

Solar activity ranged from very low to moderate levels. Very low activity was observed on 17-19 Aug, low level activity on 20 and 23 Aug and moderate level activity on 21-22 Aug. Developing Region 2403 (S15, L=193, class/area Ekc/760 on 23 Aug), which exhibited a complex beta-gamma-delta magnetic configuration, produced all of the flare activity during the period.

On 21 Aug, Region 2403 produced three M1 (R1-minor) flares, the largest was an M1/2b flare observed at 21/0948 UTC. Associated with this event was a Type II radio emission (estimated 490 km/s shock velocity) and a partial-halo CME observed off the south limb, first visible in SOHO/LASCO C2 imagery at 21/1024 UTC. Analysis of this CME determined that a weak Earth-directed component was present.

22 Aug saw 2 more M-class flares produced by Region 2403, the largest was an M3/1b flare observed at 22/2124 UTC. Early on the 22nd, the region produced an M1/1b flare observed at 22/0649 UTC. Associated with this event was a Type II radio emission (estimated 1149 km/s shock velocity), a Type IV radio emission and a partial-halo CME observed off the NE limb, first visible in SOHO/LASCO C2 imagery at 22/0712 UTC. Analysis of this CME determined that a weak Earth-directed component was present.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit was at high levels on 17-22 Aug with a peak flux of 9,116 pfu observed at 21/1830 UTC. Moderate levels were observed on 23 Aug.

Geomagnetic field activity generally ranged from quiet to active levels during the period. Isolated minor storm (G1-minor) periods were observed midday on 17 Aug and again on 23 Aug. An isolated major storm (G2-moderate) period was observed between 0600-0900 UTC on 23 Aug. From 17-20 Aug, field conditions ranged from quiet to minor storm levels and were influenced by a geoeffective positive polarity coronal hole high speed stream (CH HSS). During this time frame, measurements at the ACE satellite indicated peak wind speeds approaching 600 km/s midday on 17 Aug. However, ACE parameters indicated a fairly weak magnetic structure was present with Bz measuring a maximum southward extent of only -7 nT. Quiet to unsettled conditions were present for 21-22 Aug.

By 23 Aug, field conditions increased to unsettled to major storm levels under the influence of a co-rotating interaction region (CIR) in advance of an equatorial, positive polarity CH HSS. At about 23/0600 UTC, solar wind parameters observed an increase in wind speeds from about 400 km/s to near 550 km/s by about 23/0900 UTC. Wind speeds further increased to 610 km/s by 23/1400 UTC before ending the period near 525 km/s. IMF total field registered maximum readings of 15 nT at about 23/0700 UTC while the Bz component reached a maximum southward extent of -12 nT at about 23/0600 UTC. The phi angle remained in a predominately positive (away) orientation throughout the summary period.



Space Weather Outlook 24 August - 19 September 2015

Solar activity is likely to be at moderate levels (R1-R2, minor-moderate), with a slight chance for X-class flares (R3-Strong or greater), from 24-29 August due to the flare potential from Region 2403. Very low to low flare activity is expected from 30 Aug to 10 Sep after Region 2403 rotates off the visible disk. A return to moderate levels (R1-R2, minor-moderate), with a slight chance for X-class flares (R3-Strong or greater), is likely from 11-19 Sep after the return of old Region 2403 (S15, L=193).

No proton events are expected at geosynchronous orbit barring any significant flare activity from Region 2403.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at moderate to high levels throughout the period. Moderate levels are expected on 24 Aug, 27 Aug, 01-04 Sep, 09-12 Sep and 19 Sep. High levels are expected from 25-26 Aug, 28-31 Aug, 05-08 Sep and 13-18 Sep.

Geomagnetic field activity is expected to be at G1 (minor) on 24 Aug due to effects from the 21 and 22 Aug CMEs coupled with a positive polarity CH HSS. G1 (minor) field activity is also expected on 03 Sep due to a positive polarity CH HSS. Unsettled to active levels are expected on 25-29 Aug, 02 Sep, 04-06 Sep, 12-14 Sep, 16 Sep and 27 Sep due to recurrent CH HSS influences. Quiet to unsettled levels are expected for the remainder of the outlook 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
17 August	87	20	30	B1.4	0	0	0	0	0	0	0	0
18 August	89	44	110	B1.4	0	0	0	1	0	0	0	0
19 August	98	36	150	B2.0	0	0	0	6	0	0	0	0
20 August	103	68	410	B4.2	6	0	0	17	0	1	0	0
21 August	110	78	380	B5.0	3	3	0	19	2	1	0	0
22 August	117	72	420	B9.6	13	2	0	8	4	0	0	0
23 August	133	93	790	B6.2	5	0	0	10	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
	17 August	9.2e+05	1.1e+04	2.7e+03		2.3e+08
18 August	3.8e+05	1.1e+04	3.0e+03		8.6e+08	
19 August	4.2e+05	1.2e+04	3.0e+03		9.5e+07	
20 August	4.1e+05	1.2e+04	2.7e+03		2.2e+08	
21 August	2.9e+05	1.1e+04	2.7e+03		3.4e+08	
22 August	1.5e+05	1.1e+04	2.6e+03		1.8e+08	
23 August	2.6e+05	1.1e+04	2.7e+03		6.2e+06	

Daily Geomagnetic Data

Date	Middle Latitude Fredericksburg		High Latitude College		Estimated Planetary	
	A	K-indices	A	K-indices	A	K-indices
	17 August	27	4-5-5-4-4-3-3-2	47	3-4-6-6-6-6-2-2	27
18 August	10	3-3-3-3-1-2-1-2	11	3-3-3-3-1-3-1-2	9	3-3-3-2-1-2-1-2
19 August	18	3-3-4-4-4-3-2-2	44	4-4-5-5-7-5-2-2	19	4-4-4-3-4-3-3-2
20 August	11	2-3-1-3-3-2-3-2	28	2-2-3-4-7-3-2-1	13	2-3-2-2-4-2-3-3
21 August	6	1-2-2-1-3-1-1-1	8	2-2-4-0-2-2-1-1	6	1-2-2-1-2-1-1-1
22 August	8	1-1-2-3-3-2-2-2	19	1-1-3-5-5-4-2-1	9	2-1-2-3-3-2-2-2
23 August	23	3-2-5-5-4-2-3-3	42	2-3-5-7-6-4-3-2	28	3-3-6-5-4-3-3-3



Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
17 Aug 0755	EXTENDED WARNING: Geomagnetic K = 4	15/0837 - 17/1400
17 Aug 0806	WARNING: Geomagnetic K = 5	17/0805 - 1300
17 Aug 1012	CONTINUED ALERT: Electron 2MeV Integral Flux \geq 1000pfu	16/1800
17 Aug 1257	EXTENDED WARNING: Geomagnetic K = 4	15/0837 - 17/1800
17 Aug 1257	EXTENDED WARNING: Geomagnetic K = 5	17/0805 - 1800
17 Aug 1501	ALERT: Geomagnetic K = 5	17/1459
17 Aug 1652	WATCH: Geomagnetic Storm Category G1 predicted	
17 Aug 1748	EXTENDED WARNING: Geomagnetic K = 5	17/0805 - 18/0300
17 Aug 1748	EXTENDED WARNING: Geomagnetic K = 4	15/0837 - 18/0300
18 Aug 0501	CONTINUED ALERT: Electron 2MeV Integral Flux \geq 1000pfu	16/1800
19 Aug 0226	WARNING: Geomagnetic K = 4	19/0300 - 1200
19 Aug 0257	ALERT: Geomagnetic K = 4	19/0257
19 Aug 1145	EXTENDED WARNING: Geomagnetic K = 4	19/0300 - 1800
19 Aug 1318	EXTENDED WARNING: Geomagnetic K = 4	19/0300 - 2359
19 Aug 1318	WARNING: Geomagnetic K = 5	19/1317 - 1900
19 Aug 1418	CONTINUED ALERT: Electron 2MeV Integral Flux \geq 1000pfu	16/1800
20 Aug 1031	CONTINUED ALERT: Electron 2MeV Integral Flux \geq 1000pfu	16/1800
20 Aug 1244	WARNING: Geomagnetic K = 4	20/1245 - 2200
20 Aug 1328	ALERT: Geomagnetic K = 4	20/1327
20 Aug 1651	WATCH: Geomagnetic Storm Category G1 predicted	
21 Aug 0825	CONTINUED ALERT: Electron 2MeV Integral Flux \geq 1000pfu	16/1800
21 Aug 1032	ALERT: Type II Radio Emission	21/0959
21 Aug 1039	ALERT: Type IV Radio Emission	21/0942
22 Aug 0500	CONTINUED ALERT: Electron 2MeV Integral Flux \geq 1000pfu	16/1800
22 Aug 0742	ALERT: Type II Radio Emission	22/0650

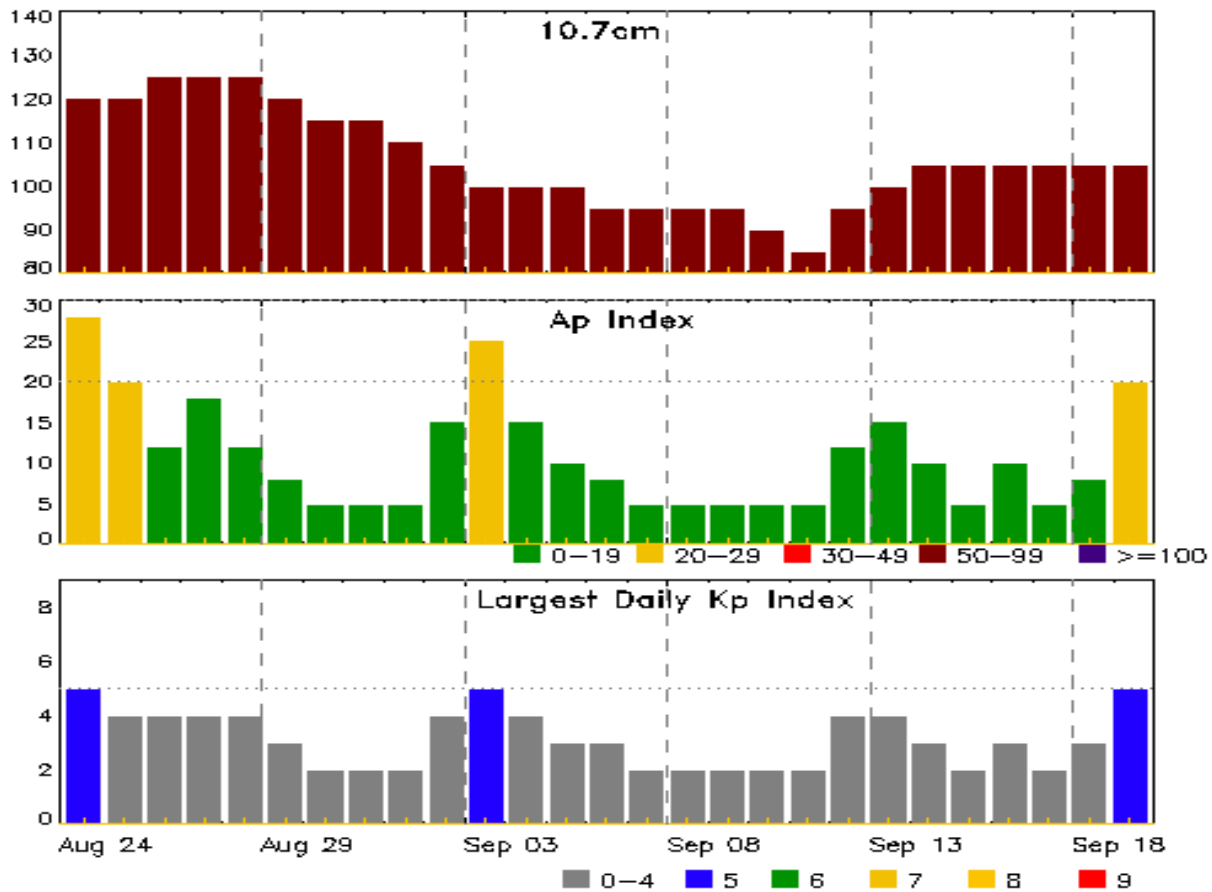


Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
22 Aug 0742	ALERT: Type IV Radio Emission	22/0656
22 Aug 2131	WATCH: Geomagnetic Storm Category G1 predicted	
23 Aug 0240	WARNING: Geomagnetic K = 4	23/0239 - 1300
23 Aug 0722	ALERT: Geomagnetic K = 4	23/0717
23 Aug 0730	WARNING: Geomagnetic K = 5	23/0730 - 1300
23 Aug 0737	ALERT: Geomagnetic K = 5	23/0731
23 Aug 0800	WARNING: Geomagnetic K = 6	23/0800 - 1300
23 Aug 0901	ALERT: Geomagnetic K = 6	23/0859
23 Aug 1106	ALERT: Geomagnetic K = 5	23/1101
23 Aug 1322	WARNING: Geomagnetic K = 4	23/1322 - 2300
23 Aug 1347	ALERT: Geomagnetic K = 4	23/1347
23 Aug 1413	WARNING: Geomagnetic K = 5	23/1412 - 2300
23 Aug 2110	EXTENDED WARNING: Geomagnetic K = 4	23/1322 - 24/1900



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
24 Aug	120	28	5	07 Sep	95	5	2
25	120	20	4	08	95	5	2
26	125	12	4	09	95	5	2
27	125	18	4	10	90	5	2
28	125	12	4	11	85	5	2
29	120	8	3	12	95	12	4
30	115	5	2	13	100	15	4
31	115	5	2	14	105	10	3
01 Sep	110	5	2	15	105	5	2
02	105	15	4	16	105	10	3
03	100	25	5	17	105	5	2
04	100	15	4	18	105	8	3
05	100	10	3	19	105	20	5
06	95	8	3				

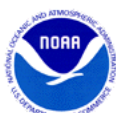


Energetic Events

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
21 Aug	0156	0218	0237	M1.2	0.022	1F	S16E39	2403				
21 Aug	0934	0948	1007	M1.4	0.018	2B	S17E26	2403	120	73	1	
21 Aug	1910	2034	2050	M1.1	0.031	1N	S12E26	2403				
22 Aug	0639	0649	0659	M1.2	0.010	1B	S15E20	2403	330	62	2	2
22 Aug	2119	2124	2128	M3.5	0.011	1B	S15E15	2403				

Flare List

Date	Time			X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
	Begin	Max	End				
17 Aug	0020	0025	0029	B2.7			2401
17 Aug	0841	0845	0850	B2.8			2403
17 Aug	1349	1353	1357	B2.1			2401
17 Aug	1420	1424	1427	B2.6			2401
18 Aug	0001	0022	0036	B2.9			2403
18 Aug	1422	1422	1424		SF	S12E70	2403
18 Aug	1453	1512	1534	B4.3			2403
19 Aug	0518	0538	0545	B4.8			2403
19 Aug	1048	1053	1055	B6.8	SF	S10E58	2403
19 Aug	1146	1150	1154	B3.0	SF	S10E58	2403
19 Aug	1201	1204	1208	B3.6			2403
19 Aug	1213	1217	1219	B5.4	SF	S10E58	2403
19 Aug	B1303	U1307	1321	B6.1	SF	S11W21	2401
19 Aug	1323	U1325	A1336		SF	S12E60	2403
19 Aug	1354	1421	1443	B6.4			2403
19 Aug	1558	1601	1603	B4.5			
19 Aug	1759	1804	1809	B6.2	SF	S15E58	2403
19 Aug	1935	1938	1941	B4.6			2403
19 Aug	2150	2153	2158	B4.0			2403
19 Aug	2227	2247	2303	B5.1			2403
20 Aug	0054	0058	0100	B5.5			2403
20 Aug	0232	0235	0237	B4.2			2403
20 Aug	0508	0526	0629	C3.4	2N	S13E45	2403
20 Aug	0623	0638	0643		SF	S17E47	2403
20 Aug	0700	0723	0728	C1.7	SF	S18E49	2403
20 Aug	B0747	U0809	A0847	C1.6	SF	S13E47	2403



Flare List

Date	Time			Optical			Rgn #
	Begin	Max	End	X-ray Class	Imp/Brtns	Location Lat CMD	
20 Aug	B0849	U0851	A0913		SF	S13E47	2403
20 Aug	B0931	U1015	A1109		SF	S13E47	2403
20 Aug	B1157	U1213	A1215		SF	S13E47	2403
20 Aug	B1241	U1244	A1248		SF	S13E47	2403
20 Aug	B1249	U1250	1253		SF	S13E47	2403
20 Aug	1346	1350	1355	B8.2	SF	S12E46	2403
20 Aug	1425	1559	1619	C1.1	SF	S13E45	2403
20 Aug	1654	1733	1737		SF	S15E43	2403
20 Aug	1750	1753	1755	B9.6	SF	S15E43	2403
20 Aug	1851	1852	1856		SF	S15E43	2403
20 Aug	1907	1907	1912		SF	S09W40	2401
20 Aug	2134	2138	2145	C1.3	SF	S14E39	2403
20 Aug	2223	2228	2238	B8.9	SF	S16E40	2403
20 Aug	2330	2341	2344	C1.1	SF	S16E41	2403
21 Aug	0027	0030	0032	B9.7	SF	S16E39	2403
21 Aug	0151	0215	0311	M1.2	1F	S16E39	2403
21 Aug	0314	0320	0326		SF	S14E37	2403
21 Aug	0334	0336	0339		SF	S15E36	2403
21 Aug	0756	0804	0811	B9.1	SF	S14E33	2403
21 Aug	0817	0826	0850	C1.2	SF	S14E34	2403
21 Aug	0934	0948	1007	M1.4	2B	S17E26	2403
21 Aug	B1114	U1135	1222		SF	S19E29	2403
21 Aug	B1236	U1307	A1345		SF	S12E35	2403
21 Aug	B1433	U1439	1457	C1.2	SF	S09E30	2403
21 Aug	1514	1516	1523		SF	S13E31	2403
21 Aug	1544	1553	1648		SF	S13E28	2403
21 Aug	1649	1654	1701		SF	S15E30	2403
21 Aug	1711	1714	1718		SF	S15E30	2403
21 Aug	1743	1745	1748		SF	S16E27	2403
21 Aug	1810	1811	1812		SF	S15E27	2403
21 Aug	1910	2034	2050	M1.1	1N	S12E26	2403
21 Aug	2147	2148	2203		SF	S14E27	2403
21 Aug	2224	2225	2228		SF	S14E26	2403
21 Aug	B2317	2321	2327		SF	S15E26	2403
21 Aug	2334	2346	2353	C1.3	SF	S22E16	2403
21 Aug	2344	2344	2355		SF	S15E24	2403
22 Aug	0020	0027	0037	C2.0	SF	S15E22	2403
22 Aug	B0445	U0537	A0616		SF	S14E24	2403



Flare List

Date	Time			X-ray Class	Optical		Rgn #
	Begin	Max	End		Imp/ Brtns	Location Lat CMD	
22 Aug	B0622	U0646	A0757		1B	S15E20	2403
22 Aug	0627	0633	0637	C5.1			2403
22 Aug	0639	0649	0659	M1.2			2403
22 Aug	0821	U0914	1056		1F	S14E19	2403
22 Aug	0834	0843	0848	C6.7			2403
22 Aug	0909	0921	0939	C5.1			2403
22 Aug	1021	1025	1031	C6.3			2403
22 Aug	1106	1106	1110		SF	S14E20	2403
22 Aug	1117	1134	1147	C3.4	SF	S15E18	2403
22 Aug	B1250	U1254	A1255		SF	S13E19	2403
22 Aug	B1322	U1322	A1517	C2.2	1N	S15E19	2403
22 Aug	1519	1521	1526		SF	S15E17	2403
22 Aug	1519	1529	1531	C1.6	SF	S15E19	2403
22 Aug	1542	U1621	1649	C1.6	SF	S15E16	2403
22 Aug	1843	1857	1901	C2.2			2403
22 Aug	2004	2042	2054	C3.1			
22 Aug	2119	2124	2128	M3.5	1B	S15E15	2403
22 Aug	2234	2237	2240	C1.5			2403
22 Aug	2302	2329	2357	C2.7			2403
23 Aug	B0000	U0019	0030		SF	S15E06	2403
23 Aug	B0455	U0502	0612		1F	S15E10	2403
23 Aug	0648	0648	0652		SF	S15E08	2403
23 Aug	0700	0714	0723	C6.6	SF	S15E09	2403
23 Aug	0853	0857	0913	C2.4	SF	S15E07	2403
23 Aug	0937	0937	0941		SF	S15E07	2403
23 Aug	0953	0956	0958	B9.8			2403
23 Aug	1115	1121	1126	C1.7	SF	S16E09	2403
23 Aug	B1435	1438	1444		SF	S15E15	2403
23 Aug	1447	1448	1451		SF	S15E03	2403
23 Aug	B1711	1715	1725		SF	S15E03	2403
23 Aug	1856	1907	1927	C3.9			2403
23 Aug	2044	2057	2105	C2.2			2403
23 Aug	2334	2337	2345		SF	S15W03	2403



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

Region 2398

07 Aug	N15E60	340	30	1	Hax	1	A										
08 Aug	N15E47	340	20	2	Hax	2	A										
09 Aug	N15E33	341	10	1	Hrx	1	A										
10 Aug	N16E19	341	10	1	Hrx	1	A										
11 Aug	N16E06	341	10	1	Axx	1	A										
12 Aug	N16W08	342	10	1	Axx	1	A										
13 Aug	N16W22	343	plage														
14 Aug	N16W36	344	plage														
15 Aug	N16W50	345	plage														
16 Aug	N16W64	345	plage														
17 Aug	N16W78	346	plage														
								0	0	0	0	0	0	0	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 341

Region 2399

11 Aug	S16W00	347	10	3	Bxo	3	B										
12 Aug	S16W14	348	10	3	Bxo	2	B										
13 Aug	S16W28	349	plage														
14 Aug	S16W42	350	plage														
15 Aug	S16W56	351	plage														
16 Aug	S16W70	351	plage														
17 Aug	S16W84	352	plage														
								0	0	0	0	0	0	0	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 347



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 2400																							
11 Aug	N17E36	311	10	4	Bxo	4	B						2										
12 Aug	N17E22	312	10	1	Bxo	2	B																
13 Aug	N17E07	314	50	5	Dao	7	B						1										
14 Aug	N17W05	313	50	5	Cao	5	B																
15 Aug	N18W18	313	30	5	Cao	5	B																
16 Aug	N17W33	314	10	2	Axx	2	A																
17 Aug	N17W47	315	plage																				
18 Aug	N17W61	316	plage																				
19 Aug	N17W75	317	plage																				
20 Aug	N17W89	318	plage																				
										0	0	0	3	0	0	0	0	0					

Crossed West Limb.
 Absolute heliographic longitude: 313

Region 2401																							
13 Aug	S11E50	271	10	3	Bxo	5	B						3										
14 Aug	S12E37	271	70	6	Cai	8	B	4					4										
15 Aug	S11E22	273	30	7	Cri	8	B	1					3										
16 Aug	S11E10	271	70	8	Dai	10	B						1										
17 Aug	S10W03	270	30	8	Cro	10	B																
18 Aug	S10W17	272	40	8	Cso	10	B																
19 Aug	S10W30	272	60	9	Dai	8	B						1										
20 Aug	S11W42	271	60	5	Dao	6	B						1										
21 Aug	S11W58	273	10	1	Hrx	2	A																
22 Aug	S11W72	274	plage																				
23 Aug	S11W86	275	plage																				
										5	0	0	13	0	0	0	0	0					

Still on Disk.
 Absolute heliographic longitude: 270

Region 2402																							
18 Aug	N05W38	293	10	1	Axx	1	A																
19 Aug	N05W53	295	plage																				
20 Aug	N05W68	297	plage																				
21 Aug	N05W83	298	plage																				
										0	0	0	0	0	0	0	0	0					

Crossed West Limb.
 Absolute heliographic longitude: 293



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 2403																	
18 Aug	S12E64	191	60	8	Cso	3	B					1					
19 Aug	S12E50	192	90	8	Dac	8	B					5					
20 Aug	S13E37	192	330	8	Dkc	29	BG	6				16		1			
21 Aug	S14E23	192	350	10	Dkc	43	BG	3	3			19	2	1			
22 Aug	S14E09	193	400	13	Ekc	49	BGD	12	2			8	4				
23 Aug	S15W04	193	760	15	Ekc	66	BGD	5				10	1				
								26	5	0		59	7	2	0	0	

Still on Disk.

Absolute heliographic longitude: 193

Region 2404

20 Aug	N15E25	204	20	3	Cao	3	B										
21 Aug	N14E13	202	20	3	Cro	3	B										
22 Aug	N14W01	203	20	4	Cro	3	B										
23 Aug	N14W16	205	30	4	Cro	7	B										
								0	0	0		0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 203

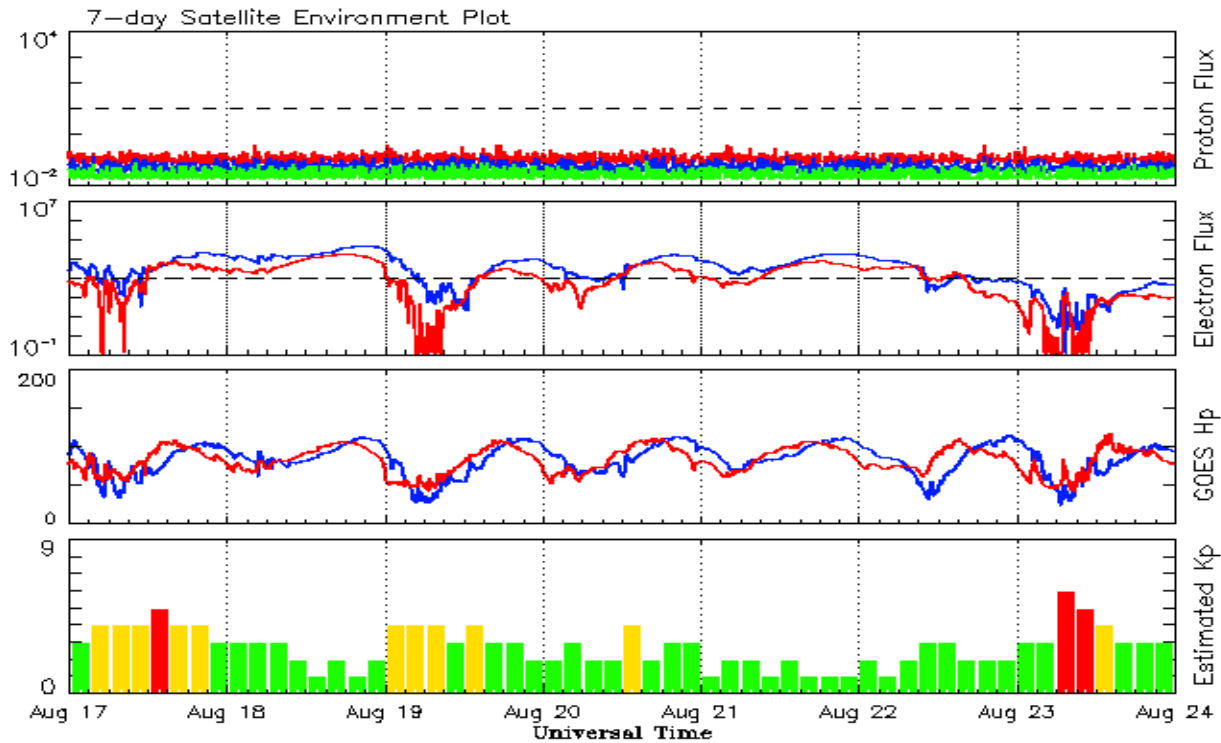


Recent Solar Indices (preliminary)
Observed monthly mean values

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
2013									
August	90.2	66.0	0.73	103.7	68.9	114.7	127.9	9	7.6
September	55.0	37.0	0.67	111.0	73.0	102.7	132.3	5	7.8
October	127.1	85.6	0.67	114.3	74.9	132.3	134.7	7	7.8
November	125.7	77.6	0.62	114.6	75.3	148.4	135.4	5	7.9
December	118.2	90.3	0.76	115.4	75.9	147.7	135.9	5	7.5
2014									
January	125.9	81.8	0.65	117.7	77.3	158.6	137.3	6	7.1
February	174.6	102.3	0.59	119.5	78.3	170.3	138.6	12	6.9
March	141.1	91.9	0.65	123.2	80.8	149.9	140.8	6	7.2
April	130.5	84.7	0.65	124.8	81.9	144.3	143.5	9	7.5
May	116.8	75.2	0.64	122.3	80.5	130.0	144.7	7	7.9
June	107.7	71.0	0.66	121.4	79.7	122.2	145.5	7	8.4
July	113.6	72.4	0.64	120.4	78.5	137.3	145.2	5	8.8
August	106.2	74.6	0.70	115.1	75.5	124.7	142.8	9	8.9
September	127.4	87.6	0.69	107.4	70.8	146.1	140.1	11	9.3
October	92.0	60.6	0.66	101.7	67.3	153.7	138.4	10	9.9
November	101.8	70.2	0.69	97.9	65.4	155.3	137.4	10	10.1
December	120.0	76.7	0.65	95.2	56.0	158.7	137.0	12	10.5
2015									
January	101.2	67.0	0.66	92.1	53.9	141.7	135.8	10	11.0
February	70.6	44.8	0.63			128.8		10	
March	61.7	38.4	0.62			126.0		17	
April	72.5	54.4	0.75			129.2		12	
May	83.0	58.8	0.71			120.1		9	
June	77.3	41.0	0.53			123.2		14	
July	68.4	39.8	0.58			107.0		10	

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 17 August 2015*

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.

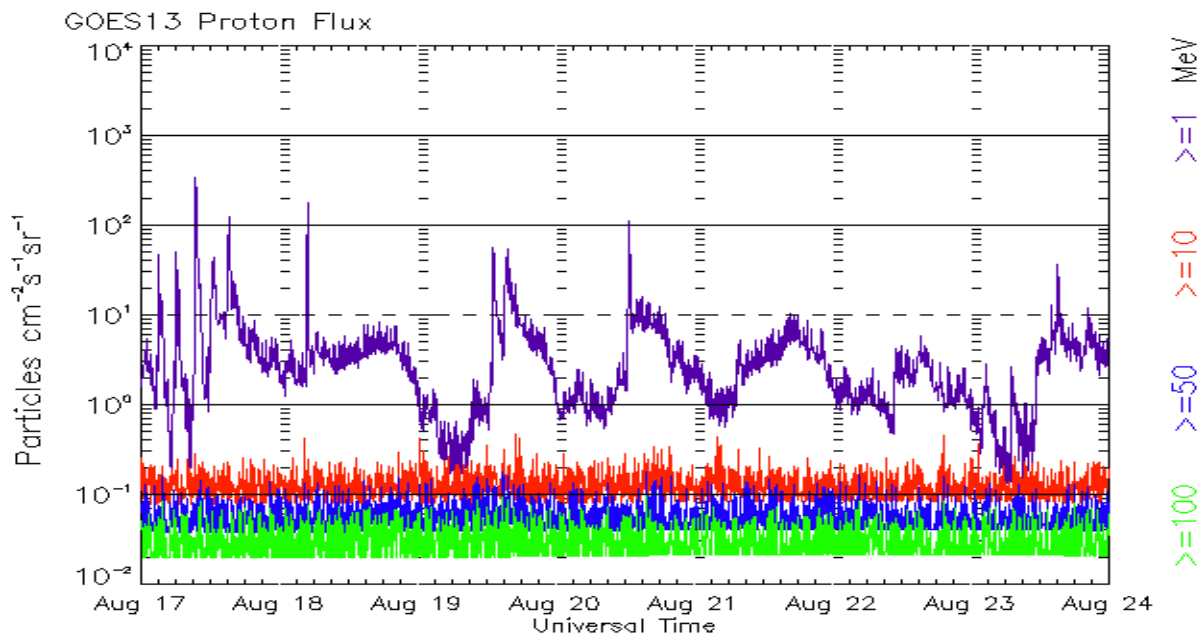
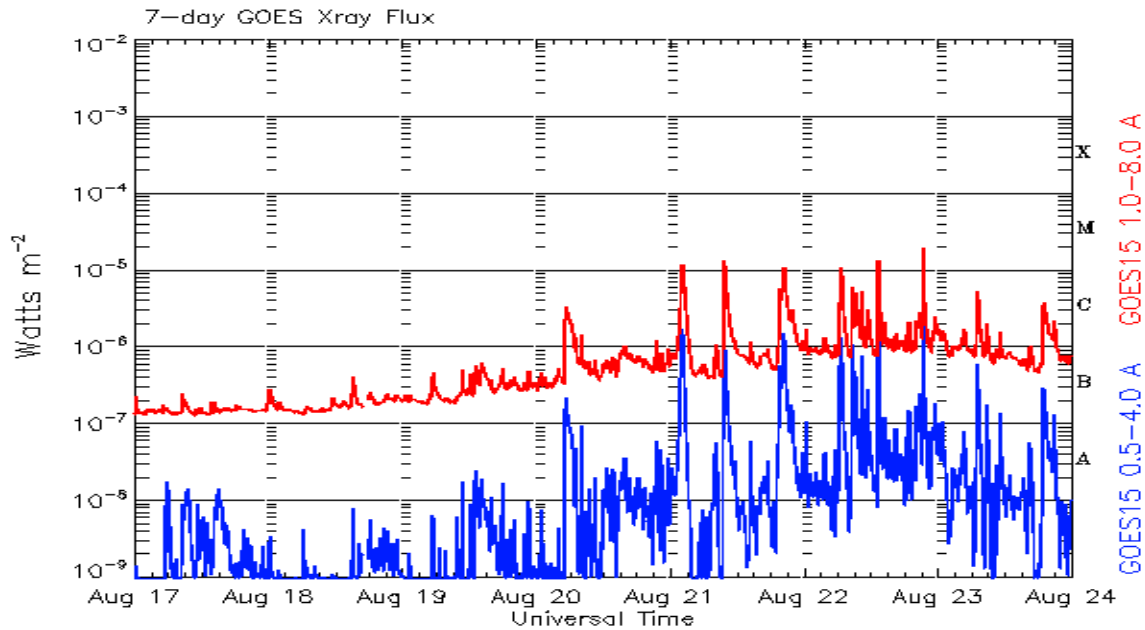
The electron flux plot contains the five-minute averaged integral electron flux (electrons/cm²-sec -sr) with energies greater than 2 MeV by the SWPC Primary GOES satellite.

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 17 August 2015*

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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