

Space Weather Highlights
08 February - 14 February 2021

SWPC PRF 2372
15 February 2021

Solar activity was very low. A B5 flare was observed on 10/1206 UTC from a region of plage in the SE quadrant. The visible disk remained spotless. No Earth-directed CMEs were observed in available coronagraph imagery.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit was at normal to moderate levels over 08-14 Feb. A peak flux of 434 pfu was observed on 11/1615 UTC.

Geomagnetic field activity ranged from quiet to active levels. Weak influence from a positive polarity CH HSS was observed on 08 Feb. Quiet conditions followed nominal solar wind from 09-11 Feb. Unsettled conditions were observed on 12 Feb and active conditions on 13 Feb in response to the onset of a negative polarity CH HSS. Wind speeds briefly reached ~550 km/s early on 13 Feb and total magnetic field strength peaked at 15 nT while Bz reached a maximum southward deflection of -14 nT at 13/0216 UTC. Quiet conditions returned on 14 Feb as total magnetic field strength and solar wind speeds waned.

Space Weather Outlook
15 February - 13 March 2021

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 range from normal to high levels. High levels are likely on 22-26 Feb and 02-04 Mar in response to CH HSS activity. Normal to moderate levels are expected for the remainder of the outlook period.

Geomagnetic field activity is expected to be at quiet to G1 (Minor) geomagnetic storm levels. G1 (Minor) conditions are likely on 01 Mar; active conditions are likely on 21-22 Feb, 02 Mar, 06 Mar and 12-13 Mar; unsettled conditions are likely on 15-16 Feb, 23 Feb and 03 Mar. All enhancements in geomagnetic activity are in response to multiple, recurrent CH HSSs. The remainder of the outlook period is expected to be quiet.



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
08 February	74	0	0	A1.8	0	0	0	0	0	0	0	0
09 February	70	0	0	A1.4	0	0	0	0	0	0	0	0
10 February	74	0	0	A1.7	0	0	0	0	0	0	0	0
11 February	76	0	0	A1.3	0	0	0	0	0	0	0	0
12 February	72	0	0	A1.3	0	0	0	0	0	0	0	0
13 February	71	0	0	A1.0	0	0	0	0	0	0	0	0
14 February	71	0	0	A1.1	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	
	08 February	2.7e+05	4.4e+04	9.8e+06
09 February	7.3e+04	4.4e+04	4.6e+06	
10 February	6.5e+04	4.4e+04	5.4e+06	
11 February	2.9e+05	4.4e+04	1.1e+07	
12 February	3.6e+05	4.4e+04	7.2e+06	
13 February	1.6e+05	4.3e+04	1.5e+06	
14 February	5.0e+04	4.3e+04	2.0e+06	

Daily Geomagnetic Data

Date	Middle Latitude Fredericksburg		High Latitude College		Estimated Planetary	
	A	K-indices	A	K-indices	A	K-indices
	08 February	6	1-1-2-2-1-1-1-3	5	1-1-2-3-1-1-0-2	6
09 February	3	1-1-2-2-1-0-1-0	6	1-1-3-4-1-0-0-0	4	2-2-2-2-1-0-0-0
10 February	1	0-0-0-1-1-0-1-0	4	0-0-0-3-3-0-0-0	3	1-0-1-1-1-0-0-0
11 February	2	0-0-1-1-1-1-1-0	5	0-0-2-4-1-0-0-0	4	1-1-2-1-1-1-0-0
12 February	4	0-1-1-0-1-2-2-2	3	0-0-0-1-2-1-2-2	5	0-1-0-0-1-2-2-3
13 February	10	2-3-2-4-3-1-1-1	18	2-2-3-6-4-1-0-1	13	3-3-2-4-3-1-1-2
14 February	3	1-1-1-0-2-1-1-0	2	1-1-1-0-1-1-0-0	6	2-1-2-1-1-1-1-0

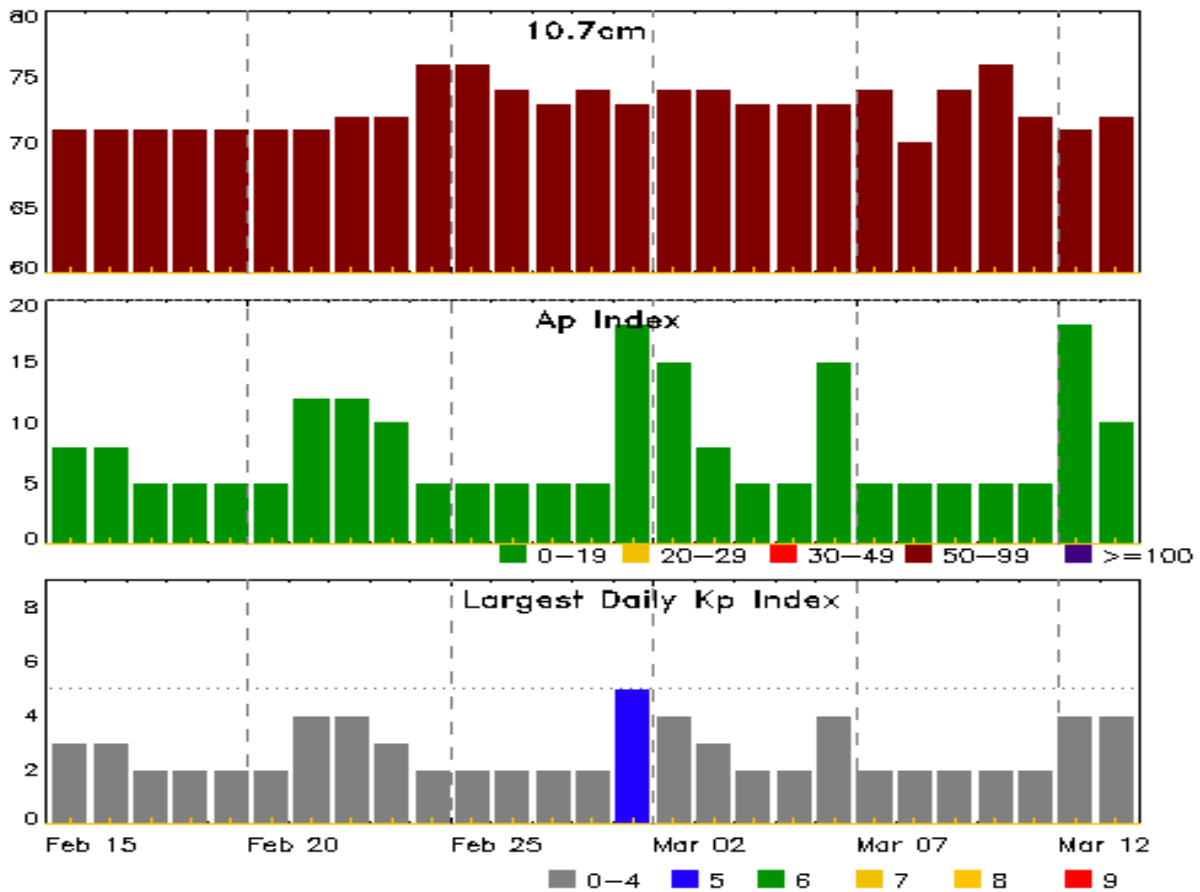


Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
08 Feb 2333	WARNING: Geomagnetic K = 4	08/2331 - 09/0600
13 Feb 0421	WARNING: Geomagnetic K = 4	13/0420 - 1500
13 Feb 1047	ALERT: Geomagnetic K = 4	13/1045



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
15 Feb	71	8	3	01 Mar	73	18	5
16	71	8	3	02	74	15	4
17	71	5	2	03	74	8	3
18	71	5	2	04	73	5	2
19	71	5	2	05	73	5	2
20	71	5	2	06	73	15	4
21	71	12	4	07	74	5	2
22	72	12	4	08	70	5	2
23	72	10	3	09	74	5	2
24	76	5	2	10	76	5	2
25	76	5	2	11	72	5	2
26	74	5	2	12	71	18	4
27	73	5	2	13	72	10	4
28	74	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 #	245	2695	II

No Events Observed

Flare List

Date	Time			X-ray Class	Optical		
	Begin	Max	End		Imp/ Brtns	Location Lat CMD	Rgn #
10 Feb	1142	1206	1217	B5.7			



Region Summary

Location		Sunspot Characteristics					Flares							
Date	Lat CMD	Helio Lon	Area 10 ⁻⁶	Extent hemi.	Spot (helio) Class	Spot Count	Mag Class	X-ray			Optical			
							C	M	X	S	1	2	3	4

No Active Regions



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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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