Space Weather Highlights
15 August - 21 August 2022

SWPC PRF 2451
22 August 2022

Solar activity was reached moderate levels on 15 Aug and 17-19 Aug with High levels observed on 16 Aug mostly due to M-class flaring from Region 3078 (S23, L=030, class/area Dao/270 on 16 Aug). This region was responsible for 57 C-class flares and 10 M-class flares. The largest was an M5 at 16/0758 UTC. Multiple CMEs were observed during the period with Earth-directed components. These included a partial-halo CME at 14/1325 UTC off the W limb associated with a LDE C2 flare at 14/1235 UTC from Region 3076 (N16,l=061, class/area Dao/170 on 12 Aug), a CME at 15/0516 UTC off the SW limb associated with a filament eruption centered near S21W43 at 15/0400 UTC, a CME at 17/1430 UTC off the SW limb associated with an M2 flare at 17/1345 UTC from Region 3078, a CME at 18/2256 UTC off the SW limb associated with C4 flare from Region 3078, and a CME at 19/0500 UTC off the SW limb associated with an M1/Sn flare at 19/0444 UTC from Region 3078. Analysis of these CMEs appeared to be combined arrivals early on 18 Aug, late on 19 Aug, and early on 22 Aug.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit was at moderate levels on 18 Aug and reached high levels on 15-17 and 19-21 Aug. The peak flux was 7,580 pfu observed at 15/1520 UTC.

Geomagnetic field activity ranged from quiet to G2 (Moderate) storm levels. The period began under the waning effects of a positive polarity CH HSS. Solar wind speed decreased from near 500 km/s to 360 km/s by 16/0355 UTC. At 16/1155 UTC a solar sector boundary crossing was observed changing polarity from positive to negative. The geomagnetic field was at quiet levels on 15-16 Aug. On 17 Aug at 0214 UTC, a weak shock was observed at the DSCVR spacecraft. Total field increased from 8 nT to 18 nT while solar wind speed increased from 385 km/s to 434 km/s. A subsequent geomagnetic sudden impulse was observed at 17/0303 UTC (23 nT at HAD magnetometer). Total field remained in the 10-18 nT range through 18/1510 UTC. Solar wind speed continued to increase to near 570-600 km/s. This was likely the arrival of the 14 Aug CME followed by the onset of a negative polarity CH HSS. Another shock was observed at 19/1702 UTC with a total field increase from 5 nT to 12 nT as solar wind speed increased from 540 km/s to 630 km/s. A sudden impulse was observed at 20/1812 UTC (8 nT at SIT magnetometer). Solar wind peaked around 676 km/s at 19/2048 and remained in the 470 km/s to 600 km/s range through the end of the period. The geomagnetic field responded with quiet to G2 (Moderate) storm levels on 17 Aug, quiet to G1 (Minor) storm levels on 18-19 Aug, and quiet to active levels on 20-21 Aug.

Space Weather Outlook
22 August - 17 September 2022

Solar activity is expected to be very low to low on 22 Aug - 02 Sep and 17 Sep. An increased chance for M-class (R1-R2, Minor-Moderate) levels is likely on 03-16 Sep with the return of

Region 3078.

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 22-26 Aug, 28 Aug - 01 Sep, 04-12 Sep, and again on 14-17 Sep due to CH HSS influence.

Geomagnetic field activity is expected to be reach unsettled to active levels on 22-24 Aug, 27-30 Aug, 03-10 Sep, 13-17 Sep with G1 (Minor) storm conditions likely on 22 Aug, 03-05 Sep, and G2 (Moderate) levels likely on 03-04 Sep due to recurrent CH HSSs. There is a possibility of a glancing blow from the 18-19 Aug CMEs arriving on 22 Aug.

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
15 August	131	92	740	B6.8	13	4	0	9	3	0	0	0
16 August	129	119	560	B5.8	14	2	0	4	1	0	0	0
17 August	123	83	530	B6.2	18	2	0	23	1	0	0	0
18 August	117	83	410	B7.0	21	3	0	16	3	0	0	0
19 August	105	74	390	B5.0	12	1	0	3	4	0	0	0
20 August	102	56	140	B2.5	0	0	0	2	0	0	0	0
21 August	97	56	160	B1.9	4	0	0	4	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
15 August	3.1e+06	3.6e+04	2.8e+08
16 August	3.8e+06	3.5e+04	2.6e+08
17 August	3.2e+06	3.2e+04	1.2e+08
18 August	1.8e+06	3.0e+04	4.5e+06
19 August	1.8e+06	3.4e+04	5.2e+07
20 August	3.4e+05	3.0e+04	5.9e+07
21 August	1.0e+05	2.8e+04	9.2e+07

Daily Geomagnetic Data

Date	Middle Latitude Fredericksburg		High Latitude College		Estimated Planetary	
	A	K-indices	A	K-indices	A	K-indices
15 August	6	1-1-2-2-3-2-1-1	8	1-1-1-0-2-5-1-0	6	1-2-2-2-2-2-1-1
16 August	5	1-2-0-2-2-2-1-2	4	1-1-1-3-2-0-0-1	5	1-2-1-2-1-1-0-2
17 August	22	2-3-1-3-3-4-5-5	17	1-3-1-3-3-4-4-4	31	2-3-2-3-2-4-6-6
18 August	19	3-2-3-3-4-4-3-4	30	2-3-3-3-6-6-3-3	26	3-2-3-3-5-5-4-5
19 August	15	3-3-1-2-2-4-4-3	25	3-4-3-4-5-3-5-2	20	3-3-2-2-2-4-5-4
20 August	16	3-4-3-2-1-4-3-3	15	4-4-5-2-0-0-2-2	14	4-3-3-2-1-1-3-4
21 August	13	2-2-2-3-3-4-3-2	18	3-3-1-4-3-5-3-2	12	3-2-2-3-3-4-3-2

Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
15 Aug 0459	CONTINUED ALERT: Electron 2MeV Integral Flux >= 1000pfu	08/1645
15 Aug 0630	SUMMARY: 10cm Radio Burst	15/0608 - 0613
15 Aug 1824	WATCH: Geomagnetic Storm Category G2 predicted	
16 Aug 0517	CONTINUED ALERT: Electron 2MeV Integral Flux >= 1000pfu	08/1645
16 Aug 0801	ALERT: X-ray Flux exceeded M5	16/0758
16 Aug 0816	SUMMARY: X-ray Event exceeded M5	16/0752 - 0805
16 Aug 1807	WATCH: Geomagnetic Storm Category G3 predicted	
17 Aug 0235	WARNING: Geomagnetic Sudden Impulse expected	17/0240 - 0340
17 Aug 0316	SUMMARY: Geomagnetic Sudden Impulse	17/0303
17 Aug 0318	WARNING: Geomagnetic K = 4	17/0316 - 2359
17 Aug 0459	CONTINUED ALERT: Electron 2MeV Integral Flux >= 1000pfu	08/1645
17 Aug 1559	ALERT: Type IV Radio Emission	17/1436
17 Aug 1729	ALERT: Geomagnetic K = 4	17/1727
17 Aug 1729	WARNING: Geomagnetic K = 5	17/1726 - 2359
17 Aug 1855	ALERT: Geomagnetic K = 5	17/1854
17 Aug 1926	EXTENDED WARNING: Geomagnetic K = 4	17/0316 - 18/1200
17 Aug 1926	WARNING: Geomagnetic K = 6	17/1922 - 2359
17 Aug 1926	EXTENDED WARNING: Geomagnetic K = 5	17/1726 - 18/0300
17 Aug 2009	ALERT: Geomagnetic K = 6	17/2008
17 Aug 2035	EXTENDED WARNING: Geomagnetic K = 6	17/1922 - 18/0300
17 Aug 2035	WARNING: Geomagnetic K>= 7	17/2031 - 2359
17 Aug 2035	EXTENDED WARNING: Geomagnetic K = 5	17/1726 - 18/0600
17 Aug 2129	ALERT: Geomagnetic K = 5	17/2128
18 Aug 0011	ALERT: Geomagnetic K = 6	17/2359
18 Aug 1023	WATCH: Geomagnetic Storm Category G3 predicted	
18 Aug 1137	ALERT: Type II Radio Emission	18/1049
18 Aug 1146	EXTENDED WARNING: Geomagnetic K = 4	17/0316 - 18/2359

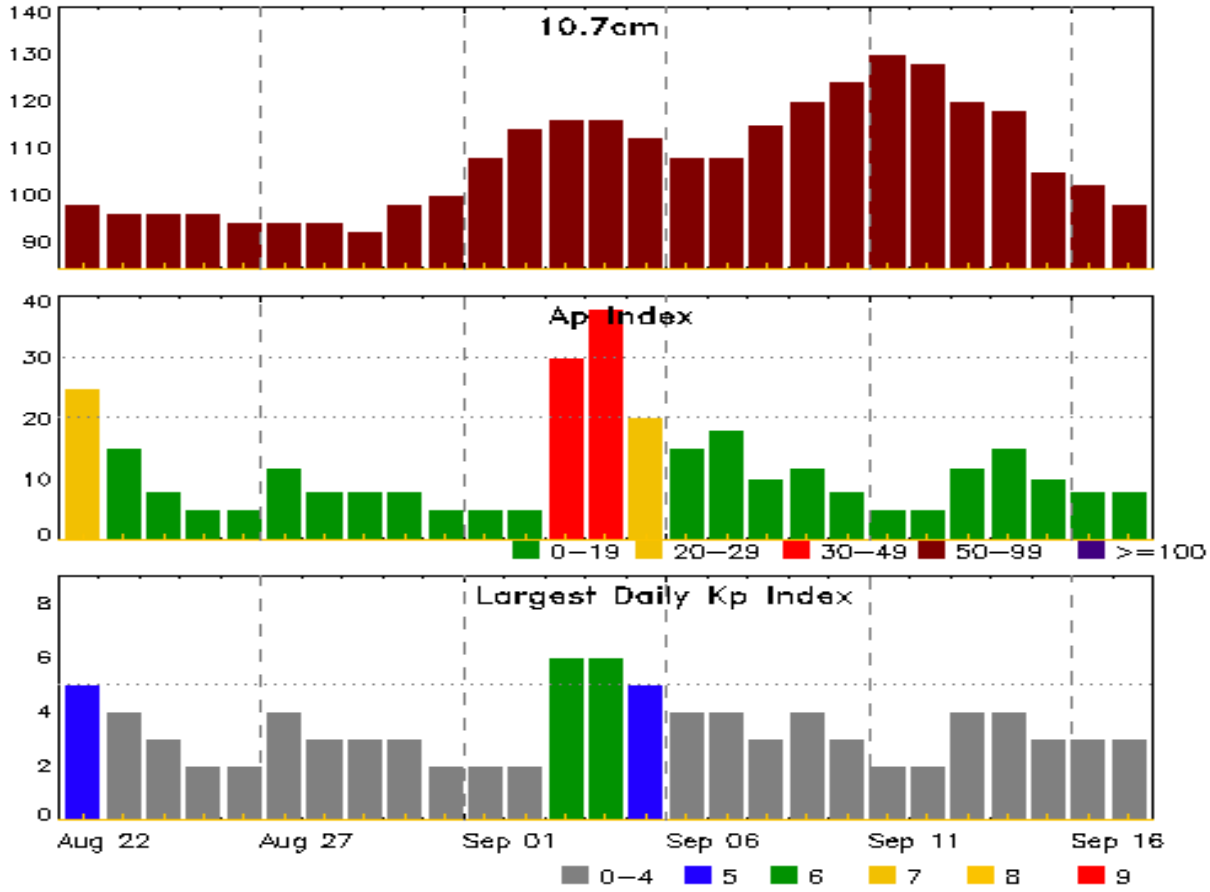
Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
18 Aug 1500	WARNING: Geomagnetic K = 5	18/1500 - 2100
18 Aug 1510	ALERT: Geomagnetic K = 5	18/1454
18 Aug 2037	EXTENDED WARNING: Geomagnetic K = 5	18/1500 - 19/0300
18 Aug 2037	EXTENDED WARNING: Geomagnetic K = 4	17/0316 - 19/0600
18 Aug 2333	ALERT: Geomagnetic K = 5	18/2330
19 Aug 0459	ALERT: Type II Radio Emission	19/0443
19 Aug 0529	SUMMARY: 10cm Radio Burst	19/0458 - 0505
19 Aug 0545	EXTENDED WARNING: Geomagnetic K = 4	17/0316 - 19/1500
19 Aug 0635	ALERT: Type IV Radio Emission	19/0457
19 Aug 1322	ALERT: Electron 2MeV Integral Flux >= 1000pfu	19/1300
19 Aug 1718	WARNING: Geomagnetic Sudden Impulse expected	19/1727 - 1807
19 Aug 1720	WARNING: Geomagnetic K = 4	19/1718 - 20/0600
19 Aug 1744	WARNING: Geomagnetic K = 5	19/1745 - 20/0300
19 Aug 1750	SUMMARY: Geomagnetic Sudden Impulse	19/1734
19 Aug 1759	ALERT: Geomagnetic K = 4	19/1756
19 Aug 1955	ALERT: Geomagnetic K = 5	19/1944
19 Aug 2002	EXTENDED WARNING: Geomagnetic K = 5	19/1745 - 20/0900
19 Aug 2002	EXTENDED WARNING: Geomagnetic K = 4	19/1718 - 20/1200
19 Aug 2002	WARNING: Geomagnetic K = 6	19/2000 - 20/0600
19 Aug 2108	ALERT: Type II Radio Emission	19/2033
20 Aug 1208	CONTINUED ALERT: Electron 2MeV Integral Flux >= 1000pfu	19/1300
20 Aug 1243	WATCH: Geomagnetic Storm Category G1 predicted	
20 Aug 1755	WARNING: Geomagnetic Sudden Impulse expected	20/1800 - 1845
20 Aug 1837	SUMMARY: Geomagnetic Sudden Impulse	20/1812
20 Aug 2250	WARNING: Geomagnetic K = 4	20/2250 - 21/0900
20 Aug 2307	ALERT: Geomagnetic K = 4	20/2305
21 Aug 1251	CONTINUED ALERT: Electron 2MeV Integral Flux >= 1000pfu	19/1300
21 Aug 1623	WARNING: Geomagnetic K = 4	21/1622 - 2359

Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
21 Aug 1634	ALERT: Geomagnetic K = 4	21/1633
21 Aug 1732	WARNING: Geomagnetic K = 5	21/1731 - 2359
21 Aug 2355	EXTENDED WARNING: Geomagnetic K = 4	21/1622 - 22/0900

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
22 Aug	98	25	5	05 Sep	112	20	5
23	96	15	4	06	108	15	4
24	96	8	3	07	108	18	4
25	96	5	2	08	115	10	3
26	94	5	2	09	120	12	4
27	94	12	4	10	124	8	3
28	94	8	3	11	130	5	2
29	92	8	3	12	128	5	2
30	98	8	3	13	120	12	4
31	100	5	2	14	118	15	4
01 Sep	108	5	2	15	105	10	3
02	114	5	2	16	102	8	3
03	116	30	6	17	98	8	3
04	116	38	6				

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
15 Aug	1427	1436	1442	M1.0	0.005				200			
15 Aug	1640	1654	1658	M2.7	0.009	1N	S23W01	3078	220			
15 Aug	1727	1735	1742	M0.9	0.005	1F	S10W49	3079				
15 Aug	2147	2153	2158	M1.1	0.004	SN	S22W03	3078	280			
16 Aug	0752	0758	0805	M5.0	0.022			3078	1900	130		
16 Aug	2110	2121	2128	M1.8	0.010			3078				
17 Aug	1326	1345	1350	M2.0	0.008	1N	S24W26	3078	320			
17 Aug	1428	1452	1510	M1.0	0.018			3078	24000			
18 Aug	1000	1009	1013	M1.3	0.004	1N	S23W38	3078	1100			
18 Aug	1037	1055	1113	M1.5	0.024			3078	690		1	1
18 Aug	1401	1413	1418	M1.3	0.005	1F	S25W37	3078				
19 Aug	0414	0444	0518	M1.6	0.036	SN	S28W49	3078	880	150	2	1

Flare List

	Time			Optical			
Date	Begin	Max	End	X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
15 Aug	0012	0017	0037		SF	S08W40	3079
15 Aug	0405	0431	0437	C3.5	SF	S23E04	3078
15 Aug	0456	0520	0550		SF	S21W43	3074
15 Aug	0713	0714	0717		SF	S22E04	3078
15 Aug	0805	0811	0825	C1.9	SF	S22E02	3078
15 Aug	0900	0908	0920	C1.4	SF	N14E20	3081
15 Aug	0936	0943	0948	C2.6			3078
15 Aug	1057	1110	1119	C3.1			3078
15 Aug	1151	1200	1204	C2.3			3079
15 Aug	1204	1212	1218	C2.7			3079
15 Aug	1229	1249	1258	C3.5			3079
15 Aug	1314	1436	1600		1N	S24W00	3078
15 Aug	1354	1359	1407	C1.7			3078
15 Aug	1427	1436	1442	M1.0			
15 Aug	1555	1609	1618	C2.5			
15 Aug	1640	1654	1658	M2.7	1N	S23W01	3078
15 Aug	1723	1733	1809	M0.9	1F	S10W49	3079
15 Aug	1936	1951	1957	C3.9			
15 Aug	2020	2026	2034	C2.3	SF	S10W49	3079

Flare List

Date	Time			Optical			
	Begin	Max	End	X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
15 Aug	2127	2128	2131		SF	S10W51	3079
15 Aug	2147	2153	2158	M1.1	SN	S22W03	3078
15 Aug	2243	2250	2258	C1.1			3078
16 Aug	0004	0013	0021	C8.4			3078
16 Aug	0100	0121	0125	C3.3			
16 Aug	0125	0139	0147	C5.9			3078
16 Aug	0331	0340	0348	C1.4			3079
16 Aug	0451	0456	0503	C2.2			3078
16 Aug	0651	0657	0703	C1.4			3078
16 Aug	0735	0740	0746	C1.6			3078
16 Aug	0752	0758	0805	M5.0			3078
16 Aug	0840	0844	0849	C1.5			3078
16 Aug	0928	0932	0936	C1.3			3078
16 Aug	1034	1038	1042	B9.7			
16 Aug	1319	1331	1336	C6.4			3078
16 Aug	1321	U1331	1538		1N	S22W12	3078
16 Aug	1325	1325	1620		SF	S24W12	3078
16 Aug	1356	1405	1412	C5.8			3078
16 Aug	1540	1554	1608		SF	S24W12	3078
16 Aug	1645	1651	1654		SF	S25W15	3078
16 Aug	1719	1720	1724		SF	S24W15	3078
16 Aug	2040	2048	2057	C1.7			3078
16 Aug	2110	2121	2128	M1.8			3078
16 Aug	2303	2313	2319	C4.6			3078
16 Aug	2334	2338	2342	C2.6			3078
17 Aug	0105	0106	0111		SF	S24W17	3078
17 Aug	0133	0142	0147	C1.6	SF	S24W17	3078
17 Aug	0226	0232	0241	C1.5	SF	S24W17	3078
17 Aug	0447	0457	0502	C2.8	SF	S24W17	3078
17 Aug	0513	0516	0523	B9.6	SF	N28E49	3082
17 Aug	0524	0527	0530	C1.1	SF	N28E47	3082
17 Aug	0555	0558	0600		SF	N28E47	3082
17 Aug	0643	0651	0655	B9.7			3078
17 Aug	0658	0710	0719	C3.3	SF	N28E47	3082
17 Aug	0812	0820	0833	C9.1			3078
17 Aug	0813	0820	0833	C9.0			3078
17 Aug	0815	0820	0920		SF	S22W26	3078
17 Aug	0928	0936	0943	C4.0	SF	N29E46	3082

Flare List

Date	Time			X-ray	Optical		
	Begin	Max	End	Class	Imp/ Brtns	Location Lat CMD	Rgn #
17 Aug	0956	1000	1003		SF	N28E45	3082
17 Aug	1034	1035	1037		SF	N28E45	3082
17 Aug	1101	1103	1106		SF	N28E45	3082
17 Aug	1118	1131	1146	C4.3			3083
17 Aug	1120	1124	1206		SF	S25W30	3083
17 Aug	1136	1138	1149		SF	N28E44	3082
17 Aug	1152	1155	1159		SF	N28E44	3082
17 Aug	1209	1213	1229		SF	N28E44	3082
17 Aug	1244	1245	1246		SF	N28E44	3082
17 Aug	1247	1248	1250		SF	N28E44	3082
17 Aug	1252	1254	1256		SF	S24W27	3078
17 Aug	1317	1324	1326	C1.2	SF	N29E44	
17 Aug	1326	1345	1350	M2.0	1N	S24W26	3078
17 Aug	1355	1358	1400		SF	N28E44	3082
17 Aug	1406	1408	1410		SF	N28E44	3082
17 Aug	1428	1452	1510	M1.0			3078
17 Aug	1610	1614	1622	C1.5			3078
17 Aug	1713	1722	1725	C1.1			3078
17 Aug	1725	1731	1740	C1.4			3078
17 Aug	1742	1756	1803	C2.2			3082
17 Aug	1916	1919	1923	B8.5			
17 Aug	2036	2041	2046	C1.3			3082
17 Aug	2105	2111	2115	C1.0			3082
17 Aug	2115	2122	2129	C1.3			3082
17 Aug	2201	2210	2223	B7.5			3081
17 Aug	2316	2333	0001	C3.3			3079
18 Aug	0036	0040	0044	C3.7			3078
18 Aug	0057	0058	0100		SF	N21W77	3075
18 Aug	0250	0252	0259	C1.8	SF	S24W30	3078
18 Aug	0418	0429	0433	C4.5	SF	S24W30	3078
18 Aug	0435	0439	0446	C2.2	SF	N09W09	3081
18 Aug	0504	0522	0531	C4.2	SF	N11W08	3081
18 Aug	0537	0537	0541		SF	N09W09	3081
18 Aug	0554	0602	0606	C5.7	SF	S24W34	3078
18 Aug	0733	0741	0749		SF	S24W30	3078
18 Aug	0805	0809	0815	C1.9	SF	S24W30	3078
18 Aug	0835	0852	0859	C3.6	SF	S24W30	3078
18 Aug	0913	0920	0927	C1.7			3078

Flare List

Date	Time			Optical			
	Begin	Max	End	X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
18 Aug	0919	1009	1321		1N	S23W38	3078
18 Aug	0928	0929	0942		SF	S24W30	3078
18 Aug	1000	1009	1013	M1.3			3078
18 Aug	1037	1055	1113	M1.5			3078
18 Aug	1100	1118	1234		SF	S24W51	3083
18 Aug	1227	1235	1243	C2.7	SF	N20W76	3076
18 Aug	1401	1413	1418	M1.3	1F	S25W37	3078
18 Aug	1544	1553	1557	C4.2			3078
18 Aug	B1622	1622	1718		SF	S23W39	3078
18 Aug	1746	1802	1808	C1.1	SF	S22W40	3078
18 Aug	1809	1814	1818	C1.5			3078
18 Aug	1928	1937	1941	C3.0	SF	S24W40	3078
18 Aug	2001	2013	2018	C3.4			3081
18 Aug	2039	2048	2059	C1.0			
18 Aug	2144	2158	2202	C6.3			3078
18 Aug	2207	2215	2218	C3.0			3078
18 Aug	2217	2246	2313	C3.5	1F	S27W41	3078
18 Aug	2228	2240	2255	C4.4			3078
18 Aug	2343	2350	2355	C3.9			3081
19 Aug	0113	0121	0127	B7.8			3078
19 Aug	0155	0209	0220	C3.3	1F	S24W44	3078
19 Aug	0314	0322	0331	C1.0			3078
19 Aug	0414	0444	0518	M1.6	SN	S28W49	3078
19 Aug	0605	0610	0614	C3.2	SF	S26W48	3078
19 Aug	0759	0810	0814	C4.5	1N	S24W48	3078
19 Aug	0855	0901	0913	C1.9	SF	N12W14	3081
19 Aug	0922	0930	0943	B9.4			
19 Aug	B1017	U1030	A1044	C3.0	1F	S25W49	3078
19 Aug	1101	1117	1132	C4.0			3078
19 Aug	1144	1149	1153	C1.8			3078
19 Aug	1341	1347	1353	B7.5			3078
19 Aug	1516	1522	1534	C1.2			3078
19 Aug	1601	1607	1616	B6.4			3078
19 Aug	1721	1726	1730	B7.2			3078
19 Aug	1746	1748	1815	B5.5			3078
19 Aug	2009	2016	2020	C1.6	1N	S26W55	3078
19 Aug	2019	2031	2042	C6.7			3078
19 Aug	2216	2223	2230	B5.9			3081

Flare List

Date	Time			Optical			
	Begin	Max	End	X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
19 Aug	2230	2240	2244	C1.4			3081
19 Aug	2258	2303	2307	B7.4			3078
20 Aug	0227	0233	0237	B7.2	SF	S24W58	3078
20 Aug	0330	0343	0353	B6.4			3081
20 Aug	0816	0823	0829	B5.3			3078
20 Aug	1405	1412	1416	B4.5	SF	S09W03	3084
20 Aug	1616	1621	1625	B4.2			3078
20 Aug	1752	1802	1808	B4.9			3078
20 Aug	2129	2138	2150	B9.1			3078
21 Aug	0309	0317	0341	B3.5			3084
21 Aug	0448	0459	0510	C2.9	SF	N09W48	3081
21 Aug	0515	0517	0520		SF	N08W59	3081
21 Aug	0806	0816	0824	B2.9			3078
21 Aug	1552	1559	1604	B3.9			3081
21 Aug	1734	1743	1747	B5.4			3085
21 Aug	1758	1814	1826	C2.0	SF	N00E00	3078
21 Aug	1834	1846	1858	B9.8			3078
21 Aug	2007	2011	2018	C1.1	SF	N32E18	3085
21 Aug	2214	2220	2227	B3.7			3078
21 Aug	2331	2341	2347	C2.4			3085

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 3071												
02 Aug	S16E68	129	140	3	Hsx	1	A								
03 Aug	S19E58	126	120	2	Hsx	1	A								
04 Aug	S19E43	128	120	2	Hsx	1	A								
05 Aug	S19E30	128	120	2	Hsx	2	A								
06 Aug	S19E17	127	110	2	Hsx	1	A								
07 Aug	S19E04	127	100	2	Hsx	1	A								
08 Aug	S21W07	125	110	3	Hsx	2	A								
09 Aug	S18W24	127	110	3	Hsx	1	A								
10 Aug	S13W36	127	70	1	Hsx	1	A								
11 Aug	S17W50	128	70	2	Hsx	1	A								
12 Aug	S18W62	127	110	2	Hsx	1	A								
13 Aug	S18W76	127	120	1	Hsx	1	A								
14 Aug	S18W90	128	120	1	Hsx	1	A								
								0	0	0	0	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 127

			Region 3074												
05 Aug	S18E68	90	120	2	Hsx	1	A								
06 Aug	S17E54	90	120	2	Hsx	3	A								
07 Aug	S16E40	91	120	2	Hsx	1	A								
08 Aug	S16E26	92	150	6	Hsx	4	A				1				
09 Aug	S17E13	90	130	2	Hsx	1	A								
10 Aug	S16E01	89	100	3	Hsx	1	A								
11 Aug	S17W13	90	130	2	Hsx	1	A								
12 Aug	S17W25	90	130	2	Hsx	1	A				1				
13 Aug	S18W37	88	100	2	Hsx	1	A								
14 Aug	S16W52	90	110	2	Hsx	1	A								
15 Aug	S17W64	88	90	2	Hsx	1	A				1				
16 Aug	S17W76	88	30	1	Hsx	2	A								
17 Aug	S17W90	88	plage												
								0	0	0	3	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 89

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 3075												
07 Aug	N21E54	77	20	5	Cro	3	B								
08 Aug	N22E38	80	10	5	Bxo	5	B								
09 Aug	N18E26	77	10	2	Axx	1	A								
10 Aug	N18E12	79	plage												
11 Aug	N18W02	80	plage												
12 Aug	N18W16	81	plage												
13 Aug	N18W30	81	plage												
14 Aug	N18W44	82	plage												
15 Aug	N18W58	83	plage												
16 Aug	N16W78	90	20	1	Axx	1	A								
								0	0	0	0	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 80

			Region 3076												
07 Aug	N16E69	62	110	2	Hsx	1	A								
08 Aug	N16E61	59	180	2	Hsx	1	A								
09 Aug	N13E43	60	130	2	Hsx	1	A								
10 Aug	N14E29	62	120	2	Hsx	1	A								
11 Aug	N13E16	61	120	2	Cao	1	B	1							
12 Aug	N16E04	61	170	4	Dao	8	B	3			2				
13 Aug	N15W10	61	170	5	Dao	10	B								
14 Aug	N16W23	61	90	5	Cai	9	B	1							
15 Aug	N16W36	60	60	3	Cao	3	B								
16 Aug	N15W49	61	10	1	Axx	2	A								
17 Aug	N15W63	62	plage												
18 Aug	N15W77	63	plage					1			1				
								6	0	0	3	0	0	0	0

Died on Disk.
Absolute heliographic longitude: 61

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 3077												
09 Aug	S17W09	112	10	4	Cro	4	B								
10 Aug	S15W23	114	50	4	Cso	6	B								
11 Aug	S17W37	114	40	4	Cao	4	B	2			1				
12 Aug	S18W48	113	20	4	Bxo	4	B	1			1				
13 Aug	S18W60	111	10	1	Axx	2	A								
14 Aug	S18W74	112	plage												
15 Aug	S18W88	113	plage												
								3	0	0	2	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 112

			Region 3078												
10 Aug	S22E58	33	50	1	Hax	1	A								
11 Aug	S27E45	33	80	1	Hsx	1	A								
12 Aug	S25E32	33	30	1	Cao	3	B								
13 Aug	S25E20	31	20	3	Hax	2	A	1							
14 Aug	S25E06	32	60	3	Cao	5	B	4			5				
15 Aug	S24W05	30	230	4	Dac	12	BGD	6	2		4	2			
16 Aug	S23W18	30	270	5	Dao	10	BGD	12	2		4	1			
17 Aug	S20W34	33	190	5	Dac	10	BGD	8	2		6	1			
18 Aug	S24W47	33	210	6	Dac	14	BGD	15	3		10	3			
19 Aug	S24W62	34	210	6	Dac	14	BGD	10	1		2	4			
20 Aug	S24W74	33	30	3	Dai	6	BG				1				
21 Aug	S24W88	34	plage					1			1				
								57	10	0	33	11	0	0	0

Still on Disk.
Absolute heliographic longitude: 30

			Region 3079												
12 Aug	S11W13	78	70	4	Dro	8	B	2			7				
13 Aug	S11W25	76	120	6	Dao	9	B	16			6				
14 Aug	S11W39	77	130	8	Cai	15	B	3			2				
15 Aug	S11W52	76	140	6	Cao	10	B	4	1		3	1			
16 Aug	S11W66	78	80	8	Cao	7	B	1							
17 Aug	S06W78	76	80	5	Cao	3	B	1							
								27	1	0	18	1	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 78

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 3080												
12 Aug	N21W37	102	10	3	Bxo	2	B								
13 Aug	N20W52	103	10	1	Axx	2	A								
14 Aug	N20W66	104	plage												
15 Aug	N13W63	101	plage												
16 Aug	N18W80	92	plage												
								0	0	0	0	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 102

			Region 3081												
13 Aug	N10E44	7	240	4	Dai	9	B				2				
14 Aug	N10E31	7	160	7	Dai	13	B	2			3				
15 Aug	N12E18	6	220	8	Dao	16	BG	1			1				
16 Aug	N12E04	8	120	9	Dao	10	BG								
17 Aug	N11W08	6	150	9	Cao	9	B								
18 Aug	N11W23	9	120	7	Cao	9	B	4			3				
19 Aug	N16W38	10	110	4	Cao	4	B	2			1				
20 Aug	N11W52	10	90	3	Hax	4	A								
21 Aug	N11W66	12	90	2	Hax	5	A	1			2				
								10	0	0	12	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 8

			Region 3082												
16 Aug	N27E49	323	10	4	Bxo	3	B								
17 Aug	N23E37	321	80	6	Dao	7	B	7			15				
18 Aug	N27E22	324	50	7	Dao	4	B								
19 Aug	N23E15	321	40	8	Cao	2	B								
20 Aug	N28E02	317	10	8	Cro	2	B								
21 Aug	N28W11	317	10	9	Cro	2	B								
								7	0	0	15	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 317

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 3083												
16 Aug	S24W29	41	20	5	Cro	4	B								
17 Aug	S24W42	41	30	7	Dao	4	B	1			1				
18 Aug	S24W56	42	10	8	Bxo	3	B				1				
19 Aug	S24W70	42	10	8	Bxo	2	B								
20 Aug	S24W84	43	plage												
								1	0	0	2	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 41

			Region 3084												
18 Aug	S09E18	328	20	3	Bxo	3	B								
19 Aug	S11E01	331	20	3	Bxo	2	B								
20 Aug	S09W12	331	10	4	Bxo	4	B				1				
21 Aug	S11W19	325	10	8	Bxo	3	B								
								0	0	0	1	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 331

			Region 3085												
21 Aug	N29E16	290	50	5	Dao	6	B	2			1				
								2	0	0	1	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 290

Preliminary Report and Forecast of Solar Geophysical Data (The Weekly)

Published every Monday by the Space Weather Prediction Center.

U.S. Department of Commerce
NOAA / National Weather Service
Space Weather Prediction Center
325 Broadway, Boulder CO 80305

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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