

**Space Weather Highlights**  
**02 December - 08 December 2024**

**SWPC PRF 2571**  
**09 December 2024**

Solar activity reached high levels on 08 Dec when Region 3912 (S07, L=80, class/area=Dai/220 on 07 Dec) produced an impulsive X2.2/2b flare at 08/0906 UTC; the largest event of the period. Associated with the X2.2 flare was a Castelli-U radio burst, a 870 sfu Tenflare, and a 360 sfu Type-II radio sweep. Regions 3912 and 3917 (S07, L=09, class/area=Dac/210 on 08 Dec) produced the bulk of the M-class flares (R1-Minor events) observed over the course of the week. No Earth-directed CMEs were detected as a result of this week's activity.

No proton events were observed at geosynchronous orbit.

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

Geomagnetic field activity reached active levels on 03 Dec due to the passage of a CME from 27 Nov. Quiet and quiet to unsettled levels were observed throughout the remainder of the period.

**Space Weather Outlook**  
**09 December - 04 January 2025**

Solar activity is likely to reach moderate levels. M-class flares (R1-R2/Minor-Moderate) are likely, with a slight chance for X-class flares (R3-Strong or greater), throughout much of the outlook period.

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

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

Geomagnetic field activity is expected to be quiet and unsettled over 09-14 Dec due to positive polarity CH HSS influences. Quiet and unsettled conditions are likely over 16-20 Dec, with active conditions possible on 19 Dec, due to negative polarity CH HSS influences.



### **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					
02 December	185	113	910	C1.5	8	0	0	7	0	0	0	0
03 December	185	126	850	C1.3	7	0	0	4	0	0	0	0
04 December	175	105	690	C1.8	8	3	0	5	0	0	0	0
05 December	175	101	640	C1.6	12	3	0	3	0	0	0	0
06 December	178	103	740	C1.7	15	1	0	5	0	0	0	0
07 December	183	91	740	C1.6	17	2	0	15	0	0	0	0
08 December	178	103	870	C1.5	12	1	1	3	1	1	0	0

### **Daily Particle Data**

Date	Proton Fluence (protons/cm <sup>2</sup> -day -sr)		>2MeV	Electron Fluence (electrons/cm <sup>2</sup> -day -sr)	
	>1 MeV	>10 MeV		>2MeV	
02 December	1.4e+05	1.4e+04			1.1e+06
03 December	2.0e+05	1.4e+04			1.6e+06
04 December	1.3e+05	1.4e+04			1.1e+06
05 December	1.0e+05	1.4e+04			1.6e+06
06 December	7.8e+04	1.4e+04			1.9e+06
07 December	1.1e+05	1.4e+04			1.7e+06
08 December	1.6e+05	1.4e+04			1.4e+06

### **Daily Geomagnetic Data**

Date	Middle Latitude		High Latitude		Estimated	
	A	K-indices	A	K-indices	A	K-indices
02 December	6	2-2-1-0-2-2-2-2	2	0-0-0-0-2-0-1-1	6	2-2-1-1-1-1-2-2
03 December	10	3-2-3-2-2-3-2-2	21	2-2-5-5-3-3-4-1	13	4-3-2-2-2-3-3-2
04 December	5	1-1-1-1-2-2-2-2	8	1-0-1-4-3-1-1-2	7	2-1-1-2-2-2-2-2
05 December	5	2-2-1-1-1-2-1-1	3	1-1-0-3-1-0-0-0	5	2-2-1-1-1-1-1-1
06 December	4	1-2-1-1-1-2-1-1	2	0-1-2-1-0-1-1-0	5	2-3-1-1-1-1-1-1
07 December	5	1-1-1-1-2-2-2-2	7	0-1-1-4-3-0-1-1	6	1-2-1-2-1-1-2-2
08 December	4	0-1-1-0-3-2-2-0	14	0-0-3-3-5-4-2-0	3	1-2-1-2-3-2-2-1

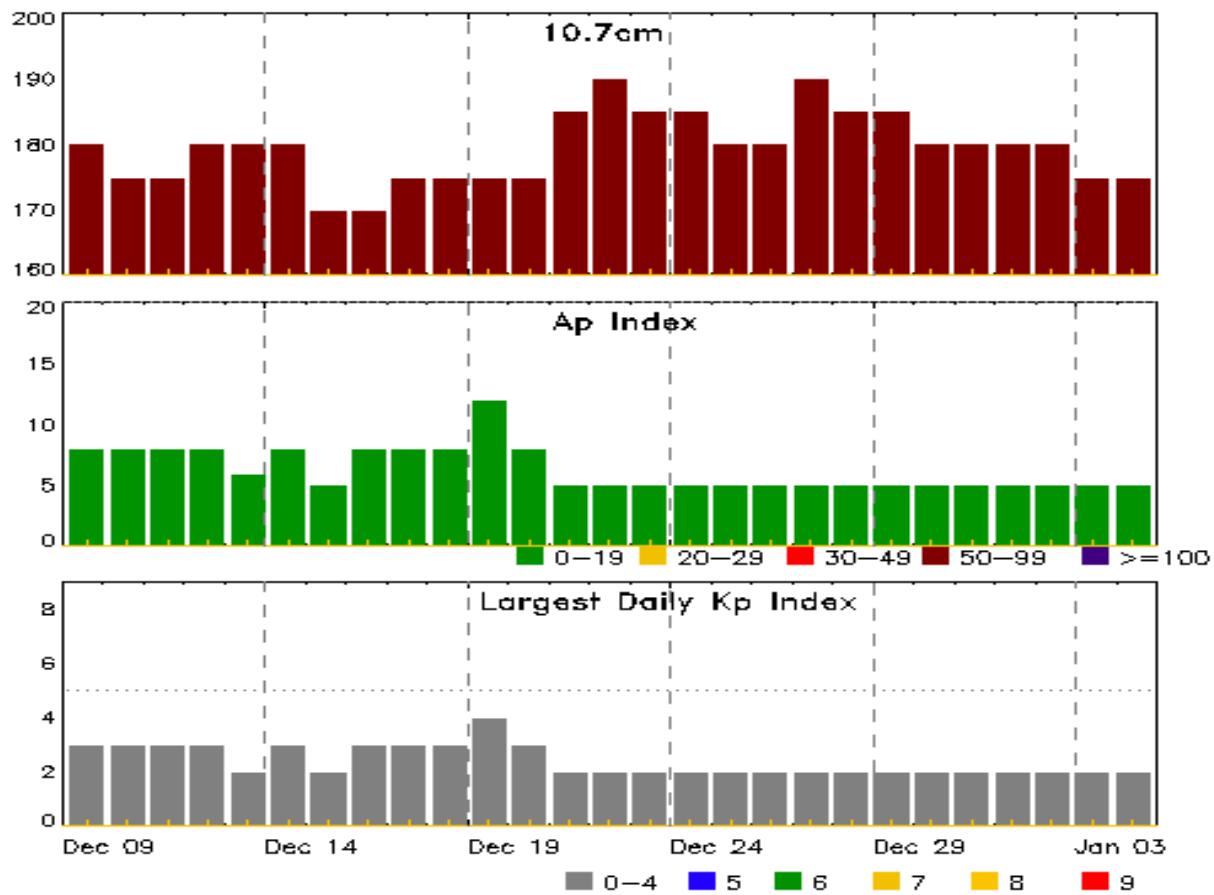


### *Alerts and Warnings Issued*

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
02 Dec 2322	WARNING: Geomagnetic K = 4	02/2321 - 03/0900
03 Dec 0309	ALERT: Geomagnetic K = 4	
03 Dec 0855	EXTENDED WARNING: Geomagnetic K = 4	02/2321 - 03/1500
04 Dec 1046	ALERT: Type II Radio Emission	04/1004
05 Dec 1111	ALERT: Type II Radio Emission	05/1040
08 Dec 0906	ALERT: X-ray Flux exceeded M5	08/0905
08 Dec 0921	SUMMARY: 10cm Radio Burst	08/0903 - 0906
08 Dec 0925	ALERT: Type II Radio Emission	08/0905
08 Dec 0928	SUMMARY: X-ray Event exceeded X1	08/0850 - 0910



## 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
09 Dec	180	8	3	23 Dec	185	5	2
10	175	8	3	24	185	5	2
11	175	8	3	25	180	5	2
12	180	8	3	26	180	5	2
13	180	6	2	27	190	5	2
14	180	8	3	28	185	5	2
15	170	5	2	29	185	5	2
16	170	8	3	30	180	5	2
17	175	8	3	31	180	5	2
18	175	8	3	01 Jan	180	5	2
19	175	12	4	02	180	5	2
20	175	8	3	03	175	5	2
21	185	5	2	04	175	5	2
22	190	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
04 Dec	0952	1000	1008	M2.3	0.001					130		2
04 Dec	2031	2046	2057	M1.3	0.016	SN	S15E58			3916		
04 Dec	2057	2105	2112	M1.4	0.012					3917		
05 Dec	0656	0709	0733	M1.0	0.016	SF	S07E66			3917		
05 Dec	0812	0820	0824	M1.1	0.004					3906		
05 Dec	1032	1040	1046	M2.5	0.011					3906		2
06 Dec	0906	0920	0942	M1.2	0.018	SF	S08E47			3917		
07 Dec	1300	1308	1315	M2.3	0.001	SF	S08E33			3917	180	
07 Dec	2153	2215	2226	M3.2	0.031	SN	S08E28			3917		
08 Dec	0850	0906	0910	X2.2	0.070	2B	S08W54			3912	3e+05	870
08 Dec	1600	1611	1618	M1.5	0.009	1N	S09W58			3912	93	73

## *Flare List*

Date	Time			Optical			
	Begin	Max	End	X-ray Class	Imp/ Brtns	Location Lat	Rgn #
02 Dec	0134	0141	0146	C2.7			3906
02 Dec	0346	0355	0401	C3.5			3912
02 Dec	0646	0705	0715	C4.1			
02 Dec	0754	0754	0755		SF	S15W42	3906
02 Dec	0758	0758	0803		SF	S15W42	3906
02 Dec	0956	1003	1012	C3.6			3906
02 Dec	1121	1133	1150	C4.1			3906
02 Dec	1518	1519	1523		SF	S14W47	3906
02 Dec	1617	1629	1641	C4.9			
02 Dec	1806	1817	1835	C2.5			
02 Dec	2132	2133	2136		SF	S06E26	3912
02 Dec	2152	2201	2204		SF	S07E24	3912
02 Dec	2214	2242	2301	C4.6			3912
02 Dec	2216	2217	2228		SF	S19W56	3906
02 Dec	2236	2246	2253		SF	S07E30	3912
03 Dec	0256	0300	0304	C5.4	SF	S07E22	3912
03 Dec	0534	0544	0549	C6.1	SF	S19W61	3906
03 Dec	0952	0958	1004	C3.4	SF	N16E65	3915
03 Dec	1001	1001	1005		SF	N16E65	3915
03 Dec	1317	1326	1342	C2.0			3916



## Flare List

Date	Time			Optical			
	Begin	Max	End	X-ray Class	Imp/Brtns	Location Lat CMD	Rgn #
03 Dec	1403	1412	1418	C2.4			3916
03 Dec	1815	1824	1832	C2.9			3916
03 Dec	2236	2247	2256	C5.4			3916
04 Dec	0314	0330	0346	C5.6			3906
04 Dec	0448	0455	0502	C3.9			3906
04 Dec	0852	0856	0904	C3.3			
04 Dec	0952	1000	1008	M2.3			
04 Dec	1137	1145	1151	C3.5			3906
04 Dec	1447	1453	1514	C4.4	SF	S15E60	3916
04 Dec	1528	1534	1543	C3.0			3906
04 Dec	1550	1552	1555		SF	S06E70	
04 Dec	1624	1632	1643		SF	S05W00	3912
04 Dec	1809	1814	1820	C2.5			
04 Dec	1833	1837	1841	C2.2			
04 Dec	2031	2046	2057	M1.3	SN	S15E58	3916
04 Dec	2047	2133	2218		SN	S09E68	3917
04 Dec	2057	2105	2112	M1.4			3917
05 Dec	0008	0016	0022	C5.3	SF	S15E57	3916
05 Dec	0623	0631	0638	C2.8			3906
05 Dec	0638	0641	0645	C3.3			3906
05 Dec	0656	0709	0733	M1.0	SF	S07E66	3917
05 Dec	0812	0820	0824	M1.1			3906
05 Dec	0849	0849	0855		SF	S06W08	3912
05 Dec	1032	1040	1046	M2.5			3906
05 Dec	1206	1212	1221	C2.7			3906
05 Dec	1250	1256	1300	C2.6			3906
05 Dec	1334	1347	1403	C3.6			3917
05 Dec	1455	1524	1536	C4.7			3917
05 Dec	1917	1930	1935	C3.8			3906
05 Dec	2037	2046	2053	C2.2			3906
05 Dec	2108	2115	2122	C6.2			3912
05 Dec	2144	2149	2153	C3.2			3906
05 Dec	2211	2218	2222	C3.4			3906
06 Dec	0057	0106	0112	C3.5			3906
06 Dec	0209	0216	0230	C2.9			3917
06 Dec	0436	0443	0450	C2.6			3912
06 Dec	0459	0510	0529	C3.8			3917
06 Dec	0554	0555	0606		SF	S06W21	3912



## Flare List

Date	Time			Optical			
	Begin	Max	End	X-ray Class	Imp/Brtns	Location Lat CMD	Rgn #
06 Dec	0642	0658	0709	C8.0	SF	S17E43	3916
06 Dec	0756	0805	0812	C4.8			
06 Dec	0906	0920	0942	M1.2	SF	S08E47	3917
06 Dec	1301	1328	1349	C3.0			3917
06 Dec	1349	1416	1430	C3.2			
06 Dec	1454	1459	1507	C5.9			3917
06 Dec	1552	1605	1619	C5.1			3917
06 Dec	1743	1754	1758	C3.9			3917
06 Dec	2108	2115	2119	C3.4			3912
06 Dec	2212	2218	2227	C2.8			3912
06 Dec	2252	2256	2300	C6.8	SF	S07W36	3912
06 Dec	2323	2329	2335	C4.8	SF	S07W37	3912
07 Dec	0010	0017	0024	C4.6			3917
07 Dec	0136	0145	0150	C3.2			3916
07 Dec	0209	0210	0211		SF	S05W38	3912
07 Dec	0223	0230	0234	C2.7			3917
07 Dec	0438	0446	0458	C3.1			3917
07 Dec	0530	0541	0549	C3.4			
07 Dec	0701	0708	0713	C2.7			
07 Dec	0742	0749	0753	C4.8	SF	S05W41	3912
07 Dec	0755	0800	0806	C3.4	SF	S08E37	3917
07 Dec	0850	0859	0912	C7.8	SN	S05W41	3912
07 Dec	0953	0953	0956		SF	N15W63	3910
07 Dec	1026	1030	1036	C7.0	SF	S07W43	3912
07 Dec	1040	1053	1118	C5.3			3917
07 Dec	1300	1308	1315	M2.3	SF	S08E33	3917
07 Dec	1456	1502	1506	C2.6			3912
07 Dec	B1515	1515	1519		SF	S05W43	3912
07 Dec	1523	1534	1547	C3.6	SF	S06W42	3912
07 Dec	1717	1721	1726	C2.3			3917
07 Dec	1805	1815	1820	C5.5			3917
07 Dec	1812	1822	1835	C6.4	SF	S06E29	3917
07 Dec	1835	1837	1856		SF	S07W23	3917
07 Dec	2034	2038	2042	C2.4	SF	S06W50	3912
07 Dec	2153	2215	2226	M3.2	SN	S08E28	3917
07 Dec	2206	2207	2210		SF	N18W88	3910
07 Dec	2301	2304	2307		SF	S05W51	3912
08 Dec	0037	0042	0047	C2.5			3912



## Flare List

Date	Time			Optical			
	Begin	Max	End	X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
08 Dec	0107	0120	0136	C5.5			3917
08 Dec	0226	0231	0238	C2.0			3917
08 Dec	0453	0459	0502	C2.3			3912
08 Dec	0502	0507	0511	C2.4			3912
08 Dec	0823	0832	0850	C3.2			3912
08 Dec	0850	0906	0910	X2.2	2B	S08W54	3912
08 Dec	1006	1013	1021	C2.9			3912
08 Dec	1153	1210	1223	C8.0			3912
08 Dec	1528	1538	1550	C4.5			
08 Dec	1600	1611	1618	M1.5	1N	S09W58	3912
08 Dec	1707	1718	1728	C5.1	SF	S07E15	3917
08 Dec	2123	2128	2134	C3.0	SF	S08W60	3912
08 Dec	2134	2137	2150	C3.9	SF	S14E04	3916

## *Region Summary*

Location		Sunspot Characteristics						Flares								
Date	Lat	Lon	Helio $10^6$	Area hemi.	Extent (helio)	Spot Class	Spot Count	Mag Class	X-ray			Optical				
	CMD								C	M	X	S	1	2	3	4
<b><i>Region 3902</i></b>																
20 Nov	S17E70	187	70	11	Cso	2	B									
21 Nov	S16E56	188	70	2	Hsx	1	A									
22 Nov	S16E42	189	70	2	Hsx	1	A									
23 Nov	S16E28	189	60	2	Hsx	1	A									
24 Nov	S16E22	182	60	2	Hsx	1	A									
25 Nov	S18E08	183	60	2	Hsx	1	A				1					
26 Nov	S17W03	181	40	2	Hsx	1	A									
27 Nov	S16W16	181	40	2	Hsx	1	A									
28 Nov	S16W31	180	40	2	Hsx	1	A									
29 Nov	S16W43	181	40	2	Hsx	1	A									
30 Nov	S16W57	182	10	1	Hsx	1	A									
01 Dec	S16W71	183	plage													
02 Dec	S16W85	184	plage													
									1	0	0	0	0	0	0	

## Crossed West Limb.

### Absolute heliographic longitude: 181

*Region 3905*

21 Nov	S09E78	164	60	9	Dao	3	B	1				
22 Nov	S09E64	166	80	10	Dao	6	BG	3	1		3	1
23 Nov	S09E53	164	120	12	Eso	8	BG					
24 Nov	S09E40	164	250	12	Eko	8	BGD					
25 Nov	S10E26	165	330	12	Eki	15	BGD	1	1		5	
26 Nov	S09E12	166	450	12	Eki	19	BG					
27 Nov	S09W03	168	320	14	Eko	15	BG	1				
28 Nov	S09W16	167	380	14	Eko	17	BG	1				
29 Nov	S09W30	168	400	14	Eko	17	BG	2			2	
30 Nov	S09W44	169	300	14	Eki	10	B	1				
01 Dec	S09W58	170	200	14	Eso	6	B					
02 Dec	S09W72	171	180	11	Eso	5	BG					
03 Dec	S09W83	169	140	11	Eso	4	BG				0	0
								10	2	0	10	1

## Crossed West Limb.

Absolute heliographic longitude: 168



## ***Region Summary - continued***

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
<b>Region 3906</b>																
22 Nov	S16E73		158	160	9	Dao	11	B	1	1			1			
23 Nov	S16E59		158	240	10	Dai	11	BG	4				1			
24 Nov	S16E47		157	500	11	Ekc	15	BGD	6				3			
25 Nov	S17E33		158	550	11	Ekc	16	BGD	4	3			3			
26 Nov	S16E19		159	520	13	Eki	16	BGD	4				2			
27 Nov	S16E07		158	400	12	Eki	26	BGD	2							
28 Nov	S16W07		159	420	14	Eki	22	BGD	1				1			
29 Nov	S16W21		159	500	12	Eki	36	BG	3							
30 Nov	S16W35		160	450	11	Eko	16	BG	6				1			
01 Dec	S16W49		161	450	11	Eko	15	BG	4							
02 Dec	S16W63		162	350	11	Eko	13	BG	3				4			
03 Dec	S16W76		162	310	11	Eko	7	BG	1				1			
04 Dec	S17W90		162	280	11	Eko	4	BG	4					0	0	0
										43	4	0	15	2	0	0

Crossed West Limb.

Absolute heliographic longitude: 158

## **Region 3908**

23 Nov	N14E79	152	plage							2	1					
24 Nov	N14E65	139	40	6	Bxo	6	B	1				1				
25 Nov	N13E54	137	10	1	Axx	1	A									
26 Nov	N13E40	138	10	1	Axx	1	A									
27 Nov	N13E26	139	10	3	Bxo	3	B									
28 Nov	N13E13	139	10	3	Bxo	3	B									
29 Nov	N13W00	138	10	10	Bxo	3	B	2								
30 Nov	N13W14	139	plage													
01 Dec	N13W28	140	plage													
02 Dec	N13W42	141	plage													
03 Dec	N13W56	140	plage													
04 Dec	N13W70	142	plage													
05 Dec	N13W84	143	plage											0	0	0
										5	1	0	1	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 138

## ***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
<b>Region 3910</b>																
25 Nov	N16E83		108		plage									1		
26 Nov	N16E69		108		250		8	Dko	6	B	2			1		
27 Nov	N17E55		110		250		7	Dko	1	BG	3					
28 Nov	N16E42		111		250		6	Dko	6	BG						
29 Nov	N16E28		110		250		5	Cko	6	B	1			1		
30 Nov	N16E14		111		230		4	Cso	3	B						
01 Dec	N16W00		112		220		4	Hsx	1	A						
02 Dec	N16W14		113		230		8	Cso	4	B						
03 Dec	N16W25		111		170		8	Cso	9	B						
04 Dec	N15W39		111		140		7	Dso	3	B						
05 Dec	N16W47		106		140		4	Hax	1	A						
06 Dec	N16W61		107		140		3	Hax	1	A						
07 Dec	N16W73		106		150		1	Hsx	1	A				2		
08 Dec	N16W86		106		150		3	Hsx	1	A						
											6	1	0	4	0	0
														0	0	0

Still on Disk.

Absolute heliographic longitude: 112

## **Region 3912**

28 Nov	S04E66		87		110		11	Eso	2	B	2					
29 Nov	S04E50		88		120		9	Dso	2	B	1					
30 Nov	S04E36		89		190		13	Eso	11	BG	2					
01 Dec	S05E41		71		90		11	Esi	9	BG						
02 Dec	S05E27		72		100		12	Esi	10	BG	2		3			
03 Dec	S05E11		75		160		14	Eai	16	B	1		1			
04 Dec	S06W02		74		180		14	Eai	12	BG			1			
05 Dec	S06W16		75		180		10	Dai	9	B	1		1			
06 Dec	S06W30		76		200		7	Cao	13	B	5		3			
07 Dec	S07W47		80		220		7	Dai	12	BG	6		8			
08 Dec	S06W61		81		200		7	Dao	7	B	7	1	1	1	1	0
											27	1	1	18	1	1
														0	0	

Still on Disk.

Absolute heliographic longitude: 74



## ***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
<b>Region 3913</b>														
01 Dec	S06E24		88		40		3	Cro	2	B				
02 Dec	S06E10		89		30		5	Cro	2	B				
03 Dec	S06W06		92		10		1	Hrx	1	A				
04 Dec	S07W20		92		10		6	Bxo	3	B				
05 Dec	S07W33		92		30		7	Bxo	6	B				
06 Dec	S07W47		93		10		2	Bxo	3	B				
07 Dec	S07W61		94	plage							0	0	0	
08 Dec	S07W75		95	plage							0	0	0	
											0	0	0	

Still on Disk.

Absolute heliographic longitude: 92

### **Region 3914**

02 Dec	N07W13		111		10		3	Bxo	5	B			
03 Dec	N07W28		114		10		2	Axx	1	A			
04 Dec	N07W43		115	plage							0	0	0
05 Dec	N07W57		116	plage							0	0	0
06 Dec	N07W71		117	plage							0	0	0
07 Dec	N07W85		118	plage							0	0	0

Crossed West Limb.

Absolute heliographic longitude: 111

### **Region 3915**

02 Dec	N13E67		31		10		3	Bxo	4	B			
03 Dec	N15E56		30		10		4	Bxo	3	B	1		2
04 Dec	N14E41		31		10		4	Bxo	2	B			
05 Dec	N14E27		32		10		3	Bxo	2	B			
06 Dec	N12E12		34		10		3	Bxo	2	B			
07 Dec	N12W02		35		10		1	Axx	1	A			
08 Dec	N12W16		36	plage							1	0	0

Still on Disk.

Absolute heliographic longitude: 35

## ***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 3916***

03 Dec	S16E72	15	40	8	Cai	5	B	4								
04 Dec	S16E58	14	40	8	Cai	6	B	1	1					2		
05 Dec	S16E42	17	160	8	Dai	6	BG	1						1		
06 Dec	S16E28	18	170	9	Dai	6	B	1						1		
07 Dec	S15E15	18	150	8	Dac	4	B	1								
08 Dec	S15E01	19	170	8	Dac	12	BG	1					1			
								9	1	0	5	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 19

### ***Region 3917***

04 Dec	S09E61	10	30	4	Cao	5	B	1								
05 Dec	S08E51	8	90	7	Dri	6	BG	2	1					1		
06 Dec	S08E37	9	180	8	Dao	7	BG	6	1					1		
07 Dec	S07E24	9	200	8	Dac	12	BD	8	2					5		
08 Dec	S07E11	9	210	10	Dac	15	B	3					1			
								19	5	0	9	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 9

### ***Region 3918***

05 Dec	N13W47	106	30	2	Hrx	1	A									
06 Dec	N13W61	107	30	1	Hsx	1	A									
07 Dec	N13W75	108	10	1	Axx	1	A									
08 Dec	N13W89	109	plage										0	0	0	0
													0	0	0	0

Still on Disk.

Absolute heliographic longitude: 106

### ***Region 3919***

08 Dec	S14E08	12	50	4	Cso	2	B	0	0	0	0	0	0	0	0	0
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Still on Disk.

Absolute heliographic longitude: 12



### *Region Summary - continued*

Date	Lat	CMD	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
08 Dec	N22E52		326	90	9	Csi	6	B	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 326

## ***Preliminary Report and Forecast of Solar Geophysical Data (The Weekly)***

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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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