

Solar activity ranged from low to high levels. The most active region on the disk remained Region 808 (S09, L=232, class/area, Fkc/1430 on 09 September) which produced several major flares this period. During the summary period, the region produced 53 C-class, 12 M-class, and 3 X-class flares. Late on 13 September, Region 808 produced a pair of X-class events responsible for a strong, complex, front-sided, asymmetric full halo CME. The first event was a double peak, X1.5/2b long duration event at 13/1927 UTC with an associated 6000 sfu 10cm radio burst, while the second event was an X1.7/1b at 12/2322 UTC with an associated 180 sfu 10cm radio burst. Since 14 September, the region has shown signs of significant decay in white light. Region 808 has produced 13 major flares greater than or equal to M5, to include ten X-class and three M5 or higher M-class flares. Based on this criteria (greater than or equal to M5 flares) alone, Region 808 produced more major flares than any other region in Solar Cycle 23.

Solar wind data were available from the NASA Advanced Composition Explorer (ACE) spacecraft during most of the summary period. Solar wind speed at ACE was elevated at the beginning of the summary period at near 800 km/s due to CME effects from the X6 flare of 09 September. At about 12/0600 UTC, another shock was observed at ACE, as solar wind speed measurements increased to about 1000 km/s, and the IMF Bz fluctuated between +/- 10 nT for about six hours. This shock was assumed to be associated with the long duration X2 flare and CME on 10 September. By midday on 12 September, solar wind velocity began to decrease, and by early on 15 September, had decayed to near 600 km/s. During this same period, the Bz component of the IMF did not vary much beyond +/- 5 nT. At 15/0907 UTC, a 29 nT sudden impulse was observed at the Boulder magnetometer as a shock from the CME activity associated with the double X-class flare on 13 September arrived at Earth. Solar wind speed rose from about 600 km/s to near 900 km/s, while the IMF had periods of southward Bz to -15 nT for a six hour period. The summary period ended with the solar wind speed at near 550 km/s and a weak IMF Bz not varying much beyond +/- 5 nT.

A greater than 10 MeV proton event that began early on 08 September as a result of the X17 flare on the 7th, finally ended early on 16 September. The event began at 08/0215 UTC, reached an initial peak of 1880 pfu on 11/0425 UTC, and fell below event threshold late on 12 September. A second infusion of greater than 10 MeV energetic protons from the CME and X-class activity late on the 13th saw a second, weaker max of 235 pfu at 15/0905 UTC. The event finally ended at 16/0025 UTC. A greater than 100 MeV proton event began at 08/0405 UTC, maxed at 8 pfu on 09/1920 UTC, and ended at 11/0545 UTC.

The greater than 2 MeV electron flux at geosynchronous orbit was at high levels 11 - 16 September and very high levels on 17 and 18 September. The geomagnetic field ranged from quiet to severe storm levels. Predominantly active to minor storm levels at middle latitudes, and major to severe storm levels at high latitudes persisted through midday on 13 September, as CME effects from the X6 flare of 09 September persisted. Conditions relaxed to mostly quiet to unsettled through early on 14 September. By 14/0900 UTC, geomagnetic activity increased to unsettled to active levels at middle latitudes, and major to severe storm levels at high latitudes, as transient effects from CME activity continued. By midday on 15 September, minor storm levels were present at middle latitudes. By late on the 15th, conditions at all latitudes relaxed to mostly unsettled to active. However, by 16/0900 UTC, activity levels increased once again as CME effects from the double X-class flare and CME of 13 September became geoeffective. Activity levels remained mostly unsettled to active at middle latitudes, but at high latitudes, activity increased to major to severe storm levels for about six hours, and subsequently relaxed to minor to major storm levels through midday on the 18th. Thereafter, and for the remainder of the summary period, the field was quiet at all latitudes.



**Space Weather Outlook**  
**21 September – 17 October 2005**

Solar activity is expected to be at mostly very low to low levels. Region 808 has shown significant decay in white light; therefore, the potential for major flare activity from this region has been significantly reduced.

No greater than 10 MeV proton events are expected.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at high levels on 21 – 24 September and high again on 29 September – 17 October.

The geomagnetic field is expected to range from quiet to minor storm levels. Active to minor storm conditions are possible on 28 – 29 September, while unsettled to active conditions are possible on 12 - 13 October, both due to recurrent coronal hole high speed wind streams.



**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
12 September	118	62	840	B4.9	9	4	0	2	2	2	0	0
13 September	114	95	860	B5.2	9	1	2	8	0	1	0	0
14 September	117	86	1000	B5.2	8	1	0	8	0	0	0	0
15 September	119	77	880	B3.5	12	2	1	9	1	1	0	0
16 September	112	51	620	B3.3	6	3	0	6	2	0	0	0
17 September	104	59	470	B3.7	6	1	0	5	0	1	0	0
18 September	102	50	510	B2.8	3	0	0	2	0	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)		
	>1 MeV	>10 MeV	>100 MeV	>.6 MeV	>2MeV	>4 MeV
	12 September	2.2E+8	6.4E+6	1.1E+4		4.0E+8
13 September	4.9E+7	5.9E+5	2.3E+3		4.1E+8	
14 September	8.4E+7	8.5E+6	2.7E+3		9.8E+8	
15 September	1.7E+8	6.1E+6	2.1E+3		4.6E+8	
16 September	3.5E+7	4.1E+5	3.2E+3		1.2E+9	
17 September	1.1E+7	1.4E+5	3.4E+3		2.6E+9	
18 September	6.9E+6	1.1E+5	3.7E+3		3.1E+9	

**Daily Geomagnetic Data**

Date	Middle Latitude Fredericksburg		High Latitude College		Estimated Planetary	
	A	K-indices	A	K-indices	A	K-indices
	12 September	32	4-3-5-4-3-5-4-5	136	5-5-9-8-6-7-6-5	66
13 September	26	4-5-4-5-4-1-3-3	96	5-5-8-7-8-2-4-3	51	6-5-6-6-5-3-4-4
14 September	13	3-2-4-3-2-2-3-2	49	3-4-7-6-6-4-3-2	25	3-3-5-5-5-3-3-2
15 September	22	3-2-3-3-5-5-3-3	76	3-2-4-7-7-8-4-3	43	3-2-3-5-6-7-5-4
16 September	11	3-2-2-4-3-2-2-1	54	3-4-6-8-5-2-3-1	18	4-4-3-4-3-2-3-2
17 September	10	0-2-1-3-3-3-2-3	31	1-2-2-5-6-6-3-2	12	2-2-1-3-3-3-3-3
18 September	8	1-3-3-2-2-1-1-1	20	2-2-4-6-4-2-1-1	12	1-3-4-4-3-2-2-1



### *Alerts and Warnings Issued*

<u>Date &amp; Time of Issue</u>	<u>Type of Alert or Warning</u>	<u>Date &amp; Time of Event UTC</u>
12 Sep 0011	3 – 245 MHz Radio Bursts	11 Sep
12 Sep 0011	245 MHz Radio Noise Storm	11 Sep
12 Sep 0058	CONT. ALERT: Proton Event 10MeV Integral Flux $\geq$ 1000pfu	10 Sep 1035
12 Sep 0150	ALERT: Geomagnetic K = 5	12 Sep 0145
12 Sep 0630	SUMMARY: Geomagnetic Sudden Impulse	12 Sep 0624
12 Sep 0635	ALERT: Type IV Radio Emission	12 Sep 0446
12 Sep 0706	WARNING: Geomagnetic K = 6	12 Sep 0710 – 1600
12 Sep 0715	ALERT: Geomagnetic K = 6	12 Sep 0714
12 Sep 0858	ALERT: X-Ray Flux $\geq$ M5	12 Sep 0857
12 Sep 0940	SUMMARY: X-Ray Flux $\geq$ M5	12 Sep 0903
12 Sep 0950	SUMMARY: 10cm Radio Burst	12 Sep 0843
12 Sep 1556	EXTENDED WARNING: Geomagnetic K = 6	12 Sep 0710 – 2359
12 Sep 2045	SUMMARY: 10cm Radio Burst	12 Sep 2007
12 Sep 2142	SUMMARY: Proton Event 10MeV Integral Flux $\geq$ 100pfu	08 Sep 2145
12 Sep 2203	WATCH: Geomagnetic A $\geq$ 20	14 Sep
12 Sep 2253	ALERT: Type IV Radio Emission	12 Sep 2226
12 Sep 2315	ALERT: Electron 2MeV Integral Flux $\geq$ 1000pfu	12 Sep 2300
12 Sep 2341	EXT. WARNING: Proton Event 10MeV Integral Flux $\geq$ 10pfu	09 Sep 2359 – 13/1200
12 Sep 2345	EXTENDED WARNING: Geomagnetic K = 6	12 Sep 0710 – 13/1500
13 Sep 0017	4 – 245 MHz Radio Bursts	12 Sep
13 Sep 0059	CONT. ALERT: Proton Event 10MeV Integral Flux $\geq$ 1000pfu	10 Sep 1035
13 Sep 0923	WARNING: Geomagnetic Sudden Impulse	13 Sep 0925 – 1200
13 Sep 1029	ALERT: Geomagnetic K = 6	12 Sep 1028
13 Sep 1141	ALERT: Type IV Radio Emission	13 Sep 1041
13 Sep 1143	SUMMARY: 10cm Radio Burst	13 Sep 1120
13 Sep 1158	EXT. WARNING: Proton Event 10MeV Integral Flux $\geq$ 10pfu	09 Sep 2359 – 13/1500
13 Sep 1257	ALERT: Electron 2MeV Integral Flux $\geq$ 1000pfu	13 Sep 0530
13 Sep 1455	EXTENDED WARNING: Geomagnetic K = 6	12 Sep 0710 – 13/2359
13 Sep 1925	ALERT: X-Ray Flux $\geq$ M5	13 Sep 1923
13 Sep 2048	WATCH: Geomagnetic A $\geq$ 50	15 Sep
13 Sep 2127	SUMMARY: X-Ray Flux $\geq$ X1	13 Sep 1927
13 Sep 2147	EXT WARNING: Proton Event 10MeV Integral Flux $\geq$ 10pfu	13 Sep 2155 – 14/1600
13 Sep 2200	SUMMARY: 10cm Radio Burst	13 Sep 1922
13 Sep 2320	ALERT: X-Ray Flux $\geq$ M5	13 Sep 2319
13 Sep 2336	SUMMARY: X-Ray Flux $\geq$ X1	13 Sep 2322
13 Sep 2343	WARNING: Geomagnetic K = 5	13 Sep 2345 – 14/1500
14 Sep 0012	4 – 245 MHz Radio Bursts	13 Sep
14 Sep 0012	245 MHz Radio Noise Storm	13 Sep
14 Sep 0100	ALERT: Proton Event 10MeV Integral Flux $\geq$ 10pfu	14 Sep 0100
14 Sep 0505	ALERT: Electron 2MeV Integral Flux $\geq$ 1000pfu	14 Sep 0500
14 Sep 0647	ALERT: Proton Event 10MeV Integral Flux $\geq$ 100pfu	14 Sep 0625
14 Sep 1445	EXTENDED WARNING: Geomagnetic K = 5	13 Sep 2345 – 14/2359
14 Sep 1555	EXT. WARNING: Proton Event 10MeV Integral Flux $\geq$ 10pfu	13 Sep 2155 – 15/1600
15 Sep 0000	EXTENDED WARNING: Geomagnetic K = 5	13 Sep 2359 – 15/1500
15 Sep 0311	CONT. ALERT: Proton Event 10MeV Integral Flux $\geq$ 10pfu	14 Sep 0647
15 Sep 0414	245 MHz Radio Burst	14 Sep
15 Sep 0414	245 MHz Radio Noise Storm	14 Sep
15 Sep 0524	ALERT: Electron 2MeV Integral Flux $\geq$ 1000pfu	15 Sep 0500

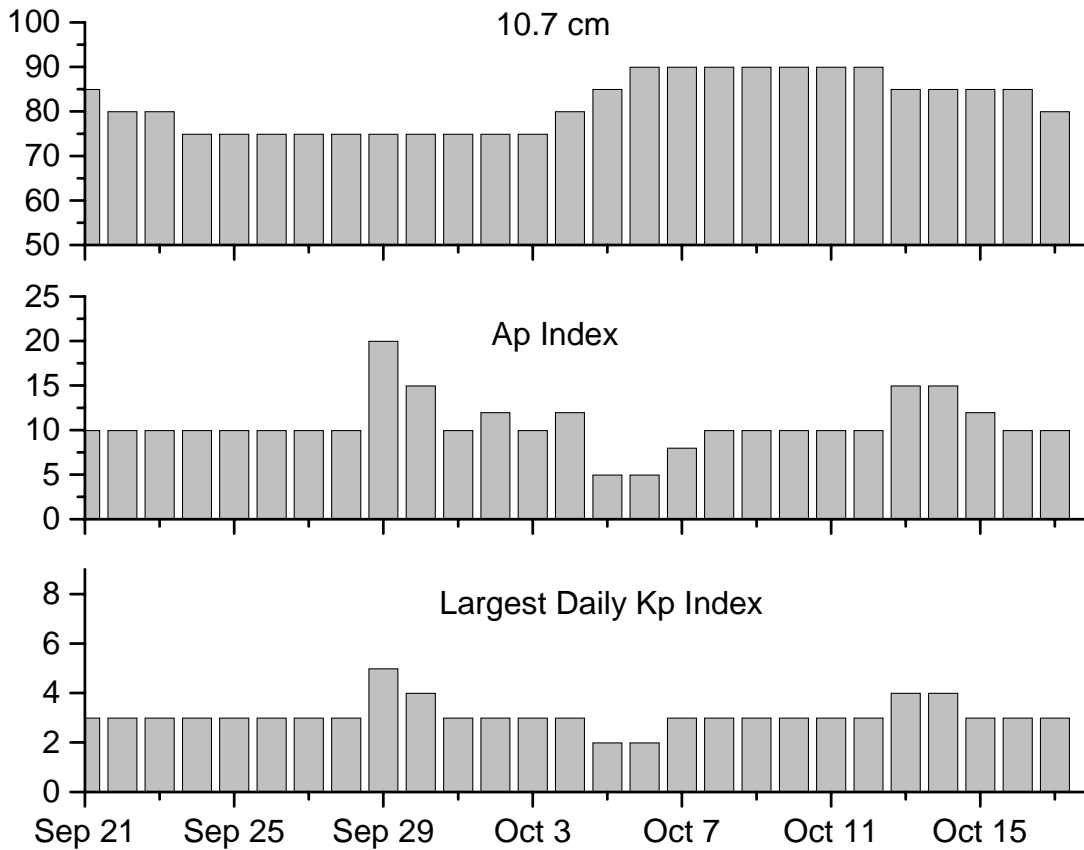


*Alerts and Warnings Issued – continued.*

<u>Date &amp; Time of Issue</u>	<u>Type of Alert or Warning</u>	<u>Date &amp; Time of Event UTC</u>
15 Sep 0839	ALERT: X-Ray Flux $\geq$ M5	15 Sep 0837
15 Sep 0848	WARNING: Geomagnetic Sudden Impulse	15 Sep 0849
15 Sep 0852	WARNING: Geomagnetic K = 6	15 Sep 0852 – 1500
15 Sep 0910	SUMMARY: Geomagnetic Sudden Impulse	15 Sep 0907
15 Sep 0912	SUMMARY: 10cm Radio Burst	15 Sep 0835
15 Sep 0916	SUMMARY: X-Ray Flux $\geq$ X1	15 Sep 0838
15 Sep 1338	ALERT: Geomagnetic K = 5	15 Sep 1335
15 Sep 1442	EXTENDED WARNING: Geomagnetic K = 6	15 Sep 0852 – 2359
15 Sep 1735	ALERT: Geomagnetic K = 6	15 Sep 1733
15 Sep 2017	SUMMARY: 10cm Radio Burst	15 Sep 1859
15 Sep 2117	EXT. WARNING: Proton Event 10MeV Integral Flux $\geq$ 10pfu	13 Sep 2155 – 16/1500
15 Sep 2119	SUMMARY: Proton Event 10MeV Integral Flux $\geq$ 100pfu	08 Sep 0215
16 Sep 0031	WARNING: Geomagnetic K = 5	16 Sep 0035 – 1500
16 Sep 0040	CONT. ALERT: Proton Event 10MeV Integral Flux $\geq$ 10pfu	14 Sep 0647
16 Sep 0210	SUMMARY: 10cm Radio Burst	16 Sep 0146
16 Sep 0309	245 MHz Radio Burst	15 Sep
16 Sep 0309	245 MHz Radio Noise Storm	15 Sep
16 Sep 0524	ALERT: Electron 2MeV Integral Flux $\geq$ 1000pfu	16 Sep 0505
16 Sep 1434	SUMMARY: Proton Event 10MeV Integral Flux $\geq$ 10pfu	08 Sep 0215
17 Sep 0522	ALERT: Electron 2MeV Integral Flux $\geq$ 1000pfu	17 Sep 0500
17 Sep 0605	ALERT: X-Ray Flux $\geq$ M5	17 Sep 0604
17 Sep 0625	SUMMARY: X-Ray Flux $\geq$ M5	17 Sep 0605
17 Sep 0634	SUMMARY: 10cm Radio Burst	17 Sep 0600
18 Sep 0515	ALERT: Electron 2MeV Integral Flux $\geq$ 1000pfu	18 Sep 0500
18 Sep 0733	ALERT: Geomagnetic K = 4	18 Sep 0733
18 Sep 1003	ALERT: Geomagnetic K = 4	18 Sep 1001



### 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
21 Sep	85	10	3	05 Oct	85	5	2
22	80	10	3	06	90	5	2
23	80	10	3	07	90	8	3
24	75	10	3	08	90	10	3
25	75	10	3	09	90	10	3
26	75	10	3	10	90	10	3
27	75	10	3	11	90	10	3
28	75	10	3	12	90	10	3
29	75	20	5	13	85	15	4
30	75	15	4	14	85	15	4
01 Oct	75	10	3	15	85	12	3
02	75	12	3	16	85	10	3
03	75	10	3	17	80	10	3
04	80	12	3				



### *Energetic Events*

Date	Time			X-ray		Optical Information			Peak		Sweep Freq	
	Begin	Max	½	Class	Flux	Imp/ Brtns	Location Lat CMD	Rgn #	Radio Flux		Intensity	
			Max						245	2695	II	IV
12 Sep 05	0449	0505	0527	M1.5	.026							
12 Sep 05	0656	0701	0705	M1.3	.004	1f	S11E33	808		64		
12 Sep 05	0837	0903	0920	M6.1	.098	2f	S11E25	808		980		
12 Sep 05	2005	2009	2011	M1.5	.003	1n	S11E24	808		410		
13 Sep 05	1041	1121	1124	M1.3	.008					120		
13 Sep 05	1919	1927	2057	X1.5	.550	2b	S09E10	808	700	6000		
13 Sep 05	2315	2322	2330	X1.7	.093			808		180		
14 Sep 05	1005	1038	1054	M4.6	.049				170	188		2
15 Sep 05	0152	0212	0218	M1.3	.013	1f	S11W08					
15 Sep 05	0830	0838	0846	X1.1	.056	2n	S12W14	808	52	450		
15 Sep 05	1855	1910	1926	M1.0	.014	Sf	S11W19	808		190		
16 Sep 05	0141	0149	0156	M4.4	.020	1b	S13W26	808		220		
16 Sep 05	1735	1748	1810	M1.3	.018	Sf	S11W33	808		26		
16 Sep 05	1918	1936	1948	M3.5	.031	1f	S11W37	808		100		
17 Sep 05	0558	0605	0615	M9.8	.053	2n	S10W39	808		1000		

### *Flare List*

Date	Time			Optical X-ray Class.	Imp / Brtns	Location Lat CMD	Rgn
	Begin	Max	End				
12 September	0045	0049	0053	C3.3			
	0242	0248	0253	C2.0			
	0449	0505	0527	M1.5			
	0700	0701	0705	M1.3	1f	S11E33	808
	0845	U0847	A0930	M6.1	2f	S11E25	808
	1349	1353	1408	B9.9			
	1533	1537	1542	C1.1			
	1629	1633	1635	C1.1			
	1635	1638	1640	C1.2			
	1735	1735	1746		Sf	S10E20	808
	1836	1839	1845	B7.5			
	1928	1940	1942	C3.2			
	2007	2008	2016	M1.5	1n	S11E24	808
	2207	2225	2242	C7.2			
	2246	2305	2359		2f	S14E19	808
	2257	2301	2303	C5.6			808
	B2315	2315	2323	C5.5	Sf	S11E22	
13 September	0056	0057	0106	C4.3	Sf	S13E20	808
	0326	0328	0339	C3.4	Sf	S15E19	808
	0357	0400	0402	C1.5			
	0415	0418	0420	C1.9			
	0442	0442	0453	C5.1	Sf	S13E11	808
	0635	0635	0639	C1.2	Sf	S15E17	808
	0645	0654	0702		Sf	S10E12	808



*Flare List – continued.*

Date	Time			Optical X-ray Class.	Imp / Brtns	Location Lat CMD	Rgn	
	Begin	Max	End					
13 September	0828	0829	0833	C1.8	Sf	S15E15	808	
	1041	1121	1124	M1.3				
	1339	1352	1424	C4.5	Sf	S11E06	808	
	1904	1906	1910	C2.9	Sf	S09E01	808	
	1922	1923	2313	X1.5	2b	S09E10	808	
	2315	2322	2330	X1.7			808	
14 September	0202	0225	0254		Sf	S10E02	808	
	0416	0423	0428	C3.8	Sf	S10E01	808	
	B0635	0635	0641		Sf	S11E01	808	
	0659	0705	0723	C5.2	Sf	S10W01	808	
	0859	0904	0908	C2.2				
	1005	1038	1054	M4.6				
	1247	1257	1301	C3.4				
	1544	1549	1554	B8.3				
	1910	1913	1916	B6.9				
	1925	1929	1951	C4.4	Sf	S13W04	808	
	2111	2112	2141	C4.3	Sf	S09W07	808	
	2251	2303	2318	C5.8	Sf	S14W11	808	
	2340	2341	2354	C3.7	Sf	S11W14	808	
	15 September	0057	0103	0105	C8.5	Sf	S10W11	808
B0155		0210	0224	M1.3	1f	S11W08		
0500		0501	0504	C2.6	Sf	S10W13	808	
0648		0653	0658	C1.8	Sf	S10W14	808	
0723		0733	0744	B8.1				
0836		0837	0936	X1.1	2n	S12W14	808	
1037		1042	1046	C1.0				
1436		1437	1441	C1.0	Sf	S10W18	808	
1448		1535	1546	C7.1	Sf	S12W18	808	
1449		1450	1454		Sf	S13W16	808	
1532		1535	1537	C5.2				
1614		1620	1624	C1.1				
1633		1650	1702	C4.8	Sf	S13W19	808	
1828		1829	1832	C2.3	Sf	S14W17	808	
1900		1900	1931	M1.0	Sf	S11W19	808	
2035		2039	2041	C1.5				
2156		2200	2205	C3.8				
16 September		0146	0148	0405	M4.4	1b	S13W26	808
		0522	0522	0525	C1.1	Sf	S10W26	808
	0856	0856	0906	C1.2	Sf	S10W28	808	
	1055	1058	1100	B4.3				
	1105	1124	1133	B8.1				
	1308	1313	1315	C1.5				





*Flare List – continued.*

Date	Time			Optical	Imp / Brtns	Location Lat CMD	Rgn
	Begin	Max	End	X-ray Class.			
16 September	1350	1353	1356	B6.9			
	1442	1443	1457	C6.1	Sf	S11W30	808
	1521	1523	1533	C7.9	Sf	S13W31	808
	1717	1722	1725	B7.7			
	1742	1745	1822	M1.3	Sf	S11W33	808
	1930	1935	2020	M3.5	1f	S11W37	808
	2337	2339	2348	C6.2	Sf	S10W37	808
17 September	0212	0213	0218	C2.0	Sf	S10W38	808
	0415	0419	0425	B8.3			
	0440	0441	0444	C3.3	Sf	S10W39	808
	0445	0450	0500		Sf	S10W39	808
	0602	0605	0733	M9.8	2n	S10W39	808
	B0650	0654	0659		Sf	S14W37	
	0917	0920	0923	C1.2			
	0934	0939	0948	C1.5			
	1033	1036	1039	C2.5			
	1458	1504	1506	C1.5			
	1531	1536	1540	B7.3			
	1656	1659	1701	B5.2			
	1809	1814	1818	B7.4			
	2025	2029	2036	B6.4			
	2217	2218	2222	B9.9	Sf	S13W51	808
	2319	2322	2324	B4.3			
	18 September	0143	0144	0147	B7.2	Sf	S09W57
0157		0201	0204	B5.3			
0424		0433	0438	C3.7			
0454		0503	0529	C1.8			
1109		1113	1117	B5.0			
1207		1214	1217	C1.1			
2038		2046	2059	B8.7			
2358		0000	0006	B8.5	Sf	S10W63	808



### 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 808</i>															
07 Sep	S12E83	229	0010	00	Hsx	001	A			1				1	
08 Sep	S09E67	232	0510	12	Ekc	014	Bg	5	2	1	2			1	
09 Sep	S09E54	232	1430	16	Fkc	038	Bgd	7	5	3	12	1	2		
10 Sep	S09E44	229	1400	12	Ekc	038	Bgd	3	3	2	13	4	1		
11 Sep	S09E30	229	1250	14	Ekc	080	Bgd	4	2		5	2			
12 Sep	S11E17	229	0840	16	Fkc	052	Bgd	1	3		1	2	2		
13 Sep	S11E04	229	0840	16	Fkc	074	Bgd	7		2	8	1	1		
14 Sep	S11W10	230	1000	14	Ekc	076	Bgd	6			8				
15 Sep	S11W22	229	0880	15	Ekc	067	Bgd	7	1	1	9		1		
16 Sep	S11W37	230	0620	14	Ekc	041	Bgd	5	3		6	2			
17 Sep	S11W50	230	0420	13	Ekc	038	Bd	2	1		4		1		
18 Sep	S11W63	230	0340	12	Cki	022	Bg				2				
								47	20	10	70	12	9	1	0

Still on Disk.

Absolute heliographic longitude:229

#### *Region 809*

08 Sep	N10E60	239	0040	01	Hsx	002	A								
09 Sep	N10E47	239	0020	01	Hrx	001	A								
10 Sep	N10E34	239	0020	01	Hsx	001	A								
11 Sep	N10E20	239	0020	01	Hsx	001	A								
12 Sep	N09E05	241													
13 Sep	N08W08	241	0020	02	Hsx	001	A								
14 Sep	N08W21	241													
								0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude:241

#### *Region 810*

17 Sep	N10E78	102	0050	02	Hsx	001	A								
18 Sep	N10E69	098	0170	09	Dao	008	B								
								0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude:098

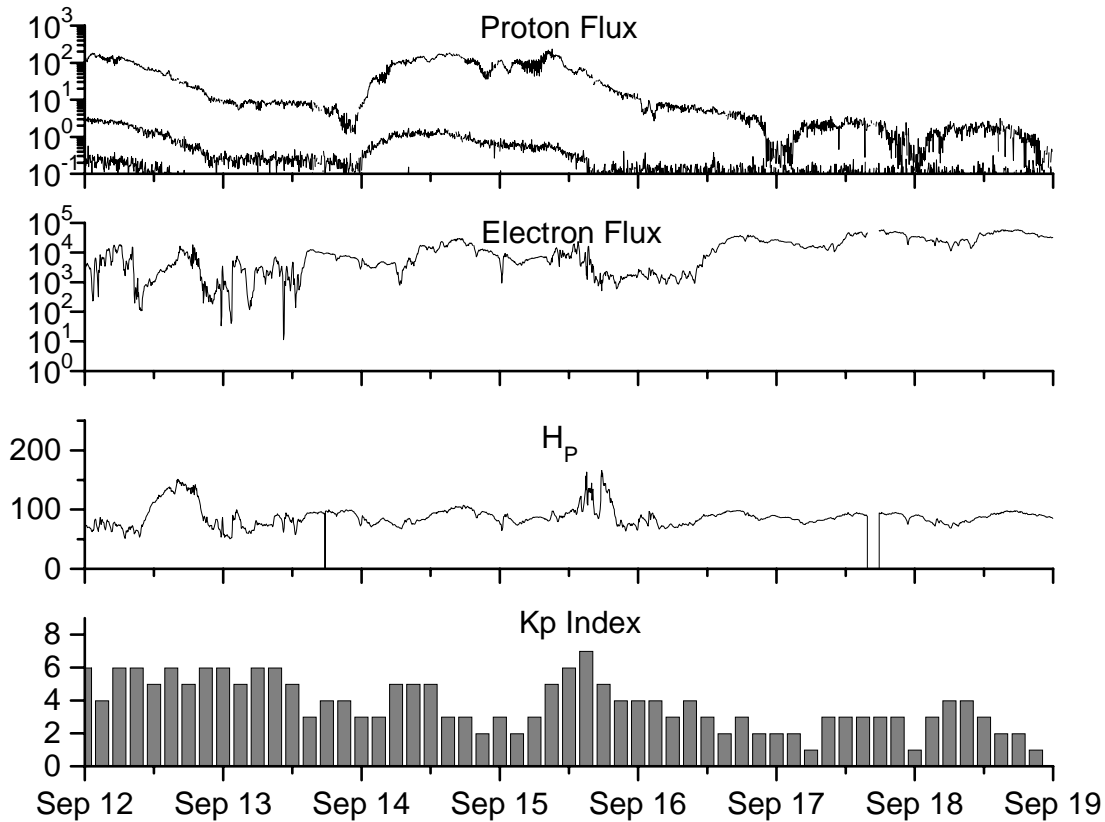


**Recent Solar Indices (preliminary)  
of the observed monthly mean values**

Month	Sunspot Numbers			Radio Flux		Geomagnetic			
	Observed SWO	values RI	Ratio RI/SWO	Smooth SWO	values RI	*Penticton 10.7 cm	Smooth Value	Planetary Ap	Smooth Value
<b>2003</b>									
September	82.6	48.8	0.59	100.7	59.8	112.3	123.7	18	21.8
October	118.9	65.5	0.55	96.6	58.4	153.1	121.8	35	21.1
November	118.9	67.3	0.57	93.6	57.0	153.1	120.1	28	20.0
December	75.4	46.5	0.62	91.4	55.0	115.1	118.0	16	18.6
<b>2004</b>									
January	62.3	37.7	0.61	87.9	52.0	114.1	116.3	22	18.1
February	75.6	45.8	0.61	84.2	49.4	107.0	115.5	13	17.7
March	81.0	49.1	0.61	80.9	47.2	112.2	114.6	14	16.9
April	59.3	39.3	0.66	77.9	45.6	101.2	112.3	11	15.5
May	77.3	41.5	0.54	74.1	43.9	99.8	109.2	8	14.3
June	78.9	43.2	0.55	70.4	41.7	97.4	107.2	8	14.0
July	87.8	51.0	0.58	68.3	40.2	118.5	105.9	23	13.8
August	69.5	40.9	0.59	66.6	39.3	110.1	105.0	11	13.8
September	50.0	27.7	0.55	63.7	37.6	103.1	103.7	10	13.6
October	77.9	48.4	0.62	61.3	35.9	105.7	102.1	9	13.5
November	70.5	43.7	0.62	60.0	35.4	113.2	101.5	26	14.1
December	34.7	17.9	0.52	58.8	35.3	94.6	101.3	11	14.8
<b>2005</b>									
January	52.0	31.3	0.60	57.3	34.7	102.4	100.3	22	14.7
February	45.4	29.1	0.64	56.4	34.0	97.3	98.5	11	14.6
March	41.0	24.8	0.60			90.0		12	
April	41.5	24.4	0.59			85.9		12	
May	65.4	42.6	0.65			99.5		20	
June	59.8	39.6	0.66			93.7		13	
July	71.0	39.9	0.56			96.6		16	
August	65.6	36.4	0.55			90.7		16	

**NOTE:** All smoothed values after September 2002 and monthly values after March 2003 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 23, RI = 120.8, occurred April 2000. \*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 12 September 2005*

*Protons* plot contains the five-minute averaged integral proton flux (protons/cm<sup>2</sup>-sec-sr) as measured by GOES-11 (W113) for each of three energy thresholds: greater than 10, 50, and 100 MeV.

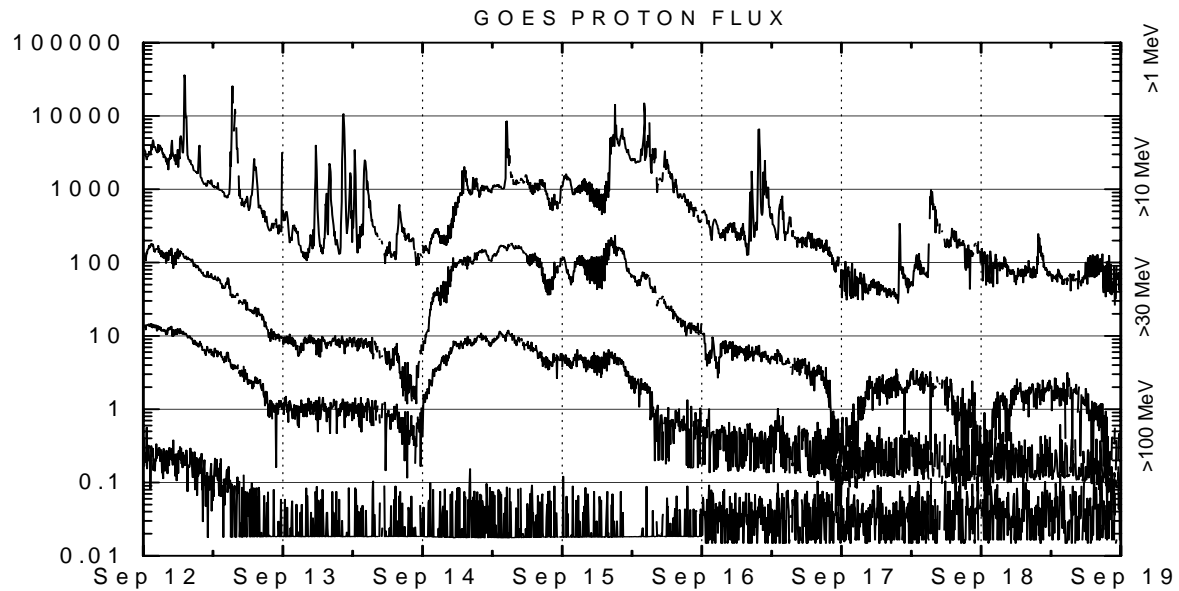
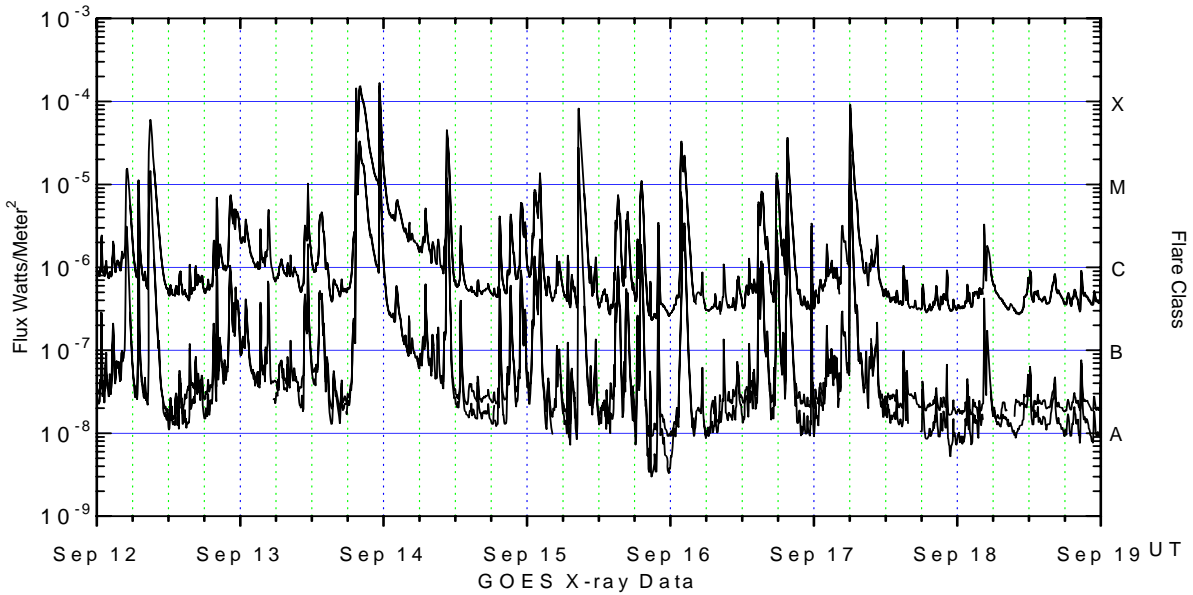
*Electrons* plot contains the five-minute averaged integral electron flux (electrons/cm<sup>2</sup>-sec-sr) with energies greater than 2 MeV at GOES-12 (W75).

*H<sub>p</sub>* plot contains the five minute averaged magnetic field H - component in nanoteslas (nT) as measured by GOES-12. 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 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 Hartland, UK. These data are made available through cooperation from the Geological Survey of Canada (GSC), British Geological Survey (BGS) 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 parallel 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 12 (W75) and GOES 10 (W135) 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-11 (W113) 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.

