

BRITISH ANTARCTIC SURVEY

(FORMERLY FALKLAND ISLAND DEPENDENCIES SURVEY)

MAGNETIC RECORDS FOR 1959

FROM ARGENTINE ISLANDS A.973

LAT. -65° 15'

LONG. 295° 44'

GEOMAGNETIC LAT. -53.8°

GEOMAGNETIC LONG. 3.3°

ORIGINAL RECORDS HELD AT :-

BRITISH ANTARCTIC SURVEY

DEPARTMENT OF NATURAL PHILOSOPHY

DRUMMOND STREET

EDINBURGH, 8.

Phone: EDINBURGH NEWINGTON 1011 EXT. 2497

HEAD OFFICE:-

BRITISH ANTARCTIC SURVEY

30 GILLINGHAM STREET

LONDON, S.W. 1.

Phone: LONDON VICTORIA 3687

are standard to Com variometers, recording H, D, and Z.

2. Time

Charts were changed at Greenwich midnight, so that each chart shows a complete Greenwich day. The master clock was adjusted to keep the clock error less than 1/2 minute.

The parallax correction for each trace is given below. The correction is to be added to the times read from the magnetograms.

Sensitive Magnetograms	Trace	Correction
	H	+ 2 mins.
	D	+ 1 min.
	Z	nil
	T	+ 4 mins.
Insensitive Magnetograms		
	H	nil
	D	- 1 min.
	Z	- 2 mins.
	T	+ 1 min.

3. Order of Traces, from top to bottom

Sensitive Magnetograms	Insensitive Magnetograms
T trace	D trace and baseline (double baseline, upper line used)
H trace and baseline	H baseline
D baseline and trace	T trace
Z baseline and trace	H trace
	Z baseline and trace

4. Sense of Traces

All magnetograms: Temperature increases up the sheet.
 H increases up the sheet.
 D increases easterly up the sheet.
 Z increases down the sheet.
 (N.B. Z is negative, hence as Z increases, modulus of Z decreases).

5. Temperature Coefficients

The sensitive H and Z variometers have appreciable temperature coefficients. H baseline values increase with increasing temperature. Z baseline values decrease (i.e. their moduli increase) with increasing temperature.

Temperature coefficient	H	Z	
	4.5 %/°C	2.96 %/°C	Jan - Feb.
		1.5 %/°C	Mar - Dec.

T Trace	Scale Value	Baseline
Jan - 22nd Mar.	0.527°E/mm	- 31.5°C
22nd Mar - 27th Mar	0.527°C/mm	- 33.2°C
27th Mar - Dec	0.527°C/mm	- 33.6°C
(Insensitive Magnetogram)	1.88 °C/mm	+ 12.7°C

6. Scale Values

	Sensitive Magnetograms	Insensitive Magnetograms
H	4.37 %/mm	16.1 %/mm
D	0.92 %/mm	2.36 %/mm
Z	2.50 %/mm	10.9 %/mm
	4.00	
	4.06	
	4.11	
	4.15	
	4.18	
	4.05	

H Baseline	D Baseline	Z Baseline
1 Jan-22 Jan 23975 at 0°C	1 Jan-31 Jan 17° 31.0' E	1 Jan-19 Jan -36854 at 0°C
23 Jan-13 Feb 23359 "	1 Feb-30 Jan 17° 57.7' E	20 Jan-12 Feb -36871 "
14 Feb-13 Mar 23364 "	1 Jul-14 Dec 17° 37.8' E	13 Feb- 2 Mar -36722 "
14 Mar- 2 Sep 23367 "	15 Dec-31 Dec 17° 38.4' E	3 Mar-13 Mar -36724 "
3 Sep-21 Nov 23366 "		14 Mar-30 Apr -36726 "
22 Nov-14 Dec 23360 "		1 May-30 Jun -36731 "
15 Dec-31 Dec 23296 "		1 Jul-31 Aug -36728 "
		1 Sep-23 Nov -36731 "
		24 Nov-26 Nov -36732 "
		27 Nov-30 Nov -36733 "
		1 Dec-14 Dec -36734 "
		15 Dec-31 Dec -36601 "

Insensitive Magnetograms

Insensitive 0 C baselines are only quoted for the days on which they are required for completion or clarification of record. The hourly values derived from insensitive records are calculated by comparing sensitive and insensitive magnetogram baselines on the same day at the temperature for that day.

Date	H baseline	D baseline	Z baseline
Jan 21	23996 8	16° 30.3' E	-36854 8
23	992	30.5	854
25	993	30.3	856
27	991	30.4	854
Feb 12	986	30.6	854
25	987	29.9	863
27	987	30.6	863
May 3	983	29.4	882
4	986	29.2	876
Jun 8	984	29.2	888
10	997	30.0	886
Jul 14	994	29.9	880
15	994	30.1	880
16	24001	30.4	881
Sep 12	23998	30.1	877
13	994	30.1	881
14	996	30.5	878
Dec 4	992	30.8	880
14	995	30.9	880
21	995	30.7	881
24	992	30.9	885

Baseline Separations - to give scale.

	H - D	D - Z	D - H	H - Z
1 Jan-12 Feb	37.0 mm ± 0.1	118.4 mm ± 0.1	(
13 Feb-14 Dec	36.9 mm ± 0.1	149.4 mm ± 0.1	(46.6 mm ± 0.2	131.2 mm ± 0.2
15 Dec-31 Dec	36.9 mm ± 0.1	136.3 mm ± 0.1	(

(Sensitive)

(Insensitive)

ARGENTINE ISLANDS A.973

JANUARY 1959

Lower limit K9: 500 y.

Scale Values: H 4.39 y/mm; D 6.28 y/mm

K_H

K_D

MAX (K_H, K_D)

Day	K1	K2	K3	K4	K5	K6	K7	K8	K1	K2	K3	K4	K5	K6	K7	K8	K1	K2	K3	K4	K5	K6	K7	K8	Sum
1	1	1	1	1	1	1	1	1	0	0	0	1	1	0	0	0	1	1	1	1	1	1	1	1	8
2	1	1	1	1	1	2	3	2	1	0	1	2	2	1	1	0	1	1	1	2	2	2	3	2	14
3	2	2	2	2	2	2	2	1	2	2	3	3	1	1	1	0	2	2	3	3	2	2	2	1	17
4	2	2	0	2	2	3	3	3	0	1	3	3	3	2	1	1	2	2	3	3	3	3	3	3	22
5	4	2	1	2	3	4	6	5	2	1	2	3	4	3	4	4	4	2	2	3	4	4	6	5	30
6	3	4	2	2	4	3	4	4	2	3	3	3	2	2	2	3	3	4	3	3	4	3	4	4	28
7	4	3	2	2	1	2	3	4	3	3	3	4	0	1	3	2	4	3	3	4	1	2	3	4	24
8	3	2	2	2	2	3	3	4	2	1	2	2	2	1	2	3	3	2	2	2	2	3	3	4	21
9	3	2	2	3	3	4	4	5	3	2	2	3	3	4	3	5	3	2	2	3	3	4	4	5	26
10	4	4	2	4	2	3	4	3	5	4	3	5	4	3	3	4	5	4	3	5	4	3	4	4	32
11	3	2	1	1	2	2	4	4	3	1	2	1	2	1	3	3	3	2	2	1	2	2	4	4	20
12	3	2	1	2	2	3	4	4	3	1	1	2	2	2	2	2	3	2	1	2	2	3	4	4	21
13	3	1	2	2	2	3	4	2	1	1	3	2	1	1	3	0	3	1	3	2	2	3	4	2	20
14	1	1	3	2	1	2	2	3	0	0	2	3	3	0	1	2	1	1	3	3	3	2	2	3	18
15	3	2	2	2	2	1	1	2	1	3	3	2	1	1	0	0	3	3	3	2	2	1	1	2	17
16	2	1	1	4	3	3	3	4	1	0	2	4	3	2	3	2	2	1	2	4	3	3	3	4	22
17	3	3	3	2	3	3	2	3	1	3	2	3	3	2	2	1	3	3	3	3	3	3	2	3	23
18	3	2	2	2	2	4	3	3	2	2	2	3	2	2	3	2	3	2	2	3	2	4	3	3	21
19	1	2	2	2	2	2	2	2	1	2	2	2	2	2	2	1	1	2	2	2	2	2	2	2	15
20	1	1	1	1	1	2	2	2	0	0	0	1	1	2	1	0	1	1	1	1	1	2	2	2	11
21	2	1	2	1	2	2	2	2	0	0	2	1	2	2	1	0	2	1	2	1	2	2	2	2	14
22	q	4	3	q	q	q	q	3	q	q	3	q	q	q	q	q	q	4	3	q	q	q	q	3	10+
23	2	2	2	2	2	2	2	2	1	1	1	3	3	1	0	0	2	2	2	3	3	2	2	2	18
24	5	2	1	1	1	1	1	2	2	1	1	2	1	0	1	0	5	2	1	2	1	1	1	2	15
25	1	1	2	3	4	3	5	4	0	0	1	4	4	4	4	2	1	1	2	4	4	4	5	4	25
26	3	5	q	5	5	4	3	q	q	3	q	6	6	3	q	q	3	5	q	6	6	4	3	q	27+
27	1	3	3	2	2	3	4	3	0	1	2	4	4	1	1	1	1	3	3	4	4	3	4	3	25
28	2	2	2	1	2	2	4	5	1	1	1	3	2	1	3	2	2	2	2	3	2	2	4	5	22
29	3	3	2	2	2	2	4	4	1	1	3	3	2	1	3	3	3	3	3	3	2	2	4	4	24
30	3	3	2	2	2	1	2	2	2	3	2	3	3	1	1	0	3	3	2	3	3	1	2	2	19
31	2	2	3	3	2	2	2	3	2	3	3	2	2	2	1	0	2	2	3	3	2	2	1	3	18

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EXPLANATORY NOTES 1959

1. Instruments

These are standard La Cour variometers, recording H, D, and Z.

2. Time

Charts were changed at Greenwich midnight, so that each chart shows a complete Greenwich day. The master clock was adjusted to keep the clock error less than 1/2 minute.

The parallax correction for each trace is given below. The correction is to be added to the times read from the magnetograms.

<u>Sensitive Magnetograms</u>	<u>Trace</u>	<u>Correction</u>
	H	+ 2 mins.
	D	+ 1 min.
	Z	nil
	T	+ 4 mins.

Insensitive Magnetograms

H	nil
D	- 1 min.
Z	- 2 mins.
T	+ 1 min.

3. Order of Traces, from top to bottom

<u>Sensitive Magnetograms</u>	<u>Insensitive Magnetograms</u>
T trace	D trace and baseline (double baseline, upper line used)
H trace and baseline	H baseline
D baseline and trace	T trace
Z baseline and trace	H trace Z baseline and trace

4. Sense of Traces

All magnetograms: Temperature increases up the sheet.
 H increases up the sheet.
 D increases easterly up the sheet.
 Z increases down the sheet.
 (N.B. Z is negative, hence as Z increases, modulus of Z decreases).

5. Temperature Coefficients

The sensitive H and Z variometers have appreciable temperature coefficients. H baseline values increase with increasing temperature. Z baseline values decrease (i.e. their moduli increase) with increasing temperature.

	<u>H</u>	<u>Z</u>	
Temperature coefficient	4.5 $\delta/^\circ\text{C}$	2.96 $\delta/^\circ\text{C}$	Jan - Feb.
		1.5 $\delta/^\circ\text{C}$	Mar - Dec.

<u>T Trace</u>	<u>Scale Value</u>	<u>Baseline</u>
Jan - 22nd Mar.	0.527 $^\circ\text{C}/\text{mm}$	- 31.5 $^\circ\text{C}$
22nd Mar - 27th Mar	0.527 $^\circ\text{C}/\text{mm}$	- 33.2 $^\circ\text{C}$
27th Mar - Dec	0.527 $^\circ\text{C}/\text{mm}$	- 33.6 $^\circ\text{C}$
(Insensitive Magnetogram	1.88 $^\circ\text{C}/\text{mm}$	+ 12.7 $^\circ\text{C}$)

6. Scale Values

	<u>Sensitive Magnetograms</u>	<u>Insensitive Magnetograms</u>
H	4.37 δ/mm	16.1 δ/mm
D	0.92 δ/mm	2.36 δ/mm
Z	2.50 δ/mm	10.9 δ/mm
	4.00 Jan - 13th Feb	
	4.06 14th Feb - Mar	
	4.11 Apr.	
	4.15 May	
	4.18 June - Aug	
	4.18 Sept - 14th Dec	
	4.05 15th Dec - 31st Dec.	

Baseline Values - Sensitive Magnetograms

		<u>H baseline</u>	<u>D baseline</u>	<u>Z baseline</u>	
1 Jan-22 Jan	23476 δ at 0°C	1 Jan-31 Jan	17 $^\circ$ 37.6'E	1 Jan-19 Jan	-3694.2 δ at 0°C
23 Jan-13 Feb	23359 "	1 Feb-30 Jun	17 $^\circ$ 37.7'E	20 Jan-12 Feb	-36821 "
14 Feb-13 Mar	23364 "	1 Jul-14 Dec	17 $^\circ$ 37.8'E	13 Feb- 2 Mar	-36722 "
14 Mar- 2 Sep	23367 "	15 Dec-31 Dec	17 $^\circ$ 38.4'E	3 Mar-13 Mar	-36724 "
3 Sep-21 Nov	23366 "			14 Mar-30 Apr	-36726 "
22 Nov-14 Dec	23360 "			1 May-30 Jun	-36731 "
15 Dec-31 Dec	23296 "			1 Jul-31 Aug	-36728 "
				1 Sep-23 Nov	-36731 "
				24 Nov-26 Nov	-36732 "
				27 Nov-30 Nov	-36733 "
				1 Dec-14 Dec	-36734 "
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Insensitive Magnetograms

Insensitive O C baselines are only quoted for the days on which they are required for completion or clarification of record. The hourly values derived from insensitive records are calculated by comparing sensitive and insensitive magnetogram baselines on the same day at the temperature for that day.

<u>Date</u>	<u>H baseline</u>	<u>D baseline</u>	<u>Z baseline</u>
Jan 21	23996 δ	16 $^\circ$ 30.3'E	-36854 δ
23	992	30.5	854
25	993	30.3	856
27	991	30.4	854
Feb 12	986	30.6	854
25	987	29.9	863
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14	996	30.5	878
Dec 4	992	30.8	880
14	995	30.9	880
21	995	30.7	881
24	992	30.9	885

Baseline Separations - to give scale.

	<u>H - D</u>	<u>D - Z</u>	<u>D - H</u>	<u>H - Z</u>
1 Jan-12 Feb	37.0 mm \pm 0.1	118.4 mm \pm 0.1	(
13 Feb-14 Dec	36.9 mm \pm 0.1	149.4 mm \pm 0.1	(46.6 mm \pm 0.2	131.2 mm \pm 0.2
15 Dec-31 Dec	36.9 mm \pm 0.1	136.3 mm \pm 0.1	(

(Sensitive)

(Insensitive)

ARGENTINE ISLANDS A.973

FEBRUARY 1959

Lower limit K_9 : 500 y

Scale Values: \bar{H} 4.39 y/mm \bar{D} 6.28 y/mm

K_H

K_D

MAX (K_H, K_D)

Day	K_H								K_D								MAX (K_H, K_D)								Sum
	E1	E2	E3	E4	E5	E6	E7	E8	E1	E2	E3	E4	E5	E6	E7	E8	E1	E2	E3	E4	E5	E6	E7	E8	
1	2	3	2	3	1	2	2	2	1	2	2	2	3	1	1	1	2	3	2	3	3	2	2	2	19
2	2	3	3	3	4	3	4	4	1	2	4	3	4	1	3	1	2	3	4	3	4	3	4	4	27
3	3	2	2	3	2	3	4	4	2	2	2	3	3	3	3	3	3	2	2	3	3	3	4	4	24
4	3	2	2	3	4	4	4	5	3	3	3	3	4	3	3	4	3	3	3	3	4	4	4	5	29
5	3	4	2	2	3	3	3	3	2	2	3	3	3	2	2	1	3	4	3	3	3	3	3	3	25
6	2	2	1	3	2	2	3	3	3	1	3	3	3	2	2	3	3	2	3	3	3	2	3	3	22
7	3	2	1	1	3	2	2	2	2	2	2	2	1	1	1	0	3	2	2	2	3	2	2	2	18
8	2	3	2	2	2	2	4	5	1	2	2	2	3	2	3	3	2	3	2	2	3	2	4	5	25
9	3	3	4	2	2	2	1	2	4	4	5	3	1	2	0	1	4	4	5	3	2	2	1	2	23
10	2	1	1	1	1	2	3	3	2	0	0	1	1	1	1	1	2	1	1	1	1	2	3	3	14
11	2	4	4	5	4	3	4	5	0	3	4	6	5	3	3	2	2	4	4	6	5	3	4	5	33
12	3	4	3	3	2	3	3	3	3	4	2	3	3	3	2	4	3	4	3	3	3	3	3	4	26
13	2	2	2	2	3	3	4	4	4	1	1	2	3	3	3	3	4	2	2	2	3	3	4	4	24
14	3	3	2	1	5	3	4	3	2	4	2	4	4	3	2	1	3	4	2	4	5	3	4	3	28
15	3	4	4	4	3	4	3	3	2	5	5	4	4	2	1	0	3	5	5	4	4	4	3	3	31
16	4	4	4	2	4	5	4	4	5	4	5	3	4	4	4	5	5	4	5	3	4	5	4	5	35
17	5	3	3	2	1	3	3	2	5	4	4	1	2	2	2	0	5	4	4	2	2	3	3	2	25
18	1	1	1	1	1	2	1	2	0	0	0	0	0	0	0	0	1	1	1	1	1	2	1	2	10
19	3	3	1	1	2	1	2	3	1	2	3	3	3	1	1	2	3	3	3	3	3	1	2	3	21
20	1	2	1	2	1	1	1	1	0	1	1	1	1	0	0	0	1	2	1	2	1	1	1	1	10
21	2	1	2	2	1	2	3	2	0	1	2	2	1	1	2	1	2	1	2	2	1	2	3	2	15
22	3	4	3	3	1	2	2	4	2	4	3	4	2	2	1	2	3	4	3	4	2	2	2	4	24
23	4	3	4	3	3	0	2	1	3	3	4	4	3	0	0	0	4	3	4	4	3	0	2	1	21
24	0	1	1	1	1	2	2	3	0	0	1	2	2	1	1	1	0	1	1	2	2	2	2	3	13
25	5	5	5	5	6	5	4	4	2	4	5	5	5	4	3	3	5	5	5	5	6	5	4	4	39
26	4	4	5	3	4	3	3	3	4	4	5	2	3	4	3	3	4	4	5	3	4	4	3	3	30
27	3	3	2	3	3	4	3	3	3	3	2	2	3	3	3	3	3	3	2	3	3	4	3	3	24
28	4	3	2	3	3	2	4	4	5	4	2	3	4	3	4	5	5	4	2	3	4	3	4	5	30

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	T	+ 4 mins.
<u>Insensitive Magnetograms</u>		
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3. Order of Traces, from top to bottom

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	4.06 14th Feb - Mar	
	4.11 Apr.	
	4.11 May	
	4.15 June - Aug	
	4.18 Sept - 14th Dec	
	4.05 15th Dec - 31st Dec.	

H baseline			D baseline			Z baseline		
1 Jan-22 Jan	23476 g	at 0°C	1 Jan-31 Jan	17° 37.6' E	1 Jan-19 Jan	-3694.2 g	at 0°C	
25 Jan-13 Feb	23359	"	1 Feb-30 Jan	17° 37.7' E	20 Jan-12 Feb	-3682.1	"	
14 Feb-13 Mar	23364	"	1 Jul-14 Dec	17° 37.8' E	13 Feb- 2 Mar	-36722	"	
14 Mar- 2 Sep	23367	"	15 Dec-31 Dec	17° 38.4' E	3 Mar-13 Mar	-36724	"	
3 Sep-21 Nov	23366	"			14 Mar-30 Apr	-36726	"	
22 Nov-14 Dec	23360	"			1 May-30 Jun	-36731	"	
15 Dec-31 Dec	23296	"			1 Jul-31 Aug	-36728	"	
					1 Sep-23 Nov	-36731	"	
					24 Nov-26 Nov	-36732	"	
					27 Nov-30 Nov	-36733	"	
					1 Dec-14 Dec	-36734	"	
					15 Dec-31 Dec	-36601	"	

Insensitive Magnetograms

Insensitive O C baselines are only quoted for the days on which they are required for completion or clarification of record. The hourly values derived from insensitive records are calculated by comparing sensitive and insensitive magnetogram baselines on the same day at the temperature for that day.

Date	H baseline	D baseline	Z baseline
Jan 21	23996 g	16° 30.3' E	-36854 g
23	992	30.5	854
25	993	30.3	856
27	991	30.4	854
Feb 12	986	30.6	854
25	987	29.9	863
27	987	30.6	863
May 3	983	29.4	882
4	986	29.2	876
Jun 8	984	29.2	888
10	997	30.0	886
Jul 14	994	29.9	880
15	994	30.1	880
16	24001	30.4	881
Sep 12	23998	30.1	877
13	994	30.1	881
14	996	30.5	878
Dec 4	992	30.8	880
14	995	30.9	880
21	995	30.7	881
24	992	30.9	885

Baseline Separations - to give scale.

	H - D	D - Z	D - H	H - Z
1 Jan-12 Feb	37.0 mm ± 0.1	118.4 mm ± 0.1	(
13 Feb-14 Dec	36.9 mm ± 0.1	149.4 mm ± 0.1	(46.6 mm ± 0.2	131.2 mm ± 0.2
15 Dec-31 Dec	36.9 mm ± 0.1	136.3 mm ± 0.1	(

(Sensitive)

(Insensitive)

Lower limit K9: 500 y

Scale Values: H 4.39 y/ann D 6.28 y/ann

K_H

K_D

MAX ($K_H - K_D$)

Day	K1	K2	K3	K4	K5	K6	K7	K8	K1	K2	K3	K4	K5	K6	K7	K8	K1	K2	K3	K4	K5	K6	K7	K8	Sum
1	4	4	4	4	4	4	3	4	3	4	5	4	3	3	4	3	4	4	5	4	4	4	4	4	33
2	4	3	3	3	2	3	3	2	4	3	4	3	4	3	4	4	4	3	4	3	4	3	4	4	29
3	3	4	2	2	1	3	3	4	3	3	3	3	2	3	2	3	3	4	3	3	2	3	3	4	25
4	3	2	2	2	1	2	2	2	3	1	3	3	2	2	2	1	3	2	3	3	2	2	2	2	19
5	2	2	2	1	1	3	2	2	4	3	3	1	2	2	2	1	4	3	3	1	2	3	2	2	20
6	2	2	1	0	1	1	1	1	2	2	1	1	1	0	1	0	2	2	1	1	1	1	1	1	10
7	1	1	0	1	1	2	3	3	0	2	2	1	2	1	2	3	1	2	2	1	2	2	3	3	16
8	3	2	2	0	0	2	1	2	5	3	1	0	1	1	1	0	5	3	2	0	1	2	1	2	16
9	1	1	1	1	1	1	1	1	2	1	1	1	1	1	0	0	2	1	1	1	1	1	1	1	9
10	1	1	2	1	1	1	1	1	0	0	1	2	0	0	0	0	1	1	2	2	1	1	1	1	10
11	2	1	2	2	1	1	3	2	0	0	1	2	2	1	2	1	2	1	2	2	2	1	3	2	15
12	3	3	3	2	2	3	3	2	2	3	3	3	4	3	3	1	3	3	3	3	4	3	3	2	24
13	3	3	2	2	1	2	2	3	1	1	1	3	3	2	1	1	3	3	2	3	3	2	2	3	21
14	1	2	3	1	1	2	1	2	0	3	3	2	2	2	1	1	1	3	3	2	2	2	1	2	16
15	3	3	1	2	2	1	1	2	3	3	0	2	1	0	0	0	3	3	1	2	2	1	1	2	15
16	2	1	2	1	1	1	1	2	3	0	0	0	1	0	0	0	3	1	2	1	1	1	1	2	12
17	2	2	2	0	1	2	2	2	1	2	2	1	1	2	1	1	2	2	2	1	1	2	2	2	14
18	1	1	1	1	1	2	2	4	0	0	0	0	1	1	0	2	1	1	1	1	1	2	2	4	13
19	2	2	1	2	1	2	2	1	1	0	0	3	3	1	2	0	2	2	1	3	3	2	2	1	16
20	2	2	1	1	1	1	2	1	0	1	1	1	2	0	1	0	2	2	1	1	2	1	2	1	12
21	2	1	1	1	0	2	2	2	0	0	1	3	2	1	2	0	2	1	1	3	2	2	2	2	15
22	2	0	1	1	1	1	2	2	0	0	1	1	2	2	1	0	2	0	1	1	2	2	2	2	12
23	3	3	2	2	1	2	3	1	1	3	3	2	2	1	2	1	3	3	3	2	2	2	3	1	19
24	2	3	2	2	1	1	2	2	2	2	1	1	2	1	1	0	2	3	2	2	2	1	2	2	16
25	3	4	3	2	2	3	4	4	1	4	3	1	3	3	3	1	3	4	3	2	3	3	4	4	26
26	2	1	4	4	6	3	4	5	2	0	3	5	6	3	3	5	2	1	4	5	6	3	4	5	30
27	6	5	6	4	6	5	4	4	7	6	7	5	5	4	3	3	7	6	7	5	6	5	4	4	44
28	3	3	3	4	4	5	4	5	1	5	4	4	5	4	4	6	3	5	4	4	5	5	4	6	36
29	5	5	5	3	3	3	4	3	4	4	5	4	4	3	3	2	5	5	5	4	4	3	4	3	33
30	3	3	3	3	3	2	2	3	3	3	4	4	3	2	2	2	3	3	4	4	3	2	2	3	24
31	2	3	3	2	1	2	3	3	3	2	3	3	2	2	3	5	3	3	3	3	2	2	3	5	24

BRITISH ANTARCTIC SURVEY

(FORMERLY FALKLAND ISLAND DEPENDENCIES SURVEY)

MAGNETIC RECORDS FOR 1959

FROM ARGENTINE ISLANDS A.973

LAT. -65° 15'

LONG. 295° 44'

GEOMAGNETIC LAT. -53.8°

GEOMAGNETIC LONG. 3.3°

ORIGINAL RECORDS HELD AT :-

BRITISH ANTARCTIC SURVEY
DEPARTMENT OF NATURAL PHILOSOPHY
DRUMMOND STREET
EDINBURGH, 8.

Phone: EDINBURGH NEWINGTON 1011 EXT. 2497

HEAD OFFICE:-

BRITISH ANTARCTIC SURVEY
30 GILLINGHAM STREET
LONDON, S.W. 1.

Phone: LONDON VICTORIA 3687

EXPLANATORY NOTES 1959

1. Instruments

These are standard La Cour variometers, recording H, D, and Z.

2. Time

Charts were changed at Greenwich midnight, so that each chart shows a complete Greenwich day. The master clock was adjusted to keep the clock error less than 1/2 minute.

The parallax correction for each trace is given below. The correction is to be added to the times read from the magnetograms.

<u>Sensitive Magnetograms</u>	<u>Trace</u>	<u>Correction</u>
	H	+ 2 mins.
	D	+ 1 min.
	Z	nil
	T	+ 4 mins.
<u>Insensitive Magnetograms</u>		
	H	nil
	D	- 1 min.
	Z	- 2 mins.
	T	+ 1 min.

3. Order of Traces, from top to bottom

<u>Sensitive Magnetograms</u>	<u>Insensitive Magnetograms</u>
T trace	D trace and baseline (double baseline, upper line used)
H trace and baseline	H baseline
D baseline and trace	T trace
Z baseline and trace	H trace
	Z baseline and trace

4. Sense of Traces

All magnetograms: Temperature increases up the sheet.
 H increases up the sheet.
 D increases easterly up the sheet.
 Z increases down the sheet.
 (N.B. Z is negative, hence as Z increases, modulus of Z decreases).

5. Temperature Coefficients

The sensitive H and Z variometers have appreciable temperature coefficients. H baseline values increase with increasing temperature. Z baseline values decrease (i.e. their moduli increase) with increasing temperature.

	<u>H</u>	<u>Z</u>	
Temperature coefficient	4.5 $\gamma/^\circ\text{C}$	2.96 $\gamma/^\circ\text{C}$	Jan - Feb.
		1.5 $\gamma/^\circ\text{C}$	Mar - Dec.
<u>T Trace</u>	<u>Scale Value</u>	<u>Baseline</u>	
Jan - 22nd Mar.	0.527 $^\circ\text{C}/\text{mm}$	- 31.5 $^\circ\text{C}$	
22nd Mar - 27th Mar	0.527 $^\circ\text{C}/\text{mm}$	- 33.2 $^\circ\text{C}$	
27th Mar - Dec	0.527 $^\circ\text{C}/\text{mm}$	- 33.6 $^\circ\text{C}$	
(Insensitive Magnetogram	1.88 $^\circ\text{C}/\text{mm}$	+ 12.7 $^\circ\text{C}$)	

6. Scale Values

	<u>Sensitive Magnetograms</u>	<u>Insensitive Magnetograms</u>
H	4.37 δ/mm	16.1 δ/mm
D	0.92 δ/mm	2.36 δ/mm
Z	2.50 δ/mm	10.9 δ/mm
	4.00	Jan - 13th Feb
	4.06	14th Feb - Mar
	4.11	Apr.
	4.15	May
	4.18	June - Aug
	4.05	Sept - 14th Dec
		15th Dec - 31st Dec.

Baseline Values - Sensitive Magnetograms

		<u>H baseline</u>	<u>D baseline</u>	<u>Z baseline</u>	
1 Jan-22 Jan	23476 δ at 0 $^\circ\text{C}$	1 Jan-31 Jan	17 $^\circ$ 37.6'E	1 Jan-19 Jan	-3694.2 δ at 0 $^\circ\text{C}$
23 Jan-13 Feb	23359 "	1 Feb-30 Jun	17 $^\circ$ 37.7'E	20 Jan-12 Feb	-36821 "
14 Feb-13 Mar	23364 "	1 Jul-14 Dec	17 $^\circ$ 37.8'E	13 Feb- 2 Mar	-36722 "
14 Mar- 2 Sep	23367 "	15 Dec-31 Dec	17 $^\circ$ 38.4'E	3 Mar- 13 Mar	-36724 "
3 Sep-21 Nov	23366 "			14 Mar-30 Apr	-36726 "
22 Nov-14 Dec	23360 "			1 May-30 Jun	-36731 "
15 Dec-31 Dec	23296 "			1 Jul-31 Aug	-36728 "
				1 Sep-23 Nov	-36731 "
				24 Nov-26 Nov	-36732 "
				27 Nov-30 Nov	-36733 "
				1 Dec-14 Dec	-36734 "
				15 Dec-31 Dec	-36601 "

Insensitive Magnetograms

Insensitive O C baselines are only quoted for the days on which they are required for completion or clarification of record. The hourly values derived from insensitive records are calculated by comparing sensitive and insensitive magnetogram baselines on the same day at the temperature for that day.

<u>Date</u>	<u>H baseline</u>	<u>D baseline</u>	<u>Z baseline</u>
Jan 21	23996 δ	15 $^\circ$ 30.3'E	-36854 δ
23	992	30.5	854
25	993	30.3	856
27	991	30.4	854
Feb 12	986	30.6	854
25	987	29.9	863
27	987	30.6	863
May 3	983	29.4	882
4	986	29.2	876
Jun 8	984	29.2	888
10	997	30.0	886
Jul 14	994	29.9	880
15	994	30.1	880
16	24001	30.4	881
Sep 12	23998	30.1	877
13	994	30.1	881
14	996	30.5	878
Dec 4	992	30.8	880
14	995	30.9	880
21	995	30.7	881
24	992	30.9	885

Baseline Separations - to give scale.

	<u>H - D</u>	<u>D - Z</u>	<u>D - H</u>	<u>H - Z</u>
1 Jan-12 Feb	37.0 mm \pm 0.1	118.4 mm \pm 0.1	(
13 Feb-14 Dec	36.9 mm \pm 0.1	149.4 mm \pm 0.1	(45.6 mm \pm 0.2	131.2 mm \pm 0.2
15 Dec-31 Dec	36.9 mm \pm 0.1	136.3 mm \pm 0.1	(
	(Sensitive)		(Insensitive)	

ARGENTINE ISLANDS A.973

APRIL 1959

Lower limit K9: 500 γ

Scale Values: H 4.39 γ/mm D 6.28 γ/mm

K_H

K_D

MAX (K_H, K_D)

Day	K_H								K_D								MAX (K_H, K_D)								Sum
	E1	E2	E3	E4	E5	E6	E7	E8	E1	E2	E3	E4	E5	E6	E7	E8	E1	E2	E3	E4	E5	E6	E7	E8	
1	3	3	3	1	2	1	1	1	4	3	4	1	1	1	0	0	4	3	4	1	2	1	1	1	17
2	1	1	1	2	1	1	3	2	0	0	0	2	2	1	1	3	1	1	1	2	2	1	3	3	14
3	2	3	3	2	1	0	1	3	3	2	2	3	3	1	0	2	3	3	3	3	3	1	1	3	20
4	2	1	2	1	0	1	2	1	3	2	0	2	0	2	1	0	3	2	2	2	0	2	2	1	14
5	3	2	1	1	2	1	1	1	3	1	1	1	1	0	0	0	3	2	1	1	2	1	1	1	12
6	2	1	2	0	0	1	2	1	3	1	1	0	0	1	2	2	3	1	2	0	0	1	2	2	11
7	2	2	2	1	1	1	3	2	0	0	2	1	1	1	2	3	2	2	2	1	1	1	3	3	15
8	3	3	3	2	2	2	3	4	3	2	3	3	3	2	2	4	3	3	3	3	3	2	3	4	24
9	5	4	3	3	1	2	4	4	6	5	4	4	2	1	3	3	6	5	4	4	2	2	4	4	31
10	5	4	5	4	5	4	4	3	4	4	5	5	6	4	4	3	5	4	5	5	6	4	4	3	36
11	3	3	3	3	2	2	3	4	3	3	3	3	2	1	2	4	3	3	3	3	2	2	3	4	23
12	3	2	2	2	1	1	1	2	3	2	2	1	1	0	0	1	3	2	2	2	1	1	1	2	14
13	2	2	2	1	1	1	1	2	3	0	3	1	2	2	1	2	3	2	3	1	2	2	1	2	16
14	2	2	1	1	1	0	2	3	3	3	3	1	2	1	1	2	3	3	3	1	2	1	2	3	18
15	4	2	2	1	0	1	2	2	4	2	3	2	1	1	1	1	4	2	3	2	1	1	2	2	17
16	2	1	2	1	2	2	1	1	1	2	2	2	1	1	1	0	2	2	2	2	2	2	1	1	14
17	1	1	2	1	1	1	1	1	0	0	2	2	2	1	1	2	1	1	2	2	2	1	1	2	12
18	2	0	1	0	0	1	1	0	3	1	0	1	0	1	1	0	3	1	1	1	0	1	1	0	8
19	1	1	1	2	1	0	1	1	0	0	1	1	2	1	1	1	1	1	1	2	2	1	1	1	10
20	1	2	2	1	1	1	2	1	0	0	1	2	1	0	1	0	1	2	2	2	1	1	2	1	12
21	3	2	2	2	1	1	1	1	2	3	2	3	2	1	1	0	3	3	2	3	2	1	1	1	16
22	1	1	1	1	0	1	1	1	0	0	0	0	0	0	0	0	1	1	1	1	0	1	1	1	7
23	1	1	1	3	3	2	5	4	0	0	0	2	3	3	5	5	1	1	1	3	3	3	5	5	22
24	4	5	3	2	2	1	1	3	3	4	4	4	4	2	0	2	4	5	4	4	4	2	1	3	27
25	3	4	2	2	2	3	3	3	4	4	4	3	2	3	3	3	4	4	4	3	2	3	3	3	26
26	4	4	1	2	2	3	3	4	4	4	2	3	2	1	2	4	4	4	2	3	2	3	3	4	25
27	3	3	3	2	1	1	2	3	3	5	4	3	3	2	0	3	3	5	4	3	3	2	2	3	25
28	2	2	2	3	1	1	2	4	2	3	4	3	2	0	2	4	2	3	4	3	2	1	2	4	21
29	3	4	3	2	3	2	3	3	4	4	3	3	3	2	2	1	4	4	3	3	3	2	3	3	25
30	1	2	2	1	3	3	4	2	3	3	3	1	2	2	3	4	3	3	3	1	2	3	4	4	23

BRITISH ANTARCTIC SURVEY

(FORMERLY FALKLAND ISLAND DEPENDENCIES SURVEY)

MAGNETIC RECORDS FOR 1959

FROM ARGENTINE ISLANDS A.973

LAT. -65° 15'

LONG. 295° 44'

GEOMAGNETIC LAT. -53.8°

GEOMAGNETIC LONG. 3.3°

ORIGINAL RECORDS HELD AT :-

BRITISH ANTARCTIC SURVEY

DEPARTMENT OF NATURAL PHILOSOPHY

DRUMMOND STREET

EDINBURGH, 8.

Phone: EDINBURGH NEWINGTON 1011 EXT. 2497

HEAD OFFICE:-

BRITISH ANTARCTIC SURVEY

30 GILLINGHAM STREET

LONDON, S.W. 1.

Phone: LONDON VICTORIA 3687

1. Instruments

These are standard La Cour variometers, recording H, D, and Z.

2. Time

Charts were changed at Greenwich midnight, so that each chart shows a complete Greenwich day. The master clock was adjusted to keep the clock error less than 1/2 minute.

The parallax correction for each trace is given below. The correction is to be added to the times read from the magnetograms.

Sensitive Magnetograms	Trace	Correction
	H	+ 2 mins.
	D	+ 1 min.
	Z	nil
	T	+ 4 mins.
Insensitive Magnetograms		
	H	nil
	D	- 1 min.
	Z	- 2 mins.
	T	+ 1 min.

3. Order of Traces, from top to bottom

Sensitive Magnetograms	Insensitive Magnetograms
T trace	D trace and baseline (double baseline, upper line used)
H trace and baseline	H baseline
D baseline and trace	T trace
Z baseline and trace	H trace
	Z baseline and trace

4. Sense of Traces

All magnetograms: Temperature increases up the sheet.
 H increases up the sheet.
 D increases easterly up the sheet.
 Z increases down the sheet.
 (N.B. Z is negative, hence as Z increases, modulus of Z decreases).

5. Temperature Coefficients

The sensitive H and Z variometers have appreciable temperature coefficients. H baseline values increase with increasing temperature. Z baseline values decrease (i.e. their moduli increase) with increasing temperature.

	H	Z	
Temperature coefficient	4.5 $\delta/^\circ\text{C}$	2.96 $\delta/^\circ\text{C}$	Jan - Feb.
		1.5 $\delta/^\circ\text{C}$	Mar - Dec.
T Trace	Scale Value	Baseline	
Jan - 22nd Mar.	0.527 $^\circ\text{C}/\text{mm}$	- 31.5 $^\circ\text{C}$	
22nd Mar - 27th Mar	0.527 $^\circ\text{C}/\text{mm}$	- 33.2 $^\circ\text{C}$	
27th Mar - Dec	0.527 $^\circ\text{C}/\text{mm}$	- 33.6 $^\circ\text{C}$	
(Insensitive Magnetogram	1.88 $^\circ\text{C}/\text{mm}$	+ 12.7 $^\circ\text{C}$)	

6. Scale Values

	Sensitive Magnetograms	Insensitive Magnetograms
H	4.37 δ/mm	16.1 δ/mm
D	0.92 δ/mm	2.36 δ/mm
Z	2.50 δ/mm	10.9 δ/mm
	4.00	Jan - 13th Feb
	4.06	14th Feb - Mar
	4.11	Apr.
	4.15	May
	4.18	June - Aug
	4.18	Sept - 14th Dec
	4.05	15th Dec - 31st Dec.

H baseline		D baseline		Z baseline	
1 Jan-22 Jan	23476 δ at 0 $^\circ\text{C}$	1 Jan-31 Jan	17 $^\circ$ 37.6'E	1 Jan-19 Jan	-36942 δ at 0 $^\circ\text{C}$
23 Jan-13 Feb	23359 "	1 Feb-30 Jun	17 $^\circ$ 37.7'E	20 Jan-12 Feb	-36821 "
14 Feb-13 Mar	23364 "	1 Jul-14 Dec	17 $^\circ$ 37.8'E	13 Feb- 2 Mar	-36722 "
14 Mar- 2 Sep	23367 "	15 Dec-31 Dec	17 $^\circ$ 38.4'E	3 Mar-13 Mar	-36724 "
3 Sep-21 Nov	23366 "			14 Mar-30 Apr	-36726 "
22 Nov-14 Dec	23360 "			1 May-30 Jun	-36731 "
15 Dec-31 Dec	23296 "			1 Jul-31 Aug	-36728 "
				1 Sep-23 Nov	-36731 "
				24 Nov-26 Nov	-36732 "
				27 Nov-30 Nov	-36733 "
				1 Dec-14 Dec	-36734 "
				15 Dec-31 Dec	-36601 "

Insensitive Magnetograms

Insensitive O C baselines are only quoted for the days on which they are required for completion or clarification of record. The hourly values derived from insensitive records are calculated by comparing sensitive and insensitive magnetogram baselines on the same day at the temperature for that day.

Date	H baseline	D baseline	Z baseline
Jan 21	23996 δ	16 $^\circ$ 30.3'E	-36854 δ
23	992	30.5	854
25	993	30.3	856
27	991	30.4	854
Feb 12	986	30.6	854
25	987	29.9	863
27	987	30.6	863
May 3	993	29.4	862
4	996	29.2	876
Jun 8	984	29.2	888
10	997	30.0	886
Jul 14	994	29.9	880
15	994	30.1	880
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Sep 12	23998	30.1	877
13	994	30.1	881
14	996	30.5	878
Dec 4	992	30.8	880
14	995	30.9	880
21	995	30.7	881
24	992	30.9	885

Baseline Separations - to give scale.

	H - D	D - Z	D - H	H - Z
1 Jan-12 Feb	57.0 mm \pm 0.1	118.4 mm \pm 0.1	(
13 Feb-14 Dec	36.9 mm \pm 0.1	743.4 mm \pm 0.1	(46.6 mm \pm 0.2	131.2 mm \pm 0.2
15 Dec-31 Dec	36.9 mm \pm 0.1	136.3 mm \pm 0.1	(

(Sensitive)

(Insensitive)

ABERTINE ISLANDS A.973

MAY 1959

Lower limit K9: 500 y

Scale Values: H 4.39 y/ann D 6.28 y/ann

K_H

K_D

MAX (K_H, K_D)

Day	E1	E2	E3	E4	E5	E6	E7	E8	E1	E2	E3	E4	E5	E6	E7	E8	E1	E2	E3	E4	E5	E6	E7	E8	Sum
1	2	2	1	2	2	1	1	2	1	4	2	3	2	0	1	2	2	4	2	3	2	1	1	2	17
2	2	2	2	1	1	2	1	3	1	3	1	0	0	0	0	1	2	3	2	1	1	2	1	3	15
3	2	2	2	1	1	1	1	3	0	1	2	1	1	1	1	3	2	2	2	1	1	1	1	3	10+
4	2	2	2	2	1	1	2	4	1	1	2	1	1	1	2	3	2	2	2	2	1	1	2	4	16
5	5	4	2	2	3	2	1	1	6	6	3	2	3	1	0	0	6	6	3	2	3	2	1	1	24
6	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	8
7	2	1	2	1	1	1	1	2	0	0	0	0	0	0	0	1	2	1	2	1	1	1	1	2	11
8	4	5	4	4	2	2	2	3	2	5	5	5	3	2	1	2	4	5	5	5	3	2	2	3	29
9	3	3	2	2	2	1	1	2	3	2	2	2	2	2	2	1	3	3	2	2	2	2	2	2	18
10	2	2	3	2	2	2	2	2	2	2	2	3	1	2	2	1	2	2	3	3	2	2	2	2	18
11	2	2	3	2	3	2	1	5	2	2	4	2	3	1	1	4	2	2	4	2	3	2	1	5	21
12	6	5	5	5	4	5	2	3	5	5	5	5	4	5	2	4	6	5	5	5	4	5	2	4	36
13	1	2	2	2	1	2	2	3	1	2	2	3	2	2	2	3	1	2	2	3	2	2	2	3	17
14	1	1	1	1	1	1	1	1	0	0	0	1	1	1	0	0	1	1	1	1	1	1	1	1	8
15	3	1	2	2	3	3	3	4	2	2	3	4	3	1	3	4	3	2	3	4	3	3	3	4	25
16	4	4	5	3	2	1	1	2	5	5	5	3	2	1	0	2	5	5	5	3	2	1	1	2	24
17	0	1	2	2	3	2	2	2	2	1	3	3	3	2	1	0	2	1	3	3	3	2	2	2	18
18	3	3	3	1	2	2	3	3	3	3	4	2	1	2	2	4	3	3	4	2	2	2	3	4	23
19	3	3	1	3	3	1	2	2	3	3	1	3	2	1	3	2	3	3	1	3	3	1	3	2	19
20	3	2	2	1	1	1	1	2	3	2	3	2	1	0	2	2	3	2	3	2	1	1	2	2	16
21	3	4	2	2	1	2	2	3	5	3	3	2	1	1	2	2	5	4	3	2	1	2	2	3	22
22	3	3	3	2	3	3	1	3	3	3	3	3	2	3	2	3	3	3	3	3	3	3	2	3	23
23	4	2	2	2	1	1	2	2	4	4	3	3	1	0	2	1	4	4	3	3	1	1	2	2	20
24	3	4	4	4	3	2	2	5	4	3	5	4	3	2	2	4	4	4	5	4	3	2	2	5	29
25	5	4	3	2	1	2	1	2	5	3	4	3	1	1	1	3	5	4	4	3	1	2	1	3	23
26	3	1	1	2	2	0	2	2	4	0	0	2	0	0	2	1	4	1	1	2	2	0	2	2	14
27	3	2	1	1	1	1	1	1	2	1	1	1	1	0	0	0	3	2	1	1	1	1	1	1	11
28	1	1	1	1	1	1	0	1	0	1	0	0	0	0	0	0	1	1	1	1	1	1	0	1	7
29	1	1	1	1	1	1	1	1	0	1	0	0	0	0	0	0	1	1	1	1	1	1	1	1	8
30	1	1	1	1	1	2	2	1	0	0	0	0	1	0	0	0	1	1	1	1	1	2	2	1	10
31	2	3	2	3	2	2	3	4	1	3	1	2	1	1	3	3	2	3	2	3	2	2	3	4	21

BRITISH ANTARCTIC SURVEY

(FORMERLY FALKLAND ISLAND DEPENDENCIES SURVEY)

MAGNETIC RECORDS FOR 1959

FROM ARGENTINE ISLANDS A.973

LAT. -65° 15'

LONG. 295° 44'

GEOMAGNETIC LAT. -53.8°

GEOMAGNETIC LONG. 3.3°

ORIGINAL RECORDS HELD AT :-

BRITISH ANTARCTIC SURVEY

DEPARTMENT OF NATURAL PHILOSOPHY

DRUMMOND STREET

EDINBURGH, 8.

Phone: EDINBURGH NEWINGTON 1011 EXT. 2497

HEAD OFFICE:-

BRITISH ANTARCTIC SURVEY

30 GILLINGHAM STREET

LONDON, S.W. 1.

Phone: LONDON VICTORIA 3687

EXPLANATORY NOTES 1939

1. Instruments

These are standard La Cour variometers, recording H, D, and Z.

2. Time

Charts were changed at Greenwich midnight, so that each chart shows a complete Greenwich day. The master clock was adjusted to keep the clock error less than 1/2 minute.

The parallax correction for each trace is given below. The correction is to be added to the times read from the magnetograms.

<u>Sensitive Magnetograms</u>	<u>Trace</u>	<u>Correction</u>
	H	+ 2 mins.
	D	- 1 min.
	Z	nil
	T	+ 4 mins.

Insensitive Magnetograms

H	nil
D	- 1 min.
Z	- 2 mins.
T	+ 1 min.

3. Order of Traces, from top to bottom

<u>Sensitive Magnetograms</u>	<u>Insensitive Magnetograms</u>
T trace	D trace and baseline (double baseline. upper line used)
H trace and baseline	H baseline
D baseline and trace	T trace
Z baseline and trace	H trace
	Z baseline and trace

4. Sense of Traces

All magnetograms: Temperature increases up the sheet.
 H increases up the sheet.
 D increases easterly up the sheet.
 Z increases down the sheet.
 (N.B. Z is negative, hence as Z increases, modulus of Z decreases).

5. Temperature Coefficients

The sensitive H and Z variometers have appreciable temperature coefficients. H baseline values increase with increasing temperature. Z baseline values decrease (i.e. their moduli increase) with increasing temperature.

	<u>H</u>	<u>Z</u>	
Temperature coefficient	4.5 %/°C	2.96 %/°C	Jan - Feb.
		1.5 %/°C	Mar - Dec.
<u>T Trace</u>	<u>Scale Value</u>	<u>Baseline</u>	
Jan - 22nd Mar.	0.527°C/mm	- 31.5°C	
22nd Mar - 27th Mar	0.527°C/mm	- 33.2°C	
27th Mar - Dec	0.527°C/mm	- 33.6°C	
(Insensitive Magnetogram 1.88 °C/mm)		+ 12.7°C	

6. Scale Values

	<u>Sensitive Magnetograms</u>	<u>Insensitive Magnetograms</u>
H	4.37 %/mm	16.1 %/mm
D	0.92 %/mm	2.36 %/mm
Z	2.50 %/mm	10.9 %/mm
	4.00 Jan - 13th Feb	
	4.06 14th Feb - Mar	
	4.11 Apr.	
	4.15 May	
	4.15 June - Aug	
	4.18 Sept - 14th Dec	
	4.05 15th Dec - 31st Dec.	

Baseline Values - Sensitive Magnetograms

1939

		<u>H baseline</u>	<u>D baseline</u>	<u>Z baseline</u>	
1 Jan-22 Jan	23476 at 0°C	1 Jan-31 Jan	17° 37.6'E	1 Jan-19 Jan	-36942 at 0°C
23 Jan-13 Feb	23359 "	1 Feb-30 Jun	17° 37.7'E	20 Jan-12 Feb	-36821 "
14 Feb-13 Mar	23364 "	1 Jul-14 Dec	17° 37.8'E	13 Feb- 2 Mar	-36722 "
14 Mar- 2 Sep	23367 "	15 Dec-31 Dec	17° 38.4'E	3 Mar-13 Mar	-36724 "
3 Sep-21 Nov	23366 "			14 Mar-30 Apr	-36726 "
22 Nov-14 Dec	23360 "			1 May-30 Jun	-36731 "
15 Dec-31 Dec	23296 "			1 Jul-31 Aug	-36728 "
				1 Sep-23 Nov	-36731 "
				24 Nov-26 Nov	-36732 "
				27 Nov-30 Nov	-36733 "
				1 Dec-14 Dec	-36734 "
				15 Dec-31 Dec	-36601 "

Insensitive Magnetograms

Insensitive 0 C baselines are only quoted for the days on which they are required for completion or clarification of record. The hourly values derived from insensitive records are calculated by comparing sensitive and insensitive magnetogram baselines on the same day at the temperature for that day.

<u>Date</u>	<u>H baseline</u>	<u>D baseline</u>	<u>Z baseline</u>
Jan 21	23996 x	16° 30.3'E	-36854 x
23	992	30.5	854
25	993	30.3	856
27	991	30.4	854
Feb 12	986	30.6	854
25	987	29.9	863
27	987	30.6	863
May 3	983	29.4	882
4	986	29.2	876
Jun 8	984	29.2	888
10	997	30.0	886
Jul 14	994	29.9	880
15	994	30.1	880
16	24001	30.4	881
Sep 12	23998	30.1	877
13	994	30.1	881
14	996	30.5	878
Dec 4	992	30.8	880
14	995	30.9	880
21	995	30.7	881
24	992	30.9	885

Baseline Separations - to give scale.

	<u>H - D</u>	<u>D - Z</u>	<u>D - H</u>	<u>H - Z</u>
1 Jan-12 Feb	57.0 mm ± 0.1	118.4 mm ± 0.1	(
13 Feb-14 Dec	36.9 mm ± 0.1	149.4 mm ± 0.1	(46.6 mm ± 0.2	131.2 mm ± 0.2
15 Dec-31 Dec	36.9 mm ± 0.1	136.3 mm ± 0.1	(

(Sensitive)

(Insensitive)

101 (L.S.)

	B1	B2	B3	B4	B5	B6	B7	B8	B1	B2	B3	B4	B5	B6	B7	B8	B1	B2	B3	B4	B5	B6	B7	B8	Adv
1	4	2	1	2	1	1	1	2	3	3	3	1	1	1	1	2	4	3	3	2	1	1	1	2	17
2	2	2	3	2	2	2	3	3	2	3	3	3	1	2	2	4	2	3	3	3	2	2	3	4	22
3	3	4	2	2	2	1	2	2	3	3	3	3	1	1	1	1	3	4	3	3	2	1	2	2	20
4	4	4	4	2	2	2	2	4	4	3	4	4	1	2	3	3	4	4	4	4	2	2	3	4	27
5	5	3	2	2	1	2	2	1	4	4	2	2	1	2	2	1	5	4	2	2	1	2	2	1	19
6	1	1	2	2	2	2	2	3	1	1	2	2	2	2	1	3	1	1	2	2	2	2	2	3	15
7	2	2	1	2	1	1	1	1	2	3	2	2	1	1	2	1	2	3	2	2	1	1	2	1	14
8	1	1	3	1	1	1	1	2	1	1	3	3	1	2	0	2	1	1	3	3	1	2	1	2	14
9	2	3	3	4	3	2	2	2	2	3	3	3	3	2	2	2	2	3	3	4	3	2	2	2	13+
10	4	5	2	1	1	1	0	1	4	5	3	2	2	2	0	1	4	5	3	2	2	2	0	1	19
11	1	1	1	3	2	2	1	1	1	1	2	4	2	2	1	0	1	1	2	4	2	2	1	1	14
12	1	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	1	3
13	1	1	0	1	0	1	1	0	0	0	0	0	0	0	0	0	1	1	0	1	0	1	1	0	5
14	0	1	0	1	2	2	0	2	0	0	0	1	2	2	1	2	0	1	0	1	2	2	1	2	9
15	2	1	3	3	1	1	1	0	1	1	4	3	1	0	0	0	2	1	4	3	1	1	1	0	13
16	2	2	1	1	0	0	1	1	1	3	1	1	1	0	0	0	2	3	1	1	1	0	1	1	10
17	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3	3
18	2	3	2	1	1	2	1	2	2	3	3	1	1	1	1	0	2	3	3	1	1	2	1	2	15
19	1	3	2	1	0	0	0	0	1	4	3	1	0	0	0	0	1	4	3	1	0	0	0	0	9
20	2	2	1	1	0	0	1	2	3	0	1	1	1	0	0	1	3	2	1	1	1	0	1	2	11
21	2	1	2	0	0	0	1	1	2	1	3	1	0	0	1	1	2	1	3	1	0	0	1	1	9
22	2	1	2	2	3	1	1	2	3	3	3	3	2	1	0	1	3	3	3	3	3	1	1	2	19
23	2	2	1	1	1	2	3	4	3	2	1	0	0	1	3	4	3	2	1	1	1	2	3	4	17
24	4	5	2	1	0	2	2	3	5	5	2	0	0	0	2	3	5	5	2	1	0	2	2	3	20
25	3	2	1	1	0	1	0	3	3	2	1	1	0	0	0	3	3	2	1	1	0	1	0	3	11
26	3	3	3	3	2	1	1	0	3	4	4	4	1	1	0	0	3	4	4	4	2	1	1	0	19
27	1	1	1	3	4	4	2	4	1	0	2	3	2	4	2	4	1	1	2	3	4	4	2	4	21
28	3	4	5	3	2	2	3	3	4	5	5	5	4	2	3	2	4	5	5	5	4	2	3	3	31
29	2	3	4	5	3	2	4	4	3	4	5	4	3	2	3	5	3	4	5	5	3	2	4	5	31
30	3	3	3	4	3	3	3	3	5	3	4	5	3	3	2	3	5	3	4	5	3	3	3	3	29

BRITISH ANTARCTIC SURVEY

(FORMERLY FALKLAND ISLAND DEPENDENCIES SURVEY)

MAGNETIC RECORDS FOR 1959

FROM ARGENTINE ISLANDS A.973

LAT. -65° 15'

LONG. 295° 44'

GEOMAGNETIC LAT. -53.8°

GEOMAGNETIC LONG. 3.3°

ORIGINAL RECORDS HELD AT :-

BRITISH ANTARCTIC SURVEY

DEPARTMENT OF NATURAL PHILOSOPHY

DRUMMOND STREET

EDINBURGH, 8.

Phone: EDINBURGH NEWINGTON 1011 EXT. 2497

HEAD OFFICE:-

BRITISH ANTARCTIC SURVEY

30 GILLINGHAM STREET

LONDON, S.W. 1.

Phone: LONDON VICTORIA 3687

1. Instruments

These are standard La Cour variometers, recording H, D, and Z.

2. Time

Charts were changed at Greenwich midnight, so that each chart shows a complete Greenwich day. The master clock was adjusted to keep the clock error less than 1/2 minute.

The parallax correction for each trace is given below. The correction is to be added to the times read from the magnetograms.

Sensitive Magnetograms	Trace	Correction
	H	+ 2 mins.
	D	+ 1 min.
	Z	nil
	T	+ 4 mins.

Insensitive Magnetograms

H	nil
D	- 1 min.
Z	- 2 mins.
T	+ 1 min.

3. Order of Traces, from top to bottom

Sensitive Magnetograms	Insensitive Magnetograms
T trace	D trace and baseline (double baseline, upper line used)
H trace and baseline	H baseline
D baseline and trace	T trace
Z baseline and trace	H trace Z baseline and trace

4. Sense of Traces

All magnetograms: Temperature increases up the sheet.
H increases up the sheet.
D increases easterly up the sheet.
Z increases down the sheet.
(N.B. Z is negative, hence as Z increases, modulus of Z decreases).

5. Temperature Coefficients

The sensitive H and Z variometers have appreciable temperature coefficients. H baseline values increase with increasing temperature. Z baseline values decrease (i.e. their moduli increase) with increasing temperature.

Temperature coefficient	H	Z	
	4.5 $\delta/^\circ\text{C}$	2.96 $\delta/^\circ\text{C}$	Jan - Feb.
		1.5 $\delta/^\circ\text{C}$	Mar - Dec.

T Trace	Scale Value	Baseline
Jan - 27th Mar.	0.527 $^\circ\text{C}/\text{mm}$	- 31.5 $^\circ\text{C}$
22nd Mar - 27th Mar	0.527 $^\circ\text{C}/\text{mm}$	- 33.2 $^\circ\text{C}$
27th Mar - Dec	0.527 $^\circ\text{C}/\text{mm}$	- 33.6 $^\circ\text{C}$
(Insensitive Magnetogram)	1.88 $^\circ\text{C}/\text{mm}$	+ 12.7 $^\circ\text{C}$

6. Scale Values

	Sensitive Magnetograms	Insensitive Magnetograms
H	4.37 δ/mm	16.1 δ/mm
D	0.92 δ/mm	2.36 δ/mm
Z	2.50 δ/mm	10.9 δ/mm
	4.00 Jan - 13th Feb	
	4.06 14th Feb - Mar	
	4.11 Apr.	
	4.15 May	
	4.18 June - Aug	
	4.18 Sept - 14th Dec	
	4.05 15th Dec - 31st Dec.	

H baseline		D baseline		Z baseline	
1 Jan-22 Jan	23476 δ at 0 $^\circ\text{C}$	1 Jan-31 Jan	17 $^\circ$ 37.6'E	1 Jan-19 Jan	-3694.2 δ at 0 $^\circ\text{C}$
23 Jan-13 Feb	23359 "	1 Feb-30 Jun	17 $^\circ$ 37.7'E	20 Jan-12 Feb	-36821 "
14 Feb-13 Mar	23364 "	1 Jul-14 Dec	17 $^\circ$ 37.8'E	13 Feb- 2 Mar	-36722 "
14 Mar- 2 Sep	23367 "	15 Dec-31 Dec	17 $^\circ$ 38.4'E	3 Mar-13 Mar	-36724 "
3 Sep-21 Nov	23366 "			14 Mar-30 Apr	-36726 "
22 Nov-14 Dec	23360 "			1 May-30 Jun	-36731 "
15 Dec-31 Dec	23296 "			1 Jul-31 Aug	-36728 "
				1 Sep-23 Nov	-36731 "
				24 Nov-26 Nov	-36732 "
				27 Nov-30 Nov	-36733 "
				1 Dec-14 Dec	-36734 "
				15 Dec-31 Dec	-36664 "

Insensitive Magnetograms

Insensitive O C baselines are only quoted for the days on which they are required for completion or clarification of record. The hourly values derived from insensitive records are calculated by comparing sensitive and insensitive magnetogram baselines on the same day at the temperature for that day.

Date	H baseline	D baseline	Z baseline
Jan 21	23996 δ	16 $^\circ$ 30.3'E	-36854. δ
23	992	30.5	854
25	993	30.3	856
27	991	30.4	854
Feb 12	986	30.6	854
25	987	29.9	863
27	987	30.6	863
May 3	983	29.4	882
4	986	29.2	876
Jun 8	984	29.2	888
10	997	30.0	886
Jul 14	994	29.9	880
15	994	30.1	880
16	24001	30.4	881
Sep 12	23998	30.1	877
13	994	30.1	881
14	996	30.5	878
Dec 4	992	30.8	880
14	995	30.9	880
21	995	30.7	881
24	992	30.9	885

Baseline Separations - to give scale.

	H - D	D - Z	D - H	H - Z
1 Jan-12 Feb	37.0 mm \pm 0.1	118.4 mm \pm 0.1	(
13 Feb-14 Dec	36.9 mm \pm 0.1	149.4 mm \pm 0.1	(46.6 mm \pm 0.2	134.2 mm \pm 0.2
15 Dec-31 Dec	36.9 mm \pm 0.1	136.3 mm \pm 0.1	(

(Sensitive)

(Insensitive)

Lower Limit: $K_9: 500$

Scale Values: $H 4.59$ $D 6.23$

K_H

K_D

$\frac{K_H}{K_D}$

	B1	B2	B3	B4	B5	B6	B7	B8	B1	B2	B3	B4	B5	B6	B7	B8	B1	B2	B3	B4	B5	B6	B7	B8	Sum
1	1	2	2	1	1	0	1	3	2	2	2	0	0	0	0	3	2	2	2	1	1	0	1	3	12
2	4	3	4	1	1	1	1	1	3	4	4	1	2	0	0	0	4	4	4	1	2	1	1	1	18
3	2	1	2	1	1	1	1	1	2	1	0	0	0	0	0	0	2	1	2	1	1	1	1	1	10
4	1	1	1	2	2	2	2	2	0	0	0	2	2	2	3	3	1	1	1	2	2	2	3	3	15
5	3	4	3	3	2	1	2	1	3	4	4	4	3	2	2	1	3	4	4	4	3	2	2	1	23
6	1	2	2	2	2	2	2	2	1	3	2	2	3	2	2	2	1	3	2	2	3	2	2	2	17
7	2	2	2	2	2	2	1	1	3	3	2	3	2	2	1	1	3	3	2	3	2	2	1	1	17
8	1	3	3	3	2	2	2	2	2	3	4	4	1	2	2	1	2	3	4	4	2	2	2	2	21
9	2	3	3	2	2	1	2	2	2	4	3	3	3	2	2	2	2	4	3	3	3	2	2	2	21
10	4	4	3	2	2	1	1	1	3	4	4	2	0	0	0	0	4	4	4	2	2	1	1	1	19
11	4	3	2	2	2	4	4	5	4	4	4	1	2	3	3	5	4	4	4	2	2	4	4	5	29
12	5	2	2	3	3	2	1	2	6	2	2	3	2	2	0	2	6	2	2	3	3	2	1	2	21
13	2	2	2	1	2	1	1	2	2	2	3	1	2	1	0	2	2	2	3	1	2	1	1	2	14
14	2	2	3	2	3	2	1	2	2	3	3	4	3	1	1	0	2	3	3	4	3	2	1	2	20
15	4	3	6	7	7	7	7	6	3	3	7	7	7	7	8	6	4	3	7	7	7	7	8	6	49
16	6	4	2	2	2	2	3	3	7	5	2	2	2	2	3	3	7	5	2	2	2	2	3	3	26
17	2	4	3	3	2	7	6	6	2	3	3	3	3	7	6	6	2	4	3	3	3	7	6	6	34
18	6	5	6	4	3	4	3	5	7	6	5	5	3	4	2	5	7	6	6	5	3	4	3	5	39
19	5	3	3	3	3	3	2	3	6	3	3	2	3	2	2	3	6	3	3	3	3	3	2	3	26
20	3	3	3	3	2	2	2	4	4	3	3	2	2	1	2	4	4	3	3	3	2	2	2	4	23
21	4	3	2	2	2	1	3	1	4	3	3	3	3	2	2	1	4	3	3	3	3	2	3	1	22
22	4	2	1	2	2	1	1	4	4	2	2	2	2	1	1	3	4	2	2	2	2	1	1	4	18
23	4	3	3	2	2	0	3	2	5	3	4	2	1	0	2	1	5	3	4	2	2	0	3	2	21
24	3	2	2	4	2	3	3	4	4	2	3	3	2	2	3	5	4	2	3	4	2	3	3	5	26
25	4	3	2	3	3	3	4	4	5	3	3	4	2	3	3	5	5	3	3	4	3	3	4	5	30
26	4	2	2	3	3	3	3	4	3	4	3	3	3	2	4	5	4	4	3	3	3	3	4	5	29
27	4	3	3	3	3	2	4	3	5	4	4	4	3	1	4	5	5	4	4	4	3	2	4	5	31
28	4	3	3	2	2	2	2	3	4	2	1	3	2	1	1	2	4	3	3	3	2	2	2	3	22
29	3	4	3	1	1	1	1	1	3	4	2	1	2	1	0	0	3	4	3	1	2	1	1	1	16
30	2	0	1	1	1	1	1	1	2	1	0	0	0	0	0	0	2	1	1	1	1	1	1	1	9
31	2	3	2	2	1	1	2	3	1	4	3	3	2	2	2	3	2	4	3	3	2	2	2	3	21

BRITISH ANTARCTIC SURVEY

(FORMERLY FALKLAND ISLAND DEPENDENCIES SURVEY)

MAGNETIC RECORDS FOR 1959

FROM ARGENTINE ISLANDS A.973

LAT. -65° 15'

LONG. 295° 44'

GEOMAGNETIC LAT. -53.8°

GEOMAGNETIC LONG. 3.3°

ORIGINAL RECORDS HELD AT :-

BRITISH ANTARCTIC SURVEY

DEPARTMENT OF NATURAL PHILOSOPHY

DRUMMOND STREET

EDINBURGH, 8.

Phone: EDINBURGH NEWINGTON 1011 EXT. 2497

HEAD OFFICE:-

BRITISH ANTARCTIC SURVEY

30 GILLINGHAM STREET

LONDON, S.W. 1.

Phone: LONDON VICTORIA 3687

EXPLANATORY NOTES 1959

1. Instruments

These are standard La Cour variometers, recording H, D, and Z.

2. Time

Charts were changed at Greenwich midnight, so that each chart shows a complete Greenwich day. The master clock was adjusted to keep the clock error less than 1/2 minute.

The parallax correction for each trace is given below. The correction is to be added to the times read from the magnetograms.

Sensitive Magnetograms	Trace	Correction
	H	+ 2 mins.
	D	+ 1 min.
	Z	nil
	T	+ 4 mins.
<u>Insensitive Magnetograms</u>		
	H	nil
	D	- 1 min.
	Z	- 2 mins.
	T	+ 1 min.

3. Order of Traces, from top to bottom

Sensitive Magnetograms	Insensitive Magnetograms
T trace	D trace and baseline (double baseline, upper line used)
H trace and baseline	H baseline
D baseline and trace	T trace
Z baseline and trace	H trace
	Z baseline and trace

4. Sense of Traces

All magnetograms: Temperature increases up the sheet.
 H increases up the sheet.
 D increases easterly up the sheet.
 Z increases down the sheet.
 (N.B. Z is negative, hence as Z increases, modulus of Z decreases).

5. Temperature Coefficients

The sensitive H and Z variometers have appreciable temperature coefficients. H baseline values increase with increasing temperature. Z baseline values decrease (i.e. their moduli increase) with increasing temperature.

Temperature coefficient	H	Z	
	4.5 $\gamma/^\circ\text{C}$	2.96 $\gamma/^\circ\text{C}$	Jan - Feb.
		1.5 $\gamma/^\circ\text{C}$	Mar - Dec.
	<u>T Trace</u>	<u>Baseline</u>	
	Jan - 22nd Mar.	0.527 $^\circ\text{C}/\text{mm}$	- 31.5 $^\circ\text{C}$
	22nd Mar - 27th Mar	0.527 $^\circ\text{C}/\text{mm}$	- 33.2 $^\circ\text{C}$
	27th Mar - Dec	0.527 $^\circ\text{C}/\text{mm}$	- 33.6 $^\circ\text{C}$
	(Insensitive Magnetogram	1.88 $^\circ\text{C}/\text{mm}$	+ 12.7 $^\circ\text{C}$)

6. Scale Values

	Sensitive Magnetograms	Insensitive Magnetograms
H	4.37 γ/mm	16.1 γ/mm
D	0.92 γ/mm	2.36 γ/mm
Z	2.50 γ/mm	10.9 γ/mm
	4.00 Jan - 13th Feb	
	4.06 14th Feb - Mar	
	4.11 Apr.	
	4.15 May	
	4.15 June - Aug	
	4.18 Sept - 14th Dec	
	4.05 15th Dec - 31st Dec.	

Baseline Values - Sensitive Magnetograms

H baseline		D baseline		Z baseline	
1 Jan-22 Jan	23476 γ at 0 $^\circ\text{C}$	1 Jan-31 Jan	17 $^\circ$ 37.6'E	1 Jan-19 Jan	-36942 γ at 0 $^\circ\text{C}$
23 Jan-13 Feb	23359 "	1 Feb-30 Jun	17 $^\circ$ 37.7'E	20 Jan-12 Feb	-36821 "
14 Feb-13 Mar	23364 "	1 Jul-14 Dec	17 $^\circ$ 37.8'E	13 Feb- 2 Mar	-36722 "
14 Mar- 2 Sep	23367 "	15 Dec-31 Dec	17 $^\circ$ 38.4'E	3 Mar-13 Mar	-36724 "
3 Sep-21 Nov	23366 "			14 Mar-30 Apr	-36726 "
22 Nov-14 Dec	23360 "			1 May-30 Jun	-36731 "
15 Dec-31 Dec	23296 "			1 Jul-31 Aug	-36728 "
				1 Sep-23 Nov	-36731 "
				24 Nov-26 Nov	-36732 "
				27 Nov-30 Nov	-36733 "
				1 Dec-14 Dec	-36734 "
				15 Dec-31 Dec	-36601 "

Insensitive Magnetograms

Insensitive O C baselines are only quoted for the days on which they are required for completion or clarification of record. The hourly values derived from insensitive records are calculated by comparing sensitive and insensitive magnetogram baselines on the same day, at the temperature for that day.

Date	H baseline	D baseline	Z baseline
Jan 21	23996 γ	16 $^\circ$ 30.3'E	-36854 γ
23	992	30.5	854
25	993	30.3	856
27	991	30.4	854
Feb 12	986	30.6	854
25	987	29.9	863
27	987	30.6	853
May 3	983	29.4	882
4	986	29.2	876
Jun 3	984	29.2	888
10	997	30.0	886
Jul 14	994	29.9	880
15	994	30.1	880
16	24301	30.4	881
Sep 12	23998	30.1	877
13	994	30.1	881
14	996	30.5	878
Dec 4	992	30.8	880
14	995	30.9	880
21	995	30.7	881
24	992	30.9	885

Baseline Separations - to give scale.

	H - D	D - Z	D - H	H - Z
1 Jan-12 Feb	37.0 mm \pm 0.1	118.4 mm \pm 0.1	(
13 Feb-14 Dec	36.9 mm \pm 0.1	149.4 mm \pm 0.1	(46.6 mm \pm 0.2	131.2 mm \pm 0.2
15 Dec-31 Dec	36.9 mm \pm 0.1	136.3 mm \pm 0.1	(

(Sensitive) (Insensitive)

ARGENTINE ISLANDS A.973

AUGUST 1959

Lower limit K9: 500 y

Scale Values: H 4.39 y/mm D 6.28 y/mm

K_H

K_D

MAX (K_H, K_D)

Day	K_H								K_D								MAX (K_H, K_D)								Sum
	E1	E2	E3	E4	E5	E6	E7	E8	E1	E2	E3	E4	E5	E6	E7	E8	E1	E2	E3	E4	E5	E6	E7	E8	
1	3	3	3	2	2	2	2	2	3	3	4	3	3	2	1	2	3	3	4	3	3	2	2	2	22
2	4	3	4	2	2	1	2	2	4	4	4	2	1	1	0	0	4	4	4	2	2	1	2	2	21
3	3	3	3	2	2	2	2	1	4	4	4	3	3	2	2	1	4	4	4	3	3	2	2	1	23
4	2	2	1	3	2	3	2	3	1	3	2	3	3	2	2	3	2	3	2	3	3	3	2	3	21
5	2	1	2	1	1	1	1	2	0	0	2	1	1	2	1	1	2	1	2	1	1	2	1	2	12
6	2	4	1	2	3	2	2	3	1	4	1	2	3	2	2	4	2	4	1	2	3	2	2	4	20
7	4	3	1	2	2	2	2	2	4	3	3	3	2	1	1	2	4	3	3	3	2	2	2	2	21
8	1	2	2	2	2	2	0	2	2	1	3	3	3	1	0	2	2	2	3	3	3	2	0	2	17
9	2	1	1	2	2	3	3	2	4	1	2	4	3	3	3	2	4	1	2	4	3	3	3	2	22
10	3	2	1	0	1	1	3	2	2	4	1	2	2	2	2	1	3	4	1	2	2	2	3	2	19
11	2	3	1	1	0	2	1	1	3	3	2	1	1	1	0	1	3	3	2	1	1	2	1	1	14
12	1	2	2	1	1	1	0	1	1	2	2	0	1	0	0	2	1	2	2	1	1	1	0	2	10
13	2	2	2	1	0	1	2	1	2	3	3	1	1	0	0	1	2	3	3	1	1	1	2	1	14
14	2	2	2	2	1	1	1	0	2	3	1	1	1	0	1	0	2	3	2	2	1	1	1	0	12
15	2	2	2	3	2	2	3	4	3	3	1	2	2	1	3	4	3	3	2	3	2	2	3	4	22
16	4	3	5	5	5	5	5	6	3	3	6	6	5	4	5	6	4	3	6	6	5	5	5	6	40
17	5	6	6	4	3	4	4	3	7	7	6	5	4	3	3	4	7	7	6	5	4	4	4	4	41
18	3	4	5	2	2	3	3	3	3	5	5	3	2	2	2	4	3	5	5	3	2	3	3	4	28
19	3	3	3	3	2	1	3	2	5	5	5	2	2	1	2	2	5	5	5	3	2	1	3	2	25
20	2	5	5	3	2	2	4	3	2	5	5	3	2	1	3	2	2	5	5	3	2	2	4	3	26
21	4	4	3	3	3	2	3	4	4	4	3	4	3	2	3	5	4	4	3	4	3	2	3	5	28
22	3	3	4	2	2	3	4	3	5	3	4	2	3	2	3	5	5	3	4	2	3	3	4	5	29
23	3	3	3	2	3	2	3	4	4	4	4	3	3	3	3	5	4	4	4	3	3	3	3	5	29
24	4	4	2	2	2	2	1	3	4	5	4	2	2	0	0	3	4	5	4	2	2	2	1	3	23
25	3	3	2	2	2	2	1	3	3	3	3	3	2	2	0	4	3	3	3	3	2	2	1	4	21
26	2	2	2	2	0	2	2	1	3	1	3	0	0	1	1	0	3	2	3	2	0	2	2	1	15
27	3	1	1	1	1	1	0	1	3	1	2	0	0	0	0	0	3	1	2	1	1	1	0	1	10
28	1	1	1	0	1	0	1	1	0	0	1	0	0	0	0	0	1	1	1	0	1	0	1	1	6
29	3	2	2	1	2	3	2	2	2	2	1	0	1	2	1	2	3	2	2	1	2	3	2	2	17
30	1	2	1	2	1	2	2	1	2	2	2	2	1	1	1	0	2	2	2	2	1	2	2	1	14
31	2	1	2	2	1	3	2	2	1	2	2	3	2	2	2	2	2	2	2	3	2	3	2	2	18

BRITISH ANTARCTIC SURVEY

(FORMERLY FALKLAND ISLAND DEPENDENCIES SURVEY)

MAGNETIC RECORDS FOR 1959

FROM ARGENTINE ISLANDS A.973

LAT. -65° 15'

LONG. 295° 44'

GEOMAGNETIC LAT. -53.8°

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ORIGINAL RECORDS HELD AT :-

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HEAD OFFICE:-

BRITISH ANTARCTIC SURVEY

30 GILLINGHAM STREET

LONDON, S.W. 1.

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EXPLANATORY NOTES 1959

1. Instruments

These are standard La Cour variometers, recording H, D, and Z.

2. Time

Charts were changed at Greenwich midnight, so that each chart shows a complete Greenwich day. The master clock was adjusted to keep the clock error less than 1/2 minute.

The parallax correction for each trace is given below. The correction is to be added to the times read from the magnetograms.

<u>Sensitive Magnetograms</u>	<u>Trace</u>	<u>Correction</u>
	H	+ 2 mins.
	D	+ 1 min.
	Z	nil
	T	+ 4 mins.
<u>Insensitive Magnetograms</u>		
	H	nil
	D	- 1 min.
	Z	- 2 mins.
	T	+ 1 min.

3. Order of Traces, from top to bottom

<u>Sensitive Magnetograms</u>	<u>Insensitive Magnetograms</u>
T trace	D trace and baseline (double baseline, upper line used)
H trace and baseline	H baseline
D baseline and trace	T trace
Z baseline and trace	H trace
	Z baseline and trace

4. Sense of Traces

All magnetograms: Temperature increases up the sheet.
 H increases up the sheet.
 D increases easterly up the sheet.
 Z increases down the sheet.
 (N.B. Z is negative, hence as Z increases, modulus of Z decreases).

5. Temperature Coefficients

The sensitive H and Z variometers have appreciable temperature coefficients. H baseline values increase with increasing temperature. Z baseline values decrease (i.e. their moduli increase) with increasing temperature.

	<u>H</u>	<u>Z</u>	
Temperature coefficient	4.5 %/°C	2.96 %/°C	Jan - Feb.
		1.5 %/°C	Mar - Dec.

<u>T Trace</u>	<u>Scale Value</u>	<u>Baseline</u>
Jan - 22nd Mar.	0.527°C/mm	- 31.5°C
22nd Mar - 27th Mar	0.527°C/mm	- 33.2°C
27th Mar - Dec	0.527°C/mm	- 33.6°C
(Insensitive Magnetogram 1.88 °C/mm)		+ 12.7°C)

6. Scale Values

	<u>Sensitive Magnetograms</u>	<u>Insensitive Magnetograms</u>
H	4.37 δ/mm	16.1 δ/mm
D	0.92 δ/mm	2.36 δ/mm
Z	2.50 δ/mm	10.9 δ/mm
	4.00 Jan - 13th Feb	
	4.06 14th Feb - Mar	
	4.11 Apr.	
	4.11 May	
	4.15 June - Aug	
	4.18 Sept - 14th Dec	
	4.05 15th Dec - 31st Dec.	

Baseline Values - Sensitive Magnetograms

<u>H baseline</u>		<u>D baseline</u>		<u>Z baseline</u>	
1 Jan-22 Jan	23476 δ at 0°C	1 Jan-31 Jan	17° 37.6'E	1 Jan-19 Jan	-36942 δ at 0°C
23 Jan-13 Feb	23359 "	1 Feb-30 Jun	17° 37.7'E	20 Jan-12 Feb	-36821 "
14 Feb-13 Mar	23364 "	1 Jul-14 Dec	17° 37.8'E	13 Feb- 2 Mar	-36722 "
14 Mar- 2 Sep	23367 "	15 Dec-31 Dec	17° 38.4'E	3 Mar-13 Mar	-36724 "
3 Sep-21 Nov	23366 "			14 Mar-30 Apr	-36726 "
22 Nov-14 Dec	23360 "			1 May-30 Jun	-36734 "
15 Dec-31 Dec	23296 "			1 Jul-31 Aug	-36728 "
				1 Sep-23 Nov	-36731 "
				24 Nov-26 Nov	-36732 "
				27 Nov-30 Nov	-36733 "
				1 Dec-14 Dec	-36734 "
				15 Dec-31 Dec	-36601 "

Insensitive Magnetograms

Insensitive O C baselines are only quoted for the days on which they are required for completion or clarification of record. The hourly values derived from insensitive records are calculated by comparing sensitive and insensitive magnetogram baselines on the same day at the temperature for that day.

<u>Date</u>	<u>H baseline</u>	<u>D baseline</u>	<u>Z baseline</u>
Jan 21	23996 δ	15° 30.3'E	-36854 δ
23	992	30.5	854
25	993	30.3	856
27	994	30.4	854
Feb 12	986	30.6	854
25	987	29.9	863
27	987	30.6	863
May 3	983	29.4	882
4	986	29.2	876
Jun 8	984	29.2	888
10	997	30.0	886
Jul 1+	994	29.9	880
15	994	30.1	880
16	24001	30.4	881
Sep 12	23998	30.1	877
13	994	30.1	881
14	996	30.5	878
Dec 4	992	30.8	880
14	995	30.9	880
21	995	30.7	881
24	992	30.9	885

Baseline Separations - to give scale.

	<u>H - D</u>	<u>D - Z</u>	<u>D - H</u>	<u>H - Z</u>
1 Jan-12 Feb	37.0 mm ± 0.1	118.4 mm ± 0.1	(
13 Feb-14 Dec	36.9 mm ± 0.1	149.4 mm ± 0.1	(46.6 mm ± 0.2	131.2 mm ± 0.2
15 Dec-31 Dec	36.9 mm ± 0.1	136.3 mm ± 0.1	(
	(Sensitive)		((Insensitive)

ARGENTINE ISLANDS A.973

SEPTEMBER 1959

Lower limit K9: 500 γ

Scale Values: H 4.39 γ/mm D 6.28 γ/mm

Day	K_H								K_D								MAX (K_H, K_D)								Sum
	E1	E2	E3	E4	E5	E6	E7	E8	E1	E2	E3	E4	E5	E6	E7	E8	E1	E2	E3	E4	E5	E6	E7	E8	
1	3	2	2	2	2	3	3	3	4	2	4	4	2	1	2	1	4	2	4	4	2	3	3	3	25
2	4	4	5	4	1	2	2	4	4	5	5	5	1	2	2	3	4	5	5	5	1	2	2	4	28
3	3	3	3	2	2	2	3	5	3	3	3	3	3	3	3	6	3	3	3	3	3	3	3	6	27
4	5	5	5	5	4	5	4	5	6	6	6	5	3	4	3	5	6	6	6	5	4	5	4	5	41
5	4	3	3	2	2	3	3	4	4	3	3	2	3	2	3	5	4	3	3	2	3	3	3	5	26
6	5	3	2	2	2	2	1	2	5	3	3	2	1	1	1	0	5	3	3	2	2	2	1	2	20
7	2	1	1	1	1	2	2	1	1	0	0	1	1	2	1	2	2	1	1	1	1	2	2	2	12
8	2	2	2	2	1	2	1	2	1	2	3	3	2	2	1	3	2	2	3	3	2	2	1	3	18
9	2	2	1	2	1	1	1	2	2	2	1	2	1	1	0	2	2	2	1	2	1	1	1	2	12
10	2	2	2	1	1	1	1	3	1	2	1	1	1	1	1	3	2	2	2	1	1	1	1	3	13
11	3	3	2	2	2	1	1	3	3	4	3	3	3	1	1	2	3	4	3	3	3	1	1	3	21
12	4	3	2	2	2	1	2	0	4	3	2	2	2	1	1	1	4	3	2	2	2	1	2	1	17
13	3	1	2	2	1	0	1	4	3	0	1	1	1	0	1	5	3	1	2	2	1	0	1	5	15
14	3	2	4	2	2	1	1	3	4	3	4	3	3	2	1	1	4	3	4	3	3	2	1	3	23
15	2	1	2	2	2	2	4	4	2	1	3	3	3	2	3	2	2	1	3	3	3	2	4	4	22
16	4	4	1	1	1	2	1	1	4	4	2	1	2	2	1	0	4	4	2	1	2	2	1	1	17
17	2	2	3	2	2	2	4	5	2	1	1	2	2	2	3	2	2	2	3	2	2	2	4	5	22
18	3	2	3	3	2	2	3	4	4	2	2	3	4	3	4	4	4	2	3	3	4	3	4	4	27
19	5	3	3	3	3	1	2	3	4	4	3	4	3	1	2	0	5	4	3	4	3	1	2	3	25
20	3	4	4	4	4	4	4	4	4	4	5	4	6	3	3	4	4	4	5	4	6	4	4	4	35
21	4	4	5	3	3	4	4	4	5	6	7	3	4	4	4	3	5	6	7	3	4	4	4	4	37
22	5	5	4	4	3	3	3	2	7	6	5	4	3	3	3	2	7	6	5	4	3	3	3	2	33
23	2	3	3	2	1	2	3	4	3	3	3	2	2	2	2	3	3	3	3	2	2	2	3	4	22
24	3	3	2	2	3	3	3	3	2	3	4	3	4	2	3	2	3	3	4	3	4	3	3	3	26
25	5	4	3	2	2	2	3	4	4	4	4	3	3	3	3	5	5	4	4	3	3	3	3	5	30
26	3	2	3	3	3	3	3	3	5	3	2	3	2	2	1	4	5	3	3	3	3	3	3	4	27
27	3	2	3	3	1	2	3	3	2	3	3	4	2	3	3	2	3	3	3	4	2	3	3	3	24
28	3	3	3	3	1	1	3	3	4	2	4	3	2	1	3	2	4	3	4	3	2	1	3	3	23
29	1	1	1	2	1	1	1	2	2	1	1	3	2	0	0	1	2	1	1	3	2	1	1	2	13
30	2	2	2	2	1	2	3	2	2	1	2	3	2	2	2	2	2	2	2	3	2	2	3	2	18

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HEAD OFFICE:-

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Phone: LONDON VICTORIA 3687

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	D	+ 1 min.
	Z	nil
	T	+ 4 mins.
<u>Insensitive Magnetograms</u>		
	H	= 1
	D	- 1 min.
	Z	- 2 mins.
	T	+ 1 min.

3. Order of Traces, from top to bottom

Sensitive Magnetograms	Insensitive Magnetograms
T trace	D trace and baseline (double baseline, upper line used)
H trace and baseline	H baseline
D baseline and trace	T trace
Z baseline and trace	H trace
	Z baseline and trace

4. Sense of Traces

All magnetograms: Temperature increases up the sheet.
 H increases up the sheet.
 D increases easterly up the sheet.
 Z increases down the sheet.
 (N.B. Z is negative, hence as Z increases, modulus of Z decreases).

5. Temperature Coefficients

The sensitive H and Z variometers have appreciable temperature coefficients. H baseline values increase with increasing temperature. Z baseline values decrease (i.e. their moduli increase) with increasing temperature.

	H	Z	
Temperature coefficient	4.5 %/°C	2.96 %/°C	Jan - Feb.
		1.5 %/°C	Mar - Dec.

T Trace	Scale Value	Baseline
Jan - 22nd Mar.	0.527°C/mm	- 31.5°C
22nd Mar - 27th Mar	0.527°C/mm	- 33.2°C
27th Mar - Dec	0.527°C/mm	- 33.6°C
(Insensitive Magnetogram	1.88 °C/mm	+ 12.7°C)

6. Scale Values

	Sensitive Magnetograms	Insensitive Magnetograms
H	4.37 δ/mm	16.1 δ/mm
D	0.92 δ/mm	2.36 δ/mm
Z	2.50 δ/mm	10.9 δ/mm
	4.00 Jan - 13th Feb	
	4.06 14th Feb - Mar	
	4.11 Apr.	
	4.15 May	
	4.18 June - Aug	
	4.05 Sept - 14th Dec	
	4.05 15th Dec - 31st Dec.	

Baseline Values - Sensitive Magnetograms

H baseline		D baseline		Z baseline	
1 Jan-22 Jan	23476 δ at 0°C	1 Jan-31 Jan	17° 37.6' E	1 Jan-19 Jan	-36942 δ at 0°C
23 Jan-13 Feb	23359 "	1 Feb-30 Jun	17° 37.7' E	20 Jan-12 Feb	-36821 "
14 Feb-13 Mar	23364 "	1 Jul-14 Dec	17° 37.8' E	13 Feb- 2 Mar	-36722 "
14 Mar- 2 Sep	23367 "	15 Dec-31 Dec	17° 38.4' E	3 Mar-13 Mar	-36724 "
3 Sep-21 Nov	23366 "			14 Mar-30 Apr	-36726 "
22 Nov-14 Dec	23360 "			1 May-30 Jun	-36731 "
15 Dec-31 Dec	23296 "			1 Jul-31 Aug	-36728 "
				1 Sep-23 Nov	-36731 "
				24 Nov-26 Nov	-36732 "
				27 Nov-30 Nov	-36733 "
				1 Dec-14 Dec	-36734 "
				15 Dec-31 Dec	-36601 "

Insensitive Magnetograms

Insensitive Q C baselines are only quoted for the days on which they are required for completion or clarification of record. The hourly values derived from insensitive records are calculated by comparing sensitive and insensitive magnetogram baselines on the same day at the temperature for that day.

Date	H baseline	D baseline	Z baseline
Jan 21	23996 δ	16° 30.3' E	-36854 δ
23	992	30.5	854
25	993	30.3	856
27	991	30.4	854
Feb 12	986	30.6	854
25	987	29.9	863
27	987	30.6	863
May 3	983	29.4	882
4	966	29.2	876
Jun 8	984	29.2	888
10	997	30.0	886
Jul 14	994	29.9	880
15	994	30.1	880
16	24001	30.2	891
Sep 12	23998	30.1	877
13	994	30.1	881
14	996	30.5	876
Dec 4	992	30.8	880
14	995	30.9	880
21	995	30.7	881
24	992	30.9	885

Baseline Separations - to give scale.

	H - D	D - Z	D - H	H - Z
1 Jan-12 Feb	37.0 mm ± 0.1	118.4 mm ± 0.1	(
13 Feb-14 Dec	36.9 mm ± 0.1	149.4 mm ± 0.1	(46.6 mm ± 0.2	131.2 mm ± 0.2
15 Dec-31 Dec	36.9 mm ± 0.1	136.3 mm ± 0.1	(

(Sensitive) (Insensitive)

ARGENTINE ISLANDS A.973

OCTOBER 1959

Lower limit K9: 500 y

Scale Values: H 4.39, B 6.28, /

K_H

K_D

MAX (K_H, K_D)

Day	E1	E2	E3	E4	E5	E6	E7	E8	E1	E2	E3	E4	E5	E6	E7	E8	E1	E2	E3	E4	E5	E6	E7	E8	Sum
1	2	4	4	4	2	2	2	4	3	4	5	4	3	2	2	2	3	4	5	4	3	2	2	4	27
2	2	5	4	3	2	2	2	1	2	5	5	3	2	1	1	1	2	5	5	3	2	2	2	1	22
3	2	2	4	2	2	2	5	5	0	2	5	3	3	2	4	6	2	2	5	3	3	2	5	6	28
4	2	6	3	4	4	2	4	3	2	7	5	3	3	3	3	2	2	7	5	4	4	3	4	3	32
5	4	3	2	1	1	3	3	4	5	4	2	2	3	3	3	4	5	4	2	2	3	3	3	4	26
6	4	5	3	3	4	3	4	4	3	5	5	4	3	3	4	3	4	5	5	4	4	3	4	4	33
7	3	3	2	2	0	1	2	3	4	4	2	2	3	1	2	4	4	4	2	2	3	1	2	4	22
8	3	3	1	1	1	1	1	1	3	2	1	2	0	0	1	0	3	3	1	2	1	1	1	1	13
9	2	1	1	0	0	1	2	0	2	1	1	1	1	1	1	0	2	1	1	1	1	1	2	0	9
10	1	1	1	0	0	1	1	1	0	1	0	0	1	1	0	1	1	1	1	0	1	1	1	1	7
11	2	1	1	1	0	0	1	1	1	1	1	0	0	0	1	1	2	1	1	1	0	0	1	1	7
12	1	0	0	0	0	2	3	2	1	0	0	1	2	2	2	1	1	0	0	1	2	2	3	2	11
13	1	2	2	2	1	2	3	3	0	2	2	2	2	2	2	2	1	2	2	2	2	2	2	2	1+
14	1	2	2	2	1	2	3	3	1	1	3	4	4	2	3	2	1	2	3	4	4	2	3	3	22
15	4	3	2	2	2	1	3	3	3	3	3	3	2	1	4	4	4	3	3	3	2	1	4	4	24
16	2	1	0	1	0	1	2	1	0	1	0	1	0	0	1	0	2	1	0	1	0	1	2	1	8
17	2	2	3	4	2	3	4	3	1	2	2	3	3	3	3	2	2	2	3	4	3	3	4	3	24
18	4	3	3	3	2	3	4	4	5	3	3	4	4	3	3	4	5	3	3	4	4	3	4	4	30
19	3	3	2	2	2	2	3	3	3	3	2	2	1	1	1	3	3	3	2	2	2	2	3	3	20
20	2	2	2	2	1	1	0	0	4	1	2	2	1	0	0	0	4	2	2	2	1	1	0	0	12
21	1	1	0	0	1	2	3	4	0	1	0	1	1	2	1	1	1	1	0	1	1	2	3	4	13
22	4	4	3	2	1	2	2	3	1	2	3	2	3	2	0	3	4	4	3	2	3	2	2	3	23
23	3	1	2	2	0	0	1	0	2	1	1	3	2	0	0	0	3	1	2	3	2	0	1	0	12
24	1	1	2	1	0	2	2	3	0	1	2	2	2	1	2	1	1	1	2	2	2	2	2	3	15
25	2	3	3	3	2	2	3	2	1	3	3	4	3	2	2	1	2	3	3	4	3	2	3	2	22
26	3	4	3	3	3	3	3	3	2	4	5	4	3	2	2	2	3	4	5	4	3	3	3	3	28
27	2	2	2	2	1	1	1	1	1	2	3	4	1	1	1	0	2	2	3	4	1	1	1	1	15
28	2	1	2	1	0	0	0	0	0	1	2	1	1	0	0	0	2	1	2	1	1	0	0	0	7
29	1	0	0	0	0	0	1	5	0	1	1	1	1	0	0	1	1	1	1	1	1	0	1	5	11
30	5	3	3	2	2	3	4	5	4	5	2	3	2	2	4	4	5	5	3	3	2	3	4	5	30
31	3	3	2	3	5	3	4	5	1	3	2	3	4	2	3	5	3	3	2	3	5	3	4	5	28

BRITISH ANTARCTIC SURVEY

(FORMERLY FALKLAND ISLAND DEPENDENCIES SURVEY)

MAGNETIC RECORDS FOR 1959

FROM ARGENTINE ISLANDS A.973

LAT. -65° 15'

LONG. 295° 44'

GEOMAGNETIC LAT. -53.8°

GEOMAGNETIC LONG. 3.3°

ORIGINAL RECORDS HELD AT :-

BRITISH ANTARCTIC SURVEY

DEPARTMENT OF NATURAL PHILOSOPHY

DRUMMOND STREET

EDINBURGH, 8.

Phone: EDINBURGH NEWINGTON 1011 EXT. 2497

HEAD OFFICE:-

BRITISH ANTARCTIC SURVEY

30 GILLINGHAM STREET

LONDON, S.W. 1.

Phone: LONDON VICTORIA 3687

EXPLANATORY NOTES 1959

1. Instruments

These are standard La Cour variometers, recording H, D, and Z.

2. Time

Charts were changed at Greenwich midnight, so that each chart shows a complete Greenwich day. The master clock was adjusted to keep the clock error less than 1/2 minute.

The parallax correction for each trace is given below. The correction is to be added to the times read from the magnetograms.

Sensitive Magnetograms	Trace	Correction
	H	+ 2 mins.
	D	+ 1 min.
	Z	nil
	T	- 4 mins.
Insensitve Magnetograms		
	H	nil
	D	- 1 min.
	Z	- 2 mins.
	T	+ 1 min.

3. Order of Traces, from top to bottom

Sensitive Magnetograms	Insensitve Magnetograms
T trace	D trace and baseline (double baseline, upper line used)
H trace and baseline	H baseline
D baseline and trace	T trace
Z baseline and trace	H trace
	Z baseline and trace

4. Sense of Traces

All magnetograms: Temperature increases up the sheet.
 H increases up the sheet.
 D increases easterly up the sheet.
 Z increases down the sheet.
 (N.B. Z is negative, hence as Z increases, modulus of Z decreases).

5. Temperature Coefficients

The sensitive H and Z variometers have appreciable temperature coefficients. H baseline values increase with increasing temperature. Z baseline values decrease (i.e. their moduli increase) with increasing temperature.

	H	Z	
Temperature coefficient	4.5 %/°C	2.96 %/°C	Jan - Feb.
		1.5 %/°C	Mar - Dec.
T Trace	Scale Value	Baseline	
Jan - 22nd Mar.	0.527°C/mm	- 31.5°C	
22nd Mar - 27th Mar	0.527°C/mm	- 33.2°C	
27th Mar - Dec	0.527°C/mm	- 33.6°C	
(Insensitve Magnetogram	1.88 °C/mm	+ 12.7°C)	

6. Scale Values

	Sensitive Magnetograms	Insensitve Magnetograms
H	4.37 %/mm	16.1 %/mm
D	0.92 %/mm	2.36 %/mm
Z	2.50 %/mm	10.9 %/mm
	4.00 Jan - 13th Feb	
	4.06 14th Feb - Mar	
	4.11 Apr.	
	4.15 May	
	4.15 June - Aug	
	4.18 Sept - 14th Dec	
	4.05 15th Dec - 31st Dec.	

Baseline Values - Sensitive Magnetograms

H baseline		D baseline		Z baseline	
1 Jan-22 Jan	23476 % at 0°C	1 Jan-31 Jan	17° 37.6'E	1 Jan-19 Jan	-3694.2% at 0°C
23 Jan-13 Feb	23579 "	1 Feb-30 Jun	17° 37.7'E	20 Jan-12 Feb	-36821 "
14 Feb-13 Mar	23364 "	1 Jul-14 Dec	17° 37.8'E	13 Feb- 2 Mar	-36722 "
14 Mar- 2 Sep	23367 "	15 Dec-31 Dec	17° 38.4'E	3 Mar-13 Mar	-36724 "
3 Sep-21 Nov	23366 "			14 Mar-30 Apr	-36726 "
22 Nov-14 Dec	23360 "			1 May-30 Jun	-36731 "
15 Dec-31 Dec	23296 "			1 Jul-31 Aug	-36728 "
				1 Sep-23 Nov	-36731 "
				24 Nov-26 Nov	-36732 "
				27 Nov-30 Nov	-36733 "
				1 Dec-14 Dec	-36734 "
				15 Dec-31 Dec	-36601 "

Insensitve Magnetograms

Insensitve 0 C baselines are only quoted for the days on which they are required for completion or clarification of record. The hourly values derived from insensitve records are calculated by comparing sensitive and insensitve magnetogram baselines at the same day at the temperature for that day.

Date	H baseline	D baseline	Z baseline
Jan 21	23996 %	16° 30.3'E	-36854 %
23	992	30.5	854
25	993	30.3	856
27	991	30.4	854
Feb 12	986	30.6	854
25	987	29.9	863
27	987	30.6	863
May 3	983	29.4	882
4	986	29.2	876
Jun 8	984	29.2	888
10	997	30.0	886
Jul 14	994	29.9	880
15	994	30.1	880
16	24001	30.4	881
Sep 12	23998	30.1	877
13	994	30.1	881
14	996	30.5	878
Dec 4	992	30.8	880
14	995	30.9	880
21	995	30.7	881
24	992	30.9	885

Baseline Separations - to give scale.

	H - D	D - Z	D - H	H - Z
1 Jan-12 Feb	37.0 mm ± 0.1	148.4 mm ± 0.1	(
13 Feb-14 Dec	36.9 mm ± 0.1	149.4 mm ± 0.1	(46.6 mm ± 0.2	131.2 mm ± 0.2
15 Dec-31 Dec	36.9 mm ± 0.1	136.3 mm ± 0.1	(

(Sensitive) (Insensitve)

ARGENTINE ISLANDS A.973

NOVEMBER 1959

Lower limit K9: 500y

Scale Values: H 4.39y/--- D 6.28y/---

K_H

K_D

MAX (K_H, K_D)

Day	K_H								K_D								MAX (K_H, K_D)								Sum
	E1	E2	E3	E4	E5	E6	E7	E8	E1	E2	E3	E4	E5	E6	E7	E8	E1	E2	E3	E4	E5	E6	E7	E8	
1	3	5	4	4	4	2	3	3	3	4	5	4	4	2	2	2	3	5	5	4	4	2	3	3	29
2	3	4	4	3	4	4	4	4	4	3	4	5	4	3	4	3	4	4	4	5	4	4	4	4	33
3	4	4	3	4	3	4	3	3	5	3	3	4	4	2	3	3	5	4	3	4	4	4	3	3	30
4	2	3	3	3	3	3	3	4	1	1	3	3	3	3	4	3	2	3	3	3	3	3	4	4	25
5	4	3	3	3	3	2	3	3	4	3	3	4	4	2	2	0	4	3	3	4	4	2	3	3	26
6	4	3	3	3	2	2	2	4	4	3	3	4	3	1	2	3	4	3	3	4	3	2	2	4	25
7	1	2	2	1	1	1	3	2	0	2	1	1	1	0	1	0	1	2	2	1	1	1	3	2	13
8	3	4	2	2	1	2	2	2	0	3	2	3	2	2	1	1	3	4	2	3	2	2	2	2	20
9	2	3	2	0	0	3	3	3	0	1	0	2	2	1	3	3	2	3	2	2	2	3	3	3	20
10	2	2	1	2	2	2	3	3	1	2	2	2	3	1	1	2	2	2	2	2	3	2	3	3	19
11	2	1	1	1	0	1	2	3	0	1	1	2	2	0	1	1	2	1	1	2	2	1	2	3	14
12	2	2	1	1	1	2	2	3	1	2	2	1	2	1	1	1	2	2	2	1	2	2	2	3	16
13	3	2	2	2	2	2	3	4	1	1	3	2	3	2	2	3	3	2	3	2	3	2	3	4	22
14	3	4	3	4	3	3	3	3	4	2	4	4	4	3	2	2	4	4	4	4	4	3	3	3	29
15	2	1	1	1	1	1	0	2	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	2	10
16	0	1	2	0	1	2	2	2	0	0	1	1	2	1	1	1	0	1	2	1	2	2	2	2	12
17	2	3	2	2	2	0	1	2	2	3	3	3	2	0	1	1	2	3	3	3	2	0	1	2	16
18	2	3	2	3	2	4	4	3	1	3	3	4	2	3	4	1	2	3	3	4	2	4	4	3	25
19	2	2	3	2	2	1	1	3	1	2	3	3	3	2	0	0	2	2	3	3	3	2	1	3	19
20	3	2	1	1	0	0	2	2	1	1	2	1	0	0	1	1	3	2	2	1	0	0	2	2	12
21	2	3	2	2	3	3	3	4	0	2	2	2	3	2	2	3	2	3	2	2	3	3	3	4	22
22	3	3	3	3	3	2	4	4	3	2	3	3	3	2	3	1	3	3	3	3	3	2	4	4	25
23	5	3	4	4	3	2	3	2	4	5	6	5	3	3	2	1	5	5	6	5	3	3	3	2	32
24	2	0	0	1	1	1	1	2	2	2	1	1	2	1	1	0	2	2	1	1	2	1	1	2	12
25	2	1	2	3	3	2	2	2	2	1	2	3	2	1	1	2	2	1	2	3	3	2	2	2	17
26	1	2	3	3	2	2	2	5	2	3	2	4	3	1	1	3	2	3	3	4	3	2	2	5	24
27	4	2	2	2	1	3	3	6	3	2	4	2	2	1	1	2	4	2	4	2	2	3	3	6	26
28	5	6	6	4	4	4	4	2	4	6	6	5	4	2	2	2	5	6	6	5	4	4	4	2	36
29	2	2	1	2	2	2	3	2	2	2	2	3	2	1	2	0	2	2	2	3	2	2	3	2	18
30	2	3	3	4	4	4	3	5	1	1	4	4	4	6	4	4	2	3	4	4	4	6	4	5	32

BRITISH ANTARCTIC SURVEY

(FORMERLY FALKLAND ISLAND DEPENDENCIES SURVEY)

MAGNETIC RECORDS FOR 1959

FROM ARGENTINE ISLANDS A.973

LAT. -65° 15'

LONG. 295° 44'

GEOMAGNETIC LAT. -53.8°

GEOMAGNETIC LONG. 3.3°

ORIGINAL RECORDS HELD AT :-

BRITISH ANTARCTIC SURVEY

DEPARTMENT OF NATURAL PHILOSOPHY

DRUMMOND STREET

EDINBURGH, 8.

Phone: EDINBURGH NEWINGTON 1011 EXT. 2497

HEAD OFFICE:-

BRITISH ANTARCTIC SURVEY

30 GILLINGHAM STREET

LONDON, S.W. 1.

Phone: LONDON VICTORIA 3687

1. Instruments

These are standard La Cour variometers, recording H, D, and Z.

2. Time

Charts were changed at Greenwich midnight, so that each chart shows a complete Greenwich day. The master clock was adjusted to keep the clock error less than 1/2 minute.

The parallax correction for each trace is given below. The correction is to be added to the times read from the magnetograms.

Sensitive Magnetograms	Trace	Correction
	H	+ 2 mins.
	D	+ 1 min.
	Z	nil
	T	+ 4 mins.
<u>Insensitive Magnetograms</u>		
	H	nil
	D	- 1 min.
	Z	- 2 mins.
	T	+ 1 min.

3. Order of Traces, from top to bottom

Sensitive Magnetograms	Insensitive Magnetograms
T trace	D trace and baseline (double baseline, upper line used)
H trace and baseline	H baseline
D baseline and trace	T trace
Z baseline and trace	H trace
	Z baseline and trace

4. Sense of Traces

All magnetograms: Temperature increases up the sheet.
 H increases up the sheet.
 D increases easterly up the sheet.
 Z increases down the sheet.
 (N.B. Z is negative, hence as Z increases, modulus of Z decreases).

5. Temperature Coefficients

The sensitive H and Z variometers have appreciable temperature coefficients. H baseline values increase with increasing temperature. Z baseline values decrease (i.e. their moduli increase) with increasing temperature.

	H	Z	
Temperature coefficient	4.5 %/°C	2.96 %/°C	Jan - Feb.
		1.5 %/°C	Mar - Dec.
<u>T Trace</u>	<u>Scale Value</u>	<u>Baseline</u>	
Jan - 22nd Mar.	0.527°C/mm	- 31.5°C	
22nd Mar - 27th Mar	0.527°C/mm	- 33.2°C	
27th Mar - Dec	0.527°C/mm	- 33.6°C	
(Insensitive Magnetogram	1.88 °C/mm	+ 12.7°C)	

6. Scale Values

	Sensitive Magnetograms	Insensitive Magnetograms
H	4.37 %/mm	16.1 %/mm
D	0.92 %/mm	2.36 %/mm
Z	2.50 %/mm	10.9 %/mm
	4.00	Jan - 13th Feb
	4.06	14th Feb - Mar
	4.11	Apr.
	4.15	May
	4.18	June - Aug
	4.18	Sept - 14th Dec
	4.05	15th Dec - 31st Dec.

H baseline		D baseline		Z baseline	
1 Jan-22 Jan	23476 at 0°C	1 Jan-31 Jan	17° 37.6' E	1 Jan-19 Jan	-36942 at 0°C
25 Jan-13 Feb	23359 "	1 Feb-30 Jun	17° 57.7' E	20 Jan-12 Feb	-36821 "
14 Feb-13 Mar	23364 "	1 Jul-14 Dec	17° 37.8' E	13 Feb- 2 Mar	-36722 "
14 Mar- 2 Sep	23367 "	15 Dec-31 Dec	17° 38.4' E	5 Mar-13 Mar	-36724 "
3 Sep-21 Nov	23366 "			14 Mar-30 Apr	-36726 "
22 Nov-14 Dec	23360 "			1 May-30 Jun	-36731 "
15 Dec-31 Dec	23296 "			1 Jul-31 Aug	-36728 "
				1 Sep-23 Nov	-36731 "
				24 Nov-26 Nov	-36732 "
				27 Nov-30 Nov	-36733 "
				1 Dec-14 Dec	-36734 "
				15 Dec-31 Dec	-36601 "

Insensitive Magnetograms

Insensitive O C baselines are only quoted for the days on which they are required for completion or clarification of record. The hourly values derived from insensitive records are calculated by comparing sensitive and insensitive magnetogram baselines on the same day at the temperature for that day.

Date	H baseline	D baseline	Z baseline
Jan 21	23996 δ	16° 30.3' E	-36854 δ
23	992	30.5	854
25	993	30.3	856
27	991	30.4	854
Feb 12	986	30.6	854
25	987	29.9	863
27	987	30.6	863
May 3	983	29.4	882
4	986	29.2	876
Jun 8	984	29.2	888
10	997	30.0	886
Jul 14	994	29.9	880
15	994	30.1	881
16	24001	30.4	881
Sep 12	23998	30.1	877
13	994	30.1	881
14	996	30.5	878
Dec 4	992	30.8	880
14	995	30.9	880
21	995	30.7	881
24	992	30.9	885

Baseline Separations - to give scale.

	H - D	D - Z	D - H	H - Z
1 Jan-12 Feb	37.0 mm ± 0.1	118.4 mm ± 0.1	(
13 Feb-14 Dec	36.9 mm ± 0.1	149.4 mm ± 0.1	(46.6 mm ± 0.2	131.2 mm ± 0.2
15 Dec-31 Dec	36.9 mm ± 0.1	136.3 mm ± 0.1	(
	(Sensitive)			(Insensitive)