

Solar activity was at low levels for 06-08, 10-12 Oct but reached moderate levels on 09 Oct. Low level solar activity early in the period increased to moderate levels as Region 2182 (S14, L=123, class/area=Dac/170 on 09 Oct) produced two M-class flares in rapid succession early on 09 Oct, followed by a third M-class flare a few hours later. The first two moderate level flares from Region 2182 were a pair of M1 flares at 0143 UTC and 0158 UTC on 09 Oct, with the first flare having an associated optical component measured at 1f. The third flare from Region 2182 was an M1/1n flare at 0659 UTC on 09 Oct. Region 2182 produced numerous C-class flares before rotating around the western limb on 12 Oct. A coronal mass ejection (CME) associated with the first two M-class flares was observed leaving the west limb in SOHO/LASCO C2 coronagraph imagery beginning at 09/0336 UTC. A second CME associated with the third M-class flare was observed leaving the west limb in C2 imagery beginning at 09/1348 UTC. Subsequent analysis determined that these CMEs were directed well west of the Sun-Earth line. Solar activity returned to low levels on 10 Oct and persisted through the remainder of the period. Region 2187 (S09, L=321, class/area=Cso/120 on 12 Oct) rotated onto the visible disk on 11 Oct and produced low-level C-class flare activity late in the period, the largest of which was a C3 flare at 10/1647 UTC while the region was on the eastern limb.

A Hyder flare was observed in conjunction with a filament eruption (estimated at 10-15 degrees). The filament was centered near S13W51 and was observed erupting in SDO/AIA 304 imagery between 1538-1809 UTC on 10 Oct. A subsequent CME was observed off the southwest limb in C2 coronagraph imagery beginning at 10/1612 UTC. WSA-ENLIL model output and forecaster analysis indicate that this CME was predominately south and west of the Sun-Earth line but a possible weak glancing blow late 13 Oct/early 14 Oct has not been completely ruled out. An additional filament liftoff (estimated at 8 degrees) centered near N10W15 was observed in SDO/AIA 304 imagery beginning at 11/1854 UTC, but appeared to be reabsorbed. Late in the period, an eruption behind the west limb was observed in SDO/AIA 304 imagery beginning at 12/2340 UTC. Due to missing STEREO satellite imagery, it is unclear whether this eruption is associated with a filament liftoff or flare activity from the vicinity of old Region 2182. A subsequent CME was observed off the west limb in C2 coronagraph imagery beginning at 13/0000 UTC but is not expected to be Earth-directed.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit was at low to moderate levels on 06-09 Oct and decreased to low levels for 10-12 Oct.

Geomagnetic field activity was at quiet to unsettled levels on 06-08, 10-11 Oct with quiet conditions prevailing on 12 Oct under a nominal solar wind regime. Quiet to unsettled levels with active conditions between 0300-0900 UTC were observed on 09 Oct due to a solar sector boundary crossing (SSBC) followed by an extended period of southward Bz.



## **Space Weather Outlook 13 October - 08 November 2014**

Solar activity is expected to be at low levels for 13-14, 29-31 Oct, and 01-08 Nov. Solar activity is expected to be low with a chance for M-class (R1-R2 (Minor-Moderate)) flare activity for 15-28 Oct as old Regions 2172 (S12, L=241) and 2173 (S17, L=250) return to the visible disk. Regions 2172 and 2173 were very active (five M-class flares between the two regions) and produced significant solar activity last rotation.

No proton events are expected at geosynchronous orbit, barring any significant flare activity from Regions 2172 or 2173.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at normal to moderate levels throughout the period.

Geomagnetic field activity is expected to be at quiet levels on 13, 17-18, 30-31 Oct and 01-03, and 08 Nov under a nominal solar wind regime. Quiet to unsettled levels are expected on 14-16, 19-20, 25-29 Oct and 04-07 Nov due weak coronal hole high speed stream (CH HSS) effects. Isolated G1 (Minor) geomagnetic storm conditions are likely on 21 Oct followed by periods of active geomagnetic field activity on 22-24 Oct due to effects of a strong positive polarity CH HSS.



### *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
06 October	130	86	300	B5.0	4	0	0	3	0	0	0	0
07 October	125	75	290	B3.8	4	0	0	8	0	0	0	0
08 October	126	61	320	B3.5	5	0	0	8	0	0	0	0
09 October	119	65	440	B5.4	9	3	0	11	3	0	0	0
10 October	121	54	350	B3.0	1	0	0	0	0	0	0	0
11 October	112	38	390	B3.2	1	0	0	0	0	0	0	0
12 October	111	28	320	B2.9	2	0	0	0	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
	06 October	1.7e+05	1.1e+04	2.5e+03		1.5e+07
07 October	1.4e+05	1.1e+04	2.7e+03		8.6e+06	
08 October	1.7e+05	1.2e+04	2.7e+03		6.3e+06	
09 October	1.6e+05	1.2e+04	2.7e+03		2.4e+06	
10 October	1.1e+05	1.2e+04	2.6e+03		2.8e+06	
11 October	6.4e+05	1.2e+04	2.7e+03		4.0e+05	
12 October	2.8e+05	1.1e+04	2.7e+03		5.6e+05	

### *Daily Geomagnetic Data*

Date	Middle Latitude Fredericksburg		High Latitude College		Estimated Planetary	
	A	K-indices	A	K-indices	A	K-indices
	06 October	6	2-2-0-2-2-2-2-2	3	1-2-0-0-2-0-1-1	6
07 October	5	2-3-0-1-1-2-1-1	2	2-1-0-0-1-0-0-0	6	2-3-1-1-1-1-1-1
08 October	6	1-1-2-2-2-2-2-2	16	1-0-0-5-5-3-2-2	9	1-1-2-3-2-2-2-3
09 October	10	2-3-3-2-3-2-2-2	8	3-0-0-0-3-3-1-0	14	3-4-4-3-3-2-2-2
10 October	7	3-3-1-1-2-2-1-1	5	1-3-1-1-1-2-1-1	8	3-3-1-1-1-1-2-1
11 October	8	2-3-3-2-3-1-1-0	13	1-3-4-4-4-1-0-0	10	3-3-3-3-3-1-1-1
12 October	2	0-0-1-1-1-1-1-1	13	0-1-0-5-5-2-0-0	5	1-1-1-2-2-1-1-1

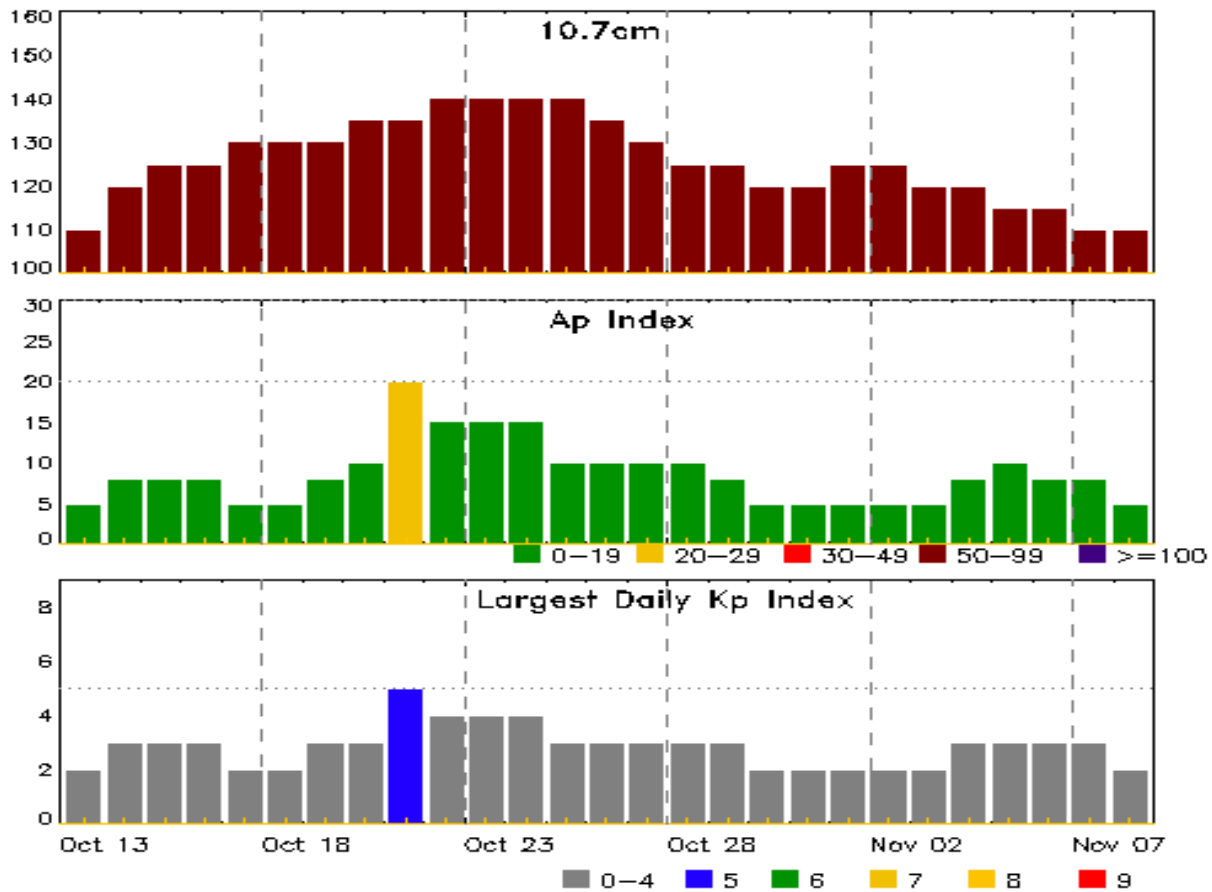


### *Alerts and Warnings Issued*

<b>Date &amp; Time of Issue UTC</b>	<b>Type of Alert or Warning</b>	<b>Date &amp; Time of Event UTC</b>
07 Oct 0456	WARNING: Geomagnetic K = 4	07/0456 - 1300
07 Oct 0932	CANCELLATION: Geomagnetic K = 4	
08 Oct 0958	WARNING: Geomagnetic K = 4	08/1000 - 1300
09 Oct 0028	WARNING: Geomagnetic K = 4	09/0030 - 0700
09 Oct 0419	ALERT: Geomagnetic K = 4	09/0419
09 Oct 0610	EXTENDED WARNING: Geomagnetic K = 4	09/0030 - 1300
09 Oct 1257	EXTENDED WARNING: Geomagnetic K = 4	09/0030 - 1900
10 Oct 0303	WARNING: Geomagnetic K = 4	10/0303 - 1300
11 Oct 0612	WARNING: Geomagnetic K = 4	11/0615 - 1300
11 Oct 1255	EXTENDED WARNING: Geomagnetic K = 4	11/0615 - 2200



## 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
13 Oct	110	5	2	27 Oct	130	10	3
14	120	8	3	28	125	10	3
15	125	8	3	29	125	8	3
16	125	8	3	30	120	5	2
17	130	5	2	31	120	5	2
18	130	5	2	01 Nov	125	5	2
19	130	8	3	02	125	5	2
20	135	10	3	03	120	5	2
21	135	20	5	04	120	8	3
22	140	15	4	05	115	10	3
23	140	15	4	06	115	8	3
24	140	15	4	07	110	8	3
25	140	10	3	08	110	5	2
26	135	10	3				



### *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 Oct	0130	0143	0147	M1.3	0.005	1F	S15W45	2182				
09 Oct	0154	0158	0202	M1.4	0.004			2182				
09 Oct	0648	0659	0706	M1.2	0.008	1N	S16W46	2182				

### *Flare List*

Date	Time			X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
	Begin	Max	End				
06 Oct	0001	0006	0011	C1.2	SF	S11W45	2181
06 Oct	1544	1549	1554	C1.7	SF	S13W55	2181
06 Oct	1635	1707	1734	C3.0	SF	S16E60	2185
06 Oct	2108	2126	2141	C1.5			2181
07 Oct	0705	0709	0717	B8.2	SF	N15E44	
07 Oct	0720	0726	0732	C1.1	SF	N15E44	
07 Oct	B1525	U1527	A1542	B7.2	SF	N15E39	
07 Oct	1555	1600	1604	C1.6	SF	N14E38	
07 Oct	1948	1957	2007	C1.0	SF	N14E36	
07 Oct	2232	2235	2244		SF	S15W26	2182
07 Oct	2301	2302	2304		SF	S15W26	2182
07 Oct	2329	2334	2340	C1.1	SF	N14E35	
08 Oct	B0914	U0915	A0938		SF	S16W31	2182
08 Oct	0937	0937	0944		SF	N15E30	
08 Oct	1304	1317	1320	C1.0	SF	S16W32	2182
08 Oct	1346	1347	1357		SF	N15E27	
08 Oct	1645	1651	1656	C2.1	SF	S17W38	2182
08 Oct	1948	1953	1958	C2.0	SF	S17W41	2182
08 Oct	2021	2027	2034	C1.8			
08 Oct	2103	2104	2107		SF	S17W41	2182
08 Oct	2225	2254	2303	C3.8	SF	S14W43	2182
09 Oct	0129	0144	0217	M1.3	1F	S15W45	2182
09 Oct	0154	0158	0202	M1.4			2182
09 Oct	0305	0314	0339	C1.6	SF	S15W45	2182
09 Oct	0437	0442	0448	C1.3			2182
09 Oct	0459	0504	0517	C4.2	SF	S16W46	2182
09 Oct	0611	0615	0618	C1.1	SF	S19W46	2182
09 Oct	0641	0657	0721	M1.2	1N	S16W46	2182



## *Flare List*

Date	Time			X-ray Class	Imp/ Brtns	Optical		Rgn #
	Begin	Max	End			Location Lat CMD		
09 Oct	0735	0743	0751	C2.7	SF	S18W46		2182
09 Oct	0821	0927	0937	C7.9				2182
09 Oct	0826	0827	0835		SF	S15W47		2182
09 Oct	0843	0844	0851		SF	S19W48		2182
09 Oct	0919	0925	1003		1F	S19W47		2182
09 Oct	1052	1055	1057	C1.1	SF	S19W50		2182
09 Oct	1102	1108	1115		SF	S19W50		2182
09 Oct	1130	1135	1149	B7.9				2182
09 Oct	1205	1207	1219		SF	S19W49		2182
09 Oct	1253	1303	1320	C1.9	SF	S19W51		2182
09 Oct	1517	1518	1527		SF	S19W53		2182
09 Oct	1819	1823	1831	C1.0				2182
09 Oct	2020	2023	2025	B6.6				
10 Oct	1542	1647	1821	C3.0				
11 Oct	0326	0345	0425	B6.5				2187
11 Oct	2304	2323	2338	B9.5				2187
11 Oct	2352	0013	0029	C1.8				2187
12 Oct	0230	0240	0247	B6.2				2187
12 Oct	0510	0515	0521	C2.5				2187
12 Oct	0619	0637	0641	C1.7				2187
12 Oct	1000	1013	1019	B6.7				2187



## Region Summary

Date	Location		Sunspot Characteristics				Flares										
	Lat CMD	Helio Lon	Area 10 <sup>6</sup> hemi.	Extent (helio)	Spot Class	Spot Count	Mag Class	X-ray			Optical						
								C	M	X	S	1	2	3	4		
<b>Region 2176</b>																	
25 Sep	N06E41	210	10	1	Axx	1	A										
26 Sep	N07E28	209	10	5	Bxo	4	B										
27 Sep	N07E13	211	plage														
28 Sep	N07W02	213	plage														
29 Sep	N08W13	211	10	3	Bxo	4	B	1				3					
30 Sep	N08W25	210	30	5	Dro	3	B					2					
01 Oct	N09W39	210	20	6	Cro	7	B										
02 Oct	N09W52	209	30	6	Dro	6	B										
03 Oct	N08W66	211	40	8	Cao	5	B										
04 Oct	N19W79	211	30	7	Cao	2	B										
05 Oct	N09W92	211	20	9	Cao	3	B										
								1	0	0	5	0	0	0	0	0	

Crossed West Limb.  
Absolute heliographic longitude: 213

<b>Region 2177</b>																	
24 Sep	N12E89	176	plage					1									
25 Sep	N12E75	176	30	1	Hsx	1	A										
26 Sep	N12E67	170	80	5	Dao	5	B	2				3					
27 Sep	N11E56	168	110	15	Eai	7	B										
28 Sep	N12E43	168	120	11	Eai	12	BG										
29 Sep	N11E31	167	200	12	Eac	17	BG	1				5					
30 Sep	N12E16	169	140	13	Eac	19	BG					1					
01 Oct	N12E03	168	70	9	Dao	19	BG										
02 Oct	N12W11	168	30	6	Cso	9	B										
03 Oct	N13W27	172	10	2	Axx	6	A										
04 Oct	N15W38	170	10	7	Bxo	8	B	1				1					
05 Oct	N13W54	173	10	1	Axx	1	A	1									
06 Oct	N13W68	174	plage														
07 Oct	N13W82	174	plage														
								6	0	0	10	0	0	0	0	0	

Crossed West Limb.  
Absolute heliographic longitude: 168





### *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 2178</b>																				
27 Sep	S01E75	149	30	5	Hsx	1	A		1											
28 Sep	S03E60	151	50	2	Cao	4	B						1							
29 Sep	S03E45	153	120	4	Cso	3	B						1							
30 Sep	S03E32	153	120	6	Dao	5	BG													
01 Oct	S02E19	152	180	6	Dac	12	BG						1							
02 Oct	S02E05	152	140	6	Dai	12	BG													
03 Oct	S01W08	153	160	7	Cai	10	B							2						
04 Oct	S01W23	155	130	7	Cai	13	B	3						3						
05 Oct	S01W37	156	110	3	Cao	4	B	1						1						
06 Oct	S01W51	157	100	2	Hax	3	A													
07 Oct	S02W64	155	80	2	Hax	1	A													
08 Oct	S03W79	158	70	2	Hsx	1	A													
09 Oct	S01W93	158	60	2	Hax	1	A													
								4	1	0	9	0	0	0	0	0				

Crossed West Limb.  
 Absolute heliographic longitude: 152

<b>Region 2179</b>																				
28 Sep	S11E71	140	60	2	Hsx	1	A													
29 Sep	S10E56	141	40	1	Hsx	1	A													
30 Sep	S11E41	144	30	2	Hax	1	A						3							
01 Oct	S11E29	142	40	2	Hax	1	A													
02 Oct	S10E15	142	20	1	Hax	1	A													
03 Oct	S11E04	141	20	1	Hax	2	A													
04 Oct	S09W10	142	10	1	Axx	1	A													
05 Oct	S10W24	143	10	1	Axx	1	A													
06 Oct	S10W38	144	plage																	
07 Oct	S10W52	144	plage																	
08 Oct	S10W66	145	plage																	
09 Oct	S10W80	146	plage																	
								0	0	0	3	0	0	0	0	0				

Crossed West Limb.  
 Absolute heliographic longitude: 141



**Region Summary - continued**

Date	Location		Sunspot Characteristics				Flares										
	Lat CMD	Helio Lon	Area 10 <sup>6</sup> hemi.	Extent (helio)	Spot Class	Spot Count	Mag Class	X-ray			Optical						
								C	M	X	S	1	2	3	4		
<b>Region 2180</b>																	
30 Sep	N12W13	197	10	2	Bxo	2	B										
01 Oct	N13W27	198	10	3	Bxo	2	B										
02 Oct	N13W41	199	plage														
03 Oct	N13W55	200	plage														
04 Oct	N13W69	201	plage														
05 Oct	N13W83	202	plage														
								0	0	0	0	0	0	0	0	0	

Crossed West Limb.  
Absolute heliographic longitude: 197

<b>Region 2181</b>																	
30 Sep	S09E23	160	10	1	Hrx	1	A										
01 Oct	S12E10	161	10	5	Bxo	5	B										
02 Oct	S11W05	162	10	5	Bxo	2	B										
03 Oct	S11W17	162	30	6	Dro	7	BG	1									
04 Oct	S11W30	162	80	7	Dao	14	B										
05 Oct	S12W45	164	70	9	Dai	9	BG	1									
06 Oct	S11W59	165	80	7	Dsi	7	BG	3			2						
07 Oct	S12W73	164	70	7	Cao	3	B										
08 Oct	S14W88	167	50	10	Hsx	1	A										
								5	0	0	2	0	0	0	0	0	

Crossed West Limb.  
Absolute heliographic longitude: 162

<b>Region 2182</b>																	
03 Oct	S13E25	120	20	5	Cso	5	B				1						
04 Oct	S14E11	121	80	6	Cao	5	B										
05 Oct	S15W02	121	90	5	Csi	6	B										
06 Oct	S15W16	122	90	8	Dai	11	B										
07 Oct	S15W27	119	50	7	Cao	7	B				2						
08 Oct	S16W42	121	50	7	Dso	6	B	4			6						
09 Oct	S14W58	123	170	8	Dac	19	BG	9	3		11	3					
10 Oct	S15W69	121	150	9	Dac	9	BG										
11 Oct	S15W83	124	120	7	Dao	4	B										
								13	3	0	20	3	0	0	0	0	

Crossed West Limb.  
Absolute heliographic longitude: 121



### *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

#### *Region 2183*

03 Oct	N13E54	91	10	1	Axx	1	A										
04 Oct	N11E42	90	20	1	Hrx	1	A										
05 Oct	N13E29	89	10	1	Axx	1	A										
06 Oct	N13E16	90	10	1	Axx	1	A										
07 Oct	N13E02	89	0	1	Axx	1	A										
08 Oct	N13W12	91	plage														
09 Oct	N13W26	92	plage														
10 Oct	N13W40	93	plage														
11 Oct	N13W54	94	plage														
12 Oct	N13W68	94	plage														
									0	0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 89

#### *Region 2184*

03 Oct	S18E66	79	10	1	Hrx	1	A										
04 Oct	S20E50	82	10	1	Axx	1	A										
05 Oct	S17E39	79	10	1	Axx	1	A										
06 Oct	S17E26	80	10	1	Axx	1	A										
07 Oct	S23E22	71	10	4	Bxo	2	B										
08 Oct	S21E07	72	0		Axx	1	A										
09 Oct	S21W07	73	plage														
10 Oct	S13W12	65	0	1	Axx	1	A										
11 Oct	S17W41	81	plage														
12 Oct	S17W54	80	plage														
									0	0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 72



### *Region Summary - continued*

Date	Location		Sunspot Characteristics					Flares															
	Lat	CMD	Helio Lon	Area 10 <sup>6</sup> hemi.	Extent (helio)	Spot Class	Spot Count	Mag Class	X-ray			Optical											
									C	M	X	S	1	2	3	4							
<b>Region 2185</b>																							
06 Oct	S14E43		63	10	4	Bxo	3	B	1				1										
07 Oct	S14E29		63	plage																			
08 Oct	S14E15		64	plage																			
09 Oct	S13E04		62	10	3	Bxo	2	B															
10 Oct	S13W10		63	0	3	Axx	2	A															
11 Oct	S13W23		63	plage																			
12 Oct	S13W37		63	plage																			
									1	0	0		1	0	0	0	0	0					

Still on Disk.

Absolute heliographic longitude: 62

<b>Region 2186</b>																							
07 Oct	S19E73		19	80	3	Hkx	1	A															
08 Oct	S19E60		19	150	5	Cso	2	B															
09 Oct	S22E45		20	200	4	Cso	3	B															
10 Oct	S20E34		19	200	3	Cso	2	B															
11 Oct	S20E19		21	170	4	Cso	3	B															
12 Oct	S21E07		19	200	5	Cao	5	B															
									0	0	0		0	0	0	0	0	0					

Still on Disk.

Absolute heliographic longitude: 19

<b>Region 2187</b>																							
11 Oct	S08E79		320	100	2	Hsx	1	A	1														
12 Oct	S09E65		321	120	4	Cso	3	B	2														
									3	0	0		0	0	0	0	0	0					

Still on Disk.

Absolute heliographic longitude: 321

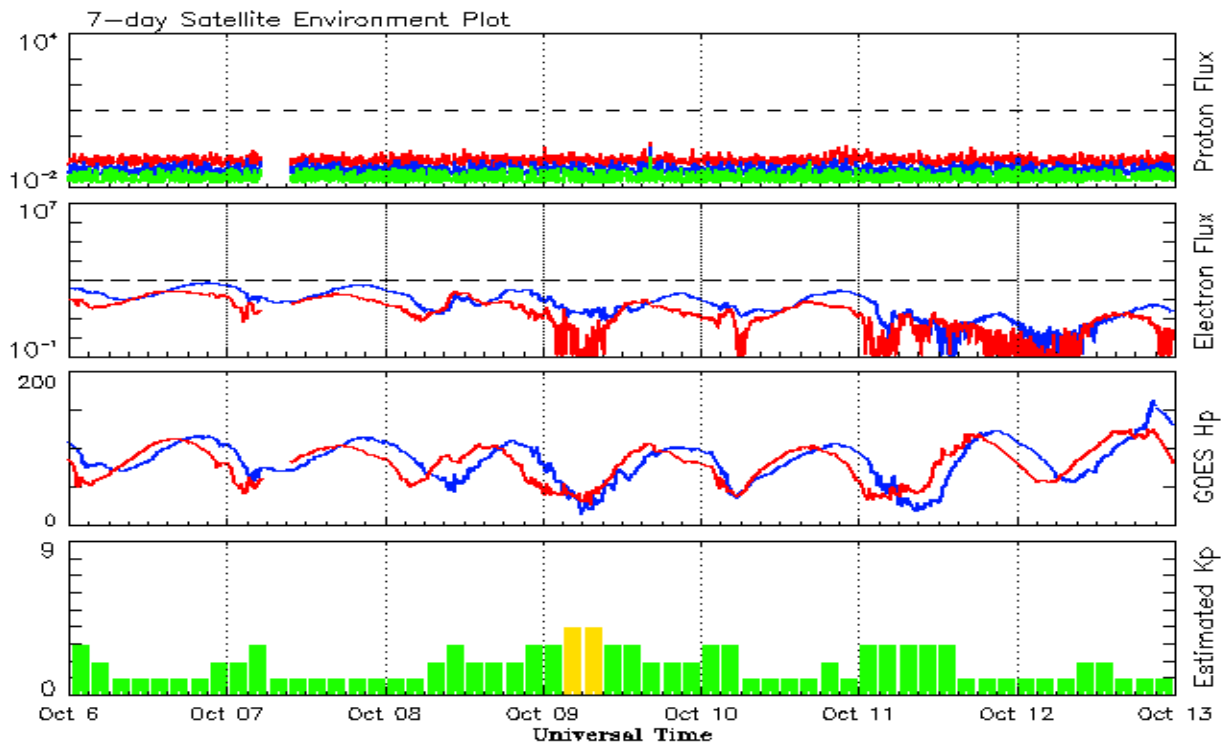


**Recent Solar Indices (preliminary)**  
**Observed monthly mean values**

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>2012</b>									
October	73.5	53.3	0.73	85.0	58.6	123.3	119.2	9	7.4
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
<b>2013</b>									
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
<b>2014</b>									
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			144.3		9	
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	

**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 06 October 2014*

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.

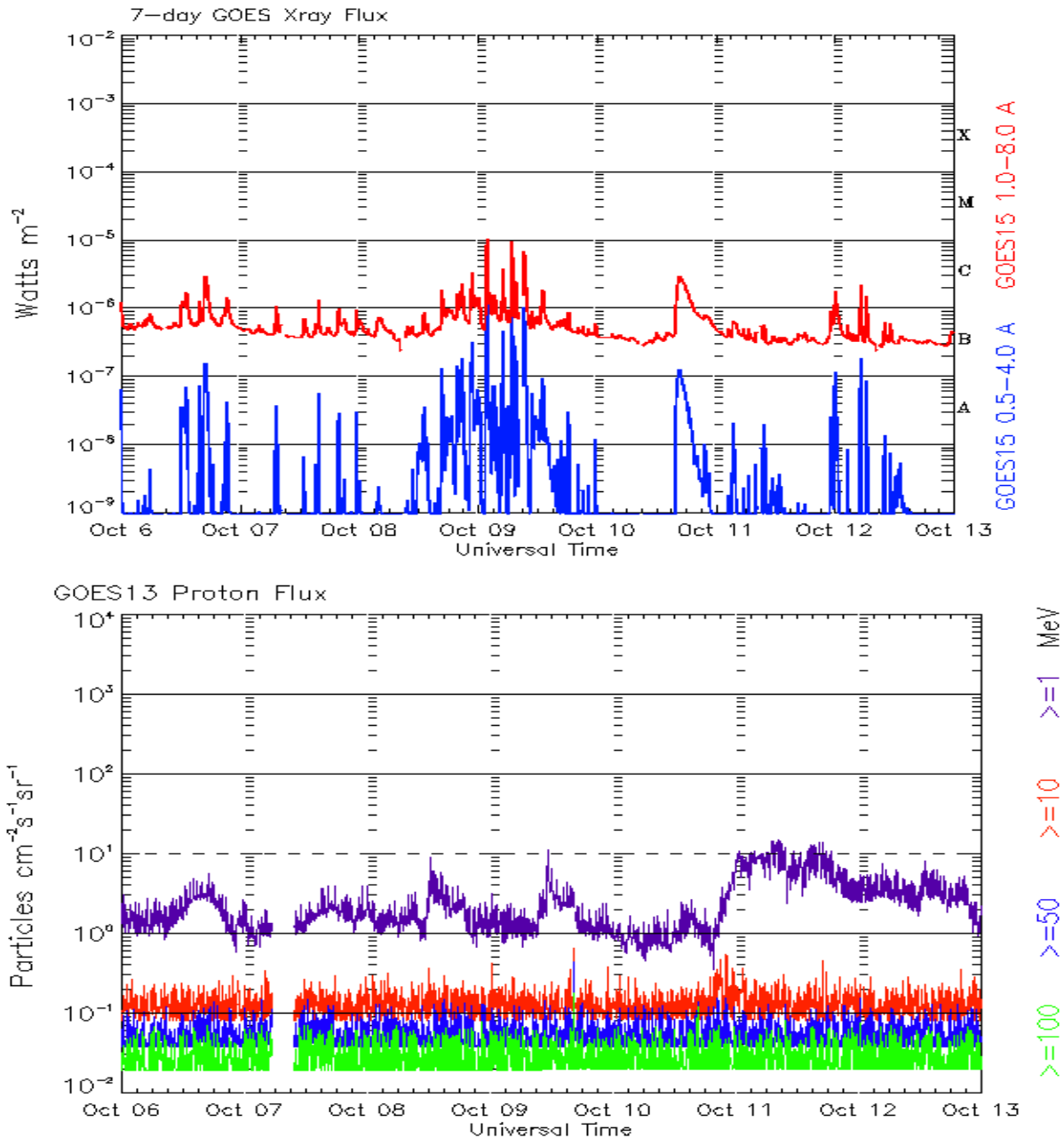
The electron flux plot contains the five-minute averaged integral electron flux (electrons/cm<sup>2</sup>-sec -sr) with energies greater than 2 MeV by the SWPC Primary GOES satellite.

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.

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.

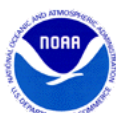




*Weekly GOES Satellite X-ray and Proton Plots  
Week Beginning 06 October 2014*

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 intergral 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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