

Space Weather Highlights
03 August - 09 August 2020

SWPC PRF 2345
10 August 2020

Solar activity was at very low levels on 03-07 and 09 Aug. Low levels were reached on 08 Aug as Region 2770 (N23, L=023, class/area Cso/070 on 06 Aug) produced an isolated C1/Sn flare at 08/0349 UTC. This was the first C-class flare observed since 29 May. No Earth-directed CMEs were observed.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit was at moderate to high levels. Moderate levels were observed on 03-04 Aug. High levels were observed on 05-09 Aug due to coronal hole high speed stream (CH HSS) influence. The maximum flux of the period was 2,815 pfu observed at 05/1630 UTC.

Geomagnetic field activity ranged from quiet to active levels. The period began with the onset of a positive polarity CH HSS. Total field reached 10 nT at the beginning of the period and solar wind speed reached a maximum of 754 km/s at 04/0516 UTC. By early on 05 Aug, solar wind speed was in decline and nominal background levels returned by 07 Aug. The geomagnetic field responded with quiet to active levels on 03-04 Aug and quiet conditions on 05-09 Aug.

Space Weather Outlook
10 August - 05 September 2020

Solar activity is expected to be very low levels with a slight chance for isolated C-class flares through 15 Aug. Very low levels are expected for the rest of the outlook period.

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 10-11 Aug and again on 01-05 Sep due to CH HSS influence.

Geomagnetic field activity is expected to be reach unsettled levels on 29-31 Aug with active levels likely on 30 Aug due to recurrent CH HSS effects.



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
03 August	73	23	70	A3.9	0	0	0	0	0	0	0	0
04 August	73	12	50	A3.4	0	0	0	0	0	0	0	0
05 August	73	13	160	A4.0	0	0	0	0	0	0	0	0
06 August	73	14	70	A3.3	0	0	0	0	0	0	0	0
07 August	74	14	70	A3.3	0	0	0	0	0	0	0	0
08 August	75	11	50	A3.2	1	0	0	1	0	0	0	0
09 August	74	13	30	A2.8	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	>2MeV
	03 August	1.7e+05	4.6e+04
04 August	7.9e+04	4.6e+04	2.7e+07
05 August	5.8e+04	4.7e+04	9.9e+07
06 August	6.2e+04	4.7e+04	1.0e+08
07 August	5.9e+04	4.8e+04	1.2e+08
08 August	5.6e+04	4.8e+04	1.1e+08
09 August	5.8e+04	4.8e+04	1.3e+08

Daily Geomagnetic Data

Date	Middle Latitude Fredericksburg		High Latitude College		Estimated Planetary	
	A	K-indices	A	K-indices	A	K-indices
	03 August	15	3-3-3-3-3-3-3-3	26	3-4-4-6-3-4-2-2	16
04 August	9	2-4-2-1-2-2-2-2	13	3-4-2-4-3-1-1-1	8	2-4-2-2-2-1-2-2
05 August	6	2-2-1-1-2-2-2-1	4	1-2-1-1-1-1-1-1	5	2-2-1-1-1-1-2-1
06 August	4	0-1-0-1-2-2-1-2	4	1-1-1-0-2-2-1-1	5	1-2-1-1-2-2-0-2
07 August	5	1-1-0-2-2-2-1-2	2	1-1-0-0-0-0-1-1	4	2-1-1-1-1-1-1-2
08 August	5	2-2-1-2-1-2-2-0	8	2-2-3-3-3-1-0-0	5	2-2-2-1-1-1-1-0
09 August	3	0-0-0-2-2-1-1-1	1	0-0-0-2-0-0-0-0	2	0-1-0-1-1-0-0-1

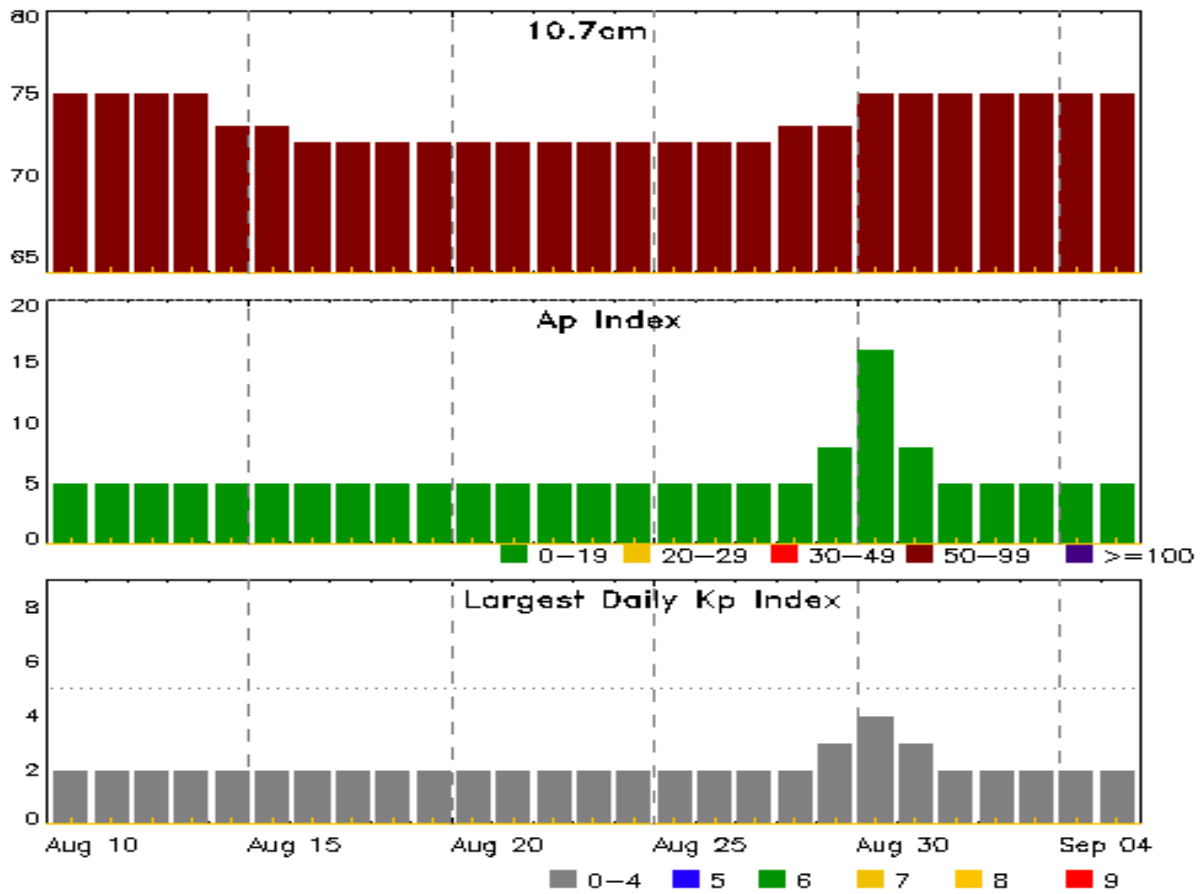


Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
03 Aug 0121	WARNING: Geomagnetic K = 4	03/0120 - 1200
03 Aug 0254	ALERT: Geomagnetic K = 4	03/0251
03 Aug 2108	WARNING: Geomagnetic K = 4	03/2107 - 04/0300
04 Aug 0255	EXTENDED WARNING: Geomagnetic K = 4	03/2107 - 04/1200
04 Aug 0455	ALERT: Geomagnetic K = 4	04/0454
05 Aug 1025	ALERT: Electron 2MeV Integral Flux \geq 1000pfu	05/1010
06 Aug 0622	CONTINUED ALERT: Electron 2MeV Integral Flux \geq 1000pfu	05/1010
07 Aug 0653	CONTINUED ALERT: Electron 2MeV Integral Flux \geq 1000pfu	05/1010
08 Aug 0942	CONTINUED ALERT: Electron 2MeV Integral Flux \geq 1000pfu	05/1010
09 Aug 0716	CONTINUED ALERT: Electron 2MeV Integral Flux \geq 1000pfu	05/1010



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
10 Aug	75	5	2	24 Aug	72	5	2
11	75	5	2	25	72	5	2
12	75	5	2	26	72	5	2
13	75	5	2	27	72	5	2
14	73	5	2	28	73	5	2
15	73	5	2	29	73	8	3
16	72	5	2	30	75	16	4
17	72	5	2	31	75	8	3
18	72	5	2	01 Sep	75	5	2
19	72	5	2	02	75	5	2
20	72	5	2	03	75	5	2
21	72	5	2	04	75	5	2
22	72	5	2	05	75	5	2
23	72	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 #	Radio Flux 245	Radio Flux 2695	Intensity II

No Events Observed

Flare List

Date	Time			X-ray Class	Imp/ Brtns	Optical Location Lat CMD	Optical Rgn #
	Begin	Max	End				
03 Aug	0147	0154	0158	B2.0			2770
03 Aug	0319	0322	0326	B2.7			2770
03 Aug	0330	0335	0339	B2.1			2770
03 Aug	0341	0343	0348	B3.0			2770
03 Aug	0544	0554	0603	B1.3			2770
03 Aug	0742	0746	0750	B1.2			2770
03 Aug	0834	0839	0846	B2.2			2770
04 Aug	1232	1240	1249	B1.0			2769
05 Aug	2352	2359	0007	B1.4			2770
06 Aug	0007	0015	0020	B2.2			2770
08 Aug	0342	0349	0355	C1.5	SN	N22E17	2770
08 Aug	1558	1605	1612	B1.2			2770



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 2767																					
21 Jul	S22E72	197	80	1	Hsx	1	A														
22 Jul	S22E58	200	120	1	Hsx	1	A														
23 Jul	S22E44	200	120	3	Hsx	1	A														
24 Jul	S21E31	200	120	3	Hsx	1	A														
25 Jul	S21E18	200	120	3	Hsx	1	A														
26 Jul	S21E05	200	120	3	Hsx	1	A														
27 Jul	S20W07	198	70	1	Hsx	1	A														
28 Jul	S20W21	198	40	1	Hsx	1	A														
29 Jul	S16W35	200	80	2	Hsx	1	A														
30 Jul	S20W46	197	90	2	Hsx	1	A														
31 Jul	S21W60	198	60	1	Hsx	1	A														
01 Aug	S21W73	198	50	1	Hsx	1	A														
02 Aug	S22W85	197	50	2	Hsx	1	A														
													0	0	0	0	0	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 200

Region 2768																					
28 Jul	N25E65	113	10	1	Axx	1	A														
29 Jul	N20E54	110	5		Axx	1	A														
30 Jul	N26E40	111	20		Hsx	1	A														
31 Jul	N26E27	111	10	1	Bxo	2	B														
01 Aug	N26E14	111	10	1	Axx	1	A														
02 Aug	N26W00	112	plage																		
03 Aug	N26W14	113	plage																		
04 Aug	N26W28	114	plage																		
05 Aug	N26W42	115	plage																		
06 Aug	N26W56	115	plage																		
07 Aug	N26W70	116	plage																		
08 Aug	N26W84	117	plage																		
													0	0	0	0	0	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 112



Region Summary - continued

Date	Location		Sunspot Characteristics				Flares								
	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 2769

02 Aug	N26E53	59	10	1	Axx	1	A										
03 Aug	N27E41	58	10	2	Axx	2	A										
04 Aug	N27E27	59	plage														
05 Aug	N27E13	60	plage														
06 Aug	N27W01	60	plage														
07 Aug	N27W15	61	plage														
08 Aug	N27W29	62	plage														
09 Aug	N27W43	63	plage														
									0	0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 60

Region 2770

03 Aug	N21E72	25	60	1	Hsx	1	A										
04 Aug	N23E60	26	50	10	Cso	2	B										
05 Aug	N22E49	24	160	8	Cso	3	B										
06 Aug	N23E36	23	70	6	Cso	4	B										
07 Aug	N23E22	24	70	6	Cso	4	B										
08 Aug	N22E08	24	50	1	Hsx	1	A	1				1					
09 Aug	N22W04	24	30	4	Cso	3	B										
								1	0	0	1	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 24



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

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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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