

Solar activity was moderate. Three low level M-class x-ray flares occurred in the first three days of the week. At 08/1117 UTC, an M2 was observed off the east limb. This was followed by two M1 flares from the same vicinity on 09/2331 UTC and 10/0504 UTC. The remainder of the week was characterized by C-class activity, primarily from Region 1589 (N13, L=266, class/area=Dkc/280 on 12 October). This region was first numbered on 09 October as it rotated into view as a Cao/B type group. It grew to its maximum area and produced the largest C-class flare of the week, a C9/1f on 12/0820 UTC, in addition to three other C1 flares. Magnetic complexity increased as the region became an Ekc/BGD on 13 October while its areal extent began to decrease. By the 14th, the area had diminished to 240 millionths and the region was classified as an Eac/BG. The week ended with five regions on the visible solar disk with 1589 remaining the largest among them. Region 1591 (N07, L=230, class/area Dsi/220 on 14 October) was numbered on the 12th. By the 14th, it had become the most productive, responsible for five of the six C-class events that day, the largest of which was a C3 at 14/2159 UTC. There were no Earth-directed CMEs during the period.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit was at low levels on 08 October, then reached high levels every day for the remainder of the week.

Geomagnetic field activity reached major storm levels on the 8th and 9th of October with the arrival of an Earth-directed CME that occurred on 05 October. An interplanetary shock was observed at the ACE spacecraft at 08/0445 UTC. A sudden impulse of 21 nT at the Boulder magnetometer followed at 08/0515 UTC. By 08/0556 UTC the Kp index had reached active levels. Minor then major storm levels were subsequently observed at 08/0718 UTC and 08/0834 UTC respectively. The major storm conditions persisted through 08/1200 UTC, after which conditions returned to mostly active levels. Major storms were again observed during the first two synoptic periods on 09 October, followed by a minor storm period and an active period. Late on the 9th, a coronal hole high speed stream became geoeffective bringing geomagnetic activity to minor storm level for the final period of the day. Solar wind speed at the ACE spacecraft rose from about 380 km/s to near 560 km/s during the latter half of the day. The geomagnetic field activity then declined and, with the exception of one active period on the 12th, remained at quiet to unsettled levels. By the 13th, another coronal hole high speed stream became geoeffective. It was preceded by a corotating interaction region and a solar sector boundary change. This led to active conditions by 13/0450 UTC and minor storm conditions by 13/0819 UTC. Minor storm levels persisted until 13/2100 UTC before briefly decreasing to unsettled levels for the final period of the 13th. The 14th began with minor storm conditions, after which activity ranged from quiet to active levels.

Space Weather Outlook
15 October - 10 November 2012

Solar activity is expected to be at low levels with a slight chance for moderate activity through 21 October when Region 1589 rotates around the west limb. Generally low levels of activity are



then expected to persist through 03 November, after which there is a slight chance for moderate activity as old Region 1589 returns.

No proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at high levels from 13 October through 18 October and again from 05-10 November. Recurrent coronal hole high speed streams are responsible for both periods of high flux.

Geomagnetic field activity is expected to be at quiet levels for the majority of the period. The two exceptions are 15-19 October and 08-10 November when recurrent coronal hole high speed streams are expected to bring active levels with a slight chance for minor storm levels.



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
08 October	103	41	460	B4.4	5	1	0	1	0	0	0	0
09 October	106	63	410	B4.5	10	1	0	3	0	0	0	0
10 October	112	71	400	B3.6	9	1	0	3	0	0	0	0
11 October	117	82	500	B5.0	5	0	0	5	0	0	0	0
12 October	122	89	670	B4.3	5	0	0	4	1	0	0	0
13 October	125	85	610	B4.3	1	0	0	1	0	0	0	0
14 October	132	97	590	B5.4	6	0	0	4	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
	08 October	6.8e+06	1.4e+04	2.5e+03		6.4e+05
09 October	5.5e+06	1.1e+04	2.6e+03		1.3e+08	
10 October	6.1e+05	1.1e+04	2.6e+03		1.5e+08	
11 October	4.9e+05	1.1e+04	2.6e+03		4.1e+08	
12 October	1.0e+06	1.1e+04	2.4e+03		4.8e+08	
13 October	1.9e+06	1.0e+04	2.4e+03		8.1e+07	
14 October	1.5e+06	1.1e+04	2.9e+03		1.3e+08	

Daily Geomagnetic Data

Date	Middle Latitude Fredericksburg		High Latitude College		Estimated Planetary	
	A	K-indices	A	K-indices	A	K-indices
	08 October	21	2-3-5-5-3-2-3-3	66	2-4-8-7-5-3-4-4	35
09 October	32	6-5-5-4-2-2-3-4	54	4-5-7-7-4-2-3-4	42	6-6-5-4-2-2-3-5
10 October	6	2-1-2-2-2-1-2-1	22	4-2-3-5-5-3-2-2	10	3-2-2-2-2-2-3-2
11 October	5	2-0-0-0-2-2-1-1	7	2-1-1-3-3-2-1-1	6	2-1-1-2-2-2-1-2
12 October	12	3-4-3-1-2-2-3-1	18	3-3-3-4-5-3-2-1	12	3-4-3-2-2-3-3-1
13 October	28	3-4-5-5-4-4-3-3	70	2-5-6-7-7-6-5-3	38	3-4-5-5-5-5-5-3
14 October	20	5-3-3-4-3-2-3-3	33	4-4-5-6-5-2-3-3	19	5-3-3-4-3-2-3-3



Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
08 Oct 0440	WARNING: Geomagnetic Sudden Impulse expected	08/0515 - 0545
08 Oct 0443	WARNING: Geomagnetic K = 4	08/0445 - 1200
08 Oct 0527	SUMMARY: Geomagnetic Sudden Impulse	08/0515
08 Oct 0558	ALERT: Geomagnetic K = 4	08/0556
08 Oct 0637	WARNING: Geomagnetic K = 5	08/0640 - 1200
08 Oct 0720	ALERT: Geomagnetic K = 5	08/0718
08 Oct 0832	WARNING: Geomagnetic K = 6	08/0830 - 1200
08 Oct 0836	ALERT: Geomagnetic K = 6	08/0834
08 Oct 1136	EXTENDED WARNING: Geomagnetic K = 4	08/0445 - 1800
08 Oct 1136	EXTENDED WARNING: Geomagnetic K = 5	08/0640 - 1500
08 Oct 1144	ALERT: Geomagnetic K = 6	08/1138
08 Oct 1755	EXTENDED WARNING: Geomagnetic K = 4	08/0445 - 09/0600
08 Oct 1756	WARNING: Geomagnetic K = 5	08/1800 - 2359
08 Oct 2344	EXTENDED WARNING: Geomagnetic K = 5	08/1800 - 09/0600
09 Oct 0033	WARNING: Geomagnetic K = 6	09/0035 - 0600
09 Oct 0039	ALERT: Geomagnetic K = 5	09/0039
09 Oct 0111	ALERT: Geomagnetic K = 6	09/0111
09 Oct 0540	EXTENDED WARNING: Geomagnetic K = 6	09/0035 - 1200
09 Oct 0540	EXTENDED WARNING: Geomagnetic K = 5	08/1800 - 09/1200
09 Oct 0540	EXTENDED WARNING: Geomagnetic K = 4	08/0445 - 09/1200
09 Oct 0540	ALERT: Geomagnetic K = 6	09/0540
09 Oct 1032	ALERT: Electron 2MeV Integral Flux \geq 1000pfu	09/1015
09 Oct 1145	EXTENDED WARNING: Geomagnetic K = 4	08/0445 - 09/1800
09 Oct 2149	WARNING: Geomagnetic K = 4	09/2150 - 10/0600
09 Oct 2204	ALERT: Geomagnetic K = 4	09/2204
09 Oct 2240	WARNING: Geomagnetic K = 5	09/2240 - 10/0300
09 Oct 2246	ALERT: Geomagnetic K = 5	09/2246
10 Oct 1123	CONTINUED ALERT: Electron 2MeV Integral Flux \geq 1000pfu	09/1015

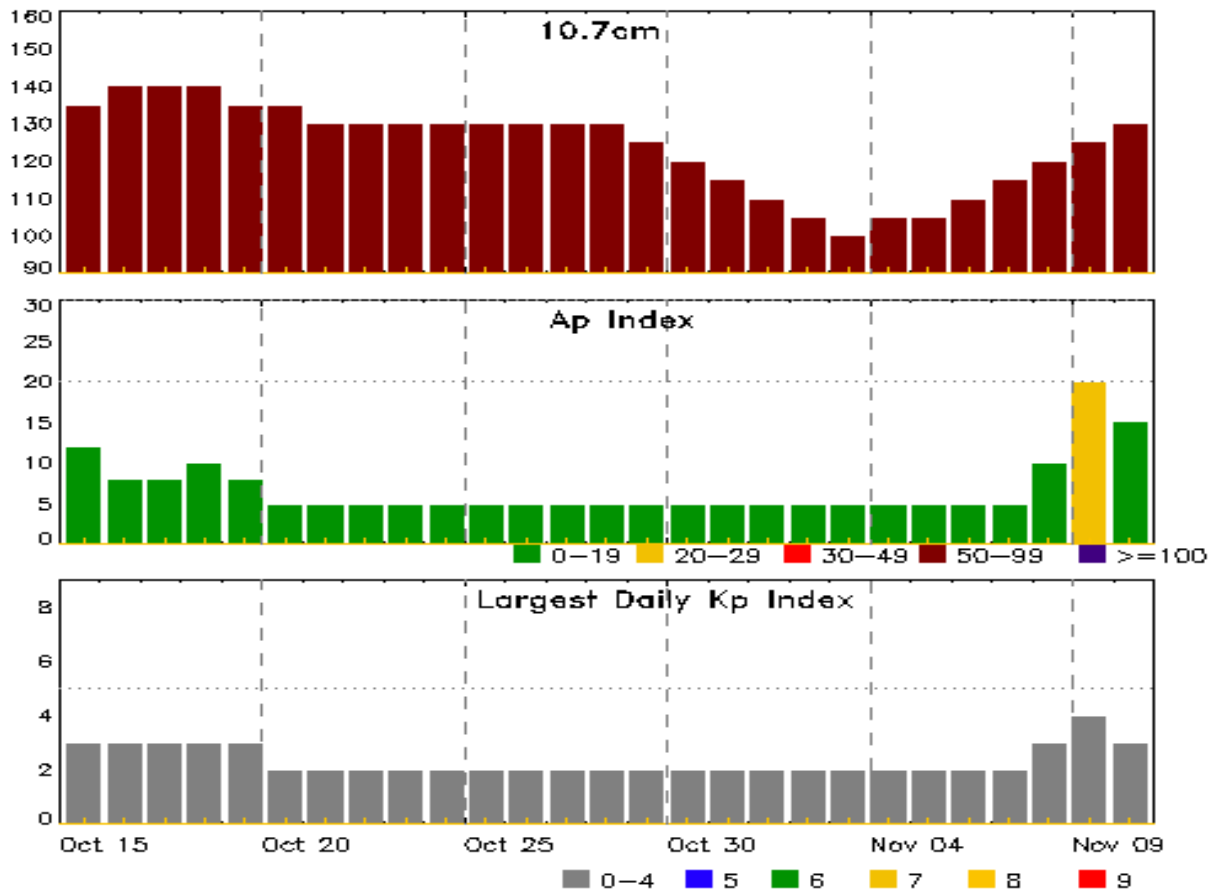


Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
11 Oct 0500	CONTINUED ALERT: Electron 2MeV Integral Flux \geq 1000pfu	09/1015
12 Oct 0406	WARNING: Geomagnetic K = 4	12/0406 - 0900
12 Oct 0453	ALERT: Geomagnetic K = 4	12/0453
12 Oct 0502	CONTINUED ALERT: Electron 2MeV Integral Flux \geq 1000pfu	09/1015
12 Oct 2245	WARNING: Geomagnetic K = 4	12/2250 - 13/1300
13 Oct 0452	ALERT: Geomagnetic K = 4	13/0450
13 Oct 0502	WARNING: Geomagnetic K = 5	13/0515 - 0900
13 Oct 0823	ALERT: Geomagnetic K = 5	13/0819
13 Oct 0831	EXTENDED WARNING: Geomagnetic K = 5	13/0515 - 1200
13 Oct 0831	WARNING: Geomagnetic K = 6	13/0830 - 1200
13 Oct 0918	CONTINUED ALERT: Electron 2MeV Integral Flux \geq 1000pfu	09/1015
13 Oct 1150	EXTENDED WARNING: Geomagnetic K = 5	13/0515 - 1500
13 Oct 1150	EXTENDED WARNING: Geomagnetic K = 4	12/2250 - 13/1800
13 Oct 1709	WARNING: Geomagnetic K = 5	13/1709 - 2359
13 Oct 1719	ALERT: Geomagnetic K = 5	13/1719
13 Oct 1755	EXTENDED WARNING: Geomagnetic K = 4	12/2250 - 14/1700
13 Oct 1842	WATCH: Geomagnetic Storm Category G1 predicted	
14 Oct 0159	WARNING: Geomagnetic K = 5	14/0200 - 0900
14 Oct 0204	ALERT: Geomagnetic K = 5	14/0200
14 Oct 0810	CONTINUED ALERT: Electron 2MeV Integral Flux \geq 1000pfu	09/1015
14 Oct 0856	EXTENDED WARNING: Geomagnetic K = 5	14/0200 - 1500
14 Oct 1655	EXTENDED WARNING: Geomagnetic K = 4	12/2250 - 15/0100



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
15 Oct	135	12	3	29 Oct	125	5	2
16	140	8	3	30	120	5	2
17	140	8	3	31	115	5	2
18	140	10	3	01 Nov	110	5	2
19	135	8	3	02	105	5	2
20	135	5	2	03	100	5	2
21	130	5	2	04	105	5	2
22	130	5	2	05	105	5	2
23	130	5	2	06	110	5	2
24	130	5	2	07	115	5	2
25	130	5	2	08	120	10	3
26	130	5	2	09	125	20	4
27	130	5	2	10	130	15	3
28	130	5	2				

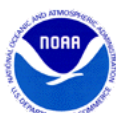


Energetic Events

Date	Time			X-ray		Optical Information			Peak		Sweep Freq			
	Begin	Max	Half Max	Class	Integ Flux	Imp/ Brtns	Location	Rgn #	Radio Flux	245	2695	Intensity	II	IV
08 Oct	1105	1117	1123	M2.3	0.011									
09 Oct	2322	2331	2335	M1.7	0.006									
10 Oct	0451	0504	0520	M1.0	0.013									

Flare List

Date	Time			X-ray Class	Optical			Rgn #
	Begin	Max	End		Imp/ Brtns	Location	Lat CMD	
08 Oct	0557	0743	0751	B9.5				
08 Oct	0737	0743	0749	B9.9				
08 Oct	0801	0806	0811	C1.2				
08 Oct	0841	0903	0912	C2.2				
08 Oct	1105	1117	1123	M2.3				
08 Oct	1316	1317	1321		SF	S21W08		1585
08 Oct	1352	1355	1429	C1.0				
08 Oct	1814	1818	1828	B8.3				
08 Oct	1841	1847	1856	B8.8				
08 Oct	2300	2310	2326	C2.2				
08 Oct	2356	0106	0201	C2.0				1589
09 Oct	0323	0324	0329	C1.7	SF	S08W63		
09 Oct	0417	0423	0433	C1.0	SF	S08W64		
09 Oct	0613	0637	0648	C1.2	SF	N08W48		
09 Oct	0845	0851	0903	C1.2				
09 Oct	1134	1151	1207	C1.0				
09 Oct	1448	1501	1511	C1.9				
09 Oct	1517	1525	1533	C5.9				
09 Oct	2043	2050	2055	C3.4				
09 Oct	2132	2151	2203	C3.6				
09 Oct	2214	2219	2229	C3.0				
09 Oct	2322	2331	2335	M1.7				
10 Oct	0057	0101	0106	C1.3	SF	S07W75		1587
10 Oct	0138	0144	0148	C2.6				
10 Oct	0250	0310	0319	C5.1				
10 Oct	0451	0504	0520	M1.0				
10 Oct	0640	0644	0646	C2.1				
10 Oct	0659	0706	0710	C4.6				



Flare List

Date	Time			X-ray Class	Optical		
	Begin	Max	End		Imp/ Brtns	Location Lat CMD	Rgn #
10 Oct	0832	0836	0838	B9.0			
10 Oct	1044	1049	1052	B8.4			
10 Oct	1056	1100	1102	B8.6			
10 Oct	1411	1414	1416	C1.1			
10 Oct	1425	1431	1434	C2.1	SF	S15W37	1585
10 Oct	1513	1516	1519	B8.3			
10 Oct	1534	1537	1540	B7.9			
10 Oct	1848	1853	1856	C1.4	SF	S16W41	1585
10 Oct	1907	1910	1913	B9.3			1585
10 Oct	2140	2145	2147	C1.5	SF	N15E65	1589
11 Oct	0423	0428	0431	C1.2	SF	S17W44	1585
11 Oct	0758	0804	0808	C4.6	SF	N13E56	1589
11 Oct	0920	0924	0930	C1.2			
11 Oct	1016	1020	1022	C1.3	SF	S19W46	1585
11 Oct	1041	1049	1054		SF	N18E59	1589
11 Oct	1102	1102	1115		SF	N18E57	1589
11 Oct	2230	2246	2255	C2.1			1589
12 Oct	0252	0303	0316	C1.0	SF	S28E63	1590
12 Oct	0548	0637	0645	C1.0	SF	N13E51	1589
12 Oct	0744	0754	0800	C1.6	SF	N13E51	1589
12 Oct	0808	0820	0843	C9.0	1F	N14E47	1589
12 Oct	0900	0904	0907	B9.9	SF	N13E45	1589
12 Oct	1252	1254	1257	B7.9			
12 Oct	1847	1851	1857	B7.5			1590
12 Oct	1945	1949	1952	C1.0			1589
13 Oct	1211	1258	1331	B8.2			
13 Oct	2346	0000	0018	C1.5	SF	N11E25	1589
14 Oct	0115	0116	0122		SF	N06E63	1591
14 Oct	0215	0230	0309	C4.8			
14 Oct	0627	0632	0637	C1.1			1591
14 Oct	0753	0759	0806	C1.0			1591
14 Oct	1230	1232	1236	B9.6			1591
14 Oct	1248	1252	1255	C1.0	SF	N10E56	1591
14 Oct	1635	1639	1646	B7.2			1590
14 Oct	1845	1850	1859	B9.8			
14 Oct	2028	2034	2038	C1.5	SF	N10E52	1591
14 Oct	2154	2159	2206	C3.0	SF	N10E51	1591



Region Summary

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 1582																							
26 Sep	S12E68		85	200	4	Hsx	1	A	1														
27 Sep	S13E55		84	260	4	Hhx	1	A															
28 Sep	S12E42		84	280	4	Hhx	1	A															
29 Sep	S11E28		85	360	4	Hhx	1	A															
30 Sep	S12E15		84	350	3	Hhx	1	A															
01 Oct	S11E02		84	310	4	Hhx	1	A															
02 Oct	S12W12		85	310	6	Dho	7	B	1				1										
03 Oct	S08W25		85	270	5	Cho	5	B															
04 Oct	S12W38		85	250	4	Hhx	2	A															
05 Oct	S12W51		85	230	3	Hsx	1	A															
06 Oct	S12W64		84	220	3	Hsx	1	A															
07 Oct	S13W77		84	270	3	Hhx	1	A															
08 Oct	S12W91		85	210	6	Hsx	1	A															
									2	0	0	1	0	0	0	0	0						

Crossed West Limb.

Absolute heliographic longitude: 84

Region 1584																							
30 Sep	S23E28		71	10	2	Cao	3	B	1				2										
01 Oct	S23E16		70	40	6	Dso	4	B															
02 Oct	S22W01		72	30	2	Hsx	1	A															
03 Oct	S23W12		72	20	2	Hax	2	A															
04 Oct	S22W26		73	10	2	Axx	2	A															
05 Oct	S22W40		74	0	1	Axx	2	A															
06 Oct	S22W54		75	plage																			
07 Oct	S22W68		75	plage																			
									1	0	0	2	0	0	0	0	0						

Died on Disk.

Absolute heliographic longitude: 72



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	4				
Region 1585																			
02 Oct	S16E63		9	50	2	Dso	4	B											
03 Oct	S17E52		8	240	7	Dso	7	B					3						
04 Oct	S18E39		8	220	6	Dao	7	B											
05 Oct	S19E26		8	180	7	Dao	10	B											
06 Oct	S20E12		8	150	6	Dso	6	B					1						
07 Oct	S21W01		8	120	7	Cso	5	B											
08 Oct	S19W13		7	170	9	Dao	9	B					1						
09 Oct	S20W29		9	200	5	Cso	6	B											
10 Oct	S19W41		9	120	5	Dao	4	B	2				1						
11 Oct	S19W54		9	100	5	Cao	8	B	2				2						
12 Oct	S18W68		10	90	4	Cso	6	B											
13 Oct	S19W81		9	30	3	Cro	2	B											
									4	0	0	8	0	0	0	0	0		

Crossed West Limb.
Absolute heliographic longitude: 8

Region 1586																			
07 Oct	S12E66		301	90	2	Hsx	1	A											
08 Oct	S13E52		302	80	3	Hsx	1	A											
09 Oct	S13E38		302	80	2	Hsx	1	A											
10 Oct	S12E24		302	60	1	Hsx	1	A											
11 Oct	S13E11		304	80	2	Hsx	1	A											
12 Oct	S12W01		302	80	2	Hsx	1	A											
13 Oct	S12W15		303	80	2	Hsx	1	A											
14 Oct	S13W28		303	70	3	Hsx	2	A											
									0	0	0	0	0	0	0	0	0	0	

Still on Disk.
Absolute heliographic longitude: 302

Region 1587																			
09 Oct	S09W78		59	10	3	Axx	1	A											
10 Oct	S09W92		60	10	3	Axx	1	A	1				1						
									1	0	0	1	0	0	0	0	0		

Crossed West Limb.
Absolute heliographic longitude: 59



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 1588

09 Oct	N08W61	42	10	3	Bxo	2	B										
10 Oct	N08W73	41	10	4	Bxo	3	B										
11 Oct	N09W87	42	10	1	Axx	1	A										
								0	0	0	0	0	0	0	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 42

Region 1589

09 Oct	N13E75	265	110	6	Cao	3	B										
10 Oct	N13E61	265	200	8	Dai	12	B	1			1						
11 Oct	N12E49	266	280	10	Dac	20	BG	2			3						
12 Oct	N13E34	266	280	10	Dkc	29	BG	4			3	1					
13 Oct	N13E22	266	270	12	Ekc	27	BGD	1			1						
14 Oct	N13E09	266	240	11	Eac	34	BG										
								9	0	0	8	1	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 266

Region 1590

11 Oct	S29E59	256	30	5	Cso	2	B										
12 Oct	S29E46	256	20	2	Hax	1	A	1			1						
13 Oct	S30E31	257	40	2	Cso	2	B										
14 Oct	S30E17	258	40	1	Hsx	1	A										
								1	0	0	1	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 258

Region 1591

12 Oct	N07E72	228	200	6	Dso	2	B										
13 Oct	N07E59	229	190	5	Dso	3	B										
14 Oct	N07E45	230	220	8	Dsi	5	B	5			4						
								5	0	0	4	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 230



Region Summary - continued

Date	Location		Sunspot Characteristics				Flares									
	Lat CMD	Lon	Heli 10 ⁻⁶	Area hemi.	Extent (heli)	Spot Class	Spot Count	Mag Class	X-ray			Optical				
									C	M	X	S	1	2	3	4
<i>Region 1592</i>																
14 Oct	N23E20	255	20	4	Dro	5	B	0	0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 255

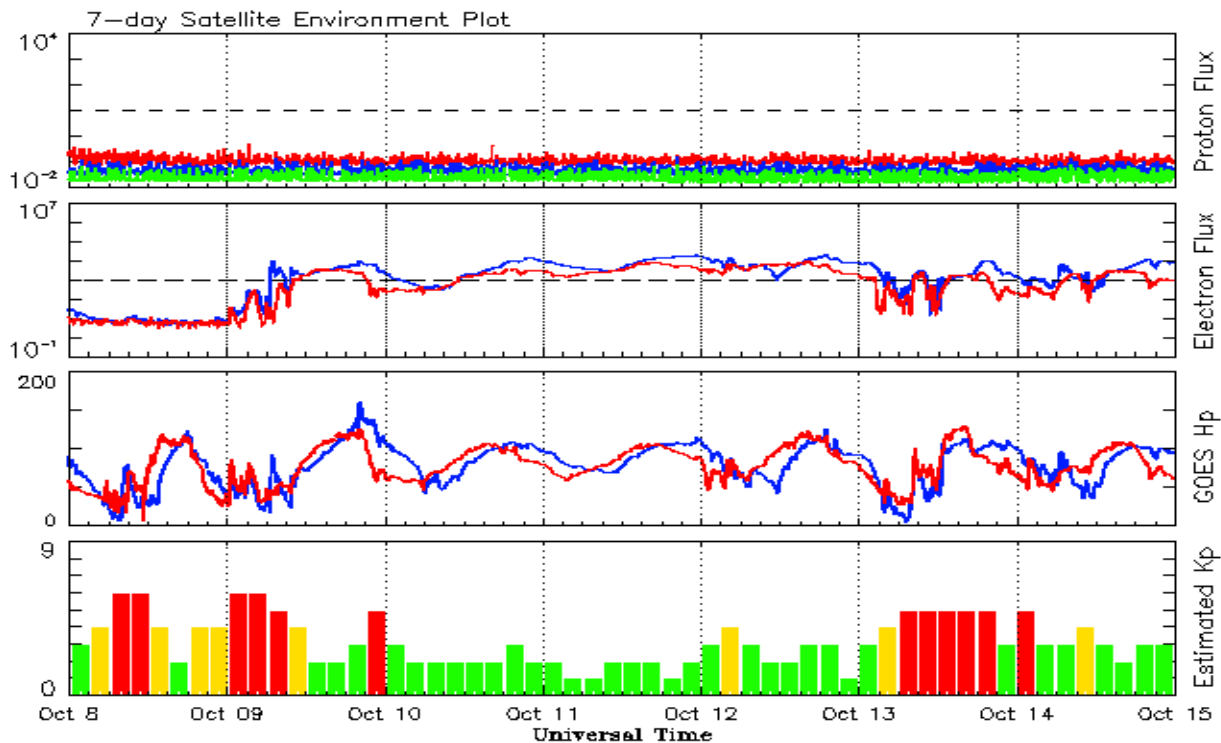


Recent Solar Indices (preliminary)
Observed monthly mean values

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
2010									
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
2011									
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	69.0	47.6	95.9	105.6	9	7.5
June	55.5	37.0	0.67	76.5	53.2	95.8	110.9	8	7.4
July	67.0	43.8	0.66	82.5	57.2	94.2	115.4	9	7.3
August	66.1	50.6	0.77	84.9	59.0	101.7	117.9	8	7.4
September	106.4	78.0	0.73	84.6	59.5	134.5	118.4	13	7.7
October	116.8	88.0	0.75	84.6	59.9	137.2	118.4	7	8.0
November	133.1	96.7	0.73	86.3	61.1	153.1	119.5	3	8.0
December	106.3	73.0	0.69	89.2	63.4	141.2	121.6	3	8.0
2012									
January	91.3	58.3	0.64	92.0	65.5	133.1	124.4	6	8.3
February	50.1	32.9	0.66	94.2	66.9	106.7	126.7	7	8.4
March	77.9	64.3	0.82	94.1	66.8	115.1	126.8	14	8.1
April	84.4	55.2	0.65			113.1		9	
May	99.5	69.0	0.69			121.5		8	
June	88.6	64.5	0.73			120.5		10	
July	99.6	66.5	0.67			135.6		13	
August	85.8	63.1	0.74			115.7		7	
September	84.0	61.5	0.73			123.2		8	

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 08 October 2012*

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.

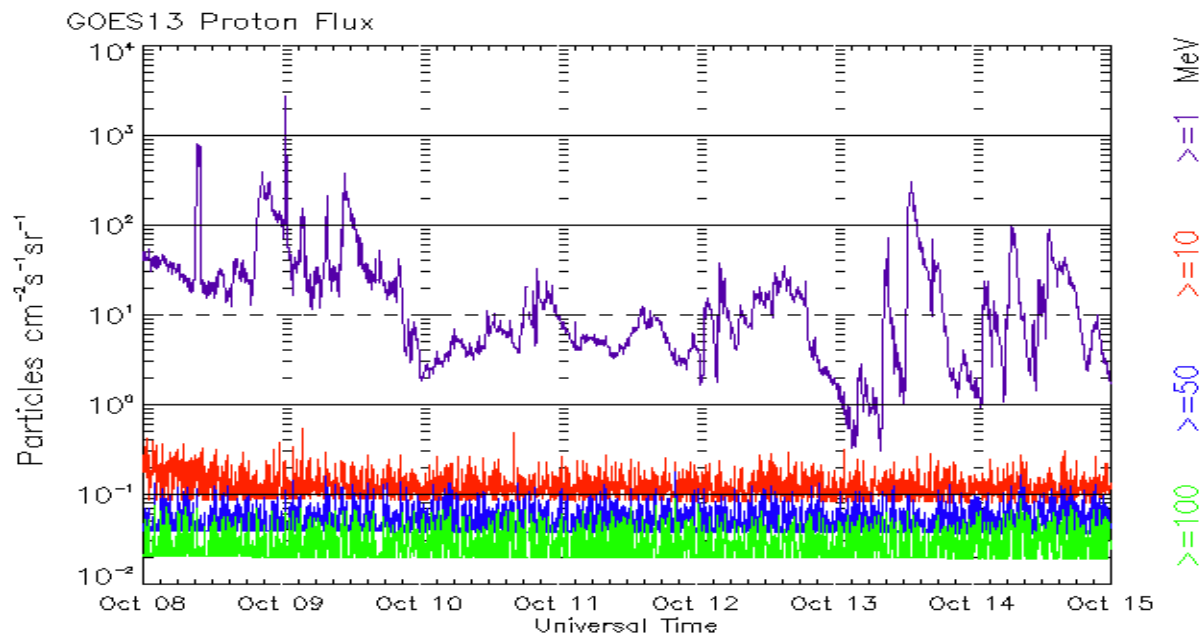
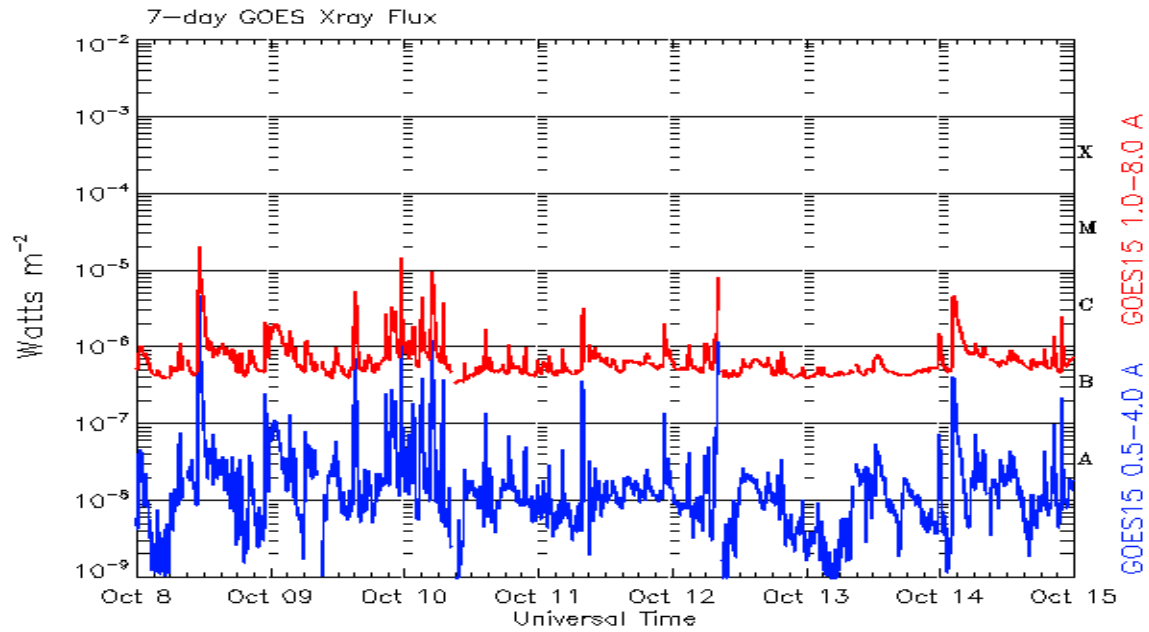
The electron flux plot contains the five-minute averaged integral electron flux (electrons/cm²-sec -sr) with energies greater than 2 MeV by the SWPC Primary GOES satellite.

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 08 October 2012*

The x-ray plots contains five-minute averages x-ray flux ($Watt/m^2$) 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^2 -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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