

Solar activity has been at very low to high levels. Two active sunspot regions dominated the summary period. Region 1543 (N21, L=21, class/area Hhx/360 on 16 August) was the most active region from 13-16 August, producing multiple C-class solar flares. Many of these events were associated with discrete radio frequency bursts, Type II and Type IV radio sweeps, suggesting CME liftoff. Due to the location of Region 1543, many of the CME's were Earth-directed but very little effects were forecast upon arrival at Earth. Region 1543 decayed from a beta-gamma to a simple beta group during the summary period. On 17 August, from around the east limb, multiple M-class solar flares were observed, including an M2.4 x-ray event at 17/1319 UTC as well as an M1 x-ray event at 17/1720 UTC. On 18 August, five more M-class solar flares were observed, the largest being an M5/Sf x-ray flare at 18/0102 UTC with an associated 120 sfu Tenflare. As the day progressed, Region 1548 (N20, L=232, class/area Cso/120 on 18 August) was numbered and determined to be the active region responsible for all of the M-class events. From 16-18 August, multiple CME's were observed in LASCO C2 imagery, all appeared to originate from Region 1548. Due to the location around the east limb, none of these CME's were forecast to arrive at Earth.

No proton events were observed at geosynchronous orbit.

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

Geomagnetic field activity was at predominantly quiet to active levels throughout the summary period. Quiet to unsettled levels prevailed from 13-16 August as solar wind speeds, as measured by the ACE spacecraft, remained at nominal background levels. An increase to quiet to unsettled levels with isolated active periods were observed from 17-19 August. Weak CME effects were observed on 17 August and late on 18 August, measurements from the ACE spacecraft indicated a solar sector boundary (SSB) crossing. Following the SSB, coronal hole effects were observed on 19 August with solar wind speeds, increasing from below 400 km/s to almost 600 km/s

Space Weather Outlook **20 August - 15 September 2012**

Solar activity is expected to be at low levels with a slight chance for more M-class events from 20-31 August as Region 1548 continues to evolve and rotate across the disk. A return to predominantly low levels is expected to prevail from 01-15 September.

No proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be normal levels from 20-21 August. An increase to high flux levels is expected from 22-26 August. A return to normal - background levels is expected to prevail for the remainder of the period.

Geomagnetic field activity is expected to be at mostly quiet levels with a few brief periods of quiet to unsettled levels due to recurrent coronal hole high speed stream effects. From 20 - 22



August, 25-25 August, 08-09 September, and 15 September quiet to unsettled levels are expected. For the remainder of the forecast period, mostly quiet levels are expected to prevail.



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
13 August	108	62	340	B3.0	3	0	0	1	0	0	0	0
14 August	106	46	350	B2.4	5	0	0	4	1	0	0	0
15 August	101	32	310	B1.7	0	0	0	4	0	0	0	0
16 August	98	34	410	B1.8	1	0	0	2	1	0	0	0
17 August	95	42	400	B1.9	5	2	0	1	0	0	0	0
18 August	97	56	500	B3.7	13	5	0	24	1	0	0	0
19 August	96	67	350	B2.0	3	0	0	10	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
	13 August	7.9e+04	1.1e+04	2.7e+03		1.6e+06
14 August	2.0e+05	1.1e+04	2.6e+03		3.7e+06	
15 August	8.1e+04	1.0e+04	2.5e+03		4.7e+06	
16 August	2.9e+05	1.1e+04	2.6e+03		3.8e+06	
17 August	3.2e+05	1.0e+04	2.7e+03		2.6e+07	
18 August	2.9e+05	1.0e+04	2.6e+03		1.6e+07	
19 August	2.8e+05	1.1e+04	2.5e+03		2.1e+06	

Daily Geomagnetic Data

Date	Middle Latitude Fredericksburg		High Latitude College		Estimated Planetary	
	A	K-indices	A	K-indices	A	K-indices
	13 August	8	1-2-2-2-2-2-3-2	10	1-2-2-4-1-3-3-1	9
14 August	7	2-2-1-2-3-1-2-2	9	2-2-3-3-2-3-1-1	7	2-3-2-2-2-1-1-2
15 August	7	2-1-1-2-3-2-2-2	8	2-1-2-3-3-2-1-1	6	2-1-1-1-1-2-2-2
16 August	10	2-2-2-2-3-3-3-2	21	3-2-3-1-5-5-4-1	11	2-2-2-2-3-3-3-3
17 August	11	4-3-3-2-3-1-2-0	14	3-4-2-5-2-1-1-1	10	4-3-2-1-2-2-1-1
18 August	11	0-3-2-2-2-2-4-3	18	0-3-3-5-5-1-2-2	11	1-2-2-2-2-2-4-3
19 August	10	2-2-2-3-3-2-1-3	21	2-2-1-6-5-2-2-2	12	2-2-2-3-3-2-2-4

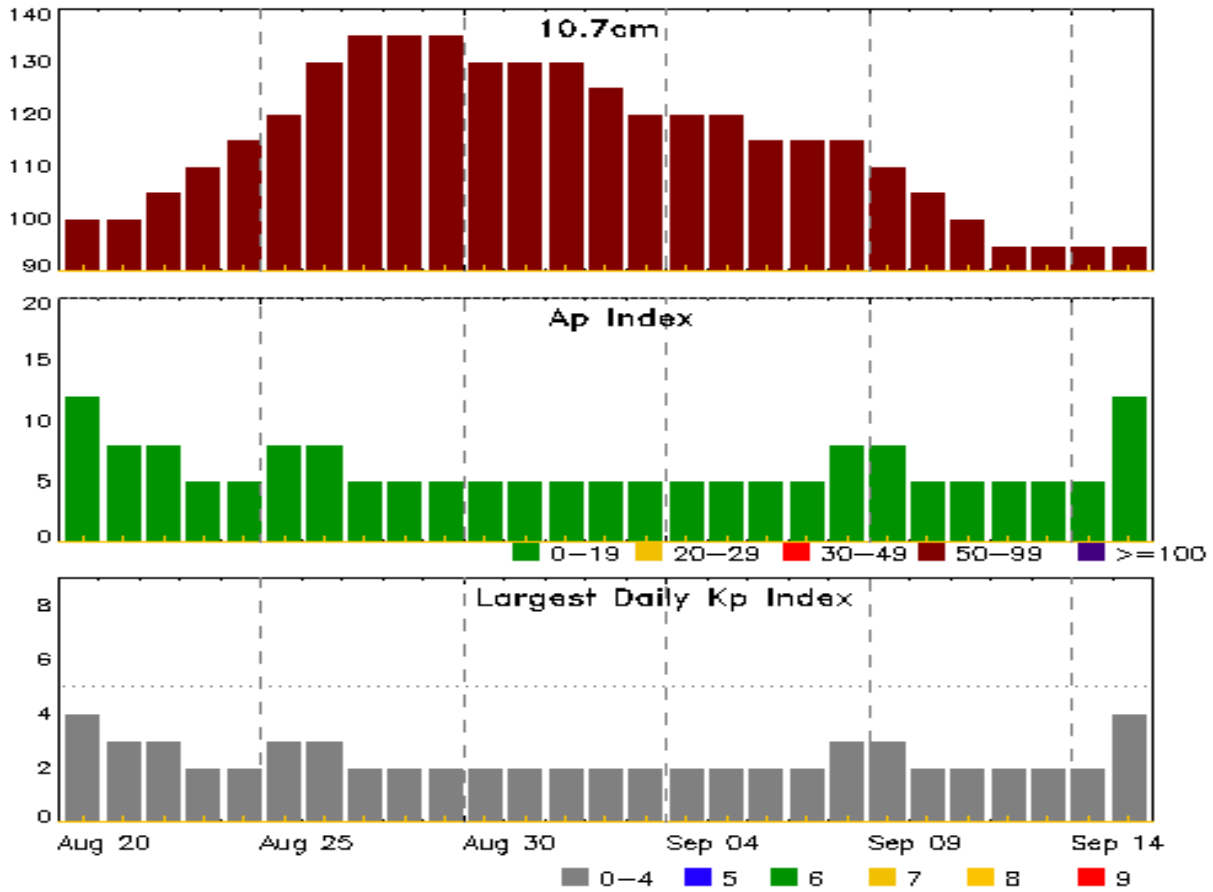


Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
13 Aug 0508	ALERT: Type IV Radio Emission	13/0413
13 Aug 1331	ALERT: Type II Radio Emission	13/1241
13 Aug 2119	ALERT: Type IV Radio Emission	13/1306
16 Aug 1344	ALERT: Type II Radio Emission	16/1308
16 Aug 1345	ALERT: Type IV Radio Emission	16/1254
16 Aug 1700	WARNING: Geomagnetic K = 4	16/1705 - 17/0000
17 Aug 0122	WARNING: Geomagnetic K = 4	17/0125 - 0600
17 Aug 0128	ALERT: Geomagnetic K = 4	17/0129
17 Aug 1736	SUMMARY: 10cm Radio Burst	17/1714 - 1717
18 Aug 0103	ALERT: X-ray Flux exceeded M5	17/0100
18 Aug 0111	SUMMARY: 10cm Radio Burst	18/0057 - 0058
18 Aug 0115	SUMMARY: X-ray Event exceeded M5	18/0024 - 0107
18 Aug 0341	SUMMARY: 10cm Radio Burst	18/0322 - 0322
18 Aug 2056	WARNING: Geomagnetic K = 4	18/2055 - 19/0300
18 Aug 2104	ALERT: Geomagnetic K = 4	18/2100
19 Aug 1029	WARNING: Geomagnetic K = 4	19/1030 - 1500
19 Aug 2223	WARNING: Geomagnetic K = 4	19/2223 - 20/0600



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
20 Aug	100	12	4	03 Sep	120	5	2
21	100	8	3	04	120	5	2
22	105	8	3	05	120	5	2
23	110	5	2	06	115	5	2
24	115	5	2	07	115	5	2
25	120	8	3	08	115	8	3
26	130	8	3	09	110	8	3
27	135	5	2	10	105	5	2
28	135	5	2	11	100	5	2
29	135	5	2	12	95	5	2
30	130	5	2	13	95	5	2
31	130	5	2	14	95	5	2
01 Sep	130	5	2	15	95	12	4
02	125	5	2				



Energetic Events

Date	Time			X-ray		Optical Information			Peak		Sweep Freq	
	Begin	Max	Half	Class	Integ Flux	Imp/ Brtns	Location Lat CMD	Rgn #	Radio Flux		Intensity	
			Max						245	2695	II	IV
17 Aug	1312	1319	1323	M2.4	0.007			1548		59		
17 Aug	1708	1720	1727	M1.0	0.006			1548		140		
18 Aug	0024	0102	0107	M5.5	0.029	SF	N19E86	1548	460	150		
18 Aug	0317	0323	0330	M1.8	0.008	SN	N19E86	1548	120	100		
18 Aug	1602	1607	1609	M2.0	0.004	1N	N19E80	1548	56	56		
18 Aug	2246	2254	2300	M1.0	0.005	SF	N19E78	1548				
18 Aug	2315	2322	2332	M1.3	0.009	SN	N21E76	1548	220			

Flare List

Date	Time			X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
	Begin	Max	End				
13 Aug	0405	0413	0427	C1.0	SF	N24E02	1543
13 Aug	0919	0930	0941	C1.4			1540
13 Aug	1233	1240	1249	C2.8			1543
13 Aug	2144	2159	2208	B6.3			1540
14 Aug	0023	0031	0042	C3.5	SF	N23W08	1543
14 Aug	0218	0303	0447	C1.1	SF	S14W17	1542
14 Aug	1128	1137	1143	C1.1			1543
14 Aug	1833	1841	1904	B3.9			
14 Aug	1912	2026	2143	C1.2			1540
14 Aug	2020	2024	2041		SF	N20W14	1543
14 Aug	2043	2050	2056		SF	N20W14	1543
14 Aug	2223	2228	2254	C1.6	1F	S15E04	1542
15 Aug	0337	0346	0354	B8.5	SF	N23W25	1543
15 Aug	0746	0746	0749		SF	N26W21	1543
15 Aug	1448	1454	1512	B6.8	SF	S12W40	1542
15 Aug	1546	1546	1555		SF	N25W25	1543
16 Aug	0151	0207	0222	B6.0	SF	S20W41	1542
16 Aug	0606	0611	0617	B3.2	SF	N18W35	1543
16 Aug	1241	1316	1348	C3.6	1F	N19W36	1543
17 Aug	0105	0113	0118	B4.7			
17 Aug	0506	0514	0523	C1.8			
17 Aug	B0649	U0656	A0706	B4.2	SF	N23W48	1543
17 Aug	0829	0837	0844	C4.7			
17 Aug	1121	1128	1137	B5.2			



Flare List

Date	Time			X-ray Class	Optical		
	Begin	Max	End		Imp/ Brtns	Location Lat CMD	Rgn #
17 Aug	1209	1218	1230	B7.8			
17 Aug	1312	1319	1323	M2.4			1548
17 Aug	1423	1427	1429	B4.3			
17 Aug	1521	1532	1542	C1.3			1543
17 Aug	1605	1611	1615	C1.5			1543
17 Aug	1708	1720	1727	M1.0			1548
17 Aug	1753	1758	1800	C1.3			
17 Aug	2123	2127	2135	B3.8			
17 Aug	2223	2228	2236	B5.9			
18 Aug	0024	0102	0107	M5.5	SF	N19E86	1548
18 Aug	0304	0324	0341	M1.8	SN	N19E86	1548
18 Aug	0600	0613	0621	C6.1	SF	N19E83	1548
18 Aug	0729	0731	0735		SF	N22E89	1548
18 Aug	0810	0810	0813		SF	N22E87	1548
18 Aug	0814	0816	0819		SF	N22E87	1548
18 Aug	0830	0837	0840	C2.6	SN	N22E89	1548
18 Aug	0850	0858	0904	C1.9			
18 Aug	0908	0908	0911		SF	N22E85	1548
18 Aug	0938	0949	0957	C1.0	SF	N22E85	1548
18 Aug	1032	1037	1039	C1.9	SF	N22E86	1548
18 Aug	1119	1120	1123		SF	N22E84	1548
18 Aug	1141	1145	1147	C1.3	SF	N22E86	1548
18 Aug	1149	1153	1155	C2.4			
18 Aug	1223	1226	1228	C1.0			
18 Aug	1230	1233	1236	B9.5			
18 Aug	1329	1338	1342	C2.1	SF	N21E81	1548
18 Aug	1418	1427	1430	C7.3	SF	N20E81	1548
18 Aug	1451	1452	1453		SF	N20E81	1548
18 Aug	1458	1507	1518	C1.3	SF	N21E82	1548
18 Aug	1519	1519	1529		SF	N19E85	1548
18 Aug	1532	1532	1537		SF	N19E81	1548
18 Aug	1602	1607	1609	M2.0	1N	N19E80	1548
18 Aug	1721	1722	1723	B6.4	SF	N20E80	1548
18 Aug	1749	1752	1758	B5.5			
18 Aug	1810	1814	1817	B6.6			
18 Aug	1906	1913	1919	C2.5	SF	N19E78	1548
18 Aug	2109	2114	2117		SF	N19E78	1548
18 Aug	2120	2127	2133	C1.1	SF	N19E78	1548



Flare List

Date	Time			X-ray Class	Optical		Rgn #
	Begin	Max	End		Imp/ Brtns	Location Lat CMD	
18 Aug	2220	2223	2226	B4.4			
18 Aug	2246	2254	2300	M1.0	SF	N19E78	1548
18 Aug	2315	2322	2332	M1.3	SN	N21E76	1548
19 Aug	0127	0131	0135	B5.5			
19 Aug	0219	0223	0226	B6.9	SF	N20E76	1548
19 Aug	0231	0241	0248	C1.9			
19 Aug	0301	0305	0308	B8.7			
19 Aug	0336	0412	0510	C2.2	SF	N20E71	1548
19 Aug	0516	0543	0556	C2.3	SF	N20E72	1548
19 Aug	0605	0608	0617		SF	N22E75	1548
19 Aug	0704	0711	0715	B4.0	SF	N20E69	1548
19 Aug	0811	0827	0832	B7.8	SF	N23E71	1548
19 Aug	0920	0923	0929		SF	N23E70	1548
19 Aug	1048	1049	1055		SF	N21E70	1548
19 Aug	1106	1106	1111		SF	N24E70	1548
19 Aug	1550	1550	1556		SF	N22E69	1548
19 Aug	1651	1655	1700	B2.7			
19 Aug	2243	2315	2338	B8.8			1543



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 1537</i>																		
31 Jul	N12E76	110	10	1	Axx	1	A											
01 Aug	N12E64	108	40	3	Hsx	1	A											
02 Aug	N12E50	109	50	2	Hsx	1	A											
03 Aug	N12E35	111	40	2	Hsx	1	A											
04 Aug	N12E23	110	50	2	Hsx	1	A											
05 Aug	N13E09	109	40	1	Hsx	1	A											
06 Aug	N13W04	110	40	1	Hsx	1	A											
07 Aug	N12W17	110	50	1	Hsx	1	A											
08 Aug	N12W30	110	20	1	Hsx	1	A											
09 Aug	N13W42	108	30	1	Hsx	1	A											
10 Aug	N13W55	108	20	2	Hsx	1	A											
11 Aug	N12W69	108	10	1	Axx	1	A											
12 Aug	N12W82	109	plage															
								0	0	0	0	0	0	0	0	0	0	0

Crossed West Limb.
 Absolute heliographic longitude: 110

<i>Region 1538</i>																		
30 Jul	S23E82	118	plage					1										
31 Jul	S23E68	118	30	4	Dro	2	B	2				15						
01 Aug	S22E54	118	160	8	Dao	6	B	4				8						
02 Aug	S23E43	116	220	9	Dao	7	B											
03 Aug	S22E28	118	220	10	Dao	6	B	1				3						
04 Aug	S22E16	117	220	11	Eso	8	BG											
05 Aug	S22E02	117	140	9	Dso	8	B											
06 Aug	S22W11	117	130	9	Dso	5	B											
07 Aug	S22W23	116	100	10	Dso	3	B					1						
08 Aug	S23W35	115	100	10	Dso	2	B											
09 Aug	S22W47	113	160	10	Dso	5	B	2				2						
10 Aug	S23W60	113	110	9	Dso	6	B											
11 Aug	S23W74	113	70	8	Dso	2	B											
12 Aug	S22W87	113	10	2	Axx	1	A											
								10	0	0	29	0	0	0	0	0	0	0

Crossed West Limb.
 Absolute heliographic longitude: 117



Region Summary - continued

Date	Location		Sunspot Characteristics					Flares									
	Lat	CMD	Helio	Area	Extent	Spot	Spot	Mag	X-ray			Optical					
			Lon	10 ⁶ hemi.	(helio)	Class	Count	Class	C	M	X	S	1	2	3	4	
Region 1539																	
02 Aug	S22E60		99	30	3	Cro	4	B									
03 Aug	S23E45		101	10	6	Bxo	3	B	1						1		
04 Aug	S22E31		102	20	3	Cro	3	B	1			3					
05 Aug	S23E18		101	10	1	Hrx	1	A	1								
06 Aug	S23E04		102	0	1	Axx	1	A									
07 Aug	S20W07		100	plage													
08 Aug	S22W20		100	20	3	Cso	2	B									
09 Aug	S20W29		96	10		Axx	1	A				1					
10 Aug	S20W43		96	plage													
11 Aug	S20W57		97	plage													
12 Aug	S20W71		98	plage													
13 Aug	S20W85		99	plage													
									3	0	0	4	1	0	0	0	

Crossed West Limb.
 Absolute heliographic longitude: 102

Region 1540																	
03 Aug	S27E60		86	30	7	Cro	3	B	1								
04 Aug	S27E46		87	90	7	Cao	8	B				2					
05 Aug	S27E32		87	110	6	Dso	8	B									
06 Aug	S27E17		89	100	6	Cai	13	B									
07 Aug	S26E04		89	90	5	Dai	9	B				5					
08 Aug	S26W09		89	90	6	Dai	9	B	1			4					
09 Aug	S26W21		88	90	5	Cao	6	B				1					
10 Aug	S26W34		87	110	4	Cao	7	B									
11 Aug	S25W50		89	50	1	Hax	1	A		1				1			
12 Aug	S25W62		89	30	1	Hax	1	A									
13 Aug	S25W76		90	plage					1								
14 Aug	S25W90		91	plage					1								
									4	1	0	12	0	1	0	0	

Crossed West Limb.
 Absolute heliographic longitude: 89



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 1541																		
03 Aug	S15E64	82	10	1	Hrx	1	A											
04 Aug	S15E50	83	0	1	Axx	1	A											
05 Aug	S16E38	81	10		Axx	1	A											
06 Aug	S17E24	82	10	1	Axx	1	A											
07 Aug	S17E10	83	plage															
08 Aug	S17W04	84	plage															
09 Aug	S17W18	85	plage															
10 Aug	S17W32	85	plage															
11 Aug	S17W46	86	plage															
12 Aug	S17W60	87	plage															
13 Aug	S17W74	88	plage															
14 Aug	S17W88	89	plage															
									0	0	0	0	0	0	0	0	0	0

Crossed West Limb.
 Absolute heliographic longitude: 84

Region 1542																		
06 Aug	S13E75	31	20	2	Hax	2	A	9	1									
07 Aug	S14E62	31	140	8	Cso	6	B	10			6	2						
08 Aug	S14E50	30	160	9	Dai	9	B	4			8							
09 Aug	S14E37	30	190	7	Dai	14	B	4			9	1						
10 Aug	S16E24	29	130	6	Dai	10	B	3			6							
11 Aug	S14E08	31	110	4	Dao	7	B	1			4	2						
12 Aug	S13W04	30	60	5	Dao	6	BG				5							
13 Aug	S12W18	32	40	7	Dao	4	BG											
14 Aug	S12W33	34	40	6	Cao	4	B	2			1	1						
15 Aug	S14W46	33	10	2	Bxo	3	B				1							
16 Aug	S11W62	35	0	1	Axx	1	A				1							
17 Aug	S11W76	37	plage															
18 Aug	S11W90	38	plage															
										33	1	0	41	6	0	0	0	0

Crossed West Limb.
 Absolute heliographic longitude: 30



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 1543																		
07 Aug	N21E70	23	140	8	Cso	4	B											
08 Aug	N21E58	22	230	9	Dao	4	B											
09 Aug	N21E45	22	260	8	Dho	6	BG											
10 Aug	N21E33	20	250	10	Dho	4	B					1						
11 Aug	N20E20	20	250	10	Dho	9	B					1						
12 Aug	N20E07	19	230	9	Dso	5	BG											
13 Aug	N20W05	19	250	10	Dko	12	BG	2				1						
14 Aug	N22W19	20	300	7	Cko	9	BG	2				3						
15 Aug	N21W34	21	300	4	Cho	9	BG					3						
16 Aug	N22W48	22	360	3	Hhx	2	A	1				1	1					
17 Aug	N24W59	20	320	6	Cko	5	B	2				1						
18 Aug	N24W73	21	320	6	Cko	5	B											
19 Aug	N23W86	20	180	6	Dso	3	B											
								7	0	0	11	1	0	0	0	0		

Still on Disk.

Absolute heliographic longitude: 19

Region 1544																		
09 Aug	S30W06	73	70	5	Dai	10	B	3				8						
10 Aug	S29W20	73	80	8	Dso	6	B	1				1						
11 Aug	S31W33	72	70	8	Dao	7	B	1				2						
12 Aug	S31W45	72	50	2	Cao	2	B											
13 Aug	S29W56	70	30	2	Cao	2	B											
14 Aug	S29W70	71	plage															
15 Aug	S29W84	71	plage															
								6	0	0	11	0	0	0	0	0		

Crossed West Limb.

Absolute heliographic longitude: 73

Region 1545																		
11 Aug	S14W21	61	10	1	Bxo	1	B											
12 Aug	S14W34	61	10	1	Bxo	1	B											
13 Aug	S14W49	63	20	6	Cso	4	B											
14 Aug	S14W63	64	10	5	Axx	3	A											
15 Aug	S14W77	64	plage															
								0	0	0	0	0	0	0	0	0		

Died on Disk.

Absolute heliographic longitude: 61



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 1546

16 Aug	N16E69	265	50	1	Hsx	1	A										
17 Aug	N16E56	264	50	3	Hsx	1	A										
18 Aug	N16E42	266	50	3	Hsx	1	A										
19 Aug	N16E28	266	50	2	Hsx	1	A										
								0	0	0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 266

Region 1547

17 Aug	N05E21	298	30	5	Cso	6	B										
18 Aug	N06E09	298	10	3	Cro	2	B										
19 Aug	N06W04	298	20	4	Cso	3	B										
								0	0	0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 298

Region 1548

18 Aug	N20E76	232	120	5	Cao	8	B	10	5		23	1					
19 Aug	N19E62	232	80	8	Cso	7	B	2			10						
								12	7	0	33	1	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 232

Region 1549

19 Aug	S16W30	323	20	4	Cso	3	B										
								0	0	0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 323

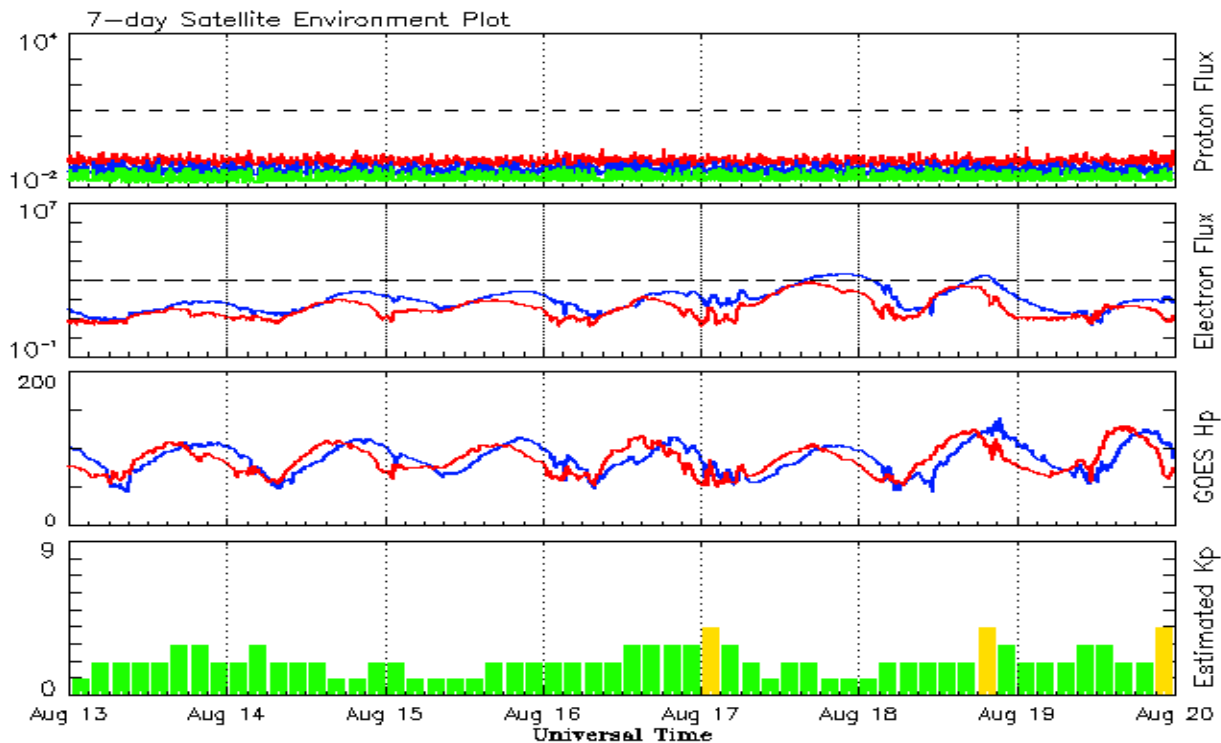


Recent Solar Indices (preliminary)
Observed monthly mean values

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									
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	57.2	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	84.6	59.5	134.5	118.4	13	7.7
October	116.8	88.0	0.75	84.6	59.9	137.2	118.4	7	8.0
November	133.1	96.7	0.73	86.3	61.1	153.1	119.5	3	8.0
December	106.3	73.0	0.69	89.2	63.4	141.2	121.6	3	8.0
2012									
January	91.3	58.3	0.64	92.0	65.5	133.1	124.4	6	8.3
February	50.1	32.9	0.66			106.7		7	
March	77.9	64.3	0.82			115.1		14	
April	84.4	55.2	0.65			113.1		9	
May	99.5	69.0	0.69			121.5		8	
June	88.6	64.5	0.73			120.5		10	
July	99.6	66.5	0.67			135.6		13	

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 13 August 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.

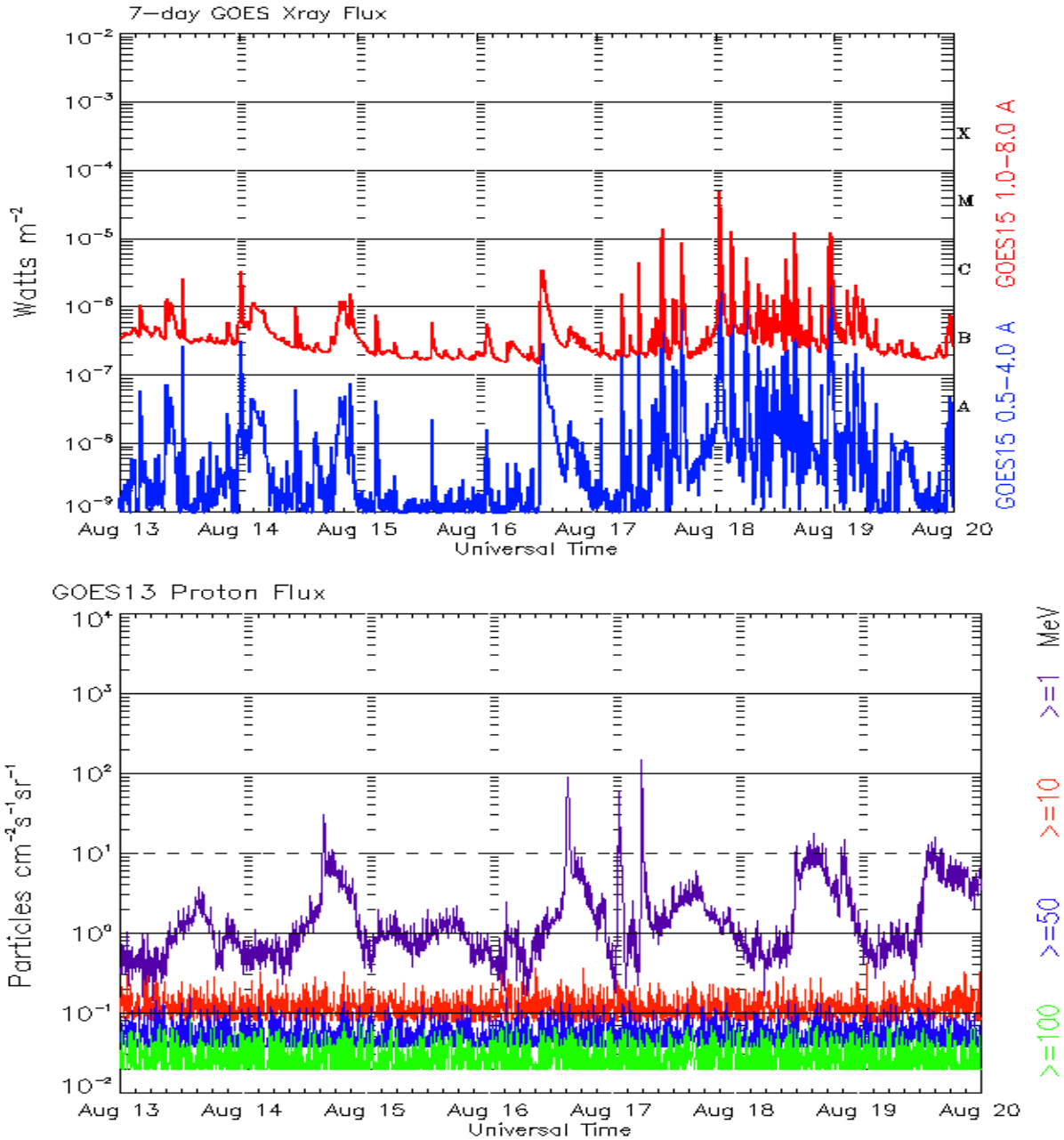
The electron flux plot contains the five-minute averaged integral electron flux (electrons/cm²-sec -sr) with energies greater than 2 MeV by the SWPC Primary GOES satellite.

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 13 August 2012*

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 integral 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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