

Solar activity was at very low to low levels during the period. Region 2833 (N23, L=208, class/area Hsx/160 on 21 Jun) produced a C1/Sf flare observed at 25/1403 UTC. A long duration C3 x-ray event was observed from around the NE limb at 23/0707 UTC. This event was accompanied by a Type II radio sweep with an estimated shock velocity of 724 km/s. Regions 2835 (S18, L=053, class/area Dso/230 on 27 Jun) and 2836 (S27, L=057, class/area Cro/020 on 27 Jun) produced a few B-class events during the period. No Earth-directed CMEs were observed in available coronagraph data.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit was at moderate levels on 22 Jun and 26-27 Jun. High levels were observed on 21 Jun and 23-25 Jun. A maximum flux of 4,330 pfu was observed at 21/1435 UTC.

Geomagnetic field activity was at mostly quiet levels with isolated unsettled periods observed early on 22 Jun, late on 24 Jun and early on 25 Jun. Solar wind parameters were mostly unremarkable during the period.

Space Weather Outlook
28 June - 24 July 2021

Solar activity is expected to be at predominately 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 be at high levels on 29-30 Jun and 01-06 Jul due to CH HSS influences. Normal to moderate levels are expected for the remainder of the outlook period.

Geomagnetic field activity is expected to be at unsettled to active levels on 30 Jun, 04 Jul, 09-10 Jul and 12-13 Jul due to recurrent CH HSS influence. Mostly quiet conditions 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
21 June	79	11	160	A6.7	0	0	0	0	0	0	0	0
22 June	81	12	130	A9.3	0	0	0	0	0	0	0	0
23 June	80	11	820	A9.7	1	0	0	0	0	0	0	0
24 June	81	11	140	A8.7	0	0	0	0	0	0	0	0
25 June	83	25	220	B1.0	1	0	0	2	0	0	0	0
26 June	82	16	130	B1.3	0	0	0	2	0	0	0	0
27 June	87	32	250	B1.4	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
	21 June	6.4e+04	4.4e+04
22 June	5.8e+04	4.4e+04	3.0e+07
23 June	6.5e+04	4.4e+04	2.8e+07
24 June	1.0e+05	4.4e+04	3.5e+07
25 June	5.4e+04	4.4e+04	2.5e+06
26 June	7.0e+04	4.5e+04	3.1e+06
27 June	5.2e+04	4.5e+04	4.0e+06

Daily Geomagnetic Data

Date	Middle Latitude Fredericksburg		High Latitude College		Estimated Planetary	
	A	K-indices	A	K-indices	A	K-indices
	21 June	3	1-0-0-1-1-2-2-1	2	1-0-0-0-0-1-1-1	4
22 June	8	2-3-1-2-3-1-2-2	7	2-3-2-3-2-0-0-1	7	1-3-2-2-2-1-1-2
23 June	6	2-1-1-1-3-2-2-0	2	2-1-1-0-0-0-0-0	4	2-1-1-1-1-1-1-0
24 June	6	0-0-1-2-2-2-2-3	2	0-1-1-0-1-0-2-1	5	0-1-2-1-1-1-1-2-3
25 June	8	3-2-1-2-3-2-2-1	5	2-1-2-2-2-0-1-1	7	3-2-2-2-1-1-1-1
26 June	5	1-0-1-2-2-2-2-1	3	1-0-1-3-1-1-0-0	4	1-0-1-2-1-1-1-0
27 June	4	0-0-1-1-2-2-2-2	1	0-0-1-0-1-0-1-0	2	0-1-1-1-1-1-1-1

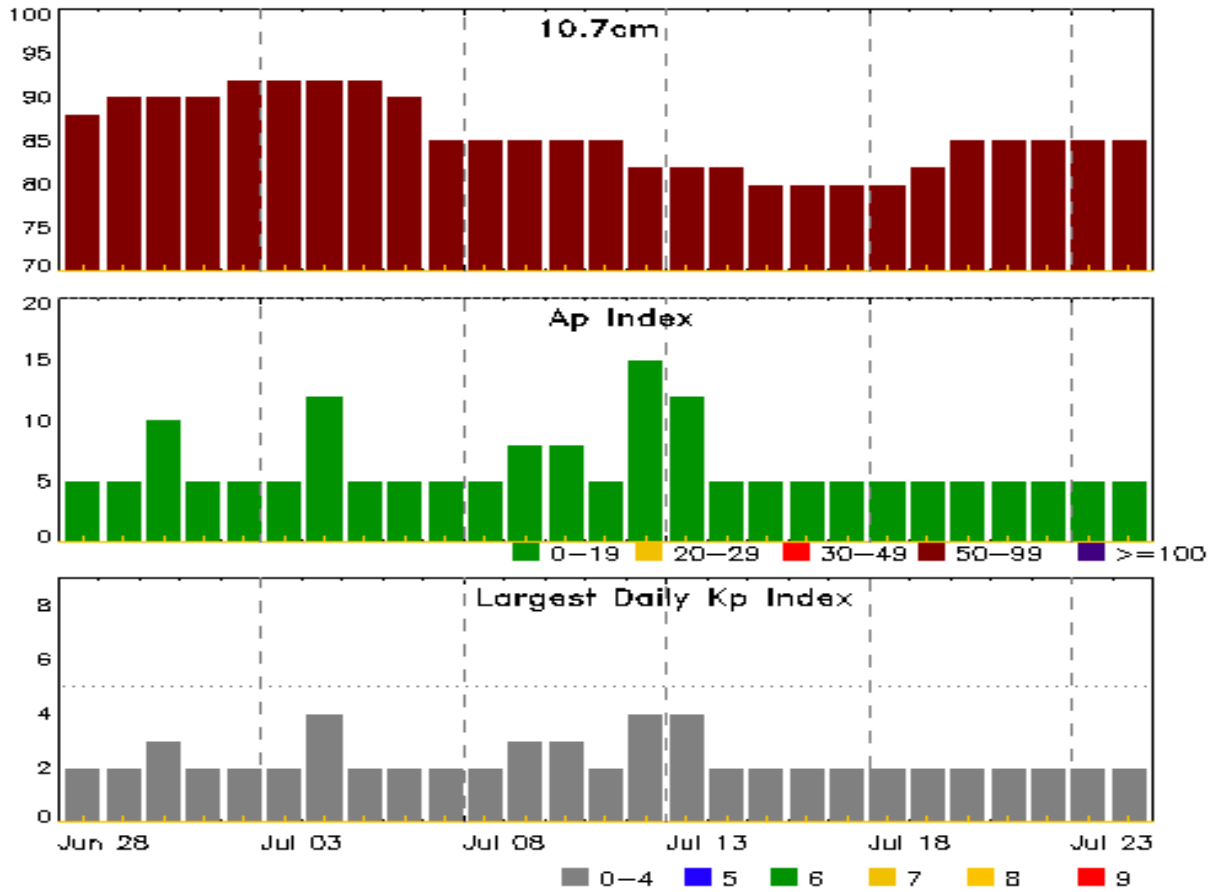


Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
21 Jun 0838	CONTINUED ALERT: Electron 2MeV Integral Flux \geq 1000pfu	17/0835
23 Jun 0734	ALERT: Type II Radio Emission	23/0705
25 Jun 0234	WARNING: Geomagnetic K = 4	25/0233 - 1200



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
28 Jun	88	5	2	12 Jul	82	15	4
29	90	5	2	13	82	12	4
30	90	10	3	14	82	5	2
01 Jul	90	5	2	15	80	5	2
02	92	5	2	16	80	5	2
03	92	5	2	17	80	5	2
04	92	12	4	18	80	5	2
05	92	5	2	19	82	5	2
06	90	5	2	20	85	5	2
07	85	5	2	21	85	5	2
08	85	5	2	22	85	5	2
09	85	8	3	23	85	5	2
10	85	8	3	24	85	5	2
11	85	5	2				



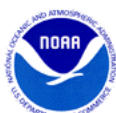
Energetic Events

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	Rgn #	
21 Jun	1748	1754	1800	B1.2			2833	
22 Jun	0229	0243	0256	B3.7			2833	
22 Jun	1305	1314	1320	B7.8				
23 Jun	0643	0707	0734	C3.4				
23 Jun	2010	2026	2042	B2.8				
24 Jun	1710	1716	1722	B2.8			2833	
24 Jun	2116	2123	2126	B1.8				
24 Jun	2126	2136	2150	B1.9				
25 Jun	0141	0150	0158	B2.0				
25 Jun	0245	0304	0326	B6.0	SF	N21W75	2833	
25 Jun	1345	1403	1415	C1.7	SF	N23W82	2833	
25 Jun	1839	1848	1857	B3.1			2835	
25 Jun	1857	1905	1916	B8.6			2835	
26 Jun	0000	0001	0010		SF	S18E67	2835	
26 Jun	0208	0219	0230	B3.9				
26 Jun	0244	0252	0300	B3.4				
26 Jun	0546	0547	0549		SF	S18E62	2835	
26 Jun	0946	0955	1004	B2.7			2835	
26 Jun	1136	1146	1153	B2.4			2833	
26 Jun	1153	1202	1208	B2.7			2833	
27 Jun	0054	0101	0107	B2.4			2835	
27 Jun	2011	2020	2028	B3.3			2835	
27 Jun	2143	2152	2203	B2.3			2836	
27 Jun	2325	2349	0036	B5.0				



Region Summary

Date	Location		Sunspot Characteristics				Flares														
	Lat CMD	Helio Lon	Area 10 ⁶ hemi.	Extent (helio)	Spot Class	Spot Count	Mag Class	X-ray			Optical										
								C	M	X	S	1	2	3	4						
Region 2833																					
13 Jun	N08E64	211	140	3	Hsx	1	A														
14 Jun	N26E51	211	100	2	Hsx	1	A														
15 Jun	N25E38	211	60	2	Hsx	1	A														
16 Jun	N24E25	211	130	2	Hsx	1	A														
17 Jun	N24E11	211	130	5	Hsx	2	A														
18 Jun	N22W00	210	120	2	Hsx	2	A														
19 Jun	N24W13	210	120	5	Cso	5	B														
20 Jun	N25W27	210	90	4	Cso	3	B														
21 Jun	N23W38	208	160	2	Hsx	1	A														
22 Jun	N25W50	207	130	6	Hsx	2	A														
23 Jun	N23W64	208	820	2	Hsx	1	A														
24 Jun	N24W76	206	140	2	Hsx	1	A														
25 Jun	N24W91	207	70	2	Hsx	1	A				1			2							
											1	0	0	2	0	0	0	0			
Crossed West Limb.																					
Absolute heliographic longitude: 210																					
Region 2834																					
18 Jun	N20W71	281	10	2	Bxo	2	B														
19 Jun	N20W87	283	plage																		
											0	0	0	0	0	0	0	0			
Crossed West Limb.																					
Absolute heliographic longitude: 281																					
Region 2835																					
25 Jun	S18E65	52	150	5	Dso	4	B														
26 Jun	S18E51	53	130	9	Dso	6	B						2								
27 Jun	S18E38	53	230	10	Dso	7	B														
											0	0	0	2	0	0	0	0			
Still on Disk.																					
Absolute heliographic longitude: 53																					
Region 2836																					
27 Jun	S27E34	57	20	4	Cro	5	B														
											0	0	0	0	0	0	0	0			
Still on Disk.																					
Absolute heliographic longitude: 57																					



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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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