

Solar activity ranged from very low to high levels during the period. The period began with very low activity during 25 July, with B-class flares predominantly from Region 1260 (N19, L=358, class/area Ehi/330 on 30 July). Activity increased to low levels on 26 July with two C-class flares from Region 1260. Activity increased to moderate levels on 27 July due to an M1/1n flare at 27/1607 UTC, as well as frequent to occasional low-level C-class flares, from Region 1260. Activity decreased to low levels during 28 - 29 July with 13 C-class flares on each of those days. The largest during this period was a C6/1f at 29/1640 UTC from Region 1261 (N16, L=330, class/area Eki/350 on 31 July). Activity increased to high levels on 30 July due to an impulsive M9 flare from Region 1261 at 20/0209 UTC. A 180 sfu Tenflare was associated with this flare. Low levels returned on 31 July with several C-class events, the largest of which was a C3/Sn at 31/0254 UTC from Region 1261.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit was at normal to high levels during 25 - 26 July. Flux increased to moderate to high levels during 27 - 29 July. Flux decreased to normal to moderate levels on 30 - 31 July.

Geomagnetic field activity ranged from quiet to minor storm levels during the period. Activity began the period at quiet to unsettled levels, with isolated active to minor storm levels at high latitudes on 25 July, due to a coronal hole high-speed stream (CH HSS). Activity decreased to mostly quiet to unsettled levels on 26 July. Activity decreased to mostly quiet levels during 27 - 29 July. Activity increased to quiet to active levels with an isolated minor storm period at high latitudes during 30 July. Mostly unsettled conditions were observed on 31 July.

Space Weather Outlook
03 August - 29 August 2011

Solar activity is expected to be at low to moderate levels during 03 - 08 August, with a chance for M-class flares greater than M5 from Region 1261. Activity is expected to decrease to very low to low levels during the rest of the period as Region 1261 departs. A chance for M-class activity increases on 20 August when Region 1261 rotates back around the east limb.

No proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at moderate to high levels on 03 - 04 August. Normal to moderate levels are expected during 05 - 07 August. Moderate to high levels are expected during 08 - 13 August due to effects from a recurrent CH HSS. Normal to moderate levels are expected on 14 - 15 August followed by moderate to high levels from 16 - 25 August due to a second CH HSS. Normal to moderate levels are expected for the remainder of the period.

Geomagnetic field activity is expected to be predominantly quiet during 03 - 04 August. A CME observed at approximately 02/0706 UTC on LASCO C3 imagery is expected to arrive late on 04



August and increase activity to unsettled to active levels with a chance for minor storm conditions through the first few periods of 06 August. Major storm periods are possible at high latitudes during this time. Quiet to unsettled conditions are expected for the rest of 06 August through 11 August due to effects from a recurrent CH HSS. Activity is expected to decrease to mostly quiet levels from 12 - 13 August as the CH HSS effects subside. Activity is expected to increase to quiet to unsettled levels from 14 - 22 August, with a chance for active levels on 15 - 17 August due to another recurrent CH HSS. Conditions are expected to decrease to quiet levels until the arrival of a third CH HSS anticipated to become geoeffective on 26 August. Quiet to unsettled conditions with a chance for isolated active periods are expected to prevail for the remainder of the forecast 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
25 July	87	38	35	B1.7	0	0	0	4	0	0	0	0
26 July	94	30	320	B2.7	2	0	0	7	0	0	0	0
27 July	99	54	380	B4.8	9	1	0	12	1	0	0	0
28 July	107	84	770	B5.4	13	0	0	16	1	0	0	0
29 July	112	88	930	B5.0	13	0	0	19	1	0	0	0
30 July	113	101	1170	B3.0	1	1	0	5	0	0	0	0
31 July	119	128	1130	B3.6	9	0	0	12	1	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
	25 July	2.3e+05	1.2e+04	3.1e+03		9.2e+07
26 July	1.2e+05	1.3e+04	3.2e+03		7.2e+07	
27 July	1.2e+05	1.3e+04	3.3e+03		8.3e+07	
28 July	2.1e+05	1.3e+04	3.1e+03		9.0e+07	
29 July	3.6e+05	1.2e+04	2.9e+03		8.0e+07	
30 July	4.5e+05	1.3e+04	3.1e+03		2.0e+07	
31 July	8.1e+04	1.2e+04	2.7e+03		1.2e+06	

Daily Geomagnetic Data

Date	Middle Latitude Fredericksburg		High Latitude College		Estimated Planetary	
	A	K-indices	A	K-indices	A	K-indices
	25 July	10	3-2-2-2-3-2-3-2	20	2-3-4-5-5-2-2-2	12
26 July	5	2-2-2-1-2-0-1-1	7	2-3-3-1-1-1-1-1	5	2-2-2-1-1-1-1-1
27 July	2	1-1-0-0-0-1-0-1	2	1-2-0-1-0-0-0-1	4	1-2-0-0-1-1-0-2
28 July	3	1-2-0-0-1-1-1-1	1	1-1-0-0-0-0-0-1	3	1-2-0-0-0-0-1-2
29 July	3	0-1-0-1-2-1-1-1	3	1-1-0-0-1-3-1-0	5	1-1-0-0-2-2-2-1
30 July	10	0-0-1-2-3-3-4-3	16	0-1-1-3-5-4-3-3	16	1-1-1-2-3-4-5-4
31 July	7	3-2-2-1-2-1-2-2	14	4-3-3-4-1-2-2-2	8	3-2-2-1-1-2-2-3

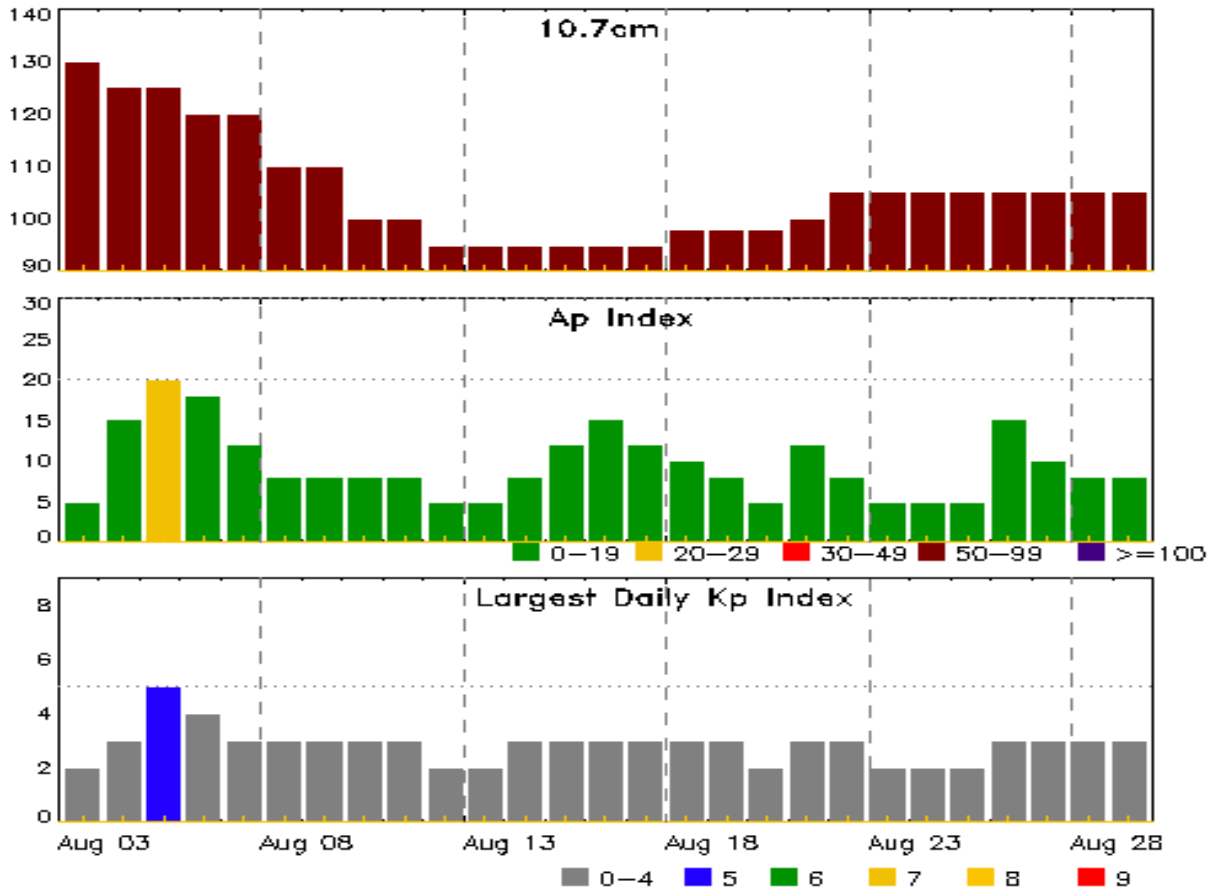


Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
25 Jul 1006	CONTINUED ALERT: Electron 2MeV Integral Flux \geq 1000pfu	20/1250
26 Jul 1131	CONTINUED ALERT: Electron 2MeV Integral Flux \geq 1000pfu	20/1250
27 Jul 1214	CONTINUED ALERT: Electron 2MeV Integral Flux \geq 1000pfu	20/1250
28 Jul 1107	CONTINUED ALERT: Electron 2MeV Integral Flux \geq 1000pfu	20/1250
29 Jul 1219	CONTINUED ALERT: Electron 2MeV Integral Flux \geq 1000pfu	20/1250
30 Jul 0212	ALERT: X-ray Flux exceeded M5	30/0208
30 Jul 0233	SUMMARY: 10cm Radio Burst	30/0208 - 0209
30 Jul 0255	SUMMARY: X-ray Event exceeded M5	30/0204 - 0212
30 Jul 1657	WARNING: Geomagnetic K = 4	30/1657 - 31/0600
30 Jul 1658	ALERT: Geomagnetic K = 4	30/1659
31 Jul 0459	EXTENDED WARNING: Geomagnetic K = 4	30/1657 - 31/1200



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
03 Aug	130	5	2	17 Aug	95	12	3
04	125	15	3	18	98	10	3
05	125	20	5	19	98	8	3
06	120	18	4	20	98	5	2
07	120	12	3	21	100	12	3
08	110	8	3	22	105	8	3
09	110	8	3	23	105	5	2
10	100	8	3	24	105	5	2
11	100	8	3	25	105	5	2
12	95	5	2	26	105	15	3
13	95	5	2	27	105	10	3
14	95	8	3	28	105	8	3
15	95	12	3	29	105	8	3
16	95	15	3				



Energetic Events

Date	Time			X-ray		Optical Information			Peak		Sweep Freq	
	Begin	Max	Half Max	Class	Integ Flux	Imp/ Brtns	Location Lat CMD	Rgn #	245	2695	Intensity II	IV
30 Jul	0204	0209	0212	M9.3	0.020	SF	N21W68	1199	180	180		
27 Jul	1548	1607	1622	M1.1	0.013	1N	N20E37	1260	140			

Flare List

Date	Time			X-ray Class	Optical			Rgn #
	Begin	Max	End		Imp/ Brtns	Location Lat CMD	Rgn #	
25 Jul	1014	1020	1028	B4.2				
25 Jul	1339	1339	1354		SF	N23W17		1259
25 Jul	1624	1628	1630	B7.2				
25 Jul	1718	1719	1724		SF	N19E62		1260
25 Jul	1758	1802	1807	B6.1	SF	N20E63		1260
25 Jul	2120	2126	2133		SF	N18E61		1260
26 Jul	0250	0255	0302	B7.6				1260
26 Jul	0317	0339	0348	C1.2				1260
26 Jul	0552	0554	0556		SF	N18E57		1260
26 Jul	0713	U0713	A0724		SF	N18E48		1260
26 Jul	0738	0745	0752	B6.5	SF	N19E56		1260
26 Jul	B0758	U0806	A0819		SF	N19E55		1260
26 Jul	0859	0859	A0928		SF	N15E80		
26 Jul	0948	0955	1001	B5.8				
26 Jul	1112	1122	1139	B9.4				1261
26 Jul	B1142	U1148	A1200		SF	N16E79		1261
26 Jul	1553	1556	1600	B6.9				1261
26 Jul	2153	2241	2253	C3.8	SF	N18E46		1260
26 Jul	2353	2359	0003	B8.9				
27 Jul	0138	0201	0235	C3.0				1260
27 Jul	0555	0613	0619		SF	N19E44		1260
27 Jul	0633	0639	0646	C3.0	SF	N19E41		1260
27 Jul	0648	0648	0652		SF	N19E41		1260
27 Jul	0654	0655	0657		SF	N19E41		1260
27 Jul	B0841	U0841	A0857		SF	N15E69		1261
27 Jul	B0949	U1000	A1026	C3.0	SF	N19E40		1260
27 Jul	1118	1131	1133	C3.6	SF	N19E39		1260
27 Jul	1237	1313	1343		SF	N19E38		1260
27 Jul	1247	1253	1300	C2.0				1260
27 Jul	1309	1313	1325	C2.0				1260



Flare List

Date	Time			X-ray Class	Imp/ Brtns	Optical		Rgn #
	Begin	Max	End			Location Lat CMD		
27 Jul	1548	1607	1622	M1.1	1N	N20E37	1260	
27 Jul	1909	1913	1929		SF	N18E37	1260	
27 Jul	2041	2121	2129	C2.3	SF	N19E35	1260	
27 Jul	2139	2157	2232	C2.5	SF	N19E35	1260	
27 Jul	2211	2217	2221	C1.6			1262	
27 Jul	2310	2352	0004		SF	N18E33	1260	
28 Jul	0016	0025	0104	C2.5	SF	N18E33	1260	
28 Jul	0119	0131	0136	C1.8				
28 Jul	0219	0225	0229	C5.2			1260	
28 Jul	0439	0444	0453	C2.2	SF	N19E29	1260	
28 Jul	0503	0508	0511	C1.6			1260	
28 Jul	0625	0629	0633	B8.5				
28 Jul	0654	0654	0658	C1.9	SF	N17W42	1262	
28 Jul	0700	0705	0717		SF	N19E29	1260	
28 Jul	0728	0757	0806	C2.7	SF	N18E30	1260	
28 Jul	0805	0806	0823		SF	N16E58	1261	
28 Jul	0812	0819	0826		SF	N19E27	1260	
28 Jul	0845	0848	0852		SF	N19E27	1260	
28 Jul	0911	0914	0916	B9.1	SF	N20E27	1260	
28 Jul	1030	1030	1053		SF	N19E26	1260	
28 Jul	1055	1059	1103	C1.5	SF	N19E26	1260	
28 Jul	B1156	U1211	A1247	C5.3	1N	N19E25	1260	
28 Jul	1351	1356	1409	B8.7	SF	N17E76		
28 Jul	1443	1527	1545	C4.1				
28 Jul	1641	1649	1656	C2.4	SF	N19E21	1260	
28 Jul	1759	1815	1822	C1.6	SF	N15E50	1261	
28 Jul	1816	1816	1824		SF	N17E76	1263	
28 Jul	1844	1844	1846		SF	N17E71	1263	
28 Jul	2029	2037	2040	C3.5			1260	
29 Jul	0032	0039	0046	C2.3			1261	
29 Jul	0057	0106	0115	C4.1	SF	N19E16	1260	
29 Jul	0220	0224	0226	C1.0			1261	
29 Jul	0345	0348	0352	C1.2			1261	
29 Jul	0431	0435	0437	C1.1	SF	N17E45	1261	
29 Jul	0440	0442	0454		SF	N19E16	1260	
29 Jul	0520	0523	0525	B8.9	SF	N16E45	1261	
29 Jul	0529	0533	0536	C1.1	SF	N23E14	1260	
29 Jul	0543	0543	0548		SF	N16E45	1261	



Flare List

Date	Time			X-ray Class	Optical		Rgn #
	Begin	Max	End		Imp/ Brtns	Location Lat CMD	
29 Jul	0554	0556	0601		SF	N17E45	1261
29 Jul	B0606	0606	0614		SF	N23E12	1260
29 Jul	0617	0620	0624	C1.1	SF	N18E44	1261
29 Jul	0654	0655	0701		SF	N15E45	1261
29 Jul	0709	0713	0718	B8.0	SF	N16E44	1261
29 Jul	B0742	U0745	A0749		SF	N16E44	1261
29 Jul	0803	0807	0810	C1.4	SF	N16E43	1261
29 Jul	B0826	U0827	A0833		SF	N19E14	1260
29 Jul	0834	0837	0839	C1.1			1261
29 Jul	B0912	0913	0916		SF	N16E43	1261
29 Jul	1213	1217	1226	C3.9			1261
29 Jul	B1228	U1228	A1304		SF	N16E41	1261
29 Jul	1345	1351	1354	C1.3	SF	N18E66	1263
29 Jul	B1432	U1437	A1444		SF	N18E66	1263
29 Jul	1634	1640	1646	C6.3	1F	N15E41	1261
29 Jul	1753	1800	1842	C3.2	SF	N16E41	1261
29 Jul	2159	2202	2204	B7.0			
29 Jul	2235	2238	2240	B6.9			1260
30 Jul	0050	0053	0056	B5.3			
30 Jul	0204	0209	0212	M9.3			1261
30 Jul	0658	0659	0704		SF	N18W30	
30 Jul	1000	1000	1003		SF	N16E58	1263
30 Jul	1003	1005	1010		SF	N18W32	1265
30 Jul	1211	1217	1227	C1.3	SF	N19W32	1265
30 Jul	1346	1352	1428		SF	N15E21	1261
30 Jul	1533	1538	1545	B5.6			1261
30 Jul	1810	1814	1816	B5.3			
30 Jul	1852	1901	1915	B4.9			1261
30 Jul	1937	1941	1943	B4.6			1261
31 Jul	0143	0147	0149	C1.0			
31 Jul	0212	0214	0217	B7.5	SF	N17E46	1263
31 Jul	0246	0254	0302	C3.8	SN	N14E20	1261
31 Jul	0544	0553	0646		SF	N18E44	1263
31 Jul	0716	0725	0729		SF	N17E45	1263
31 Jul	0804	0804	0810		SF	N18E43	1263
31 Jul	0812	0813	0819		SF	N15E16	1261
31 Jul	1402	1406	1411	B5.4			
31 Jul	1605	1605	1617		SF	N16E11	1261



Flare List

Date	Time			X-ray Class	Optical		Rgn #
	Begin	Max	End		Imp/ Brtns	Location Lat CMD	
31 Jul	1757	1801	1803	C1.1			1263
31 Jul	1843	1850	1852	C1.4	SF	N16E39	1263
31 Jul	1901	1909	1917	C1.7	SF	N18W50	1265
31 Jul	1924	2202	A0008		1F	N16E04	1261
31 Jul	2041	2047	2050	C1.9	SF	N16E39	1263
31 Jul	2108	2108	2116		SF	N16E38	1263
31 Jul	2148	2204	2211	C1.8			1261
31 Jul	2246	2254	2257	C1.5			
31 Jul	2336	2340	2344	C1.0	SF	N17E35	1263



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		
<i>Region 1254</i>																	
14 Jul	S22E59	141	30	2	Cro	1	B					6					
15 Jul	S22E49	138	50	8	Cao	5	B										
16 Jul	S22E36	138	50	8	Dso	7	B					1					
17 Jul	S23E23	137	50	8	Cai	15	B					6					
18 Jul	S22E11	136	60	7	Cai	15	B	1				1					
19 Jul	S22W04	139	80	8	Dso	12	B					1					
20 Jul	S22W17	138	110	9	Cso	14	B					1					
21 Jul	S24W28	136	100	7	Cai	10	B					1					
22 Jul	S24W42	137	80	7	Dso	10	B										
23 Jul	S23W54	134	60	7	Cao	7	B										
24 Jul	S23W67	134	10	4	Axx	2	A										
25 Jul	S23W80	134	5	1	Bxo	2	B										
								1	0	0	17	0	0	0	0		

Crossed West Limb.
Absolute heliographic longitude: 139

<i>Region 1259</i>																	
18 Jul	N26E69	78	30	3	Dao	1	B										
19 Jul	N25E56	79	100	8	Cso	3	B										
20 Jul	N25E42	79	80	6	Cso	12	B										
21 Jul	N25E32	76	130	5	Dsi	13	B										
22 Jul	N25E18	77	60	5	Dso	13	B										
23 Jul	N25E02	80	40	3	Cao	3	B										
24 Jul	N25W10	79	10	2	Bxo	3	B										
25 Jul	N25W23	79	10	8	Bxo	2	B					1					
26 Jul	N25W36	79	plage														
27 Jul	N25W50	79	plage														
28 Jul	N25W64	80	plage														
29 Jul	N25W78	81	plage														
								0	0	0	1	0	0	0	0	0	

Crossed West Limb.
Absolute heliographic longitude: 80



Region Summary - continued

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 1260																							
24 Jul	N20E71	358	10	1	Axx		A																
25 Jul	N20E58	357	20	6	Bxo	4	B						3										
26 Jul	N20E45	357	120	10	Dao	8	B	2					5										
27 Jul	N18E30	357	110	10	Dsi	15	BG	8	1			11	1										
28 Jul	N19E17	358	220	11	Eac	16	BGD	9				10	1										
29 Jul	N19E03	358	310	12	Eai	20	BG	2				5											
30 Jul	N19W09	358	330	12	Ehi	12	B																
31 Jul	N19W22	358	300	12	Ehi	21	BG																
								21	1	0	34	2	0	0	0								

Still on Disk.

Absolute heliographic longitude: 358

Region 1261

26 Jul	N16E74	330	200	2	Dho	2	B						1									
27 Jul	N15E60	327	250	8	Dko	5	B						1									
28 Jul	N15E49	326	280	8	Dko	10	B	1				2										
29 Jul	N16E33	328	300	9	Dai	21	BG	10				12	1									
30 Jul	N17E22	327	350	10	Dkc	23	BGD		1			1										
31 Jul	N16E05	330	350	11	Eki	35	BGD	2				3	1									
								13	1	0	20	2	0	0	0							

Still on Disk.

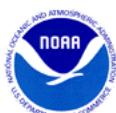
Absolute heliographic longitude: 330

Region 1262

27 Jul	N16W38	66	20	10	Dso	4	BGD	1														
28 Jul	N16W49	65	0		Axx	1	A	1				1										
29 Jul	N16W63	66	plage																			
30 Jul	N16W77	67	plage																			
								2	0	0	1	0	0	0	0							

Died on Disk.

Absolute heliographic longitude: 66



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 1263																	
28 Jul	N18E73	302	260	9	Dho	3	B					2					
29 Jul	N18E59	303	310	7	Dho	5	B	1				2					
30 Jul	N18E48	301	470	9	Dhi	12	B					1					
31 Jul	N18E34	301	460	10	Dki	17	B	4				8					
								5	0	0	13	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 301

Region 1264																	
28 Jul	S31E50	325	10	3	Bxo	4	B										
29 Jul	S32E37	325	10	1	Bxo	2	B										
30 Jul	S29E20	329	10	1	Axx	2	A										
31 Jul	S23E07	328	10	2	Bxo	2	B										
								0	0	0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 328

Region 1265																	
30 Jul	N18W41	30	10	2	Bxo	2	B	1				2					
31 Jul	N17W54	30	10	3	Bxo	3	B	1				1					
								2	0	0	3	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 30

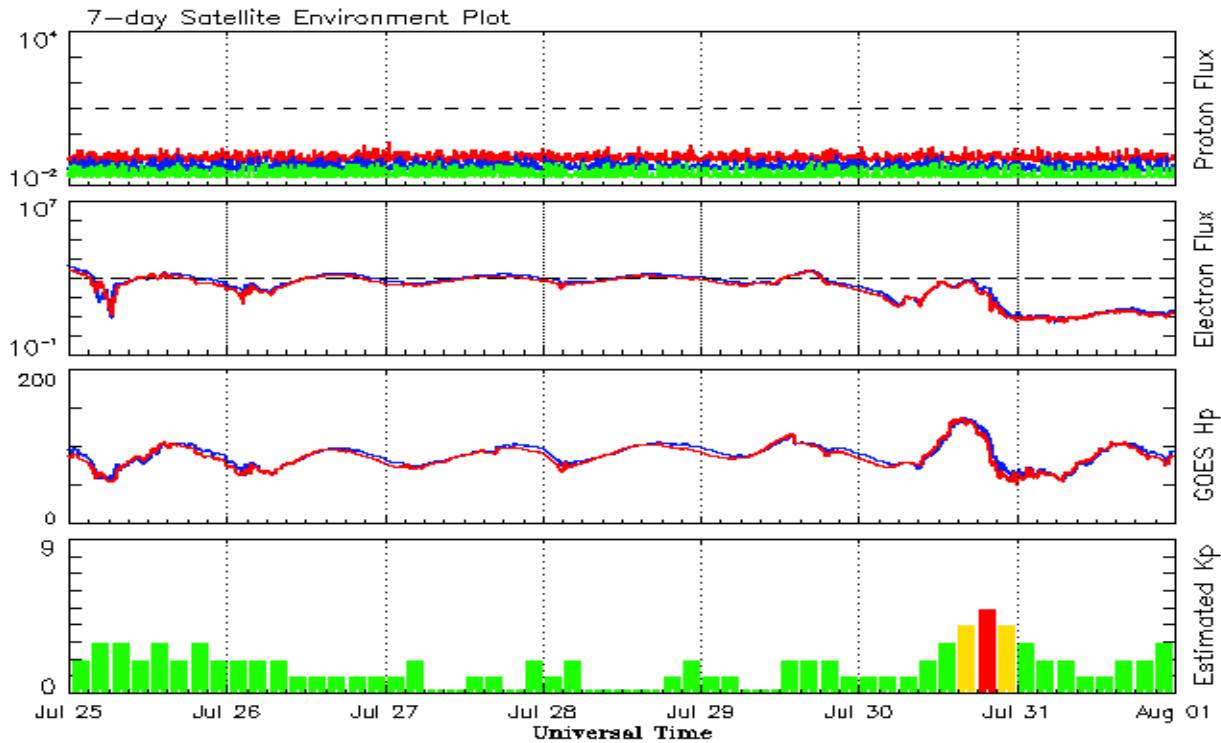


Recent Solar Indices (preliminary)
Observed monthly mean values

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									
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	47.2	31.0	83.7	91.2	6	6.7
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	
July	67.0	43.9	0.66			94.2		9	

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 25 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.

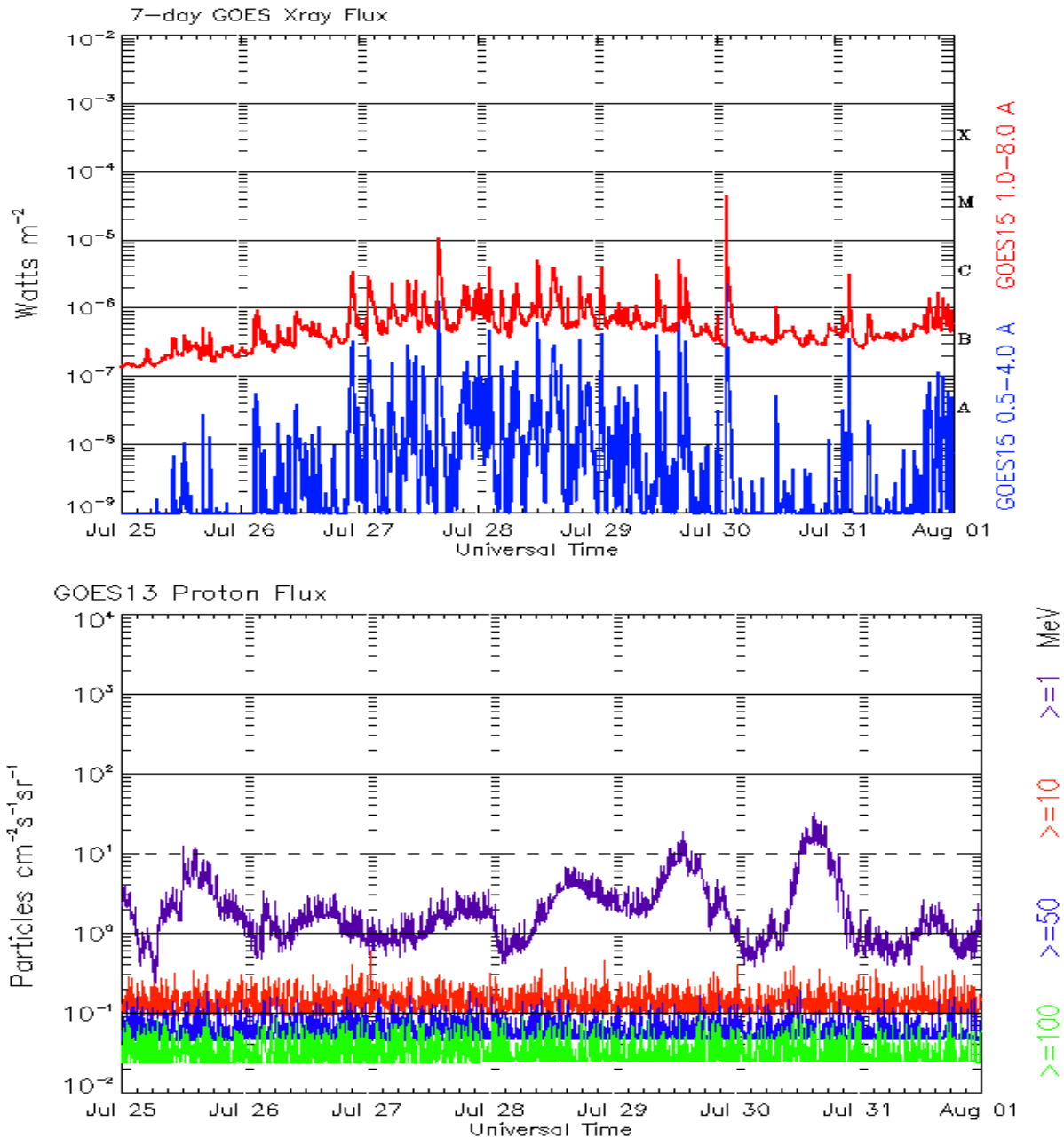
The electron flux plot contains the five-minute averaged integral electron flux (electrons/cm²-sec -sr) with energies greater than 2 MeV by the SWPC Primary GOES satellite.

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 25 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.



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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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