

Solar activity reached moderate levels on 29 May when Region 4455 (N15, L=83, class/area=Eko/370 on 29 May) produced an M1.1/Sf flare at 29/0704 UTC; the largest flare of the period. Solar activity was low with C-flare activity observed throughout the remainder of the week.

The greater than 10 MeV proton flux became enhanced late on 25 May following an eruption from beyond the NW limb. The greater than 10 MeV proton flux exceeded S1 (Minor) levels at 26/0010 UTC, and reached a peak flux of 2,380 pfu at 26/0110 UTC before decreasing below S1 levels by 26/0540 UTC. The greater than 100 MeV proton flux also became enhanced following this event, but did not exceed alert threshold.

The greater than 2 MeV electron flux at geosynchronous orbit was at normal to moderate levels throughout the period.

Geomagnetic field activity reached unsettled levels on 25 and 27 May, with active levels observed on 26, and 28-31 May, as negative polarity CH HSS influences prevailed throughout the period.

Space Weather Outlook **01 June - 27 June 2026**

Solar activity is expected to be at predominately low levels throughout the outlook period, with a chance for M-class (R1-R2/Minor-Moderate) flare activity.

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 12-20 Jun, with normal to moderate levels likely throughout the remainder of the period.

Geomagnetic field activity is likely to reach G2 (Moderate) storm levels on 11 Jun, with G1 (Minor) storming likely on 12 Jun, due to negative polarity CH HSS influences. Active conditions are likely on 01, 03-05, 13-14, and 23-27 Jun due to multiple recurrent CH HSSs. Quiet and quiet to unsettled conditions are expected to prevail throughout the remainder of 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
25 May	139	132	845	B9.4	2	0	0	3	0	0	0	0
26 May	141	148	885	B9.6	8	0	0	1	0	0	0	0
27 May	142	165	1325	B7.8	3	0	0	1	0	0	0	0
28 May	145	161	1095	B8.0	4	0	0	3	0	0	0	0
29 May	148	135	990	B7.5	6	1	0	5	0	0	0	0
30 May	142	133	850	B7.4	8	0	0	2	2	0	0	0
31 May	136	110	830	B6.8	13	0	0	12	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	
	25 May	1.7e+06	3.3e+04	1.4e+07
26 May	3.8e+06	5.4e+05	1.4e+07	
27 May	1.1e+06	6.2e+04	1.6e+07	
28 May	5.7e+05	2.4e+04	1.7e+07	
29 May	8.1e+05	2.0e+04	1.8e+07	
30 May	5.5e+05	2.0e+04	1.5e+07	
31 May	1.1e+05	1.9e+04	1.9e+07	

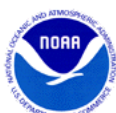
Daily Geomagnetic Data

Date	Middle Latitude Fredericksburg		High Latitude College		Estimated Planetary	
	A	K-indices	A	K-indices	A	K-indices
	25 May	8	3-2-1-2-3-1-2-2	10	3-2-2-3-3-2-2-2	8
26 May	7	2-1-1-2-2-1-2-3	6	3-1-1-1-1-1-1-3	8	2-1-1-1-1-1-2-4
27 May	12	3-3-3-1-2-3-2-3	12	3-3-4-2-1-3-2-2	11	2-2-3-2-1-3-3-3
28 May	13	2-3-3-2-3-3-3-3	16	2-3-3-3-3-5-2-2	13	2-2-3-3-3-4-3-3
29 May	16	3-4-2-3-3-3-3-3	27	2-3-2-4-6-5-4-2	15	3-3-2-2-3-3-4-3
30 May	13	3-3-1-2-2-3-3-4	14	4-4-2-1-2-2-3-3	15	3-3-1-2-2-2-4-4
31 May	8	3-2-2-1-3-2-1-1	13	4-4-2-1-3-3-1-2	22	4-3-2-2-3-2-2-2



Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
26 May 0016	WARNING: Proton 10MeV Integral Flux > 10pfu	26/0015 - 2359
26 May 0035	ALERT: Proton Event 10MeV Integral Flux >= 10pfu	26/0010
26 May 1418	ALERT: Type II Radio Emission	26/1244
26 May 1419	CANCELLATION: Type II Radio Emission	
26 May 1419	CANCELLATION: Type II Radio Emission	
26 May 1419	ALERT: Type II Radio Emission	26/1244
26 May 1419	ALERT: Type II Radio Emission	26/1244
26 May 1419	ALERT: Type II Radio Emission	26/1244
26 May 1419	ALERT: Type II Radio Emission	26/1244
26 May 1419	ALERT: Type II Radio Emission	26/1244
26 May 1419	ALERT: Type II Radio Emission	26/1244
26 May 1420	ALERT: Type II Radio Emission	26/1420
26 May 1422	ALERT: Type II Radio Emission	26/1244
26 May 2138	WARNING: Geomagnetic K = 4	26/2137 - 27/0600
27 May 0001	ALERT: Geomagnetic K = 4	26/2359
27 May 0227	SUMMARY: Proton Event 10MeV Integral Flux >= 10pfu	26/0015 - 0425
27 May 0228	SUMMARY: Proton Event 10MeV Integral Flux >= 10pfu	27/0015 - 26/0425
27 May 1445	CANCELLATION: Proton Event 10MeV Integral Flux >= 10pfu	
27 May 2347	WARNING: Geomagnetic K = 4	27/2347 - 28/0600
28 May 1706	ALERT: Geomagnetic K = 4	28/1706
28 May 1717	CANCELLATION: Geomagnetic K = 4	
28 May 1800	ALERT: Geomagnetic K = 4	28/1800
29 May 0011	EXTENDED WARNING: Geomagnetic K = 4	27/2347 - 29/0600
29 May 0541	EXTENDED WARNING: Geomagnetic K = 4	27/2347 - 29/1200
29 May 1932	WARNING: Geomagnetic K = 4	29/1932 - 30/0900
29 May 1952	ALERT: Geomagnetic K = 4	29/1949
30 May 1852	WARNING: Geomagnetic K = 4	30/1851 - 31/0600

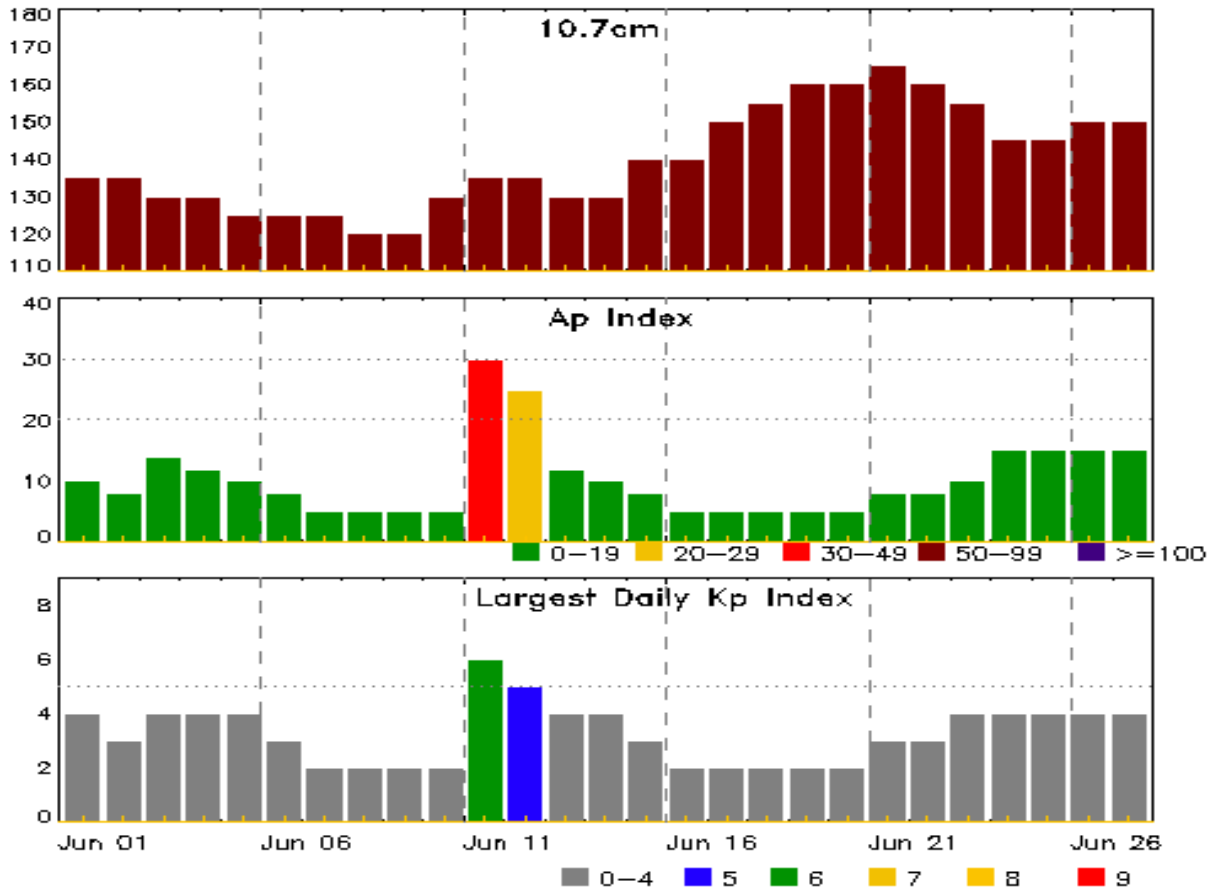


Alerts and Warnings Issued

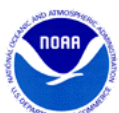
Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
30 May 2036	ALERT: Geomagnetic K = 4	30/2035



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
01 Jun	135	10	4	15 Jun	140	8	3
02	135	8	3	16	140	5	2
03	130	14	4	17	150	5	2
04	130	12	4	18	155	5	2
05	125	10	4	19	160	5	2
06	125	8	3	20	160	5	2
07	125	5	2	21	165	8	3
08	120	5	2	22	160	8	3
09	120	5	2	23	155	10	4
10	130	5	2	24	145	15	4
11	135	30	6	25	145	15	4
12	135	25	5	26	150	15	4
13	130	12	4	27	150	15	4
14	130	10	4				



Energetic Events

Date	Time		Half Max	X-ray		Optical Information			Peak		Sweep Freq	
	Begin	Max		Class	Integ Flux	Imp/ Brtns	Location Lat CMD	Rgn #	Radio Flux 245 2695	Intensity II IV		
29 May	0640	0704	0724	M1.1	0.026	SF	N14E61	4455				

Flare List

Date	Time			X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
	Begin	Max	End				
25 May	0051	0104	0115	C3.7	SF	S17E23	4447
25 May	0641	0653	0707	C1.7	SF	S16E21	4447
25 May	1133	1134	1137		SF	N09W40	4439
26 May	0711	0717	0723	C2.4	SF	S08E52	4448
26 May	0827	0840	0848	C2.9			4446
26 May	1230	1238	1244	C9.7			4446
26 May	1350	1400	1411	C1.6			
26 May	2010	2019	2024	C2.5			
26 May	2040	2048	2051	C1.7			
26 May	2051	2056	2100	C1.8			4443
26 May	2339	2349	2352	C4.7			4446
27 May	0149	0159	0203	C1.9			4454
27 May	1207	1216	1219	C3.4			4446
27 May	1320	1323	1329	C2.8	SF	N17E80	4455
28 May	0752	0800	0807	C1.1	SF	S15W20	4447
28 May	0958	1009	1020	C1.8			4455
28 May	1509	1516	1518	C3.2	SF	N10W28	4452
28 May	1628	1637	1641	C1.5	SF	N09E57	4455
29 May	0524	0537	0550	C7.6			4455
29 May	0640	0704	0724	M1.1	SF	N14E61	4455
29 May	1407	1408	1418		SF	N17E50	4455
29 May	1541	1553	1601	C1.2	SF	N13E59	4455
29 May	1901	1909	1914	C1.2	SF	S08E03	4449
29 May	1928	1933	1936	C1.6			4455
29 May	1934	1953	2027		SF	N14E47	4455
29 May	1936	1947	1957	C3.0			4455
29 May	2109	2129	2141	C2.0			4455
30 May	0235	0240	0244	C1.3			4446
30 May	0729	0747	0759	C3.9	1F	S11W04	4449
30 May	0840	0852	0908	C1.8			4446



Flare List

Date	Time			X-ray Class	Optical		
	Begin	Max	End		Imp/ Brtns	Location Lat CMD	Rgn #
30 May	1145	1153	1155	C4.7	1N	S17W17	4446
30 May	1437	1448	1457	C1.0			4453
30 May	1727	1736	1741	C1.1	SF	S10W11	4449
30 May	2223	2228	2230	C1.0			4457
30 May	2230	2237	2239	C1.2			
30 May	2239	2245	2253		SF	S09E01	4457
31 May	0159	0209	0212	C3.1			4447
31 May	0253	0305	0319	C1.2			4452
31 May	0422	0436	0444	C1.5			4449
31 May	0444	0449	0500	C1.8	SF	N10W62	4452
31 May	0454	0454	0459		SF	S07W15	4449
31 May	0612	0613	0615		SF	S08W15	4449
31 May	0802	0807	0810	C1.2			4449
31 May	0859	0910	0927	C1.1			4455
31 May	1012	1014	1017	C1.0			4446
31 May	1038	1042	1045	B9.4			4446
31 May	1053	1055	1058		SF	S07W17	4446
31 May	1101	1109	1117		SF	S07W18	4446
31 May	1237	1243	1246	C1.0			4449
31 May	1242	1248	1300		SF	S07W19	4446
31 May	1246	1251	1253	C1.1			4455
31 May	1248	1248	1254		SF	S08W18	4449
31 May	1546	1547	1555		SF	S10W24	4446
31 May	1756	1810	1828	C1.5			
31 May	1831	1836	1839	C1.7	SF	S06W10	4457
31 May	1834	1837	1842		SF	S11W33	4446
31 May	1939	1943	1947	C1.5	SF	S11W34	4446
31 May	2142	2153	2211	C1.9	SF	S06W12	4457



Region Summary

Date	Location		Sunspot Characteristics					Flares															
	Lat CMD	Lon	Helio 10 ⁻⁶ hemi.	Area	Extent (helio)	Spot Class	Spot Count	Mag Class	X-ray			Optical											
									C	M	X	S	1	2	3	4							
Region 4409																							
30 Mar	N02E54		153	10	2	Bxo	2	B															
31 Mar	N02E39		154	20	4	Dro	4	B															
01 Apr	N02E24		156	30	4	Dri	8	B	7														
02 Apr	N02E13		155	40	9	Dai	15	BG	6			4											
03 Apr	N02W01		155	140	11	Eai	16	BG	12	1		11	1										
04 Apr	N02W15		156	170	11	Eai	26	BG	13	4		6	1										
05 Apr	N02W28		156	170	11	Eac	26	B	12			1											
06 Apr	N02W43		157	190	11	Eai	25	B	1														
07 Apr	N02W57		158	190	12	Eai	15	BG	5			1											
08 Apr	N01W71		159	180	11	Esi	20	BD	1														
09 Apr	N01W85		160	170	11	Esi	20	BD	4	1		1											
									61	6	0	24	2	0	0	0	0						

Crossed West Limb.

Absolute heliographic longitude: 155

Region 4439

16 May	N06E68		238	50	2	Dao	2	B	1													
17 May	N06E52		240	50	2	Dao	2	B	1													
18 May	N06E42		237	50	8	Dao	2	B														
19 May	N06E30		236	50	9	Cao	5	B														
20 May	N06E15		238	20	7	Hrx	5	A	1			1										
21 May	N07W02		241	30	3	Cao	2	B														
22 May	N06W17		242	10	2	Cro	2	B														
23 May	N06W29		242	10	1	Hrx	1	A														
24 May	N06W44		244	plage																		
25 May	N06W59		246	plage								1										
26 May	N06W73		246	plage																		
27 May	N06W87		247	plage																		
									3	0	0	2	0	0	0	0	0					

Crossed West Limb.

Absolute heliographic longitude: 241



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 4444																							
21 May	S21E65		175	60	3	Hsx	1	A															
22 May	S20E53		173	120	3	Cso	4	B	1														
23 May	S19E38		175	130	6	Dso	5	B					1										
24 May	S21E29		171	100	3	Hsx	1	A															
25 May	S21E16		171	90	2	Hsx	1	A															
26 May	S21E05		169	100	3	Hsx	2	A															
27 May	S21W09		169	90	2	Hsx	1	A															
28 May	S21W22		169	90	2	Hsx	1	A															
29 May	S21W35		169	90	2	Hsx	1	A															
30 May	S21W48		169	70	2	Hsx	1	A															
31 May	S21W62		169	70	2	Hsx	1	A															
									1	0	0		1	0	0	0	0	0					

Still on Disk.

Absolute heliographic longitude: 169

Region 4445																							
23 May	N07E48		164	20	1	Hrx	1	A															
24 May	N07E37		163	20	1	Hsx	1	A															
25 May	N07E26		161	20	4	Cro	3	B															
26 May	N07E11		162	10	2	Axx	3	A															
27 May	N07W02		162	5	1	Axx	1	A															
28 May	N07W15		162	5	1	Axx	1	A															
29 May	N07W29		163	plage																			
30 May	N07W43		164	plage																			
31 May	N07W58		165	plage																			
									0	0	0		0	0	0	0	0	0					

Still on Disk.

Absolute heliographic longitude: 162



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 4446																							
23 May	S13E75	138	170	9	Dao	2	B	7															
24 May	S13E59	141	280	9	Dko	3	B	3															
25 May	S14E45	142	220	4	Hax	3	A																
26 May	S16E43	130	400	23	Fho	16	BG	3															
27 May	S16E30	131	400	24	Fko	17	BG	1															
28 May	S16E16	131	300	24	Fko	12	BG																
29 May	S16E03	131	290	5	Cko	13	BG																
30 May	S15W21	142	250	5	Cho	8	B	3													1		
31 May	S15W35	142	250	6	Cho	8	B	2														6	
								19	0	0			6	1	0	0	0	0					

Still on Disk.

Absolute heliographic longitude: 131

Region 4447

24 May	S17E23	177	120	6	Dao	14	B	1					1									
25 May	S17E11	175	150	6	Dso	5	B	2					2									
26 May	S16W02	175	160	7	Dsi	13	B															
27 May	S17W14	175	145	7	Dsi	13	B															
28 May	S17W28	175	140	6	Dsi	8	B	1					1									
29 May	S17W41	175	90	6	Cso	3	B															
30 May	S17W55	176	80	2	Hsx	1	A															
31 May	S17W69	176	100	2	Hsx	1	A	1														
								5	0	0			4	0	0	0	0	0				

Still on Disk.

Absolute heliographic longitude: 175

Region 4448

25 May	S07E55	132	75	8	Dao	4	B															
26 May	S08E42	132	80	8	Dao	10	B	1					1									
27 May	S07E28	132	70	8	Cao	6	B															
28 May	S06E13	134	10	5	Bxo	7	B															
29 May	S05W00	133	0	1	Axx	2	A															
30 May	S05W12	133	plage																			
31 May	S05W27	134	plage																			
								1	0	0			1	0	0	0	0	0				

Still on Disk.

Absolute heliographic longitude: 133



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 4449																	
25 May	S10E50	137	80	3	Dao	3	B										
26 May	S11E37	136	70	4	Hsx	4	A										
27 May	S10E23	138	65	2	Hax	2	A										
28 May	S10E11	136	40	3	Cao	2	B										
29 May	S10W02	136	40	4	Cso	5	B	1			1						
30 May	S09W16	137	40	6	Cso	5	B	2			1	1					
31 May	S09W30	137	30	2	Hsx	1	A	3			3						
								6	0	0	5	1	0	0	0	0	

Still on Disk.

Absolute heliographic longitude: 136

Region 4450																	
25 May	N10E49	138	10	1	Bxo	5	B										
26 May	N09E36	137	5	5	Bxo	4	B										
27 May	N10E21	140	plage														
28 May	N10E08	139	plage														
29 May	N10W06	140	plage														
30 May	N10W20	141	plage														
31 May	N10W34	141	plage														
								0	0	0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 140

Region 4451																	
25 May	S16E65	122	30	3	Cro	3	B										
29 May	S17E12	121	plage														
30 May	S17W01	122	plage														
31 May	S17W15	122	plage														
								0	0	0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 122



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 4452																		
26 May	N09W07		181	30	3	Cro	3	B										
27 May	N09W21		181	60	5	Cai	9	B										
28 May	N09W34		181	100	6	Dai	14	BG	1				1					
29 May	N10W48		182	90	8	Dai	14	BG										
30 May	N10W61		182	70	7	Dai	9	BG										
31 May	N10W75		182	30	7	Dri	4	B	2				1					
									3	0	0		2	0	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 181

Region 4453																		
27 May	N11W63		224	10	4	Bxo	2	B										
28 May	N11W75		222	5	1	Axx	1	A										
29 May	N12W88		222	plage														
									0	0	0		0	0	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 224

Region 4454																		
27 May	S15E61		99	10	1	Axx	1	A	1									
28 May	S15E48		99	15	1	Hrx	1	A										
29 May	S15E34		100	10	1	Hrx	1	A										
30 May	S15E20		101	10	1	Hrx	1	A										
31 May	S14E06		101	10	1	Hrx	1	A										
									1	0	0		0	0	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 101

Region 4455																		
27 May	N14E78		82	450	5	Hax	2	A	1									
28 May	N15E65		82	380	10	Dho	3	B	2				1					
29 May	N15E52		83	370	11	Eko	5	B	5	1			4					
30 May	N15E38		83	300	10	Dho	10	B										
31 May	N15E24		83	320	11	Cko	6	B	2									
									10	1	0		5	0	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 83



Region Summary - continued

Date	Location		Sunspot Characteristics				Flares								
	Lat CMD	Lon	Helio 10 ⁻⁶	Area hemi.	Extent (helio)	Spot Class	Spot Count	Mag Class	X-ray			Optical			
									C	M	X	S	1	2	3

Region 4456

30 May	N14E56	65	10	7	Bxo	3	B										
31 May	N14E42	65	plage														
									0	0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 65

Region 4457

30 May	S10W00	121	20	8	Cro	5	B	1				1					
31 May	S09W14	121	20	4	Cro	8	B	2				2					
								3	0	0	3	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 121



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

<ftp://ftp.swpc.noaa.gov/pub/warehouse> -- Online archive from 1997

<https://www.ngdc.noaa.gov/stp/satellite/goes-r.html> -- NCEI GOES data
textarchive

<https://www.swpc.noaa.gov/products/solar-cycle-progression> -- Solar Cycle
Progression web site

<https://www.swpc.noaa.gov/content/contact-us> -- Contact and Copyright
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https://www.swpc.noaa.gov/sites/default/files/images/u2/Usr_guide.pdf -- User
Guide

