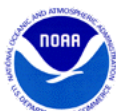


Solar activity ranged from low to moderate levels. Low levels were observed on 14 Oct with C-class activity from Regions 1861 (S10, L=168, class/area Dho/480 on 15 Oct), 1865 (S22, L=145, class/area Dkc/270 on 13 Oct) and 1869 (N19, L=085, class/area Dso/040 on 13 Oct). The largest event of the day was a C8/1f at 14/1315 UTC from Region 1865. 15 Oct saw activity increase to moderate levels with a pair of M-class flares from Region 1865, the largest an M1/Sn at 15/0838 UTC. Numerous C-class activity was also seen from Regions 1861 and 1865. No Earth-directed CMEs were observed with the 15 Oct activity. Activity levels dipped to low levels on 16 Oct with Region 1865 producing the largest event of the day, a C8/1n at 16/1432 UTC with an associated asymmetric, partial halo coronal mass ejection (CME). Analysis determined that the relative slow speed (386 km/s) of this CME was unlikely to produce significant effects at Earth. Region 1861 produced a C1/Sf event at 16/0920 UTC with associated Type II (548 km/s) and Type IV radio sweeps. C-class activity was also observed from Regions 1867 (N24, L=183, class/area Dao/050 on 13 Oct) and 1870 (S13, L=143 class/area Cro/030 on 14 Oct). Activity increased to moderate levels on 17 Oct with Region 1861 producing an M1 flare at 17/1541 UTC. Additional C-class flaring was observed from Regions 1861 and 1865. Activity levels decreased to low on 18 - 20 Oct with C-class events observed from Regions 1861, 1868 (N23, L=102, class/area Cao/040 on 19 Oct) and Region 1975 (N08, L=026, class/area Esi/150 on 19 Oct).

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit was at moderate flux levels on 14 - 15 Oct and at high levels 16 - 20 October.

Geomagnetic field activity ranged from quiet to active levels. The period began with quiet levels, but field activity ramped up to unsettled to active with the onset of a recurrent coronal hole high speed stream (CH HSS). The field remained elevated through early on 16 Oct when predominately quiet levels persisted through the remainder of the summary period. ACE wind signatures indicated an increase in wind speeds from 320 km/s at the beginning of the period to a peak of about 575 km/s at 15/2036 UTC. Corresponding increases in temperature and density accompanied the speed increase. The interplanetary magnetic field (IMF) total field (Bt) reached a peak of 12 nT at 14/0856 UTC with the Bz component reaching a maximum southward extent of -10 nT at 14/0854 UTC. The phi angle switched from a negative (towards) to a positive (away) orientation at 14/0835 UTC and remained predominately positive through the remainder of the summary period. By late on 15 Oct, Bt and Bz closed up with Bz not varying much beyond +/- 3 nT through the balance of the period. Wind speeds slowly decreased to end-of summary period values of just under 300 km/s.



Space Weather Outlook
21 October - 16 November 2013

Solar activity is expected to be at low levels with a chance for isolated moderate level events through the forecast period.

No proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at moderate to high levels on 21 Oct, normal to moderate levels on 22 Oct - 10 Nov and moderate to high levels on 11 - 16 Nov.

Geomagnetic field activity is expected to be at quiet to unsettled levels on 21 - 22 Oct and unsettled to active levels on 10 - 13 Nov due to recurrent CH HSS effects. Predominately quiet levels are expected for the remainder of the outlook period.



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
14 October	125	136	790	B4.1	7	0	0	1	1	0	0	0
15 October	125	148	800	B6.3	12	2	0	12	1	0	0	0
16 October	128	120	620	B4.2	10	0	0	8	1	0	0	0
17 October	136	166	760	B8.6	5	1	0	16	0	0	0	0
18 October	140	154	930	C1.0	9	0	0	8	0	0	0	0
19 October	133	149	890	B9.2	7	0	0	0	0	0	0	0
20 October	133	117	720	B7.5	4	0	0	8	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
14 October	4.1e+05	1.8e+04	2.6e+03		7.4e+06	
15 October	2.5e+05	1.8e+04	2.3e+03		1.1e+07	
16 October	1.8e+05	1.3e+04	2.3e+03		3.7e+07	
17 October	3.8e+05	1.2e+04	2.7e+03		1.6e+08	
18 October	1.1e+05	1.1e+04	2.5e+03		1.4e+08	
19 October	1.2e+05	1.1e+04	2.6e+03		1.9e+08	
20 October	1.2e+05	1.1e+04	2.7e+03		1.7e+08	

Daily Geomagnetic Data

Date	Middle Latitude Fredericksburg		High Latitude College		Estimated Planetary	
	A	K-indices	A	K-indices	A	K-indices
14 October	10	0-2-2-3-3-2-3-3	31	0-1-5-6-5-5-3-2	13	0-2-2-3-3-3-4-3
15 October	14	3-4-3-3-3-1-1-3	27	4-4-5-6-3-1-2-2	14	4-4-3-3-2-1-1-3
16 October	9	3-2-1-2-3-2-2-2	10	2-1-1-3-4-3-1-1	9	4-2-2-1-2-2-2-2
17 October	10	2-3-3-2-3-2-2-1	16	2-2-4-5-4-2-1-1	9	2-3-3-2-2-2-1-1
18 October	3	0-0-0-1-2-0-2-1	1	0-0-1-1-0-0-1-0	3	0-0-1-1-1-1-2-0
19 October	3	0-0-0-1-2-2-2-1	0	0-0-0-1-0-0-0-0	3	0-0-0-1-1-1-0-0
20 October	3	0-0-1-1-2-1-1-1	0	0-0-0-1-0-0-0-0	3	0-0-1-1-1-1-1-1

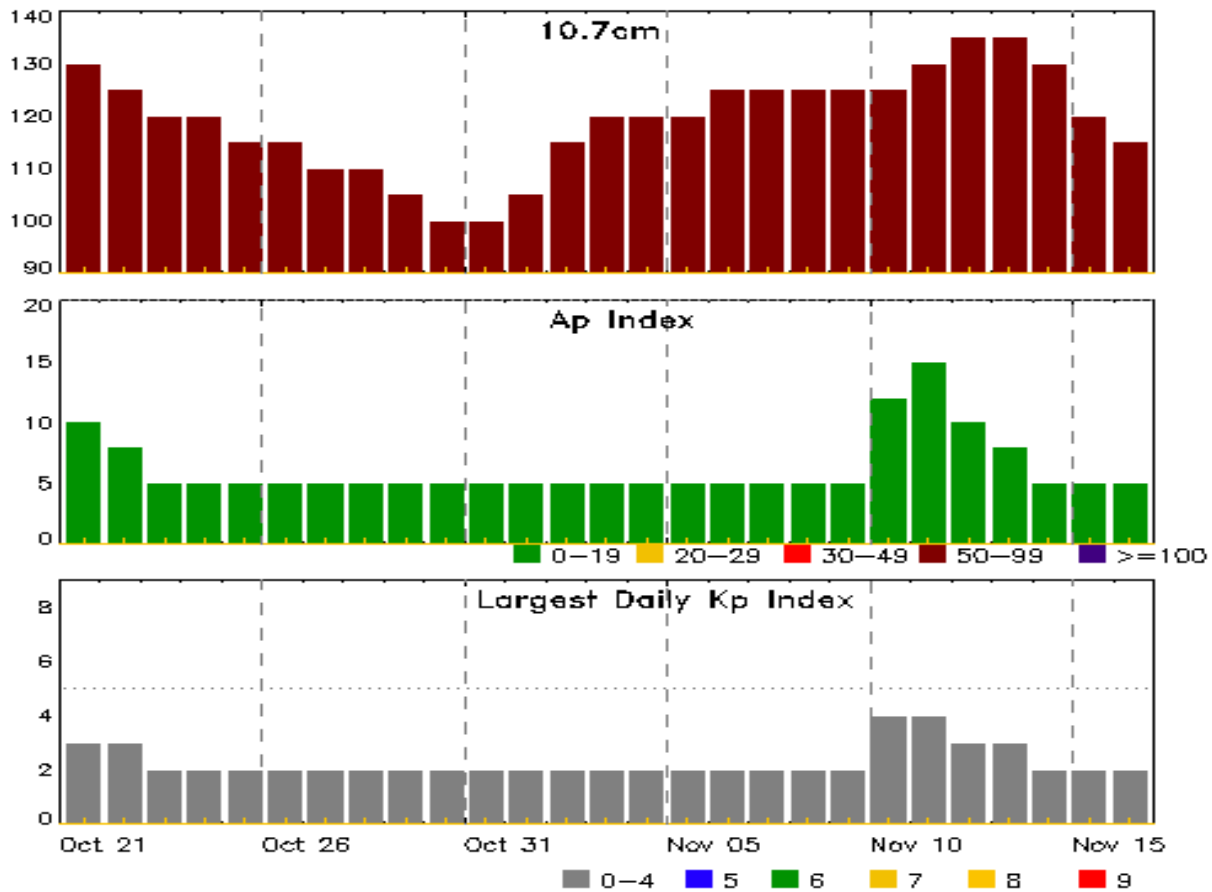


Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
14 Oct 1855	WARNING: Geomagnetic K = 4	14/1855 - 15/0400
14 Oct 2100	ALERT: Geomagnetic K = 4	14/2100
15 Oct 0411	WARNING: Geomagnetic K = 4	15/0410 - 1300
15 Oct 0923	WARNING: Geomagnetic Sudden Impulse expected	15/0925 - 1025
15 Oct 2133	WARNING: Geomagnetic K = 4	15/2130 - 16/0100
16 Oct 0224	WARNING: Geomagnetic K = 4	16/0225 - 0700
16 Oct 0302	ALERT: Geomagnetic K = 4	16/0259
16 Oct 0953	ALERT: Type IV Radio Emission	16/0930
16 Oct 0953	ALERT: Type II Radio Emission	16/0919
17 Oct 0943	ALERT: Electron 2MeV Integral Flux \geq 1000pfu	17/0930
18 Oct 1136	CONTINUED ALERT: Electron 2MeV Integral Flux \geq 1000pfu	17/0930
19 Oct 0501	CONTINUED ALERT: Electron 2MeV Integral Flux \geq 1000pfu	17/0930
20 Oct 0500	CONTINUED ALERT: Electron 2MeV Integral Flux \geq 1000pfu	17/0930



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
21 Oct	130	10	3	04 Nov	120	5	2
22	125	8	3	05	120	5	2
23	120	5	2	06	125	5	2
24	120	5	2	07	125	5	2
25	115	5	2	08	125	5	2
26	115	5	2	09	125	5	2
27	110	5	2	10	125	12	4
28	110	5	2	11	130	15	4
29	105	5	2	12	135	10	3
30	100	5	2	13	135	8	3
31	100	5	2	14	130	5	2
01 Nov	105	5	2	15	120	5	2
02	115	5	2	16	115	5	2
03	120	5	2				



Energetic Events

Date	Time			X-ray		Optical Information			Peak		Sweep Freq	
	Begin	Max	Half Max	Class	Integ Flux	Imp/ Brtns	Location Lat CMD	Rgn #	Radio Flux		Intensity	
									245	2695	II	IV
15 Oct	0826	0838	0848	M1.8	0.001	SN	S22W13	1865			87	
15 Oct	2331	2336	2341	M1.3	0.004	1F	S23W20	1865				
17 Oct	1509	1541	1558	M1.2	0.025			1861	170			

Flare List

Date	Time			X-ray Class	Imp/ Brtns	Optical		Rgn #
	Begin	Max	End			Location Lat CMD		
14 Oct	0012	0022	0030	C1.8				1861
14 Oct	0049	0101	0110	C1.5				1869
14 Oct	0317	0324	0328	C1.1				1869
14 Oct	1256	1315	1336	C8.0	1F	S21W01		1865
14 Oct	2120	2127	2134	C3.4				1861
14 Oct	2138	2153	2203	C3.0				
14 Oct	2249	2254	2322	C7.4	SN	S09W30		1861
15 Oct	0140	0146	0154	C2.4	SF	S09W32		1861
15 Oct	0323	0333	0348	C1.9	SF	S22W09		1865
15 Oct	0409	0421	0438	C1.5	SF	S09W33		1861
15 Oct	0424	0429	0431		SF	S09W33		1861
15 Oct	0504	0507	0510	C9.5	SN	S22W11		1865
15 Oct	0748	0801	0812	C2.8				1865
15 Oct	0813	0816	0818	C2.8	SF	S22W14		1865
15 Oct	0826	0838	0848	M1.8	SN	S22W13		1865
15 Oct	0909	0915	0924		SF	S10W36		1861
15 Oct	1025	1029	1034	C2.9				1861
15 Oct	1414	1421	1429	C2.2	SN	S20E52		1865
15 Oct	1437	1457	1509	C4.4				1865
15 Oct	1522	1536	1549	C6.5				1865
15 Oct	1556	1556	1614		SF	S12W14		1861
15 Oct	1704	1711	1719	C1.8	SF	S12W14		1861
15 Oct	1812	1812	1820		SF	S12W14		1861
15 Oct	2004	2013	2057	C3.3				1865
15 Oct	2331	2336	2341	M1.3	1F	S23W20		1865
16 Oct	0332	0348	0402	C2.5				
16 Oct	0520	0532	0545	C3.7				
16 Oct	0630	0640	0646	B7.8	SF	S11W46		1861



Flare List

Date	Time			Optical			
	Begin	Max	End	X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
16 Oct	0910	0920	0930	C1.8	SF	S11W41	1861
16 Oct	1354	1402	1412	C1.4			1861
16 Oct	1426	1432	1440	C8.9	1N	S23W29	1865
16 Oct	1503	1520	1534	C1.8	SF	S15W29	1870
16 Oct	1623	1638	1644	C1.6	SF	S11W46	1861
16 Oct	1739	1743	1746	C1.9	SF	N21W72	1867
16 Oct	2039	2051	2107	C1.2			
16 Oct	2127	2130	2134		SF	S27W46	1864
16 Oct	2224	2228	2233		SF	S12W49	1861
16 Oct	2238	2239	2241		SF	S12W49	1861
16 Oct	2311	2328	2339	C1.4			1861
17 Oct	0320	0328	0335	C4.7	SF	S08W52	1861
17 Oct	0607	0612	0617	C1.2	SF	S11W46	1861
17 Oct	0726	U0730	0730		SF	S11W54	1861
17 Oct	0753	0754	0756		SF	S11W54	1861
17 Oct	0855	0902	0906		SF	S11W56	1861
17 Oct	0915	0917	0919		SF	S11W56	1861
17 Oct	0938	U0940	0940		SF	S11W56	1861
17 Oct	1025	1032	1037	C5.8	SN	S11W56	1861
17 Oct	1147	1204	1215	C4.8	SF	S11W56	1861
17 Oct	1342	1354	1407		SF	S09W60	1861
17 Oct	1437	1439	1441		SF	N09E80	
17 Oct	1509	1541	1558	M1.2			1861
17 Oct	1631	1645	1650		SF	S10W65	1861
17 Oct	1655	1658	1700		SF	S10W65	1861
17 Oct	2112	2113	2118		SF	S10W65	1861
17 Oct	2218	2224	2232	C1.6			
17 Oct	2221	2224	2226		SF	S22W49	1865
17 Oct	2259	2300	2301		SF	S10W63	1861
18 Oct	0014	0016	0020		SF	S09W66	1861
18 Oct	0056	0101	0104	C2.7			1875
18 Oct	0302	0307	0310	C3.3			
18 Oct	0324	0327	0330	C1.5			1861
18 Oct	0500	0508	0512	C5.3			1875
18 Oct	0724	0729	0731	C3.3			1875
18 Oct	0738	0738	0741		SF	S11W69	1861
18 Oct	0816	0821	0824	C2.2	SF	N08E76	1875
18 Oct	1017	1034	1048	C5.0			1861



Flare List

Date	Time			Optical			Rgn #
	Begin	Max	End	X-ray Class	Imp/ Brtns	Location Lat CMD	
18 Oct	1051	1054	1056	C4.7			1875
18 Oct	1352	1357	1420		SF	S11W71	1861
18 Oct	1420	1425	1427		SF	S09W72	1861
18 Oct	1428	1430	1439		SF	N09E69	1875
18 Oct	1506	1519	1525		SF	S12W73	1861
18 Oct	1510	1516	1524		SF	N08E66	1875
18 Oct	1515	1526	1539	C8.4			1861
19 Oct	0102	0116	0139	C1.6			1861
19 Oct	0927	0934	0943	C2.9			1861
19 Oct	1032	1038	1041	C1.9			1861
19 Oct	1231	1234	1247	C1.4			
19 Oct	1425	1432	1444	C1.2			1861
19 Oct	1826	1830	1835	C1.7			1861
19 Oct	2309	2330	2346	C2.0			1861
20 Oct	0833	0840	0846	C2.9	SF	N22W33	1868
20 Oct	0940	0943	1011		SF	N11E40	1875
20 Oct	1158	U1216	A1246		SF	N12E39	1875
20 Oct	1241	1245	1250	C2.0	SF	N22W35	1868
20 Oct	1357	1357	1400		SF	N11E15	1873
20 Oct	B1419	U1426	A1431		SF	N13E16	1873
20 Oct	1809	1848	1907	C1.7	SF	N11E15	1873
20 Oct	2251	2256	2312	C1.0	SF	N09E37	1875



Region Summary

Location		Sunspot Characteristics						Flares							
		Helio	Area	Extent	Spot	Spot	Mag	X-ray			Optical				
Date	Lat CMD	Lon	10 ⁻⁶ hemi.	(helio)	Class	Count	Class	C	M	X	S	1	2	3	4
Region 1856															
02 Oct	N08E69	225	50	2	Cao	1	B								
03 Oct	N07E56	225	70	6	Dso	2	B				1				
04 Oct	N08E43	226	80	7	Dso	8	B	1			1				
05 Oct	N08E31	225	70	7	Cao	5	B								
06 Oct	N08E18	225	40	7	Cao	4	B	1							
07 Oct	N07E02	226	30	4	Cro	4	B	2			1	2			
08 Oct	N07W10	226	30	3	Cao	3	B				2				
09 Oct	N07W22	225	10	4	Bxo	8	B								
10 Oct	N07W36	226	10	3	Bxo	2	B								
11 Oct	N07W51	228	plage												
12 Oct	N07W66	230	plage												
13 Oct	N07W81	232	plage												
								4	0	0	5	2	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 226

Region 1857															
02 Oct	S06E66	228	70	2	Hax	1	A								
03 Oct	S08E54	227	100	2	Hsx	1	A	1							
04 Oct	S07E41	228	100	3	Cao	4	B								
05 Oct	S08E28	228	110	2	Hsx	1	A								
06 Oct	S08E14	229	110	2	Hsx	1	A				1				
07 Oct	S07E01	227	80	2	Hsx	1	A				1				
08 Oct	S08W11	227	90	2	Hsx	1	A								
09 Oct	S07W24	227	110	2	Hsx	1	A				1				
10 Oct	S08W37	227	100	5	Hsx	1	A								
11 Oct	S08W51	228	100	2	Hsx	1	A								
12 Oct	S08W65	229	80	2	Hsx	1	A								
13 Oct	S08W78	229	70	2	Hsx	1	A								
14 Oct	S07W90	228	30	1	Hsx	1	A								
								1	0	0	3	0	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 227



Region Summary - continued

Date	Location	Sunspot Characteristics						Flares							
	Lat CMD	Helio	Area 10 ⁻⁶ hemi.	Extent (helio)	Spot Class	Spot Count	Mag Class	X-ray			Optical				
		Lon						C	M	X	S	1	2	3	4
Region 1860															
07 Oct	S28E40	189	10	1	Axx	1	A								
08 Oct	S27E31	187	10	2	Axx	2	A								
09 Oct	S28E13	190	plage												
10 Oct	S28W01	191	plage												
11 Oct	S28W15	192	plage								1				
12 Oct	S28W29	193	plage												
13 Oct	S28W43	194	plage												
14 Oct	S28W57	195	plage												
15 Oct	S28W71	195	plage												
16 Oct	S28W85	196	plage												
								0	0	0	1	0	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 191

Region 1861

07 Oct	S13E64	164	10	4	Bxo	2	B	2							
08 Oct	S13E50	165	10	6	Bxo	3	B								
09 Oct	S13E37	166	60	11	Cao	8	B								
10 Oct	S10E22	168	200	11	Eac	23	BG	6			9				
11 Oct	S09E08	169	340	9	Dkc	19	BGD	10			12		1		
12 Oct	S09W05	169	380	8	Dkc	14	BG	8			9	2			
13 Oct	S09W19	170	400	8	Dhi	12	BG	1			1		1		
14 Oct	S08W32	170	400	8	Dho	9	BG	3			1				
15 Oct	S10W45	168	480	8	Dho	17	B	4			7				
16 Oct	S10W57	167	350	10	Dhc	13	BG	3			5				
17 Oct	S08W69	166	370	14	Eki	17	BG	3	1		14				
18 Oct	S07W79	163	410	15	Eki	16	BG	3			5				
19 Oct	S07W91	163	240	13	Eac	9	BG	6							
								49	1	0	63	2	2	0	0

Crossed West Limb.

Absolute heliographic longitude: 169



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 1863

08 Oct	S18E19	197	10	4	Bxo	4	B								
09 Oct	S18E05	197	10	2	Axx	2	A								
10 Oct	S19W08	198	30	4	Dro	5	B								
11 Oct	S18W22	199	20	6	Cro	3	B								
12 Oct	S18W36	200	10	4	Bxo	3	B								
13 Oct	S18W50	201	20	4	Cro	4	B								
14 Oct	S18W62	200	20	4	Cro	3	B								
15 Oct	S17W75	198	10	3	Cro	2	B								
16 Oct	S17W89	200	plage												
								0	0	0	0	0	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 197

Region 1864

08 Oct	S23E62	154	50	1	Hsx	1	A								
09 Oct	S22E48	155	70	2	Hax	2	A								
10 Oct	S23E34	156	60	2	Hax	2	A								
11 Oct	S23E21	156	60	3	Hsx	3	A								
12 Oct	S23E07	157	60	2	Hsx	2	A								
13 Oct	S23W07	158	60	2	Hsx	1	A								
14 Oct	S23W20	158	70	2	Hsx	1	A								
15 Oct	S23W32	156	60	1	Hsx	1	A								
16 Oct	S23W45	156	50	1	Hsx	1	A				1				
17 Oct	S23W60	157	60	1	Hsx	1	A								
18 Oct	S23W73	157	20	1	Hsx	1	A								
19 Oct	S22W85	157	30	1	Hax	1	A								
								0	0	0	1	0	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 157



Region Summary - continued

Date	Location	Sunspot Characteristics						Flares							
	Lat CMD	Helio	Area 10 ⁻⁶ hemi.	Extent (helio)	Spot Class	Spot Count	Mag Class	X-ray			Optical				
		Lon						C	M	X	S	1	2	3	4
Region 1865															
08 Oct	S20E73	143	60	3	Cao	2	B								
09 Oct	S21E58	145	210	7	Dao	5	BD	1	1		1				
10 Oct	S22E45	145	220	7	Dai	15	BGD	3			3				
11 Oct	S22E32	145	220	8	Dao	14	BGD	1			2				
12 Oct	S22E19	145	200	9	Dao	20	BGD	1							
13 Oct	S22E06	145	270	9	Dkc	16	BGD	2	1		2				
14 Oct	S22W08	145	120	7	Cai	10	BGD	1					1		
15 Oct	S21W21	144	90	5	Dao	11	BGD	8	2		5	1			
16 Oct	S22W37	147	50	2	Dso	3	BD	1				1			
17 Oct	S21W50	148	10	2	Bxo	4	B				1				
18 Oct	S23W64	148	plage												
19 Oct	S23W78	150	plage												
								18	4	0	14	3	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 145

Region 1867

10 Oct	N23E07	183	10	2	Axx	2	A								
11 Oct	N23W07	184	10	1	Axx	1	A								
12 Oct	N23W20	184	30	5	Cro	6	B								
13 Oct	N24W32	183	50	6	Dao	7	B								
14 Oct	N24W44	182	40	8	Dao	5	B								
15 Oct	N24W56	180	20	8	Cro	4	B								
16 Oct	N23W74	183	10	3	Bxo	2	B	1			1				
17 Oct	N23W83	181	10		Axx	1	A								
								1	0	0	1	0	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 183



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 1868															
13 Oct	N18E51	100	10	1	Axx	1	A								
14 Oct	N18E37	101	10	1	Axx	1	A								
15 Oct	N17E23	100	10	1	Axx	1	A								
16 Oct	N17E09	102	plage												
17 Oct	N17W05	103	plage												
18 Oct	N23W17	101	10	2	Bxo	4	B								
19 Oct	N23W30	102	40	2	Cao	3	B								
20 Oct	N23W44	102	plage					2			2				
								2	0	0	2	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 103

Region 1869															
13 Oct	N19E66	85	40	9	Dso	3	B								
14 Oct	N18E54	82	40	4	Dso	2	B	2							
15 Oct	N20E44	79	30	3	Cro	2	B								
16 Oct	N18E27	82	20	3	Dso	2	B								
17 Oct	N18E16	81	20	5	Cso	2	B								
18 Oct	N19E07	78	20	1	Hsx	1	A								
19 Oct	N20W05	77	20	1	Hrx	1	A								
20 Oct	N19W19	77	plage												
								2	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 77

Region 1870															
14 Oct	S13W06	143	30	3	Cro	3	B								
15 Oct	S14W21	144	20	4	Cro	8	B								
16 Oct	S13W35	145	10	1	Bxo	2	B	1			1				
17 Oct	S13W49	146	10	1	Axx	1	A								
18 Oct	S15W58	143	30	2	Cao	3	B								
19 Oct	S15W72	144	10	1	Bxo	3	B								
20 Oct	S15W86	144	plage												
								1	0	0	1	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 143



Region Summary - continued

Date	Location	Sunspot Characteristics						Flares							
	Lat CMD	Helio	Area	Extent	Spot	Spot	Mag	X-ray			Optical				
		Lon	10 ⁻⁶ hemi.	(helio)	Class	Count	Class	C	M	X	S	1	2	3	4
<i>Region 1871</i>															
14 Oct	N16E62	74	30	1	Hsx	1	A								
15 Oct	N17E46	77	20	1	Hrx	1	A								
16 Oct	N17E32	78	10	2	Axx	2	A								
17 Oct	N18E21	75	20	1	Hsx	1	A								
18 Oct	N16E08	77	plage												
19 Oct	N16W06	78	plage												
20 Oct	N16W20	78	plage												
								0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 78

<i>Region 1872</i>															
15 Oct	S15E67	55	60	2	Hsx	1	A								
16 Oct	S17E55	55	90	2	Hsx	1	A								
17 Oct	S17E41	56	70	2	Cso	1	B								
18 Oct	S16E28	56	80	2	Hsx	1	A								
19 Oct	S17E15	57	80	2	Hsx	1	A								
20 Oct	S17E01	57	80	2	Hsx	1	A								
								0	0	0	0	0	0	0	0

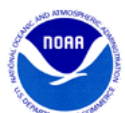
Still on Disk.

Absolute heliographic longitude: 57

<i>Region 1873</i>															
16 Oct	N11E60	49	30	7	Cro	4	B								
17 Oct	N11E48	49	110	7	Cso	10	B								
18 Oct	N12E34	50	40	8	Cso	9	B								
19 Oct	N12E23	49	20	3	Cro	6	B								
20 Oct	N12E09	49	50	9	Dao	12	B	1			3				
								1	0	0	3	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 49



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 1874

17 Oct	S10E22	75	20	3	Dao	4	B								
18 Oct	S10E07	77	50	5	Dao	8	B								
19 Oct	S11W06	78	40	5	Dao	6	B								
20 Oct	S11W20	78	40	6	Cao	10	B								
								0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 78

Region 1875

17 Oct	N07E69	27	50	3	Cao	2	B								
18 Oct	N07E60	24	150	10	Dao	10	BG	5			3				
19 Oct	N08E46	26	150	12	Esi	15	BG								
20 Oct	N07E32	26	150	11	Eai	24	BG	1			3				
								6	0	0	6	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 26

Region 1876

17 Oct	N05W62	158	10	2	Bxo	2	B								
18 Oct	N05W75	160	plage												
19 Oct	N05W90	162	plage												
								0	0	0	0	0	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 158

Region 1877

18 Oct	S11E75	9	120	2	Hsx	1	A								
19 Oct	S12E61	11	260	4	Cko	4	B								
20 Oct	S13E55	3	390	16	Fho	8	BG								
								0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 3

Region 1878

20 Oct	S10W54	112	10	5	Bxo	2	B								
								0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 112

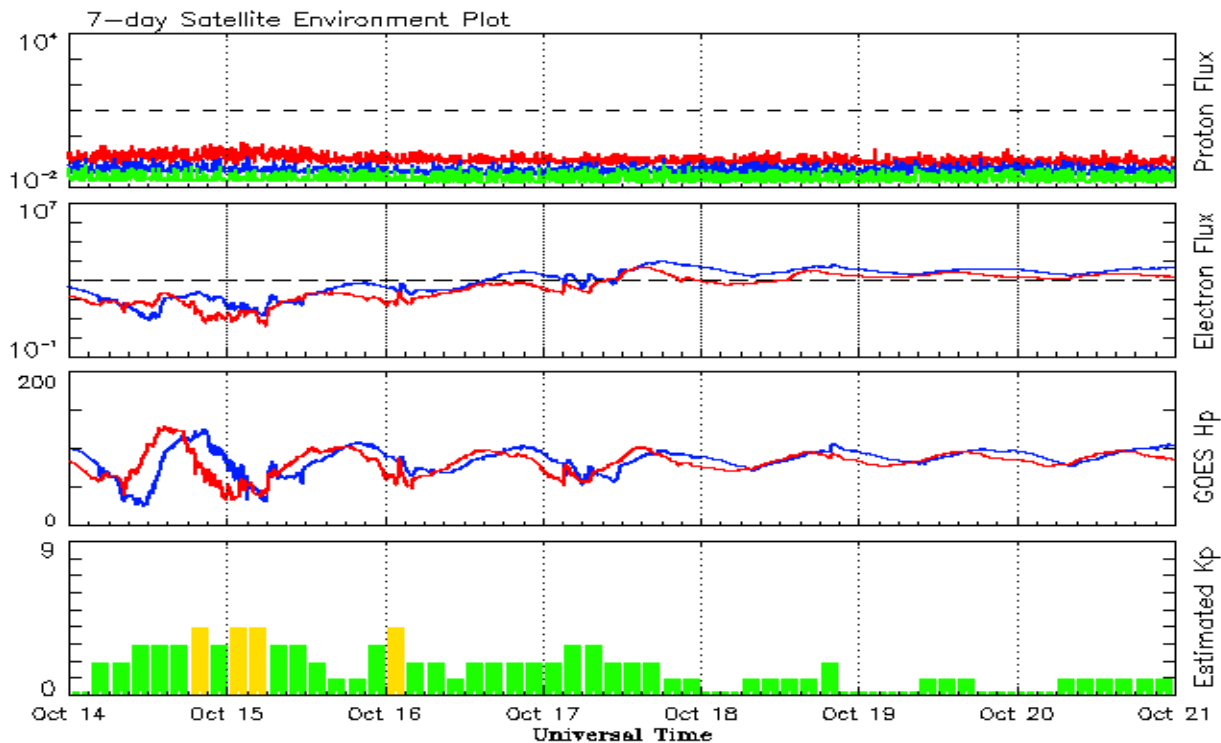


Recent Solar Indices (preliminary)
Observed monthly mean values

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
2011									
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	91.3	64.6	113.1	125.8	9	8.0
May	99.5	69.0	0.69	87.7	61.7	121.5	123.8	8	8.2
June	88.6	64.5	0.73	83.9	58.9	120.5	121.1	10	8.3
July	99.6	66.5	0.67	82.4	57.8	135.6	119.5	13	8.3
August	85.8	63.0	0.74	83.1	58.2	115.7	119.2	7	8.1
September	84.0	61.4	0.73	83.7	58.1	123.2	118.9	8	7.8
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
2013									
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	57.5	111.2	117.1	9	7.4
April	112.8	72.4	0.64			125.0		5	
May	125.5	78.7	0.63			131.3		10	
June	80.1	52.5	0.66			110.2		13	
July	86.1	57.0	0.66			115.6		9	
August	90.2	66.0	0.73			114.7		9	
September	55.0	36.9	0.67			102.7		5	

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 14 October 2013*

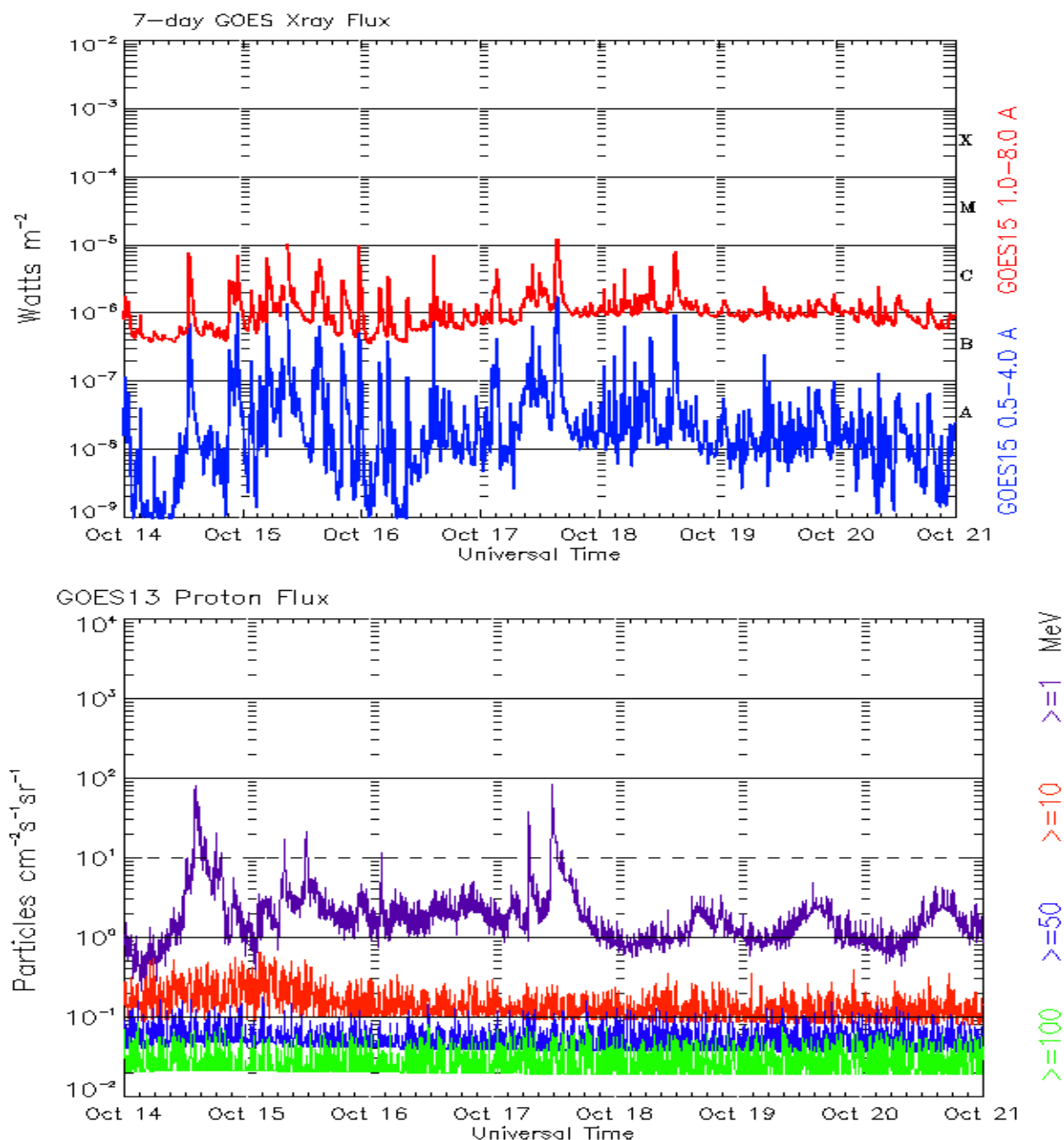
The proton flux plot contains the five-minute averaged integral proton flux (protons/cm²-sec -sr) as measured by the SWPC Primary GOES satellite, near West 75, for each of three energy thresholds: greater than 10, 50, and 100 MeV.

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 14 October 2013*

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 integral 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.

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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