

Solar activity was at very low to low levels from 27-30 Aug, reached R1 (Minor) levels on 24 and 26 Aug, and peaked at R2 (Moderate) levels on 25 Aug. Region 4513 (N04, L=54, class/area Ekc/310 on 25 Aug) was responsible for all seven of the M-class (R1/R2-Minor/Moderate) flares throughout the period. The largest event was an M6.9/1b (R2) flare that peaked at 25/1002 UTC. This flare was accompanied by a Type II radio sweep, estimated speed of 603 km/s, a 160 sfu F10.7 cm radio burst, and a CME first observed in LASCO C2 imagery at ~25/1100 UTC. Analysis of the CME indicated possible impacts at Earth on 28 Aug. Region 4513 also produced an M2.2/1b flare at 26/034 UTC that had a corresponding Type II radio sweep, estimated speed of 930 km/s, and a potentially Earth-directed CME. Analysis indicated the likely arrive window for the CMEs was on 28-29 Aug. Region 4315 also contributed 14 C-class flares throughout the period.

No proton events exceeding the S1 (Minor) alert threshold were observed at geosynchronous orbit. However, flux levels were elevated to near 7 nT and remained elevated from 24-26 Aug, after which they returned to near background conditions.

The greater than 2 MeV electron flux at geosynchronous orbit was high levels from 24-28 Aug, then returned to normal to moderate levels from 29-30 Aug.

Geomagnetic field activity was at unsettled levels on 24 Aug, quiet levels on 25-27 Aug, and reached active levels on 28-30 Aug under positive polarity coronal hole high speed stream influence.

Space Weather Outlook **31 August - 26 September 2026**

Solar activity is expected to be at very low to low levels, with a chance for moderate levels and a slight chance for high levels throughout the forecast 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 31 Aug - 06 Sep, then again from 16-23 Sep. Levels are expected to be at normal to moderate levels from 07 - 15 Sep, and again from 24-26 Sep.

Geomagnetic field activity is expected to decrease from unsettled levels on 31 Aug to mostly quiet levels from 01-11 Sep and again from 17-23 Sep. Unsettled to active conditions are expected from 12-16 Sep due to negative polarity CH HSS influence, then again from 24-26 Sep under positive polarity CH HSS influence.



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
24 August	143	84	460	B6.9	3	1	0	5	1	0	0	0
25 August	132	83	570	B7.7	4	4	0	10	3	0	0	0
26 August	131	99	480	B6.1	4	2	0	4	1	0	0	0
27 August	122	76	330	B4.6	5	0	0	5	0	0	0	0
28 August	116	92	340	B4.2	1	0	0	2	0	0	0	0
29 August	111	73	310	B4.3	2	0	0	1	0	0	0	0
30 August	107	74	200	B4.7	2	0	0	3	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	
24 August	2.8e+06	2.7e+05	7.7e+07	
25 August	1.8e+06	1.3e+05	8.5e+07	
26 August	1.5e+06	4.5e+04	8.9e+07	
27 August	1.7e+06	2.9e+04	8.6e+07	
28 August	1.6e+06	2.4e+04	3.2e+07	
29 August	3.7e+05	2.2e+04	1.4e+07	
30 August	1.7e+05	2.1e+04	1.8e+07	

Daily Geomagnetic Data

Date	Middle Latitude Fredericksburg		High Latitude College		Estimated Planetary	
	A	K-indices	A	K-indices	A	K-indices
24 August	8	2-1-1-2-3-1-2-3	3	2-1-0-0-0-0-1-2	6	2-2-1-1-1-0-1-3
25 August	6	2-1-1-2-3-2-1-0	1	1-0-1-0-0-0-0-0	4	1-2-1-1-1-1-0-0
26 August	4	0-0-1-2-3-1-2-0	0	0-0-0-0-0-0-0-0	3	0-1-1-1-1-1-1-1
27 August	4	1-0-1-2-2-1-2-1	0	0-0-0-0-0-0-0-0	4	1-1-1-1-1-1-0-1
28 August	14	0-1-2-2-4-3-4-4	15	1-0-1-2-5-4-3-3	15	1-1-1-2-4-3-4-4
29 August	15	4-3-4-2-3-2-3-2	23	3-4-4-4-5-3-3-2	17	4-3-4-3-2-2-4-2
30 August	13	3-3-3-4-3-2-2-1	27	3-4-4-6-4-4-2-2	22	4-4-3-4-2-3-2-2

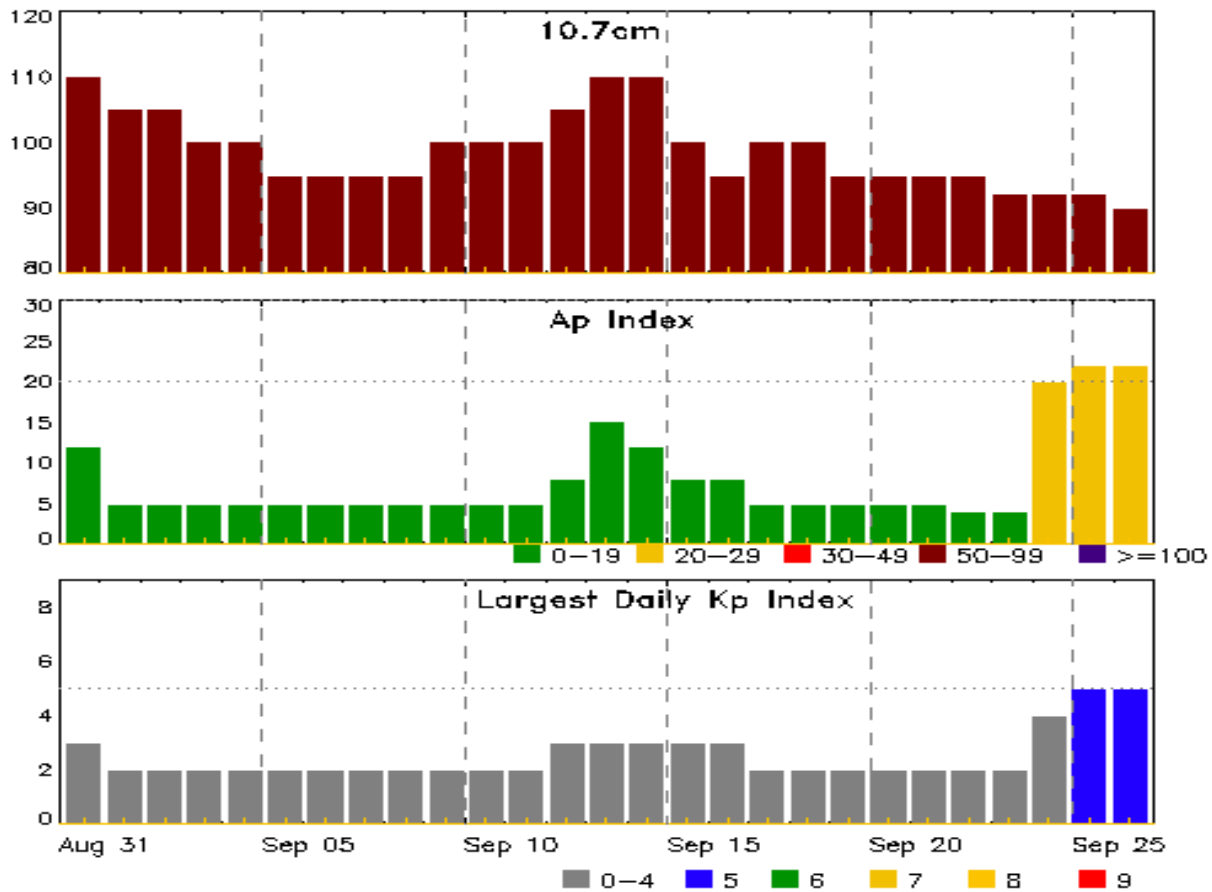


Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
24 Aug 1036	CONTINUED ALERT: Electron 2MeV Integral Flux $\geq$ 1000pfu	21/1105
25 Aug 0718	CONTINUED ALERT: Electron 2MeV Integral Flux $\geq$ 1000pfu	21/1105
25 Aug 1001	ALERT: X-ray Flux exceeded M5	25/0959
25 Aug 1015	ALERT: Type II Radio Emission	25/0959
25 Aug 1020	SUMMARY: 10cm Radio Burst	25/0956 - 1006
25 Aug 1027	SUMMARY: X-ray Event exceeded M5	25/0932 - 1013
25 Aug 1838	WATCH: Geomagnetic Storm Category G2 predicted	
26 Aug 0645	SUMMARY: 10cm Radio Burst	26/0631 - 0632
26 Aug 0658	ALERT: Type II Radio Emission	26/0635
26 Aug 0813	CONTINUED ALERT: Electron 2MeV Integral Flux $\geq$ 1000pfu	21/1105
26 Aug 1636	WATCH: Geomagnetic Storm Category G2 predicted	
27 Aug 0934	CONTINUED ALERT: Electron 2MeV Integral Flux $\geq$ 1000pfu	21/1105
28 Aug 1411	WARNING: Geomagnetic K = 4	28/1409 - 2359
28 Aug 1502	ALERT: Geomagnetic K = 4	28/1500
28 Aug 2040	WARNING: Geomagnetic K = 5	28/2039 - 29/0600
28 Aug 2350	EXTENDED WARNING: Geomagnetic K = 4	28/1409 - 29/1200
29 Aug 1142	EXTENDED WARNING: Geomagnetic K = 4	28/1409 - 30/0600
30 Aug 0555	EXTENDED WARNING: Geomagnetic K = 4	28/1409 - 30/2359



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
31 Aug	110	12	3	14 Sep	110	12	3
01 Sep	105	5	2	15	100	8	3
02	105	5	2	16	95	8	3
03	100	5	2	17	100	5	2
04	100	5	2	18	100	5	2
05	95	5	2	19	95	5	2
06	95	5	2	20	95	5	2
07	95	5	2	21	95	5	2
08	95	5	2	22	95	4	2
09	100	5	2	23	92	4	2
10	100	5	2	24	92	20	4
11	100	5	2	25	92	22	5
12	105	8	3	26	90	22	5
13	110	15	3				

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		Intensity	
									245	2695	II	IV
24 Aug	1851	1936	1954	M1.7	0.036	1B	N06E12	4513				
25 Aug	0104	0126	0140	M1.9	0.023	1N	N03E11	4513				
25 Aug	0355	0402	0407	M1.0	0.006	SN	N04E14	4513				
25 Aug	0630	0640	0646	M1.8	0.009	1N	N04E12	4513				
25 Aug	0932	1002	1013	M6.9	0.069	1B	N03E06	4513	4400		160	3
26 Aug	0629	0634	0638	M2.2	0.008	1B	N04E15	4513	1800		130	2
26 Aug	1206	1214	1222	M1.0	0.006	SF	N05W05	4513				

Flare List

Date	Time			X-ray Class	Optical		
	Begin	Max	End		Imp/ Brtns	Location Lat CMD	Rgn #
24 Aug	0017	0017	0027		SF	N09E26	4513
24 Aug	0218	0223	0230	B9.3			4513
24 Aug	0706	0723	0748	C2.2	SF	N03E21	4513
24 Aug	1411	1413	1417		SF	N16W50	4516
24 Aug	1610	1614	1619		SF	N15W50	4516
24 Aug	1701	1709	1719	C1.4	SF	N08E10	4513
24 Aug	1809	1815	1819	C1.5			4513
24 Aug	1851	1936	1954	M1.7	1B	N06E12	4513
25 Aug	0104	0126	0140	M1.9	1N	N03E11	4513
25 Aug	0335	0347	0355	C4.9	SF	N02E12	4513
25 Aug	0355	0402	0407	M1.0	SN	N04E14	4513
25 Aug	0548	0555	0600	C1.6			
25 Aug	0630	0640	0646	M1.8	1N	N04E12	4513
25 Aug	0722	0728	0734	C6.2	SF	N04E08	4513
25 Aug	0910	0919	0929		SF	N03E07	4513
25 Aug	0932	1002	1013	M6.9	1B	N03E06	4513
25 Aug	1238	1258	1316	C4.7	SF	N04E15	4513
25 Aug	1539	1544	1600		SF	N08W03	4513
25 Aug	2049	2052	2103		SF	N09W15	4517
25 Aug	2102	2102	2111		SF	N13W66	4516
25 Aug	2132	2133	2136		SF	N13W66	4516
25 Aug	2259	2303	2307	B8.2	SF	N09W15	4517
26 Aug	0027	0050	0103	C1.2	SF	N05W06	4513
26 Aug	0629	0634	0638	M2.2	1B	N04E15	4513



Flare List

Date	Time			Optical			
	Begin	Max	End	X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
26 Aug	1140	1147	1152	C1.5			
26 Aug	1206	1214	1222	M1.0	SF	N05W05	4513
26 Aug	1739	1745	1748	B8.8			4517
26 Aug	1905	1912	1919	C1.3	SF	N09E48	4518
26 Aug	2129	2140	2145	C3.4	SN	N09E46	4518
27 Aug	0012	0012	0014		SF	N07W19	4513
27 Aug	0132	0141	0149	C5.2			4513
27 Aug	0308	0316	0322	B9.2			4513
27 Aug	0341	0350	0356	C1.3			4513
27 Aug	0524	0530	0548	B6.9			4513
27 Aug	0548	0553	0557	C1.2			4513
27 Aug	0631	0640	0647	C1.0	SF	N05W21	4513
27 Aug	0703	0707	0711	C1.2	SF	N05W23	4513
27 Aug	0900	0908	0914	B8.3	SF	N05W23	4513
27 Aug	2016	2019	2023		SF	N06W37	4517
27 Aug	2106	2112	2124	B6.2			4513
28 Aug	0052	0054	0056		SF	N03W26	4513
28 Aug	0412	0422	0430	C1.1	SF	N03W28	4513
29 Aug	0719	0726	0731	B6.1			4517
29 Aug	1201	1211	1221	C1.1			4517
29 Aug	1315	1325	1329	C1.0	SF	N08W66	4517
29 Aug	1353	1359	1406	B9.9			4517
29 Aug	1441	1450	1457	B9.4			4517
29 Aug	1833	1840	1847	B8.2			
29 Aug	1934	1941	1947	B5.7			4517
30 Aug	0110	0120	0125	C3.0			
30 Aug	0618	0626	0632	B7.2	SF	N07E01	4518
30 Aug	1248	1256	1302	B9.8			
30 Aug	1620	1634	1641	B8.6			
30 Aug	1641	1656	1711	C2.2	SF	N04W66	4513
30 Aug	2133	2145	2157	B8.6			
30 Aug	2224	2224	2234		SF	N08E00	4518



Region Summary

Date	Location	Sunspot Characteristics						Flares							
	Lat CMD	Helio	Area 10 ⁻⁶ hemi.	Extent (helio)	Spot Class	Spot Count	Mag Class	X-ray			Optical				
		Lon						C	M	X	S	1	2	3	4
Region 4508															
11 Aug	N06E70	165	130	3	Hsx	2	A	1							
12 Aug	N07E56	166	120	3	Hax	2	A	1							
13 Aug	N07E43	166	100	2	Hax	2	A								
14 Aug	N07E27	168	80	4	Cso	3	B	2			2	1			
15 Aug	N08E15	167	60	2	Cso	3	B	1				1			
16 Aug	N07E03	166	90	6	Cso	2	B	1							
17 Aug	N08W09	164	90	6	Cao	3	B								
18 Aug	N08W23	165	90	5	Cao	5	B								
19 Aug	N08W37	166	90	4	Cso	4	B								
20 Aug	N09W50	166	30	3	Hrx	2	A								
21 Aug	N09W64	167	30	3	Hrx	2	A								
22 Aug	N09W77	166	10	1	Hsx	1	A								
23 Aug	N08W86	166	plage												
								6	0	0	2	2	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 166

Region 4511

13 Aug	S09E67	141	10	1	Axx	1	A								
14 Aug	S09E53	142	10	1	Axx	1	A								
15 Aug	S09E40	142	10	1	Axx	1	A								
16 Aug	S09E26	143	plage												
17 Aug	S09E12	143	plage												
18 Aug	S09W02	144	plage												
19 Aug	S09W16	145	plage												
20 Aug	S09W30	146	plage												
21 Aug	S09W44	147	plage												
22 Aug	S09W58	147	plage												
23 Aug	S09W72	148	plage												
24 Aug	S09W86	149	plage												
								0	0	0	0	0	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 144



Region Summary - continued

Date	Location	Sunspot Characteristics						Flares							
	Lat CMD	Helio	Area 10 ⁻⁶ hemi.	Extent (helio)	Spot Class	Spot Count	Mag Class	X-ray			Optical				
		Lon						C	M	X	S	1	2	3	4
Region 4513															
19 Aug	N03E81	47	100	6	Dao	2	B	2	1						
20 Aug	N04E69	46	180	8	Dac	12	B	10	3		5	1			
21 Aug	N04E55	48	200	14	Eac	12	BGD	7			5				
22 Aug	N04E39	50	260	14	Ekc	18	BG	1			3				
23 Aug	N04E25	50	260	12	Ekc	24	BG	7			5	2			
24 Aug	N04E10	53	280	14	Ekc	26	BGD	3	1		3	1			
25 Aug	N04W04	54	310	13	Ekc	21	BGD	3	4		6	3			
26 Aug	N04W17	54	190	10	Dac	14	BG	1	2		2	1			
27 Aug	N04W29	52	150	10	Dac	12	BGD	5			4				
28 Aug	N04W43	53	120	8	Dai	12	B	1			2				
29 Aug	N04W58	55	70	5	Dai	5	B								
30 Aug	N05W73	57	30	2	Cro	4	B	1			1				
								41	11	0	36	8	0	0	0

Still on Disk.

Absolute heliographic longitude: 54

Region 4515

21 Aug	S08E63	40	10	1	Hrx	1	A								
22 Aug	S08E49	40	40	2	Hsx	1	A								
23 Aug	S07E36	39	30	1	Hsx	1	A								
24 Aug	S08E23	40	30	2	Hsx	1	A								
25 Aug	S07E09	41	30	2	Hsx	1	A								
26 Aug	S07W04	41	20	1	Hsx	1	A								
27 Aug	S07W18	41	20	2	Hsx	1	A								
28 Aug	S07W31	41	30	1	Hsx	1	A								
29 Aug	S07W43	40	20	1	Hsx	1	A								
30 Aug	S07W56	40	10	1	Axx	1	A								
								0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 41

Region 4516

22 Aug	N16W30	119	10	2	Bxo	4	B								
23 Aug	N17W44	119	10	2	Bxo	3	B				1				
24 Aug	N17W55	118	30	5	Cao	8	B				2				
25 Aug	N16W68	118	80	6	Dso	8	BG				2				
26 Aug	N15W81	118	60	8	Dao	3	B								
								0	0	0	5	0	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 119



Region Summary - continued

Date	Location	Sunspot Characteristics						Flares							
	Lat CMD	Helio	Area 10 ⁻⁶ hemi.	Extent (helio)	Spot Class	Spot Count	Mag Class	X-ray			Optical				
		Lon						C	M	X	S	1	2	3	4
Region 4517															
22 Aug	N10E25	64	10	4	Bxo	2	B								
23 Aug	N10E11	64	20	5	Dao	5	B				1				
24 Aug	N10W03	66	120	8	Dao	9	B								
25 Aug	N10W17	67	150	8	Dai	13	BG				2				
26 Aug	N09W31	68	170	9	Dai	13	BG								
27 Aug	N09W44	67	140	10	Dso	7	B				1				
28 Aug	N09W58	68	150	11	Eso	7	B								
29 Aug	N09W72	69	180	11	Eai	7	B	2			1				
30 Aug	N09W85	69	110	10	Dao	6	B								
								2	0	0	5	0	0	0	

Still on Disk.

Absolute heliographic longitude: 66

Region 4518

26 Aug	N07E43	354	30	3	Cri	5	B	2			2				
27 Aug	N07E30	353	10	4	Bxo	5	B								
28 Aug	N08E19	351	20	7	Cro	7	B								
29 Aug	N08E06	351	10	3	Bxo	3	B								
30 Aug	N06W09	353	20	1	Cro	6	B				2				
								2	0	0	4	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 351

Region 4519

26 Aug	N28E53	344	10	2	Bxo	3	B								
27 Aug	N27E40	343	10	1	Axx	1	A								
28 Aug	N27E25	345	10	1	Axx	1	A								
29 Aug	N27E11	346	plage												
30 Aug	N27W03	347	plage												
								0	0	0	0	0	0	0	0

Still on Disk.

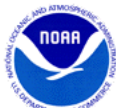
Absolute heliographic longitude: 347

Region 4520

28 Aug	S13E34	336	10	5	Bxo	4	B								
29 Aug	S12E20	337	30	5	Cro	7	B								
30 Aug	S12E08	336	30	6	Dro	7	B								
								0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 336



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

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

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