

Solar activity was predominately at low levels throughout the period but reached high levels on 25 April due to an R3 (Strong) radio blackout. On 25 April at 0027 UTC Region 2035 (S13, L=224, class/area=Ekc/390 on 23 Apr), two days behind the solar west limb, produced an impulsive X1/Sf flare at 25/0027 UTC with an associated Type-II radio sweep (estimated speed 753 km/s), a radio burst of 43,000 sfu on 245 MHz, and a 1,100 sfu Tenflare. A subsequent coronal mass ejection (CME) was observed in SOHO/LASCO C2 coronagraph imagery beginning at 25/0048 UTC but was directed well west of the Sun-Earth line and did not contain an Earth-directed component. The remainder of the period was dominated by low-level C-class flare activity from a number of active regions: Region 2034 (N04, L=244, class/area=Ekc/480 on 18 Apr) produced eight C-flares, Region 2035 produced 44 C-flares and one M-flare (16 Apr), and Region 2036 (S15, L=246, class/area=Dhc/510 on 17 Apr) produced 28 C-flares and one M-flare (18 Apr). The other active regions on the visible disk this period were relatively unproductive and unremarkable.

The greater than 10 MeV proton flux was slightly elevated early in the period due to the S1 (Minor) solar radiation storm last week (18 Apr), but remained well-below the S1 alert threshold. No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit reached high levels/exceeded the 1,000 pfu alert threshold on 25-27 April, reaching a maximum flux value of 2,920 pfu at 27/1630 UTC, likely in response to a solar wind enhancement associated with a weak negative polarity coronal hole high speed stream (CH HSS).

Geomagnetic field activity began the period at unsettled to active levels on 21 April due to the lingering effects of a pair of CMEs (from 16 and 18 Apr) that arrived at Earth on 19 and 20 April. The geomagnetic field was at quiet to unsettled levels on 24-25 April due a weak negative polarity CH HSS. The geomagnetic field was predominately quiet for the remainder of the period.

**Space Weather Outlook**  
**28 April - 24 May 2014**

Solar activity is expected to be at low levels with a slight chance for M-class (R1-R2 (Minor-Moderate)) flare activity for 28 April-04 May and 20-24 May. Solar activity is expected to be at low levels with a chance for M-class flare activity for 05-19 May due to the return of old Regions 2035 (S13, L=224) and 2036 (S15, L=246).

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 for 28 April-05 May due to a solar wind enhancement associated with the negative polarity coronal hole high speed stream (CH HSS) from 24-25 April and a positive polarity CH



HSS on 29-30 April. The greater than 2 MeV electron flux is expected to be at normal to moderate levels for the remainder of the period.

Geomagnetic field activity is expected to be quiet to unsettled for 29-30 April (positive CH HSS), 14-15 May (positive CH HSS-like feature), and 21-22 May (negative CH HSS). Predominately quiet geomagnetic field activity is expected for the remainder of the period, barring any unforeseeable transient features.



### *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
21 April	159	168	1060	B7.9	9	0	0	9	0	0	0	0
22 April	145	136	760	B2.8	9	0	0	6	1	0	0	0
23 April	136	105	810	B7.8	7	0	0	2	0	0	0	0
24 April	130	71	450	B5.1	2	0	0	0	0	0	0	0
25 April	125	73	390	B6.1	4	0	1	1	0	0	0	0
26 April	121	46	300	B4.4	3	0	0	0	0	0	0	0
27 April	118	84	520	B2.9	0	0	0	0	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
	21 April	5.5e+06	3.6e+04	2.1e+03		7.4e+05
22 April	6.9e+05	1.3e+04	2.5e+03		1.0e+06	
23 April	3.4e+05	1.1e+04	2.4e+03		2.3e+06	
24 April	3.9e+05	1.0e+04	2.4e+03		5.1e+06	
25 April	2.8e+05	1.2e+04	2.6e+03		4.0e+07	
26 April	1.9e+05	1.1e+04	2.3e+03		9.5e+07	
27 April	1.4e+05	1.0e+04	2.5e+03		1.1e+08	

### *Daily Geomagnetic Data*

Date	Middle Latitude Fredericksburg		High Latitude College		Estimated Planetary	
	A	K-indices	A	K-indices	A	K-indices
	21 April	18	4-4-3-4-3-3-2-2	30	4-5-3-5-5-5-1-1	18
22 April	4	1-2-2-1-1-1-0-1	2	1-1-1-1-0-1-0-0	5	1-2-1-2-1-1-0-1
23 April	6	0-1-1-3-2-2-2-1	7	0-1-1-4-2-2-1-1	7	1-1-1-2-2-2-2-2
24 April	8	2-1-2-2-3-2-2-2	18	2-2-3-5-4-4-2-2	10	3-2-3-2-2-2-2-3
25 April	7	3-2-0-2-3-1-2-1	11	2-3-1-3-4-2-2-1	9	3-3-1-2-2-2-2-1
26 April	8	1-3-2-1-3-2-1-2	6	1-2-2-3-3-1-0-0	6	1-3-2-1-2-1-1-2
27 April	4	1-0-0-1-3-1-2-1	1	2-0-0-0-0-1-0-0	4	1-1-1-0-1-1-1-2

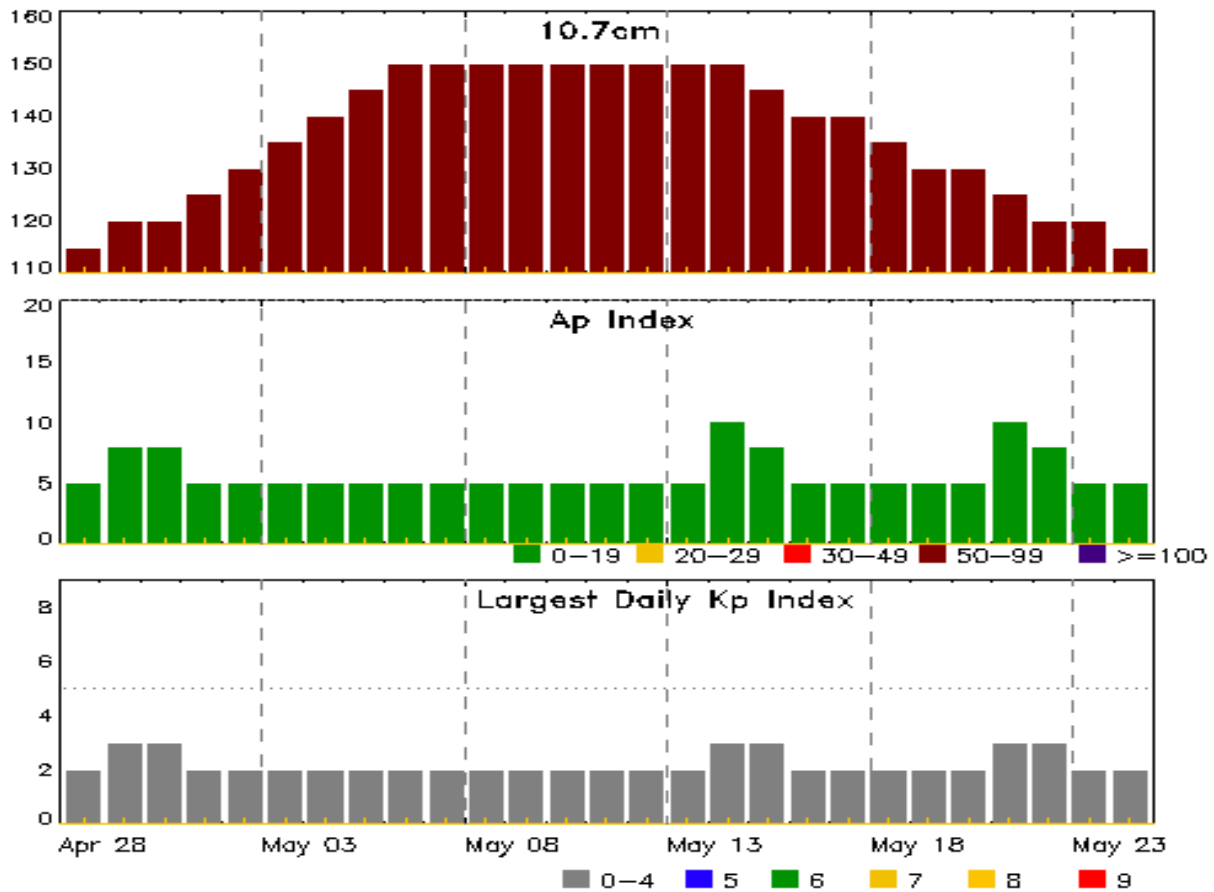


### *Alerts and Warnings Issued*

<b>Date &amp; Time of Issue UTC</b>	<b>Type of Alert or Warning</b>	<b>Date &amp; Time of Event UTC</b>
21 Apr 0056	EXTENDED WARNING: Geomagnetic K = 5	20/1257 - 21/0600
21 Apr 0555	EXTENDED WARNING: Geomagnetic K = 4	19/1815 - 21/1600
21 Apr 1523	EXTENDED WARNING: Geomagnetic K = 4	19/1815 - 21/2100
24 Apr 0148	WARNING: Geomagnetic K = 4	24/0147 - 0600
25 Apr 0024	ALERT: X-ray Flux exceeded M5	25/0022
25 Apr 0048	SUMMARY: X-ray Event exceeded X1	25/0017 - 0038
25 Apr 0050	SUMMARY: 10cm Radio Burst	25/0020 - 0025
25 Apr 0117	ALERT: Type II Radio Emission	25/0022
25 Apr 0247	WARNING: Geomagnetic K = 4	25/0247 - 1300
25 Apr 1853	ALERT: Electron 2MeV Integral Flux $\geq$ 1000pfu	25/1835
26 Apr 1146	CONTINUED ALERT: Electron 2MeV Integral Flux $\geq$ 1000pfu	25/1835
27 Apr 1041	CONTINUED ALERT: Electron 2MeV Integral Flux $\geq$ 1000pfu	25/1835



## 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
28 Apr	115	5	2	12 May	150	5	2
29	120	8	3	13	150	5	2
30	120	8	3	14	150	10	3
01 May	125	5	2	15	145	8	3
02	130	5	2	16	140	5	2
03	135	5	2	17	140	5	2
04	140	5	2	18	135	5	2
05	145	5	2	19	130	5	2
06	150	5	2	20	130	5	2
07	150	5	2	21	125	10	3
08	150	5	2	22	120	8	3
09	150	5	2	23	120	5	2
10	150	5	2	24	115	5	2
11	150	5	2				



### *Energetic Events*

Date	Time			X-ray		Optical Information			Peak		Sweep Freq	
	Begin	Max	Half Max	Class	Integ Flux	Imp/ Brtns	Location	Rgn #	245	2695	II	IV
25 Apr	0017	0027	0038	X1.3	0.110			2035	43000	1100	2	

### *Flare List*

Date	Time			X-ray Class	Imp/ Brtns	Location	Rgn #
	Begin	Max	End				
21 Apr	0056	0108	0153	C1.7			2034
21 Apr	0449	0454	0457	C1.4			2045
21 Apr	0630	0634	0640	C1.2			2036
21 Apr	0653	0702	0709	C1.2			2036
21 Apr	0913	0935	1020	C2.0	SF	S10W07	2038
21 Apr	0933	0934	0937		SF	S23E61	2045
21 Apr	1143	1149	1153		SF	S17W67	2036
21 Apr	1326	1329	1337	C1.1	SF	S11W11	2038
21 Apr	1930	2002	2026	C5.1	SF	S11W14	2038
21 Apr	1944	1945	1948		SF	S11W54	2035
21 Apr	2108	2109	2114		SF	S11W54	2035
21 Apr	2209	2229	2246	C3.0			2038
21 Apr	2213	2213	2218		SF	S11W54	2035
21 Apr	2214	2224	2256		SF	S11W18	2038
21 Apr	2320	2331	2340	C2.3			2035
22 Apr	0034	0103	0118	C1.7			2035
22 Apr	0342	0420	0434	C2.0			2035
22 Apr	0525	0547	0606	C3.6	1F	S11W21	2038
22 Apr	0615	U0616	A0617		SF	S22E50	2045
22 Apr	0615	U0615	A0623		SF	S11W21	2038
22 Apr	0757	0803	0812	C2.9			2035
22 Apr	0844	0849	0854	C3.8	SF	S12W25	2038
22 Apr	0933	0939	0943	C2.4			2035
22 Apr	1129	1137	1141	C8.8	SF	S09W66	2035
22 Apr	1520	1522	1526		SF	S12W73	2035
22 Apr	1828	1841	1851	C2.5	SF	S12W31	2038
22 Apr	2003	2051	2109	C2.2			2034
23 Apr	0048	0104	0119	C4.3	SF	S12W35	2038
23 Apr	0837	0845	0859	C1.6			2034
23 Apr	1205	1214	1238	C2.3			2035



## *Flare List*

Date	Time			X-ray Class	Optical		Rgn #
	Begin	Max	End		Imp/ Brtns	Location Lat CMD	
23 Apr	1248	1306	1318	C5.1			2035
23 Apr	1351	1351	1355		SF	N07W14	
23 Apr	1504	1518	1528	C1.5			2035
23 Apr	2015	2043	2050	C1.7			2035
23 Apr	2322	2353	0005	C3.3			2044
24 Apr	1003	1016	1036	C2.9			2035
24 Apr	2059	2203	2218	C2.9			2035
25 Apr	0017	0027	0038	X1.3			2035
25 Apr	0033	0042	A0047		SF	S15W90	2046
25 Apr	1035	1042	1049	C1.0			2038
25 Apr	1155	1208	1238	C3.3			2035
25 Apr	2219	2230	2238	C1.9			2038
25 Apr	2354	0042	0203	C1.6			2045
26 Apr	0216	0227	0240	C1.5			
26 Apr	0546	0628	0718	C1.6			
26 Apr	1447	1459	1507	C2.4			2038
27 Apr	0534	0538	0544	B5.1			2045



## Region Summary

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 2033</b>																	
09 Apr	N12E62	263	60	2	Hsx	1	A										
10 Apr	N12E47	264	80	2	Hsx	1	A										
11 Apr	N12E34	264	110	2	Hsx	1	A										
12 Apr	N12E20	264	90	2	Hsx	1	A										
13 Apr	N12E08	264	90	2	Hsx	1	A										
14 Apr	N12W05	264	80	2	Hsx	1	A										
15 Apr	N12W18	263	60	2	Hsx	1	A										
16 Apr	N12W31	263	80	2	Hsx	2	A										
17 Apr	N13W45	263	80	2	Hsx	1	A										
18 Apr	N12W58	263	80	2	Hsx	2	A										
19 Apr	N12W71	264	80	1	Hsx	1	A										
20 Apr	N11W84	264	60	2	Hsx	1	A	3									
								3	0	0	0	0	0	0	0	0	0

Crossed West Limb.  
 Absolute heliographic longitude: 264

<b>Region 2034</b>																	
10 Apr	N04E71	240	30	5	Dro	5	B					1					
11 Apr	N05E57	241	130	9	Dao	5	B										
12 Apr	N04E44	242	220	10	Dai	9	B										
13 Apr	N05E31	241	250	10	Dho	11	BG										
14 Apr	N04E16	243	210	12	Eai	13	B										
15 Apr	N04E02	242	200	11	Eai	14	BG										
16 Apr	N04W10	242	250	11	Eki	19	B	2				3					
17 Apr	N05W26	244	280	9	Dhc	40	B										
18 Apr	N04W39	244	480	11	Ekc	27	B										
19 Apr	N05W52	245	400	11	Ekc	16	BG	2				1					
20 Apr	N04W66	246	270	11	Eko	16	BG	2									
21 Apr	N05W80	247	260	13	Eki	11	BG	1									
22 Apr	N06W92	244	80	11	Eso	1	B	1									
								8	0	0	5	0	0	0	0	0	0

Crossed West Limb.  
 Absolute heliographic longitude: 242





### *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 2035</b>																				
09 Apr	S15E0*	224	plage																	
10 Apr	S15E88	224	plage																	
11 Apr	S15E74	224	150	10	Dao	2	B													
12 Apr	S16E62	224	190	11	Eai	7	BG													
13 Apr	S18E50	222	210	12	Eai	13	BG													
14 Apr	S18E37	222	260	14	Ehi	16	BG													
15 Apr	S19E26	219	190	16	Fac	18	BG	5				6								
16 Apr	S17E11	221	320	15	Ekc	45	BG	5	1			6	2							
17 Apr	S14W04	222	240	16	Fsc	40	BG	5				3								
18 Apr	S15W18	223	340	13	Ekc	45	BGD					2								
19 Apr	S16W31	224	290	12	Ekc	33	BG	1												
20 Apr	S16W43	223	200	13	Eai	30	BG	4				4	1							
21 Apr	S15W58	225	290	12	Eki	27	BG	1				3								
22 Apr	S13W71	223	240	13	Eac	18	B	5				2								
23 Apr	S13W85	224	390	14	Ekc	9	BG	4												
								44	1	0	26	3	0	0	0					

Crossed West Limb.

Absolute heliographic longitude: 222

### **Region 2036**

13 Apr	S18E25	247	20	3	Dro	5	B	2				2								
14 Apr	S18E13	246	70	5	Dai	8	BG	9				15								
15 Apr	S18W01	246	270	8	Dkc	15	BG	6				5	1							
16 Apr	S18W14	246	450	8	Dkc	22	BG													
17 Apr	S15W28	246	510	9	Dhc	34	BG	1				1								
18 Apr	S16W41	246	390	10	Dhc	47	BG	4	1			2								
19 Apr	S17W54	247	300	10	Dkc	35	BG	2												
20 Apr	S17W68	248	180	10	Dac	20	BG	2												
21 Apr	S17W81	248	150	11	Esi	11	BG	2				1								
22 Apr	S17W92	245	90	13	Eso	3	B													
								28	1	0	26	1	0	0	0					

Crossed West Limb.

Absolute heliographic longitude: 246



### *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 2037</b>																							
13 Apr	S10E30	242	20	2	Bxo	4	B	1				1											
14 Apr	S09E16	243	30	3	Cao	6	B																
15 Apr	S09E03	242	40	2	Dso	3	BG																
16 Apr	S10W13	245	100	7	Dai	27	BG	1				2											
17 Apr	S09W27	245	110	8	Dai	24	BG	1				1											
18 Apr	S09W40	245	100	7	Dai	15	BG																
19 Apr	S10W54	247	90	8	Cso	8	B																
20 Apr	S10W67	247	40	9	Cao	4	B																
21 Apr	S09W82	249	30	2	Hax	1	A																
								3	0	0		4	0	0	0	0	0						

Crossed West Limb.  
Absolute heliographic longitude: 242

<b>Region 2038</b>																							
15 Apr	S12E64	181	30	2	Cso	2	B																
16 Apr	S14E51	181	70	4	Cso	4	B																
17 Apr	S13E37	181	50	2	Cso	6	B																
18 Apr	S13E23	182	90	6	Dac	8	B																
19 Apr	S11E09	184	100	6	Dsi	15	B																
20 Apr	S11W05	185	80	6	Dai	12	B	1				1											
21 Apr	S10W20	187	90	7	Cai	18	B	4				4											
22 Apr	S12W33	185	80	7	Dac	24	BG	3				3	1										
23 Apr	S11W47	186	110	7	Dai	15	BG	1				1											
24 Apr	S10W59	185	70	7	Dao	7	B																
25 Apr	S09W74	187	40	3	Cao	3	B					2											
26 Apr	S09W88	189	plage									1											
								12	0	0		9	1	0	0	0							

Crossed West Limb.  
Absolute heliographic longitude: 185



### *Region Summary - continued*

Date	Location		Sunspot Characteristics				Flares								
	Lat	CMD	Helio	Area	Extent	Spot	Spot	Mag	X-ray			Optical			
			Lon	10 <sup>6</sup> hemi.	(helio)	Class	Count	Class	C	M	X	S	1	2	3

#### ***Region 2039***

15 Apr	N16E28	217	10	1	Bxo	2	B										
16 Apr	N23W02	220	10	2	Bxo	2	B										
17 Apr	N25W17	223	10	3	Bxo	5	B										
18 Apr	N23W30	235	10	5	Bxo	3	B										
19 Apr	N24W42	235	10	3	Bxo	4	B										
20 Apr	N24W56	236	plage														
21 Apr	N24W70	237	plage														
22 Apr	N24W84	237	plage														
								0	0	0	0	0	0	0	0	0	0

Crossed West Limb.  
Absolute heliographic longitude: 220

#### ***Region 2040***

15 Apr	N24E11	234	0		Bxo	1	B										
16 Apr	N15E11	231	10	8	Bxo	7	B										
17 Apr	N16W02	228	10	9	Bxo	14	B										
18 Apr	N16W15	221	10	4	Bxo	3	B										
19 Apr	N15W28	221	20	4	Cro	6	B										
20 Apr	N15W42	222	plage														
21 Apr	N15W56	223	plage														
22 Apr	N15W70	223	plage														
23 Apr	N15W84	224	plage														
								0	0	0	0	0	0	0	0	0	0

Crossed West Limb.  
Absolute heliographic longitude: 228

#### ***Region 2041***

16 Apr	S21W30	262	10	2	Bxo	4	B										
17 Apr	S19W43	261	10	2	Bxo	5	B										
18 Apr	S19W57	263	plage														
19 Apr	S19W71	264	plage														
20 Apr	S19W85	265	plage														
								0	0	0	0	0	0	0	0	0	0

Crossed West Limb.  
Absolute heliographic longitude: 262



### *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 2042</b>																							
16 Apr	N19E69	163	70	6	Cso	2	B	2				8											
17 Apr	N18E54	165	240	9	Dso	4	B																
18 Apr	N18E41	164	230	9	Dao	12	B																
19 Apr	N19E27	166	270	11	Eko	11	B																
20 Apr	N19E15	165	170	9	Cso	4	B																
21 Apr	N18E02	165	160	9	Dao	4	B																
22 Apr	N18W11	163	170	8	Cao	5	B																
23 Apr	N17W24	163	180	8	Cso	11	B																
24 Apr	N18W40	166	160	2	Hsx	1	A																
25 Apr	N18W53	167	140	5	Cso	2	B																
26 Apr	N18W67	168	140	5	Cso	2	B																
27 Apr	N19W81	168	110	2	Hsx	1	A																
								2	0	0		8	0	0	0	0	0						

Still on Disk.

Absolute heliographic longitude: 165

### **Region 2043**

17 Apr	S11W17	235	10	2	Bxo	2	B														
18 Apr	S11W31	237	plage																		
19 Apr	S11W45	238	plage																		
20 Apr	S11W59	239	plage																		
21 Apr	S11W73	240	plage																		
22 Apr	S11W87	240	plage																		
								0	0	0		0	0	0	0	0	0				

Crossed West Limb.

Absolute heliographic longitude: 235



### *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 2044</b>																	
19 Apr	S20E52	141	10	5	Bxo	6	B	2			2						
20 Apr	S20E37	143	30	9	Dro	11	B										
21 Apr	S21E24	143	30	9	Cao	12	B										
22 Apr	S19E10	142	20	9	Cso	5	B										
23 Apr	S18E04	136	30	4	Cro	7	B	1									
24 Apr	S21W14	139	30	4	Cro	7	B										
25 Apr	S21W27	141	20	6	Cso	6	B										
26 Apr	S21W41	142	20	6	Cso	6	B										
27 Apr	S21W55	142	plage														
								3	0	0	2	0	0	0	0	0	

Still on Disk.

Absolute heliographic longitude: 136

<b>Region 2045</b>																	
19 Apr	S25E78	115	50	2	Hax	2	A	2			1						
20 Apr	S22E62	118	50	3	Cao	4	B										
21 Apr	S23E47	120	50	2	Cao	4	B	1			1						
22 Apr	S23E36	117	80	5	Dao	10	B				1						
23 Apr	S24E23	117	100	10	Dao	13	B										
24 Apr	S25E09	117	120	2	Cso	1	B										
25 Apr	S24W02	116	140	5	Cao	8	B	1									
26 Apr	S24W16	117	140	5	Cao	8	B										
27 Apr	S25W29	116	140	5	Cao	6	B										
								4	0	0	3	0	0	0	0	0	

Still on Disk.

Absolute heliographic longitude: 116

<b>Region 2046</b>																	
24 Apr	S17W78	204	70	4	Cao	5	B										
25 Apr	S16W91	205	50	4	Dso	4	B				1						
								0	0	0	1	0	0	0	0	0	

Crossed West Limb.

Absolute heliographic longitude: 204

<b>Region 2047</b>																	
27 Apr	S18E42	45	10	5	Cro	2	B										
								0	0	0	0	0	0	0	0	0	

Still on Disk.

Absolute heliographic longitude: 45



### *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

#### ***Region 2048***

27 Apr	N20W37	124	40	8	Dai	11	B	0	0	0	0	0	0	0	0
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Still on Disk.  
Absolute heliographic longitude: 124

#### ***Region 2049***

27 Apr	S07E71	16	180	7	Dao	3	B	0	0	0	0	0	0	0	0
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Still on Disk.  
Absolute heliographic longitude: 16

#### ***Region 2050***

27 Apr	N12E73	14	40	2	Hsx	1	A	0	0	0	0	0	0	0	0
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Still on Disk.  
Absolute heliographic longitude: 14

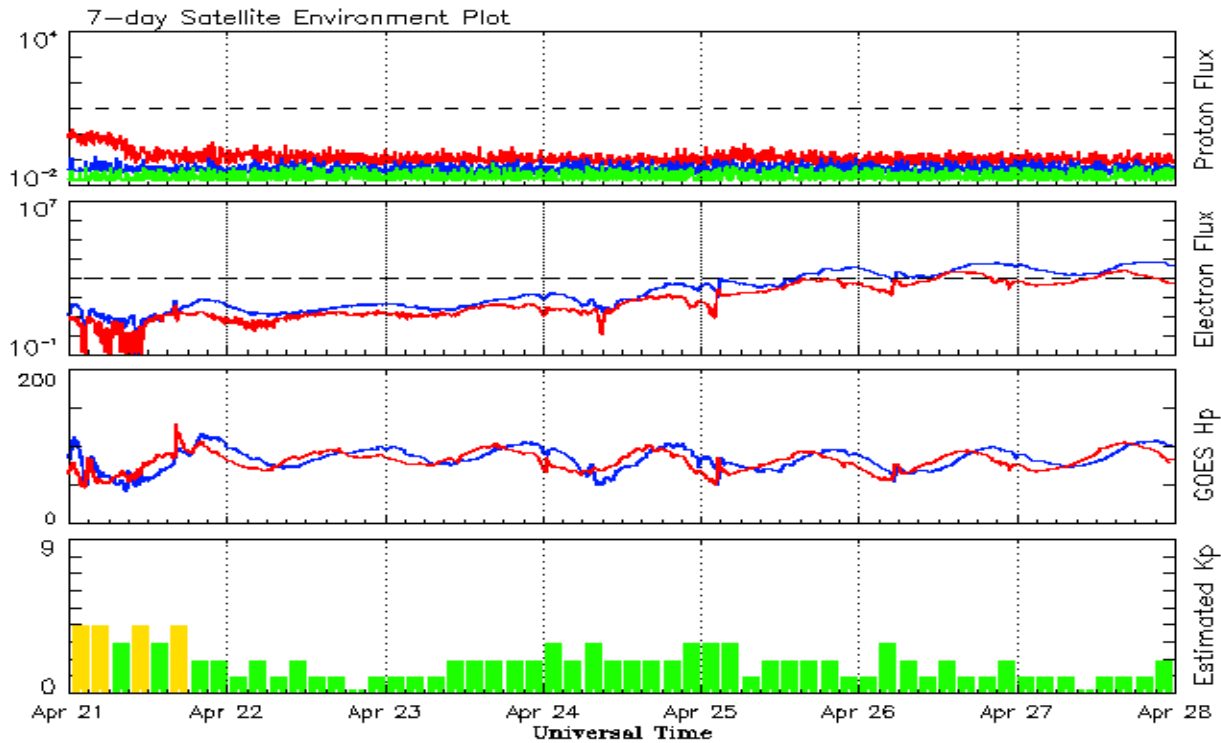


**Recent Solar Indices (preliminary)  
Observed monthly mean values**

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>2012</b>									
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
<b>2013</b>									
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	57.6	111.2	117.1	9	7.4
April	112.8	72.4	0.64	86.7	57.9	125.0	116.6	5	7.2
May	125.5	78.7	0.63	90.5	59.9	131.3	118.1	10	7.0
June	80.1	52.5	0.66	94.4	62.6	110.2	120.9	13	7.1
July	86.1	57.0	0.66	97.9	65.5	115.6	123.9	9	7.3
August	90.2	66.0	0.73	103.7	69.0	114.7	127.9	9	7.6
September	55.0	37.0	0.67	111.0	73.1	102.7	132.3	5	7.8
October	127.1	85.6	0.67			132.3		7	
November	125.7	77.6	0.62			148.4		5	
December	118.2	90.3	0.76			147.7		5	
<b>2014</b>									
January	125.9	82.0	0.65			158.6		6	
February	174.6	102.8	0.59			170.3		12	
March	141.1	92.2	0.65			149.9		6	

**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 21 April 2014*

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.

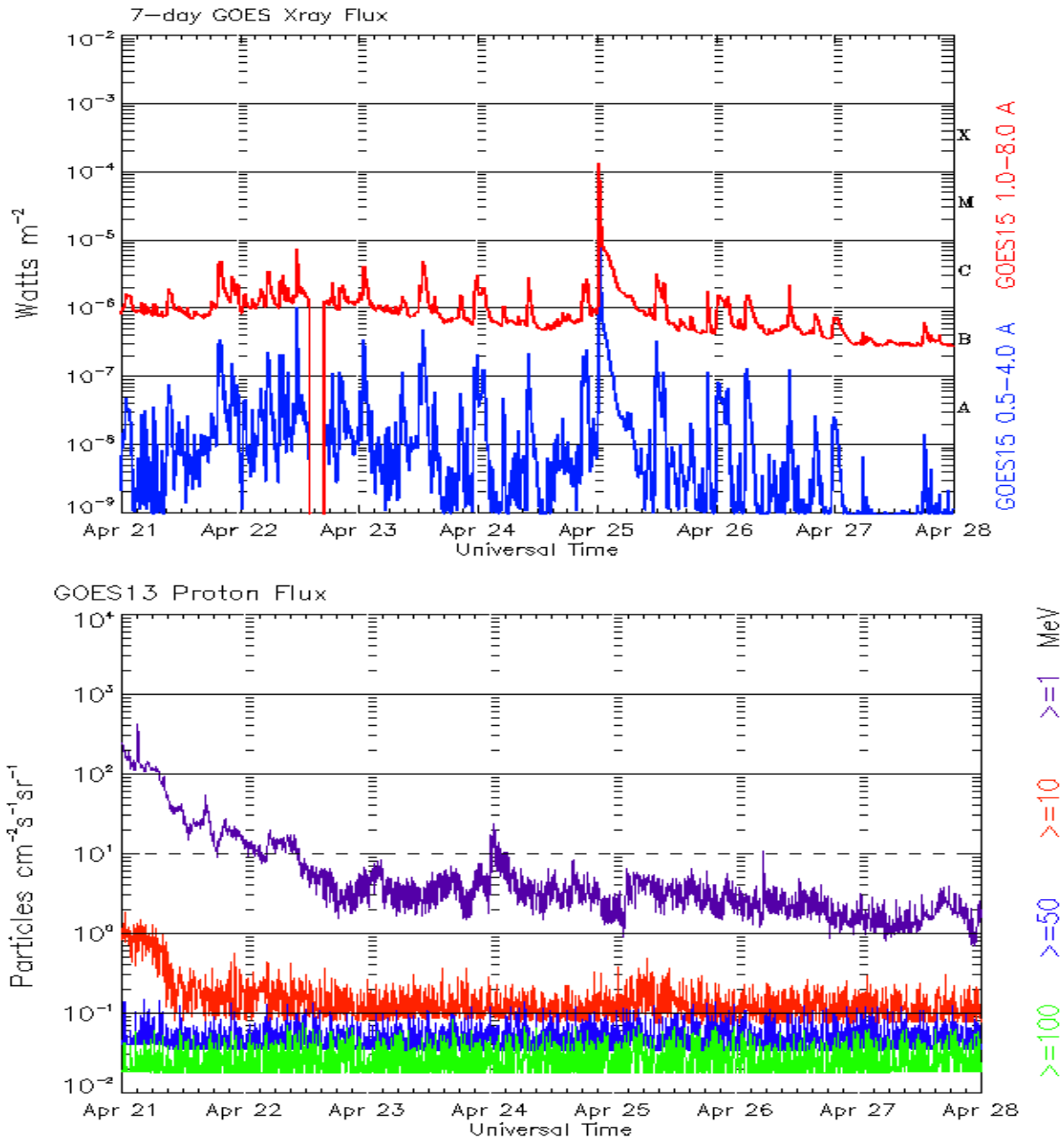
The Hp plot contains the five minute averaged Hp magnetic field component in nanoteslas (nT) as by the SWPC Primary GOES satellite. The Hp component is parallel to the spin axis of the satellite, which is nearly parallel to the Earth's rotation axis.

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.



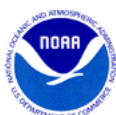




*Weekly GOES Satellite X-ray and Proton Plots  
Week Beginning 21 April 2014*

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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