	95	90	55*	-90*	-45*	89	(16)	
5	40*	80*	80*	65	-350*	-780*	Z-*	-475*	170	100	140	155	150	120	85	100*	-335*	-545*	60*	310*	180*	40*	-55*	45*	123	(8)	
6	-195*	-695*	Z-*	Z-*	Z-*	Z-*	Z-*	50*	40*	5*	Z-*	25	125	75	75	150	145	115	65	75	110*	125*	130	90	97	(11)	
7	85	105	100*	165*	125*	160*	30*	10*	60*	70*	60*	110	120	125	140	110	105	110	70	80	85	70	45	95	15	(15)	
8	45	65	80	70	85	60*	110*	75	85*	160*	190*	250*	120*	125*	160*	160*	185*	235*	225*	225*	170*	90*	175*	110*	70	(6)	
9	85*	-160*	Z-*	Z-*	Z-*	Z-*	Z-*	Z-*	40*	85	65	Z-*	Z-*	Z+*	95	95*	100	Z+*	Z-*	165*	125	65	105	130	96	(8)	
10	20*	Z-*	-140*	Z-*	Z+*	Z-*	Z-*	Z-*	Z-*	-40*	70*	Z+*	Z+*	Z+*	Z+*	Z+*	Z+*	Z+*	Z-*	Z-*	Z-*	-260*	-50*	-	(0)		
11	45*	35	30	30	35*	50*	120*	85*	90	130	140	110	100	115	115	70	80*	95*	80	120	120	125	75	75	92	(18)	
12	80	65	50	40	Z-*	Z-*	Z-*	Z-*	Z-*	Z-*	Z-*	-625*	-375*	50*	130*	115*	155*	95*	120*	70*	155*	130*	-145*	95*	59	(4)	
13	150	110	55	10*	160*	170*	130*	-20*	Z-*	90	110*	Z+*	Z-*	Z+*	95*	145*	120	110	Z-*	-25*	Z+*	Z-*	30*	75	101	(7)	
14	75	80	45	25	35*	Z-*	-115*	-45*	Z-*	Z+*	Z+*	190*	Z+*	Z+*	115*	155	115*	120*	125	120*	25*	Z-*	100	100	88	(8)	
15	85	70	65	95	90	70	80	110	75	85	150	145*	Z+*	Z+*	Z-*	Z+*	255	Z-*	Z+*	35	30	30	55	65	85	(17)	
16	65	75	50	55	75	155	135	170	125	125	130	130	105	100	90	80	90	65	50	20	35	50	30	30	85	(24)	
17	25	25	25	25	30	35	45	45	80	200	155	160	170	120	85	70	70	65	35	15	20	20	15	65	65	(24)	
18	20	25	25	15	10	25	50	70	55	70	95	90	60	50	45	55	30	35	70*	30	15	30	25	30	42	(23)	
19	25	30	10	35	20	50	30	50	50	140	150	145	70	60	60	80	105	65	20	15	25	30	25	45	56	(24)	
20	35	35	30	30	115	35	-15*	100	95	130*	20*	80	75	115	95	110	110	90	65	60	90	105	110	95	80	(21)	
21	75	45	30	30	30	40	85	140	90	110	170	130	185	135	125	110	110	130	125	160	160	155	155	110	120	(24)	
22	75	70	65	75	95	105	105	85	95	105	115	100	80	70	75	110	75	115	110	90	115	160	125	120	97	(24)	
23	105	125	150	90	65	55	90	125	125	75	85	100	85	115	90	75	75	110	90	75	150	115	140	135	102	(24)	
24	140	135	110	100	125	95	95	115	75	45	50	60	35*	5*	35*	130	20*	30*	25*	-140*	45*	45	30	45	87	(16)	
25	30	30	30	15	60	125	145	165	155	125	125	185	110	80	50	50	45	45	30	45	45	35	30	20	74	(24)	
26	60	20	45	45	45	45	90	110	110*	90*	80	75	80	110	90	95	95	75*	70	50	30*	45*	45	30	67	(19)	
27	25	20	20	20	20	15	40	60	25	0*	15*	35*	55	50	80	85	80	85	85	55	70	45	20	15	46	(21)	
28	15	20	20	20	20	20	30	60	65	65	45	30	40	55*	50*	80	80	95	90	70	35	45	45	45	47	(22)	
29	70	60	30	35	45	50	65	65	70	80	100	80	95	110	110	115	120	75	20	10	15	10	20	30	62	(24)	
30	25	10	30	15	20	30	30	30	40	50	55	80	60	70	45*	70*	55*	-15*	90*	35*	0*	30*	28*	65*	39	(14)	
Mean	56	57	45	41	51	56	65	89	81	93	102	98	94	90	92	98	101	92	74	62	70	65	65	62	74	(472)	
	(24)	(24)	(23)	(23)	(19)	(18)	(17)	(18)	(19)	(18)	(18)	(19)	(19)	(19)	(19)	(20)	(20)	(18)	(18)	(20)	(18)	(18)	(21)	(22)			
	Mean for 0a days																							[88	(3)]		

Daily, monthly and annual means are computed excluding hours with precipitation and, of course, all indeterminate entries. The number of hours or days used in computing each mean is shown in round brackets. Entries in square brackets are means for 0a days (see Introduction) and the figure in round brackets is the number of days used in computing this mean.

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

39 ESKDALEMUIR

Factor 9.88 (metre⁻¹)

MAY 1960

	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*	70	60	45	70	100	65	85	65	60	80	80	95	85	60	65	60	80	50	35	25	25	30	30	62	(23)		
2		20	20	10	15	30	40	35	30	55	140	165	140	75	70	110	115	150	110	105	35	5	10	15	20	63	(24)		
3		-30	30	40	-5	5	25	10	55	80	30*	50*	95	120	120	110	110	105	95	100	65	50	15	0	0	54	(22)		
4		-	-	-	-	-	-	-	-	15*	15*	25*	30*	30*	140*	195*	70*	95*	55*	55	75	35	30	20	30*	43	(5)		
5		25*	10*	-60*	-65*	75*	130*	110*	135*	110*	130*	75*	110*	105*	110	150	180	150	155	120	115	50	195	210	15	132	(11)		
6		40	35	40	10	20	55	95	125	155	115	155	115	120	130	140	105	80	55*	45*	50	30	20	15	25	76	(22)		
7		20	50	65	60	30	75	45*	110*	45*	85	100	95	125	150	165	170	160	165	150	-	-	-	-	-	104	(16)		
8		-	-	-	-	-	-	-	-	-	40*	75*	140	185	120	70	60	90	110	135	85	200	80	-30	2*	104	(12)		
9		-20*	-10*	20	20	50	65*	15*	55*	50	15	35	45	80	75	90	125	120	70	30	5	50	0	-5	0	46	(19)		
10		-15	-15	30	-15	50	120	70	35	15*	35*	55	70	130	130	145	150	140	140	160	120	100	60	-25	55	77	(22)		
11		80	100	75	100	100	135	90	110	120	110	110	105	115	115	115	110	85	50	45	40	-25	15	40	5	81	(24)		
12		-15	10	-5	-15	-5	5	40	55	80	75	80	70	155	140	150	130	40	60	7*-	7*-	65*	30	30	55	20)	55	(20)	
13		70	35	Z±*	Z±*	Z±*	Z±*	Z±*	Z±*	Z±*	Z±*	Z±*	Z±*	Z±*	Z±*	Z±*	Z±*	Z±*	65*	65	135	95	79	39	49	68	(8)		
14		35	30	50	110	45	125	105	150	120	165	120	70*	95*	Z±*	Z±*	70	195	150	155	140	120	85	75	75	106	(20)		
15		90	65	45	50	45	65	70	70	95	80	75	95	95	95	105	120	120	120	100	65	65	60	45	50	79	(24)		
16		55	50	45	45	50	60	45	70	80	120	110	110	135	140	125	110	115	115	95	105	45	45	75	95	85	(24)		
17		45	35	15	60	225	510	265	75	100	95	120	120	105	110	Z	Z	95	100	110	95	95	50	135	75	120	(22)		
18		55	70	110	200	275	130	80	80	125	140	120	105	95	110	110	110	110	125	120	100	100	65	40	75	110	(24)		
19		60	60	75	105	115	110	105	115	110	60	55	105	85	105	115	65	-	-	105	125	120	130	105	100	97	(22)		
20		120	75	120	125	125	120	130	125*	115*	120	100	95	120	110	95	100	125	125	120	95	35	-15	80	65	99	(22)		
21		65	60	30	25	25	45	65	105	55	60	95	85	75	60	80	85	70	50	35	30	35	40	30	20	55	(24)		
22		30	40	70*	165*	165*	140*	50	5	60	120	130	95	110	100	100	125	125	135	75	50	100	50	95	86	(20)			
23		60	40	55	-40*	75*	115*	115*	130*	65*	110	110	90	100*	40*	Z±*	Z±*	Z±*	Z±*	Z±*	Z±*	Z±*	65*	165	Z±	90	(7)		
24		140	125	115	120	15	185	145	145	130	120	125	130	120*	130	150	150	155	140	130	35	-5	30	20	35	107	(23)		
25		50	45	65	45	85	60	115	125	65	45	120	155	145	180	200	165	180	70*	5*	25*	5*	10*	20*	40*	109	(17)		
26		15*	45*	75*	320*	280*	310*	170*	365*	215*	265*	205*	270*	225*	210	260	120	120	155	135*	120*	140	75*	45*	110*	167	(6)		
27		105*	160*	70*	130	310	270	215	140	130*	95*	140	110	110	90	110*	-15*	95	65	100	130	95	125	110	95	137	(17)		
28		110	115	70	60	50	70	80	80	65	75	-	-	-	-	65	60	60	45	35	35	30	25	30	35	60	(20)		
29		30	30	30	25	20	35	50	60	75	85	75	75	75	45	45	60	40	30	-15	-30	15	15	10	10	37	(24)		
30		10	15	10	5	10	15	20	15	-	-	-	-	-	-	-	-	65	35	45	30	0	5	15	10	19	(16)		
31		15	10	20	15	30	45	70	35	70	55	55	45	45	35	55	60	55	-	65	45	50	40	25	10	41	(23)		
Mean		47 (24)	48 (25)	50 (24)	56 (24)	74 (24)	104 (23)	88 (23)	80 (22)	88 (20)	93 (22)	101 (23)	99 (24)	109 (22)	111 (25)	117 (24)	109 (25)	108 (27)	101 (24)	90 (26)	71 (26)	59 (27)	51 (26)	48 (28)	43 (25)	80	(583)		
Mean for 0a days																										[61	(6)]		

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

39 ESKDALEMUIR

Factor 9.40 (metre⁻¹)

JUNE 1960

	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	15	50	50	15	20	25*	20*	75	115	110	115	130	100	115	110	145	150	140	135	130	120	120	50	70	95 (22)
2	145	60	70	5	-10*	-5*	15	105*	120*	190*	245*	100*	90	100*	75*	35	190*	30*	105*	70	100	90	160	155	83 (12)
3	140	220	150	80	70	120	115	120	105	120	175	135	120	170	145	115	70	50	30	5	20	15	15	20	97 (24)
4	20	20	20	25	30	35	50	60	65	70	85	95	70	75	75	55	55	50	70	80	95	50	35	20	54 (24)
5	20	20	15	5	-5	-20	5	25	25	20	40	60	65	80	75	75	80	70	Z±*	Z±*	Z±*	Z±*	75*	30*	36 (18)
6	30	25	90	75	95	155	295	330	300	155	75	95	80	65	75	120	90	120	140	120	120	105	70	123 (24)	
7	100	75	50	Z±*	65	Z±*	Z±*	Z±*	Z±*	Z±*	Z±*	Z±*	Z±*	Z±*	105*	190	175	150	150	145*	-40*	20*	155*	60*	119 (8)
8	240*	-95*	-115*	-230*	-225*	120*	145*	110*	180	130*	110	Z±*	105*	110*	120*	5*	Z±*	Z±*	190*	116*	Z±*	140*	190	205	171 (4)
9	185	100	135	-5*	80*	55*	50*	20*	70*	90*	115*	80*	110*	35*	135	170	135	150	160	150	160	160	135	120	146 (13)
10	115	105	90	55	45	0*	20*	50	55	70	55	70	70	80	95	70	105	110	100	100	100	70	75	75	80 (22)
11	35	Z±*	35*	-35*	75*	160*	35*	120*	130	35*	Z±*	40*	-10*	0*	60	45*	85*	75*	35	65	-	-	-	-	65 (5)
12	-	-*	-*	-*	-*	-*	-*	-*	-*	-*	-*	Z±*	Z±*	Z±*	Z±*	Z±*	-	-	-	-	Z±*	Z±*	Z±*	Z±*	- (0)
13	Z±*	-*	-*	-*	-*	-*	-*	-*	-*	-*	Z±*	145	Z±*	Z±*	Z±*	Z±*	Z±*	110	105	85	120	160	125	135	130 (6)
14	120	105	90	90	90	95	75	85	120	130	95	100	75	95	105	Z±*	125*	95	75*	65	65	85	95	92 (21)	
15	85	90	90	165*	205*	200*	225	185	160	155	180	220	225	210	180	140	140	140	120*	-5*	Z±*	65*	45*	Z±*	162 (15)
16	Z±*	195*	190*	190*	225*	95*	125*	160*	220*	175*	340*	180	90*	110	125	80	100	120	130	115	90	105	165	150	123 (12)
17	135	95	90	110	105	125*	150*	175*	245	180	190	145	130	130	105	90*	95*	55*	85*	185	-	-	355	320	168 (15)
18	240	190	290	540	575	495	395	185*	-20*	155*	270	150*	130	70	50*	70*	135*	185	170	190	145	135	125	135	252 (17)
19	120	125	105	90	90	120	125	130	130	135	180	130	150	160	225	230	300	245	240	225	185	165	90	115	159 (24)
20	90	50	55	55	55	70	75	75	65	65	75	65	90	105	95	100	90	65	40	25	15	35	75	45	66 (24)
21	50	70	70	55	60	155	115	75	110	120	145	145	185	130	80	85	90	45	30	25	25	20	20	20	80 (24)
22	15	20	15	20	20	40	45	50	55	50	50	60	65	60	50	50	60	70	85	75	35	35	30	25	45 (24)
23	35	35	15	60	105	100	65	70	115	185	270	155	190	180	155	115	140	160	165	125	100	100	105	105	119 (24)
24	155	-	-	-	-	-*	-*	100	100	100	120	165	250	240	245	235	245	240	235	145	135	165	135	120	178 (17)
25	95	30	10	15	0	0	35	40	45	65	90	105	125	100	100	95	120	135	130	110	85	95	75	75	74 (24)
26	65	70	75	270	150	60	55	130	40*	50*	70	95	40	70	50	75	80	65	85	55	45	65	60	60	81 (22)
27	50	60	45	45	25	35	30	30	30	40	50	10	0	-25	50	65	60	55	75	50	45	65	55	-155*	41 (23)
28	-60*	30	65	125	90	175	170	125	130	105	110	120	110	100	110	120	120	95	120	120	120	115	95	90	111 (23)
29	80	95	100	115	150	145	120	195	135	120	90	105	90	105	100	105	95	100	105	95	80	50	60	70	104 (24)
30	65	60	55	55	90	125	130	135	100	65	95*	-80*	85*	65*	105	90	60	55	55	45	50	45	55	75	76 (20)
Mean	88 (25)	75 (24)	77 (21)	91 (21)	92 (17)	112 (19)	113 (19)	104 (19)	114 (22)	103 (20)	120 (22)	115 (22)	111 (22)	110 (22)	110 (24)	111 (23)	116 (22)	113 (25)	113 (23)	99 (24)	88 (22)	89 (23)	99 (25)	99 (24)	102 (535)
	Mean for 0a days																								111 (5)

JULY 1960

Mean for 0a days	[123 (2)]
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AUGUST 1960

Mean for 0a days	[108 (2)]
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Daily, monthly and annual means are computed excluding hours with precipitation and, of course, all indeterminate entries. The number of hours or days used in computing each mean is shown in round brackets. Entries in square brackets are means for 0a days (see Introduction) and the figure in round brackets is the number of days used in computing this mean.

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

39 ESKDALEMUIR													Factor 8.38 (metre ⁻¹)													SEPTEMBER 1960	
	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	25	25	45	65	50	55	85	115	115	150	135	95	35*	5*	30*	70*	105	85	70	70	90	85	100	125	85 (20)		
2	170	200	205	105	160	130	195	290	245	110*	90*	5*	-5*	125*	70*	120*	200*	200*	130*	120*	70*	95	115	174 (11)			
3	145	185	180	195	145	155	180	180	170	125	95	Z+*	Z+*	Z-*	Z+*	Z+*	Z-*	Z+*	170	160	125	115	260	162 (16)			
4	170	195	130	115	130	150	150	245	200	140	85	200	120*	Z+*	Z-*	95*	155*	100	70	75	50	70	55	50	125 (19)		
5	45	75	80	155	125	115	195	190	165	180	125	120	120	125	165	115	120	120	150	175	225	135	120	105	135 (24)		
6	85	85	65	75	90	90*	130*	130*	-*	-*	-*	-*	-*	-*	-*	-*	-*	-*	-*	-*	-*	-*	-*	-*	80 (5)		
7	-*	-*	-*	-	-	-	-	-	100	150	165	185	155	120	110	120	100	135	150	160	170	135	115	105	136 (16)		
8	90	80	70	75	90	105	185	260	105	135	115	70*	130*	-	-	-	-	-	-	-	-	-	-	-	119 (11)		
9	-*	-*	-*	-*	-*	-*	-*	235	275	155	185	185	205	185	175	145	160	165	155	175	135	135	125	160	174 (17)		
10	235	150	95	105	105	105*	85*	135	150	165	155	125	115	135	150	140	145*	90*	125*	110*	180*	185*	190*	210*	140 (14)		
11	215*	215*	250*	305*	240*	155*	270	235	210*	250*	220	175	145	115	125	140	125	135	130	115	105	105	55	0	137 (16)		
12	5	45	20	15	30	15	40	65	55	80	100	100	130	125	140	140	105	125	150	135	165	170	95	70	88 (24)		
13	40	30	70	40	80	110	120	130	145	155	140	95	115	120	170	170	160	135	125	55	25	10*	15*	109 (22)			
14	-20*	-15*	0*	-5*	5*	-120*	-315*	-215*	-215*	-295*	-370*	-390*	Z-*	Z-*	195*	180*	140*	190*	230	170	Z-	Z-*	80*	-70*	200 (2)		
15	80*	85*	Z-*	Z-*	Z+*	Z+*	-10*	15	85	-15*	Z+*	115	165	140	115	Z-*	95*	95	50	Z+	55	80	65	55	86 (12)		
16	40	30	45	50	30	30	30*	0*	45	80	90	80	-180*	-85*	Z+*	Z+*	Z+*	120*	90*	150*	75*	80	165*	15*	55 (11)		
17	165*	75*	110*	205*	125*	100*	150*	115*	110*	130*	165*	130*	120*	235*	190*	175*	170	90*	120*	55*	10	-	-	-	90 (2)		
18	-	-	-	-	-	-	-	-	-	190	200	180	160	140	110	75	85	130	75	55	90	35	25	50	107 (15)		
19	70	40	40	Z-*	Z+*	Z-*	Z+*	Z+*	Z-*	Z-*	Z-*	-5*	140	110	145	125	90	165	205	250	260	245	250	235	158 (15)		
20	175	155	115	120	100	55	30	105	100	135	185	105	170	105	150	155	175	95	70	60	55	55	50	45	107 (24)		
21	65	65	60	55	45	50	50	75	90	135	-	-	-	-	-	-	170	115	35	20*	45*	80*	70*	25*	78 (13)		
22	15*	45*	65*	50*	45*	55*	135*	220*	125*	140*	165*	170*	110	110	130	145	135	165	160	145	135	135	130	70	131 (12)		
23	65	85	80	80	80	85	85	110	105	110	130	135	125	130	140	135	135	175	215	205	195	140	105	120	124 (24)		
24	90	80	65	60	120	115	205	220	210	175	170	175	185	165	155	160	155	160	175	230	215*	240	160	105	155 (23)		
25	50	30	30*	105	135	65	80	110	160	135	155	175	160	165	175	165	170	120	90	95	145	100	90	75	120 (23)		
26	80	85	105	85	60	50	45	50	55	70	90	90	100	125	110	110	90	110	95	90	0	-15	5	5	70 (24)		
27	5	55	195	50	40	50	60	55	55	65	75	95	110	60	70	85	130	100	65	70	70	70	65	74 (24)			
28	65	30	-40	-35	-35	-10	30	65	80	95	130	145	165	110	105	175	65	-30	-5	-10	-35	-25	-5	-20	45 (23)		
29	-10	-10	-15	-20*	-25*	-5*	-85*	Z-*	Z-*	Z-*	Z-*	Z-*	85*	25*	-15*	50	105	140	135	95	90	35	10	70	58 (12)		
30	55	55	55	65	45	50	80	Z+	Z-	Z-	Z-	120*	115	90*	115	70*	-50*	-15	-20*	95	65	15	30	-10	54 (15)		
Mean	80	80	79	79	81	76	116	144	129	131	137	136	142	127	134	131	128	123	118	125	104	95	85	93	110 (489)		
	(22)	(22)	(21)	(20)	(20)	(18)	(18)	(20)	(21)	(20)	(20)	(19)	(19)	(18)	(19)	(18)	(20)	(21)	(22)	(22)	(22)	(23)	(22)	(22)			
Mean for 0a days																								121 (5)			

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

39	ESKDALEMUIR												Factor 8.39 (metre ⁻¹)												OCTOBER 1960											
	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	25	60	-30	-40	-40	Z-*	Z-*	35*	70	15	75	Z-*	Z+*	30	-20	45	-5	-40	-95*	-105*	-95*	-70*	-60	-80	0	(15)										
2	-95	-65	-70	-65	-75*	-95*	-135*	-170*	Z-*	Z-*	Z-*	Z-*	145*	-95*	240*	230	235	235	150*	185*	40*	-255*	Z-*	-40*	58	(7)										
3	Z-*	Z-*	Z-*	Z-*	Z-*	Z+*	Z+*	Z+*	160	190	130	135	95	85	110*	130*	140	120	140	120	-	-	-	-	131	(10)										
4	-	-	-	-	-*	-	Z-*	Z-*	Z-*	105*	100	90	80	80	80	85	55	-	-	-	-	-	-	-	81	(7)										
5	-	-	-	-	-	-	-	-	-*	-*	-	125	65	105	95*	60*	Z+*	Z+*	140*	Z-*	Z-*	65	95	135	98	(6)										
6	105	90	-	-	-	-*	-*	-	115	145	115	95	95	100	130	70	70	50	-	-	-	-	-	-	98	(12)										
7	-	-	-	-	-	-	-	-	-	30	45	95	70	60	35	50	35	40	50	60	50	45	25	-15*	49	(14)										
8	0	-15	20	45	80	50	105	Z-*	Z-*	220*	215*	115	105	90	125*	95*	125*	145	135*	155	-	-	-	-	75	(12)										
9	-*	-*	-	-	-	-	-	-*	-*	-*	-*	-*	-*	-*	-*	-*	-	-	-	-	-	-	-	-	-	(0)										
10	-	-	-	-	-	-	-	-	-*	-*	-*	-	-	-*	-	75	90	55	65	90	180	170	120	165	112	(9)										
11	145	135	135	105	110	170	135	150	250	270	215	210	190	160	175	160	165	215	240	255	265	225	150	145	182	(24)										
12	160	155	145	120	85	95	90	110	145	180	225	230	215	180	190	140	125	195	135	155	185	165	75	65	149	(24)										
13	55	50	55	55	75	75	55	65	-	-	-	-	-	-	-	-	-*	-*	-	-	-	-	15	15	51	(10)										
14	25	15	15	15	15	15	15	20*	15	10	-40*	10*	40	75	105	70	40	40	30	30	35	15*	20*	25*	34	(18)										
15	25*	40	55	30	40	50*	45	50	50	75	80	105	155	155	125	105	105	65	85*	45	40	40	40	25	70	(21)										
16	15*	20*	20	15	15	10	15	40	40	50	55	25*	55	70	80	55*	40*	55	30	15	15	25	30	30	35	(19)										
17	40	30	35	40	40	30	25	30	30	25	40	80	Z	145	140	80	120	150*	15*	70	75	125	95*	25*	63	(19)										
18	-	-	-*	-*	-*	-*	-*	-*	-*	-*	-*	-	180	145	210	185	Z+*	Z-*	195*	210	255*	115*	125*	75	167	(6)										
19	Z+*	125*	195*	200*	280*	280	195	155*	Z-*	Z-*	215*	115	30	115*	55*	115	Z-*	Z-*	Z-*	Z+*	Z-*	Z-*	Z+*	Z+*	145	(5)										
20	Z-	110	100	80	40	70*	25*	50*	50*	15*	Z-*	Z-*	-30*	60*	80*	90*	40*	15*	30*	35*	30*	50*	25*	15*	83	(4)										
21	20*	-30	30	Z-*	Z-*	Z-*	100*	165*	115*	115*	195	155	125	175	195	215	135	70*	5*	-50*	30*	-140*	-95*	-15*	133	(9)										
22	65*	80*	80	0*	-15*	15*	55	75*	40*	50*	80*	75	70*	50*	-5*	70	70	55*	55*	55	45	15*	25*	63	(8)											
23	15	25	25	30	-25*	Z-*	Z-*	Z-*	Z-*	-30*	25*	30*	25*	120*	75*	135	160*	85*	40*	160	155	145	150	155	99	(10)										
24	155	135	55*	35*	-*	-	-*	-*	-	-*	-*	-*	-*	-*	-	-*	-*	-	-	-*	-*	-*	-*	-*	145	(2)										
25	-	-	-	-	-	-	-	-*	-	-	-	-*	-*	-*	-	-*	-	-	-	-	-*	-*	-*	-*	-	(0)										
26	-	-	-	-	-	-	-	-	30	15	50	50	135	160	100	145	215	115	30*	35*	240*	245*	195*	170*	101	(10)										
27	125*	120*	110*	70*	80*	75*	Z-*	Z-*	Z-*	-305*	-320*	-300*	-220*	-200*	-155*	-105*	Z-*	-35*	Z+*	Z+*	Z+*	15*	-55*	-90*	-	(0)										
28	-110*	-80	-85	-100	-90	-95	-85	-60*	Z-*	Z-*	15*	Z-*	215*	275	280	295	250	215	240	205	235	195	175	160	117	(17)										
29	120	135	180	125	80	Z-*	Z-*	Z-*	-20*	-15*	Z+*	Z-*	110	160	145	115	170	200	225	260	235	275	215	160	171	(17)										
30	160	160	170	150	225	170	140	140	120	155	145	130	115	105	120	95	45	120	175	125	165	105	135	165	139	(24)										
31	85	40	40	45	45	40*	40*	20*	70*	70*	105	70	60	55	70	Z-*	135*	95*	95*	30	190	260	295	265	110	(15)										
Mean	71	55	51	40	51	80	66	84	93	97	113	117	107	121	127	124	114	114	133	120	134	135	104	106	99	(354)										
	(14)	(18)	(18)	(16)	(14)	(10)	(12)	(7)	(11)	(12)	(14)	(16)	(18)	(20)	(17)	(20)	(18)	(16)	(10)	(17)	(14)	(14)	(14)	(14)												
																						Mean for 0a days			114	(4)										

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

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39	ESKDALEMUIR												Factor 8.82 (metre ⁻¹)												NOVEMBER 1960			
	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	275	245	180	125	120	85*	110*	Z-*	20*	30*	25*	-35*	-40*	-30*	-	-	-	-	-	-	-	-	-*	-*	189 (5)			
2	255*	295*	165*	85*	Z+*	Z+*	Z-*	95*	-*	-*	-*	-*	-*	-*	-*	-*	-*	-*	-*	-*	-*	-*	-*	-*	(0)			
3	-	-	-	-	-	-	-*	-	-	-*	Z-*	Z+*	Z-*	Z+*	Z-*	Z-*	Z-*	Z-*	Z-*	Z-*	Z-*	45*	80	85	83 (2)			
4	120	70	135	90	100	125	125	65	75*	135	85	155	95	155	205	180	180	240	35*	Z-*	Z-*	-*	-	-	133 (17)			
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-*	-	-	-	-	-	-	-	-	210	170	190 (2)			
6	110	155	120	60	-	-	-	-	45	85	165	240	220	235	165	-	-	-	-	-	-	-	-	-	145 (11)			
7	-	-	-	-	-	-	-	-	105	155	145	100	115	125	115	100	75	60	40	-	-	-	-	-	103 (11)			
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	- (0)			
9	-	-	-	-	-	-	-	-	-	-	-	135	65*	Z-*	Z-*	Z-*	145*	110*	Z-*	Z+*	170*	170*	255	165	185 (3)			
10	170	125	100	-45*	Z-*	Z-*	Z-*	Z-*	Z-*	Z-*	Z-*	230*	Z-*	Z+*	Z+*	Z+*	Z+*	310	330*	255	265	195	190	85*	201 (8)			
11	15*	60	100	Z-*	Z-*	Z-*	45*	Z-*	Z+*	Z+*	Z-*	-160*	-185*	-165*	-155*	-135*	-130*	-105*	-190*	-185*	Z-*	Z-*	Z-*	Z+*	80 (2)			
12	Z-*	Z+*	Z+*	Z+*	Z+*	Z+*	Z+*	+40*	-45*	10*	-5	Z-*	Z-*	25	55	-20	-20*	Z-*	Z+*	Z+*	Z+*	Z+*	Z+*	Z+*	11 (4)			
13	Z+*	Z-*	185	250	210	190	175	195	195	245	Z+*	Z+*	165	190	225*	170*	50*	Z-*	Z+*	Z-*	Z-*	295	170	140	200 (13)			
14	145	115	160	145	165	155	160	135	230	230	180	240	220	185	235	265	220	215	Z+*	Z+*	Z+*	125	185	255	189 (21)			
15	170	110*	115	110	135	145	Z+*	200*	155*	Z+*	145*	240*	Z+*	Z+*	Z+*	170	Z-*	Z-*	135	Z-*	Z-*	Z-*	Z-*	105*	140 (7)			
16	125*	110	115	95	Z-*	Z-*	Z-*	90	135	175	155	170	160	155	220	190	235	90	235	235	245	260	Z-*	Z-*	171 (18)			
17	Z-*	Z-*	Z-*	Z-*	Z-*	Z-*	365	455	260	310	400	250	240*	240	260	335	405	595	340	215	315	535	475	455	365 (17)			
18	430	385	360	320	355	485	490	510	340	240	240	240	240	225	155	145	205	185	205	185	265	245	235	225	288 (24)			
19	215	175	310	240	315	415	455	545	580	510	330	325	190	175	195	215	205	205	330	310	310	205	250	260	303 (24)			
20	210	220	180	155*	150	225*	190	175	235	255	-5*	-80*	265*	165*	135	170	260	Z+*	185*	70*	Z-*	Z+*	Z-*	Z-*	198 (11)			
21	-255*	-155*	-30*	195	235	225	225	110*	220	240	275	265	250	260	220	255	290	145	Z-*	Z-*	Z-*	Z-*	Z-*	60	224 (15)			
22	140	110	185	140	125	150	100	80*	110*	130	125	75*	155*	150	150*	90*	185	190*	170	140	85	40	70*	110*	132 (15)			
23	85*	195	205	165*	165*	Z-*	Z-*	Z-*	15*	75*	90*	110	120	125	190	250	235*	320*	310	305	325	300	225	175*	222 (12)			
24	80*	Z-*	Z-*	Z+*	80*	85*	Z-*	Z-*	Z-*	215	Z+*	Z-*	Z-*	155*	Z-*	Z+*	Z-*	Z-*	Z-*	20*	155*	75*	100*	100*	215 (1)			
25	190*	275	260	245	245	160	205	175	155	185	175	195	190	190	150	160	140	130	125	155	250	305	260	220*	197 (22)			
26	280	250	215	165	135	190	245	365	315	235	195	125	155	170	155	100	100*	170*	225	165	110	85	100	100	185 (22)			
27	75	85	80	70	100	110	130	95	90	70	85	115	140	150	225	215	190	240	265	345	300	310	265	260	167 (24)			
28	155	Z+*	10*	Z-*	Z-*	100	Z-*	Z-*	Z-*	85*	70*	Z-	160*	185	210	150	160	180	160	155	175	210	180	100	163 (13)			
29	100	50	95	30	35	10*	Z-*	Z-*	70*	40*	75*	120*	260*	290*	250*	95*	135*	125*	Z-*	Z-*	20*	75*	70*	40*	62 (5)			
30	100*	105	100	70*	100*	150*	205*	Z-*	Z-*	145*	200*	125*	25*	60*	Z-*	Z-*	Z-*	Z-*	Z-*	Z-*	Z-*	Z-*	Z-*	Z-*	103 (2)			
Mean	185 (14)	161 (17)	168 (19)	152 (15)	173 (14)	204 (12)	239 (12)	255 (11)	223 (13)	213 (16)	197 (13)	177 (15)	174 (13)	173 (17)	181 (16)	180 (16)	212 (13)	216 (12)	212 (12)	224 (11)	240 (11)	239 (13)	220 (14)	190 (12)	197 (331)			
Mean for 0a days																							229 (5)					

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

39	ESKDALEMUIR												Factor 8.87 (metre ⁻¹)												DECEMBER 1960											
	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	Z-*	Z-*	Z-*	Z-*	Z-*	Z-*	Z-*	70*	Z+*	Z+*	Z+*	Z-*	405*	450	385	40*	Z+*	160*	285	245	220	225	195	180	273	(8)										
2	240	225	230	265	240	Z*	120*	125	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	221	(6)									
3	-*	-*	-*	-*	-*	-*	-*	-*	20*	25*	Z-*	15*	Z-*	Z-*	Z-*	Z-*	Z+*	Z+*	Z+*	Z+*	Z+*	Z+*	70	Z-*	Z-*	70	(1)									
4	Z-*	Z-*	Z-*	25*	Z+*	5*	90	Z-*	85*	Z-*	Z+*	85*	65*	Z-*	Z-*	Z+*	Z-*	Z+*	Z+*	Z-*	105	100	Z+*	Z+*	98	(3)										
5	Z-*	Z+*	Z+*	Z+*	Z+*	Z-*	Z+*	Z-*	Z+*	Z+*	Z+*	Z+*	135	155	210	315	365	445	415	385	350	360	240	175	296	(12)										
6	175	90	150	325	260	325	290	300	280	200	215	235	270	245	270	330	295	190	180	165	155	180	125	100	223	(24)										
7	130	110	80	95	85	85	70	80	105	135	145	185	235	160	115	115	150	180	150	165	80	95	175	255	133	(24)										
8	255	235	180	130	115	110	125	90	80	70	70	70	155*	140*	165	170	190	190	170	150	135	105	85	55	134	(22)										
9	50	45	55	55	55	100	115	140	150	165	120	45	225	230	260	265	410	440	250	310	335	275	270	155	188	(24)										
10	160	10	105	115	15	85	95	110	110*	90	100	50*	100	180	165	155	175	140	175	175	165	130	115	85	122	(21)										
11	100	85	75	90	80	115	85	85	-	-	-	-	-	90	80	110	160*	195*	25*	-160*	-260*	30*	Z-*	Z-*	90	(11)										
12	385	185	320	495	445	220	225	140	85	140	170	180	160	125	130	220	200	205	200	225	275	175	205	125	218	(24)										
13	100	100	80	90	70	65	90	100	185	205	210	225	125	190	230	220	Z+*	Z+*	Z-*	450	460	470	505	530	224	(21)										
14	375	265	195	350	320	255	290	160	155	135	145	100	75	100	200	195	245	195	200	220	210	195	170	140	204	(24)										
15	175	140	115	115	140	125	130	210	215	340	255	250	200	170	255	230	160	195	205	210	225	190	250	120	193	(24)										
16	40	140	110	125*	-45*	50*	115*	155*	170*	245*	195*	235*	335*	345	450	445	500	550*	485*	605*	315*	135*	240*	275*	290	(7)										
17	215*	220*	280*	210*	160*	185*	230*	310	275*	380*	395*	365*	435	370*	390*	515	280*	285*	215*	330*	260*	210*	210*	225*	420	(3)										
18	215*	235*	275*	315*	140*	290*	255	265	190	190	155	215	185	175	225	295	240	210	280	390	380	340	250	205	247	(18)										
19	175	155	115	160	265	245	190	165	225	210	185	190	115	150	250	235	260	355	390	400	415	605	545	435	268	(24)										
20	275	265	265	255	200	215	185	180	235	215	190	215	225	265	355	400	405	375	335	250	240	200	230	245	259	(24)										
21	235	270	260	265	180	200	165	165	165	135	180	180	215	210	145*	140*	165	300	305	240	250	220	175	185	212	(22)										
22	225	160	150	115	100	115	145	165	155	140	100	135	215*	175	170	195	235*	225*	125*	25*	30	115	Z-*	130*	141	(17)										
23	Z-*	120*	125*	70*	65*	90*	160*	30*	-115*	25*	Z-*	Z-*	55*	45*	225*	335	325	315	225	50	225	285	350	255	263	(9)										
24	230	270	260	195	125	110	125	135	250	260	210	205	175	210	290	310	440	595	625	495	Z+*	Z+*	Z-*	Z-*	276	(20)										
25	Z+*	155*	100*	Z+*	140	160	180	125	175	Z-*	Z-*	175*	Z-*	Z-*	Z-*	Z+*	Z-*	Z-*	Z-*	Z-*	Z-*	Z-*	Z-*	Z-*	156	(5)										
26	Z-*	Z-*	Z+*	-5*	Z-*	Z+*	Z+*	115	120	140	195	165	120	Z-*	75	130	100	160*	Z-*	Z+*	Z+*	Z-*	140	135	136	(10)										
27	150	160	130	95	100	80*	85*	80	95	165	125*	170*	180	175	135*	180	265	285	290	260	365	295	190	170	191	(19)										
28	95	100	105	150	70	Z-*	Z+*	Z+*	Z-*	Z-*	Z-*	195	400	315	380	545	765	820	590	690	745	730	570	400	426	(18)										
29	260	185	145*	375	495	735	785	645	515	640	690	770	670	180	95	135*	385*	485	490	295	245	230	155	35*	447	(20)										
30	Z-*	Z-*	Z-*	115*	50*	Z-*	195*	585	615	440	430	385	395	335	275	100	230	400	455	260	Z-*	Z+*	Z+*	Z-*	377	(13)										
31	130	200*	280	Z+*	Z+*	Z+*	Z-*	155	155	155	155*	85*	Z-*	Z-*	Z-*	250	255	300	235	315	230*	150*	160	215	217	(12)										
Mean	189 (21)	160 (20)	163 (20)	197 (19)	175 (20)	199 (16)	191 (19)	193 (24)	207 (20)	209 (20)	209 (18)	219 (18)	232 (20)	210 (22)	236 (21)	261 (24)	292 (21)	331 (20)	307 (21)	288 (22)	267 (21)	254 (22)	243 (21)	208 (20)	228 (20)	(490)										
	Mean for 0a days																							[200	(8)]											
Annual Mean	102 (234)	93 (238)	92 (240)	92 (228)	94 (224)	111 (203)	118 (211)	127 (210)	127 (210)	133 (215)	139 (213)	141 (214)	143 (221)	141 (236)	143 (227)	142 (231)	146 (226)	146 (219)	145 (210)	138 (228)	133 (230)	131 (240)	121 (240)	110 (230)	125 (230)	(5368)										
	Annual mean for 0a days																							[125]												

40 ESKDALEMUIR

	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	2b	hr.	2c	hr.	2c	hr.	2a	hr.	0a	hr.	1a	hr.
2	(0a)	5.1	2b	6.1	2c	11.1	2b	5.7	...	...	1a	0.3
3	1a	-	2c	10.1	2c	3.9	2b	15.5	1a	2.0	1a	2.2
4	2b	1.6	2c	11.6	2c	11.7	2c	15.7	1a	2.2	1a	0.3
5	1a	5.2	2c	6.8	1a	0.9	2a	4.4	(1a)	-	0a	...
6	1a	0.1	0a	...	1a	1.3	2c	6.8	1a	2.8	(2b)	-
7	1a	0.1	1a	0.2	1a	0.1	2c	8.5	0a	...	1a	0.1
8	0a	...	1a	0.5	(0a)	...	1b	0.5	(1a)	-	(2c)	-
9	1b	1.2	1a	0.2	(1a)	-	1b	0.5	(1b)	-	(2b)	-
10	1a	0.3	0a	...	2a	3.5	2c	9.0	2a	3.7	1a	0.7
11	0a	...	2b	5.8	1b	1.4	2c	15.5	2a	3.8	1a	0.3
12	2b	3.1	1b	0.5	2b	3.1	0a	...	1a	1.3	(2b)	-
13	2a	9.8	1c	2.5	2a	3.0	2c	9.8	2b	5.0	(2c)	-
14	1b	2.0	1b	1.4	2b	4.7	2b	5.7	2c	8.3	(2c)	-
15	1b	2.5	1b	0.4	1b	2.2	2c	4.7	1b	2.3	1a	0.6
16	(1a)	0.9	0b	...	2b	5.7	1c	2.9	0a	...	(1b)	-
17	0a	...	1b	0.6	2b	3.8	1a	0.2	1a	0.1	1b	0.9
18	0a	...	1b	0.1	1a	2.6	0a	...	1a	0.4	(1a)	-
19	2c	9.7	2c	4.4	1b	1.1	1a	0.2	1a	0.9	1a	0.6
20	2c	6.7	1c	0.9	1b	2.9	1a	0.7	1a	0.5	0a	...
21	0b	...	1c	2.1	1a	0.6	1a	1.3	1a	0.5	1a	0.1
22	2b	12.3	0b	...	1b	0.1	1a	0.3	0a	...	0a	...
23	2b	14.1	(0a)	(...)	1a	0.5	0a	...	1a	0.2	1a	0.1
24	2b	6.0	(0a)	(...)	1a	1.2	0a	...	2c	7.2	1a	0.1
25	1b	2.6	2c	3.9	1a	0.1	1a	1.9	1a	0.5	(0a)	-
26	1a	0.1	2c	14.4	0a	...	1a	0.3	1a	1.4	1a	0.5
27	(0a)	-	2c	6.1	1a	0.2	1a	0.2	1a	0.6	1a	0.3
28	(1a)	-	1c	2.6	0a	...	1a	0.9	1b	0.6	1a	2.1
29	1b	2.7	1b	2.9	1a	0.3	1a	0.1	0a	...	1a	0.6
30	1a	1.1	2c	6.6	1a	0.3	1a	0.5	1a	1.0	0a	...
31	1b	2.7			1a	2.2	1a	2.2	(0a)	-	1a	0.6
31	2c	11.4			2b	8.3			1a	0.3		
Total	-	101.3	-	90.7	-	76.8	-	114.0	-	45.6	-	10.4
No. of days used	-	28	-	29	-	30	-	30	-	27	-	21
Mean	-	3.6	-	3.1	-	2.6	-	3.8	-	1.7	-	0.5

	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.	2b	hr.	(2b)	hr.	2c	hr.
2	(1b)	0.7	(1a)	-	1b	0.6	2b	13.7	(2b)	-	(2c)	6.9
3	(1a)	-	(1a)	-	2c	1.2	2b	14.6	(2b)	-	(2c)	-
4	1a	-	(1a)	-	1b	3.5	(2c)	-	(2c)	-	(2c)	-
5	2b	0.9	(1a)	-	1b	0.4	(2b)	-	(2b)	-	2c	8.0
6	2b	3.7	(0a)	-	0a	...	(2b)	-	(1a)	-	2c	4.9
7	(2b)	-	1a	0.5	(2b)	-	(1a)	-	(1a)	-	0a	...
8	(2a)	-	1a	0.1	(1a)	-	(1a)	-	(1a)	-	0a	...
9	0a	...	1b	2.2	(1a)	-	(2b)	-	(1a)	-	0a	...
10	1b	2.1	2c	5.7	(1a)	-	(1a)	-	(2c)	-	0a	...
11	2b	6.7	1a	0.2	0a	...	(1a)	-	2c	7.2	1a	1.1
12	1a	0.8	1b	1.3	1a	0.5	0a	...	2c	16.8	(2b)	-
13	1b	0.5	1b	0.2	1a	0.1	0a	...	2c	12.5	0a	...
14	2b	3.5	2c	7.1	1a	0.2	(1a)	-	2c	4.3	1b	0.3
15	(2c)	-	1b	2.6	2b	11.6	1a	1.0	1b	1.2	1a	0.1
16	(2b)	-	1a	0.1	2c	4.0	0a	...	2c	5.1	1a	0.1
17	(1a)	-	1b	0.8	2b	6.0	0a	...	2b	3.5	1a	1.6
18	(2b)	-	(2c)	-	(1a)	-	1b	0.2	2c	5.1	0a	...
19	(2c)	-	(2b)	-	(0a)	-	(1b)	-	0a	...	1a	0.5
20	(2c)	-	2b	4.0	2c	5.2	2c	7.7	0a	...	1a	0.1
21	1a	0.8	0a	...	0a	...	2b	3.9	2b	5.3	0a	...
22	2b	3.6	1b	1.5	(1a)	-	2b	5.5	2b	5.8	0a	...
23	2b	3.5	2c	3.5	1a	0.3	1a	2.1	1a	0.2	1b	0.6
24	1a	0.1	1b	1.4	1a	0.1	2b	4.1	1b	2.7	2b	3.9
25	1a	0.3	2b	3.1	1a	0.1	(2b)	-	2c	6.8	1b	1.6
26	1b	1.0	2c	5.3	0a	...	(1b)	-	0a	...	2c	9.8
27	1b	1.5	1b	1.6	1a	1.7	(1a)	-	0a	...	2c	6.3
28	0a	...	2c	5.7	1a	0.2	2b	14.7	0a	...	1a	0.1
29	1a	0.3	2b	3.9	2a	8.1	2b	10.6	2c	3.8	2c	4.1
30	1b	0.9	(1a)	-	2b	10.0	2b	3.7	2b	3.7	1a	0.4
31	2c	4.5	(1a)	-	2b	4.0	1a	0.3	2c	7.9	2c	6.6
31	(1a)	-	2a	4.7			1b	1.7			1c	1.9
Total	-	35.4	-	55.3	-	57.8	-	83.8	-	91.9	-	58.9
No. of days used	-	20	-	22	-	23	-	18	-	21	-	28
Mean	-	1.8	-	2.5	-	2.5	-	4.1	-	4.4	-	2.1

Annual values: Character 0 1 2
No. of days used 57 180 129

Duration: Total 821.9
No. of days 297
Mean 2.77 hr.

KEW

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

41 KEW OBSERVATORY		Factor 4.58 (metre ⁻¹)																				JANUARY 1960					
	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*	35*	85*	85*	105*	55*	105*	Z±*	Z±*	Z±*	185	140	295	195	290	350	280	255*	195*	115*	265	295	350	360	273	(11)	
2	375	445	445	350	405	360	220*	360*	-440*	Z±*	385*	515*	465*	435*	585*	665*	385*	420*	270*	595*	630*	80*	45	-10	302	(8)	
3	70	270	185	15	70	15	105	155	175	140	245	385	270	270	350	325	175*	225*	360	295*	325*	280	155	105	197	(20)	
4	140	210	195	125	165	295	365	410	420	505	500	405	365	335	315*	305	295	290*	225*	385	365	335	280	225	315	(21)	
5	195	225	200	195	140	95*	125*	150*	105*	280	335	475	575	560	525	385	435	490	435	455	435	365	220	280	360	(20)	
6	270	290	305	325	335	445	420	475	525	475	465	225	490	575	710	560	570	350	315	255	265	290	265	195	391	(24)	
7	195	630	995	1130	1050	1315	1275	1190	805	615	605	410	645	665	515	405	735	665	630	560	420	15	15	945	685	(24)	
8	770	535	550	420	245	715	700	645	855*	350	210	420	435	375	325	385*	500	195	325	0	105	185	25	195*	382	(21)	
9	420	445	445	490	490	550	605	655	795	550	665	710	665*	700*	575*	665	715	585	665	700	805	805	785	560	624	(21)	
10	410	200	410	430	385	455	515	525	575	665	805	645*	700*	620	420	420	515	475	655	525	445	280	125	70	451	(22)	
11	0	-75*	-175*	-90	-185	Z±*	-135*	35*	85	125	175	155	175	350	245*	475*	200*	490*	735	535	640	655	395*	280*	258	(13)	
12	-185*	-35*	0	55	95*	270*	280	410	645*	665	700	630	735	725	855	830	910	1065	825	735	840	700	490	615	635	(19)	
13	560	210	465	585	435*	665*	645*	665*	505*	525*	785*	895*	840*	615*	365*	805	475	645	910	805	140	575	700	805	591	(13)	
14	560	375	175	70	15	25	85	325*	385*	255	245*	280*	85*	15*	35*	125*	185*	35*	-20	0	-10*	35*	-165*	-130*	154	(10)	
15	-80*	-45	15*	0*	225*	350	430	665	715	895	840*	825	840	795	825	685	475	315	245	455	410	665	490	435	551	(19)	
16	405	270	335	335	350	305	125	125	155	85	35*	70	185	245	225	175	45	-10	-20	70	-55	-200	-35	45	140	(23)	
17	140	0	225	280	280	305	295	290	420	265	315	435	505	505	375	295*	125*	-330	0	-355	55	105	350	350	245	(21)	
18	165	-75	35	35	140	-80	35	125	115	95	245	315	315	375*	335*	295	410	420	325	315	375	325	210	220	198	(22)	
19	265	210	220	235	280	265	280	270*	80*	-35*	-75*	430	420	395	475	465	350	265	Z±*	Z±*	130	210	305	245	303	(18)	
20	195	175	155	140	125	140	200	405	490	525	475	490	420	505	505	500	665	585	455	665	105*	Z±*	Z±*	Z±*	391	(20)	
21	195*	-100*	-20*	-10*	-145	-55*	-75*	85*	500*	575*	605*	385*	245	245*	195*	290	210	195	175	150	85*	150	220	165	165	(10)	
22	125	155	55	130	140	60	105	175	155*	225*	245	265	175*	115*	130	280	270	290*	235	155	125	70*	70*	55*	166	(16)	
23	70	55*	70*	70*	105	105*	140	155	185*	-185*	-185*	-130*	-275*	-365*	-185*	0*	195	85	235	195	-45*	70*	-20*	60	138	(9)	
24	-20*	130	195	150*	-300*	Z±*	Z±*	-145*	-45	10	0*	-385*	-185*	-110*	105	55	10	-190*	-365*	Z±*	35*	140	225	295	112	(10)	
25	265	155	245	265	255	280	385	365	700	965	1015	875	830	715	595	615	465	420	295	115	185	95	80	210	433	(24)	
26	685	840	925	815	490	655*	525	465	375*	155	95	295	490	175	105	140	60	290*	535	620	455	455	420	290	430	(21)	
27	315	350	255	315	340	335	420	490	560*	685	715	690	630	665	575	Z±*	Z±*	Z±*	Z±*	-295	-585*	-475*	-185*	432	(15)		
28	Z±*	Z±*	Z±*	125*	Z±*	155*	295*	140*	15*	-20	-80		-35	-25	55	105*	140*	0*	105	115	55*	-20	-185	-275*	-10	(9)	
29	-175*	70	85	140	195	220	290	405	585	685	560	475	385	405	505	490	525	525*	405*	105*	45*	-100*	55*	80*	376	(16)	
30	105*	-130*	55*	35*	140	140	175	185	245	255*	235*	295	130	165*	280	265	350	350	360	395	405	305	270	220	265	(17)	
31	210	165	140	105	95	80*	125	175	210	265	220	315	325	350	350	350	385	350	280	270	360	395	435	350	271	(23)	
Mean	296 (23)	260 (24)	302 (24)	287 (24)	236 (25)	325 (20)	343 (23)	404 (21)	410 (17)	421 (22)	417 (21)	402 (24)	420 (23)	448 (21)	413 (22)	420 (23)	410 (24)	414 (18)	377 (24)	338 (24)	313 (22)	309 (24)	260 (24)	306 (23)	353 (540)		
																							Mean for selected quiet days			333 (9)	

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

41	KEW OBSERVATORY												Factor 4.49 (metre ⁻¹)												FEBRUARY 1960											
	Hour G.M.T.												volts per metre																							
	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											
1	385	280	255	275	315	210	150	115	325	0	45*	-295	140	255	55*	175*	350	105*	-145*	0	115	265	130	300	188 (19)											
2	440	460	440	350	160	290	220	245	335	255*	-90*	140*	325	265	275	175	240	245*	210	160	125*	160	60*	70	268 (18)											
3	115	70	55	45	10	80	105*	-20*	125*	125*	-100*	140*	140*	105	160	300	220	310*	345	360*	315*	275	255	240	163 (14)											
4	200	0*	Z±*	195	195	210	290	405	530	495	495	485	Z±*	Z±*	Z±*	385*	385	325*	Z±*	-20*	420	385	440	405	369 (15)											
5	300	345	280	360	350	530	600	755	860	915	530	350	615	625	580	430	20	385*	280	265	245	300	150	-20	420 (23)											
6	325	95	460	855	800	335	335	280	500	650	275	300	160	325	245	280	230	125*	90*	650	720	465	460	430	417 (22)											
7	350	350	315	335	175	160	230	290	335	405	485	495	460	460	450	460	495	565	545	545	615	635	685	625	436 (24)											
8	605	565	495	420	440	605	685	775	880	905	845	775	740	730	590	670	720	685	825	740	730	580	495	475	666 (24)											
9	385	265	310	280	245*	265*	385*	720	915	950	860	790	755*	545*	600*	755*	670	775	705	670	635	615	600	705	638 (17)											
10	670	695	600	325	220	210	245	460	510*	530	790	880	940	705	650	450	430	350*	500	495	450	460	420	315	520 (22)											
11	310	230	385	565	280	220	230	440	530	460	580	500*	420*	310*	460*	335	60	360	590	345	520*	495*	-130*	-185*	370 (16)											
12	240*	310*	380*	350	350	430	555	685	940	860	1020	890*	680	695*	635*	775	715	650*	680*	430*	545*	495*	385*	450*	669 (11)											
13	460*	Z±*	Z±*	Z±*	Z±*	Z±*	Z±*	230	565	720	Z±*	Z±*	Z±*	Z±*	670*	Z±*	600*	715	775	580*	335	405	Z±*	Z±*	535 (7)											
14	Z±*	Z±*	Z±*	25*	70	35	80	300	325	300	350	350	385	345	370	360	350	415	565	370	Z±*	Z±*	-20*	160*	311 (16)											
15	150	315	350	335	500	520	590	580*	405	650	530		460	395	420	440*	570	625	670	825	625	530	460	245	486 (22)											
16	195	325	325	290	335	335	405	420	635	615	555	460	450	385	350	370	475	670	520	510	485	495	315	450	432 (24)											
17	315	275	460	325	380	530	535	680	880	1055	835	600	465	420	440	420	460	600	615	720	845	600	685	705	577 (24)											
18	650	485	230	160	300	55	35	335	570	625	485	280	385	350	345	385	360	335	315	335	440	300	300	280	347 (24)											
19	Z±*	Z±*	55	Z±	Z±	255	315	370	385	360	420	385	405	395	405	460	450	580	1020	775	935	900	670	510	503 (20)											
20	345	Z±*	Z±*	Z±*	125*	130*	Z±*	Z±*	-10*	-260*	Z±*	Z±*	315*	475	Z±*	Z±*	150	530	Z±*	300*	695*	565*	600*	565*	342 (3)											
21	265	315	350	290	275	290	310	325	465	510	475	510	530	465	380	345	290	175	415	640	740	985	1200	970	480 (24)											
22	685	315	140	210	265	315	335	485	545	670	685*	685*	640	485*	495*	315*	495*	370*	140*	-55*	70	-20*	35*	-85*	390 (12)											
23	-295*	-200*	-515*	-625	-755*	20*	35*	70*	230*	195*	385	380	440	405	345*	385*	420*	495	555	625	605	545	685	440	505 (11)											
24	245	405	475	535	545	405	460	535	740	615	315	195	125	125	185*	-185*	-370*	-265	90	105	95	105	-100	-35	272 (21)											
25	-35*	20*	70*	70*	-370*	-185*	-185*	20*	Z±*	Z±*	-265*	-10*	90*	45*	240	385	530	580	755	845*	140*	-75*	-75*	125*	498 (5)											
26	55	95	125	140	165	220	265	385	670	660	530	495	385*	275*	210*	265	-140*	90*	-315*	-460*	-230*	20*	55*	90*	313 (13)											
27	90*	140	95	55	55	90	125	160	210	265	245	255	255	245	245	230	280	315	380	450	405	300	360	200	233 (23)											
28	200	175	160	130	95	90	105	140	175	230	165	160	230	245	230	245	195	325	275	350	360	315	230	315	214 (24)											
29	315	335	310	210	140	125	95	200	335	405	395	310	265	255	310	300	265	230	185	175	140*	195	165	160	247 (23)											
Mean	341 (22)	311 (21)	303 (22)	306 (23)	279 (23)	273 (24)	310 (23)	413 (25)	550 (23)	567 (24)	531 (22)	414 (21)	433 (21)	375 (20)	371 (18)	382 (20)	371 (24)	458 (19)	506 (22)	464 (21)	493 (20)	446 (22)	430 (20)	371 (21)	404 (521)											
																									Mean for selected quiet days [440 (10)]											

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

107

41	KEW OBSERVATORY												Factor 4.37 (metre ⁻¹)												MARCH 1960				
	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				
	volts per metre																												
1	135	110	100	90	100	90*	40*	175*	200	225	235	250	150*	50*	120*	250	245*	210*	245	300	300	220*	160	220	195	(15)			
2	150	90	75	75	-20*	120*	100	170	245	405	260	260	260	250	250	235	260	285	275	285	355	395	370	410	248	(22)			
3	435	285	250	235	235	220	245	150*	-140*	-35*	120*	285	185	260	285	355	270	270	250	250	210	185	200	200	255	(20)			
4	200	200	195	200	200	220	300	470	580	605	470	470	540	505	420	470	410	640	200	100	50	195	150	150	331	(24)			
5	120	185	335	360	430	310	170	370	300	235	310	245	385	420	405	85	50	50	245	200	270	285	285	35	254	(24)			
6	50	90	100	0	-25	-60	90	120	60	-35	60	75	135	225	250	245	245	320	335	245	195	245	320	385	153	(24)			
7	355	370	210	85	135	100	-175	0	50	285	355	435	435	435	435	505	485	380	200	150	300	310	235	220	262	(24)			
8	195	200	160	195	220	170	200	285	330	320	445	455	540	595	510	430	360	405	200	65	220	320	335	410	315	(24)			
9	50	0	-80	-25	50	15	-380*	-335*	Z+*	Z+*	Z+*	Z+*	Z+*	370	580	645	730	815	690	590	Z+*	125	135	320	313	(16)			
10	320	250	330	385	435	615*	730	875	975	705	640	530	420	335	410	470	385	435	455*	Z+*	Z+*	Z+*	Z+*	Z+*	508	(17)			
11	Z+*	Z+*	260*	330*	295*	345	345	385	250	570	605	850	875	805	680	485	435*	245*	150*	445*	630	420	Z+	220	533	(14)			
12	270	670	620	570	470	555*	705	655	Z+*	Z+*	260	220	300	385*	160	285	360	395	590	570	620	670	470	495	468	(20)			
13	480	270	200	Z+*	470	135	175	150*	Z+*	Z+*	175	60*	-90	200	210	330	540	565	555	455	435	455	355	160	320	(19)			
14	85	270	270	320	430	595	540	470	405	355*	480	420	310	60*	250	260	330*	320	385	505	605	690	605	455	413	(21)			
15	590	420*	185*	385	445	435	470	615	705	805	-	-	-	-	690	680	740	755	670	570	590	605	470	320	586	(18)			
16	370	320	195	100	40	-35*	-60	300	-*	-*	460	470	505	565	570	580	580	530	540	480	510	370	360	335	387	(21)			
17	235	200	160	170	200	210	260	380	540	565	620	580	540	505	520	570	605	505	555	505	510	470	430	420	431	(24)			
18	295	200	195	210	505	605	530	655	750	690*	595	335	300	335	320	335	275	295	310	300	270	370	335	355	377	(23)			
19	260	160	120	170	175	235	225	235	270	145	120	175	200	260	335	380	235	260	100	355	435	380	380	370	249	(24)			
20	485	420	345	300	160	100	160	345	335	285	300	300	300	275	430	370	395	385	370	335	320	335	330	320	321	(24)			
21	295	235	185	90	170	245	330	520	555	410	335	300	295	330	380	470	460	505	385	335	480	530	565	505	371	(24)			
22	220	150	-95	65	380	420	335	135	370	775	740	775	605	620	630	695	605	520	530	410	235	210	245	195	407	(24)			
23	235	360	270	120	210	310	300	370	445	470	380	510	570	690	690	670	605	570	335	220	200	225	200	335	387	(24)			
24	355	360	260	220	170	235	300	590	505	665	790	590	730	840	840	630	645	630	355	150	430	285	210	250	460	(24)			
25	220	250	245	170	145	160	235	405	555	690	595	765	630	555	505	605	570	530	15	-55	-80	-175	-220	-285	293	(24)			
26	-290	-380	-365	-345	-105	-125	-35	-90	0	145	40	170	195	100	145	150	-35	-195	-90	-195	-290	-285	-250	-325	-102	(24)			
27	-220	-230	-230	-285	-255	-290	-195	-275	-265	-105	50	110	135	65	60	-95	-90	10	185	65	90*	35*	100*	100*	-93	(20)			
28	160	135	120	75	210	135	210*	405*	285*	360*	470	470*	370*	370*	245*	455*	170*	-515*	-435*	-345*	-95*	-285*	-45*	-175*	186	(7)			
29	-60*	-35*	Z+*	Z+*	Z+*	Z+*	Z+*	Z+*	Z+*	505*	300*	Z+*	Z+*	50*	570*	620*	540*	590*	435*	370*	320*	320*	275*	225*	-	(0)			
30	355*	430*	455*	355*	360*	335	370	530	670	805	830*	705*	670*	840	520	815	880	915	965	790	60*	75	145	170	588	(15)			
31	85	135	370	355	300	235	380	720	805	925	905	740	595	570	555	420	410	480	480	300	430	345	285	300	463	(24)			
Mean	219	196	168	159	219	212	260	369	401	450	411	413	396	438	430	425	422	432	366	307	329	309	273	257	326	(628)			
	(28)	(27)	(27)	(27)	(27)	(25)	(27)	(25)	(24)	(22)	(26)	(25)	(25)	(25)	(28)	(29)	(26)	(27)	(27)	(27)	(25)	(26)	(26)	(27)					
Mean for selected quiet days																												350	(8)

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

41 KEW OBSERVATORY													Factor 4.44 (metre ⁻¹)													APRIL 1960				
	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	145	285	105	120	240	485	655	465	355*	365	400	380	190	140	200	270	275	270	260	260	225	70	110	-80	254	(23)				
2	10	95	95	140	205	240	260	270	285	250	275	275	270	275	310	320	305	295	270	205	145	105	70	80	210	(24)				
3	120	Z-*	Z-*	Z-*	Z+*	Z+*	-450*	-35*	335*	225*	225	295	215	190	205	140	00	70	275	355	365	310	275	235	218	(15)				
4	-125	-215	-250*	95*	155	225	370	460	485	365	335	275	310	225	235	235	275	345	370	330	435	415	200	175	267	(22)				
5	175	165	35	105	110	140	140	190	240	175*	190*	105*	130*	175*	285*	310	335	365	345*	200*	190	305	310	165	205	(16)				
6	295	275	215	205	155	140	215	240	235	275	310	275	250	130*	-505*	-700*	-440*	-180*	250*	225*	365	310	415	270	261	(17)				
7	275	355	310	240	205	270	250	435	435	345	320	310	310	305	275	250*	180*	-395*	-305*	Z+*	Z+*	205*	305*	190	302	(16)				
8	205	140	120	130	70*	155	240	240*	320	345	285	275	205	225	235	215	250	270	275	400	520	435	440	330	273	(22)				
9	345	320	225	175	175	190	240	105*	Z+*	235*	155*	140*	215	225	200	140	175	205	275	465	615	570	500	415	298	(19)				
10	260	225	130	95	70	70	Z+*	Z+*	85	120	175	175	175	175	120	175	Z+	190	180	120	95	95	85	105	139	(21)				
11	105	95	50	95	120	165	270	285	270	235	240	240	205*	165*	Z+*	225	190*	225	240	190	120	180	240	235	191	(20)				
12	250	200	205	205	205	310	390	400	370	215	200	175	60	-190*	-80*	85*	70*	80*	130*	0	85*	140	70	35	202	(17)				
13	15	0	50	70	85	105	145*	140*	110*	155	140*	140*	175	200	140	130	155*	35*	175*	335	425	425	345	275	183	(16)				
14	200	175	175	155	180	Z+*	260	330	295	240	270	225	225	240	205*	215*	Z+*	205	240	250	260	295	225	225	233	(20)				
15	240	225	190	175	200	205	205	205	225	215	190	205	190	155	240	260	285	240	225	250	380	380	270	275	235	(24)				
16	275	35	50	-70	-10	200	460	710	545	370	270	295	240	200*	180	190	235	250*	320	425	560	590	570	500	315	(22)				
17	400	365	355	295	225	205	260	295	250	275	260	205	225	205	205	200	205	310	355	400	500	485	640	520	318	(24)				
18	400	225	240	260	260	240	205	275	275	310	275	330	270	225	175	175	180	180	215*	240	330	485	330	263	(23)					
19	155	85	60	80	50	45	45	85	205	175	190	225	215	260	295	275	215	200	205	180	85	50	35	45	144	(24)				
20	105	155	140	110	130	235	365	405	345	260	275	275	250	260	260	250	260	310	415	465	295	345	275	270	269	(24)				
21	240	215	240	310	270	320	630	690	755	675	485	400	365	355	335	275	250	425	345	295	165	120	50	105	346	(24)				
22	85	70	85	110	70	140	190	270	225	240	235	225	225	175	215	250	270	270	225	215	235	35	155	120	181	(24)				
23	175	165	155	175	85	130	225	270	200	180	415	510	425	310	275	370	425	440	380	335	275	320	295	10	273	(24)				
24	-35	45	45	10	15	70	140	215	260	270	275	225	225	165	175	165	215	50	130	80*	25	165*	145	85	133	(22)				
25	105	190	205	175	70	50*	225*	345*	345*	370*	330*	310*	355*	335*	435*	165*	415*	665*	465	415	355	240	365	165	250	(11)				
26	130	205	270	250	330	335	535	500	365	390	310	240	250	270	205	85*	285*	95*	745	720	655	685	120	330	373	(21)				
27	365	500	590	405	425	345*	685	625	415	355	345	335	295	305	295	305	305	275	285	390	450	605	630	450	419	(23)				
28	435	400	345	365	415	485	535	555	615	305	345	305	260*	215*	295*	330	305	260	200	260	380	275	240	215	360	(21)				
29	285	275	225	225	250	345	440	530	580	605	405	435	355	365	510	440	485	460	485	460	390	485	570	440	419	(24)				
30	205	270	275	225	240	380	580	560	370	345	405	330	295	270	200	165	145	110	95	130	155	200	240	200	266	(24)				
Mean	195 (30)	191 (29)	185 (28)	173 (28)	176 (28)	225 (26)	339 (26)	383 (24)	346 (25)	303 (26)	297 (26)	286 (26)	247 (26)	240 (23)	238 (23)	242 (24)	257 (21)	260 (23)	298 (25)	314 (25)	318 (28)	314 (28)	289 (29)	224 (30)	262 (627)					
																					Mean for selected quiet days					287 (9)				

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

41	KEW OBSERVATORY														Factor 4.36 (metre ⁻¹)														MAY 1960			
	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															Mean			
															volts per metre																	
1	120	35	50	75	60	120	220	175	Z+*	210*	245	175*	230*	305	205	260	195	255	285	175	210	100	175	170	172	(20)						
2	145	110	70	15	40	40*	505*	Z+*	Z+*	Z+*	280*	160*	120*	95	100	150	175	170	220	285	235	260	220	153	(15)							
3	150	125	100*	110	110	175	280	370	365	280	245	210	Z+	Z+*	Z+*	Z+*	Z+	245*	125	135	345	370	345	260	235	(17)						
4	245	135	205	280	170	255	255	185	295	340	255	185	185	210	150	145	170	205	245	315	270	340	210	205	227	(24)						
5	175	170	205	210	205	220	305*	440*	455*	390	260	210	230	235	220	205	195	145	150	210	255	100	50	235	204	(21)						
6	170	185	125	150	135	235	315	585	560	340	260	235	210	205	185	170	160	135	120	125	150	85	95	170	213	(24)						
7	150	60	100	95	160	100	135	220	395	380	220	170	150	125	110	100	100	230	175	100	40	50	10	85	144	(24)						
8	135	205	125	75	35	75	160	175	295	255	170	160	145	100	135	170	170	195	230	125	145	100	25	70	145	(24)						
9	120	160	260	220	205	270	415	775	845	745	540	405	205	185	170	150	95*	70*	425	475	100	100	145	185	323	(22)						
10	135	170	160	170	150	125	340	585	585	640	565	525	475	515	540	505	475	405	285	220	135	185	235	160	345	(24)						
11	110	75	75	70	135	170	340	515	355*	525*	Z+*	Z+*	Z+*	Z+*	640*	515	610	540*	305*	Z+*	Z+*	Z+*	Z+*	Z+*	230	259	(11)					
12	285	245	175	235	210	Z+*	Z+*	Z+*	85	95*	40*	315*	220	340	295	450	455	345	340	425	600	590	Z+*	Z+*	Z+*	331	(16)					
13	Z+*	120	Z+*	15*	Z+*	Z+*	Z+*	Z+*	Z+*	Z+*	Z+*	Z+*	230	255	255	235	260	260	270	270	455	450	425	330	293	(13)						
14	235	230	255	255	245	220	280	320	340	220	205	150	185	185	175	175	195	210	255	345	430	450	370	475	267	(24)						
15	330	295	175	125	125	100	75	205	305	625*	235*	100*	205*	220	175	230	260	255	260	270	295	345	280	185	225	(20)						
16	195	185	205	150	110	125	280	415	490	505	415	390	340	285	270	255	255	255	295	330	305	245	255	280	285	(24)						
17	145	120	185	160	110	255	390	370	395	530	525	405	390	355	315	295	285	320	320	395	370	370	450	390	327	(24)						
18	305	345	285	195	195	150	340	430	405	490	-	405	285	355	405*	355	425	390	355	380	390	295	295	255	333	(22)						
19	175	175	185	135	150	235	355	355	405	Z+*	Z+*	Z+*	Z+*	Z+*	Z+*	285*	210*	120*	Z+*	285*	145	205	205	220*	227	(12)						
20	-45*	150*	-15*	135*	Z+*	Z+*	-280*	Z+*	355*	320*	340*	Z+*	Z-*	Z-*	Z-*	Z+*	585*	500*	475*	505*	-200*	-225*	-60*	15*	0	(0)						
21	-10*	120*	425	205	185*	230*	160	330	340	260	260	245	315	210	255	160	345	355	260	355	405	330	405	380	300	(20)						
22	220	195	170*	150	160	145	150	160	150	145	150	100	100	120	110	110	110	175	170	175	185	255	260	220	162	(23)						
23	170	205	100	110	195	220	380	455	390	255	185	160	150	185	170	175	210	195	285	255	220*	205	125	95*	217	(22)						
24	35*	70	135*	100	100*	425	505	550	500	430	380	355	285	305	285	280	260	255	230	260	195	145	125	85	298	(20)						
25	100	170	125	220	270	175	260	320	320	205	160	160	125	170	205	170	205	175	170	175	260	255	185	195	199	(24)						
26	210	260	205	185	230	245	260	365	315	260	260	230	175	185	245	255	255	205	185	185	245	270	280	260	240	(24)						
27	205	150	135	125	150	145	210	345	270	255	205	135	120	255	255	230	175	185	185	185	185	150	195	145	191	(24)						
28	110	220	320	245	235	285	185	255	260	255	255	210	125	135	95	95	145	220	260	285	305	295	235	365	225	(24)						
29	305	230	195	205	220	210	245	220	185	210	185	185	150	160	150	145	120	145	160	185	70	150	135	85	177	(24)						
30	95	100	85	70	75	255	370	315	370	340	305	315	305	305	305	280	235	270	205	70	85	85	40	75	206	(24)						
31	100	100	40	60	40	95	220	315	340	260	365	365	305	245	245	235	235	270	-10	0	-45	75	75	60	166	(24)						
Mean	179	171	172	152	153	193	274	358	368	347	288	257	225	237	216	230	246	240	229	237	243	236	210	214	234	(634)						
	(27)	(28)	(26)	(29)	(27)	(26)	(26)	(26)	(25)	(23)	(23)	(23)	(24)	(26)	(26)	(28)	(27)	(26)	(28)	(28)	(28)	(28)	(29)	(28)	(27)							
Mean for selected quiet days																										241	(10)					

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

41	KEW OBSERVATORY											Factor 4.17 (metre ⁻¹)													JUNE 1960																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
	Hour G.M.T.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			</

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

109

41	KEW OBSERVATORY												Factor 4.72 (metre ⁻¹)												JULY 1960			
	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	185	125	140	125	135	205	525	535	425	305	250	240	215	185*	-20*	150*	180	115	80	135	160	125	180	185	218 (21)			
2	230	215	100	160	180	80	140	230	455	490	420	305	170	140	140	140	135	115	125	275	180	80	45	35	191 (24)			
3	25	25	20	20	10	20	70	195	225	215	215	170	105	90	80	90	80	90	80	115	150	180	180	150	108 (24)			
4	115	90	70	60	90	125	160	140	185	225	225	185	170*	150*	170	105	140	70	160	150	125	105	180	160	138 (22)			
5	90	90	125	100*	25*	60*	170*	195*	250*	185*	215	215*	285*	285	265*	230*	185*	215*	195	180	250	305	285	205	202 (11)			
6	205	180	135	135	150	180	230	285	285	250	225*	230	195*	185*	205	180*	180	170	105*	135	185	230	205	180	198 (19)			
7	140	125	90	125	150	195	285	305	305	285	Z±*	Z±*	Z±*	230*	215	195	140	180	105*	180	90*	135	105	125*	186 (17)			
8	70*	-100*	-20*	35*	35*	10*	285*	-145*	25*	-220*	170*	100*	-25*	390*	Z±*	Z±*	305	Z±*	160	Z±*	Z±*	70	105	160	160 (5)			
9	125	100	205	215	170	265	275	425	385	Z±*	Z±*	275*	250*	Z±*	250*	250*	250	225	240	150	320	340*	265*	230*	239 (14)			
10	230*	180*	170*	135*	140*	180*	185*	160*	150*	140	185*	180*	185*	230	185	375	285*	Z±	80*	185	215	215	205	160	212 (9)			
11	150	135	140	115	125*	Z±*	185	215*	20*	150*	90*	Z±*	45*	Z±*	Z±*	Z±*	Z±*	105	55	150	195	225	240	154 (11)				
12	230	215	215	225	240	275	340	390	390	365	275*	Z±*	305	340	125	Z±*	Z±*	Z±*	Z±*	420	340	340	285	250	294 (18)			
13	250	250*	215*	185*	160*	125*	185*	170*	230*	195*	215*	265*	180*	215*	185*	205*	215*	225*	260*	250	285	320	195*	Z±*	276 (4)			
14	Z±*	225	260	265	265	275	330	410	390	340	375	275*	285*	275*	330	260	250	195	285	320	355	410	385	365	315 (20)			
15	320	295	285	250	285	295	375	390	375	275*	320	275	Z±*	Z±*	Z±*	260*	305	285	230	250	250	250	195	195	286 (19)			
16	250	275	240	195	205	275	340	375	305	250	215	215	205	180	215	230	310	295	305	355	320	205	105	195	253 (24)			
17	80*	-75*	-55*	-55*	Z±*	Z±*	Z±*	-20*	100*	185*	250*	260	195	195*	170	185	185	205	230	250	225*	Z±*	Z±*	215	211 (9)			
18	205	170	135	125	150	195	195	340	310*	Z±*	Z±*	Z±*	225*	35*	240	225*	250	265	275	275	260	185	225	185	216 (17)			
19	185	205	250	250	215	240	305	365	260	305	105*	Z±*	Z±	Z±*	Z±*	Z±*	Z±*	Z±	Z±*	Z±	455	365	215	250	276 (14)			
20	240	240	230	305	320	410	410	480	425	420	320	355	365	345	365	340	365	375	310	320	260	320	195	215	330 (24)			
21	215	185	70*	125	135	160	230	310	275	230*	215*	70	215	230	260	135	230	230	215	205	225	230	240	250	208 (21)			
22	240	225	180	205	285	365	425	410	340	Z±*	Z±*	Z±*	Z±*	Z±*	Z±*	Z±*	Z±	Z±*	Z±	305	305	400	355	205	303 (14)			
23	160	125	150	140	160	230	295	365	365	355	265	250	240	215	170	150	180	230	195	205	285	320	345	310	238 (24)			
24	330	320	260	265	390	390	320	310	285	260	225	180	115	150	180	125	150	260	240	330	355	365	265	180	260 (24)			
25	150	195	215	215	230	250	265	285	310	305	305	265	240	230	215	225	240	215	260	275	330	295	340	295	256 (24)			
26	240	215	260	230	265	305	385	375	435	400	285	260	260	230	215	170	170	215	250	340	455	285	285	295	284 (24)			
27	305	275	250	250	260	320	410	455	355	390	320	265	260	230	185*	285	180	180	355	340	295*	345*	320*	250*	299 (19)			
28	115*	70*	80*	-65*	205*	140*	185	215	195*	215*	215*	250	250	230	240	250	225	230	285	260	250	230	215	135	230 (15)			
29	150	125	135	115	105	125	195	240*	320*	340*	250*	230*	250	265	275	275	275	285	295	265	250	310	365	310	230 (19)			
30	185	180*	185	180	180	205	285	345	320	310	215*	180	160	185	225	265	205	180	225	250	355	435	390	375	256 (22)			
31	340	310	250	250	345	320	320	320	305	240	180	160	135	115	160	140	140	160	195	225	355	410	435	345	256 (24)			
Mean	202 (26)	187 (25)	181 (25)	182 (25)	205 (24)	238 (24)	288 (26)	344 (24)	336 (22)	308 (19)	276 (15)	229 (18)	217 (17)	217 (17)	209 (21)	207 (19)	211 (24)	207 (23)	221 (24)	241 (29)	275 (27)	261 (28)	243 (27)	224 (27)	237 (556)			
Mean for selected quiet days																							[233 (10)]					

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

41 KEW OBSERVATORY													Factor 4.55 (metre ⁻¹)													AUGUST 1960	
	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	215	215	285	320	230	160*	185	250	185	Z±*	Z±*	225*	265*	250	425	285	215	265	250	180	295	320	355	262 (19)		
2	265	195	230	225	140	215	355	425	425	320	250	Z±*	Z±*	Z±*	105	160	170	80	80	135	160	90	70	205 (20)			
3	70	70	55	90	125	185	215	275	285	250	195	160	140*	180	150	140	140	150	195	180	195	180	195	150	167 (23)		
4	185	195	215	185	205	225	285	375	400	340	240	230	250	265	260	240*	195	180	135	125	125	135	140	230	223 (23)		
5	150	185	170	185	265	90	250	570	615	515	480	535	340	310	275	285	275	250	265	250	140	100	180	80	282 (24)		
6	80	10	70	105	100	170	265	305	410	295	250	205	150	140	160	215	230	215	160	105	45	55	80	105	164 (24)		
7	135	90	105	90	90	90	125	140	140	125	105	125	160	Z±	Z±	Z±	Z±	Z±*	Z±*	Z±*	160*	170	230	205	133 (16)		
8	140	150	160	140	135	150	285	305	355	320	345	355	265	305	260	240	205	180	180	180	150	285	295	265	235 (24)		
9	185	170	135	160	160	240	355	465	375	240	260	250	215	Z±*	205	170	195	215	215	Z±*	295	305	355	365	251 (22)		
10	305	275	275	240	285	320	410*	470*	265*	--	--	--	--	--	--	--	--	295	225	185*	195	140	215	160	244 (12)		
11	240	170	275	310*	365*	375*	285*	505*	535*	-35*	-195*	-240*	-110*	285*	-260*	Z±*	-415*	-315*	-295*	-460*	-140*	-65*	-140*	-155*	228 (3)		
12	-35*	90*	180*	185	225	320	465	615	605	515	400	410	320	285	240	260	215	230	195	205	180	185	180	170	305 (21)		
13	170	180	140	185	195	225	275	425	400	355	275	260	215	160	160	185	170	140*	70*	55*	135	115	230*	Z±*	222 (19)		
14	-35*	-460*	55*	20*	-100*	-20*	160	250	240	240	260	205	170	160	180	180	170	-10*	330	390*	355	425	400	340	254 (16)		
15	310	295	250	230	215	250	285	425*	355	310	305	275	230	195	215	205	205	205	250	205	185	215	230	225	245 (23)		
16	230	215	240	285	320	320	390	500	390	295	285*	0*	90*	230	225	230	195	185	160	125*	150	170	180	205	256 (20)		
17	160	35	60	-20	70	80	355	390	390	390	310	225	170	140	160	180	215	195	160	195	305	425	390	240	217 (24)		
18	275	260	225	260	225	265	215	225	285*	305*	305*	355	230	Z±*	535*	Z±*	Z±*	-35	425	295	410	435	265	205	267 (17)		
19	135	90	215	205	250	305	465	455	385	310	275	250	185	195	180	180	140	135	100	80	160*	140*	185*	205	226 (21)		
20	195*	140*	105*	125*	140	195	275	250	285	275	240	230	195	205	140	160	125	150	215	285	320	285	275*	265*	221 (18)		
21	260*	250*	285*	225	215	250	250	285	285	250	230	195	170	180	180	170	195	215	265	240	260	250	285	250	231 (21)		
22	240	215	170	215	240	250	285*	265*	310*	Z±*	345	265	240	250	265	305	285	285	275	260	285	265	305	285	262 (20)		
23	260	225	250	225	285	320	365	385	345	345*	275*	275*	265*	265*	240*	215*	105*	260*	320*	435	455	400	385	330	333 (14)		
24	295	310*	285*	285*	240*	230*	275*	285*	265*	260*	260	260	260	250	275	260	265	275	275	250*	205*	205	240	180	254 (13)		
25	195	215*	240	250	250	285	320	385	400	400	330	320	275	265	230	205	185	205	250	305	385	390	390	310	294 (23)		
26	385	305	345	305	230	225	215	Z±	Z±	Z±	Z±*	Z±*	Z±*	Z±*	Z±*	260	390	265	355	390	355	340	305	355	314 (16)		
27	425	400	260	230	265	320	390	550	425	365*	Z±*	265	230	215	195	205	205	230	250	310	330	305	265	240	296 (22)		
28	230	205	195	185	180	180	180*	275	305	Z±*	Z±*	215	170	Z±*	160	180	160	180	260	285	320	340	305	225	200 (16)		
29	265	230	240	215	195	205*	250*	230*	215*	225*	180*	265*	250	265	250*	285	285	345	340	320	355	310	265	250	276 (16)		
30	215	205	195	195	195	260	285	285	330	320	295*	260	230	250	215	195	150	265	Z±*	295	265	225	275	285	245 (22)		
31	160	185	205	215	230	310	425	545	525	425	310	305	320	285	285	275	230	180	180	310	330	320	260	230	294 (24)		
Mean	221 (27)	191 (25)	197 (26)	196 (27)	205 (28)	232 (27)	303 (24)	369 (24)	372 (24)	318 (21)	283 (20)	268 (23)	228 (22)	225 (21)	212 (23)	220 (25)	211 (26)	206 (26)	228 (26)	242 (23)	252 (27)	256 (29)	261 (27)	236 (28)	245 (10)		
	Mean for selected quiet days																				243 (10)						

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

41	KEW OBSERVATORY													Factor 4.65 (metre ⁻¹)													SEPTEMBER 1960									
	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	220	220	195	175	140	175	225*	295*	290*	245*	220*	395	375*	Z±*	Z±*	Z±*	Z±*	Z±*	280*	220*	235	225	220	265	224	(11)										
2	280	235	210*	200*	220	255	315	365	365	290	270*	255	265	265*	245*	255*	280*	255*	245*	305	270	255	245	210	275	(15)										
3	210	175	210	185*	265*	245*	280*	270*	245*	140*	265*	255*	245*	255	255	225	265	325	445	535	575	560	535	490	361	(14)										
4	405	350	315	280	265	315	430	535	385	305	Z±*	Z±*	225	175*	200	Z±*	Z±*	125	245	340	395	430	350	315	326	(19)										
5	335	140	165	175	225	225	315	525	480	420	445	375	365	385	365	385	280	315	295	280	280	350	325	335	341	(24)										
6	270	220	245	265	270	325	435	480*	375*	420*	435*	350*	270*	335*	350*	325*	405*	315*	315*	420*	405*	350*	360*	220*	290	(7)										
7	195*	185*	220*	225*	265*	365*	350*	455*	435*	335	405	350	350	315	360	295	315	325	270	245	225	280	270	315	310	(15)										
8	350	315	325	360	315	315	335	350	375	420	385	360	350	325	295	290	265	290	225	265	280	340	350	315	325	(24)										
9	365	235	195	195	245	270	280	305	295	295	305	280	295	295	290	290	270	295	315*	385	375	365	315	305	293	(23)										
10	245	290	235	210	235	265	325	350	280	305	315	265	245	225	225	210	235	245	280	325	350	335	315	340	277	(24)										
11	290	220	265	245	270	270	280	290	295	270	220		185	200	175	195	210	255	245	220	290	420	375	315	261	(24)										
12	315	295	245	295	245	245	265	340	475	545	500	505	420	360	315	350	365	280	225	140	105	85	155	125	300	(24)										
13	105	280	210	265	125	315	490	780	760	675	545	480	445	455	430	435	305	280	235	125	200	305	315	245	367	(24)										
14	225	220	175	245	265	155	295	280	165	140	60	10*	155	60*	155	165*	55*	70*	10*	10*	265*	315	280*	280*	204	(14)										
15	235*	210*	140	200	200	270	490	595	535	475	385	270	265	225	210	210	220	290	335	210*	35*	55*	235*	280*	313	(17)										
16	Z±*	Z±*	-125*	175*	-35*	Z±*	Z±*	Z±*	-155*	-145*	140*	140*	315*	195*	295*	435*	315*	225	395	435	405*	85*	195	220	294	(5)										
17	195	175	195	210	225	270	295	360	395	315	255	235	245	280	280	280	270	295	360	480	545	315	255	225	290	(24)										
18	220	195	125	70	70	95	80*	220	265	295	315	315	280	225	255	270	270	255	335	140	85	85	140	125	202	(23)										
19	95	85	55	55	25	25	45	45	85	220	210	225	195	125	125	105*	140	150	0	-35*	10*	-10	-120	Z±*	89	(20)										
20	Z±	-35	95	140	165	125	125	-165*	-90	70*	105*	195*	10*	155	200*	200	140	165*	365*	245	270	210	200	125	138	(15)										
21	70	35	85	105	140	225	350	335	335	395	385	340	305	325	305	295	350	225	255	255*	315*	385*	430*	365*	256	(19)										
22	360*	305*	280*	295*	360*	295*	335*	465*	430*	335*	340	280	245	315	315	315	360	405	365	270*	155	-45*	225*	105*	309	(10)										
23	70*	70*	55*	-80*	165*	200*	210*	225*	375	350	350	365	290	335	290	295	315	325	290	360	265	350	475	385	338	(16)										
24	430	305	270	210	255	95	235	420	455	490	475	385	280	255	265	255	220	210	305	210	325	150	35	315	285	(24)										
25	360	420	365	245	130	335	385	480	350	315	270	305	305	315	315	335	305	375	445	410	430	430	410	395	351	(24)										
26	385	385	410	420	430	475	560	675	735	645	605	505	445	480	490	430	490	420	480	405	605	445	385	315	484	(24)										
27	315	270	295	245	280	305	405	385	420	525	420	385	385	430	430	465	490	525	430	435	410	405	315	265	385	(24)										
28	245	175	165	185	295	410	505	500	575	525	360	335	265	255	280	305	360	430	-10	245	210	255	245	325	310	(24)										
29	265	175	155	140	130	225	385	405	Z±*	Z±*	455	420	735	Z±*	Z±*	490	375	245	195	410	340	365	490	455	343	(20)										
30	435	350	140	80	-35	-20	290	435	410	505	Z±*	Z±*	185*	85*	-110*	Z±*	Z±*	175*	545	640*	Z±*	210*	395*	480	301	(12)										
Mean	276	229	211	209	205	239	340	407	379	395	366	341	314	297	288	310	296	296	300	315	314	303	283	300	299	(563)										
	(24)	(25)	(25)	(24)	(25)	(25)	(23)	(22)	(23)	(23)	(22)	(23)	(24)	(22)	(23)	(22)	(23)	(24)	(24)	(24)	(22)	(23)	(24)	(24)	(24)											
Mean for selected quiet days																							[290 (10)]													

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

41	KEW OBSERVATORY												Factor 4.52 (metre ⁻¹)												OCTOBER 1960																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
	Hour G.M.T.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			</

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

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41	KEW OBSERVATORY													Factor 4.46 (metre ⁻¹)													NOVEMBER 1960				
	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	140*	10*	165*	140*	85*	200*	155*	85*	175*	175*	315*	330	260*	-45*	85*	320*	295*	365	Z±*	Z±*	Z±*	50*	105*	190	295	(3)					
2	235	210	200	175	165	185	235	295	365	375	315	285	305	315	315*	425	460	550	660	540	610	485*	355*	Z±*	345	(20)					
3	Z±*	85*	Z±*	130*	250*	295	190	245	365	Z±*	350	Z±*	Z±*	175*	550	550	Z±*	Z±*	880	870	1130	885	820	565	592	(13)					
4	485	450	295*	Z±*	165	190	175	245*	285	Z±*	Z±*	225	285	420	470	480	495*	Z±*	Z±*	355	390	540	565	480	373	(16)					
5	365	315	225	215	210	185	280	385	420	435	460	365	365	Z±*	Z±*	Z±*	420*	450	585	210	-65	-185	-230	263	(19)						
6	-275	-260	95	140	185	85	140	155	355	400	435	385	390	355	410	400	375	505	385	435	320	130	340	340	259	(24)					
7	385	225	210	270	315	340	245	400	565	600	730	755	680	610	645	575	540	565	420	350	385	250	260	235	440	(24)					
8	105	155	60	60	-110	150	140	350	520	435	460	485	495	420	425	400	400	575	420	280	245	270	425	435	317	(24)					
9	375	315	225	250*	70*	-665*	-390*	105	365	280*	70*	210*	155*	285	340	235	295	350	445	385	385	280	250	350	312	(16)					
10	200*	Z±*	25*	-30	45*	50*	-95*	-55*	-150*	280*	350	365*	450	445	620	Z±*	Z±*	825	Z±	835	785	645	645	470	549	(11)					
11	Z±*	215	210	155	210*	210	140*	270*	445	Z±*	Z±*	460	400*	400*	460*	485	610	625	555	Z±*	Z±*	Z±*	620	450	420	(12)					
12	445	305	330	385	520	480*	Z±*	Z±*	165*	Z±*	Z±*	Z±*	-30*	400	270*	680	555	810	825	705	755	660	295	550	548	(15)					
13	555	540	620	575	320	620	620	660	625	355*	625	550	495	425	435*	280*	330	190	210	120*	85*	-30*	120*	25*	489	(15)					
14	210*	260	305	385	485	495	590	670	730	740	610	520	460	470	505	495	505	485	480	470	355	340	Z±*	0*	493	(21)					
15	-20*	270	385	425	480	520	610	620	645	720	800	655	540	485	575	Z±*	Z±*	955	785	215	320	565	540	445	550	(21)					
16	350	295	285	280	295	385	515	600	785	955	860	590	445	420	420	385*	530	620	680	740	660	655	530	445	537	(23)					
17	470	420	270	295	235	250	295	420*	235*	295*	Z±*	Z±*	Z±*	Z±*	Z±*	-445*	-295*	190	350	425	620	800	590	810	430	(14)					
18	845	625	705	655	685	775	885	1070	1130	Z±*	Z±*	670*	670*	730	835	720	Z±*	Z±*	Z±	Z±	750	350	425	625	738	(16)					
19	590	680	720	880	860	820	775	680	920	835	730	765	695	460	470	520	565	520	420	470	190	555	620	550	637	(24)					
20	625	660	400*	185*	-35*	50*	165*	350	385*	260*	35*	-95*	130*	140*	365	420	400*	365*	485	480	270	165	210	210	385	(11)					
21	315	250	185	245	245	270*	355*	385	420	450*	350	215*	270	120	10*	-75*	45*	295	385	375	385	305	285	435	309	(17)					
22	390*	270*	-185*	-390*	-590*	-315*	-240*	-220*	-120*	120*	280*	420	470	550	515	565	610	670	625	590	555	555	635	600	566	(13)					
23	610	610	520	530	520	450	385*	-155*	105*	280*	260*	330*	185	390	450	585	695	680	655	625	645	645	540	425	542	(18)					
24	295	165*	-390*	70*	25*	155*	200	350	Z±*	Z±*	280*	305*	210*	140*	245*	Z±*	280*	520	680	625	520	515	385	295	439	(10)					
25	260	200	175	190	215	245	285	350	610	730	610	330*	-260*	-455*	-275*	-220*	-35*	-205*	-75*	35*	50	175	-65*	80	298	(14)					
26	165	155	115*	130	140	175	185	225	260	315	315	315	225*	-140*	105	175	315*	365	375	365	355	305	280	245	247	(20)					
27	200	200	175	140	190	190*	210*	245*	285	210*	155*	-480*	-425*	-260	-480*	Z±*	60*	315	280	365	470	445	385	235	245	(14)					
28	210	280	505	485	400	480	485	590	685	730	750	905	670	515	520	505	590	600	450	530	435	355	315	315	513	(24)					
29	260	225	200	190*	-45*	70*	245*	450	655	590	620	565	450*	450*	390	425	450	420	365	410	435	520	460	260	428	(18)					
30	140	95*	105*	130	115	130*	105*	210*	315	250	245	215*	215*	315*	185*	70	185*	225*	60*	95	105	215	210	175	172	(12)					
Mean	348	317	315	305	316	361	381	447	534	579	529	504	424	398	478	458	501	522	511	485	457	425	418	370	429	(502)					
	(23)	(24)	(21)	(22)	(21)	(19)	(18)	(20)	(22)	(14)	(17)	(17)	(16)	(19)	(18)	(19)	(15)	(23)	(24)	(25)	(27)	(26)	(25)	(27)							
	Mean for selected quiet days																				424	(8)									

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

41	KEW OBSERVATORY												Factor 4.20 (metre ⁻¹)												DECEMBER 1960				
	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	115	90	65	50	40	50*	-80*	155	325	400	360	365	325	295	295	275	295	300	270	65*	Z±*	Z±*	260	Z±	238	(18)			
2	Z±*	90*	145	165	185	235	295	425	585	555	530	495	450	455	475	495	505	490	320	275	340	455	585	520	408	(22)			
3	340	245	-175*	15*	-50*	0*	-35*	10*	-155*	-60*	65*	65*	35*	-70*	-35*	-15*	-35*	-60*	35*	35*	-70*	-70*	-60*	-85	167	(3)			
4	-70*	-35*	-215*	-200*	-390*	-260*	15*	-105*	-385*	-215*	100*	230	275	295	340	325	360	405	390	360	350	320	295	230	321	(13)			
5	275	245	195	180	195	210	295	385	570	585	620	490	475	520	560	895	995	830	880	635	605	645	685	610	524	(24)			
6	455	645	650	605	455	80	285	490*	620*	520*	605*	-590*	620*	455*	850	850	775	715	865*	830*	740	685	760	700	617	(15)			
7	490	540	780	790	405	115	260	425	505	650	635*	595	480	455	520	570	605	530	400	465	455	440	570	505	502	(23)			
8	520	490	335	320	340	335	235	100	520	710	765	660	560	295*	Z±*	Z±*	130*	630*	405	-130	385	65	365	465	392	(19)			
9	360	50	-695	-750	-765	-385	-50	-140	-260*	340*	425	295	450	505	455	490	490	630	725	700	635	765*	530*	165	179	(20)			
10	165*	-225*	-200*	-105*	105*	130*	40	75	165*	310	130*	220*	145	210*	195*	255*	115*	140	325	365	405	425	400	400	275	(11)			
11	400	285	255	255	185	230	295	365	440	670	455	425	425	430	475	450	375	320	260	505	555	800	780	805	435	(24)			
12	630	180	360	505	425	475*	230*	260*	440*	635*	0*	320*	145*	295	455	555	335	465	700	540	505	340	300	360	434	(16)			
13	325	270	165	390	325	440	740	560	735	440	620	495	440	495	530	455	850*	1075*	765	700*	390*	520	635	675	501	(20)			
14	145	145	75	205	35	245*	75*	100*	750*	800*	1025	915	780*	650*	360*	145*	40*	65	165	325	235	205	130	10	263	(14)			
15	50	35	0	130	300	255	260	360	450	455*	465	400	325*	325*	400*	115*	310	270	400	360	300*	455	700	780	332	(18)			
16	545	340	295	325	455	490	360	295	375	475	585	675	710	765	775	530	775	850	595	425	450	490	605	740	539	(24)			
17	430	620	520	570	555	515	555	650	675	635	650	670	715	570	515	455	425	400	260*	260	275*	195*	165*	170*	547	(19)			
18	165*	245*	130*	100*	115*	235*	340*	375*	650*	505*	360*	490*	375	230	220*	285*	325*	455*	65*	10*	0*	-25*	145*	815*	303	(2)			
19	710*	620*	295*	15*	230*	100*	-165*	65*	-420*	-835*	-765*	Z-	-155*	275*	455	560	560	620	760	715	825	775	580	365	621	(10)			
20	140*	-45*	-350*	-435*	-590*	-25*	40*	0*	115*	-175*	660*	Z±*	Z±*	Z±*	Z±*	Z±*	Z±*	100	455	455	260	-235*	-45	-45	197	(6)			
21	-260	-35*	-260*	Z-	Z±*	Z-	90*	55	245	360	415	425	405	425	360	430	295	145	275	255	320	440	115	80	266	(18)			
22	-35	115	230	140	170	255	295	310	405	495	610	585	620	620	635	760	540	430	360	520	455	375	560	850	429	(24)			
23	475	490	455	390	390	375	295	360*	400*	430*	520*	325*	325*	155	325	415	230	195*	-50*	0*	165*	-385*	Z±*	Z-	363	(11)			
24	-95	-35	210	205	115*	55*	65*	295*	425*	480*	585	295	415	505	365	400	260	360	425	425	230	185	270	195	289	(18)			
25	270	270	210	430	375	405	340	245	390	390	415	465	605	490	480	555	540	450	450	375	425	195*	115	105	382	(23)			
26	105	65	100*	90*	50*	-35*	-85*	Z±*	Z±*	Z±*	285	390	405	400	490	560	710	710	585	630	585	515	475	390	456	(16)			
27	300	310	295	245	220	230	220	50	145	490	630	580	585	620	620	715	790	870	995	960	980	930	945	1010	572	(24)			
28	840	750	605	480	365	365	285	65	230	300	75*	-385*	Z-	Z-	Z±*	390*	530	540	50	490	520	300	245	490	414	(18)			
29	295	195	245	285	205	285	360	Z±	725	735	980	945	585	630	855	770	765	765	800	715	585	635	765	545	586	(23)			
30	530*	455*	50*	295*	205*	185*	155*	210*	255*	360*	780*	630	310	540	700	715	710	825	805	700	750	715	945	920	713	(13)			
31	970	775	765	580	605	580	610	750	880	815	750	670	555	530	505	555	585	775	685	685	650	650	685	715	680	(24)			
Mean	331 (24)	309 (23)	280 (22)	295 (22)	260 (21)	279 (18)	314 (19)	285 (18)	482 (17)	530 (17)	588 (19)	532 (22)	469 (22)	465 (22)	523 (23)	547 (23)	532 (24)	500 (26)	509 (26)	480 (25)	510 (24)	494 (23)	489 (26)	463 (27)	440 (533)				
																				Mean for selected quiet days					414 (9)]				
Annual Mean	242 (305)	223 (299)	216 (297)	216 (297)	215 (297)	246 (279)	304 (276)	370 (276)	408 (265)	404 (254)	387 (254)	354 (268)	329 (263)	326 (259)	328 (267)	337 (274)	331 (274)	338 (278)	342 (294)	329 (293)	334 (297)	319 (305)	299 (303)	279 (309)	309 (6786)				
																				Annual mean for selected quiet days					318]				

42 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	1	0.7	2	3.9	1	0.7	1	0.7	1	0.4	1	0.8
2	1	2.0	1	1.3	1	0.2	1	0.3	1	1.0	-	-
3	1	0.5	1	2.4	1	1.3	2	6.2	1	2.7	0	0.0
4	0	0.0	1	2.5	1	0.7	1	2.2	0	0.0	0	0.0
5	0	0.0	1	0.7	1	1.0	1	0.2	1	0.2	1	2.5
6	0	0.0	1	0.5	2	3.7	2	4.2	1	0.2	1	0.3
7	1	1.1	0	0.0	1	2.0	1	2.4	1	0.4	1	1.8
8	1	1.5	0	0.0	1	0.2	0	0.0	1	0.2	1	0.7
9	0	0.0	0	0.0	2	7.5	1	0.3	1	0.3	1	2.0
10	0	0.0	0	0.0	1	1.6	1	0.8	0	0.0	1	2.0
11	2	6.1	1	1.8	1	1.2	1	0.2	1	2.7	1	0.1
12	1	2.2	0	0.0	1	0.3	1	2.3	2	3.0	1	0.3
13	1	0.6	-	-	1	2.6	1	1.2	2	5.0	1	1.0
14	2	4.3	2	3.5	1	0.5	1	0.7	0	0.0	2	4.3
15	1	2.6	1	0.2	0	0.0	0	0.0	1	0.4	0	0.0
16	2	4.3	0	0.0	1	2.2	1	1.6	0	0.0	0	0.0
17	2	3.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
18	1	2.5	1	0.7	0	0.0	1	0.1	0	0.0	1	0.2
19	1	2.3	1	1.9	1	0.2	1	0.2	2	4.5	0	0.0
20	1	1.5	2	8.0	0	0.0	0	0.0	2	11.4	0	0.0
21	2	5.0	0	0.0	1	0.1	1	0.2	1	1.2	0	0.0
22	1	0.2	2	3.2	1	1.5	1	0.2	0	0.0	1	0.4
23	2	8.2	2	6.3	0	0.0	1	0.6	0	0.0	2	5.6
24	2	11.4	2	4.8	1	0.2	1	2.1	1	0.3	1	2.4
25	0	0.0	2	10.0	2	5.4	1	0.4	0	0.0	1	1.6
26	0	0.0	2	4.9	2	15.4	1	0.8	0	0.0	1	0.1
27	2	6.8	1	0.1	2	13.1	0	0.0	0	0.0	1	0.6
28	2	8.7	0	0.0	2	6.7	0	0.0	0	0.0	1	0.4
29	1	2.2	1	0.1	2	7.9	0	0.0	1	0.1	0	0.0
30	1	1.5			1	0.7	0	0.0	1	0.2	0	0.0
31	0	0.0			1	0.2			1	1.9		
Total	-	79.5	-	56.8	-	77.1	-	27.9	-	36.1	-	27.1
No. of days used	-	31	-	28	-	31	-	30	-	31	-	29
Mean	-	2.6	-	2.0	-	2.5	-	0.9	-	1.2	-	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
		hr.		hr.		hr.		hr.		hr.		hr.
1	1	0.4	1	0.8	1	1.2	2	3.0	1	2.8	1	2.0
2	0	0.0	1	1.9	0	0.0	1	1.4	1	0.7	1	0.6
3	0	0.0	0	0.0	1	0.1	1	3.0	1	3.0	2	12.4
4	0	0.0	0	0.0	1	2.4	0	0.0	1	2.0	2	7.8
5	1	0.8	1	0.2	0	0.0	1	0.4	2	4.8	0	0.0
6	1	0.3	1	0.5	0	0.0	1	0.8	1	2.1	1	1.4
7	1	0.6	2	3.5	0	0.0	1	1.0	0	0.0	1	0.2
8	2	6.4	0	0.0	0	0.0	2	6.0	1	1.6	2	4.0
9	1	0.5	1	0.4	0	0.0	2	10.8	1	2.6	2	6.3
10	1	0.2	-	-	0	0.0	2	8.3	2	4.8	2	3.8
11	2	3.3	2	12.5	0	0.0	1	0.1	1	1.7	0	0.0
12	1	2.9	1	0.4	1	0.1	1	1.0	2	4.2	1	0.6
13	1	0.7	1	1.1	1	0.1	1	0.2	1	1.2	1	0.1
14	1	0.3	2	4.0	1	0.1	1	1.2	1	1.1	1	2.1
15	1	1.1	0	0.0	1	1.2	1	0.2	1	1.9	1	0.8
16	1	0.1	1	0.4	2	6.4	1	0.8	0	0.0	1	0.1
17	2	6.9	0	0.0	0	0.0	1	0.3	-	-	0	0.0
18	1	1.2	1	1.0	0	0.0	0	0.0	1	2.3	1	1.6
19	2	4.1	1	0.1	2	4.3	2	3.0	1	0.1	2	6.4
20	0	0.0	0	0.0	2	3.4	2	4.8	1	2.0	2	12.8
21	1	0.5	0	0.0	0	0.0	1	0.3	1	1.4	2	5.3
22	2	3.8	1	0.1	1	0.6	1	2.6	2	5.4	1	0.8
23	0	0.0	1	0.4	1	0.8	1	0.5	1	0.9	2	4.3
24	0	0.0	0	0.0	1	0.9	1	2.7	1	2.3	1	1.3
25	0	0.0	0	0.0	0	0.0	1	0.6	2	6.7	0	0.0
26	0	0.0	2	3.3	0	0.0	2	10.8	1	0.8	1	2.8
27	0	0.0	1	0.6	0	0.0	1	1.2	2	5.9	0	0.0
28	1	0.8	1	1.3	1	0.6	1	0.6	0	0.0	2	5.0
29	0	0.0	0	0.0	1	1.5	2	16.5	1	0.8	1	0.2
30	0	0.0	1	0.1	2	5.8	2	3.8	1	0.3	1	0.3
31	0	0.0	0	0.0			1	0.6			0	0.0
Total	-	34.9	-	32.6	-	29.5	-	84.9	-	63.4	-	83.0
No. of days used	-	31	-	30	-	30	-	31	-	29	-	31
Mean	-	1.1	-	1.1	-	1.0	-	2.7	-	2.2	-	2.7

Annual values: Character 0 1 2
No. of days 100 192 70

Duration: Total 632.8
No. of days 362
Mean 1.75 hr.

ELECTRICAL OBSERVATIONS, UNDERGROUND LABORATORY, WILSON METHOD
Mean value for periods of twenty minutes about 14h.30m.

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

43 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	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2	...	...	...	...	...	...	2.55	107	42	...	...	...	...	...	...	4.48	272	61
3	...	...	...	...	...	...	3.21	146	45	...	...	...	...	...	...	...	...	...
4	3.90	120	31	...	...	...	4.53	127	28	2.35	119	51	1.51	99	66	...	...	...
5	5.03	179	36	6.13	179	29	...	...	...	...	...	...	2.03	171	84	...	...	...
6	6.59	237	36	...	...	...	...	...	...	...	...	...	1.91	159	83	...	...	...
7	...	...	...	...	...	...	4.27	233	55	2.73	137	50	...	...	...	3.39	259	76
8	...	...	...	5.65	239	42	5.11	221	43	2.25	124	55	...	...	...	...	...	...
9	...	...	...	...	...	...	...	...	...	...	...	...	1.58	140	89	1.22	-	-
10	...	...	...	...	...	...	4.80	266	55	...	...	...	5.24	249	48	1.61	137	85
11	2.02	144	71	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13	...	...	...	...	...	...	...	...	...	1.55	134	86	2.35	198	84	0.82	95	116
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15	8.38	126	15	4.14	152	37	6.87	215	31	...	...	...	...	...	...	1.71	250	146
16	...	...	...	3.53	187	53	...	...	...	...	...	...	2.53	197	78	1.92	157	82
17	...	...	...	...	...	...	5.18	153	30	...	...	...	2.79	200	72	2.90	144	50
18	2.76	93	34	3.08	147	48	2.96	126	43	...	...	...	...	...	...	...	...	...
19	4.64	168	36	3.78	151	40	...	...	...	2.90	154	53	...	...	...	...	...	...
20	5.52	141	26	...	...	...	...	...	...	2.47	162	66	...	...	...	3.05	232	76
21	...	...	...	...	...	...	3.51	141	40	3.29	225	68	...	...	...	4.69	289	62
22	...	...	...	...	...	...	6.59	206	31	2.19	142	65	...	...	...	...	...	...
23	...	...	...	...	...	...	7.03	211	30	...	...	...	1.50	285	190	...	...	...
24	...	...	...	2.17	-	-	...	...	...	...	...	...	2.77	161	58	...	...	...
25	6.29	118	19	...	...	...	...	...	...	...	...	...	1.95	152	78	...	...	...
26	...	...	...	...	...	...	...	...	...	...	...	...	2.43	198	81	...	...	...
27	...	...	...	...	...	...	...	...	...	2.83	209	74	2.26	172	76	...	...	...
28	0.40	21	53	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
29	4.85	147	30	3.13	184	59	...	...	...	4.49	232	52	...	...	...	1.74	112	64
30	...	...	...	...	...	...	...	...	...	...	...	...	2.78	185	67	2.17	157	72
31	...	...	...	...	...	...	5.51	191	35	...	...	...	2.33	135	58	...	...	...
Mean	4.58	136	35	3.95	177	44	4.78	180	39	2.71	164	62	2.40	180	81	2.47	191	81
No. of days used	11	11	11	8	7	7	13	13	13	10	10	10	15	15	15	12	11	11

	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	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.87	132	46
2	...	...	...	...	...	...	1.71	109	64	...	...	...	3.28	133	41	4.72	98	21
3	...	...	...	1.43	170	119	...	...	...	2.31	158	68	...	...	...	...	...	...
4	1.51	132	87	2.64	172	65	...	...	...	3.40	115	34	4.62	159	34	...	...	...
5	2.25	131	58	2.42	187	77	3.31	151	46	...	...	...	...	...	...	5.54	139	25
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7	1.92	123	64	...	...	...	3.99	-	-	4.75	127	27	5.63	161	29	...	...	...
8	...	...	...	2.64	187	71	3.06	101	33	...	...	...	...	...	...	...	...	...
9	...	...	...	...	...	...	...	...	...	...	...	...	4.44	101	23	5.34	82	15
10	...	...	...	...	...	...	...	...	...	...	...	...	7.80	198	25	...	...	...
11	...	...	...	...	...	...	...	...	...	3.09	122	39	...	...	...	...	...	...
12	...	...	...	2.22	130	59	...	...	...	...	...	...	...	...	...	...	...	...
13	...	...	...	...	...	...	...	...	...	4.00	138	35	...	...	...	...	...	...
14	3.64	216	59	...	...	...	...	...	...	...	...	...	4.76	124	26	...	...	...
15	...	...	...	2.36	129	55	...	...	...	...	...	...	6.22	167	27	...	...	...
16	...	...	...	...	...	...	...	...	...	...	...	...	4.13	119	29	7.53	115	15
17	...	...	...	...	...	...	...	...	...	4.66	193	41	...	...	...	...	...	...
18	2.71	136	50	...	...	...	...	...	...	3.66	186	51	7.59	126	17	...	...	...
19	...	...	...	1.90	105	55	...	...	...	...	...	...	...	...	...	4.50	114	25
20	3.35	163	49	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
21	...	...	...	...	...	...	2.80	124	44	...	...	...	...	...	...	3.45	101	29
22	...	...	...	2.47	139	56	3.30	242	73	...	...	...	5.14	89	17	7.29	158	22
23	...	...	...	...	...	...	3.20	124	39	...	...	...	4.36	109	25	...	...	...
24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25	2.22	104	47	2.20	116	53	...	...	...	3.71	215	58	...	...	...	...	...	...
26	...	...	...	2.57	204	79	4.75	188	40	...	...	...	...	...	...	...	...	...
27	1.72	119	69	...	...	...	4.17	137	33	...	...	...	...	...	...	...	...	...
28	2.78	145	52	...	...	...	2.71	156	58	3.60	244	68	4.58	106	23	...	...	...
29	...	...	...	...	...	...	3.28	225	69	...	...	...	...	...	...	6.38	67	11
30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.79	81	12
31	...	...	...	2.69	137	51	...	...	...	3.96	110	28	...	...	...	...	...	...
Mean	2.46	141	59	2.32	152	67	3.30	156	50	3.71	161	45	5.21	133	26	5.44	109	22
No. of days used	9	9	9	11	11	11	11	10	10	10	10	10	12	12	12	10	10	10

Year: Mean 3.60 157 52
No. of days used 132 129 129

AIR POLLUTION: HOURLY MEANS FOR EACH MONTH

44 KEW OBSERVATORY

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		
	<i>milligrams per cubic metre</i>																									
Jan.	0.13	0.12	0.12	0.11	0.11	0.11	0.11	0.13	0.15	0.16	0.20	0.18	0.19	0.19	0.17	0.17	0.18	0.19	0.19	0.20	0.23	0.20	0.17	0.13	0.16	19
Feb.	0.16	0.16	0.15	0.14	0.13	0.13	0.14	0.15	0.16	0.15	0.15	0.14	0.14	0.14	0.15	0.16	0.15	0.20	0.19	0.19	0.19	0.19	0.19	0.17	0.16	28
Mar.	0.12	0.12	0.11	0.12	0.11	0.11	0.12	0.14	0.14	0.13	0.13	0.13	0.14	0.13	0.13	0.14	0.15	0.16	0.18	0.18	0.18	0.18	0.15	0.13	0.14	29
Apr.	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	0.05	0.05	0.06	0.07	0.07	0.09	0.08	0.07	0.06	0.07
May	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.07	0.07	0.07	0.07	0.07	0.05	0.05	0.06	0.06	0.06	0.07	0.07	0.07	0.07	0.07	0.07	0.06	0.06	0.06
June	0.05	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	0.05	0.06	0.06	0.06	0.05	0.05
July	0.06	0.06	0.05	0.05	0.05	0.05	0.06	0.05	0.05	0.05	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.06	0.05	0.07	0.05	0.05	0.05	0.05	31
Aug.	0.06	0.06	0.06	0.06	0.06	0.06	0.07	0.06	0.05	0.06	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.06	0.05	0.05	0.05	0.05	31
Sept.	0.08	0.09	0.09	0.08	0.08	0.08	0.09	0.09	0.09	0.09	0.09	0.08	0.08	0.07	0.07	0.07	0.07	0.08	0.08	0.09	0.09	0.09	0.09	0.09	0.08	25
Oct.	0.12	0.11	0.11	0.11	0.11	0.11	0.10	0.11	0.10	0.10	0.10	0.10	0.11	0.11	0.11	0.11	0.13	0.14	0.15	0.14	0.14	0.12	0.12	0.12	0.11	22
Nov.	0.08	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.08	0.08	0.08	0.08	0.08	0.07	0.08	0.08	0.09	0.11	0.12	0.12	0.12	0.11	0.10	0.09	30
Dec.	0.14	0.13	0.12	0.12	0.11	0.11	0.12	0.13	0.14	0.16	0.18	0.18	0.18	0.18	0.18	0.19	0.23	0.24	0.26	0.27	0.27	0.25	0.24	0.20	0.17	31
Year	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.11	0.12	0.12	0.12	0.13	0.12	0.11	0.10	0.10	330
Winter	0.13	0.12	0.11	0.11	0.11	0.11	0.11	0.12	0.13	0.14	0.15	0.15	0.15	0.15	0.15	0.16	0.17	0.19	0.19	0.19	0.20	0.19	0.17	0.14	0.15	108
Spring	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.11	0.11	0.09	0.09	0.09	0.10	0.09	0.09	0.10	0.11	0.13	0.13	0.13	0.13	0.11	0.09	0.11	57
Autumn	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.10	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.09	47
Summer	0.06	0.06	0.05	0.05	0.06	0.06	0.07	0.06	0.06	0.06	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.06	0.05	0.07	0.06	0.05	0.05	0.05	118