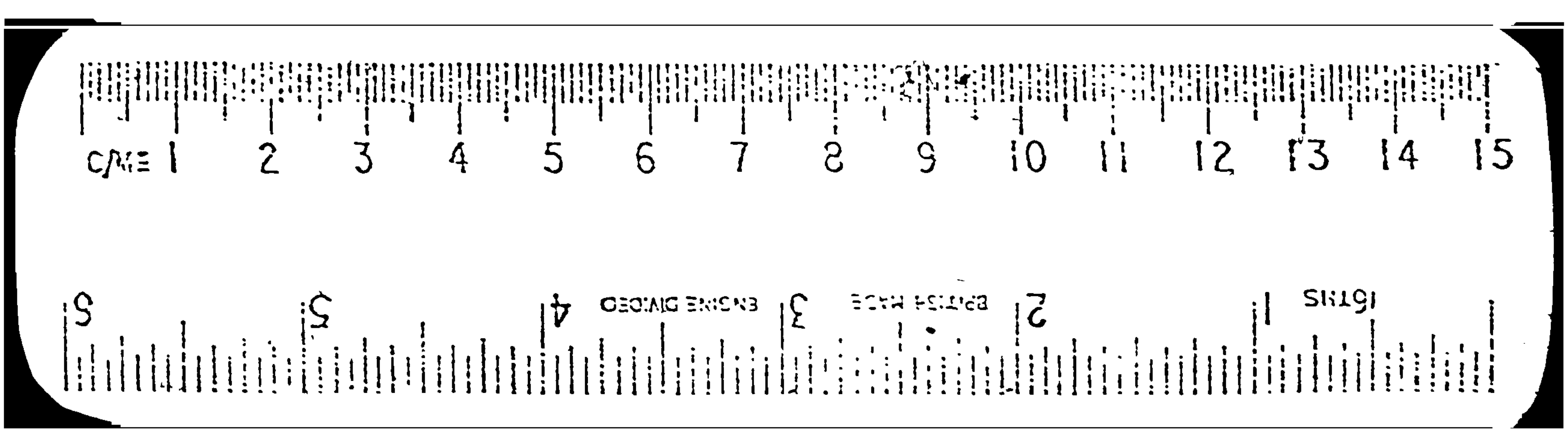
CLASS-MARK BRITISH ANTARTIC SURVEY.

MAGNETIC RECORDS FOR 1977
FROM.
ARGENTINE ISLANDS

RATIO REDUCTION. 10.



BRITISH ANTARCTIC SURVEY

(FORMERLY FALKLAND ISLANDS DEPENDENCIES SURVEY)

MAGNETIC RECORDS FOR 1977

FROM ARGENTINE ISLANDS A.973

LAT. -65° 15' LONG. 295° 44'

GEOMAGNETIC LATITUDE -53.8°

GEOMAGNETIC LONGITUDE 3.3°

ORIGINAL RECORDS HELD AT:-

BRITISH ANTARCTIC SURVEY

ATMOSPHERIC SCIENCES DIVISION

MADINGLEY ROAD

CAMBRIDGE CB3 OET

Phone (0223) 61188

ARGENTINE ISLANDS A.973

Explanatory Notes for 1977

1. Instruments

These are standard La Cour variometers and an E.D.A. fluxgate magnetometer, all recording H, D and Z.

2. Time

The La Cour charts are usually changed at midnight U.T.C., so that each chart shows a complete day in U.T.C. The fluxgate charts are usually changed at about 2345 U.T.C. every Sunday so that each chart shows a complete week in U.T.C.

Due to parallax, during the periods indicated, the following corrections should be added to time read on the traces. Up until 1st June the relevant moving time dot should be used for each of the storm La Cour traces.

Instrument and Dates		H	T	D	Z
Normal La Cour	from 0001Z on 01.1.77	-1min	zero	zero	+1min
	from 0000Z on 08.5.77	-1min	+1min	zero	+3min
	from 0001Z on 18.5.77	zero	+1min	zero	+3min
	from 2358Z on 18.7.77	zero	+1min	zero	+4min
	from 1900Z on 05.8.77	-1min	+1min	-1min	+3min
Storm La Cour	01 Jan - 28 May	zero		-1min	zero
	29 July	zero		-1min	+1min
	30 July - 31 Dec	-1min		-2min	+2min

for other days the parallax can be deduced from each chart as required.

3. Order of the Traces

Reading from top to bottom of the chart.

Normal La Cour	Storm La Cour	Fluxgate
T trace (when present	Z trace	H trace
H trace	Z baseline	Time
H baseline (used also as T baseline)	T trace	D trace
T trace (when present)	H trace	Z trace
D trace	H baseline	
D baseline	T trace (from 1757Z 29.7.77 only)	
Z trace	D trace	
Z baseline	D baseline	

4. Sense of Traces

T increases up the chart
H increases up the chart
D becomes more easterly (increases) up the chart
Z becomes more negative up the chart

5. Temperature Coefficient

Normal H	June 01 - Aug 05	-2.3	$\gamma\,^{o}C^{-1}$
	Aug 06 - Dec 31	-1.0	$\gamma\,^{o}C^{-1}$
Normal Z	Jan 01 - Dec 31	+2.9	$\gamma\,^{o}C^{-1}$

Those for the storm magnetograms are negligible, but can be deduced from comparisons with the normal magnetograms, similarly for the fluxgate records.

6. Scale Values

Normal La Cour	H(γmm⁻¹)	D('mm⁻¹)	Z(γmm⁻¹)	T(°Cmm⁻¹)
01 Jan - 11 Mar	4.07	0.92	2.20	0.40
12 Mar - 5 Aug (1700Z)	4.07	0.92	2.30	0.40
5 Aug - 8 Aug (1500Z)	4.87*	0.92	2.30	0.40
8 Aug - 10 Oct	4.63	0.92	2.32	0.40
11 Oct - 31 Dec	4.48	0.92	2.32	0.40

*(based on only 3 scale tests).

Storm La Cour			
01 Jan - 18 Jun	16.0	2.30	10.8
19 Jun - 31 Dec	16.0	2.36	10.8

Fluxgate determined as required.

7. Scale of reproduction

To give scale, a ruler of 50mm. length is reproduced on each magnetogram.

8. Baselines

	Dates	Temperature	Value
Normal H	01 Jan - 05 May	9.7°C	22585γ
	06 May - 16 May (1440Z)	3.2°C	22572γ
	16 May - 08 Jul	3.1°C	22472γ
	09 Jul - 20 Jul	3.1°C	22473γ
	21 Jul - 05 Aug (1700Z)	3.1°C	22474γ
	05 Aug - 06 Aug (1750Z)	1.0°C	22403γ
	06 Aug - 08 Aug (1510Z)	3.0°C	22426γ
	08 Aug - 29 Aug	3.3°C	22385γ
	30 Aug - 08 Sep	3.1°C	22386γ
	09 Sep - 17 Sep	3.2°C	22387γ
	18 Sep - 10 Oct	3.1°C	22388γ
	11 Oct - 24 Nov	3.3°C	22473γ
	25 Nov - 29 Nov	3.4°C	22474γ
	30 Nov - 22 Dec (1445Z)	3.4°C	22475γ
	23 Dec - 31 Dec	8.8°C	22482γ
Normal D	01 Jan - 26 Mar		16°26.8'
	27 Mar - 11 Apr		16°26.9'
	12 Apr - 17 May		16°27.0'
	18 May - 04 Jul		16°27.1'
	05 Jul - 05 Aug		16°27.2'
	06 Aug - 31 Dec		16°27.3'
Normal Z	01 Jan - 25 Mar	9.7°C	-34,973γ
	26 Mar - 05 May	9.6°C	-34,974γ
	06 May - 16 May (1440Z)	3.2°C	-34,955γ
	16 May - 31 Jul	3.1°C	-34,924γ
	01 Aug - 24 Nov	3.2°C	-34,923γ
	25 Nov - 29 Nov	3.4°C	-34,922γ
	30 Nov - 22 Dec (1445Z)	3.4°C	-34,921γ
	22 Dec - 31 Dec	8.8°C	-34,937γ

Normal T	Lower Trace	Upper Trace
01 Jan - 16 May (1440Z)	19.3°C	17.4°C
16 May - 08 Jul	15.9°C	-20.9°C
09 Jul - 20 Jul	16.0°C	-20.8°C
21 Jul - 27 Jul	16.1°C	-20.7°C
28 Jul - 01 Aug	16.2°C	-20.6°C
02 Aug - 05 Aug (1700Z)	16.3°C	-20.5°C
05 Aug - 07 Aug	9.8°C	
08 Aug (0001Z)	9.8°C	
09 Aug - 29 Aug	9.4°C	
30 Aug - 06 Sep (2200Z)	9.5°C	
07 Sep - 10 Oct	9.9°C	
11 Oct - 29 Nov	11.4°C	
30 Nov - 22 Dec	11.5°C	
22 Dec - 23 Dec	11.6°C	
24 Dec - 25 Dec	11.7°C	
26 Dec - 31 Dec	11.8°C	

Whenever possible the upper temperature trace should be used.

Storm La Cour baselines are required on the following days:

	H	D'	Z
Feb 28	22482γ	16°24.2'	-35174γ
Mar 01	22482γ	16°24.2'	-35174γ
May 16	22482γ	16°24.2'	-35177γ
Jul 29	-	-	-34804γ
Aug 05	22240γ	16°36.7'	-34670γ
Aug 09	22240γ	-	-
Sep 20	22240γ	16°36.9'	-34670γ
Sep 28	22240γ	16°37.3'	-34670γ
Sep 29	22240γ	16°37.3'	-34670γ
Oct 03	22240γ	16°37.3'	-34670γ
Oct 11	22240γ	16°37.3'	-34670γ
Oct 22	-	-	-34670γ
Dec 02	-	-	-34670γ

Fluxgate Baselines are required on the following days (ordinate 50 used as baseline):

Scale value adopted given in brackets.

	H	D	Z
Feb 25	-	-	-35093γ (12γmm⁻¹)
Dec 11	22640γ (15γmm⁻¹)	17 00.1' (2.15'mm⁻¹)	-35010γ (12γmm⁻¹)

9. Example of computation of absolute values

01 Jan 1977, 1200Z

H_0 etc. quoted baseline at temperature T_S
q temperature coefficients
s scale values
n ordinates

$$H = H_0 + s_H n_H + q_H(T_S - (T_0 + s_T n_T))$$
$$= 22585 + 4.07 \times (-2.3) \times (9.7 - (19.3 + 0.40 \times (-23.6)))$$
$$= 22576\gamma$$

$$D = D_0 + s_D n_D$$
$$= 16^\circ 26.8' + 0.92 \times 26.8 = 16^\circ 51.5' \text{ east.}$$

$$Z = Z_0 + s_Z n_Z + q_Z(T_S - (T_0 + s_T n_T))$$
$$= -34{,}973 + (-2.20) \times 17.8 + 2.9\ (9.7 - (19.3 + 0.40 \times (-23.6)))$$
$$= -35013\gamma$$

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ARGENTINE ISLANDS 1977

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	from 0001Z on 18.5.77	zero	+1min	zero	+3min
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Fluxgate Baselines are required on the following days (ordinate 50 used as baseline):-

Scale value adopted given in brackets.

	H	D	Z
Feb 25	-	-	-35093γ ($12\gamma mm^{-1}$)
Dec 11	22640γ ($15\gamma mm^{-1}$)	17 00.1' ($2.15'mm^{-1}$)	-35010γ ($12\gamma mm^{-1}$)

9. Example of computation of absolute values

01 Jan 1977, 1200Z H_O etc. quoted baseline at temperature T_S
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ARGENTINE ISLANDS A.9/3

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Normal T	Lower Trace	Upper Trace
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$$= 16^{o}26.8' + 0.92 \times 26.8 = 16^{o}51.5' \text{ east.}$$

$$Z = Z_O + s_Z n_Z + q_Z(T_S - (T_O + s_T n_T))$$
$$= -34,973 + (-2.20) \times 17.8 + 2.9\ (9.7 - (19.3 + 0.40 \times (-23.6)))$$
$$= -35013\gamma$$

BRITISH ANTARCTIC SURVEY

(FORMERLY FALKLAND ISLANDS DEPENDENCIES SURVEY)

MAGNETIC RECORDS FOR 1977

FROM ARGENTINE ISLANDS A.973

LAT. -65° 15' LONG. 295° 44'

GEOMAGNETIC LATITUDE -53.8°

GEOMAGNETIC LONGITUDE 3.3°

ORIGINAL RECORDS HELD AT:-

BRITISH ANTARCTIC SURVEY

ATMOSPHERIC SCIENCES DIVISION

MADINGLEY ROAD

CAMBRIDGE CB3 OET

Phone (0223) 61188

ARGENTINE ISLANDS A.972

Explanatory Notes for 1977

1. Instruments

These are standard La Cour variometers and an E.D.A. fluxgate magnetometer, all recording H, D and Z.

2. Time

The La Cour charts are usually changed at midnight U.T.C., so that each chart shows a complete day in U.T.C. The fluxgate charts are usually changed at about 2345 U.T.C. every Sunday so that each chart shows a complete week in U.T.C.

Due to parallax, during the periods indicated, the following corrections should be added to time read on the traces. Up until 1st June the relevant moving time dot should be used for each of the storm La Cour traces.

Instrument and Dates		H	T	D	Z
Normal La Cour	from 0001Z on 01.1.77	-1min	zero	zero	+1min
	from 0000Z on 08.5.77	-1min	+1min	zero	+3min
	from 0001Z on 18.5.77	zero	+1min	zero	+3min
	from 2358Z on 18.7.77	zero	+1min	zero	+4min
	from 1900Z on 05.8.77	-1min	+1min	-1min	+3min
Storm La Cour	01 Jan - 28 May	zero		-1min	zero
	29 July	zero		-1min	+1min
	30 July - 31 Dec	-1min		-2min	+2min

for other days the parallax can be deduced from each chart as required.

3. Order of the Traces

Reading from top to bottom of the chart.

Normal La Cour	Storm La Cour	Fluxgate
T trace (when present	Z trace	H trace
H trace	Z baseline	Time
H baseline (used also as T baseline)	T trace	D trace
T trace (when present)	H trace	Z trace
D trace	H baseline	
D baseline	T trace (from 1757Z 29.7.77 only)	
Z trace	D trace	
Z baseline	D baseline	

4. Sense of Traces

T increases up the chart
H increases up the chart
D becomes more easterly (increases) up the chart
Z becomes more negative up the chart

5. Temperature Coefficient

Normal H	June 01 - Aug 05	-2.3	$\gamma\,^{\circ}C^{-1}$
	Aug 06 - Dec 31	-1.0	$\gamma\,^{\circ}C^{-1}$
Normal Z	Jan 01 - Dec 31	+2.9	$\gamma\,^{\circ}C^{-1}$

Those for the storm magnetograms are negligible, but can be deduced from comparisons with the normal magnetograms, similarly for the fluxgate records.

6. Scale Value

Normal La Cour	H(γmm^{-1})	D('mm^{-1})	Z(γmm^{-1})	T($^{\circ}$C mm^{-1})
01 Jan - 11 Mar	4.07	0.92	2.30	0.40
12 Mar - 5 Aug (1700Z)	4.07	0.92	2.30	0.40
5 Aug - 8 Aug (1500Z)	4.87*	0.92	2.30	0.40
8 Aug - 10 Oct	4.63	0.92	2.32	0.40
11 Oct - 31 Dec	4.48	0.92	2.32	0.40

*(based on only 3 scale tests).

Storm La Cour			
01 Jan - 18 Jun	16.0	2.30	10.8
19 Jun - 31 Dec	16.0	2.36	10.8

Fluxgate determined as required.

7. Scale of reproduction

To give scale, a ruler of 50mm. length is reproduced on each magnetogram.

8. Baselines

	Dates	Temperature	Value
Normal H	01 Jan - 05 May	9.7°C	22585γ
	06 May - 16 May (1440Z)	3.2°C	22572γ
	16 May - 08 Jul	3.1°C	22472γ
	09 Jul - 20 Jul	3.1°C	22473γ
	21 Jul - 05 Aug (1700Z)	3.1°C	22474γ
	05 Aug - 06 Aug (1750Z)	1.0°C	22403γ
	06 Aug - 08 Aug (1510Z)	3.0°C	22426γ
	08 Aug - 29 Aug	3.3°C	22385γ
	30 Aug - 08 Sep	3.1°C	22386γ
	09 Sep - 17 Sep	3.2°C	22387γ
	18 Sep - 10 Oct	3.1°C	22388γ
	11 Oct - 24 Nov	3.3°C	22473γ
	25 Nov - 29 Nov	3.4°C	22474γ
	30 Nov - 22 Dec (1445Z)	3.4°C	22475γ
	23 Dec - 31 Dec	8.8°C	22482γ
Normal D	01 Jan - 26 Mar		16°26.8'
	27 Mar - 11 Apr		16°26.9'
	12 Apr - 17 May		16°27.0'
	18 May - 04 Jul		16°27.1'
	05 Jul - 05 Aug		16°27.2'
	06 Aug - 31 Dec		16°27.3'
Normal Z	01 Jan - 25 Mar	9.7°C	-34,973γ
	26 Mar - 05 May	9.6°C	-34,974γ
	06 May - 16 May (1440Z)	3.2°C	-34,955γ
	16 May - 31 Jul	3.1°C	-34,924γ
	01 Aug - 24 Nov	3.2°C	-34,923γ
	25 Nov - 29 Nov	3.4°C	-34,922γ
	30 Nov - 22 Dec (1445Z)	3.4°C	-34,921γ
	22 Dec - 31 Dec	8.8°C	-34,937γ

Normal T	Lower Trace	Upper Trace
01 Jan - 16 May (1440Z)	19.3°C	17.4°C
16 May - 08 Jul	15.9°C	20.9°C
09 Jul - 20 Jul	16.0°C	20.8°C
21 Jul - 27 Jul	16.1°C	-20.7°C
28 Jul - 01 Aug	16.2°C	-20.6°C
02 Aug - 05 Aug (1700Z)	16.3°C	-20.5°C
05 Aug - 07 Aug	9.8°C	
08 Aug (0001Z)	9.8°C	
09 Aug - 29 Aug	9.4°C	
30 Aug - 06 Sep (2200Z)	9.5°C	
07 Sep - 10 Oct	9.9°C	
11 Oct - 29 Nov	11.4°C	
30 Nov - 22 Dec	11.5°C	
22 Dec - 23 Dec	11.6°C	
24 Dec - 25 Dec	11.7°C	
26 Dec - 31 Dec	11.8°C	

Whenever possible the upper temperature trace should be used.

Storm La Cour baselines are required on the following days:

	H	D	Z
Feb 28	22482γ	16°24.2'	-35174γ
Mar 01	22482γ	16°24.2'	-35174γ
May 16	22482γ	16°24.2'	-35177γ
Jul 29	-	-	-34804γ
Aug 05	22240γ	16°36.7'	-34670γ
Aug 09	22240γ	-	-
Sep 20	22240γ	16°36.9'	-34670γ
Sep 28	22240γ	16°37.3'	-34670γ
Sep 29	22240γ	16°37.3'	-34670γ
Oct 03	22240γ	16°37.3'	-34670γ
Oct 11	22240γ	16°37.3'	-34670γ
Oct 22	-	-	-34670γ
Dec 02	-	-	-34670γ

Fluxgate Baselines are required on the following days (ordinate 50 used as baseline):-

Scale value adopted given in brackets.

	H	D	Z
Feb 25	-	-	-35093γ (12γmm^{-1})
Dec 11	22640γ (15γmm^{-1})	17 00.1' (2.15'mm^{-1})	-35010γ (12γmm^{-1})

9. Example of computation of absolute values

01 Jan 1977, 1200Z

H_0 etc. quoted baseline at temperature T_S
q temperature coefficients
s scale values
n ordinates

$$H = H_0 + s_H n_H + q_H(T_S - (T_0 + s_T n_T))$$
$$= 22585 + 4.07 \times (-2.3) \times (9.7 - (19.3 + 0.40 \times (-23.6)))$$
$$= 22576\gamma$$

$$D = D_0 + s_D n_D$$
$$= 16^{\circ}26.8' + 0.92 \times 26.8 = 16^{\circ}51.5' \text{ east.}$$

$$Z = Z_0 + s_Z n_Z + q_Z(T_S - (T_0 + s_T n_T))$$
$$= -34{,}973 + (-2.20) \times 17.8 + 2.9\ (9.7 - (19.3 + 0.40 \times (-23.6)))$$
$$= -35013\gamma$$

BRITISH ANTARCTIC SURVEY

(FORMERLY FALKLAND ISLANDS DEPENDENCIES SURVEY)

MAGNETIC RECORDS FOR 1977

FROM ARGENTINE ISLANDS A.973

LAT. -65° 15' LONG. 295° 44'

GEOMAGNETIC LATITUDE -53.8°

GEOMAGNETIC LONGITUDE 3.3°

ORIGINAL RECORDS HELD AT:-

BRITISH ANTARCTIC SURVEY

ATMOSPHERIC SCIENCES DIVISION

MADINGLEY ROAD

CAMBRIDGE CB3 0ET

Phone (0223) 61188

[illegible]

Explanatory Note for 1977

1. Instruments

These are standard La Cour variometers and an E.D.A. fluxgate magnetometer, all recording H, D and Z.

2. Time

The La Cour charts are usually changed at midnight U.T.C., so that each chart shows a complete day in U.T.C. The fluxgate charts are usually changed at about 2345 U.T.C. every Sunday so that each chart shows a complete week in U.T.C.

Due to parallax, during the periods indicated, the following corrections should be added to time read on the traces. Up until 1st June the relevant moving time dot should be used for each of the storm La Cour traces.

Instrument and Dates		H	T	D	Z
Normal La Cour	from 0001Z on 01.1.77	-1min	zero	zero	+1min
	from 0000Z on 08.5.77	-1min	+1min	zero	+3min
	from 0001Z on 18.5.77	zero	+1min	zero	+3min
	from 2358Z on 18.7.77	zero	+1min	zero	+4min
	from 1900Z on 05.8.77	-1min	+1min	-1min	+3min
Storm La Cour	01 Jan - 28 May	zero		-1min	zero
	29 July	zero		-1min	+1min
	30 July - 31 Dec	-1min		-2min	+2min

for other days the parallax can be deduced from each chart as required.

3. Order of the Traces

Reading from top to bottom of the chart.

Normal La Cour	Storm La Cour	Fluxgate
T trace (when present	Z trace	H trace
H trace	Z baseline	Time
H baseline (used also as T baseline)	T trace	D trace
T trace (when present)	H trace	Z trace
D trace	H baseline	
D baseline	T trace (from 1757Z 29.7.77 only)	
Z trace	D trace	
Z baseline	D baseline	

4. Sense of Traces

T increases up the chart
H increases up the chart
D becomes more easterly (increases) up the chart
Z becomes more negative up the chart

5. Temperature Coefficient

Normal H	June 01 - Aug 05	-2.3	$\gamma\,{}^{\circ}C^{-1}$
	Aug 06 - Dec 31	-1.0	$\gamma\,{}^{\circ}C^{-1}$
Normal Z	Jan 01 - Dec 31	+2.9	$\gamma\,{}^{\circ}C^{-1}$

Those for the storm magnetograms are negligible, but can be deduced from comparisons with the normal magnetograms, similarly for the fluxgate records.

6. Scale Values

Normal La Cour	H (γmm^{-1})	D ($'mm^{-1}$)	Z (γmm^{-1})	T ($^{\circ}C mm^{-1}$)
01 Jan - 11 Mar	4.07	0.92	2.20	0.40
12 Mar - 5 Aug (1700Z)	4.07	0.92	2.30	0.40
5 Aug - 8 Aug (1500Z)	4.87*	0.92	2.30	0.40
8 Aug - 10 Oct	4.63	0.92	2.32	0.40
11 Oct - 31 Dec	4.48	0.92	2.32	0.40

*(based on only 3 scale tests).

Storm La Cour			
01 Jan - 18 Jun	16.0	2.30	10.8
19 Jun - 31 Dec	16.0	2.36	10.8

Fluxgate determined as required.

7. Scale of reproduction

To give scale, a ruler of 50mm. length is reproduced on each magnetogram.

8. Baselines

	Dates	Temperature	Value
Normal H	01 Jan - 05 May	9.7°C	22585γ
	06 May - 16 May (1440Z)	3.2°C	22572γ
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	09 Jul - 20 Jul	3.1°C	22473γ
	21 Jul - 05 Aug (1700Z)	3.1°C	22474γ
	05 Aug - 06 Aug (1750Z)	1.0°C	22403γ
	06 Aug - 08 Aug (1510Z)	3.0°C	22426γ
	08 Aug - 29 Aug	3.3°C	22385γ
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	09 Sep - 17 Sep	3.2°C	22387γ
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	23 Dec - 31 Dec	8.8°C	22482γ
Normal D	01 Jan - 26 Mar		16°26.8'
	27 Mar - 11 Apr		16°26.9'
	12 Apr - 17 May		16°27.0'
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Normal Z	01 Jan - 25 Mar	9.7°C	-34,973γ
	26 Mar - 05 May	9.6°C	-34,974γ
	06 May - 16 May (1440Z)	3.2°C	-34,955γ
	16 May - 31 Jul	3.1°C	-34,924γ
	01 Aug - 24 Nov	3.2°C	-34,923γ
	25 Nov - 29 Nov	3.4°C	-34,922γ
	30 Nov - 22 Dec (1445Z)	3.4°C	-34,921γ
	22 Dec - 31 Dec	8.8°C	-34,937γ

Storm La Cour	Lower Trace	Upper Trace
01 Jan - 16 May (1440Z)	19.3°C	17.4°C
16 May - 08 Jul	19.9°C	20.9°C
09 Jul - 20 Jul	16.0°C	20.8°C
21 Jul - 27 Jul	16.1°C	-20.7°C
28 Jul - 01 Aug	16.2°C	-20.6°C
02 Aug - 05 Aug (1700Z)	16.3°C	-20.5°C
05 Aug - 07 Aug	9.8°C	
08 Aug (0001Z)	9.8°C	
09 Aug - 29 Aug	9.4°C	
30 Aug - 06 Sep (2200Z)	9.5°C	
07 Sep - 10 Oct	9.9°C	
11 Oct - 29 Nov	11.4°C	
30 Nov - 22 Dec	11.5°C	
22 Dec - 23 Dec	11.6°C	
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Whenever possible the upper temperature trace should be used.

Storm La Cour baselines are required on the following days:

	H	D	Z
Feb 28	22482γ	16°24.2'	-35174γ
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May 16	22482γ	16°24.2'	-35177γ
Jul 29	-	-	-34804γ
Aug 05	22240γ	16°36.7'	-34670γ
Aug 09	22240γ	-	-
Sep 20	22240γ	16°36.9'	-34670γ
Sep 28	22240γ	16°37.3'	-34670γ
Sep 29	22240γ	16°37.3'	-34670γ
Oct 03	22240γ	16°37.3'	-34670γ
Oct 11	22240γ	16°37.3'	-34670γ
Oct 22	-	-	-34670γ
Dec 02	-	-	-34670γ

Fluxgate Baselines are required on the following days (ordinate 50 used as baseline):-

Scale value adopted given in brackets.

	H	D	Z
Feb 25	-	-	-35093γ ($12\gamma mm^{-1}$)
Dec 11	22640γ ($15\gamma mm^{-1}$)	17 00.1' ($2.15' mm^{-1}$)	-35010γ ($12\gamma mm^{-1}$)

9. Example of computation of absolute values

01 Jan 1977, 1200Z

H_0 etc. quoted baseline at temperature T_S
q temperature coefficients
s scale values
n ordinates

$$H = H_0 + s_H n_H + q_H (T_S - (T_0 + s_T n_T))$$
$$= 22585 + 4.07 \times (-2.3) \times (9.7 - (19.3 + 0.40 \times (-23.6)))$$
$$= 22576\gamma$$

$$D = D_0 + s_D n_D$$
$$= 16^{\circ}26.8' + 0.92 \times 26.8 = 16^{\circ}51.5' \text{ east.}$$

$$Z = Z_0 + s_Z n_Z + q_Z (T_S - (T_0 + s_T n_T))$$
$$= -34,973 + (-2.20) \times 17.8 + 2.9\,(9.7 - (19.3 + 0.40 \times (-23.6)))$$
$$= -35013\gamma$$

BRITISH ANTARCTIC SURVEY

(FORMERLY FALKLAND ISLANDS DEPENDENCIES SURVEY)

MAGNETIC RECORDS FOR 1977

FROM ARGENTINE ISLANDS A.973

LAT. -65° 15' LONG. 295° 44'

GEOMAGNETIC LATITUDE -53.8°

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ORIGINAL RECORDS HELD AT:-

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ARGENTINE ISLANDS A.97[illegible]

Explanatory Notes for 1977

1. Instruments

These are standard La Cour variometers and an E.D.A. fluxgate magnetometer, all recording H, D and Z.

2. Time

The La Cour charts are usually changed at midnight U.T.C., so that each chart shows a complete day in U.T.C. The fluxgate charts are usually changed at about 2345 U.T.C. every Sunday so that each chart shows a complete week in U.T.C.

Due to parallax, during the periods indicated, the following corrections should be added to time read on the traces. Up until 1st June the relevant moving time dot should be used for each of the storm La Cour traces.

Instrument and Dates		H	T	D	Z
Normal La Cour	from 0001Z on 01.1.77	-1min	zero	zero	+1min
	from 0000Z on 08.5.77	-1min	+1min	zero	+3min
	from 0001Z on 18.5.77	zero	+1min	zero	+3min
	from 2358Z on 18.7.77	zero	+1min	zero	+4min
	from 1900Z on 05.8.77	-1min	+1min	-1min	+3min
Storm La Cour	01 Jan - 28 May	zero	-	-1min	zero
	29 July	zero		-1min	+1min
	30 July - 31 Dec	-1min		-2min	+2min

for other days the parallax can be deduced from each chart as required.

3. Order of the Traces

Reading from top to bottom of the chart.

Normal La Cour	Storm La Cour	Fluxgate
T trace (when present	Z trace	H trace
H trace	Z baseline	Time
H baseline (used also as T baseline)	T trace	D trace
T trace (when present)	H trace	Z trace
D trace	H baseline	
D baseline	T trace (from 1757Z 29.7.77 only)	
Z trace	D trace	
Z baseline	D baseline	

4. Sense of Traces

T increases up the chart
H increases up the chart
D becomes more easterly (increases) up the chart
Z becomes more negative up the chart

5. Temperature Coefficient

Normal H	June 01 - Aug 05	-2.3	$\gamma\,{}^{o}C^{-1}$
	Aug 06 - Dec 31	-1.0	$\gamma\,{}^{o}C^{-1}$
Normal Z	Jan 01 - Dec 31	+2.9	$\gamma\,{}^{o}C^{-1}$

Those for the storm magnetograms are negligible, but can be deduced from comparisons with the normal magnetograms, similarly for the fluxgate records.

6. Scale Values

Normal La Cour	H(γmm^{-1})	D('mm^{-1})	Z(γmm^{-1})	T($^\circ C mm^{-1}$)
01 Jan - 11 Mar	4.07	0.92	2.20	0.40
12 Mar - 5 Aug (1700Z)	4.07	0.92	2.30	0.40
5 Aug - 8 Aug (1500Z)	4.87*	0.92	2.30	0.40
8 Aug - 10 Oct	4.63	0.92	2.32	0.40
11 Oct - 31 Dec	4.48	0.92	2.32	0.40

*(based on only 3 scale tests).

Storm La Cour

01 Jan - 18 Jun	16.0	2.30	10.8
19 Jun - 31 Dec	16.0	2.36	10.8

Fluxgate determined as required.

7. Scale of reproduction

To give scale, a ruler of 50mm. length is reproduced on each magnetogram.

8. Baselines

	Dates	Temperature	Value
Normal H	01 Jan - 05 May	9.7°C	22585γ
	06 May - 16 May (1440Z)	3.2°C	22572γ
	16 May - 08 Jul	3.1°C	22472γ
	09 Jul - 20 Jul	3.1°C	22473γ
	21 Jul - 05 Aug (1700Z)	3.1°C	22474γ
	05 Aug - 06 Aug (1750Z)	1.0°C	22403γ
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	08 Aug - 29 Aug	3.3°C	22385γ
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	09 Sep - 17 Sep	3.2°C	22387γ
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	30 Nov - 22 Dec (1445Z)	3.4°C	22475γ
	23 Dec - 31 Dec	8.8°C	22482γ
Normal D	01 Jan - 26 Mar		16°26.8'
	27 Mar - 11 Apr		16°26.9'
	12 Apr - 17 May		16°27.0'
	18 May - 04 Jul		16°27.1'
	05 Jul - 05 Aug		16°27.2'
	06 Aug - 31 Dec		16°27.3'
Normal Z	01 Jan - 25 Mar	9.7°C	-34,973γ
	26 Mar - 05 May	9.6°C	-34,974γ
	06 May - 16 May (1440Z)	3.2°C	-34,955γ
	16 May - 31 Jul	3.1°C	-34,924γ
	01 Aug - 24 Nov	3.2°C	-34,923γ
	25 Nov - 29 Nov	3.4°C	-34,922γ
	30 Nov - 22 Dec (1445Z)	3.4°C	-34,921γ
	22 Dec - 31 Dec	8.8°C	-34,937γ

Normal T	Lower Trace	Upper Trace
01 Jan - 16 May (1440Z)	19.3°C	17.4°C
16 May - 08 Jul	15.9°C	20.9°C
09 Jul - 20 Jul	16.0°C	-20.8°C
21 Jul - 27 Jul	16.1°C	-20.7°C
28 Jul - 01 Aug	16.2°C	-20.6°C
02 Aug - 05 Aug (1700Z)	16.3°C	-20.5°C
05 Aug - 07 Aug	9.8°C	
08 Aug (0001Z)	9.8°C	
09 Aug - 29 Aug	9.4°C	
30 Aug - 06 Sep (2200Z)	9.5°C	
07 Sep - 10 Oct	9.9°C	
11 Oct - 29 Nov	11.4°C	
30 Nov - 22 Dec	11.5°C	
22 Dec - 23 Dec	11.6°C	
24 Dec - 25 Dec	11.7°C	
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Whenever possible the upper temperature trace should be used.

Storm La Cour baselines are required on the following days:

	H	D	Z
Feb 28	22482γ	16°24.2'	-35174γ
Mar 01	22482γ	16°24.2'	-35174γ
May 16	22482γ	16°24.2'	-35177γ
Jul 29	-	-	-34804γ
Aug 05	22240γ	16°36.7'	-34670γ
Aug 09	22240γ	-	-
Sep 20	22240γ	16°36.9'	-34670γ
Sep 28	22240γ	16°37.3'	-34670γ
Sep 29	22240γ	16°37.3'	-34670γ
Oct 03	22240γ	16°37.3'	-34670γ
Oct 11	22240γ	16°37.3'	-34670γ
Oct 22	-	-	-34670γ
Dec 02	-	-	-34670γ

Fluxgate Baselines are required on the following days (ordinate 50 used as baseline):-

Scale value adopted given in brackets.

	H	D	Z
Feb 25	-	-	-35093γ ($12\gamma mm^{-1}$)
Dec 11	22640γ ($15\gamma mm^{-1}$)	17 00.1' ($2.15' mm^{-1}$)	-35010γ ($12\gamma mm^{-1}$)

9. Example of computation of absolute values

01 Jan 1977, 1200Z

H_O etc. quoted baseline at temperature T_S
q temperature coefficients
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n ordinates

$$H = H_O + s_H n_H + q_H(T_S - (T_O + s_T n_T))$$
$$= 22585 + 4.07 \times (-2.3) \times (9.7 - (19.3 + 0.40 \times (-23.6)))$$
$$= 22576\gamma$$

$$D = D_O + s_D n_D$$
$$= 16^\circ 26.8' + 0.92 \times 26.8 = 16^\circ 51.5' \text{ east.}$$

$$Z = Z_O + s_Z n_Z + q_Z(T_S - (T_O + s_T n_T))$$
$$= -34,973 + (-2.20) \times 17.8 + 2.9\ (9.7 - (19.3 + 0.40 \times (-23.6)))$$
$$= -35013\gamma$$

BRITISH ANTARCTIC SURVEY

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ORIGINAL RECORDS HELD AT:-

BRITISH ANTARCTIC SURVEY

ATMOSPHERIC SCIENCES DIVISION

MADINGLEY ROAD

CAMBRIDGE CB3 OET

Phone (0223) 61188

[illegible]

Explanatory Note for 1977

1. Instruments

These are standard La Cour variometers and an E.D.A. fluxgate magnetometer, all recording H, D and Z.

2. Time

The La Cour charts are usually changed at midnight U.T.C., so that each chart shows a complete day in U.T.C. The fluxgate charts are usually changed at about 2345 U.T.C. every Sunday so that each chart shows a complete week in U.T.C.

Due to parallax, during the periods indicated, the following corrections should be added to time read on the traces. Up until 1st June the relevant moving time dot should be used for each of the storm La Cour traces.

Instrument and Dates		H	T	D	Z
Normal La Cour	from 0001Z on 01.1.77	-1min	zero	zero	+1min
	from 0000Z on 08.5.77	-1min	+1min	zero	+3min
	from 0001Z on 18.5.77	zero	+1min	zero	+3min
	from 2358Z on 18.7.77	zero	+1min	zero	+4min
	from 1900Z on 05.8.77	-1min	+1min	-1min	+3min
Storm La Cour	01 Jan - 28 May	zero		-1min	zero
	29 July	zero		-1min	+1min
	30 July - 31 Dec	-1min		-2min	+2min

for other days the parallax can be deduced from each chart as required.

3. Order of the Traces

Reading from top to bottom of the chart.

Normal La Cour	Storm La Cour	Fluxgate
T trace (when present	Z trace	H trace
H trace	Z baseline	Time
H baseline (used also as T baseline)	T trace	D trace
T trace (when present)	H trace	Z trace
D trace	H baseline	
D baseline	T trace (from 1757Z 29.7.77 only)	
Z trace	D trace	
Z baseline	D baseline	

4. Sense of Traces

T increases up the chart
H increases up the chart
D becomes more easterly (increases) up the chart
Z becomes more negative up the chart

5. Temperature Coefficient

Normal H	June 01 - Aug 05	-2.3	$\gamma\,{}^{o}C^{-1}$
	Aug 06 - Dec 31	-1.0	$\gamma\,{}^{o}C^{-1}$
Normal Z	Jan 01 - Dec 31	+2.9	$\gamma\,{}^{o}C^{-1}$

Those for the storm magnetograms are negligible, but can be deduced from comparisons with the normal magnetograms, similarly for the fluxgate records.

6. Scale Value

Normal La Cour	H(γmm⁻¹)	D('mm⁻¹)	Z(γmm⁻¹)	T(°Cmm⁻¹)
01 Jan - 11 Mar	4.07	0.92	2.20	0.40
12 Mar - 5 Aug (1700Z)	4.07	0.92	2.30	0.40
5 Aug - 8 Aug (1500Z)	4.87*	0.92	2.30	0.40
8 Aug - 10 Oct	4.63	0.92	2.32	0.40
11 Oct - 31 Dec	4.48	0.92	2.32	0.40

*(based on only 3 scale tests).

Storm La Cour			
01 Jan - 18 Jun	16.0	2.30	10.8
19 Jun - 31 Dec	16.0	2.36	10.8

Fluxgate determined as required.

7. Scale of reproduction

To give scale, a ruler of 50mm. length is reproduced on each magnetogram.

8. Baselines

	Dates	Temperature	Value
Normal H	01 Jan - 05 May	9.7°C	22585γ
	06 May - 16 May (1440Z)	3.2°C	22572γ
	16 May - 08 Jul	3.1°C	22472γ
	09 Jul - 20 Jul	3.1°C	22473γ
	21 Jul - 05 Aug (1700Z)	3.1°C	22474γ
	05 Aug - 06 Aug (1750Z)	1.0°C	22403γ
	06 Aug - 08 Aug (1510Z)	3.0°C	22426γ
	08 Aug - 29 Aug	3.3°C	22385γ
	30 Aug - 08 Sep	3.1°C	22386γ
	09 Sep - 17 Sep	3.2°C	22387γ
	18 Sep - 10 Oct	3.1°C	22388γ
	11 Oct - 24 Nov	3.3°C	22473γ
	25 Nov - 29 Nov	3.4°C	22474γ
	30 Nov - 22 Dec (1445Z)	3.4°C	22475γ
	23 Dec - 31 Dec	8.8°C	22482γ
Normal D	01 Jan - 26 Mar		16°26.8'
	27 Mar - 11 Apr		16°26.9'
	12 Apr - 17 May		16°27.0'
	18 May - 04 Jul		16°27.1'
	05 Jul - 05 Aug		16°27.2'
	06 Aug - 31 Dec		16°27.3'
Normal Z	01 Jan - 25 Mar	9.7°C	-34,973γ
	26 Mar - 05 May	9.6°C	-34,974γ
	06 May - 16 May (1440Z)	3.2°C	-34,955γ
	16 May - 31 Jul	3.1°C	-34,924γ
	01 Aug - 24 Nov	3.2°C	-34,923γ
	25 Nov - 29 Nov	3.4°C	-34,922γ
	30 Nov - 22 Dec (1445Z)	3.4°C	-34,921γ
	22 Dec - 31 Dec	8.8°C	-34,937γ

Normal T	Lower Temp	Upper Temp
01 Jan - 16 May (1440Z)	15.1°C	[illegible]
16 May - 08 Jul	15.9°C	20.9°C
09 Jul - 20 Jul	16.0°C	20.8°C
21 Jul - 27 Jul	16.1°C	20.7°C
28 Jul - 01 Aug	16.2°C	-20.6°C
02 Aug - 05 Aug (1700Z)	16.3°C	-20.5°C
05 Aug - 07 Aug	9.8°C	
08 Aug (0001Z)	9.8°C	
09 Aug - 29 Aug	9.4°C	
30 Aug - 06 Sep (2200Z)	9.5°C	
07 Sep - 10 Oct	9.9°C	
11 Oct - 29 Nov	11.4°C	
30 Nov - 22 Dec	11.5°C	
22 Dec - 23 Dec	11.6°C	
24 Dec - 25 Dec	11.7°C	
26 Dec - 31 Dec	11.8°C	

Whenever possible the upper temperature trace should be used.

Storm La Cour baselines are required on the following days:

	H	D	Z
Feb 28	22482γ	16°24.2'	-35174γ
Mar 01	22482γ	16°24.2'	-35174γ
May 16	22482γ	16°24.2'	-35177γ
Jul 29	-	-	-34804γ
Aug 05	22240γ	16°36.7'	-34670γ
Aug 09	22240γ	-	-
Sep 20	22240γ	16°36.9'	-34670γ
Sep 28	22240γ	16°37.3'	-34670γ
Sep 29	22240γ	16°37.3'	-34670γ
Oct 03	22240γ	16°37.3'	-34670γ
Oct 11	22240γ	16°37.3'	-34670γ
Oct 22	-	-	-34670γ
Dec 02	-	-	-34670γ

Fluxgate Baselines are required on the following days (ordinate 50 used as baseline):-

Scale value adopted given in brackets.

	H	D	Z
Feb 25	-	-	-35093γ (12γmm⁻¹)
Dec 11	22640γ (15γmm⁻¹)	17 00.1' (2.15'mm⁻¹)	-35010γ (12γmm⁻¹)

9. Example of computation of absolute values

01 Jan 1977, 1200Z H_O etc. quoted baseline at temperature T_S
q temperature coefficients
s scale values
n ordinates

$$H = H_O + s_H n_H + q_H(T_S - (T_O + s_T n_T))$$
$$= 22585 + 4.07 \times (-2.3) \times (9.7 - (19.3 + 0.40 \times (-23.6)))$$
$$= 22576\gamma$$

$$D = D_O + s_D n_D$$
$$= 16^\circ 26.8' + 0.92 \times 26.8 = 16^\circ 51.5' \text{ east.}$$

$$Z = Z_O - s_Z n_Z + q_Z(T_S - (T_O + s_T n_T))$$
$$= -34,973 + (-2.20) \times 17.8 + 2.9\ (9.7 - (19.3 + 0.40 \times (-23.6)))$$
$$-35013\gamma$$

BRITISH ANTARCTIC SURVEY

(FORMERLY FALKLAND ISLANDS DEPENDENCIES SURVEY)

MAGNETIC RECORDS FOR 1977

FROM ARGENTINE ISLANDS A.973

LAT. -65° 15' LONG. 295° 44'

GEOMAGNETIC LATITUDE -53.8°

GEOMAGNETIC LONGITUDE 3.3°

ORIGINAL RECORDS HELD AT:-

BRITISH ANTARCTIC SURVEY

ATMOSPHERIC SCIENCES DIVISION

MADINGLEY ROAD

CAMBRIDGE CB3 OET

Phone (0223) 61188

[illegible]

Explanatory Note for 1977

1. Instruments

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2. Time

The La Cour charts are usually changed at midnight U.T.C., so that each chart shows a complete day in U.T.C. The fluxgate charts are usually changed at about 2345 U.T.C. every Sunday so that each chart shows a complete week in U.T.C.

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Instrument and Dates		H	T	D	Z
Normal La Cour	from 0001Z on 01.1.77	-1min	zero	zero	+1min
	from 0000Z on 08.5.77	-1min	+1min	zero	+3min
	from 0001Z on 18.5.77	zero	+1min	zero	+3min
	from 2358Z on 18.7.77	zero	+1min	zero	+4min
	from 1900Z on 05.8.77	-1min	+1min	-1min	+3min
Storm La Cour	01 Jan - 28 May	zero		-1min	zero
	29 July	zero		-1min	+1min
	30 July - 31 Dec	-1min		-2min	+2min

for other days the parallax can be deduced from each chart as required.

3. Order of the Traces

Reading from top to bottom of the chart.

Normal La Cour	Storm La Cour	Fluxgate
T trace (when present	Z trace	H trace
H trace	Z baseline	Time
H baseline (used also as T baseline)	T trace	D trace
T trace (when present)	H trace	Z trace
D trace	H baseline	
D baseline	T trace (from 1757Z 29.7.77 only)	
Z trace	D trace	
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4. Sense of Traces

T increases up the chart
H increases up the chart
D becomes more easterly (increases) up the chart
Z becomes more negative up the chart

5. Temperature Coefficient

Normal H	June 01 - Aug 05	-2.3	$\gamma\,{}^{o}C^{-1}$
	Aug 06 - Dec 31	-1.0	$\gamma\,{}^{o}C^{-1}$
Normal Z	Jan 01 - Dec 31	+2.9	$\gamma\,{}^{o}C^{-1}$

Those for the storm magnetograms are negligible, but can be deduced from comparisons with the normal magnetograms, similarly for the fluxgate records.

6. Scale Values

Normal La Cour	H(γmm^{-1})	D($'mm^{-1}$)	Z(γmm^{-1})	T($^\circ C mm^{-1}$)
01 Jan - 11 Mar	4.07	0.92	2.20	0.40
12 Mar - 5 Aug (1700Z)	4.07	0.92	2.30	0.40
5 Aug - 8 Aug (1500Z)	4.87*	0.92	2.30	0.40
8 Aug - 10 Oct	4.63	0.92	2.32	0.40
11 Oct - 31 Dec	4.48	0.92	2.32	0.40

*(based on only 3 scale tests).

Storm La Cour			
01 Jan - 18 Jun	16.0	2.30	10.8
19 Jun - 31 Dec	16.0	2.36	10.8

Fluxgate determined as required.

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To give scale, a ruler of 50mm. length is reproduced on each magnetogram.

8. Baselines

	Dates	Temperature	Value
Normal H	01 Jan - 05 May	9.7°C	22585γ
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	22 Dec - 31 Dec	8.8°C	-34,937γ

Period	Lower Trace	Upper Trace
01 Jan - 16 May (1440Z)	19.3°C	[illegible]
16 May - 08 Jul	15.9°C	-20.9°C
09 Jul - 20 Jul	16.0°C	-20.8°C
21 Jul - 27 Jul	16.1°C	-20.7°C
28 Jul - 01 Aug	16.2°C	-20.6°C
02 Aug - 05 Aug (1700Z)	16.3°C	-20.5°C
05 Aug - 07 Aug	9.8°C	
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Fluxgate Baselines are required on the following days (ordinate 50 used as baseline):-

Scale value adopted given in brackets.

	H	D	Z
Feb 25	-	-	-35093γ ($12\gamma mm^{-1}$)
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9. Example of computation of absolute values

01 Jan 1977, 1200Z

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ARGENTINE ISLANDS 1977

Explanatory Notes for 1977

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2. Time

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Those for the storm magnetograms are negligible, but can be deduced from comparisons with the normal magnetograms, similarly for the fluxgate records.

6. Scale Value

Normal La Cour	$H(\gamma mm^{-1})$	$D('mm^{-1})$	$Z(\gamma mm^{-1})$	$T(^{\circ}C\ mm^{-1})$
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5 Aug - 8 Aug (1500Z)	4.87*	0.92	2.30	0.40
8 Aug - 10 Oct	4.63	0.92	2.32	0.40
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*(based on only 3 scale tests).

Storm La Cour

01 Jan - 18 Jun	16.0	2.30	10.8
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Fluxgate determined as required.

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To give scale, a ruler of 50mm. length is reproduced on each magnetogram.

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	30 Nov - 22 Dec (1445Z)	3.4°C	-34,921γ
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Normal T	Lower Trace	Upper Trace
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Storm La Cour baselines are required on the following days:

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Oct 11	22240γ	16°37.3'	-34670γ
Oct 22	-	-	-34670γ
Dec 02	-	-	-34670γ

Fluxgate Baselines are required on the following days (ordinate 50 used as baseline):-

Scale value adopted given in brackets.

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H_0 etc. quoted baseline at temperature T_S
q temperature coefficients
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ARGENTINE ISLANDS A.97[illegible]

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Due to parallax, during the periods indicated, the following corrections should be added to time read on the traces. Up until 1st June the relevant moving time dot should be used for each of the storm La Cour traces.

Instrument and Dates		H	T	D	Z
Normal La Cour	from 0001Z on 01.1.77	-1min	zero	zero	+1min
	from 0000Z on 08.5.77	-1min	+1min	zero	+3min
	from 0001Z on 18.5.77	zero	+1min	zero	+3min
	from 2358Z on 18.7.77	zero	+1min	zero	+4min
	from 1900Z on 05.8.77	-1min	+1min	-1min	+3min
Storm La Cour	01 Jan - 28 May	zero		-1min	zero
	29 July	zero		-1min	+1min
	30 July - 31 Dec	-1min		-2min	+2min

for other days the parallax can be deduced from each chart as required.

3. Order of the Traces

Reading from top to bottom of the chart.

Normal La Cour	Storm La Cour	Fluxgate
T trace (when present	Z trace	H trace
H trace	Z baseline	Time
H baseline (used also as T baseline)	T trace	D trace
T trace (when present)	H trace	Z trace
D trace	H baseline	
D baseline	T trace (from 1757Z 29.7.77 only)	
Z trace	D trace	
Z baseline	D baseline	

4. Sense of Traces

T increases up the chart
H increases up the chart
D becomes more easterly (increases) up the chart
Z becomes more negative up the chart

5. Temperature Coefficient

Normal H	June 01 - Aug 05	-2.3	$\gamma\,^{o}C^{-1}$
	Aug 06 - Dec 31	-1.0	$\gamma\,^{o}C^{-1}$
Normal Z	Jan 01 - Dec 31	+2.9	$\gamma\,^{o}C^{-1}$

Those for the storm magnetograms are negligible, but can be deduced from comparisons with the normal magnetograms, similarly for the fluxgate records.

6. Scale Value

Normal La Cour	H(γmm^{-1})	D('mm^{-1})	Z(γmm^{-1})	T(^{o}Cmm^{-1})
01 Jan - 11 Mar	4.07	0.92	2.20	0.40
12 Mar - 5 Aug (1700Z)	4.07	0.92	2.30	0.40
5 Aug - 8 Aug (1500Z)	4.87*	0.92	2.30	0.40
8 Aug - 10 Oct	4.63	0.92	2.32	0.40
11 Oct - 31 Dec	4.48	0.92	2.32	0.40

*(based on only 3 scale tests).

Storm La Cour			
01 Jan - 18 Jun	16.0	2.30	10.8
19 Jun - 31 Dec	16.0	2.36	10.8

Fluxgate determined as required.

7. Scale of reproduction

To give scale, a ruler of 50mm. length is reproduced on each magnetogram.

8. Baselines

	Dates	Temperature	Value
Normal H	01 Jan - 05 May	9.7^{o}C	22585γ
	06 May - 16 May (1440Z)	3.2^{o}C	22572γ
	16 May - 08 Jul	3.1^{o}C	22472γ
	09 Jul - 20 Jul	3.1^{o}C	22473γ
	21 Jul - 05 Aug (1700Z)	3.1^{o}C	22474γ
	05 Aug - 06 Aug (1750Z)	1.0^{o}C	22403γ
	06 Aug - 08 Aug (1510Z)	3.0^{o}C	22426γ
	08 Aug - 29 Aug	3.3^{o}C	22385γ
	30 Aug - 08 Sep	3.1^{o}C	22386γ
	09 Sep - 17 Sep	3.2^{o}C	22387γ
	18 Sep - 10 Oct	3.1^{o}C	22388γ
	11 Oct - 24 Nov	3.3^{o}C	22473γ
	25 Nov - 29 Nov	3.4^{o}C	22474γ
	30 Nov - 22 Dec (1445Z)	3.4^{o}C	22475γ
	23 Dec - 31 Dec	8.8^{o}C	22482γ
Normal D	01 Jan - 26 Mar		16^{o}26.8'
	27 Mar - 11 Apr		16^{o}26.9'
	12 Apr - 17 May		16^{o}27.0'
	18 May - 04 Jul		16^{o}27.1'
	05 Jul - 05 Aug		16^{o}27.2'
	06 Aug - 31 Dec		16^{o}27.3'
Normal Z	01 Jan - 25 Mar	9.7^{o}C	-34,973γ
	26 Mar - 05 May	9.6^{o}C	-34,974γ
	06 May - 16 May (1440Z)	3.2^{o}C	-34,955γ
	16 May - 31 Jul	3.1^{o}C	-34,924γ
	01 Aug - 24 Nov	3.2^{o}C	-34,923γ
	25 Nov - 29 Nov	3.4^{o}C	-34,922γ
	30 Nov - 22 Dec (1445Z)	3.4^{o}C	-34,921γ
	22 Dec - 31 Dec	8.8^{o}C	-34,937γ

Normal T	Lower Trace	Upper Trace
01 Jan - 16 May (1440Z)	19.3^{o}C	-17.4^{o}C
16 May - 08 Jul	15.9^{o}C	-20.9^{o}C
09 Jul - 20 Jul	16.0^{o}C	-20.8^{o}C
21 Jul - 27 Jul	16.1^{o}C	-20.7^{o}C
28 Jul - 01 Aug	16.2^{o}C	-20.6^{o}C
02 Aug - 05 Aug (1700Z)	16.3^{o}C	-20.5^{o}C
05 Aug - 07 Aug	9.8^{o}C	
08 Aug (0001Z)	9.8^{o}C	
09 Aug - 29 Aug	9.4^{o}C	
30 Aug - 06 Sep (2200Z)	9.5^{o}C	
07 Sep - 10 Oct	9.9^{o}C	
11 Oct - 29 Nov	11.4^{o}C	
30 Nov - 22 Dec	11.5^{o}C	
22 Dec - 23 Dec	11.6^{o}C	
24 Dec - 25 Dec	11.7^{o}C	
26 Dec - 31 Dec	11.8^{o}C	

Whenever possible the upper temperature trace should be used.

Storm La Cour baselines are required on the following days:

	H	D	Z
Feb 28	22482γ	16^{o}24.2'	-35174γ
Mar 01	22482γ	16^{o}24.2'	-35174γ
May 16	22482γ	16^{o}24.2'	-35177γ
Jul 29	-	-	-34804γ
Aug 05	22240γ	16^{o}36.7'	-34670γ
Aug 09	22240γ	-	-
Sep 20	22240γ	16^{o}36.9'	-34670γ
Sep 28	22240γ	16^{o}37.3'	-34670γ
Sep 29	22240γ	16^{o}37.3'	-34670γ
Oct 03	22240γ	16^{o}37.3'	-34670γ
Oct 11	22240γ	16^{o}37.3'	-34670γ
Oct 22	-	-	-34670γ
Dec 02	-	-	-34670γ

Fluxgate Baselines are required on the following days (ordinate 50 used as baseline):-

Scale value adopted given in brackets.

	H	D	Z
Feb 25	-	-	-35093γ (12γmm^{-1})
Dec 11	22640γ (15γmm^{-1})	17 00.1' (2.15'mm^{-1})	-35010γ (12γmm^{-1})

9. Example of computation of absolute values

01 Jan 1977, 1200Z

H_O etc. quoted baseline at temperature T_S
q temperature coefficients
s scale values
n ordinates

$$H = H_O + s_H n_H + q_H(T_S - (T_O + s_T n_T))$$
$$= 22585 + 4.07 \times (-2.3) \times (9.7 - (19.3 + 0.40 \times (-23.6)))$$
$$= 22576\gamma$$

$$D = D_O + s_D n_D$$
$$= 16^{o}26.8' + 0.92 \times 26.8 = 16^{o}51.5' \text{ east.}$$

$$Z = Z_O + s_Z n_Z + q_Z(T_S - (T_O + s_T n_T))$$
$$= -34,973 + (-2.20) \times 17.8 + 2.9\ (9.7 - (19.3 - 0.40 \times (-23.6)))$$
$$-35013\gamma$$

BRITISH ANTARCTIC SURVEY

(FORMERLY FALKLAND ISLANDS DEPENDENCIES SURVEY)

MAGNETIC RECORDS FOR 1977

FROM ARGENTINE ISLANDS A.973

LAT. -65° 15' LONG. 295° 44'

GEOMAGNETIC LATITUDE -53.8°

GEOMAGNETIC LONGITUDE 3.3°

ORIGINAL RECORDS HELD AT:-

BRITISH ANTARCTIC SURVEY
ATMOSPHERIC SCIENCES DIVISION
MADINGLEY ROAD
CAMBRIDGE CB3 OET

Phone (0223) 61188

[illegible] 1977

Explanatory Notes for 1977

1. Instruments

These are standard La Cour variometers and an E.D.A. fluxgate magnetometer, all recording H, D and Z.

2. Time

The La Cour charts are usually changed at midnight U.T.C., so that each chart shows a complete day in U.T.C. The fluxgate charts are usually changed at about 2345 U.T.C. every Sunday so that each chart shows a complete week in U.T.C.

Due to parallax, during the periods indicated, the following corrections should be added to time read on the traces. Up until 1st June the relevant moving time dot should be used for each of the storm La Cour traces.

Instrument and Dates		H	T	D	Z
Normal La Cour	from 0001Z on 01.1.77	-1min	zero	zero	+1min
	from 0000Z on 08.5.77	-1min	+1min	zero	+3min
	from 0001Z on 18.5.77	zero	+1min	zero	+3min
	from 2358Z on 18.7.77	zero	+1min	zero	+4min
	from 1900Z on 05.8.77	-1min	+1min	-1min	+3min
Storm La Cour	01 Jan - 28 May	zero	-	-1min	zero
	29 July	zero		-1min	+1min
	30 July - 31 Dec	-1min		-2min	+2min

for other days the parallax can be deduced from each chart as required.

3. Order of the Traces

Reading from top to bottom of the chart.

Normal La Cour	Storm La Cour	Fluxgate
T trace (when present	Z trace	H trace
H trace	Z baseline	Time
H baseline (used also as T baseline)	T trace	D trace
T trace (when present)	H trace	Z trace
D trace	H baseline	
D baseline	T trace (from 1757Z 29.7.77 only)	
Z trace	D trace	
Z baseline	D baseline	

4. Sense of Traces

T increases up the chart
H increases up the chart
D becomes more easterly (increases) up the chart
Z becomes more negative up the chart

5. Temperature Coefficient

Normal H	June 01 - Aug 05	-2.3	$\gamma\,{}^{o}C^{-1}$
	Aug 06 - Dec 31	-1.0	$\gamma\,{}^{o}C^{-1}$
Normal Z	Jan 01 - Dec 31	+2.9	$\gamma\,{}^{o}C^{-1}$

Those for the storm magnetograms are negligible, but can be deduced from comparisons with the normal magnetograms, similarly for the fluxgate records.

6. Scale Values

Normal La Cour	H(γmm⁻¹)	D('mm⁻¹)	Z(γmm⁻¹)	T(°C mm⁻¹)
01 Jan - 11 Mar	4.07	0.92	2.20	0.40
12 Mar - 5 Aug (1700Z)	4.07	0.92	2.30	0.40
5 Aug - 8 Aug (1500Z)	4.87*	0.92	2.30	0.40
8 Aug - 10 Oct	4.63	0.92	2.32	0.40
11 Oct - 31 Dec	4.48	0.92	2.32	0.40

*(based on only 3 scale tests).

Storm La Cour			
01 Jan - 18 Jun	16.0	2.30	10.8
19 Jun - 31 Dec	16.0	2.36	10.8

Fluxgate determined as required.

7. Scale of reproduction

To give scale, a ruler of 50mm. length is reproduced on each magnetogram.

8. Baselines

	Dates	Temperature	Value
Normal H	01 Jan - 05 May	9.7°C	22585γ
	06 May - 16 May (1440Z)	3.2°C	22572γ
	16 May - 08 Jul	3.1°C	22472γ
	09 Jul - 20 Jul	3.[illegible]°C	22473γ
	21 Jul - 05 Aug (1700Z)	3.1°C	22474γ
	05 Aug - 06 Aug (1750Z)	1.0°C	22403γ
	06 Aug - 08 Aug (1510Z)	3.0°C	22426γ
	08 Aug - 29 Aug	3.3°C	22385γ
	30 Aug - 08 Sep	3.1°C	22386γ
	09 Sep - 17 Sep	3.2°C	22387γ
	18 Sep - 10 Oct	3.1°C	22388γ
	11 Oct - 24 Nov	3.3°C	22473γ
	25 Nov - 29 Nov	3.4°C	22474γ
	30 Nov - 22 Dec (1445Z)	3.4°C	22475γ
	23 Dec - 31 Dec	8.8°C	22482γ
Normal D	01 Jan - 26 Mar		16°26.8'
	27 Mar - 11 Apr		16°26.9'
	12 Apr - 17 May		16°27.0'
	18 May - 04 Jul		16°27.1'
	05 Jul - 05 Aug		16°27.2'
	06 Aug - 31 Dec		16°27.3'
Normal Z	01 Jan - 25 Mar	9.7°C	-34,973γ
	26 Mar - 05 May	9.6°C	-34,974γ
	06 May - 16 May (1440Z)	3.2°C	-34,955γ
	16 May - 31 Jul	3.1°C	-34,924γ
	01 Aug - 24 Nov	3.2°C	-34,923γ
	25 Nov - 29 Nov	3.4°C	-34,922γ
	30 Nov - 22 Dec (1445Z)	3.4°C	-34,921γ
	22 Dec - 31 Dec	8.8°C	-34,937γ

Normal T	Lower Trace	Upper Trace
01 Jan - 16 May (1440Z)	19.3°C	17.4°C
16 May - 08 Jul	15.9°C	20.9°C
09 Jul - 20 Jul	16.0°C	20.8°C
21 Jul - 27 Jul	16.1°C	20.7°C
28 Jul - 01 Aug	16.2°C	-20.6°C
02 Aug - 05 Aug (1700Z)	16.3°C	-20.5°C
05 Aug - 07 Aug	9.8°C	
08 Aug (0001Z)	9.8°C	
09 Aug - 29 Aug	9.4°C	
30 Aug - 06 Sep (2200Z)	9.5°C	
07 Sep - 10 Oct	9.9°C	
11 Oct - 29 Nov	11.4°C	
30 Nov - 22 Dec	11.5°C	
22 Dec - 23 Dec	11.6°C	
24 Dec - 25 Dec	11.7°C	
26 Dec - 31 Dec	11.8°C	

Whenever possible the upper temperature trace should be used.

Storm La Cour baselines are required on the following days:

	H	D	Z
Feb 28	22482γ	16°24.2'	-35174γ
Mar 01	22482γ	16°24.2'	-35174γ
May 16	22482γ	16°24.2'	-35177γ
Jul 29	-	-	-34804γ
Aug 05	22240γ	16°36.7'	-34670γ
Aug 09	22240γ	-	-
Sep 20	22240γ	16°36.9'	-34670γ
Sep 28	22240γ	16°37.3'	-34670γ
Sep 29	22240γ	16°37.3'	-34670γ
Oct 03	22240γ	16°37.3'	-34670γ
Oct 11	22240γ	16°37.3'	-34670γ
Oct 22	-	-	-34670γ
Dec 02	-	-	-34670γ

Fluxgate Baselines are required on the following days (ordinate 50 used as baseline):-

Scale value adopted given in brackets.

	H	D	Z
Feb 25	-	-	-35093γ (12γmm⁻¹)
Dec 11	22640γ (15γmm⁻¹)	17 00.1' (2.15'mm⁻¹)	-35010γ (12γmm⁻¹)

9. Example of computation of absolute values

01 Jan 1977, 1200Z

H_O etc. quoted baseline at temperature T_S
q temperature coefficients
s scale values
n ordinates

$$H = H_O + s_H n_H + q_H(T_S - (T_O + s_T n_T))$$
$$= 22585 + 4.07 \times (-2.3) \times (9.7 - (19.3 + 0.40 \times (-23.6)))$$
$$= 22576\gamma$$

$$D = D_O + s_D n_D$$
$$= 16^\circ 26.8' + 0.92 \times 26.8 = 16^\circ 51.5' \text{ east.}$$

$$Z = Z_O + s_Z n_Z + q_Z(T_S - (T_O + s_T n_T))$$
$$= -34,973 + (-2.20) \times 17.8 + 2.9\ (9.7 - (19.3 + 0.40 \times (-23.6)))$$
$$= -35013\gamma$$

BRITISH ANTARCTIC SURVEY

(FORMERLY FALKLAND ISLANDS DEPENDENCIES SURVEY)

MAGNETIC RECORDS FOR 1977

FROM ARGENTINE ISLANDS A.973

LAT. -65° 15' LONG. 295° 44'

GEOMAGNETIC LATITUDE -53.8°

GEOMAGNETIC LONGITUDE 3.3°

ORIGINAL RECORDS HELD AT:-

BRITISH ANTARCTIC SURVEY
ATMOSPHERIC SCIENCES DIVISION
MADINGLEY ROAD
CAMBRIDGE CB3 0ET

Phone (0223) 61188

ARGENTINE ISLAND A.973

Explanatory Notes for 1977

1. Instruments

These are standard La Cour variometers and an E.D.A. fluxgate magnetometer, all recording H, D and Z.

2. Time

The La Cour charts are usually changed at midnight U.T.C., so that each chart shows a complete day in U.T.C. The fluxgate charts are usually changed at about 2345 U.T.C. every Sunday so that each chart shows a complete week in U.T.C.

Due to parallax, during the periods indicated, the following corrections should be added to time read on the traces. Up until 1st June the relevant moving time dot should be used for each of the storm La Cour traces.

Instrument and Dates		H	T	D	Z
Normal La Cour	from 0001Z on 01.1.77	-1min	zero	zero	+1min
	from 0000Z on 08.5.77	-1min	+1min	zero	+3min
	from 0001Z on 18.5.77	zero	+1min	zero	+3min
	from 2358Z on 18.7.77	zero	+1min	zero	+4min
	from 1900Z on 05.8.77	-1min	+1min	-1min	+3min
Storm La Cour	01 Jan - 28 May	zero	-	-1min	zero
	29 July	zero		-1min	+1min
	30 July - 31 Dec	-1min		-2min	+2min

for other days the parallax can be deduced from each chart as required.

3. Order of the Traces

Reading from top to bottom of the chart.

Normal La Cour	Storm La Cour	Fluxgate
T trace (when present	Z trace	H trace
H trace	Z baseline	Time
H baseline (used also as T baseline)	T trace	D trace
T trace (when present)	H trace	Z trace
D trace	H baseline	
D baseline	T trace (from 1757Z 29.7.77 only)	
Z trace	D trace	
Z baseline	D baseline	

4. Sense of Traces

T increases up the chart
H increases up the chart
D becomes more easterly (increases) up the chart
Z becomes more negative up the chart

5. Temperature Coefficient

Normal H	June 01 - Aug 05	-2.3	$\gamma\,^{o}C^{-1}$
	Aug 06 - Dec 31	-1.0	$\gamma\,^{o}C^{-1}$
Normal Z	Jan 01 - Dec 31	+2.9	$\gamma\,^{o}C^{-1}$

Those for the storm magnetograms are negligible, but can be deduced from comparisons with the normal magnetograms, similarly for the fluxgate records.

6. Scale Value

Normal La Cour	H(γmm^{-1})	D('mm^{-1})	Z(γmm^{-1})	T($^{\circ}$Cmm^{-1})
01 Jan - 11 Mar	4.07	0.92	2.20	0.40
12 Mar - 5 Aug (1700Z)	4.07	0.92	2.30	0.40
5 Aug - 8 Aug (1500Z)	4.87*	0.92	2.30	0.40
8 Aug - 10 Oct	4.63	0.92	2.32	0.40
11 Oct - 31 Dec	4.48	0.92	2.32	0.40

*(based on only 3 scale tests).

Storm La Cour			
01 Jan - 18 Jun	16.0	2.30	10.8
19 Jun - 31 Dec	16.0	2.36	10.8

Fluxgate determined as required.

7. Scale of reproduction

To give scale, a ruler of 50mm. length is reproduced on each magnetogram.

8. Baselines

	Dates	Temperature	Value
Normal H	01 Jan - 05 May	9.7°C	22585γ
	06 May - 16 May (1440Z)	3.2°C	22572γ
	16 May - 08 Jul	3.1°C	22472γ
	09 Jul - 20 Jul	3.1°C	22473γ
	21 Jul - 05 Aug (1700Z)	3.1°C	22474γ
	05 Aug - 06 Aug (1750Z)	1.0°C	22403γ
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	09 Sep - 17 Sep	3.2°C	22387γ
	18 Sep - 10 Oct	3.1°C	22388γ
	11 Oct - 24 Nov	3.3°C	22473γ
	25 Nov - 29 Nov	3.4°C	22474γ
	30 Nov - 22 Dec (1445Z)	3.4°C	22475γ
	23 Dec - 31 Dec	8.8°C	22482γ
Normal D	01 Jan - 26 Mar		16°26.8'
	27 Mar - 11 Apr		16°26.9'
	12 Apr - 17 May		16°27.0'
	18 May - 04 Jul		16°27.1'
	05 Jul - 05 Aug		16°27.2'
	06 Aug - 31 Dec		16°27.3'
Normal Z	01 Jan - 25 Mar	9.7°C	-34,973γ
	26 Mar - 05 May	9.6°C	-34,974γ
	06 May - 16 May (1440Z)	3.2°C	-34,955γ
	16 May - 31 Jul	3.1°C	-34,924γ
	01 Aug - 24 Nov	3.2°C	-34,923γ
	25 Nov - 29 Nov	3.4°C	-34,922γ
	30 Nov - 22 Dec (1445Z)	3.4°C	-34,921γ
	22 Dec - 31 Dec	8.8°C	-34,937γ

Normal T	Lower Trace	Upper Trace
01 Jan - 16 May (1440Z)	19.3°C	-17.4°C
16 May - 08 Jul	15.9°C	-20.9°C
09 Jul - 20 Jul	16.0°C	-20.8°C
21 Jul - 27 Jul	16.1°C	-20.7°C
28 Jul - 01 Aug	16.2°C	-20.6°C
02 Aug - 05 Aug (1700Z)	16.3°C	-20.5°C
05 Aug - 07 Aug	9.8°C	
08 Aug (0001Z)	9.8°C	
09 Aug - 29 Aug	9.4°C	
30 Aug - 06 Sep (2200Z)	9.5°C	
07 Sep - 10 Oct	9.9°C	
11 Oct - 29 Nov	11.4°C	
30 Nov - 22 Dec	11.5°C	
22 Dec - 23 Dec	11.6°C	
24 Dec - 25 Dec	11.7°C	
26 Dec - 31 Dec	11.8°C	

Whenever possible the upper temperature trace should be used.

Storm La Cour baselines are required on the following days:

	H	D	Z
Feb 28	22482γ	16°24.2'	-35174γ
Mar 01	22482γ	16°24.2'	-35174γ
May 16	22482γ	16°24.2'	-35177γ
Jul 29	-	-	-34804γ
Aug 05	22240γ	16°36.7'	-34670γ
Aug 09	22240γ	-	-
Sep 20	22240γ	16°36.9'	-34670γ
Sep 28	22240γ	16°37.3'	-34670γ
Sep 29	22240γ	16°37.3'	-34670γ
Oct 03	22240γ	16°37.3'	-34670γ
Oct 11	22240γ	16°37.3'	-34670γ
Oct 22	-	-	-34670γ
Dec 02	-	-	-34670γ

Fluxgate Baselines are required on the following days (ordinate 50 used as baseline):-

Scale value adopted given in brackets.

	H	D	Z
Feb 25	-	-	-35093γ (12γmm^{-1})
Dec 11	22640γ (15γmm^{-1})	17°00.1' (2.15'mm^{-1})	-35010γ (12γmm^{-1})

9. Example of computation of absolute values

01 Jan 1977, 1200Z

H_O etc. quoted baseline at temperature T_S
q temperature coefficients
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n ordinates

$$H = H_O + s_H n_H + q_H (T_S - (T_O + s_T n_T))$$
$$= 22585 + 4.07 \times (-2.3) \times (9.7 - (19.3 + 0.40 \times (-23.6)))$$
$$= 22576\gamma$$

$$D = D_O + s_D n_D$$
$$= 16^{\circ}26.8' + 0.92 \times 26.8 = 16^{\circ}51.5' \text{ east.}$$

$$Z = Z_O + s_Z n_Z + q_Z (T_S - (T_O + s_T n_T))$$
$$= -34,973 + (-2.20) \times 17.8 + 2.9\ (9.7 - (19.3 + 0.40 \times (-23.6)))$$
$$-35013\gamma$$