

Solar activity was low with isolated B- and C-class subflares observed daily. Region 9335 (N09, L = 062, class/area Eao/100 on 06 February) was the principal flare producer during 05 - 08 February as it grew at a gradual pace. Its largest flare was a C8/1f at 05/1520 UTC associated with a Type II radio sweep. Region 9335 slowly decayed during the rest of the period. Region 9338 (S19, L = 052, class/area Dao/210 on 11 February) became active on 09 February, as it produced isolated C-class subflares during a relatively brief period of growth. Region 9338 stabilized on 11 February. Region 9346 (N18, L = 104, class/area Bxo/030 on 09 February) produced the most interesting event of the period, A C6/1f flare at 11/0123 UTC associated with a Type II radio sweep, halo CME, and a proton flux enhancement. Region 9346 was in a state of gradual decay and nearing the west limb at the time of the flare.

Data were available from the Advanced Composition Explorer (ACE) spacecraft for most of the period. Limited data were available from ACE during 05 - 08 February due to spacecraft maneuvers. However, SOHO/MTOF data were available during this interval. A high speed stream was observed during 06 - 07 February with velocities peaking at around 520 km/sec on 06 February. IMF Bz became southward at the onset of the stream with maximum deflections to minus 16 nT (GSM). Nominal solar wind conditions were observed during the rest of the period.

A greater than 10 MeV proton flux enhancement at geosynchronous orbit began on 11 February following the C6/1f flare from Region 9346.

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

The geomagnetic field was at quiet to unsettled levels during most of the period with brief, isolated active periods detected on 06 and 11 February.

### **Space Weather Outlook**

#### **14 February - 12 March 2001**

Solar activity is expected to be at low levels during most of the period. However, there will be a slight chance for an isolated M-class flare sometime during the period.

No proton events are expected during the period.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at mostly normal levels.

Geomagnetic field activity may increase to unsettled to active levels during 14 - 15 February. Otherwise, the field is expected to be largely undisturbed (barring an Earth directed CME).



### *Daily Solar Data*

Date	Radio Flux 10.7 cm	Sun spot No.	Sunspot Area (10 <sup>6</sup> hemi.)	X-ray Background	Flares							
					X-ray Flux			Optical				
					C	M	X	S	1	2	3	4
05 February	165	157	650	B5.5	3	0	0	4	1	0	0	0
06 February	170	161	670	C1.0	3	0	0	0	0	0	0	0
07 February	164	163	660	B5.5	1	0	0	0	0	0	0	0
08 February	157	168	540	B4.4	1	0	0	1	0	0	0	0
09 February	162	179	700	B4.4	5	0	0	5	0	0	0	0
10 February	161	172	550	B7.6	5	0	0	3	0	0	0	0
11 February	151	169	560	B5.0	2	0	0	3	1	0	0	0

### *Daily Particle Data*

Date	Proton Fluence (protons/cm <sup>2</sup> -day-sr)			Electron Fluence (electrons/cm <sup>2</sup> -day-sr)		
	>1MeV	>10MeV	>100MeV	>.6MeV	>2MeV	>4Me
	05 February	2.7E+5	1.1E+4	2.8E+3		3.8E+6
06 February	1.1E+5	1.1E+4	2.7E+3		1.9E+5	
07 February	6.4E+4	1.1E+4	2.9E+3		1.3E+5	
08 February	6.1E+4	1.2E+4	2.8E+3		2.4E+5	
09 February	8.2E+4	1.0E+4	2.5E+3		3.0E+5	
10 February	7.0E+4	9.8E+3	2.5E+3		3.7E+5	
11 February	3.2E+5	2.9E+4	2.5E+3		3.7E+5	

### *Daily Geomagnetic Data*

Date	Middle Latitude Fredericksburg		High Latitude College		Estimated Planetary	
	A	K-indices	A	K-indices	A	K-indices
	05 February	2	0-0-0-0-1-0-2-1	1	0-0-0-0-1-0-1-0	3
06 February	11	2-2-4-1-1-2-3-3	17	1-1-5-5-3-2-2-2	11	2-1-4-3-2-3-2-3
07 February	5	2-3-1-0-1-1-1-1	5	2-2-1-2-1-1-2-1	5	2-3-1-1-1-2-2-2
08 February	5	1-1-2-2-1-2-1-2	3	0-1-1-3-0-0-1-1	6	1-2-2-3-0-2-2-3
09 February	3	1-0-0-1-1-2-2-0	*	1-0-0-1-3-*-1-0	4	0-0-0-1-2-2-2-2
10 February	4	1-2-1-1-2-2-1-0	6	1-1-1-3-1-3-1-0	5	1-2-1-2-2-3-2-1
11 February	5	2-2-2-2-2-0-1-1	11	1-0-4-4-4-0-1-1	7	2-2-3-3-2-2-1-1



*Alerts and Warnings Issued*

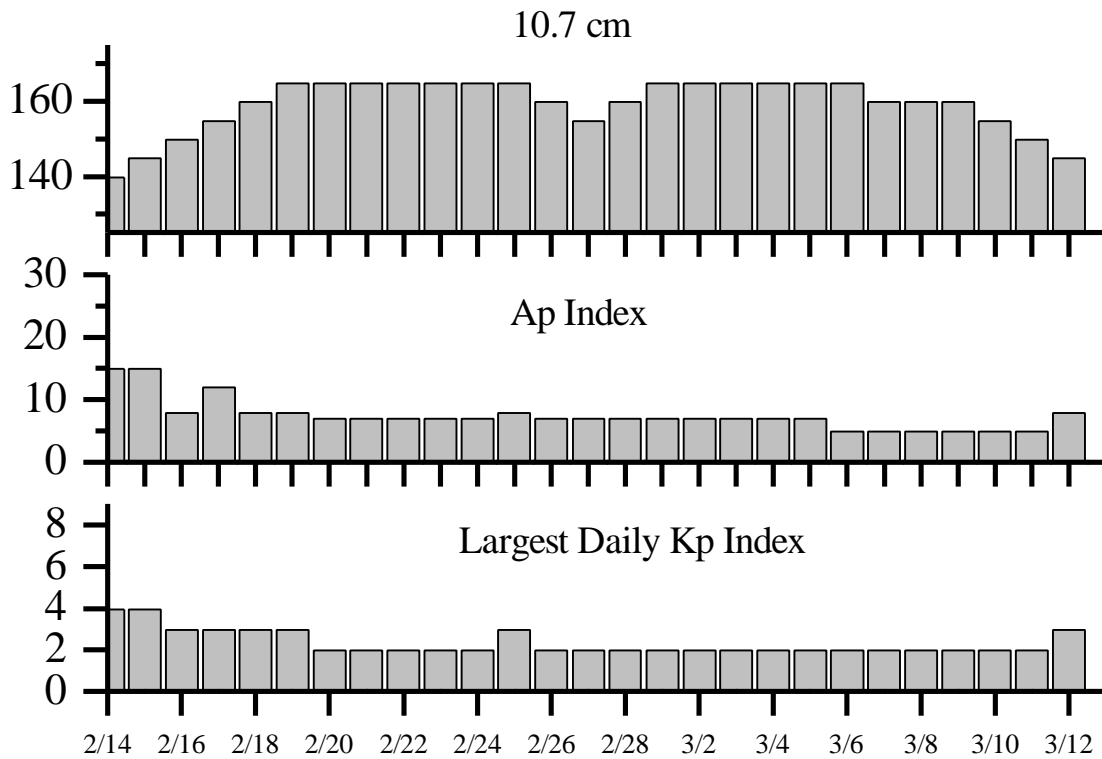
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<u>Date &amp; Time of Issue</u>	<u>Type of Alert or Warning</u>	<u>Date &amp; Time of Event UT</u>
05 Feb 1236	Stratwarm Alert Exists Monday	
05 Feb 1845	Type II Radio Emission	05 Feb 1513
06 Feb 0619	K= 4 Warning	6 Feb 0625 - 1500
06 Feb 0900	K= 4 Observed	6 Feb 06 - 09
06 Feb 1317	Stratwarm Alert Exists Tuesday	
07 Feb 1039	Stratwarm Alert Exists Wednesday	
08 Feb 1251	Stratwarm Alert Exists Thursday	
09 Feb 1214	Stratwarm Alert Exists Friday	
10 Feb 0041	4 - 245 MHz Radio Bursts	09 Feb
10 Feb 1436	Stratwarm Alert Exists Saturday	
11 Feb 0152	Type II Radio Emission	11 Feb 0104
11 Feb 0903	K= 4 Observed	11 Feb 06 - 09
11 Feb 1253	Stratwarm Alert Exists Sunday	

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## Twenty-seven Day Outlook



Date	Radio Flux 10.7 cm	Planetary A Index	Largest Kp Index	Date	Radio Flux 10.7 cm	Planetary A Index	Largest Kp Index
14 Feb	140	15	4	28 Feb	160	7	2
15	145	15	4	01 Mar	165	7	2
16	150	8	3	02	165	7	2
17	155	12	3	03	165	7	2
18	160	8	3	04	165	7	2
19	165	8	3	05	165	7	2
20	165	7	2	06	165	5	2
21	165	7	2	07	160	5	2
22	165	7	2	08	160	5	2
23	165	7	2	09	160	5	2
24	165	7	2	10	155	5	2
25	165	8	3	11	150	5	2
26	160	7	2	12	145	8	3
27	155	7	2				



### *Energetic Events*

Date	Time		X-ray		Optical Information			Peak		Sweep Freq		
	Begin	Max	½ Max	Class	Integ Flux	Imp/ Brtns	Location		Radio Flux		Intensity	
							Lat	CMD	245	2695	II	IV

*No Events Observed*

### *Flare List*

Date	Time			X-ray Class.	Imp / Brtns	Optical Location		Rgn
	Begin	Max	End			Lat	CMD	
05 February	0103	0104	0107	B8.0	Sf	S09E78		9339
	0224	0225	0229	B9.5	Sf	N12E32		9334
	1517	1519	1556	C8.2	1f	N07E38		9335
	1647	1652	1658	C1.9	Sf	N21W74		9327
	2316	2319	2325	C1.2	Sf	N13E44		9335
06 February	1127	1132	1134	C1.5				
	2006	2011	2022	B9.9				
	2023	2028	2036	C1.1				
	2345	2350	2355	C1.0				
07 February	0044	0048	0053	C1.0				
	1401	1408	1423	B9.9				
	2121	2131	2146	B9.2				
08 February	1807	1811	1815	B7.8				
	2029	2029	2033	C1.1	Sf	N08E04		9335
	2119	2122	2124	B6.4				
09 February	0920	0924	0943	B6.7				
	1541	1549	1557	C1.2				
	1719	1721	1729		Sf	S19W01		9338
	1726	1727	1731	C1.0	Sf	N08W06		9335
	2105	2107	2135	C2.0	Sf	S19W02		9338
	2143	2144	2213	C3.5	Sf	S21E01		9338
	2300	2302	2354	C3.1	Sf	S19W01		9338
10 February	0005	0009	0011	C1.6				
	0146	0152	0202		Sf	S17W04		9338
	0251	0253	0336	C1.5	Sf	S18W06		9338
	0355	0421	0434	C2.0				9338
	0531	0534	0537	C1.4				
	2010	2010	2024	C1.9	Sf	S21W12		9338
11 February	0059	0108	0205	C6.5	1f	N24W57		9346
	0107	0113	0151		Sf	N16W63		9346
	B0908	0912	0927	C2.1	Sf	S17W23		9338
	1321	1321	1328	B7.8	Sf	S18W25		9338
	1607	1614	1620	B6.5				



### Region Summary

Date	Location		Sunspot Characteristics				Flares											
	( ° Lat ° CMD)	Helio	Area (10 <sup>6</sup> hemi)	Extent (helio)	Spot Class	Spot Count	Mag Class	X-ray			Optical							
		Lon						C	M	X	S	1	2	3	4			
<i>Region 9325</i>																		
25 Jan	N10E64	183	0050	03	Cso	004	B											
26 Jan	N10E50	184	0050	01	Hsx	002	A		1				1					
27 Jan	N11E37	184	0060	05	Dso	006	B	1				1						
28 Jan	N10E25	182	0050	05	Cso	006	B					1						
29 Jan	N09E10	184	0050	05	Dao	007	B											
30 Jan	N10W04	185	0030	05	Cso	004	B											
31 Jan	N09W17	185	0020	06	Cao	005	B											
01 Feb	N10W32	187	0030	02	Cao	003	B											
02 Feb	N10W48	190	0010	01	Hsx	001	A											
03 Feb	N11W60	189	0000	00	Axx	001	A											
04 Feb	N11W74	190	0000	00	Axx	001	A											
05 Feb	N11W87	190																
								1	1	0	2	1	0	0	0	0		

Crossed West Limb.

Absolute heliographic longitude: 185

<i>Region 9327</i>																		
27 Jan	N17E47	174	0010	03	Bxo	002	B											
28 Jan	N14E32	175	0000	02	Bxo	002	B											
29 Jan	N14E18	176	0000	00	Axx	001	A											
30 Jan	N18E06	175	0050	04	Dao	009	B											
31 Jan	N18W07	175	0050	09	Dao	016	B											
01 Feb	N18W21	176	0050	08	Dao	011	B											
02 Feb	N17W36	178	0030	06	Dso	004	B											
03 Feb	N18W47	176	0040	06	Dao	005	B											
04 Feb	N17W62	178	0050	06	Cao	005	B											
05 Feb	N19W73	176	0010	01	Hrx	001	A	1				1						
								1	0	0	1	0	0	0	0	0		

Crossed West Limb.

Absolute heliographic longitude: 175



**Region Summary- continued.**

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

*Region 9329*

29 Jan	S10E50	144	0030	06	Dso	006	B	2			2						
30 Jan	S10E36	145	0020	03	Cso	005	B										
31 Jan	S10E23	145	0020	07	Cso	005	B										
01 Feb	S11E06	149	0010	01	Bxo	002	B										
02 Feb	S10W06	148	0010	02	Axx	002	A										
03 Feb	S09W14	143	0010	03	Bxo	003	B										
04 Feb	S09W27	143															
05 Feb	S09W40	143															
06 Feb	S09W53	143															
									2	0	0	2	0	0	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 149

*Region 9330*

30 Jan	N24E67	114	0100	02	Hsx	001	A	1			1						
31 Jan	N26E57	111	0230	13	Eso	011	B										
01 Feb	N25E44	111	0220	12	Eao	012	B	3			3						
02 Feb	N26E31	111	0140	12	Eao	016	B										
03 Feb	N26E18	111	0160	11	Eso	017	B										
04 Feb	N25E04	112	0130	12	Eai	017	B	2			3						
05 Feb	N26W09	112	0090	08	Dao	006	B										
06 Feb	N26W21	111	0080	10	Dao	010	B										
07 Feb	N25W36	113	0080	09	Dao	008	B										
08 Feb	N26W47	110	0080	11	Cao	007	B										
09 Feb	N25W61	111	0070	10	Dso	006	B										
10 Feb	N22W80	117	0020	01	Hsx	001	A										
11 Feb	N22W91	115	0000	01	Axx	001	A										
									6	0	0	7	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 112

*Region 9331*

30 Jan	N13E27	154	0050	03	Dao	003	B										
31 Jan	N13E13	155	0010	01	Axx	003	A										
01 Feb	N13E00	155	0010	01	Bxo	003	B										
02 Feb	N13W13	155															
03 Feb	N13W26	155															
04 Feb	N13W39	155															
05 Feb	N13W52	155															
									0	0	0	0	0	0	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 155



**Region Summary- continued.**

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

*Region 9332*

30 Jan	N08E24	157	0020	03	Cso	003	B										
31 Jan	N08E10	158	0020	03	Cro	007	B										
01 Feb	N08W03	158	0040	04	Dso	008	B										
02 Feb	N08W19	161	0030	06	Dao	005	B										
03 Feb	N09W32	161	0020	05	Cro	004	B										
04 Feb	N09W45	161															
05 Feb	N09W58	161															
06 Feb	N09W71	161															

0 0 0 0 0 0 0 0

Crossed West Limb.

Absolute heliographic longitude: 158

*Region 9333*

01 Feb	N24W10	165	0020	04	Cso	005	B										
02 Feb	N25W24	166	0030	06	Dao	005	B										
03 Feb	N26W39	168	0030	03	Cao	003	B										
04 Feb	N25W50	166	0030	07	Cso	005	B										
05 Feb	N26W64	167	0010	01	Axx	001	A										
06 Feb	N26W78	168															

0 0 0 0 0 0 0 0

Crossed West Limb.

Absolute heliographic longitude: 165

*Region 9334*

01 Feb	N12E78	077	0060	02	Hsx	001	A						5				
02 Feb	N11E67	075	0200	15	Eso	006	B		1				1	1			
03 Feb	N11E54	075	0210	11	Eso	009	B										
04 Feb	N11E41	075	0220	14	Eai	018	B		3				3				
05 Feb	N12E27	076	0180	13	Eai	017	B						1				
06 Feb	N11E13	077	0130	12	Eao	019	B										
07 Feb	N12W01	078	0150	13	Eao	021	B										
08 Feb	N12W14	077	0110	13	Eai	016	B										
09 Feb	N12W27	077	0100	12	Esi	015	B										
10 Feb	N12W42	079	0050	11	Eao	009	B										
11 Feb	N12W55	079	0040	11	Cso	005	B										

3 1 0 10 1 0 0 0

Still on Disk.

Absolute heliographic longitude: 078





**Region Summary- continued.**

Date	Location		Sunspot Characteristics				Flares											
	° Lat ° CMD	Helio	Area (10 <sup>6</sup> hemi)	Extent (helio)	Spot Class	Spot Count	Mag Class	X-ray			Optical							
		Lon						C	M	X	S	1	2	3	4			
<i>Region 9335</i>																		
03 Feb	N09E68	061	0100	10	Dao	005	B											
04 Feb	N08E52	064	0130	09	Dao	009	B											
05 Feb	N08E40	063	0080	08	Dao	011	B	2				1	1					
06 Feb	N09E28	062	0100	11	Eao	013	B											
07 Feb	N10E14	063	0100	10	Dao	015	Bg											
08 Feb	N09E01	062	0070	10	Dsi	011	B	1				1						
09 Feb	N09W13	063	0060	10	Dao	009	B	1				1						
10 Feb	N11W29	066	0030	01	Hsx	002	A											
11 Feb	N11W43	067	0000	01	Axx	002	A											
								4	0	0	3	1	0	0	0	0		

Still on Disk.

Absolute heliographic longitude: 062

<i>Region 9336</i>																		
03 Feb	S10W01	130	0000	00	Axx	001	A											
04 Feb	S10W17	133	0010	01	Bxo	003	B											
05 Feb	S09W27	130	0010	03	Cro	004	B											
06 Feb	S09W41	131	0020	03	Bxo	004	B											
07 Feb	S09W54	131																
08 Feb	S09W67	131																
09 Feb	S09W80	131																
								0	0	0	0	0	0	0	0	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 130

<i>Region 9337</i>																		
03 Feb	S27E76	053	0000	01	Axx	001	A											
04 Feb	S27E60	056	0020	01	Hsx	001	A											
05 Feb	S28E51	052	0020	03	Cro	004	B											
06 Feb	S29E38	052	0040	05	Cao	007	B											
07 Feb	S27E25	052	0060	05	Dao	007	B											
08 Feb	S28E12	051	0020	03	Cso	005	B											
09 Feb	S28W01	051																
10 Feb	S28W14	051																
11 Feb	S28W27	051																
								0	0	0	0	0	0	0	0	0	0	

Still on Disk.

Absolute heliographic longitude: 051



**Region Summary- continued.**

Date	Location		Sunspot Characteristics				Flares										
	( ° Lat ° CMD)	Helio	Area (10 <sup>6</sup> hemi)	Extent (helio)	Spot Class	Spot Count	Mag Class	X-ray			Optical						
		Lon						C	M	X	S	1	2	3	4		
<i>Region 9338</i>																	
04 Feb	S17E59	057	0030	01	Hrx	002	A	1			1						
05 Feb	S18E50	053	0020	03	Bxo	002	B										
06 Feb	S20E38	052	0030	05	Cso	004	B										
07 Feb	S19E24	053	0020	05	Bxo	006	B										
08 Feb	S18E10	053	0020	07	Bxo	006	B										
09 Feb	S20W02	052	0080	10	Dao	016	B	3			4						
10 Feb	S20W15	052	0170	09	Dao	024	Bg	2			3						
11 Feb	S20W28	052	0210	10	Dao	021	B	1			2						
								7	0	0	10	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 052

<i>Region 9339</i>																	
04 Feb	S12E74	042	0070	07	Hsx	003	A	2			2						
05 Feb	S11E62	041	0220	11	Eao	007	B				1						
06 Feb	S11E48	042	0250	11	Eao	011	B										
07 Feb	S09E34	043	0240	11	Eao	012	B										
08 Feb	S11E21	042	0210	12	Eao	013	B										
09 Feb	S10E06	044	0200	13	Eao	011	B										
10 Feb	S10W08	045	0130	12	Eao	006	B										
11 Feb	S08W19	043	0120	16	Cao	009	B										
								2	0	0	3	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 044

<i>Region 9340</i>																	
05 Feb	S13E05	098	0010	03	Bxo	004	B										
06 Feb	S13W08	098															
07 Feb	S13W21	098															
08 Feb	S11W36	099	0000	01	Axx	002	A										
09 Feb	S11W49	099															
10 Feb	S11W62	099															
11 Feb	S11W75	099															
								0	0	0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 098



**Region Summary- continued.**

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

*Region 9341*

06 Feb	S10E23	067	0010	01	Cso	002	B											
07 Feb	S08E09	068	0010	02	Cro	002	B											
08 Feb	S09W03	066	0010	03	Bxo	003	B											
09 Feb	S09W16	066	0010	03	Cso	003	B											
10 Feb	S10W30	067	0010	01	Cso	003	B											
11 Feb	S09W43	067	0010	03	Bxo	003	B											

0 0 0 0 0 0 0 0

Still on Disk.

Absolute heliographic longitude: 066

*Region 9342*

06 Feb	S26E56	034	0010	01	Hrx	001	A											
07 Feb	S26E42	035	0000	00	Axx	001	A											
08 Feb	S26E29	035																
09 Feb	S26E16	035																
10 Feb	S26E03	035																
11 Feb	S26W10	035																

0 0 0 0 0 0 0 0

Still on Disk.

Absolute heliographic longitude: 035

*Region 9343*

07 Feb	N03E08	069	0000	00	Axx	001	A											
08 Feb	N03W05	069																
09 Feb	N03W18	069																
10 Feb	N03W31	069																
11 Feb	N03W44	069																

0 0 0 0 0 0 0 0

Still on Disk.

Absolute heliographic longitude: 069

*Region 9344*

08 Feb	N31E13	050	0020	03	Bxo	003	B											
09 Feb	N31E01	049	0020	04	Cso	004	B											
10 Feb	N30W14	051	0010	01	Cso	002	B											
11 Feb	N30W27	051																

0 0 0 0 0 0 0 0

Still on Disk.

Absolute heliographic longitude: 049



**Region Summary- continued.**

Date	Location		Sunspot Characteristics				Flares										
	( ° Lat ° CMD)	Helio	Area (10 <sup>6</sup> hemi)	Extent (helio)	Spot Class	Spot Count	Mag Class	X-ray			Optical						
		Lon						C	M	X	S	1	2	3	4		
<i>Region 9345</i>																	
08 Feb	S20E19	044	0000	01	Axx	002	A										
09 Feb	S19E07	043	0040	05	Cso	007	B										
10 Feb	S20W07	044	0030	05	Dao	007	B										
11 Feb	S20W20	044	0020	06	Cso	006	B										
								0	0	0	0	0	0	0	0	0	0
Still on Disk.																	
Absolute heliographic longitude: 43																	
<i>Region 9346</i>																	
09 Feb	N18W54	104	0030	04	Bxo	004	B										
10 Feb	N18W67	104															
11 Feb	N18W80	104									1	1					
								0	0	0	0	1	1	0	0	0	0
Still on Disk.																	
Absolute heliographic longitude: 104																	
<i>Region 9347</i>																	
09 Feb	N04E66	344	0090	06	Cso	004	B										
10 Feb	N03E51	346	0040	03	Cso	004	B										
11 Feb	N04E38	346	0050	04	Dao	004	B										
								0	0	0	0	0	0	0	0	0	0
Still on Disk.																	
Absolute heliographic longitude: 346																	
<i>Region 9348</i>																	
10 Feb	N09E05	032	0010	03	Cro	003	B										
11 Feb	N11W08	032	0010	05	Bxo	006	B										
								0	0	0	0	0	0	0	0	0	0
Still on Disk.																	
Absolute heliographic longitude: 032																	
<i>Region 9349</i>																	
10 Feb	N28E60	337	0050	01	Hsx	001	A										
11 Feb	N28E46	338	0040	01	Hsx	001	A										
								0	0	0	0	0	0	0	0	0	0
Still on Disk.																	
Absolute heliographic longitude: 338																	
<i>Region 9350</i>																	
11 Feb	N18E69	315	0060	03	Hsx	001	A										
								0	0	0	0	0	0	0	0	0	0
Still on Disk.																	
Absolute heliographic longitude: 315																	

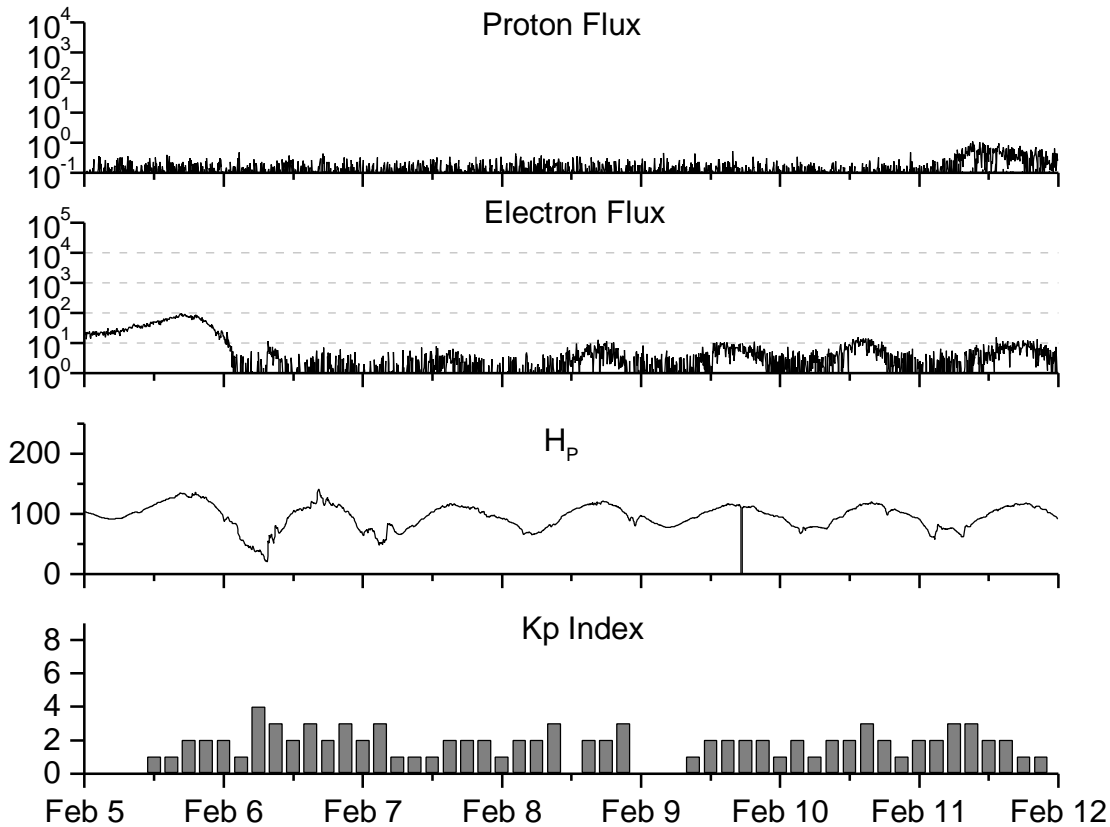


**Recent Solar Indices (preliminary)  
of the observed monthly mean values**

Month	Sunspot Numbers				Radio Flux		Geomagnetic		
	Observed values SWO	RI	Ratio RI/SWO	Smooth values SWO	RI	*Penticton 10.7 cm	Smooth Value	Planetary Ap	Smooth Value
<b>1999</b>									
February	93.4	66.3	0.71	120.2	84.6	142.0	142.6	12	11.6
March	100.5	68.8	0.68	120.5	83.8	126.3	144.0	14	11.7
April	92.9	63.7	0.69	123.8	85.5	117.2	145.8	12	12.2
May	140.5	106.4	0.76	131.7	90.5	148.6	149.9	08	12.4
June	208.3	137.7	0.66	136.0	93.1	169.8	152.9	07	12.4
July	169.2	113.5	0.67	138.0	94.3	165.6	154.4	10	12.6
August	136.1	93.7	0.69	142.8	97.5	170.8	156.3	15	12.9
September	107.4	71.5	0.67	150.0	102.3	135.7	161.0	19	12.8
October	167.7	116.7	0.70	158.5	107.8	164.8	167.2	19	12.7
November	199.3	133.2	0.67	164.7	110.0	191.5	171.5	14	13.1
December	123.5	86.4	0.69	165.9	111.1	169.8	173.4	10	13.8
<b>2000</b>									
January	140.8	90.1	0.64	168.0	112.9	158.1	175.5	13	14.5
February	161.9	112.9	0.70	172.1	116.7	173.2	176.8	15	15.0
March	203.6	138.5	0.68	175.4	119.9	208.2	178.4	09	15.0
April	193.4	125.5	0.65	176.3	120.8	184.2	180.5	15	15.0
May	188.8	121.6	0.64	173.1	119.0	184.5	180.0	15	15.0
June	190.3	124.9	0.66	172.0	118.7	179.8	179.7	15	15.1
July	236.7	169.1	0.71	173.0	119.7	204.7	180.2	21	14.8
August	166.6	130.5	0.78			163.1		16	
September	157.9	109.9	0.70			182.1		18	
October	138.9	100.1	0.72			167.7		18	
November	149.9	106.5	0.71			178.8		17	
December	146.4	104.5	0.71			173.6		08	
<b>2001</b>									
January	142.7	95.1	0.67			166.7		08	

**NOTE:** All smoothed values after December 1999 and monthly values after June 2000 are preliminary estimates. The lowest smoothed sunspot index number for Cycle 22, RI = 8.0, occurred in May 1996. The highest smoothed sunspot number for Cycle 22, RI= 158.5, occurred July 1989. \*After June 1991, the 10.7 cm radio flux data source is Penticton, B.C. Canada. Prior to that, it was Ottawa.





*Weekly Geosynchronous Satellite Environment Summary  
Week Beginning 29 January 2001*

*Protons* plot contains the five-minute averaged integral proton flux (protons/cm<sup>2</sup>-sec -sr) as measured by GOES-8 (W75) for each of three energy thresholds: greater than 10, 50, and 100 MeV.

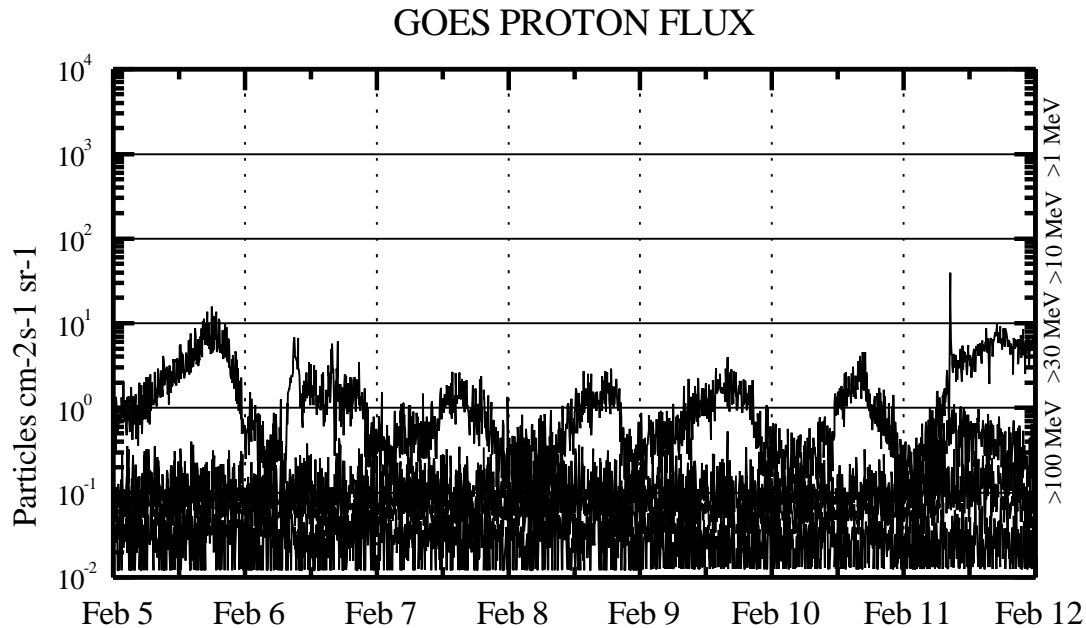
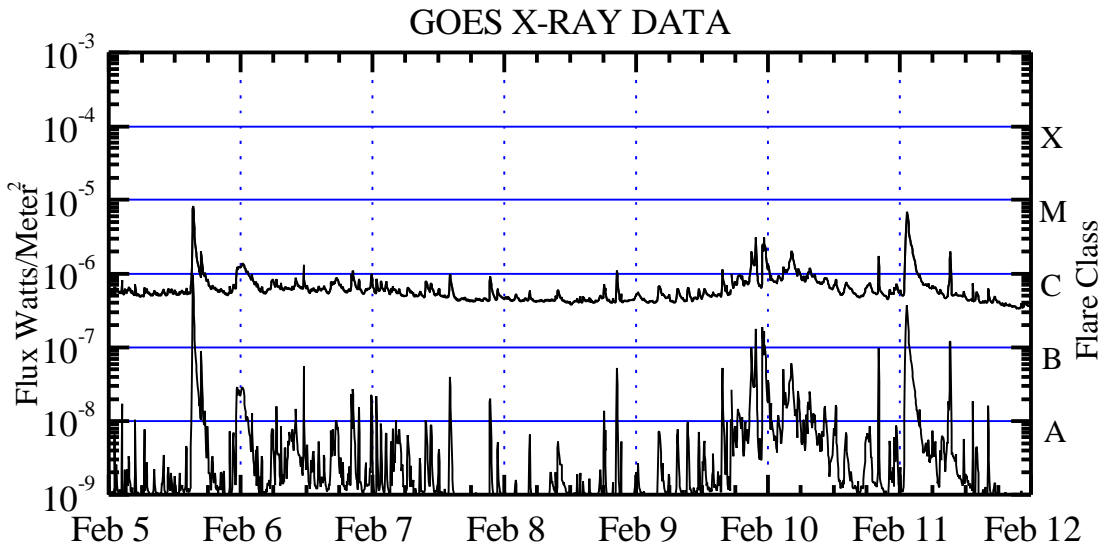
*Electrons* plot contains the five-minute averaged integral electron flux (electrons/cm<sup>2</sup> -sec -sr) with energies greater than 2 MeV at GOES-8.

*H<sub>p</sub>* plot contains the five minute averaged magnetic field H - component in nanoteslas (nT) as measured by GOES-8. The H component is parallel to the spin axis of the satellite, which is nearly parallel to the Earth's rotation axis.

*K<sub>p</sub>* plot contains the estimated planetary 3-hour K-index (derived by the USAF 55<sup>th</sup> Space Weather Squadron) in real time from magnetometers at Meanook, Canada; Sitka, AK; Glenlea, Canada; St. Johns, Canada; Ottawa, Canada; Newport, WA; Fredericksburg, VA; Boulder, CO; Fresno, CA and Heartland, UK. These data are made available through cooperation from the Geological Survey of Canada (GSC) and the US Geological Survey. These may differ from the final K<sub>p</sub> values derived from a more extensive network of magnetometers.

The data included here are those now available in real time at the SWO and are incomplete in that they do not include the full set of parameters and energy ranges known to cause satellite operating anomalies. The proton and electron fluxes and K<sub>p</sub> are “ global ” parameters that are applicable to a first order approximation over large areas. H<sub>parallel</sub> is subject to more localized phenomena and the measurements generally are applicable to within a few degrees of longitude of the measuring satellite.





*Weekly GOES Satellite X-ray and Proton Plots*

X-ray plot contains five-minute averaged x-ray flux (watts/m<sup>2</sup>) as measured by GOES 8 and 10 in two wavelength bands, .05 - .4 and .1 - .8 nm. The letters A, B, C, M and X refer to x-ray event levels for the .1 - .8 nm band.

Proton plot contains the five-minute averaged integral proton flux (protons/cm<sup>2</sup>-sec-sr) as measured by GOES-8 (W75) for each of the energy thresholds: >1, >10, >30 and >100 MeV. P10 event threshold is 10 pfu (protons/cm<sup>2</sup>-sec-sr) at greater than 10 MeV.

