

Space Weather Highlights
20 - 26 August 2001

SWO PRF 1356
28 August 2001

Solar activity ranged from low to high levels throughout the period. Activity was low on 20, 21, and 23 August with isolated B- and C-class flares. Activity was moderate on 22, 24, and 26 August, with a single M1 event occurring on each day. Activity reached high levels on 25 August when Region 9591 (S19, L = 298, class/area Fki/650 on 25 August) produced several M-class flares and an X5/3b event at 25/1645 UTC. This event had an associated 8100 sfu tenflare, Type II and Type IV radio sweeps, and a full halo coronal mass ejection. Region 9591 was by far the most active region during the period. It maintained a relatively large area (600 - 750 millionths) and a beta-gamma-delta magnetic configuration throughout the period. Region 9591 appears to be old returning Region 9557 (S20, L=288, class/area Dki/600 on 07 August) that may have merged with another region. Two other events of note occurred during the period. The first was an eruptive prominence on the limb (EPL) near southeast 20 on about 20/1920 UTC. This event was accompanied by a long-duration C2 x-ray burst, a Type II radio sweep, and various radio bursts. The second event was a filament eruption in the southeast quadrant in concurrence with a long-duration C2 X-ray event that peaked at 21/1303 UTC and a non-earth directed coronal mass ejection.

Solar Wind data were available from the Advanced Composition Explorer (ACE) spacecraft for most of the period. A high speed stream was noted on 22 August with solar wind speed reaching the 550 to 650 km/s range. Solar wind speed for the rest of the period was mostly in the 350 to 450 km/s range. The greater than 10 MeV proton flux was slightly enhanced on 20 August following the proton event that occurred on 16-18 August. There were no other proton events during the period.

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

The geomagnetic field was mostly quiet to unsettled during the period. Active conditions were noted on 22 August due to a recurrent, negative-polarity coronal hole and its corresponding high speed stream impacting earth. Active conditions were also noted on 25 August due to possible coronal hole effects.

Space Weather Outlook
29 August - 24 September 2001

Solar activity is expected to be at low to moderate levels. Isolated M-class flares are possible. There will be a chance for a major flare during the first half of the period until Region 9591 leaves the visible disk on 04-05 September.

There will be a chance for a solar proton event during the first half of the period.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at normal to moderate levels during most of the period. However, there will be slight chance for high flux levels around 03 - 04 September.

Active geomagnetic field conditions will be possible around 27-29 August, 01 - 02 and 09 - 10 September. Otherwise, quiet to unsettled levels are expected.



Daily Solar Data

Date	Radio Flux 10.7 cm	Sun spot No.	Sunspot Area (10 ⁻⁶ hemi.)	X-ray Background	Flares							
					X-ray Flux			Optical				
					C	M	X	S	1	2	3	4
20 August	156	172	900	B8.1	4	0	0	7	1	0	0	0
21 August	160	169	950	C1.1	6	1	0	2	0	0	0	0
22 August	162	183	1190	C1.2	14	1	0	9	1	0	0	0
23 August	170	194	1560	C2.7	10	0	0	7	1	0	0	0
24 August	175	187	1260	C1.0	10	3	0	8	1	0	0	0
25 August	199	132	1300	C7.2	17	2	1	27	0	0	1	0
26 August	190	139	1400	C2.0	7	1	0	15	0	0	0	0

Daily Particle Data

Date	Proton Fluence (protons/cm ² -day-sr)			Electron Fluence (electrons/cm ² -day-sr)		
	>1MeV	>10MeV	>100MeV	>.6MeV	>2MeV	>4MeV
	20 August	1.9E+6	3.9E+5	6.2E+3		2.9E+4
21 August	2.7E+6	3.2E+5	4.4E+3		8.0E+4	
22 August	3.4E+6	2.3E+5	3.7E+3		2.2E+6	
23 August	1.5E+6	1.7E+5	2.8E+3		2.8E+7	
24 August	8.7E+5	1.3E+5	2.6E+3		5.6E+7	
25 August	2.6E+6	1.2E+5	2.7E+3		4.5E+7	
26 August	1.4E+6	8.0E+4	2.3E+3		1.3E+6	

Daily Geomagnetic Data

Date	Middle Latitude Fredericksburg		High Latitude College		Estimated Planetary	
	A	K-indices	A	K-indices	A	K-indices
	20 August	6	1-0-1-3-2-1-1-3	4	1-1-0-2-2-1-2-1	10
21 August	12	2-2-1-3-2-3-4-3	11	1-2-1-4-2-4-2-1	14	2-1-2-3-3-4-4-2
22 August	14	1-2-3-3-3-3-3-4	23	2-2-3-5-5-4-3-3	17	2-2-3-4-4-4-4-4
23 August	7	3-2-2-0-2-2-2-2	14	3-2-4-0-4-1-1-4	12	3-2-4-2-3-3-3-2
24 August	5	1-1-0-1-3-3-0-0	1	1-2-0-0-0-0-0-0	4	1-1-1-1-2-2-2-1
25 August	10	0-1-1-1-3-3-4-3	10	0-1-3-4-1-2-3-2	10	1-1-1-2-3-4-4-3
26 August	9	2-2-2-2-2-2-3-3	20	3-2-5-4-5-1-2-1	12	3-1-3-3-3-3-3-3

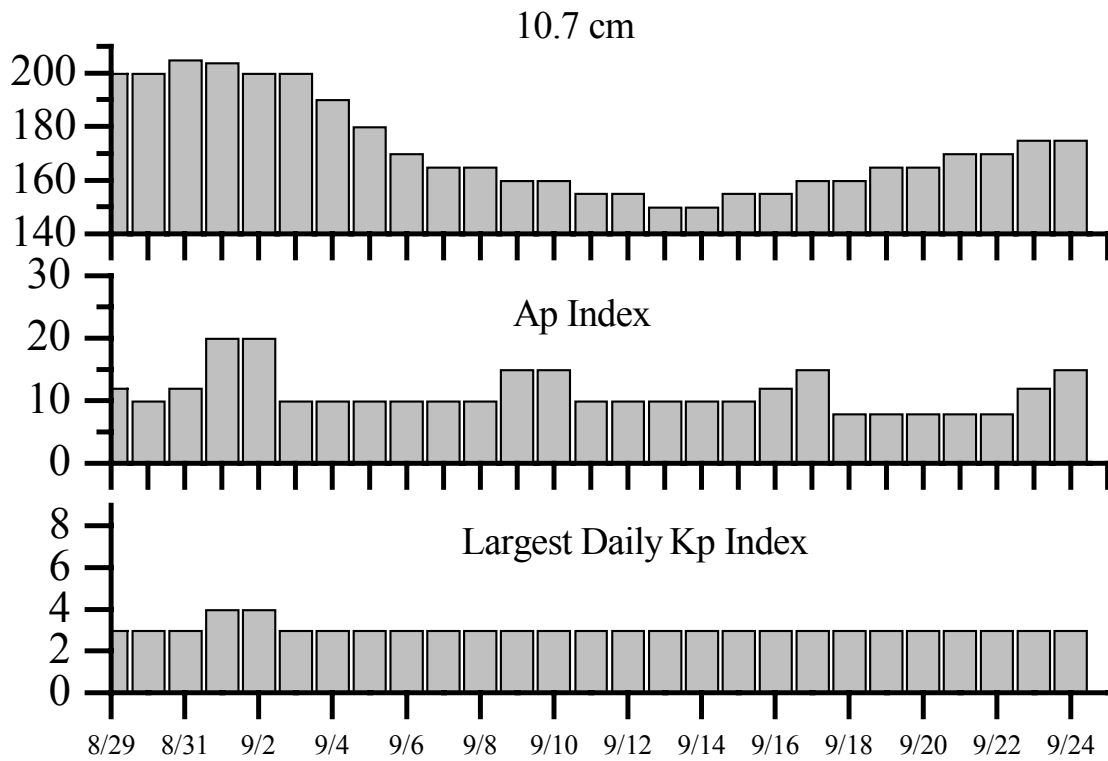


Alerts and Warnings Issued

<u>Date & Time of Issue</u>	<u>Type of Alert or Warning</u>	<u>Date & Time of Event UT</u>
20 Aug 2125	Type II Radio Emission	20 Aug 1924
21 Aug 0011	1 - 245 MHz Burst	20 Aug
21 Aug 1536	K= 4 Warning	21/1536 - 22/1500 Aug
21 Aug 1803	K= 4 Observed	21 Aug 1500 - 1800
21 Aug 2244	Type II Radio Emission	21 Aug 2154
22 Aug 0017	4 - 245 MHz Bursts	21 Aug
22 Aug 1428	EXTENDED K= 4 Warning	21/1536 - 22/2359 Aug
22 Aug 2332	EXTENDED K= 4 Warning	21/1536 - 23/1500 Aug
23 Aug 0039	1 - 245 MHz Burst	22 Aug
25 Aug 0049	10cm Radio Burst 250 F.U.	24 Aug 2359
25 Aug 0057	1 - 245 MHz Burst	24 Aug
25 Aug 1659	Type II Radio Emission	25 Aug 1632
25 Aug 1708	X-Ray event X5.3/3B/S17E34	25 Aug 1645
25 Aug 1714	Type IV Radio Emission	25 Aug 1639
25 Aug 1716	K= 4 Warning	25/1720 - 26/1800 Aug
25 Aug 1740	10cm Radio Burst 8100 F.U.	25 Aug 1624
25 Aug 1821	Proton Event >10MeV >=10pfu Warning	26/ - 27 /1500 Aug
25 Aug 2006	A >= 30 Watch	27 Aug
25 Aug 2006	A >= 30 Watch	28 Aug
25 Aug 2119	K = 4 Observed	25 Aug 1500 - 1800
26 Aug 0025	2 - 245 MHz Bursts	25 Aug
26 Aug 1452	CANCELLED K= 4 Warning	25/1720 - 26/1800 Aug
26 Aug 1953	CANCELLED Proton Event >10MeV >=10pfu Warning	26/0800 - 27/1500 Aug
26 Aug 2330	K= 4 Warning	26/2335 - 27/1800 Aug



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
29 Aug	200	12	3	12 Sep	155	10	3
30	200	10	3	13	150	10	3
31	205	12	3	14	150	10	3
01 Sep	204	20	4	15	155	10	3
02	200	20	4	16	155	12	3
03	200	10	3	17	160	15	3
04	190	10	3	18	160	8	3
05	180	10	3	19	165	8	3
06	170	10	3	20	165	8	3
07	165	10	3	21	170	8	3
08	165	10	3	22	170	8	3
09	160	15	3	23	175	12	3
10	160	15	3	24	175	15	3
11	155	10	3				



Energetic Events

Date	Time		X-ray		Optical Information			Peak		Sweep Freq			
	Begin	Max	½ Max	Class	Integ Flux	Imp/ Brtns	Location		Rgn	Radio Flux		Intensity	
							Lat	CMD #		245	2695	II	IV
21 Aug	2151	2157	2200	M1.5	.005					1800	170		2
22 Aug	1158	1216	1229	M1.0	.012								
24 Aug	0848	0913	0941	M1.1	.030	SF	S15E57	9591					
24 Aug	2231	2254	2313	M1.2	.022			9591					
24 Aug	2347	0017	0044	M3.5	.086	SF	S18E44	9591		280			
25 Aug	0909	0928	0932	M1.2	.006	SF	S18E31	9591					
25 Aug	1623	1645	1704	X5.3	.820	3B	S17E34	9591	36000	8100	2	2	
25 Aug	1952	1956	1959	M1.1	.004	SF	S19E37	9591					
26 Aug	1206	1306	1323	M1.3	.028								

Flare List

Date	Time			X-ray Class	Imp / Brtns	Optical		Rgn
	Begin	Max	End			Location	Lat CMD	
20 August	0255	0257	0305	C1.2	SF	N15E33	9585	
	0519	0527	0547	C2.0	SF	N28E23	9582	
	0546	0548	0600		SF	N16E34	9585	
	0600	0600	0604		SF	N29E22	9582	
	0750	0750	0756		SF	N14E13		
	0807	0821	0844	C3.6	1F	N28E20	9582	
	1452	1454	1459		SF	S14E26	9587	
	1919	1937	2102	C2.3				
	2357	2358	0005		SF	N15E25	9585	
21 August	0010	0018	0028	C3.0				
	0157	0157	0202	C1.3	SF	N15E24	9585	
	0331	0337	0346	C1.9				
	0721	0748	0813	C1.6				
	1035	1303	1434	C2.7				
	1422	1422	1428		SF	N15E14	9585	
	2052	2057	2102	C1.9				
22 August	2151	2157	2200	M1.5				
	0338	0338	0341		SF	N27W09	9582	
	0502	0507	0511	C6.2				
	0735	0742	0752	C4.2				
	0904	0908	0912	C6.6				
	0924	0937	0945	C3.9				
	1158	1216	1229	M1.0				
	1432	1437	1445	C2.5				
	1502	1504	1523	C3.7	SF	S17E77	9591	
	1554	1558	1601	C2.8				
	1655	1657	1704		SF	S18E75	9591	
1715	1720	1731	C5.4	SF	S18E69	9591		



Flare List- continued

Date	Begin	Time		X-ray Brtns	Optical		Rgn
		Max	End		Class.	Imp / Lat CMD	
22 August	1753	1756	1809		1N	S17E74	9591
	1819	1826	1835	C4.5			
	1846	1846	1900	C7.5	SF	S19E73	9591
	2115	2115	2125	C7.0	SF	S18E73	9591
	2142	2143	2156	C3.5	SF	S18E67	9591
	2229	2256	2323	C5.8			9591
	2331	2332	2341		SF	S18E66	9591
	2353	0000	0011	C6.9	SF	S19E74	9591
23 August	0027	0028	0035	C7.0	SF	S21E72	9591
	0201	0205	0209	C6.6			
	0325	0339	0347	C6.9			
	0508	0513	0517	C8.3			
	0755	0800	0804	C3.0			
	0944	0949	0958	C3.3			
	1112	1116	1122	C4.8			
	1346	1347	1400	C5.9	1F	S19E61	9591
	1436	1441	1445	C3.3	SF	S18E68	9591
	1607	1609	1618		SF	S05W67	9592
	1754	1755	1808	C3.8	SF	S21E63	9591
	1843	1846	1850		SF	S18E64	9591
	2239	2240	2244		SF	S07W74	9592
	2330	2332	2336		SF	S07W74	9592
	24 August	0019	0055	0101	C5.4		
0622		0646	0703	C3.8			
0902		0903	0913	M1.1	SF	S15E57	9591
1113		1122	1140		SF	S24E31	9590
1152		1153	1201		SF	S16E53	9591
1317		1317	1324	C4.3	SF	S18E52	9591
1333		1335	1358	C5.7	1F	S20E55	9591
1405		1405	1415		SF	S18E43	9591
1510		1512	1522	C4.8	SF	S18E50	9591
1658		1703	1709	C3.8			
1750		1802	1812	C4.0			
1829		1908	1918	C5.5			
2005		2048	2101	C7.8			
2113		2118	2121	C7.0			
2231		2254	2313	M1.2			9591
2309		2309	2316		SF	N18W27	9585
2352		0000	0056	M3.5	SF	S18E44	9591



Flare List- continued

Date	Begin	Time		X-ray Brtns	Optical		Rgn
		Max	End		Class.	Imp / Lat CMD	
25 August	0059	0103	0116	SF		S18E43	9591
	0239	0242	0244	C3.2			
	0333	0336	0337		SF	S19E40	9591
	0351	0355	0358	C2.0			
	0522	0526	0530	C1.9			
	0710	0711	0717	C1.8	SF	S20E42	9591
	0721	0728	0801	C3.6	SF	S18E37	9591
	0802	0806	0813		SF	S18E34	9591
	0819	0823	0832	C2.6	SF	S18E32	9591
	0841	0843	0849	C2.5	SF	S18E34	9591
	0924	0928	0933	M1.2	SF	S18E31	9591
	0955	0959	A1008	C3.7	SF	S17E31	9591
	1048	1054	1101	C1.9	SF	S18E33	9591
	1106	1108	1110	C1.6			
	1300	1300	1308	C2.0	SF	S18E32	9591
	1327	1327	1334	C3.2	SF	S17E31	9591
	1411	1418	1426	C2.3			
	1441	1441	1444		SF	S18E30	9591
	1524	1529	1545	C2.2	SF	S18E32	9591
	1554	1555	1557		SF	S18E32	9591
	1624	1652	1917	X5.3	3B	S17E34	9591
	1930	1930	1934		SF	S20E35	9591
	1954	1955	2001	M1.1	SF	S19E37	9591
	2049	2049	2054		SF	S12W49	9587
	2112	2118	2121		SF	S11W48	9587
	2116	2126	2201	C4.0	SF	S19E24	9591
	2158	2201	2212		SF	S10W49	9587
	2206	2216	2246		SF	S19E29	9591
	2213	2215	2231	C9.6	SF	S10W49	9587
	2302	2304	2306		SF	S19E29	9591
	2303	2304	2307		SF	S27E13	9590
	2314	2352	2356		SF	S10W50	9587
2344	2345	0019	C7.0	SF	S19E25	9591	
26 August	0110	0113	0117	C2.5	SF	S09W52	9587
	0610	0610	0614	C2.2	SF	S19E21	9591
	0912	0921	0935	C3.4	SF	S18E21	9591
	1004	1007	1030	C6.1	SF	S19E16	9591
	1120	1122	1126		SF	S16E29	9591
	1206	1306	1323	M1.3			
	1405	1411	1423	C4.0	SF	S22E27	9591
	1728	1730	1733		SF	S20E23	9591



Flare List- continued

Date	Begin	Time		X-ray Brtns	Optical		Rgn	
		Max	End		Class.	Imp / Lat CMD		Location
25 August		1742	1743	1747		SF	S17E26	9591
		1812	1812	1819		SF	S20E24	9591
		1936	1937	1943		SF	S22E24	9591
		2013	2015	2055	C2.4	SF	S22E23	9591
26 August		2100	2100	2107	C5.7	SF	S21E23	9591
		2119	2126	2130		SF	S17E21	9591
		2223	2224	2228		SF	S18E20	9591
		2234	2236	2240		SF	S21E23	9591

Region Summary

Date	Location (° 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

Region 9573

08 Aug	S08E70	122	0050	03	HAX	002	A										
09 Aug	S09E58	121	0110	04	CSO	002	B										
10 Aug	S09E46	120	0180	07	DAO	008	B										
11 Aug	S09E33	119	0140	07	DAO	016	B										
12 Aug	S10E20	119	0180	09	DAO	016	B										
13 Aug	S10E07	118	0110	09	DAO	019	B										
14 Aug	S08W08	120	0070	08	CSO	012	B										
15 Aug	S08W23	122	0040	05	CAO	005	B										
16 Aug	S09W35	121	0030	01	HSX	001	A										
17 Aug	S08W49	121	0030	01	HSX	001	A										
18 Aug	S08W62	121	0030	01	HSX	001	A										
19 Aug	S08W75	121	0040	01	HRX	001	A										1
20 Aug	S08W87	120	0030	03	HAX	001	A										

0 0 0 1 0 0 0 0

Crossed West Limb.

Absolute heliographic longitude: 118



Region Summary - continued.

Location		Sunspot Characteristics					Flares																
Date	(° Lat ° CMD)	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								
<i>Region 9575</i>																							
11 Aug	N11E73	079	0080	02	HSX	001	A																
12 Aug	N11E61	078	0130	10	CAO	008	B																
13 Aug	N11E47	078	0140	07	CSO	005	B																
14 Aug	N11E34	078	0140	06	CSO	005	B																
15 Aug	N12E20	079	0130	03	HAX	001	A																
16 Aug	N12E08	078	0130	05	CAO	004	B																
17 Aug	N11W02	074	0100	06	CSO	003	B						1										
18 Aug	N11W12	071	0150	07	CSO	004	B																
19 Aug	N11W32	078	0110	04	CSO	003	B	1					2										
20 Aug	N10W46	079	0110	02	HSX	001	A																
21 Aug	N09W59	079	0120	03	HSX	001	A																
22 Aug	N10W73	079	0130	02	HSX	001	A																
23 Aug	N10W86	079	0090	02	HSX	001	A																
																					1 0 0 3 0 0 0 0		

Crossed West Limb.

Absolute heliographic longitude: 074

<i>Region 9580</i>																					
14 Aug	N24E73	039	0090	02	HSX	001	A														
15 Aug	N25E61	038	0140	03	HAX	001	A														
16 Aug	N25E48	038	0080	02	HSX	001	A														
17 Aug	N24E35	037	0090	02	HAX	001	A														
18 Aug	N25E22	037	0100	02	HSX	001	A														
19 Aug	N26E09	037	0090	02	HAX	001	A														
20 Aug	N25W05	038	0100	03	HSX	001	A														
21 Aug	N25W17	037	0090	03	HSX	001	A														
22 Aug	N24W30	036	0090	02	HSX	001	A														
23 Aug	N24W43	036	0110	02	HSX	002	A														
24 Aug	N25W54	034	0090	06	CSO	002	B														
25 Aug	N24W68	035	0090	02	HSX	001	A														
26 Aug	N23W82	036	0080	02	HSX	001	A														

0 0 0 0 0 0 0 0

Still on Disk.

Absolute heliographic longitude: 038



Region Summary - continued.

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

Region 9581

15 Aug	S28W09	108	0020	01	HRX	001	A									
16 Aug	S26W23	109	0050	06	CSO	003	B									1
17 Aug	S25W42	114	0020	01	HSX	001	A	1								1
18 Aug	S26W50	109	0040	04	DSO	003	B									
19 Aug	S26W65	111	0050	07	CAO	005	B									
20 Aug	S26W77	110	0010	08	BXO	003	B									
21 Aug	S26W90	110														
								1	0	0	2	0	0	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 108

Region 9582

15 Aug	N32E73	026	0040	03	CAO	003	B									
16 Aug	N32E59	027	0030	02	AXX	002	A									
17 Aug	N30E45	027	0020	03	BXO	003	B									
18 Aug	N28E33	026	0070	07	DAO	008	B	5								5
19 Aug	N28E20	026	0110	08	DAO	011	B									
20 Aug	N28E05	028	0130	10	DSO	022	B	2								2 1
21 Aug	N28W07	027	0130	10	DAO	025	B									
22 Aug	N27W20	026	0120	10	DSO	022	B									1
23 Aug	N28W33	026	0050	09	CSO	014	B									
24 Aug	N27W48	028	0040	06	CSO	004	B									
25 Aug	N27W61	028														
26 Aug	N27W74	028														
								7	0	0	8	1	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 028

Region 9583

16 Aug	S23E13	073	0020	04	DSO	003	B									
17 Aug	S23E00	073														
18 Aug	S23W13	073														
19 Aug	S23W26	073														
20 Aug	S23W39	073														
21 Aug	S23W52	073														
22 Aug	S23W65	073														
23 Aug	S23W78	073														
								0	0	0	0	0	0	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 073



Region Summary - continued.

Location		Sunspot Characteristics					Flares																
Date	(° Lat ° CMD)	Helio	Area (10 ⁻⁶ hemi)	Extent (helio)	Spot Class	Spot Count	Mag Class	X-ray			Optical												
		Lon						C	M	X	S	1	2	3	4								
<i>Region 9587</i>																							
17 Aug	S11E56	016	0020	01	HRX	001	A																
18 Aug	S11E43	016	0020	01	HSX	001	A																
19 Aug	S11E28	018	0020	01	HSX	001	A																
20 Aug	S11E15	018	0010	01	HRX	001	A					1											
21 Aug	S10E02	018	0010	03	BXO	002	B																
22 Aug	S10W14	020	0000	01	AXX	001	A																
23 Aug	S10W27	020																					
24 Aug	S11W35	015	0010	01	AXX	002	A																
25 Aug	S10W50	017	0060	04	DSO	007	B	1				5											
26 Aug	S10W64	018	0210	07	DAO	012	B	1				1											
								2	0	0	0	7	0	0	0	0	0	0	0	0	0		

Still on Disk.

Absolute heliographic longitude: 018

Region 9588

19 Aug	S32W55	101	0080	07	CAO	005	B														
20 Aug	S32W70	103	0090	09	DAO	004	B														
21 Aug	S32W80	100	0030	08	BXO	002	B														
								0	0	0	0	0	0	0	0	0	0	0	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 101

Region 9589

20 Aug	N15W21	054	0010	02	BXO	004	B														
21 Aug	N14W35	055	0020	05	CAO	007	B														
22 Aug	N16W46	052	0050	05	DAO	009	B														
23 Aug	N16W59	052	0060	07	CAO	010	B														
24 Aug	N15W73	053	0020	04	CRO	003	B														
25 Aug	N15W86	053																			
								0	0	0	0	0	0	0	0	0	0	0	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 054



Region Summary - continued.

Location		Sunspot Characteristics						Flares							
Date	(° Lat ° CMD)	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 9590

20 Aug	S28E80	313	0150	02	HSX	001	A									
21 Aug	S28E64	316	0210	04	HAX	001	A									
22 Aug	S28E50	316	0210	04	HAX	002	A									
23 Aug	S28E37	316	0190	03	HAX	004	A									
24 Aug	S28E25	315	0210	03	HSX	002	A					1				
25 Aug	S29E12	315	0180	03	HAX	003	A					1				
26 Aug	S29W02	316	0180	03	HAX	003	A									
								0	0	0	2	0	0	0	0	

Still on Disk.

Absolute heliographic longitude: 316

Region 9591

21 Aug	S18E71	309	0060	06	HAX	001	A									
22 Aug	S17E63	303	0280	16	FKO	008	B	7			8	1				
23 Aug	S17E53	300	0730	25	FKI	028	BGD	4			4	1				
24 Aug	S18E42	298	0650	26	FKI	032	BGD	3	3		6	1				
25 Aug	S19E32	295	0740	32	FKI	032	BGD	11	2	1	20			1		
26 Aug	S19E18	296	0740	28	FKI	043	BGD	6			14					
								31	5	1	52	3	0	1	0	

Still on Disk.

Absolute heliographic longitude: 296

Region 9592

22 Aug	S09W59	065	0020	03	BXO	003	B									
23 Aug	S08W73	066	0080	07	DSO	005	B				3					
24 Aug	S09W87	067	0040	07	DSO	002	B									
								0	0	0	3	0	0	0	0	

Crossed West Limb.

Absolute heliographic longitude: 065

Region 9593

23 Aug	N00E01	352	0010	02	BXO	002	B									
24 Aug	N00W12	352	0000	00	AXX	001	A									
25 Aug	N00W25	352														
26 Aug	N00W38	352														
								0	0	0	0	0	0	0	0	

Still on Disk.

Absolute heliographic longitude: 352



Region Summary - continued.

Location		Sunspot Characteristics					Flares									
Date	(° Lat ° CMD)	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	
<i>Region 9594</i>																
24 Aug	N37E05	335	0010	04	BXO	003	B									
25 Aug	N37W10	337	0000	00	AXX	001	A									
26 Aug	N37W23	337														
								0	0	0	0	0	0	0	0	0
Still on Disk.																
Absolute heliographic longitude: 335																
<i>Region 9595</i>																
24 Aug	N16E27	313	0010	01	AXX	001	A									
25 Aug	N16E14	313														
26 Aug	N16E01	313														
								0	0	0	0	0	0	0	0	0
Still on Disk.																
Absolute heliographic longitude: 313																
<i>Region 9596</i>																
25 Aug	N23E79	248	0120	02	HAX	001	A									
26 Aug	N22E67	247	0130	02	HSX	001	A									
								0	0	0	0	0	0	0	0	0
Still on Disk.																
Absolute heliographic longitude: 247																
<i>Region 9597</i>																
26 Aug	N17E48	266	0010	03	BXO	002	B									
								0	0	0	0	0	0	0	0	0
Still on Disk.																
Absolute heliographic longitude: 266																

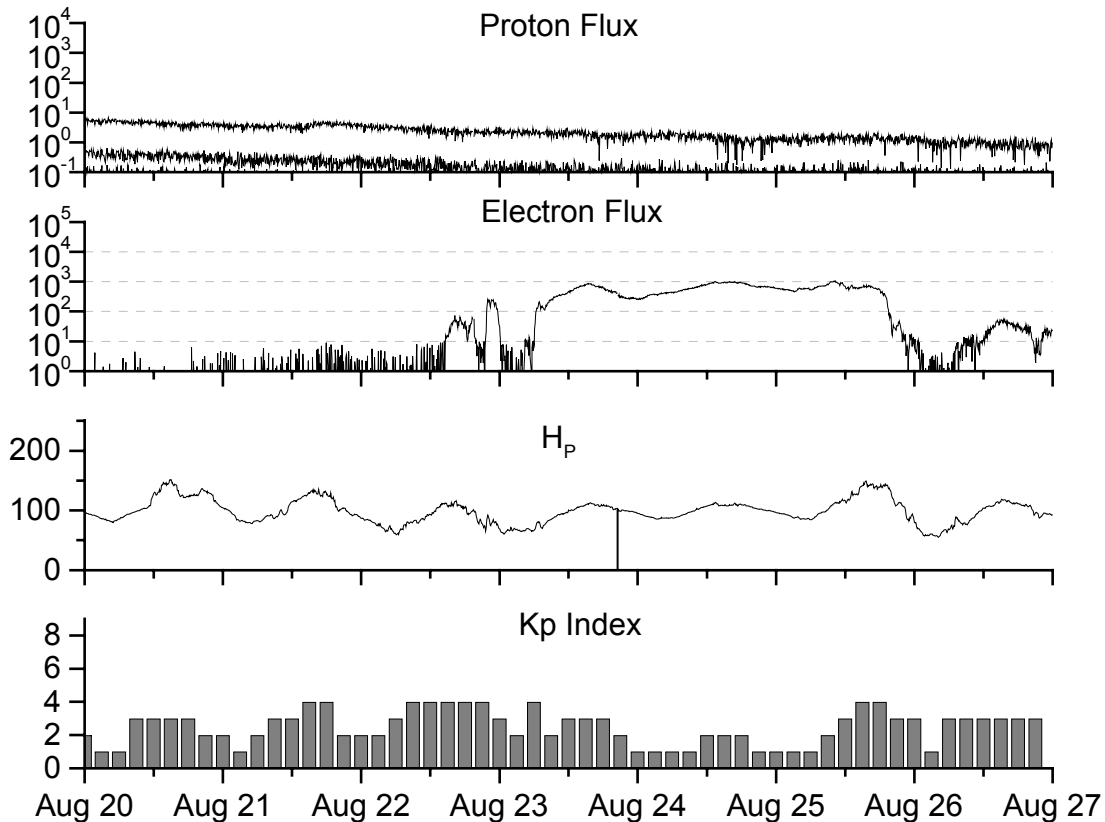


**Recent Solar Indices (preliminary)
of the observed monthly mean values**

Month	Sunspot Numbers			Radio Flux		Geomagnetic			
	Observed values SWO	Ratio RI	Ratio RI/SWO	Smooth values SWO	Smooth values RI	*Penticton 10.7 cm	Smooth Value	Planetary Ap	Smooth Value
1999									
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
2000									
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	171.8	118.6	163.1	179.5	16	14.2
September	157.9	109.9	0.70	169.0	116.2	182.1	177.1	18	14.2
October	138.9	100.1	0.72	166.2	114.4	167.7	175.6	18	14.6
November	149.9	106.5	0.71	162.7	112.7	178.8	173.6	17	14.6
December	146.4	104.5	0.71	160.8	112.1	173.6	172.0	08	14.4
2001									
January	142.7	95.1	0.67	156.3	108.8	166.7	168.8	08	13.8
February	131.0	80.1	0.61			147.3		06	
March	166.7	114.2	0.69			177.7		17	
April	163.6	108.2	0.66			178.3		18	
May	135.1	97.3	0.72			148.7		12	
June	196.7	134.0	0.68			173.7		12	
July	124.6	82.2	0.66			131.3		11	

NOTE: All smoothed values after June 1999 and monthly values after December 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 20 August 2001

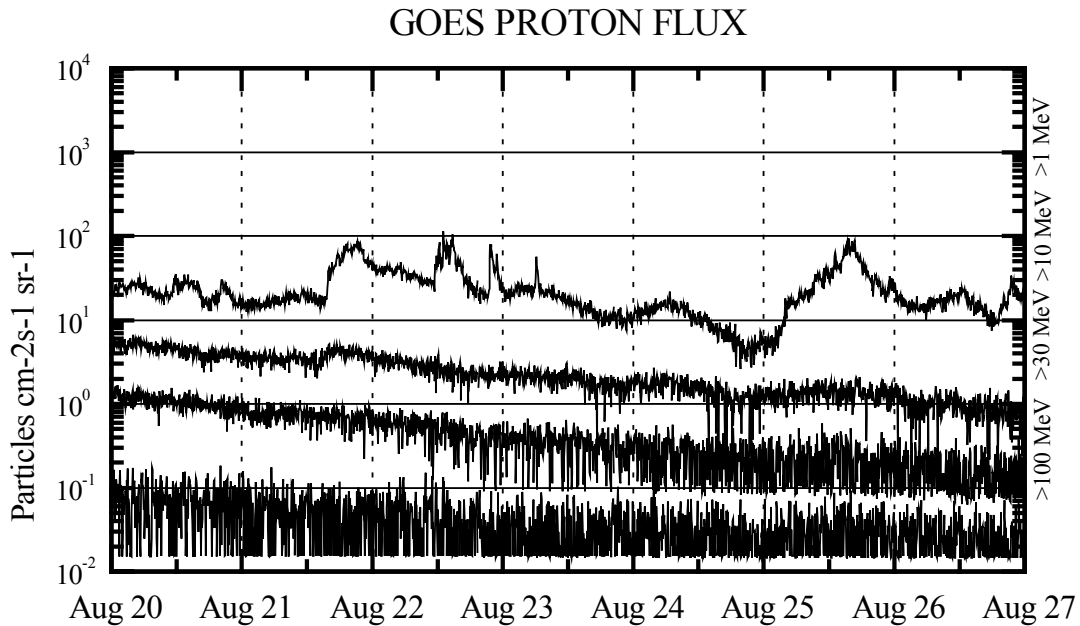
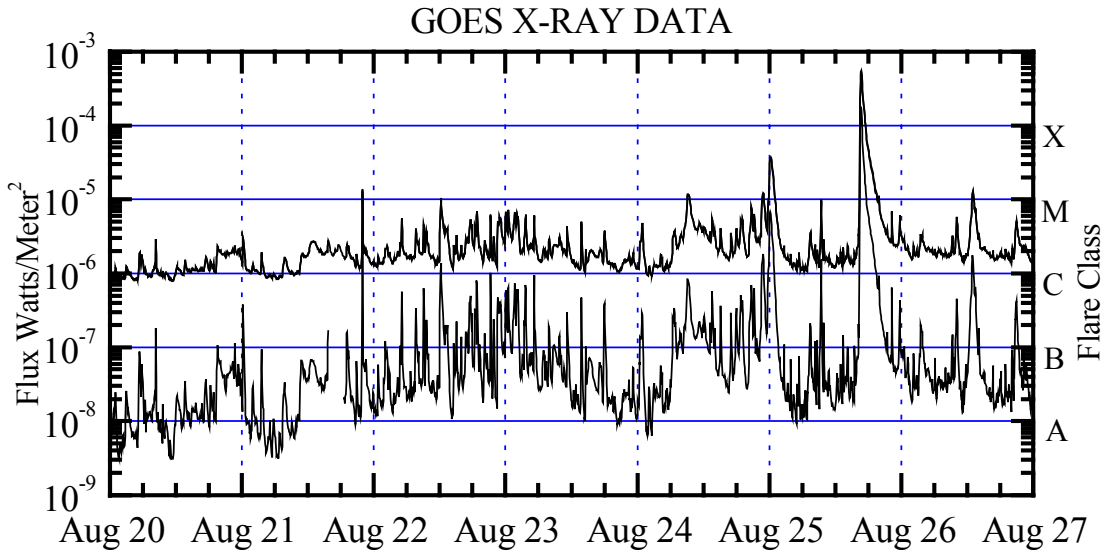
Protons plot contains the five-minute averaged integral proton flux (protons/cm²-sec -sr) as measured by GOES-8 (W75) for each of three energy thresholds: greater than 10, 50, and 100 MeV.

Electrons plot contains the five-minute averaged integral electron flux (electrons/cm²-sec -sr) with energies greater than 2 MeV at GOES-8.

H_p 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_p plot contains the estimated planetary 3-hour K-index (derived by the Air Force Weather Agency) 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_p 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_p are "global" parameters that are applicable to a first order approximation over large areas. H_p 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/m²) 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/cm²-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/cm²-sec-sr) at greater than 10 MeV.

