Space Weather Highlights
06 July - 12 July 2026

SWPC PRF 2654
13 July 2026

Solar activity ranged from low to moderate levels (R1-Minor). Region 4482 (S09, L=296, class/area=Eki/420 on 08 Jul) produced the strongest flare of the reporting period, an M4.01/1b flare at 07/1419 UTC. Type II (est. 593 km/s) and Type IV radio sweeps were associated with the event. Subsequent coronagraph imagery only contained a faint identifiable CME signature in STEREO-A COR2 imagery. No Earth-directed component was identified in the analysis of the event. An additional Type II sweep (est. 1,441 km/s) was on 07 Jul at 07/2256 UTC and associated with an eruptive event on the W limb. Near that time, near the Sun's E limb (N18E75), a large filament eruption (~15 degrees) was observed beginning around 07/2116 UTC in SUVI 304 imagery. The subsequent CME was analyzed and determined to not be Earth-directed. The region only produced two other M-class flares, an M1.5/1n flare at 08/1756 UTC and an M1.1/Sf at 09/0227 UTC during its transit across the visible disk.

Region 4485 (S10, L=353, class/area=Dac/180 on 11 Jul) produced a CME on 09 Jul, associated with a C2.7 flare at 09/0713 UTC, that was analyzed and modeled. The results suggested influence from the CME should be observed at Earth on 12 Jul. Other activity from this region included a Type II radio sweep on 12 Jul, with the associated CME likely to pass by Earth on 16 Jul.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit was at high levels on 06-07 Jul following influence from combined effects of a CME and positive polarity CH HSS. High levels were again observed on 10-12 Jul following influence from a negative polarity CH HSS. Moderate levels were observed on 08-09 Jul.

Geomagnetic field activity was at quiet to unsettled levels on 06-08 Jul. Influence of a negative polarity CH HSS increased wind speeds to over 600 km/s 09 Jul and through 10 Jul. This resulted in periods of active conditions. Quiet conditions were observed on 11 Jul as solar winds steadily decreased. G1 (Minor) geomagnetic storm conditions were observed on 12 Jul due to the passage of a mild CME that left the Sun on 09 Jul.

Space Weather Outlook
13 July - 08 August 2026

Solar activity is expected to be at low levels, with a chance for M-class activity (R1-R2/Minor-Moderate), over the outlook period due to multiple complex active regions both on the visible disk and the return of significantly complex regions from the Sun's farside.

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

13-14 Jul, 24-27 Jul, and 06-08 Aug due to the anticipated influence of multiple, recurrent coronal holes. Normal to moderate levels are likely throughout the remainder of the outlook period.

Geomagnetic field activity is expected to range from quiet to active levels. Active levels are likely over 13-14 Jul, 16 Jul due to potential CME influence and again on 22 Jul, 01 Aug, And 04-05 Aug due to anticipated coronal hole influence. Unsettled level are likely on 15 Jul, 23 Jul, 02 Aug, and 06 Aug. The remainder of the outlook period is likely 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
06 July	125	85	1000	C2.5	5	0	0	1	0	0	0	0
07 July	110	50	460	B9.3	3	1	0	0	1	0	0	0
08 July	116	81	550	B5.8	4	1	0	5	1	0	0	0
09 July	110	77	600	B4.1	1	1	0	8	0	0	0	0
10 July	107	62	605	B4.3	1	0	0	0	1	0	0	0
11 July	112	82	540	B4.6	3	0	0	0	0	0	0	0
12 July	107	70	520	B5.4	5	1	0	2	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
06 July	1.0e+05	2.0e+04	7.9e+07
07 July	1.2e+05	2.0e+04	2.3e+08
08 July	1.6e+05	1.8e+04	2.7e+07
09 July	2.7e+05	1.8e+04	2.6e+07
10 July	4.0e+05	1.9e+04	7.8e+07
11 July	1.5e+06	2.1e+04	1.9e+08
12 July	1.5e+06	1.8e+04	1.1e+08

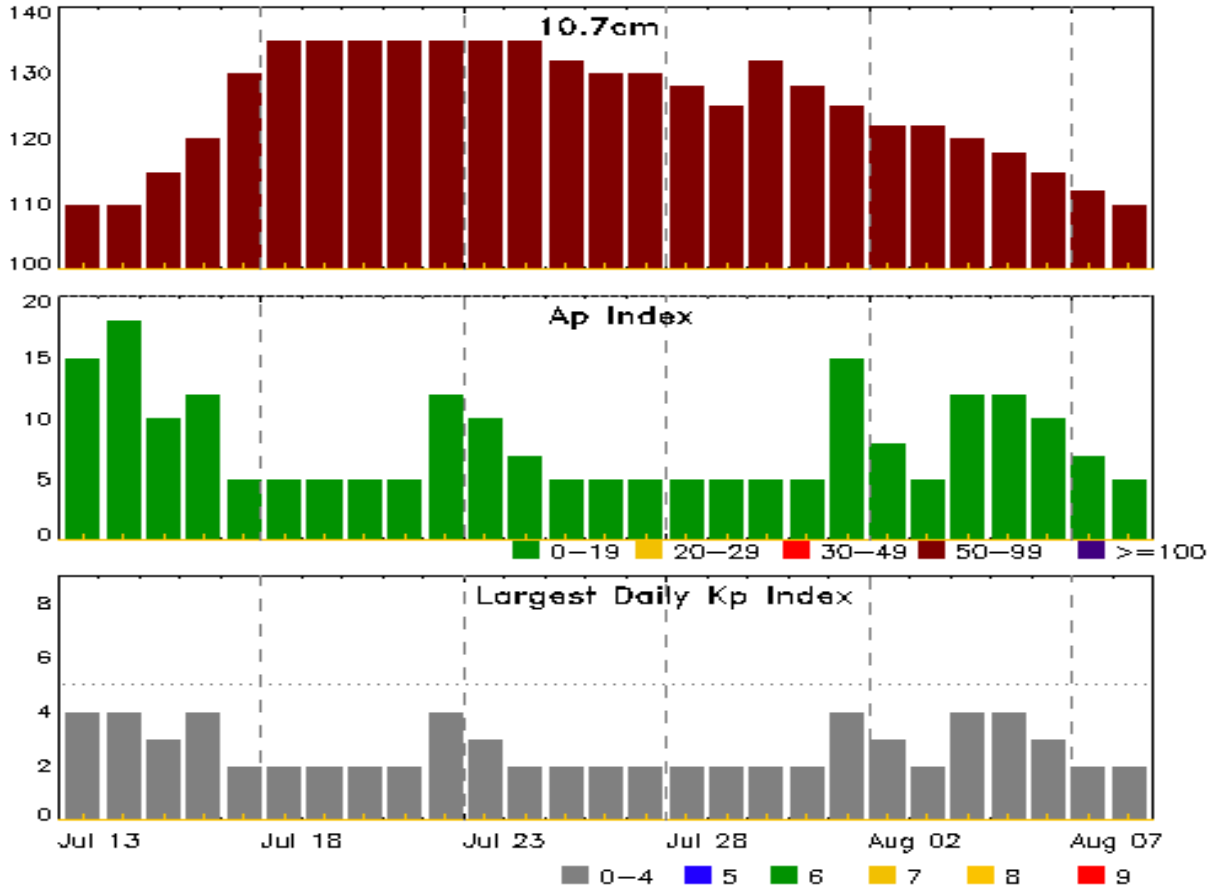
Daily Geomagnetic Data

Date	Middle Latitude Fredericksburg		High Latitude College		Estimated Planetary	
	A	K-indices	A	K-indices	A	K-indices
06 July	6	2-2-1-2-2-1-2-1	10	2-2-3-2-4-2-2-1	7	3-2-2-2-2-1-2-2
07 July	4	0-1-1-1-2-1-1-2	3	1-1-1-1-1-0-1-2	4	1-2-1-1-1-0-1-2
08 July	11	3-3-3-2-3-1-2-2	31	3-5-6-5-4-3-2-2	12	3-3-3-3-2-2-3-2
09 July	15	2-1-2-5-3-2-3-3	23	3-1-3-6-3-4-3-3	16	3-1-2-4-2-3-4-4
10 July	12	2-3-4-3-2-2-2-2	21	2-3-5-5-4-2-2-2	12	2-3-4-3-2-1-2-3
11 July	9	3-2-2-2-3-2-2-1	7	3-2-3-0-2-1-1-1	7	2-2-2-1-2-1-2-1
12 July	16	4-2-3-3-4-3-2-3	40	3-3-3-7-6-5-2-1	22	4-2-3-4-5-3-2-3

Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
06 Jul 1150	ALERT: Electron 2MeV Integral Flux >= 1000pfu	06/1149
07 Jul 0503	CONTINUED ALERT: Electron 2MeV Integral Flux >= 1000pfu	06/1149
07 Jul 0506	CANCELLATION: Electron 2MeV Integral Flux >= 1000pfu	
07 Jul 0507	CONTINUED ALERT: Electron 2MeV Integral Flux >= 1000pfu	06/1149
07 Jul 1443	ALERT: Type II Radio Emission	07/1420
07 Jul 1456	ALERT: Type IV Radio Emission	07/1435
07 Jul 2318	ALERT: Type II Radio Emission	07/2256
08 Jul 0529	WARNING: Geomagnetic K = 4	08/0528 - 1200
09 Jul 1119	WARNING: Geomagnetic K = 4	09/1119 - 10/1200
09 Jul 1120	ALERT: Geomagnetic K = 4	09/1120
10 Jul 1126	ALERT: Electron 2MeV Integral Flux >= 1000pfu	10/1126
10 Jul 1151	EXTENDED WARNING: Geomagnetic K = 4	09/1119 - 11/0300
10 Jul 1946	WATCH: Geomagnetic Storm Category G1 predicted	
11 Jul 0501	CONTINUED ALERT: Electron 2MeV Integral Flux >= 1000pfu	10/1126
12 Jul 0134	WARNING: Geomagnetic K = 4	12/0135 - 2359
12 Jul 0211	ALERT: Type II Radio Emission	12/0135
12 Jul 0212	ALERT: Type IV Radio Emission	12/0053
12 Jul 0346	ALERT: Geomagnetic K = 4	12/0259
12 Jul 0532	CONTINUED ALERT: Electron 2MeV Integral Flux >= 1000pfu	10/1126
12 Jul 1411	WARNING: Geomagnetic K = 5	12/1410 - 13/2100
12 Jul 1503	ALERT: Geomagnetic K = 5	12/1459
12 Jul 2101	CANCELLATION: Geomagnetic K = 5	

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
13 Jul	110	15	4	27 Jul	130	5	2
14	110	18	4	28	128	5	2
15	115	10	3	29	125	5	2
16	120	12	4	30	132	5	2
17	130	5	2	31	128	5	2
18	135	5	2	01 Aug	125	15	4
19	135	5	2	02	122	8	3
20	135	5	2	03	122	5	2
21	135	5	2	04	120	12	4
22	135	12	4	05	118	12	4
23	135	10	3	06	115	10	3
24	135	7	2	07	112	7	2
25	132	5	2	08	110	5	2
26	130	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
07 Jul	1409	1419	1422	M4.0	0.010	1B	S11	E53	4482			1	1
08 Jul	1749	1756	1801	M1.5	0.006	1N	S11	E37	4482				
09 Jul	0217	0227	0229	M1.1	0.003	SF	S08	E29	4482				
12 Jul	0717	0811	0842	M1.1	0.033	SF	S09	W70	4485	170			

Flare List

	Time			Optical			
Date	Begin	Max	End	X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
06 Jul	0034	0044	0049	C5.9			4479
06 Jul	0157	0221	0234	C9.6			4479
06 Jul	0455	0511	0530	C6.1			4479
06 Jul	0639	0748	0916	C7.2			
06 Jul	1640	1640	1651		SF	S09E58	4482
06 Jul	1825	1840	1853	C3.8			4479
07 Jul	0332	0340	0346	C1.8			4478
07 Jul	1202	1212	1217	C1.6			
07 Jul	1409	1419	1422	M4.0	1B	S11E53	4482
07 Jul	2240	2249	2253	C1.8			4485
08 Jul	0732	0741	0745	C1.2	SF	S10E36	4482
08 Jul	0750	0750	0805		SF	S10E36	4482
08 Jul	0940	0955	1001	C2.1			4482
08 Jul	1031	1042	1059	C1.0			4482
08 Jul	1120	1125	1128	C1.0			4482
08 Jul	1311	1312	1315		SF	S09W22	4485
08 Jul	1402	1403	1405		SF	S09W22	4485
08 Jul	1600	1600	1603		SF	S07E32	4482
08 Jul	1749	1756	1801	M1.5	1N	S11E37	4482
09 Jul	0217	0227	0229	M1.1	SF	S08E29	4482
09 Jul	0406	0411	0413	B8.7	SF	S09W29	4485
09 Jul	0517	0525	0530	B6.6			4485
09 Jul	0651	0713	0735	C2.7	SF	S14W29	4485
09 Jul	1346	1349	1351	B7.3			4482
09 Jul	1533	1547	1558	B7.0	SF	S10W37	4485
09 Jul	1842	1845	1902		SF	S10W39	4485
09 Jul	1904	1908	1919		SF	S13W39	4485

Flare List

Date	Time			Optical			
	Begin	Max	End	X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
09 Jul	1937	1943	1948	B4.5	SF	S13W39	4485
09 Jul	2347	2347	2349		SF	S09W43	4485
10 Jul	1433	1459	1520	C6.0	1F	S16W47	4485
10 Jul	2303	2307	2311	B6.1			4485
10 Jul	2321	2327	2332	B9.3			4485
11 Jul	0332	0337	0343	C1.1			4485
11 Jul	0431	0438	0440	B7.4			4485
11 Jul	0522	0530	0537	B9.4			4485
11 Jul	1313	1327	1341	C1.0			4485
11 Jul	1612	1621	1638	B5.3			4485
11 Jul	1638	1640	1642	B5.8			4485
11 Jul	2002	2013	2030	C1.0			4485
12 Jul	0028	0057	0135	C5.9	SF	S09W70	4485
12 Jul	0717	0811	0842	M1.1	SF	S09W70	4485
12 Jul	1346	1358	1406	C2.6			4485
12 Jul	1523	1532	1536	C1.0			4485
12 Jul	1536	1540	1543	C1.0			4485
12 Jul	1705	1716	1733	B9.5			4485
12 Jul	1952	1959	2010	B8.9			
12 Jul	2248	2308	2334	C1.1			4485

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 4478												
23 Jun	S06E90	75	plage					1							
24 Jun	S06E75	75	350	17	Fkc	9	BG	4							
25 Jun	S06E63	74	825	19	Fhc	16	BGD	6			3	1			
26 Jun	S06E46	76	920	19	Fkc	19	BGD	2			4				
27 Jun	S06E33	77	1190	18	Fkc	24	BGD	2			7				
28 Jun	S06E20	77	1140	17	Fkc	27	BGD	1			2				
29 Jun	S05E08	76	1200	17	Fko	38	BGD	1			3				
30 Jun	S05W06	76	1280	17	Fki	33	BGD	2			9				
01 Jul	S05W20	77	1550	17	Fki	45	BGD	2	2		6		1		
02 Jul	S05W33	77	1400	17	Fki	35	BGD				4				
03 Jul	S06W46	77	840	18	Fko	36	BG	1	2		13		1		
04 Jul	S06W59	76	660	19	Fko	24	BG		1		2				
05 Jul	S05W74	78	300	12	Eko	13	BG				3				
06 Jul	S05W90	80	280	12	Eko	8	BG								
								22	5	0	56	1	2	0	0

Crossed West Limb.
Absolute heliographic longitude: 76

			Region 4479												
24 Jun	N14E58	90	5	3	Axx	2	A	1							
25 Jun	N16E45	91	20	4	Cro	4	B				2				
26 Jun	N16E31	92	30	4	Dao	4	B	1			1				
27 Jun	N15E16	94	90	4	Dai	5	B	1			7				
28 Jun	N16E02	95	160	7	Dai	11	B	2			2	1			
29 Jun	N16W10	94	375	11	Eki	20	BGD	10	1		11				
30 Jun	N16W24	94	520	12	Eki	27	BGD	1		1	6	2	1		
01 Jul	N17W38	95	660	13	Eki	34	BGD		8		8	3	2		
02 Jul	N17W52	96	720	13	Eki	21	BGD	3	2		8	3			
03 Jul	N17W66	97	640	16	Fkc	22	BGD	7	1		6	1		1	
04 Jul	N16W79	96	550	18	Fkc	17	BGD	7	13		22	5			
05 Jul	N16W91	95	380	11	Eki	13	BGD	15	9		20				
06 Jul	N17W98	89	340	11	Eko	16	BGD	4							
								52	34	1	93	15	3	1	0

Crossed West Limb.
Absolute heliographic longitude: 95

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 4480												
27 Jun	S18E07	103	30	5	Dao	4	B								
28 Jun	S18W05	102	70	6	Dao	9	B				1				
29 Jun	S18W17	101	60	8	Dao	9	B								
30 Jun	S18W30	101	40	8	Cso	6	B	1			2				
01 Jul	S16W43	100	80	12	Csi	18	BG				4				
02 Jul	S16W56	100	150	12	Esi	15	BG	1	1		7				
03 Jul	S18W70	101	140	13	Eai	13	BG	1	2		6	1			
04 Jul	S18W83	100	50	6	Dao	4	B				5	1			
05 Jul	S17W94	98	20	1	Hsx	1	A		1						
								3	4	0	25	2	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 102

			Region 4481												
03 Jul	N14E62	329	30	1	Hsx	1	A								
04 Jul	N14E47	330	10	1	Axx	1	A								
05 Jul	N14E33	331	10	1	Axx	1	A								
06 Jul	N14E20	331	10	1	Axx	1	A								
07 Jul	N14E07	330	10	1	Axx	1	A								
08 Jul	N14W06	331	10	1	Axx	1	A								
09 Jul	N14W20	331	10	1	Axx	1	A								
10 Jul	N14W33	331	10	1	Axx	1	A								
11 Jul	N14W47	332	plage												
12 Jul	N14W61	333	plage												
								0	0	0	0	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 331

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 4482												
04 Jul	S08E77	300	20	2	Hsx	1	A	1		1					
05 Jul	S08E62	302	80	2	Cso	2	B								
06 Jul	S09E54	297	360	11	Eko	8	BG				1				
07 Jul	S09E40	296	410	12	Eki	12	BG		1			1			
08 Jul	S09E27	296	420	12	Eki	12	BGD	4	1		3	1			
09 Jul	S09E15	297	410	12	Eko	9	BG		1		1				
10 Jul	S09W00	298	410	10	Cko	8	B								
11 Jul	S08W12	297	330	9	Cko	6	B								
12 Jul	S08W29	300	330	5	Cho	6	B								
								5	3	1	5	2	0	0	0

Still on Disk.
Absolute heliographic longitude: 298

			Region 4483												
05 Jul	S07W29	33	10	3	Bxo	2	B								
06 Jul	S07W42	33	plage												
07 Jul	S07W57	35	plage												
08 Jul	S07W72	37	plage												
09 Jul	S07W87	38	plage												
								0	0	0	0	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 33

			Region 4484												
05 Jul	N14E05	359	10	2	Bxo	2	B								
06 Jul	N12W16	1	plage												
07 Jul	N12W30	1	plage												
08 Jul	N12W44	4	plage												
09 Jul	N12W58	5	plage												
10 Jul	N12W72	8	plage												
11 Jul	N12W86	10	plage												
								0	0	0	0	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 359

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 4485												
05 Jul	S09E13	351	10	2	Bxo	2	B								
06 Jul	S11W01	352	10	4	Bxo	2	B								
07 Jul	S11W15	351	40	6	Cso	7	B	1							
08 Jul	S10W28	352	100	6	Dso	15	BG				2				
09 Jul	S10W41	353	155	8	Dai	12	BG	1			7				
10 Jul	S10W55	353	175	9	Dai	12	BG	1				1			
11 Jul	S10W68	353	180	10	Dac	25	BG	3							
12 Jul	S10W82	354	170	11	Eac	18	BG	5	1		2				
								11	1	0	11	1	0	0	0

Still on Disk.
Absolute heliographic longitude: 352

			Region 4486												
08 Jul	S18W57	22	10	1	Axx	1	A								
09 Jul	S18W71	22	10	6	Bxo	2	B								
10 Jul	S17W86	24	plage												
								0	0	0	0	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 22

			Region 4487												
08 Jul	N09E26	298	10	2	Bxo	2	B								
09 Jul	N09E13	299	15	4	Cro	3	B								
10 Jul	N09W01	299	10	4	Cro	1	B								
11 Jul	N09W14	299	20	6	Cao	8	B								
12 Jul	N09W28	300	10	5	Bxo	4	B								
								0	0	0	0	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 299

			Region 4488												
11 Jul	N23W13	298	10	3	Bxo	3	B								
12 Jul	N23W25	297	10	3	Bxo	2	B								
								0	0	0	0	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 298

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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