Space Weather Highlights **SWPC PRF 2519**
04 December - 10 December 2023 **11 December 2023**

Solar activity ranged from low to high levels this period with Regions 3511 (S22, L=216, class/area=Fsi/180 on 09 Dec) and 3513 (N19, L=220, class/area=Eai/220 on 10 Dec) being the primary sources of flare activity. The largest event observed was an M5.4/1b flare (R2/Moderate) at 08/2307 UTC from Region 3511. In addition to the M5.5 event, Region 3511 produced four R1 (Minor) events over 08-10 Dec. Region 3513 produced five R1 (Minor) events over 05-06 Dec. Despite the flare activity and a number of filament eruptions observed throughout the week, no Earth-directed CMEs were detected.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit reached high levels 08-09 Dec, with normal to moderate levels observed on 04-07 and 10 Dec.

Geomagnetic field activity was at quiet to unsettled levels over 04-06 Dec due to a combination of weak CME (from 01 Dec) influences on 04-05 Dec and negative polarity CH HSS influences on 05-06 Dec. Quiet conditions and a background solar wind environment prevailed over 07-10 Dec.

Space Weather Outlook
11 December - 06 January 2024

Solar activity is likely to reach moderate to high levels on 11-12 Dec due to the flare potential of Regions 3511 and 3513. Solar activity is expected to be low with a chance for R1-R2 (Minor-Moderate) flare events throughout the remainder of the outlook period.

No proton events are expected at geosynchronous orbit.

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

Geomagnetic field activity is expected to be quiet and unsettled over 11-14 Dec due to positive polarity CH HSS influences. Quiet to unsettled levels are expected over 15-20 Dec, with active conditions likely on 18 Dec and G1 (Minor) storms likely on 19 Dec, due to positive polarity CH HSS influences. G1 (Minor) storms are likely on 22 Dec, with active conditions likely on 23 Dec, due to positive polarity CH HSS effects. Quiet to unsettled levels are expected on 30 Dec-02 Jan, with active conditions likely on 01 Jan, due to negative polarity CH HSS influences. Quiet levels and background solar wind 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
04 December	138	113	660	B7.1	9	0	0	5	0	0	0	0
05 December	142	133	800	B9.7	22	3	0	5	4	1	0	0
06 December	130	125	780	B6.3	13	2	0	13	1	1	0	0
07 December	135	121	710	B8.3	10	0	0	4	0	0	0	0
08 December	133	125	690	B9.6	14	1	0	6	1	0	0	0
09 December	128	125	600	B9.6	17	2	0	10	0	0	0	0
10 December	127	120	550	B7.6	14	2	0	2	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
04 December	1.8e+05	1.7e+04	1.5e+06
05 December	1.0e+05	1.7e+04	2.2e+06
06 December	5.4e+04	1.8e+04	2.5e+07
07 December	9.6e+04	1.8e+04	4.1e+07
08 December	1.2e+05	1.8e+04	6.6e+07
09 December	6.8e+04	1.8e+04	5.0e+07
10 December	8.5e+04	1.8e+04	4.0e+07

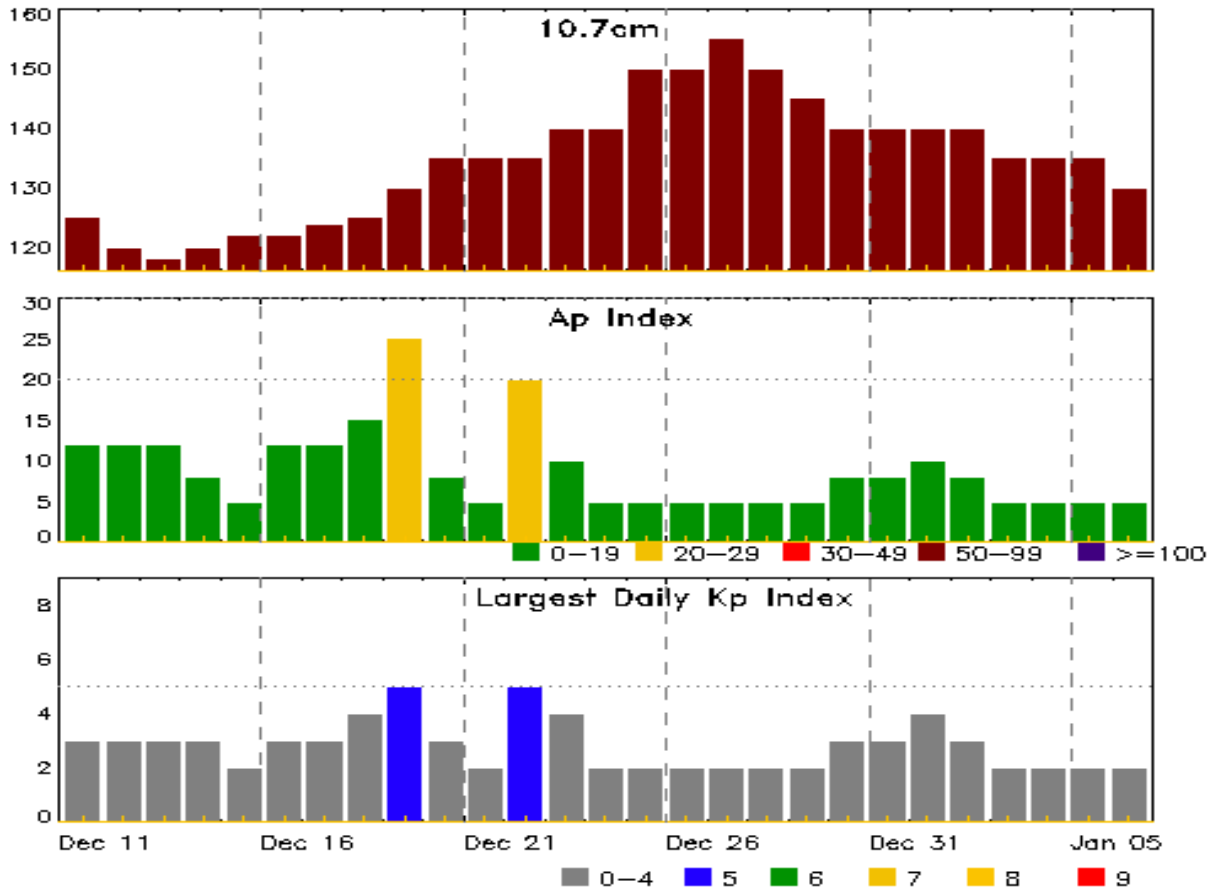
Daily Geomagnetic Data

Date	Middle Latitude Fredericksburg		High Latitude College		Estimated Planetary	
	A	K-indices	A	K-indices	A	K-indices
04 December	9	2-2-3-2-2-3-2-1	14	1-1-4-4-4-3-2-1	9	2-2-3-3-2-2-2-1
05 December	9	3-3-2-2-3-1-1-2	32	1-4-2-6-6-4-3-3	15	3-3-3-3-3-3-2-3
06 December	7	2-2-2-2-2-2-2-1	25	3-2-5-5-5-3-3-2	10	3-3-3-2-3-3-2-2
07 December	4	1-0-1-1-1-2-2-2	4	1-1-2-2-2-0-1-0	5	1-1-1-1-1-1-2-2
08 December	4	1-1-1-1-1-2-1-1	3	0-0-1-1-0-2-2-1	5	1-0-1-1-1-2-2-1
09 December	2	0-0-0-1-1-2-0-1	0	0-0-1-0-0-0-0-0	3	0-0-1-1-0-1-1-0
10 December	4	0-1-1-1-2-2-1-1	2	0-1-2-0-1-0-0-0	3	1-1-1-0-1-1-1-1

Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
04 Dec 0702	WARNING: Geomagnetic K = 4	04/0700 - 2359
05 Dec 0451	WARNING: Geomagnetic K = 4	05/0451 - 1200
05 Dec 1147	EXTENDED WARNING: Geomagnetic K = 4	05/0451 - 1800
05 Dec 1755	EXTENDED WARNING: Geomagnetic K = 4	05/0451 - 06/0300
08 Dec 1308	ALERT: Electron 2MeV Integral Flux >= 1000pfu	08/1200
08 Dec 2307	ALERT: X-ray Flux exceeded M5	08/2305
08 Dec 2320	SUMMARY: X-ray Event exceeded M5	08/2256 - 2314
09 Dec 1333	CONTINUED ALERT: Electron 2MeV Integral Flux >= 1000pfu	08/1200

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
11 Dec	125	12	3	25 Dec	150	5	2
12	120	12	3	26	150	5	2
13	118	12	3	27	155	5	2
14	120	8	3	28	150	5	2
15	122	5	2	29	145	5	2
16	122	12	3	30	140	8	3
17	124	12	3	31	140	8	3
18	125	15	4	01 Jan	140	10	4
19	130	25	5	02	140	8	3
20	135	8	3	03	135	5	2
21	135	5	2	04	135	5	2
22	135	20	5	05	135	5	2
23	140	10	4	06	130	5	2
24	140	5	2				

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
05 Dec	0639	0644	0648	M1.5	0.005	1F		N18E87	3513	800		
05 Dec	2059	2110	2117	M1.0	0.006	1N		N20E70	3513			
05 Dec	2117	2120	2125	M1.4	0.006				3513			
06 Dec	0530	0541	0552	M2.1	0.014	2N		N18E66	3513			
06 Dec	2126	2144	2155	M2.3	0.020	1B		N20E55	3513			
08 Dec	2257	2307	2314	M5.4	0.027	1B		S21W47	3511			
09 Dec	0941	0955	1006	M1.5	0.013	SF		S21W54	3511			
09 Dec	1303	1319	1337	M1.0	0.015				3511	240		
10 Dec	0342	0353	0358	M2.3	0.009	SF		S20W66	3511			
10 Dec	2237	2243	2247	M1.4	0.005				3511			

Flare List

	Time			Optical			
Date	Begin	Max	End	X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
04 Dec	0055	0104	0110	C1.5			3511
04 Dec	0122	0126	0130	C8.1			3511
04 Dec	0243	0253	0304	C2.1	SN	N05E14	3507
04 Dec	0409	0421	0432	C1.2			
04 Dec	0911	0920	0934	C1.3			3507
04 Dec	1504	1516	1527	C1.3			
04 Dec	1638	1638	1650		SF	S13E01	3508
04 Dec	1640	1644	1651		SF	S14W01	3505
04 Dec	1930	1931	1934		SF	N22W43	3503
04 Dec	2314	2318	2325	C3.9			
04 Dec	2328	2339	2345	C4.7			3500
04 Dec	2351	2355	0002	C3.0	SF	N18E87	
05 Dec	0134	0138	0142	C1.4			
05 Dec	0142	0148	0152	C2.0			
05 Dec	0318	0324	0331	C5.9	2N	N18E87	
05 Dec	0339	0341	0344		SF	N18E87	
05 Dec	0424	0437	0446	C2.5			3494
05 Dec	0639	0644	0648	M1.5	1F	N18E87	3513
05 Dec	0654	0655	0657		SF	N18E81	
05 Dec	0854	0859	0907	C5.8	SF	S22E02	3510
05 Dec	0929	0936	0943	C3.8			3513

Flare List

Date	Time			Optical			
	Begin	Max	End	X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
05 Dec	1003	1010	1016	C3.0			3513
05 Dec	1100	1104	1108	C2.4			3510
05 Dec	1100	1104	1108	C2.4			3510
05 Dec	1147	1205	1207	C4.2			3513
05 Dec	1207	1215	1219	C4.7			3513
05 Dec	1327	1337	1345	C5.3			3513
05 Dec	1345	1351	1355	C5.2			3513
05 Dec	1521	1532	1535	C1.4			3513
05 Dec	1535	1540	1544	C2.9			3513
05 Dec	1551	1711	2007		1N	N20E70	3513
05 Dec	1657	1710	1713	C3.2			3513
05 Dec	1713	1725	1732	C7.4			3513
05 Dec	1742	1759	1855	C8.6	1N	S21W00	3511
05 Dec	1902	1906	1929		SF	S21W03	3511
05 Dec	1907	1917	1925	C5.6			3513
05 Dec	2032	2036	2041	C1.7			3500
05 Dec	2042	2120	2204	M1.0	1N	N20E70	3513
05 Dec	2117	2120	2125	M1.4			3513
05 Dec	2212	2255	2311	C5.0	SF	N20E70	3513
05 Dec	2319	2325	2333	C2.9			3513
06 Dec	0010	0015	0017		SF	N20E70	3513
06 Dec	0038	0041	0044		SF	N20E70	3513
06 Dec	0051	0058	0115	C3.8	SF	N20E70	3513
06 Dec	0245	0259	0310	C3.9	SF	N20E70	3513
06 Dec	0449	0501	0519	C2.6			
06 Dec	0530	0541	0552	M2.1	2N	N18E66	3513
06 Dec	0807	0817	0828	C9.4	SN	N18E64	3513
06 Dec	1132	1144	1200	C1.6			3513
06 Dec	1239	1248	1254	C1.7			3513
06 Dec	1318	1328	1336	C1.4			3513
06 Dec	1346	1401	1422	C3.6			3513
06 Dec	B1455	1456	1458		SF	N21W68	
06 Dec	B1506	1509	1507		SF	N20E59	3513
06 Dec	1508	1527	1537		SF	N21E61	3513
06 Dec	1527	1535	1539	C1.4	SF	N20E59	3513
06 Dec	1600	1606	1611	C3.2			3513
06 Dec	1625	1636	1646		SF	N20E59	3513
06 Dec	1704	1714	1723	C1.3			3507

Flare List

Date	Time			Optical			
	Begin	Max	End	X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
06 Dec	1808	1808	1811		SF	N11E66	3514
06 Dec	1847	1856	1903	C4.8	SF	N20E59	3513
06 Dec	2126	2144	2155	M2.3	1B	N20E55	3513
06 Dec	2250	2257	2305	C2.7	SF	N19E50	3513
07 Dec	0342	0351	0353	C1.9			3513
07 Dec	0353	0358	0402	C2.0			
07 Dec	0612	0619	0625	C7.6	SF	N20E51	3513
07 Dec	1031	1044	1052	C1.7			3511
07 Dec	1115	1122	1128	C1.4			3511
07 Dec	1205	1212	1218	C1.9			3511
07 Dec	1235	1241	1251	C1.3			3511
07 Dec	1802	1812	1816	C4.1	SF	N21E46	3513
07 Dec	2046	2057	2101	C8.1	SF	N21E44	3513
07 Dec	2221	2225	2234	C4.3	SF	N21E44	3513
08 Dec	0010	0014	0019	C2.7			3513
08 Dec	0059	0112	0123	C7.8			3513
08 Dec	0412	0423	0432	C2.2			3513
08 Dec	0559	0607	0615	C2.6			3513
08 Dec	0615	0621	0633	C3.3			3511
08 Dec	0810	0814	0820	C2.4			3513
08 Dec	0835	0848	0907	C2.3			3511
08 Dec	1106	1127	1148	C1.9	SF	N20E36	3513
08 Dec	B1216	U1217	1226		SF	N20E37	3513
08 Dec	1321	1340	1351	C2.6			3511
08 Dec	1411	1426	1444	C3.7			3511
08 Dec	1534	1542	1551	C2.7	SF	N19E35	3513
08 Dec	1715	1728	1735	C2.3	SF	S20W46	3511
08 Dec	1735	1742	1746	C2.6			3511
08 Dec	1735	1742	1746	C2.6			3511
08 Dec	2215	2216	2222		SF	N19E31	3513
08 Dec	2257	2307	2314	M5.4	1B	S21W47	3511
08 Dec	2306	2307	A2347		SF	S15W50	3508
09 Dec	0145	0156	0212	C2.0	SF	N15E25	3513
09 Dec	0230	0242	0302	C2.0			3510
09 Dec	0402	0410	0413	C1.6			3511
09 Dec	0413	0422	0432	C1.8			3513
09 Dec	0504	0518	0540	C3.7			3511
09 Dec	0635	0646	0651	C4.5	SF	S20W52	3511

Flare List

Date	Time			Optical			
	Begin	Max	End	X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
09 Dec	0651	0705	0717	C5.6			3511
09 Dec	0823	0828	0834	C2.5	SF	S21W54	3511
09 Dec	0834	0838	0844	C2.6			3511
09 Dec	0844	0852	0900	C3.4	SF	S22W43	3511
09 Dec	0928	0930	0942		SF	S21W54	3511
09 Dec	0941	0955	1006	M1.5	SF	S21W54	3511
09 Dec	1042	1048	1056	C4.3	SF	S22W56	3511
09 Dec	1303	1319	1337	M1.0			3511
09 Dec	1544	1548	1555	C1.2			3511
09 Dec	1600	1603	1610		SF	N18E18	3513
09 Dec	1719	1724	1741	C1.5	SF	N18E17	3513
09 Dec	1801	1814	1836	C2.0			3511
09 Dec	1915	1920	1925	C1.2	SF	N18E15	3513
09 Dec	1925	1935	1947	C4.7			3511
09 Dec	2346	2358	0035	C1.7			3511
10 Dec	0157	0206	0211	C2.0			3511
10 Dec	0254	0303	0309	C1.9			3511
10 Dec	0342	0353	0358	M2.3	SF	S20W66	3511
10 Dec	0436	0447	0459	C4.3			3511
10 Dec	0601	0611	0619	C1.3			3513
10 Dec	0702	0716	0727	C7.0	SF	S20W69	3511
10 Dec	0748	0754	0800	C1.8			3511
10 Dec	0810	0819	0824	C2.1			3511
10 Dec	1031	1042	1049	C6.6			3511
10 Dec	1141	1155	1215	C5.5			3511
10 Dec	1419	1428	1441	C3.9			3511
10 Dec	1622	1631	1638	C1.0			3511
10 Dec	2037	2047	2055	C7.3			3511
10 Dec	2217	2224	2228	C1.3			3511
10 Dec	2228	2233	2237	C5.5			3511
10 Dec	2237	2243	2247	M1.4			3511

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 3500												
23 Nov	S18E65	302	520	7	Dko	6	BGD								
24 Nov	S19E50	305	530	9	Dkc	6	BGD								
25 Nov	S18E36	306	560	8	Dkc	13	BGD								
26 Nov	S19E23	306	470	6	Dkc	10	BGD	2			1				
27 Nov	S20E08	307	320	6	Dkc	12	BG	1							
28 Nov	S19W05	307	160	8	Dkc	12	BG	1	2		2				
29 Nov	S18W18	307	210	11	Esc	25	BG	6			5				
30 Nov	S18W30	304	300	12	Ekc	24	BG	2							
01 Dec	S18W44	307	280	11	Ekc	15	BG	4	1		2				
02 Dec	S18W58	308	270	10	Ekc	12	BG	2			2				
03 Dec	S18W71	307	250	10	Dkc	9	BG	1							
04 Dec	S18W84	307	180	10	Dac	4	BG	1							
								20	3	0	12	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 307

			Region 3501												
23 Nov	S10E73	295	120	2	Hsx	1	A								
24 Nov	S09E58	297	60	2	Hsx	1	A								
25 Nov	S09E44	298	60	2	Hsx	1	A								
26 Nov	S09E32	297	60	2	Hsx	1	A								
27 Nov	S10E17	298	90	2	Hsx	1	A								
28 Nov	S09E04	298	20	2	Hsx	1	A								
29 Nov	S09W09	298	30	1	Hsx	1	A								
30 Nov	S09W21	295	40	1	Hsx	1	A								
01 Dec	S09W35	298	40	2	Hsx	1	A								
02 Dec	S08W49	299	30	2	Hsx	1	A								
03 Dec	S08W62	298	20	1	Hsx	1	A								
04 Dec	S09W76	299	20	2	Hsx	1	A								
05 Dec	S11W88	297	60	2	Hsx	3	A								
								0	0	0	0	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 298

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 3503													
25 Nov	N21E58	284	20	2	Cro	2	B	1							
26 Nov	N21E45	284	20	1	Cro	5	B								
27 Nov	N15E31	284	10	1	Hrx	1	A	1							
28 Nov	N15E18	284	10	1	Hrx	1	A								
29 Nov	N15E04	285	10	1	Hrx	1	A								
30 Nov	N21W06	282	0	1	Axx	1	A								
01 Dec	N19W20	283	10	3	Axx	2	A								
02 Dec	N19W34	284	plage					1			1				
03 Dec	N19W48	284	plage												
04 Dec	N19W62	285	plage								1				
05 Dec	N19W76	286	plage												
06 Dec	N19W90	287	plage												
								3	0	0	2	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 285

		Region 3505													
28 Nov	S17E69	233	20	3	Hax	1	A								
29 Nov	S18E55	234	30	3	Hsx	1	A								
30 Nov	S18E41	233	20	1	Hsx	1	A								
01 Dec	S17E29	234	30	2	Hsx	1	A								
02 Dec	S18E16	234	20	1	Hsx	1	A								
03 Dec	S17E03	233	20	2	Cso	3	B								
04 Dec	S17W12	235	30	1	Hsx	1	A				1				
05 Dec	S16W23	232	40	2	Hsx	1	A								
06 Dec	S16W37	233	30	1	Hsx	1	A								
07 Dec	S16W50	234	10	2	Axx	2	A								
08 Dec	S16W64	234	plage												
09 Dec	S16W78	235	plage												
								0	0	0	1	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 233

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 3506													
29 Nov	N15W24	313	10	3	Bxo	3	B								
30 Nov	N15W43	316	plage												
01 Dec	N15W57	320	plage												
02 Dec	N15W71	321	plage												
03 Dec	N15W85	321	plage												
								0	0	0	0	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 313

		Region 3507													
29 Nov	N08E70	219	60	3	Hsx	1	A	1							
30 Nov	N08E55	219	70	2	Hsx	1	A								
01 Dec	N08E40	223	80	3	Hsx	1	A								
02 Dec	N08E28	222	130	3	Hsx	1	A								
03 Dec	N08E14	222	130	3	Hsx	2	A								
04 Dec	N08W00	223	160	4	Cso	5	B	2			1				
05 Dec	N09W12	221	180	4	Cso	6	B								
06 Dec	N08W25	221	210	5	Cso	9	B	1							
07 Dec	N07W40	224	180	5	Cso	6	B								
08 Dec	N07W53	223	150	5	Cso	6	B								
09 Dec	N06W66	223	80	4	Cso	2	B								
10 Dec	N07W80	224	70	2	Hsx	1	A								
								4	0	0	1	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 223

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 3508													
29 Nov	S14E65	224	40	3	Hsx	1	A								
30 Nov	S15E53	221	40	2	Hsx	1	A								
01 Dec	S15E38	225	60	2	Hsx	1	A								
02 Dec	S15E25	225	60	2	Hsx	1	A								
03 Dec	S15E12	224	60	2	Hsx	1	A								
04 Dec	S15W02	225	60	2	Hsx	1	A				1				
05 Dec	S15W15	224	90	2	Hsx	1	A								
06 Dec	S14W28	224	80	2	Hsx	1	A								
07 Dec	S15W40	224	80	2	Hsx	1	A								
08 Dec	S15W54	224	60	2	Hsx	1	A				1				
09 Dec	S15W68	225	40	2	Hsx	1	A								
10 Dec	S16W82	226	30	2	Hax	1	A								
								0	0	0	2	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 225

		Region 3509													
01 Dec	N10W50	313	30	10	Cri	11	B								
02 Dec	N10W65	315	50	5	Cso	5	B	1							
03 Dec	N11W79	315	30	5	Cro	2	B								
								1	0	0	0	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 313

		Region 3510													
03 Dec	S15E22	214	30	3	Cri	6	B	1							
04 Dec	S15E08	215	130	6	Dai	12	B								
05 Dec	S15W06	215	150	8	Dai	22	B	3			1	1			
06 Dec	S15W20	216	100	10	Dai	12	B								
07 Dec	S15W33	217	90	11	Dso	9	B								
08 Dec	S15W48	218	50	6	Hax	6	A								
09 Dec	S15W63	220	20	3	Hax	3	A	1							
10 Dec	S15W75	219	10	3	Axx	3	A								
								5	0	0	1	1	0	0	0

Still on Disk.
Absolute heliographic longitude: 215

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 3511												
03 Dec	S23E23	213	10	3	Bxo	3	B								
04 Dec	S23E09	214	60	6	Dao	8	B	2							
05 Dec	S23W05	215	170	7	Dao	15	BG	1			1				
06 Dec	S22W19	215	170	9	Dao	11	BG								
07 Dec	S22W31	215	160	11	Dso	7	B	4							
08 Dec	S22W45	215	150	13	Esi	7	B	7	1		1	1			
09 Dec	S22W59	216	180	16	Fsi	11	BG	12	2		6				
10 Dec	S23W71	215	140	16	Fsi	9	BG	13	2		2				
								39	5	0	10	1	0	0	0

Still on Disk.
Absolute heliographic longitude: 215

			Region 3512												
04 Dec	S09E58	165	20	1	Hrx	1	A								
05 Dec	S09E42	167	30	1	Hsx	2	A								
06 Dec	S09E29	167	10	1	Axx	1	A								
07 Dec	S09E18	165	10	1	Axx	1	A								
08 Dec	S09E04	166	plage												
09 Dec	S09W10	167	plage												
10 Dec	S09W24	168	plage												
								0	0	0	0	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 166

			Region 3513												
05 Dec	N19E67	142	80	2	Cao	3	B	13	3		1	3			
06 Dec	N19E53	142	100	3	Dao	8	B	11	2		11	1	1		
07 Dec	N18E40	144	120	11	Eai	12	BG	5			4				
08 Dec	N19E27	143	120	12	Eai	17	BG	7			4				
09 Dec	N19E13	144	150	11	Eai	17	BG	4			4				
10 Dec	N19W01	145	220	13	Eai	16	BG	1							
								41	5	0	24	4	1	0	0

Still on Disk.
Absolute heliographic longitude: 145

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 3514													
06 Dec	N09E65	131	80	3	Dao	2	B				1				
07 Dec	N09E51	133	60	8	Dso	3	B								
08 Dec	N11E36	134	70	9	Dso	6	B								
09 Dec	N09E22	135	30	11	Cso	7	B								
10 Dec	N10E07	137	30	12	Cso	6	B								
								0	0	0	1	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 137

		Region 3515													
08 Dec	S15E74	96	30	1	Hax	1	A								
09 Dec	S15E61	96	30	1	Hsx	1	A								
10 Dec	S15E48	96	10	1	Axx	1	A								
								0	0	0	0	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 96

		Region 3516													
08 Dec	S19E74	96	60	2	Hsx	1	A								
09 Dec	S19E64	93	70	7	Cso	3	B								
10 Dec	S18E52	92	40	7	Cso	3	B								
								0	0	0	0	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 92

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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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