

Solar activity was very low. No Earth-directed CMEs were observed during the period.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit was at moderate levels on 05 Aug and at high levels from 06-11 Aug. The largest flux of the period was 26,161 pfu observed at 07/1930 UTC.

Geomagnetic field activity was at quiet to G1 (Minor) storm levels over the period. The period began as a positive polarity coronal hole high speed stream (CH HSS) was becoming geoeffective. Total field increased to 23 nT by 05/0855 UTC as the Bz component became variable between +11 nT/-19 nT. Solar wind speed reached a maximum of 745 km/s at 06/0750 UTC. The geomagnetic field responded with four consecutive periods of G1 (Minor) storm levels on 05 Aug followed by quiet to unsettled levels on 06 Aug. Two further enhancements in solar wind speed were observed on 08 Aug and on 09-10 Aug. The first peaked around 575 km/s while the second peaked at approximately 650 km/s. However, no significant increases in total field were observed. Quiet conditions were observed on 07 Aug with quiet to unsettled levels on 08-11 Aug.

### **Space Weather Outlook** **12 August - 07 September 2019**

Solar activity is expected to continue at very low levels for the forecast period (12 Aug-07 Sep).

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 12-16 Aug and again on 02-07 Sep due to recurrent CH HSS influence.

Geomagnetic field activity is expected to reach unsettled levels on 12 Aug, 16 Aug, 26-28 Aug, and 06-07 Sep due to recurrent CH HSS activity. Unsettled to active levels are expected on 01-02 Sep with G1 (Minor) storming likely on 01 Sep also due to recurrent CH HSS activity.



### *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
05 August	68	12	10	A6.5	0	0	0	0	0	0	0	0
06 August	68	11	0	A7.0	0	0	0	0	0	0	0	0
07 August	68	0	0	A7.0	0	0	0	0	0	0	0	0
08 August	69	0	0	A6.9	0	0	0	0	0	0	0	0
09 August	67	0	0	A6.8	0	0	0	0	0	0	0	0
10 August	67	0	0	A6.5	0	0	0	0	0	0	0	0
11 August	68	0	0	A6.5	0	0	0	0	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
05 August	9.6e+05	2.1e+04	3.6e+03	3.8e+06		
06 August	1.3e+06	2.1e+04	3.5e+03	7.7e+08		
07 August	9.1e+05	2.1e+04	4.0e+03	1.2e+09		
08 August	1.2e+06	2.1e+04	4.0e+03	9.5e+08		
09 August	2.3e+06	2.1e+04	3.7e+03	7.8e+08		
10 August	8.5e+05	2.0e+04	3.6e+03	4.8e+08		
11 August	9.1e+05	2.1e+04	3.9e+03	2.9e+08		

### *Daily Geomagnetic Data*

Date	Middle Latitude Fredericksburg		High Latitude College		Estimated Planetary	
	A	K-indices	A	K-indices	A	K-indices
05 August	20	2-3-4-4-4-4-3-3	61	0-5-5-7-7-6-3-3	35	1-3-5-5-5-5-4-4
06 August	10	3-3-2-3-2-2-1-2	24	4-3-2-6-5-2-1-2	12	3-3-2-3-2-2-1-3
07 August	6	2-3-1-1-2-1-1-2	7	3-2-1-2-2-2-1-1	6	2-2-1-1-1-1-1-2
08 August	6	2-2-2-1-3-1-1-1	12	2-2-2-1-5-3-1-2	7	2-2-2-1-3-2-1-1
09 August	7	0-1-2-2-2-2-2-3	11	0-1-2-5-3-2-1-2	6	1-1-2-2-2-2-2-3
10 August	8	2-2-2-3-2-2-2-1	9	3-2-3-3-2-1-1-1	8	3-2-2-2-1-1-2-2
11 August	7	1-1-2-2-3-2-2-2	14	0-1-2-5-5-1-1-1	3	1-1-2-2-3-1-1-2

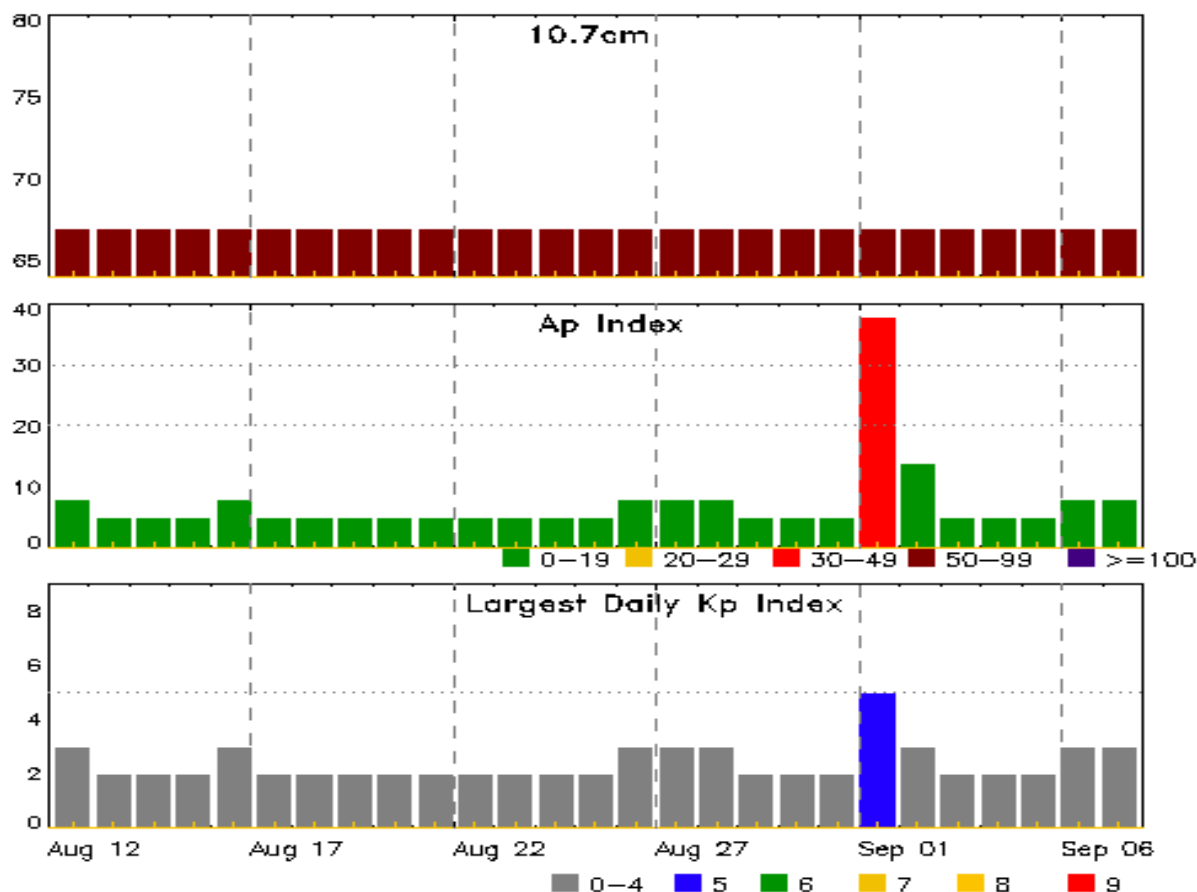


### *Alerts and Warnings Issued*

<b>Date &amp; Time of Issue UTC</b>	<b>Type of Alert or Warning</b>	<b>Date &amp; Time of Event UTC</b>
05 Aug 0336	WARNING: Geomagnetic K = 4	05/0336 - 1800
05 Aug 0707	WARNING: Geomagnetic K = 5	05/0705 - 1500
05 Aug 0732	ALERT: Geomagnetic K = 4	05/0731
05 Aug 0813	ALERT: Geomagnetic K = 5	05/0813
05 Aug 1032	ALERT: Geomagnetic K = 5	05/1031
05 Aug 1053	WARNING: Geomagnetic K = 6	05/1053 - 1500
05 Aug 1246	ALERT: Geomagnetic K = 5	05/1246
05 Aug 1443	EXTENDED WARNING: Geomagnetic K = 5	05/0705 - 2359
05 Aug 1622	ALERT: Geomagnetic K = 5	05/1622
05 Aug 1755	EXTENDED WARNING: Geomagnetic K = 4	05/0336 - 06/0600
06 Aug 0555	EXTENDED WARNING: Geomagnetic K = 4	05/0336 - 06/1200
06 Aug 1030	ALERT: Electron 2MeV Integral Flux $\geq$ 1000pfu	06/1015
06 Aug 1150	EXTENDED WARNING: Geomagnetic K = 4	05/0336 - 06/1800
07 Aug 0859	CONTINUED ALERT: Electron 2MeV Integral Flux $\geq$ 1000pfu	06/1015
08 Aug 0859	CONTINUED ALERT: Electron 2MeV Integral Flux $\geq$ 1000pfu	06/1015
09 Aug 0859	CONTINUED ALERT: Electron 2MeV Integral Flux $\geq$ 1000pfu	06/1015
10 Aug 0908	CONTINUED ALERT: Electron 2MeV Integral Flux $\geq$ 1000pfu	06/1015
11 Aug 0900	CONTINUED ALERT: Electron 2MeV Integral Flux $\geq$ 1000pfu	06/1015



## 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
12 Aug	67	8	3	26 Aug	67	8	3
13	67	5	2	27	67	8	3
14	67	5	2	28	67	8	3
15	67	5	2	29	67	5	2
16	67	8	3	30	67	5	2
17	67	5	2	31	67	5	2
18	67	5	2	01 Sep	67	38	5
19	67	5	2	02	67	14	3
20	67	5	2	03	67	5	2
21	67	5	2	04	67	5	2
22	67	5	2	05	67	5	2
23	67	5	2	06	67	8	3
24	67	5	2	07	67	8	3
25	67	5	2				

### ***Energetic Events***

Date	Time			X-ray		Optical Information			Peak		Sweep Freq	
	Begin	Max	Half	Class	Flux	Imp/	Location	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 #
11 Aug	1440	1441	1442	A1.1			



## Region Summary

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	4

### Region 2745

22 Jul	N02W35	84	0	1	Axx	1	A								
23 Jul	N02W50	85	plage												
24 Jul	N02W65	87	plage												
25 Jul	N02W78	87	plage												
05 Aug	S05E08	219	10	1	Bxo	2	B								
								0	0	0	0	0	0	0	0

Died on Disk.

Absolute heliographic longitude: 219

### Region 2746

06 Aug	S05W07	217	plage												
07 Aug	S05W22	219	plage												
08 Aug	S05W37	221	plage												
09 Aug	S05W52	223	plage												
10 Aug	S05W67	224	plage												
11 Aug	S05W82	226	plage												
								0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 217

### Region 2747

06 Aug	N06E11	199	0		Axx	1	A								
07 Aug	N06W03	199	plage												
08 Aug	N06W18	202	plage												
09 Aug	N06W33	204	plage												
10 Aug	N06W48	205	plage												
11 Aug	N06W63	207	plage												
								0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 199

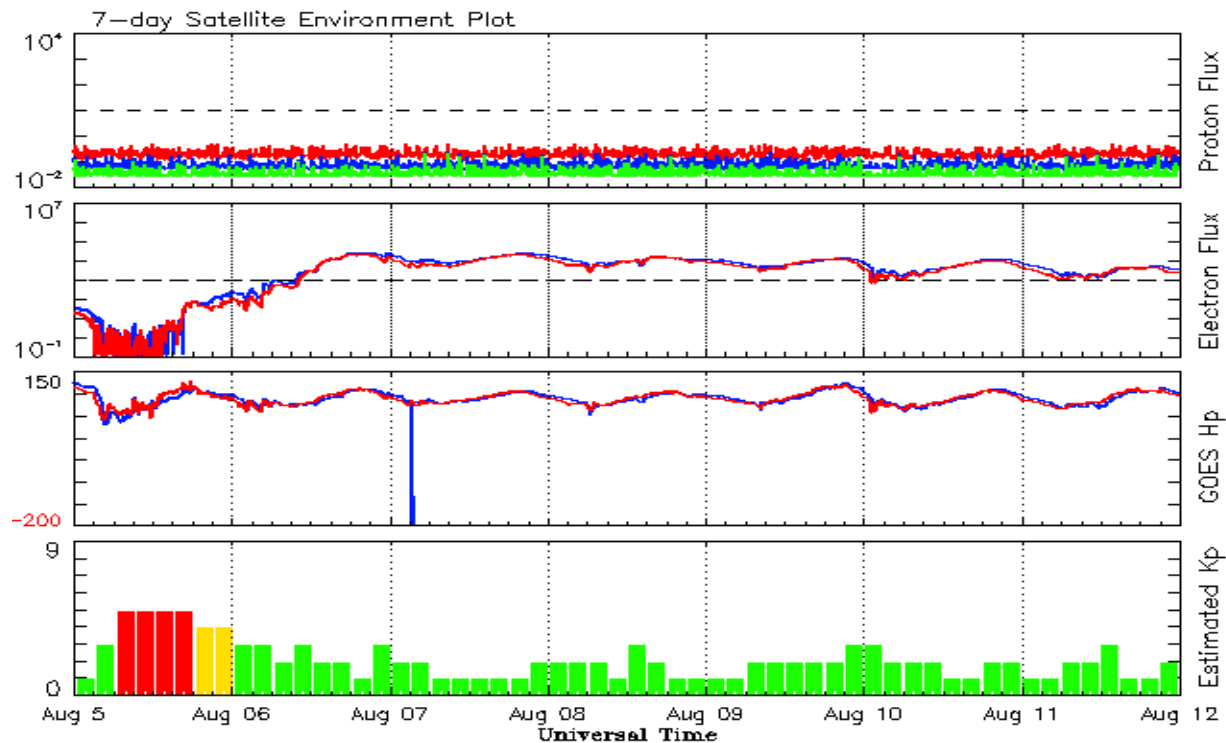


**Recent Solar Indices (preliminary)**  
**Observed monthly mean values**

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>2017</b>									
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
<b>2018</b>									
January	7.8	4.1	0.51	15.0	8.5	70.0	74.0	6	9.3
February	16.0	6.4	0.40	13.7	7.6	72.0	73.3	7	9.1
March	6.0	1.5	0.25	11.5	5.9	68.4	71.9	8	8.6
April	7.0	5.3	0.76	9.6	4.7	70.0	70.6	7	8.0
May	15.0	7.9	0.53	9.2	4.5	70.9	70.2	8	7.6
June	19.7	9.4	0.48	9.1	4.3	72.5	70.0	7	7.4
July	1.3	1.0	0.77	9.4	4.2	69.7	70.0	6	7.3
August	10.0	5.2	0.53	9.0	4.0	69.1	70.0	10	7.3
September	5.7	2.0	0.35	8.7	3.9	68.3	70.1	9	7.3
October	6.9	2.9	0.42	9.2	4.1	69.5	70.3	7	7.1
November	7.3	2.9	0.48	9.5	4.0	68.9	70.4	6	7.0
December	5.6	1.9	0.34	9.3	3.6	70.0	70.3	7	6.9
<b>2019</b>									
January	16.0	4.6	0.29	9.0	3.2	71.6	70.0	6	6.8
February		0.5				70.6		7	
March	14.8	5.6	0.39			71.5		6	
April	11.5	5.5	0.48			72.4		6	
May	18.1	6.1	0.34			71.3		7	
June	11.6	0.7	0.06			68.1		5	
July	1.6	0.5	0.31			67.1		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 05 August 2019*

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.

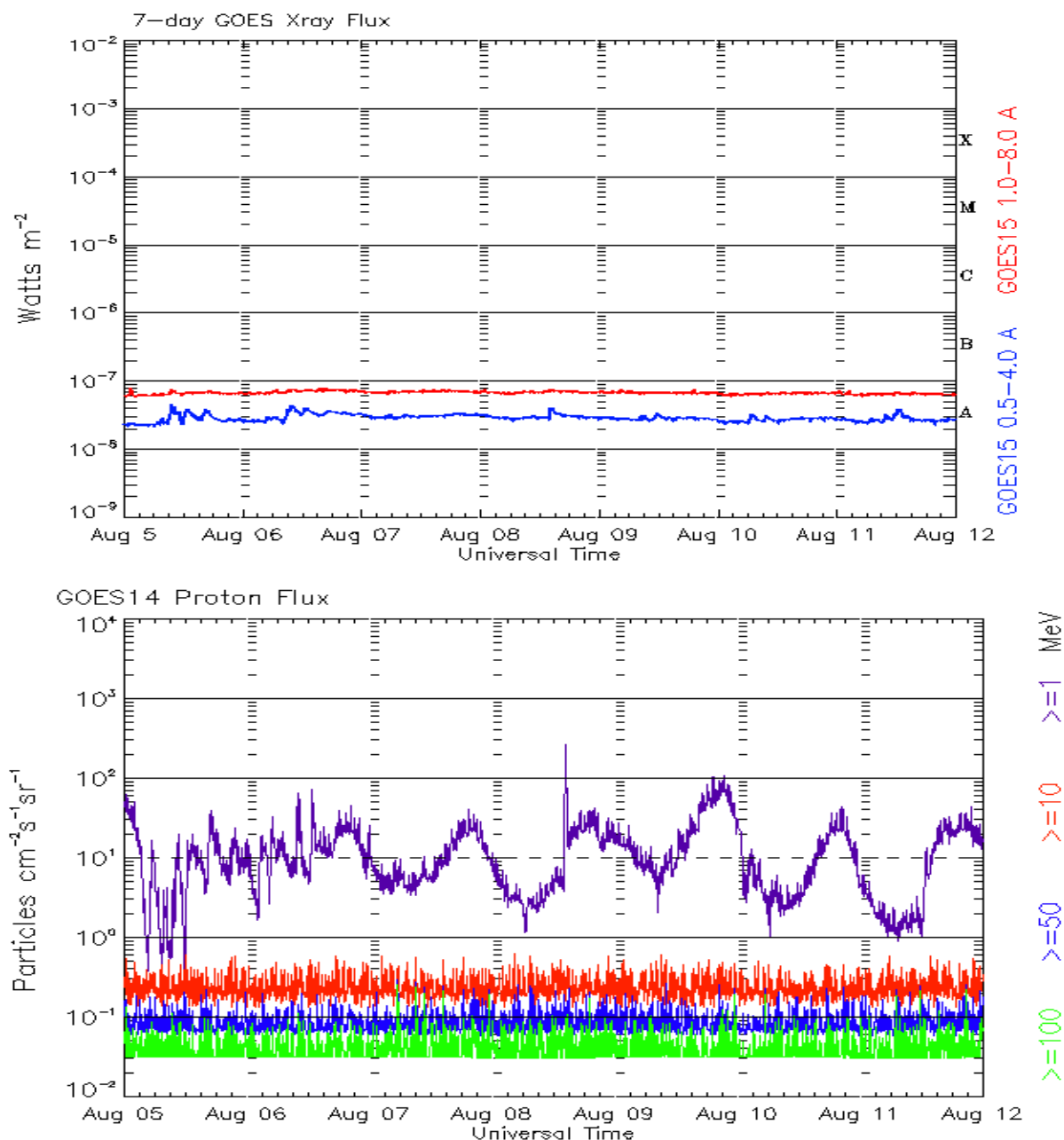
The electron flux plot contains the five-minute averaged integral electron flux (electrons/cm<sup>2</sup>-sec -sr) with energies greater than 2 MeV by the SWPC Primary GOES satellite.

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 05 August 2019*

The x-ray plots contains five-minute averages x-ray flux (Watt/m<sup>2</sup>) 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<sup>2</sup> -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.



## ***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  
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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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