Space Weather Highlights
31 May - 06 June 2021

SWPC PRF 2388
07 June 2021

Solar activity was at very low levels on 31 May, and 02-06 June while low levels were reached on 01 June. The majority of the flare activity, including the C1.6 flare on 01 June, was caused by Region 2827 (N11, L=78, class/area Dso/110 on 31 May). B-class activity was observed by Regions 2828 (S31, L=69, class/area Axx/10 on 31 May) and 2829 (S18, L=12, class/area Cro/30 on 05 June).

No proton events were observed at geosynchronous orbit.

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

Geomagnetic field activity was quiet to unsettled for the highlight period with no significant activity.

Space Weather Outlook
07 June - 03 July 2021

Solar activity is expected to be at very low to 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 high levels on 11-14 June and 20-22 June due to recurrent coronal hole high speed stream (CH HSS) influences.

Geomagnetic field activity is expected to be at unsettled to active levels on 08 June and 16 June due to recurrent CH HSS influences. Quiet to unsettled levels are expected for 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
31 May	82	31	120	A6.7	0	0	0	2	0	0	0	0
01 June	75	20	100	A5.5	1	0	0	1	0	0	0	0
02 June	76	30	80	A5.4	0	0	0	0	0	0	0	0
03 June	76	28	80	A5.3	0	0	0	0	0	0	0	0
04 June	77	30	70	A6.6	0	0	0	2	0	0	0	0
05 June	74	30	150	A4.8	0	0	0	0	0	0	0	0
06 June	77	42	180	A5.8	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 May	1.3e+06	4.8e+04	2.3e+06
01 June	8.0e+05	4.7e+04	2.5e+06
02 June	1.3e+06	4.6e+04	2.3e+06
03 June	9.4e+04	4.6e+04	1.8e+06
04 June	6.1e+04	4.4e+04	1.3e+06
05 June	6.6e+04	4.5e+04	1.3e+06
06 June	5.7e+04	4.5e+04	1.1e+06

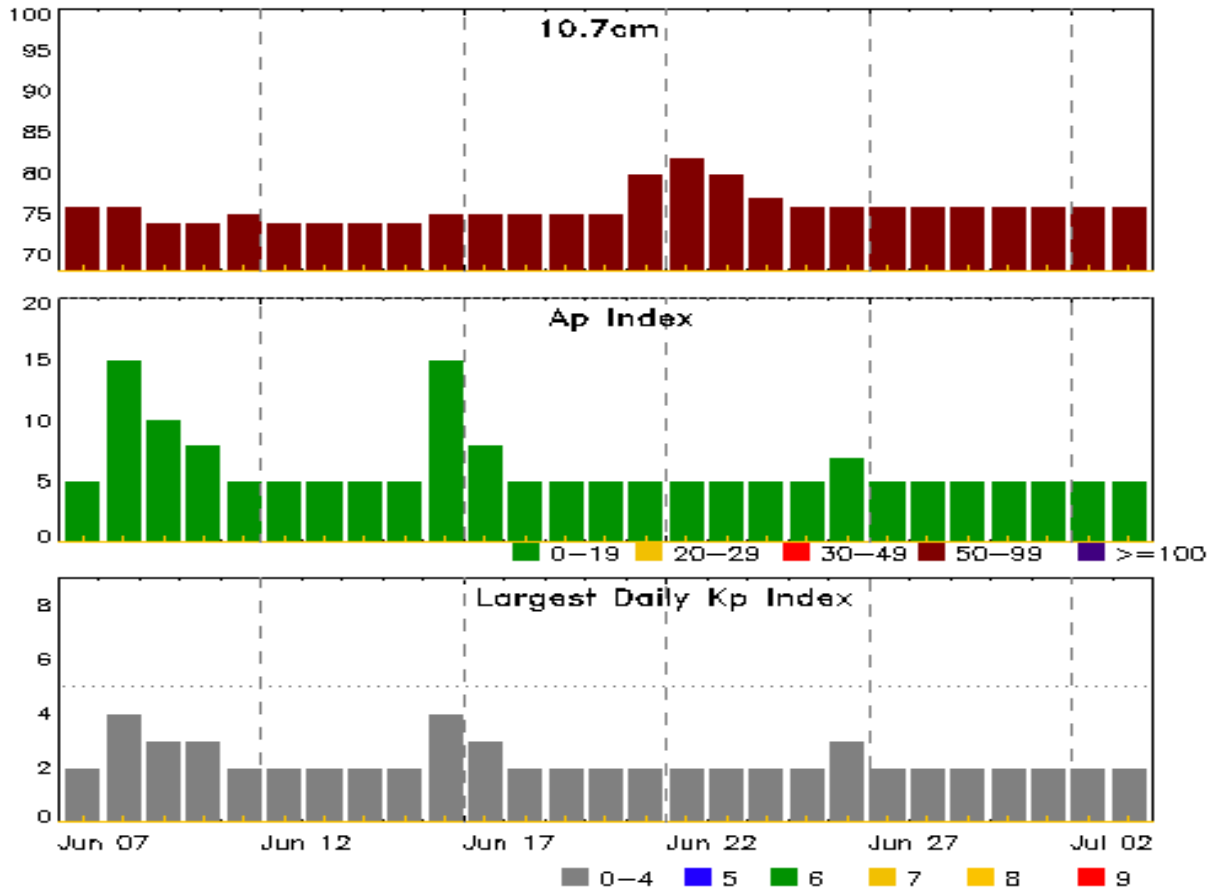
Daily Geomagnetic Data

Date	Middle Latitude Fredericksburg		High Latitude College		Estimated Planetary	
	A	K-indices	A	K-indices	A	K-indices
31 May	4	1-1-1-1-2-1-1-1	2	2-1-1-1-0-0-0-0	3	1-1-1-1-1-1-0-0
01 June	3	2-0-0-1-2-2-1-0	0	0-0-1-0-0-0-0-0	3	1-1-1-0-1-0-1-0
02 June	5	0-1-1-1-3-2-1-2	4	1-1-0-0-3-2-0-1	5	1-1-1-1-3-2-1-1
03 June	8	3-2-3-2-2-2-1-1	11	1-2-4-3-4-2-0-0	6	2-2-3-2-1-1-1-0
04 June	4	2-1-1-1-2-1-1-1	2	1-1-0-2-1-0-1-0	5	2-1-1-1-1-1-1-1
05 June	4	1-1-1-1-2-1-1-2	2	1-1-0-0-0-0-1-1	4	0-1-1-1-1-1-1-2
06 June	6	2-1-1-1-2-2-2-2	1	1-1-0-0-0-0-0-1	9	2-1-1-1-1-1-1-2

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
07 Jun	76	5	2	21 Jun	80	5	2
08	76	15	4	22	82	5	2
09	74	10	3	23	80	5	2
10	74	8	3	24	77	5	2
11	75	5	2	25	76	5	2
12	74	5	2	26	76	7	3
13	74	5	2	27	76	5	2
14	74	5	2	28	76	5	2
15	74	5	2	29	76	5	2
16	75	15	4	30	76	5	2
17	75	8	3	01 Jul	76	5	2
18	75	5	2	02	76	5	2
19	75	5	2	03	76	5	2
20	75	5	2				

Energetic Events

	Time			X-ray		Optical Information			Peak Radio Flux		Sweep Freq Intensity	
Date	Begin	Max	Half Max	Class	Integ Flux	Imp/ Brtns	Location Lat CMD	Rgn #	245	2695	II	IV

No Events Observed

Flare List

	Time				Optical		
Date	Begin	Max	End	X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
31 May	0025	0036	0041	B3.3	SF	N16E32	2827
31 May	0359	0403	0407	B2.1			2827
31 May	0444	0451	0456	B1.9			2827
31 May	0534	0544	0548	B7.7			2827
31 May	0608	0614	0615		SF	N11E26	2827
31 May	0630	0636	0641	B2.3			2827
31 May	0838	0845	0851	B1.4			2827
31 May	1526	1535	1543	B1.4			
31 May	1556	1603	1607	B1.2			
31 May	1821	1832	1833	B1.2			
31 May	2046	2056	2102	B2.1			
31 May	2309	2319	2330	B1.4			
01 Jun	0244	0249	0256	B1.0			
01 Jun	0327	0335	0342	B1.1			2827
01 Jun	0427	0431	0435	C1.6	SF	N13E14	2827
01 Jun	0649	0652	0703	B1.0			2827
01 Jun	1030	1037	1046	B1.0			2827
01 Jun	1139	1143	1147	B1.2			2827
01 Jun	1201	1207	1211	B1.0			2827
01 Jun	2313	2325	2345	B1.6			2827
02 Jun	0556	0606	0613	B1.3			2827
02 Jun	0735	0745	0750	B1.2			2827
02 Jun	0818	0822	0826	B2.7			2827
02 Jun	1300	1316	1329	B2.3			2827
02 Jun	1414	1423	1430	B1.5			2827
02 Jun	1529	1543	1559	B1.8			2827
03 Jun	0157	0205	0209	B5.7			2829
03 Jun	0409	0417	0428	B1.1			2829
03 Jun	0711	0720	0740	B1.1			2827
03 Jun	0917	0925	0932	B1.0			2829
03 Jun	1146	1154	1200	B1.3			2827

Flare List

Date	Time			Optical			
	Begin	Max	End	X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
03 Jun	1616	1625	1639	B1.3			2827
04 Jun	0045	0054	0100	B2.0			2829
04 Jun	0103	0106	0112	B1.7			2829
04 Jun	0120	0130	0143	B2.2			2829
04 Jun	0147	0150	0159		SF	S21E40	2829
04 Jun	0209	0216	0220	B1.8			2829
04 Jun	0447	0454	0459	B1.0			2829
04 Jun	0504	0511	0518	B1.0			2829
04 Jun	0715	0723	0732	B1.1			2829
04 Jun	0812	0821	0828	B4.5	SF	N12W31	2827
04 Jun	1151	1206	1214	B2.5			2827
04 Jun	1423	1430	1437	B3.8			2827
04 Jun	1554	1559	1604	B2.9			2827
04 Jun	1954	2013	2030	B2.1			2827
04 Jun	2309	2318	2327	B1.4			2827
04 Jun	2357	0003	0010	B2.3			2829
05 Jun	0020	0030	0039	B2.2			2829
06 Jun	0113	0121	0127	B1.6			2829
06 Jun	0239	0247	0252	B1.4			2828
06 Jun	0457	0503	0511	B1.0			2829
06 Jun	1841	1846	1850	B1.2			
06 Jun	1902	1918	1927	B1.6			
06 Jun	2145	2152	2156	B1.6			

Region Summary

	Location		Sunspot Characteristics					Flares							
		Helio	Area	Extent	Spot	Spot	Mag	X-ray			Optical				
Date	Lat CMD	Lon	10^{-6} hemi.	(helio)	Class	Count	Class	C	M	X	S	1	2	3	4
			Region 2825												
23 May	N16E53	141	10	1	Axx	1	A								
24 May	N17E39	142	10	1	Axx	1	A								
25 May	N17E25	143	plage												
26 May	N17E11	144	plage												
27 May	N17W03	144	plage												
28 May	N17W17	145	plage												
29 May	N17W31	146	plage												
30 May	N17W45	147	plage												
31 May	N17W59	147	plage												
01 Jun	N17W73	148	plage												
02 Jun	N17W87	149	plage												
								0	0	0	0	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 144

			Region 2827												
29 May	N11E44	71	10	2	Bxo	2	B								
30 May	N11E29	73	60	5	Cro	5	B				1				
31 May	N12E15	73	110	7	Cai	10	BG				2				
01 Jun	N11E03	71	100	10	Csi	10	B	1			1				
02 Jun	N12W14	74	70	8	Csi	8	B								
03 Jun	N11W27	76	70	5	Cso	4	B								
04 Jun	N11W41	78	50	5	Dso	5	B				1				
05 Jun	N12W56	78	120	6	Hsx	3	A								
06 Jun	N12W72	81	100	3	Hsx	1	A								
								1	0	0	5	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 71

Region Summary - continued

	Location		Sunspot Characteristics					Flares							
		Helio	Area	Extent	Spot	Spot	Mag	X-ray			Optical				
Date	Lat CMD	Lon	10^{-6} hemi.	(helio)	Class	Count	Class	C	M	X	S	1	2	3	4
			Region 2828												
30 May	S32E33	69	10	1	Axx	2	A								
31 May	S31E19	69	10	1	Axx	1	A								
01 Jun	S31E06	69	plage												
02 Jun	S31W08	70	plage												
03 Jun	S31W22	71	plage												
04 Jun	S31W36	72	plage												
05 Jun	S31W50	72	plage												
06 Jun	S31W63	72	plage												
								0	0	0	0	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 69

			Region 2829												
02 Jun	S18E49	12	10	1	Hrx	2	A								
03 Jun	S18E35	14	10	1	Cro	4	B								
04 Jun	S18E23	12	20	4	Cao	5	B				1				
05 Jun	S18E10	12	30	6	Cro	7	B								
06 Jun	S18W04	13	10	6	Bxo	5	B								
								0	0	0	1	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 13

			Region 2830												
06 Jun	S27W59	68	70	3	Cao	6	B								
								0	0	0	0	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 68

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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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