

Solar activity was at very low to low levels. On 10 – 11 March, activity was at low levels due to activity from Region 306 (N07, L=080, class/area Dko/640 on 15 March) and Region 304 (S11, L=168, class/area Dao/70 on 09 March). Region 306 developed a beta-gamma magnetic configuration on 13 March and has exhibited steady growth throughout the period. Activity was very low on 12 and 14 March and low levels on 13 March due to a minor C-flare. A B9.2 X-ray enhancement on 14 March at 1825 UTC was most likely due to a disappearing solar filament. The western most 30 degrees of a large southwest filament lifted off at 1730 UTC and was associated with a CME. The most significant region during the period was Region 314 (S14, L=60, class/area Eki/380 on 16 March). This region appeared on the visible disk on 14 March and has been in a rapid growth phase since. Area coverage has increased to 380 millionths and on 16 March the region developed a beta-gamma-delta magnetic configuration. Activity on 15 and 16 March was at low levels due to C-class flares from Region 314. The largest event of the period was a C8.4/Sf from Region 314 on 15 March at 2016 UTC. At the time of this report (18 March) Region 314 continues its rapid growth and has produced two M-class and two X-class flares.

Solar wind data were available from the NASA Advanced Composition Explorer (ACE) spacecraft for most of the summary period. Solar wind velocity was relatively low early in the period. Solar wind velocity remained low until late on 11 March when the NASA/ACE spacecraft detected a sector boundary crossing. The new away sector was marked by an increase in solar wind velocity to 450 – 500 km/s. On 12 – 13 March, velocity was steady near 450 km/s and the Bz component of the interplanetary magnetic field was averaging between +5 and –5 nT. On 14 March solar wind velocity increased to over 600 km/s marking the onset of a transequatorial coronal hole and high speed stream. By the close of the period on 16 March, solar wind velocity was over 700 km/s and continuing a gradual rise.

There were no greater than 10 MeV proton events at geo-synchronous orbit during the summary period.

The greater than 2 MeV electron flux at geo-synchronous orbit reached high levels on 10 –13 March and again on 15 – 16 March.

The geomagnetic field has been at quiet to major storm levels. Activity on 10 – 13 March was quiet to active with the most disturbed levels associated with periods of southward Bz. On 14 March isolated major storm levels were observed and on 15 – 16 March unsettled to minor storm levels were observed, all due to effects from the large transequatorial coronal hole.



Space Weather Outlook 19 March – 14 April 2003

Solar activity is expected to be at low to moderate levels with a continued chance of high levels of activity. Region 314 is expected to have X-class potential until it rotates beyond and two X-class flares the west limb on 21 March. Activity is expected to be very low to low from 22 March until the return of Regions 306 and 314 on 01 and 02 April respectively. Low level with a chance of moderate activity is expected after 02 April.

Greater than 10 MeV proton events are possible from Region 314 until 21 March.

The greater than 2 MeV electron flux may reach high levels on 19 – 24 March, 27 – 28 March and again on 04 – 06 April due to returning coronal holes.

The geomagnetic field is expected to be at quiet to major storm levels. On 20 March a CME shock is expected from the X1.5 flare that occurred on 18 March with major storm levels possible. The large equatorial coronal hole is expected to continue to produce unsettled to isolated minor storm conditions until 21 March. Two smaller but more intense coronal holes are due on 25 – 27 March and 30 – 31 March and are expected to produce active to isolated major storm levels. A weak but persistent coronal hole is expected on 01 – 04 April with unsettled to isolated active conditions.



Daily Solar Data

Date	Radio Flux 10.7 cm	Sun spot No.	Sunspot Area (10 ⁻⁶ hemi.)	X-ray Background	Flares							
					X-ray Flux			Optical				
					C	M	X	S	1	2	3	4
10 March	144	214	1240	B3.3	2	0	0	2	0	0	0	0
11 March	142	142	1080	B2.9	1	0	0	1	0	0	0	0
12 March	138	109	990	B2.6	0	0	0	1	0	0	0	0
13 March	134	88	770	B2.6	1	0	0	4	0	0	0	0
14 March	139	114	840	B2.5	1	0	0	0	0	0	0	0
15 March	131	124	1010	B2.5	3	0	0	1	0	0	0	0
16 March	129	121	1140	B3.5	3	0	0	2	0	0	0	0

Daily Particle Data

Date	Proton Fluence (protons/cm ² -day-sr)			Electron Fluence (electrons/cm ² -day-sr)		
	>1MeV	>10MeV	>100MeV	>.6MeV	>2MeV	>4MeV
10 March	3.6E+5	1.1E+4	2.7E+3		4.0E+7	
11 March	9.9E+4	1.1E+4	2.4E+3		2.4E+7	
12 March	8.1E+4	1.1E+4	2.5E+3		2.8E+7	
13 March	1.2E+5	1.1E+4	2.5E+3		9.7E+6	
14 March	5.2E+5	1.1E+4	2.5E+3		7.2E+6	
15 March	1.0E+6	1.1E+4	2.5E+3		4.2E+7	
16 March	2.0E+6	1.1E+4	2.3E+3		4.2E+7	

Daily Geomagnetic Data

Date	Middle Latitude Fredericksburg		High Latitude College		Estimated Planetary	
	A	K-indices	A	K-indices	A	K-indices
	10 March	10	1-3-2-3-3-2-2-2	22	2-2-3-4-6-4-2-2	16
11 March	7	2-1-3-2-2-2-1-1	20	3-2-4-5-4-4-1-1	13	3-2-4-3-3-3-3-2
12 March	9	2-2-2-1-3-3-2-3	*	*-*-*-*-*-*-*	9	2-2-2-2-3-3-3-3
13 March	8	3-2-2-2-3-1-1-2	22	3-3-2-5-6-1-2-2	15	4-3-3-3-4-3-3-2
14 March	16	2-2-4-4-4-2-3-3	45	2-1-5-6-7-4-4-4	25	2-2-4-4-6-3-4-3
15 March	17	5-3-3-3-3-3-2-2	30	4-3-4-5-5-5-3-3	24	5-4-4-4-4-3-4-3
16 March	12	2-2-2-3-3-3-3-3	52	2-1-2-7-6-6-6-3	23	3-3-2-5-4-4-5-4

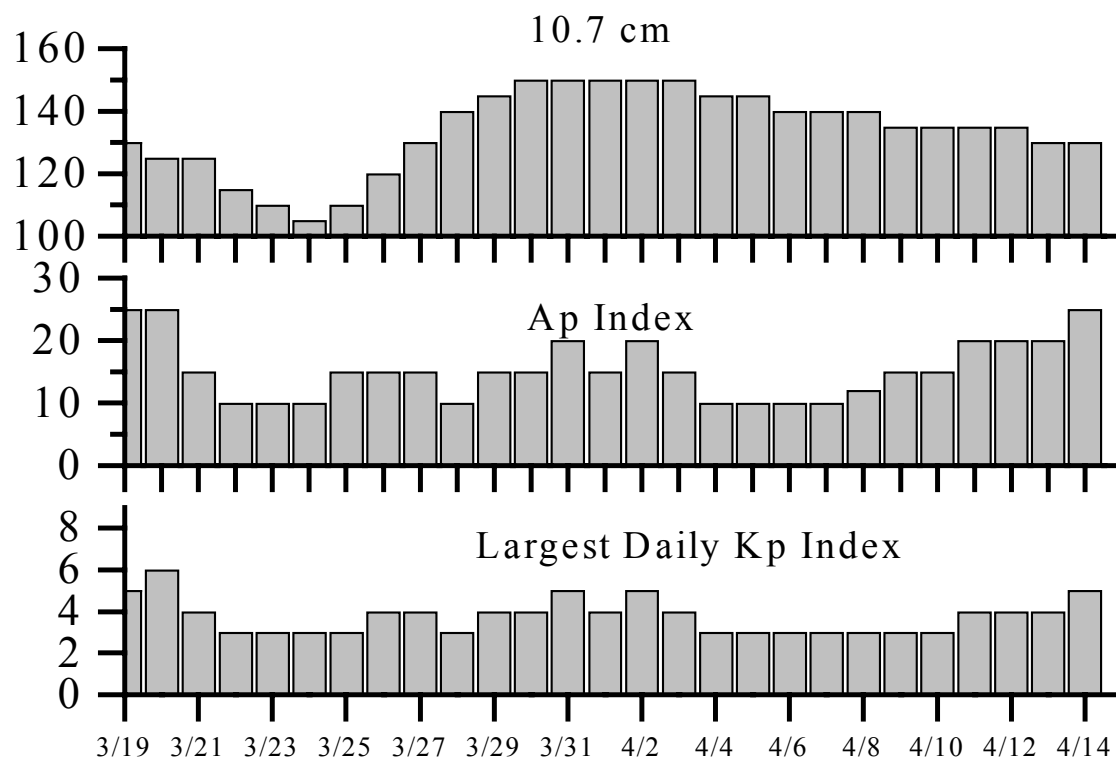


Alerts and Warnings Issued

Date & Time of Issue	Type of Alert or Warning	Date & Time of Event UT
10 Mar 0027	4 - 245 MHz Radio Bursts	09 Mar
10 Mar 1306	ALERT: Type II Radio Emission	10 Mar 1003
10 Mar 1339	ALERT: Electron 2MeV Integral Flux > 1000pfu	10 Mar 1320
10 Mar 1344	ALERT: Geomagnetic K= 4	10 Mar 1343
10 Mar 1500	CANCEL ALERT: Type II Radio Emission	10 Mar 1306
11 Mar 0002	6 - 245 MHz Radio Bursts	10 Mar
11 Mar 1754	ALERT: Electron 2MeV Integral Flux > 1000pfu	11 Mar 1735
11 Mar 1756	ALERT: Geomagnetic K= 4	11 Mar 1755
12 Mar 0011	2 - 245 MHz Radio Bursts	11 Mar
12 Mar 0011	1 - 245 MHz Radio Noise Storm	11 Mar
12 Mar 2110	ALERT: Electron 2MeV Integral Flux > 1000pfu	14 Mar 2050
13 Mar 0140	ALERT: Geomagnetic K= 4	14 Mar 0140
13 Mar 1455	ALERT: Geomagnetic K= 4	14 Mar 1455
14 Mar 0012	1 - 245 MHz Radio Bursts	13 Mar
14 Mar 0012	1 - 245 MHz Radio Noise Storm	13 Mar
14 Mar 0807	ALERT: Geomagnetic K= 4	14 Mar 0807
14 Mar 0823	SUMMARY: Geomagnetic Sudden Impulse	14 Mar 0742
14 Mar 1306	ALERT: Geomagnetic K- 4	14 Mar 1305
14 Mar 1452	WARNING: Geomagnetic K= 4	14 Mar 1455 -15 Mar 2359
14 Mar 2103	ALERT: Geomagnetic K= 4	14 Mar 2058
15 Mar 0243	WARNING: Geomagnetic K= 5	15 Mar 0244 - 1500
15 Mar 0249	ALERT: Geomagnetic K= 5	15 Mar 0247
15 Mar 1443	ALERT: Electron 2MeV Integral Flux > 1000pfu	15 Mar 1425
15 Mar 2352	ALERT: Type II Radio Emission	15 Mar 2307
16 Mar 0046	2 - 245 MHz Radio Bursts	15 Mar
16 Mar 0052	WARNING: Geomagnetic K= 4	16 Mar 0055 - 2359
16 Mar 1329	ALERT: Electron 2MeV Integral Flux > 1000pfu	16 Mar 1310
16 Mar 2253	EXTENDED WARNING: Geomagnetic K= 4	16 Mar 0055 -17 Mar 2359



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
19 Mar	130	25	5	02 Apr	150	20	5
20	125	25	6	03	150	15	4
21	125	15	4	04	145	10	3
22	115	10	3	05	145	10	3
23	110	10	3	06	140	10	3
24	105	10	3	07	140	10	3
25	110	15	3	08	140	12	3
26	120	15	4	09	135	15	3
27	130	15	4	10	135	15	3
28	140	10	3	11	135	20	4
29	145	15	4	12	135	20	4
30	150	15	4	13	130	20	4
31	150	20	5	14	130	25	5
01 Apr	150	15	4				



Energetic Events

Date	Time		X-ray	Optical Information			Peak		Sweep Freq	
	Begin	Max	Integ	Imp/ Brtns	Location		Rgn	Radio Flux		
			Class		Flux	Lat		CMD	245	2695

No Events Observed

Flare List

Date	Time			X-ray Class.	Optical		Rgn
	Begin	Max	End		Imp / Brtns	Location Lat CMD	
10 March	0538	0543	0546	B6.3			
	0540	0540	0545		Sf	S18W54	295
	0844	0852	0858	B9.2	Sf	N03E45	306
	0929	0939	0949	C1.5			297
	1001	1005	1009	C1.3			306
	1039	1044	1048	B8.2			297
	1531	1553	1612	B9.7			308
	1824	1828	1830	B4.1			
11 March	0008	0012	0022	B4.9			304
	0409	0412	0415	B4.3			
	0546	0550	0552	B7.3			
	0840	0845	0848	B6.2			
	1226	1226	1231	C1.2	Sf	S14W62	304
	1619	1622	1628	B5.4			304
	1837	1840	1842	B5.3			
12 March	0939	0940	0946	B6.1	Sf	N08E13	306
	1643	1652	1656	B8.4			306
	2114	2117	2126	B5.6			306
13 March	0205	0207	0214		Sf	N16W53	312
	0209	0213	0233	C1.3	Sf	S12E09	311
	0602	0610	0621		Sf	S29E64	
	B1334	U1334	1341		Sf	S26W54	307
	1954	2010	2026	B5.1			
14 March	1013	1017	1035	B4.7			
	1741	1825	1847	B9.2			
	2359	0009	0033	C1.8			
15 March	0327	0336	0344	B8.1			314
	1002	1015	1029	B9.6			
	1521	1530	1540	C3.7			314
	2000	2016	2032	C8.4			314
	2043	2046	2049		Sf	S16W11	314
	2359	0003	0006	C1.3			
		0400	0408	0439	C3.0	Sf	S15W15
16 March	1121	1129	1138	C1.0			
	1251	1312	1323	C1.2			
	1910	1910	1915		Sf	S11W29	314



Region Summary

Date	Location		Sunspot Characteristics				Flares							
	(° Lat ° CMD)	Helio	Area (10 ⁻⁶ hemi)	Extent (helio)	Spot Class	Spot Count	Mag Class	X-ray			Optical			
		Lon						C	M	X	S	1	2	3

Region 295

27 Feb	S19E65	192	0070	06	Cao	003	B											
28 Feb	S17E55	189	0090	05	Cso	004	B											
01 Mar	S17E41	190	0070	02	Hsx	001	A											
02 Mar	S18E27	192	0070	02	Hsx	001	A											
03 Mar	S18E14	192	0050	05	Cso	006	B											
04 Mar	S18E01	190	0060	03	Cao	007	B											
05 Mar	S18W12	190	0090	03	Dao	006	B											
06 Mar	S18W25	190	0040	02	Dao	004	B											
07 Mar	S17W38	190	0020	03	Cso	003	B											
08 Mar	S17W51	190	0010	03	Bxo	002	B											
09 Mar	S17W63	190																
10 Mar	S17W76	190																1
11 Mar	S17W89	190																
																		0 0 0 1 0 0 0 0

Crossed West Limb.

Absolute heliographic longitude: 190

Region 296

28 Feb	N12E73	171	0270	04	Dho	002	B											1
01 Mar	N12E62	169	0640	10	Dko	008	B	3										2
02 Mar	N11E48	169	0590	11	Eho	007	B	1										2
03 Mar	N11E35	170	0600	09	Dki	020	Bg											
04 Mar	N11E21	170	0650	10	Dki	023	Bg											
05 Mar	N11E08	170	0560	09	Dki	022	Bg											1
06 Mar	N12W05	170	0470	07	Dki	014	Bg											
07 Mar	N13W18	170	0440	08	Dko	017	Bg											
08 Mar	N13W31	170	0440	07	Dko	014	Bg											
09 Mar	N12W45	170	0440	09	Dko	011	Bg											
10 Mar	N12W58	170	0400	04	Cho	002	Bg											
11 Mar	N12W71	170	0290	03	Hhx	001	A											
12 Mar	N12W85	172	0220	03	Hhx	001	A											
																		4 0 0 6 0 0 0 0

Crossed West Limb.

Absolute heliographic longitude: 170



Region Summary - continued.

Date	Location		Sunspot Characteristics				Flares															
	(° Lat ° CMD)	Helio	Area (10 ⁻⁶ hemi)	Extent (helio)	Spot Class	Spot Count	Mag Class	X-ray			Optical											
		Lon						C	M	X	S	1	2	3	4							
<i>Region 297</i>																						
01 Mar	S15E67	165	0100	08	Bxo	005	B															
02 Mar	S16E56	162	0050	05	Dso	004	B															
03 Mar	S16E43	162	0040	05	Dao	004	B															
04 Mar	S16E28	163	0050	05	Dso	004	B															
05 Mar	S15E13	165	0030	04	Dso	005	B															
06 Mar	S15E00	165	0030	07	Dao	006	B															
07 Mar	S14W12	164	0030	07	Cso	005	B															
08 Mar	S14W25	164	0020	05	Bxo	008	B															
09 Mar	S13W39	164	0020	08	Cao	006	B															
10 Mar	S13W52	164	0010	01	Axx	001	A	1														
11 Mar	S13W65	164																				
12 Mar	S11W80	167	0010	01	Axx	002	B															
																					1 0 0 0 0 0 0 0	

Crossed West Limb.

Absolute heliographic longitude: 165

Region 298

03 Mar	S08E18	187	0020	03	Dso	005	B														
04 Mar	S09E04	187	0030	04	Dso	007	B														
05 Mar	S08W08	186	0020	06	Dro	005	B														
06 Mar	S08W21	186																			
07 Mar	S08W34	186																			
08 Mar	S08W47	186																			
09 Mar	S08W60	186																			
10 Mar	S08W73	186																			
11 Mar	S08W86	186																			
																					0 0 0 0 0 0 0 0

Crossed West Limb.

Absolute heliographic longitude: 187



Region Summary - continued.

Date	Location		Sunspot Characteristics				Flares							
	(° Lat ° CMD)	Helio	Area (10 ⁻⁶ hemi)	Extent (helio)	Spot Class	Spot Count	Mag Class	X-ray			Optical			
		Lon						C	M	X	S	1	2	3

Region 299

03 Mar	N12E47	158	0070	05	Cao	003	B										
04 Mar	N12E34	157	0040	05	Cso	004	B										
05 Mar	N12E20	158	0020	05	Cro	007	B										
06 Mar	N13E06	159	0030	09	Cro	015	B										
07 Mar	N14W08	160	0030	06	Dso	014	B										
08 Mar	N14W21	160	0030	06	Bxo	013	B										
09 Mar	N14W35	160	0030	05	Cro	007	B										
10 Mar	N14W48	160	0030	03	Cso	004	B										
11 Mar	N14W61	160															
12 Mar	N14W74	160															
13 Mar	N14W87	160															

0 0 0 0 0 0 0 0 0

Crossed West Limb.

Absolute heliographic longitude: 159

Region 300

03 Mar	N16E66	139	0010	01	Axx	001	A										
04 Mar	N16E53	138	0030	01	Hsx	001	A										
05 Mar	N16E38	140	0010	01	Hrx	001	A										
06 Mar	N17E25	140	0010	01	Axx	002	A										
07 Mar	N16E14	138	0010	07	Bxo	003	B										
08 Mar	N16E01	138															
09 Mar	N16W12	138															
10 Mar	N16W26	138	0020	05	Bxo	006	B										
11 Mar	N16W39	138	0030	04	Dao	009	B										
12 Mar	N16W51	138	0040	06	Cao	009	B										
13 Mar	N16W65	139	0050	01	Hax	001	A										
14 Mar	N17W81	142	0020	01	Axx	002	A										

0 0 0 0 0 0 0 0 0

Crossed West Limb.

Absolute heliographic longitude: 138



Region Summary - continued.

Date	Location		Sunspot Characteristics				Flares							
	(° Lat ° CMD)	Helio Lon	Area (10 ⁻⁶ hemi)	Extent (helio)	Spot Class	Spot Count	Mag Class	X-ray			Optical			
							C	M	X	S	1	2	3	4

Region 301

04 Mar	N21E36	155	0030	05	Cro	004	B								
05 Mar	N22E22	156	0040	06	Dao	009	B								
06 Mar	N22E08	157	0040	07	Dao	008	B								
07 Mar	N22W05	157	0050	08	Dao	012	B								
08 Mar	N22W18	157	0050	08	Dao	010	B				1				
09 Mar	N22W32	157	0030	05	Cso	005	B								
10 Mar	N22W45	157	0020	04	Bxo	004	B								
11 Mar	N22W58	157													
12 Mar	N22W71	157													
13 Mar	N22W84	157													
											1	0	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 157

Region 302

04 Mar	N19E62	129	0020	01	Hsx	001	A								
05 Mar	N19E50	128	0020	04	Cro	003	B				1				
06 Mar	N20E35	130	0020	02	Cro	002	B								
07 Mar	N20E23	129	0020	04	Cao	005	B								
08 Mar	N20E10	129	0020	05	Bxo	005	B								
09 Mar	N20W04	129	0010	03	Bxo	002	B								
10 Mar	N20W17	129	0020	04	Cao	004	B								
11 Mar	N20W30	129	0020	03	Cro	003	B								
12 Mar	N20W43	129													
13 Mar	N18W67	141													
14 Mar	N18W80	141													
											0	0	0	1	0

Crossed West Limb.

Absolute heliographic longitude: 129

Region 303

07 Mar	S18W47	199	0010	05	Cso	003	B								
08 Mar	S18W60	199	0010	04	Bxo	002	B								
09 Mar	S16W67	193													
10 Mar	S16W80	193													
11 Mar	S16W93	193													
											0	0	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 199



Region Summary - continued.

Date	Location		Sunspot Characteristics				Flares									
	(° Lat ° CMD)	Helio	Area (10 ⁻⁶ hemi)	Extent (helio)	Spot Class	Spot Count	Mag Class	X-ray			Optical					
		Lon						C	M	X	S	1	2	3	4	
<i>Region 304</i>																
07 Mar	S13W16	168	0040	08	Dso	012	B									
08 Mar	S13W29	168	0050	06	Dao	011	B						1			
09 Mar	S11W43	168	0070	07	Dao	019	B	4					2			
10 Mar	S11W56	168	0060	06	Dao	013	B									
11 Mar	S11W69	168	0050	05	Dso	009	B	1					1			
12 Mar	S13W86	173	0020	02	Hsx	006	A									
								5	0	0	4	0	0	0	0	

Crossed West Limb.

Absolute heliographic longitude: 168

<i>Region 305</i>																
07 Mar	S22E27	125	0030	03	Dso	006	B									
08 Mar	S22E14	125	0050	06	Dso	013	B									
09 Mar	S22E00	125	0090	07	Dao	017	B									
10 Mar	S22W13	125	0040	07	Dso	015	B									
11 Mar	S22W26	125	0080	07	Bxo	005	B									
12 Mar	S24W37	123														
13 Mar	S24W50	123														
14 Mar	S24W63	123														
15 Mar	S24W76	123														
								0	0	0	0	0	0	0	0	

Still on Disk.

Absolute heliographic longitude: 125

<i>Region 306</i>																
07 Mar	N05E76	076	0280	04	Hhx	001	A									
08 Mar	N05E63	076	0470	04	Hhx	001	A	1					1			
09 Mar	N05E47	076	0540	06	Dko	007	B						3			
10 Mar	N05E34	076	0510	06	Cko	008	B	1					1			
11 Mar	N05E21	078	0520	05	Dko	006	B									
12 Mar	N06E08	079	0590	06	Dko	008	B						1			
13 Mar	N07W05	079	0570	07	Cko	015	Bg									
14 Mar	N07W19	080	0580	08	Dko	016	Bg									
15 Mar	N07W33	080	0640	06	Dko	015	Bg									
16 Mar	N08W45	079	0630	07	Dko	012	Bg									
								2	0	0	6	0	0	0	0	

Still on Disk.

Absolute heliographic longitude: 079



Region Summary - continued.

Date	Location		Sunspot Characteristics				Flares							
	(° Lat ° CMD)	Helio Lon	Area (10 ⁻⁶ hemi)	Extent (helio)	Spot Class	Spot Count	Mag Class	X-ray			Optical			
								C	M	X	S	1	2	3

Region 307

08 Mar	S26W02	141	0010	03	Bxo	003	B											
09 Mar	S26W16	141	0010	02	Axx	002	A											
10 Mar	S26W29	141																
11 Mar	S26W42	141																
12 Mar	S26W55	141																
13 Mar	S26W68	141																1
14 Mar	S26W81	141																
																		0 0 0 1 0 0 0 0

Crossed West Limb.

Absolute heliographic longitude: 141

Region 308

08 Mar	N08E75	064	0060	02	Hax	001	A											
09 Mar	N08E61	064	0080	03	Cao	003	B											
10 Mar	N08E48	064	0030	01	Hax	001	A											
11 Mar	N08E35	064	0020	01	Hsx	002	A											
12 Mar	N10E21	066	0010	01	Hrx	001	A											
13 Mar	N10E06	068	0010	03	Bxo	002	B											
14 Mar	N11W07	068	0010	01	Bxo	003	B											
15 Mar	N10W20	067	0010	03	Cro	005	B											
16 Mar	N11W33	067	0020	03	Bxo	004	B											
																		0 0 0 0 0 0 0 0

Still on Disk.

Absolute heliographic longitude: 068

Region 309

09 Mar	N05W77	202	0040	05	Dso	005	B											
10 Mar	N05W90	202	0020	01	Hsx	001	A											
																		0 0 0 0 0 0 0 0

Crossed West Limb.

Absolute heliographic longitude: 202

Region 310

09 Mar	S16W49	174	0030	05	Cso	006	B	1										1
10 Mar	S16W62	174	0010	03	Bxo	002	B											
11 Mar	S16W75	174																
12 Mar	S16W88	174																
																		1 0 0 1 0 0 0 0

Crossed West Limb.

Absolute heliographic longitude: 174



Region Summary - continued.

Date	Location		Sunspot Characteristics				Flares								
	(° Lat ° CMD)	Helio	Area (10 ⁻⁶ hemi)	Extent (helio)	Spot Class	Spot Count	Mag Class	X-ray			Optical				
		Lon						C	M	X	S	1	2	3	4

Region 311

09 Mar	S16E45	080	0020	04	Cso	004	B											
10 Mar	S16E32	080	0070	05	Dao	012	B											
11 Mar	S16E19	080	0070	07	Dai	016	B											
12 Mar	S12E05	082	0100	07	Dso	012	B											
13 Mar	S12W08	082	0110	07	Dao	012	B	1				1						
14 Mar	S13W22	083	0080	06	Dao	013	B											
15 Mar	S12W36	083	0060	05	Cao	011	B											
16 Mar	S10W50	084	0050	04	Cao	007	B											
								1	0	0	0	1	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 082

Region 312

10 Mar	N09W25	137	0000	01	Axx	001	A											
11 Mar	N09W38	137	0000	00	Axx	001	A											
12 Mar	N09W51	137																
13 Mar	N09W64	137										1						
14 Mar	N09W77	137																
								0	0	0	0	1	0	0	0	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 137

Region 313

13 Mar	N32E00	074	0030	06	Cso	008	B											
14 Mar	N33W14	075	0070	06	Dao	006	B											
15 Mar	N33W26	073	0060	07	Dso	004	B											
16 Mar	N33W38	072	0050	07	Dao	005	B											
								0	0	0	0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 074

Region 314

14 Mar	S14E00	061	0080	07	Dso	014	Bg											
15 Mar	S13W14	061	0220	11	Eao	027	Bg	2				1						
16 Mar	S14W26	060	0380	11	Eki	031	Bgd	1				2						
								3	0	0	0	3	0	0	0	0	0	

Still on Disk.

Absolute heliographic longitude: 061



Region Summary - continued.

Date	Location		Sunspot Characteristics				Flares							
	(° Lat ° CMD)	Helio Lon	Area (10 ⁻⁶ hemi)	Extent (helio)	Spot Class	Spot Count	Mag Class	X-ray			Optical			
							C	M	X	S	1	2	3	4

Region 315

15 Mar	N03W74	121	0020	01	Axx	002	A								
16 Mar	N02W86	120	0010	01	Axx	002	A								
								0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 121

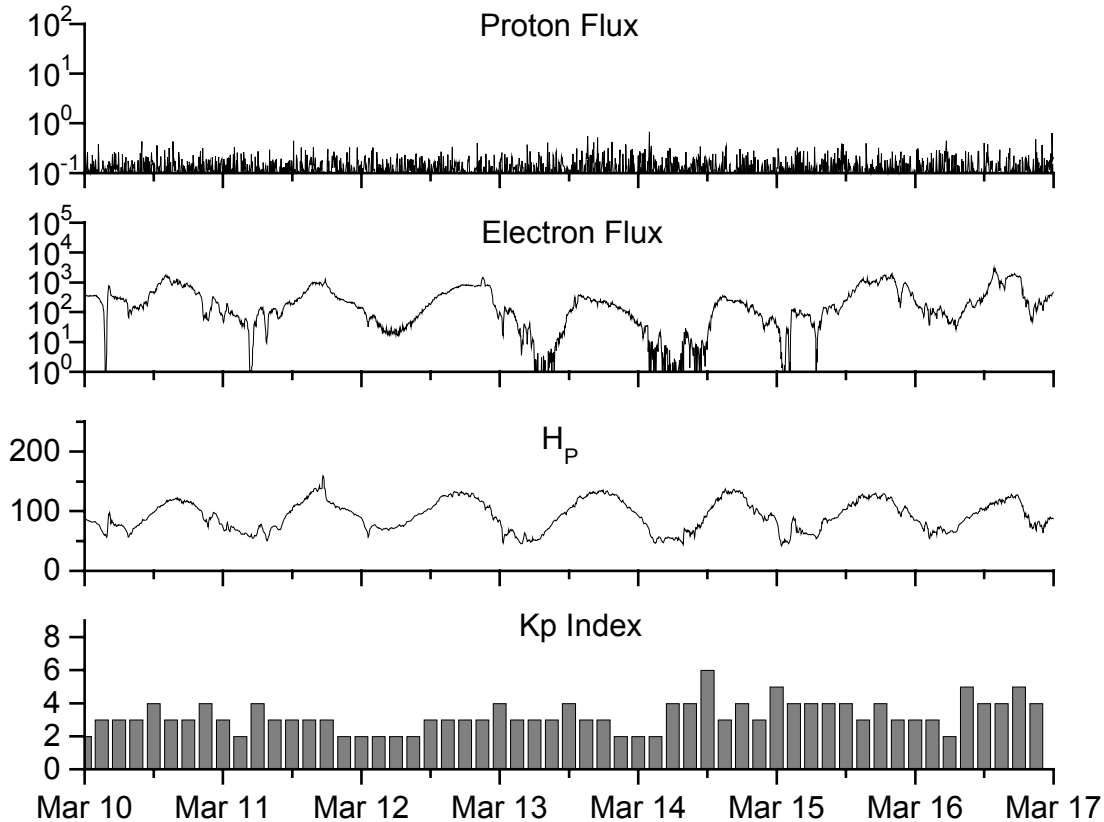


**Recent Solar Indices (preliminary)
of the observed monthly mean values**

Month	Sunspot Numbers			Radio Flux		Geomagnetic			
	Observed values SWO	Ratio RI	Ratio RI/SWO	Smooth values SWO	Smooth values RI	*Penticton 10.7 cm	Smooth Value	Planetary Ap	Smooth Value
2001									
March	166.7	114.2	0.69	154.0	104.9	177.7	167.9	17	12.9
April	163.6	108.2	0.66	159.4	107.7	178.1	171.7	18	12.7
May	135.1	97.3	0.72	163.1	108.8	147.9	174.8	12	12.5
June	196.7	134.0	0.68	167.2	109.9	173.7	178.8	12	12.4
July	124.6	82.2	0.66	172.1	111.8	131.3	183.9	11	12.4
August	159.4	106.8	0.67	176.7	113.8	163.1	188.8	13	12.5
September	229.1	150.7	0.66	178.8	114.3	233.8	191.3	13	12.8
October	197.4	125.6	0.64	179.5	114.1	208.1	191.9	20	12.0
November	178.6	106.5	0.60	183.7	115.6	212.7	193.7	16	12.0
December	217.5	132.2	0.61	184.5	114.6	235.6	193.9	09	12.2
2002									
January	189.0	114.1	0.60	184.8	113.5	227.3	194.6	08	12.4
February	194.5	107.4	0.55	188.6	114.7	205.0	197.2	10	12.8
March	153.1	98.4	0.64	188.9	113.4	180.3	195.7	10	13.0
April	194.9	120.7	0.62	186.2	110.5	189.8	191.5	15	13.2
May	204.1	120.8	0.59	183.6	108.9	178.4	188.0	15	13.3
June	146.0	88.3	0.61	179.9	106.3	148.7	183.0	11	13.5
July	183.5	99.9	0.54	175.4	102.7	173.5	176.3	13	13.9
August	191.0	116.4	0.61	169.3	98.7	183.9	169.5	16	14.3
September	206.4	109.6	0.53			175.8		14	
October	153.9	97.5	0.63			167.0		23	
November	159.8	95.5	0.60			168.7		16	
December	147.9	80.8	0.55			158.6		13	
2003									
January	149.3	79.5	0.53			144.6		13	
February	87.9	46.2	0.53			124.6		15	

NOTE: All smoothed values after June 1999 and monthly values after December 2000 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 10 March 2003

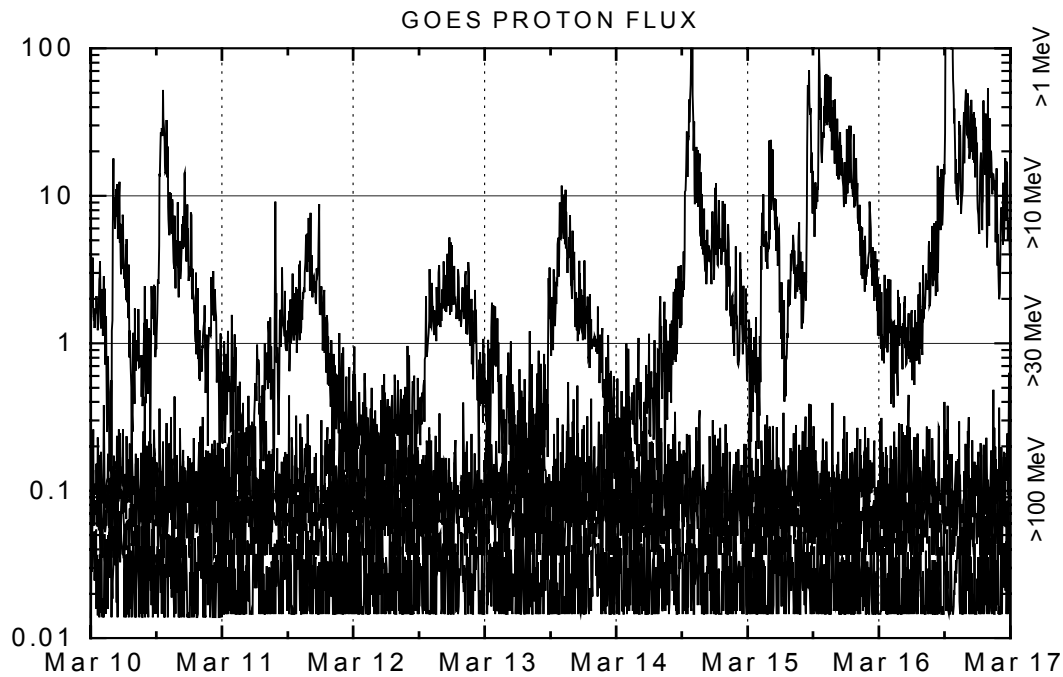
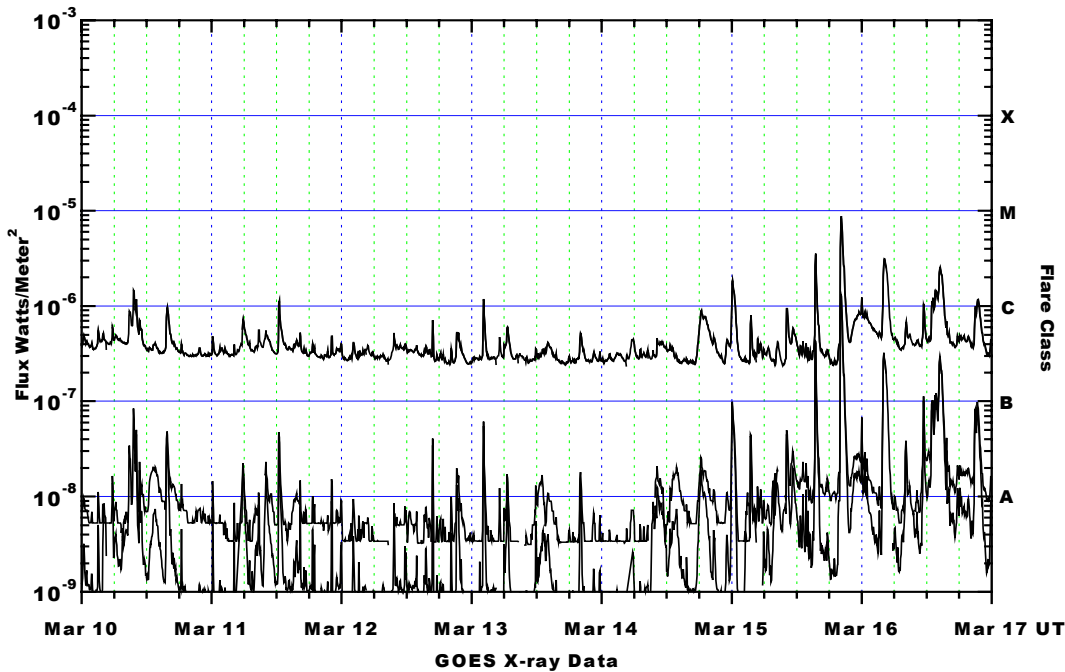
Protons plot contains the five-minute averaged integral proton flux (protons/cm²-sec-sr) as measured by GOES-8 (W75) for each of three energy thresholds: greater than 10, 50, and 100 MeV.

Electrons plot contains the five-minute averaged integral electron flux (electrons/cm²-sec-sr) with energies greater than 2 MeV at GOES-8.

H_p plot contains the five minute 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.

K_p plot contains the estimated planetary 3-hour K-index (derived by the Air Force Weather Agency) 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 K_p 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 K_p are "global" parameters that are applicable to a first order approximation over large areas. H_p 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-minute averaged x-ray flux (watts/m²) 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-minute 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/cm²-sec-sr) at greater than 10 MeV

