Space Weather Highlights **SWO PRF 1280**
06 - 12 March 2000 **14 March 2000**

Solar activity varied from low to moderate levels. Activity was low during 06, 09, and 10 March with occasional C-class flares. Activity was moderate on 07 March due to an M1/1F event at 07/1950UT from an unnumbered region near S22 on the east limb. An optically uncorrelated M1 flare also occurred at 07/1607UT. Activity was again moderate on 08 March due to an impulsive, optically uncorrelated M1 flare that occurred at 08/0200UT. On 11 March, activity was moderate due to an M1/1N event at 11/0927UT from Region 8906 (S16, L = 122, class/area Dkc/800 on 11 March). Activity was also moderate on 12 March with an M3/1B event occurring at 12/2338UT from region 8906. Region 8906 was the most impressive region during the period. The region showed rapid growth and increased activity toward the end of the period becoming an Fkc group with 41 spots, measuring 850 millionths, and a beta-delta magnetic classification by March 12th.

Real-time solar wind data were available from the NASA Advanced Composition Explorer (ACE) spacecraft for most of the period. Solar wind conditions were mostly nominal for the period.

There were no proton events detected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit was at normal to moderate levels for the period.

The geomagnetic field was mostly quiet to unsettled for the first six days of the period, 06 -11 March. Isolated active conditions occurred on 06 March. Active conditions were also reported at high latitudes on 11 March. Unsettled to active conditions, with minor storming at high latitudes occurred on the last day of the period, 12 March.

Space Weather Outlook
15 March - 10 April 2000

Solar activity is expected to range from low to moderate levels throughout the period with C-class flares being the most likely. Chances for isolated major flare activity from Region 8906 will continue until the region rotates over the west limb on 21 March. The potential for major flare activity will persist throughout the period with the return of old Region 8882 on 19 March.

Proton events are possible if Region 8906 and returning old Region 8882 produce major flares during the period.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at normal to moderate levels during most of the period.

Geomagnetic field activity is expected to be at quiet to unsettled levels during most of the period (barring an Earth-directed CME). However, active conditions will be possible during 22 - 24 March due to recurrent coronal hole effects.

Daily Solar Data

Date	Radio Flux 10.7 cm	Sun spot No.	Sunspot Area (10^{-6} hemi.)	X-ray Background	Flares: X-ray Flux C	M	X	Flares: Optical S	1	2	3	4
06 March	222	172	1530	C1.2	6	0	0	5	0	0	0	0
07 March	222	164	1630	C1.2	16	2	0	6	1	0	0	0
08 March	215	212	1930	C1.6	11	1	0	3	0	0	0	0
09 March	206	225	1590	B9.7	10	0	0	2	1	0	0	0
10 March	203	231	1630	B8.2	26	0	0	24	1	0	0	0
11 March	203	178	1520	B8.1	10	1	0	9	1	0	0	0
12 March	203	188	1600	C1.6	13	1	0	15	2	0	0	0

Daily Particle Data

Date	Proton Fluence (protons/cm^2-day-sr) >1MeV	>10MeV	>100MeV	Electron Fluence (electrons/cm^2-day-sr) >.6MeV	>2MeV	>4MeV
06 March	1.0E+5	1.2E+4	2.6E+3		5.1E+6	
07 March	1.3E+5	1.2E+4	2.7E+3		1.5E+7	
08 March	1.4E+5	1.2E+4	2.5E+3		2.1E+7	
09 March	3.7E+4	1.1E+4	2.5E+3		3.6E+6	
10 March	8.0E+4	1.2E+4	2.4E+3		8.2E+6	
11 March	1.3E+5	1.1E+4	2.4E+3		9.8E+6	
12 March	1.3E+5	1.1E+4	2.4E+3		8.5E+6	

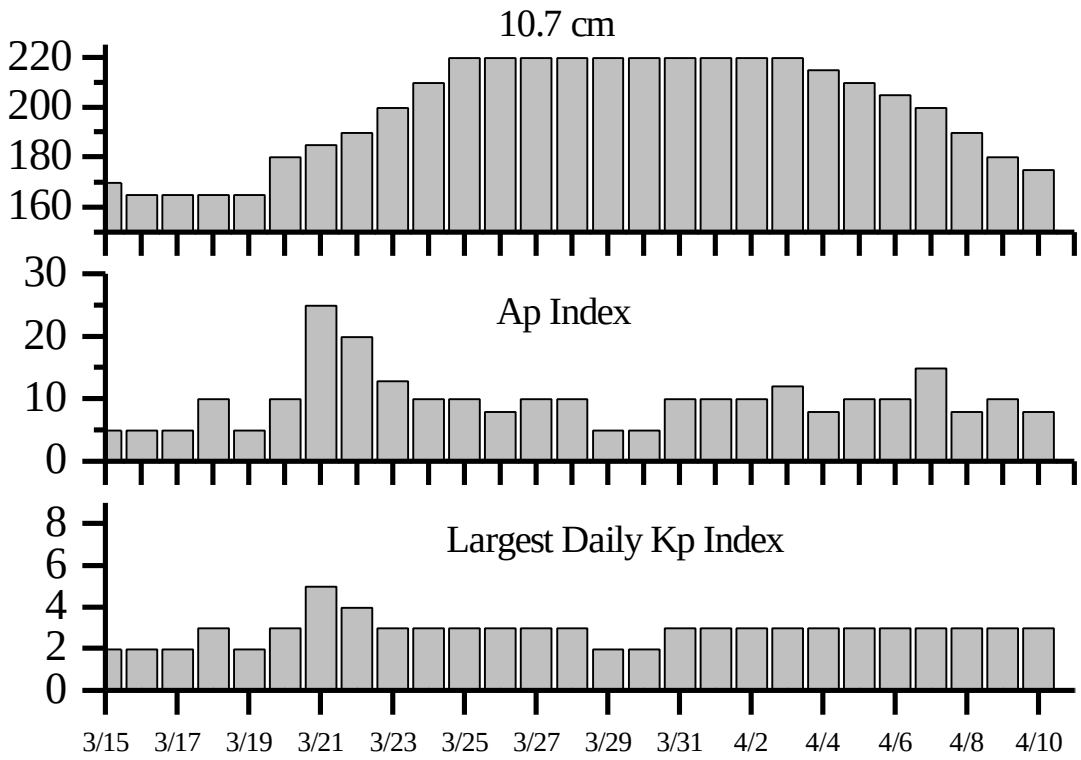
Daily Geomagnetic Data

Date	Middle Latitude Fredericksburg A	K-indices	High Latitude College A	K-indices	Estimated Planetary A	K-indices
06 March	8	1-2-2-2-3-2-2-2	13	0-1-4-3-4-2-2-3	11	2-2-3-3-3-3-3-3
07 March	10	3-2-3-2-2-2-2-3	28	3-3-5-6-4-4-2-2	16	3-3-4-4-3-3-3-3
08 March	9	2-3-2-2-3-2-2-2	17	2-2-2-4-4-4-4-2	13	3-3-2-3-3-3-3-3
09 March	3	2-0-0-0-2-2-0-1	5	1-0-0-2-3-0-1-3	5	2-0-0-2-3-2-2-2
10 March	8	1-1-1-1-3-2-3-3	15	1-1-1-4-5-4-2-2	10	1-0-1-3-3-3-2-4
11 March	7	3-1-2-2-2-1-1-2	14	2-2-3-3-5-3-1-1	12	3-3-4-2-4-2-2-2
12 March	15	2-1-4-4-4-3-1-2	27	3-2-5-5-6-3-1-1	19	3-3-5-4-4-3-3-3

Alerts and Warnings Issued

Date & Time of Issue	Type of Alert or Warning	Date & Time of Event
06 Mar 0057	13 - 245 MHz Bursts	05 Mar
06 Mar 0057	245 MHz Noise Storms	05 Mar
07 Mar 0011	2 - 245 MHz Bursts	06 Mar
07 Mar 0837	K= 4 Warning	07 Mar 0838 - 1500
07 Mar 0900	K= 4 Observed	07 Mar 06 - 09
08 Mar 0039	9 - 245 MHz Bursts	07 Mar
08 Mar 0039	245 MHz Noise Storms	07 Mar
08 Mar 1326	Stratwarm Alert Exists Wednesday	
09 Mar 0111	6 - 245 MHz Bursts	08 Mar
09 Mar 0111	245 MHz Noise Storm	08 Mar
09 Mar 1221	Stratwarm Alert Exists Thursday	
10 Mar 0008	10 - 245 MHz Bursts	09 Mar
10 Mar 0008	245 MHz Noise Storms	09 Mar
10 Mar 1312	Stratwarm Alert Exists Friday	
11 Mar 1104	Stratwarm Alert Exists Saturday	
12 Mar 0151	2 - 245 MHz Bursts	11 Mar
12 Mar 0707	K= 4 Warning	12 Mar 0715 -1500
12 Mar 1327	Stratwarm Alert Exists Sunday	
12 Mar 1749	K= 4 Warning	12/1800 - 13/1500 Mar
12 Mar 1802	K= 4 Observed	12 Mar 15 - 18

Twenty-seven Day Outlook



Date	Radio Flux 10.7 cm	Planetary A Index	Largest Kp Index	Date	Radio Flux 10.7 cm	Planetary A Index	Largest Kp Index
15 Mar	170	5	2	29 Mar	220	5	2
16	165	5	2	30	220	5	2
17	165	5	2	31	220	10	3
18	165	10	3	01 Apr	220	10	3
19	165	5	2	02	220	10	3
20	180	10	3	03	220	12	3
21	185	25	5	04	215	8	3
22	190	20	4	05	210	10	3
23	200	13	3	06	205	10	3
24	210	10	3	07	200	15	3
25	220	10	3	08	190	8	3
26	220	8	3	09	180	10	3
27	220	10	3	10	175	8	3
28	220	10	3				

Energetic Events

Date	Time			X-ray		Optical Information			Peak Radio Flux		Sweep Freq Intensity	
	Begin	Max	½ Max	Class	Integ Flux	Imp/ Brtns	Location Lat CMD	Rgn #	245	2695	II	IV
07 Mar	1601	1607	1613	M1.2	.005	1F	S22E77		110	170		
07 Mar	1944	1950	1953	M1.0	.003							
08 Mar	0153	0200	0205	M1.4	.007							
11 Mar	0915	0927	0935	M1.3	.009	1N	S12E40	8906				
12 Mar	2330	2338	2343	M3.6	.016	1B	S15E19	8906				

Flare List

Date	Time			X-ray	Optical		
	Begin	Max	End	Class.	Imp / Brtns	Location Lat CMD	Rgn #
06 March	1043	1049	1053	C4.5			
	1119	1128	1142	C3.8			
	1150	1200	1214	C4.3	SF	S11E27	8898
	1620	1620	1625	C3.9	SF	N20W82	8889
	1736	1737	1740		SF	N21W78	8889
	1757	1758	1802		SF	S14W62	8891
	1853	1859	1914	C3.4			
	2039	2045	2110	C2.8			
	B2226	2235	A2250		SF	S13E56	8901
07 March	0346	0350	0353	C2.9			
	0441	0446	0449	C3.2			
	0703	0707	0714	C2.7			
	0722	0726	0730	C3.0			
	1115	1255	1300	C5.9			
	1133	1141	1217		SF	S09E16	8898
	1327	1333	1337	C7.6			
	1407	1408	1420		SF	S12W21	8900
	1422	1426	1440		SF	S16W23	8900
	1423	1436	1442	C6.3	SF	S13W59	8891
	1448	1449	1505		SF	S12W22	8900
	1509	1513	1517	C5.1			
	1606	1608	1610	M1.2	1F	S22E77	
	1729	1733	1737	C2.4			
	1801	1806	1812	C3.0			
	1906	1914	1921	C3.0			
	1931	1935	1939	C2.8			
	1944	1950	1953	M1.0			
	2020	2027	2032	C4.9			
	2206	2207	2217	C8.7	SF	S16W71	8891
	2228	2232	2237	C8.6			8891
	2336	2340	2347	C4.8			
08 March	0022	0026	0030	C4.4			
	0153	0200	0205	M1.4			

	0242	0245	0248	C2.4				

Flare List-continued

	Time			X-ray	Optical Imp /		Location	Rgn
Date	Begin	Max	End	Class.	Brtns	Lat	CMD	#23
08 March	0625	0629	0637	C2.2				
	1004	1005	1017		SF		S17W31	8900
	1051	1059	1104	C7.6				
	1129	1134	1137	C3.5				
	1212	1215	1217	C3.4				
	1322	1325	1328	C1.5				
	1605	1609	1611	C1.9				
	1623	1628	1634	C1.7				
	1746	1748	1804		SF		S15W29	8900
	1746	1748	1804	C2.8	SF		S13W30	8899
	1939	1947	1957	C2.0				
09 March	0119	0123	0133	C1.6				
	0225	0230	0235	C2.8				
	0352	0359	0405	C1.7				
	0608	0611	0613	C1.7				
	0709	0722	0739	C2.0				
	0806	0809	0812	C1.3				
	1338	1343	1349	C1.5	SF		S19E57	8906
	1612	1618	1626	C1.5				
	1703	1708	1717		SF		N23W15	8904
	1833	1838	1841	C2.9				
	1835	1837	1844	C2.9	1F		S19E54	8906
10 March	0209	0214	0216	C2.7				
	0230	0235	0238	C2.4				
	0311	0317	0321	C6.7				
	0543	0543	0546	C3.6	SF		S18W54	8900
	0758	0801	0804	C1.2				
	0812	0814	0818	C2.3				
	0832	0835	0838	C2.4				
	0910	0912	0918	C2.0	SF		S13W53	8899
	1035	1036	1041	C4.1	SF		S18E54	8906
	1055	1056	1106	C2.6	SF		S15E53	8906
	1327	1331	1335	C2.1				
	1434	1439	1444		SF		S16E51	8906
	1434	1436	1440		SF		N25W29	8904
	1454	1500	1504	C1.9				
	1506	1507	1510		SF		S11W55	8899
	1555	1559	1607		SF		N23W27	8904
	1607	1607	1611		SF		S11W56	8899

1613 1616 1619 C1.6

Flare List-continued

	Time			X-ray	Optical Imp /	Optical Location	Rgn
Date	Begin	Max	End	Class.	Brtns	Lat CMD	#
10 March	1624	1624	1629		SF	N23W27	8904
	1626	1626	1630	C1.8	SF	S11W56	8899
	1638	1640	1646	C4.7	SN	S17E50	8906
	1658	1700	1744	C2.6	SF	S12W60	8900
	1721	1727	1735		SF	S13W29	8898
	1733	1759	1826		SF	S14E48	8906
	1751	1755	A1831	C7.7	SF	S12E45	8906
	1814	1814	1827		SF	S14W62	8900
	1827	1830	1833		SF	S13W62	8900
	1834	1842	1846		SF	S16E49	8906
	1916	1922	1929	C1.6	SF	S16E49	8906
	1931	1934	1938	C1.4			
	1947	2016	2041	C3.4	SF	S16E47	8906
	1951	1954	1956	C1.7			
	2038	2041	2043	C2.4			8906
	2042	2105	2145	C7.4	1F	S15E47	8906
	2214	2215	2226		SF	S16E47	8906
	2247	2251	2254	C1.8			
	2303	2317	2351	C4.7	SF	S16E46	8906
	B2335	U2335	0010	C2.1	SF	S18E42	8906
11 March	0016	0016	0032	C3.4	SF	S15E45	8906
	B0334	U0334	0342		SF	S18E40	8906
	0401	0404	0406	C1.5			
	0409	0415	0428	C6.2			
	0911	0924	1007	M1.3	1N	S12E40	8906
	1041	1044	1046	C1.4			
	1109	1114	1122	C5.7	SF	S15E39	8906
	1159	1205	1209	C2.4			
	1424	1444	1455	C4.5	SF	N21W39	8904
	1520	1520	1529		SF	S16E37	8906
	1536	1541	1609	C5.9	SF	S12W72	8900
	1603	1605	1616		SF	S18E33	8906
	1641	1717	1729	C2.6	SF	S18E32	8906
	2122	2135	2200	C6.9	SF	N22W43	8904
12 March	0038	0042	0045	C2.7			
	0139	0141	0232		SF	N20W49	8904
	0233	0249	0254		SF	N19W50	8904

Flare List-continued

Date	Time Begin	Time Max	Time End	X-ray Class.	Optical Imp / Brtns	Optical Location Lat CMD	Rgn #
12 March	0300	0311	0335	C2.3	SF	N23W45	8904
	0357	0358	0411		SF	N18W48	8904
	0428	0431	0441	C4.7	SF	N18W49	8904
	0610	0615	0624	C2.5	SF	S12E23	8906
	0636	0639	0643	C5.4			
	0745	0745	0749		SF	S19W51	8898
	0903	0904	0940	C5.8	SF	S13E27	8906
	1022	1026	1029	C2.2			
	1129	1130	1135		SF	S12W41	8903
	1130	1131	1141	C1.4	SF	S14W53	8898
	1219	1223	1234	C2.4	SF	S20E22	8906
	1422	1425	1431		SF	S07W28	8905
	1717	1723	1734	C3.5	SF	N19W55	8904
	1724	1724	1736		SF	S18E19	8906
	1847	1852	1909	C6.4	1F	S14W54	8898
	2028	2058	2135	C2.2			
	2306	2308	2325	C3.9	SF	S17E20	8906
	2333	2335	0000	M3.6	1B	S15E19	8906

Region Summary

Date	Location (° Lat ° CMD)	Location Helio Lon	Sunspot Characteristics Area (10^{-6} hemi)	Extent (helio)	Spot Class	Spot Count	Mag Class	Flares X-ray C	X-ray M	X-ray X	Optical S	Optical 1	Optical 2	Optical 3	Optical 4
		Region 8888													
24 Feb	N36E56	307	0040	02	HSX	001	A								
25 Feb	N36E42	308	0050	03	CSO	002	B	1			1				
26 Feb	N36E30	307	0030	03	CSO	002	B								
27 Feb	N36E18	305	0030	04	CAO	003	B								
28 Feb	N36E06	304	0030	03	CSO	002	B								
29 Feb	N37W07	304	0040	03	CSO	003	B								
01 Mar	N37W20	304	0000	01	AXX	002	A								
02 Mar	N37W27	298	0000	09	BXO	002	B								
03 Mar	N37W40	298													
04 Mar	N37W53	298													
05 Mar	N37W66	298													
06 Mar	N37W79	298													
								1	0	0	1	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 304

Region Summary-continued

Date	Location (° Lat ° CMD)	Helio Lon	Sunspot Characteristics: Area (10^{-6} hemi)	Extent (helio)	Spot Class	Spot Count	Mag Class	Flares: X-ray C	X-ray M	X-ray X	Optical S	Optical 1	Optical 2	Optical 3	Optical 4
			Region 8889												
24 Feb	N20E67	296	0180	10	ESO	002	B				1				
25 Feb	N21E58	292	0350	15	EHO	004	B	2			4				
26 Feb	N21E45	292	0370	16	FSO	007	B	1	1		1		1		
27 Feb	N21E33	290	0350	15	EAO	005	B	1			2	1			
28 Feb	N21E19	291	0370	16	FSO	006	B								
29 Feb	N21E06	291	0380	17	FSO	010	B								
01 Mar	N20W07	291	0330	17	FAO	010	B				1				
02 Mar	N20W20	291	0250	17	FSO	012	BG								
03 Mar	N20W33	290	0190	17	FSO	010	B	1			2				
04 Mar	N20W47	291	0150	14	ESO	006	B	1			1				
05 Mar	N20W61	292	0180	13	EAO	003	B								
06 Mar	N19W74	292	0110	14	ESO	004	B	1			2				
07 Mar	N19W82	287	0010	06	BXO	002	B								
								7	1	0	14	1	1	0	0

Crossed West Limb.
Absolute heliographic longitude: 291

Date	Location (° Lat ° CMD)	Helio Lon	Sunspot Characteristics: Area (10^{-6} hemi)	Extent (helio)	Spot Class	Spot Count	Mag Class	Flares: X-ray C	X-ray M	X-ray X	Optical S	Optical 1	Optical 2	Optical 3	Optical 4
Region	*8891*														
25 Feb	S14E71	279	0510	10	DHO	008	B				1				
26 Feb	S15E60	277	0720	12	EKC	015	B	1			3				
27 Feb	S16E48	275	0870	12	EKI	015	B	1			5				
28 Feb	S15E35	275	0990	11	EKI	019	BG				1				
29 Feb	S16E21	276	1030	11	EKI	026	BG	2			4				
01 Mar	S16E08	276	0900	12	EKC	045	BG								
02 Mar	S15W04	275	1000	11	EKC	039	BG	1			4				
03 Mar	S15W17	274	0830	11	EKC	033	BG				1				
04 Mar	S15W29	273	0780	14	EKI	028	B								
05 Mar	S16W43	274	0730	10	DKC	031	BG	1			1				
06 Mar	S16W58	276	0590	11	EKI	020	BG				1				
07 Mar	S17W67	272	0680	16	FKO	014	B	3			2				
08 Mar	S16W83	275	0270	10	CSO	005	B								
								9	0	0	23	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 275

Region Summary-continued

Date	Location (° Lat ° CMD)	Helio Lon	Sunspot Characteristics Area (10^{-6} hemi)	Extent (helio)	Spot Class	Spot Count	Mag Class	Flares X-ray C	X-ray M	X-ray X	Optical S	Optical 1	Optical 2	Optical 3	Optical 4
			Region 8892												
26 Feb	N05E64	273	0040	01	HSX	001	A								
27 Feb	N06E53	270	0020	01	HSX	002	A								
28 Feb	N06E39	271	0030	03	CSO	004	B								
29 Feb	N05E27	270	0010	03	CSO	002	B								
01 Mar	N06E14	270	0010	03	BXO	003	B								
02 Mar	N07E01	270	0010	05	BXO	007	B								
03 Mar	N06W12	269	0010	01	AXX	002	A								
04 Mar	N06W25	269													
05 Mar	N06W38	269													
06 Mar	N06W51	269													
07 Mar	N06W64	269													
08 Mar	N06W77	269													
								0	0	0	0	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 270

Region	*8896*														
29 Feb	N18E62	235	0050	08	DSO	003	B								
01 Mar	N18E52	232	0080	10	DSO	008	B								
02 Mar	N19E39	232	0050	10	CSO	012	B								
03 Mar	N19E26	231	0040	10	CSO	012	B								
04 Mar	N19E12	232	0040	07	CSO	006	B								
05 Mar	N19W03	234	0030	06	CSO	005	B								
06 Mar	N20W17	235	0010	02	CSO	002	B								
07 Mar	N20W30	235													
08 Mar	N20W43	235													
								0	0	0	0	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 234

			Region 8897												
01 Mar	S35W12	296	0000	03	BXO	002	B								
02 Mar	S35W26	297	0010	05	BXO	003	B								
03 Mar	S35W38	295	0030	07	CSO	005	B								
04 Mar	S36W51	295	0070	08	DSO	005	B								
05 Mar	S36W64	295	0110	09	DSO	003	B								
06 Mar	S37W82	300	0050	02	HSX	001	A								
07 Mar	S37W95	300	0000	02	AXX	001	A								
								0	0	0	0	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 296

Region Summary-continued

Date	Location (° Lat ° CMD)	Helio Lon	Sunspot Characteristics Area (10^{-6} hemi)	Extent (helio)	Spot Class	Spot Count	Mag Class	Flares X-ray C	M	X	Optical S	1	2	3	4
	Region 8898														
02 Mar	S15E71	200	0010	01	AXX	001	A								
03 Mar	S16E60	197	0030	07	BXO	003	B								
04 Mar	S15E48	196	0050	07	DSO	006	B								
05 Mar	S13E34	197	0140	07	DAO	014	B	8			15				
06 Mar	S13E20	198	0330	09	DKO	020	B	1			1				
07 Mar	S13E07	198	0470	13	EKO	018	B				1				
08 Mar	S13W06	198	0470	12	EKI	021	BG								
09 Mar	S13W20	199	0550	12	EKO	023	B								
10 Mar	S13W32	198	0420	12	EHI	021	B				1				
11 Mar	S13W45	198	0370	11	EAI	017	B								
12 Mar	S13W59	199	0310	11	EAO	011	B	2			2	1			
								11	0	0	20	1	0	0	0
Still on Disk.															
Absolute heliographic longitude:		198													
	Region 8899														
03 Mar	S11E33	224	0010	03	BXO	004	B				1				
04 Mar	S11E19	225	0030	04	BXO	007	B	1			1				
05 Mar	S10E06	225	0020	04	DAO	009	B								
06 Mar	S11W08	226	0030	04	CRO	008	B								
07 Mar	S11W20	225	0040	05	DAO	007	B								
08 Mar	S12W33	225	0030	05	CSO	006	B	1			1				
09 Mar	S12W48	227	0020	01	HRX	001	A								
10 Mar	S13W61	227	0000	00	AXX	001	A	2			4				
11 Mar	S13W74	227													
12 Mar	S13W87	227													
								4	0	0	7	0	0	0	0
Still on Disk.															
Absolute heliographic longitude:		225													
Region	*8900*														
04 Mar	S15E16	228	0030	05	DSO	009	B				4				
05 Mar	S16E02	229	0230	09	DAI	022	B								
06 Mar	S15W12	230	0360	12	EKI	021	BG								
07 Mar	S16W26	231	0330	14	EAI	021	BG				3				
08 Mar	S15W38	230	0220	14	ESO	023	B				2				
09 Mar	S15W51	230	0270	15	EAI	030	BG								
10 Mar	S16W63	229	0210	16	FAI	017	BG	2			4				
11 Mar	S17W74	227	0060	05	CSO	004	B	1			1				
12 Mar	S17W87	227													
								3	0	0	14	0	0	0	0
Still on Disk.															
Absolute heliographic longitude:		229													

Region Summary-continued

Date	Location (° Lat ° CMD)	Helio Lon	Sunspot Characteristics Area (10^{-6} hemi)	Extent (helio)	Spot Class	Spot Count	Mag Class	Flares X-ray C	M	X	Optical S	1	2	3	4
	Region 8901														
05 Mar	S13E71	160	0010	02	AXX	002	A								
06 Mar	S14E57	161	0020	08	BXO	005	B				1				
07 Mar	S15E41	164	0020	16	BXO	008	B								
08 Mar	S13E29	163	0030	05	BXO	006	B								
09 Mar	S12E15	164	0010	03	BXO	003	B								
10 Mar	S12E01	165	0020	01	CRO	003	B								
11 Mar	S12W13	166	0010	01	HSX	001	A								
12 Mar	S12W22	162	0010	07	CSO	004	B								
								0	0	0	1	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 165

	Region 8902														
06 Mar	S18E72	146	0030	01	HSX	001	A								
07 Mar	S17E60	145	0050	01	HSX	001	A								
08 Mar	S18E49	143	0040	03	HSX	003	A								
09 Mar	S18E35	144	0010	02	BXO	004	B								
10 Mar	S18E22	144	0010	01	AXX	003	A								
11 Mar	S17E10	143	0020	01	HSX	001	A								
12 Mar	S17W03	143	0010	01	HRX	001	A								
								0	0	0	0	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 143

	Region 8903														
07 Mar	S12E23	182	0030	04	DAO	002	B								
08 Mar	S12E09	183	0040	09	DAO	007	B								
09 Mar	S12W03	182	0050	07	DRO	009	B								
10 Mar	S12W17	183	0040	09	CRO	011	B								
11 Mar	S12W31	184	0040	09	DSO	006	B								
12 Mar	S12W46	186	0040	07	CAO	008	B				1				
								0	0	0	1	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 182

Region Summary-continued

Date	Location (° Lat ° CMD)	Helio Lon	Sunspot Characteristics Area (10^{-6} hemi)	Extent (helio)	Spot Class	Spot Count	Mag Class	Flares X-ray C	M	X	Optical S	1	2	3	4
	Region 8904														
08 Mar	N26W06	198	0030	05	CRO	007	B								
09 Mar	N24W19	198	0050	07	CRO	014	B				1				
10 Mar	N25W32	198	0100	09	CAO	024	B				3				
11 Mar	N24W45	198	0130	11	ESO	018	B	2			2				
12 Mar	N23W59	199	0170	11	EAO	012	B	3			6				
								5	0	0	12	0	0	0	0
Still on Disk.															
Absolute heliographic longitude:		198													
	Region 8905														
08 Mar	S06E22	170	0020	02	BXO	005	B								
09 Mar	S06E08	171	0010	03	CRO	005	B								
10 Mar	S06W05	171	0010	01	BXO	004	B								
11 Mar	S06W18	171													
12 Mar	S06W31	171									1				
								0	0	0	1	0	0	0	0
Still on Disk.															
Absolute heliographic longitude:		171													
	Region 8906														
08 Mar	S17E68	124	0740	08	HKX	012	A								
09 Mar	S16E55	124	0480	12	EKO	019	B	2			1	1			
10 Mar	S16E44	122	0730	10	DKC	029	B	10			12	1			
11 Mar	S16E31	122	0800	09	DKC	022	BD	3	1		6	1			
12 Mar	S15E18	122	0850	16	FKC	041	BD	4	1		5	1			
								19	2	0	24	4	0	0	0
Still on Disk.															
Absolute heliographic longitude:		122													
	Region 8907														
08 Mar	S17E22	170	0040	06	DSO	007	B								
09 Mar	S18E06	173	0040	06	CSO	004	B								
10 Mar	S16W06	172	0020	02	HRX	002	A								
11 Mar	S18W20	173	0020	07	CSO	005	B								
12 Mar	S17W35	175	0010	00	AXX	001	A								
								0	0	0	0	0	0	0	0
Still on Disk.															
Absolute heliographic longitude:		173													

Region Summary-continued

Date	Location (° Lat ° CMD)	Helio Lon	Sunspot Characteristics: Area (10^{-6} hemi)	Extent (helio)	Spot Class	Spot Count	Mag Class	Flares: X-ray C	X-ray M	X-ray X	Optical S	Optical 1	Optical 2	Optical 3	Optical 4
	Region 8908														
09 Mar	S19E71	108	0100	09	CSO	003	B								
10 Mar	S19E59	107	0070	08	CSO	006	B								
11 Mar	S19E45	108	0040	04	CSO	003	B								
12 Mar	S20E33	107	0020	04	CSO	004	B								
								0	0	0	0	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 107

Region 8909

11 Mar	S29E76	077	0030	02	HRX	001	A								
12 Mar	S29E64	076	0040	02	HSX	002	A								
								0	0	0	0	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 076

Region 8910

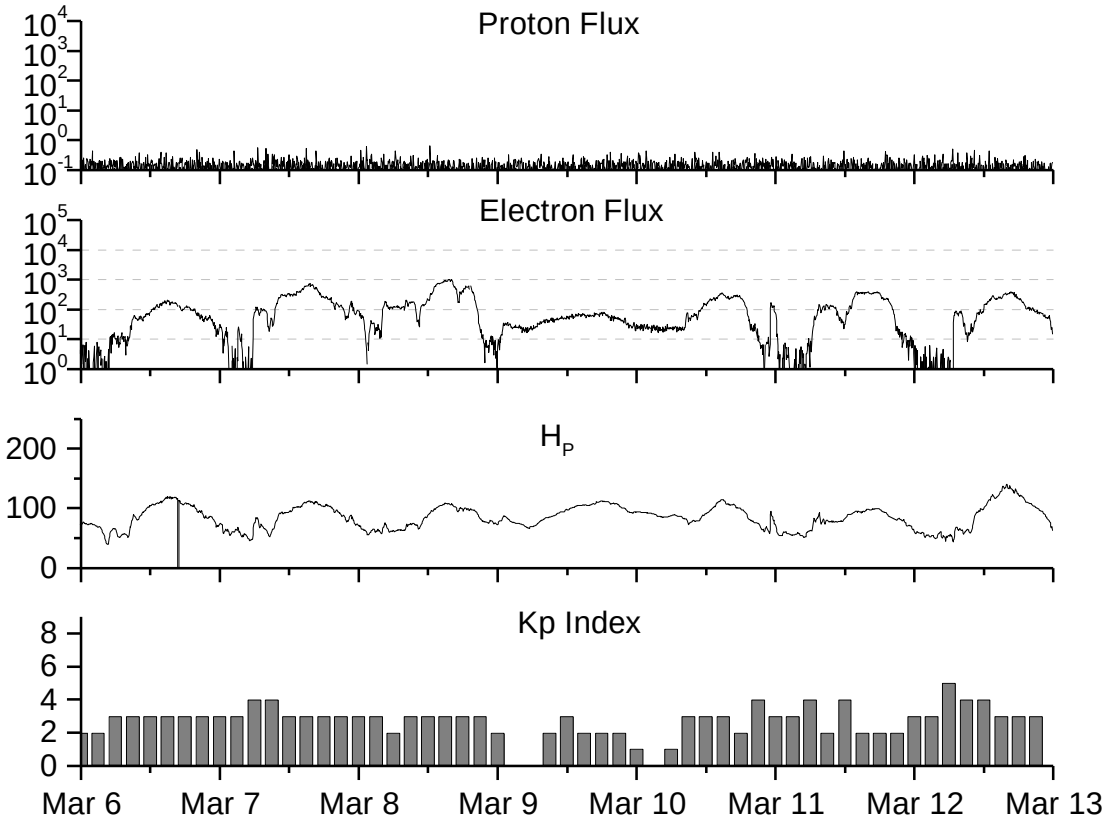
12 Mar	N11E68	072	0140	06	CAO	004	B								
								0	0	0	0	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 072

Recent Solar Indices (preliminary)
of the observed monthly mean values

	Sunspot Numbers					Radio Flux		Geomagnetic	
	Observed values		Ratio	Smooth values		*Penticton	Smooth	Planetary	Smooth
Month	SWO	RI	RI/SWO	SWO	RI	10.7 cm	Value	Ap	Value
					1998				
February	54.4	40.3	0.74	67.4	48.9	93.4	101.7	08	10.5
March	81.8	54.8	0.67	73.3	53.4	109.1	105.8	13	11.1
April	73.6	53.4	0.73	77.7	56.5	108.3	108.9	10	11.3
May	74.3	56.3	0.76	81.4	59.4	106.7	112.0	18	11.6
June	93.6	70.7	0.76	85.9	62.5	108.4	115.8	10	11.9
July	98.3	66.6	0.68	90.3	65.5	114.0	120.3	11	12.2
August	118.6	92.2	0.78	93.7	67.8	136.0	124.1	18	12.4
September	119.0	92.9	0.78	96.1	69.5	138.3	126.8	13	12.6
October	77.0	55.5	0.72	97.7	70.5	117.3	127.9	13	12.8
November	99.5	74.0	0.74	101.3	73.0	140.2	130.0	16	12.4
December	120.8	81.9	0.68	108.8	77.9	150.1	134.3	08	11.9
					1999				
January	94.3	62.0	0.66	116.5	82.6	142.6	139.0	10	11.7
February	93.4	66.3	0.71	120.2	84.6	142.0	142.6	12	11.6
March	100.5	68.8	0.68	120.5	83.8	126.3	144.0	14	11.7
April	92.9	63.7	0.69	123.8	85.4	117.2	145.8	12	12.2
May	140.5	106.3	0.76	131.7	90.4	148.6	150.0	08	12.4
June	208.3	137.4	0.66	136.0	93.0	169.8	152.9	07	12.4
July	169.2	113.5	0.67	138.0	94.4	165.6	154.4	10	12.3
August	136.1	93.7	0.69	142.8	97.5	170.8	156.4	15	12.2
September	107.4	70.9	0.66			135.7		19	
October	167.7	116.4	0.69			164.9		19	
November	199.3	132.7	0.67			191.7		14	
December	123.5	86.4	0.70			169.8		10	
					2000				
January	140.8	90.2	0.64			158.3		06	
February	161.9	112.3	0.69			173.7		13	

NOTE: All smoothed values after November 1998 and monthly values after June 1999 are preliminary estimates. The lowest smoothed sunspot index number for Cycle 22, RI = 8.0, occurred in May 1996. The highest smoothed sunspot number for Cycle 22, RI= 158.5, occurred July 1989. * After June 1991, the 10.7 cm radio flux data source is Penticton, B.C. Canada. Prior to that, it was Ottawa.



Weekly Geosynchronous Satellite Environment Summary
Week Beginning 06 March 2000

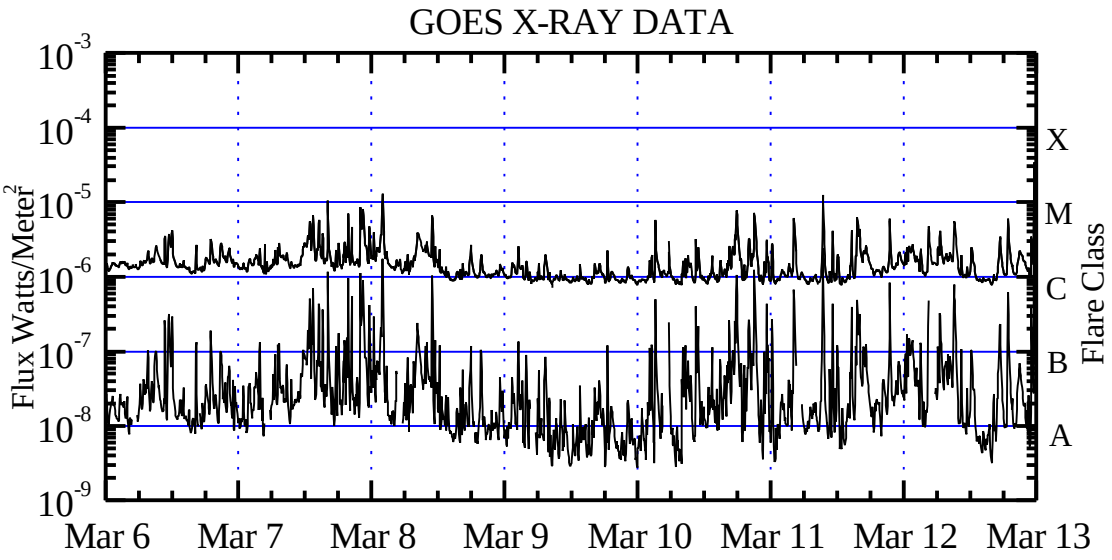
Protons plot contains the five-mine averaged integral proton flux (protons/cm^2–sec –sr) as measured by GOES-8 (W75) for each of three energy thresholds: greater than 10, 50, and 100 MeV.

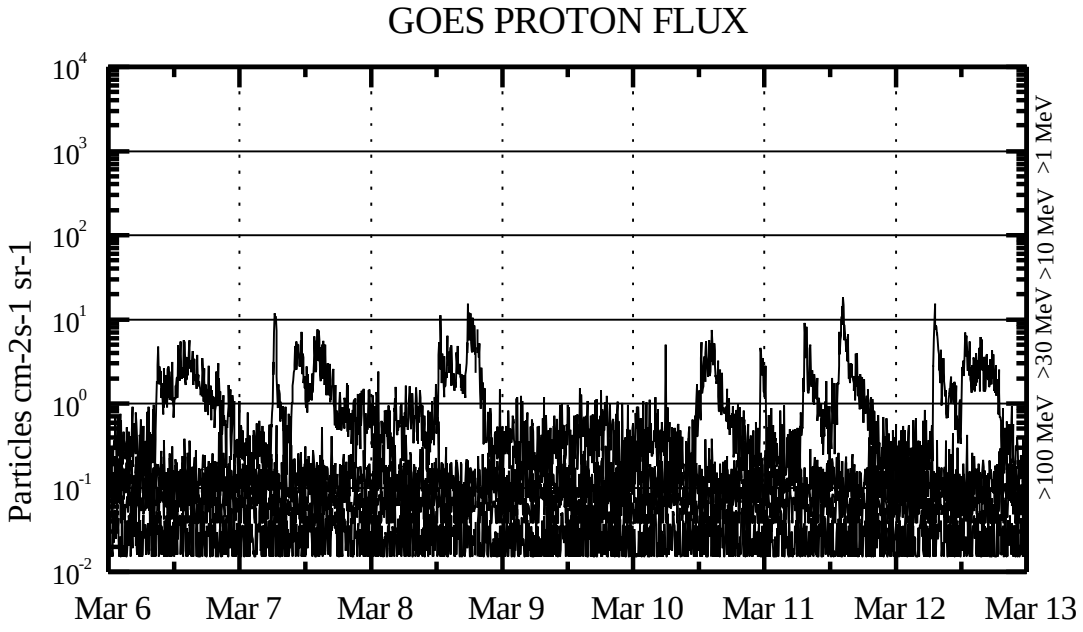
Electrons plot contains the five-mine averaged integral electron flux (electrons/cm^2–sec –sr) with energies greater than 2 MeV at GOES-8.

Hp plot contains the five mine averaged magnetic field H - component in nanoteslas (nT) as measured by GOES-8. The H component is parallel to the spin axis of the satellite, which is nearly parallel to the Earth's rotation axis.

Kp plot contains the estimated planetary 3-hour K-index (derived by the USAF 55th Space Weather Squadron) in real time from magnetometers at Meanook, Canada; Sitka, AK; Glenlea, Canada; St. Johns, Canada; Ottawa, Canada; Newport, WA; Fredericksburg, VA; Boulder, CO; Fresno, CA and Heartland, UK. These data are made available through cooperation from the Geological Survey of Canada (GSC) and the US Geological Survey. These may differ from the final Kp values derived from a more extensive network of magnetometers.

The data included here are those now available in real time at the SWO and are incomplete in that they do not include the full set of parameters and energy ranges known to cause satellite operating anomalies. The proton and electron fluxes and Kp are " global " parameters that are applicable to a first order approximation over large areas. Hparallel is subject to more localized phenomena and the measurements generally are applicable to within a few degrees of longitude of the measuring satellite.





Weekly GOES Satellite X-ray and Proton Plots

X-ray plot contains five mine averaged x-ray flux (watts/$m^{2)}$ as measured by GOES 8 and 10 in two wavelength bands, .05 -. 4 and .1 - .8 nm. The letters A, B, C, M and X refer to x-ray event levels for the .1 - .8 nm band.

Proton plot contains the five mine averaged integral proton flux (protons/cm2 –sec –sr) as measured by GOES-8 (W75) for each of the energy thresholds: >1, >10, >30 and >100 MeV. P10 event threshold is 10 pfu (protons/cm^2-sec-sr) at greater than 10 MeV.