

Solar activity was at predominately very low levels with an isolated C1/Sf flare observed at 27/0748 UTC from Region 2597 (S13, L=349, class/area Dsc/120 on 24 Sep). This region also produced numerous background flares during the period. The only other spotted region on the disk, new Region 2598 (N12, L=172, class/area Bxo/010 on 02 Oct), produced a few background flares late in the period.

Other activity consisted of a pair of CMEs that were observed lifting off the NE limb on 01 Oct. At 01/0139 UTC, a 38 degree long filament erupted that was centered near N26E27. C2 LASCO imagery observed a CME off the east limb, first visible at 01/0248 UTC. Later in the day at 01/1340 UTC, coronal dimming was observed in the NE quadrant with an associated CME off the east limb, first visible in C2 LASCO imagery at 01/1424 UTC. WSA-Enlil model output suggested a possible weak, glancing impact at Earth mid to late on 04 Oct.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit was at normal levels on 26 Sep, moderate levels on 27 Sep, high levels on 28-29 Sep and 02 Oct and very high levels on 30 Sep and 01 Oct.

Geomagnetic field activity was dominated during the period by a large, recurrent, positive polarity CH HSS. Field activity began the period on 26 Sep at unsettled to active levels due to a period of prolonged southward Bz to -10 Nt. Wind speeds were in the 400-425 km/s range through midday on 26 Sep when a gradual increase to near 475 km/s was observed by early on 27 Sep. Through 27 Sep, wind speeds continued to increase to end the day near 700 km/s as the CH HSS became geoeffective. Bz was variable between +/- 9 nT. The geomagnetic field reacted with unsettled to minor storm (G1-Minor) levels with isolated major storm (G2-Moderate) levels.

From 28 Sep through midday on 30 Sep, wind speeds remained in the 700 km/s range while the Bz component was variable at +/- 5 nT. Field conditions remained at predominately unsettled to G1 storm levels with isolated G2 storm periods observed on 28 and 29 Sep. From midday on 30 Sep through 02 Oct, wind speeds slowly decreased to end the summary period near 475 km/s. Bz remained variable between +/- 5 nT. Field conditions responded with quiet to active levels with some isolated G1 storm periods.

Space Weather Outlook

03 October - 29 October 2016

Solar activity is expected to be at very low levels with a slight chance for C-class flares through the outlook period.

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 from 03-06 Oct, 18 Oct and 24-28 Oct and very high levels 27-29 Oct due to the anticipated influence of multiple, recurrent CH HSSs. Normal to moderate levels are expected for the remainder of the period.

Geomagnetic field activity is expected to be at unsettled to active levels on 03-05 Oct, 16-18 Oct and 23-29 Oct. G1(Minor) field activity is possible on 17 Oct and 23-29 Oct with G2 (Moderate) activity possible on 24-26 Oct. This activity is due to the anticipated influence of multiple, recurrent CH HSSs. Generally quiet to unsettled conditions are expected throughout the remainder of the 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
26 September	87	23	70	B1.6	0	0	0	3	0	0	0	0
27 September	86	21	110	B1.5	1	0	0	4	0	0	0	0
28 September	84	20	100	A8.5	0	0	0	1	0	0	0	0
29 September	83	17	100	B1.5	0	0	0	0	0	0	0	0
30 September	81	12	60	B1.6	0	0	0	0	0	0	0	0
01 October	81	0	0	B1.1	0	0	0	0	0	0	0	0
02 October	82	13	10	B1.1	0	0	0	4	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
	26 September		9.5e+05	1.4e+04	3.5e+03	
27 September		5.0e+06	1.4e+04	3.1e+03		9.5e+07
28 September		5.9e+06	1.3e+04	2.9e+03		3.8e+08
29 September		1.2e+07	1.3e+04	3.0e+03		4.9e+08
30 September		7.5e+06	1.4e+04	3.2e+03		1.9e+09
01 October		6.4e+06	1.4e+04	3.2e+03		2.4e+09
02 October		9.0e+06	1.5e+04	3.3e+03		1.0e+09

Daily Geomagnetic Data

Date	Middle Latitude Fredericksburg		High Latitude College		Estimated Planetary	
	A	K-indices	A	K-indices	A	K-indices
	26 September	18	3-4-3-3-3-3-4	33	2-3-4-6-5-5-4-3	22
27 September	21	4-3-3-4-3-5-2-3	64	5-4-5-7-7-6-3-3	38	5-4-5-5-4-6-3-4
28 September	24	4-4-4-1-3-4-5-3	58	5-4-4-7-5-6-6-3	42	5-5-3-5-4-5-6-4
29 September	22	4-4-4-4-3-4-3-2	73	3-4-7-7-6-7-4-3	39	4-5-5-5-4-5-4-3
30 September	15	4-3-3-3-2-3-3-2	33	3-3-5-6-4-4-5-1	21	4-4-4-4-3-3-5-2
01 October	14	3-4-2-2-2-3-3-3	27	2-4-4-5-4-4-5-2	19	3-4-2-3-2-4-4-3
02 October	15	3-3-2-3-3-2-4-3	37	3-2-4-6-7-2-2-3	18	3-3-3-2-4-2-5-4



Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
26 Sep 1051	EXTENDED WARNING: Geomagnetic K = 4	25/2022 - 26/1800
26 Sep 1751	EXTENDED WARNING: Geomagnetic K = 4	25/2022 - 27/0600
26 Sep 2353	WARNING: Geomagnetic K = 5	26/2353 - 27/0400
27 Sep 0029	WATCH: Geomagnetic Storm Category G2 predicted	
27 Sep 0119	ALERT: Geomagnetic K = 5	27/0119
27 Sep 0357	EXTENDED WARNING: Geomagnetic K = 5	26/2353 - 27/0900
27 Sep 0357	EXTENDED WARNING: Geomagnetic K = 4	25/2022 - 27/1200
27 Sep 0856	EXTENDED WARNING: Geomagnetic K = 5	26/2353 - 27/1500
27 Sep 0856	EXTENDED WARNING: Geomagnetic K = 4	25/2022 - 27/1800
27 Sep 0903	ALERT: Geomagnetic K = 5	27/0859
27 Sep 1036	ALERT: Geomagnetic K = 5	27/1036
27 Sep 1449	EXTENDED WARNING: Geomagnetic K = 5	26/2353 - 27/2359
27 Sep 1449	EXTENDED WARNING: Geomagnetic K = 4	25/2022 - 28/0600
27 Sep 1541	ALERT: Electron 2MeV Integral Flux \geq 1000pfu	27/1525
27 Sep 1543	ALERT: Geomagnetic K = 5	27/1543
27 Sep 1609	WARNING: Geomagnetic K = 6	27/1610 - 2359
27 Sep 1730	ALERT: Geomagnetic K = 6	27/1729
27 Sep 2322	EXTENDED WARNING: Geomagnetic K = 4	25/2022 - 28/1600
27 Sep 2328	EXTENDED WARNING: Geomagnetic K = 5	26/2353 - 28/1400
28 Sep 0300	ALERT: Geomagnetic K = 5	28/0259
28 Sep 0510	ALERT: Geomagnetic K = 5	28/0509
28 Sep 0857	CONTINUED ALERT: Electron 2MeV Integral Flux \geq 1000pfu	27/1525
28 Sep 1045	ALERT: Geomagnetic K = 5	28/1040
28 Sep 1351	EXTENDED WARNING: Geomagnetic K = 5	26/2353 - 28/2100
28 Sep 1351	EXTENDED WARNING: Geomagnetic K = 4	25/2022 - 28/2100
28 Sep 1546	WARNING: Geomagnetic K = 6	28/1546 - 2100
28 Sep 1659	ALERT: Geomagnetic K = 5	28/1657
28 Sep 1841	ALERT: Geomagnetic K = 5	28/1841



Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
28 Sep 2049	ALERT: Geomagnetic K = 6	28/2048
28 Sep 2049	EXTENDED WARNING: Geomagnetic K = 6	28/1546 - 29/0300
28 Sep 2049	EXTENDED WARNING: Geomagnetic K = 5	26/2353 - 29/0600
28 Sep 2049	EXTENDED WARNING: Geomagnetic K = 4	25/2022 - 29/1200
28 Sep 2108	WATCH: Geomagnetic Storm Category G1 predicted	
29 Sep 0527	EXTENDED WARNING: Geomagnetic K = 4	25/2022 - 29/1800
29 Sep 0528	EXTENDED WARNING: Geomagnetic K = 5	26/2353 - 29/1500
29 Sep 0533	ALERT: Geomagnetic K = 5	29/0531
29 Sep 0541	CONTINUED ALERT: Electron 2MeV Integral Flux \geq 1000pfu	27/1525
29 Sep 0632	WARNING: Geomagnetic K = 6	29/0631 - 1200
29 Sep 0747	ALERT: Geomagnetic K = 5	29/0746
29 Sep 1020	ALERT: Geomagnetic K = 5	29/1014
29 Sep 1157	EXTENDED WARNING: Geomagnetic K = 6	29/0631 - 1500
29 Sep 1448	EXTENDED WARNING: Geomagnetic K = 4	25/2022 - 29/2359
29 Sep 1448	EXTENDED WARNING: Geomagnetic K = 5	26/2353 - 29/2100
29 Sep 1542	ALERT: Geomagnetic K = 5	29/1542
29 Sep 1616	WARNING: Geomagnetic K = 6	29/1616 - 2100
29 Sep 2051	EXTENDED WARNING: Geomagnetic K = 5	26/2353 - 30/0600
29 Sep 2051	EXTENDED WARNING: Geomagnetic K = 4	25/2022 - 30/1200
30 Sep 0500	CONTINUED ALERT: Electron 2MeV Integral Flux \geq 1000pfu	27/1525
30 Sep 0555	EXTENDED WARNING: Geomagnetic K = 5	26/2353 - 30/1500
30 Sep 0555	EXTENDED WARNING: Geomagnetic K = 4	25/2022 - 30/1800
30 Sep 1433	EXTENDED WARNING: Geomagnetic K = 5	26/2353 - 01/0300
30 Sep 1506	EXTENDED WARNING: Geomagnetic K = 4	25/2022 - 01/1200
30 Sep 2106	ALERT: Geomagnetic K = 5	30/2059
01 Oct 0432	WARNING: Geomagnetic K = 5	01/0431 - 1300
01 Oct 0501	CONTINUED ALERT: Electron 2MeV Integral Flux \geq 1000pfu	27/1525

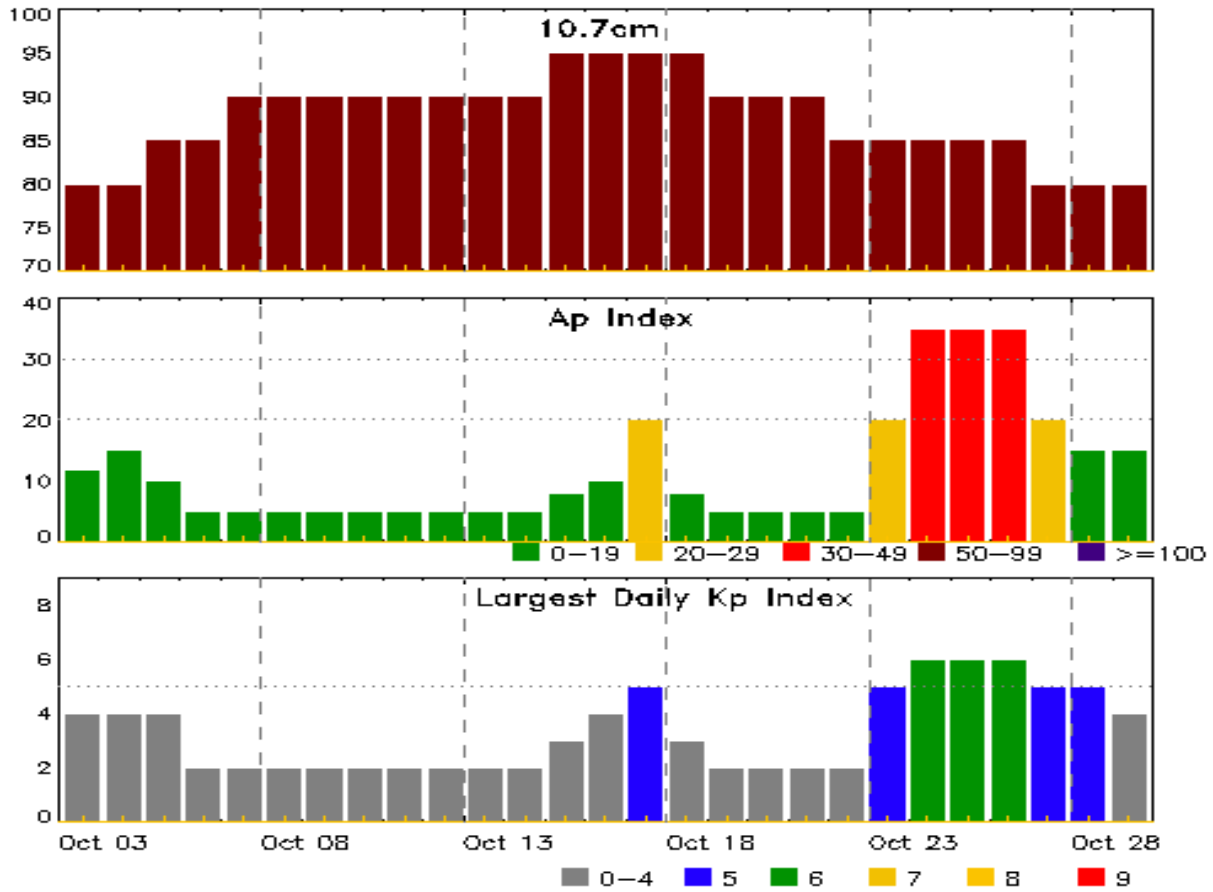


Alerts and Warnings Issued

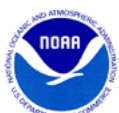
Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
01 Oct 0628	EXTENDED WARNING: Geomagnetic K = 4	25/2022 - 01/1500
01 Oct 1456	EXTENDED WARNING: Geomagnetic K = 4	25/2022 - 01/2359
01 Oct 1932	WARNING: Geomagnetic K = 5	01/1935 - 2359
01 Oct 2350	EXTENDED WARNING: Geomagnetic K = 4	25/2022 - 02/1300
02 Oct 0500	CONTINUED ALERT: Electron 2MeV Integral Flux \geq 1000pfu	27/1525
02 Oct 1256	EXTENDED WARNING: Geomagnetic K = 4	25/2022 - 02/2359
02 Oct 2044	WARNING: Geomagnetic K = 5	02/2045 - 2359
02 Oct 2100	ALERT: Geomagnetic K = 5	02/2059
02 Oct 2354	EXTENDED WARNING: Geomagnetic K = 4	25/2022 - 03/1300



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
03 Oct	80	12	4	17 Oct	95	20	5
04	80	15	4	18	95	8	3
05	85	10	4	19	90	5	2
06	85	5	2	20	90	5	2
07	90	5	2	21	90	5	2
08	90	5	2	22	85	5	2
09	90	5	2	23	85	20	5
10	90	5	2	24	85	35	6
11	90	5	2	25	85	35	6
12	90	5	2	26	85	35	6
13	90	5	2	27	80	20	5
14	90	5	2	28	80	15	5
15	95	8	3	29	80	15	4
16	95	10	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 245	Radio Flux 2695	Intensity II

No Events Observed

Flare List

Date	Time			X-ray Class	Imp/ Brtns	Optical Location Lat CMD	Rgn #
	Begin	Max	End				
26 Sep	0353	0359	0408	B4.2			2597
26 Sep	0643	0646	0648	B5.0			2597
26 Sep	0752	0755	0757	B3.1			2597
26 Sep	0828	0830	0833		SF	S14W29	2597
26 Sep	B0900	U0904	A0916		SF	S14W30	2597
26 Sep	B1457	U1459	1512		SF	S16W34	2597
26 Sep	2346	2354	0007	B3.4			2597
27 Sep	0115	0121	0127	B4.1			
27 Sep	0536	0544	0558	B3.6			
27 Sep	0733	0748	0805	C1.0	SF	S14W30	2597
27 Sep	0951	0958	1009	B4.3	SF	S16W43	2597
27 Sep	1249	1254	1258	B2.5			
27 Sep	1525	1555	1640		SF	S14W46	2597
27 Sep	1757	1803	1806	B6.7	SF	S14W49	2597
28 Sep	1403	1419	1432		SF	S16W60	2597
28 Sep	1555	1601	1609	B3.9			2597
28 Sep	1702	1707	1712	B7.5			2597
28 Sep	1743	1746	1749	B5.3			2597
29 Sep	1431	1435	1439	B2.8			2597
01 Oct	0215	0219	0224	B3.4			2598
02 Oct	0449	0459	0508	B4.8			2598
02 Oct	1627	1632	1641	B3.7			
02 Oct	1741	1744	1749	B2.8	SF	N13E65	2598
02 Oct	1853	1857	1859	B3.4	SF	N10E63	2598
02 Oct	1919	1919	1924		SF	N11E62	2598
02 Oct	1934	1936	1938		SF	N11E62	2598



Region Summary

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 2592																				
15 Sep	N14E66		27	10	3	Bxo	2	B												
16 Sep	N14E53		27	10	2	Bxo	3	B												
17 Sep	N14E39		29	10	5	Bxo	4	B				1								
18 Sep	N14E27		27	10	6	Bxo	5	B				2	2							
19 Sep	N12E14		27	20	7	Cro	2	B												
20 Sep	N12W00		28	plage																
21 Sep	N12W14		29	plage																
22 Sep	N12W28		30	plage																
23 Sep	N12W42		31	plage																
24 Sep	N12W56		32	plage																
25 Sep	N12W70		32	plage																
26 Sep	N12W84		33	plage																
													0	0	0	3	2	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 28

Region 2593																				
18 Sep	N07E11		43	20	4	Cri	9	B				1								
19 Sep	N09W04		45	60	5	Dao	8	B				1								
20 Sep	N09W18		46	50	8	Cso	5	B												
21 Sep	N06W32		47	60	8	Dai	11	B	1			3								
22 Sep	N08W45		47	70	9	Dao	7	B												
23 Sep	N09W59		48	50	11	Eao	9	B												
24 Sep	N07W72		48	30	11	Cro	4	B												
25 Sep	N07W84		46	plage																
													1	0	0	5	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 45

Region 2594																				
18 Sep	N12E11		43	10	3	Cro	3	B												
19 Sep	N12W03		45	10	1	Axx	1	A												
20 Sep	N12W17		45	plage																
													0	0	0	0	0	0	0	0

Died on Disk.
Absolute heliographic longitude: 45



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 2597																		
23 Sep	S13W00	349	30	5	Cao	6	B											
24 Sep	S13W13	349	120	6	Dsc	12	BG							3				
25 Sep	S13W25	347	60	8	Dao	8	B	1						4				
26 Sep	S14W40	349	70	8	Dac	13	BG							3				
27 Sep	S14W52	348	110	9	Dao	11	B	1						4				
28 Sep	S14W66	349	100	10	Dao	10	B							1				
29 Sep	S14W80	350	100	10	Cao	7	B											
30 Sep	S14W91	347	60	7	Hsx	2	A											
								2	0	0	15	0	0	0	0			

Crossed West Limb.

Absolute heliographic longitude: 349

Region 2598

02 Oct	N12E58	172	10	3	Bxo	3	B							4				
								0	0	0	4	0	0	0	0			

Still on Disk.

Absolute heliographic longitude: 172

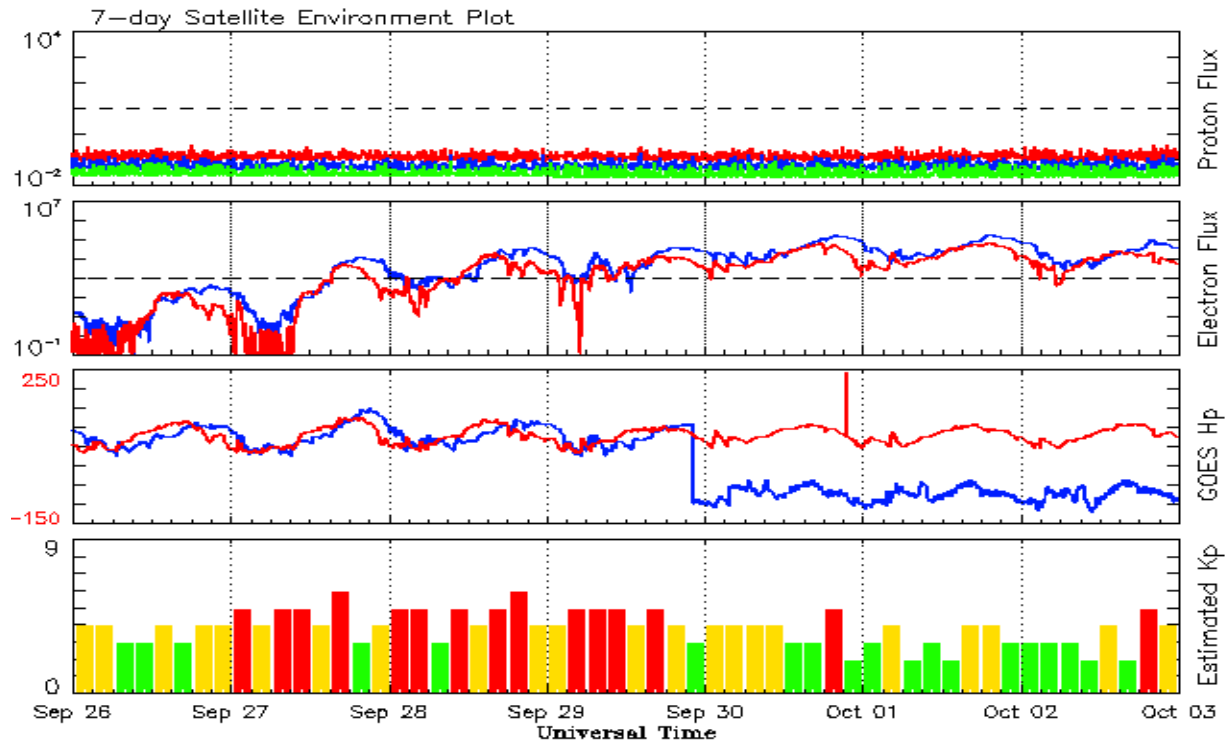


Recent Solar Indices (preliminary)
Observed monthly mean values

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									
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	49.6	31.6	103.5	98.1	10	12.0
March	40.9	32.5	0.80	47.7	30.4	91.6	96.6	11	11.8
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	
August	50.4	30.4	0.60			85.0		10	
September	37.4	26.8	0.72			87.8		16	

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 26 September 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.

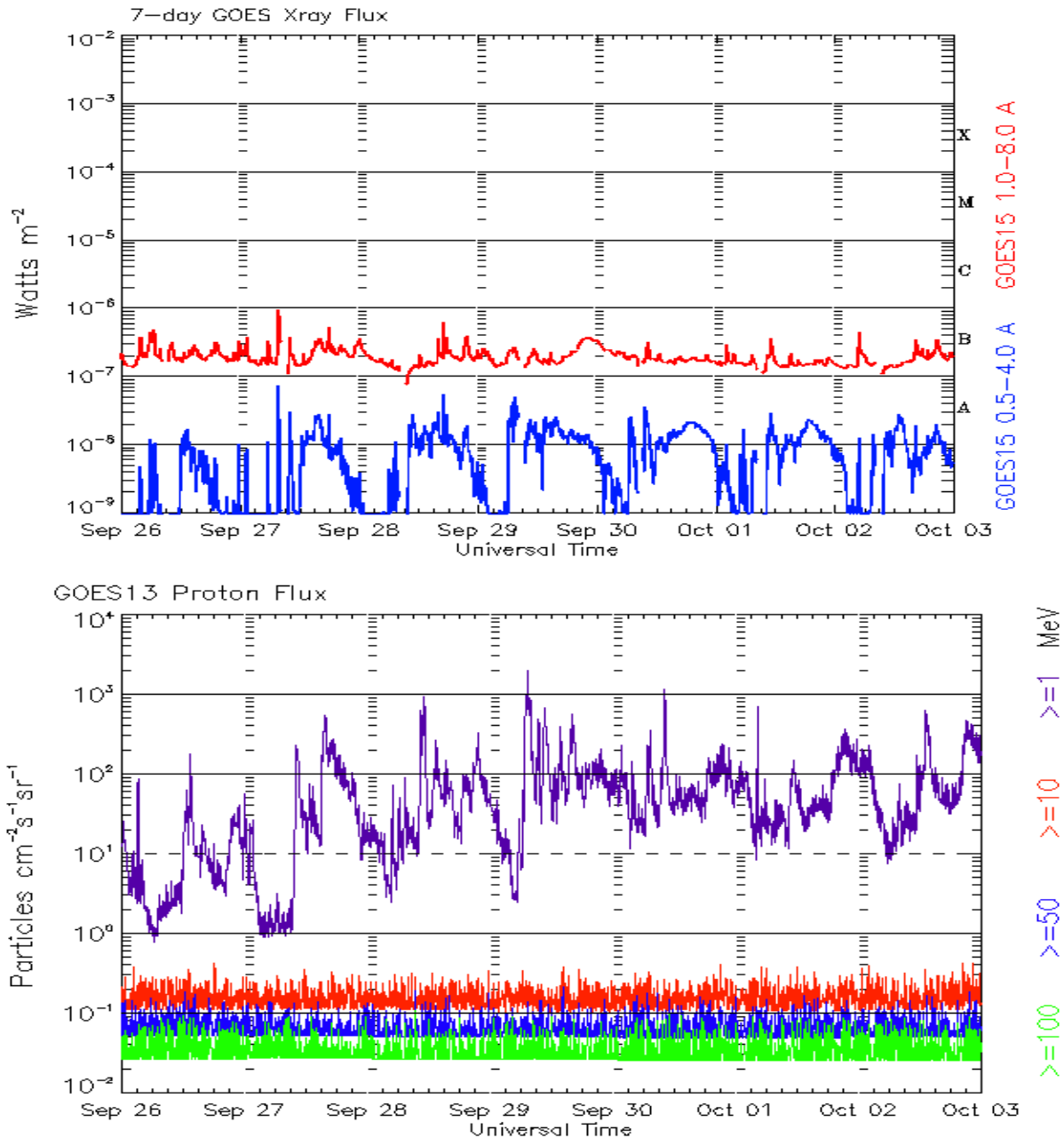
The electron flux plot contains the five-minute averaged integral electron flux (electrons/cm²-sec -sr) with energies greater than 2 MeV by the SWPC Primary GOES satellite.

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 26 September 2016*

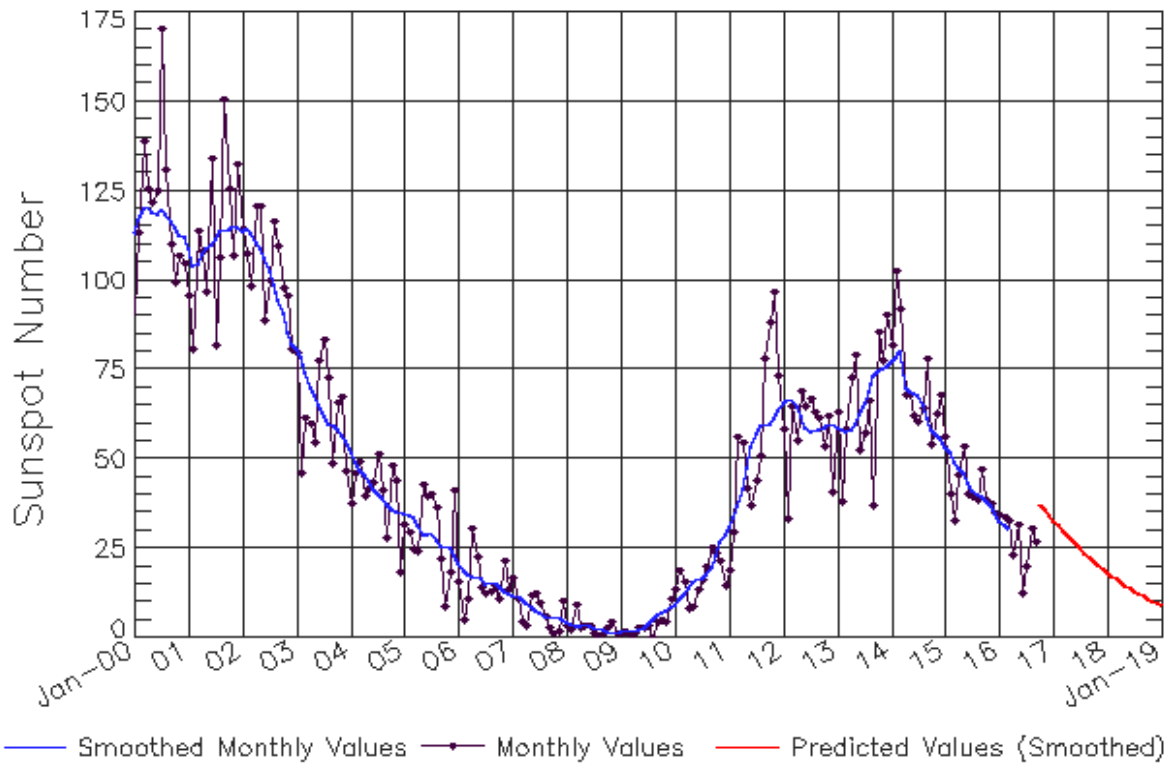
The x-ray plots contains five-minute averages x-ray flux (Watt/m²) as measure by the SWPC primary GOES X-ray satellite, usually at West 105 longitude, in two wavelength bands, 0.05 - 0.4 and 0.1 - 0.8 nm. The letters A, B, C, M and X refer to x-ray event levels for the 0.1 - 0.8 nm band.

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 Sep 2016



Updated 2016 Oct 3

NOAA/SWPC Boulder, CO USA

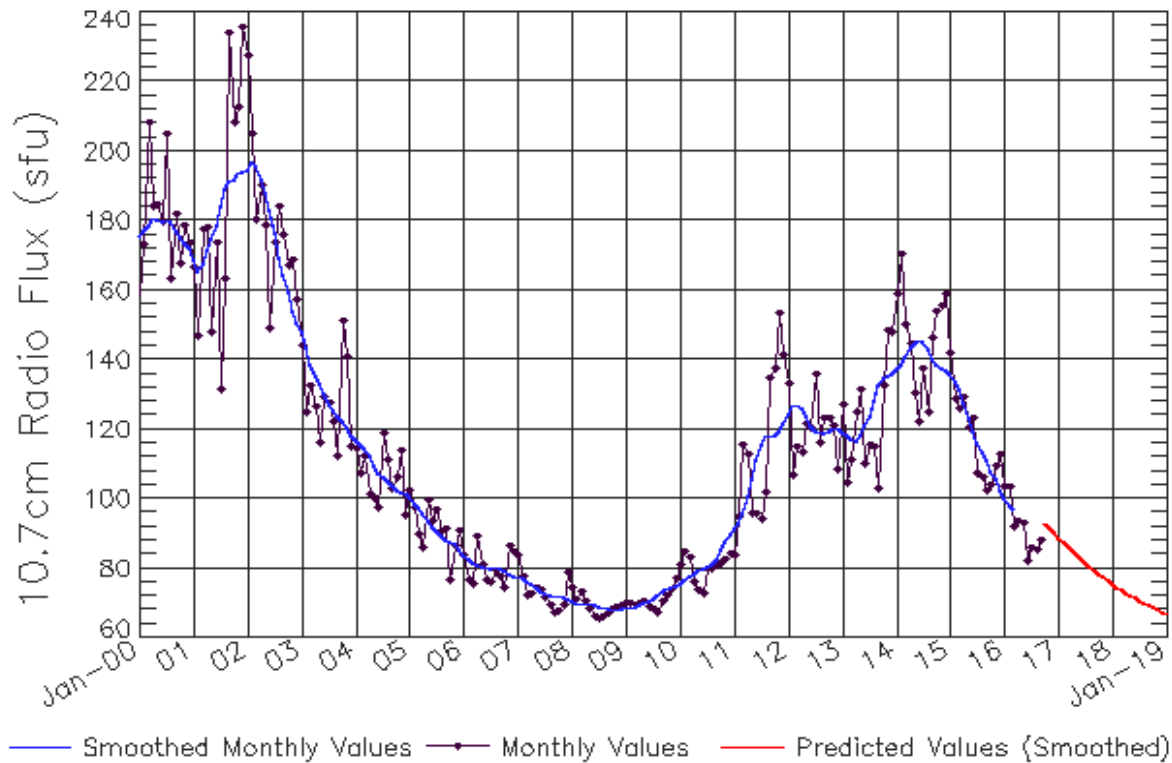
Smoothed Sunspot Number Prediction

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2010	9	10	11	13	15	16	17	17	20	23	27	29
	(1)	(2)	(3)	(5)	(5)	(6)	(7)	(7)	(8)	(9)	(9)	(10)
2011	19	30	56	54	42	37	44	51	78	88	97	73
	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)
2012	58	33	64	55	69	65	67	63	61	53	62	41
	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)
2013	63	38	58	72	79	53	57	66	37	86	78	90
	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)
2014	82	102	92	68	68	62	60	64	78	54	62	68
	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)
2015	56	40	33	45	53	40	40	39	47	38	37	35
	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)
2016	34	34	33	23	31	13	20	30	27	37	36	34
	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)
2017	33	31	30	29	27	26	25	24	23	21	20	19
	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)
2018	18	17	16	15	15	14	13	12	12	11	10	10
	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)
2019	9	8	8	7	7	6	6	6	5	5	4	4
	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)



ISES Solar Cycle F10.7cm Radio Flux Progression

Observed data through Sep 2016



Updated 2016 Oct 3

NOAA/SWPC Boulder, CO USA

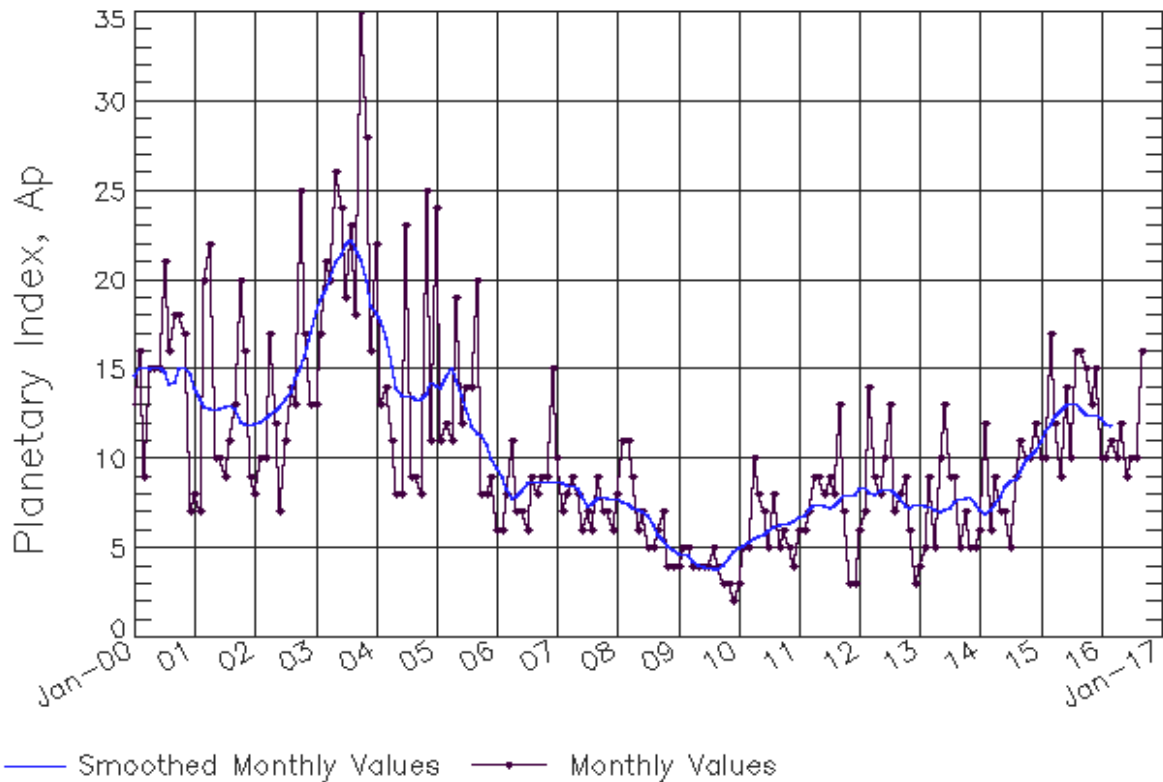
Smoothed F10.7cm Radio Flux Prediction

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 (***)	98 (***)	97 (***)	96 (1)	94 (1)	93 (2)	91 (3)	90 (4)	89 (4)	88 (5)	88 (6)	87 (7)
2017	87 (8)	87 (8)	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 Sep 2016



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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

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<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

