

BRITISH ANTARCTIC SURVEY

(FORMERLY FALKLAND ISLAND DEPENDENCIES SURVEY)

MAGNETIC RECORDS FOR 1962

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.

<u>Sensitive Magnetograms</u>	<u>Trace</u>	<u>Correction</u>
	H	+ 2 mins.
	D	- 1 min.
	Z	+ 1 min.
	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	4.2 $\delta/^\circ\text{C}$	1.5 $\delta/^\circ\text{C}$
<u>T Trace</u>		<u>Baseline</u>
Jan - Sept.	0.55 $^\circ\text{C}/\text{mm}$	- 36 $^\circ\text{C}$
Oct - Dec.	0.53 $^\circ\text{C}/\text{mm}$	- 32 $^\circ\text{C}$
(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	4.34 δ/mm	15.8 δ/mm
D	0.92 δ/mm	2.4 δ/mm
Z	4.10 δ/mm	11.5 δ/mm

The above insensitive scale values are the means for the year but since a complete set of magnetograms were obtained from the sensitive recorders, they have not been used in deriving the hourly values of the magnetic components.

Baseline Values - Sensitive Magnetograms

	<u>H baseline</u>	<u>D baseline</u>	<u>Z baseline</u>
Jan	23290 δ at 0 $^\circ\text{C}$	Jan 17 $^\circ$ 57.5'E	Jan- 1 Mar -36346 δ at 0 $^\circ\text{C}$
Feb - Apr	289 "	Feb-10 Apr 37.6'E	2 Mar- 8 May 344 "
May - 3 Aug	288 "	11 Apr-26 Oct 37.7'E	9 May- 8 Aug 347 "
4 Aug-3 Oct	287 "	27 Oct-31 Dec 37.6'E	9 Aug-18 Oct 353 "
* 4 Oct-13 Nov	056 "		19 Oct-24 Nov 358 "
14 Nov-31 Dec	055 "		*25 Nov-31 Dec 227 "

* Trace alterations

Insensitive magnetogram baselines were calculated where required by comparison of sensitive and insensitive records.

Baseline Separation, to give scale

	<u>Sensitive</u>		<u>Insensitive</u>	
	H - D	D - Z	D - H	H - Z
1 Jan - 21 Nov	33.4 mm \pm 0.1	154.8 mm \pm 0.1	(
22 Nov - 21 Dec	33.5 mm \pm 0.1	154.4 mm \pm 0.2	(46.8 mm \pm 0.1 131.0 mm \pm 0.2
22 Dec - 31 Dec	33.4 mm \pm 0.1	154.0 mm \pm 0.2	(

Lower limit K9: 500_γ

Scale values: H, 4.34 γ/cm; D, 6.28 γ/cm.

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	1	1	0	1	1	2	0	3	1	1	1	1	0	0	2	3	1	1	1	1	1	2	12
2	1	2	2	2	2	2	2	2	2	2	3	2	2	1	1	1	2	2	3	2	2	2	2	2	17
3	0	0	0	0	0	1	2	2	0	1	0	1	1	1	0	0	0	1	0	1	1	1	2	2	8
4	1	0	1	1	0	0	1	0	0	0	0	1	1	1	0	1	1	0	1	1	1	1	1	1	7
5	0	0	0	0	0	1	2	1	0	0	0	1	1	2	0	0	0	0	1	1	2	2	1		7
6	1	1	0	0	1	0	2	0	0	2	0	0	0	0	0	0	1	2	0	0	1	0	2	0	6
7	1	2	0	0	0	1	2	2	0	1	1	1	1	1	1	1	1	2	1	1	1	1	2	2	11
8	1	1	0	0	0	2	1	1	0	1	1	2	1	1	1	0	1	1	1	2	1	2	1	1	10
9	2	1	0	1	1	2	3	2	1	0	0	1	1	1	1	1	2	1	0	1	1	2	3	2	12
10	4	4	4	4	4	5	4	4	2	5	3	4	4	3	4	3	4	5	4	4	4	5	4	4	34
11	3	3	1	1	1	2	3	2	3	3	3	2	2	1	1	1	3	3	3	2	2	2	3	2	20
12	1	1	0	0	0	1	1	2	0	0	1	1	1	0	0	1	1	1	1	1	1	1	1	2	9
13	1	1	1	0	0	1	1	2	0	1	0	1	0	0	0	0	1	1	1	1	0	1	1	2	8
14	2	2	1	1	1	2	3	4	0	0	1	2	2	1	2	2	2	2	1	2	2	2	3	4	18
15	2	2	2	2	1	2	2	2	1	1	2	2	2	1	1	3	2	2	2	2	2	2	2	3	17
16	1	2	2	2	3	2	2	3	1	1	2	2	2	1	1	3	1	2	2	2	3	2	2	3	17
17	1	1	0	0	1	2	2	2	1	1	1	1	2	1	0	0	1	1	1	1	2	2	2	2	12
18	1	1	1	1	1	2	2	1	0	0	0	1	1	1	0	0	1	1	1	1	1	2	2	1	10
19	3	3	4	1	2	3	3	2	2	1	3	3	3	3	3	0	3	3	4	3	3	3	3	2	24
20	2	2	0	1	1	1	2	2	0	1	1	2	0	1	0	0	2	2	1	2	1	1	2	2	13
21	2	1	1	2	3	2	2	2	1	0	1	2	2	2	0	0	2	1	1	2	3	2	2	2	15
22	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
23	0	1	0	0	0	1	1	0	0	0	0	1	1	0	0	0	0	1	0	1	1	1	1	0	5
24	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	3
25	1	1	2	2	1	2	2	3	0	1	3	3	1	1	1	1	1	1	3	3	1	2	2	3	16
26	3	0	0	1	1	3	2	3	1	0	0	2	2	2	2	1	3	0	0	2	2	3	2	3	15
27	2	3	2	3	2	2	1	3	1	3	2	4	2	1	1	2	2	3	2	4	2	2	1	3	19
28	1	1	1	1	0	1	2	2	1	2	2	2	0	0	1	0	1	2	2	2	0	1	2	2	12
29	0	2	0	1	2	1	0	2	0	2	1	2	3	1	0	0	0	2	1	2	3	1	0	2	11
30	2	1	2	1	2	1	2	2	1	2	2	2	2	0	0	1	2	2	2	2	2	1	2	2	15
31	1	1	1	0	1	0	1	1	1	0	0	0	0	0	0	0	1	1	1	0	1	0	1	1	6

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EXPLANATORY NOTES 1962

1. Instruments

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2. Time

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	H	+ 2 mins.
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	Z	+ 1 min.
	T	+ 4 mins.
<u>Insensitive Magnetograms</u>		
	H	nil
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3. Order of Traces, from top to bottom

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	<u>H</u>	<u>Z</u>
Temperature coefficient	4.2 $\mu/\text{°C}$	1.5 $\mu/\text{°C}$
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Jan - Sept.	0.55 $\text{°C}/\text{mm}$	- 36 °C
Oct - Dec.	0.53 $\text{°C}/\text{mm}$	- 32 °C
(Insensitive Magnetogram 1.88 $\text{°C}/\text{mm}$)		+ 12.7 °C)

6. Scale Values

	<u>Sensitive Magnetograms</u>	<u>Insensitive Magnetograms</u>
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Lower limit K₉: 500_γ

Scale values: E, 4.34_{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	1	1	0	0	0	0	1	1	0	0	0	0	1	0	0	0	1	1	0	0	1	0	1	1	5
2	2	1	1	0	1	1	1	2	1	0	0	0	0	0	1	0	2	1	1	0	1	1	1	2	9
3	1	1	1	0	0	1	2	1	0	0	1	0	1	0	1	0	1	1	1	0	1	1	2	1	8
4	2	2	1	3	3	3	4	6	0	0	1	4	4	1	3	3	2	2	1	4	4	3	4	6	26
5	3	4	0	0	1	2	3	2	2	1	0	0	2	1	1	0	3	4	0	0	2	2	3	2	16
6	2	2	1	0	1	1	2	4	1	1	0	2	1	0	1	1	2	2	1	2	1	1	2	4	15
7	3	2	2	2	2	2	2	1	3	3	3	3	3	2	2	0	3	3	3	3	3	2	2	1	20
8	0	0	0	1	0	1	1	2	0	0	0	1	1	0	0	0	0	0	0	1	1	1	1	2	6
9	2	0	0	1	0	1	1	2	2	0	0	0	0	0	0	0	2	0	0	1	0	1	1	2	7
10	1	1	0	0	0	0	0	1	2	1	0	0	0	0	0	0	2	1	0	0	0	0	0	1	4
11	1	2	0	2	1	1	3	4	2	1	0	3	2	1	2	3	2	2	0	3	2	1	3	4	17
12	5	3	2	2	1	2	3	3	4	2	3	2	2	2	2	3	5	3	3	2	2	2	3	3	23
13	1	2	1	2	1	2	2	3	2	3	2	3	2	1	2	3	2	3	2	3	2	2	2	3	19
14	2	2	1	1	1	3	3	3	3	2	2	2	2	3	2	2	3	2	2	2	2	3	3	3	20
15	2	3	1	1	1	4	4	2	1	3	2	2	0	1	3	0	2	3	2	2	1	4	4	2	20
16	3	4	2	4	3	3	4	4	1	1	1	5	4	3	4	5	3	4	2	5	4	3	4	5	30
17	3	2	2	2	1	2	2	1	3	3	3	2	1	0	0	0	3	3	3	2	1	2	2	1	17
18	0	1	1	2	0	1	3	2	0	0	1	2	1	1	1	0	0	1	1	2	1	1	3	2	11
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23	2	3	0	1	3	2	2	2	0	2	1	3	2	1	2	0	2	3	1	3	3	2	2	2	18
24	2	2	2	1	1	1	2	2	1	1	1	3	2	0	1	1	2	2	2	3	2	1	2	2	16
25	1	2	1	1	1	2	2	3	0	2	1	0	2	1	1	2	1	2	1	1	2	2	2	3	14
26	3	2	2	2	3	4	4	3	1	2	0	1	3	4	3	1	3	2	2	2	3	4	4	3	23
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3. Order of Traces, from top to bottom

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Lower limit K9: 500 γ

Scale values: H, 4.34 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	0	1	1	2	2	2	1	2	0	0	1	2	3	3	1	1	0	1	1	2	3	3	1	2	13
2	2	2	1	0	2	2	2	2	1	1	2	1	3	1	2	0	2	2	2	1	3	2	2	2	16
3	1	0	1	0	2	1	2	2	0	0	0	2	3	1	1	2	1	0	1	2	3	1	2	2	12
4	3	2	1	0	0	0	2	1	2	0	0	1	2	0	1	0	3	2	1	1	2	0	2	1	12
5	1	0	2	2	5	3	3	3	1	0	2	2	5	2	3	2	1	0	2	2	5	3	3	3	19
6	3	3	3	3	3	2	3	1	2	5	4	3	4	3	2	1	3	5	4	3	4	3	3	1	26
7	1	1	1	1	1	2	1	0	1	1	2	1	2	1	0	0	1	1	2	1	2	2	1	0	10
8	1	2	1	0	0	0	0	0	0	1	1	0	0	0	0	0	1	2	1	0	0	0	0	0	4
9	0	0	0	0	0	1	2	1	0	0	0	0	1	0	1	0	0	0	0	0	1	1	2	1	5
10	3	2	2	2	2	1	2	4	2	3	2	3	3	2	2	3	3	3	2	3	3	2	2	4	22
11	4	3	2	2	1	3	2	1	3	3	3	2	2	1	1	0	4	3	3	2	2	3	2	1	20
12	2	1	3	2	1	2	3	2	3	2	2	3	2	2	2	1	3	2	3	3	2	2	3	2	20
13	3	1	1	2	2	2	0	1	3	1	1	3	1	0	0	0	3	1	1	3	2	2	0	1	13
14	1	0	2	1	0	2	1	1	0	0	1	0	2	0	0	0	1	0	2	1	2	2	1	1	10
15	3	3	2	1	1	1	1	3	1	3	2	3	2	0	0	2	3	3	2	3	2	1	1	3	18
16	2	1	2	1	0	0	1	1	0	1	1	1	1	0	0	0	2	1	2	1	1	0	1	1	9
17	2	2	1	1	1	0	0	1	0	0	1	1	2	1	0	0	2	2	1	1	2	1	0	1	10
18	1	2	2	1	2	1	2	1	0	0	1	1	2	0	0	0	1	2	2	1	2	1	2	1	12
19	2	2	2	1	2	1	3	2	2	2	3	2	2	2	3	1	2	2	3	2	2	2	3	2	18
20	1	2	2	2	1	3	3	2	0	3	2	2	2	2	3	1	1	3	2	2	2	3	3	2	18
21	3	2	3	0	2	2	2	3	1	1	3	2	1	2	2	5	3	2	3	2	2	2	2	5	21
22	0	1	0	0	0	0	0	3	0	0	1	1	0	1	1	1	0	1	1	1	0	1	1	3	8
23	1	0	1	2	0	1	1	0	0	0	0	2	2	1	0	0	1	0	1	2	2	1	1	0	8
24	3	1	1	0	0	2	2	1	3	1	0	1	2	2	0	0	3	1	1	1	2	2	2	1	13
25	2	3	2	1	2	1	0	0	4	4	3	1	2	1	0	1	4	4	3	1	2	1	0	1	16
26	2	1	0	0	0	1	0	1	3	2	0	0	0	0	0	0	3	2	0	0	0	1	0	1	7
27	2	1	1	0	1	0	1	0	0	1	1	1	1	0	0	0	2	1	1	1	1	0	1	0	7
28	0	0	0	0	1	1	2	2	0	0	0	1	2	1	1	2	0	0	0	1	2	1	2	2	8
29	3	2	2	0	0	0	1	0	3	2	3	2	2	0	0	0	3	2	3	2	2	0	1	0	13
30	1	1	1	0	0	0	1	1	1	0	0	0	0	0	0	0	1	1	1	0	0	0	1	1	5
31	3	1	2	0	0	1	1	1	0	0	1	0	0	1	0	0	3	1	2	0	0	1	1	1	9

BRITISH ANTARCTIC SURVEY

(FORMERLY FALKLAND ISLAND DEPENDENCIES SURVEY)

MAGNETIC RECORDS FOR 1962

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 1962

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	+ 1 min.
	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	4.2 $\gamma/^\circ\text{C}$	1.5 $\gamma/^\circ\text{C}$
<u>T Trace</u>		
Jan - Sept.	0.55 $^\circ\text{C}/\text{mm}$	- 36 $^\circ\text{C}$
Oct - Dec.	0.53 $^\circ\text{C}/\text{mm}$	- 32 $^\circ\text{C}$
(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	4.34 γ/mm	15.8 γ/mm
D	0.92 γ/mm	2.4 γ/mm
Z	4.10 γ/mm	11.5 γ/mm

The above insensitive scale values are the means for the year but since a complete set of magnetograms were obtained from the sensitive recorders, they have not been used in deriving the hourly values of the magnetic components.

Baseline Values - Sensitive Magnetograms

1962

	<u>H baseline</u>	<u>D baseline</u>	<u>Z baseline</u>
Jan	23290 γ at 0°C	Jan 17 $^\circ$ 37.5'E	Jan- 1 Mar -36346 γ at 0°C
Feb - Apr	289 "	Feb-10 Apr 37.6'E	2 Mar- 8 May 344 "
May - 3 Aug	288 "	11 Apr-26 Oct 37.7'E	9 May- 8 Aug 347 "
4 Aug-3 Oct	287 "	27 Oct-31 Dec 37.6'E	9 Aug-18 Oct 355 "
* 4 Oct-13 Nov	056 "		19 Oct-24 Nov 358 "
14 Nov-31 Dec	055 "		*25 Nov-31 Dec 227 "

* Trace alterations

Insensitive magnetogram baselines were calculated where required by comparison of sensitive and insensitive records.

Baseline Separation, to give scale

	<u>Sensitive</u>		<u>Insensitive</u>	
	H - D	D - Z	D - H	H - Z
1 Jan - 21 Nov	33.4 mm \pm 0.1	154.8 mm \pm 0.1	(
22 Nov - 21 Dec	33.5 mm \pm 0.1	154.4 mm \pm 0.2	(46.8 mm \pm 0.1 131.0 mm \pm 0.2
22 Dec - 31 Dec	33.4 mm \pm 0.1	154.0 mm \pm 0.2	(

Lower limit K9: 500_y

Scale values: H, 4.34 y/mm; D, 6.28 y/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	2	2	3	4	1	1	1	1	0	4	4	4	3	1	0	0	2	4	4	4	3	1	1	1	20
2	1	2	0	0	0	1	2	4	0	2	1	0	1	2	2	4	1	2	1	0	1	2	2	4	13
3	4	3	3	1	0	1	2	2	3	3	4	1	2	2	1	1	4	3	4	1	2	2	2	2	20
4	2	2	3	3	2	2	1	3	2	3	4	3	2	1	1	2	2	3	4	3	2	2	1	3	20
5	3	2	0	1	0	1	0	1	3	2	0	0	1	0	0	0	3	2	0	1	1	1	0	1	9
6	3	4	3	3	3	3	4	4	0	4	3	4	2	1	4	3	3	4	3	4	3	3	4	4	28
7	5	3	4	3	4	4	4	4	5	4	4	4	3	3	3	5	5	4	4	4	4	4	4	5	34
8	4	3	2	2	3	4	3	3	5	3	2	3	2	3	4	3	5	3	2	3	3	4	4	3	27
9	4	2	2	1	2	2	2	1	5	2	3	1	2	2	2	2	5	2	3	1	2	2	2	2	19
10	1	3	1	3	5	4	3	4	1	4	2	4	4	3	3	5	1	4	2	4	5	4	3	5	28
11	5	3	3	2	3	3	2	2	4	4	3	3	3	3	1	3	5	4	3	3	3	3	2	3	26
12	3	2	0	1	0	1	0	3	3	3	0	0	1	1	1	4	3	3	0	1	1	1	1	4	14
13	2	1	1	0	1	1	0	1	3	1	1	0	0	0	0	0	3	1	1	0	1	1	0	1	8
14	2	1	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	4
15	2	2	1	0	1	2	2	3	1	3	1	0	1	2	1	2	2	3	1	0	1	2	2	3	14
16	3	2	1	1	1	1	1	2	3	2	0	0	1	0	1	1	3	2	1	1	1	1	1	2	12
17	2	3	1	1	1	1	0	1	4	4	0	2	1	1	0	0	4	4	1	2	1	1	0	1	14
18	1	2	3	2	2	1	2	2	0	3	3	2	3	2	2	1	1	3	3	2	3	2	2	2	18
19	3	2	3	0	0	0	0	1	4	3	2	1	1	0	0	0	4	3	3	1	1	0	0	1	13
20	2	1	1	1	0	1	1	3+	3	2	1	0	0	0	0	2+	3	2	1	1	0	1	1	3+	12+
21	2	2	2	2	1	3	3	4	3	2	2	1	0	3	3	3	3	2	2	2	1	3	3	4	20
22	4	3	4	2	2	3	2	3	5	4	3	4	2	3	3	3	5	4	4	4	2	3	3	3	28
23	3	3	3	3	1	1	0	1	3	4	3	3	2	2	0	0	3	4	3	3	2	2	0	1	18
24	0	0	0	0	1	0	1	0	0	0	0	0	2	1	0	0	0	0	0	0	2	1	1	0	4
25	0	0	2	2	2	2	3	2	0	0	3	3	2	2	2	1	0	0	3	3	2	2	3	2	15
26	2	3	4	2	2	2	1	2	2	2	5	2	2	2	0	1	2	3	5	2	2	2	1	2	19
27	2	2	2	2	1	1	2	1	2	4	2	1	0	1	2	1	2	4	2	2	1	1	2	1	15
28	2	3	3	1	1	2	1	1	2	3	3	2	1	1	1	2	2	3	3	2	1	2	1	2	16
29	2	0	1	0	2	0	2	2	3	3	1	1	2	1	1	1	3	3	1	1	2	1	2	2	15
30	1	1	1	1	0	1	1	1	3	0	0	2	0	0	2	2	3	1	1	2	0	1	2	2	12

BRITISH ANTARCTIC SURVEY

(FORMERLY FALKLAND ISLAND DEPENDENCIES SURVEY)

MAGNETIC RECORDS FOR 1962

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 $\frac{1}{2}$ 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	+ 1 min.
	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	4.2 $\%$ / $^{\circ}$ C	1.5 $\%$ / $^{\circ}$ C
<u>T Trace</u>	<u>Scale Value</u>	<u>Baseline</u>
Jan - Sept.	0.55 $^{\circ}$ C/mm	- 36 $^{\circ}$ C
Oct - Dec.	0.53 $^{\circ}$ C/mm	- 32 $^{\circ}$ C
(Insensitive Magnetogram)	1.88 $^{\circ}$ C/mm	+ 12.7 $^{\circ}$ C

6. Scale Values

	<u>Sensitive Magnetograms</u>	<u>Insensitive Magnetograms</u>
H	4.34 $\%$ /mm	15.8 $\%$ /mm
D	0.92 $\%$ /mm	2.4 $\%$ /mm
Z	4.10 $\%$ /mm	11.5 $\%$ /mm

The above insensitive scale values are the means for the year but since a complete set of magnetograms were obtained from the sensitive recorders, they have not been used in deriving the hourly values of the magnetic components.

Baseline Values - Sensitive Magnetograms

	<u>H baseline</u>	<u>D baseline</u>	<u>Z baseline</u>
Jan	23290 at 0 $^{\circ}$ C	Jan 17 $^{\circ}$ 37.5'E	Jan-1 Mar -36.6 at 0 $^{\circ}$ C
Feb - Apr	289 "	Feb-10 Apr 37.6'E	2 Mar- 8 May 34.4 "
May - 3 Aug	288 "	11 Apr-26 Oct 37.7'E	9 May- 8 Aug 34.7 "
4 Aug-3 Oct	287 "	27 Oct-31 Dec 37.6'E	9 Aug-18 Oct 353 "
* 4 Oct-13 Nov	056 "		19 Oct-24 Nov 358 "
14 Nov-31 Dec	055 "		*25 Nov-31 Dec 227 "

* Trace alterations

Insensitive magnetogram baselines were calculated where required by comparison of sensitive and insensitive records.

Baseline Separation, to give scale

	<u>Sensitive</u>		<u>Insensitive</u>	
	H - D	D - Z	D - H	H - Z
1 Jan - 21 Nov	33.4 mm \pm 0.1	154.8 mm \pm 0.1	(
22 Nov - 21 Dec	33.5 mm \pm 0.1	154.4 mm \pm 0.2	(46.8 mm \pm 0.1 131.0 mm \pm 0.2
22 Dec - 31 Dec	33.4 mm \pm 0.1	154.0 mm \pm 0.2	(

Lower limit K₉: 500_y

Scale values: E, 4.34 y/mo; D, 6.28 y/mo.

Day	K _H								K _D								Max(K _H , K _D)								Sun
	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	1	1	0	0	0	2	3	4	2	3	1	0	0	1	2	4	2	3	1	0	0	2	3	15
2	2	3	3	2	3	1	2	3	3	3	3	3	1	1	1	3	3	3	3	3	3	1	2	3	21
3	3	2	2	2	2	0	2	1	4	4	3	3	0	0	1	1	4	4	3	3	2	0	2	1	19
4	2	1	2	0	0	0	1	1	2	1	2	1	0	0	0	0	2	1	2	1	0	0	1	1	8
5	0	0	1	1	0	0	1	3	0	0	1	0	0	0	0	1	0	0	1	1	0	0	1	3	6
6	2	2	2	2	4	3	3	4	1	1	0	3	3	3	3	4	2	2	2	3	4	3	3	4	23
7	3	3	2	1	2	2	1	1	4	3	2	1	1	1	0	2	4	3	2	1	2	2	1	2	17
8	3	2	1	1	0	1	0	3	4	2	2	0	0	0	1	2	4	2	2	1	0	1	1	3	14
9	2	2	1	1	0	0	0	0	2	2	1	1	1	0	0	0	2	2	1	1	1	0	0	0	7
10	2	3	2	1	0	1	0	0	3	3	1	1	1	0	0	0	3	3	2	1	1	1	0	0	11
11	0	1	2	0	1	2	2	2	0	1	2	1	1	2	2	1	0	1	2	1	1	2	2	2	11
12	1	0	1	1	0	1	1	1	0	2	2	1	0	0	0	0	1	2	2	1	0	1	1	1	9
13	2	3	2	1	2	2	3	3	0	3	3	2	2	2	2	4	2	3	3	2	2	2	3	4	21
14	3	3	2	2	2	2	3	3	3	3	3	2	1	1	2	3	3	3	3	2	2	2	3	3	21
15	4	3	2	0	1	2	4	0	3	3	3	3	0	3	3	0	4	3	3	3	1	3	4	0	21
16	1	3	2	3	1	0	1	1	1	3	3	4	2	1	1	1	1	3	3	4	2	1	1	1	16
17	1	1	1	1	0	1	1	0	1	0	1	1	0	1	0	0	1	1	1	1	0	1	1	0	6
18	1	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1	0	0	1	0	0	4
19	0	1	3	3	2	2	1	1	0	1	3	3	0	1	0	0	0	1	3	3	2	2	1	1	13
20	1	2	1	0	0	0	0	0	0	2	1	1	0	1	0	0	1	2	1	1	0	1	0	0	6
21	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2
22	1	0	1	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0	1	0	0	3
23	0	1	1	0	0	0	0	0	0	2	2	0	0	0	0	0	0	2	2	0	0	0	0	0	4
24	1	1	0	0	0	0	0	0	1	2	0	0	0	0	0	0	1	2	0	0	0	0	0	0	3
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	1	3	0	0	0	0	0	0	1	2	0	0	0	0	0	0	1	3	4
27	3	3	2	2	1	1	2	3	2	3	4	3	2	2	1	3	3	3	4	3	2	2	2	3	22
28	2	2	0	0	1	1	2	3	1	2	1	2	1	2	3	2	2	2	1	2	1	2	3	3	16
29	2	3	3	2	2	2	0	0	2	3	3	3	1	0	0	1	2	3	3	3	2	2	0	1	16
30	0	1	1	0	0	0	0	1	0	2	1	1	0	0	0	0	0	2	1	1	0	0	0	1	5
31	0	2	3	3	4	3	2	4	0	3	5	5	3	2	3	3	0	3	5	5	4	3	3	4	27

BRITISH ANTARCTIC SURVEY

(FORMERLY FALKLAND ISLAND DEPENDENCIES SURVEY)

MAGNETIC RECORDS FOR 1962

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LAT. -65° 15'

LONG. 295° 44'

GEOMAGNETIC LAT. -53.8°

GEOMAGNETIC LONG. 5.5°

ORIGINAL RECORDS HELD AT :-

BRITISH ANTARCTIC SURVEY

DEPARTMENT OF NATURAL PHILOSOPHY

DRUMMOND STREET

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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 $\frac{1}{2}$ 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	+ 1 min.
	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	4.2 μ/C	1.5 μ/C

<u>T Trace</u>	<u>Scale Value</u>	<u>Baseline</u>
Jan - Sept.	0.55 $^{\circ}\text{C}/\text{mm}$	- 36 $^{\circ}\text{C}$
Oct - Dec.	0.53 $^{\circ}\text{C}/\text{mm}$	- 32 $^{\circ}\text{C}$
(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	4.34 μ/mm	15.8 μ/mm
D	0.92 μ/mm	2.4 μ/mm
Z	4.10 μ/mm	11.5 μ/mm

The above insensitive scale values are the means for the year but since a complete set of magnetograms were obtained from the sensitive recorders, they have not been used in deriving the hourly values of the magnetic components.

Baseline Values - Sensitive Magnetograms

	<u>H baseline</u>	<u>D baseline</u>	<u>Z baseline</u>
Jan	23290 μ at 0 $^{\circ}\text{C}$	Jan 17 $^{\circ}$ 37.5'E	Jan-1 Mar -36346 μ at 0 $^{\circ}\text{C}$
Feb - Apr	289 "	Feb-10 Apr 37.6'E	2 Mar- 8 May 344 "
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* 4 Oct-13 Nov	056 "		19 Oct-24 Nov 358 "
14 Nov-31 Dec	055 "		*25 Nov-31 Dec 227 "

* Trace alterations

Insensitive magnetogram baselines were calculated where required by comparison of sensitive and insensitive records.

Baseline Separation, to give scale

	<u>Sensitive</u>		<u>Insensitive</u>	
	H - D	D - Z	D - H	H - Z
1 Jan - 21 Nov	33.4 mm \pm 0.1	154.8 mm \pm 0.1	(
22 Nov - 21 Dec	33.5 mm \pm 0.1	154.4 mm \pm 0.2	(46.8 mm \pm 0.1 131.0 mm \pm 0.2
22 Dec - 31 Dec	33.4 mm \pm 0.1	154.0 mm \pm 0.2	(

Lower limit K9: 500 y

Scale values: $K_H, 4.34 \text{ y/mm}$; $K_D, 5.29 \text{ y/mm}$

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	4	3	2	2	2	2	2	1	3	2	3	3	1	1	2	2	4	3	3	3	2	2	2	2	21
2	2	2	1	1	1	1	1	2	2	2	1	1	0	0	1	1	2	2	1	1	1	1	1	2	11
3	0	1	0	0	0	2	1	3	0	1	1	1	0	2	1	2	0	1	1	1	0	2	1	3	9
4	4	3	2	2	2	2	3	4	5	3	3	3	2	2	3	4	5	3	3	3	2	2	3	4	25
5	2	3	3	1	1	2	3	4	2	3	3	2	1	1	2	5	2	3	3	2	1	2	3	5	21
6	3	2	3	2	4	2	1	2	3	3	3	3	1	1	0	1	3	3	3	3	4	2	1	2	21
7	2	3	3	2	1	1	1	0	2	0	3	1	2	0	2	1	2	3	3	2	2	1	2	1	16
8	0	1	1	0	1	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	1	0	0	0	3
9	3	3	3	3	2	2	3	4	1	4	3	4	2	1	2	5	3	4	3	4	2	2	3	5	26
10	3	4	3	4	1	1	1	0	5	4	4	4	3	1	0	1	5	4	4	4	3	1	1	1	23
11	0	3	2	1	2	0	0+	2	0	3	3	2	2	1	1+	2	0	3	3	2	2	1	1+	2	14+
12	3	2	2	1	2	1	1	0	2	2	3	2	2	1	1	1	3	2	3	2	2	1	1	1	15
13	1	1	1	1	0	0	0	0	1	2	2	1	0	0	0	0	1	2	2	1	0	0	0	0	6
14	1	3	1	2	1	1	1	2	0	3	3	2	1	1	1	2	1	3	3	2	1	1	1	2	14
15	3	4	2	2	2	1	2	0	4	3	2	2	1	1	2	1	4	4	2	2	2	1	2	1	18
16	3	1	1	0	1	1	0	0	4	1	1	1	0	0	0	0	4	1	1	1	1	1	0	0	9
17	0	0	1	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1	0	0	1	0	0	2
18	2	1	0	0	0	0	0	0	2	1	0	0	0	0	0	0	2	1	0	0	0	0	0	0	3
19	1	1	0	0	0	0	0	0	0	2	2	1	1	1	0	0	1	2	2	1	1	1	0	0	8
20	1	1	2	0	0	1	1	0	0	1	1	1	0	0	0	0	1	1	2	1	0	1	1	0	7
21	1	2	0	1	1	1	2	2	1	1	0	1	1	2	2	3	1	2	0	1	1	2	2	3	12
22	3	4	1	1	0	1	1	2	2	4	4	1	0	1	1	3	3	4	4	1	0	1	1	3	17
23	2	3	3	2	1	2	4	3	3	4	3	2	2	2	3	3	3	4	3	2	2	2	4	3	23
24	2	2	2	1	1	1	1	2	3	2	2	2	1	1	1	3	3	2	2	2	1	1	1	3	15
25	2	2	3	2	1	0	1	0	3	3	4	1	1	1	0	0	3	3	4	2	1	1	1	0	15
26	0	0	2	1	1	2	2	2	0	2	1	0	0	1	1	2	0	2	2	1	1	2	2	2	12
27	3	4	4	2	3	2	2	2	3	3	4	4	3	2	2	3	3	4	4	4	3	2	2	3	25
28	2	3	3	3	2	1	2	4	2	3	3	4	2	2	2	3	2	3	3	4	2	2	2	4	22
29	4	3	2	1	3	2	1	2	3	4	3	3	2	2	2	3	4	4	3	3	3	2	2	3	24
30	2	3	2	3	2	2	1	2	3	4	3	3	1	1	2	1	3	4	3	3	2	2	2	2	21

BRITISH ANTARCTIC SURVEY

(FORMERLY FALKLAND ISLAND DEPENDENCIES SURVEY)

MAGNETIC RECORDS FOR 1962

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 1962

1962

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 $\frac{1}{2}$ 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	+ 1 min.
	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	4.2 μ/C	1.5 μ/C
<u>T Trace</u>	<u>Scale Value</u>	<u>Baseline</u>
Jan - Sept.	0.55 $^{\circ}\text{C}/\text{mm}$	- 36 $^{\circ}\text{C}$
Oct - Dec.	0.55 $^{\circ}\text{C}/\text{mm}$	- 32 $^{\circ}\text{C}$
(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	4.34 μ/mm	15.8 μ/mm
D	0.92 μ/mm	2.4 μ/mm
Z	4.10 μ/mm	11.5 μ/mm

The above insensitive scale values are the means for the year but since a complete set of magnetograms were obtained from the sensitive recorders, they have not been used in deriving the hourly values of the magnetic components.

Baseline Values - Sensitive Magnetograms

	<u>H baseline</u>	<u>D baseline</u>	<u>Z baseline</u>
Jan	23290 μ at 0 $^{\circ}\text{C}$	Jan 17 $^{\circ}$ 37.5' E	Jan-1 Mar -36346 μ at 0 $^{\circ}\text{C}$
Feb - Apr	289 "	Feb-10 Apr 37.6' E	2 Mar- 8 May 344 "
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* Trace alterations

Insensitive magnetogram baselines were calculated where required by comparison of sensitive and insensitive records.

Baseline Separation, to give scale

	<u>Sensitive</u>		<u>Insensitive</u>	
	H - D	D - Z	D - H	H - Z
1 Jan - 21 Nov	33.4 mm \pm 0.1	154.8 mm \pm 0.1	(
22 Nov - 21 Dec	33.5 mm \pm 0.1	154.4 mm \pm 0.2	(46.8 mm \pm 0.1 131.0 mm \pm 0.2
22 Dec - 31 Dec	33.4 mm \pm 0.1	154.0 mm \pm 0.2	(

Lower Limit K9: 500 γ

Scale values: H, 4.34 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	2	3	1	2	2	2	2	2	2	2	3	3	1	2	2	2	2	3	3	3	2	2	2	2	19
2	3	1	3	1	0	2	2	2	3	1	3	2	0	0	2	2	3	1	3	2	0	2	2	2	15
3	3	1	2	2	2	3	1	1	3	2	2	2	1	1	1	0	3	2	2	2	2	3	1	1	16
4	1	3	2	2	2	1	4	5	2	3	3	2	2	2	2	4	2	3	3	2	2	2	4	5	23
5	2	5	3	2	2	1	3	2	3	4	4	2	1	1	2	2	3	5	4	2	2	1	3	2	22
6	3	4	2	2	1	1	2	2	4	3	4	3	1	1	2	2	4	4	4	3	1	1	2	2	21
7	1	1	1	2	1	1	2	3	1	1	1	2	1	0	2	3	1	1	1	2	1	1	2	3	12
8	2	3	2	1	1	1	1	3	2	4	2	1	2	2	1	3	2	4	2	1	2	2	1	3	17
9	2	2	1	1	0	1	0	0	3	3	2	1	0	0	0	0	3	3	2	1	0	1	0	0	10
10	1	1	1	1	1	2	1	1	1	0	1	0	2	1	0	1	1	1	1	1	2	2	1	1	10
11	1	2	2	1	1	1	2	2	2	3	2	2	2	2	1	2	2	3	2	2	2	2	2	2	17
12	0	3	3	1	1	2	1	1	0	3	3	1	2	2	2	1	0	3	3	1	2	2	2	1	14
13	3	1	1	1	2	2	2	3	3	2	1	1	3	3	3	3	3	2	1	1	3	3	3	3	19
14	2	3	3	0	2	1	1	2	3	2	3	2	2	2	1	1	3	3	3	2	2	2	1	2	18
15	3	1	1	1	1	1	2	2	3	1	1	0	0	0	0	2	3	1	1	1	1	1	2	2	12
16	2	2	1	0	0	0	0	0	2	3	1	0	1	0	0	0	2	3	1	0	1	0	0	0	7
17	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	3
18	2	1	1	0	1	1	1	0	1	0	0	0	0	0	0	0	2	1	1	0	1	1	1	0	7
19	1	2	1	2	0	1	3	2	0	0	2	2	1	1	1	1	1	2	2	2	1	1	3	2	14
20	3	3	4	2	2	2	2	2	3	4	4	3	2	1	2	2	3	4	4	3	2	2	2	2	22
21	3	3	1	2	1	2	2	3	3	4	1	2	0	1	2	4	3	4	1	2	1	2	2	4	19
22	3	2	3	2	0	1	1	2	4	2	3	2	1	1	2	3	4	2	3	2	1	1	2	3	18
23	1	2	2	2	2	2	2	2	1	3	4	3	1	2	2	2	1	3	4	3	2	2	2	2	19
24	2	2	1	1	1	2	3	3	2	0	0	1	3	2	3	3	2	2	1	1	3	2	3	3	17
25	3	3	2	1	1	0	0	2	5	3	3	3	1	0	0	0	5	3	3	3	1	0	0	2	17
26	3	4	5	4	4	2	3	4	1	5	7	6	2	2	2	5	3	5	7	6	4	2	3	5	35
27	5	4	2	2	3	3	2	3	6	3	3	1	4	3	1	2	6	4	3	2	4	3	2	3	27
28	4	3	3	1	2	3	3	2	4	3	4	2	2	2	1	3	4	3	4	2	2	3	3	3	24
29	4	2	2	1	1	2	1	2	3	3	3	2	0	1	1	2	4	3	3	2	1	2	1	2	18
30	3	3	2	0	0	0	0	1	3	4	1	0	0	0	0	2	3	4	2	0	0	0	0	2	11
31	1	1	1	1	0	3	2	3	1	1	0	0	0	1	3	3	1	1	1	1	0	3	3	3	13

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	H	+ 2 mins.
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	Z	+ 1 min.
	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
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	Z baseline and trace

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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	4.2 μ/C	1.5 μ/C
<u>T Trace</u>		<u>Baseline</u>
Jan - Sept.	0.55 $^{\circ}\text{C}/\text{mm}$	- 36 $^{\circ}\text{C}$
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	H - D	D - Z	D - H	H - Z
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Lower Limit K9: 500_y

Scale values: H, 4.34 y/m; D, 6.28 y/m.

	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	4	4	3	4	3	2	2	4	5	5	4	4	3	3	3	4	5	5	4	4	3	3	3	4	27
2	2	3	2	1	2	2	1	1	3	3	2	2	1	2	2	1	3	3	2	2	2	2	2	1	17
3	1	2	1	1	2	2	2	3	2	3	3	2	2	2	1	3	2	3	2	2	2	2	2	3	19
4	1	2	2	1	1	1	1	0	1	3	2	2	0	1	0	0	1	3	2	2	1	1	1	0	14
5	2	1	2	3	2	0	1	1	3	2	2	3	2	2	1	0	3	2	2	3	2	2	1	1	16
6	2	3	3	2	3	2	2	3	3	4	4	2	3	1	1	2	3	4	4	2	3	2	2	3	23
7	3	3	2	3	1	2	3	3	4	3	3	2	2	3	2	4	4	3	3	3	2	3	3	4	25
8	5	3	2	3	3	3	1	3	5	4	4	3	3	3	2	3	5	4	4	3	3	3	2	3	27
9	3	3	3	3	2	2	2	3	5	3	3	3	2	2	2	3	5	3	3	3	2	2	2	3	23
10	3	2	3	2	2	2	1	1	4	3	4	3	1	1	0	0	4	3	4	3	2	2	1	1	20
11	1	1	0	0	0	0	0	0	2	2	0	0	0	0	0	0	2	2	0	0	0	0	0	0	4
12	0	2	1	0	0	0	1	0	0	2	2	0	1	0	0	0	0	2	2	0	1	0	1	0	6
13	0	1	1	0	0	0	0	3	1	0	1	1	1	0	1	2	1	1	1	1	1	0	1	3	9
14	2	2	1	1	0	1	2	3	2	4	1	1	1	0	1	3	2	4	1	1	1	1	2	3	15
15	2	4	3	2	2	2	2	4	4	5	6	2	1	1	1	4	4	5	6	2	2	2	2	4	27
16	5	3	3	1	1	2	3	4	4	3	5	0	1	1	3	4	5	3	5	1	1	2	3	4	24
17	5	5	2	2	2	3	3	4	5	5	4	2	2	3	3	5	5	5	4	2	2	3	3	5	29
18	2	3	4	2	3	2	3	2	4	4	4	3	3	3	2	3	4	4	4	3	3	3	3	3	27
19	3	3	2	2	3	2	2	3	5	4	3	3	2	2	2	3	5	4	3	3	3	2	2	3	25
20	2	1	0	1	1	1	0	2	2	1	1	1	1	1	0	1	2	1	1	1	1	1	0	2	9
21	3	0	1	1	0	1	0	3	2	0	1	2	0	0	0	3	3	0	1	2	0	1	0	3	10
22	4	5	4	2	3	2	4	4	6	4	4	1	2	2	3	4	6	5	4	2	3	2	4	4	30
23	4	4	2	2	3	2	3	2	4	4	3	3	2	2	3	2	4	4	3	3	3	2	3	2	24
24	3	3	4	2	4	3	3	3	2	3	4	3	3	3	2	3	3	3	4	3	4	3	3	3	26
25	4	3	2	2	2	2	2	4	4	3	3	2	2	2	3	3	4	3	3	2	2	2	3	4	23
26	3	2	2	2	2	2	1	1	2	3	2	2	2	1	1	1	3	3	2	2	2	2	1	1	16
27	2	2	1	0	0	0	1	0	2	2	2	1	0	0	0	0	2	2	2	1	0	0	1	0	8
28	2	2	0	0	1	0	0	0	2	3	1	0	1	0	0	0	2	3	1	0	1	0	0	0	7
29	1	3	2	2	2	2	3	3	2	3	4	3	2	1	2	3	2	3	4	3	2	2	3	3	22
30	2	2	2	2	3	2	2	3	3	2	3	1	2	2	2	0	3	2	3	2	3	2	2	3	20
31	4	5	4	2	3	0	2	2	5	5	5	3	3	2	2	2	5	5	5	3	3	2	2	2	27

BRITISH ANTARCTIC SURVEY

(FORMERLY FALKLAND ISLAND DEPENDENCIES SURVEY)

MAGNETIC RECORDS FOR 1962

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 1952

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	+ 1 min.
	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.

Temperature coefficient	<u>H</u> 4.2 %/°C	<u>Z</u> 1.5 %/°C
<u>T Trace</u>	<u>Scale Value</u>	<u>Baseline</u>
Jan - Sept.	0.55 °C/mm	- 36°C
Oct - Dec.	0.53 °C/mm	- 32°C
(Insensitive Magnetogram 1.88 °C/mm)		+ 12.7°C

6. Scale Values

	<u>Sensitive Magnetograms</u>	<u>Insensitive Magnetograms</u>
H	4.34 %/mm	15.8 %/mm
D	0.92 %/mm	2.4 %/mm
Z	4.10 %/mm	11.5 %/mm

The above insensitive scale values are the means for the year but since a complete set of magnetograms were obtained from the sensitive recorders, they have not been used in deriving the hourly values of the magnetic components.

Baseline Values - Sensitive Magnetograms

<u>H baseline</u>		<u>D baseline</u>		<u>Z baseline</u>	
Jan	23290 / at 0°C	Jan	17° 37.5'E	Jan-1 Mar	-36346 / at 0°C
Feb - Apr	289 "	Feb-10 Apr	37.6'E	2 Mar- 8 May	344 "
May - 3 Aug	288 "	11 Apr-26 Oct	37.7'E	9 May- 8 Aug	347 "
4 Aug-3 Oct	287 "	27 Oct-31 Dec	37.6'E	9 Aug-18 Oct	353 "
* 4 Oct-15 Nov	056 "			19 Oct-24 Nov	358 "
14 Nov-31 Dec	055 "			*25 Nov-31 Dec	227 "

* Trace alterations

Insensitive magnetogram baselines were calculated where required by comparison of sensitive and insensitive records.

Baseline Separation, to give scale

	<u>Sensitive</u>		<u>Insensitive</u>	
	H - D	D - Z	D - H	H - Z
1 Jan - 21 Nov	33.4 mm ± 0.1	154.8 mm ± 0.1	(
22 Nov - 21 Dec	33.5 mm ± 0.1	154.4 mm ± 0.2	(46.8 mm ± 0.1 131.0 mm ± 0.2
22 Dec - 31 Dec	33.4 mm ± 0.1	154.0 mm ± 0.2	(

Lower limit K9: 500

Scale values: H, 4.34 y/m; D, 6.28 y/m.

Day	K_H								K_D								$\text{Max}(K_H, K_D)$								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	2	4	3	3	3	3	3	3	3	4	4	3	3	4	3	3	3	4	4	3	3	4	3	27
2	3	4	4	3	3	3	3	3	4	4	4	4	4	3	4	3	4	4	4	4	4	3	4	3	30
3	3	4	2	4	4	3	5	4	4	4	3	3	3	3	4	5	4	4	3	4	4	3	5	5	32
4	4	5	3	3	4	4	2	3	4	5	4	3	3	2	4	4	4	5	4	3	4	4	4	4	32
5	1	2	2	3	3	3	3	3	1	3	3	3	3	3	3	3	1	3	3	3	3	3	3	3	22
6	3	3	3	3	1	2	2	3	4	4	5	3	2	2	3	3	4	4	5	3	2	2	3	3	26
7	4	3	3	2	2	2	1	1	3	2	3	3	3	3	1	1	4	3	3	3	3	3	1	1	21
8	4	3	3	2	2	2	2	2	4	4	4	4	2	1	1	1	4	4	4	4	2	2	2	2	24
9	2	3	1	2	3	0	2	2	2	2	1	1	3	1	3	3	2	3	1	2	3	1	3	3	18
10	3	3	2	1	1	0	1	1	3	3	4	3	2	0	0	0	3	3	4	3	2	0	1	1	17
11	2	1	2	3	0	1	1	2	3	1	2	3	1	0	0	1	3	1	2	3	1	1	1	2	14
12	2	3	4	4	3	4	4	5	1	2	6	5	3	4	4	5	2	3	6	5	3	4	4	5	32
13	4	3	3	2	2	3	4	2	4	3	3	2	2	4	4	2	4	3	3	2	2	4	4	2	24
14	2	3	2	1	0	1	1	2	4	3	3	1	1	0	1	3	4	3	3	1	1	1	1	3	17
15	3	4	2	2	1	2	2	2	3	3	3	1	0	0	1	2	3	4	3	2	1	2	2	2	19
16	2	2	0	1	1	2	3	4	3	2	0	1	2	1	3	3	3	2	0	1	2	2	3	4	17
17	1	2	2	1	1	1	1	2	2	2	2	1	1	1	1	3	2	2	2	1	1	1	1	3	13
18	1	0	1	0	0	0	1	1	2	0	1	0	0	0	0	2	2	0	1	0	0	0	1	2	6
19	4	4	4	2	2	3	5	5	3	5	5	3	3	3	4	5	4	5	5	3	3	3	5	5	33
20	4	1	1	2	1	1	1	0	5	3	2	2	2	0	0	0	5	3	2	2	2	1	1	0	16
21	1	2	2	1	0	2	1	1	1	3	2	1	1	2	1	2	1	3	2	1	1	2	1	2	13
22	3	3	1	3	3	2	3	2	4	4	3	2	2	3	4	2	4	4	3	3	3	3	4	2	26
23	3	3	2	2	2	1	1	2	3	3	3	3	1	0	0	2	3	3	3	3	2	1	1	2	18
24	2	2	1	0	0	0	2	3	2	3	0	0	0	0	0	1	2	3	1	0	0	0	2	3	11
25	1	1	1	1	0	1	2	3	0	0	0	1	1	0	0	1	1	1	1	1	1	1	2	3	11
26	5	4	2	2	2	4	3	3	5	4	3	2	2	3	3	1	5	4	3	2	2	4	3	3	26
27	3	2	2	2	1	1	1	3	3	1	3	1	2	1	0	2	3	2	3	2	2	1	1	3	17
28	2	1	1	1	1	2	2	3	3	3	0	2	2	2	2	2	3	3	1	2	2	2	2	3	18
29	1	2	3	3	2	2	2	4	2	3	3	3	1	0	2	4	2	3	3	3	2	2	2	4	21
30	3	2	2	2	2	2	2	2	3	3	2	2	2	1	1	1	3	3	2	2	2	2	2	2	18

BRITISH ANTARCTIC SURVEY

(FORMERLY FALKLAND ISLAND DEPENDENCIES SURVEY)

MAGNETIC RECORDS FOR 1962

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 1/4 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	+ 1 min.
	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	4.2 %/°C	1.5 %/°C
<u>T Trace</u>	<u>Scale Value</u>	<u>Baseline</u>
Jan - Sept.	0.55 °C/mm	- 36°C
Oct - Dec.	0.53 °C/mm	- 32°C
(Insensitive Magnetogram)	1.88 °C/mm	+ 12.7°C

6. Scale Values

	<u>Sensitive Magnetograms</u>	<u>Insensitive Magnetograms</u>
H	4.34 %/mm	15.8 %/mm
D	0.92 %/mm	2.4 %/mm
Z	4.10 %/mm	11.5 %/mm

The above insensitive scale values are the means for the year but since a complete set of magnetograms were obtained from the sensitive recorders, they have not been used in deriving the hourly values of the magnetic components.

Baseline Values - Sensitive Magnetograms

	<u>H baseline</u>	<u>D baseline</u>	<u>Z baseline</u>
Jan	23290 μ at 0°C	Jan 17° 37.5'E	Jan-1 Mar -36346 μ at 0°C
Feb - Apr	289 "	Feb-10 Apr 37.6'E	2 Mar-6 May 344 "
May - 3 Aug	288 "	11 Apr-26 Oct 37.7'E	9 May-8 Aug 347 "
4 Aug-3 Oct	287 "	27 Oct-31 Dec 37.6'E	9 Aug-18 Oct 353 "
* 4 Oct-13 Nov	056 "		19 Oct-24 Nov 358 "
14 Nov-31 Dec	055 "		*25 Nov-31 Dec 227 "

* Trace alterations

Insensitive magnetogram baselines were calculated where required by comparison of sensitive and insensitive records.

Baseline Separation, to give scale

	<u>Sensitive</u>		<u>Insensitive</u>	
	H - D	D - Z	D - H	H - Z
1 Jan - 21 Nov	33.4 mm \pm 0.1	154.8 mm \pm 0.1	(
22 Nov - 21 Dec	33.5 mm \pm 0.1	154.4 mm \pm 0.2	(46.8 mm \pm 0.1 131.0 mm \pm 0.2
22 Dec - 31 Dec	33.4 mm \pm 0.1	154.0 mm \pm 0.2	(

Lower limit K_H: 500_γ

Scale values: H, 4.54 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	4	4	4	3	3	4	4	3	3	3	5	3	4	5	4	3	4	4	5	3	4	5	4	32
2	4	3	2	2	3	2	3	1	4	3	4	3	3	3	3	1	4	3	4	3	3	3	3	1	24
3	2	2	2	2	3	2	1	2	1	2	2	2	4	3	1	3	2	2	2	4	3	1	3	3	19
4	2	1	2	2	1	1	1	2	1	2	2	2	1	2	2	3	2	2	2	2	1	2	2	3	16
5	1	1	1	1	1	2	4	3	1	2	2	2	1	1	4	2	1	2	2	2	1	2	4	3	17
6	3	3	3	1	2	1	0	3	5	3	4	0	4	2	2	2	5	3	4	1	4	2	2	3	24
7	2	2	1	1	0	1	3	4	2	2	2	2	1	1	1	4	2	2	2	2	1	1	3	4	17
8	4	3	2	3	2	3	4	3	6	2	3	3	3	3	3	4	6	3	3	3	3	3	4	4	29
9	5	4	3	3	3	2	3	3	5	3	4	3	3	2	2	5	5	4	4	3	3	2	3	5	29
10	3	3	2	3	3	3	4	3	5	3	2	2	4	2	4	2	5	3	2	3	4	3	4	3	27
11	3	3	2	2	2	2	3	3	4	5	4	3	2	2	2	3	4	5	4	3	2	2	3	3	26
12	2	2	1	2	1	0	1	1	3	1	1	3	2	0	0	0	3	2	1	3	2	0	1	1	13
13	1	1	1	3	3	3	2	2	0	1	1	3	1	1	2	4	1	1	1	3	3	3	2	4	18
14	3	3	3	3	3	2	4	3	4	4	4	4	3	3	4	3	4	4	4	4	3	3	4	3	29
15	2	2	2	1	2	2	1	2	2	3	2	1	1	1	1	2	2	3	2	1	2	2	1	2	15
16	3	2	2	4	3	2	3	3	2	1	2	4	3	2	1	1	3	2	2	4	3	2	3	3	22
17	3	1	2	2	0	1	2	1	3	2	1	3	0	0	0	0	3	2	2	3	0	1	2	1	14
18	3	3	0	1	2	2	2	2	4	4	2	2	2	2	2	1	4	4	2	2	2	2	2	2	20
19	0	0	2	3	3	3	4	3	0	0	4	5	4	3	3	2	0	0	4	5	4	3	4	3	23
20	3	1	1	1	2	2	3	3	1	0	1	1	1	2	2	1	3	1	1	1	2	2	3	3	16
21	3	2	2	2	1	3	1	2	4	2	2	2	1	2	2	2	4	2	2	2	1	3	2	2	18
22	3	3	2	3	3	3	3	4	1	4	3	3	4	3	2	4	3	4	3	3	4	3	3	4	27
23	4	3	2	3	3	2	2	3	5	3	2	3	2	2	3	3	5	3	2	3	3	2	3	3	24
24	3	3	1	2	2	3	4	3	3	3	2	3	3	3	3	4	3	3	2	3	3	3	4	4	25
25	3	3	3	3	3	4	4	4	4	3	3	3	3	4	4	4	4	3	3	3	3	4	4	4	28
26	3	2	3	4	4	3	3	4	3	3	3	3	3	3	3	4	3	3	3	4	4	3	3	4	27
27	2	3	3	2	4	4	3	3	3	3	4	3	3	3	2	4	3	3	4	3	4	4	3	4	28
28	2	3	2	2	1	2	3	2	2	2	2	2	3	1	3	3	2	3	2	2	3	2	3	3	20
29	2	2	2	2	2	2	2	3	3	2	3	2	1	2	1	2	3	2	3	2	2	2	2	3	19
30	3	2	2	2	1	3	2	3	2	3	3	3	2	2	2	2	3	3	3	3	2	3	2	3	22
31	2	2	0	2	1	1	2	2	2	3	2	1	0	2	2	2	2	3	2	2	1	2	2	2	16

BRITISH ANTARCTIC SURVEY

(FORMERLY FALKLAND ISLAND DEPENDENCIES SURVEY)

MAGNETIC RECORDS FOR 1962

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 1962

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 $\frac{1}{2}$ 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	+ 1 min.
	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	4.2 $\gamma/^\circ\text{C}$	1.5 $\gamma/^\circ\text{C}$
<u>T Trace</u>	<u>Scale Value</u>	<u>Baseline</u>
Jan - Sept.	0.55 $^\circ\text{C}/\text{mm}$	- 36 $^\circ\text{C}$
Oct - Dec.	0.53 $^\circ\text{C}/\text{mm}$	- 32 $^\circ\text{C}$
(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	4.34 γ/mm	15.8 γ/mm
D	0.92 γ/mm	2.4 γ/mm
Z	4.10 γ/mm	11.5 γ/mm

The above insensitive scale values are the means for the year but since a complete set of magnetograms were obtained from the sensitive recorders, they have not been used in deriving the hourly values of the magnetic components.

Baseline Values - Sensitive Magnetograms

1962

	<u>H baseline</u>	<u>D baseline</u>	<u>Z baseline</u>
Jan	23290 γ at 0 $^\circ\text{C}$	Jan 17 $^\circ$ 37.5'E	Jan-1 Mar -36346 γ at 0 $^\circ\text{C}$
Feb - Apr	289 "	Feb-10 Apr 37.6'E	2 Mar- 8 May 344 "
May - 3 Aug	288 "	11 Apr-26 Oct 37.7'E	9 May- 8 Aug 347 "
4 Aug-3 Oct	287 "	27 Oct-31 Dec 37.6'E	9 Aug-18 Oct 353 "
* 4 Oct-13 Nov	056 "		19 Oct-24 Nov 358 "
14 Nov-31 Dec	055 "		*25 Nov-31 Dec 227 "

* Trace alterations

Insensitive magnetogram baselines were calculated where required by comparison of sensitive and insensitive records.

Baseline Separation, to give scale

	<u>Sensitive</u>		<u>Insensitive</u>	
	H - D	D - Z	D - H	H - Z
1 Jan - 21 Nov	33.4 mm \pm 0.1	154.8 mm \pm 0.1	(
22 Nov - 21 Dec	33.5 mm \pm 0.1	154.4 mm \pm 0.2	(46.8 mm \pm 0.1 131.0 mm \pm 0.2
22 Dec - 31 Dec	33.4 mm \pm 0.1	154.0 mm \pm 0.2	(

Lower Limit K9: 500_y

Scale values: H, 4.34 y/m; D, 6.28 y/m.

K_H

K_D

$\text{Max}(K_H, K_D)$

	K_H								K_D								$\text{Max}(K_H, K_D)$								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	1	1	1	1	1	3	3	2	1	2	3	0	1	2	2	2	1	2	3	1	1	3	3	16
2	2	1	1	1	3	3	3	3	2	1	0	2	2	2	2	3	2	1	1	2	3	3	3	3	18
3	2	1	1	2	1	2	3	3	2	0	2	2	1	1	2	4	2	1	2	2	1	2	3	4	17
4	2	2	1	2	0	2	3	3	3	3	2	3	1	1	2	3	3	3	2	3	1	2	3	3	20
5	2	2	2	2	1	0	1	2	0	0	3	1	1	0	0	0	2	2	3	2	1	0	1	2	13
6	3	4	2	1	2	4	4	4	3	3	2	2	3	2	3	4	3	4	2	2	3	4	4	4	26
7	3	2	2	3	2	0	3	3	4	3	0	3	2	0	1	2	4	3	2	3	2	0	3	3	20
8	2	1	1	0	1	2	2	2	1	1	1	2	2	1	1	1	2	1	1	2	2	2	2	2	14
9	2	1	0	0	1	0	2	3	2	0	0	0	1	0	0	2	2	1	0	0	1	0	2	3	9
10	2	1	0	0	0	1	1	1	1	1	0	1	1	1	0	0	2	1	0	1	1	1	1	1	8
11	2	2	2	2	1	2	2	2	1	2	3	3	3	1	1	2	2	2	3	3	3	2	2	2	19
12	2	1	1	0	0	1	1	2	2	0	0	0	0	0	1	0	2	1	1	0	0	1	1	2	8
13	1	0	0	0	0	1	2	2	0	0	0	0	1	0	0	0	1	0	0	0	1	1	2	2	7
14	1	0	0	0	1	3	3	3	0	0	0	1	0	2	3	0	1	0	0	1	1	3	3	3	12
15	1	3	2	4	5	2	4	4	1	3	2	3	5	2	3	4	1	3	2	4	5	2	4	4	25
16	4	3	3	2	2	4	3	3	4	3	4	3	3	3	2	4	4	3	4	3	3	4	3	4	28
17	3	1	1	1	1	2	0	1	4	2	0	1	1	1	0	0	4	2	1	1	1	2	0	1	12
18	0	0	0	0	0	1	1	2	0	0	0	1	0	0	0	1	0	0	0	1	0	1	1	2	5
19	1	0	0	1	1	1	2	2	0	0	0	1	1	0	1	1	1	0	0	1	1	1	2	2	8
20	2	2	2	1	1	2	2	2	0	0	2	1	1	0	0	0	2	2	2	1	1	2	2	2	14
21	3	3	4	3	2	3	3	3	2	2	4	4	3	1	3	3	3	3	4	4	3	3	3	3	26
22	3	3	3	4	3	3	3	5	4	4	5	5	4	2	3	3	4	4	5	5	4	3	3	5	33
23	3	3	2	3	2	3	2	3	3	3	3	3	3	1	3	1	3	3	3	3	3	3	3	3	24
24	3	2	3	4	2	4	4	3	2	2	3	3	3	3	3	2	3	2	3	4	3	4	4	3	26
25	2	2	2	3	3	3	3	3	3	2	3	4	2	2	1	0	3	2	3	4	3	3	3	3	24
26	2	1	0	0	1	1	2	2	3	2	1	2	1	1	1	0	3	2	1	2	1	1	2	2	14
27	1	2	2	1	1	1	3	3	2	3	2	2	1	1	1	1	2	3	2	2	1	1	3	3	17
28	2	2	2	1	1	1	1	1	1	1	1	2	2	1	0	0	2	2	2	2	2	1	1	1	13
29	1	0	2	2	2	3	3	3	2	0	2	3	2	2	3	2	2	0	2	3	2	3	3	3	18
30	4	3	3	4	3	2	3	2	4	4	4	4	3	2	1	2	4	4	4	4	3	2	3	2	26

BRITISH ANTARCTIC SURVEY

(FORMERLY FALKLAND ISLAND DEPENDENCIES SURVEY)

MAGNETIC RECORDS FOR 1962

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.

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

Temperature coefficient	$\frac{H}{4.2 \text{ } \mu/\text{ }^\circ\text{C}}$	$\frac{Z}{1.5 \text{ } \mu/\text{ }^\circ\text{C}}$
<u>T Trace</u>	<u>Scale Value</u>	<u>Baseline</u>
Jan - Sept.	0.55 $^\circ\text{C}/\text{mm}$	- 36 $^\circ\text{C}$
Oct - Dec.	0.53 $^\circ\text{C}/\text{mm}$	- 32 $^\circ\text{C}$
(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	4.34 μ/mm	15.8 μ/mm
D	0.92 μ/mm	2.4 μ/mm
Z	4.10 μ/mm	11.5 μ/mm

The above insensitive scale values are the means for the year but since a complete set of magnetograms were obtained from the sensitive recorders, they have not been used in deriving the hourly values of the magnetic components.

Baseline Values - Sensitive Magnetograms

	<u>H baseline</u>	<u>D baseline</u>	<u>Z baseline</u>
Jan	23290 μ at 0 $^\circ\text{C}$	Jan 17' 37.5'E	Jan- 1 Mar -36346 μ at 0 $^\circ\text{C}$
Feb - Apr	289 "	Feb-10 Apr 37.6'E	2 Mar- 8 May 344 "
May - 3 Aug	288 "	11 Apr-26 Oct 37.7'E	9 May- 8 Aug 347 "
4 Aug-3 Oct	287 "	27 Oct-31 Dec 37.6'E	9 Aug-18 Oct 353 "
* 4 Oct-13 Nov	056 "		19 Oct-24 Nov 358 "
14 Nov-31 Dec	055 "		*25 Nov-31 Dec 227 "

* Trace alterations

Insensitive magnetogram baselines were calculated where required by comparison of sensitive and insensitive records.

Baseline Separation, to give scale

	<u>Sensitive</u>		<u>Insensitive</u>	
	H - D	D - Z	D - H	H - Z
1 Jan - 21 Nov	33.4 mm \pm 0.1	154.8 mm \pm 0.1	(
22 Nov - 21 Dec	33.5 mm \pm 0.1	154.4 mm \pm 0.2	(46.8 mm \pm 0.1 131.0 mm \pm 0.2
22 Dec - 31 Dec	33.4 mm \pm 0.1	154.0 mm \pm 0.2	(

Lower limit K9: 500

Scale values: H, 4.34 y/m; D, 6.28 y/m.

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