

**Space Weather Highlights**  
**02 September - 08 September 2013**

**SWPC PRF 1984**  
**09 September 2013**

Solar activity was at very low to low levels. Very low levels were observed on 02 September. Activity increased to low levels on 03 September with a single C1/Sf flare at 03/1747 UTC from Region 1834 (N12, L=021, class/area Dai/090 on 02 September). 04 September saw 8 C-class events, the largest a C3/Sf at 04/0431 UTC from Region 1837 (S16, L=352, class/area Dsi/130 on 05 September). A pair of C-class flares were observed on 05 September, the largest a C1/Sf at 05/1955 UTC from Region 1836 (N11, L=339 class/area Cao/180 on 30 August). Low levels continued on 06 September with a C1 x-ray event from an unnumbered region beyond the NE limb. The period closed out on 07 - 08 September with very low levels. No Earth-directed coronal mass ejections (CMEs) were observed during the summary period.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit was at moderate to high levels through the summary period.

Geomagnetic field activity was at quiet to unsettled levels. 02 - 03 September observed quiet to unsettled levels due to residual coronal hole high speed stream (CH HSS) effects combined with weak effects from the 30 August CME. The remainder of the period saw quiet levels with an isolated unsettled period early on 08 September. Solar wind began the period on 02 September at about 525 km/s, declined in speed to near 350 km/s by early on 03 September and varied between 350 km/s to 500 km/s through the remainder of the period. Interplanetary magnetic field (IMF) Bt varied between 3 to 9 nT while the Bz component of the IMF did not vary much beyond +7/-5 nT. Phi angle was in a predominately negative (towards) orientation for a majority of the period with positive (away) orientation on 02 September and again on 08 September.

**Space Weather Outlook**  
**09 September - 05 October 2013**

Solar activity is expected to be very low to low levels.

No proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be moderate to high levels on 12 - 16 September, 19 - 23 September and 29 September - 05 October due to activity associated with CH HSSs. Normal to moderate levels are expected for the remainder of the period.

Geomagnetic field activity is expected to be at quiet to unsettled levels on 09 - 13 September with isolated active periods on 09 and 12 September due to CH HSS effects. Mostly quiet conditions are expected on 14 - 16 September. Quiet to active conditions are expected from 17 - 20 September, quiet to unsettled conditions from 23 - 24 September and quiet to active conditions on 26 - 29 September due to CH HSS effects. Mostly quiet conditions are expected



for the remaining periods.



### ***Daily Solar Data***

Date	Radio Flux 10.7cm	Sun spot No.	Sunspot Area (10 <sup>-6</sup> hemi.)	X-ray Background Flux	Flares							
					X-ray			Optical				
					C	M	X	S	1	2	3	4
02 September	106	84	410	B2.1	0	0	0	2	0	0	0	0
03 September	106	74	360	B2.9	1	0	0	12	0	0	0	0
04 September	109	77	370	B3.8	8	0	0	19	0	0	0	0
05 September	110	75	320	B3.7	2	0	0	4	0	0	0	0
06 September	101	41	260	B3.1	1	0	0	0	0	0	0	0
07 September	99	35	170	B2.5	0	0	0	1	0	0	0	0
08 September	96	24	90	B1.7	0	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	>0.6 MeV	>2MeV	>4 MeV
02 September	3.0e+06	1.1e+04	2.4e+03		9.4e+07	
03 September	9.4e+05	1.0e+04	2.2e+03		8.8e+07	
04 September	3.2e+05	9.6e+03	2.3e+03		5.7e+07	
05 September	3.4e+05	1.0e+04	2.5e+03		5.5e+07	
06 September	2.2e+05	9.9e+03	2.5e+03		6.2e+07	
07 September	1.2e+05	1.0e+04	2.4e+03		4.8e+07	
08 September	1.7e+05	1.0e+04	2.6e+03		5.0e+07	

### ***Daily Geomagnetic Data***

Date	Middle Latitude Fredericksburg		High Latitude College		Estimated Planetary	
	A	K-indices	A	K-indices	A	K-indices
02 September	11	2-3-4-3-3-1-1-1	25	2-4-5-4-6-2-1-1	10	2-3-3-2-3-2-1-1
03 September	8	1-1-2-2-3-1-2-3	7	2-0-1-3-3-1-1-2	7	2-1-1-1-2-1-2-3
04 September	6	2-1-1-2-2-2-2-2	9	2-1-2-3-4-0-2-1	6	2-1-1-2-2-1-2-2
05 September	3	1-0-0-2-2-1-1-1	1	1-0-0-0-0-0-1-0	4	1-1-0-2-1-1-2-1
06 September	5	2-2-0-1-2-1-2-1	3	1-1-0-1-1-1-1-1	5	1-2-1-1-2-1-2-2
07 September	4	0-1-1-1-2-2-1-1	1	0-1-0-0-0-0-1-1	4	1-1-1-1-1-1-1-1
08 September	6	2-3-1-2-2-2-1-0	8	2-3-1-1-4-1-1-0	6	2-3-1-1-2-2-1-0

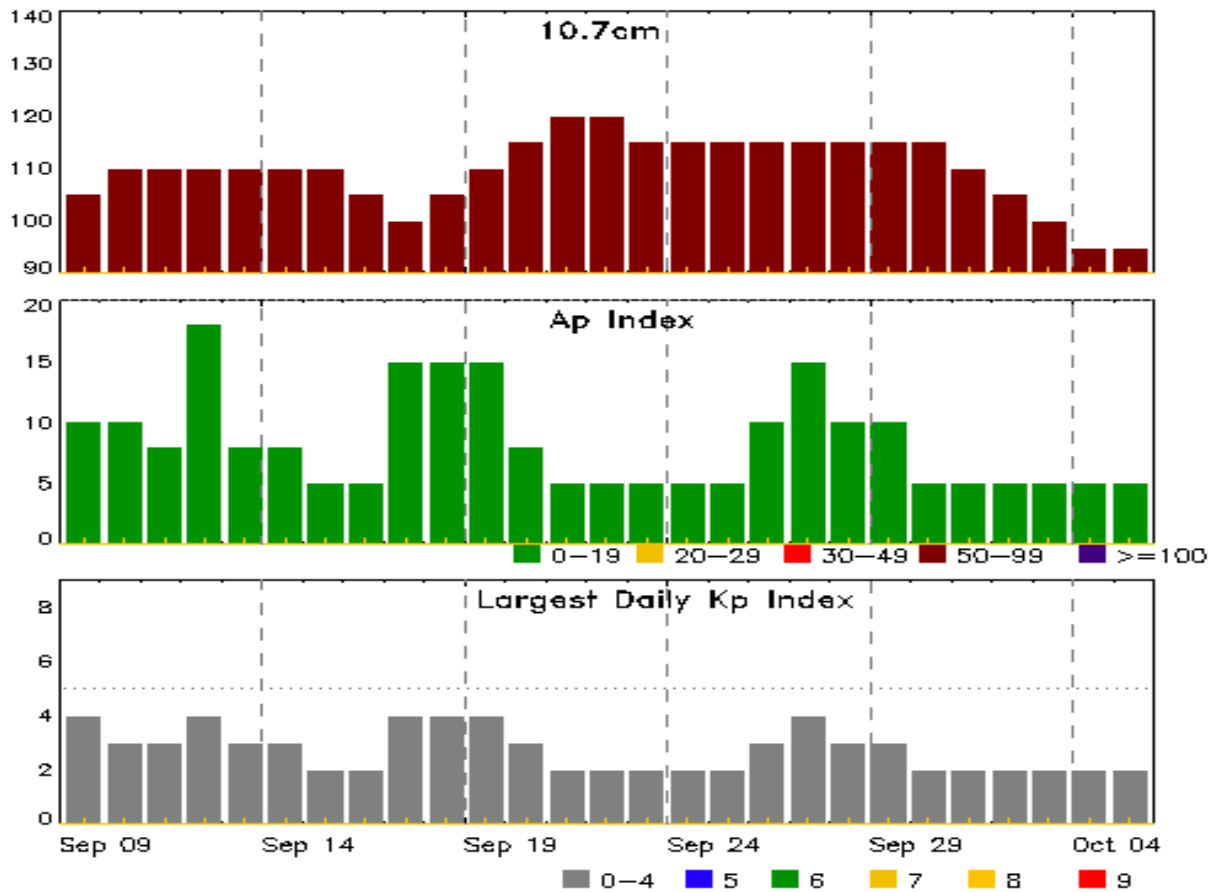


### *Alerts and Warnings Issued*

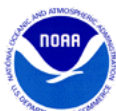
<b>Date &amp; Time of Issue UTC</b>	<b>Type of Alert or Warning</b>	<b>Date &amp; Time of Event UTC</b>
02 Sep 0708	WARNING: Geomagnetic K = 4	02/0707 - 1300
02 Sep 1334	ALERT: Electron 2MeV Integral Flux $\geq$ 1000pfu	02/1315
03 Sep 1100	CONTINUED ALERT: Electron 2MeV Integral Flux $\geq$ 1000pfu	02/1315
04 Sep 1249	CONTINUED ALERT: Electron 2MeV Integral Flux $\geq$ 1000pfu	02/1315
05 Sep 1412	CONTINUED ALERT: Electron 2MeV Integral Flux $\geq$ 1000pfu	02/1315
06 Sep 1256	CONTINUED ALERT: Electron 2MeV Integral Flux $\geq$ 1000pfu	02/1315
07 Sep 1616	CONTINUED ALERT: Electron 2MeV Integral Flux $\geq$ 1000pfu	02/1315
08 Sep 1616	CONTINUED ALERT: Electron 2MeV Integral Flux $\geq$ 1000pfu	02/1315



## Twenty-seven Day Outlook



Date	Radio Flux 10.7cm	Planetary A Index	Largest Kp Index	Date	Radio Flux 10.7cm	Planetary A Index	Largest Kp Index
09 Sep	105	10	4	23 Sep	115	5	2
10	110	10	3	24	115	5	2
11	110	8	3	25	115	5	2
12	110	18	4	26	115	10	3
13	110	8	3	27	115	15	4
14	110	8	3	28	115	10	3
15	110	5	2	29	115	10	3
16	105	5	2	30	115	5	2
17	100	15	4	01 Oct	110	5	2
18	105	15	4	02	105	5	2
19	110	15	4	03	100	5	2
20	115	8	3	04	95	5	2
21	120	5	2	05	95	5	2
22	120	5	2				



## ***Energetic Events***

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

**No Events Observed**

## ***Flare List***

Date	Time			Optical			
	Begin	Max	End	X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
02 Sep	1104	1108	1113	B4.6			
02 Sep	1215	1217	1219		SF	S17W11	1837
02 Sep	1336	1401	1408	B5.3			1834
02 Sep	1519	1521	1526		SF	S17W13	1837
03 Sep	0256	0301	0306	B5.9	SF	N13W14	1836
03 Sep	0637	0637	0641		SF	S17W21	1837
03 Sep	0936	0937	A0939		SF	N10W55	1834
03 Sep	0945	0945	0952		SF	S17W23	1837
03 Sep	1043	1052	1058	B6.6			1834
03 Sep	1211	1225	1226		SF	S17W24	1837
03 Sep	1404	U1427	1437	B8.8	SF	N10W57	1834
03 Sep	1456	1500	1507		SF	S18W26	1837
03 Sep	1609	1609	1611		SF	N09W59	1834
03 Sep	1726	1751	1811	C1.3	SF	N12W59	1834
03 Sep	2130	2133	2139	B6.9	SF	S17W30	1837
03 Sep	2245	2301	2306		SF	N11W64	1834
03 Sep	2318	2322	2327	B7.4	SF	S17W30	1837
03 Sep	2357	0003	0007	B8.5	SF	S17W31	1837
04 Sep	0037	0048	0057	B6.5			1837
04 Sep	0244	0251	0259	C1.1			1837
04 Sep	0413	0428	0431	C3.6	SF	S16W36	1837
04 Sep	0534	0539	0747	C2.9	SF	S19W35	1837
04 Sep	0613	0616	0620	C1.2			
04 Sep	B0629	U0632	A0650		SF	S16W37	1837
04 Sep	0719	0723	0727	C1.1	SF	S16W38	1837
04 Sep	0728	0733	0737	C1.2	SF	S16W38	1837
04 Sep	0817	0821	0826	B9.2	SF	S18W37	1837
04 Sep	0836	0841	0902	C2.6	SF	S16W38	1837
04 Sep	0904	0906	0916		SF	S18W36	1837
04 Sep	0930	0930	0932		SF	S18W37	1837
04 Sep	0959	1018	1038	B8.9	SF	S18W36	1837



## *Flare List*

Date	Time			Optical			
	Begin	Max	End	X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
04 Sep	1041	1044	1049		SF	S18W37	1837
04 Sep	1132	1133	1137		SF	S18W38	1837
04 Sep	1144	1149	1153	B9.4	SF	S18W38	1837
04 Sep	B1145	U1148	A1203		SF	N12W30	1836
04 Sep	1208	1214	1239	B7.3	SF	S18W38	1837
04 Sep	1506	1517	1522	B7.8	SF	N12W33	1836
04 Sep	2021	2025	2029		SF	N12W36	1836
04 Sep	2131	2135	2139	C1.3	SF	N13W36	1836
05 Sep	0650	0651	0657		SF	N11W41	1836
05 Sep	1430	1431	1434		SF	S19W54	1837
05 Sep	1946	1954	2000	C1.5	SF	N11W50	1836
05 Sep	2159	2221	2232	C1.4	SF	S18W58	1837
06 Sep	2216	2250	2313	C1.0			
07 Sep	0357	0401	0409	B8.4	SF	S15W77	1837
07 Sep	1256	1305	1330	B5.1			1836
07 Sep	1557	1603	1610	B6.5			1837
08 Sep	1532	1538	1543	B7.5	SF	S11E42	1838
08 Sep	1629	1635	1643	B4.1	SF	S04E38	1838



## 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
Region 1834															
24 Aug	N14E71	19	10	9	Bxo	3	B								
25 Aug	N14E64	16	10	1	Bxo	2	B								
26 Aug	N14E48	16	plage												
27 Aug	N14E34	17		10	10	Bxo	3	B							
28 Aug	N14E21	16		20	4	Cro	6	B							
29 Aug	N14E07	18	40	6	Dai	15	B				1				
30 Aug	N13W07	19	30	7	Cri	17	B								
31 Aug	N13W20	18	30	10	Cri	12	B				1				
01 Sep	N12W34	18	60	11	Eai	18	BG	1			2				
02 Sep	N12W50	21	90	9	Dai	19	BG								
03 Sep	N11W60	18	70	8	Cao	10	B	1			5				
04 Sep	N12W79	21	80	9	Cso	5	B								
05 Sep	N13W94	24	10	7	Bxo	3	B								
								2	0	0	9	0	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 18

<b>Region 1835</b>															
24 Aug	S09E80	10	30	2	Hsx	1	A								
25 Aug	S10E63	13	180	2	Hsx	1	A								
26 Aug	S10E51	12	140	4	Cso	3	B								
27 Aug	S10E39	11	240	4	Dso	5	B								
28 Aug	S11E26	10	280	4	Dko	6	B								
29 Aug	S10E13	12	250	4	Dko	7	B								
30 Aug	S10W00	12	180	4	Dai	10	B				3				
31 Aug	S11W13	11	140	4	Dsc	9	B				1				
01 Sep	S11W26	10	110	5	Cso	11	B				1				
02 Sep	S10W41	12	110	2	Cso	3	B								
03 Sep	S10W54	12	80	2	Hax	3	A								
04 Sep	S12W67	12	60	3	Cso	4	B								
05 Sep	S08W82	13	30	4	Cso	2	B								
								0	0	0	5	0	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 12





### *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
Region 1836															
27 Aug	N10E68	342	70	3	Hsx	1	A								
28 Aug	N10E55	342	140	2	Hax	2	A								
29 Aug	N12E42	343	160	3	Hax	3	A	1							
30 Aug	N11E33	339	180	10	Cao	5	B	1					1		
31 Aug	N11E19	338	170	14	Eao	9	BG	1				2			
01 Sep	N11E04	339	150	14	Eso	12	BG								
02 Sep	N11W05	336	160	13	Eso	13	BG								
03 Sep	N12W22	339	110	6	Hsx	8	A					1			
04 Sep	N12W39	342	110	5	Dso	7	B	1				4			
05 Sep	N13W56	345	120	9	Cso	10	B	1				2			
06 Sep	N11W67	345	130	8	Cao	5	B								
07 Sep	N10W78	344	90	2	Cao	2	B								
08 Sep	N10W91	344	60	2	Hax	1	A								
								5	0	0	9	1	0	0	0

Still on Disk.

Absolute heliographic longitude: 339

### *Region 1837*

02 Sep	S16W19	350	50	4	Dso	9	B				2				
03 Sep	S16W32	350	100	7	Dsi	13	B				6				
04 Sep	S15W47	352	120	8	Dso	21	B	6			15				
05 Sep	S16W61	352	130	8	Dsi	9	B	1			2				
06 Sep	S16W73	351	110	9	Dao	5	B								
07 Sep	S17W88	353	50	3	Hax	2	A				1				
								7	0	0	26	0	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 350

### *Region 1838*

05 Sep	S03E68	223	30	2	Hsx	1	A								
06 Sep	S05E55	223	20	1	Hsx	1	A								
07 Sep	S05E41	225	30	1	Hax	1	A								
08 Sep	S03E27	226	30	2	Hax	3	A				1				
								0	0	0	1	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 226

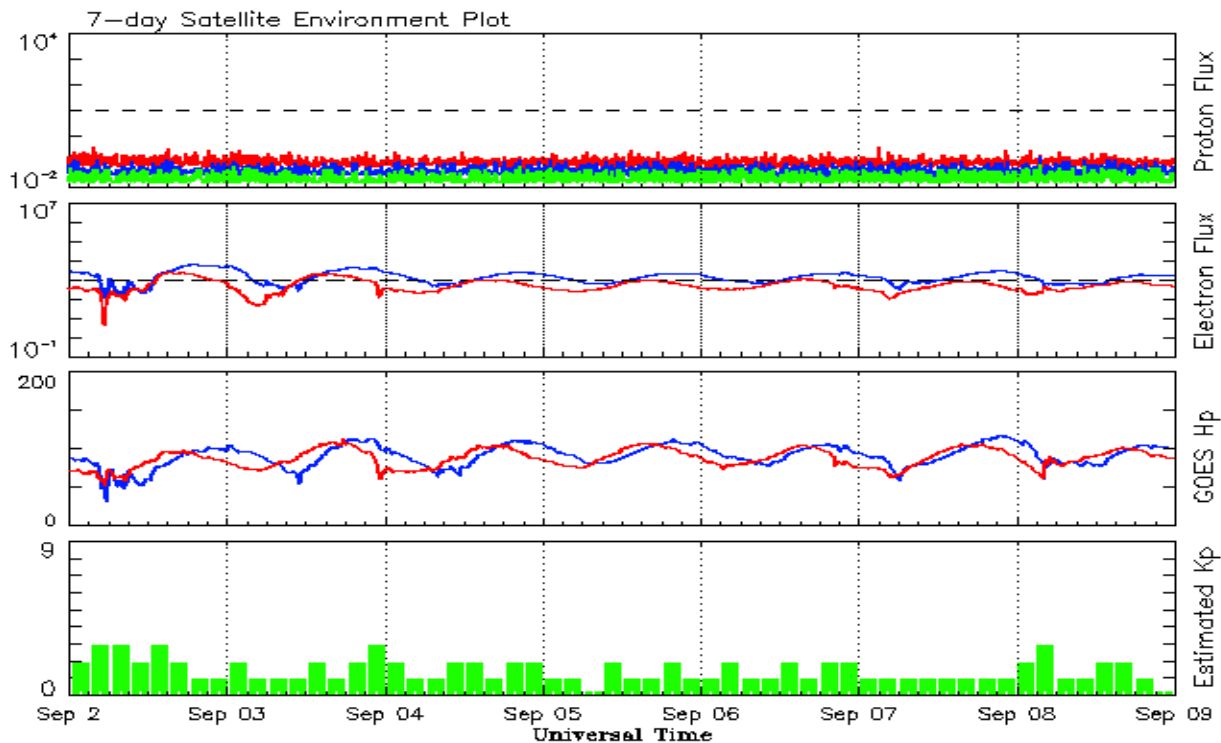


**Recent Solar Indices (preliminary)**  
**Observed monthly mean values**

Month	Sunspot Numbers					Radio Flux		Geomagnetic	
	Observed values		Ratio	Smooth values		Penticton	Smooth	Planetary	Smooth
	SEC	RI	RI/SEC	SEC	RI	10.7 cm	Value	Ap	Value
<b>2011</b>									
September	106.4	78.0	0.73	84.6	59.5	134.5	118.4	13	7.7
October	116.8	88.0	0.75	84.6	59.9	137.2	118.4	7	8.0
November	133.1	96.7	0.73	86.3	61.1	153.1	119.5	3	8.0
December	106.3	73.0	0.69	89.2	63.4	141.2	121.6	3	8.0
<b>2012</b>									
January	91.3	58.3	0.64	92.0	65.5	133.1	124.4	6	8.3
February	50.1	32.9	0.66	94.2	66.9	106.7	126.7	7	8.4
March	77.9	64.3	0.82	94.1	66.8	115.1	126.8	14	8.1
April	84.4	55.2	0.65	91.3	64.6	113.1	125.8	9	8.0
May	99.5	69.0	0.69	87.7	61.7	121.5	123.8	8	8.2
June	88.6	64.5	0.73	83.9	58.9	120.5	121.1	10	8.3
July	99.6	66.5	0.67	82.4	57.8	135.6	119.5	13	8.3
August	85.8	63.0	0.74	83.1	58.2	115.7	119.2	7	8.1
September	84.0	61.4	0.73	83.7	58.1	123.2	118.9	8	7.8
October	73.5	53.3	0.73	85.0	58.6	123.3	119.2	9	7.4
November	89.2	61.8	0.69	87.3	59.7	120.9	120.1	6	7.3
December	60.4	40.8	0.68	88.0	59.6	108.4	120.1	3	7.5
<b>2013</b>									
January	99.8	62.9	0.63	87.1	58.7	127.1	118.9	4	7.5
February	60.0	38.1	0.63	86.7	58.4	104.4	118.0	5	7.4
March	81.0	57.9	0.71			111.2		9	
April	112.8	72.4	0.64			125.0		5	
May	125.5	78.7	0.63			131.3		10	
June	80.1	52.5	0.66			110.2		13	
July	86.1	57.0	0.66			115.6		9	
August	90.2	66.0	0.73			114.7		9	

**Note:** Values are final except for the most recent 6 months which are considered preliminary.  
Cycle 24 started in Dec 2008 with an RI=1.7.





*Weekly Geosynchronous Satellite Environment Summary  
Week Beginning 02 September 2013*

The proton flux plot contains the five-minute averaged integral proton flux (protons/cm<sup>2</sup>-sec -sr) as measured by the SWPC Primary GOES satellite, near West 75, for each of three energy thresholds: greater than 10, 50, and 100 MeV.

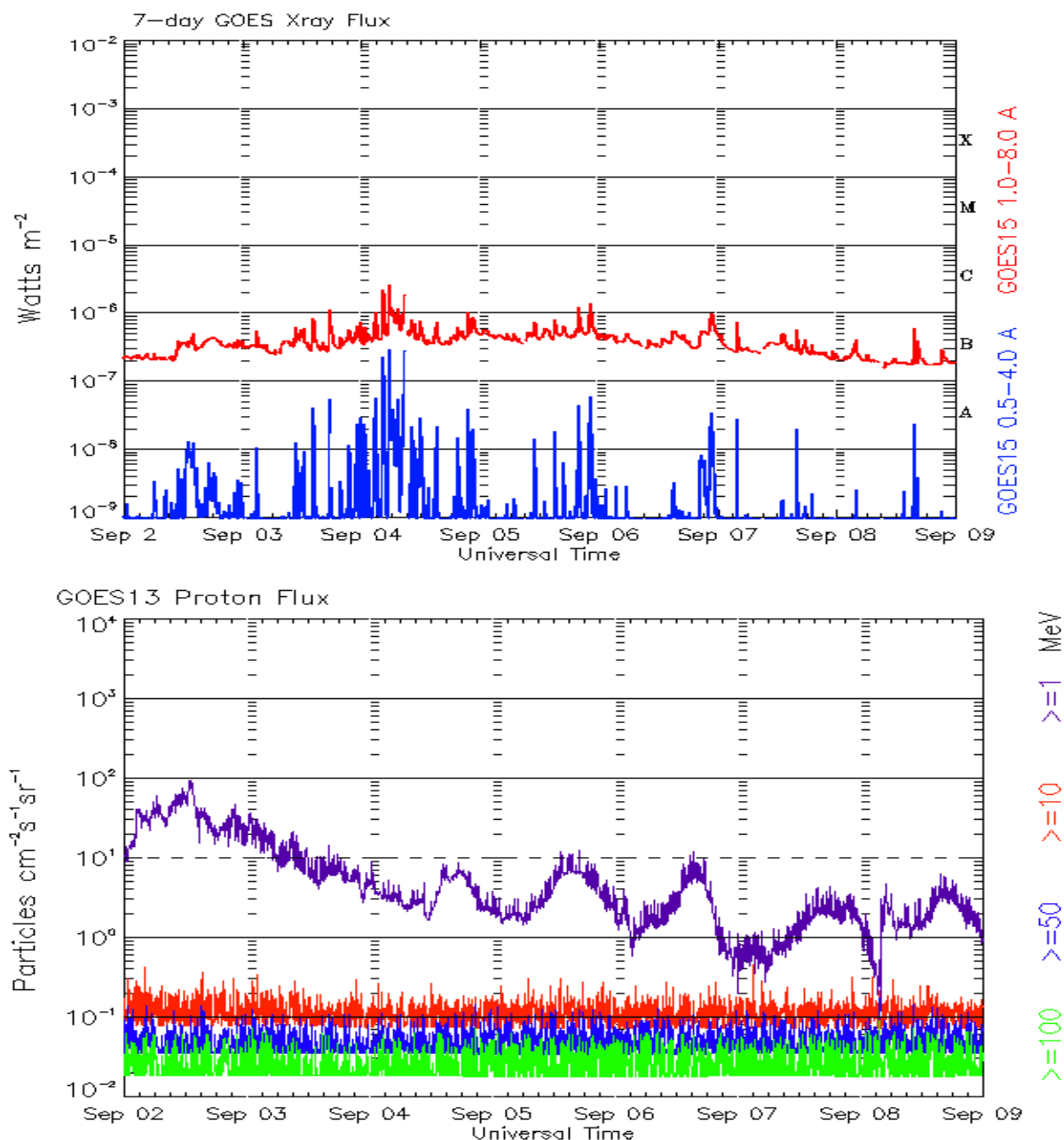
The electron flux plot contains the five-minute averaged integral electron flux (electrons/cm<sup>2</sup>-sec -sr) with energies greater than 2 MeV by the SWPC Primary GOES satellite.

The Hp plot contains the five minute averaged Hp magnetic field component in nanoteslas (nT) as by the SWPC Primary GOES satellite. The Hp component is parallel to the spin axis of the satellite, which is nearly parallel to the Earth's rotation axis.

The Estimated 3-hour Planetary Kp-index is derived at the NOAA Space Weather Prediction Center using data from the following ground-based magnetometers: Boulder, Colorado; Chambon la Foret, France; Fredericksburg, Virginia; Fresno, California; Hartland, UK; Newport, Washington; Sitka, Alaska. These data are made available thanks to the cooperative efforts between SWPC and data providers around the world, which currently includes the U.S. Geological Survey, the British Geological Survey, and the Institut de Physique du Globe de Paris.

The data included here are those now available in real time at the SWPC 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. 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.





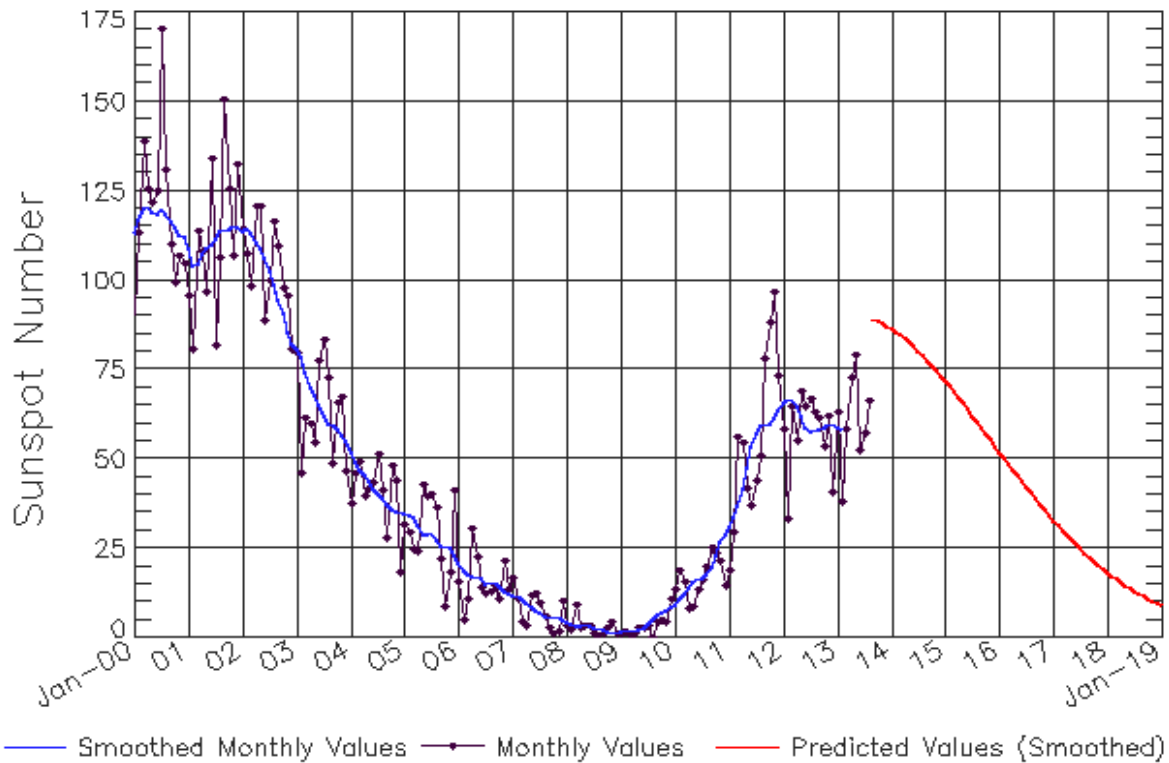
*Weekly GOES Satellite X-ray and Proton Plots  
Week Beginning 02 September 2013*

The x-ray plots contains five-minute averages x-ray flux ( $\text{Watt/m}^2$ ) as measure by the SWPC primary GOES X-ray satellite, usually at West 105 longitude, in two wavelength bands, 0.05 - 0.4 and 0.1 - 0.8 nm. The letters A, B, C, M and X refer to x-ray event levels for the 0.1 - 0.8 nm band.

The proton plot contains the five-minute averaged integral flux units (pfu = protons/ $\text{cm}^2$  -sec -sr) as measured by the primary SWPC GOES Proton satellite for each of the energy thresholds:  $>1$ ,  $>10$ ,  $>30$ , and  $>100$  MeV. The P10 event threshold is 10 pfu at greater than 10 MeV.

# ISES Solar Cycle Sunspot Number Progression

Observed data through Aug 2013

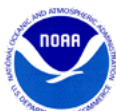


Updated 2013 Sep 9

NOAA/SWPC Boulder, CO USA

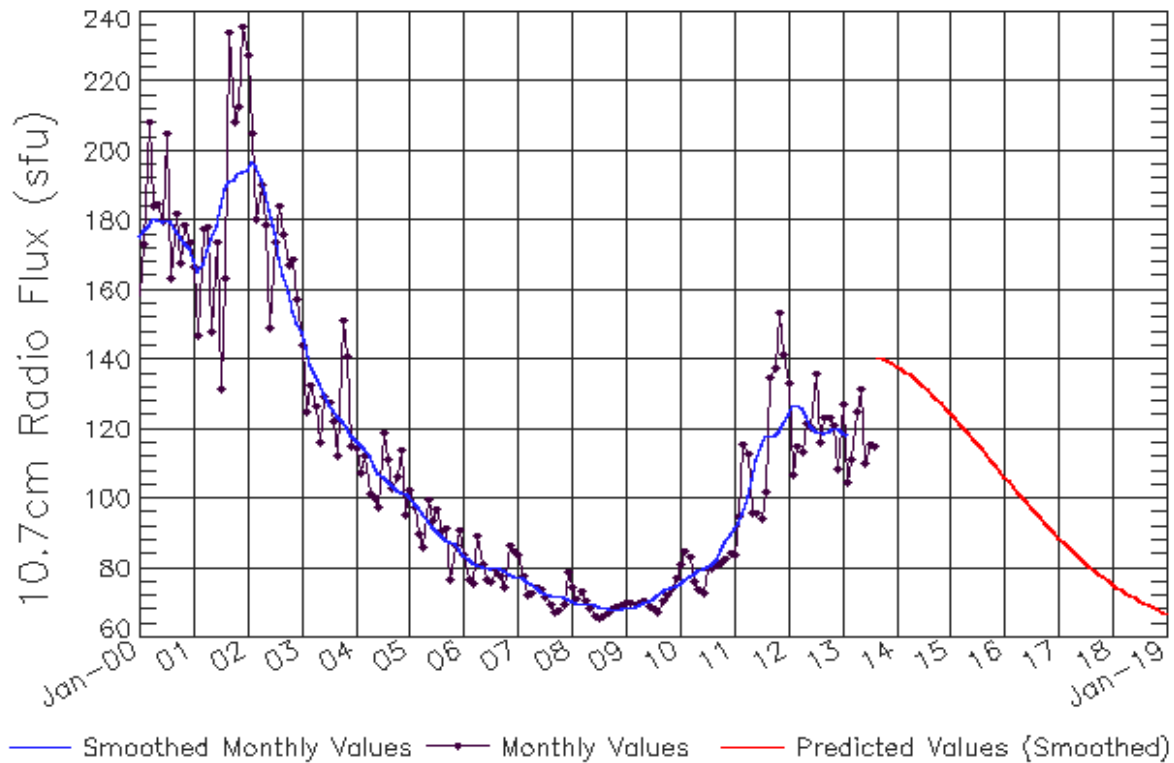
## Smoothed Sunspot Number Prediction

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2010	9 (***)	11 (***)	12 (***)	14 (***)	16 (***)	16 (***)	17 (***)	17 (***)	20 (***)	23 (***)	27 (***)	29 (***)
2011	31 (***)	33 (***)	37 (***)	42 (***)	48 (***)	53 (***)	57 (***)	59 (***)	60 (***)	60 (***)	61 (***)	63 (***)
2012	66 (***)	67 (***)	67 (***)	65 (***)	62 (***)	59 (***)	58 (***)	58 (***)	58 (***)	59 (***)	60 (***)	60 (***)
2013	59 (***)	58 (***)	60 (1)	62 (2)	65 (3)	68 (5)	71 (5)	74 (6)	77 (7)	79 (7)	79 (8)	81 (9)
2014	83 (9)	84 (10)	85 (10)	84 (10)	83 (10)	81 (10)	80 (10)	79 (10)	78 (10)	76 (10)	75 (10)	73 (10)
2015	72 (10)	70 (10)	69 (10)	67 (10)	65 (10)	64 (10)	62 (10)	60 (10)	59 (10)	57 (10)	55 (10)	54 (10)
2016	52 (10)	50 (10)	49 (10)	47 (10)	45 (10)	44 (10)	42 (10)	40 (10)	39 (10)	37 (10)	36 (10)	34 (10)
2017	33 (10)	31 (10)	30 (10)	29 (10)	27 (10)	26 (10)	25 (10)	24 (10)	23 (10)	21 (10)	20 (10)	19 (10)
2018	18 (10)	17 (10)	16 (10)	15 (10)	15 (10)	14 (10)	13 (10)	12 (10)	12 (10)	11 (10)	10 (10)	10 (10)
2019	9 (10)	8 (10)	8 (10)	7 (10)	7 (10)	6 (10)	6 (10)	6 (10)	5 (10)	5 (10)	4 (10)	4 (10)



# ISES Solar Cycle F10.7cm Radio Flux Progression

Observed data through Aug 2013



Updated 2013 Sep 9

NOAA/SWPC Boulder, CO USA

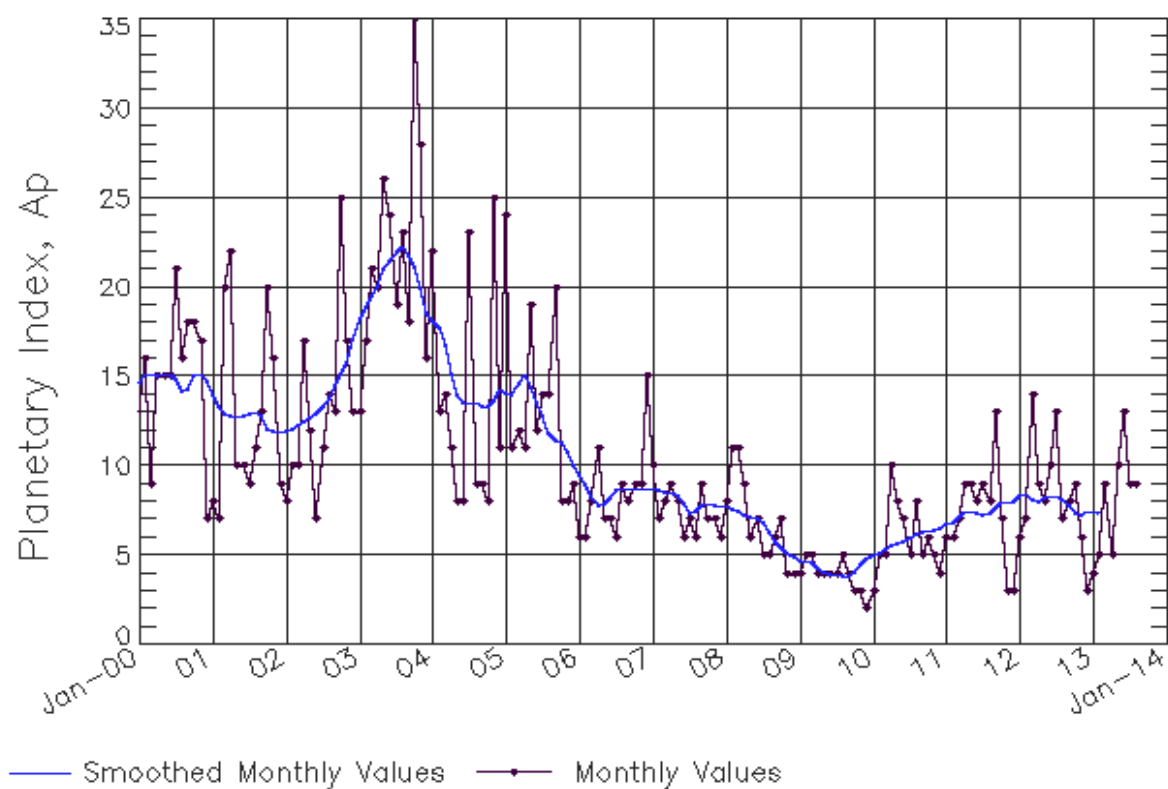
## Smoothed F10.7cm Radio Flux Prediction

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2010	76 (***)	77 (***)	78 (***)	78 (***)	79 (***)	80 (***)	80 (***)	81 (***)	82 (***)	85 (***)	88 (***)	90 (***)
2011	91 (***)	93 (***)	96 (***)	100 (***)	106 (***)	111 (***)	115 (***)	118 (***)	118 (***)	118 (***)	120 (***)	122 (***)
2012	124 (***)	127 (***)	127 (***)	126 (***)	124 (***)	121 (***)	120 (***)	119 (***)	119 (***)	119 (***)	120 (***)	120 (***)
2013	119 (***)	118 (***)	119 (1)	120 (1)	122 (2)	124 (3)	125 (4)	127 (4)	130 (5)	131 (6)	132 (7)	133 (8)
2014	134 (8)	136 (9)	136 (9)	136 (9)	135 (9)	134 (9)	132 (9)	131 (9)	130 (9)	129 (9)	127 (9)	126 (9)
2015	125 (9)	123 (9)	122 (9)	120 (9)	119 (9)	117 (9)	116 (9)	114 (9)	113 (9)	111 (9)	110 (9)	108 (9)
2016	106 (9)	105 (9)	103 (9)	102 (9)	100 (9)	99 (9)	97 (9)	96 (9)	94 (9)	93 (9)	92 (9)	90 (9)
2017	89 (9)	88 (9)	86 (9)	85 (9)	84 (9)	83 (9)	82 (9)	80 (9)	79 (9)	78 (9)	77 (9)	76 (9)
2018	75 (9)	75 (9)	74 (9)	73 (9)	72 (9)	71 (9)	71 (9)	70 (9)	69 (9)	69 (9)	68 (9)	67 (9)
2019	67 (9)	66 (9)	66 (9)	65 (9)	65 (9)	65 (9)	64 (9)	64 (9)	63 (9)	63 (9)	63 (9)	63 (9)



# ISES Solar Cycle Ap Progression

Observed data through Aug 2013



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*Solar Cycle Comparison charts are temporarily unavailable.*



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

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**Notice:** The 27-day Outlook, Satellite Environment, X-ray and Proton plots have been redesigned.  
Comments and suggestions are welcome [SWPC.Webmaster@noaa.gov](mailto:SWPC.Webmaster@noaa.gov)

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