

Space Weather Highlights
13 July - 19 July 2020

SWPC PRF 2342
20 July 2020

Solar activity was very low throughout the period. No active regions with sunspots were observed over the past week. The passage of a slow-moving CME from 08 Jul was observed on 13-14 Jul. Near the end of the period, a faint, slow-moving CME was observed off the western limb in STEREO-A imagery beginning at around 19/0524 UTC. Analysis of this event remains underway at the time of this writing.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit was at normal-to-moderate levels throughout the period.

Geomagnetic field activity reached active levels between 13/0000-0900 UTC due to a combination of positive polarity CH HSS and CME (08 Jul) effects. Quiet to unsettled conditions were observed on 13 Jul. Quiet conditions were observed throughout the remainder of the period.

Space Weather Outlook
20 July - 15 August 2020

Solar activity is expected to be very low throughout 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 normal-to-moderate throughout the outlook period.

Geomagnetic field activity is expected to be quiet to unsettled on 23-24 Jul and 31 Jul-01 Aug. Quiet conditions are expected to prevail throughout the rest 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
13 July	68	0	0	A0.0	0	0	0	0	0	0	0	0
14 July	69	0	0	A0.0	0	0	0	0	0	0	0	0
15 July	68	0	0	A1.4	0	0	0	0	0	0	0	0
16 July	69	0	0	A0.0	0	0	0	0	0	0	0	0
17 July	68	0	0	A0.0	0	0	0	0	0	0	0	0
18 July	68	0	0	A0.0	0	0	0	0	0	0	0	0
19 July	69	0	0	A0.0	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
	13 July	2.6e+05	4.6e+04
14 July	7.0e+04	4.6e+04	1.9e+06
15 July	5.7e+04	4.6e+04	2.7e+06
16 July	6.1e+04	4.6e+04	3.5e+06
17 July	5.8e+04	4.6e+04	4.0e+06
18 July	5.8e+04	4.6e+04	5.3e+06
19 July	7.1e+04	4.6e+04	6.8e+06

Daily Geomagnetic Data

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

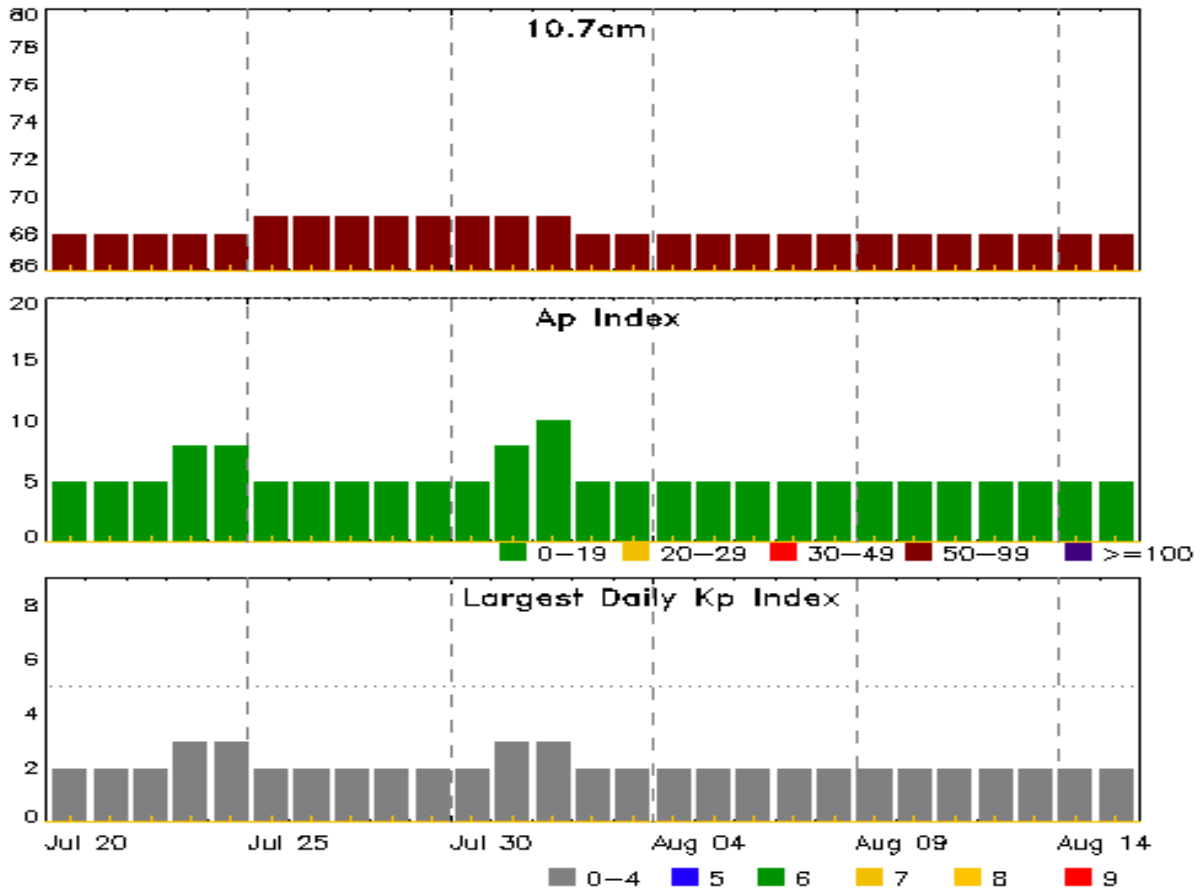


Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
14 Jul 0047	WARNING: Geomagnetic K = 4	14/0045 - 0900
14 Jul 0112	ALERT: Geomagnetic K = 4	14/0111
14 Jul 0750	EXTENDED WARNING: Geomagnetic K = 4	14/0045 - 1500
14 Jul 1445	EXTENDED WARNING: Geomagnetic K = 4	14/0045 - 2300



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 Jul	68	5	2	03 Aug	68	5	2
21	68	5	2	04	68	5	2
22	68	5	2	05	68	5	2
23	68	8	3	06	68	5	2
24	68	8	3	07	68	5	2
25	69	5	2	08	68	5	2
26	69	5	2	09	68	5	2
27	69	5	2	10	68	5	2
28	69	5	2	11	68	5	2
29	69	5	2	12	68	5	2
30	69	5	2	13	68	5	2
31	69	8	3	14	68	5	2
01 Aug	69	10	3	15	68	5	2
02	68	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	Optical			Rgn #
	Begin	Max	End		Imp/ Brtns	Location Lat CMD		

No Flares Observed



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		
<i>Region 2766</i>																		
04 Jul	N06E19	117	10	4	Bxo	2	B											
05 Jul	N05E04	119	10	1	Axx	1	A											
06 Jul	N04W11	120	plage															
07 Jul	N04W26	122	plage															
08 Jul	N04W40	123	plage															
09 Jul	N04W54	124	plage															
10 Jul	N05W65	122	10	2	Bxo	2	B											
11 Jul	N05W80	123	plage															
12 Jul	N05W95	125	plage															
										0	0	0	0	0	0	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 119



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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