

Space Weather Highlights
05 October - 11 October 2020

SWPC PRF 2354
12 October 2020

Solar activity was very low. Regions 2774 (S25, L=308, class/area Axx/010 on 09 Oct) and 2775 (S24, L=272, class/area Cro/050 on 10 Oct) were absent of significant flare activity and unremarkable throughout the period. No Earth-directed CMEs were observed.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit reached high levels on 05, 07, and 10 Oct with a peak flux of 3,236 pfu on 07/1535 UTC. Moderate flux levels were observed throughout the remainder of the period.

Geomagnetic field activity reached isolated active levels on 05 and 06 Oct due to a slightly enhanced interplanetary magnetic field. Quiet conditions were observed on 07-11 Oct under a background solar wind regime.

Space Weather Outlook
12 October - 07 November 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 reach high levels on 21-31 Oct and 01, 03, 06 Nov. Normal to moderate levels are expected during the remainder of the outlook period.

Geomagnetic field activity is likely to reach G2 (Moderate) geomagnetic storm levels on 25 Oct, with G1 (Minor) geomagnetic storms likely on 21-24 Oct, due to recurrent, positive polarity CH HSS influence. Active conditions are expected on 20, 26-28 Oct. Quiet to unsettled levels are expected throughout the remainder of the outlook 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	
05 October	72	0	0	A2.1	0	0	0	0	0	0	0	0	0
06 October	72	0	0	A1.6	0	0	0	0	0	0	0	0	0
07 October	71	0	0	A0.0	0	0	0	0	0	0	0	0	0
08 October	72	0	0	A0.0	0	0	0	0	0	0	0	0	0
09 October	73	24	20	A1.2	0	0	0	0	0	0	0	0	0
10 October	74	26	60	A1.3	0	0	0	0	0	0	0	0	0
11 October	73	26	40	A1.3	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	
	05 October	7.8e+05	4.6e+04	1.2e+09
06 October	9.8e+04	4.6e+04	2.4e+07	
07 October	2.1e+05	4.6e+04	6.2e+07	
08 October	9.2e+04	4.6e+04	2.8e+07	
09 October	1.1e+05	4.6e+04	2.7e+07	
10 October	1.4e+05	4.6e+04	4.2e+07	
11 October	2.0e+05	4.6e+04	2.0e+07	

Daily Geomagnetic Data

Date	Middle Latitude Fredericksburg		High Latitude College		Estimated Planetary	
	A	K-indices	A	K-indices	A	K-indices
	05 October	7	0-0-1-1-3-3-3-2	14	0-0-1-2-4-5-3-3	8
06 October	6	2-3-1-1-1-2-1-1	3	1-2-2-2-1-0-0-0	7	3-4-2-1-1-1-1-1
07 October	4	0-1-1-1-2-2-1-1	2	0-0-0-0-2-1-1-0	5	1-1-1-1-2-2-1-1
08 October	2	1-0-1-1-1-1-1-0	1	1-0-1-0-0-0-0-0	3	1-1-1-0-1-0-0-1
09 October	1	0-0-0-0-1-1-1-0	0	0-0-0-0-0-0-0-0	2	1-0-1-0-0-0-0-0
10 October	2	0-0-0-1-1-1-1-0	2	0-0-0-3-0-0-0-0	2	0-0-1-1-0-1-1-0
11 October	2	0-0-1-0-1-1-1-1	0	0-0-0-0-0-0-0-0	2	0-0-1-1-0-1-1-1

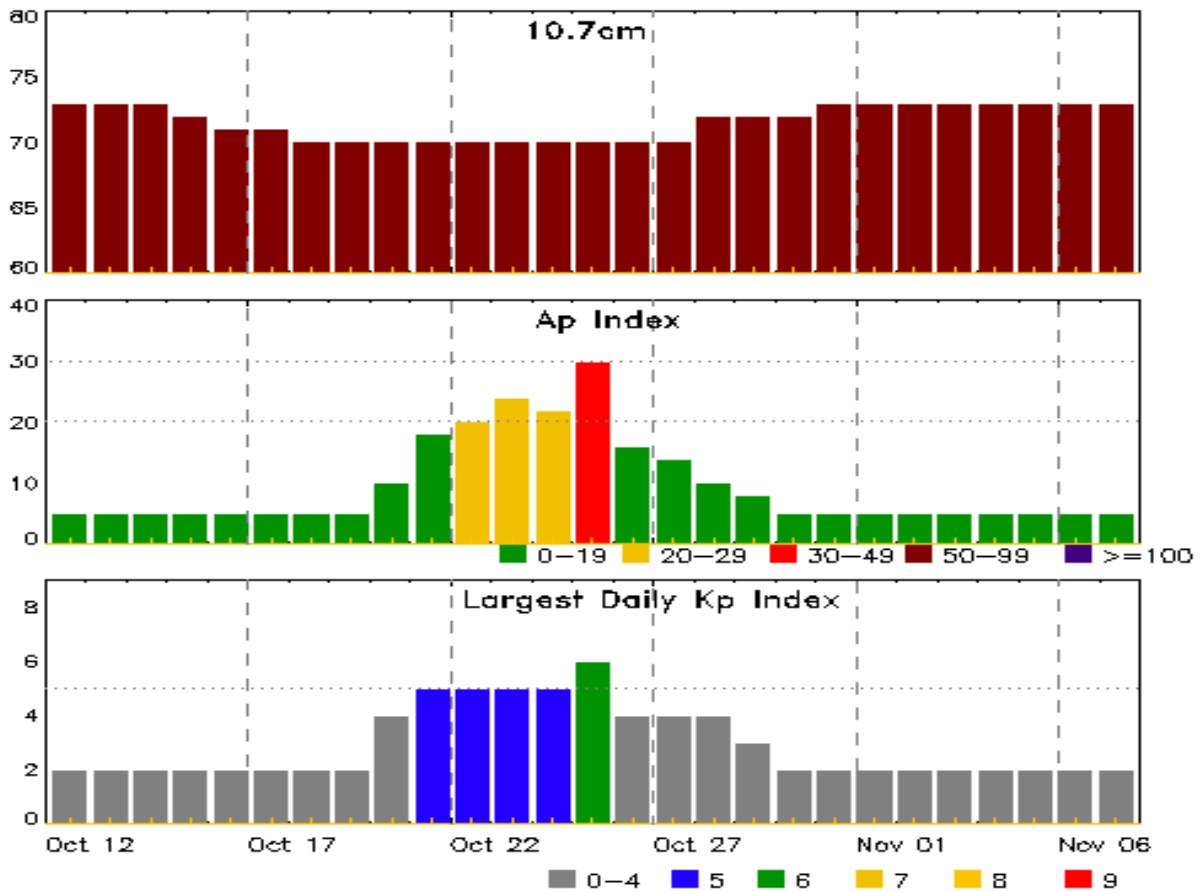


Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
05 Oct 0530	CONTINUED ALERT: Electron 2MeV Integral Flux \geq 1000pfu	24/1540
05 Oct 1932	WARNING: Geomagnetic K = 4	05/1932 - 06/0300
05 Oct 2000	ALERT: Geomagnetic K = 4	05/1949
06 Oct 0431	WARNING: Geomagnetic K = 4	06/0431 - 1200
06 Oct 0602	ALERT: Geomagnetic K = 4	06/0600
07 Oct 1503	ALERT: Electron 2MeV Integral Flux \geq 1000pfu	07/1450
10 Oct 1739	ALERT: Electron 2MeV Integral Flux \geq 1000pfu	10/1720



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 Oct	73	5	2	26 Oct	70	16	4
13	73	5	2	27	70	14	4
14	73	5	2	28	72	10	4
15	72	5	2	29	72	8	3
16	71	5	2	30	72	5	2
17	71	5	2	31	73	5	2
18	70	5	2	01 Nov	73	5	2
19	70	5	2	02	73	5	2
20	70	10	4	03	73	5	2
21	70	18	5	04	73	5	2
22	70	20	5	05	73	5	2
23	70	24	5	06	73	5	2
24	70	22	5	07	73	5	2
25	70	30	6				



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		
	Begin	Max	End		Imp/ Brtns	Location Lat CMD	Rgn #
05 Oct	1222	1224	1227	A8.1			



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 2773																		
23 Sep	N28E62		83	10	4	Bxo	3	B										
24 Sep	N28E48		84	plage														
25 Sep	N27E32		87	10		Axx	1	A	1									
26 Sep	N27E18		88	plage														
27 Sep	N27E04		89	plage														
28 Sep	N27W10		89	plage								1						
29 Sep	N27W24		90	plage														
30 Sep	N27W38		91	plage														
01 Oct	N27W52		92	plage														
02 Oct	N27W66		93	plage														
03 Oct	N27W80		93	plage														
04 Oct	N27W94		94	plage														
										1	0	0	1	0	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 89

Region 2774																		
09 Oct	S25W15		308	10	2	Axx	2	A										
10 Oct	S24W29		310	10	1	Axx	1	A										
11 Oct	S24W43		310	10	1	Axx	1	A										
										0	0	0	0	0	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 308

Region 2775																		
09 Oct	S23E24		269	10	3	Bxo	2	B										
10 Oct	S24E09		272	50	6	Cro	5	B										
11 Oct	S23W04		272	30	8	Bxo	5	B										
										0	0	0	0	0	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 272



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

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Current

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