

Solar activity was at low to moderate levels. Activity began at low levels on 07 November, although Regions 1339 (N19E45, L=102, class/area Fkc/1540 on 04 November) and 1338 (S=14, L=121, class/area Ehi/375 on 03 November) both exhibited spot areal coverage growth. Late on 07 November, a filament channel eruption was observed in SDO/AIA imagery beginning around 07/2232Z. LASCO C2 imagery first indicated a CME liftoff from the NW limb at 07/2348Z. Activity remained at low levels on 08 November, as Regions 1339 and 1338 both started to decay and simplify magnetically. On 09 November, activity increased to moderate levels when a long duration M1 flare occurred at 09/1335Z. Associated with this event were a Type II radio sweep with an estimated shock velocity of 750 km/s and an Earth directed full-halo CME, visible in LASCO C2 imagery at 09/1336Z. Activity decreased to low levels on 10 November with the largest event of the day being a C6/1f flare at 10/1831Z. Region 1339 remained the largest region on the disk but continued to decay. On 11 November, activity remained at low levels with Region 1344 (S19, L=101, class/area Dai/200 on 12 November) producing a long duration C4/Sf flare at 11/0705Z with an associated partial-halo CME. The CME had an estimated plane-of-sky speed of 825 km/s, based on SOHO/LASCO C2 images, and appeared to have a slight earth directed component. On 12 November, activity remained at low levels with occasional C-class flares. Regions 1339 and 1338 continued to decay while Region 1344 continued to increase in magnetic complexity, areal coverage, and total spot count before stabilizing on 13 November

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit was at normal levels throughout the period.

Geomagnetic field activity ranged from quiet to minor storm levels. The period began under quiet to unsettled conditions on 07 November. Activity increased on 08 November to quiet to unsettled conditions with isolated periods of active to minor storm levels at high latitudes. Mostly quiet levels returned on 09 November and continued through 13 November.

### **Space Weather Outlook**

#### **16 November - 12 December 2011**

Solar activity is expected to be at predominately low levels with a chance for M-class activity through the period. Old Region 1339 (N19, L=102) returns on 27 November bringing an increased probability of M-class activity and a slight chance for an X-class event.

No proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at background levels.

Geomagnetic field activity is expected to be quiet for the greater portion of the forecast period. Unsettled conditions are possible on 26-27 November and again on 09-10 December with the return of recurrent coronal hole high speed streams.



### *Daily Solar Data*

Date	Radio Flux 10.7cm	Sun spot No.	Sunspot Area (10 <sup>-6</sup> hemi.)	X-ray Background Flux	Flares							
					X-ray			Optical				
					C	M	X	S	1	2	3	4
07 November	182	154	2100	B7.6	4	0	0	2	0	0	0	0
08 November	181	148	1520	B6.7	3	0	0	2	0	0	0	0
09 November	180	208	2102	B6.5	1	1	0	1	0	0	0	0
10 November	179	152	1910	B6.9	3	0	0	3	1	0	0	0
11 November	174	127	1240	B7.7	4	0	0	3	0	0	0	0
12 November	169	155	1560	B7.2	5	0	0	4	0	0	0	0
13 November	155	142	1230	B6.8	8	0	0	3	0	0	0	0

### *Daily Particle Data*

Date	Proton Fluence (protons/cm <sup>2</sup> -day -sr)			Electron Fluence (electrons/cm <sup>2</sup> -day -sr)		
	>1 MeV	>10 MeV	>100 MeV	>0.6 MeV	>2MeV	>4 MeV
	07 November	3.6e+05	1.8e+04	2.9e+03		1.4e+07
08 November	5.3e+05	1.7e+04	2.9e+03		9.6e+06	
09 November	1.3e+05	1.4e+04	3.0e+03		6.0e+06	
10 November	2.9e+05	1.5e+04	3.1e+03		9.2e+06	
11 November	3.6e+05	1.4e+04	2.8e+03		8.0e+06	
12 November	5.5e+05	1.3e+04	3.1e+03		1.2e+07	
13 November	5.7e+05	1.3e+04	3.0e+03		9.6e+06	

### *Daily Geomagnetic Data*

Date	Middle Latitude Fredericksburg		High Latitude College		Estimated Planetary	
	A	K-indices	A	K-indices	A	K-indices
	07 November	4	0-2-1-1-1-2-1-1	1	0-1-0-0-2-0-0-0	4
08 November	6	2-2-2-2-2-2-1-1	17	0-1-5-2-5-4-1-0	6	2-2-2-1-2-2-1-1
09 November	2	0-0-0-1-1-2-1-0	0	0-0-0-0-0-0-0-0	2	0-0-0-0-1-2-1-1
10 November	3	0-0-0-1-2-2-2-1	0	0-0-0-1-0-0-0-0	3	0-0-0-0-1-2-1-1
11 November	3	0-1-1-1-2-1-1-0	2	0-0-1-2-1-0-0-0	2	0-1-0-1-0-0-0-0
12 November	3	0-0-1-1-2-2-1-0	2	0-0-0-1-0-2-1-0	2	0-0-1-1-1-2-0-0
13 November	2	0-0-0-1-1-1-1-1	0	0-0-0-0-0-0-0-0	0	0-0-0-0-0-0-0-1

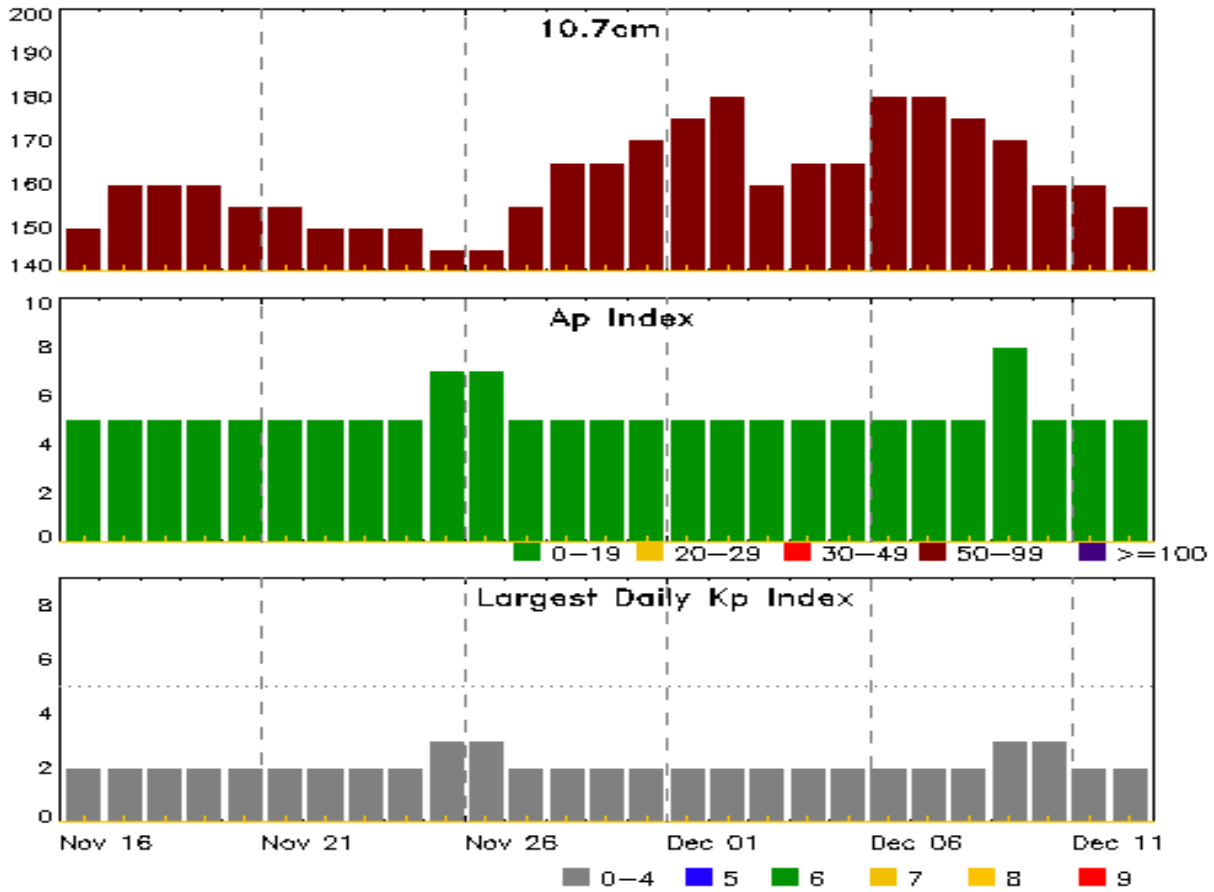


### *Alerts and Warnings Issued*

<b>Date &amp; Time of Issue UTC</b>	<b>Type of Alert or Warning</b>	<b>Date &amp; Time of Event UTC</b>
08 Nov 1310	WARNING: Geomagnetic K = 4	08/1310 - 1800
09 Nov 2027	ALERT: Type II Radio Emission	09/1311
10 Nov 1707	WATCH: Geomagnetic A $\geq$ 20	12/
12 Nov 0535	WARNING: Geomagnetic Sudden Impulse expected	12/0625 - 0730
12 Nov 0539	WARNING: Geomagnetic K = 4	12/0645 - 1600
12 Nov 0616	SUMMARY: Geomagnetic Sudden Impulse	12/0611



## 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
16 Nov	150	5	2	30 Nov	170	5	2
17	160	5	2	01 Dec	175	5	2
18	160	5	2	02	180	5	2
19	160	5	2	03	160	5	2
20	155	5	2	04	165	5	2
21	155	5	2	05	165	5	2
22	150	5	2	06	180	5	2
23	150	5	2	07	180	5	2
24	150	5	2	08	175	5	2
25	145	7	3	09	170	8	3
26	145	7	3	10	160	5	3
27	155	5	2	11	160	5	2
28	165	5	2	12	155	5	2
29	165	5	2				



### *Energetic Events*

Date	Time			X-ray		Optical Information			Peak		Sweep Freq	
	Begin	Max	Half Max	Class	Integ Flux	Imp/ Brtns	Location	Rgn #	245	2695	II	IV
09 Nov	1304	1335	1412	M1.1	0.033			1342	880			2

### *Flare List*

Date	Time			X-ray Class	Imp/ Brtns	Location	Rgn #
	Begin	Max	End				
07 Nov	0013	0017	0020	C2.3			
07 Nov	0305	0310	0316	C3.5			1339
07 Nov	0928	0934	0942	C1.4	SF	N16E17	1339
07 Nov	2239	2328	0002	C3.2	SF	N18E06	1339
08 Nov	0723	0819	0845	C2.6			1339
08 Nov	0854	0913	0919		SF	N21E06	1339
08 Nov	1923	1928	1938	C1.8	SF	N23W03	1339
08 Nov	2100	2104	2110	C1.2			1342
09 Nov	0143	0219	0251	C1.9			1339
09 Nov	1304	1335	1412	M1.1			1342
09 Nov	2301	2307	2320		SF	S13W34	1338
10 Nov	0140	0146	0150	C2.1			
10 Nov	0525	0525	0530		SF	S25W05	1345
10 Nov	1548	1552	1559	C2.2			1341
10 Nov	B1817	1831	1920	C6.0	1F	N20W30	1339
10 Nov	1847	1848	1855		SF	N12E20	1341
10 Nov	1852	1852	1856		SF	S24W11	1345
11 Nov	0611	0705	0751	C4.2			1344
11 Nov	0651	0705	0729		SF	S17W40	1344
11 Nov	0730	0730	0739		SF	S16W41	1344
11 Nov	1225	1231	1237	C1.6	SF	N19W40	1339
11 Nov	1640	1709	1733	C5.4			1344
11 Nov	2331	2334	2345	C1.3			1339
12 Nov	0742	0750	0801	C2.5	SF	N18W51	1339
12 Nov	B0805	0806	A0818		SF	N19W51	1339
12 Nov	0903	0916	0928		SF	S20W48	1344
12 Nov	1638	1643	1648	C1.8			1344
12 Nov	1811	1851	1904	C1.8			
12 Nov	2118	2126	2140	C2.4			1344
12 Nov	2237	2243	2251	C2.4	SF	S17W60	1344



## *Flare List*

Date	Time			X-ray Class	Imp/ Brtns	Optical		Rgn #
	Begin	Max	End			Location Lat CMD		
13 Nov	0350	0357	0406	C1.7	SF	S16W64		1344
13 Nov	0453	0459	0507	C2.4	SF	S19W61		1344
13 Nov	0639	0644	0653	C1.4				1344
13 Nov	0811	0820	0834	C1.9				1344
13 Nov	0917	0921	0929	C2.6	SF	N08E51		1347
13 Nov	1458	1505	1511	C1.9				1347
13 Nov	1644	1648	1705	C1.2				1341
13 Nov	2012	2016	2024	C1.1				1344



## Region Summary

Date	Location		Sunspot Characteristics				Flares																
	Lat CMD	Lon	Helio 10 <sup>6</sup> hemi.	Area	Extent (helio)	Spot Class	Spot Count	Mag Class	X-ray			Optical											
									C	M	X	S	1	2	3	4							
<b>Region 1332</b>																							
24 Oct	N32E77	217	30	2	Hsx	1	A																
25 Oct	N31E62	219	60	2	Hsx	1	A																
26 Oct	N31E49	219	40	2	Hsx	1	A																
27 Oct	N31E35	219	30	2	Hax	1	A																
28 Oct	N31E22	218	40	2	Hsx	2	A																
29 Oct	N31E10	217	30	1	Hsx	1	A																
30 Oct	N30W02	216	20	1	Hsx	1	A																
31 Oct	N31W13	215	20	1	Hsx	1	A																
01 Nov	N31W27	215	10	1	Axx	1	A																
02 Nov	N30W40	215	10	1	Axx	1	A																
03 Nov	N31W53	215	20	1	Hrx	1	A																
04 Nov	N31W67	216	plage																				
05 Nov	N31W81	217	plage																				
													0	0	0	0	0	0	0	0	0	0	

Crossed West Limb.  
Absolute heliographic longitude: 216

<b>Region 1334</b>																							
30 Oct	N13E25	188	70	6	Cso	9	B	6					1										
31 Oct	N12E11	189	110	7	Cao	11	B	1															
01 Nov	N12W03	190	120	8	Dso	9	B																
02 Nov	N11W17	191	80	7	Cso	6	B																
03 Nov	N12W34	195	70	3	Cso	3	B																
04 Nov	N12W47	195	70	2	Hsx	2	A																
05 Nov	N12W61	196	60	1	Hsx	1	A																
06 Nov	N12W73	195	40	3	Hax	2	A																
07 Nov	N12W87	196	40	2	Cso	2	B																
													7	0	0	1	0	0	0	0	0	0	

Crossed West Limb.  
Absolute heliographic longitude: 190

<b>Region 1335</b>																							
31 Oct	N19E16	184	10	4	Bxo	2	B																
01 Nov	N18E02	185	10	5	Bxo	3	B																
02 Nov	N17W11	185	10	3	Bxo	5	B																
03 Nov	N12W26	187	10	2	Bxo	3	B																
04 Nov	N12W40	189	plage																				
													0	0	0	0	0	0	0	0	0	0	

Died on Disk.  
Absolute heliographic longitude: 185



### *Region Summary - continued*

Date	Location		Sunspot Characteristics				Flares								
	Lat	CMD	Helio	Area	Extent	Spot	Spot	Mag	X-ray			Optical			
			Lon	10 <sup>6</sup> hemi.	(helio)	Class	Count	Class	C	M	X	S	1	2	3

#### *Region 1336*

31 Oct	N14E55	145	10	1	Axx	1	A										
01 Nov	N13E39	148	40	4	Cso	6	B										
02 Nov	N13E25	150	plage														
03 Nov	N11E12	149	20	3	Cso	8	B				1						
04 Nov	N11W02	151	plage														
05 Nov	N11W16	152	plage														
06 Nov	N11W30	153	plage														
07 Nov	N11W43	152	plage														
08 Nov	N11W57	153	plage														
09 Nov	N14W69	151	1	2	Axx	2	A										
10 Nov	N14W83	153	plage														
										0	0	0	1	0	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 151

#### *Region 1337*

31 Oct	N17E66	134	40	3	Hsx	1	A										
01 Nov	N17E51	136	10	3	Bxo	2	B										
02 Nov	N17E38	136	10	2	Bxo	3	B										
03 Nov	N17E26	135	40	5	Dso	7	B										
04 Nov	N18E14	134	10	4	Bxo	3	B										
05 Nov	N18W00	135	0	4	Bxo	3	B										
06 Nov	N18W14	137	plage														
07 Nov	N18W28	137	plage														
08 Nov	N18W42	138	plage														
09 Nov	N17W57	139	1	1	Axx	1	A										
10 Nov	N17W71	141	plage														
11 Nov	N17W85	142	plage														
										0	0	0	0	0	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 135





### *Region Summary - continued*

Date	Location		Sunspot Characteristics					Flares															
	Lat CMD	Lon	Helio 10 <sup>-6</sup> hemi.	Area	Extent (helio)	Spot Class	Spot Count	Mag Class	X-ray			Optical											
									C	M	X	S	1	2	3	4							
<b>Region 1338</b>																							
31 Oct	S12E83	118	plage										1										
01 Nov	S12E69	118	120	5	Dao	2	B						1										
02 Nov	S14E54	120	230	7	Dao	5	B																
03 Nov	S14E40	121	375	11	Ehi	20	BG	1						2									
04 Nov	S14E28	120	240	9	Dso	10	B																
05 Nov	S14E14	120	220	10	Dso	8	B																
06 Nov	S14E02	120	240	10	Dso	9	B	4						5									
07 Nov	S12W11	120	240	11	Esi	16	BG																
08 Nov	S14W25	121	180	13	Esi	15	B																
09 Nov	S12W38	121	230	8	Dso	11	B							1									
10 Nov	S13W51	120	190	5	Cso	4	B																
11 Nov	S13W68	123	140	5	Dao	2	B																
12 Nov	S14W79	121	120	4	Dao	6	B																
13 Nov	S13W91	120	30	3	Cro	2	B																
								7	0	0	8	0	0	0	0	0							

Still on Disk.

Absolute heliographic longitude: 120

<b>Region 1339</b>																							
01 Nov	N22E71	117	180	9	Dao	2	B	2															
02 Nov	N18E63	111	560	8	Dkc	4	BG	6	1				8										
03 Nov	N18E57	104	1400	13	Ekc	25	BGD	11	2	1			7	1	1								
04 Nov	N19E45	102	1540	17	Fkc	33	BGD	3	1				4										
05 Nov	N19E31	103	1250	15	Ekc	31	BGD	4	3				1	2									
06 Nov	N20E20	102	1230	16	Fkc	42	BGD	2	2				3										
07 Nov	N19E05	103	1240	16	Fkc	45	BGD	3					2										
08 Nov	N19W08	104	940	15	Ekc	40	BG	2					2										
09 Nov	N21W19	102	1030	16	Fkc	50	BG	1															
10 Nov	N19W33	102	1020	16	Fkc	45	BG	1						1									
11 Nov	N18W48	103	590	15	Ekc	22	BG	2					1										
12 Nov	N18W62	104	650	9	Dac	26	BG	1					2										
13 Nov	N19W75	104	360	8	Dai	11	B																
								38	9	1	30	4	1	0	0								

Still on Disk.

Absolute heliographic longitude: 103



### *Region Summary - continued*

Date	Location		Sunspot Characteristics				Flares										
	Lat CMD	Lon	Helio 10 <sup>6</sup> hemi.	Area	Extent (helio)	Spot Class	Spot Count	Mag Class	X-ray			Optical					
									C	M	X	S	1	2	3	4	
<b>Region 1340</b>																	
05 Nov	S09E61	73	80	1	Hsx	1	A										
06 Nov	S09E49	73	80	2	Cao	1	B										
07 Nov	S09E36	72	90	2	Hsx	1	A										
08 Nov	S09E22	73	plage	2		1											
09 Nov	S09E09	74	90	2	Hsx	1	A										
10 Nov	S09W04	73	80	2	Hsx	1	A										
11 Nov	S09W17	72	80	2	Hsx	1	A										
12 Nov	S09W31	73	80	2	Hsx	1	A										
13 Nov	S08W44	73	80	1	Hsx	1	A										
								0	0	0	0	0	0	0	0	0	

Still on Disk.

Absolute heliographic longitude: 73

<b>Region 1341</b>																	
05 Nov	N10E78	58	100	3	Hsx	1	A										
06 Nov	N08E66	56	120	3	Hsx	1	A										
07 Nov	N10E55	53	180	10	Cao	3	B										
08 Nov	N11E41	55	110	8	Dao	5	B										
09 Nov	N18E28	55	210	6	Dso	8	B										
10 Nov	N08E14	55	110	6	Cso	3	B	1				1					
11 Nov	N08E02	53	90	8	Cso	7	B										
12 Nov	N11W14	56	80	4	Cso	4	B										
13 Nov	N10W22	51	80	12	Cso	7	B	1									
								2	0	0	1	0	0	0	0	0	

Still on Disk.

Absolute heliographic longitude: 53



**Region Summary - continued**

Date	Location		Sunspot Characteristics				Flares																
	Lat CMD	Lon	Helio 10 <sup>6</sup> hemi.	Area	Extent (helio)	Spot Class	Spot Count	Mag Class	X-ray			Optical											
									C	M	X	S	1	2	3	4							
<b>Region 1342</b>																							
05 Nov	N18E76		60	110	10	Dso	8	B															
06 Nov	N18E62		60	120	8	Dao	6	B															
07 Nov	N17E47		61	170	11	Eao	5	B															
08 Nov	N18E34		61	130	11	Eso	14	B	1														
09 Nov	N17E22		61	310	13	Eho	18	B		1													
10 Nov	N15E15		54	180	5	Cso	5	B															
11 Nov	N16W10		65	100	2	Cso	2	B															
12 Nov	N15W22		64	140	2	Hsx	2	A															
13 Nov	N16W34		63	150	2	Hsx	1	A															
										1	1	0	0	0	0	0	0	0	0	0	0	0	

Still on Disk.

Absolute heliographic longitude: 65

**Region 1343**

06 Nov	N29E76		46	60	4	Hsx	1	A														
07 Nov	N27E62		46	140	2	Hsx	1	A														
08 Nov	N28E49		47	90	2	Hsx	1	A														
09 Nov	N27E37		46	110	2	Hsx	1	A														
10 Nov	N27E23		46	180	2	Hsx	1	A														
11 Nov	N26E12		44	120	2	Hsx	1	A														
12 Nov	N27W01		44	140	2	Hsx	1	A														
13 Nov	N28W14		43	120	2	Hsx	1	A														
										0	0	0	0	0	0	0	0	0	0	0	0	0

Still on Disk.

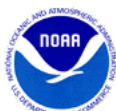
Absolute heliographic longitude: 44

**Region 1344**

07 Nov	S22E06		102	0	1	Axx	1	A														
08 Nov	S22W07		103	0	1	Axx	2	A														
09 Nov	S22W19		102	40	10	Dao	10	B														
10 Nov	S19W31		100	60	4	Cro	7	B														
11 Nov	S18W45		100	60	8	Dso	6	B	2				2									
12 Nov	S19W59		101	200	10	Dai	22	B	3				2									
13 Nov	S18W73		102	240	11	Esi	11	B	5				2									
									10	0	0	6	0	0	0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 102



### *Region Summary - continued*

Date	Location		Sunspot Characteristics				Flares											
	Lat CMD	Lon	Helio 10 <sup>6</sup> hemi.	Area	Extent (helio)	Spot Class	Spot Count	Mag Class	X-ray			Optical						
									C	M	X	S	1	2	3	4		
<b>Region 1345</b>																		
09 Nov	S25W01		84	80	4	Cso	6	B										
10 Nov	S25W16		85	90	7	Dro	6	B					2					
11 Nov	S26W29		85	60	8	Dso	6	B										
12 Nov	S26W41		84	70	9	Dso	2	B										
13 Nov	S25W54		83	30	8	Cro	3	B										
									0	0	0	2	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 84

#### **Region 1346**

12 Nov	S17E64		338	80	2	Hsx	1	A										
13 Nov	S21E57		331	110	12	Cso	2	B										
									0	0	0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 331

#### **Region 1347**

13 Nov	N07E53		346	30	4	Cro	3	B	2				1					
									2	0	0	1	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 346

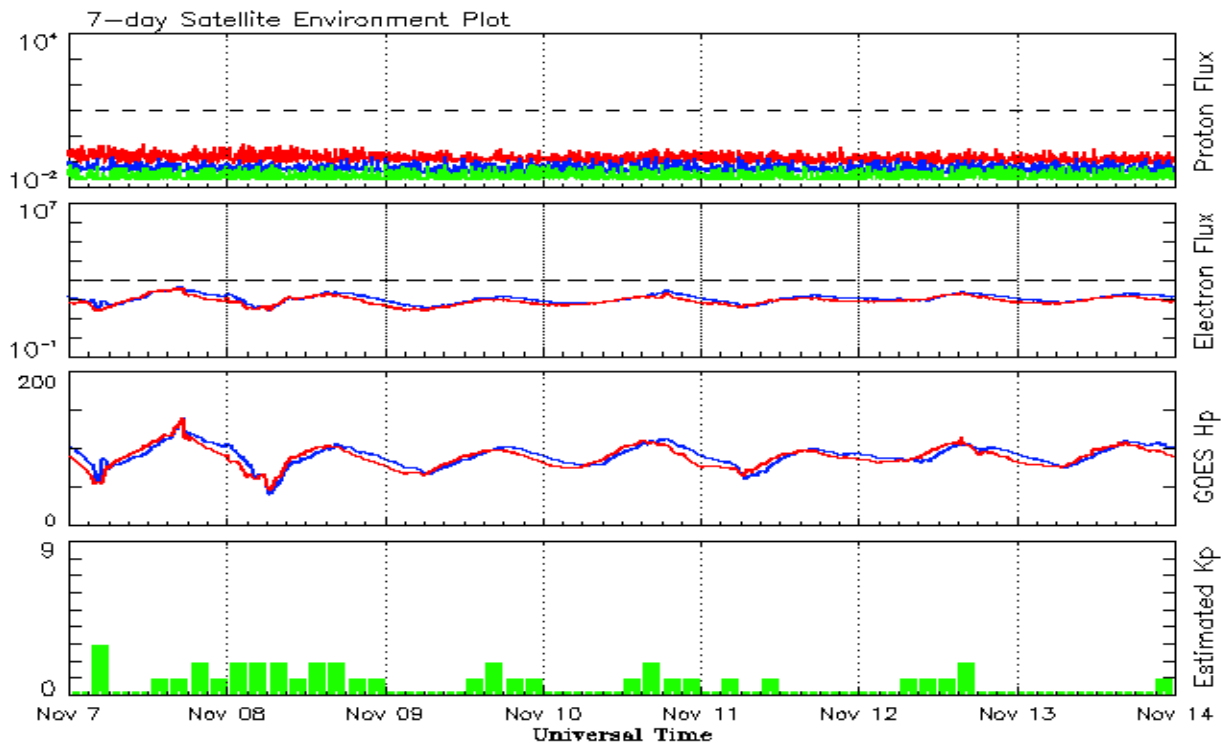


**Recent Solar Indices (preliminary)**  
**Observed monthly mean values**

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
<b>2009</b>									
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
<b>2010</b>									
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
<b>2011</b>									
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			95.9		9	
June	55.5	37.0	0.67			95.8		8	
July	67.0	43.9	0.66			94.2		9	
August	66.1	50.6	0.77			101.7		8	
September	106.4	78.0	0.73			134.5		13	
October	116.8	88.0	0.75			137.2		7	

**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 07 November 2011*

The proton flux plot contains the five-minute averaged integral proton flux (protons/cm<sup>2</sup>-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.

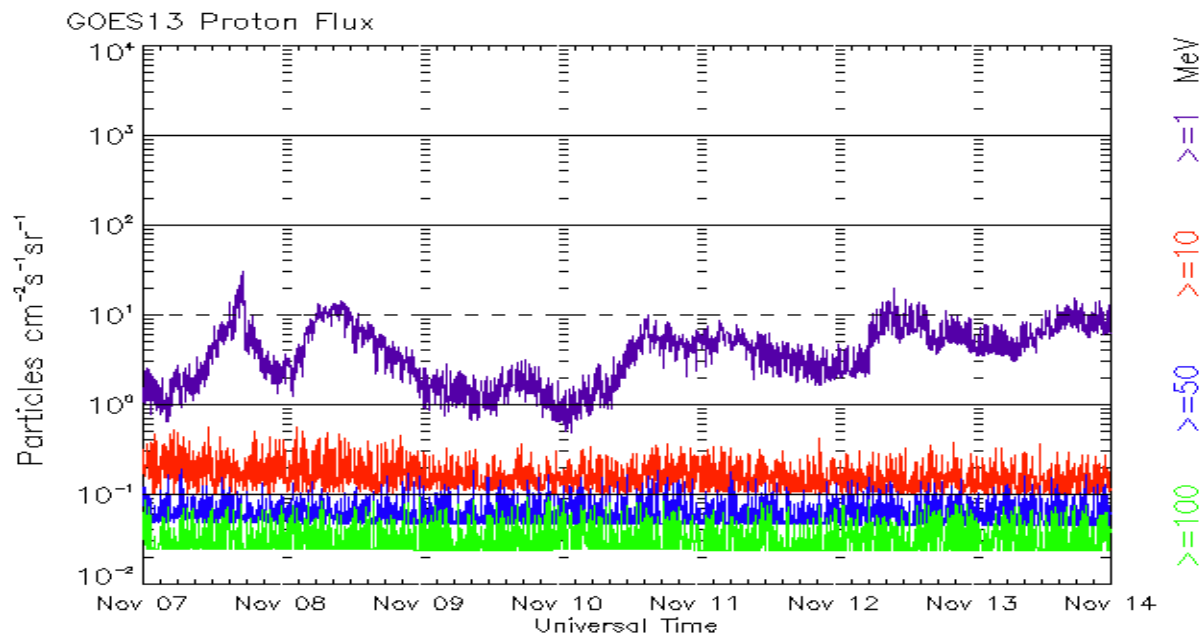
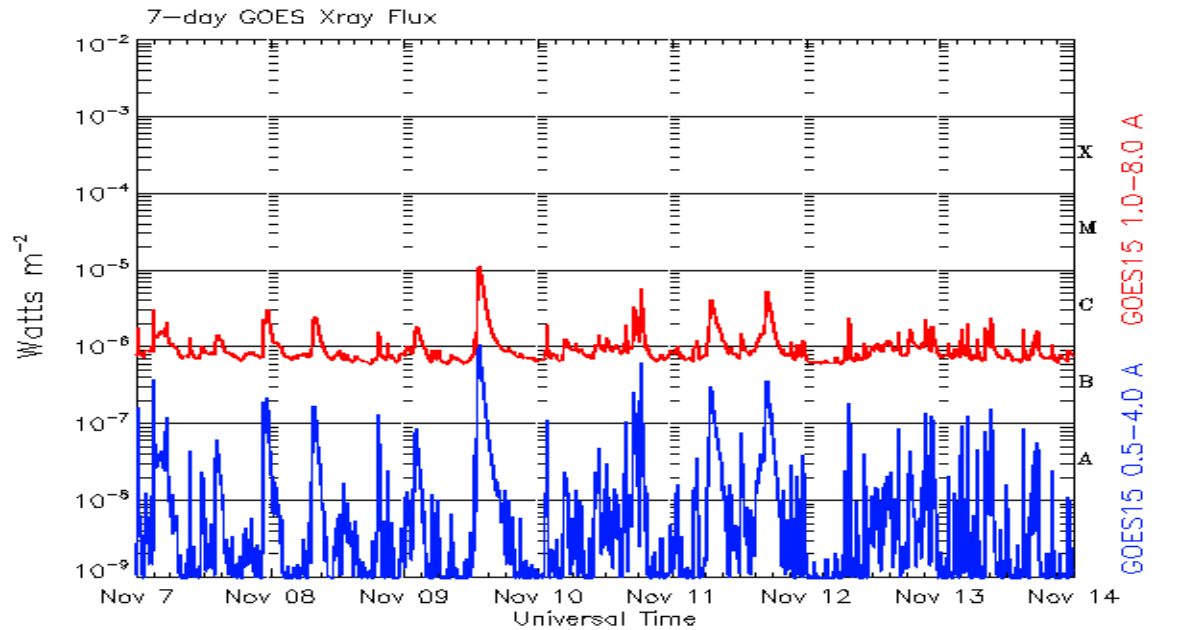
The electron flux plot contains the five-minute averaged integral electron flux (electrons/cm<sup>2</sup>-sec -sr) with energies greater than 2 MeV by the SWPC Primary GOES satellite.

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 07 November 2011*

The x-ray plots contains five-minute averages x-ray flux (Watt/m<sup>2</sup>) 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<sup>2</sup> -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.



## ***Preliminary Report and Forecast of Solar Geophysical Data (The Weekly)***

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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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