Space Weather Highlights **SWPC PRF 2563**
07 October - 13 October 2024 **14 October 2024**

Solar activity reached high levels on 07 and 09 Oct. An X2.1/2b flare was observed on 07/1902 UTC from Region 3842 (S15, L=180, class/area=Eki/730). On 08 Oct 2 X-class flares were observed. An X1.8 flare was observed at 09/0156 UTC from Region 3848 (N12, L=116, class/area=Dki/600). This event was accompanied by Type II (5176 km/s) and Type IV radio sweeps as well as a 2700 sfu Tenflare and Castelli U signature. The associated Halo CME is Earth directed and early model runs suggest arrival mid to late day 10 Oct. An additional X1.4/1N flare was observed from Region 3842 at 09/1545 UTC. Numerous M-class flares were observed during the period with moderate levels being reached on 08, 10, and 11 Oct. Low levels were observed on 12-13 Oct.

The 10 MeV proton flux reached S3 (Strong) radiation storm levels on 09-10 Oct. The greater than 10 MeV proton flux exceeded the 1000 pfu threshold reaching S3 (Strong) levels starting at 09/1240 UTC, with a peak of 1810 pfu at 10/1515 UTC. The greater than 100 MeV proton flux was also above the alert threshold of 1 pfu beginning at 09/0350 UTC, with a peak of 3 pfu at 09/0805 UTC.

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

Geomagnetic field activity was at G3 (Strong) levels on 08 Oct due to CME influences. Solar wind parameters have remained elevated since CME arrival 06 Oct. Total field has been been between 2 to 17 nT with the Bz component dropping as low as -16 nT. The Bz component has remained largely in the southward orientation since 07/1411 UTC. Solar wind speeds have remained around 450 km/s. The phi angle was predominantly negative (towards the Sun) but as of 07/1916 UTC has flipped to positive (away from the Sun).The greater than 2 MeV electron flux at geosynchronous orbit was at low to moderate levels for the summary period.

G4 (Severe) levels were observed on 10-11 Oct due to influences from a halo CME that left the Sun early on 09 Oct. Solar wind parameters, as measured by ACE, all showed abrupt jumps in value consistent with an interplanetary shock, which was interpreted as the arrival of the halo CME from 9 Oct associated with an X1.8 flare. Total magnetic field, Bt, had an average of 36 nT throughout, with a maximum of 46 nT reached at 10/2159 UTC. The north-south component of the magnetic field, Bz, varied between north (positive) and south (negative) values. It reached a maximum southward value of -46 nT at 10/2200 UTC, with several sustained periods of -20 nT. With the arrival of the CME, the wind speed increased from a background of 400 km/s to 815 km/s, and then sustained speeds around 750 km/s for the remainder of the period. Before the CME, the phi angle was predominantly positive (away from the Sun), and then varied after the arrival.

The remainder of the period saw G2 (Moderate) levels on 07 Oct, and G1 (Minor) levels on 09 and 12 Oct. All due to lingering CME influences.

Space Weather Outlook
14 October - 09 November 2024

Solar activity is expected to be at moderate levels, with isolated days of high levels throughout the period.

No proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at nomal to high levels throughout the outlook period.

Geomagnetic field activity is expected to be at G1 (Minor) storm levels on 16 Oct with a glancing blow from a CME that left the Sun on 12 Oct. Active levels on 22 and 26 Oct due to CH HSS influences. Quiet to unsettled levels are likely on the remaining days in 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
07 October	277	164	2470	C3.7	2	1	2	11	1	1	0	0
08 October	225	165	2380	C2.7	4	1	0	8	1	0	0	0
09 October	220	107	1920	C3.6	3	2	2	4	2	0	0	0
10 October	216	150	1460	C3.2	4	4	0	4	0	0	0	0
11 October	214	130	1445	C1.8	6	2	0	4	0	0	0	0
12 October	214	95	1080	C2.0	5	0	0	7	0	0	0	0
13 October	195	108	1270	C1.5	3	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
07 October	1.2e+06	1.5e+04	1.9e+06
08 October	7.6e+06	6.2e+04	1.2e+06
09 October	2.2e+08	4.9e+07	9.5e+06
10 October	2.2e+09	6.0e+07	1.1e+07
11 October	5.9e+07	3.6e+05	5.2e+06
12 October	1.7e+07	3.2e+04	1.1e+07
13 October	1.4e+07	1.6e+04	1.4e+07

Daily Geomagnetic Data

Date	Middle Latitude Fredericksburg		High Latitude College		Estimated Planetary	
	A	K-indices	A	K-indices	A	K-indices
07 October	33	4-4-3-5-5-4-5-4	67	4-4-4-7-7-5-6-5	55	5-5-3-5-6-4-6-5
08 October	29	5-5-5-3-3-3-3-4	73	5-6-8-6-5-5-4-3	58	7-7-6-4-4-4-4-4
09 October	15	3-4-4-3-3-2-2-2	34	3-4-6-5-4-5-3-3	19	4-5-4-3-4-2-2-2
10 October	50	2-2-1-2-3-7-6-7	116	3-3-2-4-6-9-8-7	96	2-3-2-2-3-8-8-9
11 October	68	6-7-7-5-6-4-3-3	123	5-7-9-6-8-5-3-3	116	8-8-8-7-7-4-3-3
12 October	16	3-1-3-4-4-2-4-2	33	4-2-2-7-5-3-3-2	20	4-2-3-5-4-3-4-3
13 October	3	1-1-0-2-2-1-0-0	4	1-0-0-2-3-1-0-1	6	2-1-1-2-2-1-*-1

Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
07 Oct 0052	ALERT: Geomagnetic K = 5	
07 Oct 0102	EXTENDED WARNING: Geomagnetic K = 4	06/1506 - 07/1500
07 Oct 0102	EXTENDED WARNING: Geomagnetic K = 5	06/2220 - 07/1200
07 Oct 0102	WARNING: Geomagnetic K = 6	07/0100 - 0900
07 Oct 0604	ALERT: Geomagnetic K = 5	
07 Oct 1109	EXTENDED WARNING: Geomagnetic K = 5	06/2220 - 07/1500
07 Oct 1142	ALERT: Geomagnetic K = 5	
07 Oct 1252	ALERT: Geomagnetic K = 4	
07 Oct 1301	ALERT: Geomagnetic K = 5	
07 Oct 1333	WARNING: Geomagnetic K = 6	07/1332 - 1800
07 Oct 1334	ALERT: Geomagnetic K = 6	
07 Oct 1338	EXTENDED WARNING: Geomagnetic K = 4	06/1506 - 08/0000
07 Oct 1338	EXTENDED WARNING: Geomagnetic K = 5	06/2220 - 07/2100
07 Oct 1738	ALERT: Geomagnetic K = 4	
07 Oct 1832	ALERT: Geomagnetic K = 4	
07 Oct 1838	ALERT: Geomagnetic K = 5	
07 Oct 1847	WARNING: Geomagnetic K = 6	07/1800 - 08/0600
07 Oct 1848	EXTENDED WARNING: Geomagnetic K = 5	06/2220 - 08/0900
07 Oct 1849	EXTENDED WARNING: Geomagnetic K = 4	06/1506 - 08/1200
07 Oct 1849	ALERT: Geomagnetic K = 6	
07 Oct 1909	ALERT: X-ray Flux exceeded M5	07/1907
07 Oct 1920	SUMMARY: 10cm Radio Burst	07/1906 - 1910
07 Oct 1938	SUMMARY: X-ray Event exceeded X1	07/1902 - 1931
07 Oct 2026	ALERT: Type II Radio Emission	07/2003
07 Oct 2112	ALERT: Type IV Radio Emission	07/2007
07 Oct 2124	ALERT: Geomagnetic K = 4	
07 Oct 2209	ALERT: Geomagnetic K = 5	
08 Oct 0051	ALERT: Geomagnetic K = 5	
08 Oct 0233	WARNING: Geomagnetic K>= 7	08/0232 - 0900

Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
08 Oct 0242	ALERT: Geomagnetic K = 7	
08 Oct 0247	EXTENDED WARNING: Geomagnetic K = 4	06/1506 - 08/2359
08 Oct 0247	EXTENDED WARNING: Geomagnetic K = 6	07/1800 - 08/1500
08 Oct 0247	EXTENDED WARNING: Geomagnetic K = 5	06/2220 - 08/2100
08 Oct 0419	ALERT: Geomagnetic K = 5	
08 Oct 0506	ALERT: Geomagnetic K = 6	
08 Oct 0517	ALERT: Geomagnetic K = 7	
08 Oct 0834	ALERT: Geomagnetic K = 5	
08 Oct 0845	ALERT: Geomagnetic K = 6	
08 Oct 1303	ALERT: Geomagnetic K = 4	
08 Oct 1732	ALERT: Geomagnetic K = 4	
08 Oct 2005	ALERT: Geomagnetic K = 4	
08 Oct 2023	WATCH: Geomagnetic Storm Category G1 predicted	
08 Oct 2317	WARNING: Geomagnetic K = 5	08/2317 - 09/0300
08 Oct 2354	EXTENDED WARNING: Geomagnetic K = 4	06/1506 - 09/0600
09 Oct 0146	ALERT: X-ray Flux exceeded M5	09/0143
09 Oct 0200	ALERT: Type II Radio Emission	09/0144
09 Oct 0200	ALERT: Type IV Radio Emission	09/0143
09 Oct 0236	EXTENDED WARNING: Geomagnetic K = 4	06/1506 - 09/1800
09 Oct 0237	EXTENDED WARNING: Geomagnetic K = 5	08/2317 - 09/1500
09 Oct 0250	SUMMARY: X-ray Event exceeded X1	09/0125 - 0243
09 Oct 0333	WARNING: Proton 100MeV Integral Flux > 1pfu	09/0333 - 2359
09 Oct 0408	ALERT: Proton Event 100MeV Integral Flux > 1pfu	09/0350
09 Oct 0431	SUMMARY: 10cm Radio Burst	09/0136 - 0400
09 Oct 0438	WARNING: Proton 10MeV Integral Flux > 10pfu	09/0440 - 2359
09 Oct 0522	ALERT: Proton Event 10MeV Integral Flux >= 10pfu	09/0505
09 Oct 0558	ALERT: Geomagnetic K = 5	
09 Oct 0801	ALERT: Proton Event 10MeV Integral Flux >= 100pfu	09/0740
09 Oct 1233	WATCH: Geomagnetic Storm Category G4 or greater	

Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
-	predicted	-
09 Oct 1255	ALERT: Proton Event 10MeV Integral Flux >= 1000pfu	09/1240
09 Oct 1347	ALERT: Geomagnetic K = 4	
09 Oct 1349	EXTENDED WARNING: Geomagnetic K = 4	06/1506 - 09/2100
09 Oct 1548	ALERT: X-ray Flux exceeded M5	09/1545
09 Oct 1603	SUMMARY: 10cm Radio Burst	09/1544 - 1547
09 Oct 1606	SUMMARY: X-ray Event exceeded X1	09/1544 - 1553
09 Oct 1618	ALERT: Type IV Radio Emission	09/1546
09 Oct 1724	ALERT: Proton Event 10MeV Integral Flux >= 1000pfu	09/1705
09 Oct 2313	ALERT: X-ray Flux exceeded M5	09/2309
09 Oct 2337	SUMMARY: X-ray Event exceeded M5	09/2259 - 2321
09 Oct 2355	EXTENDED WARNING: Proton 10MeV Integral Flux > 10pfu	09/0440 - 10/2359
09 Oct 2356	EXTENDED WARNING: Proton 100MeV Integral Flux > 1pfu	09/0333 - 10/1200
10 Oct 0759	SUMMARY: Proton Event 100MeV Integral Flux > 1pfu	09/0350 - 10/0440
10 Oct 1351	WARNING: Geomagnetic K = 4	10/1350 - 11/1200
10 Oct 1501	WARNING: Geomagnetic Sudden Impulse expected	10/1501 - 1530
10 Oct 1506	WARNING: Geomagnetic K = 5	10/1506 - 11/1200
10 Oct 1507	WARNING: Geomagnetic K = 6	10/1506 - 11/1200
10 Oct 1524	ALERT: Geomagnetic K = 4	
10 Oct 1525	SUMMARY: Geomagnetic Sudden Impulse	10/1515
10 Oct 1525	ALERT: Geomagnetic K = 5	
10 Oct 1537	ALERT: Geomagnetic K = 6	
10 Oct 1542	WARNING: Geomagnetic K>= 7	10/1541 - 11/0600
10 Oct 1552	ALERT: Geomagnetic K = 7	
10 Oct 1705	ALERT: Geomagnetic K = 8	
10 Oct 1823	ALERT: Geomagnetic K = 5	
10 Oct 1831	ALERT: Geomagnetic K = 6	
10 Oct 1858	ALERT: Geomagnetic K = 7	

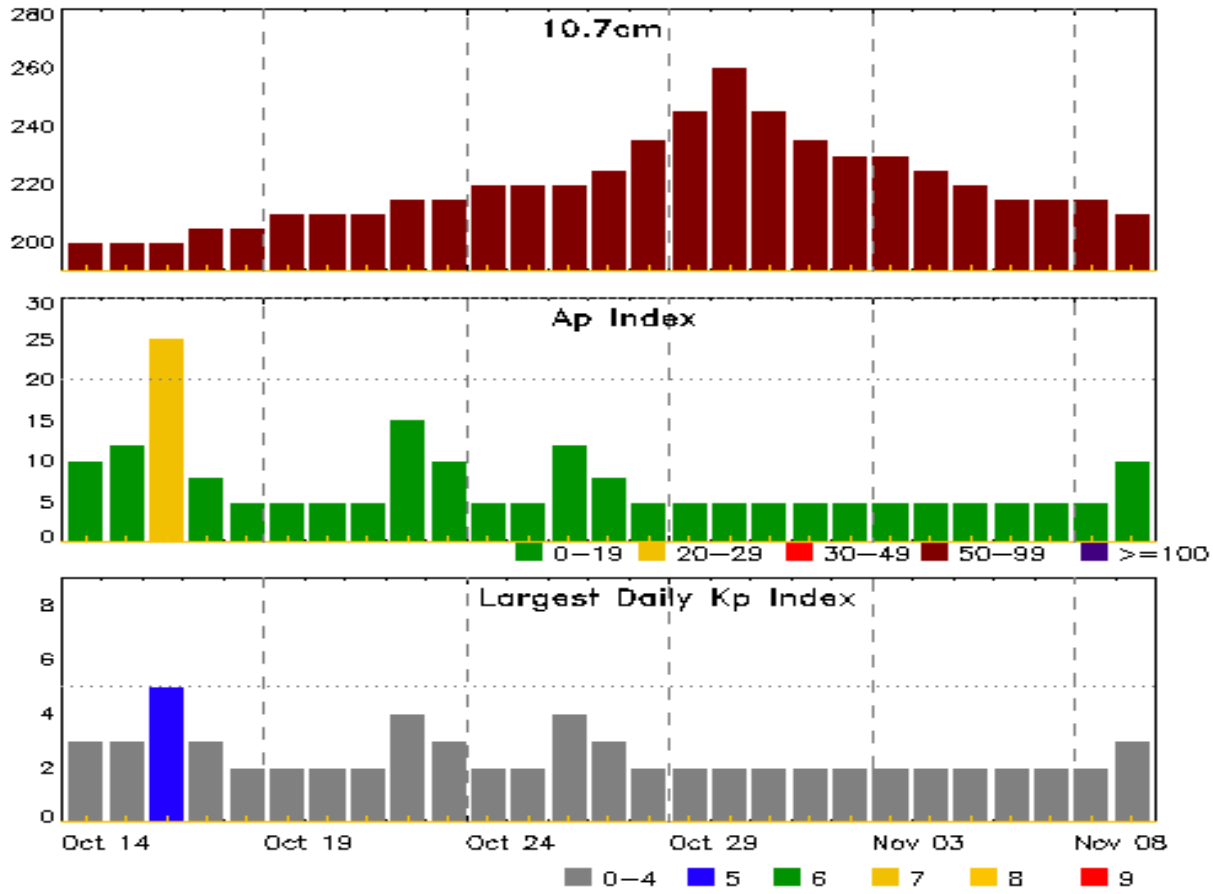
Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
10 Oct 1957	SUMMARY: Proton Event 10MeV Integral Flux >= 1000pfu	09/1240 - 10/1545
10 Oct 2037	ALERT: Geomagnetic K = 8	
10 Oct 2113	ALERT: Geomagnetic K = 5	
10 Oct 2125	EXTENDED WARNING: Proton 10MeV Integral Flux > 10pfu	09/0440 - 11/2359
10 Oct 2129	ALERT: Geomagnetic K = 6	
10 Oct 2152	ALERT: Geomagnetic K = 7	
10 Oct 2258	ALERT: Geomagnetic K = 8	
11 Oct 0019	ALERT: Geomagnetic K = 5	
11 Oct 0025	ALERT: Geomagnetic K = 6	
11 Oct 0047	ALERT: Geomagnetic K = 7	
11 Oct 0108	SUMMARY: Proton Event 10MeV Integral Flux >= 100pfu	09/0740 - 10/2110
11 Oct 0211	ALERT: Geomagnetic K = 8	
11 Oct 0333	ALERT: Geomagnetic K = 5	
11 Oct 0420	ALERT: Geomagnetic K = 6	
11 Oct 0439	ALERT: Geomagnetic K = 7	
11 Oct 0515	ALERT: Geomagnetic K = 8	
11 Oct 0516	EXTENDED WARNING: Geomagnetic K>= 7	10/1541 - 11/1200
11 Oct 0550	SUMMARY: 10cm Radio Burst	11/0533 - 0533
11 Oct 0616	ALERT: Geomagnetic K = 5	
11 Oct 0627	ALERT: Geomagnetic K = 6	
11 Oct 0742	ALERT: Geomagnetic K = 7	
11 Oct 0848	ALERT: Geomagnetic K = 8	
11 Oct 0926	ALERT: Geomagnetic K = 5	
11 Oct 0939	ALERT: Geomagnetic K = 6	
11 Oct 1012	ALERT: Geomagnetic K = 7	
11 Oct 1120	CANCELLATION: Proton 10MeV Integral Flux > 10pfu	
11 Oct 1120	SUMMARY: Proton Event 10MeV Integral Flux >= 10pfu	09/0505 - 11/0320
11 Oct 1144	EXTENDED WARNING: Geomagnetic K = 4	10/1350 - 11/2100

Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
11 Oct 1144	EXTENDED WARNING: Geomagnetic K = 6	10/1506 - 11/1800
11 Oct 1144	EXTENDED WARNING: Geomagnetic K = 5	10/1506 - 11/1800
11 Oct 1144	EXTENDED WARNING: Geomagnetic K>= 7	10/1541 - 11/1800
11 Oct 1240	ALERT: Geomagnetic K = 5	
11 Oct 1328	ALERT: Geomagnetic K = 6	
11 Oct 1500	ALERT: Geomagnetic K = 7	
11 Oct 1645	EXTENDED WARNING: Geomagnetic K = 4	10/1350 - 12/1200
11 Oct 1649	EXTENDED WARNING: Geomagnetic K = 5	10/1506 - 12/0600
11 Oct 1650	EXTENDED WARNING: Geomagnetic K = 6	10/1506 - 11/2359
11 Oct 1714	WATCH: Geomagnetic Storm Category G3 predicted	
12 Oct 1034	EXTENDED WARNING: Geomagnetic K = 4	10/1350 - 12/2359
12 Oct 1036	EXTENDED WARNING: Geomagnetic K = 5	10/1506 - 12/2359
12 Oct 1051	ALERT: Geomagnetic K = 5	
12 Oct 2045	EXTENDED WARNING: Geomagnetic K = 4	10/1350 - 13/0300
13 Oct 2042	WATCH: Geomagnetic Storm Category G1 predicted	

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
14 Oct	200	10	3	28 Oct	235	5	2
15	200	12	3	29	245	5	2
16	200	25	5	30	260	5	2
17	205	8	3	31	245	5	2
18	205	5	2	01 Nov	235	5	2
19	210	5	2	02	230	5	2
20	210	5	2	03	230	5	2
21	210	5	2	04	225	5	2
22	215	15	4	05	220	5	2
23	215	10	3	06	215	5	2
24	220	5	2	07	215	5	2
25	220	5	2	08	215	5	2
26	220	12	4	09	210	10	3
27	225	8	3				

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 Oct	1803	1838	1902	M1.3	0.041	SF	S20W64	3842	100			
07 Oct	1902	1913	1931	X2.1	0.250	2B	S19W63	3842	120	640	2	1
07 Oct	2003	2059	2127	X1.0	0.440				1600			
08 Oct	0843	0851	0857	M1.2	0.008	SF	S12W65	3842				
09 Oct	0125	0156	0243	X1.8	0.005			3848		2700	3	2
09 Oct	0541	0546	0602	M1.6	0.020			3849	130			
09 Oct	1544	1547	1553	X1.4	0.056	1N	S12W87	3842	5800	2300		1
09 Oct	2259	2312	2321	M7.7	0.052			3842	180	140		
10 Oct	1147	1201	1210	M1.3	0.005							
10 Oct	1210	1219	1223	M1.1	0.010			3842	900			
10 Oct	1651	1700	1712	M1.0	0.010			3842				
10 Oct	2154	2230	2310	M3.0	0.098	SF	S24W40	3842	560			
11 Oct	1548	1604	1607	M1.4	0.014			3854				
11 Oct	1607	1633	1646	M2.1	0.046	SF	S09E23	3854	270			

Flare List

	Time			Optical			
Date	Begin	Max	End	X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
07 Oct	0526	0532	0538	C5.9	SF	S19W58	3842
07 Oct	0555	0600	0607		SF	S11E01	3851
07 Oct	0607	0609	0614		SF	S17W56	3842
07 Oct	0733	0734	0737		SF	N18E12	3848
07 Oct	0904	0909	0931		SF	S17W56	3842
07 Oct	1021	1028	1036	C6.6	SF	N11E12	3848
07 Oct	1029	1031	1050		SF	S07E44	3849
07 Oct	1053	1101	1116		SF	S18W52	3842
07 Oct	1803	1838	1902	M1.3	SF	S20W64	3842
07 Oct	1821	1821	1838		SF	S15W72	3839
07 Oct	1827	2006	2156		1F	S19W79	3844
07 Oct	1902	1913	1931	X2.1	2B	S19W63	3842
07 Oct	2003	2059	2127	X1.0			
07 Oct	2209	2212	2218		SF	S16W58	3842
08 Oct	B0743	U0744	A0748		SF	S15W66	3842
08 Oct	B0818	U0818	A0841		SF	S07E27	3849
08 Oct	0843	0851	0857	M1.2	SF	S12W65	3842

Flare List

Date	Time			Optical			
	Begin	Max	End	X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
08 Oct	0907	0908	0911		SF	S12W66	3842
08 Oct	1048	1050	1053		SF	S12W66	3842
08 Oct	1104	1104	1110		SF	S11W66	3842
08 Oct	1145	1153	1203	C5.4			3844
08 Oct	B1338	U1338	A1341		SF	S10W18	3851
08 Oct	1744	1750	1759	C5.8			3844
08 Oct	1858	1908	1914	C4.1			3844
08 Oct	2017	2029	2046	C8.0	1N	S08E15	3849
08 Oct	2320	2320	2325		SF	S08E15	3849
09 Oct	0125	0156	0243	X1.8			3848
09 Oct	0541	0546	0602	M1.6			3849
09 Oct	B0612	U0612	A0735		1F	N11W10	3848
09 Oct	0949	U0955	1004	C6.3	SF	S11W83	3842
09 Oct	1050	1056	1102	C6.1			3842
09 Oct	1524	1604	1645		SF	N11W16	3848
09 Oct	1544	1545	1559	X1.4	1N	S12W87	3842
09 Oct	1642	1642	1648		SF	S07E44	3852
09 Oct	2006	2014	2023	C7.5	SF	S19W86	3842
09 Oct	2259	2312	2321	M7.7			3842
10 Oct	0555	0558	0610		SF	S04E47	
10 Oct	0830	0835	0841	C7.3			
10 Oct	1147	1201	1210	M1.3			
10 Oct	1210	1219	1223	M1.1			3842
10 Oct	1432	1440	1447	C7.5			3842
10 Oct	1509	1515	1520	C5.6			3842
10 Oct	1651	1700	1712	M1.0			3842
10 Oct	1934	1938	1946		SF	S03W14	3849
10 Oct	1934	1939	1946		SF	S05E39	3854
10 Oct	2059	2150	2154	C7.5			3842
10 Oct	2154	2230	2310	M3.0	SF	S24W40	3842
11 Oct	0321	0332	0347	C4.0			3842
11 Oct	1011	1019	1025	C3.9			3849
11 Oct	1249	1254	1259	C2.8	SF	S04W24	3849
11 Oct	1353	1401	1410	C3.7	SF	S09E22	3852
11 Oct	1431	1437	1442	C2.9			
11 Oct	1548	1604	1607	M1.4			3854
11 Oct	1607	1633	1646	M2.1	SF	S09E23	3854
11 Oct	2202	2208	2218		SF	S11W24	3849

Flare List

Date	Time			Optical			
	Begin	Max	End	X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
11 Oct	2244	2320	2334	C9.7			3842
12 Oct	0325	0331	0335	C5.3			3848
12 Oct	0450	0456	0501	C5.7	SF	N10W52	3848
12 Oct	0710	U0731	A0739	C4.5	SF	N11W10	3848
12 Oct	B0818	U0818	A0837		SF	N11W10	3848
12 Oct	B1015	U1017	A1022		SF	S07E17	3854
12 Oct	B1030	U1047	A1104		SF	S09E11	3852
12 Oct	B1123	U1123	A1158		SF	N18W53	3848
12 Oct	1310	1315	1321	C3.3	SF	S09E10	3852
12 Oct	1938	2005	2020	C5.7			3850
13 Oct	0002	0003	0004		SF	S07E07	3852
13 Oct	0326	0333	0341	C3.0			3849
13 Oct	0641	0657	0710	C5.7	SF	N18W63	3848
13 Oct	0730	0731	0735		SF	S06E05	3854
13 Oct	0925	0925	0938		SF	S06E05	3854
13 Oct	1504	1516	1523	C2.8			3849

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 3839												
26 Sep	S14E73	189	20	2	Hsx	1	A	3	1			1			
27 Sep	S14E63	186	170	17	Fai	7	B	6			12				
28 Sep	S14E48	187	50	4	Cso	2	B	1			1				
29 Sep	S15E34	189	30	3	Cso	3	B								
30 Sep	S15E20	190	60	2	Hsx	1	A				1				
01 Oct	S14E06	190	60	2	Hsx	1	A	1			4				
02 Oct	S15W08	191	60	3	Cso	2	B								
03 Oct	S14W22	192	60	2	Hsx	1	A								
04 Oct	S13W35	192	40	2	Hsx	1	A								
05 Oct	S13W49	193	50	2	Hsx	1	A								
06 Oct	S15W63	193	20	2	Hsx	1	A								
07 Oct	S12W77	194	20	1	Hsx	1	A				1				
08 Oct	S11W93	197	20	1	Hsx	1	A								
								11	1	0	19	1	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 190

			Region 3841												
28 Sep	N14E55	191	40	3	Cao	5	B								
29 Sep	N14E32	191	30	4	Cri	5	B								
30 Sep	N12E20	190	50	5	Cao	7	B	1			4				
01 Oct	N13E04	192	120	6	Dai	16	B	1			1				
02 Oct	N13W08	191	220	7	Dai	17	BD	5	1		10				
03 Oct	N13W22	192	200	9	Dai	25	BD	1	2		7				
04 Oct	N13W36	193	200	9	Dai	11	BG		1		1				
05 Oct	N13W50	194	50	9	Dai	10	BG								
06 Oct	N12W65	195	30	9	Dri	6	B								
07 Oct	N14W77	194	10	3	Bxo	4	B								
08 Oct	N14W91	195	10	3	Bxo	3	B								
								8	4	0	23	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 192

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 3842												
28 Sep	S14E57	177	220	9	Dai	14	BG								
29 Sep	S15E45	178	230	7	Dai	15	BGD	1	2		1	1			
30 Sep	S15E31	179	220	11	Eai	16	BGD	1	1		5		1		
01 Oct	S15E18	178	300	11	Ekc	24	BGD	3	1	1	7		1		
02 Oct	S15E06	177	380	11	Ekc	27	BGD	2	4		8	1	1		
03 Oct	S15W08	178	530	12	Ekc	35	BGD		3	1	7				
04 Oct	S15W21	178	1150	13	Ekc	28	BGD	1	1		7	2			
05 Oct	S14W35	179	1040	11	Ekc	29	BGD	2	5		7				
06 Oct	S16W50	180	460	12	Eki	23	BGD		4		2				
07 Oct	S15W63	180	730	11	Eki	10	BG	1	1	1	6		1		
08 Oct	S13W76	180	630	11	Eki	9	BG		1		5				
09 Oct	S13W90	181	630	11	Eki	9	BG	3	1	1	2	1			
								14	24	4	57	5	4	0	0

Crossed West Limb.
Absolute heliographic longitude: 177

			Region 3843												
29 Sep	S07E15	207	60	4	Cao	8	B								
30 Sep	S08E01	209	40	5	Cai	8	B	1			3				
01 Oct	S08W11	207	110	7	Dai	12	B	2	1		5	1			
02 Oct	S09W25	208	180	7	Dai	17	BG				1	1			
03 Oct	S09W39	209	250	11	Ehi	19	BD		1		1		1		
04 Oct	S09W55	211	290	11	Eko	9	BG				2				
05 Oct	S09W68	212	130	8	Dso	7	BG								
06 Oct	S10W83	213	120	9	Dso	3	BG								
								3	2	0	12	2	1	0	0

Crossed West Limb.
Absolute heliographic longitude: 209

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 3844												
30 Sep	S15E09	199	10	3	Bxo	3	B								
01 Oct	S15W02	198	70	6	Dso	6	B	1			1				
02 Oct	S15W16	199	160	6	Dai	11	BD	1			5				
03 Oct	S15W30	200	350	10	Dki	25	BGD		2		10				
04 Oct	S15W43	200	930	11	Ekc	19	BGD		1		2				
05 Oct	S15W57	201	840	11	Ekc	17	BG	3			5	1			
06 Oct	S16W72	202	600	13	Eki	10	BG	3	1		3				
07 Oct	S13W84	201	300	4	Dko	4	B					1			
08 Oct	S15W96	200	300	4	Dko	4	B	3							
								11	4	0	26	2	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 198

			Region 3847												
01 Oct	S28E59	137	30	1	Hrx	1	A								
02 Oct	S28E45	138	20	1	Hrx	1	A								
03 Oct	S28E31	139	20	1	Hrx	1	A								
04 Oct	S27E19	138	10	1	Axx	1	A								
05 Oct	S27E05	139	10	1	Axx	1	A								
06 Oct	S27W10	140	plage												
07 Oct	S27W24	141	plage												
08 Oct	S27W38	142	plage												
09 Oct	S27W52	143	plage												
10 Oct	S27W66	144	plage												
11 Oct	S27W80	144	plage												
								0	0	0	0	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 139

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 3848												
02 Oct	N14E70	113	280	6	Dhc	5	BD		1		4				
03 Oct	N13E56	114	330	7	Dkc	15	BG	1			3				
04 Oct	N13E42	115	700	6	Dkc	12	BGD				4				
05 Oct	N13E28	116	980	7	Dkc	14	BD				1				
06 Oct	N13E14	116	900	6	Dki	16	BD				1				
07 Oct	N13E01	116	770	8	Dki	28	BGD	1			2				
08 Oct	N12W11	115	600	6	Dki	14	BGD								
09 Oct	N12W25	116	600	6	Dki	14	BGD			1	1	1			
10 Oct	N13W39	117	600	6	Dki	20	BGD								
11 Oct	N13W53	117	600	7	Dko	14	BG								
12 Oct	N14W67	118	370	6	Dko	4	BG	3			4				
13 Oct	N13W79	117	350	8	Dhi	4	BG	1			1				
								6	1	1	22	1	0	0	0

Still on Disk.
Absolute heliographic longitude: 116

			Region 3849												
04 Oct	S06E64	93	190	8	Dao	8	B								
05 Oct	S06E51	93	320	8	Dac	14	BG								
06 Oct	S06E37	93	350	9	Dki	22	BG								
07 Oct	S07E23	94	250	8	Dki	20	BG				1				
08 Oct	S07E13	91	310	8	Dki	24	BG	1			2	1			
09 Oct	S07W02	93	240	11	Eai	18	BG		1						
10 Oct	S06W16	94	240	9	Dai	25	BG				1				
11 Oct	S07W30	94	200	9	Dai	19	BG	2			2				
12 Oct	S07W44	95	200	9	Dai	19	BG								
13 Oct	S06W56	94	240	5	Dai	5	B	2							
								5	1	0	6	1	0	0	0

Still on Disk.
Absolute heliographic longitude: 93

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 3850												
06 Oct	S03E33	97	160	5	Dai	6	BG								
07 Oct	S10E20	97	130	4	Cao	3	B								
08 Oct	S10E08	96	150	6	Cao	11	B								
09 Oct	S10W06	95	100	4	Cao	8	B								
10 Oct	S08W19	97	100	3	Cao	4	B								
11 Oct	S09W31	95	110	5	Hax	3	A								
12 Oct	S09W45	96	110	5	Hsx	3	A	1							
13 Oct	S08W57	95	90	4	Hsx	1	A								
								1	0	0	0	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 95

			Region 3851												
07 Oct	S09W11	128	10	1	Axx	1	A				1				
08 Oct	S08W27	131	10	1	Axx	1	A				1				
09 Oct	S08W41	132	plage												
10 Oct	S08W55	133	plage												
11 Oct	S08W69	133	plage												
12 Oct	S08W83	134	plage												
								0	0	0	2	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 128

			Region 3852												
07 Oct	S12E67	50	250	10	Dho	3	B								
08 Oct	S14E54	50	350	10	Dko	8	B								
09 Oct	S14E40	51	350	10	Dki	8	BG				1				
10 Oct	S10E26	52	360	11	Eki	20	BG								
11 Oct	S09E12	52	320	11	Ehi	16	BG	1			1				
12 Oct	S11W02	53	260	10	Dki	8	BD	1			2				
13 Oct	S10W15	53	300	10	Dki	8	BG				1				
								2	0	0	5	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 53

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 3853												
10 Oct	N20E37	41	10	1	Hrx	1	A								
11 Oct	N22E23	41	5	1	Axx	1	A								
12 Oct	N22E09	42	plage												
13 Oct	N22W05	43	plage												
								0	0	0	0	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 43

			Region 3854												
10 Oct	S05E34	44	150	8	Dai	20	BG				1				
11 Oct	S04E20	44	210	8	Dai	17	BG		2		1				
12 Oct	S05E07	45	140	10	Dai	11	BG				1				
13 Oct	S04W05	43	260	11	Eki	15	BG				2				
								0	2	0	5	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 43

			Region 3855												
13 Oct	N14W33	71	20	3	Cso	4	B								
								0	0	0	0	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 71

			Region 3856												
13 Oct	N09E37	1	10	3	Bxo	1	B								
								0	0	0	0	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 1

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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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