

Solar activity was very low. Two small regions developed on the visible disk this period. Region 2718 (S07, L=191, class/area Hrx/020 on 17 Aug) developed on 14 Aug and decayed to plage by 19 Aug. Region 2719 (S06, L=133, class/area Bxo/010 on 19 Aug) developed in the SE quadrant on 19 Aug. No significant flare events occurred from either region. Other activity included a filament eruption centered near S11W04 observed lifting off the solar disk at approximately 19/0538 UTC. An associated coronal mass ejection was observed off the SW limb in SOHO/LASCO C2 imagery at 19/0812 UTC. WSA/Enlil modelling of the event suggested the ejecta was primarily directed westward of the Sun-Earth line and is not expected to cause any significant effects.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit was at normal levels on 13-15 Aug, moderate levels on 16-17 Aug, and at high levels on 18-19 Aug. The largest flux of the period was 18,287 pfu observed at 19/1800 UTC.

Geomagnetic field activity ranged from quiet to active levels over the period. Solar wind speed was at nominal levels at the beginning of the period with solar wind speed ranging from 310-430 km/s while total field was between 1-4 nT. The geomagnetic field was quiet on 13-14 Aug. By 15 Aug, solar wind speed increased to approximately 450-500 km/s with total field increasing to a maximum of 14 nT by 16/1005 UTC as a positive polarity coronal hole high speed stream (CH HSS) moved into geoeffective position. A further increase in solar wind speed to near 570 km/s was observed late on 17 Aug before slowly receding to nominal levels by midday on 19 Aug. The geomagnetic field responded with quiet to active levels on 15-18 Aug. By late on 19 Aug, total field increase again to 12 nT along with an increase in solar wind to near 550 km/s as a negative polarity CH HSS was becoming geoeffective. However, only quiet levels were observed on 19 Aug.

Space Weather Outlook **20 August - 15 September 2018**

Solar activity is expected to continue at very low levels.

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 22-27 Aug and again on 13-15 Sep due to CH HSS influence.

Geomagnetic field activity is expected to be unsettled to active levels on 20-25 Aug, 03-04 Sep, 07 Sep, and 11-15 Sep with a chance for G1 (Minor) geomagnetic storm levels on 20-21 Aug due to recurrent CH HSS activity.



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
13 August	68	0	0	A1.0	0	0	0	0	0	0	0	0
14 August	69	12	10	A1.6	0	0	0	0	0	0	0	0
15 August	69	12	10	A1.4	0	0	0	0	0	0	0	0
16 August	68	12	10	A1.4	0	0	0	0	0	0	0	0
17 August	67	11	20	A1.3	0	0	0	0	0	0	0	0
18 August	67	11	10	A1.3	0	0	0	0	0	0	0	0
19 August	67	15	10	A1.2	0	0	0	0	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
13 August	6.8e+05	1.8e+04	3.8e+03	7.8e+05		
14 August	1.2e+06	1.8e+04	3.8e+03	1.3e+06		
15 August	8.7e+05	1.7e+04	3.6e+03	8.7e+05		
16 August	2.2e+05	1.7e+04	3.6e+03	8.0e+06		
17 August	3.1e+05	1.6e+04	3.4e+03	1.2e+07		
18 August	1.2e+06	1.7e+04	3.5e+03	1.9e+08		
19 August	1.1e+06	1.7e+04	3.8e+03	4.7e+08		

Daily Geomagnetic Data

Date	Middle Latitude Fredericksburg		High Latitude College		Estimated Planetary	
	A	K-indices	A	K-indices	A	K-indices
13 August	6	0-2-1-2-3-2-2-1	6	1-1-1-3-4-0-0-0	5	1-2-1-2-2-1-1-1
14 August	6	1-1-1-2-3-1-2-2	2	0-0-1-1-1-0-0-1	4	2-1-1-1-1-0-0-2
15 August	12	2-2-3-3-3-2-3-3	30	1-1-4-6-6-4-3-2	14	2-1-2-3-4-3-3-4
16 August	11	4-2-3-2-2-1-2-3	20	3-3-3-5-5-2-1-2	11	4-2-3-2-2-2-2-3
17 August	14	4-4-2-2-2-1-3-3	13	3-4-4-3-1-0-2-2	13	3-4-3-2-1-1-3-3
18 August	11	1-3-4-3-3-2-1-1	39	1-4-6-7-4-4-2-1	12	2-3-4-3-3-3-1-2
19 August	8	3-2-2-2-2-1-2-2	7	1-2-2-3-1-2-2-1	9	2-2-2-2-1-2-2-2

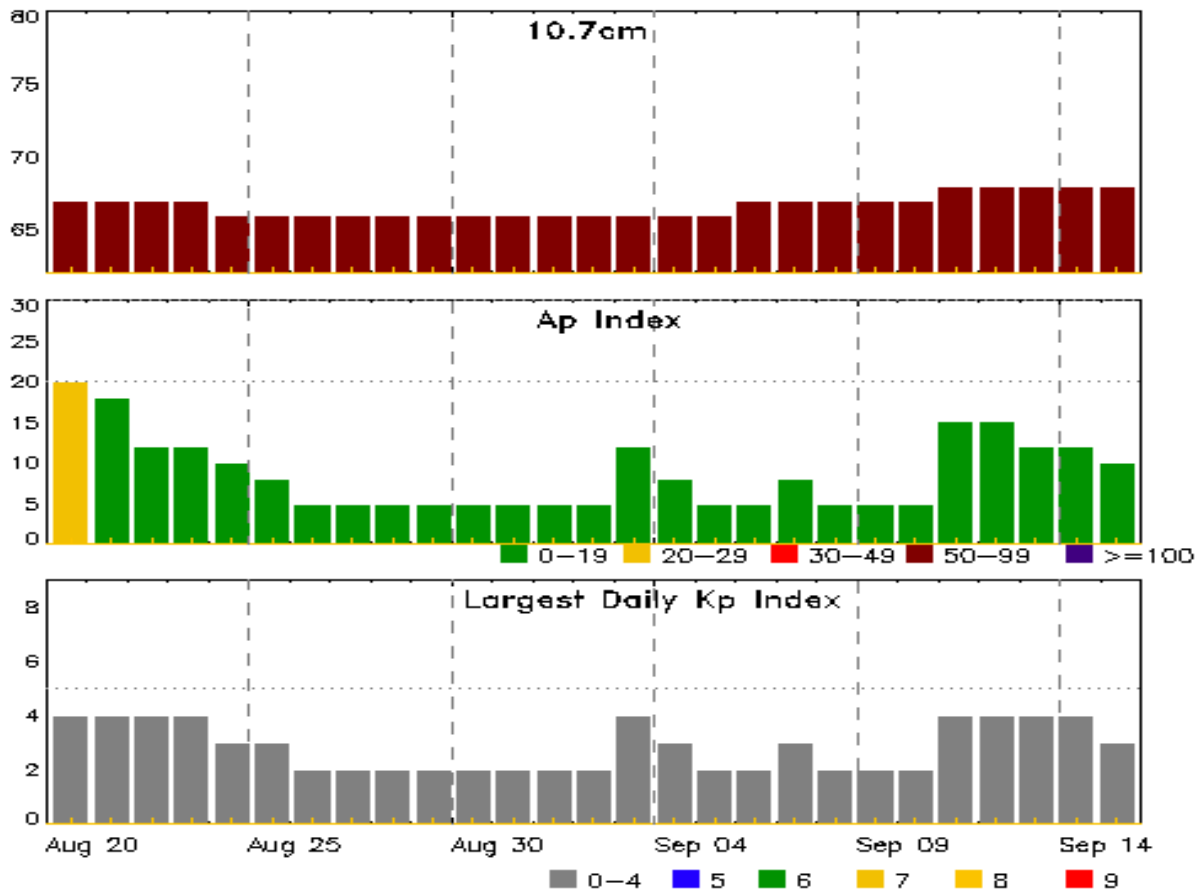


Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
15 Aug 1142	WARNING: Geomagnetic K = 4	15/1142 - 1800
15 Aug 1355	ALERT: Geomagnetic K = 4	15/1350
15 Aug 2212	WARNING: Geomagnetic K = 4	15/2215 - 16/0300
16 Aug 0002	ALERT: Geomagnetic K = 4	15/2359
16 Aug 0203	EXTENDED WARNING: Geomagnetic K = 4	15/2215 - 16/1000
17 Aug 0345	WARNING: Geomagnetic K = 4	17/0345 - 0900
17 Aug 0413	ALERT: Geomagnetic K = 4	17/0412
18 Aug 0559	WARNING: Geomagnetic K = 4	18/0600 - 1200
18 Aug 0809	ALERT: Geomagnetic K = 4	18/0808
18 Aug 1426	ALERT: Electron 2MeV Integral Flux \geq 1000pfu	18/1410
19 Aug 0859	CONTINUED ALERT: Electron 2MeV Integral Flux \geq 1000pfu	18/1410



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
20 Aug	67	20	4	03 Sep	66	12	4
21	67	18	4	04	66	8	3
22	67	12	4	05	66	5	2
23	67	12	4	06	67	5	2
24	66	10	3	07	67	8	3
25	66	8	3	08	67	5	2
26	66	5	2	09	67	5	2
27	66	5	2	10	67	5	2
28	66	5	2	11	68	15	4
29	66	5	2	12	68	15	4
30	66	5	2	13	68	12	4
31	66	5	2	14	68	12	4
01 Sep	66	5	2	15	68	10	3
02	66	5	2				

Energetic Events

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

No Events Observed

Flare List

Date	Time			Optical			
	Begin	Max	End	X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
14 Aug	0500	0501	0502	A1.0			
14 Aug	1236	1243	1254	A9.3			
16 Aug	0912	0918	0923	A8.9			2718



Region Summary

Sunspot Characteristics and Flares															
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

Region 2718

14 Aug	S08E49	192	10	3	Bxo	2	B								
15 Aug	S07E36	192	10	3	Cro	2	B								
16 Aug	S08E23	191	10	2	Bxo	2	B								
17 Aug	S07E10	191	20	1	Hrx	1	A								
18 Aug	S07W03	192	10	1	Axx	1	A								
19 Aug	S06W19	195	plage												
								0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 192

Region 2719

19 Aug	S06E43	133	10	3	Bxo	5	B								
								0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 133

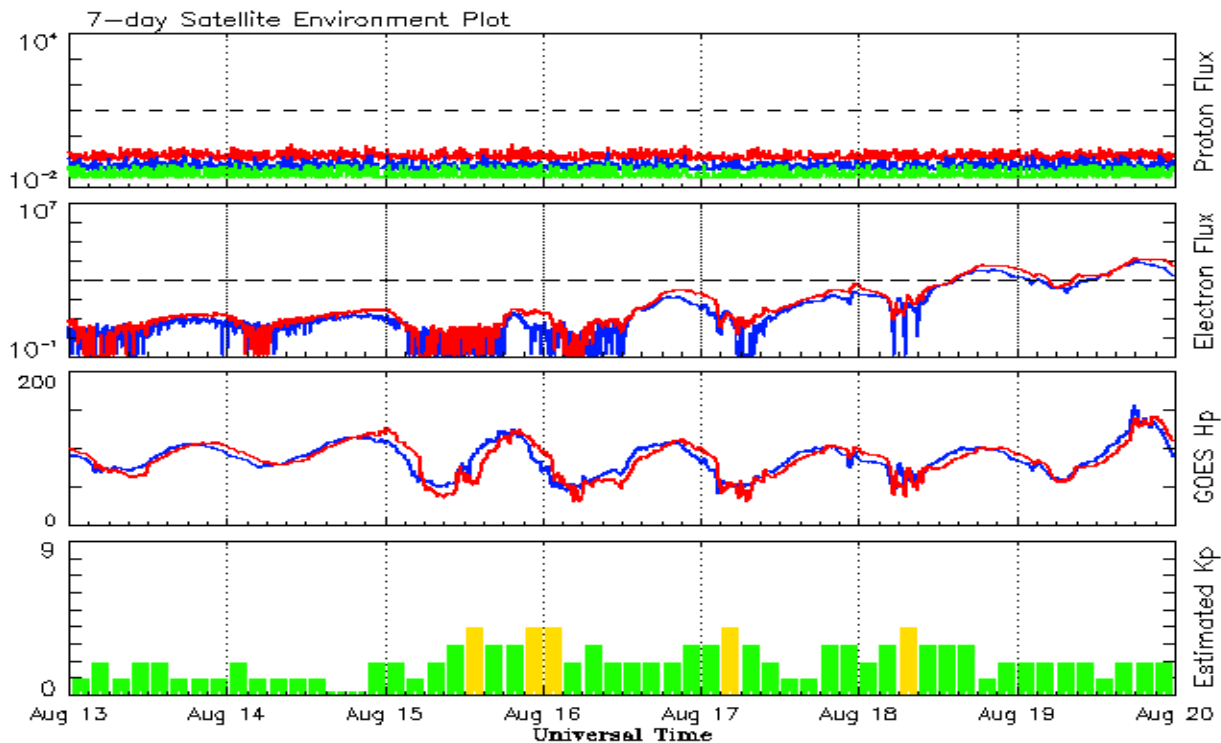


Recent Solar Indices (preliminary)
Observed monthly mean values

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
2016									
August	50.4	30.1	0.60	34.2	21.6	85.0	85.5	10	11.2
September	37.4	26.8	0.72	32.1	19.9	87.8	83.7	16	11.3
October	30.0	20.0	0.67	31.1	18.9	86.1	82.5	16	11.6
November	22.4	12.8	0.57	29.4	17.9	78.7	81.1	10	11.6
December	17.6	11.1	0.64	28.1	17.1	75.1	80.0	10	11.4
2017									
January	28.1	15.7	0.55	27.3	16.7	77.4	79.4	10	11.3
February	22.0	15.8	0.71	25.5	15.9	76.9	78.7	10	11.3
March	25.4	10.6	0.42	24.6	15.4	74.6	78.6	15	11.5
April	30.4	19.4	0.64	24.3	14.9	80.9	78.4	13	11.5
May	18.1	11.3	0.62	23.1	14.0	73.5	77.7	9	11.3
June	18.0	11.5	0.64	22.0	13.3	74.8	77.3	7	11.3
July	18.8	10.7	0.59	20.8	12.6	77.7	76.8	9	11.0
August	25.0	19.6	0.80	19.7	11.8	77.9	76.3	12	10.7
September	42.2	26.2	0.62	18.6	11.0	92.0	75.9	19	10.3
October	16.0	7.9	0.49	16.8	10.0	76.4	75.1	11	9.8
November	7.7	3.4	0.44	15.7	9.2	72.1	74.6	11	9.5
December	7.6	4.9	0.64	15.7	9.1	71.5	74.4	8	9.4
2018									
January	7.8	4.1	0.51	15.0	8.6	70.0	74.0	6	9.3
February	16.0	6.4	0.40			72.0		7	
March	6.0	1.5	0.25			68.4		8	
April	7.0	5.3	0.76			70.0		7	
May	15.0	7.9	0.53			70.9		8	
June	19.7	9.5	0.48			72.5		7	
July	1.3	1.0	0.77			69.7		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 13 August 2018*

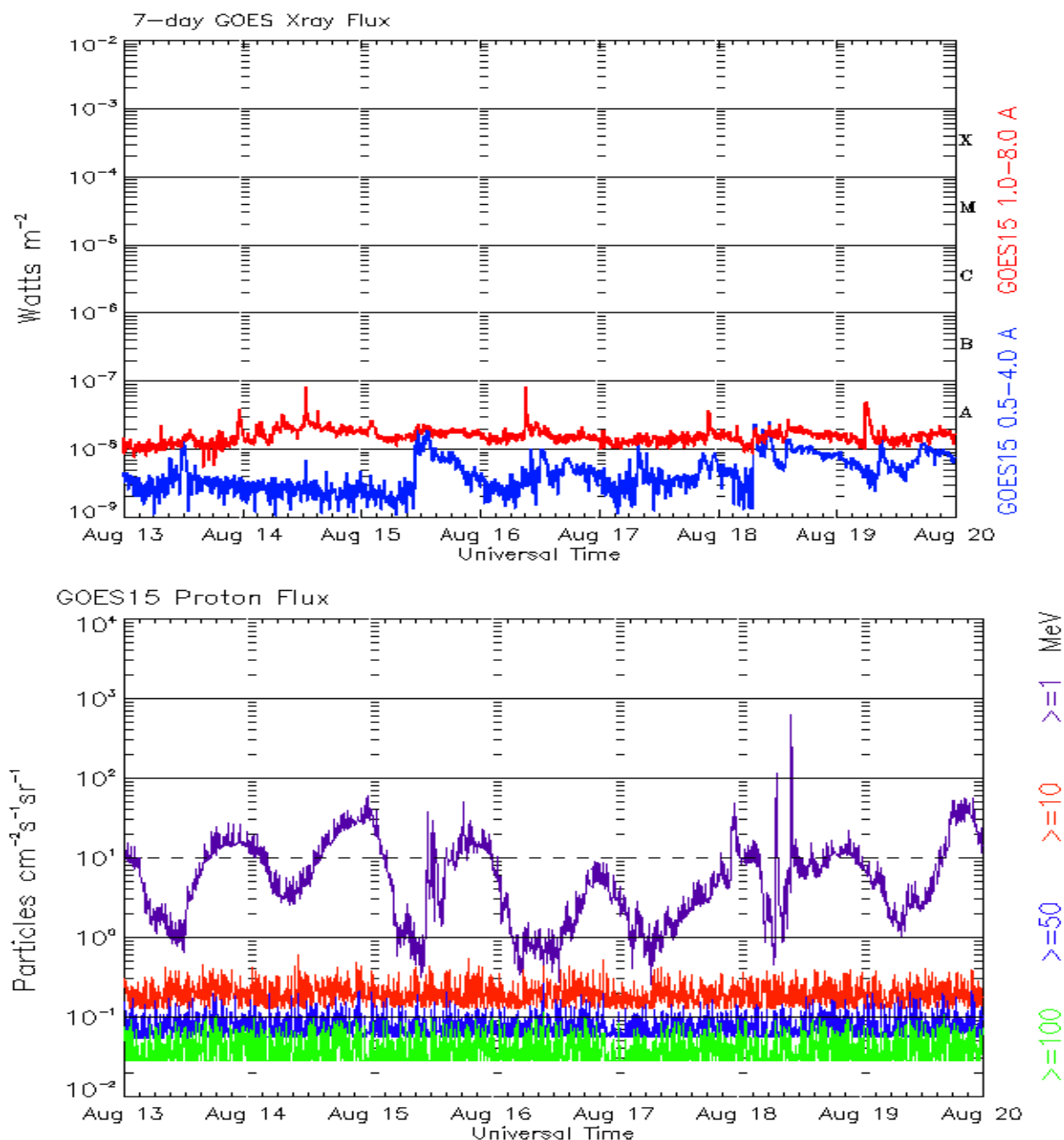
The proton flux plot contains the five-minute averaged integral proton flux (protons/cm²-sec -sr) as measured by the SWPC Primary GOES satellite, near West 75, for each of three energy thresholds: greater than 10, 50, and 100 MeV.

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. Hp 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 13 August 2018*

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.



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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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