

Solar activity was at very low to low levels during the period. Very low levels were observed on 27 April and on 02 May. Solar activity was in decline during the beginning of the period as Region 2331 (S10, L=021, class/area Dai/240 on 26 Apr) rotated around the SW limb on 29 April. Only isolated low level C-class flaring was observed for the majority of the period until new Region 2335 (S15, L=192, class/area Dai/220 on 02 May) rotated around the SE limb on 30 April. This region slowly developed in both area and magnetic class during its first few days on the visible disk and culminated in seven C-class flares; the largest of which was a C2 flare at 01/0257 UTC. Other activity of note included an 18 degree filament eruption, centered near S46E09, observed lifting off the visible disk between 02/1500-1830 UTC. Associated with this eruption was a partial-halo coronal mass ejection (CME) first observed in SOHO/LASCO C2 imagery at 02/2036 UTC with an approximate speed of 473 km/s. Although the majority of the ejecta appeared to be southward of the ecliptic plane, WSA/ENLIL modelling of the event showed a potential impact after midday on 06 May.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit was at normal to moderate levels. Moderate levels were observed on 27-29 April and again on 02-03 May.

Geomagnetic field activity was mostly quiet through late in the period. At approximately 30/0515 UTC, total field showed an increase from 6 nT to 11 nT with a weak increase in solar wind speed from approximately 280 km/s to 350 km/s. Further increases in speed to around 450 km/s occurred on 01 May as a weak, positive polarity coronal hole high speed stream (CH HSS) became geoeffective. CH HSS influence continued through the end of the period. The geomagnetic field responded with quiet to unsettled conditions on 02-03 May.

Space Weather Outlook **04 May - 30 May 2015**

Solar activity is expected to be at very low to low levels with a chance for M-class (R1-R2, Minor-Moderate) flare activity from 04-21 May and again from 28-30 May with the return of old Regions 2322 (N11, L=116) and 2325 (N05, L=050).

No proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at normal to moderate levels with high levels possible from 07-08, 13-21, and 29-30 May due to CH HSS activity.

Geomagnetic field activity is expected to be at quiet to unsettled levels from 05-07 May with active periods likely on 06-07 May due to a combination of CH HSS effects and the arrival of the 02 May CME by mid to late on 06 May. Unsettled to active conditions with likely minor storm



periods (G1-Minor) are expected from 12-15 and 17-20 May due to a recurrent CH HSS. A weak CH HSS is expected to become geoeffective from 27-30 May causing quiet to unsettled conditions.



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
27 April	108	42	240	B2.7	0	0	0	0	0	0	0	0
28 April	108	36	240	B2.7	1	0	0	0	1	0	0	0
29 April	104	26	30	B2.8	1	0	0	0	0	0	0	0
30 April	102	27	50	B2.8	1	0	0	0	0	0	0	0
01 May	100	13	70	B2.2	1	0	0	1	0	0	0	0
02 May	106	25	220	B2.7	0	0	0	6	0	0	0	0
03 May	111	67	200	B4.5	6	0	0	11	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
	27 April	1.0e+06	2.2e+04	2.3e+03		3.3e+07
28 April	4.0e+05	1.4e+04	2.7e+03		3.1e+06	
29 April	3.1e+05	1.2e+04	2.6e+03		2.9e+06	
30 April	3.2e+05	1.2e+04	2.5e+03		1.3e+06	
01 May	2.9e+05	1.2e+04	2.5e+03		9.7e+05	
02 May	2.8e+05	1.1e+04	2.5e+03		2.6e+06	
03 May	1.4e+05	1.1e+04	2.5e+03		6.9e+06	

Daily Geomagnetic Data

Date	Middle Latitude Fredericksburg		High Latitude College		Estimated Planetary	
	A	K-indices	A	K-indices	A	K-indices
	27 April	5	1-0-1-2-2-1-2-2	8	0-0-0-4-4-1-1-1	5
28 April	7	2-2-2-2-2-1-2-2	10	2-1-2-4-4-1-1-0	6	2-1-2-2-2-1-1-1
29 April	4	0-0-1-1-2-2-2-1	5	1-0-0-3-3-1-1-0	4	1-0-1-1-2-1-1-1
30 April	4	2-1-2-1-1-1-1-1	3	1-1-1-1-1-0-2-0	5	2-1-1-1-1-0-2-1
01 May	6	2-2-1-1-2-2-2-2	5	1-2-0-2-1-1-2-2	6	1-2-1-1-2-2-2-2
02 May	9	1-2-2-2-2-2-3-3	4	1-2-0-1-1-1-2-2	9	2-2-2-2-2-1-3-3
03 May	7	2-3-2-2-2-2-1-1	7	2-2-2-3-2-1-1-1	8	3-3-2-2-1-1-1-1

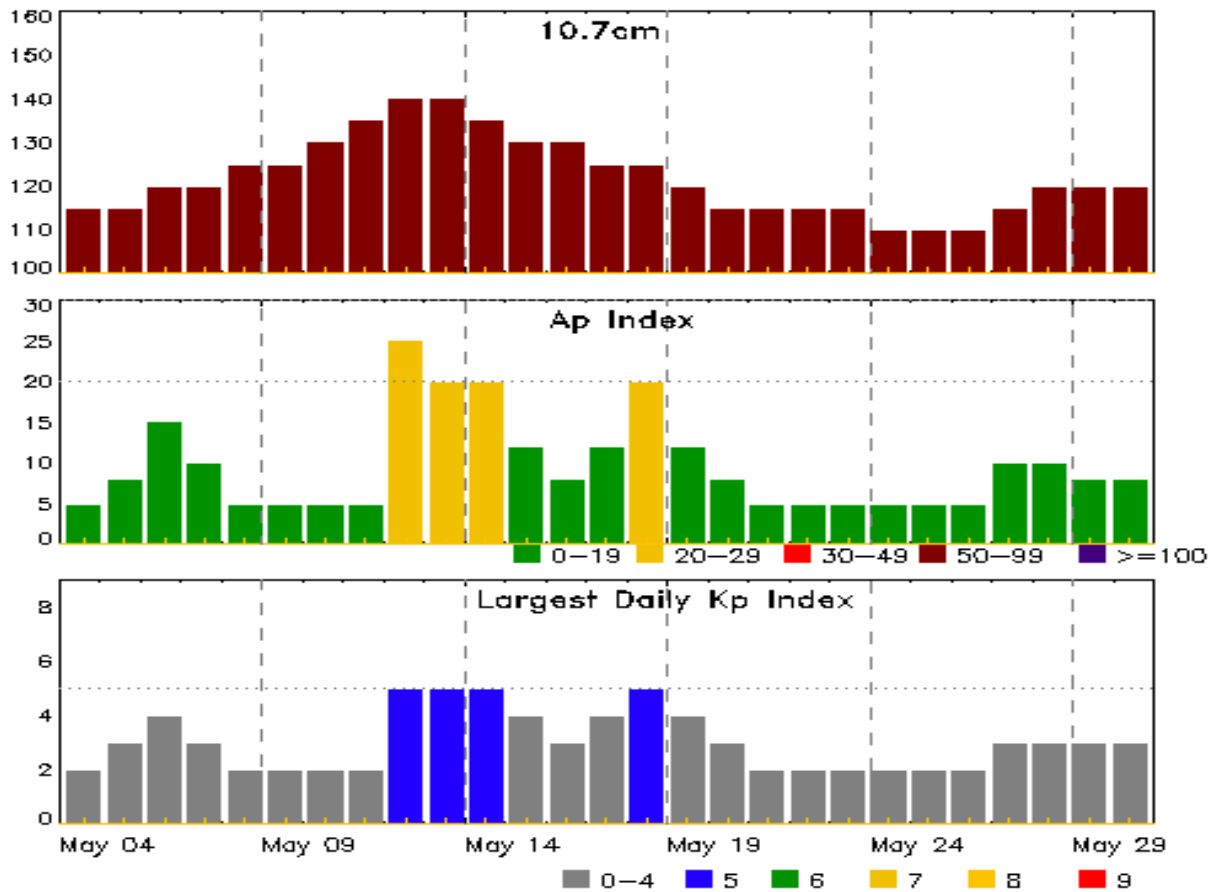


Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
30 Apr 0539	WARNING: Geomagnetic K = 4	30/0540 - 1300
30 Apr 1211	CANCELLATION: Geomagnetic K = 4	



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
04 May	115	5	2	18 May	125	20	5
05	115	8	3	19	120	12	4
06	120	15	4	20	115	8	3
07	120	10	3	21	115	5	2
08	125	5	2	22	115	5	2
09	125	5	2	23	115	5	2
10	130	5	2	24	110	5	2
11	135	5	2	25	110	5	2
12	140	25	5	26	110	5	2
13	140	20	5	27	115	10	3
14	135	20	5	28	120	10	3
15	130	12	4	29	120	8	3
16	130	8	3	30	120	8	3
17	125	12	4				



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	Imp/ Brtns	Location Lat CMD	Rgn #
	Begin	Max	End				
28 Apr	0513	0519	0522	C1.9	1F	S09W77	2331
29 Apr	1620	1634	1652	C1.0			2327
29 Apr	2022	2028	2032	B7.0			
30 Apr	1956	2108	2140	C1.1			2335
01 May	0248	0257	0307	C2.3			2335
01 May	1522	1524	1534		SF	S13E71	2335
01 May	2142	2145	2153	B3.3			
01 May	2254	2257	2300	B3.9			2335
02 May	0104	0107	0110	B5.7			
02 May	0128	0131	0144		SF	S17E64	2335
02 May	0153	0153	0210	B7.2	SF	S16E65	2335
02 May	0729	0734	0740	B6.4			2335
02 May	1636	1649	1700	B5.6			2335
02 May	1844	1850	1852		SF	S16E56	2335
02 May	2200	2209	2242	B8.8	SF	S16E54	2335
02 May	2243	2247	2308		SF	S16E52	2335
02 May	2327	2335	2348		SF	S16E52	2335
03 May	0053	0058	0110	C1.0	SF	S16E53	2335
03 May	0218	0228	0235	C1.2			2335
03 May	0407	0419	0438	B9.8			2335
03 May	0556	0605	0613	C1.8	SF	S15E51	2335
03 May	B0723	U0728	A0743		SF	S14E49	2335
03 May	B0749	U0933	A0956		SF	S14E49	2335
03 May	0846	0904	0925	C1.4			
03 May	0928	0934	0944	C1.8			2335
03 May	B1022	U1022	A1031		SF	S15E48	2335
03 May	1048	1051	1053		SF	S14E48	2335
03 May	1107	1107	1113		SF	S15E48	2335
03 May	1120	1124	1125		SF	S15E48	2335
03 May	1144	1145	1148		SF	S15E47	2335
03 May	1215	1216	1219		SF	S14E46	2335



Flare List

Date	Time			Optical			
	Begin	Max	End	X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
03 May	1413	1416	1418	B7.5			2335
03 May	1847	1847	1850		SF	S17E41	2335
03 May	2304	2347	0007	C2.2			2335



Region Summary

Date	Location		Sunspot Characteristics				Flares																
	Lat CMD	Lon	Helio 10 ⁶ hemi.	Area	Extent (helio)	Spot Class	Spot Count	Mag Class	X-ray			Optical											
									C	M	X	S	1	2	3	4							
Region 2325																							
14 Apr	N04E67		53	130	3	Hsx	1	A															
15 Apr	N05E56		52	200	9	Cso	4	B															
16 Apr	N05E44		51	200	5	Cso	4	B	1														
17 Apr	N04E32		49	140	6	Dai	8	B	3				3										
18 Apr	N05E18		50	160	11	Cai	9	B	1				1										
19 Apr	N05E06		50	220	10	Cai	12	B															
20 Apr	N05W09		51	220	10	Cko	8	B															
21 Apr	N06W24		53	210	4	Dao	8	B	1	1										1			
22 Apr	N06W39		55	205	5	Cao	7	B	2														
23 Apr	N05W52		54	240	4	Hsx	1	A	1				1										
24 Apr	N05W67		56	160	3	Hsx	1	A															
25 Apr	N04W79		55	220	3	Hsx	1	A															
26 Apr	N04W94		57	220	3	Hsx	1	A															
									9	1	0	5	0	1	0	0							

Crossed West Limb.

Absolute heliographic longitude: 50

Region 2327																							
17 Apr	S10E70		12	140	3	Cso	3	B															
18 Apr	S09E57		11	140	3	Cso	2	B															
19 Apr	S09E44		12	140	3	Cso	5	B															
20 Apr	S09E30		12	110	4	Cso	4	B															
21 Apr	S10E17		12	90	3	Hsx	3	A															
22 Apr	S10E03		13	90	3	Hsx	3	A	1				1										
23 Apr	S08W10		12	90	3	Hsx	1	A					1										
24 Apr	S09W24		12	90	3	Hsx	1	A															
25 Apr	S10W37		12	80	2	Hsx	2	A															
26 Apr	S08W49		11	60	5	Cso	3	B															
27 Apr	S08W63		13	40	3	Cso	2	B															
28 Apr	S07W77		13	20	1	Hsx	1	A															
29 Apr	S08W90		12	20	2	Hsx	2	A	1														
									2	0	0	2	0	0	0	0	0						

Crossed West Limb.

Absolute heliographic longitude: 13



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

Region 2330

20 Apr	N15E32	9	30	4	Dso	3	B										
21 Apr	N15E18	11	20	5	Cso	4	B										
22 Apr	N15E04	12	plage														
23 Apr	N15W10	12	plage														
24 Apr	N15W24	13	plage														
25 Apr	N15W38	14	plage														
26 Apr	N15W52	15	plage														
27 Apr	N15W66	16	plage														
28 Apr	N15W80	17	plage														
										0	0	0	0	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 12

Region 2331

21 Apr	S10E10	19	30	3	Bxi	10	B										
22 Apr	S10W04	20	40	5	Dac	15	B										
23 Apr	S09W19	21	90	7	Dai	11	B										
24 Apr	S10W33	21	150	9	Dai	12	BG	2			6						
25 Apr	S09W47	22	220	8	Dai	18	BG				4						
26 Apr	S10W59	21	240	10	Dai	9	BG	2			1						
27 Apr	S09W73	22	190	8	Dao	7	B										
28 Apr	S09W87	23	210	7	Dao	2	B	1				1					
								5	0	0	11	1	0	0	0	0	

Crossed West Limb.
Absolute heliographic longitude: 20

Region 2332

21 Apr	S13W17	46	10	1	Bxo	2	B										
22 Apr	S13W31	47	20	2	Cro	5	B				2						
23 Apr	S13W43	45	10	2	Bxo	2	B										
24 Apr	S13W56	45	plage														
25 Apr	S13W70	46	plage														
26 Apr	S13W84	47	plage														
										0	0	0	2	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 46



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 2333																					
22 Apr	N19E62		312	30	1	Hrx	1	A	1												
23 Apr	N20E51		311	30	2	Hax	2	A	1				3								
24 Apr	N20E37		312	30	2	Hax	2	A					1								
25 Apr	N20E25		310	20	2	Hax	5	A					1								
26 Apr	N20E12		310	10	1	Hrx	2	A													
27 Apr	N20W00		309	10	2	Hrx	3	A													
28 Apr	N21W12		308	10	2	Axx	3	A													
29 Apr	N22W27		309	10	2	Bxo	4	B													
30 Apr	N22W41		311	plage																	
01 May	N22W55		312	plage																	
02 May	N22W69		313	plage																	
03 May	N22W83		314	plage																	
										2	0	0	5	0	0	0	0	0			

Still on Disk.
 Absolute heliographic longitude: 309

Region 2334																					
30 Apr	S19E11		259	20	3	Cro	4	B													
01 May	S20W03		260	plage																	
02 May	S20W17		261	plage																	
03 May	S20W31		262	plage																	
										0	0	0	0	0	0	0	0	0	0		

Still on Disk.
 Absolute heliographic longitude: 260

Region 2335																					
30 Apr	S15E76		194	30	2	Hsx	3	A	1												
01 May	S15E63		194	70	6	Dao	3	B	1				1								
02 May	S15E52		192	220	8	Dai	15	B					6								
03 May	S16E37		194	170	10	Dac	20	B	5				11								
									7	0	0	18	0	0	0	0	0	0			

Still on Disk.
 Absolute heliographic longitude: 194

Region 2336																					
03 May	N13E12		219	10	4	Bxo	3	B													
										0	0	0	0	0	0	0	0	0	0		

Still on Disk.
 Absolute heliographic longitude: 219



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

Region 2337

03 May	S16E56	175	10	2	Axx	2	A	0	0	0	0	0	0	0	0	0
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Still on Disk.

Absolute heliographic longitude: 175

Region 2338

03 May	N04E56	175	10	1	Axx	2	A	0	0	0	0	0	0	0	0	0
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Still on Disk.

Absolute heliographic longitude: 175

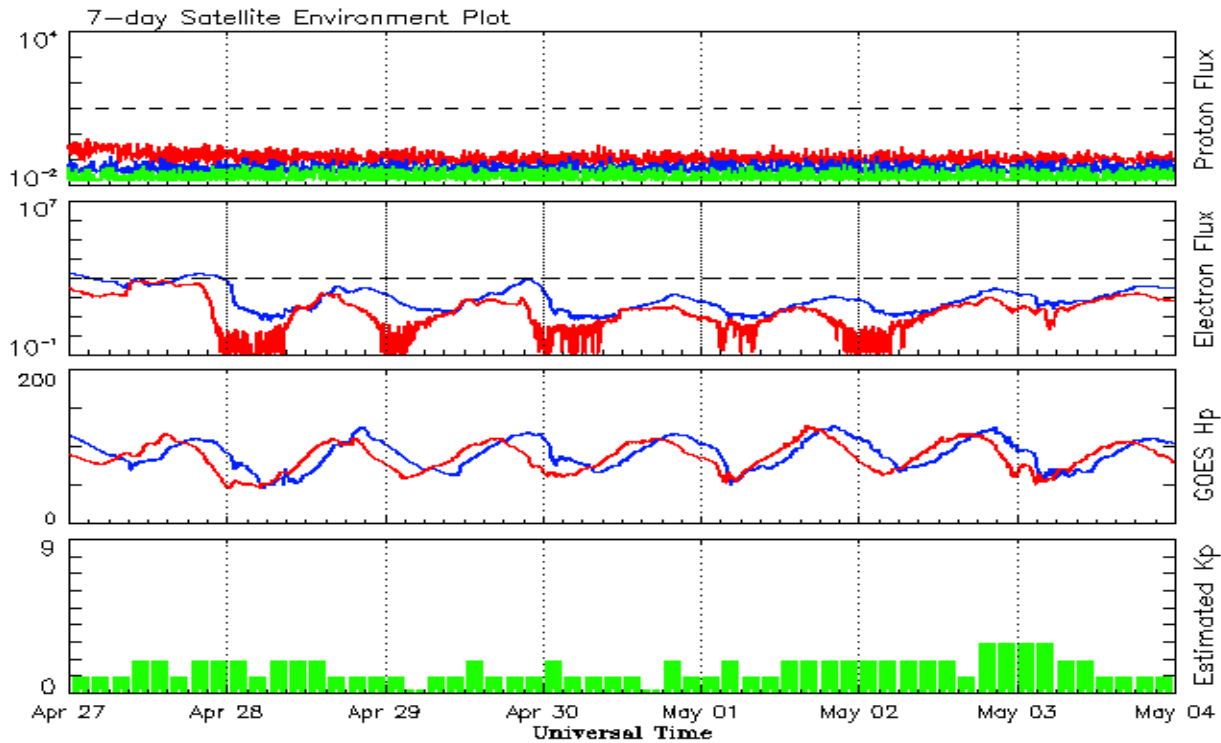


Recent Solar Indices (preliminary)
Observed monthly mean values

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
2013									
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
2014									
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	101.7	67.3	153.7	138.4	10	9.9
November	101.8	70.2	0.69			155.3		10	
December	120.0	76.7	0.65			158.7		12	
2015									
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	
April	72.5	54.4	0.75			129.2		12	

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 27 April 2015*

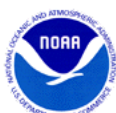
The proton flux plot contains the five-minute averaged integral proton flux (protons/cm²-sec -sr) as measured by the SWPC Primary GOES satellite, near West 75, for each of three energy thresholds: greater than 10, 50, and 100 MeV.

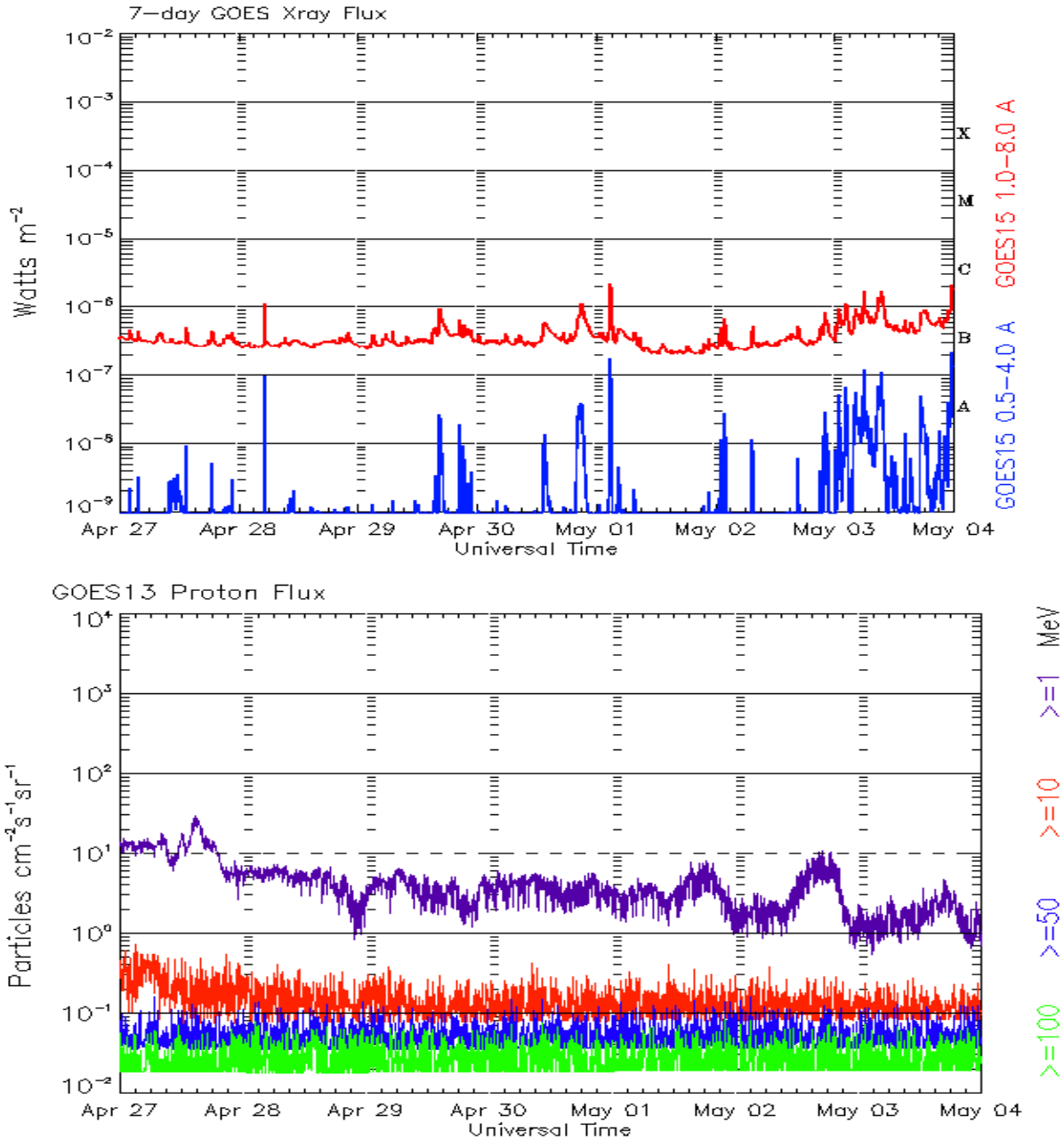
The electron flux plot contains the five-minute averaged integral electron flux (electrons/cm²-sec -sr) with energies greater than 2 MeV by the SWPC Primary GOES satellite.

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 27 April 2015*

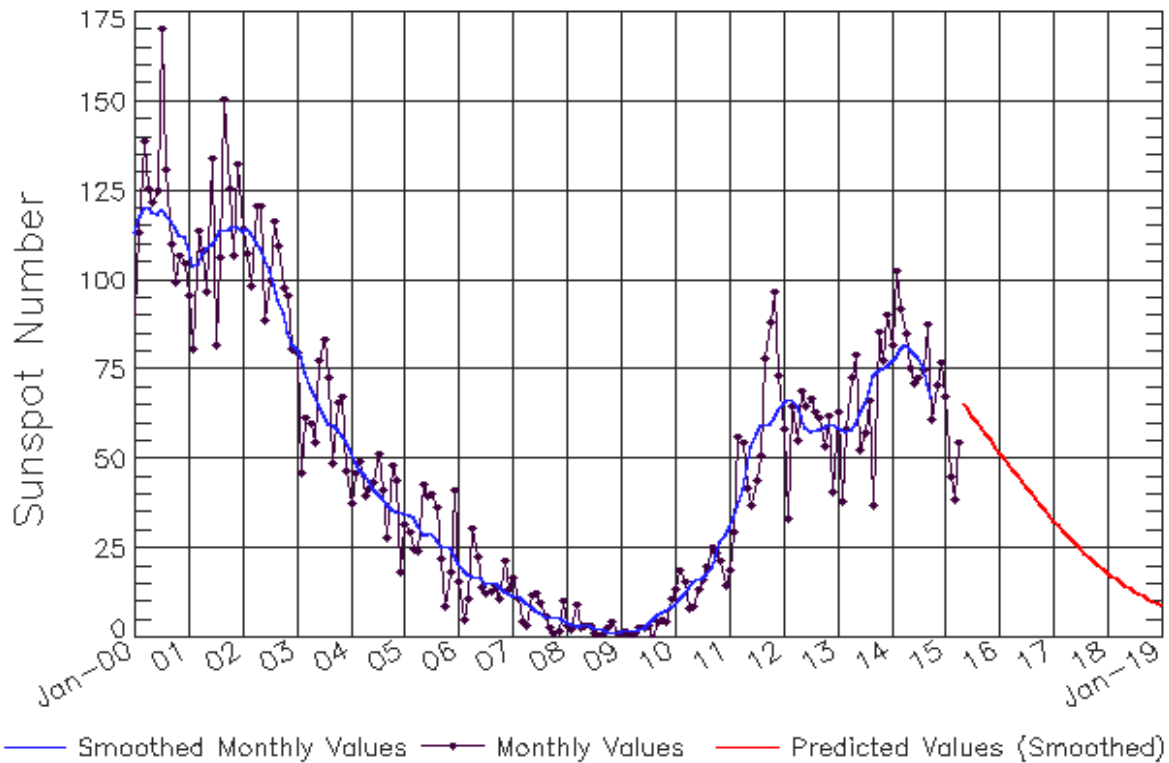
The x-ray plots contains five-minute averages x-ray flux (Watt/m²) as measure by the SWPC primary GOES X-ray satellite, usually at West 105 longitude, in two wavelength bands, 0.05 - 0.4 and 0.1 - 0.8 nm. The letters A, B, C, M and X refer to x-ray event levels for the 0.1 - 0.8 nm band.

The proton plot contains the five-minute averaged intergral flux units (pfu = protons/cm² -sec -sr) as measured by the primary SWPC GOES Proton satellite for each of the energy thresholds: >1, >10, >30, and >100 MeV. The P10 event threshold is 10 pfu at greater than 10 MeV.



ISES Solar Cycle Sunspot Number Progression

Observed data through Apr 2015

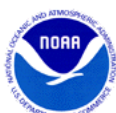


Updated 2015 May 4

NOAA/SWPC Boulder, CO USA

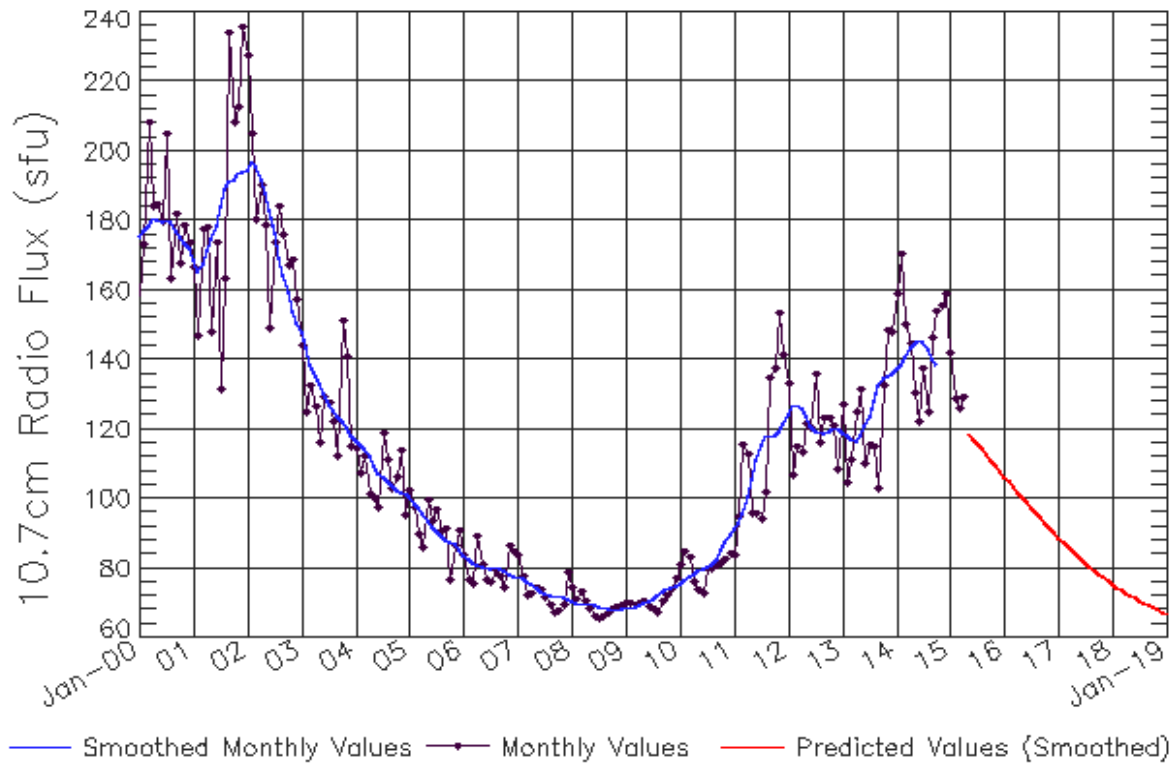
Smoothed Sunspot Number Prediction

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 (***)	67 (***)	66 (1)	65 (2)
2015	64 (3)	63 (5)	61 (5)	60 (6)	59 (7)	58 (7)	56 (8)	56 (9)	56 (9)	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 Apr 2015



Updated 2015 May 4

NOAA/SWPC Boulder, CO USA

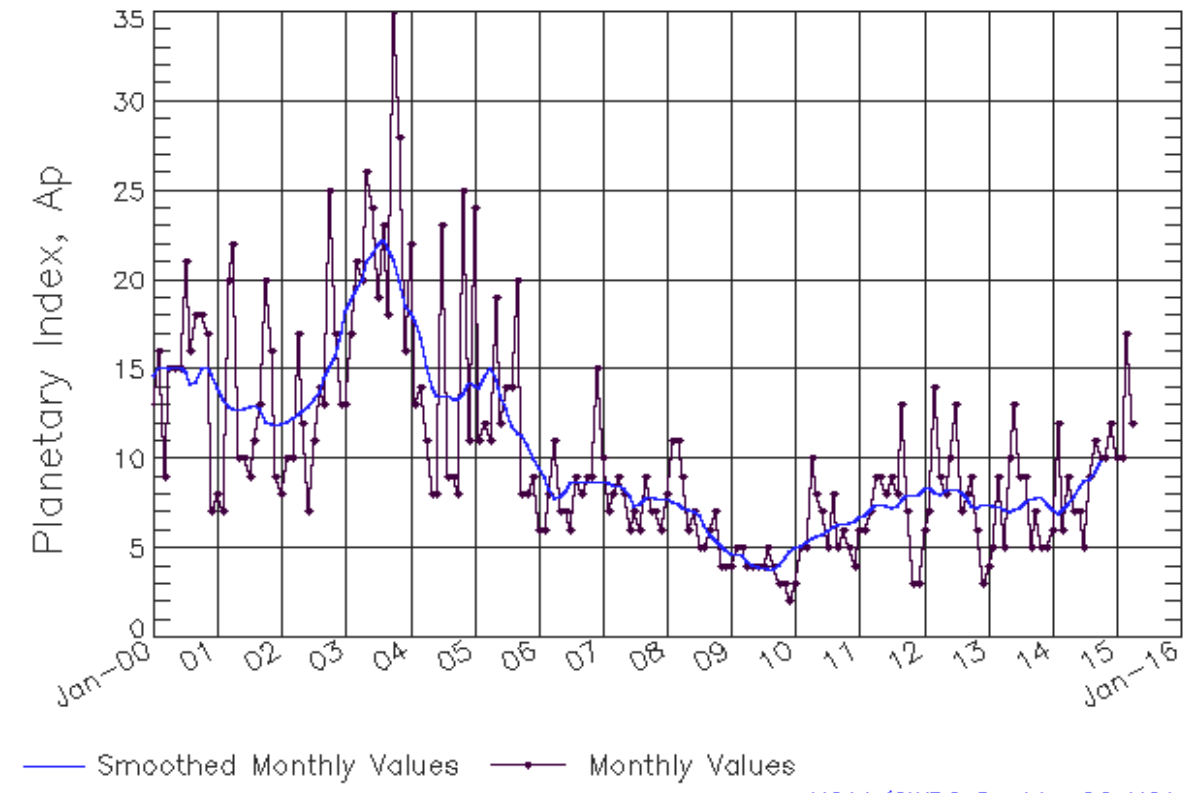
Smoothed F10.7cm Radio Flux Prediction

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 (***)	137 (1)	137 (1)
2015	136 (2)	134 (3)	132 (4)	129 (4)	126 (5)	122 (6)	118 (7)	115 (8)	114 (8)	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

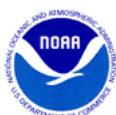
Observed data through Apr 2015



Updated 2015 May 4

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Solar Cycle Comparison charts are temporarily unavailable.



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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

The Weekly has been published continuously since 1951 and is available online since 1997.

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<http://spaceweather.gov/ftpmenu/> -- Some content as ascii text

<http://spaceweather.gov/SolarCycle/> -- Solar Cycle Progression web site

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http://spaceweather.gov/weekly/Usr_guide.pdf -- User Guide

