

BRITISH ANTARCTIC SURVEY

(FORMERLY FALKLAND ISLAND DEPENDENCIES SURVEY)

MAGNETIC RECORDS FOR 1964

FROM ARGENTINE ISLANDS A.973

LAT. -65° 15'

LONG. 295° 44'

GEOMAGNETIC LAT. -55.3°

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

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EXPLANATORY NOTES 1964

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.

Sensitive Magnetograms

<u>Trace</u>	<u>Correction</u>		
	Jan 1-Jun 30	Jul 6-Aug 5	Aug 6-Dec 31
H	+3 mins.	+1 mins.	+1 mins.
D	-1	-1	+2
Z	+1	0	+1
T	+4	+3	+3

Corrections July 1 to July 6 variable due to several baseline changes. They can be deduced by inspection of the relative positions of the traces with the appropriate 2400Z time mark.

Insensitive Magnetograms

<u>Trace</u>	<u>Correction</u>	
	Jan 1-Jun 10	Jun 11-Dec 31
H	-4 mins.	-4 mins.
D	+1	0
Z	-1	+1
T	-2	-2

3. Order of Traces, from top to bottom:

Sensitive Magnetograms

- H trace and baseline
- T trace
- D baseline and trace
- Z baseline and trace

Insensitive Magnetograms

- D trace and baseline  
(when baseline double,  
upper line used)
- H baseline
- T trace
- H trace
- Z baseline and trace

4. Sense of trace

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.)

Insensitive magnetograms

	<u>D-H</u>	<u>H-Z</u>
Jan 1-Apr 30	63.0 mm $\pm 0.2$	114.0 mm $\pm 0.3$
May 1-May 18	63.4 mm $\pm 0.2$	113.6 mm $\pm 0.3$
May 18-Jun 10	63.4 mm $\pm 0.2$	113.3 mm $\pm 0.3$
Jun 11-Dec 31	73.7 mm $\pm 0.3$	113.3 mm $\pm 0.3$

5. Temperature coefficients

H baseline values increase with increasing temperature.

Z baseline values decrease with increasing temperature.

Temperature coefficients:

H : 4.7 y/°C	Jan 1-Jun 30	Z : 0.0 y/°C	Jan 1-Jun 30
4.15	Jul 1-Dec 31	1.2	Jul 1-Dec 31

<u>T trace</u>	<u>Scale Value</u>	<u>Baseline</u>
Jan 1-Jun 30	0.55 °C/mm	11.3 °C
Jul 1-Aug 12	0.53	0.3
Aug 13-Dec 31	0.53	10.8

8. Baseline Values

Sensitive Magnetograms

<u>H baselines</u>		<u>D baselines</u>		<u>Z baselines</u>	
Jan 1-7	23,098 y	Jan 1-Feb 29	17° 37.5'	Jan 1-31	-36,160y
Jan 8-11	97	Mar 1- 31	37.6	Feb 1-Apr 30	163
12-15	96	Apr 1-Jun 30	37.8	May 1-31	168
16-20	95	Jul 1-Aug 5	41.9	Jun 1-30	170
21-24	94	Aug 6-Dec 31	19.1	Jul 1-Aug 7	064
25-28	93			Aug 8-Dec 31	073
Jan 29-Feb 1	92				
Feb 2- 5	91				
6-10	90				
11-15	89				
16-19	88				
20-23	87				
24-29	86				
Mar 1-Jun 30	85				
Jul 1-Aug 11	12				
Aug 12-Nov 30	42				
Dec 1-Dec 31	41				

Note: H and Z baselines are at 0°C  
 Insensitive magnetogram baselines and scale values are calculated where required, by comparison with the sensitive magnetograms.

6. Scale Values, Sensitive magnetograms

H	4.30y/mm Jan 1-Aug 12, 4.21y/mm Aug 13-Dec 31
D	0.92'/mm All year
Z	4.20y/mm Jan 1-Jun 30, 4.10y/mm Jul 1-Dec 31

7. Baseline separations, to give scale

Sensitive magnetograms.

<u>Dates</u>	<u>H-D</u>	<u>D-Z</u>
Jan 4-Feb 19	44.0	153.9
Feb 20-Feb 21	43.8 to 43.1	"
Feb 22-Apr 16	43.0	"
Apr 17-May 2	42.6	"
May 3-Jun 24	42.3	"
Jun 25-Jun 30	42.7	"
Jul 1-Aug 5	42.0	146.5
Aug 6-Aug 11	24.2	164.1
Aug 12, part of	21.8	"
Aug 12-Oct 31	24.2	"
Nov 1-Nov 18	23.8	164.4
Nov 19-Nov 28	23.4	164.7
Nov 29-Dec 31	23.0	"

All measured in mm, with probable error of  $\pm$  0.2 mm

Lower limit K<sub>9</sub>: 500y

Scale values: H, 4.3Cy/mm; D, 6.24 y/mm.

Day	K <sub>H</sub>								K <sub>D</sub>								Max(K <sub>H</sub> , K <sub>D</sub> )								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	0	1	0	0	1	4	3	0	0	0	1	2	0	3	1	1	0	1	1	2	1	4	3	13
2	3	5	4	5	3	3	3	2	0	6	5	5	4	2	3	1	3	6	5	5	4	3	3	2	31
3	3	2	2	2	1	2	3	3	4	3	2	2	2	2	2	3	4	3	2	2	2	2	3	3	21
4	3	3	3	2	3	3	3	3	3	2	2	2	2	1	2	3	3	3	3	2	3	3	3	3	23
5	2	2	1	0	1	0	1	2	0	2	2	1	1	0	1	0	2	2	2	1	1	0	1	2	11
6	0	0	0	0	0	1	2	2	1	1	0	1	0	0	0	0	1	1	0	1	0	1	2	2	8
7	0	0	0	3	3	1	2	2	0	0	0	2	2	0	1	1	0	0	0	3	3	1	2	2	11
8	1	0	0	2	2	2	3	3	0	0	1	1	1	0	1	1	1	0	1	2	2	2	3	3	14
9	4	3	1	2	1	2	4	4	1	3	2	1	1	2	2	3	4	3	2	2	1	2	4	4	22
10	4	3	2	1	2	2	2	2	4	3	2	1	2	1	0	3	4	3	2	1	2	2	2	3	19
11	2	2	0	1	1	0	3	2	1	1	1	1	1	1	0	0	2	2	1	1	1	1	3	2	13
12	2	0	0	1	0	0	3	2	0	0	1	0	1	0	0	0	2	0	1	1	1	0	3	2	10
13	2	1	1	0	0	1	1	2	1	2	0	1	1	0	0	1	2	2	1	1	1	1	1	2	11
14	0	0	0	0	0	1	1	1	0	0	1	1	1	0	0	0	0	0	1	1	1	1	1	1	6
15	0	0	0	0	0	0	1	2	0	0	0	1	1	1	0	0	0	0	0	1	1	1	1	2	6
16	4	4	4	3	4	3	3	2	0	3	3	4	3	3	4	1	4	4	4	4	4	3	4	2	29
17	3	1	3	2	2	1	3	2	3	3	2	3	2	0	1	0	3	3	3	3	2	1	3	2	20
18	2	1	1	0	1	1	2	1	2	1	2	2	1	1	0	0	2	1	2	2	1	1	2	1	12
19	0	1	1	0	1	2	3	2	0	0	0	0	0	1	2	1	0	1	1	0	1	2	3	2	10
20	1	2	1	0	0	1	0	0	1	1	0	1	1	1	0	0	1	2	1	1	1	1	0	0	7
21	1	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	1	3
22	1	0	1	0	0	2	0	0	2	1	1	0	0	2	0	0	2	1	1	0	0	2	0	0	6
23	1	0	0	0	1	2	2	2	0	0	0	1	2	1	0	0	1	0	0	1	2	2	2	2	10
24	3	2	2	2	2	1	2	1	1	3	2	1	2	0	1	0	3	3	2	2	2	1	2	1	16
25	2	2	2	1	1	2	3	3	2	0	3	1	1	1	2	2	2	2	3	1	1	2	3	3	17
26	2	1	0	0	1	1	2	2	3	1	0	0	1	0	2	0	3	1	0	0	1	1	2	2	10
27	1	0	1	0	0	0	1	2	2	0	0	0	0	0	0	1	2	0	1	0	0	0	1	2	6
28	2	3	2	1	0	1	4	4	0	1	2	2	2	0	3	2	2	3	2	2	2	1	4	4	20
29	3	3	3	3	3	3	3	2	1	2	3	3	3	2	1	1	3	3	3	3	3	3	3	2	23
30	2	2	1	1	1	2	1	2	3	0	2	2	2	1	0	0	3	2	2	2	2	2	1	2	16
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Sensitive Magnetograms

<u>Trace</u>	<u>Correction</u>		
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Insensitive Magnetograms

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T	-2	-2

3. Order of Traces, from top to bottom:

Sensitive Magnetograms

H trace and baseline  
 T trace  
 D baseline and trace  
 Z baseline and trace

Insensitive Magnetograms

D trace and baseline  
 (when baseline double,  
 upper line used)  
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Temperature coefficients:

H : 4.7  $\gamma/^\circ\text{C}$  Jan 1-Jun 30      Z : 0.0  $\gamma/^\circ\text{C}$  Jan 1-Jun 30  
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T trace	Scale Value	Baseline
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6. Scale Values, Sensitive magnetograms

H      4.30 $\gamma/\text{mm}$  Jan 1-Aug 12, 4.21 $\gamma/\text{mm}$  Aug 13-Dec 31  
D      0.92' /mm All year  
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7. Baseline separations, to give scale

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All measured in mm, with probable error of  $\pm 0.2$  mm

Insensitive magnetograms /

Insensitive magnetograms

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8. Baseline Values

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20-23	87				
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Note: H and Z baselines are at 0 $^\circ\text{C}$   
Insensitive magnetogram baselines and scale values are calculated where required, by comparison with the sensitive magnetograms.

ARGENTINE ISLANDS A.973

FEBRUARY 1964

Lower limit K9: 500y

Scale values: H, 4.30y/mm; D, 6.24y/mm.

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



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6-10	90				
11-15	89				
16-19	88				
20-23	87				
24-29	86				
Mar 1-Jun 30	85				
Jul 1-Aug 11	12				
Aug 12-Nov 30	42				
Dec 1-Dec 31	41				

Note: H and Z baselines are at 0 $^{\circ}$ C  
 Insensitive magnetogram baselines and scale values are calculated where required, by comparison with the sensitive magnetograms.

6. Scale Values, Sensitive magnetograms

H	4.30y/mm Jan 1-Aug 12, 4.21y/mm Aug 13-Dec 31
D	0.92'/mm All year
Z	4.20y/mm Jan 1-Jun 30, 4.10y/mm Jul 1-Dec 31

7. Baseline separations, to give scale

Sensitive magnetograms.

<u>Dates</u>	<u>H-D</u>	<u>D-Z</u>
Jan 1-Feb 19	44.0	153.9
Feb 20-Feb 21	43.8 to 43.1	"
Feb 22-Apr 16	43.0	"
Apr 17-May 2	42.6	"
May 3-Jun 24	42.3	"
Jun 25-Jun 30	42.7	"
Jul 1-Aug 5	42.0	146.5
Aug 6-Aug 11	24.2	164.1
Aug 12, part of	21.8	"
Aug 12-Oct 31	24.2	"
Nov 1-Nov 18	23.8	164.4
Nov 19-Nov 28	23.4	164.7
Nov 29-Dec 31	23.0	"

All measured in mm, with probable error of  $\pm 0.2$  mm



BRITISH ANTARCTIC SURVEY

(FORMERLY FALKLAND ISLAND DEPENDENCIES SURVEY)

MAGNETIC RECORDS FOR 1964

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 1964

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.

Sensitive Magnetograms

<u>Trace</u>	<u>Correction</u>		
	Jan 1-Jun 30	Jul 6-Aug 5	Aug 6-Dec 31
H	+3 mins.	+1 mins.	+1 mins.
D	-1	-1	+2
Z	+1	0	+1
T	+4	+3	+3

Corrections July 1 to July 6 variable due to several baseline changes. They can be deduced by inspection of the relative positions of the traces with the appropriate 2400Z time mark.

Insensitive Magnetograms

<u>Trace</u>	<u>Correction</u>	
	Jan 1-Jun 10	Jun 11-Dec 31
H	-4 mins.	-4 mins.
D	+1	0
Z	-1	+1
T	-2	-2

3. Order of Traces, from top to bottom:

Sensitive Magnetograms

- H trace and baseline
- T trace
- D baseline and trace
- Z baseline and trace

Insensitive Magnetograms

- D trace and baseline  
(when baseline double,  
upper line used)
- H baseline
- T trace
- H trace
- Z baseline and trace

4. Sense of trace

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

H baseline values increase with increasing temperature.

Z baseline values decrease with increasing temperature.

Temperature coefficients:

H : 4.7  $\gamma/^\circ\text{C}$  Jan 1-Jun 30      Z : 0.0  $\gamma/^\circ\text{C}$  Jan 1-Jun 30  
 4.15      Jul 1-Dec 31      1.2      Jul 1-Dec 31

<u>T trace</u>	<u>Scale Value</u>	<u>Baseline</u>
Jan 1-Jun 30	0.55 $^\circ\text{C}/\text{mm}$	11.3 $^\circ\text{C}$
Jul 1-Aug 12	0.53	0.3
Aug 13-Dec 31	0.53	10.8

6. Scale Values, Sensitive magnetograms

H      4.30 $\gamma/\text{mm}$  Jan 1-Aug 12, 4.21 $\gamma/\text{mm}$  Aug 13-Dec 31  
 D      0.92' /  $\text{mm}$  All year  
 Z      4.20 $\gamma/\text{mm}$  Jan 1-Jun 30, 4.10 $\gamma/\text{mm}$  Jul 1-Dec 31

7. Baseline separations, to give scale

Sensitive magnetograms.

<u>Dates</u>	<u>H-D</u>	<u>D-Z</u>
Jan 1-Feb 19	44.0	153.9
Feb 20-Feb 21	43.8 to 43.1	"
Feb 22-Apr 16	43.0	"
Apr 17-May 2	42.6	"
May 3-Jun 24	42.3	"
Jun 25-Jun 30	42.7	"
Jul 1-Aug 5	42.0	146.5
Aug 6-Aug 11	24.2	164.1
Aug 12, part of	21.8	"
Aug 12-Oct 31	24.2	"
Nov 1-Nov 18	23.8	164.4
Nov 19-Nov 28	23.4	164.7
Nov 29-Dec 31	23.0	"

All measured in mm, with probable error of  $\pm$  0.2 mm

Insensitive magnetograms /

Insensitive magnetograms

	<u>D-H</u>	<u>H-Z</u>
Jan 1-Apr 30	63.0 mm $\pm$ 0.2	114.0 mm $\pm$ 0.3
May 1-May 18	63.4 mm $\pm$ 0.2	113.6 mm $\pm$ 0.3
May 18-Jun 10	63.4 mm $\pm$ 0.2	113.3 mm $\pm$ 0.3
Jun 11-Dec 31	73.7 mm $\pm$ 0.3	113.3 mm $\pm$ 0.3

8. Baseline Values

Sensitive Magnetograms

<u>H baselines</u>		<u>D baselines</u>		<u>Z baselines</u>	
Jan 1-7	23,098 $\gamma$	Jan 1-Feb 29	17 $^\circ$ 37.5'	Jan 1-31	-36,160 $\gamma$
Jan 8-11	97	Mar 1- 31	37.6	Feb 1-Apr 30	163
12-15	96	Apr 1-Jun 30	37.8	May 1-31	168
16-20	95	Jul 1-Aug 5	41.9	Jun 1-30	170
21-24	94	Aug 6-Dec 31	19.1	Jul 1-Aug 7	064
25-28	93			Aug 8-Dec 31	073
Jan 29-Feb 1	92				
Feb 2- 5	91				
6-10	90				
11-15	89				
16-19	88				
20-23	87				
24-29	86				
Mar 1-Jun 30	85				
Jul 1-Aug 11	12				
Aug 12-Nov 30	42				
Dec 1-Dec 31	41				

Note: H and Z baselines are at 0 $^\circ\text{C}$   
 Insensitive magnetogram baselines and scale values are calculated where required, by comparison with the sensitive magnetograms.

Lower limit K9: 500y

Scale values: H, 4.30y/mm; D, 6.24y/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	0	0	0	1	4	4	5	0	0	0	0	1	4	4	6	0	0	0	0	1	4	4	6	15
2	4	3	2	2	2	3	4	3	5	4	3	2	2	2	4	3	5	4	3	2	2	3	4	3	26
3	4	3	2	3	2	2	2	3	4	4	2	1	2	1	1	3	4	4	2	3	2	2	2	3	22
4	3	2	2	0	0	1	0	3	3	3	4	2	0	0	0	3	3	3	4	2	0	1	0	3	16
5	2	3	0	2	0	1	3	2	1	3	2	3	0	1	1	4	2	3	2	3	0	1	3	4	18
6	2	2	0	0	0	0	1	2	0	2	1	0	0	1	0	3	2	2	1	0	0	1	1	3	10
7	2	2	3	2	1	0	3	2	3	2	3	2	1	1	2	0	3	2	3	2	1	1	3	2	17
8	0	1	2	3	2	0	2	2	1	0	3	4	2	0	0	0	1	1	3	4	2	0	2	2	15
9	2	2	1	1	0	0	0	0	3	3	2	2	0	0	0	0	3	3	2	2	0	0	0	0	10
10	0	1	2	2	2	0	0	1	0	1	1	3	1	0	0	0	0	1	2	3	2	0	0	1	9
11	0	1	1	3	3	1	2	1	0	0	1	3	3	2	2	0	0	1	1	3	3	2	2	1	13
12	0	1	1	0	0	0	0	1	0	1	0	0	0	0	0	0	0	1	1	0	0	0	0	1	3
13	1	1	0	0	0	0	1	1	2	1	0	0	0	0	0	0	2	1	0	0	0	0	1	1	5
14	1	1	0	0	1	0	0	0	0	0	0	1	0	0	0	0	1	1	0	1	1	0	0	0	4
15	0	0	0	2	2	0	0	4	0	0	0	1	1	0	0	4	0	0	0	2	2	0	0	4	8
16	4	2	2	1	1	1	0	0	3	3	2	1	1	1	0	0	4	3	2	1	1	1	0	0	12
17	4	3	3	2	1	1	1	1	4	3	4	3	1	2	0	1	4	3	4	3	1	2	1	1	19
18	0	0	2	2	3	2	2	3	0	0	1	3	4	2	2	2	0	0	2	3	4	2	2	3	16
19	3	2	2	2	2	1	3	4	4	3	1	4	1	1	2	3	4	3	2	4	2	1	3	4	23
20	3	2	2	0	1	1	1	3	3	2	3	2	1	0	1	4	3	2	3	2	1	1	1	4	17
21	4	1	0	0	1	0	2	2	3	1	1	1	0	0	1	1	4	1	1	1	1	0	2	2	12
22	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	1
23	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2
24	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0	0	0	0	0	2	0	0	0	1	3
25	2	1	2	2	1	1	1	2	1	0	2	3	2	2	2	3	2	1	2	3	2	2	2	3	17
26	3	4	3	1	1	1	1	2	4	4	4	2	1	1	1	3	4	4	1	2	1	1	1	3	20
27	3	3	3	3	3	4	4	4	3	3	3	2	3	2	4	4	3	3	3	3	3	4	4	4	27
28	5	4	4	3	2	1	2	3	5	5	5	4	2	1	1	4	5	5	5	4	2	1	2	4	28
29	4	3	2	2	2	1	3	1	5	5	3	2	1	1	2	0	5	5	3	2	2	1	3	1	22
30	0	0	0	0	0	0	3	5	0	0	0	0	0	1	3	5	0	0	0	0	0	1	3	5	9



BRITISH ANTARCTIC SURVEY

(FORMERLY FALKLAND ISLAND DEPENDENCIES SURVEY)

MAGNETIC RECORDS FOR 1964

FROM ARGENTINE ISLANDS A.973

LAT. -65° 15'

LONG. 295° 44'

GEOMAGNETIC LAT. -53.3°

GEOMAGNETIC LONG. 3.3°

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HEAD OFFICE:-

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

Phone: LONDON VICTORIA 3687

---

EXPLANATORY NOTES 1964

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.

Sensitive Magnetograms

<u>Trace</u>	<u>Correction</u>		
	Jan 1-Jun 30	Jul 6-Aug 5	Aug 6-Dec 31
H	+3 mins.	+1 mins.	+1 mins.
D	-1	-1	+2
Z	+1	0	+1
T	-4	+3	+3

Corrections Jul 1 to July 6 variable due to several baseline changes. They can be deduced by inspection of the relative positions of the traces with the appropriate 2400Z time mark.

Insensitive Magnetograms

<u>Trace</u>	<u>Correction</u>	
	Jan 1-Jun 10	Jun 11-Dec 31
H	-4 mins.	-4 mins.
D	+1	0
Z	-1	+1
T	-2	-2

3. Order of Traces, from top to bottom:

Sensitive Magnetograms

- H trace and baseline
- T trace
- D baseline and trace
- Z baseline and trace

Insensitive Magnetograms

- D trace and baseline  
(when baseline double,  
upper line used)
- H baseline
- T trace
- H trace
- Z baseline and trace

4. Sense of trace

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

H baseline values increase with increasing temperature.  
 Z baseline values decrease with increasing temperature.

Temperature coefficients:

H : 4.7  $\gamma/^\circ\text{C}$  Jan 1-Jun 30      Z : 0.0  $\gamma/^\circ\text{C}$  Jan 1-Jun 30  
 4.15      Jul 1-Dec 31      1.2      Jul 1-Dec 31

<u>T trace</u>	<u>Scale Value</u>	<u>Baseline</u>
Jan 1-Jun 30	0.55 $^\circ\text{C}/\text{mm}$	11.3 $^\circ\text{C}$
Jul 1-Aug 12	0.53	0.3
Aug 13-Dec 31	0.53	10.8

6. Scale Values, Sensitive magnetograms

H      4.30 $\gamma/\text{mm}$  Jan 1-Aug 12, 4.21 $\gamma/\text{mm}$  Aug 13-Dec 31  
 D      0.92'/ $\text{mm}$  All year  
 Z      4.20 $\gamma/\text{mm}$  Jan 1-Jun 30, 4.10 $\gamma/\text{mm}$  Jul 1-Dec 31

7. Baseline separations, to give scale

Sensitive magnetograms.

<u>Dates</u>	<u>H-D</u>	<u>D-Z</u>
Jan 1-Feb 19	44.0	153.9
Feb 20-Feb 24	43.8 to 43.1	"
Feb 22-Apr 16	43.0	"
Apr 17-May 2	42.6	"
May 3-Jun 24	42.3	"
Jun 25-Jun 30	42.7	"
Jul 1-Aug 5	42.0	146.5
Aug 6-Aug 11	41.2	164.1
Aug 12, part of	21.8	"
Aug 12-Oct 31	24.2	"
Nov 1-Nov 18	23.8	164.4
Nov 19-Nov 28	23.4	164.7
Nov 29-Dec 31	23.0	"

All measured in mm, with probable error of  $\pm 0.2$  mm

Insensitive magnetograms /

Insensitive magnetograms

	<u>D-H</u>	<u>H-Z</u>
Jan 1-Apr 30	63.0 mm $\pm 0.2$	114.0 mm $\pm 0.3$
May 1-May 18	63.4 mm $\pm 0.2$	113.6 mm $\pm 0.3$
May 18-Jun 10	63.4 mm $\pm 0.2$	113.3 mm $\pm 0.3$
Jun 11-Dec 31	73.7 mm $\pm 0.3$	113.3 mm $\pm 0.3$

8. Baseline Values

Sensitive Magnetograms

<u>H baselines</u>		<u>D baselines</u>		<u>Z baselines</u>	
Jan 1-7	23,098 $\gamma$	Jan 1-Feb 29	17 $^\circ$ 37.5'	Jan 1-31	-36,160 $\gamma$
Jan 8-11	97	Mar 1- 31	37.6	Feb 1-Apr 30	163
12-15	96	Apr 1-Jun 30	37.8	May 1-31	168
16-20	95	Jul 1-Aug 5	41.9	Jun 1-30	170
21-24	94	Aug 6-Dec 31	19.1	Jul 1-Aug 7	064
25-28	93			Aug 8-Dec 31	073
Jan 29-Feb 1	92				
Feb 2- 5	91				
6-10	90				
11-15	89				
16-19	88				
20-23	87				
24-29	86				
Mar 1-Jun 30	85				
Jul 1-Aug 11	12				
Aug 12-Nov 30	42				
Dec 1-Dec 31	41				

Note: H and Z baselines are at 0 $^\circ\text{C}$   
 Insensitive magnetogram baselines and scale values are  
 calculated where required, by comparison with the sensitive  
 magnetograms.

Lower limit K9: 500v

Scale values: H, 4.30y/mm; D, 6.24y/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	5	4	2	3	3	3	2	2	5	4	3	3	4	0	1	1	5	4	3	3	4	3	2	2	26
2	3	2	3	2	2	1	0	2	2	2	3	2	0	0	0	3	3	2	3	2	2	1	0	3	16
3	2	2	0	1	0	0	0	1	2	1	0	0	0	0	1	1	2	2	0	1	0	0	0	1	6
4	2	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	1	0	0	0	0	0	3
5	2	2	2	1	0	1	0	0	2	1	1	2	1	0	0	0	2	2	2	2	1	1	0	0	10
6	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	2
7	0	1	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	2	1	0	0	0	0	0	3
8	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
9	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
10	2	1	2	1	2	2	3	4	1	0	1	1	1	3	3	4	2	1	2	1	2	3	3	4	18
11	5	4	3	0	0	0	0	0	4	5	5	1	0	0	0	0	5	5	5	1	0	0	0	0	16
12	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	1	1	1	0	0	0	0	0	3
13	0	0	0	2	3	3	2	2	0	0	0	0	2	3	3	3	0	0	0	2	3	3	4	3	15
14	0	3	4	2	4	3	2	2	2	1	4	3	2	3	3	2	2	3	4	3	1	3	3	2	21
15	2	5	3	2	2	2	1	3	2	5	4	3	1	1	1	3	2	5	4	3	2	2	1	3	23
16	3	3	2	2	2	1	3	2	3	3	4	1	1	1	2	0	3	3	4	2	2	1	3	2	20
17	0	1	2	2	2	1	0	3	1	2	2	3	2	1	1	1	1	2	2	3	2	1	1	3	15
18	0	2	2	1	1	0	0	0	0	2	1	2	0	0	0	0	0	2	2	2	2	1	0	0	7
19	1	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	1	2	0	0	0	0	0	0	3
20	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
21	0	1	0	1	1	0	1	0	0	1	0	1	0	0	0	1	0	1	0	1	1	0	1	0	4
22	0	1	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	1	1	0	0	0	0	3
23	2	2	2	0	0	0	0	3	0	2	2	0	0	0	0	1	2	2	2	0	0	0	0	3	9
24	3	4	3	2	2	1	2	3	3	5	4	3	2	2	2	4	3	5	4	3	2	2	2	4	25
25	2	2	3	4	2	2	4	3	1	1	3	5	2	2	3	3	2	2	3	5	2	2	4	5	25
26	2	1	0	0	0	0	0	0	5	0	1	0	0	0	0	0	3	1	1	0	0	0	0	0	7
27	2	2	2	2	1	0	1	2	2	2	4	4	0	2	1	3	2	4	4	4	1	2	1	3	21
28	2	2	0	0	0	0	1	2	1	2	0	2	1	0	0	2	2	2	0	2	0	0	1	2	9
29	1	2	0	0	0	0	0	2	0	2	2	0	0	0	0	1	1	2	2	0	0	0	0	2	7
30	1	1	0	1	0	1	0	1	1	1	0	1	0	0	0	1	1	1	0	1	0	1	0	4	8
31	0	1	0	0	0	0	0	0	1	2	0	0	0	0	0	0	1	2	0	0	0	0	0	0	3

BRITISH ANTARCTIC SURVEY

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30 GILLINGHAM STREET

LONDON, S.W. 1.

Phone: LONDON VICTORIA 3687

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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.

Sensitive Magnetograms

<u>Trace</u>	<u>Correction</u>		
	Jan 1-Jun 30	Jul 6-Aug 5	Aug 6-Dec 31
H	+3 mins.	+1 mins.	+1 mins.
D	-1	-1	+2
Z	+1	0	+1
T	-4	+3	+3

Corrections July 1 to July 6 variable due to several baseline changes. They can be deduced by inspection of the relative positions of the traces with the appropriate 2400Z time mark.

Insensitive Magnetograms

<u>Trace</u>	<u>Correction</u>	
	Jan 1-Jun 10	Jun 11-Dec 31
H	-4 mins.	-4 mins.
D	+1	0
Z	-1	+1
T	-2	-2

3. Order of Traces, from top to bottom:

Sensitive Magnetograms

H trace and baseline  
 T trace  
 D baseline and trace  
 Z baseline and trace

Insensitive Magnetograms

D trace and baseline  
 (when baseline double,  
 upper line used)  
 H baseline  
 T trace  
 H trace  
 Z baseline and trace

Insensitive magnetograms

	<u>D-H</u>	<u>H-Z</u>
Jan 1-Apr 30	63.0 mm $\pm 0.2$	114.0 mm $\pm 0.3$
May 1-May 18	63.4 mm $\pm 0.2$	113.6 mm $\pm 0.3$
May 18-Jun 10	63.4 mm $\pm 0.2$	113.3 mm $\pm 0.3$
Jun 11-Dec 31	75.7 mm $\pm 0.3$	113.3 mm $\pm 0.3$

8. Baseline Values

Sensitive Magnetograms

<u>H baselines</u>		<u>D baselines</u>		<u>Z baselines</u>	
Jan 1-7	23,098 v	Jan 1-Feb 29	17° 37.5'	Jan 1-31	-36,160y
Jan 8-11	97	Mar 1- 31	37.6	Feb 1-Apr 30	163
12-15	96	Apr 1-Jun 30	37.8	May 1-31	168
16-20	95	Jul 1-Aug 5	41.9	Jun 1-30	170
21-24	94	Aug 6-Dec 31	19.1	Jul 1-Aug 7	064
25-28	93			Aug 8-Dec 31	073
Jan 29-Feb 1	92				
Feb 2- 5	91				
6-10	90				
11-15	89				
16-19	88				
20-23	87				
24-29	86				
Mar 1-Jun 30	85				
Jul 1-Aug 11	12				
Aug 12-Nov 30	12				
Dec 1-Dec 31	11				

Note: H and Z baselines are at 0°C  
 Insensitive magnetogram baselines and scale values are calculated where required, by comparison with the sensitive magnetograms.

4. Sense of trace

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

H baseline values increase with increasing temperature.

Z baseline values decrease with increasing temperature.

Temperature coefficients:

H : 4.7 v/°C	Jan 1-Jun 30	Z : 0.0 v/°C	Jan 1-Jun 30
4.15	Jul 1-Dec 31	1.2	Jul 1-Dec 31

<u>T trace</u>	<u>Scale Value</u>	<u>Baseline</u>
Jan 1-Jun 30	0.55 °C/mm	11.3 °C
Jul 1-Aug 12	0.53	0.3
Aug 13-Dec 31	0.53	10.8

6. Scale Values, Sensitive magnetograms

H	1.30v/mm Jan 1-Aug 12, 1.2v/mm Aug 13-Dec 31
D	0.92v/mm All year
Z	1.20v/mm Jan 1-Jun 30, 1.10v/mm Jul 1-Dec 31

7. Baseline separations, to give scale

Sensitive magnetograms.

<u>Dates</u>	<u>H-D</u>	<u>D-Z</u>
Jan 1-Feb 19	12.0	153.9
Feb 20-Feb 21	13.8 to 13.1	"
Feb 22-Apr 16	13.0	"
Apr 17-May 2	12.6	"
May 3-Jun 24	12.3	"
Jun 25-Jun 30	12.7	"
Jul 1-Aug 5	12.0	116.5
Aug 6-Aug 11	24.2	161.1
Aug 12, part of	21.8	"
Aug 12-Oct 31	24.2	"
Nov 1-Nov 18	23.8	161.1
Nov 19-Nov 28	23.1	161.7
Nov 29-Dec 31	23.0	"

All measured in mm, with probable error of  $\pm 0.2$  mm





BRITISH ANTARCTIC SURVEY

(FORMERLY FALKLAND ISLAND DEPENDENCIES SURVEY)

MAGNETIC RECORDS FOR 1964

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

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EXPLANATORY NOTES 1964

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.

Sensitive Magnetograms

<u>Trace</u>	<u>Correction</u>		
	Jan 1-Jun 30	Jul 6-Aug 5	Aug 6-Dec 31
H	+3 mins.	+1 mins.	+1 mins.
D	-1	-1	+2
Z	+1	0	+1
T	+4	+3	+3

Corrections July 1 to July 6 variable due to several baseline changes. They can be deduced by inspection of the relative positions of the traces with the appropriate 2400Z time mark.

Insensitive Magnetograms

<u>Trace</u>	<u>Correction</u>	
	Jan 1-Jun 10	Jun 11-Dec 31
H	-4 mins.	-4 mins.
D	+1	0
Z	-1	+1
T	-2	-2

3. Order of Traces, from top to bottom:

Sensitive Magnetograms

- H trace and baseline
- T trace
- D baseline and trace
- Z baseline and trace

Insensitive Magnetograms

- D trace and baseline  
(when baseline double,  
upper line used)
- H baseline
- T trace
- H trace
- Z baseline and trace

4. Sense of trace

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

H baseline values increase with increasing temperature.

Z baseline values decrease with increasing temperature.

Temperature coefficients:

H : 4.7  $\gamma/^\circ\text{C}$  Jan 1-Jun 30      Z : 0.0  $\gamma/^\circ\text{C}$  Jan 1-Jun 30  
 4.15      Jul 1-Dec 31      1.2      Jul 1-Dec 31

<u>T trace</u>	<u>Scale Value</u>	<u>Baseline</u>
Jan 1-Jun 30	0.55 $^\circ\text{C}/\text{mm}$	11.3 $^\circ\text{C}$
Jul 1-Aug 12	0.53	0.3
Aug 13-Dec 31	0.53	10.8

6. Scale Values, Sensitive magnetograms

H      4.30 $\gamma/\text{mm}$  Jan 1-Aug 12, 4.21 $\gamma/\text{mm}$  Aug 13-Dec 31  
 D      0.92' /mm All year  
 Z      4.20 $\gamma/\text{mm}$  Jan 1-Jun 30, 4.10 $\gamma/\text{mm}$  Jul 1-Dec 31

7. Baseline separations, to give scale

Sensitive magnetograms.

<u>Dates</u>	<u>H-D</u>	<u>D-Z</u>
Jan 1-Feb 19	44.0	153.9
Feb 20-Feb 21	43.8 to 43.1	"
Feb 22-Apr 16	43.0	"
Apr 17-May 2	42.6	"
May 3-Jun 24	42.3	"
Jun 25-Jun 30	42.7	"
Jul 1-Aug 5	42.0	146.5
Aug 6-Aug 11	24.2	164.1
Aug 12, part of	21.8	"
Aug 12-Oct 31	24.2	"
Nov 1-Nov 18	23.8	164.4
Nov 19-Nov 28	23.4	164.7
Nov 29-Dec 31	23.0	"

All measured in mm, with probable error of  $\pm 0.2$  mm

Insensitive magnetograms /

Insensitive magnetograms

	<u>D-H</u>	<u>H-Z</u>
Jan 1-Apr 30	63.0 mm $\pm 0.2$	114.0 mm $\pm 0.3$
May 1-May 18	63.4 mm $\pm 0.2$	113.6 mm $\pm 0.3$
May 18-Jun 10	63.4 mm $\pm 0.2$	113.3 mm $\pm 0.3$
Jun 11-Dec 31	73.7 mm $\pm 0.3$	113.3 mm $\pm 0.3$

8. Baseline Values

Sensitive Magnetograms

<u>H baselines</u>		<u>D baselines</u>		<u>Z baselines</u>	
Jan 1-7	23,098 $\gamma$	Jan 1-Feb 29	17 $^\circ$ 37.5'	Jan 1-31	-36,160 $\gamma$
Jan 8-11	97	Mar 1- 31	37.6	Feb 1-Apr 30	163
12-15	96	Apr 1-Jun 30	37.8	May 1-31	168
16-20	95	Jul 1-Aug 5	41.9	Jun 1-30	170
21-24	94	Aug 6-Dec 31	19.1	Jul 1-Aug 7	064
25-28	93			Aug 8-Dec 31	073
Jan 29-Feb 1	92				
Feb 2- 5	91				
6-10	90				
11-15	89				
16-19	88				
20-23	87				
24-29	86				
Mar 1-Jun 30	85				
Jul 1-Aug 11	12				
Aug 12-Nov 30	42				
Dec 1-Dec 31	41				

Note: H and Z baselines are at  $0^\circ\text{C}$   
 Insensitive magnetogram baselines and scale values are calculated where required, by comparison with the sensitive magnetograms.

Lower limit K9: 500y

Scale values: H, 4.30y/mm; D, 6.24y/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	0	0	0	0	0	0	0	3	2	0	0	0	0	0	0	3	2	0	0	0	0	0	0	5
2	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
3	2	3	2	1	1	1	3	3	1	2	3	2	2	1	3	5	2	3	3	2	2	1	3	5	21
4	3	2	2	1	0	0	0	0	3	2	2	2	0	0	0	0	3	2	2	2	0	0	0	0	9
5	1	1	0	0	0	0	0	1	1	2	0	0	0	0	0	0	1	2	0	0	0	0	0	1	4
6	2	1	0	0	0	0	0	1	3	2	0	1	0	0	0	0	3	2	0	1	0	0	0	0	6
7	2	3	1	1	3	1	1	3	2	4	2	2	2	1	1	4	2	4	2	2	3	1	1	4	19
8	4	4	2	2	1	1	3	3	5	5	2	3	2	0	3	4	5	5	2	3	2	1	3	4	25
9	3	2	2	0	0	2	3	4	4	3	3	1	0	1	3	5	4	3	3	1	0	2	3	5	21
10	3	3	2	2	1	2	0	0	3	3	3	3	2	1	0	0	3	3	3	3	2	2	0	0	16
11	2	0	0	1	1	0	1	0	4	0	0	1	1	0	1	0	4	0	0	1	1	0	1	0	7
12	2	1	1	0	0	0	0	1	1	1	1	1	0	1	1	2	2	1	1	1	0	1	1	2	9
13	2	1	1	2	2	0	0	0	2	0	1	2	2	0	0	0	2	1	1	2	2	0	0	0	8
14	0	1	0	0	0	0	0	0	1	2	2	0	0	0	0	0	1	2	2	0	0	0	0	0	5
15	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
16	0	1	0	0	0	2	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	2	0	1	4
17	3	0	1	1	2	3	2	1	3	1	2	1	2	3	4	1	3	1	2	1	2	3	4	1	17
18	4	3	1	3	2	2	1	2	6	4	2	5	3	2	2	4	6	4	2	5	3	2	2	4	28
19	3	2	2	2	1	0	2	7	4	3	3	4	0	0	1	3	4	3	3	4	1	0	2	3	20
20	3	3	1	2	2	0	2	0	4	2	2	3	0	0	0	0	4	2	2	3	2	0	2	0	15
21	1	0	0	0	0	0	0	3	3	1	0	0	0	0	2	3	3	1	0	0	0	0	2	3	9
22	2	2	2	1	1	2	2	1	3	2	4	2	1	0	1	1	3	2	4	2	1	2	2	1	17
23	3	0	1	1	0	0	1	0	3	0	2	2	0	0	0	0	3	0	2	2	0	0	1	0	8
24	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1
25	0	1	0	1	0	0	0	1	1	1	0	1	0	0	0	1	1	1	0	1	0	0	0	1	4
26	0	1	0	0	0	0	0	0	0	2	1	0	0	1	0	0	0	2	1	0	0	1	0	0	4
27	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
28	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
29	1	1	1	1	2	2	4	2	1	1	2	3	3	2	3	1	1	1	2	3	3	2	4	2	18
30	3	2	2	2	1	0	1	3	4	3	3	2	2	1	1	3	4	3	3	2	2	1	1	3	19
31	3	2	1	2	0	0	0	1	4	2	2	3	0	0	0	2	4	2	2	3	0	0	0	2	13

BRITISH ANTARCTIC SURVEY

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MAGNETIC RECORDS FOR 1964

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LAT. -65° 15'

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GEOMAGNETIC LAT. -53.8°

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EXPLANATORY NOTES 1964

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.

Sensitive Magnetograms

<u>Trace</u>	<u>Correction</u>		
	Jan 1-Jun 30	Jul 6-Aug 5	Aug 6-Dec 31
H	+3 mins.	+1 mins.	+1 mins.
D	-1	-1	+2
Z	+1	0	+1
T	+4	+3	+3

Corrections July 1 to July 6 variable due to several baseline changes. They can be deduced by inspection of the relative positions of the traces with the appropriate 2400Z time mark.

Insensitive Magnetograms

<u>Trace</u>	<u>Correction</u>	
	Jan 1-Jun 10	Jun 11-Dec 31
H	-4 mins.	-4 mins.
D	+1	0
Z	-1	+1
T	-2	-2

3. Order of Traces, from top to bottom:

Sensitive Magnetograms

- H trace and baseline
- T trace
- D baseline and trace
- Z baseline and trace

Insensitive Magnetograms

- D trace and baseline  
(when baseline double,  
upper line used)
- H baseline
- T trace
- H trace
- Z baseline and trace

4. Sense of trace

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

H baseline values increase with increasing temperature.

Z baseline values decrease with increasing temperature.

Temperature coefficients:

H : 4.7  $\gamma/^\circ\text{C}$  Jan 1-Jun 30      Z : 0.0  $\gamma/^\circ\text{C}$  Jan 1-Jun 30  
 4.15      Jul 1-Dec 31                      1.2      Jul 1-Dec 31

<u>T trace</u>	<u>Scale Value</u>	<u>Baseline</u>
Jan 1-Jun 30	0.55 $^\circ\text{C}/\text{mm}$	11.3 $^\circ\text{C}$
Jul 1-Aug 12	0.53	0.3
Aug 13-Dec 31	0.53	10.8

6. Scale Values, Sensitive magnetograms

H      4.30 $\gamma/\text{mm}$  Jan 1-Aug 12, 4.21 $\gamma/\text{mm}$  Aug 13-Dec 31  
 D      0.92 $^\circ/\text{mm}$  All year  
 Z      4.20 $\gamma/\text{mm}$  Jan 1-Jun 30, 4.10 $\gamma/\text{mm}$  Jul 1-Dec 31

7. Baseline separations, to give scale

Sensitive magnetograms.

<u>Dates</u>	<u>H-D</u>	<u>D-Z</u>
Jan 1-Feb 19	44.0	153.9
Feb 20-Feb 21	43.8 to 43.1	"
Feb 22-Apr 16	43.0	"
Apr 17-May 2	42.6	"
May 3-Jun 24	42.3	"
Jun 25-Jun 30	42.7	"
Jul 1-Aug 5	42.0	146.5
Aug 6-Aug 11	24.2	164.1
Aug 12, part of	21.8	"
Aug 12-Oct 31	24.2	"
Nov 1-Nov 18	23.8	164.4
Nov 19-Nov 28	23.4	164.7
Nov 29-Dec 31	23.0	"

All measured in mm, with probable error of  $\pm$  0.2 mm

Insensitive magnetograms /

Insensitive magnetograms

	<u>D-H</u>	<u>H-Z</u>
Jan 1-Apr 30	63.0 mm $\pm$ 0.2	114.0 mm $\pm$ 0.3
May 1-May 18	63.4 mm $\pm$ 0.2	113.6 mm $\pm$ 0.3
May 18-Jun 10	63.4 mm $\pm$ 0.2	113.3 mm $\pm$ 0.3
Jun 11-Dec 31	73.7 mm $\pm$ 0.3	113.3 mm $\pm$ 0.3

8. Baseline Values

Sensitive Magnetograms

<u>H baselines</u>		<u>D baselines</u>		<u>Z baselines</u>	
Jan 1-7	23,098 $\gamma$	Jan 1-Feb 29	17 $^\circ$ 37.5'	Jan 1-31	-36,160 $\gamma$
Jan 8-11	97	Mar 1- 31	37.6	Feb 1-Apr 30	163
12-15	96	Apr 1-Jun 30	37.8	May 1-31	168
16-20	95	Jul 1-Aug 5	41.9	Jun 1-30	170
21-24	94	Aug 6-Dec 31	19.1	Jul 1-Aug 7	064
25-28	93			Aug 8-Dec 31	073
Jan 29-Feb 1	92				
Feb 2- 5	91				
6-10	90				
11-15	89				
16-19	88				
20-23	87				
24-29	86				
Mar 1-Jun 30	85				
Jul 1-Aug 11	12				
Aug 12-Nov 30	42				
Dec 1-Dec 31	41				

Note: H and Z baselines are at 0 $^\circ\text{C}$   
 Insensitive magnetogram baselines and scale values are calculated where required, by comparison with the sensitive magnetograms.

Lower limit K9: 500y

Scale values: H, 4.30y/mm; D, 6.24y/mm.  
after Aug. 12th H, 4.21y/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	0	0	0	0	0	0	3	2	1	0	0	0	0	1	3	2	1	0	0	0	0	1	7
2	0	1	0	0	0	0	0	2	1	2	0	0	0	0	0	2	1	2	0	0	0	0	0	2	5
3	2	2	0	0	0	0	0	2	1	2	0	0	0	0	0	0	2	2	0	0	0	0	0	2	6
4	4	5	4	2	3	2	0	2	5	6	6	3	1	2	1	2	5	6	6	3	3	2	1	2	28
5	2	2	1	2	3	3	2	2	3	3	0	3	2	2	2	3	3	3	1	3	3	3	2	3	21
6	3	3	1	0	0	0	0	1	3	4	1	0	0	0	0	2	3	4	1	0	0	0	0	2	10
7	3	2	2	2	3	0	1	(0)	4	3	3	3	3	0	1	1	4	3	3	3	3	0	1	1	18
8	1	1	1	0	0	0	1	1	1	2	1	0	0	0	0	0	1	2	1	0	0	0	1	1	6
9	2	1	0	0	1	1	1	0	2	3	1	1	1	0	1	0	2	3	1	1	1	1	1	0	10
10	1	0	2	0	0	0	0	0	0	0	2	0	0	0	0	1	1	0	2	0	0	0	0	1	4
11	3	4	3	2	2	2	3	4	3	3	3	1	1	2	4	5	3	4	3	2	2	2	4	5	25
12	3	2	2	2	1	(1)	3	2	3	2	4	3	1	(1)	2	2	3	2	4	3	1	(1)	3	2	19
13	2	2	2	0	0	0	1	2	3	3	2	1	0	0	1	3	3	3	2	1	0	0	1	3	13
14	1	1	0	1	0	0	2	0	1	0	0	1	0	0	2	1	1	1	0	1	0	0	2	1	6
15	2	2	0	0	0	0	0	0	1	2	0	0	0	0	0	1	2	2	0	0	0	0	0	1	5
16	2	2	1	0	0	0	0	1	3	0	1	0	0	0	0	0	3	2	1	0	0	0	0	1	7
17	2	3	0	0	0	0	0	0	3	3	0	0	0	0	0	0	3	3	0	0	0	0	0	0	6
18	2	1	2	1	1	1	1	0	1	1	2	2	0	0	0	0	2	1	2	2	1	1	1	0	10
19	0	0	1	1	0	0	1	2	0	0	1	2	0	0	0	1	0	0	1	2	0	0	1	2	6
20	1	1	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	1	0	0	0	0	0	1	3
21	1	1	1	0	1	0	1	0	0	1	0	0	0	0	0	0	1	1	1	0	1	0	1	0	5
22	3	3	1	2	0	0	0	0	3	2	2	3	1	0	0	1	3	3	2	3	1	0	0	1	13
23	1	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1	1	0	1	0	0	0	0	3
24	0	0	0	0	0	0	1	1	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	1	3
25	2	2	1	0	0	2	2	2	2	2	0	0	0	1	1	1	2	2	1	0	0	2	2	2	11
26	3	3	2	0	0	1	1	3	3	3	3	0	1	0	0	2	3	3	3	0	1	1	1	3	15
27	2	2	2	2	2	1	1	0	2	3	2	2	1	1	0	0	2	3	2	2	2	1	1	0	13
28	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
29	0	0	0	0	0	0	0	2	2	0	0	1	0	0	0	1	2	0	0	1	0	0	0	2	5
30	0	1	0	0	0	0	0	1	1	0	0	1	0	0	0	0	1	1	0	1	0	0	0	1	4
31	2	2	1	2	2	2	1	4	3	3	2	2	2	0	1	4	3	3	2	2	2	2	1	4	19



BRITISH ANTARCTIC SURVEY

(FORMERLY FALKLAND ISLAND DEPENDENCIES SURVEY)

MAGNETIC RECORDS FOR 1964

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

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EXPLANATORY NOTES 1964

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.

Sensitive Magnetograms

<u>Trace</u>	<u>Correction</u>		
	Jan 1-Jun 30	Jul 6-Aug 5	Aug 6-Dec 31
H	+3 mins.	+1 mins.	+1 mins.
D	-1	-1	+2
Z	+1	0	+1
T	+4	+3	+3

Corrections July 1 to July 6 variable due to several baseline changes. They can be deduced by inspection of the relative positions of the traces with the appropriate 2400Z time mark.

Insensitive Magnetograms

<u>Trace</u>	<u>Correction</u>	
	Jan 1-Jun 10	Jun 11-Dec 31
H	-4 mins.	-4 mins.
D	+1	0
Z	-1	+1
T	-2	-2

3. Order of Traces, from top to bottom:

Sensitive Magnetograms

H trace and baseline  
T trace  
D baseline and trace  
Z baseline and trace

Insensitive Magnetograms

D trace and baseline  
(when baseline double,  
upper line used)  
H baseline  
T trace  
H trace  
Z baseline and trace

4. Sense of trace

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

H baseline values increase with increasing temperature.

Z baseline values decrease with increasing temperature.

Temperature coefficients:

H : 4.7  $\gamma/^\circ\text{C}$  Jan 1-Jun 30      Z : 0.0  $\gamma/^\circ\text{C}$  Jan 1-Jun 30  
 4.15      Jul 1-Dec 31      1.2      Jul 1-Dec 31

<u>T trace</u>	<u>Scale Value</u>	<u>Baseline</u>
Jan 1-Jun 30	0.55 $^\circ\text{C}/\text{mm}$	11.3 $^\circ\text{C}$
Jul 1-Aug 12	0.53	0.3
Aug 13-Dec 31	0.53	10.8

Insensitive magnetograms

	<u>D-H</u>	<u>H-Z</u>
Jan 1-Apr 30	63.0 mm $\pm 0.2$	114.0 mm $\pm 0.3$
May 1-May 18	63.4 mm $\pm 0.2$	113.6 mm $\pm 0.3$
May 18-Jun 10	63.4 mm $\pm 0.2$	113.3 mm $\pm 0.3$
Jun 11-Dec 31	73.7 mm $\pm 0.3$	113.3 mm $\pm 0.3$

8. Baseline Values

Sensitive Magnetograms

<u>H baselines</u>		<u>D baselines</u>		<u>Z baselines</u>	
Jan 1-7	23,098 $\gamma$	Jan 1-Feb 29	17 $^\circ$ 37.5'	Jan 1-31	-36,160 $\gamma$
Jan 8-11	97	Mar 1- 31	37.6	Feb 1-Apr 30	163
12-15	96	Apr 1-Jun 30	37.8	May 1-31	168
16-20	95	Jul 1-Aug 5	41.9	Jun 1-30	170
21-24	94	Aug 6-Dec 31	19.1	Jul 1-Aug 7	064
25-28	93			Aug 8-Dec 31	073
Jan 29-Feb 1	92				
Feb 2- 5	91				
6-10	90				
11-15	89				
16-19	88				
20-23	87				
24-29	86				
Mar 1-Jun 30	85				
Jul 1-Aug 11	12				
Aug 12-Nov 30	42				
Dec 1-Dec 31	41				

Note: H and Z baselines are at 0 $^\circ\text{C}$   
 Insensitive magnetogram baselines and scale values are calculated where required, by comparison with the sensitive magnetograms.

6. Scale Values, Sensitive magnetograms

H      4.30 $\gamma/\text{mm}$  Jan 1-Aug 12, 4.21 $\gamma/\text{mm}$  Aug 13-Dec 31  
 D      0.92 $^\circ/\text{mm}$  All year  
 Z      4.20 $\gamma/\text{mm}$  Jan 1-Jun 30, 4.10 $\gamma/\text{mm}$  Jul 1-Dec 31

7. Baseline separations, to give scale

Sensitive magnetograms.

<u>Dates</u>	<u>H-D</u>	<u>D-Z</u>
Jan 1-Feb 19	44.0	153.9
Feb 20-Feb 21	43.8 to 43.1	"
Feb 22-Apr 16	43.0	"
Apr 17-May 2	42.6	"
May 3-Jun 24	42.3	"
Jun 25-Jun 30	42.7	"
Jul 1-Aug 5	42.0	146.5
Aug 6-Aug 11	24.2	164.1
Aug 12, part of	21.8	"
Aug 12-Oct 31	24.2	"
Nov 1-Nov 18	23.8	164.4
Nov 19-Nov 28	23.4	164.7
Nov 29-Dec 31	23.0	"

All measured in mm, with probable error of  $\pm 0.2$  mm

Lower limit  $K_9 = 500\gamma$ .

Scale values: H, 4.21 $\gamma$ /mm; D, 6.24 $\gamma$ /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	3	3	0	1	2	2	3	4	2	4	1	1	2	2	3	4	3	4	1	1	2	2	3	20
2	3	2	1	1	1	0	1	1	4	2	1	1	0	0	2	1	4	2	1	1	1	0	2	1	12
3	2	2	1	0	0	1	2	1	3	3	2	0	0	1	1	0	3	3	2	0	0	1	2	1	12
4	2	2	1	2	2	0	1	1	1	2	2	2	2	1	0	3	2	2	2	2	2	1	1	3	15
5	3	3	0	1	0	0	0	0	3	3	1	1	0	0	0	0	3	3	1	1	0	0	0	0	8
6	0	1	0	0	2	1	2	3	0	2	1	1	0	0	1	4	0	2	1	1	2	1	2	4	13
7	3	2	3	3	3	3	3	5	3	1	3	4	4	2	4	5	3	2	3	4	4	3	4	5	28
8	3	3	2	3	2	3	3	3	4	3	3	2	1	2	2	2	4	3	3	3	2	3	3	3	24
9	3	4	1	2	1	2	2	2	3	3	2	2	2	1	2	3	3	4	2	2	2	2	2	3	20
10	4	1	0	0	0	1	1	1	4	2	0	0	0	0	0	3	4	2	0	0	0	1	1	3	11
11	2	2	0	0	0	0	0	0	3	3	1	0	0	0	0	0	3	3	1	0	0	0	0	0	7
12	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
13	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	2
14	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	2
15	0	1	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2	4
16	1	3	1	0	3	1	3	3	0	2	2	2	3	2	2	3	1	3	2	2	3	2	3	3	19
17	3	3	1	0	2	0	1	1	4	2	0	2	1	0	0	1	4	3	1	2	2	0	1	1	14
18	1	1	0	0	0	1	0	1	0	0	1	2	0	0	0	1	1	1	1	2	0	1	0	1	7
19	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	1	2
20	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
21	0	1	0	0	0	1	1	3	0	1	2	0	0	0	0	0	0	1	2	0	0	1	1	3	8
22	5	6	3	1	1	1	1	2	5	5	3	2	1	0	1	2	5	6	3	2	1	1	1	2	21
23	2	1	2	3	2	0	0	1	2	1	3	1	0	0	0	1	2	1	3	3	2	0	0	1	12
24	1	2	1	2	1	1	3	0	0	3	1	3	1	0	1	0	1	3	1	3	1	1	3	0	13
25	2	2	0	0	0	0	0	1	2	1	1	0	0	0	0	1	2	2	1	0	0	0	0	1	6
26	1	0	1	0	0	0	0	0	2	0	1	2	0	0	0	0	2	0	1	2	0	0	0	0	5
27	0	0	1	0	0	0	1	3	0	0	1	0	0	0	0	2	0	0	1	0	0	0	1	3	5
28	3	3	3	4	4	4	3	2	5	3	4	3	2	3	3	3	5	3	4	4	4	4	3	3	29
29	1	2	1	0	0	0	0	3	1	1	2	0	0	0	0	2	1	2	2	0	0	0	0	3	8
30	1	3	3	3	2	2	2	3	2	5	4	3	2	2	1	3	2	5	4	3	2	2	2	3	23

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EXPLANATORY NOTES 1964

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

<u>Trace</u>	<u>Correction</u>		
	Jan 1-Jun 30	Jul 6-Aug 5	Aug 6-Dec 31
H	+3 mins.	+1 mins.	+1 mins.
D	-1	-1	+2
Z	+1	0	+1
T	+4	+3	+3

Corrections July 1 to July 6 variable due to several baseline changes. They can be deduced by inspection of the relative positions of the traces with the appropriate 2400Z time mark.

Insensitive Magnetograms

<u>Trace</u>	<u>Correction</u>	
	Jan 1-Jun 10	Jun 11-Dec 31
H	-4 mins.	-4 mins.
D	+1	0
Z	-1	+1
T	-2	-2

3. Order of Traces, from top to bottom:

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- H trace and baseline
- T trace
- D baseline and trace
- Z baseline and trace

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- D trace and baseline  
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~~All magnetograms: Temperature increases up the sheet.~~

H increases up the sheet.

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(N.B. Z is negative, hence as Z increases, modulus of Z decreases.)

5. Temperature coefficients

H baseline values increase with increasing temperature.

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Temperature coefficients:

H : 4.7  $\gamma/^\circ\text{C}$  Jan 1-Jun 30      Z : 0.0  $\gamma/^\circ\text{C}$  Jan 1-Jun 30  
 4.15      Jul 1-Dec 31      1.2      Jul 1-Dec 31

<u>T trace</u>	<u>Scale Value</u>	<u>Baseline</u>
Jan 1-Jun 30	0.55 $^\circ\text{C}/\text{mm}$	11.3 $^\circ\text{C}$
Jul 1-Aug 12	0.53	0.3
Aug 13-Dec 31	0.53	10.8

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H      4.30 $\gamma/\text{mm}$  Jan 1-Aug 12, 4.21 $\gamma/\text{mm}$  Aug 13-Dec 31  
 D      0.92' /  $\text{mm}$  All year  
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Sensitive magnetograms.

<u>Dates</u>	<u>H-D</u>	<u>D-Z</u>
Jan 1-Feb 19	44.0	153.9
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All measured in mm, with probable error of  $\pm 0.2$  mm

Insensitive magnetograms

	<u>D-H</u>	<u>H-Z</u>
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Note: H and Z baselines are at  $0^\circ\text{C}$   
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(when baseline double,  
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H trace  
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H increases up the sheet.

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Z increases down the sheet

(N.B. Z is negative, hence as Z increases, modulus of Z decreases.)

Insensitive magnetograms

	<u>D-H</u>	<u>H-Z</u>
Jan 1-Apr 30	63.0 mm $\pm 0.2$	114.0 mm $\pm 0.3$
May 1-May 18	63.4 mm $\pm 0.2$	113.6 mm $\pm 0.3$
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Jun 11-Dec 31	73.7 mm $\pm 0.3$	113.3 mm $\pm 0.3$

5. Temperature coefficients

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Z baseline values decrease with increasing temperature.

Temperature coefficients:

H : 4.7 $\gamma/^\circ\text{C}$ Jan 1-Jun 30	Z : 0.0 $\gamma/^\circ\text{C}$ Jan 1-Jun 30
4.15 Jul 1-Dec 31	1.2 Jul 1-Dec 31

<u>T trace</u>	<u>Scale Value</u>	<u>Baseline</u>
Jan 1-Jun 30	0.55 $^\circ\text{C}/\text{mm}$	11.3 $^\circ\text{C}$
Jul 1-Aug 12	0.53	0.3
Aug 13-Dec 31	0.53	10.8

8. Baseline Values

Sensitive Magnetograms

<u>H baselines</u>		<u>D baselines</u>		<u>Z baselines</u>	
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20-23	87				
24-29	86				
Mar 1-Jun 30	85				
Jul 1-Aug 11	12				
Aug 12-Nov 30	42				
Dec 1-Dec 31	41				

Note: H and Z baselines are at 0 $^\circ\text{C}$   
 Insensitive magnetogram baselines and scale values are calculated where required, by comparison with the sensitive magnetograms.

6. Scale Values, Sensitive magnetograms

H	4.30 $\gamma/\text{mm}$ Jan 1-Aug 12, 4.21 $\gamma/\text{mm}$ Aug 13-Dec 31
D	0.92' / $\text{mm}$ All year
Z	4.20 $\gamma/\text{mm}$ Jan 1-Jun 30, 4.10 $\gamma/\text{mm}$ Jul 1-Dec 31

7. Baseline separations, to give scale

Sensitive magnetograms.

<u>Dates</u>	<u>H-D</u>	<u>D-Z</u>
Jan 1-Feb 19	44.0	153.9
Feb 20-Feb 21	43.8 to 43.1	"
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Jun 25-Jun 30	42.7	"
Jul 1-Aug 5	42.0	146.5
Aug 6-Aug 11	24.2	164.1
Aug 12, part of	21.8	"
Aug 12-Oct 31	24.2	"
Nov 1-Nov 18	23.8	164.4
Nov 19-Nov 28	23.4	164.7
Nov 29-Dec 31	23.0	"

All measured in mm, with probable error of  $\pm 0.2$  mm

Insensitive magnetograms

Lower limit K<sub>H</sub>: 500y

Scale values: H, 4.24y/mm; D, 6.24y/mm.

Day	K <sub>H</sub>								K <sub>D</sub>								Max(K <sub>H</sub> , K <sub>D</sub> )								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	3	0	0	2	3	3	4	0	3	3	1	1	1	0	3	0	3	3	1	2	3	3	4	19
2	3	3	2	2	0	1	1	3	3	3	2	2	1	0	0	3	3	3	2	2	1	1	1	3	16
3	2	0	0	0	0	0	0	1	2	1	0	0	0	0	0	0	2	1	0	0	0	0	0	1	4
4	1	2	1	1	1	2	1	3	0	2	1	1	2	2	0	3	1	2	1	1	2	2	1	3	13
5	2	2	0	0	2	2	3	2	1	0	1	1	2	1	1	0	2	2	1	1	2	2	3	2	15
6	0	1	0	1	0	2	1	1	0	0	0	1	1	0	0	0	0	1	0	1	1	2	1	1	7
7	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
8	3	3	2	0	1	0	2	3	1	3	2	2	2	0	1	1	3	3	2	2	2	0	2	3	17
9	4	4	2	2	2	2	3	3	4	3	2	3	1	2	1	3	4	4	2	2	2	2	3	3	22
10	2	1	1	1	0	1	1	2	3	2	1	1	0	0	0	0	3	2	1	1	0	1	1	2	11
11	0	1	0	0	0	1	1	2	0	0	1	1	1	0	0	0	0	1	1	1	1	1	1	2	8
12	2	1	0	0	0	2	2	2	2	1	0	1	0	1	0	0	2	1	0	1	0	2	2	2	10
13	1	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	1	0	1	0	0	1	0	0	3
14	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
15	0	0	0	0	3	3	3	4	0	0	0	2	2	2	3	3	0	0	0	2	3	3	3	4	15
16	3	3	1	1	1	1	3	3	1	2	3	1	1	1	1	2	3	3	3	1	1	1	3	2	18
17	1	1	1	1	0	1	1	2	1	1	1	1	1	0	0	0	1	1	1	1	1	1	1	2	9
18	2	0	1	1	0	1	2	2	0	0	1	1	0	0	1	0	2	0	1	1	0	1	2	2	9
19	1	1	0	0	0	1	1	1	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1	1	5
20	0	1	0	0	0	0	0	2	0	0	0	1	0	0	0	0	0	1	0	1	0	0	0	2	4
21	1	1	0	0	0	0	1	2	0	0	0	1	1	0	0	0	1	1	0	1	1	0	1	2	7
22	1	1	1	3	0	2	3	3	1	0	2	3	0	0	1	0	1	1	2	3	0	2	3	3	15
23	2	3	3	4	4	2	2	0	2	3	2	3	4	2	1	1	2	3	3	4	4	2	2	1	21
24	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2
25	0	0	0	0	0	1	3	2	0	0	0	0	0	0	1	0	0	0	0	0	0	1	3	2	6
26	1	2	1	2	2	2	2	1	0	3	1	2	2	1	0	0	1	3	1	2	2	2	2	1	14
27	1	1	1	0	0	1	3	3	0	0	0	0	0	0	2	1	1	1	1	0	0	1	3	3	10
28	3	2	1	1	1	2	2	1	3	2	2	2	0	2	2	0	3	2	2	2	1	2	2	1	15
29	0	0	0	0	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3	4
30	3	3	1	0	0	1	1	3	2	3	2	2	1	0	0	1	3	3	2	2	1	1	1	3	16

BRITISH ANTARCTIC SURVEY

(FORMERLY FALKLAND ISLAND DEPENDENCIES SURVEY)

MAGNETIC RECORDS FOR 1964

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<sup>43</sup> VICTORIA 3687

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EXPLANATORY NOTES 1964

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.

Sensitive Magnetograms

<u>Trace</u>	<u>Correction</u>		
	Jan 1-Jun 30	Jul 6-Aug 5	Aug 6-Dec 31
H	+3 mins.	+1 mins.	+1 mins.
D	-1	-1	+2
Z	+1	0	+1
T	+4	+3	+3

Corrections July 1 to July 6 variable due to several baseline changes. They can be deduced by inspection of the relative positions of the traces with the appropriate 2400Z time mark.

Insensitive Magnetograms

<u>Trace</u>	<u>Correction</u>	
	Jan 1-Jun 10	Jun 11-Dec 31
H	-4 mins.	-4 mins.
D	+1	0
Z	-1	+1
T	-2	-2

3. Order of Traces, from top to bottom:

Sensitive Magnetograms

H trace and baseline  
T trace  
D baseline and trace  
Z baseline and trace

Insensitive Magnetograms

D trace and baseline  
(when baseline double,  
upper line used)  
H baseline  
T trace  
H trace  
Z baseline and trace

4. Sense of trace

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

H baseline values increase with increasing temperature.

Z baseline values decrease with increasing temperature.

Temperature coefficients:

H : 4.7 y/°C Jan 1-Jun 30      Z : 0.0 y/°C Jan 1-Jun 30  
 4.15 Jul 1-Dec 31              1.2 Jul 1-Dec 31

<u>T trace</u>	<u>Scale Value</u>	<u>Baseline</u>
Jan 1-Jun 30	0.55 °C/mm	11.3 °C
Jul 1-Aug 12	0.53	0.3
Aug 13-Dec 31	0.53	10.8

6. Scale Values, Sensitive magnetograms

H      4.30y/mm Jan 1-Aug 12, 4.21y/mm Aug 13-Dec 31  
 D      0.92"/mm All year  
 Z      4.20y/mm Jan 1-Jun 30, 4.10y/mm Jul 1-Dec 31

7. Baseline separations, to give scale

Sensitive magnetograms.

<u>Dates</u>	<u>H-D</u>	<u>D-Z</u>
Jan 1-Feb 19	44.0	153.9
Feb 20-Feb 21	43.8 to 43.1	"
Feb 22-Apr 16	43.0	"
Apr 17-May 2	42.6	"
May 3-Jun 24	42.3	"
Jun 25-Jun 30	42.7	"
Jul 1-Aug 5	42.0	146.5
Aug 6-Aug 11	24.2	164.1
Aug 12, part of	21.8	"
Aug 12-Oct 31	24.2	"
Nov 1-Nov 18	23.8	164.4
Nov 19-Nov 28	23.4	164.7
Nov 29-Dec 31	23.0	"

All measured in mm, with probable error of  $\pm$  0.2 mm

Insensitive magnetograms /

Insensitive magnetograms

	<u>D-H</u>	<u>H-Z</u>
Jan 1-Apr 30	63.0 mm $\pm$ 0.2	114.0 mm $\pm$ 0.3
May 1-May 18	63.4 mm $\pm$ 0.2	113.6 mm $\pm$ 0.3
May 18-Jun 10	63.4 mm $\pm$ 0.2	113.3 mm $\pm$ 0.3
Jun 11-Dec 31	73.7 mm $\pm$ 0.3	113.3 mm $\pm$ 0.3

8. Baseline Values

Sensitive Magnetograms

<u>H baselines</u>		<u>D baselines</u>		<u>Z baselines</u>	
Jan 1-7	23,098 y	Jan 1-Feb 29	17° 37.5'	Jan 1-31	-36,160y
Jan 8-11	97	Mar 1- 31	37.6	Feb 1-Apr 30	163
12-15	96	Apr 1-Jun 30	37.8	May 1-31	168
16-20	95	Jul 1-Aug 5	41.9	Jun 1-30	170
21-24	94	Aug 6-Dec 31	19.1	Jul 1-Aug 7	064
25-28	93			Aug 8-Dec 31	073
Jan 29-Feb 1	92				
Feb 2- 5	91				
6-10	90				
11-15	89				
16-19	88				
20-23	87				
24-29	96				
Mar 1-Jun 30	85				
Jul 1-Aug 11	12				
Aug 12-Nov 30	42				
Dec 1-Dec 31	41				

Note: H and Z baselines are at 0°C  
 Insensitive magnetogram baselines and scale values are calculated where required, by comparison with the sensitive magnetograms.

Lower limit K9: 500y

Scale values: H, 4.21y/mm; D, 6.24y/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	1	2	1	1	1	2	1	2	1	2	2	1	1	0	0	2	1	2	2	1	1	2	1	12
2	0	0	1	0	0	0	2	2	0	0	1	1	0	0	0	0	0	0	1	1	0	0	2	2	6
3	0	0	0	1	2	2	3	1	0	0	1	1	2	0	1	0	0	0	1	1	2	2	3	1	10
4	1	0	0	0	0	2	1	1	0	0	0	0	0	0	1	0	1	0	0	0	0	2	1	1	5
5	0	1	0	0	0	0	1	2	0	0	1	1	0	0	0	0	0	1	1	1	0	0	1	2	6
6	1	0	0	0	0	0	2	3	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	3	6
7	1	1	0	2	3	2	3	3	0	0	1	3	2	0	1	1	1	1	1	3	3	2	3	3	17
8	2	2	1	0	0	0	1	1	2	1	1	0	0	0	0	0	2	2	1	0	0	0	1	1	7
9	0	0	2	0	0	2	2	2	0	1	1	1	0	1	0	2	0	0	2	1	0	2	2	2	9
10	1	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1	0	4
11	0	0	0	0	0	0	1	2	0	0	0	1	1	0	0	0	0	0	0	1	1	0	1	2	5
12	1	0	0	0	0	0	1	2	0	0	0	1	0	0	0	0	1	0	0	1	0	0	1	2	5
13	1	2	1	1	1	4	4	2	0	1	1	2	2	2	2	0	1	2	1	2	2	4	4	2	18
14	2	2	1	1	0	2	2	1	0	2	2	2	1	0	0	1	2	2	2	2	1	2	2	1	14
15	2	2	1	0	0	1	1	2	2	3	1	0	0	0	0	0	2	3	1	0	0	1	1	2	10
16	3	2	1	2	4	2	2	2	1	2	1	3	5	2	0	1	3	2	1	3	5	2	2	2	20
17	3	2	1	1	0	1	2	3	4	2	2	2	0	0	1	1	4	2	2	2	0	1	2	3	16
18	3	0	1	0	0	0	1	2	1	1	0	1	0	0	0	0	3	1	1	1	0	0	1	2	9
19	1	0	1	0	1	2	2	1	0	1	1	1	0	1	2	0	1	1	1	1	1	2	2	1	10
20	0	0	0	1	0	2	2	3	0	0	0	2	1	0	1	1	0	0	0	1	2	2	2	3	10
21	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0	0	0	2
22	1	0	0	0	0	1	2	2	0	0	0	0	0	0	1	0	1	0	0	0	0	1	2	2	6
23	0	2	2	0	1	0	0	2	0	0	1	0	0	0	0	0	0	2	2	0	1	0	0	2	7
24	0	1	0	0	1	1	2	2	0	1	0	0	0	0	1	0	0	1	0	0	1	1	2	2	7
25	0	0	0	0	1	2	3	3	0	0	0	0	1	0	1	1	0	0	0	0	1	2	3	3	9
26	2	1	0	0	0	0	1	1	1	1	0	0	0	0	0	0	2	1	0	0	0	0	1	1	5
27	2	0	0	0	0	0	2	1	0	0	0	1	0	0	0	0	2	0	0	1	0	0	2	1	6
28	1	0	0	0	0	3	3	3	1	0	0	0	0	0	0	0	1	0	0	0	0	3	3	3	10
29	2	0	1	0	0	1	0	1	0	1	3	1	2	0	0	0	2	1	3	1	2	1	0	1	11
30	2	0	1	0	0	0	1	1	0	0	1	1	0	0	0	0	2	0	1	1	0	0	1	1	6
31	2	1	1	1	0	1	1	1	0	1	1	0	0	0	0	0	2	1	1	1	0	1	1	1	8