

Solar activity was at low levels on 26-30 October and 01 November with numerous C-class events, primarily observed from Region 2443 (N07, L=316, class/area Fkc/650 on 01 Nov). An isolated M1/Sf (R1-Minor) flare was observed on 31 October at 1752 UTC from Region 2443. On 29 October, Type II (estimated 972 km/s shock velocity) and Type IV radio emissions were detected at 0219 UTC and 0230 UTC, respectively. SOHO/LASCO C2 imagery observed a non Earth-directed CME off the SW limb at 29/0236 UTC, believed to be associated with the Type II and Type IV radio activity.

A short-lived greater than 10 MeV at greater than or equal to 10 pfu proton event was observed on 29 October. The event began at 29/0550 UTC, reached a maximum of 23 pfu at 29/1000 UTC and ended at 29/1700 UTC. Coincident with this event was a short-lived greater than 100 MeV at greater than or equal to 1 pfu event. This event began at 29/0435 UTC, reached a maximum of 2 pfu at 29/0610 UTC and ended at 29/0930 UTC. Both of these events were most likely associated with activity just beyond the SW limb described above.

The greater than 2 MeV electron flux at geosynchronous orbit was at normal levels on 26, 30-31 October and 01 November with moderate levels observed on 27-29 October.

Geomagnetic field activity was predominately at quiet levels with some unsettled periods observed on 30-31 October and 01 November. Solar wind parameters reflected a mostly nominal environment with wind speeds ranging from a high of 483 km/s at 26/1145 UTC to a low of 287 km/s at 29/0746 UTC. Total field strength ranged from 1-10 nT while the Bz component did not vary much beyond +/- 7 nT. Phi angle was in a positive (away) orientation from the beginning of the period through early on 28 October when a switch to a negative (towards) sector was observed. Phi switched back to a positive sector at about 29/1915 UTC and remained so through the balance of the summary period.

Space Weather Outlook

02 November - 28 November 2015

Solar activity is expected to be at predominately low levels with moderate levels (R1-R2.Minor-Moderate) likely through the outlook period. Region 2443, through 10 November, and the return of old Regions 2434 (S09, L=165) on 07 November and 2437 (S18, L=098) on 12 November are likely to produce M-class activity through the outlook period.

No proton events are expected at geosynchronous orbit in the absence of any significant flare activity.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at high to very high levels on 02-13 November due to an enhanced solar wind environment as a recurrent, trans-equatorial coronal hole high speed stream (CH HSS) becomes geoeffective. Normal to



moderate levels are expected from 14-28 November.

Geomagnetic field activity is expected to began the period at G1 (Minor), G2 (Moderate) and G3 (Strong) levels on 02 November followed by G1 to G2 levels on 03 November as a recurrent, trans-equatorial CH HSS impacts Earth. Unsettled to active levels are expected on 04-06 November as CH HSS effects wane. Unsettled to active levels are expected on 13-14 November and 16-17 November due to periods of southward Bz and a weak positive polarity CH HSS. 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
26 October	106	72	250	B3.6	1	0	0	2	0	0	0	0
27 October	110	78	290	B7.9	6	0	0	0	1	0	0	0
28 October	112	71	190	B6.6	5	0	0	6	1	0	0	0
29 October	113	101	520	B6.4	12	0	0	13	0	0	0	0
30 October	121	88	620	C1.1	15	0	0	4	1	0	0	0
31 October	119	73	670	B8.3	14	1	0	10	1	0	0	0
01 November	124	88	730	B6.6	14	0	0	27	2	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
	26 October		1.7e+05	1.1e+04	2.5e+03	
27 October		1.7e+05	1.2e+04	2.7e+03		8.2e+06
28 October		4.1e+05	1.1e+04	2.8e+03		1.4e+07
29 October		2.9e+06	7.9e+05	4.7e+04		5.6e+06
30 October		1.6e+06	1.5e+05	5.0e+03		1.4e+06
31 October		3.5e+05	3.0e+04	2.7e+03		5.6e+05
01 November		3.5e+05	1.4e+04	2.6e+03		6.5e+05

Daily Geomagnetic Data

Date	Middle Latitude Fredericksburg		High Latitude College		Estimated Planetary	
	A	K-indices	A	K-indices	A	K-indices
	26 October	2	1-0-1-0-0-1-1-0	0	0-0-0-0-0-0-0-0	3
27 October	3	0-1-0-1-2-1-1-1	4	0-0-0-2-3-1-0-1	4	0-1-1-1-2-0-1-2
28 October	1	0-1-0-1-1-0-0-0	0	0-0-0-0-0-0-0-0	3	1-1-1-1-0-0-1-0
29 October	4	0-1-1-1-2-1-2-2	5	0-0-2-3-3-1-0-0	5	1-1-1-2-1-1-1-2
30 October	6	2-0-0-1-3-3-1-2	17	1-1-0-3-5-5-3-1	9	3-1-0-2-3-3-2-3
31 October	6	0-1-1-1-2-3-2-2	6	0-0-0-1-4-2-1-2	6	1-1-1-1-2-2-2-3
01 November	9	1-3-2-3-3-1-2-1	20	1-3-4-5-4-4-2-1	5	1-3-3-3-3-2-2-1

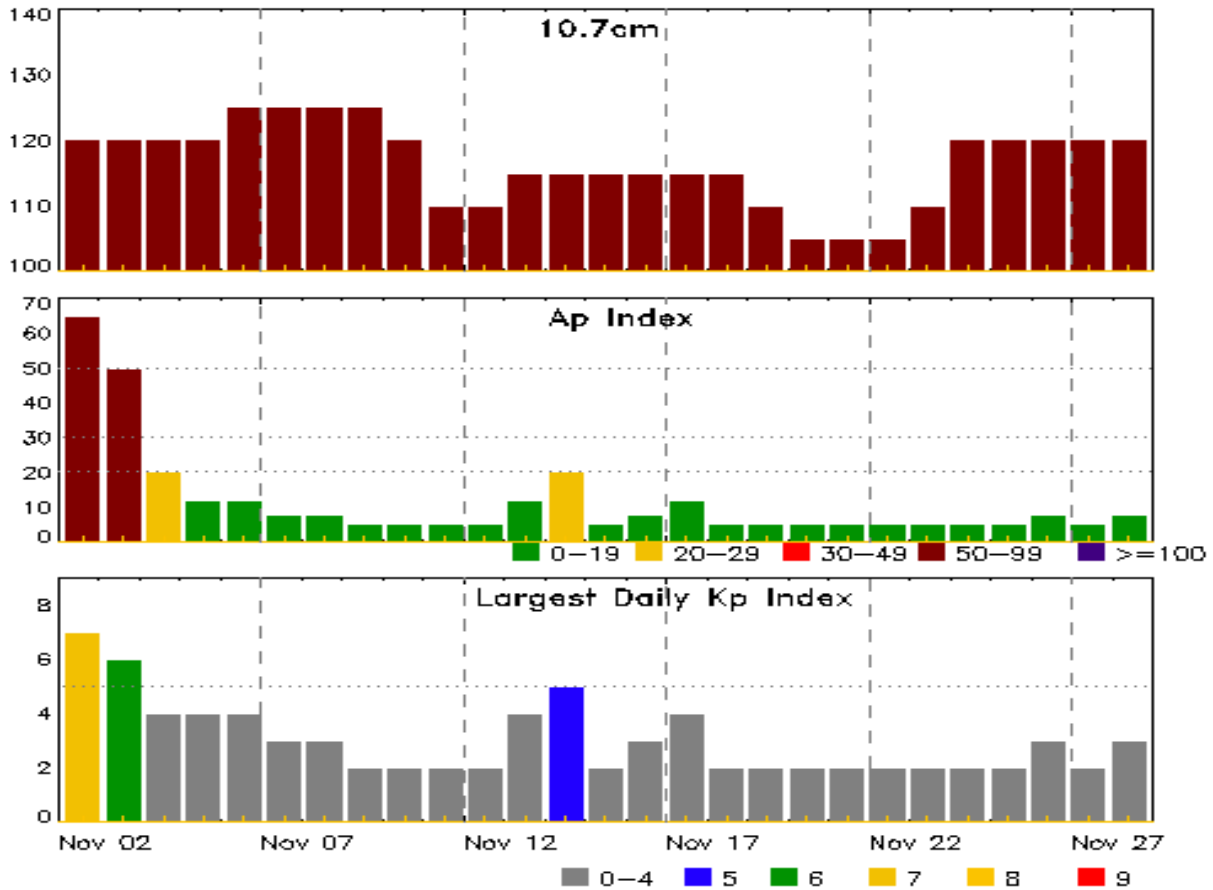


Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
29 Oct 0239	ALERT: Type IV Radio Emission	28/0230
29 Oct 0240	CANCELLATION: Type IV Radio Emission	
29 Oct 0241	ALERT: Type IV Radio Emission	29/0230
29 Oct 0248	ALERT: Type II Radio Emission	29/0219
29 Oct 0347	WARNING: Proton 10MeV Integral Flux > 10pfu	29/0430 - 1700
29 Oct 0430	WARNING: Proton 100MeV Integral Flux > 1pfu	29/0445 - 1400
29 Oct 0452	ALERT: Proton Event 100MeV Integral Flux > 1pfu	29/0435
29 Oct 0606	ALERT: Proton Event 10MeV Integral Flux >= 10pfu	29/0550
29 Oct 1651	EXTENDED WARNING: Proton 10MeV Integral Flux > 10pfu	29/0430 - 2100
29 Oct 2053	SUMMARY: Proton Event 100MeV Integral Flux > 1pfu	29/0435 - 0930
29 Oct 2130	SUMMARY: Proton Event 10MeV Integral Flux >= 10pfu	29/0550 - 1700
31 Oct 1925	WATCH: Geomagnetic Storm Category G3 predicted	



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
02 Nov	120	65	7	16 Nov	115	8	3
03	120	50	6	17	115	12	4
04	120	20	4	18	115	5	2
05	120	12	4	19	110	5	2
06	125	12	4	20	105	5	2
07	125	8	3	21	105	5	2
08	125	8	3	22	105	5	2
09	125	5	2	23	110	5	2
10	120	5	2	24	120	5	2
11	110	5	2	25	120	5	2
12	110	5	2	26	120	8	3
13	115	12	4	27	120	5	2
14	115	20	5	28	120	8	3
15	115	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 245	2695	Intensity II	IV
31 Oct	1748	1752	1755	M1.0	0.002	SF	N06E51		2443			

Flare List

Date	Time			X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
	Begin	Max	End				
26 Oct	0100	0112	0120	B7.2			2436
26 Oct	1021	1029	1041	C2.1	SF	S20W23	2437
26 Oct	1304	1308	1315	B8.9			
26 Oct	1556	1600	1610		SF	S13W55	2435
27 Oct	0505	0514	0520	C1.0			2436
27 Oct	1106	1208	1308	C1.5			
27 Oct	1308	1429	1515	C3.2			
27 Oct	1539	1550	1602	C2.3	1F	S14W69	2435
27 Oct	1832	1854	1903	C1.7			
27 Oct	2010	2019	2028	C1.4			
28 Oct	0553	0606	0623	C1.2			2437
28 Oct	0705	0708	0711	C1.3			
28 Oct	0752	0754	0801		SF	N10W60	2436
28 Oct	0833	0839	0847	C1.6			2437
28 Oct	B0838	U0838	A0847		SF	N10W60	2436
28 Oct	B0838	U0838	A0904		1F	S23W52	2437
28 Oct	0849	0849	0855		SF	S20W53	2437
28 Oct	0856	0857	0859		SF	S22W53	2437
28 Oct	0931	0937	0942	C1.9	SF	N12W61	2436
28 Oct	0950	1023	1055	C1.8			2436
28 Oct	1148	1151	1154		SF	S20W53	2437
28 Oct	1704	1707	1710	B7.8			
29 Oct	0017	0021	0027	C1.5			2443
29 Oct	0035	0036	0038		SF	N08E79	2443
29 Oct	0103	0125	0140	C1.1			2440
29 Oct	0212	0220	0225	C1.0	SF	N06E83	2443
29 Oct	0218	0219	0221	C1.0			
29 Oct	0238	0240	0247		SF	S22W63	2437
29 Oct	0325	0335	0342		SF	N06E83	2443
29 Oct	0351	0353	0355		SF	N07E82	2443



Flare List

Date	Time			X-ray Class	Optical		Rgn #
	Begin	Max	End		Imp/ Brtns	Location Lat CMD	
29 Oct	0415	0419	0421		SF	N07E82	2443
29 Oct	0425	0425	0425		SF	N07E82	2443
29 Oct	0432	0439	0446	C1.0			2443
29 Oct	0710	0710	0716	C1.1	SF	N00E00	2443
29 Oct	0735	0735	0736		SF	N00E00	2443
29 Oct	0740	0742	0743		SF	N07E84	2443
29 Oct	0804	0807	0809	B9.3			
29 Oct	0811	0812	0815		SF	N07E84	2443
29 Oct	0818	0821	0831		SF	N07E84	2443
29 Oct	B0854	U0854	A0914		SF	S20W65	2437
29 Oct	1031	1038	1044	C1.3			2443
29 Oct	1226	1229	1231	B9.5			
29 Oct	1402	1406	1414	C1.1			2443
29 Oct	1501	1506	1511	C1.5			2443
29 Oct	1652	1656	1659	C1.4			2443
29 Oct	1749	1752	1755	C1.0			2443
29 Oct	2308	2315	2323	C1.6			2443
30 Oct	0045	0050	0056	C2.3			2443
30 Oct	0100	0105	0112	C2.9			2443
30 Oct	0347	0355	0406	C2.8			2443
30 Oct	0411	0422	0431	C4.1			2443
30 Oct	0456	0503	0508	C3.9	SF	N07E73	2443
30 Oct	0541	0545	0547	C2.5	SF	N10E72	2443
30 Oct	0603	0603	0614		SF	N09E67	2443
30 Oct	0704	0715	0721	C4.2			2443
30 Oct	0821	0841	0852	C5.5			2436
30 Oct	0950	1018	1038	C4.6			2443
30 Oct	1138	1154	1202	C2.4			2443
30 Oct	1254	1301	1309	C3.1			2437
30 Oct	1414	1422	1435	C5.9			2443
30 Oct	1533	1537	1541	C5.9			2437
30 Oct	1621	1625	1631	C5.2			2443
30 Oct	1957	2016	2033	C7.8			2443
30 Oct	2037	2037	2111		1F	N06E56	2443
30 Oct	2133	2133	2140		SF	N05E59	2443
31 Oct	0024	0028	0031	C1.9			2443
31 Oct	0559	0635	0714	C3.8	SF	N07E54	2443
31 Oct	0835	0839	0841	C1.7	SF	N05E57	2443



Flare List

Date	Time			X-ray Class	Optical		Rgn #
	Begin	Max	End		Imp/ Brtns	Location Lat CMD	
31 Oct	1015	1022	1029	C1.5			2443
31 Oct	1257	1302	1310	C1.4			2443
31 Oct	1410	1618	1657		SF	N05E59	2443
31 Oct	1454	1502	1504	C5.2			2443
31 Oct	1548	1553	1603	C1.9			2443
31 Oct	1658	1659	1703		SF	N06E51	2443
31 Oct	1723	1728	1732	C2.1	SF	N06E51	2443
31 Oct	1748	1752	1755	M1.0	SF	N06E51	2443
31 Oct	1856	1907	1917	C6.6			2443
31 Oct	1858	1932	1954	C9.9	1N	N06E50	2443
31 Oct	2036	2044	2102	C2.7	SF	N06E49	2443
31 Oct	2054	2054	2102		SF	N05E50	2443
31 Oct	2113	2118	2123	C5.8	SF	N05E50	2443
31 Oct	2256	2304	2310	C6.1	SF	N06E46	2443
31 Oct	2354	2359	0005	C2.7			2443
01 Nov	0022	0027	0030	C6.5	1F	N06E45	2443
01 Nov	0111	0115	0120	C6.2	SF	N06E45	2443
01 Nov	0155	0158	0203	C1.5			2443
01 Nov	0335	0339	0344	C5.6	SF	N06E44	2443
01 Nov	0505	0512	0515	C1.8	SF	N06E43	2443
01 Nov	0518	0523	0531		SF	N06E48	2443
01 Nov	0559	0602	0604		SF	N06E43	2443
01 Nov	0622	0628	0654	C2.4	SF	N06E43	2443
01 Nov	0647	0647	0655		SF	N06E43	2443
01 Nov	0724	0726	0728		SF	N09E44	2443
01 Nov	0753	0755	0800		SF	N09E40	2443
01 Nov	0917	0921	0926	C1.1	SF	N06E40	2443
01 Nov	1018	1021	1027	B9.2			2443
01 Nov	1203	1206	1210	C1.3			2443
01 Nov	B1246	U1247	A1251		SF	N08E42	2443
01 Nov	1255	1259	1301	C1.0	SF	N09E40	2443
01 Nov	1348	1558	1707		SF	N17W35	2442
01 Nov	B1353	U1400	A1402		SF	N08E40	2443
01 Nov	1403	1406	1408		SF	N08E40	2443
01 Nov	1411	1412	1509		SF	N06E39	2443
01 Nov	1602	1638	1726	C5.0	SN	N06E39	2443
01 Nov	1708	1708	1713		SF	N17W35	2442
01 Nov	1734	1803	1830	C6.3	1F	N06E39	2443



Flare List

Date	Time			Optical			
	Begin	Max	End	X-ray Class	Imp/Brtns	Location Lat CMD	Rgn #
01 Nov	1911	1911	1917		SF	N17W39	2445
01 Nov	1936	1942	1956	C1.8	SF	N08E30	2443
01 Nov	1949	1949	2000		SF	N15W15	2441
01 Nov	2011	2023	2030	C4.9	SF	N08E30	2443
01 Nov	2040	2052	2059		SF	N17W39	2445
01 Nov	2129	2314	2351	C6.4			2443
01 Nov	2136	2142	2156		SF	N17W39	2445
01 Nov	2238	2242	2324		SF	N07E35	2443
01 Nov	2239	2240	2250		SF	N17W41	2445
01 Nov	2329	2330	2333		SF	N15W44	2445



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 2346																							
11 May	S12E69		54	50	1	Hsx	1	A															
12 May	S07E55		55	50	2	Hsx	1	A															
13 May	S06E42		55	60	2	Hsx	1	A															
14 May	S08E28		56	50	7	Cso	7	B					1										
15 May	S08E15		57	30	7	Cao	7	B					1										
16 May	S08W00		59	20	7	Cro	5	B															
17 May	S07W13		58	10	4	Bxo	4	B															
18 May	S07W29		61	plage																			
19 May	S07W44		63	plage																			
20 May	S06W55		60	10	4	Bxo	4	B					1										
21 May	S06W69		61	20	4	Cro	2	B					3										
22 May	S05W82		60	10	3	Bxo	2	B															
									0	0	0	6	0	0	0	0	0						

Crossed West Limb.
Absolute heliographic longitude: 59

Region 2434																							
12 Oct	S08E88		162	plage									1										
13 Oct	S08E74		162	40	1	Cao	4	B					5										
14 Oct	S08E60		162	50	7	Cai	8	BG					2		2								
15 Oct	S10E48		163	50	8	Dao	12	BG	14	1			7										
16 Oct	S10E34		162	150	7	Dai	22	BG	6	1			2										
17 Oct	S10E20		163	260	7	Dki	20	BGD	6				5	1									
18 Oct	S10E06		164	220	8	Dai	11	B															
19 Oct	S10W08		164	230	8	Dac	16	B	3				3										
20 Oct	S10W22		165	210	6	Dai	14	B															
21 Oct	S10W36		166	180	4	Cao	6	B					2										
22 Oct	S10W48		165	90	3	Cao	5	B	1				1										
23 Oct	S09W61		165	90	2	Cao	6	B															
24 Oct	S11W75		166	20	2	Cao	4	B	3				3										
25 Oct	S11W89		166	plage																			
									41	2	0	25	1	0	0	0	0						

Crossed West Limb.
Absolute heliographic longitude: 164



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 2435																							
16 Oct	S17E74	122	20	2	Hax	1	A	1															
17 Oct	S15E60	123	30	1	Hax	1	A	4				2											
18 Oct	S15E45	125	30	1	Hax	1	A																
19 Oct	S15E31	125	20	1	Hsx	1	A																
20 Oct	S15E17	126	20	1	Hsx	1	A																
21 Oct	S15E03	127	20	1	Cro	2	B																
22 Oct	S15W09	126	10	1	Hrx	1	A																
23 Oct	S15W21	125	10	1	Hrx	1	A					1											
24 Oct	S15W34	125	10	1	Hrx	1	A																
25 Oct	S15W49	126	10	1	Axx	1	A																
26 Oct	S13W62	125	10	1	Axx	1	A					1											
27 Oct	S13W76	127	plage					1					1										
28 Oct	S13W90	128	plage																				
								6	0	0	4	1	0	0	0								

Crossed West Limb.
 Absolute heliographic longitude: 127

Region 2436																							
17 Oct	N09E71	112	80	9	Dai	6	BG																
18 Oct	N09E58	112	210	12	Eai	16	BG	2				1											
19 Oct	N09E44	112	260	14	Ekc	20	BG	3				7											
20 Oct	N09E30	113	240	14	Eai	18	BD	2				1											
21 Oct	N08E16	114	290	14	Eki	23	BD	8				6	2										
22 Oct	N08E06	111	280	14	Eki	22	BG																
23 Oct	N09W06	110	250	14	Eki	21	B					3											
24 Oct	N09W19	110	240	14	Eso	17	B					1											
25 Oct	N09W34	111	230	14	Esi	20	B					1											
26 Oct	N09W46	110	170	14	Esi	12	B																
27 Oct	N08W61	110	110	13	Eso	6	B	1															
28 Oct	N08W74	110	100	15	Cao	2	B	2				3											
29 Oct	N09W89	112	60	8	Cao	3	B																
								18	0	0	23	2	0	0	0								

Crossed West Limb.
 Absolute heliographic longitude: 111



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 2437																							
17 Oct	S19E88	96	plage							3	2												
18 Oct	S19E74	96	60	2	Hax	1	A		1														
19 Oct	S19E60	96	60	6	Cao	6	B																
20 Oct	S20E46	97	50	6	Cao	4	B	2					1										
21 Oct	S20E32	98	20	2	Hsx	2	A																
22 Oct	S20E18	99	20	3	Cao	3	B																
23 Oct	S19E05	99	20	1	Hax	1	A																
24 Oct	S19W08	99	20	1	Hrx	1	A																
25 Oct	S19W21	98	10	1	Hrx	1	A																
26 Oct	S21W33	97	10	3	Axx	2	A	1					1										
27 Oct	S21W47	98	10	1	Axx	1	A																
28 Oct	S18W62	98	20	3	Cro	7	B	2					3	1									
29 Oct	S17W76	100	30	2	Cso	1	B						2										
30 Oct	S17W90	101	plage						2														
									11	2	0	7	1	0	0	0	0						

Crossed West Limb.

Absolute heliographic longitude: 99

Region 2438

22 Oct	S18W25	142	10	2	Bxo	2	B															
23 Oct	S18W38	142	10	1	Axx	1	A															
24 Oct	S18W52	143	plage																			
25 Oct	S18W66	143	plage																			
26 Oct	S18W80	144	plage																			
									0	0	0	0	0	0	0	0	0	0	0	0	0	

Crossed West Limb.

Absolute heliographic longitude: 142



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 2439

22 Oct	N17E76	41	60	2	Hax	1	A										
23 Oct	N17E63	41	30	2	Hsx	1	A										
24 Oct	N17E51	40	30	2	Hax	1	A										
25 Oct	N16E37	40	30	1	Hax	1	A										
26 Oct	N16E24	39	20	1	Hsx	1	A										
27 Oct	N16E11	40	10	1	Hrx	1	A										
28 Oct	N16W03	41	plage														
29 Oct	N16W17	42	plage														
30 Oct	N16W31	42	plage														
31 Oct	N16W45	43	plage														
01 Nov	N16W59	44	plage														
									0	0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 41

Region 2440

26 Oct	N20W02	66	40	2	Cso	6	B										
27 Oct	N19W16	67	30	4	Dao	4	B										
28 Oct	N19W31	67	30	4	Dso	4	B										
29 Oct	N20W44	68	30	5	Dao	3	B	1									
30 Oct	N19W57	68	10	4	Bxo	2	B										
31 Oct	N18W72	70	10	1	Axx	1	A										
01 Nov	N18W86	71	plage														
									1	0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 66

Region 2441

27 Oct	N14E47	3	30	3	Dro	2	B										
28 Oct	N14E33	3	20	3	Dro	2	B										
29 Oct	N14E20	3	30	5	Cai	7	B										
30 Oct	N14E08	3	20	4	Cro	4	B										
31 Oct	N15W06	4	10	2	Bxo	3	B										
01 Nov	N15W20	5	plage									1					
									0	0	0	1	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 4



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

Region 2442

28 Oct	N16E09	27	20	3	Cao	6	B										
29 Oct	N15W03	27	30	7	Dro	5	B										
30 Oct	N16W17	28	20	8	Cro	4	B										
31 Oct	N16W35	33	10	1	Axx	1	A										
01 Nov	N16W50	35	10	1	Hrx	1	A					2					
								0	0	0	2	0	0	0	0	0	

Still on Disk.

Absolute heliographic longitude: 27

Region 2443

29 Oct	N05E67	316	330	15	Ehc	9	B	10			11						
30 Oct	N06E56	315	560	15	Ekc	25	BGD	12			4	1					
31 Oct	N07E43	315	640	15	Ekc	28	BGD	14	1		10	1					
01 Nov	N07E29	316	650	18	Fkc	28	BG	14			19	2					
								50	1	0	44	4	0	0	0	0	

Still on Disk.

Absolute heliographic longitude: 316

Region 2444

29 Oct	S04E61	323	10	2	Cro	3	B										
30 Oct	S04E46	325	10	4	Bxo	3	B										
31 Oct	S04E31	327	plage														
01 Nov	S04E16	329	plage														
								0	0	0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 329

Region 2445

01 Nov	N15W42	27	50	6	Dai	14	B				5						
								0	0	0	5	0	0	0	0	0	

Still on Disk.

Absolute heliographic longitude: 27

Region 2446

01 Nov	N15W04	349	20	4	Cro	5	B										
								0	0	0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 349

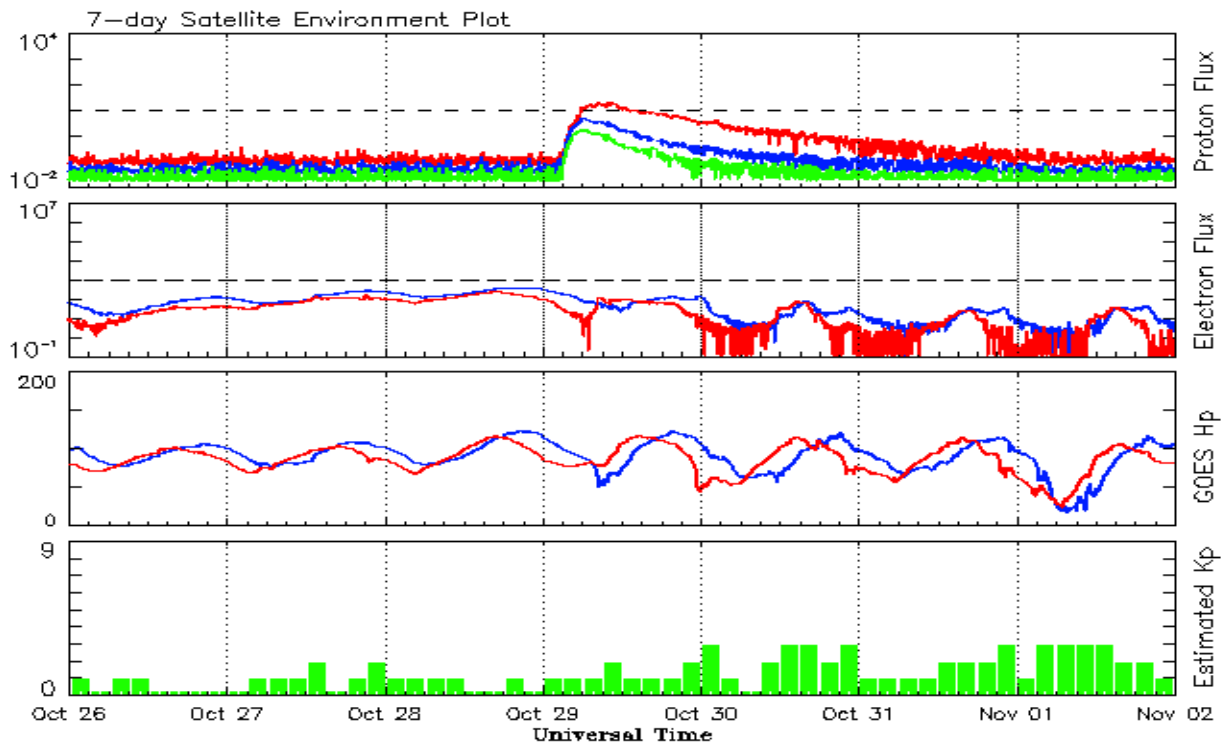


Recent Solar Indices (preliminary)
Observed monthly mean values

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										
November	125.7	77.6	0.62	114.6	114.6	75.3	148.4	135.4	5	7.9
December	118.2	90.3	0.76	115.4	115.4	75.9	147.7	135.9	5	7.5
2014										
January	125.9	81.8	0.65	117.7	117.7	77.3	158.6	137.3	6	7.1
February	174.6	102.3	0.59	119.5	119.5	78.3	170.3	138.6	12	6.9
March	141.1	91.9	0.65	123.2	123.2	80.8	149.9	140.8	6	7.2
April	130.5	67.5	0.65	124.8	124.8	69.8	144.3	143.5	9	7.5
May	116.8	67.5	0.64	122.3	122.3	69.0	130.0	144.7	7	7.9
June	107.7	61.7	0.66	121.4	121.4	68.5	122.2	145.5	7	8.4
July	113.6	60.1	0.64	120.4	120.4	67.6	137.3	145.2	5	8.8
August	106.2	64.1	0.70	115.1	115.1	65.0	124.7	142.8	9	8.9
September	127.4	78.0	0.69	107.4	107.4	61.1	146.1	140.1	11	9.3
October	92.0	54.0	0.66	101.7	101.7	58.4	153.7	138.4	10	9.9
November	101.8	62.2	0.69	97.9	97.9	56.8	155.3	137.4	10	10.1
December	120.0	67.7	0.65	95.2	95.2	55.3	158.7	137.0	12	10.5
2015										
January	101.2	55.8	0.66	92.1	92.1	53.6	141.7	135.8	10	11.0
February	70.6	40.0	0.63	88.3	88.3	51.7	128.8	133.8	10	11.5
March	61.7	32.7	0.62	84.2	84.2	49.3	126.0	131.2	17	12.0
April	72.5	45.2	0.75	80.5	80.5	47.3	129.2		12	12.4
May	83.0	53.3	0.71				120.1		9	
June	77.3	39.9	0.53				123.2		14	
July	68.4	39.8	0.58				107.0		10	
August	61.6	38.8	0.63				106.2		16	
September	72.5	46.9	0.65				102.1		16	
October	59.5	37.0	0.62						15	

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 26 October 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.

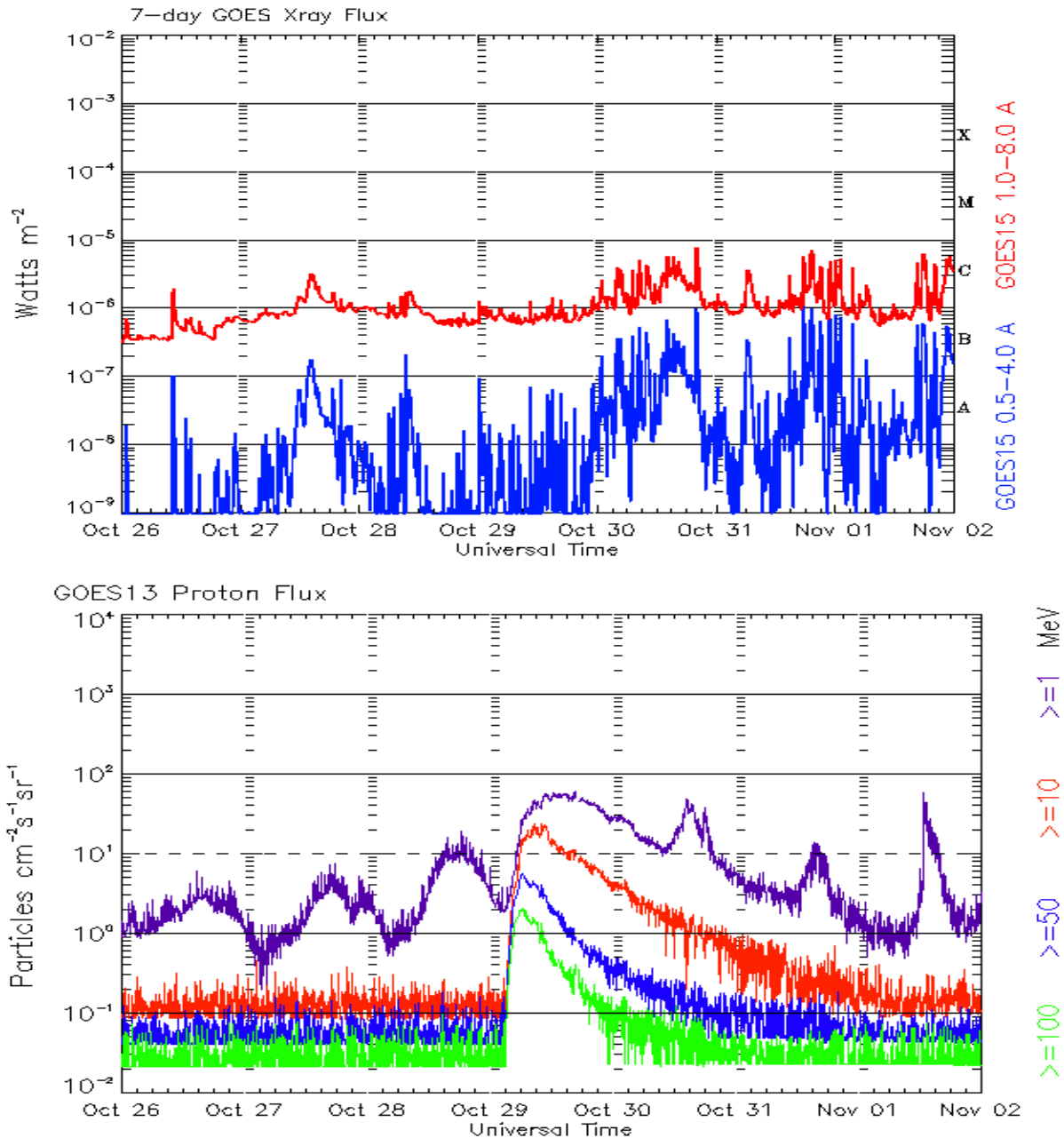
The electron flux plot contains the five-minute averaged integral electron flux (electrons/cm²-sec -sr) with energies greater than 2 MeV by the SWPC Primary GOES satellite.

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.

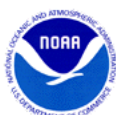




*Weekly GOES Satellite X-ray and Proton Plots
Week Beginning 26 October 2015*

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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