

Solar activity was low to moderate. Early in the period, solar activity was at low levels with a majority of the C-class activity from Regions 1319 (N=10, L=051, class/area Eki/420 on 17 October) and 1324 (N11, L=305, class/area Ekc/360 on 20 October). Low level C-class activity was observed until early on 20 October when an M1 x-ray event occurred at 20/0325Z from an area on the west limb. This event most likely originated from Region 1318 (N20, L=096, class/area Dso/50 on 13 October). M-class activity continued during 21 and 22 October with an M1 x-ray event at 21/1300Z from Region 1319 and a M1/Sf long duration flare at 22/1110Z from Region 1314 (N25, L=058, class/area Cho/370 on 12 October). The 21 October M-flare had associated Type II (789 km/s) and Type IV radio sweeps, but no Earth-directed CME was detected. The 22 October M-flare had an associated CME with a mostly northward directed component with an approximate plane-of-sky speed of 600 km/s measured in STEREO A COR2. LASCO C2 and C3 imagery observed a partial halo CME with a maximum plane-of-sky speed of 1000 km/s in its northernmost edge. A large filament eruption was also observed in SDO/AIA imagery in the Northwest quadrant of the solar disk starting at 22/0058Z. An associated CME was observed with a slight Earth-directed component with an approximate speed of 500 km/s. Activity returned to low levels on the last day of the period.

The greater than 100 MeV proton flux at geosynchronous orbit remained below threshold levels the entire period. A greater than 10 MeV proton event began at 23/1500Z in response to the M1/Sf long-duration flare observed midday on 22 October. The event peaked at 13pfu at 23/1535Z and ended at 23/1605Z.

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

The geomagnetic field was mostly quiet during the summary period. On the last day of the summary period, a weak shock passage was observed in the ACE solar wind data at 23/2320Z, but the geomagnetic field remained quiet. A glancing blow from a CME associated with an M1 x-ray event observed near the NW limb at 20/0325Z was the suspected source of the shock.

Space Weather Outlook

26 October - 21 November 2011

Solar activity is expected to be at predominantly low levels during the forecast period. There will be a slight chance for M-class activity during 26 October - 03 November. M-class activity increases from a slight chance to a chance during 04 - 17 November, with a slight chance for X-class activity from 04 - 17 November, due to the return of old active Regions 1314 (N29, L=056) and 1319 (N12, L=052).

No proton events are expected at geosynchronous orbit during the forecast period.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at normal to moderate levels during 26 - 29 October, with an increase to moderate to high levels during 30 October - 01 November. Mostly normal levels are expected during 02 - 21 November.



Quiet to active levels are forecast for 26 October as effects from the 22 October CME arrival subside. The field is expected to return to mostly quiet levels by 27 October. Quiet to unsettled levels are expected during 28 - 29 October as a coronal hole high-speed stream (CH HSS) disturbs the field. A return to mostly quiet levels is expected during 31 October - 02 November. From 03 - 05 November, quiet to unsettled levels are expected as another recurrent CH HSS affects the field. Mostly quiet levels are expected during 06 - 21 November.



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
17 October	153	165	1170	B9.8	4	0	0	3	0	0	0	0
18 October	147	155	1030	B8.6	1	0	0	0	0	0	0	0
19 October	147	162	1390	B7.8	6	0	0	9	0	0	0	0
20 October	159	195	1490	B8.6	2	1	0	2	0	0	0	0
21 October	168	207	1440	B9.9	3	1	0	2	0	0	0	0
22 October	164	164	1010	B9.3	3	1	0	7	0	0	0	0
23 October	156	128	810	B7.6	3	0	0	2	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
	17 October	1.9e+05	1.2e+04	3.3e+03		1.6e+06
18 October	2.9e+05	1.2e+04	3.2e+03		2.2e+06	
19 October	2.1e+05	1.3e+04	3.1e+03		1.9e+06	
20 October	1.2e+05	1.3e+04	3.2e+03		2.2e+06	
21 October	8.8e+04	1.3e+04	3.1e+03		1.7e+06	
22 October	4.1e+05	6.7e+04	3.0e+03		1.8e+06	
23 October	2.0e+07	4.0e+05	3.1e+03		3.8e+06	

Daily Geomagnetic Data

Date	Middle Latitude Fredericksburg		High Latitude College		Estimated Planetary	
	A	K-indices	A	K-indices	A	K-indices
	17 October	2	2-1-0-0-1-1-0-1	2	2-1-1-1-0-0-0-0	4
18 October	5	2-2-2-0-2-2-1-1	2	1-1-1-0-1-1-1-1	5	2-2-2-0-1-2-1-1
19 October	5	2-2-1-2-2-0-1-1	5	1-1-0-4-2-0-0-1	7	2-2-0-2-2-2-2-2
20 October	3	2-1-1-0-1-1-2-0	2	1-0-1-0-0-0-2-1	5	2-1-0-0-2-2-2-2
21 October	5	2-2-2-1-1-1-1-1	3	1-3-1-0-0-0-0-0	5	2-2-1-1-1-1-2-1
22 October	2	1-1-0-0-2-0-0-1	0	0-0-0-0-0-0-0-0	3	1-0-0-0-1-1-1-1
23 October	2	0-0-0-1-2-1-1-1	1	0-0-0-2-0-0-0-0	3	0-0-0-1-1-1-2-1

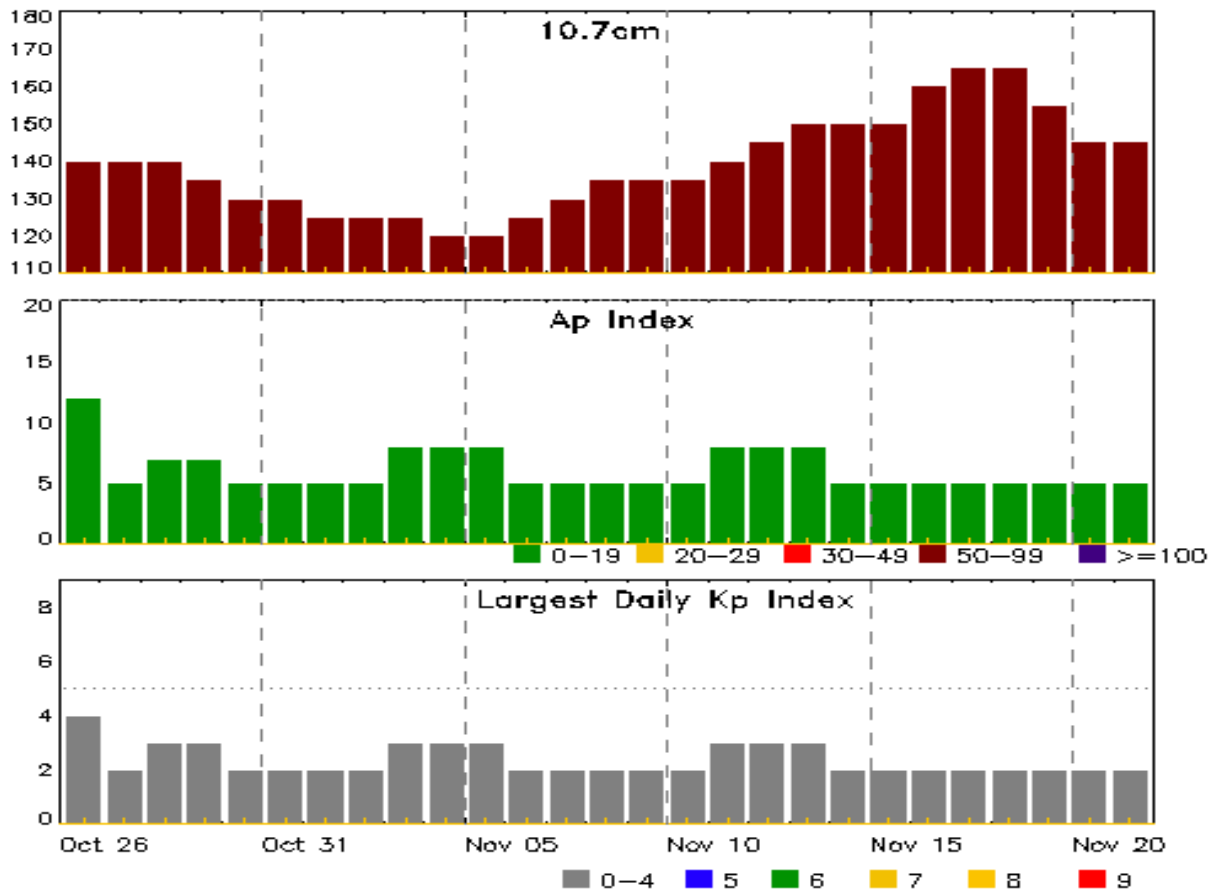


Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
21 Oct 0508	WARNING: Geomagnetic K = 4	21/0507 - 0900
21 Oct 1339	ALERT: Type II Radio Emission	21/1258
21 Oct 1349	ALERT: Type IV Radio Emission	21/1310
23 Oct 1502	WARNING: Proton 10MeV Integral Flux > 10pfu	23/1455 - 2359
23 Oct 1506	ALERT: Proton Event 10MeV Integral Flux >= 10pfu	23/1505
23 Oct 2358	EXTENDED WARNING: Proton 10MeV Integral Flux > 10pfu	23/1455 - 24/1500



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
26 Oct	140	12	4	09 Nov	135	5	2
27	140	5	2	10	135	5	2
28	140	7	3	11	140	8	3
29	135	7	3	12	145	8	3
30	130	5	2	13	150	8	3
31	130	5	2	14	150	5	2
01 Nov	125	5	2	15	150	5	2
02	125	5	2	16	160	5	2
03	125	8	3	17	165	5	2
04	120	8	3	18	165	5	2
05	120	8	3	19	155	5	2
06	125	5	2	20	145	5	2
07	130	5	2	21	145	5	2
08	135	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
20 Oct	0310	0325	0344	M1.6	0.022				220			
21 Oct	1253	1300	1308	M1.3	0.007			1319	6800	55	1	1
22 Oct	1000	1110	1309	M1.3	0.110	SF	N25W77	1314				

Flare List

Date	Time			X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
	Begin	Max	End				
17 Oct	0540	0721	0803	C1.6			
17 Oct	0721	0721	0724		SF	N10W14	1319
17 Oct	0824	0828	0830	C2.1			
17 Oct	0929	0932	0934	C1.8			
17 Oct	1208	1208	1212		SF	S13W18	1316
17 Oct	B1400	U1406	A1445		SF	S13W19	1316
17 Oct	1805	1809	1813	C1.9			1324
18 Oct	0639	0643	0645	C2.0			
19 Oct	0133	0136	0140	C1.1			
19 Oct	0449	0455	0500	C5.5			1324
19 Oct	1445	1446	1451		SF	N13E58	1324
19 Oct	1505	1506	1511		SF	N10W47	1319
19 Oct	1624	1624	1628		SF	N30W52	1314
19 Oct	1631	1634	1637	C2.4	SF	N13E57	1324
19 Oct	1814	1814	1819		SF	N13E55	1324
19 Oct	1845	1849	1851	C3.4	SF	N13E59	1324
19 Oct	1913	1916	1924		SF	N13E58	1324
19 Oct	1955	1958	2000	C1.7	SF	N13E58	1324
19 Oct	2031	2037	2039	C3.5	SF	N26W46	1314
20 Oct	0200	0203	0205	C1.5			
20 Oct	0310	0325	0344	M1.6			
20 Oct	1533	1539	1545	C5.4	SN	N13E47	1324
20 Oct	2022	2022	2026		SF	N13E43	1324
21 Oct	0853	0857	0902	C2.4			1324
21 Oct	1253	1300	1308	M1.3			1319
21 Oct	1340	1344	1346	C1.5			1319
21 Oct	1700	1704	1710	C2.7	SF	N07W76	1319
21 Oct	1903	1906	1911		SF	N13E33	1324



Flare List

Date	Time			X-ray Class	Imp/ Brtns	Optical		Rgn #
	Begin	Max	End			Location Lat CMD		
22 Oct	1000	1110	1309	M1.3	SF	N25W77		1314
22 Oct	B1232	U1252	A1328		SF	N28W77		1314
22 Oct	1514	1520	1529	C4.1	SF	N12E24		1324
22 Oct	1743	1744	1753		SF	N17E47		1325
22 Oct	1911	1917	1923	C2.2	SF	N17E46		1325
22 Oct	2022	2022	2030		SF	N17E46		1325
22 Oct	2039	2043	2047	C1.7	SF	N16E44		1325
23 Oct	0528	0531	0534	C2.1				1330
23 Oct	1142	1147	1153	C2.5				1324
23 Oct	1837	1838	1845		SF	N13E07		1324
23 Oct	1916	1916	1919		SF	N13E06		1324
23 Oct	2226	2237	2241	C1.0				1330



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 1312																	
04 Oct	N22E74	122	210	4	Hsx	1	A										
05 Oct	N23E60	123	210	2	Hsx	1	A										
06 Oct	N22E48	122	210	2	Hsx	1	A										
07 Oct	N22E35	123	320	3	Hhx	1	A										
08 Oct	N23E21	122	200	3	Hsx	1	A										
09 Oct	N23E10	121	210	3	Hsx	1	A										
10 Oct	N22W03	121	210	7	Hsx	1	A										
11 Oct	N22W16	121	210	7	Hsx	1	A										
12 Oct	N23W29	120	210	3	Cso	3	B										
13 Oct	N23W42	120	190	3	Hsx	1	A										
14 Oct	N23W55	120	270	3	Hhx	1	A						1				
15 Oct	N23W68	121	180	3	Hsx	1	A										
16 Oct	N22W81	120	180	2	Hsx	1	A										
17 Oct	N22W96	122	90	4	Hsx	1	A										
								0	0	0	1	0	0	0	0	0	

Crossed West Limb.

Absolute heliographic longitude: 121

Region 1313																	
05 Oct	S13E65	118	90	5	Dai	4	B	4					4				
06 Oct	S15E52	118	180	8	Dai	10	B	1									
07 Oct	S16E39	118	140	6	Dsi	6	B	1					1				
08 Oct	S15E28	116	120	10	Dso	5	B										
09 Oct	S15E13	117	90	9	Dso	6	B										
10 Oct	S15E01	117	90	9	Dai	15	B	4					2				
11 Oct	S15W13	118	120	9	Dai	18	B										
12 Oct	S14W25	116	140	10	Dso	20	BG										
13 Oct	S14W38	116	110	9	Cso	10	BG	2					1				
14 Oct	S16W52	117	80	5	Dso	5	B										
15 Oct	S16W64	117	70	5	Dso	5	B	1									
16 Oct	S16W78	117	10	1	Axx	2	A										
17 Oct	S16W81	107	10	4	Bxo	2	B										
								13	0	0	8	0	0	0	0	0	

Crossed West Limb.

Absolute heliographic longitude: 117



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 1314																							
09 Oct	N26E72		58	180	6	Hsx	1	A	1														
10 Oct	N27E59		59	230	3	Hsx	2	A															
11 Oct	N27E45		60	250	3	Cho	2	B					1										
12 Oct	N25E33		58	370	7	Cho	4	B	5				2										
13 Oct	N27E21		57	300	5	Cko	3	B	1				1	1									
14 Oct	N26E09		56	280	6	Cho	6	B															
15 Oct	N28W04		56	330	5	Cho	4	B	1														
16 Oct	N28W18		57	310	5	Cho	4	B					3										
17 Oct	N27W30		56	230	5	Cso	1	B															
18 Oct	N27W42		55	240	6	Cso	4	B															
19 Oct	N28W58		57	260	3	Hhx	1	A	1				2										
20 Oct	N29W69		55	210	4	Hsx	1	A															
21 Oct	N29W83		56	180	3	Hsx	1	A															
22 Oct	N29W93		53	90	4	Hsx	1	A			1		2										
									9	1	0	11	1	0	0	0	0						

Crossed West Limb.
 Absolute heliographic longitude: 56

Region 1315																							
10 Oct	N20E08		111	40	4	Dao	6	B															
11 Oct	N20W06		111	40	4	Dao	6	B															
12 Oct	N19W19		110	10	3	Bxo	4	B															
13 Oct	N19W31		109	10	3	Bxo	3	B															
14 Oct	N20W44		110	10	2	Bxo	3	B															
									0	0	0	0	0	0	0	0	0	0	0	0	0		

Died on Disk.
 Absolute heliographic longitude: 111



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 1316																							
11 Oct	S12E56		48	60	3	Dai	3	B	1				3										
12 Oct	S14E42		48	160	8	Dsi	12	B	1				2										
13 Oct	S12E28		49	310	7	Dko	10	B															
14 Oct	S12E15		49	330	8	Dhc	9	B	3				3										
15 Oct	S12E03		49	340	8	Dhi	11	B	1				1										
16 Oct	S12W11		50	340	8	Dhi	11	B															
17 Oct	S12W25		50	150	8	Dao	6	B					2										
18 Oct	S12W37		49	140	8	Dao	7	B															
19 Oct	S12W49		49	110	8	Dai	7	B															
20 Oct	S12W62		48	60	9	Dso	6	B															
21 Oct	S11W77		50	10	5	Bxo	2	B															
									6	0	0	11	0	0	0	0	0						

Died on Disk.

Absolute heliographic longitude: 49

Region 1317

11 Oct	S26E68		37	90	2	Hsx	1	A													
12 Oct	S27E54		37	70	2	Hsx	1	A													
13 Oct	S27E41		36	70	1	Hsx	1	A													
14 Oct	S26E28		37	70	2	Hsx	1	A					2								
15 Oct	S26E15		37	80	2	Hsx	1	A													
16 Oct	S26E01		38	80	2	Hsx	1	A	1				1								
17 Oct	S27W11		37	50	2	Hsx	1	A													
18 Oct	S27W25		37	50	2	Hsx	1	A													
19 Oct	S27W37		36	80	2	Hsx	1	A													
20 Oct	S26W51		37	60	2	Hsx	1	A													
21 Oct	S26W65		38	70	2	Hsx	1	A													
22 Oct	S25W77		37	50	2	Hsx	1	A													
									1	0	0	3	0	0	0	0	0				

Died on Disk.

Absolute heliographic longitude: 38



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 1318																		
12 Oct	N21W03	94	10	2	Dao	3	B											
13 Oct	N20W18	96	50	4	Dso	4	B											
14 Oct	N20W31	96	40	5	Cso	7	B											
15 Oct	N25W46	98	20	2	Cso	4	B	1				1						
16 Oct	N21W58	97	10	1	Axx	1	A											
17 Oct	N19W70	96	30	3	Cso	2	B											
18 Oct	N19W85	97	40	6	Cso	2	B											
								1	0	0	1	0	0	0	0	0		

Crossed West Limb.
Absolute heliographic longitude: 94

Region 1319																		
12 Oct	N08E42	49	30	5	Dai	11	B	5				1						
13 Oct	N10E29	48	80	7	Cso	11	B	3				5						
14 Oct	N09E16	48	80	12	Esi	20	B	3				1						
15 Oct	N11E01	51	240	11	Eai	30	B	4				3						
16 Oct	N11W13	52	280	12	Eki	30	BG	7				6						
17 Oct	N10W26	51	420	12	Eki	32	BG					1						
18 Oct	N11W39	51	280	12	Eki	19	BG											
19 Oct	N10W53	52	330	12	Eki	16	BG					1						
20 Oct	N11W66	52	330	11	Eho	10	BG											
21 Oct	N12W79	52	330	12	Eho	7	BG	2	1			1						
22 Oct	N13W89	49	40	1	Cso	5	B											
								24	1	0	19	0	0	0	0	0		

Crossed West Limb.
Absolute heliographic longitude: 51

Region 1320																		
13 Oct	S22W39	117	10	3	Bxo	3	B											
14 Oct	S21W51	117	30	5	Cro	4	B											
15 Oct	S21W65	118	10	5	Axx	4	A											
16 Oct	S21W76	115	10	2	Axx	2	A											
17 Oct	S21W90	116	plage															
								0	0	0	0	0	0	0	0	0		

Crossed West Limb.
Absolute heliographic longitude: 117



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

Region 1321

15 Oct	S14E50	1	10	3	Bxo	2	B										
16 Oct	S14E37	2	10	4	Bxo	2	B										
17 Oct	S15E22	4	20	5	Cro	3	B										
18 Oct	S14E09	3	30	5	Cao	6	B										
19 Oct	S14W03	2	20	6	Cro	6	B										
20 Oct	S14W18	4	10	6	Bxo	4	B										
21 Oct	S16W34	7	10	1	Hrx	2	A										
22 Oct	S16W48	8	plage														
23 Oct	S16W62	9	plage														
									0	0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 2

Region 1322

15 Oct	S27W51	104	10	5	Bxo	4	B										
16 Oct	S27W64	103	10	5	Bxo	4	B										
17 Oct	S27W78	104	70	7	Cso	3	B										
18 Oct	S27W93	105	30	2	Hsx	1	A										
									0	0	0	0	0	0	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 104

Region 1323

17 Oct	N23E52	333	10	1	Axx	2	A										
18 Oct	N24E41	331	20	7	Cso	2	B										
19 Oct	N24E27	333	plage														
20 Oct	N24E14	333	plage														
21 Oct	N24W00	334	plage														
22 Oct	N25W11	331	10	1	Axx	1	A										
23 Oct	N25W25	332	plage														
									0	0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 334



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 1324																							
17 Oct	N11E80	306	90	3	Hax	2	A	1															
18 Oct	N11E64	308	110	12	Eai	12	B																
19 Oct	N12E55	305	340	16	Fkc	26	BG	4				6											
20 Oct	N11E40	305	360	14	Ekc	27	BG	1				2											
21 Oct	N10E27	306	290	12	Eac	34	BG	1				1											
22 Oct	N10E14	306	280	15	Eac	28	BG	1				1											
23 Oct	N12W00	307	150	15	Eai	26	BG	1				2											
								9	0	0		12	0	0	0	0							

Still on Disk.
Absolute heliographic longitude: 307

Region 1325																							
19 Oct	N16E82	278	90	3	Hax	1	A																
20 Oct	N14E67	279	270	8	Dko	4	B																
21 Oct	N15E54	279	260	7	Dko	6	B																
22 Oct	N15E43	277	180	7	Dai	8	B	2				4											
23 Oct	N15E29	278	180	7	Dao	8	B																
								2	0	0		4	0	0	0	0							

Still on Disk.
Absolute heliographic longitude: 278

Region 1326																							
20 Oct	N16W36	22	10	2	Cso	2	B																
21 Oct	N16W48	22	30	3	Cso	3	B																
22 Oct	N16W62	22	plage																				
23 Oct	N16W76	23	plage																				
								0	0	0		0	0	0	0	0							

Still on Disk.
Absolute heliographic longitude: 22

Region 1327																							
20 Oct	S22E10	336	10	4	Bxi	5	B																
21 Oct	S21W03	336	100	6	Dao	8	B																
22 Oct	S21W15	335	130	8	Dao	11	B																
23 Oct	S21W29	336	130	8	Dao	11	B																
								0	0	0		0	0	0	0	0							

Still on Disk.
Absolute heliographic longitude: 336



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 1328																							
20 Oct	N18E23	322	10	1	Bxo	1	B																
21 Oct	N17E07	325	40	4	Dao	6	B																
22 Oct	N17W06	326	10	3	Bxo	3	B																
23 Oct	N17W20	327	plage																				
									0	0	0	0	0	0	0	0	0	0	0	0	0		

Still on Disk.
Absolute heliographic longitude: 326

Region 1329																							
21 Oct	S30W42	15	50	3	Cso	4	B																
22 Oct	S29W55	15	10	1	Axx	1	A																
23 Oct	S29W69	16	plage																				
									0	0	0	0	0	0	0	0	0	0	0	0	0		

Still on Disk.
Absolute heliographic longitude: 15

Region 1330																							
22 Oct	N04E66	254	210	5	Dso	5	B																
23 Oct	N08E60	247	210	13	Eao	5	B	2															
								2	0	0	0	0	0	0	0	0	0	0	0	0	0		

Still on Disk.
Absolute heliographic longitude: 247

Region 1331																							
23 Oct	N11W60	7	10	6	Bxo	2	B																
									0	0	0	0	0	0	0	0	0	0	0	0	0		

Still on Disk.
Absolute heliographic longitude: 7

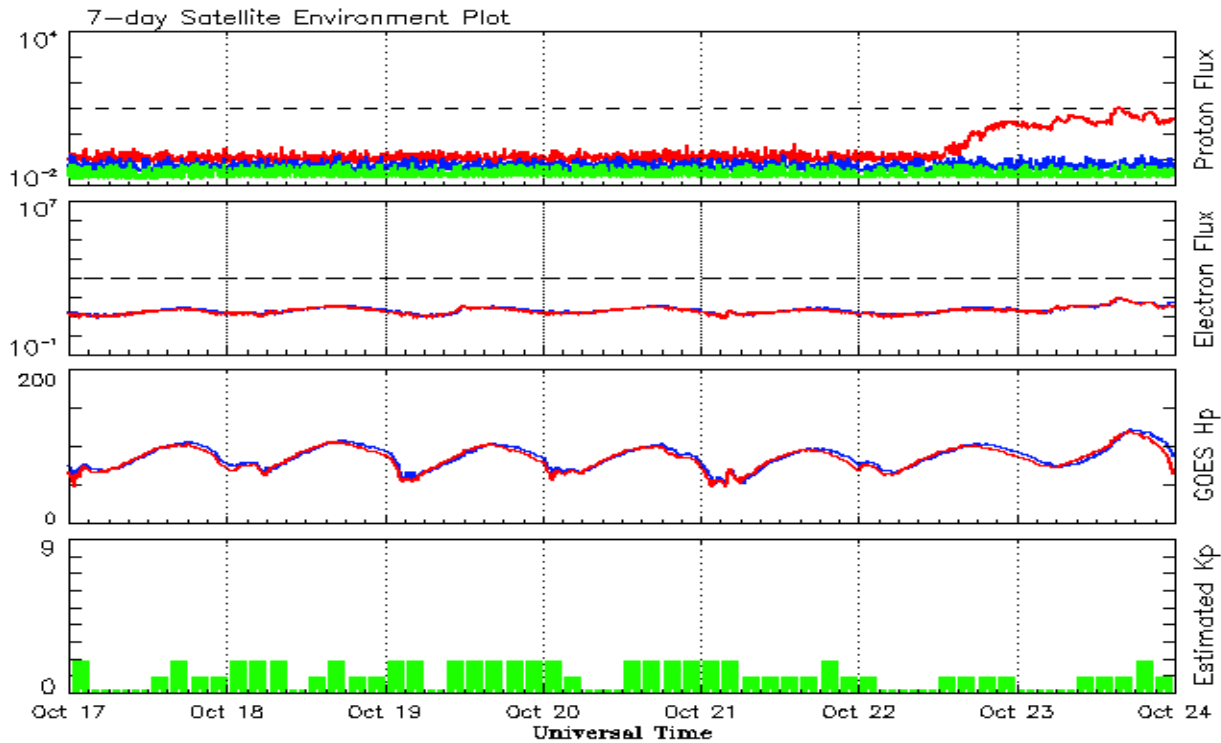


Recent Solar Indices (preliminary)
Observed monthly mean values

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
2009									
October	7.0	4.8	0.66	11.3	7.1	72.3	74.1	3	4.1
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
2010									
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
2011									
January	32.1	18.8	0.59	47.2	31.0	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			112.6		9	
May	61.4	41.6	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	

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 17 October 2011*

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.

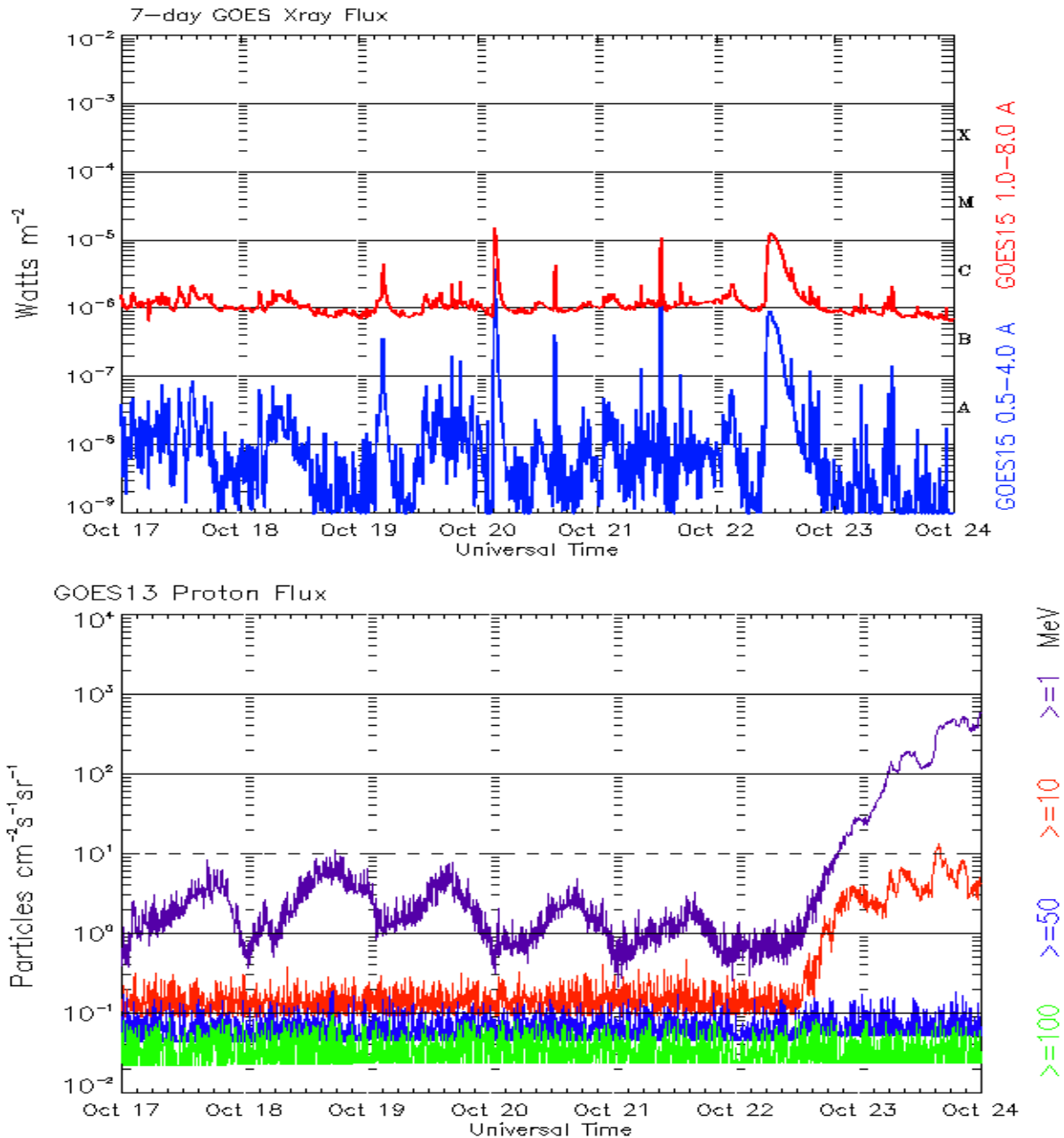
The electron flux plot contains the five-minute averaged integral electron flux (electrons/cm²-sec -sr) with energies greater than 2 MeV by the SWPC Primary GOES satellite.

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.

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 17 October 2011*

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 integral 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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