

Solar activity was at very low to low levels during the period. Solar activity began at very low levels through 06 July. On 06 July, a 23 degree long filament, centered near N25W60, was observed lifting off. An associated CME (573 km/s plane-of-sky speed) was observed, but was not Earth-directed. Low levels returned on 07 July when Region 1243 (N15, L=353, class/area Dai/100 on 06 July) produced a C1/Sf at 07/0242 UTC. Four C-class flares were observed on 08 July, the largest a C3/In at 08/1331 UTC from Region 1247 (S18, L=269, class/area Dai/040 on 10 July). There was a long duration B4 x-ray event at 09/0028Z UTC from Region 1247. Associated with this event was a filament eruption located near Region 1247 that produced an asymmetric, partial-halo CME first visible on LASCO C2 imagery at 09/0125 UTC. Activity returned to very low levels for the remainder of the period.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit was at normal levels on 04 July. Flux levels increased to moderate on 05 - 06 July and further increased to high levels on 07 - 08 July. The period ended with flux at moderate levels.

Geomagnetic activity ranged from quiet to active levels during the period, with an isolated minor storm period observed early on 05 July due to a nighttime substorm. From 04 - 08 July, activity was primarily at quiet to unsettled levels with isolated active periods observed on 05 and 06 July. An increase to quiet to active levels occurred on 09 - 10 July due to the onset of another CH HSS.

Space Weather Outlook **13 July - 08 August 2011**

Solar activity is expected to be at very low to low levels during the forecast period.

No proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at high levels from 12 - 14 July due to enhanced wind speeds from the currently geoeffective CH HSS. Normal levels are expected to return from 15 - 19 July before increasing to moderate to high flux levels again 20 - 27 July after an anticipated period of elevated solar wind speeds associated a second recurrent CH. Flux values should return to normal levels 28 July - 02 August, before another brief period of moderate to high levels on 3 - 4 August. Normal levels are expected to prevail for the remainder of the period.

Geomagnetic field activity is expected to be at quiet to unsettled levels on 13 July due to CH HSS effects. Unsettled to active conditions with the chance for a minor storm is expected to begin on 14 July and persist for a day or two due to the anticipated arrival of the CME from 1103 UTC on 11 July. Mostly quiet conditions should return 16 - 17 July. An increase in activity ranging from quiet to active levels is forecast for 18 - 23 July due to another geoeffective HSS from a recurrent negative polarity CH. Conditions are forecast to be mostly quiet from 24 July -



03 August, with the exception of more CH HSS effects expected 27 - 29 July and 31 July - 02 August. Each of these events should each produce mostly unsettled and possibly even brief active conditions. Mostly quiet conditions are forecast to return on 03 August, before a SSBC from negative to positive polarity is expected on 04 August, when mostly unsettled conditions should occur in advance of yet another CH HSS that is expected to produce mostly unsettled conditions 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
04 July	85	44	165	B1.0	0	0	0	0	0	0	0	0
05 July	85	30	130	B1.0	0	0	0	0	0	0	0	0
06 July	85	36	150	A9.9	0	0	0	0	0	0	0	0
07 July	86	42	150	B1.1	1	0	0	8	0	0	0	0
08 July	86	65	110	B1.1	4	0	0	5	2	0	0	0
09 July	86	55	70	B1.1	0	0	0	0	0	0	0	0
10 July	91	67	90	B1.7	0	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
	04 July	6.9e+04	1.3e+04	2.9e+03		1.1e+06
05 July	1.9e+05	1.3e+04	3.2e+03		5.1e+06	
06 July	1.4e+05	1.3e+04	3.1e+03		2.0e+07	
07 July	1.5e+05	1.2e+04	3.0e+03		4.6e+07	
08 July	1.4e+05	1.3e+04	3.1e+03		5.9e+07	
09 July	1.0e+05	1.3e+04	3.3e+03		6.5e+06	
10 July	1.6e+05	1.3e+04	3.2e+03		1.6e+07	

Daily Geomagnetic Data

Date	Middle Latitude Fredericksburg		High Latitude College		Estimated Planetary	
	A	K-indices	A	K-indices	A	K-indices
	04 July	7	1-2-1-0-2-2-3-3	10	1-2-2-2-3-3-3-2	11
05 July	8	2-4-2-1-1-1-2-2	12	3-4-3-3-1-2-2-2	14	3-5-2-1-1-2-2-2
06 July	7	1-3-3-1-2-1-1-1	9	2-3-4-3-0-1-1-1	8	2-3-3-1-1-2-2-2
07 July	6	3-2-1-2-2-1-2-1	6	2-2-2-3-2-1-1-1	6	3-2-1-2-1-1-2-1
08 July	6	1-1-3-1-1-1-1-3	6	1-1-3-3-1-1-0-2	8	2-1-3-2-1-2-2-3
09 July	10	3-4-1-2-1-2-2-3	16	2-4-2-4-3-4-2-2	12	3-4-1-2-1-3-2-4
10 July	8	2-3-2-1-2-2-2-2	12	3-2-4-2-3-3-2-2	12	3-4-3-1-2-3-2-2

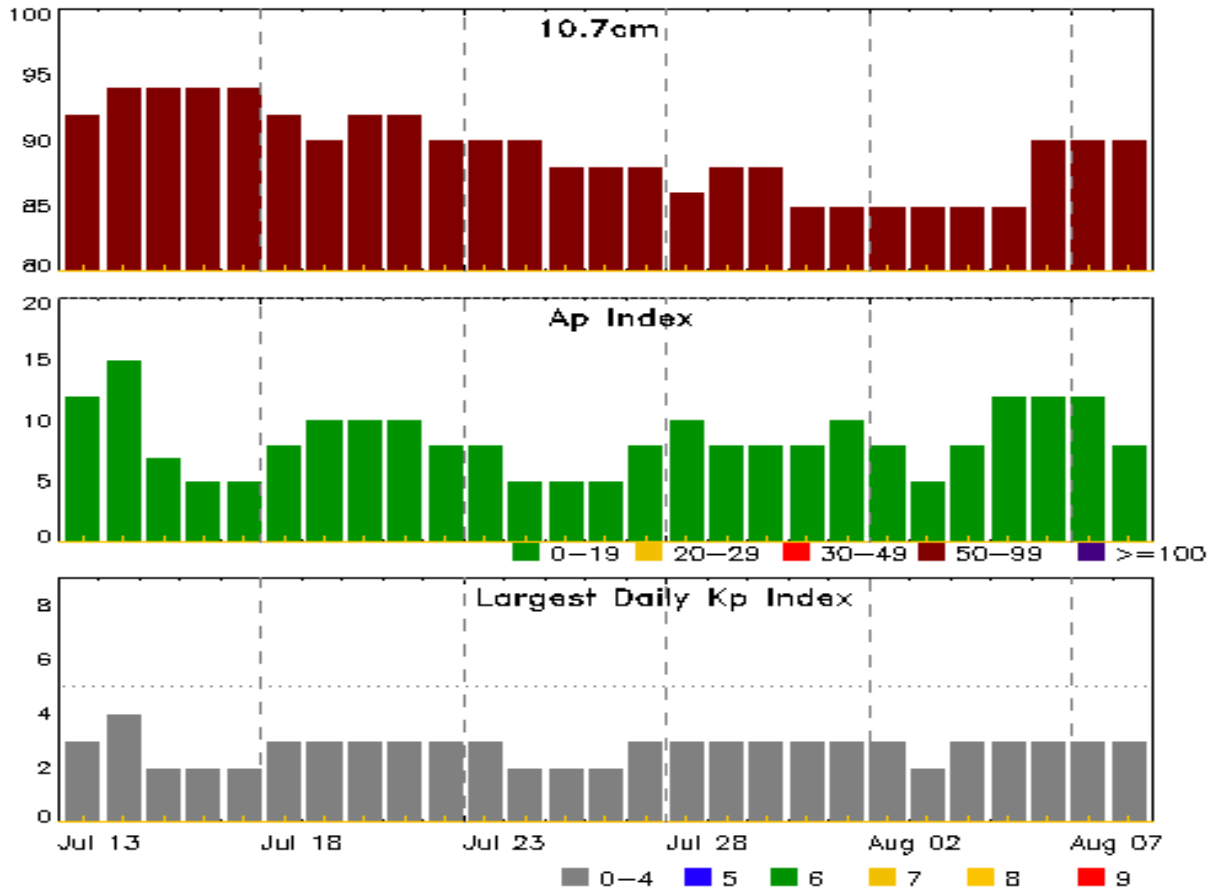


Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
04 Jul 1741	WARNING: Geomagnetic K = 4	04/1830 - 05/0030
05 Jul 0149	WARNING: Geomagnetic K = 4	05/0200 - 0600
05 Jul 0332	ALERT: Geomagnetic K = 4	05/0331
05 Jul 0449	WARNING: Geomagnetic K = 5	05/0447 - 0900
05 Jul 0449	ALERT: Geomagnetic K = 5	05/0447
05 Jul 0502	EXTENDED WARNING: Geomagnetic K = 4	05/0200 - 0900
06 Jul 0440	WARNING: Geomagnetic K = 4	06/0445 - 0900
06 Jul 0823	ALERT: Geomagnetic K = 4	06/0820
06 Jul 0855	EXTENDED WARNING: Geomagnetic K = 4	06/0445 - 1600
07 Jul 1446	ALERT: Electron 2MeV Integral Flux \geq 1000pfu	07/1415
08 Jul 1217	CONTINUED ALERT: Electron 2MeV Integral Flux \geq 1000pfu	07/1415
09 Jul 0214	WARNING: Geomagnetic K = 4	09/0215 - 1500
09 Jul 0358	ALERT: Geomagnetic K = 4	09/0358
09 Jul 0524	WARNING: Geomagnetic K = 5	09/0525 - 0900
09 Jul 0724	CANCELLATION: Geomagnetic K = 5	
09 Jul 2349	WARNING: Geomagnetic K = 4	09/2350 - 10/0300
09 Jul 2358	ALERT: Geomagnetic K = 4	09/2358
10 Jul 0257	EXTENDED WARNING: Geomagnetic K = 4	09/2350 - 10/1200
10 Jul 0432	WARNING: Geomagnetic Sudden Impulse expected	10/0445 - 0530



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
13 Jul	92	12	3	27 Jul	88	8	3
14	94	15	4	28	86	10	3
15	94	7	2	29	88	8	3
16	94	5	2	30	88	8	3
17	94	5	2	31	85	8	3
18	92	8	3	01 Aug	85	10	3
19	90	10	3	02	85	8	3
20	92	10	3	03	85	5	2
21	92	10	3	04	85	8	3
22	90	8	3	05	85	12	3
23	90	8	3	06	90	12	3
24	90	5	2	07	90	12	3
25	88	5	2	08	90	8	3
26	88	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

No Events Observed

Flare List

Date	Time			X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
	Begin	Max	End				
04 Jul	0326	0329	0335	B1.9			
04 Jul	0653	0657	0700	B1.9			
04 Jul	1248	1252	1256	B2.5			1242
04 Jul	1653	1656	1658	B1.7			1242
04 Jul	2024	2027	2029	B1.5			
04 Jul	2312	2315	2317	B2.7			1243
05 Jul	0018	0023	0026	B2.9			1242
05 Jul	0045	0048	0050	B1.6			1243
05 Jul	0956	1000	1003	B1.8			1242
05 Jul	2149	2156	2208	B2.6			1243
06 Jul	2349	2354	2359	B3.5			
07 Jul	0128	0139	0146	B2.2			1243
07 Jul	0154	0159	0202	B3.1			1244
07 Jul	0231	0243	0257	C1.0	SF	N15W45	1243
07 Jul	0347	0350	0352	B1.5			1243
07 Jul	0509	0512	0515	B2.6			1244
07 Jul	0734	0738	0743	B2.2			1243
07 Jul	0759	0759	0804		SF	N17E67	
07 Jul	0819	0823	0827	B3.2			1244
07 Jul	0904	0908	0911	B1.7			1243
07 Jul	0938	0939	0948		SF	N15E67	
07 Jul	1003	1242	1259		SF	N15E65	1245
07 Jul	1105	1112	1117	B6.3			1245
07 Jul	1300	1303	1310		SF	N16E65	1245
07 Jul	1332	1334	1339		SF	N15E64	1245
07 Jul	1357	1400	1407		SF	N16E64	1245
07 Jul	1425	1432	1434	B7.6			
07 Jul	1549	1558	1601	B3.1	SF	N16E63	1245
07 Jul	1629	1634	1640	B2.6			
07 Jul	2009	2014	2017	B3.4			
07 Jul	2024	2028	2030	B6.4			
08 Jul	0253	0257	0309	B3.0			1243



Flare List

Date	Time			Optical			
	Begin	Max	End	X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
08 Jul	0939	0947	0954	C3.0	SF	S20E19	1247
08 Jul	1033	1034	1039		SF	S18E22	1247
08 Jul	1120	1150	1238	C2.8	1F	S19E19	1247
08 Jul	1238	1252	1310		SF	S18E21	1247
08 Jul	1319	1331	1334	C3.1	1N	S19E17	1247
08 Jul	1456	1503	1508	C2.3	SF	S19E17	1247
08 Jul	1812	1820	1828	B6.1	SF	S19E14	1247
08 Jul	2357	0028	0209	B4.7			1247
09 Jul	0921	0925	0928	B4.2			1243
10 Jul	1632	1638	1643	B2.7	SF	S19W12	1247



Region Summary

Date	Location		Sunspot Characteristics				Flares											
	Lat CMD	Lon	Helio 10 ⁶ hemi.	Extent (helio)	Spot Class	Spot Count	Mag Class	X-ray			Optical							
								C	M	X	S	1	2	3	4			
Region 1242																		
28 Jun	N18W03	56	5	3	Cro	3	B											
29 Jun	N17W17	56	90	4	Dso	9	B					3						
30 Jun	N16W30	56	80	6	Dso	8	B											
01 Jul	N18W45	58	50	5	Dro	5	B											
02 Jul	N18W57	56	20	5	Dro	5	B											
03 Jul	N18W71	58	plage									1						
04 Jul	N18W82	54	5	5	Bxo	2	B											
05 Jul	N18W96	56	plage															
								0	0	0	4	0	0	0	0	0		

Crossed West Limb.

Absolute heliographic longitude: 56

Region 1243																		
28 Jun	N18E62	350	30	5	Cro	2	B											
29 Jun	N16E50	349	50	7	Cso	5	B					1						
30 Jun	N16E36	350	30	4	Cro	6	B											
01 Jul	N17E22	351	60	6	Cro	10	B					7						
02 Jul	N16E08	351	80	8	Cao	13	B											
03 Jul	N16W05	352	60	8	Dso	10	B											
04 Jul	N17W19	351	40	6	Cso	5	B											
05 Jul	N16W34	354	70	6	Cso	6	B											
06 Jul	N15W46	353	100	7	Dai	14	BG											
07 Jul	N16W59	352	90	5	Dso	7	BG	1				1						
08 Jul	N15W73	353	50	3	Cao	3	B											
09 Jul	N15W87	354	plage															
								1	0	0	9	0	0	0	0	0		

Crossed West Limb.

Absolute heliographic longitude: 352



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 1244																							
01 Jul	N15W11	24	10	7	Bxo	6	BG						4										
02 Jul	N15W24	23	10	6	Bxo	6	B						1										
03 Jul	N16W38	24	60	4	Dso	12	BG	1					9										
04 Jul	N16W53	25	120	6	Dao	7	BG																
05 Jul	N15W67	27	60	5	Dso	4	BG																
06 Jul	N14W79	26	50	3	Dso	2	B																
07 Jul	N13W90	23	10	1	Axx	1	A																
								1	0	0	0	14	0	0	0	0	0						

Crossed West Limb.
Absolute heliographic longitude: 24

Region 1245																							
07 Jul	N15E58	234	50	3	Cso	4	B						5										
08 Jul	N15E45	235	20	1	Hsx	1	A																
09 Jul	N15E31	236	30	3	Cao	4	B																
10 Jul	N15E18	236	10	2	Hax	1	A																
								0	0	0	0	5	0	0	0	0	0						

Still on Disk.
Absolute heliographic longitude: 236

Region 1246																							
08 Jul	N14W47	327	10	3	Bxo	3	B																
09 Jul	N15W62	329	0		Axx	1	A																
10 Jul	N15W76	330	plage																				
								0	0	0	0	0	0	0	0	0	0						

Still on Disk.
Absolute heliographic longitude: 327

Region 1247																							
08 Jul	S18E11	268	20	5	Dai	7	B	4					5	2									
09 Jul	S18W02	269	40	6	Cao	8	B																
10 Jul	S18W15	269	40	10	Dai	15	BG						1										
								4	0	0	0	6	2	0	0	0	0						

Still on Disk.
Absolute heliographic longitude: 269



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

Region 1248

08 Jul	N20E53	226	10	1	Axx	1	A										
09 Jul	N20E39	228	plage														
10 Jul	N20E25	229	plage														
								0	0	0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 229

Region 1249

09 Jul	S16E25	242	0		Axx	2	A										
10 Jul	S16E11	243	10	3	Cao	3	B										
								0	0	0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 243

Region 1250

10 Jul	S25E48	206	30	4	Dai	8	B										
								0	0	0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 206

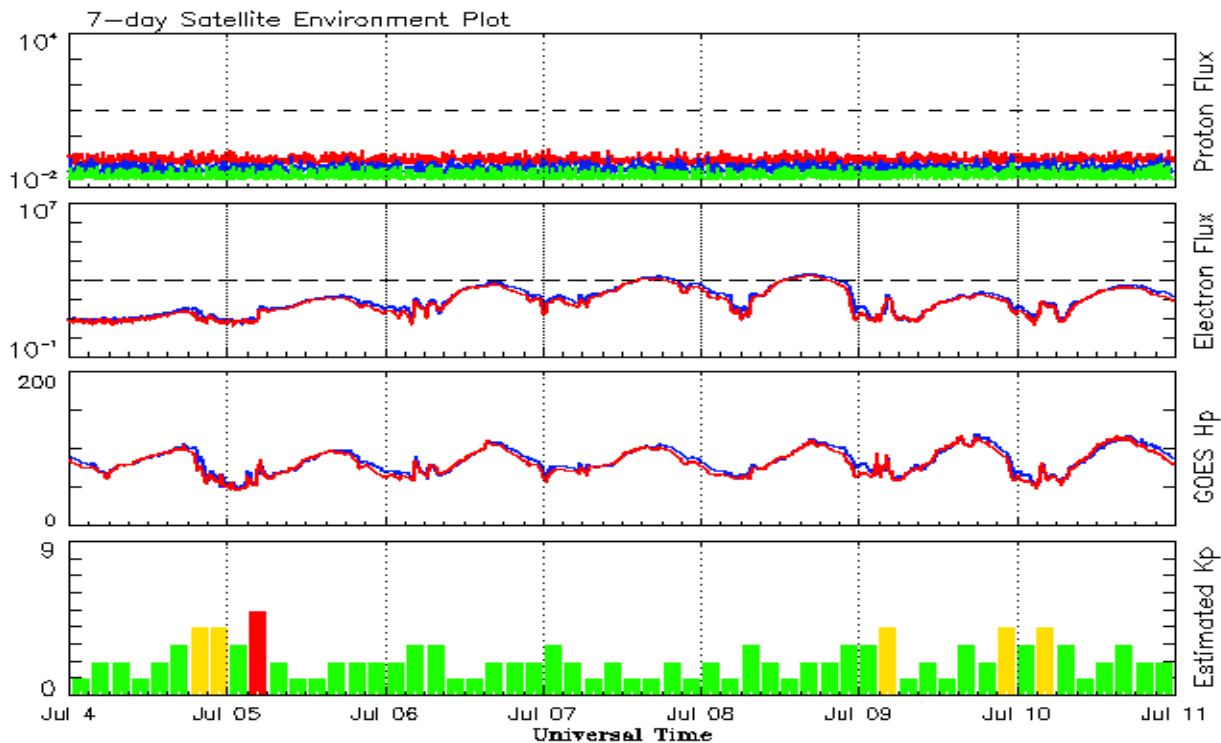


**Recent Solar Indices (preliminary)
Observed monthly mean values**

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
2009									
July	5.0	3.2	0.70	5.8	3.6	68.2	71.0	4	3.9
August	0.3	0.0	0.00	7.7	4.8	67.4	72.1	5	3.8
September	6.6	4.3	0.64	9.9	6.2	70.5	73.3	4	3.8
October	7.0	4.8	0.66	11.3	7.1	72.3	74.1	3	4.1
November	7.7	4.1	0.55	12.4	7.6	73.6	74.5	3	4.5
December	15.7	10.8	0.68	13.6	8.3	76.8	74.9	2	4.8
2010									
January	21.3	13.2	0.62	14.8	9.3	81.1	75.5	3	5.0
February	31.0	18.8	0.60	16.7	10.6	84.7	76.5	5	5.1
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			83.7		6	
February	53.2	29.6	0.55			94.5		6	
March	81.0	55.8	0.69			115.3		7	
April	81.7	54.4	0.67			112.6		9	
May	61.4	41.6	0.68			95.9		9	
June	55.5	37.0	0.67			95.8		8	

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 04 July 2011*

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.

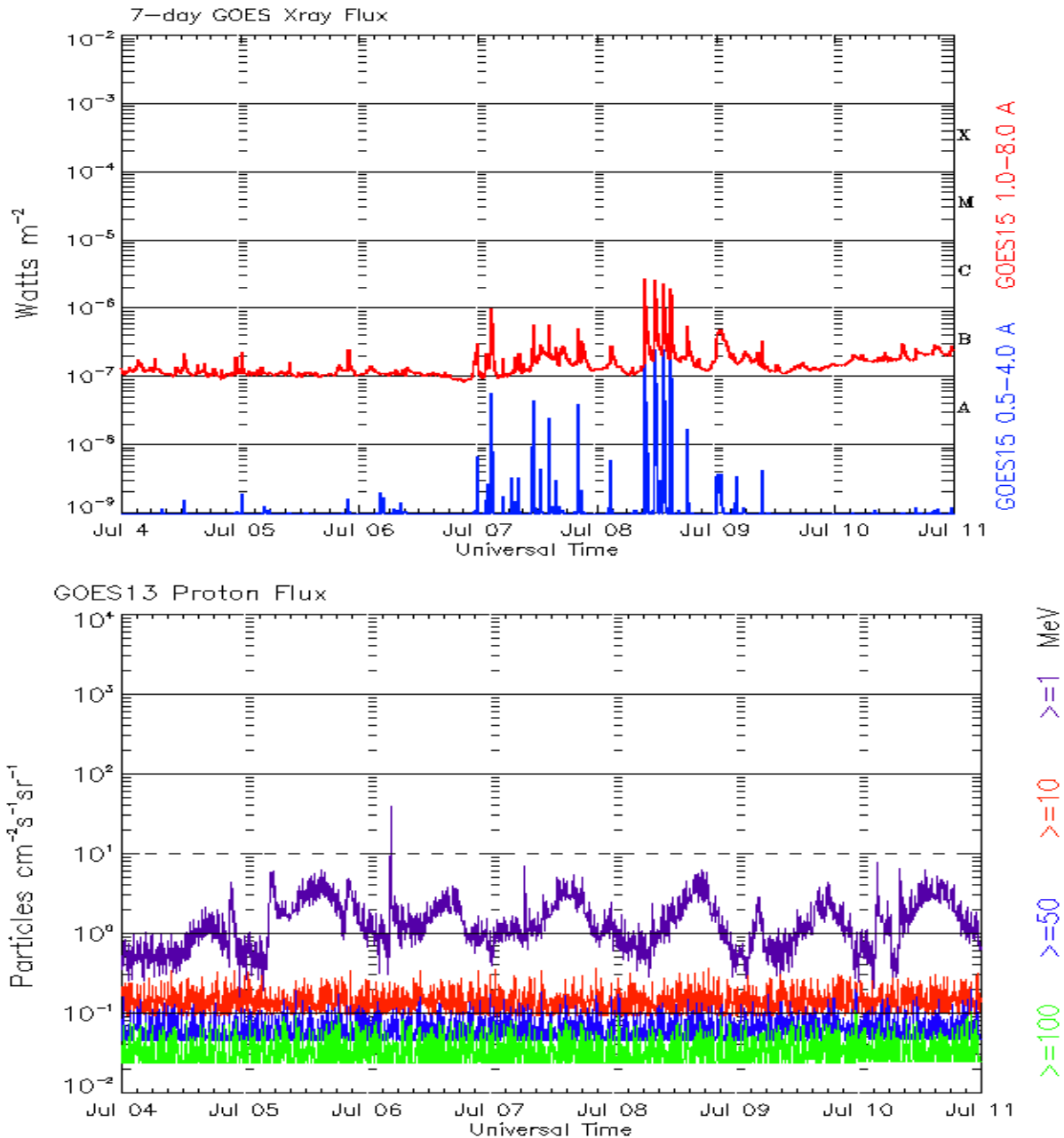
The electron flux plot contains the five-minute averaged integral electron flux (electrons/cm²-sec -sr) with energies greater than 2 MeV by the SWPC Primary GOES satellite.

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.

Kp 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 Hartland, UK. These data are made available through cooperation from the Geological Survey of Canada (GSC), British Geological Survey (BGS) 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 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 04 July 2011*

The x-ray plots contains five-minute averages x-ray flux (Watt/m²) 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 intergral flux units (pfu = protons/cm² -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.



Preliminary Report and Forecast of Solar Geophysical Data (The Weekly)

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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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