

Solar activity ranged from low to high levels during the period. Activity was at high levels during 05 - 07 and 09 - 10 March due mostly to a series of long-duration major flares from Region 1429 (N18, L=301, class/area Dkc/1270 on 07 March) which included an X1/2b at 05/0409Z, an X5/3b at 07/0024Z, an M6 at 09/0353Z, and an M8 at 10/1744Z. All four flares were associated with Earth-directed CMEs. Region 1429 was large and magnetically complex during the period, exhibiting a beta-gamma-delta configuration with multiple deltas. It appeared to slowly decay during 09 - 10 March, but retained much of its magnetic complexity. Region 1430 (N20, L=315, class/area Dai/200 on 07 March) produced an X1/Sf at 07/0114Z during a period of rapid development. Region 1430 appeared to be in a gradual decay phase during 08 - 10 March.

The period began with a greater than 10 MeV proton enhancement in progress. This increase from normal backgrounds was associated with a long-duration M2/1n flare that occurred prior to the period and sourced from Region 1429. The flux enhancement continued until the onset of greater than 100 MeV and greater than 10 MeV events early on 07 March associated with the X5/3b flare at 07/0024Z. The greater than 100 MeV event began at 07/0405Z, reached a maximum of 69 pfu at 07/1525Z, and ended at 10/1650Z. Also, a greater than 10 MeV event began at 07/0510Z, reached a maximum of 6530 pfu at 08/1115Z, and was in progress at the close of the period.

The greater than 2 MeV electron flux at geosynchronous orbit was at normal to high levels during 05 - 06 March. Flux readings were unreliable during 07 - 09 March due to proton contamination. Fluxes were at moderate to high levels on 10 and 11 March.

Geomagnetic field activity was at quiet to severe storm levels during the period. Quiet to unsettled levels occurred during 05 - 06 March with brief minor storm periods observed at high latitudes. Activity increased to unsettled to major storm levels on 07 March following a geomagnetic sudden impulse (SI) at 07/0427Z. The SI measured 20 nT at the Boulder magnetometer. This enhanced activity was due to a CME arrival associated with the X1/2b flare on 05 March. Quiet to minor storm levels occurred on 08 March, with major storm periods at high latitudes, as another CME, associated with the X5/3b on 07 March, impacted the geomagnetic field with an SI, as measured by the Boulder magnetometer of 59 nT, at 08/1105Z. Activity increased to quiet to severe storm levels on 09 March due to sustained southward IMF Bz combined with increased IMF Bt as CME effects persisted. Activity decreased to quiet to minor storm levels with major storm periods at high latitudes on 10 March as CME effects gradually subsided. A return to quiet levels was observed on 11 March.

Space Weather Outlook
14 March - 09 April 2012

Solar activity is expected to be at low levels during 14 - 16 March with a chance for M-class activity from Region 1429. Activity is expected to decrease to predominantly background levels during 17 - 27 March, following the departure of Region 1429 on 15 March. An increase to low levels with a slight chance for M-class activity is expected from 28 March through the end of



forecast period, as Region 1430 returns on 28 March and Region 1429 returns on 29 March.

A chance exists for another proton event from 14 - 16 March, as Region 1429, rotates off the visible disk. No events are expected until Region 1429 returns on 29 March, when a slight chance for another event from this proton producing region exists through the end of the forecast period.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at moderate to high levels during 14 - 19 March and 29 March - 03 April. Normal to moderate flux levels are expected during 20-28 March and 04 - 07 April.

Geomagnetic field activity is expected to be at predominantly quiet levels from 14 - 16 March. Activity is expected to increase to quiet to active levels during 17 - 18 March due to recurrent coronal hole high-speed stream effects. Activity is expected to decrease to mostly quiet levels during 19 - 27 March. Quiet to unsettled levels are expected during 28 - 31 March as another coronal hole high speed stream becomes geoeffective. A return to quiet levels is expected from 01- 02 April. Another increase to quiet to unsettled levels is expected on 03 - 04 April as a coronal hole high speed stream becomes geoeffective. A return to predominantly quiet levels is expected to prevail for the remainder of the period.



Daily Solar Data

Date	Radio Flux 10.7cm	Sun spot No.	Sunspot Area (10 ⁻⁶ hemi.)	X-ray Background Flux	Flares							
					X-ray			Optical				
					C	M	X	S	1	2	3	4
05 March	132	105	1240	C1.0	15	3	1	21	2	1	0	0
06 March	138	109	1540	B7.7	12	7	0	10	3	0	0	0
07 March	136	102	1800	C1.1	1	0	2	11	0	0	1	0
08 March	140	86	1330	B6.5	6	0	0	4	0	0	0	0
09 March	146	96	1240	B8.8	10	1	0	1	0	0	0	0
10 March	149	89	1120	B7.0	9	1	0	4	0	0	0	0
11 March	131	103	1260	B5.6	4	0	0	1	0	0	0	0

Daily Particle Data

Date	Proton Fluence (protons/cm ² -day -sr)			Electron Fluence (electrons/cm ² -day -sr)		
	>1 MeV	>10 MeV	>100 MeV	>0.6 MeV	>2MeV	>4 MeV
	05 March	2.4e+06	1.9e+05	3.3e+03		5.8e+07
06 March	5.1e+06	2.3e+05	3.2e+03		2.3e+07	
07 March	2.0e+08	6.1e+07	2.2e+06		2.9e+07	
08 March	1.5e+09	2.0e+08	2.5e+06		1.9e+08	
09 March	2.8e+08	3.7e+07	5.9e+05		1.4e+07	
10 March	6.6e+07	1.4e+07	1.1e+05		2.5e+08	
11 March	4.1e+07	6.8e+06	1.2e+04		5.9e+08	

Daily Geomagnetic Data

Date	Middle Latitude Fredericksburg		High Latitude College		Estimated Planetary	
	A	K-indices	A	K-indices	A	K-indices
	05 March	11	3-3-3-2-3-2-2-2	19	1-2-4-5-4-4-2-2	8
06 March	10	2-2-3-1-3-3-2-2	14	3-2-3-2-5-2-1-2	8	2-2-3-1-2-2-2-2
07 March	33	3-4-5-5-5-5-3-3	73	3-4-7-6-7-7-4-3	44	3-4-6-5-6-5-4-3
08 March	21	2-1-2-4-5-5-3-3	33	2-2-2-4-6-6-4-4	24	2-1-1-5-5-5-4-4
09 March	57	4-5-7-6-6-5-4-2	107	5-6-8-8-6-7-3-3	68	5-6-7-7-6-5-4-2
10 March	17	5-4-2-2-3-3-3-1	36	3-5-6-6-4-4-2-1	18	4-5-3-2-2-3-3-2
11 March	10	2-2-1-2-2-3-3-3	12	2-1-2-4-4-2-2-2	8	2-2-1-2-2-3-2-3



Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
05 Mar 0346	ALERT: X-ray Flux exceeded M5	05/0345
05 Mar 0448	SUMMARY: X-ray Event exceeded X1	05/0230 - 0443
05 Mar 0631	SUMMARY: 10cm Radio Burst	05/0334 - 0427
05 Mar 0634	CANCELLATION: 10cm Radio Burst	
05 Mar 0635	SUMMARY: 10cm Radio Burst	05/0334 - 0601
05 Mar 1307	CONTINUED ALERT: Electron 2MeV Integral Flux \geq 1000pfu	02/1425
05 Mar 1517	WARNING: Proton 10MeV Integral Flux $>$ 10pfu	05/2100 - 06/2100
05 Mar 2110	WATCH: Geomagnetic A \geq 20	07/
05 Mar 2238	WARNING: Geomagnetic K = 4	05/2300 - 06/0900
06 Mar 1441	CONTINUED ALERT: Electron 2MeV Integral Flux \geq 1000pfu	02/1425
07 Mar 0009	ALERT: X-ray Flux exceeded M5	07/0008
07 Mar 0019	WARNING: Proton 10MeV Integral Flux $>$ 10pfu	07/0030 - 08/0000
07 Mar 0057	SUMMARY: X-ray Event exceeded X1	07/0002 - 0040
07 Mar 0109	ALERT: Type II Radio Emission	07/0017
07 Mar 0135	WARNING: Geomagnetic K = 4	07/0145 - 0600
07 Mar 0206	SUMMARY: X-ray Event exceeded X1	07/0105 - 0123
07 Mar 0215	ALERT: Type II Radio Emission	07/0110
07 Mar 0256	WARNING: Proton 100MeV Integral Flux $>$ 1pfu	07/0300 - 2359
07 Mar 0310	SUMMARY: 10cm Radio Burst	07/0007 - 0210
07 Mar 0353	WARNING: Geomagnetic Sudden Impulse expected	07/0415 - 0500
07 Mar 0354	EXTENDED WARNING: Geomagnetic K = 4	07/0145 - 08/0000
07 Mar 0355	WARNING: Geomagnetic K = 5	07/0415 - 1200
07 Mar 0416	ALERT: Proton Event 100MeV Integral Flux $>$ 1pfu	07/0405
07 Mar 0429	SUMMARY: Geomagnetic Sudden Impulse	07/0427
07 Mar 0435	ALERT: Type IV Radio Emission	07/0016
07 Mar 0517	ALERT: Geomagnetic K = 4	07/0513
07 Mar 0526	ALERT: Proton Event 10MeV Integral Flux \geq 10pfu	07/0510



Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
07 Mar 0637	ALERT: Geomagnetic K = 5	07/0633
07 Mar 0751	WARNING: Geomagnetic K = 6	07/0751 - 1200
07 Mar 0852	ALERT: Geomagnetic K = 6	07/0848
07 Mar 1022	ALERT: Proton Event 10MeV Integral Flux \geq 100pfu	07/1015
07 Mar 1159	EXTENDED WARNING: Proton 10MeV Integral Flux $>$ 10pfu	07/0030 - 08/1200
07 Mar 1159	EXTENDED WARNING: Geomagnetic K = 5	07/0415 - 08/0000
07 Mar 1417	ALERT: Proton Event 10MeV Integral Flux \geq 1000pfu	07/1410
07 Mar 1451	WARNING: Geomagnetic K = 6	07/1451 - 2100
07 Mar 1454	ALERT: Geomagnetic K = 6	07/1448
07 Mar 1742	WATCH: Geomagnetic A \geq 50	08/
07 Mar 1742	WATCH: Geomagnetic A \geq 20	09/
07 Mar 2145	CONTINUED ALERT: Electron 2MeV Integral Flux \geq 1000pfu	02/1425
07 Mar 2351	EXTENDED WARNING: Geomagnetic K = 4	07/0145 - 08/2359
07 Mar 2354	EXTENDED WARNING: Proton 100MeV Integral Flux $>$ 1pfu	07/0300 - 08/2359
07 Mar 2355	EXTENDED WARNING: Proton 10MeV Integral Flux $>$ 10pfu	07/0030 - 08/2359
08 Mar 1052	WARNING: Geomagnetic Sudden Impulse expected	08/1100 - 1145
08 Mar 1054	WARNING: Geomagnetic K = 5	08/1100 - 2359
08 Mar 1109	SUMMARY: Geomagnetic Sudden Impulse	08/1105
08 Mar 1138	ALERT: Geomagnetic K = 5	08/1130
08 Mar 2320	EXTENDED WARNING: Geomagnetic K = 4	07/0145 - 09/1200
08 Mar 2322	EXTENDED WARNING: Geomagnetic K = 5	08/1100 - 09/0900
08 Mar 2330	EXTENDED WARNING: Proton 100MeV Integral Flux $>$ 1pfu	07/0300 - 09/1200
09 Mar 0319	WARNING: Geomagnetic K = 6	09/0330 - 0900
09 Mar 0345	ALERT: X-ray Flux exceeded M5	09/0344
09 Mar 0358	SUMMARY: Proton Event 10MeV Integral Flux \geq 1000pfu	07/1410 - 09/0210



Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
09 Mar 0430	ALERT: Type II Radio Emission	09/0343
09 Mar 0516	SUMMARY: X-ray Event exceeded M5	09/0322 - 0418
09 Mar 0528	ALERT: Geomagnetic K = 6	09/0526
09 Mar 0650	ALERT: Geomagnetic K = 6	09/0649
09 Mar 0658	WARNING: Geomagnetic K \geq 7	09/0700 - 0900
09 Mar 0723	EXTENDED WARNING: Proton 10MeV Integral Flux > 10pfu	07/0030 - 10/0000
09 Mar 0724	ALERT: Geomagnetic K = 7	09/0724
09 Mar 0844	EXTENDED WARNING: Geomagnetic K \geq 7	09/0700 - 1200
09 Mar 0844	EXTENDED WARNING: Geomagnetic K = 6	09/0330 - 1500
09 Mar 0844	EXTENDED WARNING: Geomagnetic K = 5	08/1100 - 09/1500
09 Mar 0844	EXTENDED WARNING: Geomagnetic K = 4	07/0145 - 09/1800
09 Mar 0844	EXTENDED WARNING: Proton 100MeV Integral Flux > 1pfu	07/0300 - 09/1800
09 Mar 0945	ALERT: Geomagnetic K = 6	09/0942
09 Mar 1033	ALERT: Geomagnetic K = 7	09/1028
09 Mar 1146	EXTENDED WARNING: Geomagnetic K = 6	09/0330 - 1800
09 Mar 1146	EXTENDED WARNING: Geomagnetic K \geq 7	09/0700 - 1500
09 Mar 1146	EXTENDED WARNING: Geomagnetic K = 4	07/0145 - 10/0000
09 Mar 1146	EXTENDED WARNING: Geomagnetic K = 5	08/1100 - 09/1800
09 Mar 1354	ALERT: Geomagnetic K = 6	09/1352
09 Mar 1740	EXTENDED WARNING: Geomagnetic K = 6	09/0330 - 10/0000
09 Mar 1740	EXTENDED WARNING: Proton 100MeV Integral Flux > 1pfu	07/0300 - 10/1200
09 Mar 1740	EXTENDED WARNING: Geomagnetic K = 5	08/1100 - 10/1200
09 Mar 2209	WATCH: Geomagnetic A \geq 50	11/
09 Mar 2227	EXTENDED WARNING: Geomagnetic K = 4	07/0145 - 10/1200
09 Mar 2233	EXTENDED WARNING: Proton 10MeV Integral Flux > 10pfu	07/0030 - 11/0000
10 Mar 0428	ALERT: Electron 2MeV Integral Flux \geq 1000pfu	10/0410
10 Mar 0525	CONTINUED ALERT: Electron 2MeV Integral Flux \geq 1000pfu	10/0410

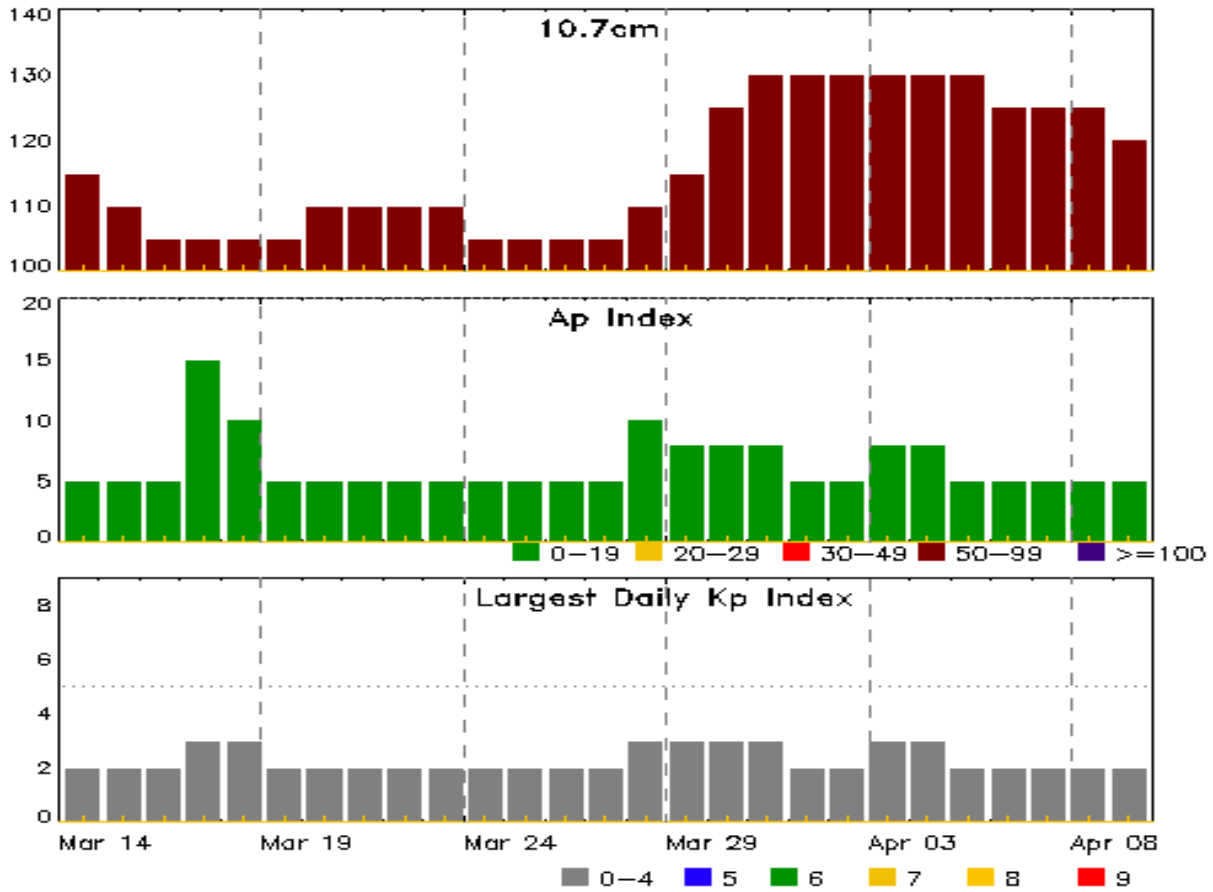


Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
10 Mar 1209	EXTENDED WARNING: Proton 100MeV Integral Flux > 1pfu	07/0300 - 10/2100
10 Mar 1726	ALERT: X-ray Flux exceeded M5	10/1725
10 Mar 1818	ALERT: Type IV Radio Emission	10/1729
10 Mar 1835	SUMMARY: X-ray Event exceeded M5	10/1715 - 1830
10 Mar 1842	SUMMARY: 10cm Radio Burst	10/1722 - 1822
10 Mar 2025	EXTENDED WARNING: Proton 100MeV Integral Flux > 1pfu	07/0300 - 11/1300
10 Mar 2025	EXTENDED WARNING: Proton 10MeV Integral Flux > 10pfu	07/0030 - 12/0100
10 Mar 2200	WATCH: Geomagnetic A \geq 30	12/
11 Mar 0106	SUMMARY: Proton Event 100MeV Integral Flux > 1pfu	07/0405 - 10/1650
11 Mar 0632	CONTINUED ALERT: Electron 2MeV Integral Flux \geq 1000pfu	10/0410
11 Mar 0935	SUMMARY: Proton Event 10MeV Integral Flux \geq 100pfu	07/1015 - 11/0650
11 Mar 1951	CANCELLATION: Geomagnetic A \geq 50	



Twenty-seven Day Outlook



Date	Radio Flux 10.7cm	Planetary A Index	Largest Kp Index	Date	Radio Flux 10.7cm	Planetary A Index	Largest Kp Index
14 Mar	115	5	2	28 Mar	110	10	3
15	110	5	2	29	115	8	3
16	105	5	2	30	125	8	3
17	105	15	3	31	130	8	3
18	105	10	3	01 Apr	130	5	2
19	105	5	2	02	130	5	2
20	110	5	2	03	130	8	3
21	110	5	2	04	130	8	3
22	110	5	2	05	130	5	2
23	110	5	2	06	125	5	2
24	105	5	2	07	125	5	2
25	105	5	2	08	125	5	2
26	105	5	2	09	120	5	2
27	105	5	2				

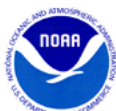


Energetic Events

Date	Time			X-ray		Optical Information			Peak		Sweep Freq	
	Begin	Max	Half Max	Class	Integ Flux	Imp/ Brtns	Location Lat CMD	Rgn #	Radio Flux		Intensity	
									245	2695	II	IV
05 Mar	0230	0409	0443	X1.1	0.370	2B	N17E52	1429	57000	12000		
05 Mar	1910	1916	1921	M2.1	0.008	1B	N14E44	1429				
05 Mar	1927	1930	1932	M1.8	0.003	1B	N14E44	1429				
05 Mar	2226	2234	2242	M1.3	0.007			1429				
06 Mar	0022	0028	0031	M1.3	0.004	SN	N16E41	1429				
06 Mar	0136	0144	0150	M1.2	0.006			1429				
06 Mar	0401	0405	0408	M1.0	0.003	1N	N16E39	1429				
06 Mar	0752	0755	0800	M1.0	0.003			1429				
06 Mar	1223	1241	1254	M2.1	0.022	1N	N18E36	1429				
06 Mar	2104	2111	2114	M1.3	0.005							
06 Mar	2249	2253	2311	M1.0	0.010			1429				
07 Mar	0002	0024	0040	X5.4	0.670	3B	N17E27	1429	3e+05	7200	2	2
07 Mar	0105	0114	0123	X1.3	0.150	SF	N22E12	1430			2	
09 Mar	0322	0353	0418	M6.3	0.130			1429	6200		2	
10 Mar	1715	1744	1830	M8.4	0.260			1429	1500	460		

Flare List

Date	Time			X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
	Begin	Max	End				
05 Mar	0008	0011	A0017		SF	N16E56	1429
05 Mar	0023	0036	0047	C3.4	SF	N17E54	1429
05 Mar	0024	0027	0032		SF	N19E40	1430
05 Mar	0058	0106	0119	C4.7	SF	N20E38	1430
05 Mar	0201	0211	0222		SF	N19E37	1430
05 Mar	0207	0235	0239		SF	N16E54	1429
05 Mar	0230	0409	0443	X1.1	2B	N17E52	1429
05 Mar	0719	0724	0732		SF	N17E47	1429
05 Mar	0806	0807	0810		SF	N20E34	1430
05 Mar	0809	0811	0814		SF	N16E49	1429
05 Mar	0814	0919	1019		SN	N16E48	1429
05 Mar	1029	1032	1036	C2.3			1429
05 Mar	1205	1213	1221	C5.8			1429
05 Mar	1426	1429	1433	C1.2			
05 Mar	1454	1504	1509	C5.4	SF	N16E48	1429
05 Mar	1524	1529	1533	C7.8	SF	N15E48	1429



Flare List

Date	Time			Optical			
	Begin	Max	End	X-ray Class	Imp/Brtns	Location Lat CMD	Rgn #
05 Mar	1600	1600	1605		SF	N15E47	1429
05 Mar	1613	1621	1639	C9.8	SF	N15E47	1429
05 Mar	1644	1650	1652	C4.6	SF	N15E47	1429
05 Mar	1725	1728	1738	C1.5			
05 Mar	1833	1837	1841	C6.8	SF	N15E46	1429
05 Mar	1858	1858	1903		SF	N15E46	1429
05 Mar	1910	1916	1921	M2.1	1B	N14E44	1429
05 Mar	1924	1930	1950	M1.8	1B	N14E44	1429
05 Mar	2010	2015	2017	C1.7	SF	N15E44	1429
05 Mar	2226	2234	2242	M1.3			1429
05 Mar	2253	2256	2259	C2.5			1429
05 Mar	2302	2302	2309		SF	N15E44	1429
05 Mar	2317	2320	2325	C1.6	SF	N16E41	1429
05 Mar	2350	0004	0015	C2.4	SF	N17E42	1429
06 Mar	0022	0028	0031	M1.3	SN	N16E41	1429
06 Mar	0043	0044	0049		SF	N15E42	1429
06 Mar	0113	0118	0125	C3.5			
06 Mar	0136	0144	0150	M1.2			1429
06 Mar	0226	0233	0237	C2.4	SF	N16E41	1429
06 Mar	0324	0328	0331	C9.2	SF	N16E40	1429
06 Mar	0400	0405	0419	M1.0	1N	N16E39	1429
06 Mar	0441	0451	0459		SF	N17E38	1429
06 Mar	0519	0528	0531	C2.9	SF	N17E37	1429
06 Mar	0548	0552	0558	C3.0			
06 Mar	0647	0650	0653	C2.6			
06 Mar	0731	0743	0747	C5.3	SF	N17E37	1429
06 Mar	0752	0755	0800	M1.0			1429
06 Mar	0856	0858	0903		SF	N17E37	1429
06 Mar	B0936	U0955	A1008		1F	N17E38	1429
06 Mar	B1107	U1119	A1158	C2.8	SF	N18E36	1429
06 Mar	1223	1241	1254	M2.1	1N	N18E36	1429
06 Mar	1645	1650	1654	C4.2			
06 Mar	1717	1720	1722	C1.5			
06 Mar	1828	1828	1831		SF	N16E33	1429
06 Mar	1943	1946	1949	C2.7			
06 Mar	2104	2111	2114	M1.3			
06 Mar	2152	2156	2211	C1.8			
06 Mar	2249	2253	2311	M1.0			1429



Flare List

Date	Time			Optical			
	Begin	Max	End	X-ray Class	Imp/Brtns	Location Lat CMD	Rgn #
07 Mar	B0000	0017	0349	X5.4	3B	N17E27	1429
07 Mar	0105	0114	0123	X1.3	SF	N22E12	1430
07 Mar	0156	0203	0219		SF	N19E13	1430
07 Mar	0436	0439	0506		SN	N22E10	1430
07 Mar	0738	0738	0754		SF	N21E09	1430
07 Mar	0918	0918	0932		SF	N21E22	1429
07 Mar	0952	0954	1000		SF	N20E09	1430
07 Mar	1619	1622	1626	C1.6	SF	N16E21	1429
07 Mar	1644	1649	1704		SF	N16E21	1429
07 Mar	1734	1735	1740		SF	N20E06	1430
07 Mar	2318	2319	2321		SF	N17E16	1429
07 Mar	2324	2326	2327		SF	N17E16	1429
08 Mar	0249	0253	0256	C7.2	SF	S18W03	1428
08 Mar	0356	0358	0400		SF	N17E11	1429
08 Mar	0703	0705	0713		SF	N16E12	1429
08 Mar	0713	0721	0733		SF	N16E12	1429
08 Mar	1019	1023	1026	C1.7			
08 Mar	1617	1623	1627	C1.1			1429
08 Mar	1928	1931	1934	C2.0			
08 Mar	1958	2022	2033	C1.7			
08 Mar	2322	2327	2331	C1.4			
09 Mar	0034	0037	0046	C1.0			
09 Mar	0123	0128	0134	C2.0			
09 Mar	0155	0200	0206	C4.7			
09 Mar	0301	0304	0308	C1.2			
09 Mar	0322	0353	0418	M6.3			1429
09 Mar	B0550	U0550	A0618		SF	N15W01	1429
09 Mar	1020	1023	1026	C2.7			
09 Mar	1602	1606	1610	C1.5			
09 Mar	1612	1617	1626	C2.0			1430
09 Mar	1800	1803	1805	C1.8			
09 Mar	1959	2025	2049	C9.7			1432
09 Mar	2145	2150	2156	C5.1			1428
10 Mar	0019	0119	0145	C3.8			1432
10 Mar	0233	0239	0245	C3.5			1429
10 Mar	0443	0446	0450	C1.1			
10 Mar	0550	0555	0601	C1.8			
10 Mar	0653	0702	0706	C1.9			1428



Flare List

Date	Time			Optical			Rgn #
	Begin	Max	End	X-ray Class	Imp/ Brtns	Location Lat CMD	
10 Mar	0655	0657	0700		SF	N16W29	1430
10 Mar	0702	0702	0707		SF	S19W32	1428
10 Mar	0731	0746	0801	C1.9	SF	N17W20	1429
10 Mar	0802	0805	0809	C2.0			
10 Mar	0853	0858	0901		SF	S19W34	1428
10 Mar	1322	1326	1329	C1.2			1432
10 Mar	1443	1552	1616	C8.0			1430
10 Mar	1715	1744	1830	M8.4			1429
11 Mar	0321	0323	0326	C2.3			1429
11 Mar	0426	0428	0432	C1.6			1428
11 Mar	0638	0644	0646	C1.2			
11 Mar	0645	0645	0649		SF	N20W28	1429
11 Mar	0723	0728	0735	C1.0			
11 Mar	1058	1103	1113	B9.6			1433
11 Mar	1359	1402	1404	B8.8			



Region Summary

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 1423																							
23 Feb	N18E70		57	120	2	Hsx	1	A															
24 Feb	N18E56		57	110	2	Hsx	1	A															
25 Feb	N18E42		58	90	2	Hsx	1	A															
26 Feb	N17E29		58	90	2	Hsx	1	A															
27 Feb	N18E15		58	100	2	Hsx	1	A															
28 Feb	N17E03		57	110	2	Hsx	1	A															
29 Feb	N17W09		57	120	2	Hsx	1	A															
01 Mar	N17W21		55	90	1	Hsx	1	A	1						1								
02 Mar	N17W36		57	80	2	Hsx	1	A															
03 Mar	N17W48		56	80	2	Hsx	1	A															
04 Mar	N17W61		55	70	2	Hsx	1	A															
05 Mar	N16W75		56	120	2	Hsx	1	A															
06 Mar	N18W90		58	30	2	Hsx	1	A															
										1	0	0	0	0	1	0	0	0	0				

Crossed West Limb.

Absolute heliographic longitude: 57

Region 1426																							
26 Feb	N10E12		75	20	4	Dro	2	B															
27 Feb	N11W02		74	10	3	Bxo	2	B															
28 Feb	N11W15		75	10	3	Bxo	3	B															
29 Feb	N11W31		78	10	1	Axx	1	A															
01 Mar	N11W45		79	plage																			
02 Mar	N11W59		80	plage																			
03 Mar	N11W73		81	plage																			
04 Mar	N11W87		82	plage																			
										0	0	0	0	0	0	0	0	0	0				

Crossed West Limb.

Absolute heliographic longitude: 74



Region Summary - continued

Date	Location		Sunspot Characteristics					Flares															
	Lat CMD	Lon	Helio 10 ⁻⁶ hemi.	Area	Extent (helio)	Spot Class	Spot Count	Mag Class	X-ray			Optical											
									C	M	X	S	1	2	3	4							
Region 1427																							
29 Feb	N17E13	35	plage											2									
01 Mar	N15W01	35	20	2	Cro	3	B																
02 Mar	N15W16	37	20	2	Cro	3	B																
03 Mar	N15W31	38	20	2	Cro	3	B	1					1										
04 Mar	N15W45	39	10	2	Bxo	2	B	1					1										
05 Mar	N15W59	41	plage																				
06 Mar	N15W73	42	plage																				
07 Mar	N15W87	42	plage																				
									2	0	0		4	0	0	0	0	0					

Crossed West Limb.
Absolute heliographic longitude: 35

Region 1428																							
03 Mar	S17E51	316	40	5	Cro	4	B																
04 Mar	S17E37	318	70	6	Dso	6	B																
05 Mar	S17E21	320	250	8	Dai	14	B																
06 Mar	S16E09	319	250	7	Dai	17	B																
07 Mar	S17W05	319	300	7	Dko	16	B																
08 Mar	S17W19	319	180	8	Dao	8	B	1					1										
09 Mar	S17W32	321	110	7	Dso	12	BG	1															
10 Mar	S17W46	322	60	6	Cro	14	B	1					2										
11 Mar	S15W60	323	30	3	Cao	3	B	1															
									4	0	0		3	0	0	0	0	0					

Still on Disk.
Absolute heliographic longitude: 319

Region 1429																							
03 Mar	N18E68	299	290	6	Dkc	4	BG	3					1										
04 Mar	N18E55	300	700	8	Dkc	8	BGD	3	1				8	1									
05 Mar	N17E41	300	770	9	Dkc	20	BD	12	3	1			17	2	1								
06 Mar	N17E29	298	1120	9	Dkc	25	BGD	5	6				10	3									
07 Mar	N17E15	299	1270	10	Dkc	28	BGD	1		1			5							1			
08 Mar	N17E01	301	950	12	Ekc	28	BGD	1					3										
09 Mar	N18W13	302	900	13	Ekc	21	BGD		1				1										
10 Mar	N18W26	302	880	13	Ekc	22	BGD	2	1				1										
11 Mar	N18W38	301	840	13	Ekc	22	BGD	1					1										
									28	13	2		48	6	1	1	0						

Still on Disk.
Absolute heliographic longitude: 301



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 1430																	
04 Mar	N19E40	315	20	3	Cro	3	B						2				
05 Mar	N20E25	316	90	5	Dao	14		1					4				
06 Mar	N19E13	315	110	5	Dao	11	B										
07 Mar	N21W00	315	200	6	Dai	16	B			1			6				
08 Mar	N21W13	315	180	7	Dao	8	B										
09 Mar	N20W28	317	120	5	Dao	9	B	1									
10 Mar	N21W42	318	100	5	Cao	9	B	1					1				
11 Mar	N20W54	317	100	4	Cao	6	B										
								3	0	1	13	0	0	0	0		

Still on Disk.

Absolute heliographic longitude: 315

Region 1431																	
05 Mar	S27W36	18	10	4	Bxo	6	B										
06 Mar	S28W48	16	30	7	Dro	5	B										
07 Mar	S24W64	19	30	2	Dso	2	B										
08 Mar	S28W76	18	20	6	Cro	2	B										
09 Mar	S28W88	17	20	2	Cro	3	B										
								0	0	0	0	0	0	0	0	0	

Crossed West Limb.

Absolute heliographic longitude: 18

Region 1432																	
09 Mar	N18E69	220	90	3	Hsx	1	A	1									
10 Mar	N16E52	224	80	3	Hsx	4	B	2									
11 Mar	N16E40	223	50	4	Cao	5	B										
								3	0	0	0	0	0	0	0	0	

Still on Disk.

Absolute heliographic longitude: 223

Region 1433																	
11 Mar	N12E63	200	150	5	Dso	3	B										
								0	0	0	0	0	0	0	0	0	

Still on Disk.

Absolute heliographic longitude: 200



Region Summary - continued

Date	Location		Sunspot Characteristics				Flares									
	Lat CMD	Lon	Heli 10 ⁻⁶	Area hemi.	Extent (heli)	Spot Class	Spot Count	Mag Class	X-ray			Optical				
									C	M	X	S	1	2	3	4
<i>Region 1434</i>																
11 Mar	S22E58	205	90	8	Dso	4	B	0	0	0	0	0	0	0	0	0

Still on Disk.

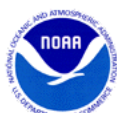
Absolute heliographic longitude: 205

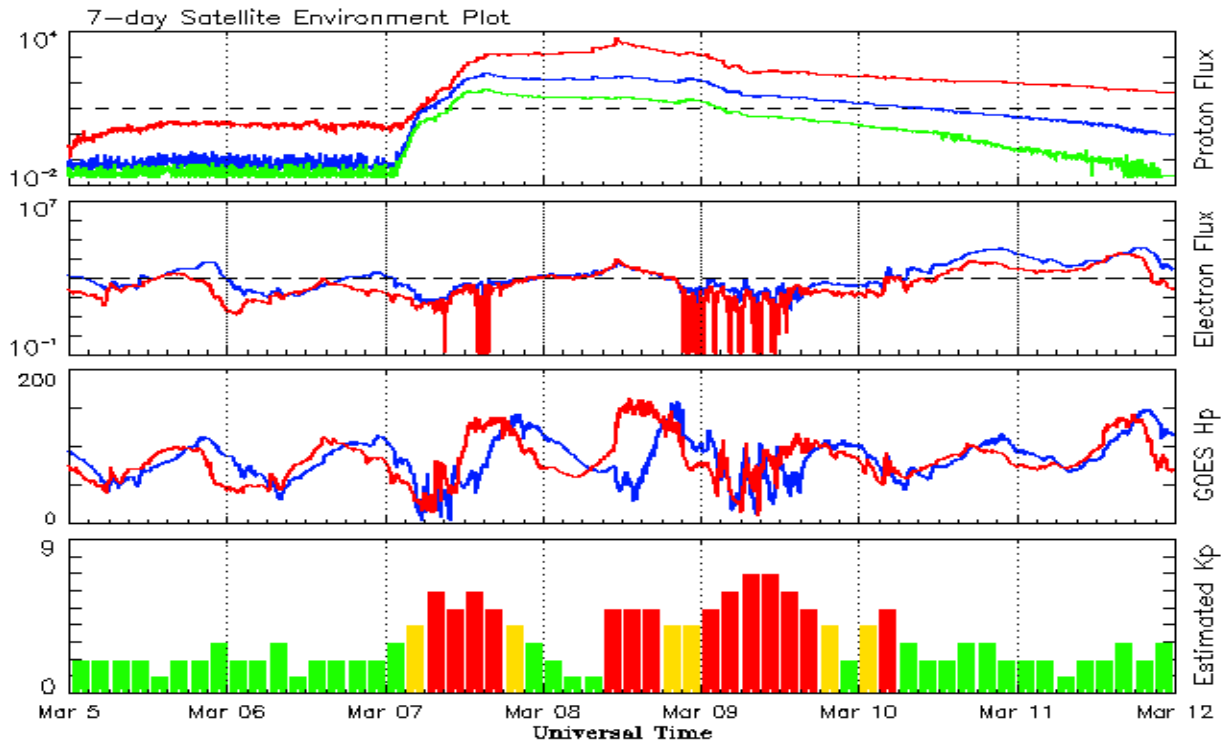


**Recent Solar Indices (preliminary)
Observed monthly mean values**

Month	Sunspot Numbers					Radio Flux		Geomagnetic	
	Observed values		Ratio	Smooth values		Penticton	Smooth	Planetary	Smooth
	SEC	RI	RI/SEC	SEC	RI	10.7 cm	Value	Ap	Value
2010									
March	24.7	15.4	0.62	19.1	12.3	83.3	77.5	5	5.3
April	11.2	8.0	0.71	21.4	14.0	75.9	78.3	10	5.5
May	19.9	8.7	0.44	23.8	15.5	73.8	79.0	8	5.7
June	17.9	13.6	0.75	25.2	16.4	72.6	79.7	7	5.8
July	23.1	16.1	0.70	25.9	16.7	79.9	80.1	5	6.0
August	28.2	19.6	0.70	27.3	17.4	79.7	80.7	8	6.2
September	35.6	25.2	0.71	30.6	19.6	81.1	82.4	5	6.3
October	35.0	23.5	0.67	35.9	23.2	81.6	85.3	6	6.4
November	36.1	21.5	0.60	40.5	26.5	82.5	87.7	5	6.4
December	22.0	14.4	0.66	43.8	28.8	84.3	89.6	4	6.5
2011									
January	32.1	18.8	0.59	47.2	30.9	83.7	91.2	6	6.7
February	53.2	29.6	0.55	50.6	33.4	94.5	92.7	6	6.8
March	81.0	55.8	0.69	55.2	36.9	115.3	95.8	7	7.2
April	81.7	54.4	0.67	61.5	41.8	112.6	100.4	9	7.5
May	61.4	41.5	0.68	69.0	47.6	95.9	105.6	9	7.5
June	55.5	37.0	0.67	76.5	53.2	95.8	110.9	8	7.4
July	67.0	43.8	0.66	82.5	57.3	94.2	115.4	9	7.3
August	66.1	50.6	0.77	84.9	59.0	101.7	117.9	8	7.4
September	106.4	78.0	0.73			134.5		13	
October	116.8	88.0	0.75			137.2		7	
November	133.1	96.7	0.73			153.1		3	
December	106.3	29.6	0.69		33.4	141.2		3	
2012									
January	91.3	58.3	0.64			133.1		6	
February	50.1	33.1	0.66			106.7		7	

Note: Values are final except for the most recent 6 months which are considered preliminary.
Cycle 24 started in Dec 2008 with an RI=1.7.





*Weekly Geosynchronous Satellite Environment Summary
Week Beginning 05 March 2012*

The proton flux plot contains the five-minute averaged integral proton flux (protons/cm²-sec -sr) as measured by the SWPC Primary GOES satellite, near West 75, for each of three energy thresholds: greater than 10, 50, and 100 MeV.

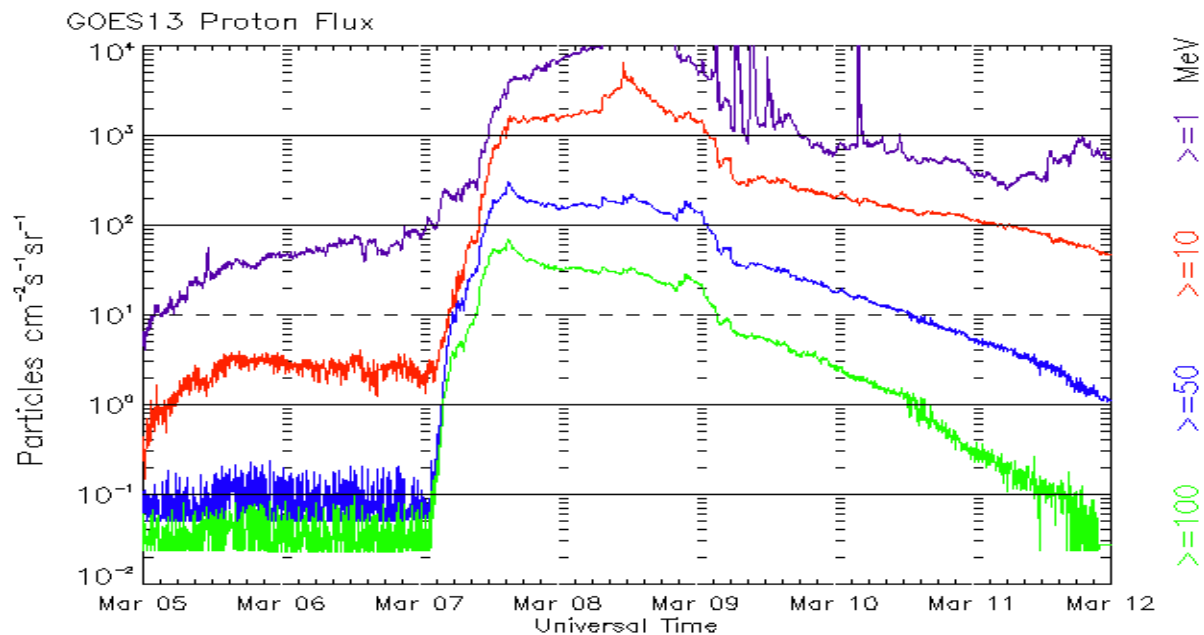
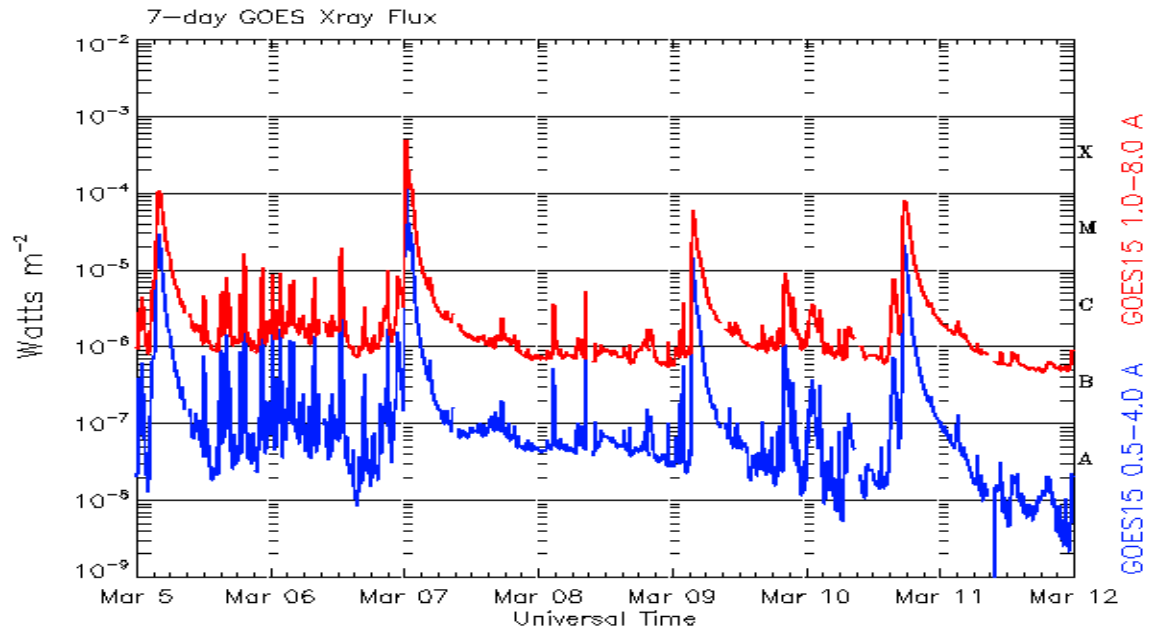
The electron flux plot contains the five-minute averaged integral electron flux (electrons/cm²-sec -sr) with energies greater than 2 MeV by the SWPC Primary GOES satellite.

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

The Estimated 3-hour Planetary Kp-index is derived at the NOAA Space Weather Prediction Center using data from the following ground-based magnetometers: Boulder, Colorado; Chambon la Foret, France; Fredericksburg, Virginia; Fresno, California; Hartland, UK; Newport, Washington; Sitka, Alaska. These data are made available thanks to the cooperative efforts between SWPC and data providers around the world, which currently includes the U.S. Geological Survey, the British Geological Survey, and the Institut de Physique du Globe de Paris.

The data included here are those now available in real time at the SWPC 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. H parallel 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
Week Beginning 05 March 2012*

The x-ray plots contains five-minute averages x-ray flux (Watt/m^2) as measure by the SWPC primary GOES X-ray satellite, usually at West 105 longitude, in two wavelength bands, 0.05 - 0.4 and 0.1 - 0.8 nm. The letters A, B, C, M and X refer to x-ray event levels for the 0.1 - 0.8 nm band.

The proton plot contains the five-minute averaged integral flux units (pfu = protons/ cm^2 -sec -sr) as measured by the primary SWPC GOES Proton satellite for each of the energy thresholds: >1, >10, >30, and >100 MeV. The P10 event threshold is 10 pfu at greater than 10 MeV.



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Notice: The 27-day Outlook, Satellite Environment, X-ray and Proton plots have been redesigned. Comments and suggestions are welcome SWPC.Webmaster@noaa.gov

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