

Space Weather Highlights
31 August - 06 September 2020

SWPC PRF 2349
07 September 2020

Solar activity was very low for the highlight period. No spotted regions were present on the visible disk. There were no Earth-directed CMEs observed during the period.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit was at moderate to high levels through the highlight period. A peak flux of 29,370 pfu was observed at 02/1625 UTC.

Geomagnetic field activity was at unsettled to G1 (minor) storm levels on 31 Aug, unsettled to active levels on 01 Sep and quiet to unsettled levels on 02 Sep; all due to positive polarity CH HSS influences. During this period of activity, solar wind speeds reached a peak of 619 km/s midday on 01 Sep, total field reached a maximum of 8 nT midday on 31 Aug and the Bz component reached a maximum southward extent of -7 nT midday on 31 Aug. Phi angle was in a mostly positive solar sector.

Quiet to isolated unsettled levels were observed from 03-06 Sep as CH HSS effects slowly waned. Solar wind parameters gradually returned to nominal levels by the end of the highlight period.

Space Weather Outlook
07 September - 03 October 2020

Solar activity is expected to be very low for 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 at moderate to high levels on 07-09 Sep and again on 26 Sep - 03 Oct 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 be at unsettled levels on 18-19 Sep, unsettled to active levels on 23-29 Sep, with G1 (minor) storm levels possible on 27 Sep, all due to recurrent CH HSS influences. The remainder of the outlook period is expected to be at mostly quiet levels.



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
31 August	70	0	0	A1.1	0	0	0	0	0	0	0	0
01 September	70	0	0	A1.1	0	0	0	0	0	0	0	0
02 September	68	0	0	A1.8	0	0	0	0	0	0	0	0
03 September	70	0	0	A1.6	0	0	0	0	0	0	0	0
04 September	70	0	0	A1.4	0	0	0	0	0	0	0	0
05 September	69	0	0	A1.0	0	0	0	0	0	0	0	0
06 September	70	0	0	A1.2	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
	31 August	5.5e+05	4.5e+04
01 September	2.3e+05	4.5e+04	4.1e+08
02 September	1.4e+05	4.6e+04	7.6e+08
03 September	1.3e+05	4.6e+04	6.0e+08
04 September	8.4e+04	4.6e+04	5.3e+08
05 September	7.6e+04	4.6e+04	1.4e+08
06 September	7.4e+04	4.7e+04	2.3e+08

Daily Geomagnetic Data

Date	Middle Latitude Fredericksburg		High Latitude College		Estimated Planetary	
	A	K-indices	A	K-indices	A	K-indices
	31 August	19	4-4-2-4-4-3-3-2	42	3-4-3-7-6-5-2-2	26
01 September	16	3-4-4-3-2-3-2-3	38	2-5-6-6-5-4-2-2	16	3-4-3-3-3-3-2-3
02 September	8	2-3-3-2-2-2-1-1	28	2-2-4-6-6-3-1-1	9	3-3-3-2-2-2-1-1
03 September	3	0-0-1-1-2-1-1-1	3	0-1-2-2-0-0-0-1	4	1-0-1-1-1-1-0-2
04 September	9	3-1-2-3-3-2-1-1	11	1-1-1-4-4-3-1-1	8	3-1-2-3-3-2-2-1
05 September	7	2-2-3-2-3-1-1-0	12	1-1-3-5-4-0-1-0	6	2-2-2-2-2-1-1-0
06 September	5	2-1-1-1-2-2-1-1	2	1-1-0-2-1-0-0-0	7	2-1-0-1-1-1-1-1

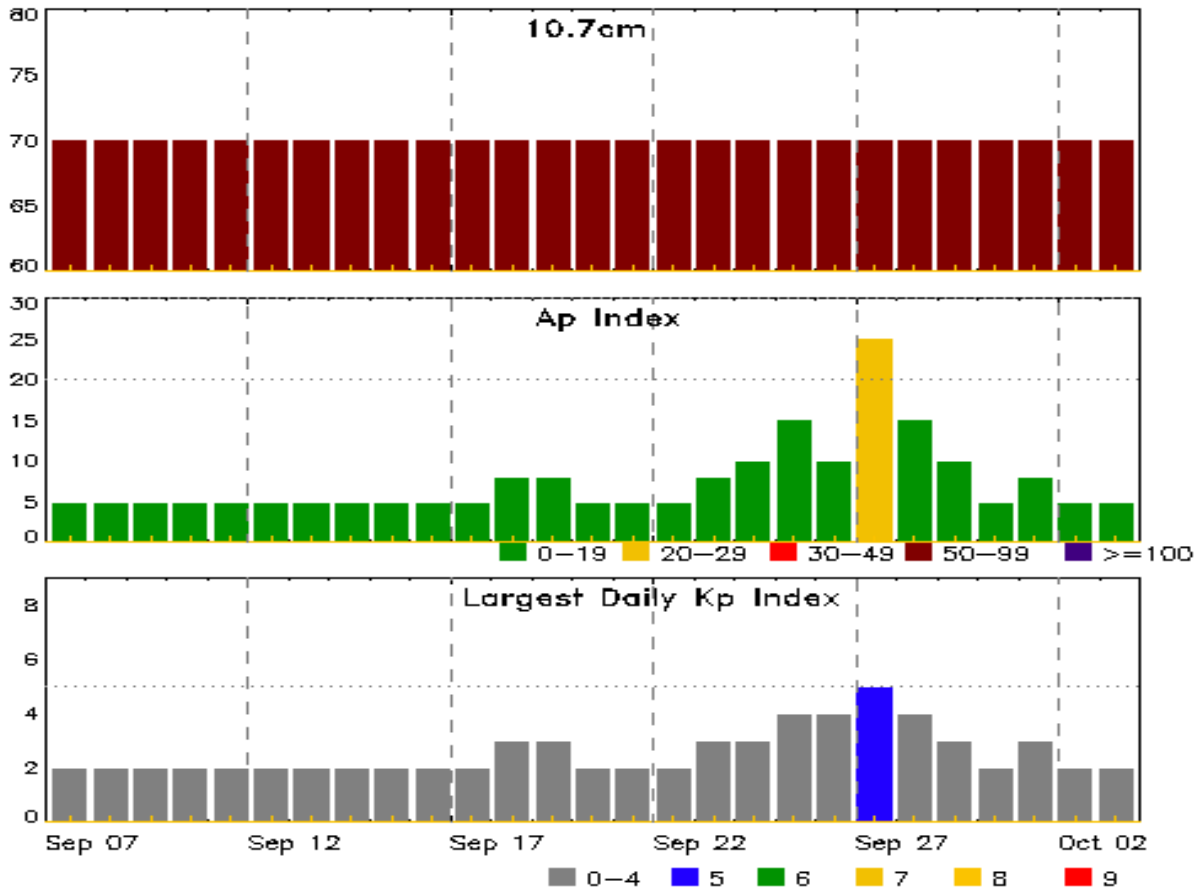


Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
31 Aug 0203	WARNING: Geomagnetic K = 4	31/0202 - 0900
31 Aug 0302	ALERT: Geomagnetic K = 4	31/0259
31 Aug 0357	WARNING: Geomagnetic K = 5	31/0357 - 0900
31 Aug 0428	ALERT: Geomagnetic K = 5	31/0427
31 Aug 0856	EXTENDED WARNING: Geomagnetic K = 4	31/0202 - 1800
31 Aug 1115	WARNING: Geomagnetic K = 5	31/1115 - 1800
31 Aug 1120	ALERT: Geomagnetic K = 5	31/1120
31 Aug 1212	CONTINUED ALERT: Electron 2MeV Integral Flux >= 1000pfu	30/1325
31 Aug 1743	EXTENDED WARNING: Geomagnetic K = 4	31/0202 - 01/0600
31 Aug 1753	EXTENDED WARNING: Geomagnetic K = 5	31/1115 - 2359
01 Sep 0342	CONTINUED ALERT: Electron 2MeV Integral Flux >= 1000pfu	30/1325
01 Sep 0356	EXTENDED WARNING: Geomagnetic K = 4	31/0202 - 01/1200
01 Sep 0652	CONTINUED ALERT: Electron 2MeV Integral Flux >= 1000pfu	30/1325
01 Sep 1758	WARNING: Geomagnetic K = 4	01/1757 - 2359
02 Sep 0500	CONTINUED ALERT: Electron 2MeV Integral Flux >= 1000pfu	30/1325
03 Sep 0511	CONTINUED ALERT: Electron 2MeV Integral Flux >= 1000pfu	30/1325
04 Sep 0501	CONTINUED ALERT: Electron 2MeV Integral Flux >= 1000pfu	30/1325
05 Sep 0752	CONTINUED ALERT: Electron 2MeV Integral Flux >= 1000pfu	30/1325
06 Sep 0500	CONTINUED ALERT: Electron 2MeV Integral Flux >= 1000pfu	30/1325



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
07 Sep	70	5	2	21 Sep	70	5	2
08	70	5	2	22	70	5	2
09	70	5	2	23	70	8	3
10	70	5	2	24	70	10	3
11	70	5	2	25	70	15	4
12	70	5	2	26	70	10	4
13	70	5	2	27	70	25	5
14	70	5	2	28	70	15	4
15	70	5	2	29	70	10	3
16	70	5	2	30	70	5	2
17	70	5	2	01 Oct	70	8	3
18	70	8	3	02	70	5	2
19	70	8	3	03	70	5	2
20	70	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		
	Begin	Max	End		Imp/ Brtns	Location Lat CMD	Rgn #
03 Sep	1525	1526	1527	A1.0			



Region Summary

Location		Sunspot Characteristics					Flares							
Date	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

No Active Regions



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
325 Broadway, Boulder CO 80305

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> --

Current

<ftp://ftp.swpc.noaa.gov/pub/warehouse> -- Online archive from 1997

<https://www.ngdc.noaa.gov/stp/satellite/goes-r.html> -- NCEI GOES data
textarchive

<https://www.swpc.noaa.gov/products/solar-cycle-progression> -- Solar Cycle
Progression web site

<https://www.swpc.noaa.gov/content/contact-us> -- Contact and Copyright
information

https://www.swpc.noaa.gov/sites/default/files/images/u2/Usr_guide.pdf -- User
Guide

