

Solar activity was at low levels for 07-10 Sep and 12-13 Sep, and was at very low levels on 11 Sep. The largest flare of the period was a C5.8/Sf at 12/1720 UTC from Region 4521 (N09, L=266, class/area Hsx/90 on 06 Sep). This region was responsible for the majority of the C-flaring activity, producing 6 of the observed 15. The remainder were produced by Regions 4524 (N12, L=225, class/area Cao/100 on 06 Sep) and 4528 (S11, L=187, class/area Hsx/120 on 08 Sep).

There were 4 CMEs this period. 3 of these were due to filament eruptions. First was a filament eruption associated with a C3.4/1f at 09/0908 UTC from Region 4524, whose slow CME first became visible in STEREO coronagraph imagery at ~09/1623 UTC and in LASCO C3 at ~09/2106 UTC. Modeling indicated a possible glancing blow on 14 Sep. Second, a filament centered around approximately S15W30 began erupting at ~10/0330 UTC, with an associated slow CME first becoming visible in LASCO C2 at ~10/0524 UTC and GOES CCOR1 at ~10/0730 UTC. Modeling indicated the majority of the material would likely pass ahead and below of Earth orbit, however there was the potential for this eruption also produce a very minor glancing blow on 14 Sep. Third was an 8 degree long filament at roughly disk center that began erupting at ~13/1900 UTC, producing a long duration C1.4 at 13/1945 UTC and an associated CME that first became visible in LASCO C2 at ~13/1948 UTC and SOLAR1 CCOR2 at ~13/2030 UTC. Modeling indicated a possible glancing blow on 17 Sep.

Lastly, a very slow CME first became visible in LASCO C2 at ~12/1612 UTC and in STEREO at ~12/1638 UTC. Despite triangulation with STEREO indicating a front-sided eruption, no clear source was found except for perhaps some faint coronal dimming in the SW quadrant in GOES/SUVI 195. Modeling indicated the material would pass below Earth orbit.

The greater than 10 MeV proton flux at geosynchronous orbit was slightly elevated on 07 Sep due to the continued recovery from the 05 Sep S1 event, but was at background levels for the majority of the reporting period.

The greater than 2 MeV electron flux at geosynchronous orbit was at normal-moderate levels on 07 Sep and at high levels on 08-13 Sep.

Geomagnetic activity reached active levels and a few isolated periods of G1 (Minor) storming conditions on 08 Sep due to positive polarity coronal hole high speed stream (CH HSS) influences, potentially with embedded effects from CMEs that left the Sun on either 04 Sep or 06 Sep. The remainder of the reporting period, 09-13 Sep, was at quiet to unsettled levels.

Space Weather Outlook

14 September - 10 October 2026

Solar activity is expected to be at low levels, with a slight chance for moderate to high levels



throughout the forecast period.

Not 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 Sep, 16-23 Sep, 27 Sep-03 Oct, and 05-10 Oct. Levels are expected to be at normal-moderate levels on 15 Sep, 24-16 Sep, and 04 Oct.

Geomagnetic field activity is expected to reach active to G1 storming levels on 14-17 Sep due to negative polarity CH HSS effects with the potential for CME influence from a CME that left the Sun on 09 Sep; 24-27 Sep due to positive polarity CH HSS influences; and unsettled to active levels on 05-08 Oct due to positive polarity CH HSS influences. Largely quiet levels are anticipated for all remaining dates in the forecast 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 September	110	103	600	B3.4	2	0	0	5	0	0	0	0
08 September	110	102	575	B3.0	6	0	0	5	0	0	0	0
09 September	109	107	535	B3.0	3	0	0	2	1	0	0	0
10 September	115	90	540	B3.3	2	0	0	4	0	0	0	0
11 September	110	88	440	B3.0	0	0	0	0	0	0	0	0
12 September	109	87	440	B2.7	1	0	0	4	0	0	0	0
13 September	114	77	420	B2.9	1	0	0	0	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 September	2.3e+06	3.2e+04	1.4e+07	
08 September	8.3e+05	2.2e+04	5.4e+07	
09 September	5.1e+05	2.0e+04	1.0e+08	
10 September	9.9e+04	2.0e+04	1.0e+08	
11 September	4.5e+05	2.1e+04	2.2e+08	
12 September	2.9e+05	2.0e+04	8.0e+07	
13 September	7.7e+04	2.0e+04	9.1e+07	

Daily Geomagnetic Data

Date	Middle Latitude Fredericksburg		High Latitude College		Estimated Planetary	
	A	K-indices	A	K-indices	A	K-indices
07 September	17	1-2-3-4-3-4-3-4	34	0-1-6-6-4-5-3-3	19	1-2-3-4-3-4-4-4
08 September	23	4-4-5-3-4-4-2-2	44	4-3-6-6-5-6-2-3	29	4-4-5-4-4-5-3-3
09 September	10	2-1-2-2-3-3-3-2	26	2-2-2-6-5-5-2-2	12	3-1-2-3-3-3-3-3
10 September	8	3-3-2-2-2-1-1-2	14	2-2-1-5-4-2-1-2	9	3-3-2-2-2-1-1-3
11 September	9	1-3-2-3-3-2-1-2	16	1-2-4-5-4-1-1-2	8	1-3-2-3-2-2-1-2
12 September	6	1-2-3-2-2-2-1-0	12	1-2-4-5-1-1-1-0	7	1-2-3-2-2-1-1-1
13 September	4	1-2-1-1-2-1-1-1	6	2-2-3-1-3-1-0-0	9	2-3-2-1-1-1-0-1

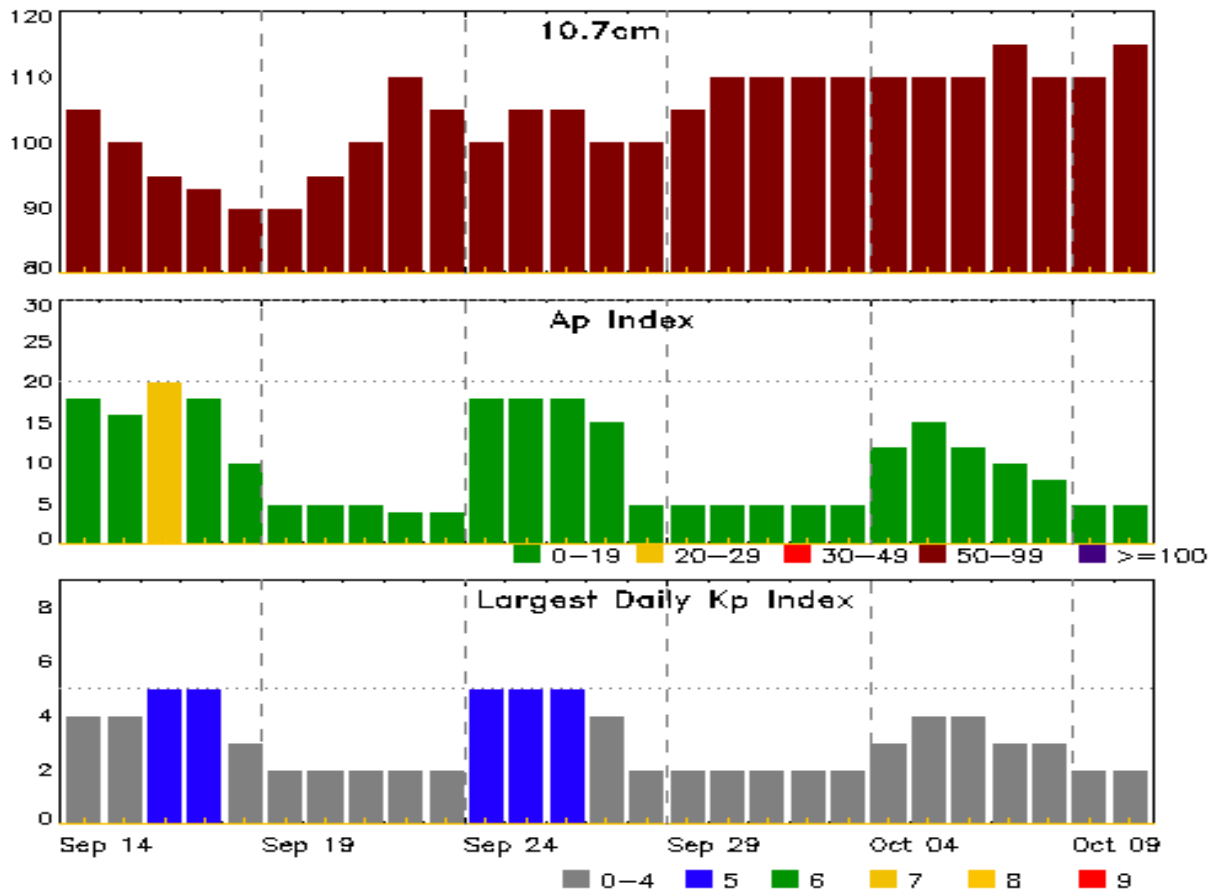


Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
07 Sep 0855	WARNING: Geomagnetic K = 4	07/0854 - 1800
07 Sep 1108	ALERT: Geomagnetic K = 4	07/1107
07 Sep 1413	EXTENDED WARNING: Geomagnetic K = 4	07/0854 - 08/0900
07 Sep 1635	WATCH: Geomagnetic Storm Category G1 predicted	
07 Sep 2001	WARNING: Geomagnetic K = 5	07/2000 - 08/0600
08 Sep 0545	EXTENDED WARNING: Geomagnetic K = 4	07/0854 - 08/2359
08 Sep 0546	EXTENDED WARNING: Geomagnetic K = 5	07/2000 - 08/1800
08 Sep 0734	ALERT: Geomagnetic K = 5	08/0730
08 Sep 1608	ALERT: Electron 2MeV Integral Flux $\geq$ 1000pfu	08/1550
08 Sep 1702	WATCH: Geomagnetic Storm Category G2 predicted	
08 Sep 1727	EXTENDED WARNING: Geomagnetic K = 5	07/2000 - 08/2359
08 Sep 1730	EXTENDED WARNING: Geomagnetic K = 4	07/0854 - 09/0900
08 Sep 1751	ALERT: Geomagnetic K = 5	08/1744
09 Sep 0535	CONTINUED ALERT: Electron 2MeV Integral Flux $\geq$ 1000pfu	08/1550
09 Sep 0538	CONTINUED ALERT: Electron 2MeV Integral Flux $\geq$ 1000pfu	08/1550
09 Sep 2101	CANCELLATION: Geomagnetic Storm Category G2 predicted	
10 Sep 1306	ALERT: Electron 2MeV Integral Flux $\geq$ 1000pfu	10/1304
11 Sep 0045	CONTINUED ALERT: Electron 2MeV Integral Flux $\geq$ 1000pfu	10/1304
11 Sep 0501	CONTINUED ALERT: Electron 2MeV Integral Flux $\geq$ 1000pfu	10/1304
12 Sep 0645	CONTINUED ALERT: Electron 2MeV Integral Flux $\geq$ 1000pfu	10/1304
13 Sep 0827	CONTINUED ALERT: Electron 2MeV Integral Flux $\geq$ 1000pfu	10/1304



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 Sep	105	18	4	28 Sep	100	5	2
15	100	16	4	29	105	5	2
16	95	20	5	30	110	5	2
17	93	18	5	01 Oct	110	5	2
18	90	10	3	02	110	5	2
19	90	5	2	03	110	5	2
20	95	5	2	04	110	12	3
21	100	5	2	05	110	15	4
22	110	4	2	06	110	12	4
23	105	4	2	07	115	10	3
24	100	18	5	08	110	8	3
25	105	18	5	09	110	5	2
26	105	18	5	10	115	5	2
27	100	15	4				



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

No Events Observed

Flare List

Date	Time			X-ray Class	Imp/ Brtns	Optical		Rgn #
	Begin	Max	End			Location Lat CMD		
07 Sep	0759	0806	0810	B7.9	SF	N10E23		4524
07 Sep	0810	0901	0924	C2.1	SF	N15E25		4524
07 Sep	0951	0953	1009		SF	N15E25		4524
07 Sep	1450	1459	1506	B7.8	SF	S08E36		
07 Sep	1927	1935	1942	C1.0	SF	S08E61		4528
08 Sep	1219	1224	1227	C2.4	SF	N11W33		4521
08 Sep	1526	1534	1546	B6.1				
08 Sep	1546	1551	1554	B6.2				
08 Sep	1735	1743	1747	C2.8				4521
08 Sep	1749	1749	1753		SF	N09W36		4521
08 Sep	2001	2007	2011	B6.4	SF	S13E51		4528
08 Sep	2015	2019	2023	B5.8	SF	S13E51		4528
08 Sep	2032	2043	2051	C1.2	SF	S13E50		4528
08 Sep	2139	2148	2156	C1.2				4521
08 Sep	2217	2224	2229	C2.6				4521
08 Sep	2322	2339	2350	C3.4				4528
09 Sep	0438	0446	0449	B5.0				4521
09 Sep	0553	0610	0625	C1.5	SF	S11E44		4528
09 Sep	0848	0908	0923	C3.4	1F	N14W02		4524
09 Sep	1023	1032	1037	C3.2	SF	N13W44		4521
10 Sep	0025	0051	0108	C1.4				4524
10 Sep	0738	0746	0752	B6.0	SF	N14W58		4521
10 Sep	1345	1350	1358	B5.6				4525
10 Sep	1653	1712	1739	C1.6	SF	N14W21		4524
10 Sep	2000	2007	2012	B8.1	SF	N20W18		4530
10 Sep	2205	2210	2213	B4.4				
10 Sep	2331	2336	2339	B6.5	SF	N07W67		4521
11 Sep	0107	0114	0116	B5.3				4521
11 Sep	0248	0256	0307	B6.7				4530
11 Sep	1127	1133	1135	B3.8				4521
11 Sep	1355	1403	1408	B5.8				4521



Flare List

Date	Time			Optical			
	Begin	Max	End	X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
11 Sep	2143	2149	2153	B5.8			4521
11 Sep	2226	2236	2255	B7.8			4524
11 Sep	2306	2314	2318	B8.5			4521
12 Sep	0544	0551	0556	B6.1			4521
12 Sep	0732	0739	0746	B5.5			4530
12 Sep	1144	1152	1203	B7.7			4521
12 Sep	1333	1344	1401	B6.3			
12 Sep	1604	1613	1618	B8.9	SF	N08W80	4521
12 Sep	1709	1720	1724	C5.8	SF	N07W82	4521
12 Sep	1827	1830	1836	B8.3	SF	N20W44	4530
12 Sep	2225	2232	2237	B4.7			4521
12 Sep	2256	2303	2309	B6.7	SF	N19W48	4530
12 Sep	2319	2323	2327	B9.6			4530
13 Sep	0314	0321	0325	B5.3			4530
13 Sep	0559	0607	0612	B5.2			4521
13 Sep	1041	1048	1054	B5.5			4521
13 Sep	1749	1801	1805	B9.2			4529
13 Sep	1912	1945	2019	C1.4			4528

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 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								
31 Aug	S12W07	337	40	6	Dai	9	B	2			2				
01 Sep	S12W20	337	40	6	Dai	10	B								
02 Sep	S12W33	337	10	4	Bxo	4	B								
03 Sep	S12W48	339	plage												
04 Sep	S12W62	340	plage												
05 Sep	S12W76	340	plage						1		1				
06 Sep	S12W90	341	plage												
								2	1	0	2	1	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 337

Region 4521

31 Aug	N09E67	264	60	2	Hsx	1	A								
01 Sep	N09E53	264	50	3	Hsx	2	A								
02 Sep	N09E39	265	80	2	Hsx	2	A								
03 Sep	N09E26	265	80	3	Hsx	2	A				1				
04 Sep	N09E12	266	80	3	Hsx	1	A								
05 Sep	N09W02	266	80	3	Hsx	1	A								
06 Sep	N09W15	266	90	4	Hsx	2	A								
07 Sep	N09W27	265	80	2	Hsx	3	A								
08 Sep	N09W40	264	80	2	Hsx	1	A	4			2				
09 Sep	N09W53	264	70	2	Hsx	1	A	1			1				
10 Sep	N09W67	265	70	2	Hsx	1	A				2				
11 Sep	N09W79	264	20	1	Hsx	1	A								
12 Sep	N09W93	265	20	1	Hsx	1	A	1			1				
								6	0	0	7	0	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 266



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
<i>Region 4523</i>															
31 Aug	N10E77	253	40	3	Hax	1	A	6				7			
01 Sep	N10E63	254	30	2	Hax	1	A								
02 Sep	N11E49	255	30	2	Cso	3	B								
03 Sep	N10E36	255	30	3	Cao	4	B								
04 Sep	N10E23	255	20	2	Hsx	2	A								
05 Sep	N10E09	255	20	2	Cso	3	B								
06 Sep	N10W05	256	10	1	Axx	1	A								
07 Sep	N10W16	254	10	4	Axx	5	A								
08 Sep	N10W29	254	10	2	Axx	3	A								
09 Sep	N10W42	254	10	1	Axx	3	A								
10 Sep	N10W56	254	plage												
11 Sep	N10W70	255	plage												
12 Sep	N10W84	256	plage												
								6	0	0	7	0	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 256

<i>Region 4524</i>															
02 Sep	N12E78	226	30	1	Hax	1	A	3	1						
03 Sep	N12E66	225	60	2	Hax	1	A	1			2				
04 Sep	N12E53	225	80	4	Dso	3	B	2	1		2	1			
05 Sep	N12E40	224	100	4	Cso	3	B	3				1	1		
06 Sep	N12E26	225	100	3	Cao	4	BG	1			1	1			
07 Sep	N12E13	225	70	3	Hax	3	A	1			3				
08 Sep	N13W00	225	50	3	Hsx	2	A								
09 Sep	N12W13	225	25	2	Hsx	3	A	1				1			
10 Sep	N12W27	225	40	1	Hsx	1	A	2			1				
11 Sep	N12W40	225	20	1	Hsx	1	A								
12 Sep	N12W54	226	20	1	Hrx	1	A								
13 Sep	N12W68	225	20	1	Hrx	1	A								
								14	2	0	9	4	1	0	0

Still on Disk.

Absolute heliographic longitude: 225



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 4525															
04 Sep	N11E66	212	10	3	Bxo	3	B								
05 Sep	N11E52	212	10	1	Axx	1	A				1				
06 Sep	N11E38	213	plage												
07 Sep	N10E27	211	10	1	Axx	2	A								
08 Sep	N11E16	209	10	5	Axx	4	A								
09 Sep	N11E04	208	20	5	Cro	6	B								
10 Sep	N11W10	208	20	6	Cri	5	B								
11 Sep	N11W24	209	10	4	Cro	4	B								
12 Sep	N11W38	210	10	1	Axx	1	A								
13 Sep	N11W52	211	10	5	Bxo	2	B								
								0	0	0	1	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 208

Region 4526															
04 Sep	S02E69	209	10	2	Bxo	2	B	1							
05 Sep	S02E55	209	10	1	Axx	1	A								
06 Sep	S02E42	209	10	7	Bxo	2	B								
07 Sep	S02E28	210	plage												
08 Sep	S02E14	211	plage												
09 Sep	S02W01	213	plage												
10 Sep	S02W16	214	plage												
11 Sep	S02W31	216	plage												
12 Sep	S02W46	218	plage												
13 Sep	S02W61	220	plage												
								1	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 213



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 4527																
04 Sep	N03E71	207	60	8	Hsx	1	A	2				1				
05 Sep	N04E57	207	160	3	Hsx	1	A									
06 Sep	N04E44	207	180	3	Hsx	2	A									
07 Sep	N03E33	205	210	3	Hsx	2	A									
08 Sep	N03E21	203	180	3	Hsx	4	A									
09 Sep	N04E09	202	190	5	Hsx	4	A									
10 Sep	N04W03	201	180	5	Hsx	3	A									
11 Sep	N04W18	203	180	5	Hsx	3	A									
12 Sep	N04W33	205	200	5	Hsx	3	A									
13 Sep	N04W48	207	200	5	Hax	3	A									
								2	0	0		1	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 201

Region 4528

06 Sep	S11E64	187	80	2	Hsx	1	A	1							
07 Sep	S11E51	187	100	2	Hsx	1	A	1			1				
08 Sep	S11E38	187	120	2	Hsx	1	A	2			3				
09 Sep	S11E25	187	120	2	Hsx	1	A	1			1				
10 Sep	S11E11	187	120	3	Hsx	1	A								
11 Sep	S11W03	188	100	3	Hsx	1	A								
12 Sep	S11W17	189	100	3	Hsx	1	A								
13 Sep	S11W31	190	100	3	Hsx	1	A	1							
								6	0	0	5	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 188

Region 4529

06 Sep	N13E63	188	100	2	Hsx	1	A								
07 Sep	N12E50	188	90	2	Hax	1	A								
08 Sep	N12E37	187	85	2	Hsx	1	A								
09 Sep	N12E24	187	70	2	Hsx	3	A								
10 Sep	N12E10	188	80	2	Hax	1	A								
11 Sep	N12W04	189	80	2	Hax	1	A								
12 Sep	N12W18	190	60	3	Cao	3	B								
13 Sep	N12W32	191	60	3	Cao	3	B								
								0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 189



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 4530															
07 Sep	N19E19	219	30	5	Dri	6	B								
08 Sep	N19E06	219	40	6	Dao	6	B								
09 Sep	N19W07	219	30	7	Dro	6	B								
10 Sep	N19W21	219	30	7	Dri	8	B					1			
11 Sep	N19W35	220	30	7	Dao	7	B								
12 Sep	N19W49	221	30	7	Dao	7	B					2			
13 Sep	N19W63	222	30	7	Cao	7	B								
								0	0	0	3	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 219



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.

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