

Solar activity was at very low to (R1-R2 - Minor-Moderate) levels throughout the summary period. Region 4545 (N17, L=222, class/area Dso/070 on 08 Oct) produced an impulsive M1.0 (R1 - Minor) flare at 05/1848 UTC. Region 4547 (N15, L=274, class/area Cri/030 on 06 Oct) produced an M1.3 flare at 09/1409 UTC as the region exited the west limb. The majority of the activity was observed from Region 4549 (N10, L=216, class/area Eki/260 on 09 Oct). During the period, the region produced 39 C-class, 3 R1-Minor, and 2 R2-Moderate flares. It produced an M6.7/2b flare at 08/1548 UTC with an associated Type II Sweep with an estimated velocity of 4,125 km/s and a Type IV Sweep. At 10/1510 UTC, this region produced an M6.4/1n flare with an associated Type II Sweep with an estimated velocity of 929 km/s and a 240 sfu Tenflare. The largest region on the disk, Region 4551 (S15, L=102, class/area Eko/400 on 11 Oct) produced 3 C-class flares. In total, 50 C-class and 7 M-class events were observed.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit reached high levels on 05-08 Oct and 10 Oct with a peak of 11,300 pfu observed at 08/1250 UTC. Normal to moderate levels were observed on 09 and 11 Oct.

Geomagnetic field activity ranged from quiet to G3-Strong levels during the period. Quiet to G1-Minor levels were observed on 05 Oct and quiet to unsettled levels were observed on 06 Oct, all due to influences from a positive polarity CH HSS. Mostly quiet levels were observed on 07-08 Oct. Activity increased on 09 Oct when unsettled to active levels were observed due to weak influence from a 06 Oct CME. Activity levels increased further on 10 Oct when unsettled to G3-Strong levels were observed due to continued influence from CME activity observed on 06 and 07 Oct. During this level of high activity, total magnetic field strength increased to a peak of 45 nT at about 10/1500 UTC and Bz observed some southward deflections to 30 nT at about 10/1630 UTC. Solar wind speeds rapidly increased from about 380 km/s at 10/1500 UTC to a peak of about 890 km/s at 10/1755 UTC. Associated with this CME activity was some influence from a negative polarity CH HSS.

Space Weather Outlook **12 October - 07 November 2026**

Solar activity is likely to continue at very low to low levels with isolated R1-Minor levels possible 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 high levels on 14-15 Oct, 23-28 Oct, and 01-04 Nov, all due to anticipated influence from multiple, recurrent CH HSSs.



Geomagnetic field activity is expected to be reach G1-Minor geomagnetic storm levels on 13 and 31 Oct , and 01 Nov. Active levels are likely on 12, 22, and 23 Oct. Unsettled levels are likely on 14-15, 21, and 24 Oct and 02 and 06-07 Nov. All increases in goemagnetic activity are associated with anticipated influence from multiple, recurrent, coronal hole HSSs. 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
05 October	100	58	110	B2.2	5	1	0	3	0	0	0	0
06 October	113	77	180	B8.4	11	2	0	4	1	0	0	0
07 October	114	78	270	B6.7	8	0	0	6	0	0	0	0
08 October	119	69	370	B9.3	5	1	0	7	0	1	0	0
09 October	121	93	550	B8.2	14	1	0	1	0	0	0	0
10 October	126	99	690	B9.0	7	2	0	4	2	0	0	0
11 October	122	94	670	B5.8	4	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	
05 October	7.6e+05	2.4e+04	5.0e+07	
06 October	8.5e+05	2.7e+04	3.8e+08	
07 October	4.2e+05	2.7e+04	4.8e+08	
08 October	6.6e+05	2.4e+04	4.1e+08	
09 October	4.4e+05	3.6e+04	2.1e+07	
10 October	4.7e+06	2.4e+04	2.2e+07	
11 October	5.5e+06	2.1e+04	1.3e+07	

Daily Geomagnetic Data

Date	Middle Latitude Fredericksburg		High Latitude College		Estimated Planetary	
	A	K-indices	A	K-indices	A	K-indices
05 October	19	3-5-2-3-2-3-3-4	28	4-4-3-5-4-5-3-3	24	4-5-2-3-3-4-4-4
06 October	8	2-3-2-2-2-2-2-2	27	3-3-5-6-5-2-1-1	11	3-3-2-3-3-2-2-2
07 October	4	1-1-1-0-2-2-2-1	3	0-1-2-1-1-1-1-1	6	1-1-1-1-1-3-2-1
08 October	5	1-1-1-2-2-1-2-2	12	1-1-2-4-4-4-1-0	6	1-2-1-2-2-1-2-1
09 October	10	3-2-2-4-2-0-2-2	19	1-2-4-6-4-1-1-1	11	3-3-2-4-2-1-1-2
10 October	27	2-2-3-3-3-6-5-4	82	2-3-5-4-5-8-8-4	46	2-3-3-2-3-7-7-5
11 October	10	4-3-2-2-2-2-1-1	16	3-3-2-4-4-4-1-1	27	4-4-3-3-2-2-2-2



Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
05 Oct 0156	WARNING: Geomagnetic K = 4	05/0155 - 2359
05 Oct 0350	WARNING: Geomagnetic K = 5	05/0350 - 1500
05 Oct 0352	ALERT: Geomagnetic K = 5	05/0352
05 Oct 1847	ALERT: Electron 2MeV Integral Flux $\geq$ 1000pfu	05/1830
05 Oct 2111	EXTENDED WARNING: Geomagnetic K = 4	05/0155 - 06/0600
06 Oct 0343	EXTENDED WARNING: Geomagnetic K = 4	05/0155 - 06/1200
06 Oct 0507	CONTINUED ALERT: Electron 2MeV Integral Flux $\geq$ 1000pfu	05/1830
06 Oct 0615	ALERT: Type II Radio Emission	06/0559
06 Oct 1633	WATCH: Geomagnetic Storm Category G2 predicted	
07 Oct 0504	CONTINUED ALERT: Electron 2MeV Integral Flux $\geq$ 1000pfu	05/1830
08 Oct 0501	CONTINUED ALERT: Electron 2MeV Integral Flux $\geq$ 1000pfu	05/1830
08 Oct 1547	ALERT: X-ray Flux exceeded M5	08/1546
08 Oct 1604	SUMMARY: X-ray Event exceeded M5	08/1529 - 1558
08 Oct 1643	ALERT: Type II Radio Emission	08/1642
08 Oct 1644	ALERT: Type IV Radio Emission	08/1612
08 Oct 1646	ALERT: Type II Radio Emission	08/1542
09 Oct 0129	WARNING: Geomagnetic K = 4	09/0128 - 10/0600
09 Oct 0812	WATCH: Geomagnetic Storm Category G2 predicted	
09 Oct 1001	ALERT: Geomagnetic K = 4	09/1001
09 Oct 1636	WATCH: Geomagnetic Storm Category G2 predicted	
10 Oct 0538	EXTENDED WARNING: Geomagnetic K = 4	09/0128 - 10/1500
10 Oct 1440	EXTENDED WARNING: Geomagnetic K = 4	09/0128 - 11/0600
10 Oct 1442	WARNING: Geomagnetic K = 5	10/1440 - 11/0300
10 Oct 1445	WARNING: Geomagnetic Sudden Impulse expected	10/1510 - 1550
10 Oct 1453	ALERT: Electron 2MeV Integral Flux $\geq$ 1000pfu	10/1453
10 Oct 1504	WARNING: Geomagnetic K = 6	10/1503 - 2359
10 Oct 1509	ALERT: X-ray Flux exceeded M5	10/1507

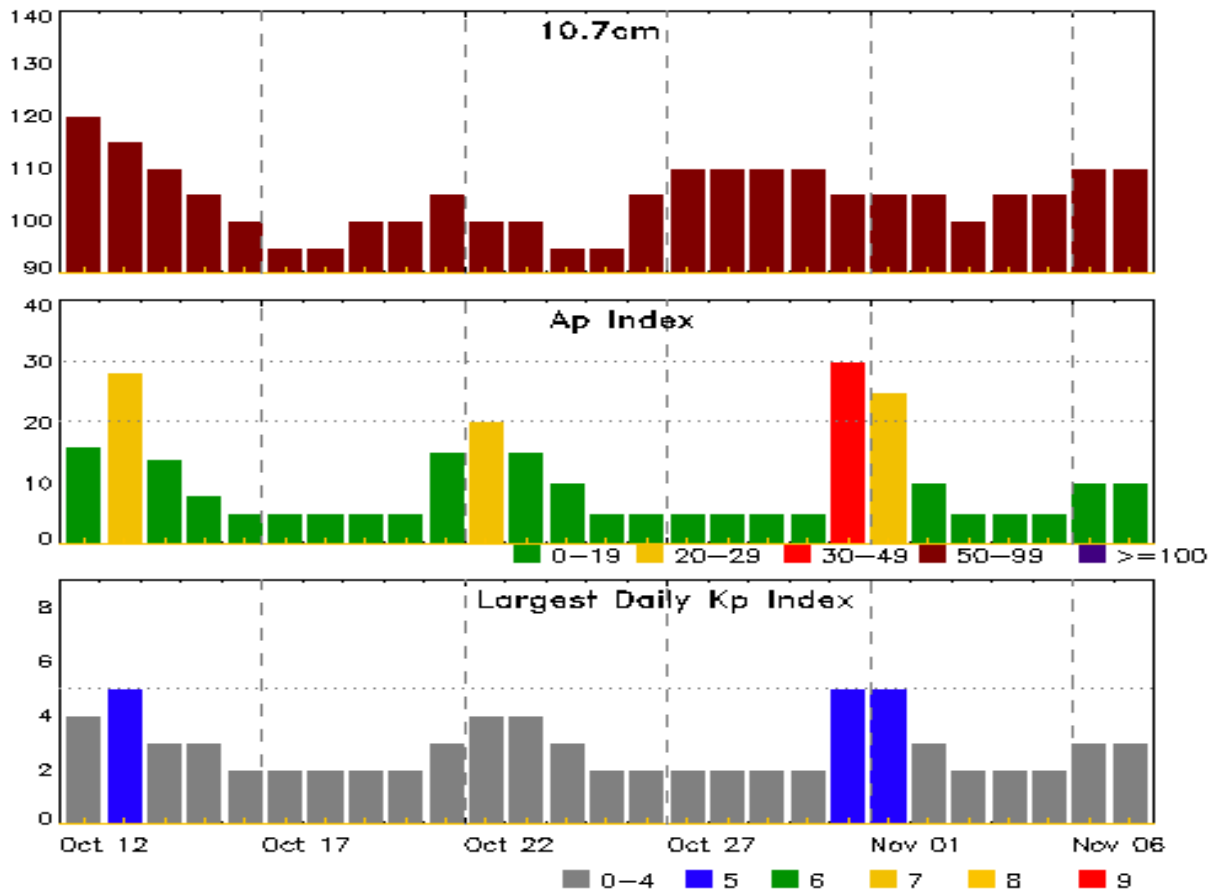


Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
10 Oct 1519	SUMMARY: 10cm Radio Burst	10/1505 - 1509
10 Oct 1524	SUMMARY: Geomagnetic Sudden Impulse	10/1516
10 Oct 1526	ALERT: Type II Radio Emission	10/1515
10 Oct 1527	SUMMARY: X-ray Event exceeded M5	10/1458 - 1520
10 Oct 1535	ALERT: Geomagnetic K = 5	10/1535
10 Oct 1718	ALERT: Geomagnetic K = 6	10/1717
10 Oct 1742	WARNING: Geomagnetic K $\geq$ 7	10/1742 - 2359
10 Oct 1758	ALERT: Geomagnetic K = 7	10/1758
10 Oct 1818	ALERT: Geomagnetic K = 5	10/1818
10 Oct 1837	ALERT: Geomagnetic K = 6	10/1837
10 Oct 1927	ALERT: Geomagnetic K = 7	10/1926
10 Oct 2145	ALERT: Geomagnetic K = 5	10/2145
11 Oct 0457	EXTENDED WARNING: Geomagnetic K = 4	09/0128 - 11/1200
11 Oct 1702	CANCELLATION: Geomagnetic Storm Category G2 predicted	
11 Oct 1911	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
12 Oct	120	16	4	26 Oct	105	5	2
13	115	28	5	27	110	5	2
14	110	14	3	28	110	5	2
15	105	8	3	29	110	5	2
16	100	5	2	30	110	5	2
17	95	5	2	31	105	30	5
18	95	5	2	01 Nov	105	25	5
19	100	5	2	02	105	10	3
20	100	5	2	03	100	5	2
21	105	15	3	04	105	5	2
22	100	20	4	05	105	5	2
23	100	15	4	06	110	10	3
24	95	10	3	07	110	10	3
25	95	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		Intensity	
									245	2695	II	IV
05 Oct	1836	1848	1857	M1.0	0.009			4545				
06 Oct	0538	0610	0651	M1.4	0.043	1F	N11E10	4549	100		3	
06 Oct	0747	0805	0813	M1.8	0.019	SF	N09E07	4549	210			
08 Oct	1529	1548	1558	M6.7	0.054	2B	N12W20	4549	930		3	
09 Oct	1355	1409	1417	M1.3	0.011			4547				
10 Oct	1356	1412	1427	M1.2	0.015	1N	N11W46	4549				
10 Oct	1458	1510	1520	M6.4	0.047	1N	N08W56	4549	1500	240	1	

Flare List

Date	Time			X-ray Class	Imp/ Brtns	Optical		Rgn #
	Begin	Max	End			Location Lat CMD		
05 Oct	0031	0044	0052	B3.6				
05 Oct	0052	0058	0101	B3.3				
05 Oct	0537	0547	0550	B7.9				
05 Oct	0545	0550	0554	B9.6	SF	N18E18		4545
05 Oct	0606	0614	0619	C1.0				4545
05 Oct	0838	0848	0900	B3.8				
05 Oct	0900	0907	0910	B4.1				
05 Oct	1134	1148	1155	C1.5	SF	N16W38		4547
05 Oct	1155	1200	1202	C1.3	SF	N16W42		4547
05 Oct	1403	1412	1419	B5.3				4547
05 Oct	1723	1731	1734	B7.7				4549
05 Oct	1747	1755	1804	B8.4				4549
05 Oct	1836	1848	1857	M1.0				4545
05 Oct	2003	2014	2022	B5.8				4549
05 Oct	2022	2032	2037	B5.6				4549
05 Oct	2056	2105	2111	B6.6				4549
05 Oct	2227	2234	2242	C1.3				4549
05 Oct	2242	2247	2250	C1.2				
06 Oct	0143	0150	0153	B8.8				4549
06 Oct	0236	0247	0252	C5.3	SF	N11E14		4549
06 Oct	0325	0335	0340	C1.1				4549
06 Oct	0340	0351	0357	C1.1				4549
06 Oct	0538	0610	0651	M1.4	1F	N11E10		4549
06 Oct	0718	0725	0731	C5.6				4549



Flare List

Date	Time			Optical			
	Begin	Max	End	X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
06 Oct	0747	0805	0813	M1.8	SF	N09E07	4549
06 Oct	1324	1334	1342	C1.5	SN	N10E04	4549
06 Oct	1459	1506	1510	C3.6			4549
06 Oct	1917	1921	1925	C2.0			4549
06 Oct	1939	1943	1948	C1.7	SF	N10E04	4549
06 Oct	1948	1952	1954	C2.0			4549
06 Oct	2029	2033	2038	C1.8			4549
06 Oct	2123	2136	2140	C2.3			4549
07 Oct	0514	0520	0525	C1.3			
07 Oct	0526	0534	0543	C1.6			4549
07 Oct	0847	0856	0907	C1.4			4549
07 Oct	0907	0912	0916	C1.3			4549
07 Oct	1224	1239	1249	C1.1			4549
07 Oct	1249	1317	1344	C7.9			4549
07 Oct	B1347	1339	1405		SF	N11W07	4549
07 Oct	1903	1910	1917		SF	N09W14	4549
07 Oct	1923	1940	1944		SF	N09W14	4549
07 Oct	2107	2110	2116		SF	N09W13	4549
07 Oct	2136	2136	2142		SF	N09W15	4549
07 Oct	2239	2246	2250	C1.1	SF	N09W15	4549
07 Oct	2257	2305	2309	C1.0			4549
08 Oct	0045	0059	0111	C1.6			4549
08 Oct	1444	1452	1456	C1.4			
08 Oct	1529	1548	1558	M6.7	2B	N12W20	4549
08 Oct	1810	1836	1849		SF	N08W26	4549
08 Oct	1851	1851	1854		SF	N08W25	4549
08 Oct	1934	1935	1938		SF	N08W27	4549
08 Oct	1959	1959	2001		SF	N08W28	4549
08 Oct	2002	2027	2100	C2.1	SF	N08W28	4549
08 Oct	2113	2117	2125	C1.5	SF	N07W26	4549
08 Oct	2233	2244	2253	C3.5	SF	N07W26	4549
09 Oct	0428	0439	0450	C1.6			4549
09 Oct	0527	0539	0550	C4.0			4549
09 Oct	0639	0648	0653	C2.9			4549
09 Oct	0818	0827	0830	C2.2			4549
09 Oct	0830	0840	0845	C3.9			4549
09 Oct	0953	1001	1008	C1.3			4549
09 Oct	1124	1131	1139	C1.3			4549



Flare List

Date	Time			Optical			
	Begin	Max	End	X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
09 Oct	1215	1217	1220	C1.5			4549
09 Oct	1233	1239	1247	C1.8			4549
09 Oct	1303	1312	1315	C4.3			4549
09 Oct	1355	1409	1417	M1.3			4547
09 Oct	1557	1602	1607	C1.4			4547
09 Oct	2152	2158	2200	C1.4			4551
09 Oct	2247	2252	2256	C1.2	SF	N09W43	4549
09 Oct	2340	2351	0015	C3.1	SF	N09W48	4549
10 Oct	0412	0420	0428	C1.5			4549
10 Oct	0435	0438	0440	C7.9	SF	N08W40	4549
10 Oct	0742	0813	0926	C4.2			4547
10 Oct	0926	0933	0939	C1.7			4549
10 Oct	1318	1325	1332	C2.7			4549
10 Oct	B1335	1410	1443	M1.2	1N	N11W46	4549
10 Oct	1458	1510	1520	M6.4	1N	N08W56	4549
10 Oct	1745	1752	1800	C4.8			4551
10 Oct	2003	2018	2029	C2.1	SF	N17W58	4545
10 Oct	2040	2041	A2053		SF	N10W52	4549
11 Oct	0246	0253	0256	C1.8			4551
11 Oct	0748	0748	0752		SF	S12E50	4551
11 Oct	0753	0753	0756		SF	S12E59	4551
11 Oct	1026	1038	1045	C1.1			4553
11 Oct	1456	1503	1509	B9.8	SF	S13E50	4551
11 Oct	1651	1701	1712	C1.2			4545
11 Oct	1712	1720	1725	C1.1			4545

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 4544

29 Sep	S09W15	321	40	4	Cso	2	B								
30 Sep	S09W29	323	30	4	Dro	3	B								
01 Oct	S09W43	324	10	1	Axx	1	A								
02 Oct	S09W57	325	plage												
03 Oct	S09W71	326	plage												
04 Oct	S09W85	327	plage												
								0	0	0	0	0	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 321

Region 4545

01 Oct	N20E61	220	10	4	Bxo	3	B	1							
02 Oct	N20E46	222	20	6	Cro	2	B								
03 Oct	N20E33	222	20	6	Dao	5	B								
04 Oct	N20E20	221	20	8	Cro	6	B								
05 Oct	N20E07	221	20	3	Dro	6	BG	1	1		1				
06 Oct	N19W06	221	50	4	Dao	12	B								
07 Oct	N18W19	221	50	6	Dao	8	B								
08 Oct	N17W33	222	70	8	Dso	9	B								
09 Oct	N18W46	222	40	8	Dao	8	B								
10 Oct	N17W60	222	20	6	Cao	5	B	1			1				
11 Oct	N16W73	222	20	6	Bxo	8	B	2							
								5	1	0	2	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 221

Region 4546

02 Oct	S19W45	313	20	2	Cso	4	B								
03 Oct	S18W59	314	10	2	Cro	3	B								
04 Oct	S19W74	315	10	1	Hrx	1	A				1				
05 Oct	S19W88	316	plage												
								0	0	0	1	0	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 313



Region Summary - continued

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 4547															
03 Oct	N15W20	275	20	3	Bxo	4	B					1			
04 Oct	N15W33	274	20	6	Cro	7	B								
05 Oct	N15W46	274	10	5	Bxi	7	B	2				2			
06 Oct	N15W59	274	30	6	Cri	8	B								
07 Oct	N15W73	275	10	1	Axx	1	A								
08 Oct	N15W87	276	plage												
								2	0	0		3	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 275

Region 4548															
03 Oct	S11E64	191	30	1	Hsx	1	A								
04 Oct	S11E51	190	60	2	Hsx	1	A								
05 Oct	S12E38	190	40	2	Hsx	1	A								
06 Oct	S12E25	190	40	1	Hsx	1	A								
07 Oct	S12E13	189	50	1	Hsx	1	A								
08 Oct	S13W01	190	40	2	Hsx	1	A								
09 Oct	S13W14	190	40	2	Hsx	1	A								
10 Oct	S13W26	188	40	2	Hsx	1	A								
11 Oct	S13W39	188	40	2	Hsx	1	A								
								0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 190

Region 4549															
05 Oct	N10E15	213	40	4	Dai	4	BGD	1							
06 Oct	N10E01	214	60	5	Dac	16	BGD	11	2		4	1			
07 Oct	N10W13	215	150	8	Dai	16	BGD	7			6				
08 Oct	N10W29	218	260	12	Eki	29	BGD	4	1		7		1		
09 Oct	N10W41	216	290	11	Eki	30	BGD	12			1				
10 Oct	N09W54	216	260	11	Eki	28	BGD	4	2		3	2			
11 Oct	N09W67	216	200	11	Eai	20	BD								
								39	5	0	21	3	1	0	0

Still on Disk.

Absolute heliographic longitude: 214



Region Summary - continued

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 4550

07 Oct	S15W22	224	10	3	Bxo	2	B								
08 Oct	S16W37	226	plage												
09 Oct	S16W51	227	plage												
10 Oct	S16W65	227	plage												
11 Oct	S16W79	228	plage												
								0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 224

Region 4551

09 Oct	S13E71	105	170	6	Dao	2	B	1							
10 Oct	S14E61	102	360	12	Eko	12	B	1							
11 Oct	S15E47	102	400	13	Eko	14	BG	1			3				
								3	0	0	3	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 102

Region 4552

09 Oct	N22W21	197	10	2	Cao	2	B								
10 Oct	N22W34	196	10	3	Bxo	3	B								
11 Oct	N23W45	194	plage												
								0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 197

Region 4553

11 Oct	N07E60	89	10	1	Axx	1	A	1							
								1	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 89



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

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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