

Space Weather Highlights
31 July – 06 Aug 2000

SWO PRF 1301
08 August 2000

Solar activity was at low levels throughout the period. Isolated B- and C-class subflares occurred. Most regions were small and simply-structured. However, Region 9114 (N12, L = 329, class/area Eao/250 on 06 August) was of moderate size and magnetic complexity and showed gradual growth during the latter half of the period. Old Region 9077 (N18, L = 310), which produced a number of major flares during its previous transit, returned as a small, simply-structured sunspot group.

Real-time solar wind data were available from the NASA Advanced Composition Explorer (ACE) spacecraft for most of the period. There were two notable changes in the solar wind flow during the period. The first was a solar sector shift, from toward (negative polarity) to away (positive-polarity), late on 31 July accompanied by a period of sustained southward IMF Bz with deflections to minus 9 nT (GSM). The second was a possible coronal hole signature on 05 - 06 August with increased wind speeds (peaks to 620 km/sec) and periods of southward IMF Bz with peak southerly deflections to minus 11 nT.

No proton events were detected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit briefly reached high levels on 04 August, but was otherwise at normal to moderate levels.

Geomagnetic field activity increased during 04 - 06 August with active to (isolated) major storm periods. Mostly quiet to unsettled conditions occurred during the rest of the period.

Space Weather Outlook
09 August - 04 September 2000

Solar activity is expected to be at low to moderate levels. Isolated M-class flares are possible during the 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 through most of the period.

Geomagnetic field activity is expected to be at quiet to unsettled levels during most of the period, barring an Earth-directed CME. However, active levels will be possible during 31 August - 02 September.



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
31 July	148	123	630	B4.6	3	0	0	0	0	0	0	0
01 August	149	139	650	B5.2	1	0	0	2	0	0	0	0
02 August	151	153	600	B4.4	10	0	0	2	0	0	0	0
03 August	154	133	540	B7.0	2	0	0	5	0	0	0	0
04 August	154	137	610	B6.0	1	0	0	9	1	0	0	0
05 August	159	161	850	B4.4	3	0	0	4	0	0	0	0
06 August	166	174	790	B7.4	4	0	0	8	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
	31 July	5.5E+5	2.1E+4	2.2E+3		3.7E+6
01 August	2.4E+5	1.2E+4	2.5E+3		5.0E+6	
02 August	1.6E+5	1.1E+4	2.5E+3		9.5E+6	
03 August	1.6E+5	1.2E+4	2.5E+3		2.7E+7	
04 August	3.0E+5	1.1E+4	2.3E+3		2.3E+7	
05 August	2.1E+5	1.0E+4	2.2E+3		9.0E+6	
06 August	2.4E+5	9.4E+3	2.1E+3		9.4E+6	

Daily Geomagnetic Data

Date	Middle Latitude Fredericksburg		High Latitude College		Estimated Planetary	
	A	K-indices	A	K-indices	A	K-indices
	31 July	17	3-3-3-4-2-3-3-4	*	*-*-*-*3-4-3	19
01 August	11	3-2-2-3-2-3-2-3	23	2-2-2-4-4-6-3-3	15	3-3-3-3-2-4-4-3
02 August	9	3-3-1-2-2-2-2-2	19	4-4-3-5-2-2-3-2	14	4-3-3-3-2-3-3-3
03 August	8	2-2-3-1-2-1-3-2	21	2-4-4-4-5-3-2-2	12	3-3-3-3-2-3-3-2
04 August	13	3-2-3-2-3-3-3-3	24	3-3-5-3-5-4-3-2	18	3-3-4-3-3-4-3-3
05 August	19	2-3-4-4-3-3-3-4	35	2-3-6-4-5-5-4-4	26	3-3-5-5-4-4-3-4
06 August	15	4-4-1-2-3-2-3-3	19	4-4-3-3-4-4-2-2	18	4-4-3-3-3-3-3-3

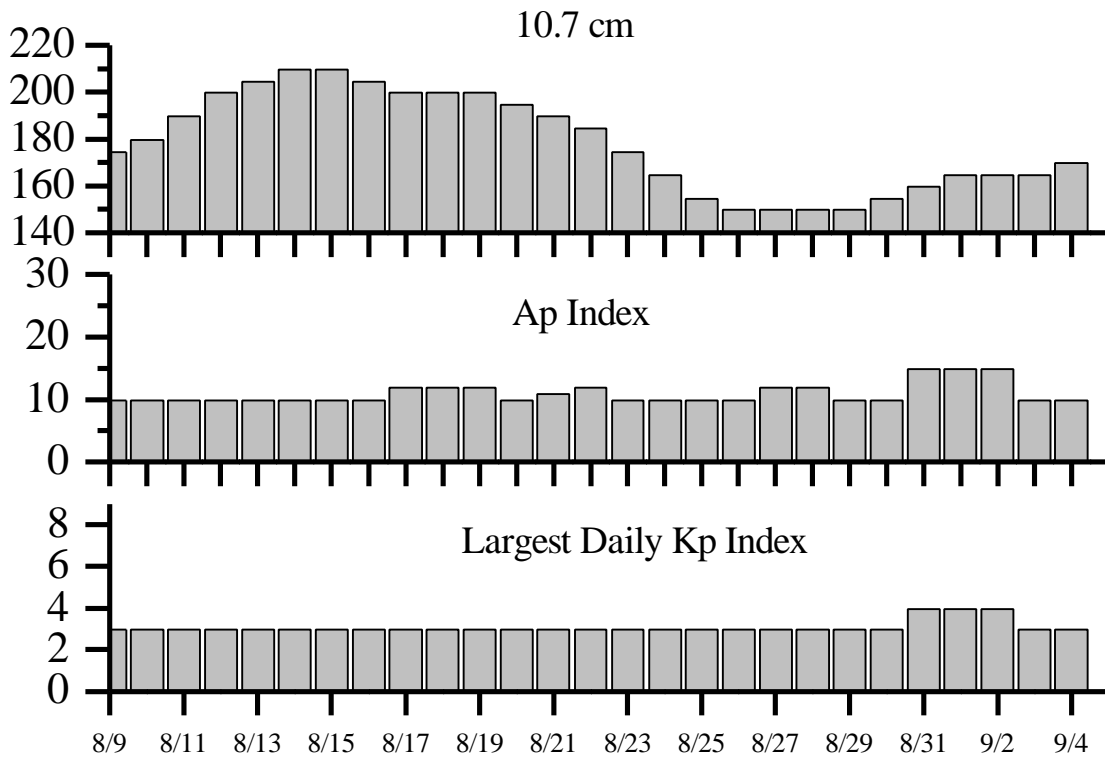


Alerts and Warnings Issued

Date & Time of Issue	Type of Alert or Warning	Date & Time of Event UT
31 Jul 0021	1- 245 MHz Radio Burst	30 Jul
31 Jul 1013	K= 4 Warning	31 Jul 1015 - 1500
31 Jul 1202	K= 4 Observed	31 Jul 0900 - 1200
31 Jul 2210	K= 4 Warning	31 Jul 2215 - 01 Aug 1500
01 Aug 0001	K= 4 Observed	31 Jul 21 - 00
01 Aug 0009	1- 245 MHz Radio Burst	31 Jul
01 Aug 1623	Type II Radio Emission	01 Aug 0347
02 Aug 0301	K= 4 Observed	02 Aug 00 - 03
03 Aug 0108	1- 245 MHz Radio Burst	02 Aug
04 Aug 0601	K= 4 Observed	04 Aug 03 - 06
04 Aug 0603	K= 4 Warning	04 Aug 0610 - 1200
04 Aug 0804	K= 5 Warning	04 Aug 0810 - 1200
04 Aug 0900	K= 5 Observed	04 Aug 06 - 09
04 Aug 1502	K= 4 Observed	04 Aug 12 - 15
04 Aug 1949	Electron Event >2MeV =1000pfu	04 Aug 1935
05 Aug 0055	CONTINUED Electron Event >2MeV =1000pfu	04 Aug 1935
05 Aug 0815	K= 5 Warning	05 Aug 0820 - 1200
05 Aug 0900	K= 6 Observed	05 Aug 06 - 09
05 Aug 0902	A =20 Observed	05 Aug 0900
05 Aug 1459	K= 4 Warning	05/1500 - 06/1500 Aug
05 Aug 1500	K= 4 Observed	05 Aug - 15
06 Aug 0224	1- 245 MHz Radio Burst	05 Aug
06 Aug 0224	245 MHz Radio Noise Storm	05 Aug
06 Aug 0201	A = 30 Warning	06 Aug 0205 - 0900
06 Aug 0303	A = 30 Observed	06 Aug 0300
06 Aug 0420	K= 5 Warning valid	06 Aug 0430 - 1500
06 Aug 0559	K= 5 Observed	06 Aug 03 - 06
06 Aug 0901	ENDED A = 30 Observed	06 Aug 0300
06 Aug 2103	ENDED A = 20 Observed	05 Aug 0900



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
09 Aug	175	10	3	23 Aug	175	10	3
10	180	10	3	24	165	10	3
11	190	10	3	25	155	10	3
12	200	10	3	26	150	10	3
13	205	10	3	27	150	12	3
14	210	10	3	28	150	12	3
15	210	10	3	29	150	10	3
16	205	10	3	30	155	10	3
17	200	12	3	31	160	15	4
18	200	12	3	01 Sep	165	15	4
19	200	12	3	02	165	15	4
20	195	10	3	03	165	10	3
21	190	11	3	04	170	10	3
22	185	12	3				



Energetic Events

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

No Events Observed

Flare List

Date	Time			X-ray Class.	Optical		Rgn
	Begin	Max	End		Imp / Brtns	Location Lat CMD	
31 July	0203	0209	0215	C3.1			
	0244	0248	0255	C1.0			
	0403	0407	0417	B9.7			
	1125	1129	1132	C1.2			
	1604	1608	1612	B7.6			
	1940	1945	1953	B8.9			
01 August	0337	0346	0354	C2.8			
	0442	0444	0454		SF	S21E57	9110
	1316	1323	1329		SF	N17E18	9105
02 August	1351	1354	1356	B7.8			
	0805	0815	0826	C7.9			9114
	1316	1337	1400	C1.5			
	1409	1410	1413	C2.3	SF	S27W08	9113
	1453	1459	1506	C1.3			
	1544	1549	1555	C1.8			
	1626	1639	1655	C1.2			
	1710	1710	1713		SF	S29W06	9113
	1840	1900	1911	C1.1			
	1936	1943	1957	C1.6			
	2151	2200	2213	C1.9			
	2300	2313	2331	C1.7			
03 August	0808	0911	1012	C1.4			
	0850	0851	0856		SF	N12E73	9114
	1352	1352	1356		SF	N15E87	
	1500	1503	1511	B8.6			
	1549	1551	1601		SF	S14E05	9107
	1722	1722	1728		SF	S19E30	9110
04 August	1848	1848	1851	C1.9	SF	N15E82	9115
	0031	0036	0044		1F	N19E86	9115
	0206	0211	0218		SF	S16E01	9107
	0300	0301	0307		SF	S16E00	9107
	0451	0456	0501	C1.1			
	0729	0732	0735	B9.3			
	1338	1341	1354		SF	S23W36	9113



Flare List – continued.

Date	Time			X-ray	Optical		Rgn Lat CMD
	Begin	Max	End		Imp / Class.	Location Brtns	
04 August	1725	1725	1733		SF	N15E72	9115
	1743	1744	1754		SF	S26W36	9113
	1810	1813	1818	B8.0	SF	N15E57	9114
	1915	1916	1919		SF	N15E57	9114
	2027	2029	2035		SF	N15E56	9114
	2139	2142	2152		SF	S18E10	9110
05 August	0136	0138	0159	C1.4	SF	S19E06	9110
	0303	0304	0311	B8.5	SF	S25W38	9113
	0425	0433	0440	C1.1			
	1010	1010	1015	B7.6	SF	N19E66	9115
	2241	2243	2247	C1.2	SF	N20W25	9111
06 August	0137	0141	0147	C1.2			
	0947	0948	0956	B9.8	SF	N11E33	9114
	1230	1231	1236		SF	N09E31	9114
	1352	1352	1356		SF	N12E26	9114
	1535	1546	1610	C2.1	SF	N09E31	9114
	1745	1749	1755	C1.1	SF	N10E30	9114
	1802	1809	1820		SF	N10E30	9114
	1844	1847	1905	C1.7	SF	S20W32	9107
	1846	1855	2059		SF	N10E30	9114



Region Summary

Date	Location		Sunspot Characteristics				Flares											
	° 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 9097</i>																		
18 Jul	N06E75	172	0200	06	DSO	002	B	1			8							
19 Jul	N05E66	168	0370	09	DAO	004	B	2			8	1						
20 Jul	N05E53	168	0650	11	EKC	012	BD	2			4							
21 Jul	N06E42	166	0660	11	EKC	019	B	1			2							
22 Jul	N06E25	169	0630	12	EKC	021	BG	1			2							
23 Jul	N09E13	168	0630	12	EKC	026	BG		1		6							
24 Jul	N06W01	169	0540	13	EKC	028	BG	1			5	1						
25 Jul	N08W15	170	0510	11	EKC	026	BG	3	2		5	1	1					
26 Jul	N07W27	169	0390	10	DAC	028	BG	1			1							
27 Jul	N09W41	170	0250	09	DAI	023	BG	1			3							
28 Jul	N09W55	170	0210	09	DAI	018	B				1							
29 Jul	N09W68	170	0120	08	DAO	013	B											
30 Jul	N08W83	172	0070	07	CSO	005	B											
31 Jul	N10W95	171	0030	05	BXO	002	B											
								13	3	0	45	3	1	0	0			

Crossed West Limb.

Absolute heliographic longitude: 169

Region 9099

19 Jul	N11E74	160	0050	02	HSX	001	A											
20 Jul	N12E63	158	0070	02	HSX	001	A											
21 Jul	N13E50	158	0080	02	HSX	001	A											
22 Jul	N13E37	157	0060	02	HSX	001	A											
23 Jul	N13E25	156	0070	02	HSX	001	A											
24 Jul	N13E12	156	0070	02	HSX	001	A											
25 Jul	N14W02	157	0060	02	HSX	001	A											
26 Jul	N14W14	156	0070	02	HSX	001	A											
27 Jul	N15W28	157	0060	02	HSX	001	A											
28 Jul	N16W41	156	0080	02	HSX	001	A											
29 Jul	N17W54	156	0070	01	HSX	001	A											
30 Jul	N16W69	158	0050	01	HSX	001	A											
31 Jul	N17W82	158	0050	02	HSX	001	A											
01 Aug	N17W94	157	0060	02	HSX	001	A											
								0	0	0	0	0	0	0	0	0	0	

Crossed West Limb.

Absolute heliographic longitude: 157



Region Summary – continued.

Date	Location		Sunspot Characteristics				Flares											
	(° 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 9100</i>																		
21 Jul	S31E73	135	0020	01	AXX	001	A											
22 Jul	S32E60	134	0040	02	HSX	001	A											1
23 Jul	S31E47	134	0070	02	HSX	001	A											2
24 Jul	S32E40	128	0100	12	EAO	011	B	1										1
25 Jul	S33E26	129	0130	13	ESO	011	B											
26 Jul	S32E13	129	0130	12	ESO	009	B											
27 Jul	S31W02	131	0130	13	CSO	008	B											
28 Jul	S30W15	130	0120	10	CSO	002	B											
29 Jul	S29W28	130	0090	09	CSO	003	B	1										1
30 Jul	S29W43	132	0120	03	HSX	001	A											
31 Jul	S28W57	133	0090	02	HSX	001	A											
01 Aug	S28W71	134	0100	02	HSX	001	A											
02 Aug	S29W81	130	0060	02	HSX	001	A											
								2	0	0	5	0	0	0	0	0	0	

Crossed West Limb.

Absolute heliographic longitude: 131

Region 9101

22 Jul	S15E66	128	0020	00	HRX	001	A											
23 Jul	S16E53	128	0020	03	CRO	002	B											
24 Jul	S17E42	126	0020	02	HSX	002	A											1
25 Jul	S15E24	131	0040	08	CSO	012	B											1
26 Jul	S14E10	132	0030	07	CSO	008	B											
27 Jul	S13W05	134	0020	02	HSX	001	A											
28 Jul	S13W19	134	0010	03	BXO	002	B											
29 Jul	S13W31	133	0010	03	BXO	003	B											
30 Jul	S13W44	133																
31 Jul	S13W57	133																
01 Aug	S13W70	133																
02 Aug	S13W83	133																
								0	0	0	2	0	0	0	0	0	0	

Crossed West Limb.

Absolute heliographic longitude: 134



Region Summary – continued.

Date	Location		Sunspot Characteristics					Flares						
	(° 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 9102

25 Jul	S21E60	095	0010	00	HRX	001	A										
26 Jul	S21E46	096	0010	06	BXO	003	B										
27 Jul	S19E30	099	0000	00	AXX	001	A										1
28 Jul	S17E15	100	0000	00	AXX	001	A										
29 Jul	S17E02	100															
30 Jul	S17W11	100															
31 Jul	S17W24	100															
01 Aug	S17W37	100															
02 Aug	S17W50	100															
03 Aug	S17W63	100															
04 Aug	S17W76	099	0000	00	AXX	001	A										
05 Aug	S16W89	099															

0 0 0 1 0 0 0 0

Crossed West Limb.

Absolute heliographic longitude: 100

Region 9103

26 Jul	N08E28	114	0010	01	HRX	001	A										
27 Jul	N09E16	113	0020	03	CRO	003	B										
28 Jul	N10E03	112	0040	05	DAO	010	B										1
29 Jul	N08W11	113	0120	08	DAO	016	B	1									2
30 Jul	N11W26	115	0120	08	DSO	015	B										4
31 Jul	N10W39	115	0120	09	DSO	011	B										
01 Aug	N12W52	115	0100	09	DSO	005	B										
02 Aug	N11W65	114	0100	08	DSO	004	B										
03 Aug	N11W78	114	0060	06	CSO	002	B										

1 0 0 7 0 0 0 0

Crossed West Limb.

Absolute heliographic longitude: 112



Region Summary – continued.

Date	Location		Sunspot Characteristics					Flares						
	(° 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 9104

26 Jul	S19E75	067	0090	02	HSX	001	A										
27 Jul	S23E65	064	0080	02	HSX	001	A										
28 Jul	S21E51	064	0100	02	HSX	001	A										
29 Jul	S21E38	064	0120	02	HSX	001	A										
30 Jul	S20E24	065	0100	03	HSX	001	A										
31 Jul	S20E10	066	0100	03	HSX	001	A										
01 Aug	S19W01	064	0110	07	DSO	009	BG										
02 Aug	S19W15	064	0090	04	CSO	007	B										
03 Aug	S19W27	063	0110	07	CSO	005	B										
04 Aug	S18W40	063	0070	04	CSO	003	B										
05 Aug	S18W54	064	0060	01	HSX	001	A										
06 Aug	S19W67	064	0040	02	HSX	001	A										

0 0 0 0 0 0 0 0

Still on Disk.

Absolute heliographic longitude: 064

Region 9105

27 Jul	N13E81	048	0050	02	HSX	001	A										
28 Jul	N15E66	049	0090	01	HSX	001	A	1			1						
29 Jul	N14E54	048	0080	02	HSX	001	A										
30 Jul	N16E40	049	0080	02	HSX	001	A	1			1						
31 Jul	N15E27	049	0080	03	HSX	001	A										
01 Aug	N16E14	049	0090	05	HSX	005	A						1				
02 Aug	N17E02	047	0080	06	CSO	005	B										
03 Aug	N17W12	048	0080	02	HSX	001	A										
04 Aug	N17W25	048	0070	02	HSX	001	A										
05 Aug	N17W38	048	0070	02	HSX	001	A										
06 Aug	N18W52	049	0050	02	HSX	001	A										

2 0 0 3 0 0 0 0

Still on Disk.

Absolute heliographic longitude: 047

Region 9106

27 Jul	S10W15	144	0010	03	CSO	004	B										
28 Jul	S10W30	145	0020	04	BXO	004	B										
29 Jul	S09W43	145	0030	04	CSO	005	B										
30 Jul	S10W58	147	0010	04	BXO	004	B										
31 Jul	S10W71	147															
01 Aug	S10W84	147															

0 0 0 0 0 0 0 0

Crossed West Limb.

Absolute heliographic longitude: 144



Region Summary – continued.

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

Region 9107

29 Jul	S19E69	033	0150	12	ESO	002	B	1			1						
30 Jul	S18E56	033	0110	16	FSO	005	B										
31 Jul	S16E38	038	0070	08	DSO	007	B										
01 Aug	S16E30	033	0080	14	EAO	009	B										
02 Aug	S16E17	032	0080	16	CAO	010	B										
03 Aug	S17E03	033	0050	17	CAO	010	B										1
04 Aug	S16W13	036	0020	07	CSO	005	B										2
05 Aug	S16W27	037	0020	08	CAO	004	B										
06 Aug	S16W41	038	0020	03	CAO	003	B	1				1					
								2	0	0	0	5	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 033

Region 9108

29 Jul	S09W18	120	0010	02	BXO	002	B										
30 Jul	S12W31	120	0000	00	AXX	001	A										
31 Jul	S12W44	120															
01 Aug	S12W57	120															
02 Aug	S12W70	120															
03 Aug	S12W83	120															
								0	0	0	0	0	0	0	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 120

Region 9109

29 Jul	S07E40	062	0020	04	CRO	004	B										
30 Jul	S06E27	062	0020	04	BXO	004	B										
31 Jul	S07E13	067	0010	04	BXO	005	B										
01 Aug	S07E00	063	0010	04	BXO	006	B										
02 Aug	S06W13	062	0020	03	DRO	002	B										
03 Aug	S06W25	061															
04 Aug	S06W38	061															
05 Aug	S06W51	061															
06 Aug	S06W64	061															
								0	0	0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 063



Region Summary – continued.

Date	Location		Sunspot Characteristics					Flares						
	° 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 9110

31 Jul	S19E55	021	0080	11	ESO	004	B											
01 Aug	S19E47	016	0060	08	CAO	005	B						1					
02 Aug	S19E33	016	0050	07	CAO	003	B											
03 Aug	S20E18	018	0040	07	CSO	004	B						1					
04 Aug	S19E06	017	0050	07	CSO	006	B						1					
05 Aug	S19W07	017	0090	08	DAO	006	B	1					1					
06 Aug	S18W19	016	0050	09	DSO	009	B											
								1	0	0	4	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 017

Region 9111

01 Aug	N10E28	035	0040	04	CRO	008	B											
02 Aug	N10E14	035	0020	04	CRO	003	A											
03 Aug	N10W03	039	0010	01	HSX	001	A											
04 Aug	N10W16	039	0010	00	AXX	001	A											
05 Aug	N10W29	039						1					1					
06 Aug	N10W42	039																
								1	0	0	1	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 039

Region 9112

02 Aug	N14W14	063	0010	01	HRX	001	A											
03 Aug	N14W27	063	0010	00	AXX	001	A											
04 Aug	N14W40	063																
05 Aug	N14W53	063																
06 Aug	N14W66	063																
								0	0	0	0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 063

Region 9113

02 Aug	S25W12	061	0030	05	CSO	006	B	1					2					
03 Aug	S26W26	062	0040	08	DAO	007	B											
04 Aug	S26W38	061	0060	09	DAO	008	B						2					
05 Aug	S25W52	062	0040	08	CSO	008	B						1					
06 Aug	S25W65	062	0010	08	BXO	002	B											
								1	0	0	5	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 061



Region Summary – continued.

Date	Location		Sunspot Characteristics				Flares							
	° 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 9114

02 Aug	N10E77	332	0060	02	HSX	001	A	1										
03 Aug	N10E64	332	0080	02	HAX	001	A					1						
04 Aug	N13E54	329	0110	11	CSO	007	B					3						
05 Aug	N12E41	329	0230	11	EAO	013	B											
06 Aug	N12E28	329	0250	12	EAO	014	B	2				7						
								3	0	0	0	11	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 329

Region 9115

03 Aug	N16E77	319	0060	03	HSX	001	A	1				1						
04 Aug	N17E68	315	0170	08	CSO	004	B					1	1					
05 Aug	N16E56	314	0230	11	CSO	006	B					1						
06 Aug	N17E43	314	0170	10	DAO	005	B											
								1	0	0	0	3	1	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 314

Region 9116

04 Aug	S12E63	320	0050	02	HSX	001	A											
05 Aug	S13E49	321	0050	02	HSX	001	A											
06 Aug	S13E37	320	0050	02	HSX	002	A											
									0	0	0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 320

Region 9117

05 Aug	S09W07	017	0020	03	CAO	003	B											
06 Aug	S10W23	020	0020	01	HAX	001	A											
									0	0	0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 017

Region 9118

05 Aug	N18W02	012	0010	03	BXO	003	B											
06 Aug	N18W15	012	0000	00		000												
									0	0	0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 012



Region Summary – continued.

Date	Location		Sunspot Characteristics				Flares															
	(° 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 9119</i>																						
05 Aug	S13E08	002	0030	04	CRO	005	B															
06 Aug	S12W06	003	0040	05	CRO	007	B															
								0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Still on Disk.																						
Absolute heliographic longitude: 003																						
<i>Region 9120</i>																						
06 Aug	S22E24	333	0020	04	HSX	004	A															
								0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Still on Disk.																						
Absolute heliographic longitude: 333																						
<i>Region 9121</i>																						
06 Aug	S35E27	330	0070	06	CSO	005	B															
								0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Still on Disk.																						
Absolute heliographic longitude: 330																						

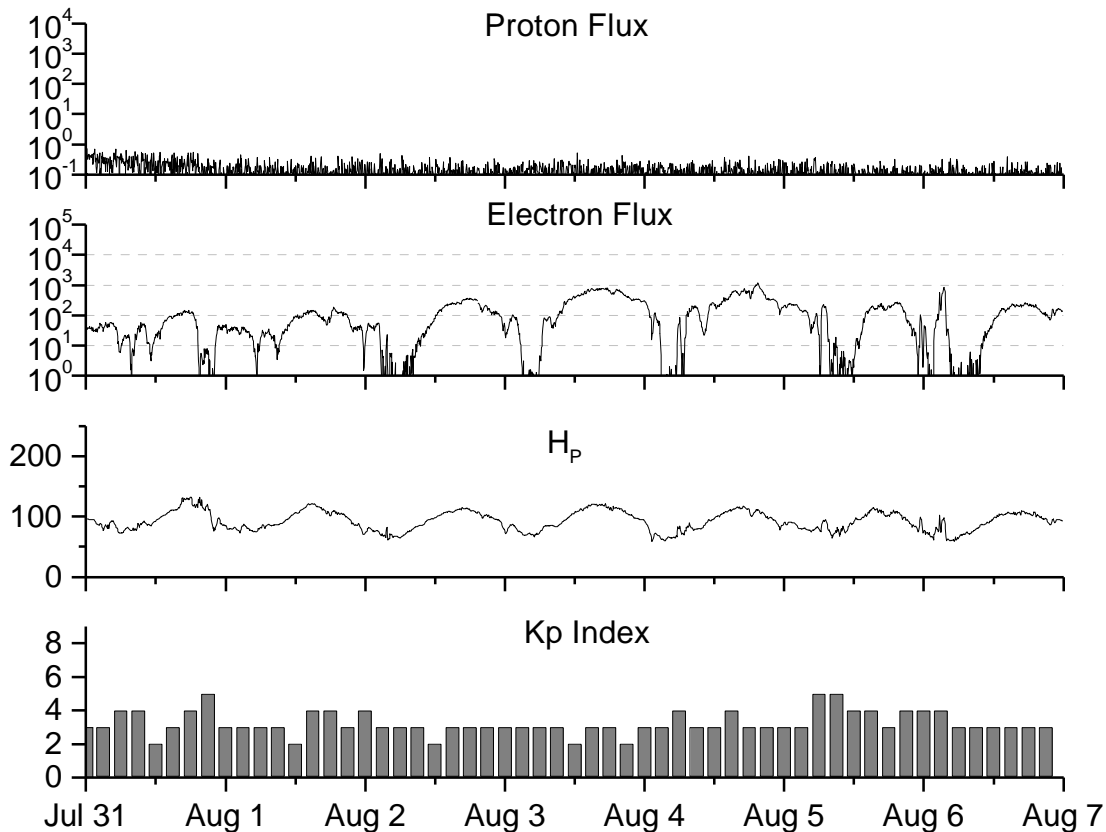


**Recent Solar Indices (preliminary)
of the observed monthly mean values**

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
1998									
August	118.6	92.2	0.78	93.7	67.8	136.0	124.1	18	12.4
September	119.0	92.9	0.78	96.1	69.5	138.3	126.8	13	12.6
October	77.0	55.5	0.72	97.7	70.5	117.3	127.9	13	12.8
November	99.5	74.0	0.74	101.3	73.0	140.2	130.0	16	12.4
December	120.8	81.9	0.68	108.8	77.9	150.1	134.3	08	11.9
1999									
January	94.3	62.0	0.66	116.5	82.6	142.6	139.0	10	11.7
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	94.4	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	0.66	150.0	102.3	135.7	161.0	19	12.8
October	167.7	116.7	0.69	158.5	107.7	164.8	167.2	19	12.7
November	199.3	133.2	0.67	164.7	110.9	191.5	171.5	14	13.2
December	123.5	86.4	0.70	165.9	110.9	169.8	173.4	10	13.9
2000									
January	140.8	90.2	0.64	168.0	112.7	158.1	175.2	13	14.7
February	161.9	112.3	0.69			173.2		15	
March	203.6	138.2	0.68			208.2		09	
April	193.4	125.3	0.65			184.2		15	
May	188.8	120.8	0.64			184.5		16	
June	190.3	124.9	0.66			178.8		16	
July	236.7	169.1	0.71			200.0		21	

NOTE: All smoothed values after June 1999 and monthly values after December 1999 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 31 July 2000*

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.

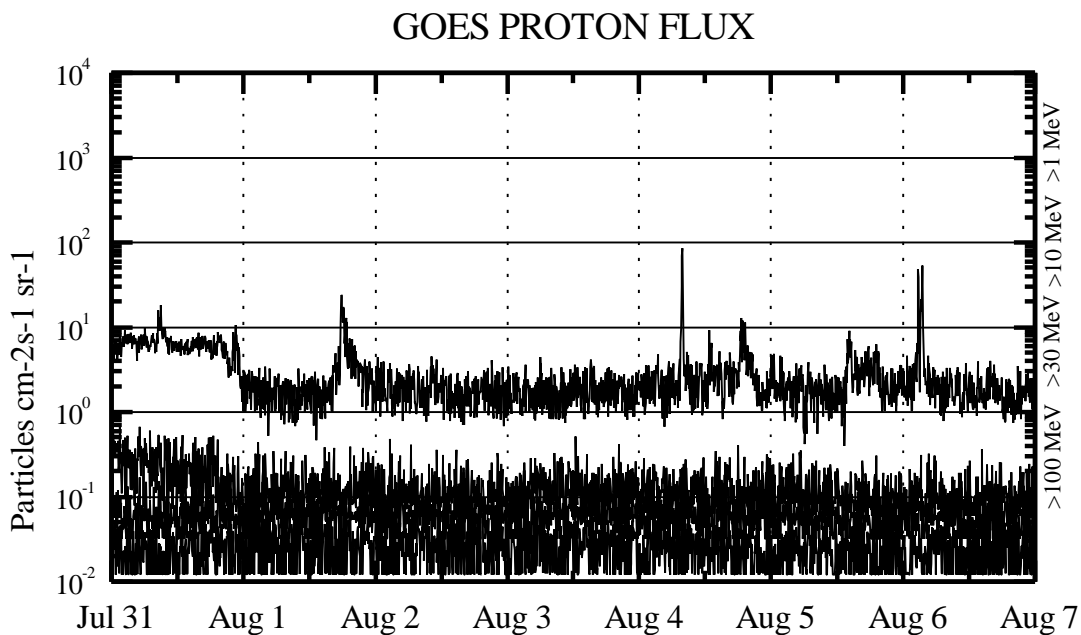
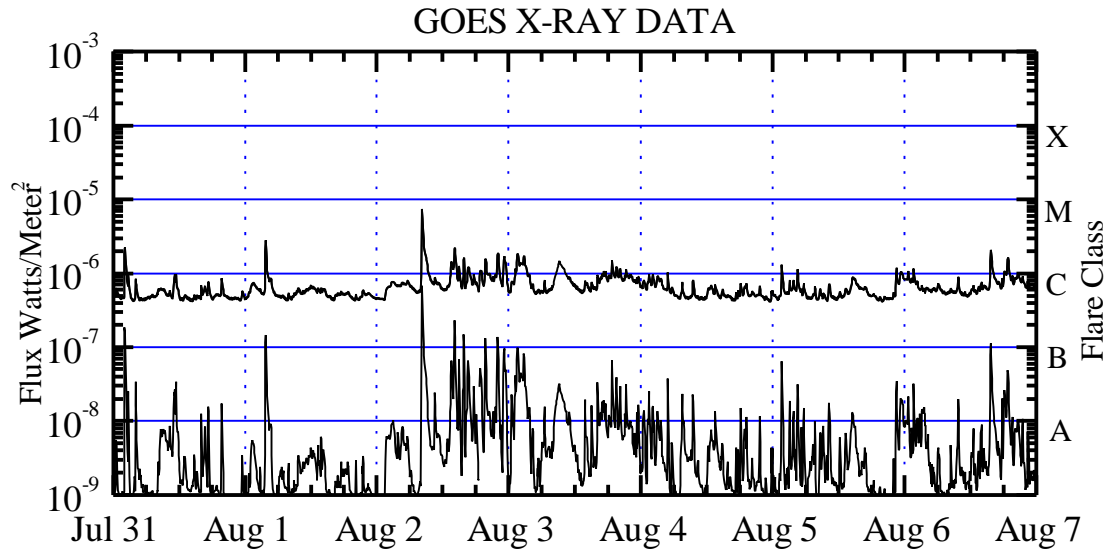
Electrons plot contains the five-minute averaged integral electron flux (electrons/cm²-sec -sr) with energies greater than 2 MeV at GOES-8.

Hp 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.

Kp plot contains the estimated planetary 3-hour K-index (derived by the USAF 55th 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 Kp 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 Kp are “ global ” parameters that are applicable to a first order approximation over large areas. Hparallel is subject to more localized phenomena and the measurements generally are applicable to within a few degrees of longitude of the measuring satellite.



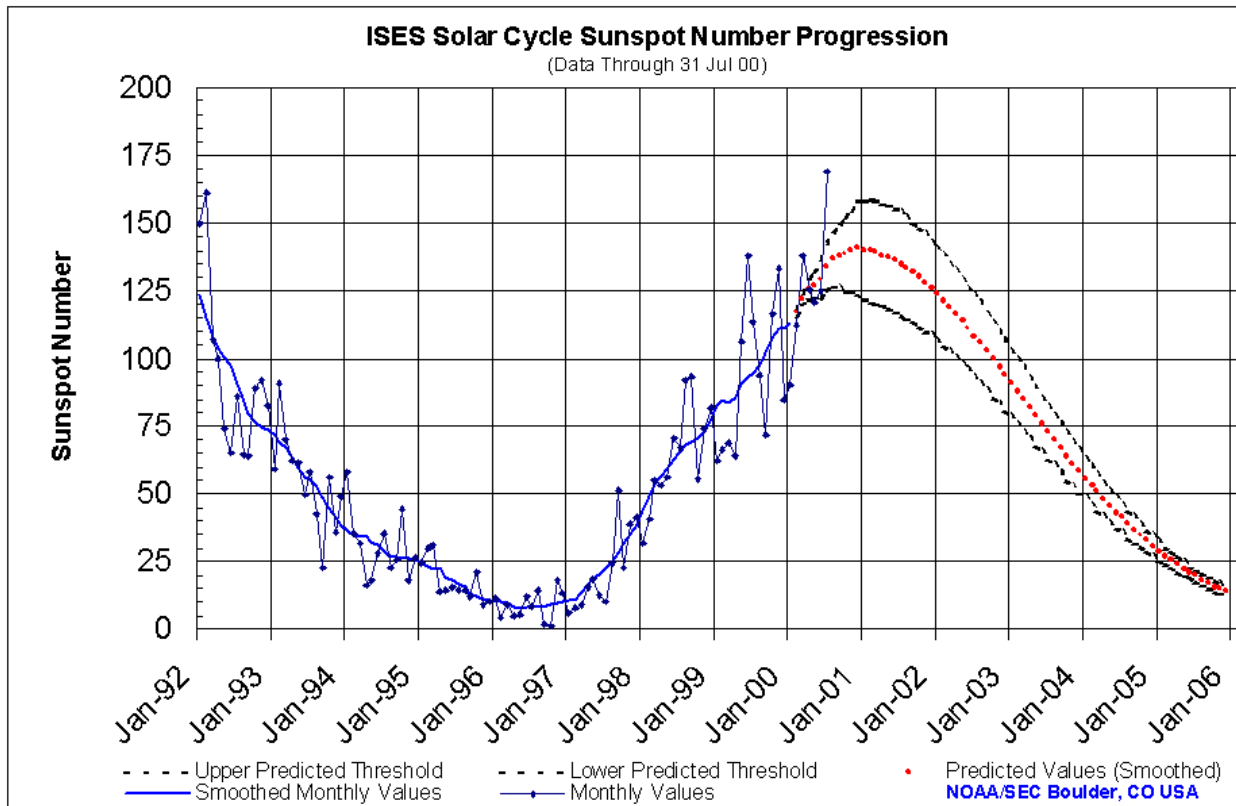


Weekly GOES Satellite X-ray and Proton Plots

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.

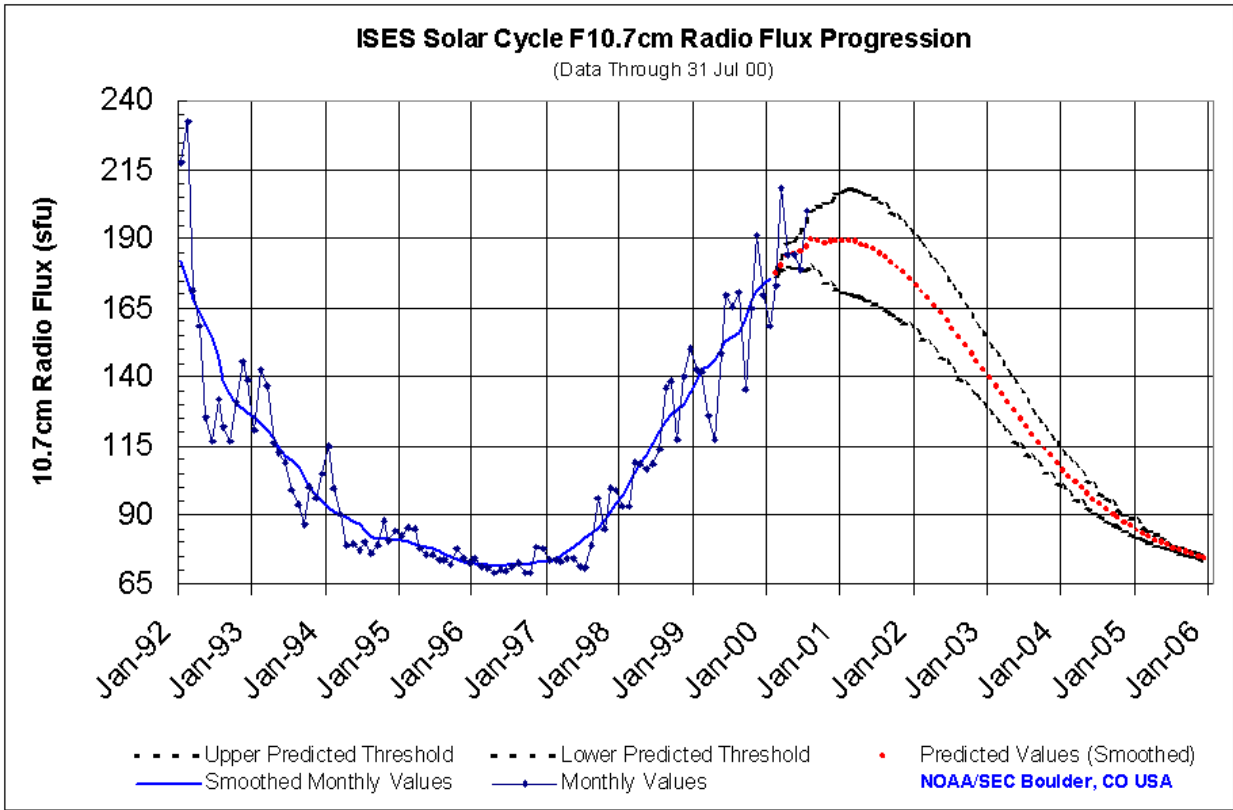




SEC Prediction of Smoothed Sunspot Number

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1996	10	10	10	9	8	9	8	8	8	9	10	10
	(***)	(***)	(***)	(***)	(***)	(***)	(***)	(***)	(***)	(***)	(***)	(***)
1997	11	11	14	17	18	20	23	25	28	32	35	39
	(***)	(***)	(***)	(***)	(***)	(***)	(***)	(***)	(***)	(***)	(***)	(***)
1998	44	49	53	57	59	63	66	68	70	71	73	78
	(***)	(***)	(***)	(***)	(***)	(***)	(***)	(***)	(***)	(***)	(***)	(***)
1999	83	85	84	86	91	93	94	97	102	108	111	111
	(***)	(***)	(***)	(***)	(***)	(***)	(***)	(***)	(***)	(***)	(***)	(***)
2000	113	116	122	125	127	129	134	137	138	138	140	141
	(***)	(1)	(2)	(4)	(5)	(7)	(9)	(10)	(12)	(14)	(15)	(17)
2001	140	140	139	138	137	136	135	133	132	130	128	126
	(18)	(19)	(19)	(19)	(19)	(19)	(19)	(19)	(18)	(18)	(18)	(17)
2002	124	121	119	116	114	111	108	106	103	100	97	94
	(17)	(17)	(16)	(16)	(16)	(15)	(15)	(15)	(14)	(14)	(13)	(13)
2003	91	88	85	82	79	76	73	70	67	64	61	58
	(12)	(12)	(12)	(11)	(11)	(10)	(10)	(9)	(9)	(9)	(8)	(8)
2004	56	53	51	48	46	43	41	39	37	35	33	31
	(7)	(7)	(7)	(6)	(6)	(6)	(5)	(5)	(5)	(4)	(4)	(4)
2005	29	27	25	24	22	21	20	18	17	16	15	14
	(4)	(3)	(3)	(3)	(3)	(2)	(2)	(2)	(2)	(2)	(2)	(1)





SEC Prediction of Smoothed F10.7cm Radio Flux

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1996	72 (***)	72 (***)	72 (***)	72 (***)	71 (***)	72 (***)	72 (***)	72 (***)	72 (***)	73 (***)	73 (***)	73 (***)
1997	73 (***)	74 (***)	75 (***)	77 (***)	78 (***)	80 (***)	82 (***)	83 (***)	86 (***)	89 (***)	91 (***)	94 (***)
1998	98 (***)	102 (***)	106 (***)	109 (***)	112 (***)	116 (***)	120 (***)	124 (***)	127 (***)	128 (***)	130 (***)	134 (***)
1999	139 (***)	143 (***)	144 (***)	146 (***)	150 (***)	153 (***)	154 (***)	156 (***)	161 (***)	167 (***)	172 (***)	173 (***)
2000	175 (***)	177 (1)	180 (2)	184 (4)	184 (5)	185 (7)	187 (9)	189 (10)	189 (12)	188 (14)	189 (15)	189 (17)
2001	189 (18)	189 (19)	189 (19)	188 (19)	187 (19)	186 (19)	185 (19)	183 (19)	181 (18)	180 (18)	178 (18)	175 (17)
2002	173 (17)	171 (17)	168 (16)	166 (16)	163 (16)	160 (15)	157 (15)	155 (15)	152 (14)	149 (14)	146 (13)	143 (13)
2003	139 (12)	136 (12)	133 (12)	131 (11)	128 (11)	125 (10)	122 (10)	119 (8)	116 (8)	114 (8)	111 (7)	109 (7)
2004	106 (6)	104 (6)	102 (6)	100 (5)	98 (5)	96 (5)	94 (4)	92 (4)	90 (4)	89 (3)	87 (3)	86 (3)
2005	85 (3)	83 (2)	82 (2)	81 (2)	80 (2)	79 (1)	78 (1)	77 (1)	77 (1)	76 (1)	75 (1)	75 (1)



ISES Solar Cycle Ap Progression

(Data Through 31 Jul 00)

