

Solar activity was at low to moderate levels. Low levels were observed on 11 - 12 June due to numerous weak C-class flares from Regions 1499 (N16, L=184, class/area Cao/060 on 09 June), 1504 (S17, L=087, class/area Ekc/750 on 16 June), 1506 (N11, L=076, class/area Hax/100 on 12 June) and 1507 (S26, L=111, class/area Dso/130 on 16 June). Activity increased to moderate levels on 13 and 14 June due to M-class flaring from Region 1504. At 13/1317 UTC, a long duration M1/1n was observed with associated Type IV and 10 cm (260 sfu) radio signatures. On 14 June, another long duration M1/1n was observed at 14/1435 UTC with associated Type IV and 10 cm (1400 sfu) radio signatures. CME signatures were detected with both of the events. Solar activity decayed to low levels on 15 - 17 June with numerous C3 or smaller x-ray events observed from Region 1504.

A greater than 10 MeV proton event at geosynchronous orbit was observed during the period. The event began at 16/1955 UTC, reached a maximum of 14 pfu at 16/2020 UTC and ended at 16/2255 UTC. This weak event was most likely associated with the 14 June M1 x-ray flare.

The greater than 2 MeV electron flux at geosynchronous orbit was at high levels on 11 June and moderate levels on 12 - 17 June.

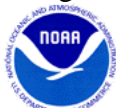
Geomagnetic field activity ranged from quiet to major storm levels. Quiet to unsettled levels were prevalent from 11 June through late on 16 June with a brief period of minor storm conditions late on 11 June to early on 12 June due to a sustained period of southward interplanetary magnetic field (IMF) Bz. At 16/2022 UTC, field conditions increased to active levels and further increased to minor to major storm conditions through 17/1500 UTC and decayed to active levels through the remainder of the period. This increase in activity was a result of combined effects from the 13 and 14 June CMEs. On 16 June, three separate sudden impulses were observed at the Boulder magnetometer; 16/0957 UTC (28 nT), 16/2019 UTC (28 nT) and 16/2115 UTC (25 nT). ACE data indicated three shock arrivals at 16/0900 UTC, 16/1931 UTC and 16/2031 UTC. Solar wind speed increased from about 350 km/s to 425 km/s with the first shock, and further increased to around 560 km/s with the second and third shocks. With each successive shock, total IMF field strength reached 10 nT, 17 nT and 34 nT respectively. A magnetopause crossing was also observed by the GOES-15 satellite from around 16/2200 UTC - 16/2300 UTC.

Space Weather Outlook **18 June - 14 July 2012**

Solar activity is expected to be at low to moderate levels through 21 June when Region 1504 will rotate around the west limb. Mostly low levels are expected through 25 June. Low to moderate levels are possible from 26 June - 14 July due to the return of old Regions 1494 (S16, L=198) and 1496 (N17, L=204) on 26 June and the return of old Region 1504 (S17, L=087) on 04 July.

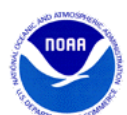
No proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at high levels on



18 - 25 June, normal to moderate levels on 26 June - 03 July and return to high levels on 04 - 14 July.

Geomagnetic field activity is expected to be at unsettled to active levels with isolated minor storm periods on 18 June due to continued effects from the 13 and 14 June CMEs. Quiet to unsettled levels with isolated active periods are possible on 19 - 20 June due to effects from a recurrent coronal hole high speed stream (CH HSS). Mostly quiet conditions are expected from 21 - 26 June. A return to quiet to unsettled levels with isolated active periods are possible on 27 - 30 June with isolated minor storm periods on 01 - 05 July due to a pair of recurrent CH HSS. Mostly quiet conditions are expected on 10 - 14 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
11 June	134	114	370	B5.5	7	0	0	7	0	0	0	0
12 June	141	132	670	B6.1	13	0	0	8	0	0	0	0
13 June	143	145	880	B8.6	13	1	0	8	1	0	0	0
14 June	149	114	840	B9.7	9	1	0	8	3	0	0	0
15 June	145	113	930	B5.5	4	0	0	14	0	0	0	0
16 June	135	110	1070	B4.2	4	0	0	8	1	0	0	0
17 June	124	96	978	B4.6	7	0	0	12	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
	11 June	1.3e+05	1.2e+04	2.9e+03		5.2e+07
12 June	7.6e+05	1.2e+04	3.1e+03		1.8e+07	
13 June	1.6e+06	1.2e+04	3.2e+03		4.4e+07	
14 June	1.0e+06	1.3e+04	3.0e+03		4.4e+07	
15 June	3.1e+06	2.6e+04	3.1e+03		5.9e+07	
16 June	3.5e+07	2.7e+05	3.1e+03		4.2e+07	
17 June	2.0e+07	1.0e+05	2.4e+03		1.8e+06	

Daily Geomagnetic Data

Date	Middle Latitude Fredericksburg		High Latitude College		Estimated Planetary	
	A	K-indices	A	K-indices	A	K-indices
	11 June	11	2-2-2-2-2-2-3-4	22	2-2-5-4-4-4-3-3	14
12 June	10	4-4-1-1-2-1-1-1	8	4-3-2-0-2-1-2-0	13	5-4-1-1-1-1-1-1
13 June	7	2-2-2-1-3-1-2-1	3	1-2-1-1-0-1-1-1	6	2-2-2-2-1-1-2-1
14 June	4	0-1-1-2-2-2-2-0	3	1-2-1-2-1-0-1-0	4	1-1-1-1-1-1-1-0
15 June	4	0-0-0-2-2-2-2-1	1	0-0-0-0-0-1-0-1	4	0-0-0-1-1-1-1-1
16 June	19	0-1-1-2-3-3-4-6	12	0-1-0-3-4-3-2-4	19	1-1-1-2-3-3-4-6
17 June	36	4-4-5-6-5-3-4-3	55	2-5-6-6-6-6-5-3	39	4-4-5-6-5-4-4-4



Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
11 Jun 1321	CONTINUED ALERT: Electron 2MeV Integral Flux \geq 1000pfu	06/1210
11 Jun 1854	WARNING: Geomagnetic K = 4	11/1900 - 2359
11 Jun 2240	ALERT: Geomagnetic K = 4	11/2238
11 Jun 2344	WARNING: Geomagnetic K = 5	11/2344 - 12/0400
11 Jun 2354	ALERT: Geomagnetic K = 5	11/2346
11 Jun 2356	EXTENDED WARNING: Geomagnetic K = 4	11/1900 - 12/0800
13 Jun 1416	SUMMARY: 10cm Radio Burst	13/1332 - 1347
13 Jun 1416	ALERT: Type IV Radio Emission	13/1325
14 Jun 1541	SUMMARY: 10cm Radio Burst	14/1343 - 1516
14 Jun 2044	ALERT: Type IV Radio Emission	14/1349
14 Jun 2105	WATCH: Geomagnetic A \geq 20	17/
16 Jun 1009	SUMMARY: Geomagnetic Sudden Impulse	16/0957
16 Jun 1716	WARNING: Proton 10MeV Integral Flux $>$ 10pfu	16/1715 - 17/1715
16 Jun 1938	WARNING: Geomagnetic Sudden Impulse expected	16/2015 - 2045
16 Jun 1941	WARNING: Geomagnetic K = 4	16/1940 - 17/0740
16 Jun 2011	ALERT: Proton Event 10MeV Integral Flux \geq 10pfu	16/1955
16 Jun 2026	ALERT: Geomagnetic K = 4	16/2022
16 Jun 2033	SUMMARY: Geomagnetic Sudden Impulse	16/2019
16 Jun 2047	WARNING: Geomagnetic Sudden Impulse expected	16/2105 - 2135
16 Jun 2120	WARNING: Geomagnetic K = 5	16/2119 - 17/0300
16 Jun 2130	SUMMARY: Geomagnetic Sudden Impulse	16/2115
16 Jun 2150	ALERT: Geomagnetic K = 5	16/2147
16 Jun 2227	WARNING: Geomagnetic K = 6	16/2230 - 17/0300
16 Jun 2247	ALERT: Geomagnetic K = 6	16/2245
17 Jun 0232	EXTENDED WARNING: Geomagnetic K = 4	16/1940 - 17/1200
17 Jun 0255	EXTENDED WARNING: Geomagnetic K = 5	16/2119 - 17/0900
17 Jun 0329	SUMMARY: Proton Event 10MeV Integral Flux \geq 10pfu	16/1955 - 2255
17 Jun 0725	WARNING: Geomagnetic K = 6	17/0730 - 1200

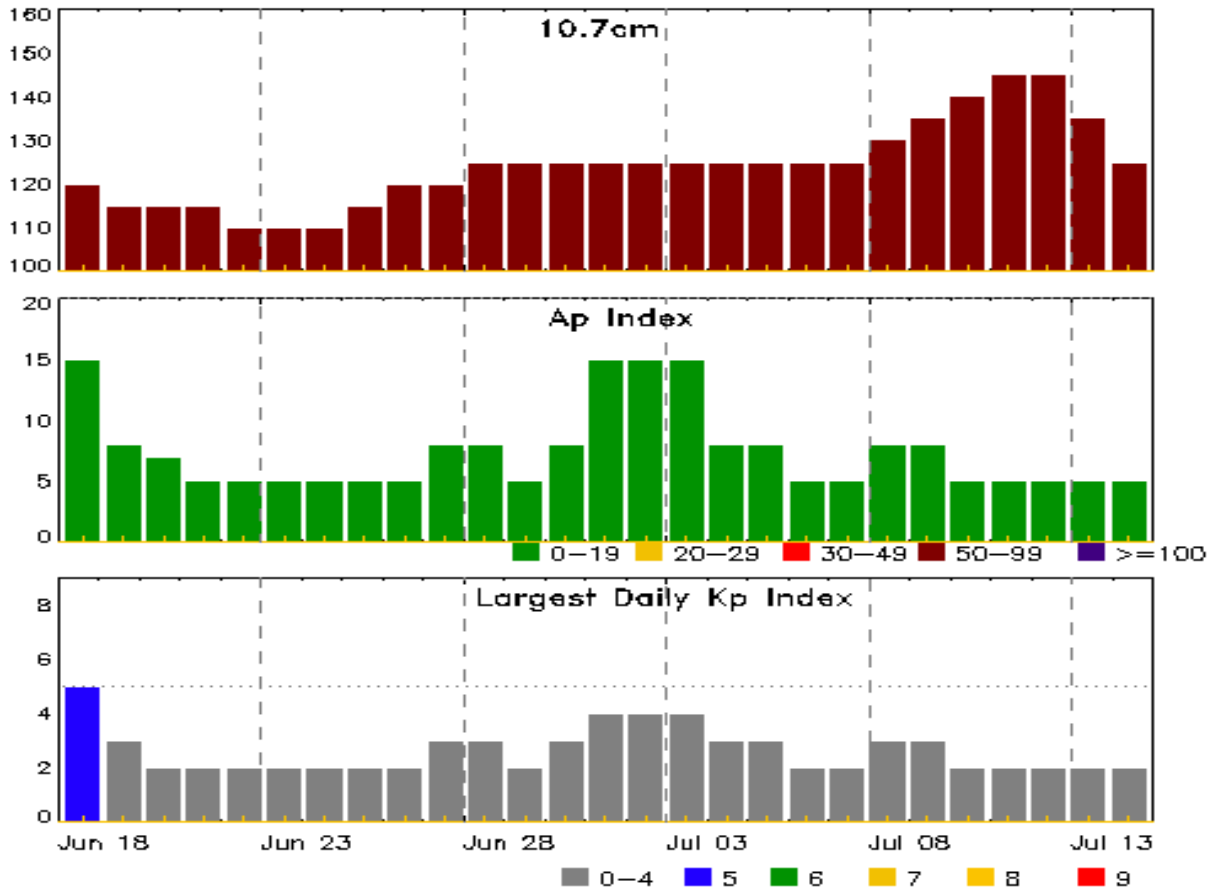


Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
17 Jun 0725	EXTENDED WARNING: Geomagnetic K = 5	16/2119 - 17/1200
17 Jun 1133	ALERT: Geomagnetic K = 6	17/1131
17 Jun 1150	EXTENDED WARNING: Geomagnetic K = 6	17/0730 - 1500
17 Jun 1150	EXTENDED WARNING: Geomagnetic K = 4	16/1940 - 17/1800
17 Jun 1150	EXTENDED WARNING: Geomagnetic K = 5	16/2119 - 17/1800
17 Jun 1746	EXTENDED WARNING: Geomagnetic K = 4	16/1940 - 18/0000
17 Jun 2354	EXTENDED WARNING: Geomagnetic K = 4	16/1940 - 18/0900



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
18 Jun	120	15	5	02 Jul	125	15	4
19	115	8	3	03	125	15	4
20	115	7	2	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	08	130	8	3
25	115	5	2	09	135	8	3
26	120	5	2	10	140	5	2
27	120	8	3	11	145	5	2
28	125	8	3	12	145	5	2
29	125	5	2	13	135	5	2
30	125	8	3	14	125	5	2
01 Jul	125	15	4				



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
13 Jun	1129	1317	1431	M1.2	0.075	1N	S16E18	1504		260		2
14 Jun	1252	1435	1556	M1.9	0.120	1N	S17E06	1504	840	1400		2

Flare List

Date	Time			X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
	Begin	Max	End				
11 Jun	0412	0427	0443	C1.1			1499
11 Jun	1125	1129	1135	C1.1			1507
11 Jun	1232	1237	1306	B9.8			1507
11 Jun	1443	1447	1452	C1.0	SF	S25E27	1507
11 Jun	1535	1542	1550	C1.5	SF	S25E19	1507
11 Jun	1617	1618	1629		SF	S25E19	1507
11 Jun	1701	1704	1708	C1.5			1507
11 Jun	1746	1749	1755		SF	N10E54	1506
11 Jun	1859	1903	1911	C1.5	SF	S25E18	1507
11 Jun	1915	1916	1919		SF	S25E18	1507
11 Jun	2101	2104	2112	C1.5	SF	N16W55	1499
12 Jun	0213	0217	0220	C1.0			1506
12 Jun	0234	0238	0249	C1.1			1506
12 Jun	0311	0315	0319	C2.1			1506
12 Jun	0412	0420	0422	C1.0	SF	N11E49	1506
12 Jun	0512	0516	0524	B8.5	SF	N12E49	1506
12 Jun	0531	0533	0535	C1.0	SF	N11E48	1506
12 Jun	0547	0555	0559	C1.0			1499
12 Jun	0638	0643	0648	C2.0			1504
12 Jun	0710	0714	0716	C1.3			1504
12 Jun	0900	0910	0915	C1.6			1504
12 Jun	1215	1218	1220	C1.1			1504
12 Jun	1317	1322	1330	B8.0	SF	N16W65	1499
12 Jun	1601	1732	1742	C1.4	SF	S28E09	1507
12 Jun	1904	1909	1912	C1.5			1506
12 Jun	1940	1940	1941		SF	N13E41	1506
12 Jun	2005	2006	2014		SF	S18E32	1504
12 Jun	2144	2145	2147		SF	N11E39	1506
12 Jun	2250	2311	2319	C1.3			1499



Flare List

Date	Time			X-ray Class	Optical		Rgn #
	Begin	Max	End		Imp/ Brtns	Location Lat CMD	
12 Jun	2340	2357	0005	C1.6			1506
13 Jun	0032	0036	0038	C1.9			1505
13 Jun	0138	0149	0156	C1.1			1499
13 Jun	0210	0227	0235	C1.2			1507
13 Jun	0315	0320	0331	C2.2			1504
13 Jun	0529	0657	0700	C1.3	SF	S17E25	1504
13 Jun	0913	0919	0924	C2.7	SF	S16E22	1504
13 Jun	0936	0939	0941	C1.3	SF	S17E26	1504
13 Jun	1129	1317	1431	M1.2	1N	S16E18	1504
13 Jun	1441	1448	1459	C7.0			1507
13 Jun	1442	1442	1444		SF	S08E17	1505
13 Jun	1455	1457	1459		SF	S29W01	1507
13 Jun	1505	1506	1507		SF	S28W02	1507
13 Jun	1525	1527	1530	C6.2			1507
13 Jun	1558	1606	1624		SF	S10E17	1505
13 Jun	1847	1852	1857	C2.7			
13 Jun	1917	1926	1955	C6.8	SF	S20E20	1504
13 Jun	2259	2302	2305	C1.8			
13 Jun	2325	0002	0021	C1.2			1508
14 Jun	0143	0147	0150	C1.3			1505
14 Jun	0249	0252	0254	C1.2			
14 Jun	0431	0437	0439		SF	S27W08	1508
14 Jun	0441	0609	A0613		1F	S16E18	1504
14 Jun	0459	0504	0509	C1.7			
14 Jun	0725	0738	0827	C2.0	SF	S16E12	1504
14 Jun	0802	0806	0810	C1.6			
14 Jun	1000	1001	1010		SF	S16E12	1504
14 Jun	1045	1050	1056	C2.5	SF	S17E10	1504
14 Jun	1105	1112	1122	C5.0	1F	S16E07	1504
14 Jun	1223	1223	1226		SF	S18E11	1504
14 Jun	1233	1237	1239	C2.6	SF	S17E12	1504
14 Jun	1252	1435	1556	M1.9	1N	S17E06	1504
14 Jun	1744	1751	1757		SF	S25W20	1507
14 Jun	2047	2052	2102	C4.0			1504
14 Jun	2152	2153	2158		SF	S26W21	1507
15 Jun	0032	0052	0106	C3.0	SF	S18E03	1504
15 Jun	0647	0648	0649		SF	S11W03	1505
15 Jun	0943	0944	0947		SF	S16W02	1504



Flare List

Date	Time			Optical			
	Begin	Max	End	X-ray Class	Imp/Brtns	Location Lat CMD	Rgn #
15 Jun	1008	1009	1014		SF	S15W04	1504
15 Jun	B1049	U1051	1106		SF	S18E02	1504
15 Jun	1157	U1200	1202		SF	S16W05	1504
15 Jun	1240	1241	1248		SF	S16W06	1504
15 Jun	1307	1324	1333	C3.4	SF	S17W06	1504
15 Jun	1342	1350	1358		SF	S17W07	1504
15 Jun	1433	1433	1435		SF	S16W05	1504
15 Jun	1539	1550	1554	C1.1	SF	S14W08	1504
15 Jun	1612	1624	1713		SF	S16W07	1504
15 Jun	1805	1816	1827	C2.0	SF	S20W05	1504
15 Jun	1830	1831	1837		SF	S20W06	1504
16 Jun	0043	0048	0050	C2.4	1N	S17W07	1504
16 Jun	0120	0125	0134	B8.8	SF	S16W14	1504
16 Jun	0447	0448	0459		SF	S18W14	1504
16 Jun	0620	0629	0635	C1.3			
16 Jun	B0703	U0703	0712		SF	S18W15	1504
16 Jun	0822	0824	0827		SF	S20W15	1504
16 Jun	1303	1303	1306		SF	S18W19	1504
16 Jun	1324	1336	1357		SF	S29W41	1507
16 Jun	1444	1453	1459	C1.8	SF	S16W21	1504
16 Jun	1506	1510	1510		SF	S15W24	1504
16 Jun	1831	1835	1840	C1.0			
17 Jun	0434	0443	0448		SF	S28W52	1507
17 Jun	0601	0601	0606		SF	S26W51	1507
17 Jun	1058	1059	1104		SF	S28W56	1507
17 Jun	1108	1134	1150		SF	S28W56	1507
17 Jun	1154	1200	1201		SF	S28W56	1507
17 Jun	1541	1543	1548		SF	S27W59	1507
17 Jun	1725	1728	1731	C1.0	SF	S17W35	1504
17 Jun	1736	1740	1746	C3.9	SF	S17W35	1504
17 Jun	1951	1957	2002	C1.0	SF	S18W34	1504
17 Jun	2132	2139	2147	C1.8	SF	S18W37	1504
17 Jun	2215	2218	2226	C1.1	SF	S17W38	1504
17 Jun	2303	2307	2311	C1.2			
17 Jun	2337	2342	2345	C1.2	SF	S17W38	1504



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 1493																				
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				

Crossed West Limb.

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		250	70	3	Hkx	1	A									
11 Jun	S17W74		200	80	2	Hax	1	A									
12 Jun	S16W84		198	50	2	Hsx	1	A									
									10	1	0	5	2	0	0	0	

Crossed West Limb.

Absolute heliographic longitude: 201



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 1496																		
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											
11 Jun	N17W76	203	plage															
12 Jun	N17W90	204	plage															
								3	1	0		4	0	0	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 202

Region 1497																		
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	0	0

Crossed West Limb.
Absolute heliographic longitude: 226



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 1498																							
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																				
11 Jun	N07W67	194	plage																				
12 Jun	N07W82	196	plage																				
								6	0	0	4	1	0	0	0								

Crossed West Limb.
Absolute heliographic longitude: 192

Region 1499																							
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																
11 Jun	N16W60	187	10	9	Bxo	5	B	2				1											
12 Jun	N15W71	185	10	2	Bxo	3	B	2				1											
13 Jun	N15W85	186	plage									1											
								18	0	0	23	0	2	0	0								

Crossed West Limb.
Absolute heliographic longitude: 188



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 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														
11 Jun	N07W90	217	plage														
									0	0	0	0	0	0	0	0	0

Crossed West Limb.
 Absolute heliographic longitude: 207

Region 1502																	
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														
11 Jun	S17W58	185	plage														
12 Jun	S17W72	186	plage														
13 Jun	S17W86	187	plage														
									0	0	0	0	0	0	0	0	0

Crossed West Limb.
 Absolute heliographic longitude: 182



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 1504																	
09 Jun	S17E67		86	60	10	Cao	6	B		2		1					
10 Jun	S18E51		89	120	10	Dai	7	B	4	1		3					
11 Jun	S17E40		87	80	11	Eri	15	B									
12 Jun	S17E28		86	310	11	Eki	24	B	4			1					
13 Jun	S17E14		86	560	12	Ekc	25	BGD	5	1		4	1				
14 Jun	S16E01		86	570	12	Ekc	20	BGD	5	1		5	3				
15 Jun	S16W12		86	660	12	Ekc	18	BG	4			13					
16 Jun	S17W27		87	750	12	Ekc	18	BG	2			7	1				
17 Jun	S17W39		87	740	11	Ekc	10	B	6			6					
									30	5	0	40	5	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 86

Region 1505																	
09 Jun	S09E63		90	30	1	Axx	1	A				1					
10 Jun	S10E51		89	50	6	Dao	3	B									
11 Jun	S09E37		89	40	5	Cao	5	B									
12 Jun	S09E24		90	100	5	Dao	13	B									
13 Jun	S09E12		89	70	5	Dao	8	B	1			2					
14 Jun	S10W02		88	50	6	Dao	10	B	1								
15 Jun	S10W15		88	60	5	Dao	9	B				1					
16 Jun	S10W28		88	70	5	Dso	8	B									
17 Jun	S11W41		89	30	5	Dro	5	B									
									2	0	0	4	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 88

Region 1506																	
10 Jun	N11E66		74	50	2	Cao	2	B									
11 Jun	N11E52		75	50	2	Cao	2	B				1					
12 Jun	N11E38		76	100	3	Hax	9	A	6			5					
13 Jun	N11E25		76	80	3	Hsx	5	A									
14 Jun	N11E11		76	70	10	Cso	7	B									
15 Jun	N11W03		76	30	2	Hrx	4	A									
16 Jun	N11W18		77	30	3	Dso	4	B									
17 Jun	N11W30		75	10	1	Axx	2	A									
									6	0	0	6	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 76



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 1507																							
10 Jun	S26E29	111	60	9	Dao	5	B																
11 Jun	S26E17	110	30	9	Cao	10	B	5				5											
12 Jun	S27E02	112	100	11	Eai	22	B	1				1											
13 Jun	S25W13	114	40	7	Dai	26	B	3				2											
14 Jun	S25W24	111	80	8	Dao	15	B					2											
15 Jun	S25W37	110	120	7	Dao	12	B																
16 Jun	S26W51	111	130	6	Dso	10	B					1											
17 Jun	S27W64	112	130	8	Dai	10	B					6											
								9	0	0		17	0	0	0	0							

Still on Disk.

Absolute heliographic longitude: 112

Region 1508																							
13 Jun	S28W06	107	80	7	Dai	20	B	1															
14 Jun	S28W20	107	70	6	Dsi	12	B					1											
15 Jun	S28W31	105	50	5	Cao	9	B																
16 Jun	S29W44	104	70	5	Dso	9	B																
17 Jun	S29W56	104	60	3	Hsx	5	A																
								1	0	0		1	0	0	0	0							

Still on Disk.

Absolute heliographic longitude: 107

Region 1509																							
15 Jun	S15W30	103	10	1	Axx	1	A																
16 Jun	S16W43	103	20	1	Hrx	1	A																
17 Jun	S17W58	105	8	3	Bxo	4	B																
								0	0	0		0	0	0	0	0							

Still on Disk.

Absolute heliographic longitude: 103

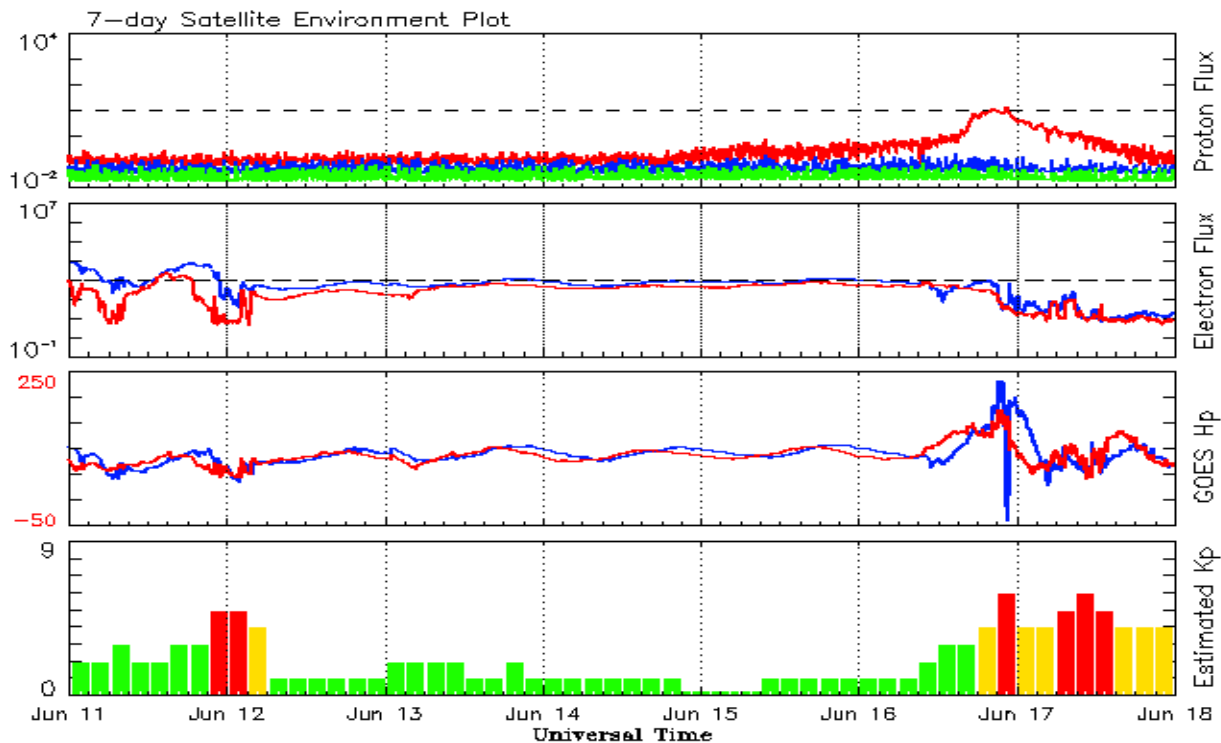


Recent Solar Indices (preliminary)
Observed monthly mean values

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									
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	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	
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	

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 11 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.

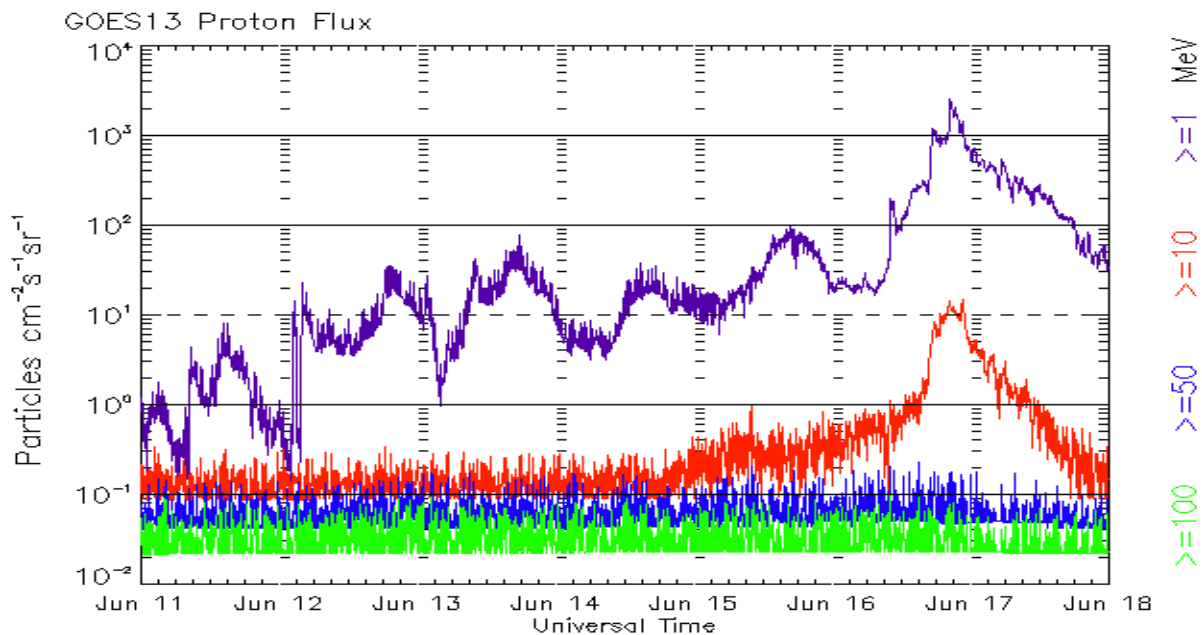
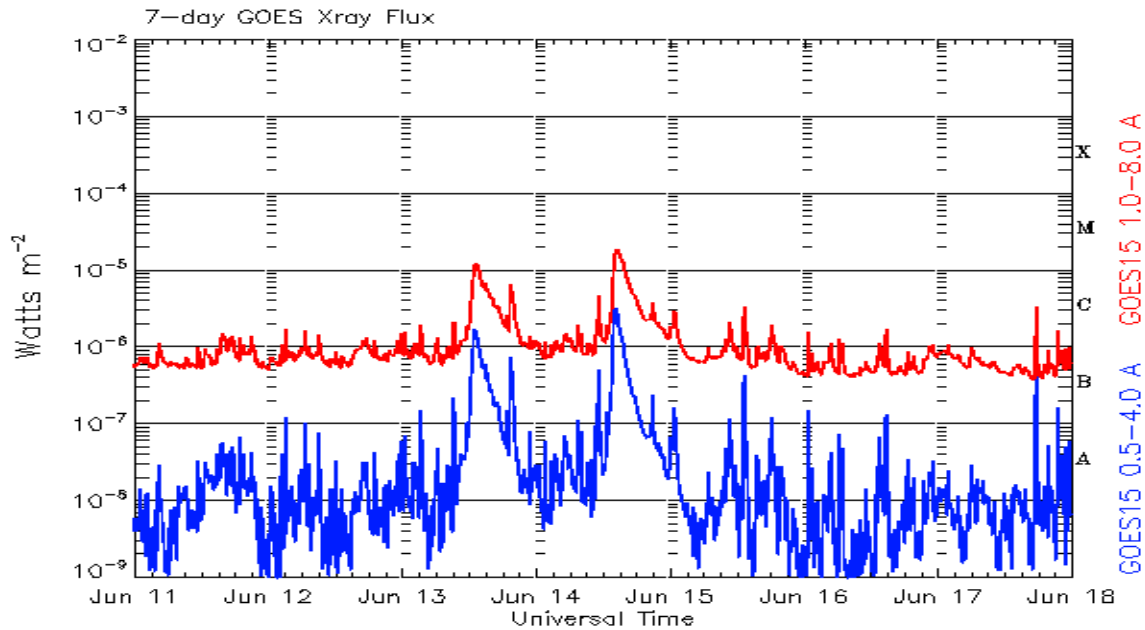
The electron flux plot contains the five-minute averaged integral electron flux (electrons/cm²-sec -sr) with energies greater than 2 MeV by the SWPC Primary GOES satellite.

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 11 June 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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