

Solar activity ranged from very low to high during the period. Region 2192 (S13, L=251, class/area=Fkc/1560 on 19 Oct) produced the vast majority of the flare activity throughout the week. These events included several low and mid level C-class flares, a M1 (R1-minor) flare at 14/1837 UTC, a long duration M2 (R1-Minor) flare 14/2121 UTC, a M4 (R1-Minor) flare 16/1303 UTC, a M1/Sf (R1-Minor) flare at 18/0758 UTC, and finally, a long duration X1/Sn flare at 19/0503 UTC.

The M1 (R1-minor) flare at 14/1837 UTC had an associated Tenflare (1300 sfu), while the long duration M2 (R1-Minor) flare 14/2121 UTC had an associated Tenflare of 180 sfu. However, due to Region 2192's proximity the east limb, none of the associated coronal mass ejections (CMEs) appeared to have an Earthward component and none were expected to have significant impacts at Earth. Neither the impulsive M4 (R1-Minor) flare 16/1303 UTC nor the long duration M1/Sf (R1-Minor) flare at 18/0758 UTC had reportable radio signatures associated with them. Nearly simultaneous with the M1 flare, an 8 degree long filament was observed in SDO/AIA 304 imagery erupting along a channel, centered near N15W10, between 18/0740-0938 UTC. LASCO C2 imagery observed a narrow CME lifting off the NW limb, first visible at 18/0912 UTC. Subsequent WSA-Enlil model output suggested the CME was well off the Sun-Earth line and is not expected to impact Earth.

SDO/AIA imagery of the long duration X1/Sn flare at 19/0503 UTC event suggested that the bulk of the ejecta was reabsorbed or directed well south and east of the Sun-Earth line. SOHO/LASCO coronagraph imagery confirmed what was observed from the SDO/AIA spacecraft as no obvious CME was detected associated with the X-flare. The remaining regions on the visible disk were generally stable and unremarkable.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit reached moderate levels on 14, 18, and 19 Oct.

Geomagnetic field activity was at predominantly quiet to unsettled levels under a nominal solar wind regime. Isolated periods of active geomagnetic field activity were observed on 18 Oct (0000-0300 UTC) as a result of solar sector variability. Minor storm levels were observed on 14 Oct (1800-2100 UTC and 2100-2400 UTC) and 15 Oct (0000-0300 UTC) as the result of the glancing blow passage of the CME observed leaving the sun on 10 Oct, combined with coronal hole high speed stream (CH HSS) influence.

## **Space Weather Outlook**

### **20 October - 15 November 2014**

Solar activity is expected to be at low to moderate levels (R1-R2, Minor-Moderate) during the forecast period, with a slight chance for X-class flaring (R3-Strong or greater) for 20-29 Oct and



11-15 Nov due to potential significant flare activity from Region 2192 (S13, L=251).

A slight chance for a greater than 10 MeV proton event (S1-Minor and above) at geosynchronous orbit exists for 20-29 Oct and 11-15 Nov due to potential significant flare activity from Region 2192 (S13, L=251).

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at normal to moderate levels with high levels possible from 21-25 Oct due to CH HSS influence.

Geomagnetic field activity is expected to be at quiet to unsettled levels from 20-21 Oct and 24 Oct-15 Nov. Unsettled to active levels are expected on 22-23 Oct due to CH HSS activity.



### *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
13 October	113	41	400	B3.5	0	0	0	0	0	0	0	0
14 October	120	70	420	B3.7	0	2	0	0	0	0	0	0
15 October	126	90	400	C1.3	0	0	0	0	0	0	0	0
16 October	139	66	420	C1.1	4	1	0	0	0	0	0	0
17 October	146	39	620	C1.0	6	0	0	4	0	0	0	0
18 October	160	60	1560	B8.3	9	1	0	7	0	0	0	0
19 October	173	86	1850	C1.2	7	0	1	10	0	0	1	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
	13 October	1.1e+05	1.1e+04	2.7e+03		3.0e+05
14 October	2.7e+05	1.1e+04	2.6e+03		1.5e+06	
15 October	9.0e+04	1.2e+04	3.1e+03		3.7e+05	
16 October	6.5e+04	1.3e+04	3.1e+03		4.0e+05	
17 October	2.0e+05	1.3e+04	3.0e+03		9.5e+05	
18 October	4.8e+05	1.6e+04	3.0e+03		7.1e+06	
19 October	2.4e+05	1.6e+04	2.8e+03		9.7e+06	

### *Daily Geomagnetic Data*

Date	Middle Latitude Fredericksburg		High Latitude College		Estimated Planetary	
	A	K-indices	A	K-indices	A	K-indices
	13 October	5	1-1-1-0-2-2-2-2	2	0-0-0-0-0-2-1-1	7
14 October	12	1-1-1-1-3-4-3-4	21	0-1-0-1-5-5-5-3	18	1-1-1-1-3-4-5-5
15 October	8	4-2-2-2-2-1-1-1	15	3-2-3-3-4-4-2-1	11	5-3-2-2-2-2-1-1
16 October	5	2-1-0-1-2-1-1-3	9	1-1-0-4-4-1-1-1	7	2-1-1-2-2-2-1-3
17 October	6	1-3-1-2-1-2-1-2	7	2-2-1-3-2-1-1-2	8	2-3-2-2-1-1-2-3
18 October	11	3-3-2-2-3-2-2-3	20	3-3-3-5-4-4-2-2	15	4-3-2-2-3-4-2-3
19 October	9	3-3-2-3-2-1-1-1	18	2-3-5-4-4-2-2-2	11	3-3-3-3-2-1-2-2

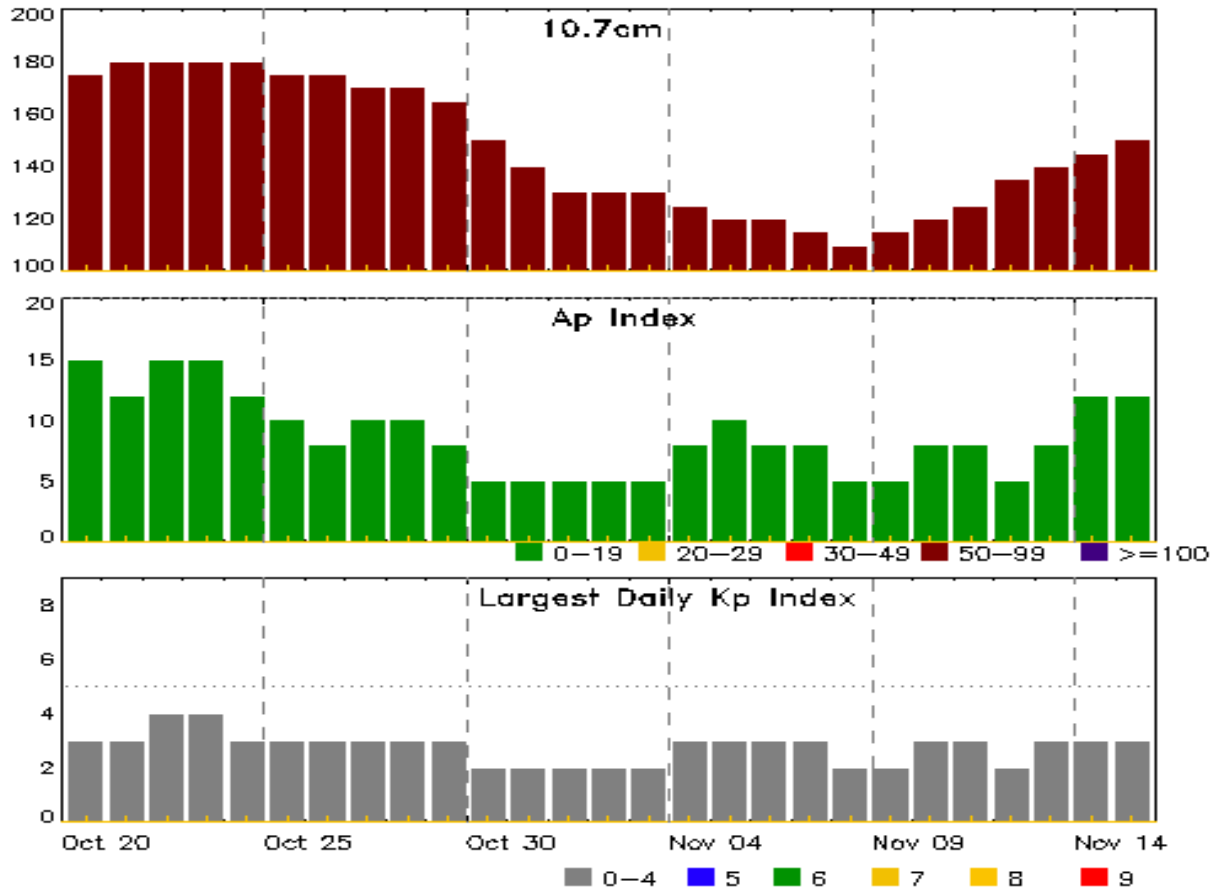


### *Alerts and Warnings Issued*

<b>Date &amp; Time of Issue UTC</b>	<b>Type of Alert or Warning</b>	<b>Date &amp; Time of Event UTC</b>
14 Oct 1431	WARNING: Geomagnetic K = 4	14/1430 - 1900
14 Oct 1702	ALERT: Geomagnetic K = 4	14/1657
14 Oct 1714	WARNING: Geomagnetic K = 5	14/1715 - 2200
14 Oct 1715	EXTENDED WARNING: Geomagnetic K = 4	14/1430 - 2300
14 Oct 1928	SUMMARY: 10cm Radio Burst	14/1840 - 1858
14 Oct 2059	ALERT: Geomagnetic K = 5	14/2051
14 Oct 2110	SUMMARY: 10cm Radio Burst	14/2026 - 2056
14 Oct 2155	EXTENDED WARNING: Geomagnetic K = 5	14/1715 - 15/0400
14 Oct 2155	EXTENDED WARNING: Geomagnetic K = 4	14/1430 - 15/0700
14 Oct 2201	WATCH: Geomagnetic Storm Category G1 predicted	
15 Oct 0357	EXTENDED WARNING: Geomagnetic K = 5	14/1715 - 15/1000
15 Oct 0357	EXTENDED WARNING: Geomagnetic K = 4	14/1430 - 15/1300
16 Oct 0909	ALERT: Type IV Radio Emission	16/0722
16 Oct 1327	SUMMARY: 10cm Radio Burst	16/1301 - 1302
16 Oct 2220	WARNING: Geomagnetic K = 4	16/2219 - 17/0700
18 Oct 0122	WARNING: Geomagnetic K = 4	18/0121 - 1400
18 Oct 0301	ALERT: Geomagnetic K = 4	18/0256
18 Oct 1355	EXTENDED WARNING: Geomagnetic K = 4	18/0121 - 2200
18 Oct 1936	SUMMARY: 10cm Radio Burst	18/1901 - 1901
18 Oct 2155	EXTENDED WARNING: Geomagnetic K = 4	18/0121 - 19/1400
19 Oct 0441	ALERT: X-ray Flux exceeded M5	19/0440
19 Oct 0555	SUMMARY: X-ray Event exceeded X1	19/0417 - 0548
19 Oct 1355	EXTENDED WARNING: Geomagnetic K = 4	18/0121 - 20/1400



## 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
20 Oct	175	15	3	03 Nov	130	5	2
21	180	12	3	04	125	8	3
22	180	15	4	05	120	10	3
23	180	15	4	06	120	8	3
24	180	12	3	07	115	8	3
25	175	10	3	08	110	5	2
26	175	8	3	09	115	5	2
27	170	10	3	10	120	8	3
28	170	10	3	11	125	8	3
29	165	8	3	12	135	5	2
30	150	5	2	13	140	8	3
31	140	5	2	14	145	12	3
01 Nov	130	5	2	15	150	12	3
02	130	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
14 Oct	1821	1837	1846	M1.1	0.010			2192		1300		
14 Oct	1907	2121	0019	M2.2	0.310			2192	160	180		
16 Oct	1258	1303	1305	M4.3	0.008			2192	9000	190		
18 Oct	0702	0758	0849	M1.6	0.066	SF	S13E71	2192				
19 Oct	0417	0503	0548	X1.1	0.390			2192				

### *Flare List*

Date	Time			X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
	Begin	Max	End				
13 Oct	2242	2245	2249	B6.3			
14 Oct	1821	1837	1846	M1.1			2192
14 Oct	1907	2121	0019	M2.2			2192
16 Oct	0731	0737	0747	C7.7			2192
16 Oct	0835	0923	0944	C6.4			2192
16 Oct	1258	1303	1305	M4.3			2192
16 Oct	1804	1810	1817	C2.0			2192
16 Oct	2334	2338	2344	C2.9			2192
17 Oct	0310	0320	0333	C3.9			2192
17 Oct	0455	0500	0506	C6.6			2192
17 Oct	0719	0723	0724		SF	S23W42	2186
17 Oct	1243	1249	1256	C3.6			
17 Oct	1534	1539	1541	C6.7	SF	S15E79	2192
17 Oct	1921	1922	1925		SF	S12E75	2192
17 Oct	1928	1933	1936	C6.3	SF	S12E73	2192
17 Oct	2043	2112	2118	C2.3			2192
18 Oct	0053	0107	0115	C5.0			
18 Oct	0643	0646	0648	C3.7	SF	S13E72	2192
18 Oct	0702	0758	0849	M1.6	SF	S13E71	2192
18 Oct	1301	1315	1319	C2.6	SF	S13E68	2192
18 Oct	1422	1425	1428	C1.7			2192
18 Oct	1559	1603	1606	C2.6	SF	S12E72	2192
18 Oct	1701	1704	1707	C2.1	SF	S12E70	2192
18 Oct	1709	1715	1725	C2.7			
18 Oct	1859	1916	1933	C3.8			
18 Oct	1954	2006	2016	C6.7			



## *Flare List*

Date	Time			X-ray Class	Optical		Rgn #
	Begin	Max	End		Imp/ Brtns	Location Lat CMD	
18 Oct	2259	2259	2306		SF	S14E59	2192
18 Oct	2320	2321	2325		SF	S15E56	2192
19 Oct	0117	0147	0325	C5.7			2192
19 Oct	0119	0120	0136		SF	S10E67	2192
19 Oct	0417	0503	0548	X1.1			2192
19 Oct	0419	0423	0639		SN	S13E57	2192
19 Oct	B0545	U0548	1020		3F	S10E58	2192
19 Oct	0641	0643	0649		SF	S16E53	2192
19 Oct	0802	0803	0813		SF	N06E20	2193
19 Oct	1105	1119	1125	C4.2	SF	S09E59	2192
19 Oct	1208	1214	1228	C5.8	SF	S09E58	2192
19 Oct	1238	1241	1250		SF	S08E56	2192
19 Oct	1320	1321	1326		SF	S10W22	2187
19 Oct	1550	1556	1604	C3.9			
19 Oct	1730	1734	1737	C4.7			2192
19 Oct	2024	2027	2029	C2.1			
19 Oct	2137	2137	2144		SF	S11E52	2192
19 Oct	2236	2245	2249		SF	S10E50	2192
19 Oct	2354	0010	0016	C2.5			



## 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

### 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														
13 Oct	N13W82	95	plage														
									0	0	0	0	0	0	0	0	0

Crossed West Limb.

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														
13 Oct	S17W68	81	plage														
14 Oct	S17W82	82	plage														
									0	0	0	0	0	0	0	0	0

Crossed West Limb.

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

#### *Region 2185*

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														
13 Oct	S13W51	64	plage														
14 Oct	S15W59	59	10	3	Bxo	2	B										
15 Oct	S15W71	58	10	1	Axx	1	A										
16 Oct	S15W85	59	plage														
								1	0	0	1	0	0	0	0	0	

Crossed West Limb.

Absolute heliographic longitude: 62

#### *Region 2186*

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										
13 Oct	S21W06	19	180	5	Cso	5	B										
14 Oct	S21W19	19	180	4	Cso	3	B										
15 Oct	S21W32	19	150	3	Hsx	4	A										
16 Oct	S20W44	17	170	4	Cso	3	B										
17 Oct	S20W57	17	160	3	Hsx	2	A					1					
18 Oct	S20W70	17	110	2	Hsx	1	A										
19 Oct	S20W84	18	100	1	Hsx	1	A										
								0	0	0	1	0	0	0	0	0	

Still on Disk.

Absolute heliographic longitude: 19



### *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 2187</b>																	
11 Oct	S08E79	320	100	2	Hsx	1	A	1									
12 Oct	S09E65	321	120	4	Cso	3	B	2									
13 Oct	S10E54	319	210	14	Eso	3	B										
14 Oct	S09E44	316	210	12	Cso	5	B										
15 Oct	S10E29	318	190	12	Cao	3	B										
16 Oct	S10E16	317	220	13	Cso	6	B										
17 Oct	S09W00	320	200	3	Hsx	1	A										
18 Oct	S09W12	319	210	10	Cso	10	B										
19 Oct	S09W27	321	160	9	Cso	7	B					1					
								3	0	0		1	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 320

#### **Region 2188**

13 Oct	N17W13	26	10	1	Bxo	3	B										
14 Oct	N17W27	27	10	5	Bxo	5	B										
15 Oct	N18W42	29	10	1	Bxo	2	B										
16 Oct	N18W56	30	plage														
17 Oct	N18W70	30	plage														
18 Oct	N18W84	31	plage														
								0	0	0		0	0	0	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 26

#### **Region 2189**

14 Oct	N21E18	342	10	3	Bxo	5	B										
15 Oct	N21E05	342	20	3	Cro	5	B										
16 Oct	N23W07	340	10	1	Axx	1	A										
17 Oct	N23W21	341	plage														
18 Oct	N23W35	342	plage														
19 Oct	N23W49	343	plage														
								0	0	0		0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 342



**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

**Region 2190**

15 Oct	N23E46	301	10	5	Bxo	3	B										
16 Oct	N22E33	300	10	6	Bxo	4	B										
17 Oct	N22E19	301	plage														
18 Oct	N22E05	302	plage														
19 Oct	N22W09	303	plage														
									0	0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 302

**Region 2191**

15 Oct	S13E41	306	10	5	Bxo	2	B										
16 Oct	S14E30	303	10	1	Axx	2	A										
17 Oct	S14E16	304	plage														
18 Oct	S14E02	305	plage														
19 Oct	S14W12	306	plage														
									0	0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 305

**Region 2192**

14 Oct	S14E0*	253	plage							2							
16 Oct	S16E80	253	plage						4	1							
17 Oct	S13E68	252	260	10	Dki	6	BG	5			3						
18 Oct	S13E56	251	1240	17	Fkc	19	BG	5	1		7						
19 Oct	S13E43	251	1560	22	Fkc	32	BGD	4		1	8					1	
								18	4	1	18	0	0	1	0		

Still on Disk.

Absolute heliographic longitude: 251

**Region 2193**

19 Oct	N05E10	284	30	5	Cro	6	B				1						
								0	0	0	1	0	0	0	0	0	

Still on Disk.

Absolute heliographic longitude: 284

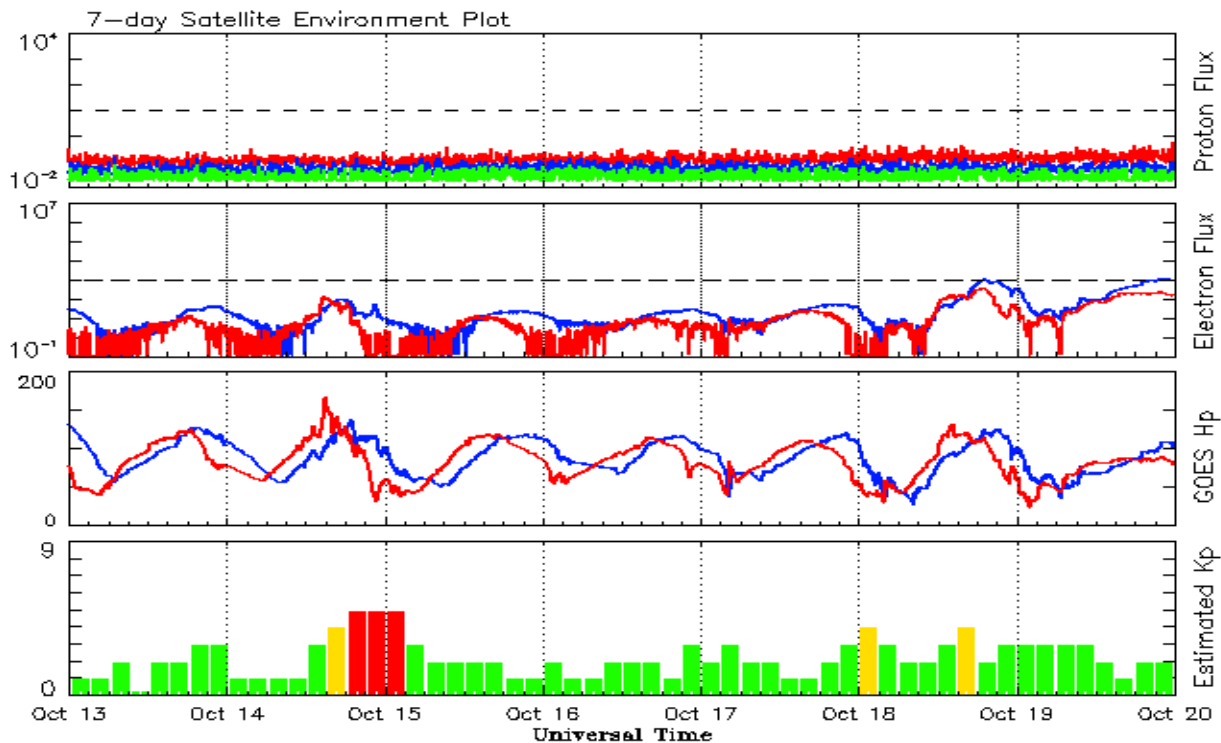


**Recent Solar Indices (preliminary)**  
**Observed monthly mean values**

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 13 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.

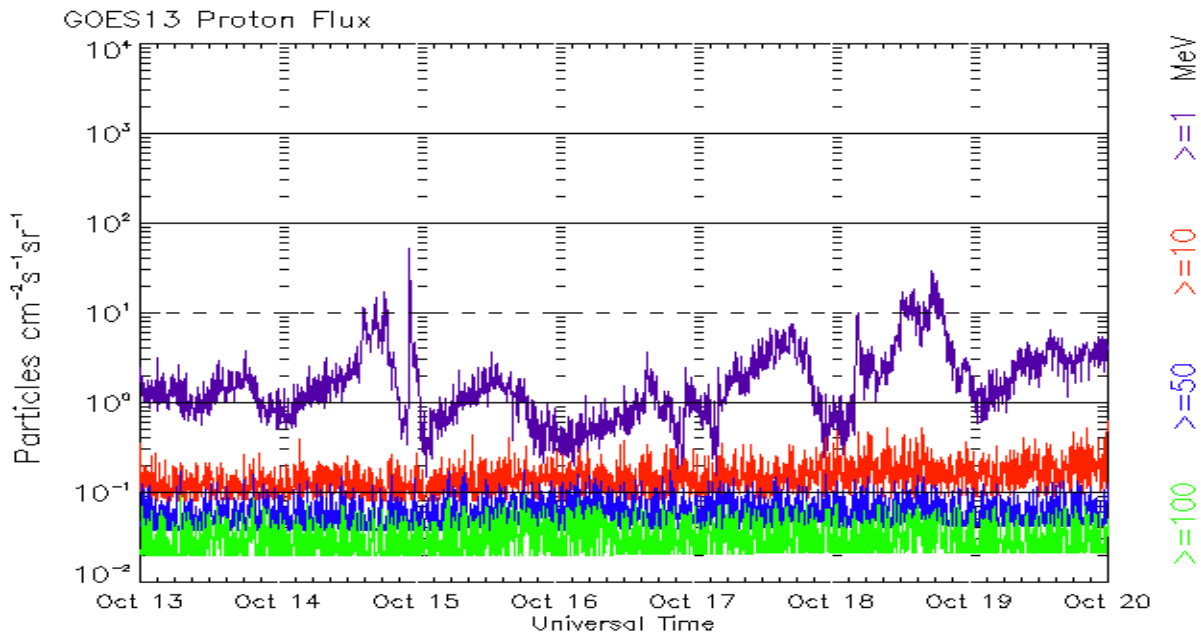
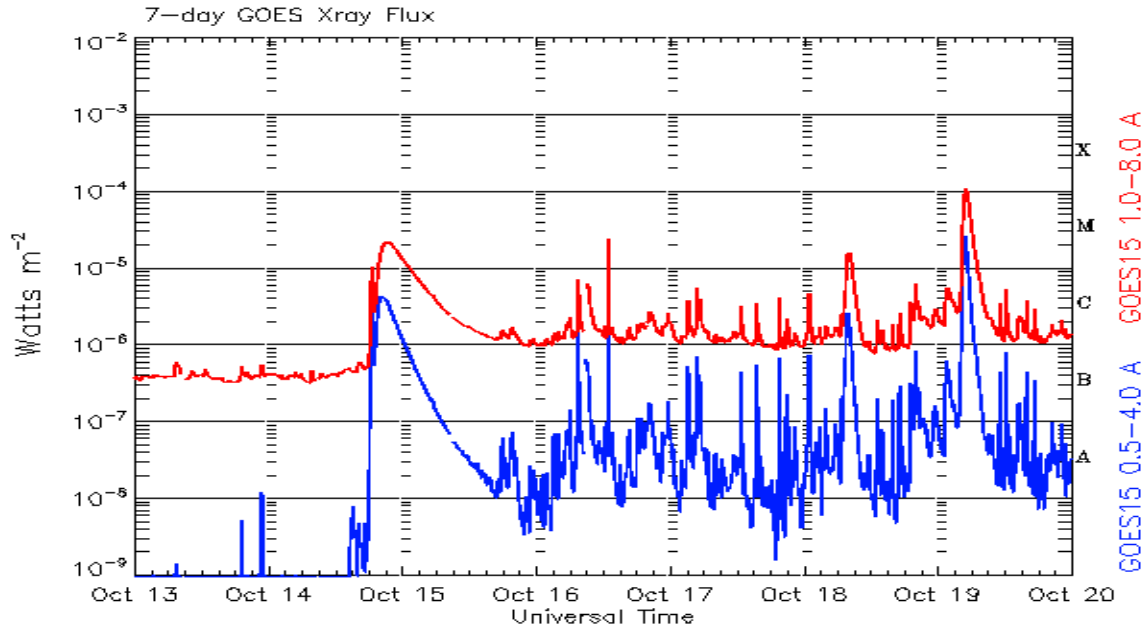
The electron flux plot contains the five-minute averaged integral electron flux (electrons/cm<sup>2</sup>-sec -sr) with energies greater than 2 MeV by the SWPC Primary GOES satellite.

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 13 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)***

Published every Monday by the Space Weather Prediction Center.

U.S. Department of Commerce  
NOAA / National Weather Service  
Space Weather Prediction Center  
325 Broadway, Boulder CO 80305

**Notice:** The 27-day Outlook, Satellite Environment, X-ray and Proton plots have been redesigned. Comments and suggestions are welcome SWPC.Webmaster@noaa.gov

The Weekly has been published continuously since 1951 and is available online since 1997.

<http://spaceweather.gov/weekly/> -- Current and previous year

<http://spaceweather.gov/ftpmenu/warehouse.html> -- Online archive from 1997

<http://spaceweather.gov/ftpmenu/> -- Some content as ascii text

<http://spaceweather.gov/SolarCycle/> -- Solar Cycle Progression web site

<http://spaceweather.gov/contacts.html> -- Contact and Copyright information

[http://spaceweather.gov/weekly/Usr\\_guide.pdf](http://spaceweather.gov/weekly/Usr_guide.pdf) -- User Guide

