

Solar activity was at low levels throughout the period. Region 2303 (N19, L=066, class/area=Hkx/400 on 17 Mar) produced low to mid-level C-class activity early in the period while Regions 2318 (N10, L=199, class/area=Dao/199 on 05 Apr) and 2320 (S12, L=212, class/area=Dai/140 on 05 Apr) each produced only low-level C-class flare activity throughout the remainder of the period.

A filament eruption centered near S29E28 was observed in SDO/AIA 193 imagery between 04/2225-2330 UTC. A long-duration C3/1f hyderflare was measured during this event and had an associated Type-II radio emission. The subsequent fast-moving coronal mass ejection (CME) was first observed in SOHO/LASCO C2 coronagraph imagery beginning at 04/2336 UTC. WSA-ENLIL model output suggests a glancing blow arrival of this CME late on 07 April.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit was at normal levels on 30 Mar and normal to moderate levels on 31 Mar-05 Apr.

Geomagnetic field activity was at quiet to unsettled levels on 02-04 Apr with an isolated period of active conditions observed between 2100-2359 UTC on 02 Apr due to the effects of a positive polarity coronal hole high speed stream. Quiet to unsettled levels were observed on 30 Mar-01 Apr, and 05 Apr under a mostly nominal solar wind environment.

### **Space Weather Outlook** **06 April - 02 May 2015**

Solar activity is expected to be low (below NOAA Scale event thresholds) with a slight chance for M-class (R1-Minor) flare activity throughout the outlook period.

No proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to reach high levels on 22-24 Apr and 02 May, moderate levels on 06-08, 11-14, 17, 20-21 Apr, and 27 Apr-01 May, and at normal levels for the remainder of the period.

Geomagnetic field activity is expected to be at G1 (Minor) geomagnetic storm levels on 15-16, 18-19, and 25-27 Apr due to coronal hole high speed stream effects. Active conditions are expected on 07-09 Apr due to the anticipated arrival of the 04/05 Apr CME. Active conditions are expected on 17, 20 Apr, and 28 Apr-01 May due to coronal hole high speed stream effects with generally quiet to unsettled levels likely for the remainder of the period.



### *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
30 March	134	56	490	B6.6	5	0	0	0	0	0	0	0
31 March	128	53	350	B4.7	0	0	0	0	0	0	0	0
01 April	124	69	520	B3.9	0	0	0	0	0	0	0	0
02 April	121	31	280	B4.1	2	0	0	2	0	0	0	0
03 April	120	29	70	B4.1	1	0	0	0	0	0	0	0
04 April	122	68	130	B3.9	3	0	0	0	0	0	0	0
05 April	122	66	230	B4.8	2	0	0	1	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
	30 March	5.3e+04	1.1e+04	2.4e+03		2.2e+06
31 March	1.9e+05	1.1e+04	2.4e+03		9.0e+06	
01 April	2.9e+05	1.0e+04	2.3e+03		8.6e+06	
02 April	3.4e+05	1.1e+04	2.5e+03		3.3e+06	
03 April	2.3e+05	1.2e+04	2.8e+03		2.7e+06	
04 April	6.7e+05	1.0e+04	2.6e+03		9.0e+06	
05 April	6.0e+05	1.1e+04	2.6e+03		1.2e+07	

### *Daily Geomagnetic Data*

Date	Middle Latitude Fredericksburg		High Latitude College		Estimated Planetary	
	A	K-indices	A	K-indices	A	K-indices
	30 March	5	2-2-0-1-3-1-1-1	3	2-2-1-2-0-0-0-0	5
31 March	7	1-1-2-2-3-2-2-2	7	0-1-2-3-3-2-2-1	9	1-1-2-2-3-2-3-2
01 April	8	1-1-2-2-3-3-2-2	5	1-1-1-2-2-1-1-2	7	2-1-2-2-2-3-2-2
02 April	22	1-2-2-2-4-3-6-4	16	0-1-3-4-5-3-2-3	13	1-2-2-2-3-2-3-4
03 April	14	3-3-3-3-3-3-2-3	16	3-2-3-4-4-3-3-2	14	3-3-3-3-3-3-2-3
04 April	10	3-2-1-2-3-3-2-2	17	3-3-1-3-5-4-2-2	12	3-3-2-2-3-3-2-2
05 April	8	2-2-1-1-2-3-2-3	5	2-2-1-1-1-1-1-2	8	2-3-2-1-1-2-2-3

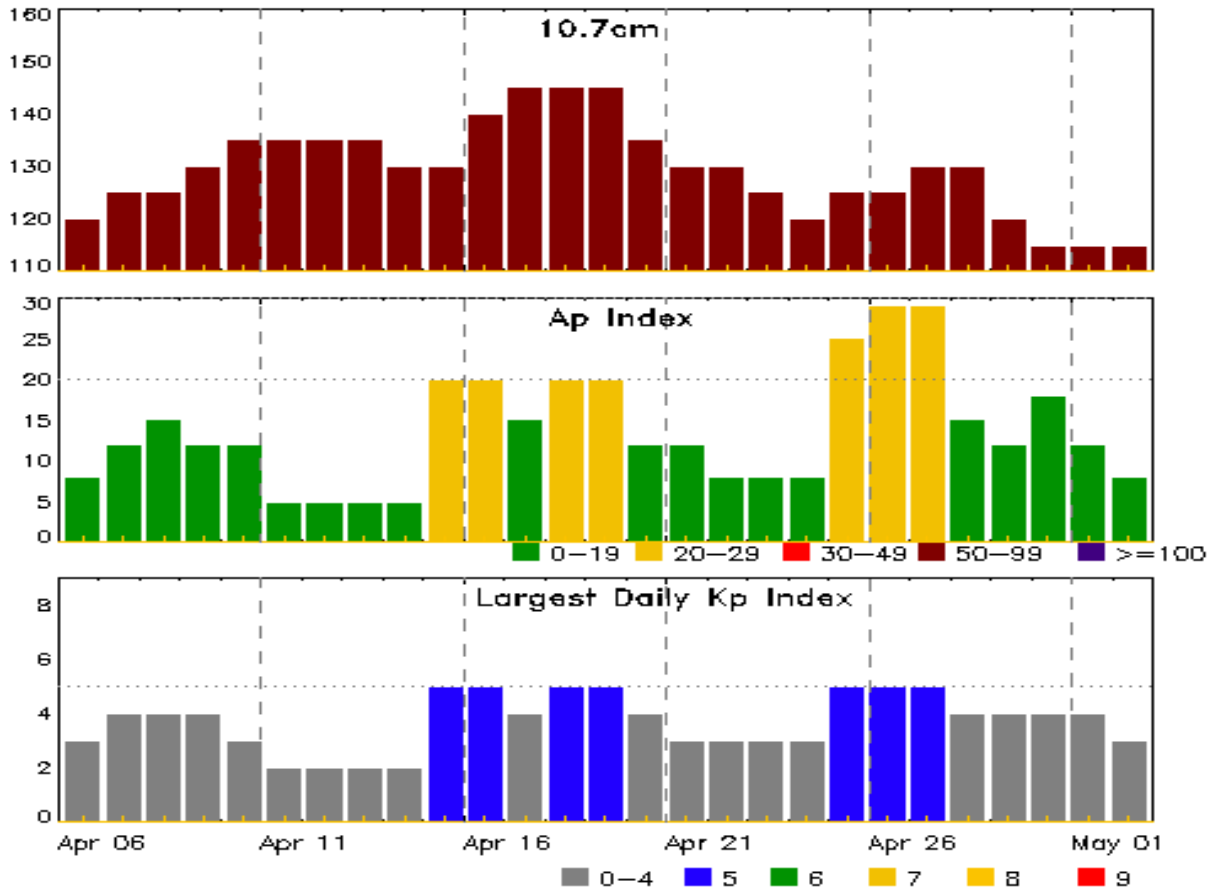


### *Alerts and Warnings Issued*

<b>Date &amp; Time of Issue UTC</b>	<b>Type of Alert or Warning</b>	<b>Date &amp; Time of Event UTC</b>
30 Mar 2144	CANCELLATION: Geomagnetic Storm Category G1 predicted	
02 Apr 1542	WARNING: Geomagnetic K = 4	02/1545 - 03/0400
02 Apr 2140	ALERT: Geomagnetic K = 4	02/2139
02 Apr 2239	WARNING: Geomagnetic K = 5	02/2238 - 03/0400
03 Apr 0355	EXTENDED WARNING: Geomagnetic K = 4	02/1545 - 03/1300
03 Apr 1202	EXTENDED WARNING: Geomagnetic K = 4	02/1545 - 04/0200
04 Apr 1117	WARNING: Geomagnetic K = 4	04/1116 - 2359
04 Apr 2355	ALERT: Type II Radio Emission	04/2313



## 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
06 Apr	120	8	3	20 Apr	135	12	4
07	125	12	4	21	130	12	3
08	125	15	4	22	130	8	3
09	130	12	4	23	125	8	3
10	135	12	3	24	120	8	3
11	135	5	2	25	125	25	5
12	135	5	2	26	125	29	5
13	135	5	2	27	130	29	5
14	130	5	2	28	130	15	4
15	130	20	5	29	120	12	4
16	140	20	5	30	115	18	4
17	145	15	4	01 May	115	12	4
18	145	20	5	02	115	8	3
19	145	20	5				



### *Energetic Events*

Date	Time			X-ray	Optical Information			Peak		Sweep Freq		
	Begin	Max	Half Max	Class	Integ Flux	Imp/ Brtns	Location Lat CMD	Rgn #	Radio Flux		Intensity	
									245	2695	II	IV

**No Events Observed**

### *Flare List*

Date	Time			X-ray Class	Optical			Rgn #
	Begin	Max	End		Imp/ Brtns	Location Lat CMD		
30 Mar	0138	0152	0214	C4.7				2303
30 Mar	1246	1255	1302	C2.4				2303
30 Mar	1534	1547	1603	C1.5				2305
30 Mar	2021	2027	2033	C1.6				2303
30 Mar	2138	2205	2216	C4.1				2303
31 Mar	0431	0558	1029	B7.5				
31 Mar	0830	0956	1220	B6.8				
02 Apr	0419	0534	0626	C1.3				
02 Apr	0848	0849	0850		SF	N08W59		2312
02 Apr	1342	1347	1353	B8.3	SF	S22W76		2315
02 Apr	2157	2202	2207	C1.0				
03 Apr	0651	0726	0758	C1.7				
03 Apr	2010	2035	2101	B8.9				
04 Apr	0017	0022	0025	B6.1				2318
04 Apr	0030	0033	0035	B9.8				2318
04 Apr	1138	1154	1210	C1.0				2318
04 Apr	1610	1613	1615	B8.5				2320
04 Apr	1629	1649	1709	B8.6				2320
04 Apr	1920	2014	2111	C1.0				2320
04 Apr	2216	0007	0145	C3.8				
05 Apr	B0006	0018	0050		SF	N08E58		2318
05 Apr	0308	0336	0357	C1.9				
05 Apr	1826	1834	1842	B7.5				2320
05 Apr	2039	2103	2129	C3.0				2320



### *Region Summary*

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 2303</b>																				
17 Mar	N19E65		66	400	2	Hkx	1	A												
18 Mar	N19E51		67	100	2	Hax	1	A												
19 Mar	N18E39		65	70	3	Hax	2	A												
20 Mar	N19E25		66	110	2	Hsx	2	A												
21 Mar	N19E11		67	120	2	Hsx	1	A												
22 Mar	N20W02		67	100	3	Cso	4	B												
23 Mar	N20W15		66	90	2	Cso	3	B												
24 Mar	N19W30		69	100	5	Cao	7	B												
25 Mar	N20W42		67	80	8	Cao	4	B												
26 Mar	N20W54		66	70	2	Hsx	2	A					1							
27 Mar	N18W66		65	50	5	Cao	1	B	1											
28 Mar	N18W78		63	50	6	Dao	3	B	4				9							
29 Mar	N18W92		65	50	6	Dao	4	B	6				16							
									11	0	0	26	0	0	0	0				

Crossed West Limb.  
Absolute heliographic longitude: 67

<b>Region 2305</b>																				
21 Mar	S08E67		11	120	4	Dao	5	B												
22 Mar	S08E58		7	220	11	Eac	10	BG												
23 Mar	S08E44		8	310	11	Ekc	15	BG					2							
24 Mar	S08E32		7	340	13	Ekc	15	BGD					1							
25 Mar	S08E19		7	400	15	Ekc	26	BGD	8				6	1						
26 Mar	S08E05		7	390	14	Cki	16	BG	4				4							
27 Mar	S09W10		9	410	13	Eki	17	BG					1							
28 Mar	S08W19		4	410	14	Eki	22	BG	2											
29 Mar	S10W36		9	340	10	Dho	7	B	1											
30 Mar	S10W51		11	440	8	Dho	7	B	1											
31 Mar	S11W64		10	310	8	Cho	6	B												
01 Apr	S10W80		13	470	6	Cho	2	B												
02 Apr	S09W91		11	220	4	Hsx	1	A												
									16	0	0	14	1	0	0	0				

Crossed West Limb.  
Absolute heliographic longitude: 7



### *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

#### ***Region 2307***

22 Mar	S18E24	41	20	4	Cro	5	B										
23 Mar	S18E09	43	20	6	Cro	3	B										
24 Mar	S19W04	43	10	3	Bxo	3	B										
25 Mar	S18W17	43	20	4	Cro	6	B										
26 Mar	S18W29	41	30	4	Cro	5	B										
27 Mar	S19W39	38	10	1	Bxo	3	B										
28 Mar	S19W53	38	plage														
29 Mar	S19W67	40	plage														
30 Mar	S19W81	41	plage														
										0	0	0	0	0	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 43

#### ***Region 2310***

23 Mar	N05E54	358	20	1	Cao	5	B										
24 Mar	N06E41	358	20	3	Cao	4	B										
25 Mar	N06E27	359	20	2	Cao	2	B					2					
26 Mar	N05E14	358	10	1	Axx	2	A										
27 Mar	N04E01	358	10	1	Bxo	2	B										
28 Mar	N04W11	356	plage					2				1					
29 Mar	N04W24	357	plage														
30 Mar	N04W39	359	plage														
01 Apr	N04W69	2	plage														
02 Apr	N04W82	2	plage														
										2	0	0	3	0	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 358



### *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	4	
<b>Region 2312</b>																	
23 Mar	N08E68		343	10	2	Axx	2	A									
24 Mar	N08E54		345	30	3	Cao	3	B					4				
25 Mar	N08E38		348	30	2	Cao	5	B									
26 Mar	N08E26		346	20	3	Cro	4	B									
27 Mar	N08E12		347	10		Axx	1	A									
28 Mar	N08W02		348	plage					2				2				
29 Mar	N08W15		348	plage													
30 Mar	N08W29		349	plage													
31 Mar	N08W43		350	plage													
01 Apr	N08W58		351	10	2	Bxo	3	B									
02 Apr	N09W55		351	plage									1				
03 Apr	N09W84		351	plage													
									2	0	0		7	0	0	0	0

Crossed West Limb.  
 Absolute heliographic longitude: 348

<b>Region 2313</b>																	
24 Mar	N18E63		336	30	2	Hsx	1	A					1				
25 Mar	N17E50		336	50	2	Hsx	1	A									
26 Mar	N17E38		334	50	2	Hax	1	A									
27 Mar	N17E26		333	30	1	Hsx	1	A									
28 Mar	N17E11		334	30	1	Hax	1	A									
29 Mar	N17W01		334	10	1	Hrx	1	A									
30 Mar	N17W15		335	10	1	Hrx	1	A									
31 Mar	N18W26		332	10	3	Bxo	3	B									
01 Apr	N18W40		333	plage													
02 Apr	N18W54		334	plage													
03 Apr	N18W68		335	plage													
04 Apr	N18W82		336	plage													
									0	0	0		1	0	0	0	0

Crossed West Limb.  
 Absolute heliographic longitude: 334





**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 2314**

26 Mar	S23E66	306	20	3	Cro	3	B										
27 Mar	S21E54	305	20	2	Cro	2	B										
28 Mar	S21E40	305	plage														
29 Mar	S21E27	306	plage														
30 Mar	S21E13	307	plage														
31 Mar	S21W01	307	plage														
01 Apr	S21W15	308	plage														
02 Apr	S21W29	309	plage														
03 Apr	S21W43	310	plage														
04 Apr	S21W57	311	plage														
05 Apr	S21W71	311	plage														
									0	0	0	0	0	0	0	0	0

Still on Disk.  
Absolute heliographic longitude: 307

**Region 2315**

28 Mar	S19W16	360	10	2	Cao	2	B										
29 Mar	S20W29	2	30	5	Dro	8	B	1									
30 Mar	S20W41	1	30	7	Cro	5	B										
31 Mar	S21W53	359	20	7	Cao	3	B										
01 Apr	S21W66	359	10	3	Bxo	6	B										
02 Apr	S25W79	359	plage									1					
									1	0	0	1	0	0	0	0	0

Crossed West Limb.  
Absolute heliographic longitude: 360

**Region 2316**

29 Mar	S21E44	289	20	6	Bxo	3	B										
30 Mar	S21E30	290	10	4	Bxo	3	B										
31 Mar	S21E16	290	10	1	Axx	1	A										
01 Apr	S21E06	287	0	1	Axx	2	A										
02 Apr	S21W08	288	plage														
03 Apr	S21W22	289	plage														
04 Apr	S21W36	290	plage														
05 Apr	S21W50	290	plage														
									0	0	0	0	0	0	0	0	0

Still on Disk.  
Absolute heliographic longitude: 287



### *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

#### ***Region 2317***

01 Apr	N10W32	325	30	3	Dro	6	B										
02 Apr	N09W45	324	60	5	Dsi	10	B										
03 Apr	N11W59	326	50	8	Dai	6	B										
04 Apr	N11W73	327	40	8	Cao	7	B										
05 Apr	N11W85	325	30	1	Hsx	1	A										
								0	0	0	0	0	0	0	0	0	

Still on Disk.

Absolute heliographic longitude: 325

#### ***Region 2318***

03 Apr	N09E69	198	20	4	Cro	3	B										
04 Apr	N09E57	197	40	7	Dao	6	B	1									
05 Apr	N10E41	199	50	8	Dao	9	B				1						
								1	0	0	1	0	0	0	0	0	

Still on Disk.

Absolute heliographic longitude: 199

#### ***Region 2319***

04 Apr	S11E06	248	20	3	Cro	6	B										
05 Apr	S10W06	246	10	2	Axx	2	A										
								0	0	0	0	0	0	0	0	0	

Still on Disk.

Absolute heliographic longitude: 248

#### ***Region 2320***

04 Apr	S12E40	214	30	4	Dao	9	B	1									
05 Apr	S12E28	212	140	5	Dai	14	B	1									
								2	0	0	0	0	0	0	0	0	

Still on Disk.

Absolute heliographic longitude: 212

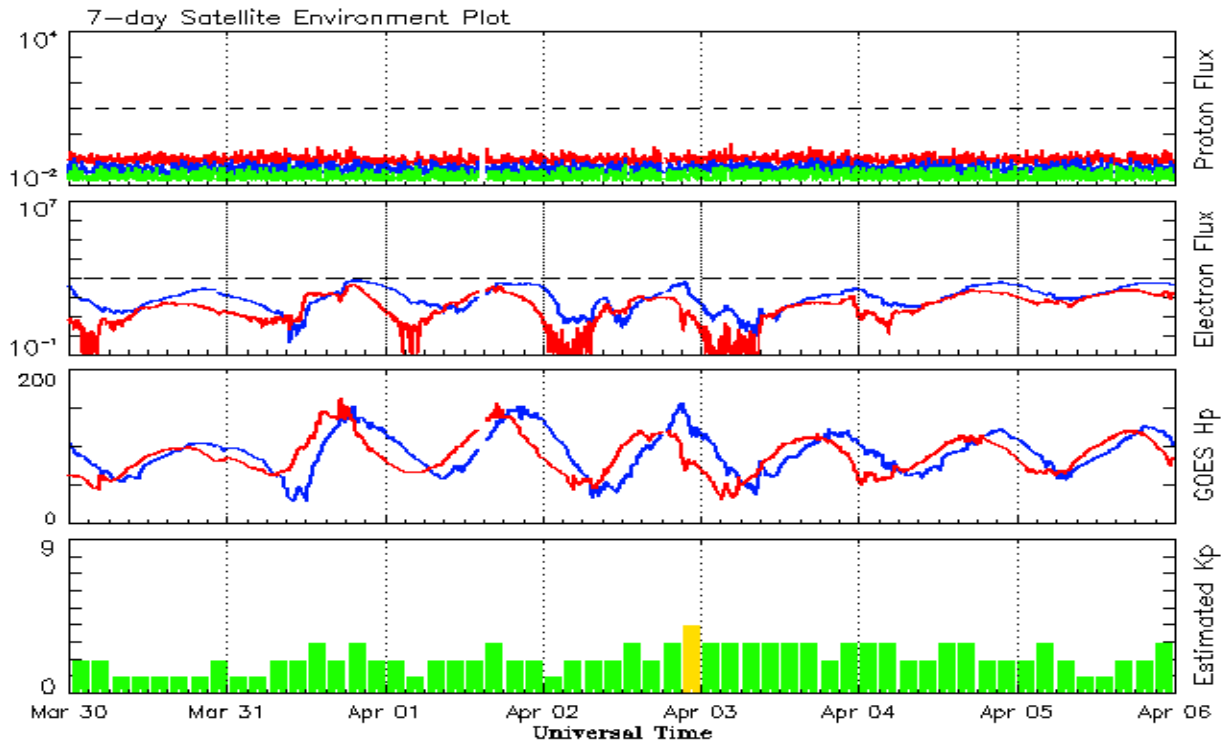


**Recent Solar Indices (preliminary)  
Observed monthly mean values**

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>2013</b>									
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	68.9	114.7	127.9	9	7.6
September	55.0	37.0	0.67	111.0	73.0	102.7	132.3	5	7.8
October	127.1	85.6	0.67	114.3	74.9	132.3	134.7	7	7.8
November	125.7	77.6	0.62	114.6	75.3	148.4	135.4	5	7.9
December	118.2	90.3	0.76	115.4	75.9	147.7	135.9	5	7.5
<b>2014</b>									
January	125.9	81.8	0.65	117.7	77.3	158.6	137.3	6	7.1
February	174.6	102.3	0.59	119.5	78.3	170.3	138.6	12	6.9
March	141.1	91.9	0.65	123.2	80.8	149.9	140.8	6	7.2
April	130.5	84.7	0.65	124.8	81.9	144.3	143.5	9	7.5
May	116.8	75.2	0.64	122.3	80.5	130.0	144.7	7	7.9
June	107.7	71.0	0.66	121.4	79.7	122.2	145.5	7	8.4
July	113.6	72.4	0.64	120.4	78.5	137.3	145.2	5	8.8
August	106.2	74.6	0.70	115.1	75.5	124.7	142.8	9	8.9
September	127.4	87.6	0.69	107.4	70.8	146.1	140.1	11	9.3
October	92.0	60.6	0.66			153.7		10	
November	101.8	70.2	0.69			155.3		10	
December	120.0	76.7	0.65			158.7		12	
<b>2015</b>									
January	101.2	67.0	0.66			141.7		10	
February	70.6	44.8	0.63			128.8		10	
March	61.7	38.4	0.62			126.0		17	

**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 30 March 2015*

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.

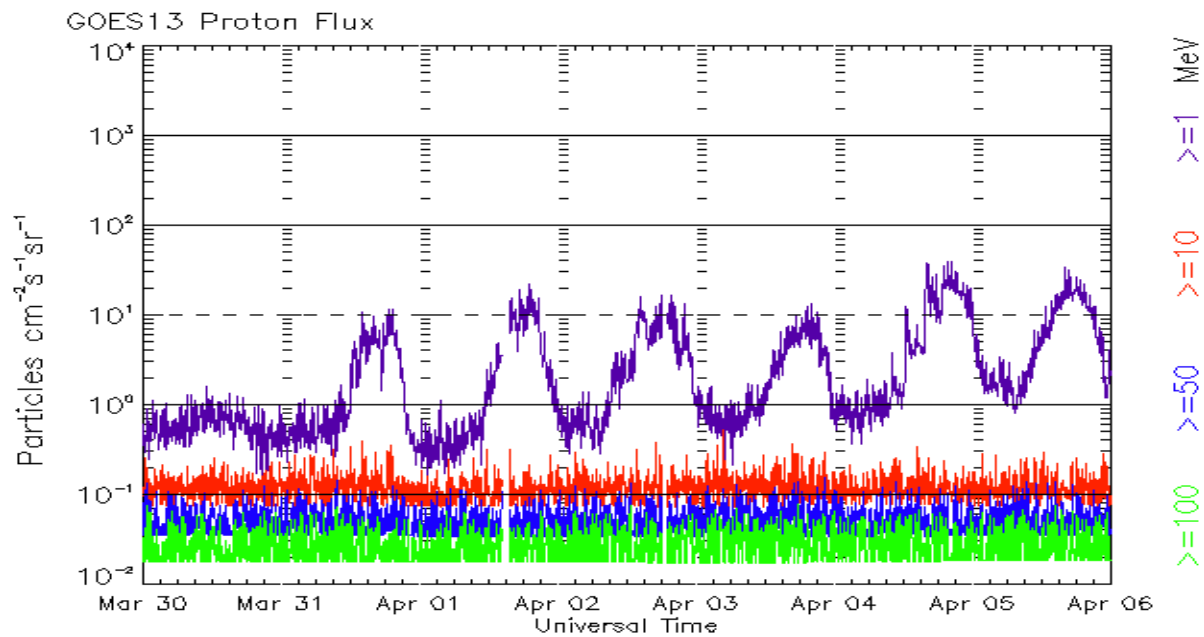
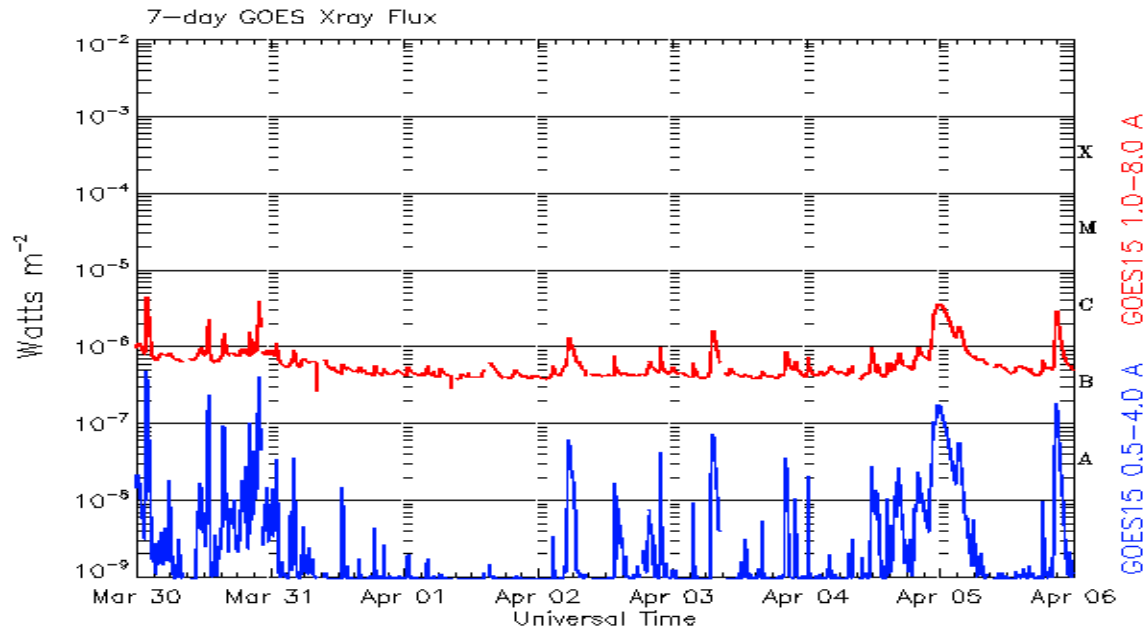
The electron flux plot contains the five-minute averaged integral electron flux (electrons/cm<sup>2</sup>-sec -sr) with energies greater than 2 MeV by the SWPC Primary GOES satellite.

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 30 March 2015*

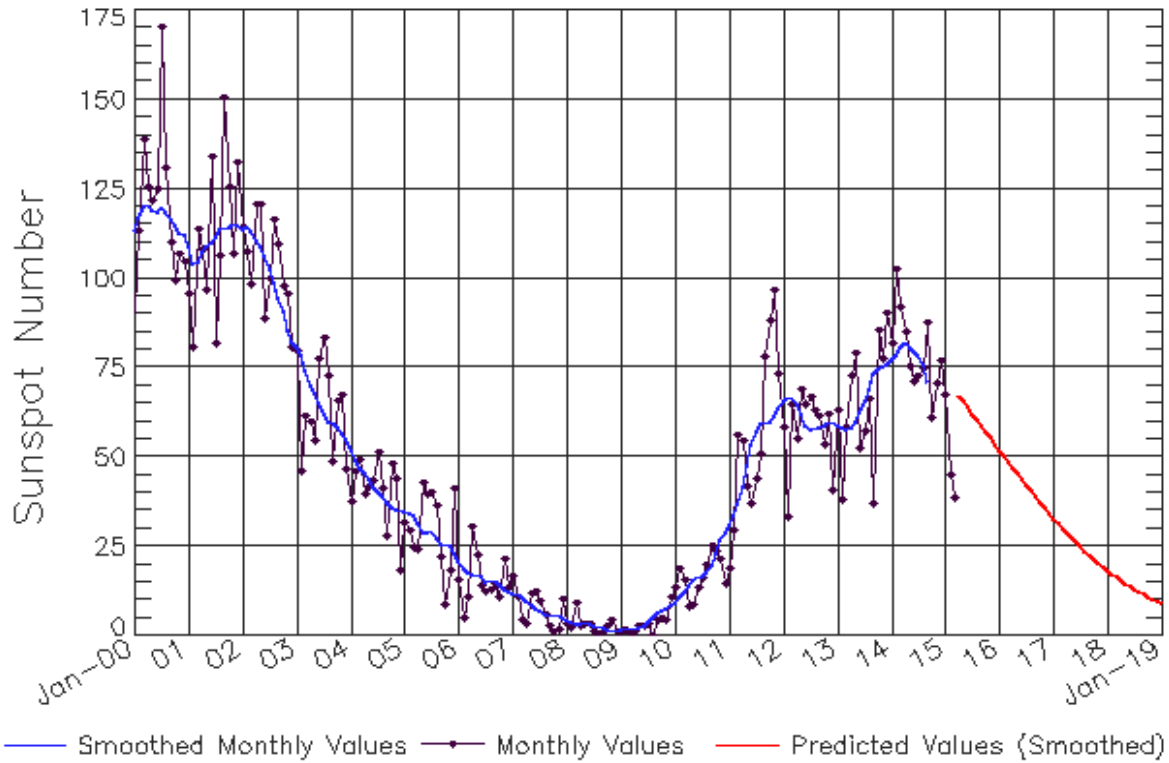
The x-ray plots contains five-minute averages x-ray flux ( $Watt/m^2$ ) as measure by the SWPC primary GOES X-ray satellite, usually at West 105 longitude, in two wavelength bands, 0.05 - 0.4 and 0.1 - 0.8 nm. The letters A, B, C, M and X refer to x-ray event levels for the 0.1 - 0.8 nm band.

The proton plot contains the five-minute averaged integral flux units (pfu = protons/ $cm^2$  -sec -sr) as measured by the primary SWPC GOES Proton satellite for each of the energy thresholds: >1, >10, >30, and >100 MeV. The P10 event threshold is 10 pfu at greater than 10 MeV.



# ISES Solar Cycle Sunspot Number Progression

Observed data through Mar 2015



Updated 2015 Apr 6

NOAA/SWPC Boulder, CO USA

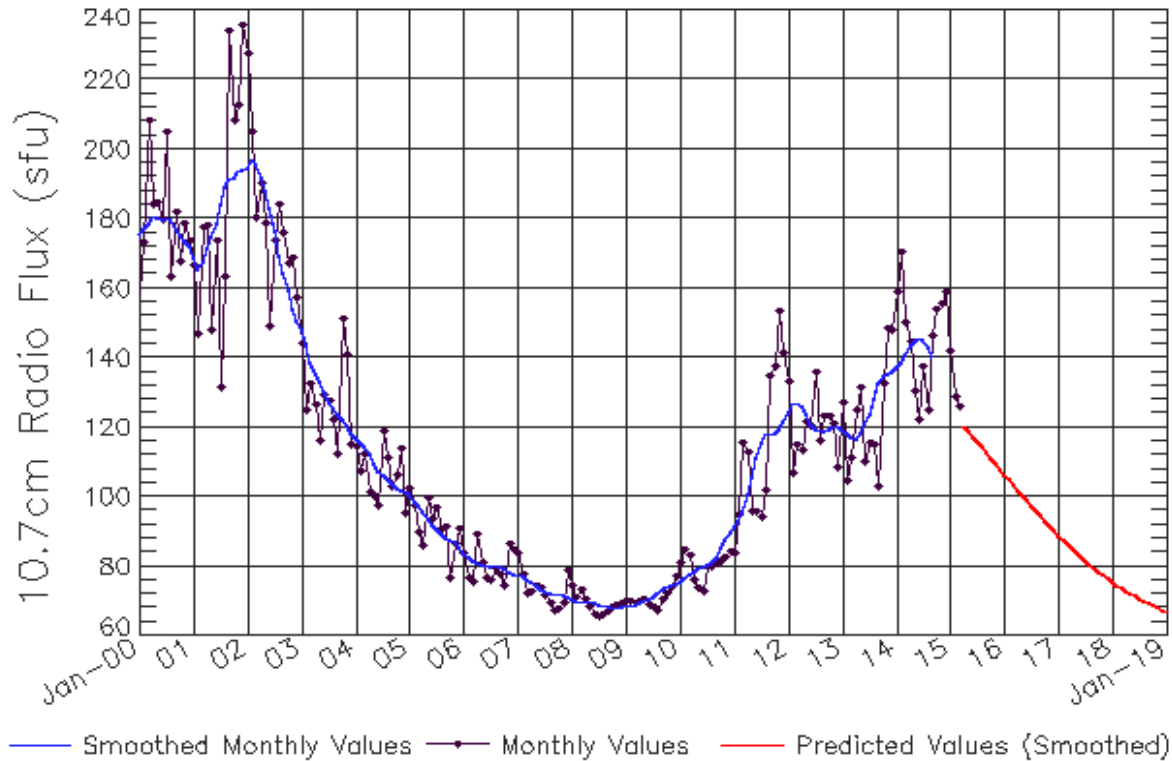
## *Smoothed Sunspot Number Prediction*

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2010	9 (***)	11 (***)	12 (***)	14 (***)	16 (***)	16 (***)	17 (***)	17 (***)	20 (***)	23 (***)	27 (***)	29 (***)
2011	31 (***)	33 (***)	37 (***)	42 (***)	48 (***)	53 (***)	57 (***)	59 (***)	60 (***)	60 (***)	61 (***)	63 (***)
2012	66 (***)	67 (***)	67 (***)	65 (***)	62 (***)	59 (***)	58 (***)	58 (***)	58 (***)	59 (***)	60 (***)	60 (***)
2013	59 (***)	58 (***)	58 (***)	58 (***)	60 (***)	63 (***)	66 (***)	69 (***)	73 (***)	75 (***)	75 (***)	76 (***)
2014	77 (***)	78 (***)	81 (***)	82 (***)	81 (***)	80 (***)	79 (***)	76 (***)	71 (***)	68 (1)	67 (2)	66 (3)
2015	65 (5)	64 (5)	63 (6)	61 (7)	60 (7)	59 (8)	57 (9)	57 (9)	57 (10)	57 (10)	55 (10)	54 (10)
2016	52 (10)	50 (10)	49 (10)	47 (10)	45 (10)	44 (10)	42 (10)	40 (10)	39 (10)	37 (10)	36 (10)	34 (10)
2017	33 (10)	31 (10)	30 (10)	29 (10)	27 (10)	26 (10)	25 (10)	24 (10)	23 (10)	21 (10)	20 (10)	19 (10)
2018	18 (10)	17 (10)	16 (10)	15 (10)	15 (10)	14 (10)	13 (10)	12 (10)	12 (10)	11 (10)	10 (10)	10 (10)
2019	9 (10)	8 (10)	8 (10)	7 (10)	7 (10)	6 (10)	6 (10)	6 (10)	5 (10)	5 (10)	4 (10)	4 (10)



# ISES Solar Cycle F10.7cm Radio Flux Progression

Observed data through Mar 2015

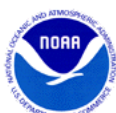


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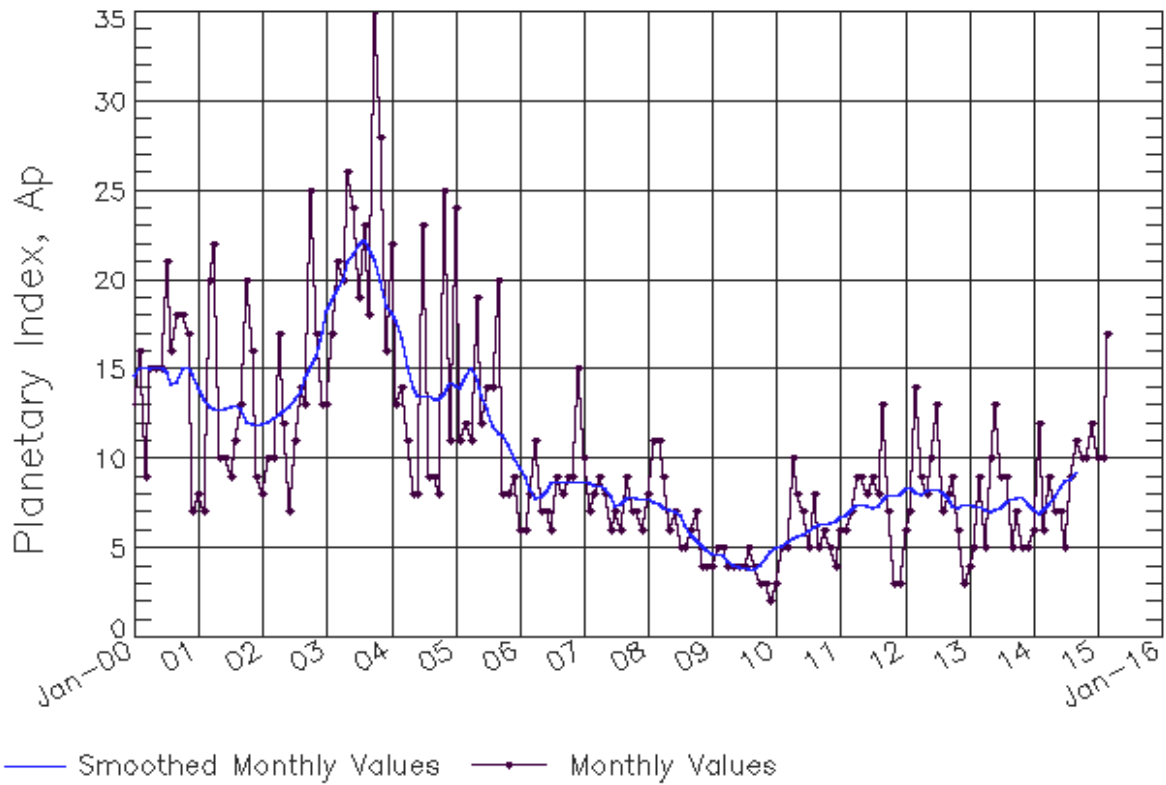
### *Smoothed F10.7cm Radio Flux Prediction*

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2010	76 (**)	77 (**)	78 (**)	78 (**)	79 (**)	80 (**)	80 (**)	81 (**)	82 (**)	85 (**)	88 (**)	90 (**)
2011	91 (**)	93 (**)	96 (**)	100 (**)	106 (**)	111 (**)	115 (**)	118 (**)	118 (**)	118 (**)	120 (**)	122 (**)
2012	124 (**)	127 (**)	127 (**)	126 (**)	124 (**)	121 (**)	120 (**)	119 (**)	119 (**)	119 (**)	120 (**)	120 (**)
2013	119 (**)	118 (**)	117 (**)	117 (**)	118 (**)	121 (**)	124 (**)	128 (**)	132 (**)	135 (**)	135 (**)	136 (**)
2014	137 (**)	139 (**)	141 (**)	144 (**)	145 (**)	146 (**)	145 (**)	143 (**)	140 (**)	138 (1)	137 (1)	136 (2)
2015	135 (3)	134 (4)	132 (4)	128 (5)	125 (6)	121 (7)	117 (8)	115 (8)	113 (9)	111 (9)	110 (9)	108 (9)
2016	106 (9)	105 (9)	103 (9)	102 (9)	100 (9)	99 (9)	97 (9)	96 (9)	94 (9)	93 (9)	92 (9)	90 (9)
2017	89 (9)	88 (9)	86 (9)	85 (9)	84 (9)	83 (9)	82 (9)	80 (9)	79 (9)	78 (9)	77 (9)	76 (9)
2018	75 (9)	75 (9)	74 (9)	73 (9)	72 (9)	71 (9)	71 (9)	70 (9)	69 (9)	69 (9)	68 (9)	67 (9)
2019	67 (9)	66 (9)	66 (9)	65 (9)	65 (9)	65 (9)	64 (9)	64 (9)	63 (9)	63 (9)	63 (9)	63 (9)



# ISES Solar Cycle Ap Progression

Observed data through Mar 2015



Updated 2015 Apr 6

NOAA/SWPC Boulder, CO USA

*Solar Cycle Comparison charts are temporarily unavailable.*





## ***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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