

Space Weather Highlights
10 February - 16 February 2025

SWPC PRF 2581
17 February 2025

Solar activity reached moderate levels on 10-11 and 13-14 Feb, with low levels of activity observed on 12 and 15-16 Feb. In total, six M1 flares (R1-Minor) were observed throughout the week from Regions 3981 (N07, L=341, class/area=Esi/190 on 10 Feb), 3990 (S10, L=191, class/area=Dki/310 on 14 Feb), and 3992 (S06, L=243, class/area=Dai/210 on 13 Feb).

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit was at normal to moderate levels on 10 Feb, with high levels observed on 11-16 Feb.

Geomagnetic field activity reached G1 (Minor) levels on 10 and 14-15 Feb, and active levels on 11-13 and 16 Feb, due to negative polarity CH HSS influences.

Space Weather Outlook
17 February - 15 March 2025

Solar activity is expected to range from low to moderate levels throughout the period. There is a varying chance for R1-R2 (Minor-Moderate) events, and a slight chance for R3 or greater events.

No proton events are expected at geosynchronous orbit, barring significant flare activity.

The greater than 2 MeV electron flux at geosynchronous orbit is likely to reach high levels on 18-19 and 23 Feb, and 10-15 Mar. Normal to moderate levels are likely to prevail throughout the remainder of the period.

Geomagnetic field activity is likely to reach G1 (Minor) levels on 28 Feb, 09 and 12-14 Mar, with active levels likely on 17-18 Feb, and on 01 and 15 Mar, due primarily to CH HSS influences. Quiet and quiet to unsettled conditions are expected to prevail throughout the remainder of the 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					
10 February	159	104	840	C1.2	5	1	0	2	0	0	0	0
11 February	153	91	690	C1.0	8	1	0	0	0	0	0	0
12 February	166	88	800	C1.0	3	0	0	0	0	0	0	0
13 February	173	112	1200	C1.0	7	1	0	10	0	0	0	0
14 February	179	111	1020	C1.0	4	3	0	5	2	0	0	0
15 February	184	153	1120	C1.0	9	0	0	2	0	0	0	0
16 February	185	271	1270	C1.1	9	0	0	1	0	0	0	0

Daily Particle Data

Date	Proton Fluence (protons/cm ² -day -sr)		>2MeV	Electron Fluence (electrons/cm ² -day -sr)	
	>1 MeV	>10 MeV		>2MeV	
10 February	3.8e+05	1.7e+04			1.0e+07
11 February	1.7e+05	1.7e+04			5.3e+07
12 February	3.0e+05	1.7e+04			7.6e+07
13 February	2.3e+05	1.7e+04			5.8e+07
14 February	5.7e+05	1.7e+04			9.7e+07
15 February	7.5e+05	1.7e+04			8.4e+07
16 February	5.9e+05	1.7e+04			1.2e+08

Daily Geomagnetic Data

Date	Middle Latitude		High Latitude		Estimated	
	A	K-indices	A	K-indices	A	Planetary K-indices
10 February	17	4-1-3-4-3-3-3-3	31	4-2-5-5-4-5-4-3	24	5-2-4-4-3-4-3-4
11 February	10	3-2-2-3-2-3-2-2	21	3-3-3-4-4-5-3-2	17	4-3-3-3-2-3-3-3
12 February	12	3-3-2-3-3-2-3-2	23	3-3-3-5-4-5-2-2	17	3-4-3-3-3-3-3-3
13 February	19	3-4-3-4-3-2-3-4	37	2-4-5-6-6-4-3-3	23	3-4-4-4-4-3-4-4
14 February	20	4-4-3-3-4-3-3-3	44	4-5-5-3-6-6-4-4	27	5-4-4-3-5-3-4-4
15 February	20	2-3-3-4-4-4-3-4	55	3-3-3-7-5-7-5-3	28	4-4-3-5-3-5-4-4
16 February	14	2-3-3-3-3-2-2-4	28	2-3-5-6-3-4-3-3	15	3-4-3-3-3-3-3-4

Alerts and Warnings Issued

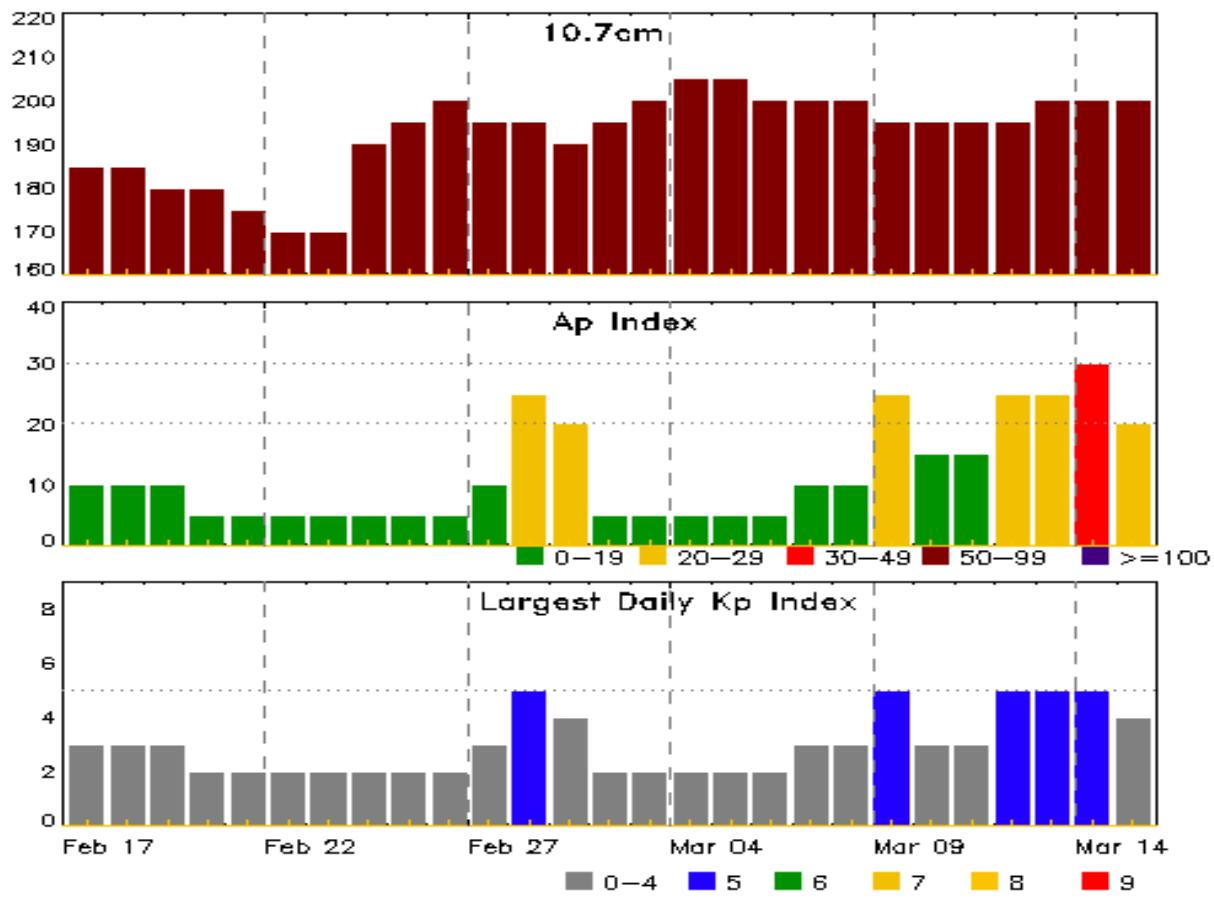
Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
10 Feb 1147	EXTENDED WARNING: Geomagnetic K = 4	09/1430 - 10/2359
10 Feb 2205	WATCH: Geomagnetic Storm Category G1 predicted	
10 Feb 2336	EXTENDED WARNING: Geomagnetic K = 4	09/1430 - 11/1200
11 Feb 1134	EXTENDED WARNING: Geomagnetic K = 4	09/1430 - 12/1200
11 Feb 1421	ALERT: Electron 2MeV Integral Flux \geq 1000pfu	11/1405
12 Feb 0951	EXTENDED WARNING: Geomagnetic K = 4	09/1430 - 13/0300
12 Feb 1151	CONTINUED ALERT: Electron 2MeV Integral Flux \geq 1000pfu	11/1405
13 Feb 0527	WARNING: Geomagnetic K = 4	13/0527 - 2359
13 Feb 0537	ALERT: Geomagnetic K = 4	
13 Feb 1409	CONTINUED ALERT: Electron 2MeV Integral Flux \geq 1000pfu	11/1405
13 Feb 1936	WATCH: Geomagnetic Storm Category G1 predicted	
13 Feb 1957	EXTENDED WARNING: Geomagnetic K = 4	13/0527 - 14/0600
13 Feb 2322	WARNING: Geomagnetic K = 5	13/2320 - 14/1500
13 Feb 2322	EXTENDED WARNING: Geomagnetic K = 4	13/0527 - 14/1800
14 Feb 0303	ALERT: Geomagnetic K = 5	
14 Feb 1247	CONTINUED ALERT: Electron 2MeV Integral Flux \geq 1000pfu	11/1405
14 Feb 1451	EXTENDED WARNING: Geomagnetic K = 4	13/0527 - 15/0600
14 Feb 1452	EXTENDED WARNING: Geomagnetic K = 5	13/2320 - 14/2359
14 Feb 1505	ALERT: Geomagnetic K = 5	
14 Feb 1946	WATCH: Geomagnetic Storm Category G1 predicted	
14 Feb 2151	ALERT: Type II Radio Emission	14/2107
15 Feb 0415	EXTENDED WARNING: Geomagnetic K = 4	13/0527 - 15/1800
15 Feb 0451	CONTINUED ALERT: Electron 2MeV Integral Flux \geq 1000pfu	11/1405
15 Feb 1009	WARNING: Geomagnetic K = 5	15/1015 - 1800
15 Feb 1030	ALERT: Geomagnetic K = 5	
15 Feb 1034	WARNING: Geomagnetic K = 6	15/1030 - 1500
15 Feb 1732	EXTENDED WARNING: Geomagnetic K = 4	13/0527 - 16/0600



Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
15 Feb 1733	EXTENDED WARNING: Geomagnetic K = 5	15/1015 - 2359
15 Feb 1822	ALERT: Geomagnetic K = 5	
15 Feb 2115	WATCH: Geomagnetic Storm Category G1 predicted	
16 Feb 0418	EXTENDED WARNING: Geomagnetic K = 4	13/0527 - 16/1500
16 Feb 0437	CONTINUED ALERT: Electron 2MeV Integral Flux >= 1000pfu	11/1405
16 Feb 1422	EXTENDED WARNING: Geomagnetic K = 4	13/0527 - 16/2359
16 Feb 2020	EXTENDED WARNING: Geomagnetic K = 4	13/0527 - 17/0600

Twenty-seven Day Outlook



Date	Radio Flux	Planetary	Largest	Date	Radio Flux	Planetary	Largest
	10.7cm	A Index	Kp Index		10.7cm	A Index	Kp Index
17 Feb	185	10	3	03 Mar	200	5	2
18	185	10	3	04	205	5	2
19	180	10	3	05	205	5	2
20	180	5	2	06	200	5	2
21	175	5	2	07	200	10	3
22	170	5	2	08	200	10	3
23	170	5	2	09	195	25	5
24	190	5	2	10	195	15	3
25	195	5	2	11	195	15	3
26	200	5	2	12	195	25	5
27	195	10	3	13	200	25	5
28	195	25	5	14	200	30	5
01 Mar	190	20	4	15	200	20	4
02	195	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 #	Radio Flux 245	2695	II	IV
10 Feb	0030	0046	0102	M1.0	0.012				3981			
11 Feb	0522	0535	0547	M1.6	0.016				3981			
13 Feb	1105	1109	1113	M1.0	0.003				3992	2300		
14 Feb	0213	0228	0243	M1.2	0.013							
14 Feb	0948	1006	1019	M1.2	0.014	1F	S11E23		3990	120		
14 Feb	2045	2057	2105	M1.8	0.012				3990	1000	130	

Flare List

Date	Time			Optical			
	Begin	Max	End	X-ray Class	Imp/ Brtns	Location Lat	Rgn #
10 Feb	0030	0046	0102	M1.0			3981
10 Feb	0658	0702	0708	C2.8	SF	N04W68	3981
10 Feb	0916	0924	0932	C3.1			3981
10 Feb	1105	1114	1120	C3.6			3981
10 Feb	1227	1235	1240	C2.9	SF	N05W73	3981
10 Feb	2101	2104	2108	C2.1			
11 Feb	0446	0456	0503	C2.9			3981
11 Feb	0522	0535	0547	M1.6			3981
11 Feb	0612	0619	0623	C6.6			
11 Feb	1028	1042	1104	C2.3			3981
11 Feb	1210	1217	1226	C2.2			3981
11 Feb	1328	1405	1444	C7.6			3981
11 Feb	1517	1523	1530	C3.3			3981
11 Feb	1805	1825	1843	C7.2			3991
11 Feb	2217	2246	2331	C3.2			3990
12 Feb	1237	1247	1258	C3.9			3992
12 Feb	2009	2017	2025	C1.7			3990
12 Feb	2200	2220	2246	C2.0			3992
13 Feb	0311	0318	0322	C1.4			
13 Feb	0720	0735	0746	C2.6			3990
13 Feb	0958	1004	1013	C2.0			3990
13 Feb	1105	1109	1113	M1.0			3992
13 Feb	1201	1209	1213	C3.3			3992
13 Feb	1233	1237	1241	C3.2			3992
13 Feb	1610	1614	1617		SF	S06W23	3992



Flare List

Date	Time			Optical			
	Begin	Max	End	X-ray Class	Imp/Brtns	Location Lat CMD	Rgn #
13 Feb	1626	1626	1627		SF	S06W23	3992
13 Feb	1645	1647	1648		SF	S06W23	3992
13 Feb	1649	1649	1652		SF	S06W23	3992
13 Feb	1845	1854	1900	C1.9			3989
13 Feb	2034	2037	2041		SF	S12E30	3990
13 Feb	2042	2048	2052		SF	S12E30	3990
13 Feb	2100	2101	2103		SF	S05W25	3992
13 Feb	2122	2126	2131		SF	S12E30	3990
13 Feb	2216	2243	2310	C9.0			3990
13 Feb	2224	2225	2225		SF	S12E33	3990
13 Feb	2230	2231	2310		SF	S09E32	3990
14 Feb	0027	0038	0048	C4.3			3989
14 Feb	0213	0228	0243	M1.2			
14 Feb	0731	0745	0750	C6.6			3994
14 Feb	0948	1006	1019	M1.2	1F	S11E23	3990
14 Feb	B1031	U1033	A1053		SF	S11E23	3990
14 Feb	B1123	U1125	A1132		SF	S20E03	3994
14 Feb	1144	U1145	A1147		SF	S21E05	3994
14 Feb	1351	1353	1356		SF	S18E85	
14 Feb	1408	1417	1421	C4.8	1N	S21E02	3994
14 Feb	B1454	U1456	A1501		SF	S12E18	3990
14 Feb	2045	2057	2105	M1.8			3990
14 Feb	2227	2236	2252	C1.6			3997
15 Feb	0022	0031	0034	C2.3			3997
15 Feb	0034	0039	0043	C3.1			3996
15 Feb	0536	0543	0547	C1.5			3990
15 Feb	0720	0723	0727	C2.8			3996
15 Feb	1217	1221	1227	C1.6			3996
15 Feb	1354	1359	1410	C2.4			3996
15 Feb	1622	1622	1627		SF	S05W52	3987
15 Feb	1922	1936	1948	C3.6			3983
15 Feb	2054	2103	2111	C2.0			3992
15 Feb	2206	2215	2236		SF	N02E42	3997
15 Feb	2356	0005	0011	C3.9			3998
16 Feb	0523	0534	0546	C1.9			3993
16 Feb	0550	0554	0559	C1.9			3998
16 Feb	0608	0612	0618	C1.9			3992
16 Feb	0857	0905	0913	C2.1			3996



Flare List

Date	Time			Optical			
	Begin	Max	End	X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
16 Feb	1731	1739	1748	C2.2			3998
16 Feb	1832	1838	1847	C6.1	SF	S12E75	3998
16 Feb	1922	1931	1935	C2.0			3992
16 Feb	1942	1949	1954	C1.8			3992
16 Feb	2025	2029	2035	C1.9			3997

Region Summary

Date	Lat	CMD	Location		Sunspot Characteristics					Flares							
			Helio	Lon	Area 10^{-6}	Extent hemi.	Spot Class	Spot Count	Mag Class	X-ray			Optical				
										C	M	X	S	1	2	3	4
Region 3976																	
27 Jan	N13E82		1	125	10	Dai	8	B	2	1							
28 Jan	N13E69		12	130	10	Dac	16	B	3								
29 Jan	N13E56		359	130	10	Dac	30	BG	4								
30 Jan	N13E42		360	150	10	Dac	30	BGD	8				1				
31 Jan	N13E28		1	230	11	Eac	33	BGD	9	1			9				
01 Feb	N13E14		1	230	11	Eac	33	BGD	3								
02 Feb	N13E02		1	260	11	Ekc	21	BG	2								
03 Feb	N13W12		1	260	11	Eki	21	BG									
04 Feb	N12W24		1	260	11	Eki	25	BG	2								
05 Feb	N12W38		1	80	9	Dai	6	B	3				3				
06 Feb	N12W51		1	60	10	Csi	6	B	3				2	1			
07 Feb	N11W68		4	80	2	Hsx	1	A									
08 Feb	N11W82		5	80	2	Hsx	1	A	1				1				
09 Feb	N11W96		6	80	2	Hsx	1	A					0	0	0	0	
									40	2	0	16	1	0	0	0	

Crossed West Limb.

Absolute heliographic longitude: 1

Region 3977

27 Jan	N18E79	2	40	3	Cao	2	B									
28 Jan	N19E67	1	50	5	Cao	11	BG			1						
29 Jan	N19E56	359	100	9	Dac	16	BG			1						
30 Jan	N19E42	360	110	9	Cao	16	B									
31 Jan	N19E28	1	110	9	Cao	16	BG	4	1			3				
01 Feb	N19E14	1	110	9	Cao	16	BG	4	1							
02 Feb	N19W00	2	120	9	Cao	12	BG	2	2			1				
03 Feb	N19W14	3	120	9	Dai	12	BG	2				1				
04 Feb	N18W27	3	150	11	Eai	22	BG	1	2							
05 Feb	N18W41	4	120	10	Dai	9	BG	6	1			5				
06 Feb	N18W54	4	60	6	Cao	7	B					2				
07 Feb	N18W68	4	10	2	Axx	1	A	2								
08 Feb	N18W82	5	10	2	Axx	1	A	1								
09 Feb	N18W96	6	10	2	Axx	1	A	2								
								24	9	0	12	0	0	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 2



Region Summary - continued

Date	Location		Sunspot Characteristics					Flares							
	Lat	CMD	Helio	Area	Extent	Spot	Spot	Mag	X-ray			Optical			
			Lon	10^6 hemi.	(helio)	Class	Count	Class	C	M	X	S	1	2	3
Region 3978															
28 Jan	N11E80	12	100	4	Hax	1	A								
29 Jan	N11E66	349	100	4	Hax	2	A	3							
30 Jan	N11E52	350	130	4	Cao	2	B	1							
31 Jan	N11E38	351	180	4	Dao	6	BG			1				1	
01 Feb	N11E24	351	180	4	Dai	6	BG	1							
02 Feb	N11E12	350	200	8	Dai	10	BG							1	
03 Feb	N11W02	351	200	8	Dai	10	BG	1						1	
04 Feb	N12W15	351	250	8	Dko	12	BG	1						1	
05 Feb	N12W29	352	200	6	Dao	7	B								
06 Feb	N11W41	351	50	3	Hax	4	A	2	1			1		1	
07 Feb	N14W53	349	280	5	Cko	6	BG	2							
08 Feb	N14W67	350	280	5	Cko	6	BG	1						1	
09 Feb	N11W80	350	30	1	Hrx	1	A	1							
10 Feb	N11W94	351	30	1	Hrx	1	A					13	2	0	4
									2	0		2	0	0	0
															0

Crossed West Limb.

Absolute heliographic longitude: 351

Region 3980

30 Jan	S10E61	341	10	6	Cao	5	B								
31 Jan	S10E47	342	10	6	Cao	5	B							1	
01 Feb	S10E33	342	10	6	Dro	5	B								
02 Feb	S10E19	343	10	1	Axx	1	A								
03 Feb	S10E05	344	10	1	Axx	1	A								
04 Feb	S11W10	346	plage												
05 Feb	S11W24	347	plage												
06 Feb	S12W36	346	10	2	Bxo	3	B								
07 Feb	S12W51	347	plage												
08 Feb	S12W65	348	plage												
09 Feb	S12W79	349	plage									0	0	0	1
												0	0	0	0
												0	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 344

Region Summary - continued

Date	Lat	CMD	Location		Sunspot Characteristics					Flares								
			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 3981																		
30 Jan	N05E66		336		10		1	Hsx	1	A								
31 Jan	N05E51		338		10		1	Hsx	1	A								
01 Feb	N05E36		341		10		5	Dso	4	B								
02 Feb	N05E24		338		190		9	Dsi	15	BGD	10	4			1			
03 Feb	N05E09		340		250		11	Ekc	15	BGD	6	9		3		2		
04 Feb	N07W03		339		400		14	Ekc	20	BGD	9	3		8				
05 Feb	N07W18		341		430		14	Ekc	32	BGD	6	1		4		1		
06 Feb	N08W31		341		410		15	Ekc	37	BGD	8	1		8		1		
07 Feb	N08W42		338		420		12	Ekc	40	BD	5	3		1				
08 Feb	N08W56		339		200		11	Eac	40	BD	5	1		3				
09 Feb	N07W69		339		190		13	Esi	8	BG	3							
10 Feb	N07W84		341		190		13	Esi	8	BG	4	1		2				
											56	23	0	29	3	2	0	0

Crossed West Limb.

Absolute heliographic longitude: 339

Region 3982

02 Feb	N22E19		343		30		5	Cao	6	B							
03 Feb	N22E05		344		30		5	Cao	3	B			1				
04 Feb	N21W08		344		10		4	Bxo	3	B							
05 Feb	N21W22		345		plage												
06 Feb	N21W36		346		plage												
07 Feb	N21W51		347		plage												
08 Feb	N21W65		348		plage												
09 Feb	N21W79		349		plage									0	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 344



Region Summary - continued

Date	Lat	CMD	Location		Sunspot Characteristics				Flares					
			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 3983														
04 Feb	N06E61		275		40	2	Hsx	1	A					
05 Feb	N06E47		275		40	2	Hsx	1	A					
06 Feb	N06E33		277		30	2	Hsx	1	A					
07 Feb	N06E18		278		40	2	Cao	2	B					
08 Feb	N06E04		279		40	2	Cso	2	B					
09 Feb	N06W07		277		40	10	Cso	3	B					
10 Feb	N06W22		279		80	10	Dso	4	B					
11 Feb	N06W37		281		60	4	Dao	5	B					
12 Feb	N06W52		283		20	3	Dro	4	B					
13 Feb	N06W66		283		10	2	Axx	1	A					
14 Feb	N06W80		284		plage					0	0	0	0	
										0	0	0	0	

Crossed West Limb.

Absolute heliographic longitude: 279

Region 3984

04 Feb	N16W15		351		85	9	Dai	15	BG			1	
05 Feb	N16W27		350		50	8	Cai	7	B	2			
06 Feb	N15W41		351		50	7	Cai	7	B	1		1	
07 Feb	N15W52		348		60	9	Dao	8	B				
08 Feb	N15W66		349		60	9	Dao	8	B	6		2	
09 Feb	N10W85		350		50	2	Cao	8	B		9	0	0
										4	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 351

Region 3985

04 Feb	N22E23		313		10	6	Bxo	4	B				
05 Feb	N22E06		317		10	6	Bxo	4	B				
06 Feb	N23W09		319		10	4	Bxo	2	B				
07 Feb	N23W23		319		20	4	Dro	3	B				
08 Feb	N23W37		320		5	5	Bxo	3	B				
09 Feb	N23W52		322		5	1	Axx	1	A				
10 Feb	N23W66		323		plage					0	0	0	0
11 Feb	N23W80		324		plage					0	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 317



Region Summary - continued

Date	Lat	CMD	Location		Sunspot Characteristics					Flares						
			Helio	Lon	Area 10^6 hemi.	Extent (helio)	Spot Class	Spot Count	Mag Class	X-ray			Optical			
										C	M	X	S	1	2	3
Region 3986																
05 Feb	N05E69		254		50	3	Hsx	1	A							
06 Feb	N06E56		254		50	2	Hsx	1	A							
07 Feb	N06E42		254		170	3	Hsx	1	A			2				
08 Feb	N06E27		256		170	3	Hsx	1	A							
09 Feb	N06E15		255		140	3	Hsx	2	A							
10 Feb	N06W00		257		140	3	Hsx	2	A							
11 Feb	N06W15		259		150	3	Hsx	2	A							
12 Feb	N06W30		261		140	3	Hsx	2	A							
13 Feb	N06W44		261		120	2	Hsx	1	A							
14 Feb	N06W51		255		70	3	Hsx	1	A							
15 Feb	N06W62		253		80	2	Hsx	1	A							
16 Feb	N05W76		254		90	3	Hsx	1	A							
										2	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 257

Region 3987

06 Feb	S09E65		245		30	2	Hsx	1	A							
07 Feb	S09E50		246		20	2	Hrx	2	A							
08 Feb	S09E36		247		20	2	Hrx	2	A							
09 Feb	S09E24		246		10	3	Hrx	3	A			1				
10 Feb	S09E10		247		10	3	Bxo	2	B							
11 Feb	S09W04		248		10	6	Bxo	6	B							
12 Feb	S09W18		249		plage											
13 Feb	S09W33		250		plage											
14 Feb	S07W47		251		plage											
15 Feb	S07W61		252		plage							1				
16 Feb	S07W75		253		plage								0	0	0	0

Still on Disk.

Absolute heliographic longitude: 248



Region Summary - continued

Date	Lat	CMD	Location		Sunspot Characteristics					Flares						
			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 3988																
07 Feb	S20W09		305		10		4	Bxo	4	B			0	0	0	0
08 Feb	S19W23		306		5		3	Bxo	4	B			0	0	0	0
09 Feb	S18W37		307		10		5	Cro	3	BG			0	0	0	0
10 Feb	S18W51		308		10		5	Bxo	3	B			0	0	0	0
11 Feb	S18W65		309		10		3	Axx	3	A			0	0	0	0
12 Feb	S18W79		310	plage									0	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 305

Region 3989

09 Feb	N18E64		206	120	2	Hsx	1	A								
10 Feb	N18E50		207	160	2	Hsx	1	A								
11 Feb	N18E36		208	170	3	Hsx	1	A								
12 Feb	N18E22		209	200	3	Hsx	1	A								
13 Feb	N18E07		210	250	3	Hhx	1	A	1							
14 Feb	N18W00		204	250	3	Hhx	1	A	1							
15 Feb	N18W14		205	270	3	Hhx	1	A								
16 Feb	N18W28		206	270	3	Hhx	1	A					2	0	0	0

Still on Disk.

Absolute heliographic longitude: 204

Region 3990

10 Feb	S09E68		189	220	3	Cao	3	B								
11 Feb	S09E54		190	260	6	Dko	3	BG	1							
12 Feb	S09E40		191	260	7	Dko	7	BG	1							
13 Feb	S09E26		191	310	9	Cki	7	BG	3	5						
14 Feb	S10E13		191	310	7	Dki	8	BG	2	2	1					
15 Feb	S09W00		191	310	13	Cki	18	BG	1							
16 Feb	S08W14		192	280	14	Cki	42	BG		6	2	0	7	1	0	0

Still on Disk.

Absolute heliographic longitude: 191



Region Summary - continued

Date	Lat	CMD	Location		Sunspot Characteristics				Flares			
			Helio	Lon	Area 10^6 hemi.	Extent (helio)	Spot Class	Spot Count	Mag Class	X-ray	Optical	
									S	1	2	3
									4			

Region 3991

11 Feb	S12E70	174	30	1	Hsx	1	A	1				
12 Feb	S12E58	173	30	7	Cso	3	B					
13 Feb	S12E44	173	20	2	Hrx	2	A					
14 Feb	S12E31	173	20	1	Hrx	1	A					
15 Feb	S13E17	174	10	2	Axx	2	A					
16 Feb	S13E03	175	20	4	Cro	6	B					
								1	0	0	0	0
									0	0	0	0

Still on Disk.

Absolute heliographic longitude: 175

Region 3992

12 Feb	S06W11	242	150	6	Dai	11	BG	2				
13 Feb	S06W26	243	210	9	Dai	16	BG	2	1			5
14 Feb	S07W40	244	90	12	Eai	11	BG					
15 Feb	S05W54	245	60	11	Eao	7	BG	1				
16 Feb	S05W67	245	70	14	Eao	5	BG	3				
								8	1	0	5	0
									0	0	0	0

Still on Disk.

Absolute heliographic longitude: 242

Region 3993

13 Feb	N15E74	143	250	5	Hhx	1	A					
14 Feb	N15E61	143	220	4	Hhx	1	A					
15 Feb	N16E47	144	220	4	Hsx	2	A					
16 Feb	N15E34	144	210	4	Hsx	3	A	1				
								1	0	0	0	0
									0	0	0	0

Still on Disk.

Absolute heliographic longitude: 144

Region 3994

13 Feb	S21E10	207	30	4	Dro	3	B					
14 Feb	S19W04	208	30	3	Dao	3	B	2			2	1
15 Feb	S19W18	209	30	5	Cro	6	B					
16 Feb	S21W32	208	40	5	Cao	9	B		2	0	0	0
								2	1	0	0	0
									0	0	0	0

Still on Disk.

Absolute heliographic longitude: 208



Region Summary - continued

Date	Lat	CMD	Location		Sunspot Characteristics				Flares						
			Helio Lon	Area 10^{-6} hemi. (helio)	Extent Class	Spot Count	Spot Class	Mag	X-ray C	X-ray M	X-ray X	Optical S	Optical 1	Optical 2	Optical 3
<i>Region 3995</i>															
14 Feb	S22W30		234	30	3	Cro	5	B	0	0	0	0	0	0	0
15 Feb	S22W44		235	20	5	Cso	2	B							
16 Feb	S23W58		236	40	2	Cao	2	B	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 234

Region 3996

15 Feb	S11E65		126	90	11	Eso	9	B	4						
16 Feb	S17E51		127	100	11	Eai	17	BG	1	5	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 127

Region 3997

14 Feb	N03E57		149	plage					1						
15 Feb	N03E42		149	30	6	Cao	5	B	1			1			
16 Feb	N03E28		150	40	6	Cai	56	B	1	3	0	0	1	0	0

Still on Disk.

Absolute heliographic longitude: 150

Region 3998

15 Feb	S14E81		111	plage					1						
16 Feb	S14E66		112	90	6	Cao	4	B	3	4	0	0	1	0	0

Still on Disk.

Absolute heliographic longitude: 112

Region 3999

16 Feb	N05E53		125	20	4	Cro	5	B	0	0	0	0	0	0	0
--------	--------	--	-----	----	---	-----	---	---	---	---	---	---	---	---	---

Still on Disk.

Absolute heliographic longitude: 125

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
information

https://www.swpc.noaa.gov/sites/default/files/images/u2/Usr_guide.pdf -- User
Guide

