

Solar activity was low to moderate during the week. The first three days of the period were marked by low level C-class x-ray flares, the largest of which was a C4/Sf from Region 1512 (S16, L=264, class/area Dki/290 on 29 June) on 28 June at 0452Z. Region 1512 was soon overshadowed by Region 1513 (N16, L=218, class/area Dao/120 on 01 July), which produced an impulsive M2/1b flare on 28 June at 1612Z. Subsequently, Region 1513 produced at least one impulsive M-class event each day for the remainder of the week, the largest of which was an M2.8/Sb on 01 July at 1918Z. While Region 1513 was the most prolific flare producer of the regions on the disk, it was dwarfed in area by Region 1515 (S17, L=204, class/area Ekc/850 on 01 July). Region 1515 appeared on the disk on 27 June and by 01 July had quadrupled in area. Both Regions 1513 and 1515 ended the week with beta-gamma magnetic characteristics. There were several CMEs observed during the week, however none were determined to be geoeffective.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit began the period at high levels before decreasing to moderate levels early on 25 June. Moderate levels continued throughout the week, increasing to high levels on 01 July at 1320Z.

Geomagnetic field activity ranged from quiet to active levels, with isolated minor to major storm levels observed at high latitudes late in the period. The geomagnetic field was at mostly quiet levels from 25-29 June. By 2100Z on 29 June, the phi angle at the ACE spacecraft switched from positive to negative polarity, indicating the arrival of the corotating interaction region. Solar wind speed at the ACE spacecraft, which had ranged between 350-500 km/s during the week, increased to 700 km/s by 30/1800Z as a coronal hole high speed stream (CH-HSS) became geoeffective. Concurrently, the Bz component of the interplanetary magnetic field turned southward, eventually dipping to -10 to -12 nT while Bt reached 14nT before decreasing to 7 nT by mid-day on 30 June. The geomagnetic field responded with unsettled to active levels for the remainder of the period. Minor to major storm levels were observed at high latitudes during 30 June-01 July.

Space Weather Outlook **02 July - 28 July 2012**

Solar activity is expected to be at low to moderate levels, with more M-class events from Regions 1513 and 1515 likely through 09 - 10 July.

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 through 08 July and from 17-21 July.

Geomagnetic field activity is expected to begin at unsettled to active levels, decreasing to mostly quiet to unsettled levels after 03 July until another CH-HSS becomes geoeffective on 27 - 28



July.



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
25 June	89	14	60	B1.3	2	0	0	2	0	0	0	0
26 June	99	28	160	B2.3	2	0	0	6	0	0	0	0
27 June	106	79	570	B3.6	4	0	0	18	0	0	0	0
28 June	120	73	530	B3.2	5	1	0	12	1	0	0	0
29 June	117	97	790	B3.9	9	1	0	16	1	0	0	0
30 June	124	90	810	B4.3	6	2	0	12	1	0	0	0
01 July	133	137	1320	B6.3	7	1	0	46	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
	25 June	2.9e+05	1.2e+04	3.0e+03		2.2e+07
26 June	1.1e+05	1.2e+04	3.0e+03		1.6e+07	
27 June	2.0e+05	1.2e+04	2.8e+03		1.5e+07	
28 June	2.4e+05	1.2e+04	2.8e+03		1.3e+07	
29 June	3.0e+05	1.2e+04	3.0e+03		1.7e+07	
30 June	6.6e+05	1.2e+04	2.9e+03		2.8e+06	
01 July	8.6e+05	1.2e+04	2.8e+03		8.2e+07	

Daily Geomagnetic Data

Date	Middle Latitude Fredericksburg		High Latitude College		Estimated Planetary	
	A	K-indices	A	K-indices	A	K-indices
	25 June	5	1-1-2-2-0-0-2-1	13	2-3-3-3-4-3-2-1	9
26 June	7	2-3-2-2-2-1-1-2	14	3-4-2-5-2-1-1-1	8	2-3-2-2-2-1-1-2
27 June	8	1-1-1-2-3-3-2-2	11	1-1-1-3-3-4-2-3	6	1-1-1-1-2-2-2-2
28 June	7	2-2-3-2-2-2-1-1	11	2-2-3-3-3-2-3-1	6	2-2-3-2-1-1-1-1
29 June	6	1-1-1-1-2-1-2-3	2	1-1-0-0-1-0-1-2	5	1-1-1-1-2-1-1-3
30 June	21	2-3-4-3-5-3-3-4	41	3-4-5-6-6-5-3-3	22	3-3-4-4-4-4-3-4
01 July	20	4-5-3-3-3-2-3-3	31	4-4-5-6-4-4-2-2	19	4-4-3-3-3-3-3-3

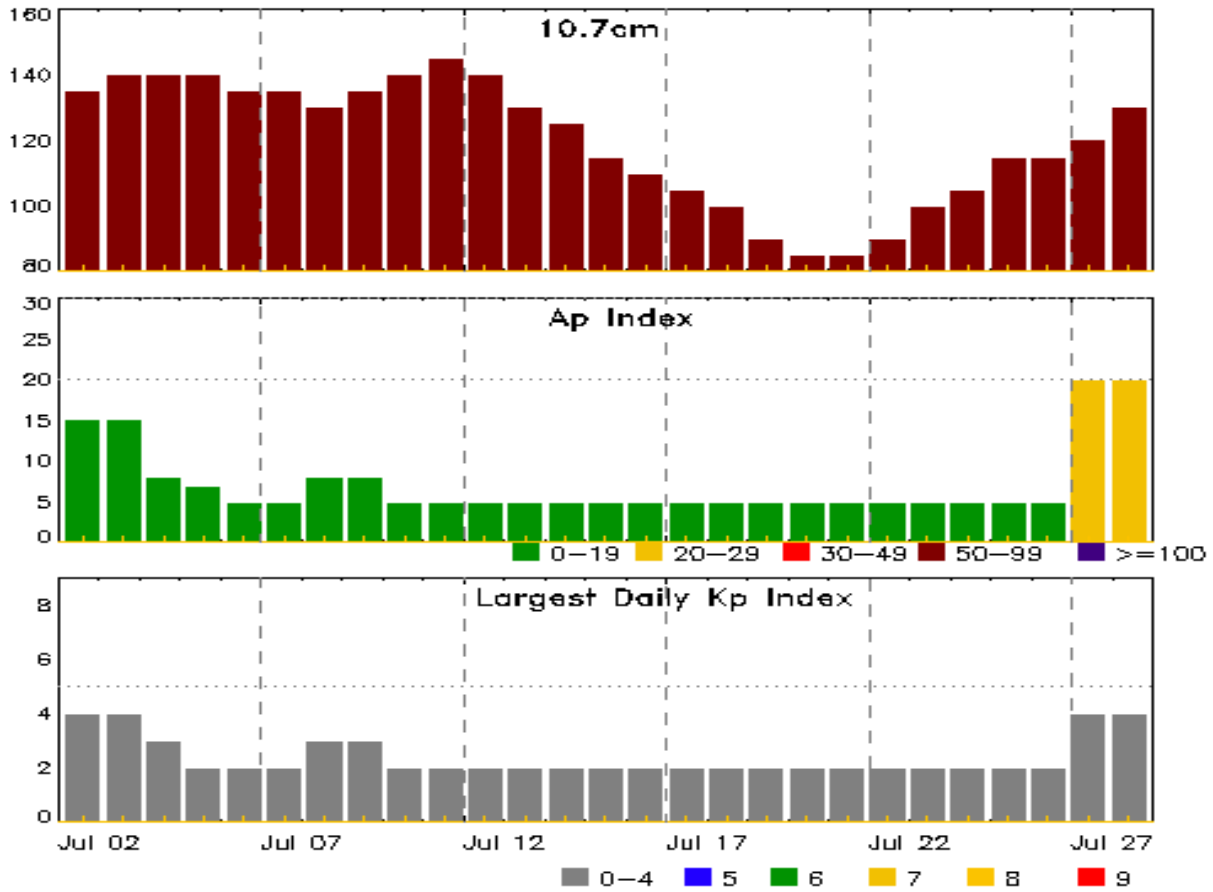


Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
30 Jun 0521	WARNING: Geomagnetic K = 4	30/0530 - 1200
30 Jun 0756	ALERT: Geomagnetic K = 4	30/0756
30 Jun 1155	EXTENDED WARNING: Geomagnetic K = 4	30/0530 - 1800
30 Jun 1731	EXTENDED WARNING: Geomagnetic K = 4	30/0530 - 01/0000
30 Jun 2349	EXTENDED WARNING: Geomagnetic K = 4	30/0530 - 01/1200
01 Jul 0141	WARNING: Geomagnetic K = 5	01/0200 - 0900
01 Jul 1335	ALERT: Electron 2MeV Integral Flux \geq 1000pfu	01/1320



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
02 Jul	135	15	4	16 Jul	110	5	2
03	140	15	4	17	105	5	2
04	140	8	3	18	100	5	2
05	140	7	2	19	90	5	2
06	135	5	2	20	85	5	2
07	135	5	2	21	85	5	2
08	130	8	3	22	90	5	2
09	135	8	3	23	100	5	2
10	140	5	2	24	105	5	2
11	145	5	2	25	115	5	2
12	140	5	2	26	115	5	2
13	130	5	2	27	120	20	4
14	125	5	2	28	130	20	4
15	115	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
28 Jun	1607	1612	1615	M2.4	0.005	1B	N16E45	1513	3300			
29 Jun	0913	0920	0922	M2.2	0.004	1B	N17E37	1513	6900			
30 Jun	1248	1252	1254	M1.0	0.002	1N	N17E21	1513	630			
30 Jun	1826	1832	1834	M1.6	0.003			1513				
01 Jul	1911	1918	1921	M2.8	0.009	SB	N14E04	1513	1400	66		

Flare List

Date	Time			X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
	Begin	Max	End				
25 Jun	1145	1150	1158	B3.2	SF	S14E49	1512
25 Jun	1641	1645	1653	B3.1			
25 Jun	1803	1814	1822	B5.2			
25 Jun	1826	1848	1945	B5.4			
25 Jun	2040	2044	2052	B7.5			
25 Jun	2055	2059	2105	C1.4	SF	S16E42	1512
25 Jun	2215	2223	2229	B7.0			
25 Jun	2341	0007	0029	C1.0			1513
26 Jun	0342	0356	0401	B4.1			
26 Jun	0456	0456	0505		SF	S14E40	1512
26 Jun	0640	0640	0645		SF	S15E39	1512
26 Jun	0833	0833	0840		SF	S16E38	1512
26 Jun	0901	0912	0926	B6.1			1513
26 Jun	1206	1212	1217		SF	N16E79	1513
26 Jun	1241	1255	1306	C1.3	SF	N21E77	1513
26 Jun	1427	1429	1434		SF	S14E34	1512
26 Jun	1933	1944	1956	C1.2			1512
27 Jun	0140	0150	0200	B8.9			1513
27 Jun	0258	0303	0310	B7.7			
27 Jun	0436	0510	0527		SF	S15E26	1512
27 Jun	0451	0455	0456		SF	N17E70	1513
27 Jun	0453	0503	0510		SF	S14E70	
27 Jun	0518	0527	0535	C3.4	SF	N16E70	1513
27 Jun	0756	0825	0836		SF	N22E68	1513
27 Jun	0757	0808	0818	C3.2	SF	S16E21	1512
27 Jun	0837	0846	0846		SF	N17E67	1513



Flare List

Date	Time			Optical			
	Begin	Max	End	X-ray Class	Imp/Brtns	Location Lat CMD	Rgn #
27 Jun	1045	1048	1053		SF	S14E80	1513
27 Jun	1100	1106	1112	C1.6	SF	N16E68	1513
27 Jun	1122	1124	1126		SF	S14E80	
27 Jun	1233	1238	1240	C3.4	SF	N17E65	1513
27 Jun	1355	1359	1401		SF	N17E64	1513
27 Jun	1416	1419	1426		SF	N17E63	1513
27 Jun	1437	1437	1444		SF	N17E63	1513
27 Jun	1523	1524	1528		SF	N17E62	1513
27 Jun	1623	1626	1650		SF	S14E77	1515
27 Jun	1711	1712	1732		SF	S16E18	1512
27 Jun	1714	1714	1720		SF	S14E77	1515
27 Jun	1919	1923	1928	B8.5			1513
28 Jun	0146	0154	0204	C1.0			1512
28 Jun	0210	0214	0216	C2.6			1513
28 Jun	0318	0323	0333	B6.2			1514
28 Jun	0445	0452	0455	C4.2	SF	S16E09	1512
28 Jun	0512	0512	0513		SF	S15E70	1514
28 Jun	0557	0601	0604	B5.1			1513
28 Jun	0630	0631	0636		SF	S17E10	1512
28 Jun	0904	0906	0908		SF	S17E66	1515
28 Jun	0909	0923	0927	B8.8	SF	S17E08	1512
28 Jun	0922	0922	0932		SF	S16E07	1512
28 Jun	1112	1116	1118	B7.2	SF	N17E62	1513
28 Jun	1302	1306	1308	B5.3			
28 Jun	1559	1600	1602	B6.4	SF	N16E46	1513
28 Jun	1607	1612	1615	M2.4	1B	N16E45	1513
28 Jun	1630	1632	1644		SF	S15E64	1515
28 Jun	1656	U1656	1704		SF	N15E61	
28 Jun	1929	1931	1945		SF	S16E02	1512
28 Jun	1938	1942	2016	C1.7	SF	N18E48	1513
28 Jun	2141	2147	2149	C3.4			
29 Jun	0033	0038	0041	C1.4	SF	N15E43	1513
29 Jun	0054	0057	0058		SF	S18E60	1515
29 Jun	0118	0125	0128	C6.7	SF	N16E42	1513
29 Jun	0409	0414	0416	C4.6	SF	S18E61	1515
29 Jun	0510	0514	0528	B6.3	SF	S17W04	1512
29 Jun	0555	0559	0601	C1.3	SF	N16E38	1513
29 Jun	0643	0647	0650	C6.2	SN	S16E60	1515



Flare List

Date	Time			Optical			
	Begin	Max	End	X-ray Class	Imp/Brtns	Location Lat CMD	Rgn #
29 Jun	0741	0755	0808		SF	N13E39	1513
29 Jun	0819	0822	0824	C2.9	SN	S16E59	1515
29 Jun	0913	0920	0922	M2.2	1B	N17E37	1513
29 Jun	1103	1110	1113		SF	S15E58	1515
29 Jun	1327	1329	1348		SF	N15E40	1513
29 Jun	1520	1520	1524		SF	S16E55	1515
29 Jun	1627	1633	1643	C1.0			
29 Jun	1713	1723	1742		SF	S15W12	1512
29 Jun	1756	1757	1808		SF	S18E53	1515
29 Jun	1835	1844	1850	C1.1	SF	S15W12	1512
29 Jun	1902	1903	1910		SF	N13E35	1513
29 Jun	2330	2338	2349	C1.8			1513
30 Jun	0435	0438	0440	C1.0			1515
30 Jun	0642	0643	0649		SF	N15E41	
30 Jun	0758	0758	0802		SF	N17E24	1513
30 Jun	0812	0812	0815		SF	S19W15	1512
30 Jun	0822	0830	0837	C4.4	SF	S13E24	1514
30 Jun	0945	0954	1001	C1.6	SF	N16E23	1513
30 Jun	1007	1010	1018	B8.6	SF	S15E40	1515
30 Jun	1048	1057	1102	C2.7			1514
30 Jun	1050	1053	1103		SF	N17E22	1513
30 Jun	1054	1057	1122		SF	S16E25	1514
30 Jun	1248	1252	1254	M1.0	1N	N17E21	1513
30 Jun	B1255	1257	1302		SF	N15E21	1513
30 Jun	1356	1356	1358		SF	S16W21	1512
30 Jun	1602	1612	1629	C1.3	SF	N08E58	
30 Jun	1826	1832	1834	M1.6			1513
30 Jun	2121	2125	2127	C1.4			
30 Jun	2347	2356	0001		SF	N14E15	1513
01 Jul	0040	0040	0047		SF	N13E15	1513
01 Jul	0102	0107	0110	C1.3	SF	N17E17	1513
01 Jul	0127	0130	0132	B6.4			
01 Jul	0417	0419	0446		SF	N17E32	
01 Jul	0515	0519	0526		SF	N17E31	
01 Jul	B0515	0534	0720		SF	N22E38	
01 Jul	0551	0551	0556		SF	S17E15	1514
01 Jul	0551	0552	0559		SF	N17E31	1514
01 Jul	0604	0608	0610		SF	N17E31	1514



Flare List

Date	Time			X-ray Class	Imp/ Brtns	Optical	
	Begin	Max	End			Location Lat CMD	Rgn #
01 Jul	0622	0634	0639		SF	N17E31	1514
01 Jul	0644	0644	0650		SF	N17E31	
01 Jul	0653	0722	0725	C5.4	SF	N17E30	1513
01 Jul	0728	0729	0731		SF	S17E26	1515
01 Jul	0744	0745	0750		SF	S17E26	1515
01 Jul	0753	0755	0816		SF	N17E30	
01 Jul	0802	0803	0851		SF	N21E36	
01 Jul	0817	0818	0834		SF	N17E30	1513
01 Jul	0835	0842	0853		SF	N17E30	1513
01 Jul	0858	0900	0920		SF	N21E35	1513
01 Jul	0859	0900	0915		SF	N17E29	1513
01 Jul	0906	0910	0919		SF	N17E09	1513
01 Jul	0917	0921	0925		SF	N17E29	
01 Jul	0949	0949	0957		SF	N20E33	
01 Jul	1010	1010	1013		SF	S17E25	1515
01 Jul	1011	1015	1105	C1.3	SF	N21E35	1515
01 Jul	1129	1130	1148		SF	S17E24	1515
01 Jul	1133	1135	1136		SF	N21E34	1513
01 Jul	1141	1143	1144		SF	N22E11	1513
01 Jul	1152	1155	1209		SF	S13E09	1514
01 Jul	1202	1206	1258		SF	N21E35	1513
01 Jul	1230	1231	1235		SF	S17E23	1515
01 Jul	1230	1241	1335		SF	N16E07	1513
01 Jul	1246	1247	1252		SF	S17E23	1515
01 Jul	1349	1351	1354		SF	N20E33	1516
01 Jul	1419	U1426	1435		SF	S17E23	1515
01 Jul	1445	1447	1450		SF	S16E24	1515
01 Jul	1454	1455	1458		SF	N21E33	1516
01 Jul	1504	1547	1607	C2.4	SF	S17E12	1514
01 Jul	1541	1545	1552	C8.2	SF	S18E21	1515
01 Jul	1800	1804	1806	C1.2	SF	S17E14	1515
01 Jul	1807	1812	1815	C2.7			
01 Jul	1834	1845	1930		SF	S17E21	1515
01 Jul	1911	1918	1921	M2.8	SB	N14E04	1513
01 Jul	1932	2024	2053		SF	S17E21	1515
01 Jul	2139	2139	2142		SF	S17E21	1515
01 Jul	2205	2206	2247		SF	S17E19	1515
01 Jul	2308	2309	2322		SF	S17E19	1515



Flare List

Date	Time			Optical			
	Begin	Max	End	X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
01 Jul	2317	2317	2322		SF	N20E33	1516



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

Region 1510

19 Jun	S16E02	19	10	3	Cro	3	B										
20 Jun	S15W10	18	10	3	Bxo	3	B										
21 Jun	S15W24	19	plage														
22 Jun	S15W38	20	plage														
23 Jun	S15W52	20	plage														
24 Jun	S16W67	22	10	2	Cro	2	B										
25 Jun	S16W81	23	plage														
									0	0	0	0	0	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 19

Region 1511

22 Jun	N15W17	358	30	4	Cro	3	B										
23 Jun	N15W29	357	30	4	Cro	3	B										
24 Jun	N15W44	358	20	4	Cro	2	B										
25 Jun	N15W58	360	plage														
26 Jun	N15W72	1	plage														
27 Jun	N15W86	2	plage														
									0	0	0	0	0	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 358

Region 1512

25 Jun	S16E39	262	60	5	Dao	4	B	1			2						
26 Jun	S16E25	263	130	6	Dai	7	B	1			4						
27 Jun	S15E11	263	280	8	Dki	20	BG	1			3						
28 Jun	S16W02	263	250	8	Dki	17	BG	2			5						
29 Jun	S16W16	264	290	10	Dki	16	B	1			3						
30 Jun	S16W29	263	180	10	Dso	9	B				2						
01 Jul	S16W41	263	130	8	Cso	5	B										
								6	0	0	19	0	0	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 263



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	
Region 1513																	
26 Jun	N16E71		216	30	1	Hax	1	A	1				2				
27 Jun	N15E58		216	80	4	Cso	5	B	3				11				
28 Jun	N17E45		216	90	4	Dso	5	BG	2	1		3	1				
29 Jun	N17E30		218	100	6	Dso	8	BG	4	1		6	1				
30 Jun	N17E17		217	120	5	Dso	4	BG	1	2		5	1				
01 Jul	N16E03		218	120	6	Dao	11	BG	2	1		13					
									14	5	0	40	3	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 218

Region 1514																	
27 Jun	S16E55		220	10	7	Bxo	7	B									
28 Jun	S15E42		219	10	5	Bxo	5	B				1					
29 Jun	S16E30		218	60	7	Dao	11	B									
30 Jun	S15E15		219	70	7	Dsi	11	B	2			2					
01 Jul	S15E02		220	10	6	Bxo	7	B	1			6					
									3	0	0	9	0	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 220

Region 1515																	
27 Jun	S16E70		205	200	10	Cso	7	B					2				
28 Jun	S17E58		203	180	10	Dso	6	B					2				
29 Jun	S17E43		205	310	9	Dkc	8	BG	3			7					
30 Jun	S16E30		204	380	11	Ekc	10	BG	1			1					
01 Jul	S17E17		204	850	11	Ekc	28	BG	3			16					
									7	0	0	28	0	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 204

Region 1516																	
29 Jun	N13E43		204	30	5	Dro	4	B									
30 Jun	N14E27		207	60	5	Dso	6	B									
01 Jul	N14E17		205	40	5	Cso	8	B				3					
									0	0	0	3	0	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 205



Region Summary - continued

Date	Location		Sunspot Characteristics				Flares									
	Lat CMD	Lon	Area 10 ⁻⁶ hemi.	Extent (helio)	Spot Class	Spot Count	Mag Class	X-ray			Optical					
								C	M	X	S	1	2	3	4	
<i>Region 1517</i>																
01 Jul	N19E26	195	170	4	Dao	18	B	0	0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 195

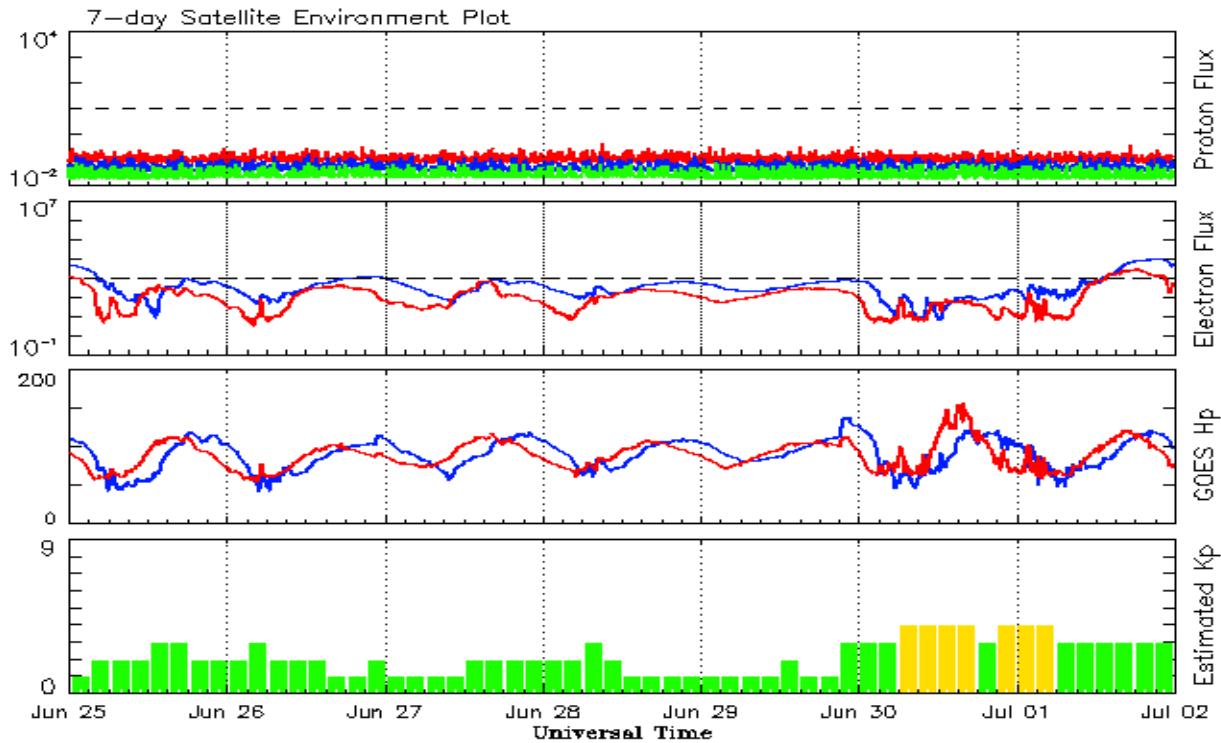


Recent Solar Indices (preliminary)
Observed monthly mean values

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									
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	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	89.3	63.4	141.2	121.6	3	8.0
2012									
January	91.3	58.3	0.64			133.1		6	
February	50.1	33.1	0.66			106.7		7	
March	77.9	64.2	0.82			115.1		14	
April	84.4	55.2	0.65			113.1		9	
May	99.5	69.0	0.69			121.5		8	
June	89.5	64.5	0.72			120.5		10	

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 25 June 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.

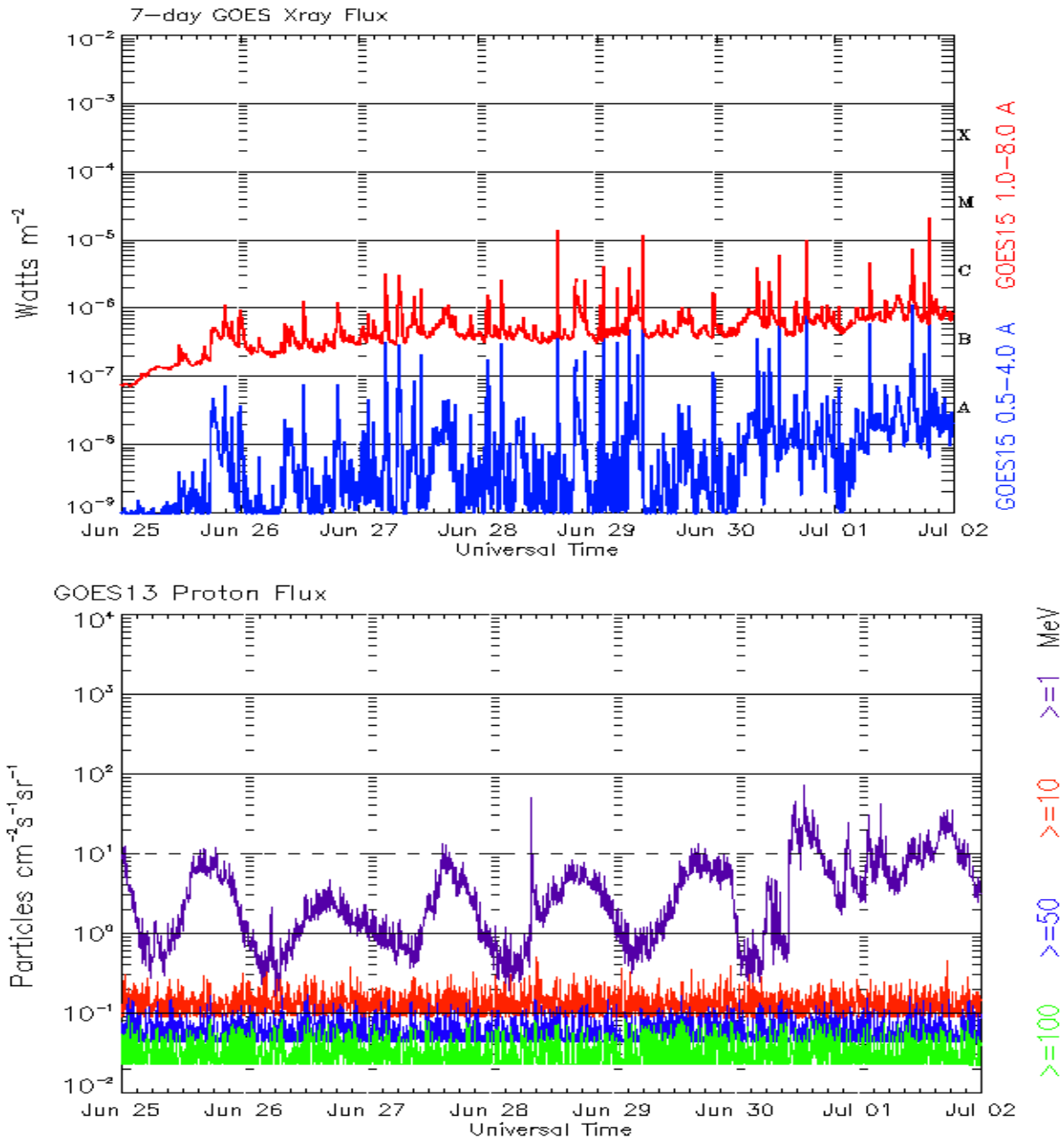
The electron flux plot contains the five-minute averaged integral electron flux (electrons/cm²-sec -sr) with energies greater than 2 MeV by the SWPC Primary GOES satellite.

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 25 June 2012*

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 intergral 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.



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

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