Space Weather Highlights **SWPC PRF 2579**
27 January - 02 February 2025 **03 February 2025**

Solar activity ranged from low to moderate levels (R2-Moderate). Minor (R1-Minor) levels were observed on 27-29 Jan, 31 Jan and 01-02 Feb. Moderate (R2-Moderate) levels were observed on 31 Jan and 02 Feb. Region 3976 (N13, L=001, class/area Ekc/260 on 02 Feb) produced 31 C-class flares and 2 M-class flares, the largest an M2.6 at 27/0812 UTC. Region 3977 (N19, L=002, class/area Cao/120 on 02 Feb produced 10 C-class flares and 6 M-class flares, the largest an M5.1 at 02/1404 UTC.

Region 3978 (N11, L=350, class/area Dai/200 on 02 Feb) produced 5 C-class flares and 1 M-class flare, the largest an M6.7/1n at 31/1406 UTC. Associated with this event was a 270 pfu 10cm burst and a 673 km/s Type II sweep. Region 3981 (N05, L=338, class/area Dsi/190 on 02 Feb) produced 10 C-class flares and 4 M-class flares, the largest an M4.1 at 02/2324 UTC. All other active regions were either quiet or contributed C-class events. Potential Earth-directed CMEs were observed on 29 and 31 Jan.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit was at high levels on 02 Feb with a maximum flux of 1,653 pfu at 02/1550 UTC. Normal to moderate levels were observed on 27-31 Jan and 01 Feb.

Geomagnetic field activity was at quiet to active levels. Unsettled to active levels were observed on 27-28 Jan due to weak CME effects. Mostly quiet levels were observed on 29-31 Jan. Unsettled to active levels were observed on 01-02 Feb due to positive polarity CH HSS effects. Solar wind parameters were slightly enhanced on 27-29 Jan due to weak CME effects. Greater enhancements were observed on 01-02 Feb with total field at highs of 18 nT and the Bz component reaching -17 nT at times. Wind speeds increased from about 410 km/s to about 750 km/s late on 01 Feb.

Space Weather Outlook
03 February - 01 March 2025

Solar activity is expected to be at R1-R2 (Minor-Moderate) levels throughout a majority of the outlook period, all due to numerous, significant solar regions expected on the solar disk.

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 03-04 Feb, 18-19 Feb, 27-28 Feb and 01 Mar, all due to CH HSS effects. Normal to moderate levels are expected on 05-17 Feb and 20-26 Feb.

Geomagnetic field activity is expected to be at unsettled to active levels on 03-05 Feb due to a combination of positive polarity CH HSS and weak CME effects. Unsettled to active levels are

expected on 10-19 Feb due to recurrent negative polarity CH HSS effects. Unsettled to minor storm (G1-Minor) levels are expected on 27-28 Feb and 01 Mar due to positive polarity CH HSS effects.

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
27 January	162	146	535	C1.8	3	1	0	0	0	0	0	0
28 January	171	128	460	C1.7	5	1	0	0	0	0	0	0
29 January	173	161	540	C1.5	10	1	0	0	0	0	0	0
30 January	184	144	560	C1.6	9	0	0	1	0	0	0	0
31 January	207	141	660	C1.9	13	3	0	13	1	0	0	0
01 February	188	145	660	C1.4	8	1	0	0	0	0	0	0
02 February	216	156	910	C1.7	14	6	0	1	1	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
27 January	3.0e+05	1.6e+04	3.4e+07
28 January	9.4e+05	1.6e+04	3.2e+06
29 January	1.8e+05	1.6e+04	1.2e+06
30 January	6.6e+05	1.6e+04	1.5e+06
31 January	5.8e+05	1.6e+04	9.1e+05
01 February	1.4e+06	1.5e+04	1.3e+06
02 February	8.3e+05	1.6e+04	1.3e+07

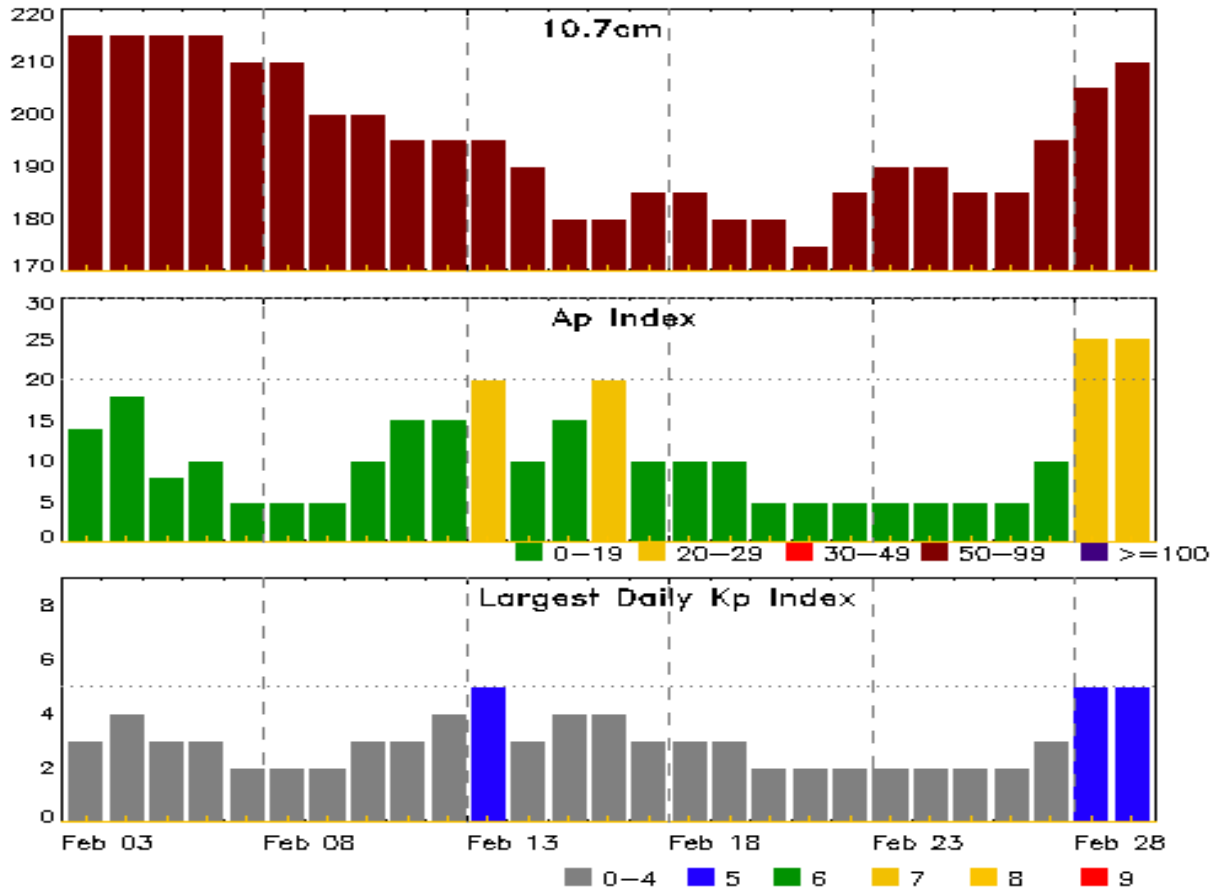
Daily Geomagnetic Data

Date	Middle Latitude Fredericksburg		High Latitude College		Estimated Planetary	
	A	K-indices	A	K-indices	A	K-indices
27 January	6	0-1-1-2-2-2-2-3	12	0-0-1-3-4-5-1-1	8	0-0-2-2-2-3-2-3
28 January	8	2-1-0-2-3-3-2-2	19	0-0-0-3-6-3-4-3	12	2-2-1-2-3-3-4-3
29 January	6	2-1-1-2-2-1-2-2	12	1-2-1-4-4-4-1-0	7	3-1-1-2-2-2-1-2
30 January	4	1-1-0-0-2-1-2-2	2	0-0-0-0-0-1-2-2	6	1-1-1-1-1-1-2-3
31 January	5	1-1-0-1-2-2-2-2	9	1-0-0-4-4-2-1-1	8	2-1-1-2-2-2-2-3
01 February	21	4-3-3-3-4-4-4-3	46	2-2-3-3-7-7-4-3	26	4-4-4-3-4-4-4-4
02 February	18	2-4-3-3-4-4-3-2	40	2-2-5-6-6-6-2-2	22	4-4-4-3-4-4-3-2

Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
27 Jan 1430	ALERT: Electron 2MeV Integral Flux >= 1000pfu	27/1415
28 Jan 0847	ALERT: Type II Radio Emission	28/0806
28 Jan 2051	WARNING: Geomagnetic K = 4	28/2021 - 29/0600
28 Jan 2057	ALERT: Geomagnetic K = 4	
29 Jan 1854	ALERT: Type II Radio Emission	29/1821
30 Jan 1706	WATCH: Geomagnetic Storm Category G1 predicted	
31 Jan 1358	ALERT: X-ray Flux exceeded M5	31/1358
31 Jan 1418	SUMMARY: 10cm Radio Burst	31/1348 - 1402
31 Jan 1420	ALERT: Type II Radio Emission	31/1356
31 Jan 1430	SUMMARY: X-ray Event exceeded M5	31/1340 - 1425
01 Feb 0024	WARNING: Geomagnetic K = 4	01/0023 - 1800
01 Feb 0240	ALERT: Geomagnetic K = 4	
01 Feb 1352	ALERT: Type II Radio Emission	01/1328
01 Feb 1459	WARNING: Geomagnetic K = 5	01/1457 - 2359
01 Feb 1459	EXTENDED WARNING: Geomagnetic K = 4	01/0023 - 02/0600
02 Feb 0515	EXTENDED WARNING: Geomagnetic K = 4	01/0023 - 02/2359
02 Feb 0622	ALERT: Type II Radio Emission	02/0540
02 Feb 1040	ALERT: Type II Radio Emission	02/1018
02 Feb 1405	ALERT: X-ray Flux exceeded M5	02/1404
02 Feb 1415	SUMMARY: X-ray Event exceeded M5	02/1358 - 1408
02 Feb 1546	ALERT: Electron 2MeV Integral Flux >= 1000pfu	02/1530
02 Feb 1551	WARNING: Geomagnetic K = 5	02/1550 - 2359

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
03 Feb	215	14	3	17 Feb	185	10	3
04	215	18	4	18	185	10	3
05	215	8	3	19	180	10	3
06	215	10	3	20	180	5	2
07	210	5	2	21	175	5	2
08	210	5	2	22	185	5	2
09	200	5	2	23	190	5	2
10	200	10	3	24	190	5	2
11	195	15	3	25	185	5	2
12	195	15	4	26	185	5	2
13	195	20	5	27	195	10	3
14	190	10	3	28	205	25	5
15	180	15	4	01 Mar	210	25	5
16	180	20	4				

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
27 Jan	0752	0812	0833	M2.6	0.043			3976				
28 Jan	1941	1945	1949	M1.7	0.005			3977		13		
29 Jan	0336	0408	0421	M1.0	0.015			3977				
31 Jan	0548	0610	0620	M1.0	0.001			3976				
31 Jan	1340	1406	1425	M6.7	0.110	1N	N11E43	3978			130	
31 Jan	2014	2023	2028	M1.8	0.007	SF	N23E28	3977		7700	180	
01 Feb	1314	1319	1323	M2.4	0.008			3977		10000	110	
02 Feb	1001	1012	1021	M3.0	0.017			3981				1
02 Feb	1241	1250	1300	M1.4	0.011			3981				
02 Feb	1358	1404	1408	M5.1	0.012			3977		1500	110	
02 Feb	1508	1513	1517	M1.2	0.004			3977				
02 Feb	1521	1533	1543	M2.7	0.025			3981				
02 Feb	2309	2324	2342	M4.1	0.050			3981				

Flare List

	Time			Optical			
Date	Begin	Max	End	X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
27 Jan	0130	0139	0146	C3.8			3961
27 Jan	0507	0516	0523	C4.4			3976
27 Jan	0752	0812	0833	M2.6			3976
27 Jan	1634	1644	1654	C3.4			3976
28 Jan	1303	1321	1337	C4.9			3976
28 Jan	1553	1600	1604	C3.3			3976
28 Jan	1655	1705	1714	C5.3			3969
28 Jan	1756	1806	1815	C4.7			
28 Jan	1941	1945	1949	M1.7			3977
28 Jan	2347	2355	0003	C3.3			3976
29 Jan	0300	0309	0319	C3.7			3976
29 Jan	0336	0408	0421	M1.0			3977
29 Jan	0940	0951	1004	C2.6			3978
29 Jan	1159	1207	1213	C2.5			3965
29 Jan	1306	1313	1319	C2.4			3978
29 Jan	1802	1810	1814	C3.3			
29 Jan	1849	1857	1911	C2.3			3967
29 Jan	1911	1917	1922	C2.4			3976

Flare List

Date	Time			Optical			
	Begin	Max	End	X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
29 Jan	2102	2108	2113	C2.9			3976
29 Jan	2139	2209	2227	C5.9			3978
29 Jan	2227	2246	2305	C6.5			3976
30 Jan	0022	0026	0030	C4.0			3976
30 Jan	0527	0536	0548	C2.5			3976
30 Jan	1121	1129	1147	C2.0			3978
30 Jan	1200	1213	1217	C3.8			3976
30 Jan	1323	1332	1342	C2.1			3976
30 Jan	1342	1416	1443	C8.1			3976
30 Jan	2125	2139	2146	C4.1	SF	N13E46	3976
30 Jan	2248	2252	2258	C2.6			3976
30 Jan	2349	0001	0010	C3.8			3976
31 Jan	0128	0133	0138	C2.5			3976
31 Jan	0215	0228	0238	C2.9			3976
31 Jan	0312	0319	0332	C4.3			3977
31 Jan	0420	0427	0435	C3.3			3976
31 Jan	0534	0545	0548	C4.4			3976
31 Jan	0548	0610	0620	M1.0			3976
31 Jan	0844	0844	0847		SF	N12E40	3976
31 Jan	0905	0908	0923	C2.5	SF	N12E40	3976
31 Jan	0956	1010	1012	C5.4	SF	N13E38	3976
31 Jan	1012	1026	1032	C6.1			3976
31 Jan	1054	1058	1059		SF	N18E32	3977
31 Jan	1101	1108	1116	C4.8			3976
31 Jan	1124	1131	1135	C5.2			3977
31 Jan	1201	1212	1218	C3.4	SF	N13E37	3976
31 Jan	1340	1406	1425	M6.7	1N	N11E43	3978
31 Jan	1511	1515	1524		SF	N14E38	3976
31 Jan	1534	1535	1542		SF	S08E55	3980
31 Jan	1658	1703	1709	C5.4	SF	N15E36	3976
31 Jan	1700	1702	1704		SF	N22E30	3977
31 Jan	1744	1749	1755	C5.8			3977
31 Jan	1904	1911	1912		SF	N14E34	3976
31 Jan	1922	1922	1925		SF	N19E34	3976
31 Jan	2014	2023	2028	M1.8	SF	N23E28	3977
31 Jan	2048	2050	2109		SF	N15E34	3976
01 Feb	0140	0148	0155	C7.1			3977
01 Feb	0231	0241	0250	C2.6			3976

Flare List

Date	Time			Optical			
	Begin	Max	End	X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
01 Feb	0541	0552	0558	C3.1			3977
01 Feb	0839	0856	0903	C6.0			3976
01 Feb	0956	1002	1006	C2.4			3977
01 Feb	1125	1132	1137	C4.0			3978
01 Feb	1314	1319	1323	M2.4			3977
01 Feb	1951	1958	2005	C1.9			3977
01 Feb	2253	2301	2311	C1.8			3976
02 Feb	0108	0112	0116	C2.4			3976
02 Feb	0246	0253	0259	C2.3			3976
02 Feb	0508	0514	0528	C2.0			3981
02 Feb	0529	0535	0544	C2.3			3977
02 Feb	0728	0737	0745	C3.0			3981
02 Feb	1001	1012	1021	M3.0			3981
02 Feb	1154	1200	1209	C6.5			3981
02 Feb	1241	1250	1300	M1.4			3981
02 Feb	1315	1324	1337	C6.2			3981
02 Feb	1358	1404	1408	M5.1			3977
02 Feb	1457	1506	1508	C5.6			3981
02 Feb	1508	1513	1517	M1.2			3977
02 Feb	1521	1533	1543	M2.7			3981
02 Feb	B1707	1751	2100		1F	N06E28	3981
02 Feb	1912	1920	1926	C4.0			3981
02 Feb	1926	1948	2000	C8.2			3981
02 Feb	2040	2059	2104	C4.9			3981
02 Feb	2104	2122	2133	C7.1	SF	N18W01	3977
02 Feb	2133	2140	2145	C6.6			3981
02 Feb	2250	2254	2258	C7.5			3981
02 Feb	2309	2324	2342	M4.1			3981

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 3952												
04 Jan	N19W01	25	10	3	Bxo	2	B								
05 Jan	N18W15	26	10	4	Axx	3	A								
06 Jan	N19W26	24	10	1	Axx	1	A								
07 Jan	N19W41	26	10	1	Axx	1	A								
08 Jan	N19W57	28	10	1	Axx	1	A								
09 Jan	N19W70	28	plage												
10 Jan	N19W84	29	plage												
								0	0	0	0	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 25

			Region 3961												
14 Jan	S09E70	181	180	6	Dao	3	B	2			4				
15 Jan	S09E58	181	220	13	Eac	15	BG	2							
16 Jan	S09E45	181	340	11	Eki	15	BG				2				
17 Jan	S09E32	181	600	11	Eki	25	BG	5	1		2				
18 Jan	S09E19	181	720	12	Ekc	22	BGD	3			6				
19 Jan	S09E06	181	780	13	Ekc	22	BGD	3			1				
20 Jan	S09W08	181	800	16	Fkc	70	BGD				1				
21 Jan	S10W21	181	780	15	Ekc	50	BGD				3				
22 Jan	S10W35	182	700	15	Ekc	32	BG	3	1			1			
23 Jan	S10W48	182	660	13	Ekc	27	BG	3			5				
24 Jan	S10W62	183	460	13	Eki	15	BG	2	1		6	1			
25 Jan	S10W76	184	460	13	Eki	15	BG	6							
26 Jan	S10W90	184	320	11	Eki	12	BG	2							
								31	3	0	30	2	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 181

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 3962													
14 Jan	N17E82	170	40	3	Hsx	1	A	1							
15 Jan	N17E68	171	80	11	Eai	6	BGD	2							
16 Jan	N17E54	172	120	10	Dso	4	B								
17 Jan	N17E41	172	120	9	Dso	6	B								
18 Jan	N18E28	172	100	9	Cso	6	B								
19 Jan	N18E14	173	110	8	Cso	5	B								
20 Jan	N18E02	171	120	10	Csi	20	BG								
21 Jan	N18W12	172	120	10	Cao	13	BG								
22 Jan	N18W29	176	100	3	Cao	4	B								
23 Jan	N17W41	175	60	2	Hax	3	A	2			1				
24 Jan	N18W54	175	30	1	Hax	2	A								
25 Jan	N18W68	176	30	1	Hax	2	A	1			1				
26 Jan	N18W82	176	30	1	Hax	2	A								
27 Jan	N18W96	177	30	1	Hax	2	A								
								6	0	0	2	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 171

		Region 3965													
16 Jan	N15E67	159	90	3	Hsx	1	A	1							
17 Jan	N15E53	160	100	3	Hsx	1	A								
18 Jan	N14E39	161	140	3	Cso	3	B								
19 Jan	N14E30	157	140	3	Cso	3	B	1							
20 Jan	N14E14	159	140	5	Cao	6	B								
21 Jan	N14W00	160	100	5	Cao	15	B	1							
22 Jan	N14W14	161	80	5	Cao	6	B								
23 Jan	N14W27	161	60	3	Cao	3	B	1							
24 Jan	N15W42	163	30	4	Hax	3	A								
25 Jan	N15W56	164	30	4	Cao	3	B								
26 Jan	N15W70	164	10	1	Axx	2	A								
27 Jan	N13W81	162	10	1	Axx	1	A								
								4	0	0	0	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 160

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 3967												
17 Jan	S18E72	141	30	2	Hax	2	A								
18 Jan	S17E57	143	60	3	Dao	2	B								
19 Jan	S17E41	146	60	6	Dso	2	B								
20 Jan	S17E26	147	60	10	Cso	5	B								
21 Jan	S17E12	148	110	11	Eai	30	BG		1		1				
22 Jan	S16W02	149	40	8	Cri	10	B								
23 Jan	S15W15	149	50	9	Bxi	6	B	1			1				
24 Jan	S15W26	147	20	6	Cro	4	B	1			1				
25 Jan	S15W40	148	20	6	Cso	4	B	1			1				
26 Jan	S15W54	148	20	6	Dso	4	B								
27 Jan	S17W65	146	30	7	Dro	4	B								
28 Jan	S17W79	147	30	7	Dro	4	B								
29 Jan	S17W92	147	30	7	Dro	4	B	1							
								4	1	0	4	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 149

			Region 3969												
19 Jan	S06E59	128	20	5	Bxo	5	B								
20 Jan	S06E45	128	40	8	Dri	25	BG								
21 Jan	S06E31	129	40	10	Dri	24	BG								
22 Jan	S06E17	130	60	10	Dri	12	B								
23 Jan	S06E04	130	80	10	Dri	14	B	2				1			
24 Jan	S06W10	131	30	10	Dro	6	B				1				
25 Jan	S06W25	133	30	10	Cao	6	B								
26 Jan	S06W40	134	30	10	Cao	6	B								
27 Jan	S06W53	134	plage												
28 Jan	S06W67	135	plage					1							
29 Jan	S06W81	136	plage												
								3	0	0	1	1	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 130

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 3970												
20 Jan	N16E21	152	10	4	Bxi	6	B								
21 Jan	N16E09	151	20	4	Bxi	9	B								
22 Jan	N16W04	151	10	4	Bxo	3	B								
23 Jan	N15W14	148	10	1	Axx	1	A								
24 Jan	N15W28	149	plage												
25 Jan	N15W42	150	plage												
26 Jan	N15W56	150	plage												
27 Jan	N15W70	151	plage												
28 Jan	N15W84	152	plage												
								0	0	0	0	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 151

			Region 3971												
20 Jan	N12E03	170	30	3	Cri	7	B								
21 Jan	N11W13	173	10	2	Axx	2	A								
22 Jan	N11W27	174	plage												
23 Jan	N14W35	169	60	4	Dao	11	BG								
24 Jan	N13W49	170	170	6	Dai	13	BG	1			1				
25 Jan	N13W63	171	170	6	Dac	13	BG	2							
26 Jan	N13W77	171	170	6	Dai	13	BG	2							
27 Jan	N13W89	170	170	6	Dai	13	BG								
								5	0	0	1	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 170

			Region 3972												
22 Jan	S18E06	141	40	7	Csi	7	B								
23 Jan	S19W07	141	80	6	Dso	10	B	1							
24 Jan	S19W21	142	40	7	Dao	6	B								
25 Jan	S19W35	143	40	7	Dao	6	B								
26 Jan	S19W49	143	20	7	Cao	6	B								
27 Jan	S19W57	138	20	4	Cro	6	B								
28 Jan	S19W71	139	40	5	Cao	10	B								
29 Jan	S19W84	139	40	5	Cao	7	B								
								1	0	0	0	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 141

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 3973												
25 Jan	N13W02	109	30	3	Dao	2	B								
26 Jan	N13W16	110	20	3	Cao	3	B								
27 Jan	N13W30	111	plage												
28 Jan	N13W44	112	plage												
29 Jan	N13W58	113	plage												
30 Jan	N13W72	114	plage												
31 Jan	N13W86	115	10	1	Axx	1	A								
								0	0	0	0	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 109

			Region 3974												
26 Jan	S18E72	22	70	2	Hax	2	A								
27 Jan	S17E61	20	90	5	Cao	12	B								
28 Jan	S17E48	20	90	5	Dai	13	BD								
29 Jan	S17E34	21	90	4	Dac	15	BD								
30 Jan	S17E20	22	120	4	Dac	15	B								
31 Jan	S17E06	23	110	4	Cao	9	B								
01 Feb	S17W08	23	110	4	Cao	9	B								
02 Feb	S17W20	22	90	6	Cao	9	B								
								0	0	0	0	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 23

			Region 3975												
27 Jan	N15W55	136	20	5	Bxi	8	B								
28 Jan	N15W70	138	20	5	Bxo	3	B								
29 Jan	N15W83	138	10	5	Bxo	2	B								
								0	0	0	0	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 136

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 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							
								31	2	0	10	0	0	0	0

Still on Disk.
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				
								10	6	0	4	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 2

			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								
								5	1	0	0	1	0	0	0

Still on Disk.
Absolute heliographic longitude: 350

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 3979												
29 Jan	S10W13	68	40	4	Dro	5	B								
30 Jan	S10W27	69	30	4	Cso	5	B								
31 Jan	S10W41	70	plage												
01 Feb	S10W55	70	10	2	Bxo	2	B								
02 Feb	S10W69	71	10	2	Bxo	2	B								
								0	0	0	0	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 68

			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								
								0	0	0	1	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 343

			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			
								10	4	0	0	1	0	0	0

Still on Disk.
Absolute heliographic longitude: 338

			Region 3982												
02 Feb	N22E19	343	30	5	Cao	6	B								
								0	0	0	0	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 343

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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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