

Space Weather Highlights
17 November - 23 November 2014

SWPC PRF 2047
24 November 2014

Solar activity was at low levels through the period with numerous C-class flares observed. The bulk of the activity occurred from Region 2209 (S13, L=251, class/area Fkc/1100 on 18 Nov) and 2216 (S13, L=165, class/area Dko/640 on 21 Nov). The largest event this period was a C8/1b flare from Region 2209 observed on 22/0101 UTC. No Earth-directed coronal mass ejections were detected.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit was at high flux levels on 17-20 November and moderate flux levels on 21-23 November.

Geomagnetic field activity was at predominately quiet to unsettled levels with isolated active periods on 19-22 November. An extensive, but weak, positive coronal hole high speed stream (CH HSS) was responsible for this period's geomagnetic activity.

Solar wind parameters indicated a fairly steady IMF total field (Bt) that ranged between 5-9 nT while the Bz component did not vary much beyond +6 to -7 nT. Solar wind speeds averaged about 430 km/s with low to high variations of about 350 km/s observed late on 22 November to near 515 km/s observed early on 18 November. The phi angle was in a predominately positive (away) orientation through the period.

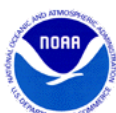
Space Weather Outlook
24 November - 20 December 2014

Solar activity is expected to be at predominately low to moderate levels with a slight chance for high levels through the outlook period.

A slight chance for a greater than 10 MeV proton event at geosynchronous orbit exists through the outlook period.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at moderate to high levels on 24 November to 01 December and again on 12-20 December. Normal levels are forecasted on 02-11 December.

Geomagnetic field activity is expected to be at quiet to active levels on 24 November, 04-06 and 11-20 December with isolated minor storm periods on 13 December. This activity is due to a combination of CH HSS effects and solar sector boundary crossings. Mostly quiet conditions are anticipated 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 November	168	95	1050	B7.9	3	0	0	5	0	0	0	0
18 November	167	92	1140	B8.9	6	0	0	2	0	0	0	0
19 November	170	72	970	B9.2	2	0	0	8	0	0	0	0
20 November	168	83	1360	B8.8	3	0	0	7	0	0	0	0
21 November	163	68	1550	B7.7	6	0	0	15	0	0	0	0
22 November	167	64	1590	B8.6	10	0	0	7	3	0	0	0
23 November	173	66	1810	B8.9	9	0	0	5	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
	17 November	4.6e+05	1.2e+04	2.8e+03		2.3e+08
18 November	3.0e+05	1.2e+04	3.2e+03		1.2e+08	
19 November	1.5e+05	1.2e+04	3.3e+03		7.6e+07	
20 November	1.7e+05	1.2e+04	2.9e+03		4.3e+07	
21 November	1.5e+05	1.2e+04	2.8e+03		2.3e+07	
22 November	1.2e+05	1.1e+04	2.6e+03		2.0e+07	
23 November	1.5e+05	1.1e+04	2.6e+03		1.9e+07	

Daily Geomagnetic Data

Date	Middle Latitude Fredericksburg		High Latitude College		Estimated Planetary	
	A	K-indices	A	K-indices	A	K-indices
	17 November	8	2-1-1-2-3-2-3-2	16	1-1-0-5-5-3-2-2	12
18 November	9	2-2-2-3-3-2-1-2	20	2-2-3-5-5-4-2-1	11	3-3-2-3-3-3-2-2
19 November	6	2-1-1-1-2-2-3-1	9	2-1-1-3-4-2-1-1	8	4-1-2-2-2-1-2-1
20 November	8	2-2-2-3-2-2-2-1	19	2-2-3-5-4-4-3-1	11	4-2-2-3-1-2-3-2
21 November	10	3-3-1-2-3-2-2-2	26	3-3-3-6-4-5-2-1	15	4-4-2-3-3-3-3-3
22 November	8	2-2-3-1-2-1-2-3	13	2-2-3-5-2-2-1-2	10	3-2-2-2-2-2-3-4
23 November	9	1-1-3-3-3-2-2-1	24	2-2-3-6-5-3-3-1	10	2-2-3-3-3-2-3-2

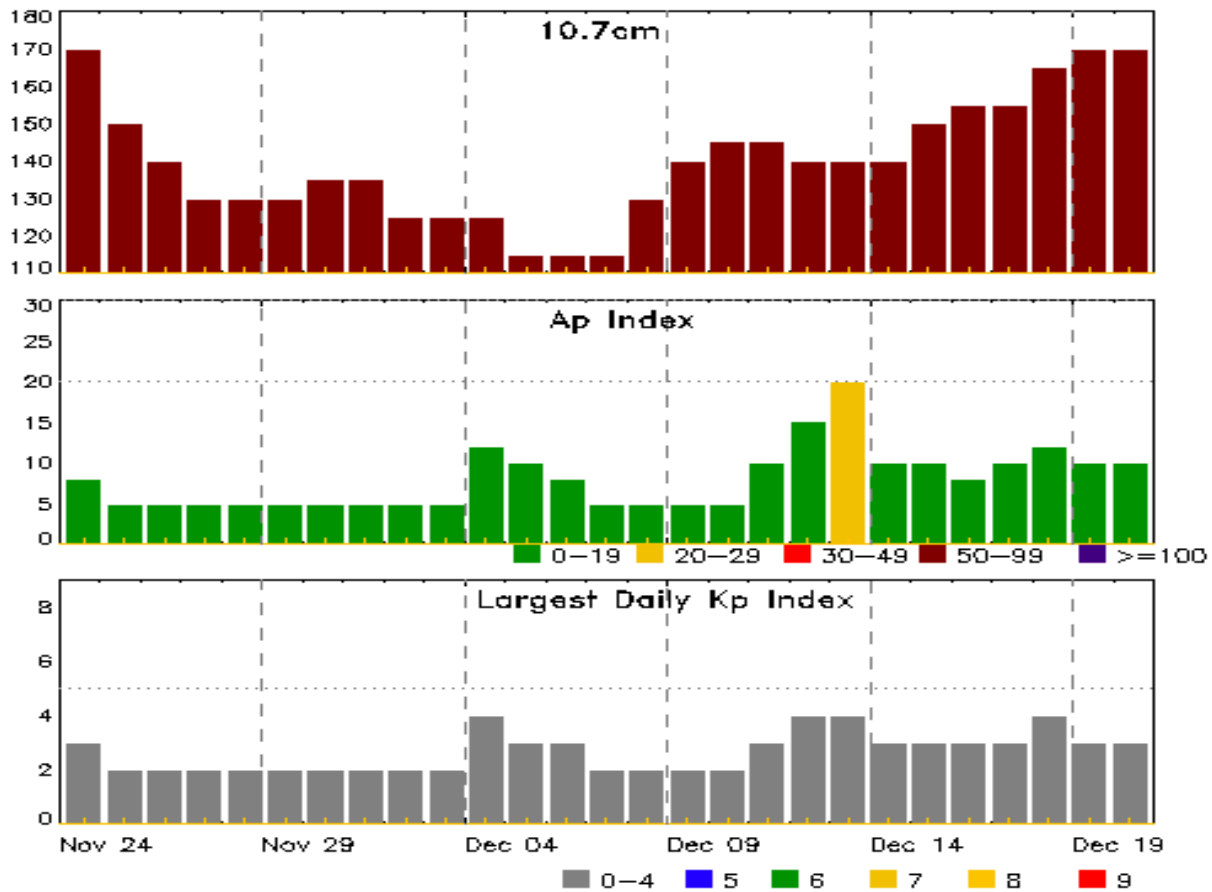


Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
17 Nov 0500	CONTINUED ALERT: Electron 2MeV Integral Flux \geq 1000pfu	16/1315
17 Nov 1356	EXTENDED WARNING: Geomagnetic K = 4	14/1906 - 17/2200
18 Nov 0716	CONTINUED ALERT: Electron 2MeV Integral Flux \geq 1000pfu	16/1315
19 Nov 0119	WARNING: Geomagnetic K = 4	19/0120 - 0700
19 Nov 0306	ALERT: Geomagnetic K = 4	19/0259
19 Nov 1317	CONTINUED ALERT: Electron 2MeV Integral Flux \geq 1000pfu	16/1315
20 Nov 0214	WARNING: Geomagnetic K = 4	20/0215 - 0700
20 Nov 0305	ALERT: Geomagnetic K = 4	20/0259
20 Nov 1447	CONTINUED ALERT: Electron 2MeV Integral Flux \geq 1000pfu	16/1315
21 Nov 0043	WARNING: Geomagnetic K = 4	21/0043 - 0700
21 Nov 0137	ALERT: Geomagnetic K = 4	21/0128
21 Nov 0627	EXTENDED WARNING: Geomagnetic K = 4	21/0043 - 1600
21 Nov 1529	EXTENDED WARNING: Geomagnetic K = 4	21/0043 - 22/0700
22 Nov 2225	WARNING: Geomagnetic K = 4	22/2224 - 23/0900
22 Nov 2256	ALERT: Geomagnetic K = 4	22/2255
23 Nov 0842	EXTENDED WARNING: Geomagnetic K = 4	22/2224 - 23/1600



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 Nov	170	8	3	08 Dec	130	5	2
25	150	5	2	09	140	5	2
26	140	5	2	10	145	5	2
27	130	5	2	11	145	10	3
28	130	5	2	12	140	15	4
29	130	5	2	13	140	20	4
30	135	5	2	14	140	10	3
01 Dec	135	5	2	15	150	10	3
02	125	5	2	16	155	8	3
03	125	5	2	17	155	10	3
04	125	12	4	18	165	12	4
05	115	10	3	19	170	10	3
06	115	8	3	20	170	10	3
07	115	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

No Events Observed

Flare List

Date	Time			X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
	Begin	Max	End				
17 Nov	0132	0133	0137		SF	S17E47	2209
17 Nov	0554	0604	0610	C1.7	SF	S11E41	2209
17 Nov	0709	0710	0713		SF	N10E64	
17 Nov	0852	0907	0922	C6.5			2205
17 Nov	1806	1830	1844	C1.6	SF	S11E33	2209
17 Nov	1904	1904	1909		SF	S11E33	2209
18 Nov	0749	0809	0823	C1.8	SF	S11E25	2209
18 Nov	1421	1522	1733	C1.9			2216
18 Nov	1853	1855	1857	C1.3	SF	S10E37	2214
18 Nov	1924	1930	1937	C1.3			2209
18 Nov	1949	1950	1954	C1.1			2209
18 Nov	2025	2115	2205	C1.4			2216
19 Nov	B0914	U0914	A0925		SF	S11E13	2209
19 Nov	B0921	U0923	A0925		SF	S10E29	2214
19 Nov	1416	1416	1434		SF	S13E08	2209
19 Nov	1614	1617	1627		SF	S13E09	2209
19 Nov	1857	1903	1907	C2.4	SF	S13E07	2209
19 Nov	1957	1957	2015		SF	S11E06	2209
19 Nov	2052	2054	2115		SF	S11E06	2209
19 Nov	2147	2150	2152	C2.6			2208
19 Nov	2227	2228	2240		SF	S13E05	2209
20 Nov	0014	0015	0017		SF	S11W66	2208
20 Nov	0631	0641	0655	C7.6			2216
20 Nov	0726	0728	0748		SF	S11E11	2209
20 Nov	B0938	U0940	A1000		SF	S14E01	2209
20 Nov	B0946	U0947	A1011		SF	S11E16	2214
20 Nov	B1125	U1128	A1132		SF	N15E68	
20 Nov	1936	1956	2009	C2.5	SF	S12W08	2209
20 Nov	2103	2113	2129	C1.3	SF	S11W10	2209
21 Nov	0024	0032	0046	C1.6			2216
21 Nov	0115	0121	0142		SF	S11W11	2209



Flare List

Date	Time			X-ray Class	Imp/ Brtns	Optical		Rgn #
	Begin	Max	End			Location Lat CMD		
21 Nov	0153	0156	0207	C1.4	SF	S11W13		2209
21 Nov	0348	0353	0359	C1.3	SF	S12E69		2216
21 Nov	0441	0445	0448	C1.9	SF	S12W14		2209
21 Nov	0454	0503	0515		SF	S11W16		2209
21 Nov	B0744	U0815	A0834		SF	S17W25		2209
21 Nov	0923	0926	0933		SF	S12W18		2209
21 Nov	B1054	U1101	A1104		SF	S13W18		2209
21 Nov	1120	1131	1139	C1.2				2216
21 Nov	B1124	U1130	A1215		SF	S13W18		2209
21 Nov	B1129	U1129	A1149		SF	S10E61		2216
21 Nov	B1241	U1246	1321		SF	S12W20		2209
21 Nov	1350	1352	1409		SF	S14W19		2209
21 Nov	1604	1604	1610		SF	S13W19		2209
21 Nov	2203	2214	2241		SF	S11W24		2209
21 Nov	2325	2333	2339	C1.1	SF	S14W21		2209
22 Nov	0001	0021	0050	C2.3				2217
22 Nov	0054	0101	0106	C8.1	1B	S12W26		2209
22 Nov	0333	0337	0401	C2.4	SF	S12W27		2209
22 Nov	0408	0410	0419	C1.7	SF	S11E54		2216
22 Nov	0558	0603	0607	C6.5	1N	S14W25		2209
22 Nov	0609	0614	0617	C3.2				2209
22 Nov	0631	0641	0643		SF	S14W26		2209
22 Nov	0953	0957	1004	C1.5	SF	S13W32		2209
22 Nov	1309	U1309	A1326	C2.1	SF	S14W33		2209
22 Nov	1311	1312	1313		SF	S14W18		2214
22 Nov	1421	1441	1507	C2.3				2216
22 Nov	1706	1712	1740	C3.1	1N	S13W33		2209
22 Nov	2200	2217	2242		SF	S11W37		2209
23 Nov	0002	0003	0007		SF	S11W42		2209
23 Nov	0330	0427	0443	C2.0				2217
23 Nov	0527	0536	0602	C2.4	SF	S12W42		2209
23 Nov	0620	0636	0645	C2.3				2217
23 Nov	0851	0900	0908	C2.1				2217
23 Nov	1041	1053	1116	C3.5				2217
23 Nov	1537	1614	1623	C2.4	SF	S13W47		2209
23 Nov	1800	1810	1813	C2.7	SF	S10E30		2216
23 Nov	1809	1809	1814		SF	S12W55		2209
23 Nov	1837	1846	1902	C2.3				2217



Flare List

Date	Time			X-ray Class	Optical		Rgn #
	Begin	Max	End		Imp/ Brtns	Location Lat CMD	
23 Nov	1907	1921	1934	C2.7			2217



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 2113																							
06 Jul	N12E80	161	50	2	Hax	1	A																
07 Jul	N07E62	165	80	3	Cao	2	B																
08 Jul	N10E48	166	60	6	Csi	12	BG	2	1			10	1	1									
09 Jul	N09E35	167	60	8	Dai	17	BG	2	1			8	1										
10 Jul	N09E20	168	40	8	Cao	6	B	1				2											
11 Jul	N07E12	163	30	15	Cro	10	B	1				3											
12 Jul	N07W04	166	60	10	Cso	8	B					1											
13 Jul	N07W18	167	70	11	Eao	9	B	1				2											
14 Jul	N07W32	167	40	9	Dao	11	B																
15 Jul	N08W46	168	10	8	Bxo	4	B																
16 Jul	N12W59	168	10		Axx	1	A																
17 Jul	N12W73	169	plage																				
18 Jul	N12W87	169	plage																				
15 Nov	S09E24	274	plage																				
								7	2	0		26	2	1	0	0							

Died on Disk.

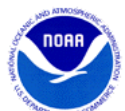
Absolute heliographic longitude: 166

Region 2205

04 Nov	N15E66	15	100	11	Eac	1	B	2	2			13	1									
05 Nov	N16E56	14	250	14	Ekc	10	BGD	3	2			12	2									
06 Nov	N15E46	10	360	15	Ekc	24	BGD	3	3			8	2	1								
07 Nov	N15E32	11	410	14	Ekc	40	BGD	5	3	1		7		1	1							
08 Nov	N15E18	12	310	14	Ekc	35	BGD	4				8										
09 Nov	N15E05	12	350	14	Ekc	31	BGD	6	1			11	2									
10 Nov	N14W08	12	280	9	Dkc	23	BGD	9				14	1									
11 Nov	N15W22	12	230	9	Dac	28	BGD	3				10	2									
12 Nov	N15W35	13	150	9	Dac	23	BG	4				5	1									
13 Nov	N14W52	15	140	9	Dac	13	BG	1				1										
14 Nov	N14W64	15	120	10	Dai	12	B	1				2										
15 Nov	N14W78	16	70	4	Dao	5	B					1										
16 Nov	N15W92	17	30	3	Hsx	1	A															
								43	13	1		92	11	2	1	0						

Crossed West Limb.

Absolute heliographic longitude: 12



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 2207																		
08 Nov	S08E64	326	40	2	Hax	1	A											
09 Nov	S08E52	325	30	2	Hax	1	A											
10 Nov	S09E41	322	40	2	Hsx	1	A											
11 Nov	S09E26	324	30	2	Hsx	1	A											
12 Nov	S08E16	321	30	1	Hax	5	A											
13 Nov	S09E02	321	10	8	Hax	6	A											
14 Nov	S09W13	324	10	1	Axx	2	A					1						
15 Nov	S09W27	325	plage															
16 Nov	S09W41	326	plage															
17 Nov	S09W55	327	plage															
18 Nov	S09W69	327	plage															
19 Nov	S09W83	328	plage															
										0	0	0	1	0	0	0	0	0

Crossed West Limb.
 Absolute heliographic longitude: 321

Region 2208																		
09 Nov	S12E71	306	30	5	Cao	5	B											
10 Nov	S11E58	305	90	6	Cai	9	B	1				2						
11 Nov	S12E43	307	70	6	Dso	11	B	1				5						
12 Nov	S11E29	307	160	13	Esc	20	B	3				3						
13 Nov	S12E15	308	100	8	Dsc	21	BG	2				9						
14 Nov	S12E03	308	120	13	Eac	29	BG	3				6						
15 Nov	S12W10	308	40	10	Cai	14	B					1						
16 Nov	S11W22	307	10	4	Bxo	4	B											
17 Nov	S10W40	310	10	13	Bxo	6	B											
18 Nov	S12W54	312	10	7	Bxo	2	B											
19 Nov	S10W68	313	10	7	Bxo	4	B	1										
20 Nov	S11W82	314	10	3	Bxo	2	B					1						
										11	0	0	27	0	0	0	0	0

Crossed West Limb.
 Absolute heliographic longitude: 308



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 2209																							
12 Nov	S13E73	264	30	1	Hsx	1	A																
13 Nov	S15E62	262	30	1	Hax	1	A	2															
14 Nov	S15E56	255	680	24	Fkc	9	BG	2				2	1										
15 Nov	S15E45	253	800	23	Fkc	16	BGD	2	2			6	1										
16 Nov	S14E31	254	940	26	Fkc	23	BGD	7	1			10											
17 Nov	S13E18	252	990	26	Fkc	22	BGD	2				4											
18 Nov	S13E07	251	1100	27	Fkc	26	BGD	3				1											
19 Nov	S14W03	248	930	19	Fko	16	BGD	1				7											
20 Nov	S16W16	248	970	16	Fko	24	BGD	2				4											
21 Nov	S15W29	248	900	19	Fko	29	BGD	3				13											
22 Nov	S15W43	249	950	19	Fko	23	BGD	7				5	3										
23 Nov	S15W57	250	1000	19	Fki	21	BGD	2				4											
								33	3	0	56	5	0	0	0								

Still on Disk.

Absolute heliographic longitude: 248

Region 2210

12 Nov	N05E47	291	plage									1									
13 Nov	N05E32	291	10	1	Axx	1	A														
14 Nov	N05E18	293	plage																		
15 Nov	N05E03	295	plage																		
16 Nov	N05W12	297	plage																		
17 Nov	N05W27	299	plage																		
18 Nov	N05W42	300	plage																		
19 Nov	N05W57	302	plage																		
20 Nov	N05W72	304	plage																		
21 Nov	N05W87	306	plage																		
								1	0	0	0	0	0	0	0	0	0				

Crossed West Limb.

Absolute heliographic longitude: 295

Region 2211

13 Nov	N08W40	3	10	4	Bxo	2	B														
14 Nov	N08W54	5	20	4	Cro	3	B														
15 Nov	N08W70	8	10	1	Axx	1	A														
16 Nov	N08W84	9	plage																		
								0	0	0	0	0	0	0	0	0	0				

Crossed West Limb.

Absolute heliographic longitude: 3



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 2212																							
14 Nov	N16E16		295	10	1	Hrx	2	A															
15 Nov	N16E02		296	10	1	Axx	1	A															
16 Nov	N16W12		297	plage									2										
17 Nov	N16W26		298	plage																			
18 Nov	N16W40		298	plage																			
19 Nov	N16W54		299	plage																			
20 Nov	N16W68		300	plage																			
21 Nov	N16W82		301	plage																			
													0	0	0	2	0	0	0	0	0	0	

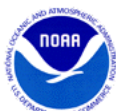
Crossed West Limb.
Absolute heliographic longitude: 296

Region 2213																							
15 Nov	S09E26		272	30	4	Cro	3	B															
16 Nov	S09E12		273	40	5	Dai	9	B					2										
17 Nov	S10W02		274	30	5	Cro	12	B															
18 Nov	S09W15		273	10	5	Bxo	6	B															
19 Nov	S08W28		273	10	2	Bxo	2	B															
20 Nov	S08W42		274	plage																			
21 Nov	S08W56		275	plage																			
22 Nov	S08W70		276	plage																			
23 Nov	S08W84		277	plage																			
													0	0	0	2	0	0	0	0	0	0	

Still on Disk.
Absolute heliographic longitude: 274

Region 2214																							
16 Nov	S13E59		226	20	4	Cro	4	B															
17 Nov	S12E47		223	10	5	Bxo	4	B															
18 Nov	S13E31		226	10	7	Bxo	6	B	1				1										
19 Nov	S12E19		225	20	7	Cro	10	B					1										
20 Nov	S12E06		226	10	5	Bxo	3	B					1										
21 Nov	S13W05		224	10	1	Axx	2	A															
22 Nov	S12W19		225	10	1	Axx	2	A					1										
23 Nov	S12W33		226	plage																			
													1	0	0	4	0	0	0	0	0	0	

Still on Disk.
Absolute heliographic longitude: 224



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 2215																	
17 Nov	N09E49	221	10		1	Axx	1	A									
18 Nov	N09E38	219	10		5	Bxo	2	B									
19 Nov	N09E24	221	plage														
20 Nov	N09E10	222	10		1	Axx	1	A									
21 Nov	N09W05	224	plage														
22 Nov	N09W17	223	plage														
23 Nov	N09W31	224	plage														
									0	0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 224

Region 2216																	
18 Nov	S13E97	164	plage						2								
19 Nov	S13E77	169	plage														
20 Nov	S13E68	164	360	6	Dko	3	B	1									
21 Nov	S14E54	165	640	10	Dkc	7	BD	3		2							
22 Nov	S13E41	165	630	9	Dkc	9	BG	2		1							
23 Nov	S13E28	165	630	8	Dkc	12	BGD	1		1							
									9	0	0	4	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 165

Region 2217																	
22 Nov	S20E80	127	plage						1								
23 Nov	S19E68	125	180	5	Cao	3	B	6									
									7	0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 125

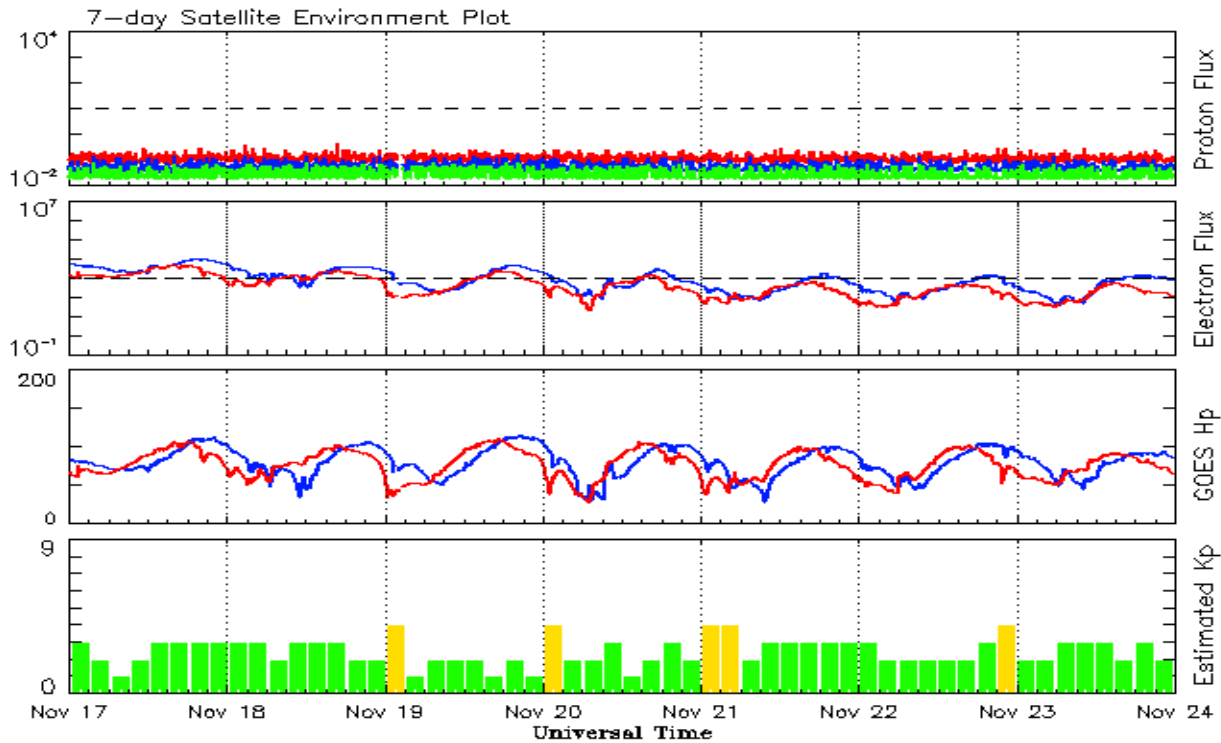


Recent Solar Indices (preliminary)
Observed monthly mean values

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
2012									
November	89.2	61.8	0.69	87.3	59.7	120.9	120.1	6	7.3
December	60.4	40.8	0.68	88.0	59.6	108.4	120.1	3	7.5
2013									
January	99.8	62.9	0.63	87.1	58.7	127.1	118.9	4	7.5
February	60.0	38.1	0.63	86.7	58.4	104.4	118.0	5	7.4
March	81.0	57.9	0.71	85.7	57.6	111.2	117.1	9	7.4
April	112.8	72.4	0.64	86.7	57.9	125.0	116.6	5	7.2
May	125.5	78.7	0.63	90.5	59.9	131.3	118.1	10	7.0
June	80.1	52.5	0.66	94.4	62.6	110.2	120.9	13	7.1
July	86.1	57.0	0.66	97.9	65.5	115.6	123.9	9	7.3
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	78.4	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			130.0		7	
June	107.7	71.0	0.66			122.2		7	
July	113.6	72.5	0.64			137.3		5	
August	106.2	74.7	0.70			124.7		9	
September	127.4	87.6	0.69			146.1		11	
October	92.0	60.6	0.66			153.7		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 November 2014*

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.

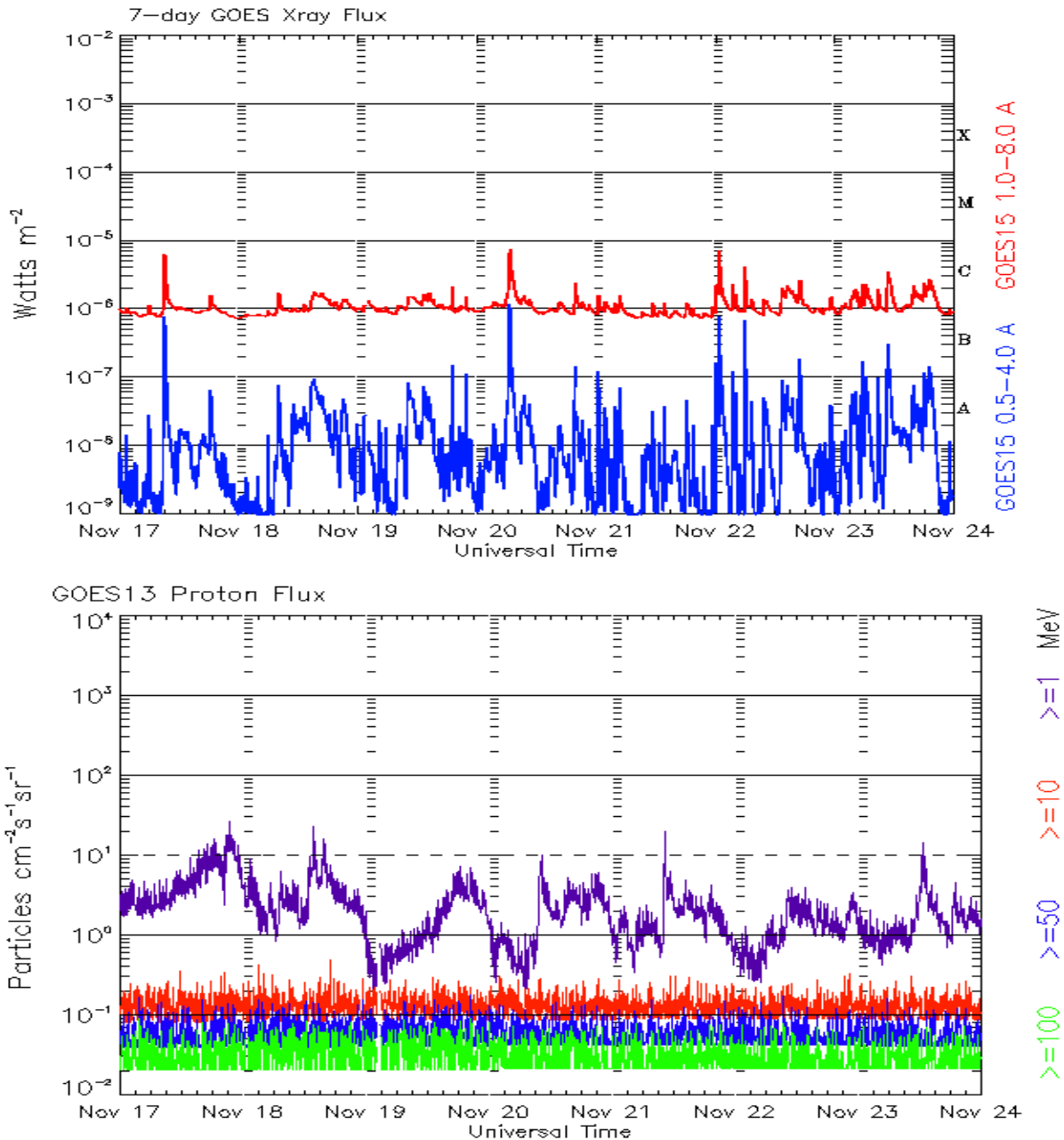
The electron flux plot contains the five-minute averaged integral electron flux (electrons/cm²-sec -sr) with energies greater than 2 MeV by the SWPC Primary GOES satellite.

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.

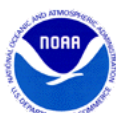




*Weekly GOES Satellite X-ray and Proton Plots
Week Beginning 17 November 2014*

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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