

Solar activity was at very low to moderate levels. Very low levels occurred on 01-04 and 06 Aug with low levels on 05 Aug and low to moderate levels on 07 Aug. Region 2572 (N13, L=320, class/area Dao/110 on 07 Aug) produced a C1/Sf flare observed at 05/1012 UTC. On 07 Aug, activity increased to moderate levels with an impulsive M1 (R1-Minor) x-ray event observed at 07/1444 UTC from an active region just beyond the SW limb. 07 Aug also saw numerous C-class flares. Region 2571 (N12, L=267, class/area Dai/150 on 07 Aug) produced a C5 event at 07/2232 UTC. New Region 2573 (N08, L=177, class/area Dso/060 on 07 Aug) produced a C8/Sf at 07/1509 UTC. No Earth-directed CMES were observed during the summary period.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit was at moderate flux levels on 02-03 Aug and high flux levels on 01 and 04-07 Aug. The highest flux reading was 16, 206 pfu observed at 06/1445 UTC.

Geomagnetic field activity was at quiet to minor storm levels. The period began on 01 Aug at quiet levels under a nominal solar wind regime. Midday on 02 Aug, activity levels increased to unsettled to minor storm (G1-Minor) levels due to shock enhancement from the arrival of the 28 Jul CME coupled with a CIR in advance of a recurrent, positive polarity CH HSS. Solar wind speeds increased from about 310 km/s early on 02 Aug to near 550 km/s by midday on 03 Aug. Unsettled to minor storm levels persisted through 03 Aug.

Wind speeds increased further on 04-05 Aug with a peak speed of near 675 km/s recorded late on 05 Aug. Winds speeds began a slow decay on 06 Aug. Mostly unsettled to active conditions were observed on 04-06 Aug. By 07 Aug, wind speeds decreased to about 500 km/s as effects from the CH HSS waned. Mostly quiet to unsettled levels were observed on 07 Aug.

Space Weather Outlook **08 August - 03 September 2016**

Solar activity is expected to be at low levels with a chance for M-class flares (R1-R2, Minor-Moderate) on 08-20 Aug due to the flare potential from Regions 2573 and 2574. Very low to low levels are expected on 21 Aug - 01 Sep. An increase to low levels with a chance for M-class flares (R1-R2, Minor-Moderate) are expected on 02-03 Sep with the return of Regions 2573 and 2574.

No proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at high flux levels on 08-15, 22-23 and 26-28 Aug and again on 31 Aug-03 Sep due to recurrent CH HSS activity. Normal to moderate levels are expected for the remainder of the outlook period.



Geomagnetic field activity is expected to be at unsettled to G1 (Minor) storm levels on 08 Aug and again on 31 Aug due to recurrent CH HSS activity. Unsettled to active levels are expected on 09-11, 15-16, 18-19, 24-25, 29 and 30-31 Aug along with 01-03 Sep, all due to recurrent CH HSS activity. Mostly quiet conditions are expected for the remainder of the outlook period.



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
01 August	72	13	10	A5.3	0	0	0	0	0	0	0	0
02 August	75	11	10	A5.2	0	0	0	0	0	0	0	0
03 August	75	0	0	A5.7	0	0	0	0	0	0	0	0
04 August	76	0	0	A6.2	0	0	0	1	0	0	0	0
05 August	80	36	80	A8.6	1	0	0	7	0	0	0	0
06 August	83	33	120	B1.1	0	0	0	0	0	0	0	0
07 August	93	63	380	B2.5	7	1	0	7	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
	01 August	3.8e+05	1.4e+04	3.3e+03	5.8e+07	
02 August	8.7e+05	1.3e+04	3.3e+03	2.0e+07		
03 August	6.5e+05	1.3e+04	2.9e+03	3.4e+06		
04 August	1.6e+06	1.4e+04	3.4e+03	9.9e+07		
05 August	1.2e+06	1.4e+04	3.3e+03	1.6e+08		
06 August	2.0e+06	1.3e+04	2.9e+03	4.8e+08		
07 August	7.8e+05	1.3e+04	2.9e+03	3.7e+08		

Daily Geomagnetic Data

Date	Middle Latitude Fredericksburg		High Latitude College		Estimated Planetary	
	A	K-indices	A	K-indices	A	K-indices
	01 August	4	1-1-0-1-2-2-1-1	0	0-0-0-0-0-0-0-0	3
02 August	17	0-2-2-3-3-3-4-5	10	0-0-0-0-0-2-2-3	17	1-2-2-2-3-3-4-5
03 August	24	5-4-4-5-3-3-2-2	49	3-5-4-7-6-5-4-2	33	5-4-5-5-4-4-3-3
04 August	17	4-4-3-3-3-3-3-2	39	3-4-5-5-6-5-4-3	18	4-4-3-3-3-4-3-2
05 August	16	2-3-3-4-3-3-2-4	33	3-4-5-6-5-4-2-3	16	2-3-4-4-3-3-2-4
06 August	13	2-2-3-4-3-2-2-3	24	3-2-3-6-5-3-2-2	14	3-2-3-4-3-2-2-3
07 August	12	4-2-1-2-3-3-2-3	20	3-3-2-1-5-5-2-3	32	4-2-2-2-3-3-1-3



Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
01 Aug 1503	ALERT: Electron 2MeV Integral Flux \geq 1000pfu	01/1445
02 Aug 1527	WARNING: Geomagnetic K = 4	02/1530 - 2300
02 Aug 2011	CANCELLATION: Geomagnetic K = 6	
02 Aug 2012	WARNING: Geomagnetic K = 6	02/2012 - 2359
02 Aug 2100	ALERT: Geomagnetic K = 4	02/2055
02 Aug 2346	ALERT: Geomagnetic K = 5	02/2345
03 Aug 0141	ALERT: Geomagnetic K = 5	03/0140
03 Aug 0252	EXTENDED WARNING: Geomagnetic K = 5	02/2005 - 03/1159
03 Aug 0412	WARNING: Geomagnetic K = 6	03/0420 - 0859
03 Aug 0858	ALERT: Geomagnetic K = 5	03/0859
03 Aug 0858	EXTENDED WARNING: Geomagnetic K = 4	02/1530 - 03/1800
03 Aug 0858	EXTENDED WARNING: Geomagnetic K = 5	02/2005 - 03/1500
03 Aug 0858	EXTENDED WARNING: Geomagnetic K = 6	03/0420 - 1200
03 Aug 0953	ALERT: Geomagnetic K = 5	03/0953
03 Aug 1455	EXTENDED WARNING: Geomagnetic K = 5	02/2005 - 03/1800
03 Aug 1751	EXTENDED WARNING: Geomagnetic K = 4	02/1530 - 03/2359
04 Aug 0102	WARNING: Geomagnetic K = 4	04/0105 - 1159
04 Aug 0111	ALERT: Geomagnetic K = 4	04/0110
04 Aug 1141	EXTENDED WARNING: Geomagnetic K = 4	04/0105 - 1600
04 Aug 1333	ALERT: Electron 2MeV Integral Flux \geq 1000pfu	04/1315
04 Aug 1554	EXTENDED WARNING: Geomagnetic K = 4	04/0105 - 2100
05 Aug 0617	WARNING: Geomagnetic K = 4	05/0615 - 1000
05 Aug 0624	CONTINUED ALERT: Electron 2MeV Integral Flux \geq 1000pfu	04/1315
05 Aug 0747	ALERT: Geomagnetic K = 4	05/0747
05 Aug 0955	EXTENDED WARNING: Geomagnetic K = 4	05/0615 - 1600
05 Aug 1520	EXTENDED WARNING: Geomagnetic K = 4	05/0615 - 2359
05 Aug 2143	WATCH: Geomagnetic Storm Category G1 predicted	
06 Aug 0500	CONTINUED ALERT:	04/1315

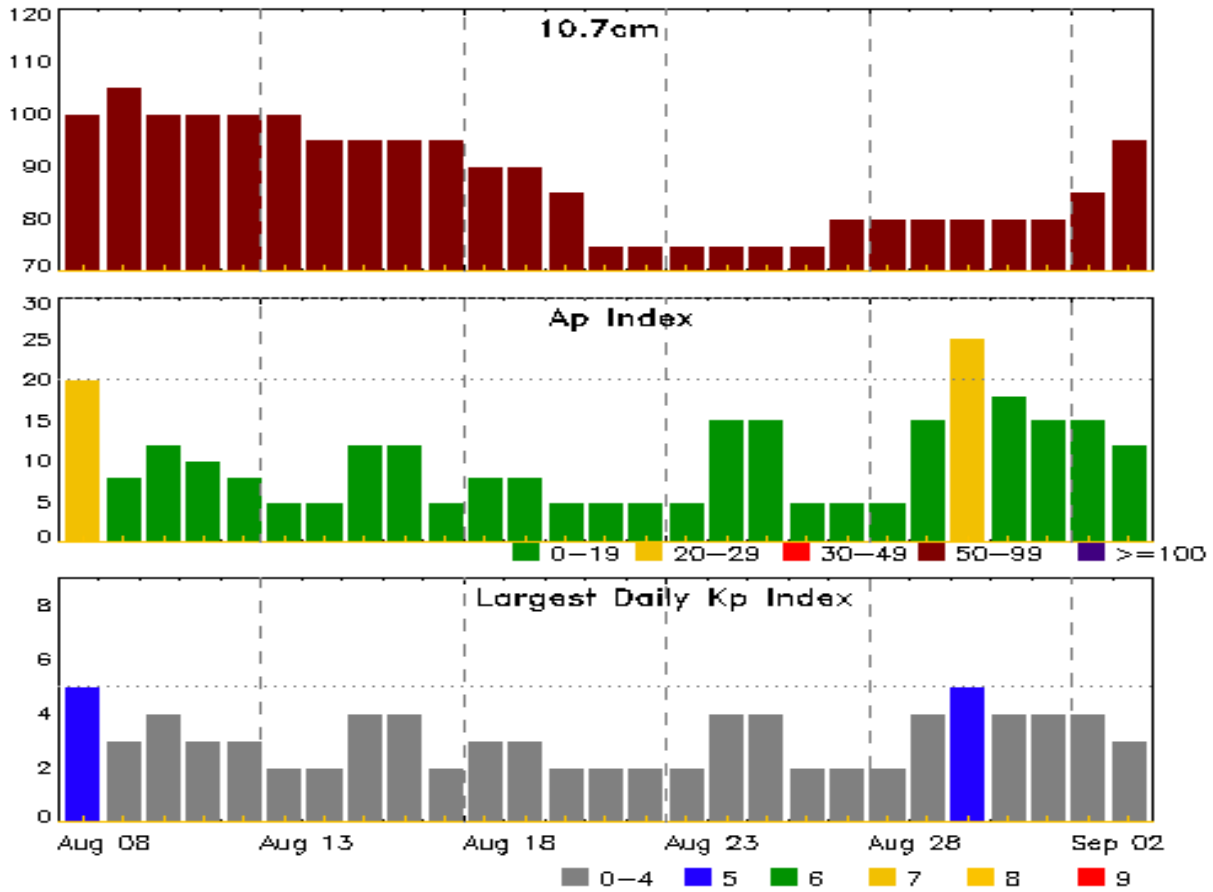


Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
-	Electron 2MeV Integral Flux \geq 1000pfu	-
06 Aug 1000	WARNING: Geomagnetic K = 4	06/1000 - 1600
06 Aug 1013	ALERT: Geomagnetic K = 4	06/1012
07 Aug 0006	WARNING: Geomagnetic K = 4	07/0005 - 1300
07 Aug 0121	ALERT: Geomagnetic K = 4	07/0120
07 Aug 0500	CONTINUED ALERT: Electron 2MeV Integral Flux \geq 1000pfu	04/1315



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
08 Aug	100	20	5	22 Aug	75	5	2
09	105	8	3	23	75	5	2
10	100	12	4	24	75	15	4
11	100	10	3	25	75	15	4
12	100	8	3	26	75	5	2
13	100	5	2	27	80	5	2
14	95	5	2	28	80	5	2
15	95	12	4	29	80	15	4
16	95	12	4	30	80	25	5
17	95	5	2	31	80	18	4
18	90	8	3	01 Sep	80	15	4
19	90	8	3	02	85	15	4
20	85	5	2	03	95	12	3
21	75	5	2				



Energetic Events

Date	Time		X-ray		Optical Information			Peak		Sweep Freq		
	Begin	Max	Half Max	Class	Integ Flux	Imp/ Brtns	Location Lat CMD	Rgn #	245	2695	II	IV
07 Aug		1437	1444	1448		M1.3	0.005					

Flare List

Date	Time			X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
	Begin	Max	End				
04 Aug	2224	2228	2230	B1.4			2572
04 Aug	2249	2254	2256	B2.0	SF	N14W31	2572
05 Aug	0006	0009	0011	B1.6			2572
05 Aug	0039	0044	0046	B8.8	SF	N14W33	2572
05 Aug	0053	0056	0058	B2.3			2572
05 Aug	0219	0224	0227	B5.2			2572
05 Aug	0350	0355	0357	B3.4			2572
05 Aug	0429	0434	0436	B2.8	SF	N11W34	2572
05 Aug	0510	0514	0521	B3.8	SF	N11W35	2572
05 Aug	0816	0819	0822	B1.1			2572
05 Aug	0920	0929	0934	B3.8	SF	N11W39	2572
05 Aug	1008	1012	1014	C1.4	SF	N11W40	2572
05 Aug	1103	1103	1105		SF	N11W38	2572
05 Aug	1220	1223	1225	B1.7			2572
05 Aug	B1249	1259	1312		SF	N13W40	2572
05 Aug	1806	1811	1815	B2.0			2572
06 Aug	0030	0043	0059	B3.0			
06 Aug	0149	0213	0317	B2.9			2572
06 Aug	2358	0028	0037	B8.8			2571
07 Aug	0154	0158	0200	B5.5			2571
07 Aug	0528	0535	0540	C1.3	SF	N13W03	2571
07 Aug	0754	0755	0757		SF	N13W03	2571
07 Aug	1018	1024	1029	C1.6			
07 Aug	1137	1142	1147	B4.7			
07 Aug	1244	1249	1254	B6.9			
07 Aug	1310	1313	1316	B5.5	SF	N13W12	2571
07 Aug	1328	1338	1349	C2.4			
07 Aug	1437	1444	1448	M1.3			
07 Aug	1437	1437	1442		SF	N09W67	2572
07 Aug	B1453	U1453	1501		SF	N13W15	2571



Flare List

Date	Time			Optical			Rgn #
	Begin	Max	End	X-ray Class	Imp/ Brtns	Location Lat CMD	
07 Aug	1455	1509	1517		SF	N09W68	2572
07 Aug	1503	1509	1516	C8.5	SF	N09E82	2572
07 Aug	2000	2011	2027	C1.0			2572
07 Aug	2143	2149	2156	C2.0			
07 Aug	2226	2232	2240	C5.6			2571



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

Region 2570

28 Jul	N11E66	316	10	2	Bxo	3	B										
29 Jul	N10E52	317	10	5	Bxo	3	B										
30 Jul	N11E40	315	10	4	Bxo	3	B										
31 Jul	N10E24	318	10	1	Axx	2	A										
01 Aug	N10E13	314	10	2	Axx	3	A										
02 Aug	N10W01	316	10	1	Axx	1	A										
03 Aug	N10W15	318	plage														
04 Aug	N10W29	318	plage														
05 Aug	N10W43	319	plage														
06 Aug	N10W57	320	plage														
07 Aug	N10W71	321	plage														
									0	0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 316

Region 2571

05 Aug	N13E09	266	20	4	Dro	7	B										
06 Aug	N12W04	266	40	5	Dao	8	B										
07 Aug	N12W19	267	150	8	Dai	12	BG	2			4						
								2	0	0	4	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 266

Region 2572

05 Aug	N13W46	321	60	5	Dao	9	B	1			4						
06 Aug	N13W59	320	80	8	Dao	5	B										
07 Aug	N13W72	320	110	9	Dao	7	B	2			3						
								3	0	0	7	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 321

Region 2573

07 Aug	N04E71	177	60	5	Dso	2	B										
								0	0	0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 177



Region Summary - continued

Location		Sunspot Characteristics					Flares								
Date	Lat CMD	Helio	Area	Extent	Spot	Spot	Mag	X-ray			Optical				
		Lon	10 ⁻⁶ hemi.	(helio)	Class	Count	Class	C	M	X	S	1	2	3	4
<i>Region 2574</i>															
07 Aug	N08E72	177	60	4	Dso	2	B	0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 177

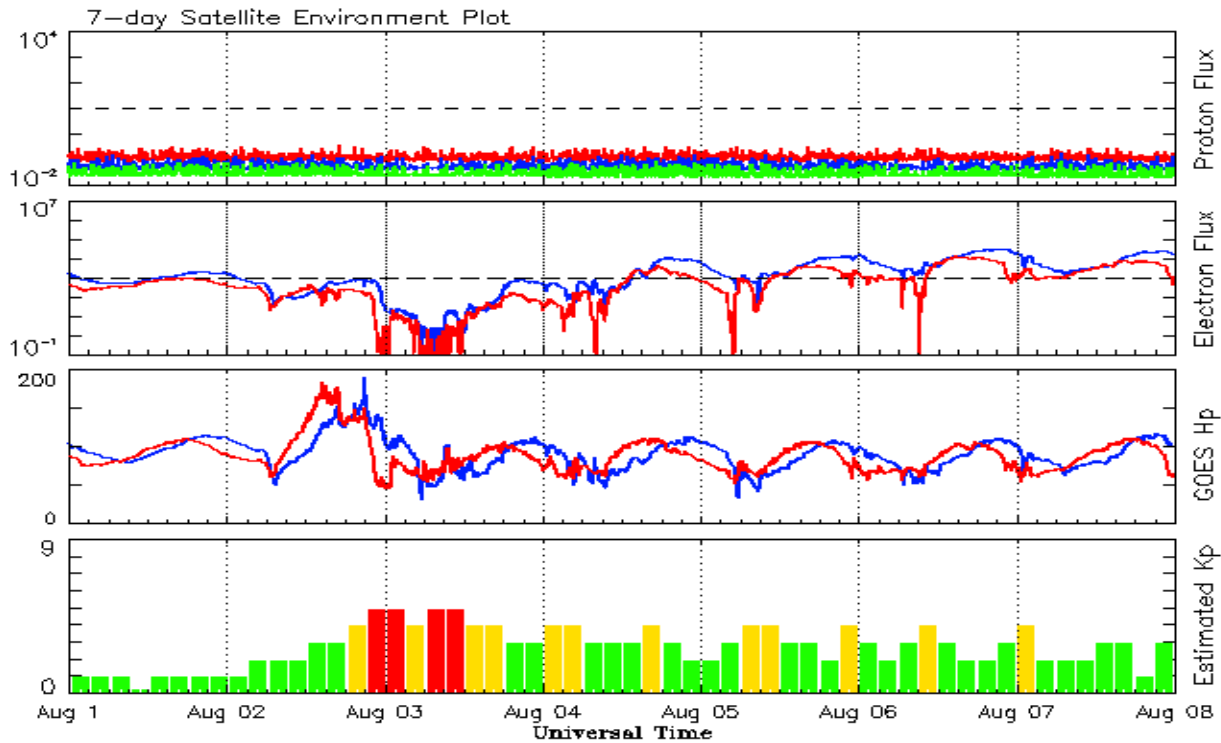


Recent Solar Indices (preliminary)
Observed monthly mean values

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
2014									
August	106.2	64.1	0.70	115.1	65.0	124.7	142.8	9	8.9
September	127.4	78.0	0.69	107.4	61.1	146.1	140.1	11	9.3
October	92.0	54.0	0.66	101.7	58.4	153.7	138.4	10	9.9
November	101.8	62.2	0.69	97.9	56.8	155.3	137.4	10	10.1
December	120.0	67.7	0.65	95.2	55.3	158.7	137.0	12	10.5
2015									
January	101.2	55.8	0.66	92.1	53.6	141.7	135.8	10	11.0
February	70.6	40.0	0.63	88.3	51.7	128.8	133.8	10	11.5
March	61.7	32.7	0.62	84.2	49.3	126.0	131.2	17	12.0
April	72.5	45.2	0.75	80.5	47.3	129.2	127.3	12	12.4
May	83.0	53.3	0.71	77.5	45.7	120.1	123.3	9	12.7
June	77.3	39.9	0.53	73.1	43.3	123.2	119.5	14	13.0
July	68.4	39.5	0.58	68.2	41.0	107.0	116.0	10	13.1
August	61.6	38.6	0.63	65.5	39.8	106.2	113.3	16	13.1
September	72.5	47.2	0.65	64.0	39.5	102.1	110.8	16	12.8
October	59.5	38.2	0.62	61.8	38.6	104.1	107.9	15	12.5
November	61.8	37.3	0.61	59.0	36.8	109.6	105.3	13	12.5
December	54.1	34.8	0.64	55.1	34.7	112.8	102.5	15	12.5
2016									
January	50.4	34.2	0.67	51.4	32.7	103.5	99.9	10	12.3
February	56.0	33.8	0.61			103.5		10	
March	40.9	32.5	0.80			91.6		11	
April	39.2	22.8	0.58			93.4		10	
May	48.9	31.3	0.64			93.1		12	
June	19.3	12.5	0.65			81.9		9	
July	36.8	19.5	0.53			85.9		10	

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 01 August 2016*

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.

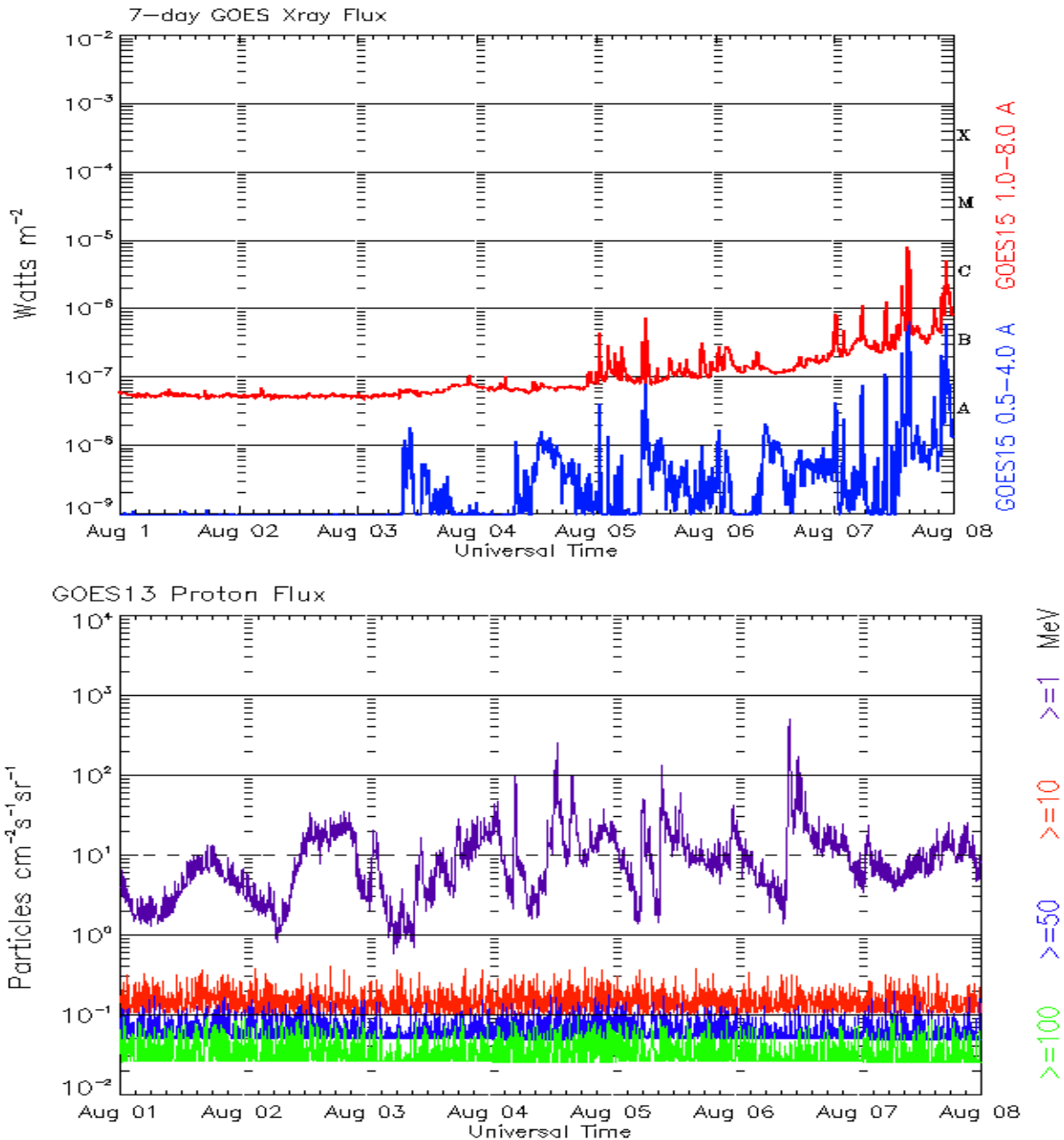
The electron flux plot contains the five-minute averaged integral electron flux (electrons/cm²-sec -sr) with energies greater than 2 MeV by the SWPC Primary GOES satellite.

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 01 August 2016*

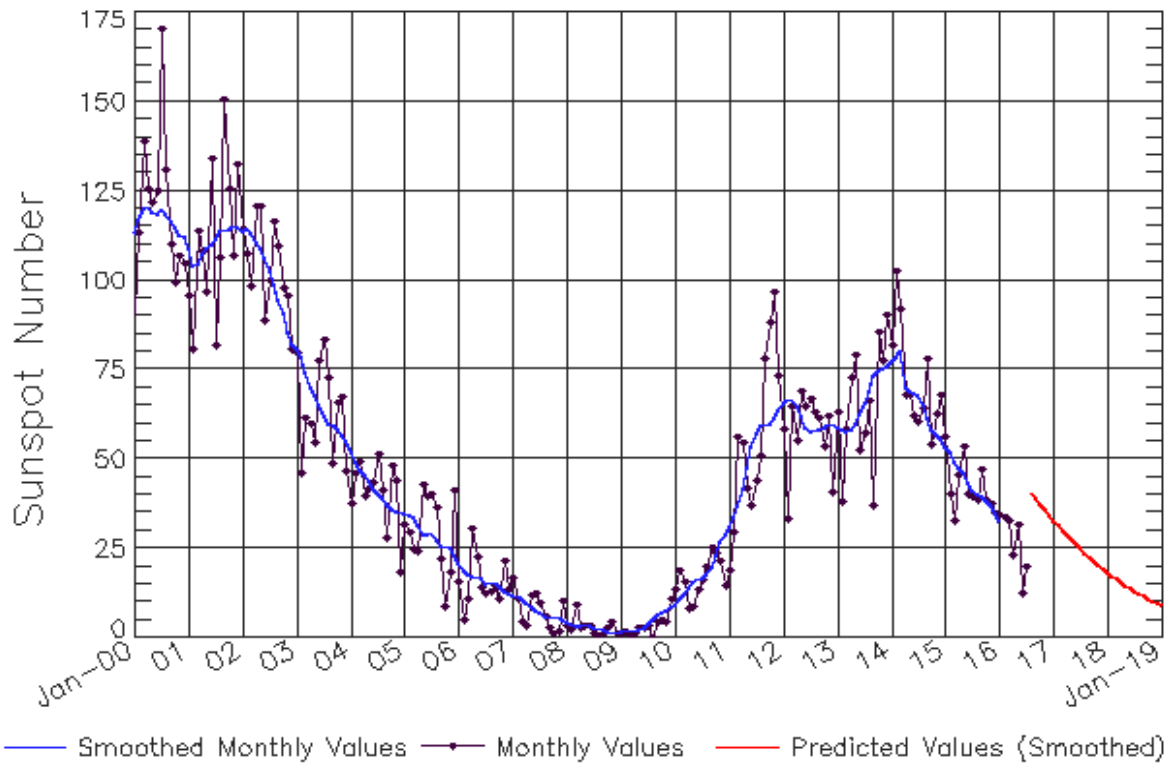
The x-ray plots contains five-minute averages x-ray flux (Watt/m²) as measure by the SWPC primary GOES X-ray satellite, usually at West 105 longitude, in two wavelength bands, 0.05 - 0.4 and 0.1 - 0.8 nm. The letters A, B, C, M and X refer to x-ray event levels for the 0.1 - 0.8 nm band.

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 Jul 2016



Updated 2016 Aug 8

NOAA/SWPC Boulder, CO USA

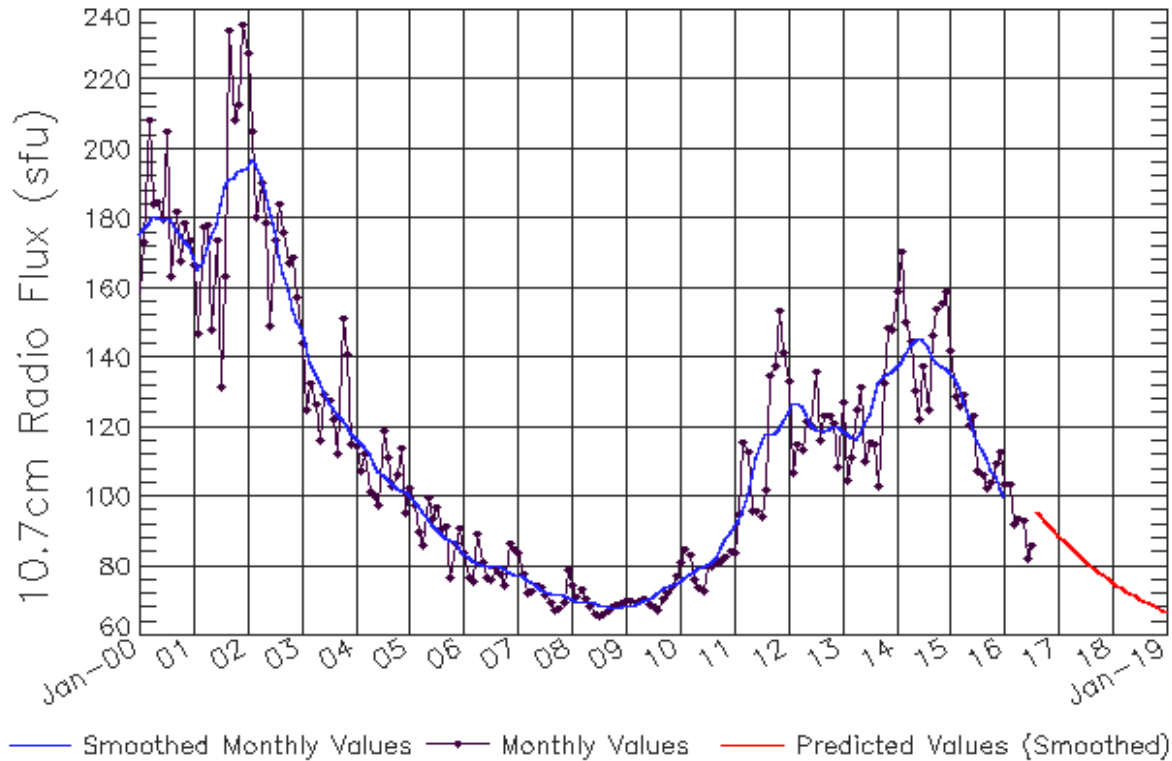
Smoothed Sunspot Number Prediction

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2010	9 (1)	10 (2)	11 (3)	13 (5)	15 (5)	16 (6)	17 (7)	17 (7)	20 (8)	23 (9)	27 (9)	29 (10)
2011	19 (10)	30 (10)	56 (10)	54 (10)	42 (10)	37 (10)	44 (10)	51 (10)	78 (10)	88 (10)	97 (10)	73 (10)
2012	58 (10)	33 (10)	64 (10)	55 (10)	69 (10)	65 (10)	67 (10)	63 (10)	61 (10)	53 (10)	62 (10)	41 (10)
2013	63 (10)	38 (10)	58 (10)	72 (10)	79 (10)	53 (10)	57 (10)	66 (10)	37 (10)	86 (10)	78 (10)	90 (10)
2014	82 (10)	102 (10)	92 (10)	68 (10)	68 (10)	62 (10)	60 (10)	64 (10)	78 (10)	54 (10)	62 (10)	68 (10)
2015	56 (10)	40 (10)	33 (10)	45 (10)	53 (10)	40 (10)	40 (10)	39 (10)	47 (10)	38 (10)	37 (10)	35 (10)
2016	34 (10)	34 (10)	33 (10)	23 (10)	31 (10)	13 (10)	20 (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 Jul 2016



Updated 2016 Aug 8

NOAA/SWPC Boulder, CO USA

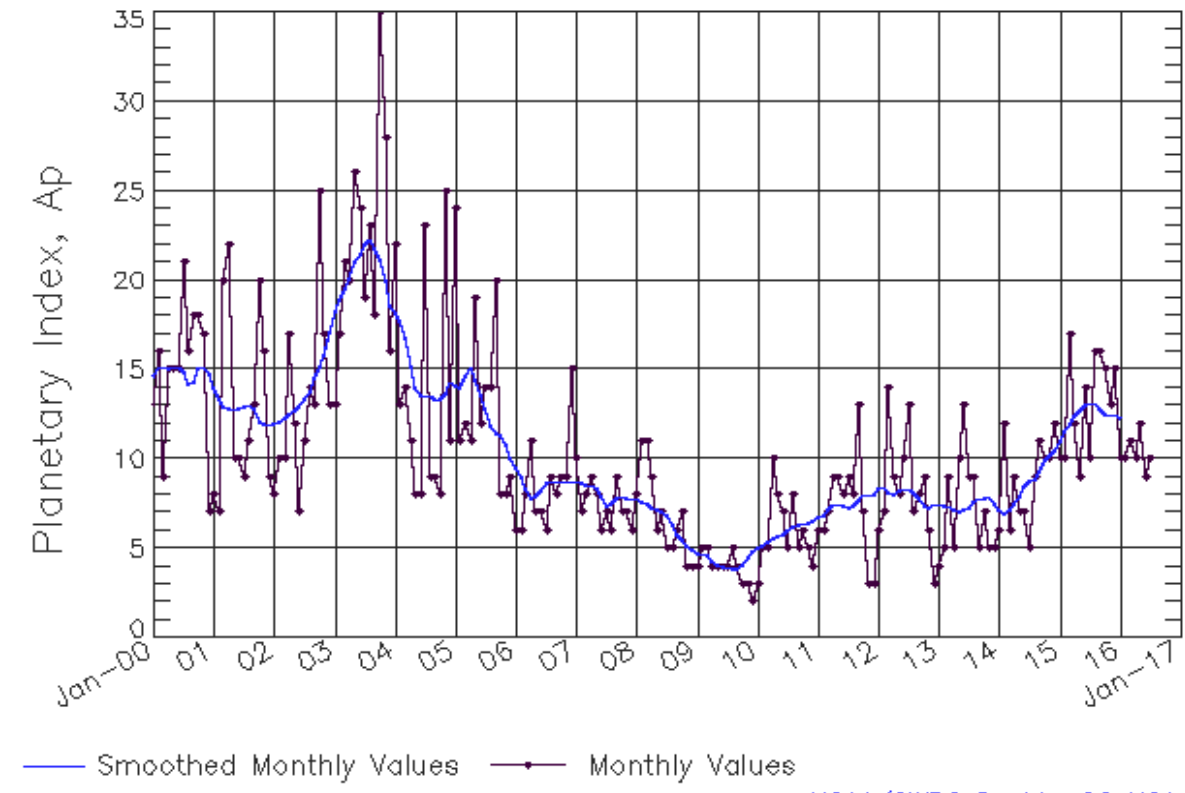
Smoothed F10.7cm Radio Flux Prediction

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 (***)	137 (***)
2015	136 (***)	134 (***)	131 (***)	127 (***)	123 (***)	120 (***)	116 (***)	113 (***)	111 (***)	108 (***)	105 (***)	103 (***)
2016	100 (***)	99 (1)	98 (1)	97 (2)	96 (3)	94 (4)	93 (4)	91 (5)	90 (6)	90 (7)	89 (8)	89 (8)
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 Jul 2016



Updated 2016 Aug 8

NOAA/SWPC Boulder, CO USA

Solar Cycle Comparison charts are temporarily unavailable.



Preliminary Report and Forecast of Solar Geophysical Data (The Weekly)

Published every Monday by the Space Weather Prediction Center.

U.S. Department of Commerce
NOAA / National Weather Service
Space Weather Prediction Center
325 Broadway, Boulder CO 80305

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.

<http://spaceweather.gov/weekly/> -- Current and previous year

<http://spaceweather.gov/ftpmenu/warehouse.html> -- Online archive from 1997

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

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

<http://spaceweather.gov/contacts.html> -- Contact and Copyright information

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

