

**Space Weather Highlights**  
**11 January - 17 January 2021**

**SWPC PRF 2368**  
**18 January 2021**

Solar activity was very low throughout the period. Regions 2796 (S21,L=089, class/area=Cro/020 on 15 Jan) and 2797 (S18, L=340, class/area=Hsx/090 on 17 Jan) produced only B-class activity throughout the week.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit was at moderate levels for the highlight period.

Geomagnetic field activity reached active levels on 11-12 Jan due to possible weak CME activity combined with recurrent coronal hole high speed stream (CH HSS) influence. Unsettled conditions were observed on the latter half of the 12 Jan as activity waned. Quiet conditions were observed 13-17 Jan.

**Space Weather Outlook**  
**18 January - 13 February 2021**

Solar activity is expected to be at very low levels during 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 20-22 Jan due to recurrent CH HSS influence. the remainder of the period is expected to be at normal to moderate levels.

Geomagnetic field activity is expected to reach active levels on 18-20 January due to recurrent CH HSS influences. Unsettled levels are expected on 21 Jan, 25-26 Jan, 01-02 Feb, and 07-08 Feb. Quiet levels are expected for the remainder of the outlook period.



### *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	
11 January	73	0	0	A0.0	0	0	0	0	0	0	0	0	0
12 January	73	0	0	A0.0	0	0	0	0	0	0	0	0	0
13 January	73	0	0	A0.0	0	0	0	0	0	0	0	0	0
14 January	74	0	0	A0.0	0	0	0	0	0	0	0	0	0
15 January	73	13	20	A1.4	0	0	0	0	0	0	0	0	0
16 January	78	15	10	A3.1	0	0	0	0	0	0	0	0	0
17 January	77	23	100	A4.1	0	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	>2MeV	
	11 January	5.7e+06	4.3e+04	1.9e+06
12 January	8.6e+04	4.3e+04	2.1e+06	
13 January	5.2e+04	4.3e+04	1.9e+06	
14 January	7.1e+04	4.4e+04	3.3e+06	
15 January	9.0e+04	4.4e+04	2.7e+06	
16 January	7.4e+04	4.3e+04	2.2e+06	
17 January	7.0e+04	4.4e+04	2.1e+06	

### *Daily Geomagnetic Data*

Date	Middle Latitude Fredericksburg		High Latitude College		Estimated Planetary	
	A	K-indices	A	K-indices	A	K-indices
	11 January	10	1-0-0-2-4-3-3-3	20	0-0-0-2-5-5-4-4	14
12 January	8	3-3-2-2-1-2-1-1	15	3-3-3-5-3-1-1-1	9	4-3-2-2-1-1-1-1
13 January	3	1-0-1-2-1-1-0-1	5	1-1-1-3-3-1-0-0	4	1-1-1-1-1-1-1-1
14 January	1	0-0-0-0-0-1-0-1	1	0-0-0-1-0-1-0-0	2	0-0-0-1-0-0-0-1
15 January	2	1-0-0-0-1-2-1-0	0	0-0-0-0-0-1-0-0	3	2-0-0-0-0-1-1-0
16 January	2	0-1-0-1-1-1-1-0	0	0-0-0-0-1-0-0-0	4	1-2-1-1-1-1-1-1
17 January	2	0-1-0-0-2-1-1-0	0	0-1-0-0-0-0-0-0	4	1-2-0-0-1-0-0-1

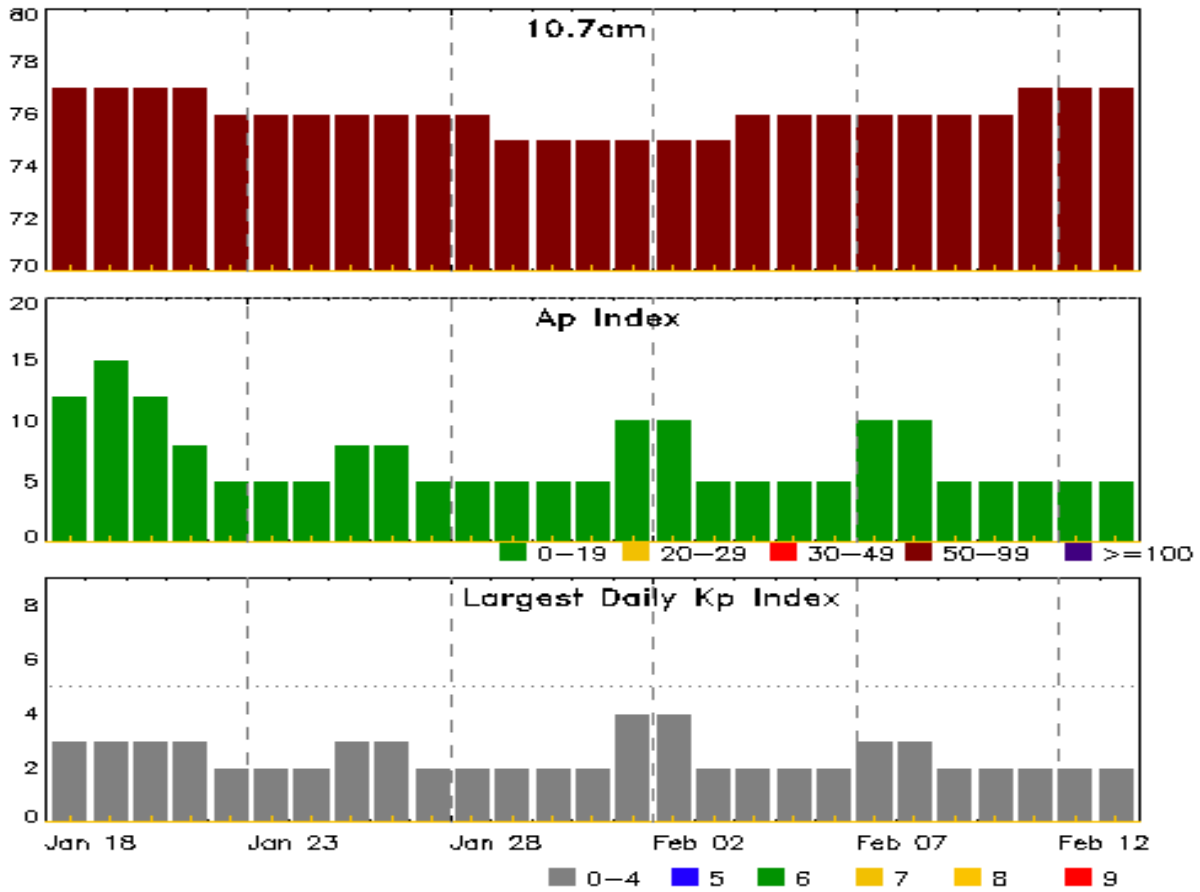


### *Alerts and Warnings Issued*

<b>Date &amp; Time of Issue UTC</b>	<b>Type of Alert or Warning</b>	<b>Date &amp; Time of Event UTC</b>
11 Jan 1329	WARNING: Geomagnetic K = 4	11/1330 - 1800
11 Jan 1506	ALERT: Geomagnetic K = 4	11/1459
11 Jan 1754	EXTENDED WARNING: Geomagnetic K = 4	11/1330 - 2359
12 Jan 0105	WARNING: Geomagnetic K = 4	12/0105 - 0900
12 Jan 0151	ALERT: Geomagnetic K = 4	12/0151



## 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
18 Jan	77	12	3	01 Feb	75	10	4
19	77	15	3	02	75	10	4
20	77	12	3	03	75	5	2
21	77	8	3	04	76	5	2
22	76	5	2	05	76	5	2
23	76	5	2	06	76	5	2
24	76	5	2	07	76	10	3
25	76	8	3	08	76	10	3
26	76	8	3	09	76	5	2
27	76	5	2	10	76	5	2
28	76	5	2	11	77	5	2
29	75	5	2	12	77	5	2
30	75	5	2	13	77	5	2
31	75	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	IV

**No Events Observed**

### ***Flare List***

Date	Time			X-ray Class	Optical			Rgn #
	Begin	Max	End		Imp/ Brtns	Location Lat CMD		
13 Jan	1241	1302	1310	A4.3				
17 Jan	1318	1328	1335	B2.8			2796	
17 Jan	2354	0001	0006	B1.2				



## *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

### *Region 2796*

15 Jan	S21W07	89	20	3	Cro	3	B									
16 Jan	S21W20	89	10	4	Bxo	5	B									
17 Jan	S21W32	88	10	1	Axx	1	A									
								0	0	0	0	0	0	0	0	0

Still on Disk.

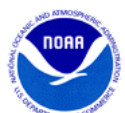
Absolute heliographic longitude: 89

### *Region 2797*

17 Jan	S18E76	340	90	4	Hsx	2	A									
								0	0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 340



## ***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

The Weekly has been published continuously since 1951 and is available online since 1997.

<https://www.swpc.noaa.gov/products/weekly-highlights-and-27-day-forecast> --

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