

SPECIAL GEOMAGNETIC EVENTS
Normal magnetograms

Sudden commencements (SC):

				X	Y	Z
Jan 22	06 11	SSC	B			
		11.9 ±.2		-4	+16	+6
		12.3 ±.2		+50	-67	-20
Jan 24	15 03	SSC	A			
		03.5 ±.2		-146	-27	-23
		04.7 ±.2		+515	+69	+164
Jan 30	16 24	SSC	C			
		24.5 ±.2		-1	-1	-1
		25.0 ±.2		+23	-10	-6

PULSATIONS

from normal recordings

Day	Onset	End	Qual	Period	Amplitude nT
pc 4:					
6	0250	1830	B	45-150	8
7	0425	1600	C	45-150	6
10	0710	1550	B	45-150	8
12	0515	1900	B	45-150	8
15	0255	1330	B	45-150	6
16	0518	1215	C	45-150	6
28	0635	1800	B	45-150	10
29	0215	1200	B	45-150	10
31	0230	0915	C	45-150	12
pc 5:					
3	0400	1340	C	150-360	15
13	0155	1110	B	150-360	15
22	0610	1630	B	150-360	25
23	0725	1545	B	150-360	15
24	0145	1805	B	150-360	30
25	0230	1800	B	150-360	25
26	0645	1600	C	150-360	15
27	0545	1510	B	150-360	20

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Sudden commencements (SC):

		X	Y	Z
Feb 18 16 43	SSC B			
	43.1 ±.2	-6	-6	-3
	44.0 ±.2	+16	+2	+2

PULSATIONS

from normal recordings

Day	Onset	End	Qual	Period	Amplitude nT
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pc 4:

4	0530	1205	B	45-150	12
7	0610	1615	C	45-150	8
8	0340	1130	B	45-150	9
9	1025	1810	C	45-150	6
13	0005	1200	B	45-150	12
14	0525	1200	C	45-150	10
17	0325	1135	C	45-150	7
20	0410	1400	B	45-150	20
21	0045	0925	C	45-150	12
22	0550	1820	B	45-150	20
23	0300	1720	B	45-150	10
26	0320	2400	B	45-150	9

pc 5:

1	0205	1430	C	150-360	15
2	0145	1340	B	150-360	20
3	0403	1200	C	150-360	15
10	0235	1400	B	150-360	12
15	0505	1400	B	150-360	25
16	0705	1545	C	150-360	20
19	0505	1650	B	150-360	20
25	0235	1435	B	150-360	15
27	0330	1335	C	150-360	10
28	0200	1645	B	150-360	35
29	0250	1115	C	150-360	12

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		X	Y	Z
Mar 07 04 19	SSC A			
	19.7 ±.2	-3	+5	+2
	20.0 ±.2	+25	+5	+5
	20.9 ±.2	+28	-32	-43
Mar 12 09 14	SSC B			
	14.5 ±.2	+20	-25	-6
	15.0 ±.2	-57	+27	+15
	17.2 ±.2	+200	+41	+19
Mar 15 13 06	SSC A			
	06.6 ±.2	-33	+15	+8
	07.2 ±.2	+23	-10	-6

PULSATIONS

from normal recordings

Day	Onset	End	Qual	Period	Amplitude nT
pc 4:					
11	1305	1800	C	45-150	12
13	0335	1400	B	45-150	8
19	0415	1125	B	45-150	10
pc 5:					
1	0310	1305	B	150-360	25
8	0155	2005	A	150-360	60
10	0540	1425	B	150-360	18
12	0010	1955	B	150-360	25
14	0325	1415	C	150-360	15
16	0135	1340	A	150-360	35
17	0210	1600	A	150-360	45
18	0400	1520	B	150-360	20
24	0515	1225	B	150-360	20
28	0415	1400	B	150-360	30

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Sudden commencements (SC):

			X	Y	Z
Apr 21	17 09	SSC C			
	09.5 ±.2		-3	+1	-1
	11.0 ±.2		+18	-7	-3
Apr 23	03 20	SSC A			
	20.2 ±.2		+7	+14	+2
	21.2 ±.2		+29	-27	-4
	22.2 ±.2		-12	-27	-2

PULSATATIONS

from normal recordings

Day	Onset	End	Qual	Period	Amplitude nT
pc 4:					
7	0345	1120	C	45-150	8
8	0240	1205	B	45-150	10
12	0410	1015	B	45-150	15
15	0515	1445	C	45-150	10
16	0405	1000	B	45-150	10
17	0715	1235	C	45-150	8
23	0320	0950	B	45-150	12
pc 5:					
1	0220	1915	B	150-360	15
9	0605	1500	C	150-360	12
13	0320	1535	B	150-360	40
14	0115	1445	B	150-360	20
18	0440	1625	C	150-360	15
24	0545	1515	B	150-360	18
25	0300	1600	B	150-360	20
26	0400	1400	B	150-360	20
27	0225	1545	B	150-360	20

SPECIAL GEOMAGNETIC EVENTS
Normal magnetograms

Sudden commencements (SC):

			X	Y	Z
May 21	19 36	SSC A			
		36.2 ±.2	-1	-3	+1
		37.2 ±.2	+34	-30	-17

PULSATATIONS

from normal recordings

Day	Onset	End	Qual	Period	Amplitude nT
pc 4:					
9	0330	1100	B	45-150	18
15	0230	1130	C	45-150	8
16	0035	0955	C	45-150	8
19	0635	1305	B	45-150	8
20	0212	1105	B	45-150	8
26	0945	1555	C	45-150	6
27	0200	1000	C	45-150	6
pc 5:					
6	0330	1555	C	150-360	12
7	0300	1615	C	150-360	12
8	0130	1315	B	150-360	24
10	0130	0955	B	150-360	30
11	0255	0830	B	150-360	15
12	0250	1610	B	150-360	15
18	0005	1400	B	150-360	15
22	0135	1140	B	150-360	20
23	0600	1610	B	150-360	50
24	0205	1120	C	150-360	15
25	0035	1520	C	150-360	12
28	0140	1720	C	150-360	10
30	0555	1400	C	150-360	8
31	0350	1530	C	150-360	15

SPECIAL GEOMAGNETIC EVENTS
Normal magnetograms

Sudden commencements (SC):

		X	Y	Z
Jun 16 09 55	ssc A			
	55.0 ±.2	-17	+4	+3
	56.2 ±.2	+20	+15	+11

PULSATIONS

from normal recordings

Day	Onset	End	Qual	Period	Amplitude nT
pc 4:					
25	0130	1900	B	45-150	8
26	0210	2005	B	45-150	8
pc 5:					
2	0005	1605	B	150-360	15
5	0100	1405	B	150-360	35
6	0200	1445	B	150-360	35
7	0005	1415	B	150-360	20
8	0545	1730	B	150-360	20
9	0025	1430	B	150-360	15
11	0515	1445	C	150-360	15
16	0955	1845	C	150-360	15
17	0005	1200	B	150-360	20
18	0505	1350	C	150-360	12
22	0410	1410	C	150-360	12
27	0400	1605	C	150-360	12
28	0005	1805	B	150-360	18
29	0350	0820	C	150-360	12
30	0500	1915	B	150-360	25

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Sudden commencements (SC):

					X	Y	Z
Jul 05 10 45	ssc*	C					
	45.2 ±.2				-8	+2	-1
	46.9 ±.2				+49	-14	-9
					X	Y	Z
Jul 21 16 11	SSC	A					
	11.9 ±.2				-19	+3	+1
	13.5 ±.2				+61	-23	-16

PULSATIONS

from normal recordings

Day	Onset	End	Qual	Period	Amplitude nT
pc 4:					
4	0455	1035	B	45-150	8
6	0100	1240	B	45-150	9
8	0015	1040	B	45-150	12
11	0002	0820	B	45-150	9
12	0330	0630	C	45-150	7
14	0615	1150	C	45-150	7
23	0002	1205	B	45-150	12
27	0325	1250	B	45-150	8
pc 5:					
1	0130	1500	B	150-360	50
2	0110	1310	B	150-360	20
3	0315	0705	C	150-360	15
5	0115	2355	B	150-360	25
7	0240	1355	B	150-360	18
8	1045	1735	C	150-360	15
10	0225	0530	C	150-360	15
11	1020	1800	C	150-360	9
12	0650	1430	C	150-360	15
22	0200	1800	B	150-360	18
24	0220	1520	B	150-360	15
25	0230	1245	B	150-360	15
28	0030	1510	B	150-360	20

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Sudden commencements (SC):

				X	Y	Z
Aug 02	10 51	ssc*	B			
	51.0	±.2		-2	-2	-1
	51.5	±.2		+7	+6	+1
	52.5	±.2		+24	-9	-2
				X	Y	Z
Aug 06	04 40	ssc*	B			
	40.3	±.2		-17	-8	-3
	42.2	±.5		+53	+36	+29
				X	Y	Z
Aug 16	13 14	SSC	B			
	14.7	±.2		-5	-1	-1
	15.3	±.2		+26	-5	-3

PULSATIONS

from normal recordings:

Will be reported later.

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Normal magnetograms

Sudden commencements (SC):

				X	Y	Z
Sep 03	12	13	SSC A			
		13.0	±.2	-149	-6	+2
		14.2	±.2	+399	-20	-39

				X	Y	Z
Sep 30	11	30	SSC B			
		30.7	±.2	-18	+10	0
		32.7	±.2	+39	-16	-8

PULSATIONS

from normal recordings:

Will be reported later.

SPECIAL GEOMAGNETIC EVENTS
 Normal magnetograms

Sudden commencements (SC):

						X	Y	Z
Oct 08	05 16	SSC	B					
		16.3 ±.2				+23	+5	+1
		17.0 ±.2				-63	-32	-25
Oct 31	15 39	SSC	A					
		39.3 ±.2				+14	-16	-4
		40.2 ±.2				-51	+6	-1

PULSATIONS

from normal recordings:

Day	Onset	End	Qual	Period	Amplitude nT
pc 4:					
3	1820	2315	C	45-150	7
8	0515	1005	B	45-150	15
9	0715	0845	B	45-150	15
12	0155	0950	B	45-150	12
16	0510	0825	C	45-150	15
31	1525	2230	C	45-150	12
pc 5:					
1	0600	1600	B	150-360	25
2	0030	0755	C	150-360	12
10	0115	1605	B	150-360	15
12	0950	1600	C	150-360	20
14	0300	1600	B	150-360	15
15	0205	1500	C	150-360	15
18	0225	1400	C	150-360	10
23	0245	1525	C	150-360	10

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Sudden commencements (SC):

NONE.

PULSATIONS
from normal recordings:

Day	Onset	End	Qual	Period	Amplitude nT
pc 4:					
7	0215	1700	B	45-150	9
8	0010	1405	B	45-150	9
15	0525	1030	B	45-150	8
20	0150	0915	C	45-150	7
25	0405	1510	B	45-150	10
26	0455	1200	C	45-150	7
27	0305	1200	B	45-150	6
pc 5:					
1	0145	1305	B	150-360	20
13	0400	0945	C	150-360	15
14	0540	1345	B	150-360	20
24	0305	2015	B	150-360	20
30	1605	2205	C	150-360	10

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Normal magnetograms

Sudden commencements (SC):

NONE.

PULSATIONS

from normal recordings:

Day	Onset	End	Qual	Period	Amplitude nT
pc 4:					
2	0330	1300	C	45-150	6
3	0345	1725	B	45-150	6
4	0410	1150	B	45-150	9
9	0355	0955	C	45-150	6
18	0050	1600	B	45-150	9
19	0400	2000	B	45-150	6
20	0020	1805	B	45-150	8
pc 5:					
17	0845	1600	C	150-360	15
29	0530	2335	C	150-360	12
30	0830	1945	C	150-360	12