

Solar activity was at low to moderate levels during the period. Low levels were observed at the beginning of the period with Region 1499 (N16, L=184 class/area Cao/060 on 09 June) responsible for a majority of the C-class x-ray activity. An increase to moderate levels was observed on 06 June as Region 1494 (S18, L=199 class/area Cso/160 on 06 June) produced an M2/1b x-ray flare at 2006 UTC. Associated with this event were both Type II (estimated shock speed of 1148 km/s) and Type IV radio sweep signatures. Location of Region 1494 on 06 June and LASCO imagery suggested part of this coronal mass ejection (CME) would be Earth directed. From 07-08 June, solar activity returned to low levels. From 09-10 June, a return to moderate levels was observed as new Region 1504 (S18, L=89 class/area Dai/120 on 10 June) dominated the visible disk in total area and solar activity producing three M-class x-ray events. The three M-class events that Region 1504 was responsible for were an optically uncorrelated M1 event at 09/1132 UTC, the second event was another M1/Sf at 09/1653 UTC, and finally another optically uncorrelated M1 event on 10/0645 UTC.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit was at normal to high flux levels during the period. The period started at normal background levels from 04-05 June, then at high levels for the remainder of the period.

Geomagnetic field activity was at quiet to active levels with isolated major storm periods observed at high latitudes. For a majority of the summary period, Earth was under the influence of a favorable positioned coronal hole high speed stream (CH HSS). Early on 04 June, solar wind speeds, as measured by the ACE spacecraft, hovered around 350 km/s. Around midday on 04 June, solar wind speeds increased to almost 650 km/s as a CH HSS arrived. This increase in solar wind speeds helped drive the geomagnetic field from quiet to active levels with isolated major storm periods observed at high latitudes through 05 June. Predominantly quiet to unsettled levels prevailed from 06-09 June as effects from the CH HSS waned. A return to quiet levels was observed on 10 June as solar wind speeds returned to normal background levels. On 08 and 10 June, small changes were observed in data from the ACE spacecraft indicating the possible arrival of a weak, partially Earth-directed CMEs, however very little if any correlating activity was attributed to these arrivals.

### **Space Weather Outlook** **11 June - 07 July 2012**

Solar activity is expected to be at low to moderate levels from 11 June - 21 June as Region 1504 rotates across the solar disk. A return to predominantly low levels is expected for the remainder of the period.

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 11-12 June, 20-25 June and then from 03 July through the end the period. Normal to



background levels are expected for all other time periods.

Geomagnetic field activity is expected to be at predominantly quiet levels from 11-17 June, 21-30 June and 04 July through the end of the period. From 18-19 June and 01-03 July, quiet to active levels are expected due to the CH HSS effects.



### *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
04 June	128	155	590	B3.7	2	0	0	3	1	0	0	0
05 June	139	154	670	B4.0	5	0	0	7	0	1	0	0
06 June	140	131	580	B4.9	8	1	0	7	1	0	0	0
07 June	128	98	480	B6.0	13	0	0	8	0	1	0	0
08 June	124	90	300	B4.7	2	0	0	2	0	0	0	0
09 June	128	107	400	B5.2	4	2	0	8	0	0	0	0
10 June	128	127	550	B5.0	5	1	0	3	0	0	0	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
	04 June	1.7e+05	1.2e+04	2.9e+03		1.6e+06
05 June	7.6e+05	1.2e+04	2.7e+03		2.4e+07	
06 June	8.5e+05	1.1e+04	2.7e+03		2.2e+08	
07 June	3.4e+05	1.1e+04	2.8e+03		4.3e+08	
08 June	4.1e+05	1.2e+04	2.7e+03		3.9e+08	
09 June	3.6e+05	1.2e+04	2.8e+03		4.1e+08	
10 June	4.2e+05	1.2e+04	3.0e+03		5.5e+08	

### *Daily Geomagnetic Data*

Date	Middle Latitude Fredericksburg		High Latitude College		Estimated Planetary	
	A	K-indices	A	K-indices	A	K-indices
	04 June	14	2-3-2-3-4-3-3-2	28	2-3-4-6-5-3-3-3	16
05 June	15	2-4-3-2-3-3-3-3	33	3-4-5-5-6-3-3-3	17	3-4-3-2-4-3-3-3
06 June	17	4-4-2-3-3-3-3-3	29	4-4-2-5-5-5-3-3	17	3-4-2-3-3-3-4-3
07 June	8	2-2-1-2-2-2-3-2	10	3-3-1-4-1-1-2-1	8	2-2-2-2-2-2-3-2
08 June	9	1-2-3-3-2-1-3-2	11	2-3-4-4-2-0-1-0	8	2-2-3-3-1-1-2-1
09 June	9	2-2-1-2-2-2-3-3	7	2-3-1-3-1-0-2-1	8	2-2-1-1-2-1-3-2
10 June	6	0-0-1-2-3-2-2-2	2	0-1-0-0-1-1-0-1	6	1-1-1-1-2-2-2-2

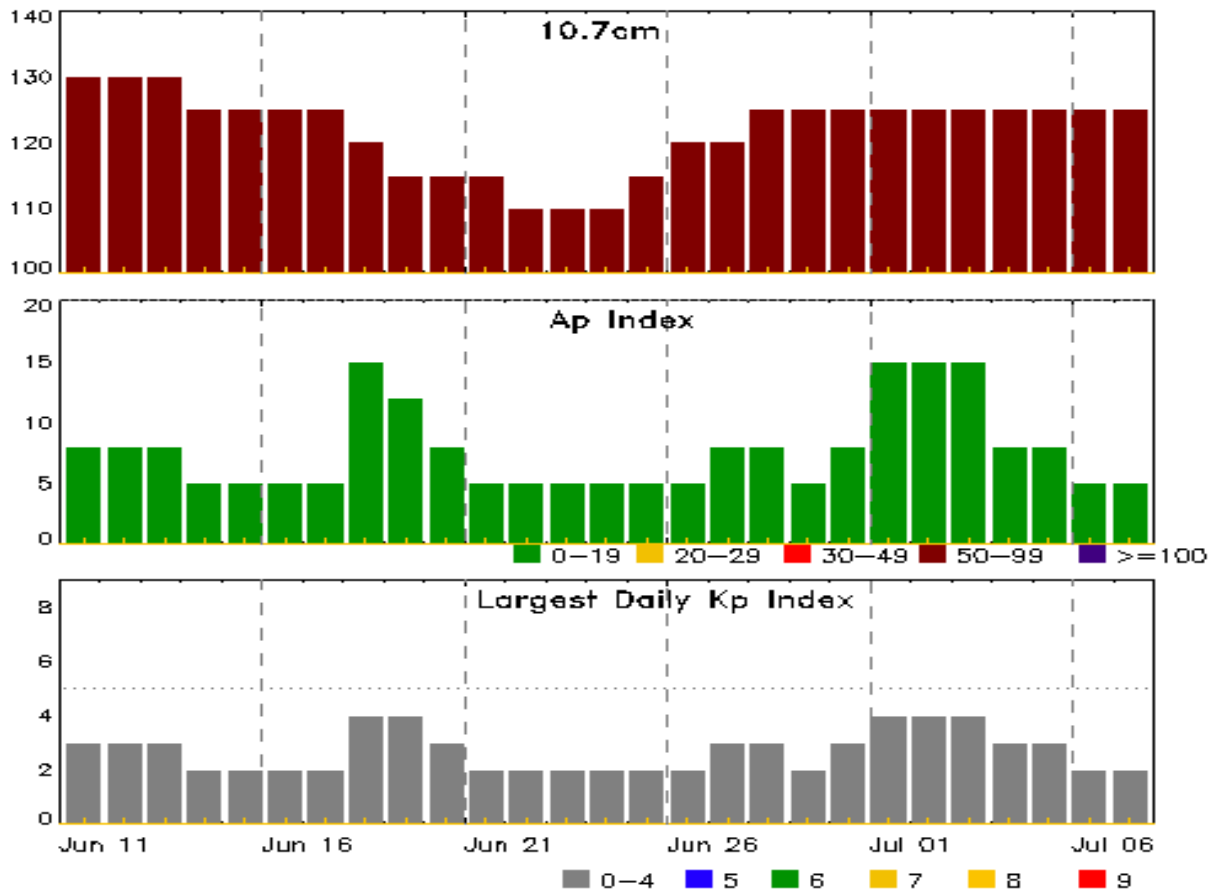


### *Alerts and Warnings Issued*

<b>Date &amp; Time of Issue UTC</b>	<b>Type of Alert or Warning</b>	<b>Date &amp; Time of Event UTC</b>
04 Jun 0755	WARNING: Geomagnetic K = 4	04/0800 - 1500
04 Jun 1102	ALERT: Geomagnetic K = 4	04/1058
04 Jun 1413	EXTENDED WARNING: Geomagnetic K = 4	04/0800 - 2100
04 Jun 2142	WARNING: Geomagnetic K = 4	04/2145 - 05/0700
05 Jun 0446	ALERT: Geomagnetic K = 4	05/0444
05 Jun 0618	EXTENDED WARNING: Geomagnetic K = 4	04/2145 - 05/1500
05 Jun 1343	EXTENDED WARNING: Geomagnetic K = 4	04/2145 - 05/2100
05 Jun 2054	EXTENDED WARNING: Geomagnetic K = 4	04/2145 - 05/1300
06 Jun 1227	ALERT: Electron 2MeV Integral Flux $\geq$ 1000pfu	06/1210
06 Jun 1935	WARNING: Geomagnetic K = 4	06/1935 - 07/0700
06 Jun 2018	ALERT: Type IV Radio Emission	06/2003
06 Jun 2022	ALERT: Geomagnetic K = 4	06/2016
06 Jun 2103	ALERT: Type II Radio Emission	06/2003
07 Jun 0501	CONTINUED ALERT: Electron 2MeV Integral Flux $\geq$ 1000pfu	06/1210
08 Jun 0346	ALERT: Type II Radio Emission	08/0305
08 Jun 0346	ALERT: Type IV Radio Emission	08/0308
08 Jun 0501	CONTINUED ALERT: Electron 2MeV Integral Flux $\geq$ 1000pfu	06/1210
09 Jun 0511	CONTINUED ALERT: Electron 2MeV Integral Flux $\geq$ 1000pfu	06/1210
09 Jun 1144	SUMMARY: 10cm Radio Burst	09/1130 - 1132
10 Jun 0502	CONTINUED ALERT: Electron 2MeV Integral Flux $\geq$ 1000pfu	06/1210



## 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
11 Jun	130	8	3	25 Jun	115	5	2
12	130	8	3	26	120	5	2
13	130	8	3	27	120	8	3
14	125	5	2	28	125	8	3
15	125	5	2	29	125	5	2
16	125	5	2	30	125	8	3
17	125	5	2	01 Jul	125	15	4
18	120	15	4	02	125	15	4
19	115	12	4	03	125	15	4
20	115	8	3	04	125	8	3
21	115	5	2	05	125	8	3
22	110	5	2	06	125	5	2
23	110	5	2	07	125	5	2
24	110	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 245	2695	Intensity II	IV
06 Jun	1954	2006	2013	M2.1	0.013	1B	S19W05	1494	1200		3	3
09 Jun	1120	1132	1135	M1.9	0.006			1504		150		
09 Jun	1645	1653	1656	M1.8	0.007	SF	S17E74	1504				
10 Jun	0639	0645	0650	M1.3	0.005			1504		100		

### *Flare List*

Date	Time			X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
	Begin	Max	End				
04 Jun	0931	0936	0938	C1.0	SF	N18E30	1496
04 Jun	1535	1542	1605	B9.9	1F	S20E26	1494
04 Jun	1646	1658	1716	C1.1	SF	N15E36	1499
04 Jun	1653	1654	1705		SF	N12E60	
05 Jun	0746	0755	0808	C1.1	SF	S17E15	1494
05 Jun	1153	1157	1159	C1.5	SF	N17E30	1499
05 Jun	1756	1759	1802	B8.3	SF	N16E27	1499
05 Jun	1911	1916	1928		SF	N15E26	1499
05 Jun	2022	2023	2028		SF	N16E23	1499
05 Jun	2049	2059	2109	C4.2	2F	N16E19	1499
05 Jun	2145	2154	2157	C1.0	SF	N15E24	1499
05 Jun	2306	2313	2326	C1.0	SF	N07E14	1498
06 Jun	0212	0219	0226	C1.8			1494
06 Jun	1614	1620	1632	C1.2	SF	N16E15	1499
06 Jun	1703	1706	1711	C1.0	SF	S20W01	1494
06 Jun	1755	1805	1810	C1.0			1492
06 Jun	1914	1916	1918		SF	N16E14	1499
06 Jun	1954	2006	2013	M2.1	1B	S19W05	1494
06 Jun	2025	2028	2042		SF	N16E14	1499
06 Jun	2127	2133	2154	C1.2	SF	N16E14	1499
06 Jun	2229	2236	2241	C1.1	SF	N16E12	1499
06 Jun	2300	2304	2311	C1.1			1494
06 Jun	2356	0000	0005	C1.0	SF	S19W06	1494
07 Jun	0006	0007	0030	C1.6	SF	N05E01	1498
07 Jun	0037	0041	0044	C1.2			1494
07 Jun	0149	0158	0206	C1.0			1498
07 Jun	0223	0239	0255	C1.2			1498



## *Flare List*

Date	Time			X-ray Class	Optical		Rgn #
	Begin	Max	End		Imp/ Brtns	Location Lat CMD	
07 Jun	0311	0329	0336	C1.0			1493
07 Jun	0551	0556	0610	C1.5	SF	S17W07	1494
07 Jun	1206	1216	1226	C2.0			
07 Jun	1302	1303	1318	C1.1	SF	N14W02	1499
07 Jun	1340	1340	1346	C1.1	SF	N12W00	1499
07 Jun	1419	1428	1437	C2.7	SF	N13W02	1499
07 Jun	1529	1543	1555	C9.1	2N	N13W06	1499
07 Jun	1927	1932	1935	C1.1	SF	N14W33	1493
07 Jun	1936	1942	1945	C1.8			1493
07 Jun	2156	2156	2200		SF	N13W10	1498
07 Jun	2226	2234	2238		SF	S22W43	1497
08 Jun	0251	0307	0322	C7.7			1494
08 Jun	B0330	U0330	0342		SF	S19W21	1494
08 Jun	0711	0716	0718	C4.8			1493
08 Jun	2029	2030	2038		SF	N16W15	1499
09 Jun	0300	0308	0320	C1.5	SF	N15W21	1499
09 Jun	1027	1032	1037	C1.5			1499
09 Jun	1120	1132	1135	M1.9			1504
09 Jun	1337	1341	1355		SF	S10E70	1505
09 Jun	1410	1420	1450		SF	N17W26	1499
09 Jun	1523	1527	1531	C1.7			
09 Jun	1645	1653	1656	M1.8	SF	S17E74	1504
09 Jun	1725	1737	1807		SF	N16W27	1499
09 Jun	1809	1817	1821		SF	N16W27	1499
09 Jun	1830	1834	1836	C1.2			
09 Jun	2000	2004	2019		SF	N16W29	1499
09 Jun	2030	2032	2039		SF	N16W29	1499
09 Jun	2311	2314	2316	B8.7			
10 Jun	0019	0026	0032	B8.6			
10 Jun	0127	0208	0220	C1.0			
10 Jun	0439	0451	0459	C1.1			1504
10 Jun	0639	0645	0650	M1.3			1504
10 Jun	1810	1815	1821	C1.3	SF	S17E59	1504
10 Jun	1942	1951	1958	C2.3	SF	S17E59	1504
10 Jun	2316	2321	2325	C1.1	SF	S17E56	1504



## Region Summary

Date	Location		Sunspot Characteristics				Flares											
	Lat CMD	Lon	Helio 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 1490</b>																		
24 May	S12E58	307	30	5	Cro	3	B											
25 May	S12E45	306	40	5	Dso	3	B											
26 May	S26E15	309	40	4	Dso	4	B						1					
27 May	S12E17	308	70	6	Dso	6	B											
28 May	S13E04	309	100	8	Dso	15	B						3					
29 May	S12W09	308	160	9	Dsi	15	B											
30 May	S12W22	307	180	10	Dsi	22	B											
31 May	S13W36	308	90	9	Dso	6	B											
01 Jun	S13W49	309	150	10	Dso	11	B											
02 Jun	S13W65	311	70	5	Dso	2	B						1					
03 Jun	S13W79	312	40	4	Cso	2	B											
04 Jun	S14W90	310	plage															
								0	0	0	5	0	0	0	0			

Crossed West Limb.  
Absolute heliographic longitude: 309

<b>Region 1492</b>																		
25 May	S13E65	286	90	6	Cso	3	B	3					2					
26 May	S40E31	283	160	9	Dso	5	B	2					2					
27 May	S14E43	281	190	11	Eao	7	B	1					2					
28 May	S12E30	283	250	11	Eko	10	B											
29 May	S13E18	281	160	12	Eao	9	B											
30 May	S13E03	281	120	11	Eao	13	B											
31 May	S12W10	281	100	11	Eso	12	B											
01 Jun	S13W22	282	80	11	Eso	22	B											
02 Jun	S13W33	279	20	2	Dso	2	B											
03 Jun	S14W44	277	10	2	Bxo	2	B											
04 Jun	S14W58	278	plage															
05 Jun	S18W73	280	10		Axx	1	A											
06 Jun	S18W87	280	plage										1					
								7	0	0	6	0	0	0	0			

Crossed West Limb.  
Absolute heliographic longitude: 281





### *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 1493</b>																							
31 May	N15E64	208	40	5	Dao	2	B	6				8											
01 Jun	N14E49	209	170	7	Dso	4	B	1				6											
02 Jun	N15E35	210	140	6	Dso	8	B	1															
03 Jun	N14E23	209	140	10	Dso	13	B																
04 Jun	N13E08	212	180	11	Esi	10	B																
05 Jun	N12W05	212	170	12	Esi	12	BG																
06 Jun	N14W18	211	130	14	Esi	11	BG																
07 Jun	N15W33	212	100	14	Eai	9	BG	3				1											
08 Jun	N14W47	214	70	8	Cao	4	B	1															
09 Jun	N15W66	219	50	4	Hax	1	A																
10 Jun	N16W80	220	60	2	Hax	1	A																
								12	0	0	15	0	0	0	0								

Still on Disk.

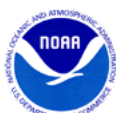
Absolute heliographic longitude: 212

### **Region 1494**

30 May	S16E83	203	plage					2													
31 May	S16E71	201	50	3	Cso	1	B														
01 Jun	S16E56	204	140	4	Cso	3	B														
02 Jun	S15E20	225	80	3	Cso	3	B														
03 Jun	S16E36	196	100	2	Hsx	2	A														
04 Jun	S16E18	202	120	2	Cso	2	B					1									
05 Jun	S17E06	201	160	5	Cso	9	B	1				1									
06 Jun	S18W06	199	160	10	Cso	8	B	4	1			2	1								
07 Jun	S18W19	198	120	10	Dso	5	BG	2				1									
08 Jun	S18W33	200	120	10	Cao	5	B	1				1									
09 Jun	S17W45	198	90	3	Hkx	1	A														
10 Jun	S16W60	200	70	3	Hax	1	A														
								10	1	0	5	2	0	0	0						

Still on Disk.

Absolute heliographic longitude: 201



### *Region Summary - continued*

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	4	
<b>Region 1495</b>																	
31 May	S12E19	254	30	3	Csi	5	B					1					
01 Jun	S14E06	254	60	4	Csi	17	B					1					
02 Jun	S14E20	225	100	7	Dso	5	B					1					
03 Jun	S15W21	253	20	2	Hsx	2	A										
04 Jun	S15W32	252	10	2	Axx	4	A										
05 Jun	S15W46	253	plage														
06 Jun	S15W60	253	plage														
07 Jun	S15W74	254	plage														
08 Jun	S15W88	255	plage														
								0	0	0	3	0	0	0	0		

Crossed West Limb.  
Absolute heliographic longitude: 254

<b>Region 1496</b>																	
01 Jun	N16E59	201	120	7	Cso	5	B	1									
02 Jun	N16E47	198	100	9	Dai	6	B										
03 Jun	N16E33	199	70	5	Dso	7	B	1	1			3					
04 Jun	N17E17	203	50	7	Cso	8	B	1				1					
05 Jun	N16E05	202	30	2	Cso	2	B										
06 Jun	N16W10	203	20	1	Hax	1	A										
07 Jun	N16W24	204	20	1	Hax	1	A										
08 Jun	N17W36	203	10	1	Axx	1	A										
09 Jun	N16W48	201	10	1	Axx	1	A										
10 Jun	N17W62	202	10	1	Axx	1	A										
								3	1	0	4	0	0	0	0		

Still on Disk.  
Absolute heliographic longitude: 202



### *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 1497</b>																	
01 Jun	S22E34	226	30	3	Csi	6	B					1					
02 Jun	S21E21	224	60	6	Dso	5	B										
03 Jun	S21E09	223	130	8	Dso	10	B										
04 Jun	S21W06	226	150	7	Dao	19	B										
05 Jun	S21W18	225	170	8	Dao	8	B										
06 Jun	S22W31	224	230	7	Dao	7	B										
07 Jun	S21W44	223	170	9	Dai	5	B					1					
08 Jun	S22W58	225	70	7	Dao	5	B										
09 Jun	S22W69	222	80	6	Cao	6	B										
10 Jun	S22W83	224	80	6	Cao	6	B										
								0	0	0	2	0	0	0	0		

Still on Disk.

Absolute heliographic longitude: 226

<b>Region 1498</b>																	
01 Jun	N07E69	189	90	7	Cso	3	B	1				1					
02 Jun	N08E55	190	60	4	Dso	2	B	1				1					
03 Jun	N07E45	187	40	2	Hsx	2	A										
04 Jun	N09E29	191	20	2	Hsx	2	A										
05 Jun	N07E16	191	70	7	Dao	8	B	1				1					
06 Jun	N06E01	192	20	4	Cao	7	B										
07 Jun	N06W11	190	50	6	Cao	4	B	3				2					
08 Jun	N08W24	190	10	1	Cao	1	BG										
09 Jun	N07W37	190	plage	7		4											
10 Jun	N07W52	193	plage														
								6	0	0	4	1	0	0	0		

Still on Disk.

Absolute heliographic longitude: 192



### *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 1499</b>																		
03 Jun	N16E50	183	40	4	Dso	3	B											
04 Jun	N15E34	186	20	4	Cro	2	B	1				1						
05 Jun	N15E18	189	30	13	Ero	10	B	3				5		1				
06 Jun	N15E05	188	20	19	Bxi	14	BG	3				5						
07 Jun	N15W09	189	20	19	Cai	14	BG	4				3		1				
08 Jun	N15W23	190	20	19	Cao	14	BG					1						
09 Jun	N16W31	184	60	7	Cao	7	BG	2				6						
10 Jun	N16W43	184	50	6	Cao	11	BG											
								13	0	0	21	0	2	0	0			

Still on Disk.

Absolute heliographic longitude: 188

#### **Region 1500**

04 Jun	N09W34	254	30	3	Dro	4	B											
05 Jun	N09W49	256	20	1	Hsx	1	A											
06 Jun	N09W63	256	plage															
07 Jun	N09W77	257	plage															
								0	0	0	0	0	0	0	0	0	0	

Died on Disk.

Absolute heliographic longitude: 254

#### **Region 1501**

04 Jun	N07E15	205	0	1	Axx	2	A											
05 Jun	N07W00	207	plage															
06 Jun	N07W15	208	plage															
07 Jun	N07W30	210	plage															
08 Jun	N07W45	212	plage															
09 Jun	N07W60	214	plage															
10 Jun	N07W75	216	plage															
								0	0	0	0	0	0	0	0	0	0	

Still on Disk.

Absolute heliographic longitude: 207



### *Region Summary - continued*

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	4	
<b>Region 1502</b>																	
04 Jun	S17E41	179	10	1	Bxo	2	B										
05 Jun	S17E27	180	0	1	Axx	1	A										
06 Jun	S17E12	181	0	1	Axx	1	A										
07 Jun	S17W02	182	plage														
08 Jun	S17W16	183	plage														
09 Jun	S17W30	184	plage														
10 Jun	S17W44	185	plage														
								0	0	0	0	0	0	0	0	0	0

Still on Disk.  
Absolute heliographic longitude: 182

<b>Region 1503</b>																	
05 Jun	N11W38	245	10	3	Bxo	2	B										
06 Jun	N09W55	248	0	1	Axx	2	A										
07 Jun	N09W69	249	plage														
08 Jun	N09W83	250	plage														
								0	0	0	0	0	0	0	0	0	0

Crossed West Limb.  
Absolute heliographic longitude: 245

<b>Region 1504</b>																	
09 Jun	S17E67	86	60	10	Cao	6	B		2		1						
10 Jun	S18E51	89	120	10	Dai	7	B	4	1		3						
								4	3	0	4	0	0	0	0	0	0

Still on Disk.  
Absolute heliographic longitude: 89

<b>Region 1505</b>																	
09 Jun	S09E63	90	30	1	Axx	1	A				1						
10 Jun	S10E51	89	50	6	Dao	3	B										
								0	0	0	1	0	0	0	0	0	0

Still on Disk.  
Absolute heliographic longitude: 89

<b>Region 1506</b>																	
10 Jun	N11E66	74	50	2	Cao	2	B										
								0	0	0	0	0	0	0	0	0	0

Still on Disk.  
Absolute heliographic longitude: 74



***Region Summary - continued***

Date	Location		Sunspot Characteristics				Flares									
	Lat CMD	Lon	Heli 10 <sup>-6</sup> hemi.	Area	Extent (helio)	Spot Class	Spot Count	Mag Class	X-ray			Optical				
									C	M	X	S	1	2	3	4
<b><i>Region 1507</i></b>																
10 Jun	S26E29	111	60	9	Dao	5	B	0	0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 111

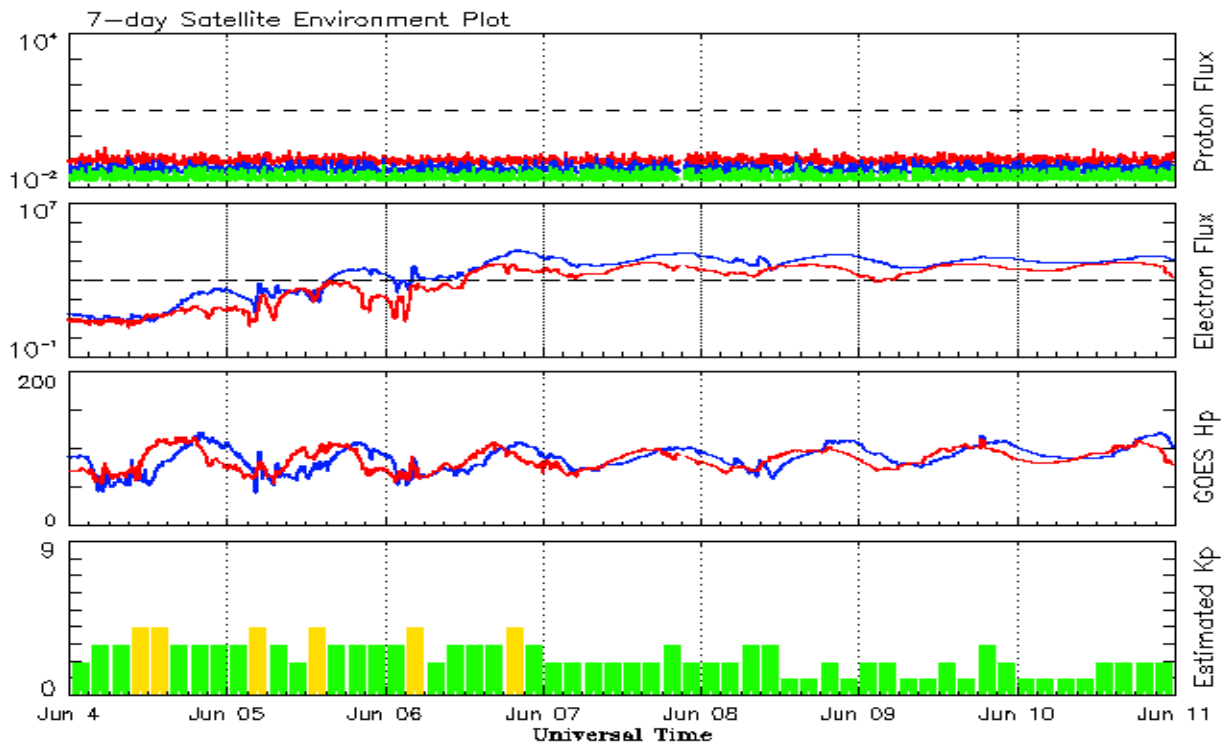


**Recent Solar Indices (preliminary)**  
**Observed monthly mean values**

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>2010</b>									
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
<b>2011</b>									
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			141.2		3	
<b>2012</b>									
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	

**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 04 June 2012*

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.

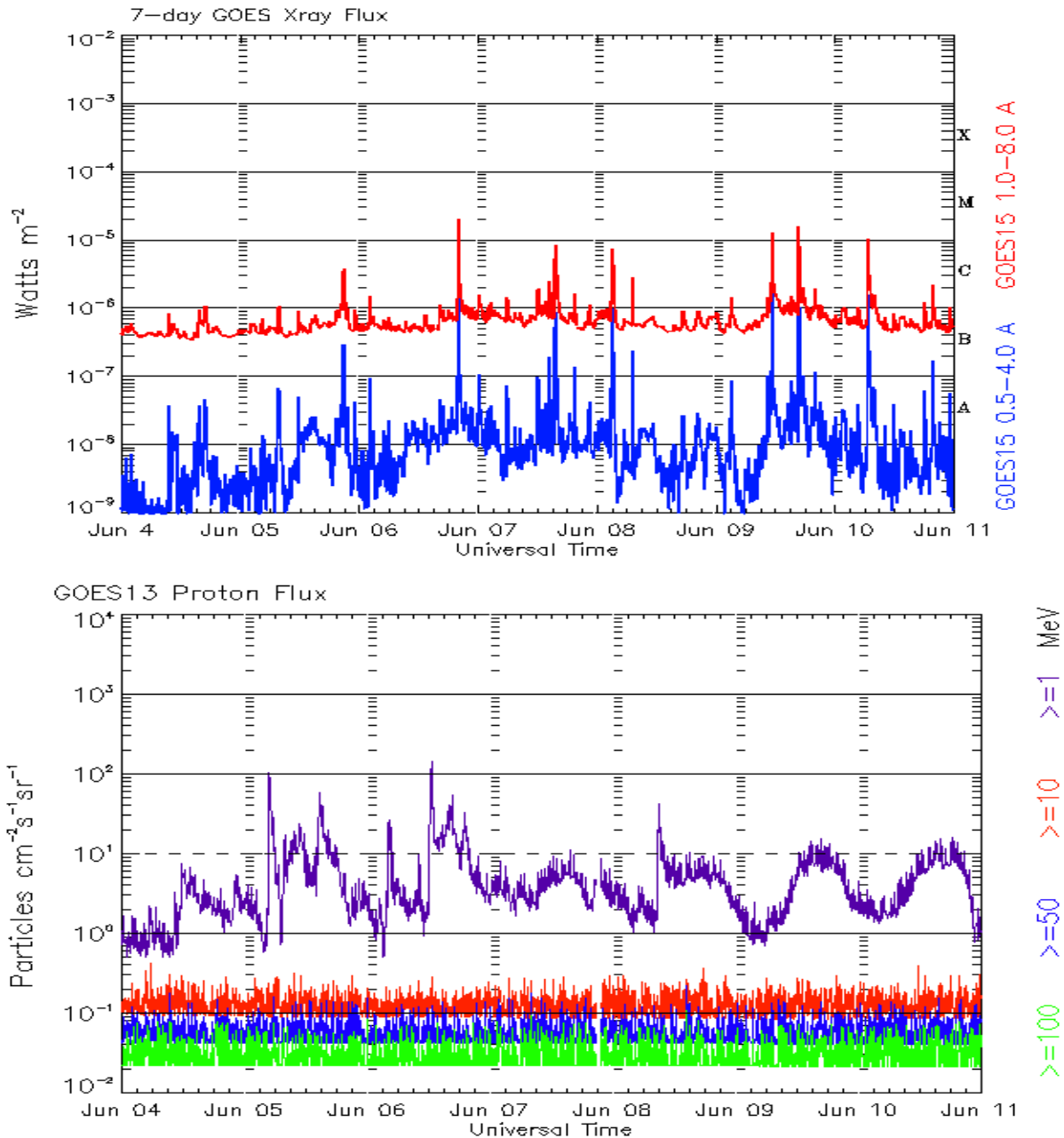
The Hp plot contains the five minute averaged Hp magnetic field component in nanoteslas (nT) as by the SWPC Primary GOES satellite. The Hp component is parallel to the spin axis of the satellite, which is nearly parallel to the Earth's rotation axis.

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 04 June 2012*

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)***

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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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