

Space Weather Highlights
18 May - 24 May 2020

SWPC PRF 2334
25 May 2020

Solar activity was at very low levels throughout the period. No spots were observed.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit was at moderate levels.

Geomagnetic field activity was at mostly quiet levels with isolated unsettled intervals. Solar wind parameters were at nominal levels. Solar wind speed ranged from 289-415 km/s while the total field ranged between 1-8 nT.

Space Weather Outlook
25 May - 20 June 2020

Solar activity is expected to continue at very low levels.

No proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at normal to moderate levels.

Geomagnetic field activity is expected to be at quiet to isolated unsettled levels through 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
18 May	70	0	0	A1.3	0	0	0	0	0	0	0	0
19 May	69	0	0	A1.1	0	0	0	0	0	0	0	0
20 May	70	0	0	A0.0	0	0	0	0	0	0	0	0
21 May	70	0	0	A0.0	0	0	0	0	0	0	0	0
22 May	71	0	0	A0.0	0	0	0	0	0	0	0	0
23 May	69	0	0	A0.0	0	0	0	0	0	0	0	0
24 May	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
	18 May	1.3e+05	4.6e+04
19 May	8.5e+04	4.6e+04	1.4e+06
20 May	7.6e+04	4.7e+04	1.2e+06
21 May	7.7e+04	4.6e+04	1.4e+06
22 May	1.0e+05	4.6e+04	1.2e+06
23 May	6.2e+04	4.7e+04	1.4e+06
24 May	1.0e+05	4.6e+04	1.3e+06

Daily Geomagnetic Data

Date	Middle Latitude Fredericksburg		High Latitude College		Estimated Planetary	
	A	K-indices	A	K-indices	A	K-indices
	18 May	5	1-0-0-2-3-2-1-1	1	0-0-0-0-0-1-0-1	4
19 May	6	1-1-2-2-2-2-2-2	6	1-2-2-3-2-1-1-0	5	1-1-2-2-2-1-1-2
20 May	3	2-0-0-1-2-2-1-0	0	0-0-0-0-0-0-0-0	3	2-0-0-1-1-1-1-1
21 May	8	1-2-2-1-3-3-2-2	5	1-2-2-2-2-1-1-0	5	1-2-1-1-1-1-1-2
22 May	7	2-1-2-1-3-2-2-1	5	1-1-1-1-1-3-2-1	6	2-1-2-1-2-2-2-1
23 May	4	2-2-1-1-2-1-0-1	2	2-1-1-0-0-0-0-0	4	2-2-1-1-1-1-1-0
24 May	5	1-0-1-1-3-2-2-1	2	0-0-0-0-1-2-1-1	4	1-1-1-1-2-3-2-1

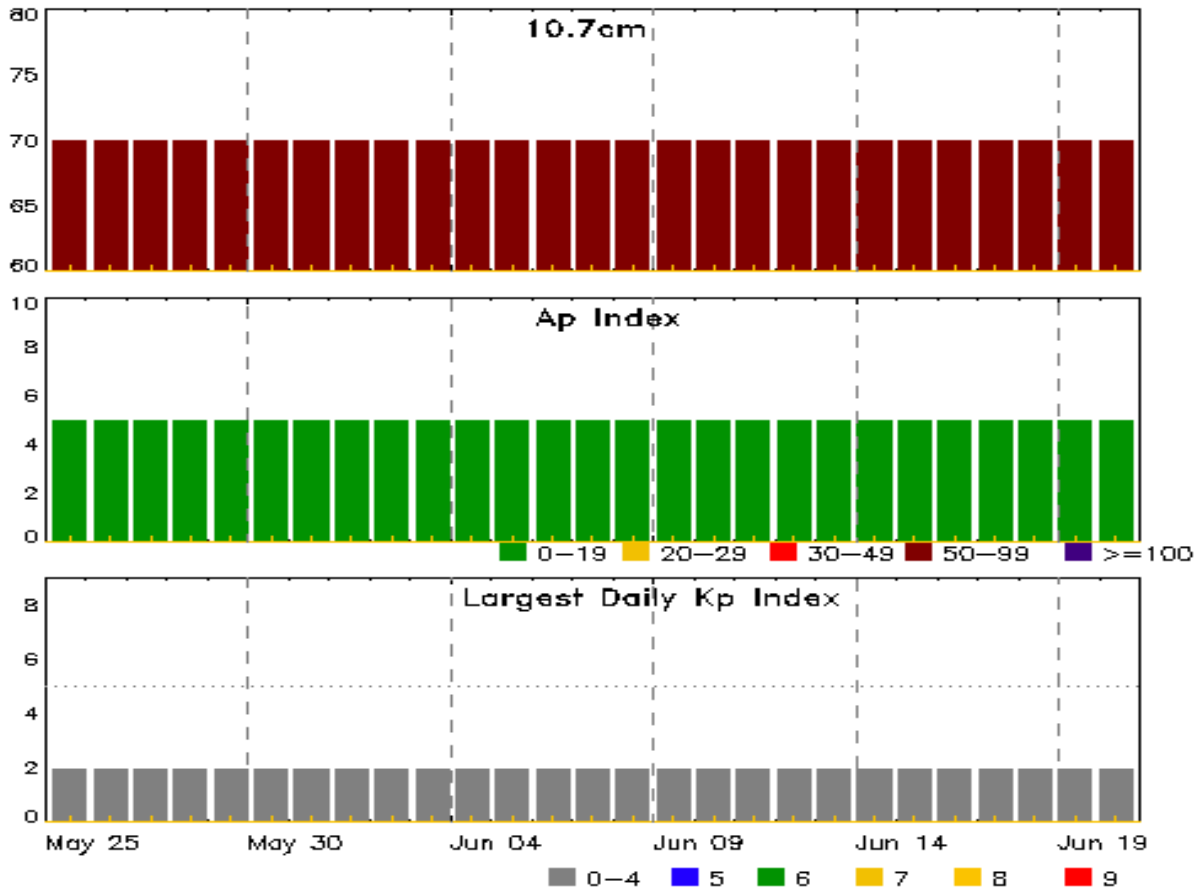


Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
	No Alerts or Warnings Issued	



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
25 May	70	5	2	08 Jun	70	5	2
26	70	5	2	09	70	5	2
27	70	5	2	10	70	5	2
28	70	5	2	11	70	5	2
29	70	5	2	12	70	5	2
30	70	5	2	13	70	5	2
31	70	5	2	14	70	5	2
01 Jun	70	5	2	15	70	5	2
02	70	5	2	16	70	5	2
03	70	5	2	17	70	5	2
04	70	5	2	18	70	5	2
05	70	5	2	19	70	5	2
06	70	5	2	20	70	5	2
07	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			Rgn #
	Begin	Max	End		Imp/ Brtns	Location Lat CMD		

No Flares Observed



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



Recent Solar Indices (preliminary)
Observed monthly mean values

Month	Sunspot Numbers					Radio Flux		Geomagnetic		
	Observed values		Ratio	Smooth values		Penticton	Smooth	Planetary	Smooth	
	SEC	RI	RI/SEC	SEC	RI	10.7 cm	Value	Ap	Value	
2018										
May	15.0	7.9	0.53	9.2	4.5	70.9	70.2	8	7.6	
June	19.7	9.4	0.48	9.1	4.3	72.5	70.0	7	7.4	
July	1.3	1.0	0.77	9.4	4.2	69.7	70.0	6	7.3	
August	10.0	5.2	0.53	9.0	4.0	69.1	70.0	10	7.3	
September	5.7	2.0	0.35	8.7	3.9	68.3	70.1	9	7.3	
October	6.9	2.9	0.42	9.2	4.1	69.5	70.3	7	7.1	
November	7.3	2.9	0.48	9.5	4.0	68.9	70.4	6	7.0	
December	5.6	1.9	0.34	9.3	3.6	70.0	70.3	7	6.9	
2019										
January	16.0	4.6	0.29	9.0	3.2	71.6	70.0	6	6.8	
February		0.5		8.7	3.0	70.6	69.8	7	6.7	
March	14.8	5.6	0.39	8.3	2.8	71.5	69.7	6	6.6	
April	11.5	5.5	0.48	7.9	2.6	72.4	69.6	6	6.7	
May	18.1	5.9	0.34	7.4	2.3	71.3	69.6	7	6.7	
June	11.6	0.7	0.06	7.3	2.2	68.1	69.6	5	6.5	
July	1.6	0.5	0.31	7.0	2.1	67.1	69.7	6	6.3	
August	2.5	0.3	0.16	7.0	2.1	67.0	69.8	7	6.2	
September	2.6	0.7	0.27	6.8	1.9	68.1	69.7	10	6.2	
October	1.8	0.2	0.11	6.2	1.6	67.4	69.5	8	6.2	
November	1.1	0.3	0.27			70.2		4		
December	7.2	0.9	0.14			70.9		4		
2020										
January	9.2	3.8	0.41			72.3		5		
February	5.5	0.2	0.04			71.0		6		
March	3.0	0.9	0.30			70.1		6		
April	8.5	3.2	0.38			69.5		6		

Note: Values are final except for the most recent 6 months which are considered preliminary.
Cycle 24 started in Dec 2008 with an RI=1.7.



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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