

Solar activity was very low with the exception of 11 September when Region 2414 (S10, L=321, class/area Dai/190 on 13 Sep) produced an isolated C1/Sf flare at 11/2137 UTC. A large filament structure was observed lifting off the NW quadrant in SDO/AIA 171 imagery beginning at 07/0740 UTC. Subsequent analysis indicated a glancing blow on 11 September. By 13 September, old Region 2403 (S15, L=192), which was responsible for multiple M-class flares last rotation, returned to the visible disk as new Region 2418 (S15, L=203, class/area Hsx/120 on 13 Sep). The region appears to have simplified, however due to limb proximity, there might be more associated spots yet to become visible.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit was at mostly high levels with moderate levels observed on 08 September. The largest flux value for the period was 11,910 pfu observed at 13/1425 UTC.

Geomagnetic field activity was at quiet to severe storm (G3-Strong) levels during the period. The period began under the influence of a positive polarity coronal hole high speed stream (CH HSS) coupled with a coronal mass ejection (CME) that was the result of a filament eruption on 04 September. Solar wind speed increased to over 600 km/s just after 07/1400 UTC followed by an increase in total field to 20 nT by 08/0700 UTC. The Bz component rotated southward by 08/2323 UTC to a maximum of -9 nT on 09 September. The geomagnetic field responded with periods of major storm levels (G2-Moderate) from 07-09 September. By 10 September, total field had decreased to 5 nT with solar wind speeds around 410 km/s. The geomagnetic field was at quiet to active levels on 10 September. By early on 11 September, total field increased again to 16 nT while the Bz component reached a maximum southward deflection of -16 nT at 11/0730 UTC. Solar wind speed increased to near 660 km/s by 11/1140 UTC as a positive polarity coronal hole high speed stream became geoeffective, possibly in combination with the glancing blow from the 07 September CME. The geomagnetic field responded with unsettled to severe storm levels (G3-Strong) on 11 September. Throughout the rest of the period, solar wind parameters slowly diminished to near nominal levels. Quiet to active levels were observed on 12 September with quiet to unsettled levels on 13 September.

### **Space Weather Outlook** **14 September - 10 October 2015**

Solar activity is expected to be at very low to low levels with a slight chance for M-class flares from 14-26 September as Regions 2414 and 2418 rotate across the visible disk.

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 with high levels expected on 14-18, 21-22, 26-27 September and from 02-06,



09-10 October due to influence from multiple recurrent CH HSSs.

Geomagnetic field activity is expected to be at unsettled to active levels on 14-16, 20, 24-25 September, and from 30 September through 10 October with minor storm (G1-Minor) periods likely on 15 September, 01 October, 05-06 October, 08 October, and major storm periods possible on 04 October due to recurrent CH HSS activity.



### *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	
07 September	84	47	80	A6.3	0	0	0	0	0	0	0	0	0
08 September	84	40	60	A5.3	0	0	0	1	0	0	0	0	0
09 September	82	49	70	A5.9	0	0	0	0	0	0	0	0	0
10 September	84	42	60	A7.9	0	0	0	0	0	0	0	0	0
11 September	93	79	230	B1.6	1	0	0	10	0	0	0	0	0
12 September	99	87	350	B2.7	0	0	0	5	0	0	0	0	0
13 September	99	75	500	B2.1	0	0	0	2	0	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
	07 September	9.0e+05	1.1e+04	2.5e+03		4.4e+07
08 September	2.3e+05	1.0e+04	2.2e+03		7.9e+06	
09 September	7.5e+05	1.1e+04	2.6e+03		8.2e+06	
10 September	3.6e+05	1.2e+04	2.9e+03		7.2e+07	
11 September	3.6e+06	1.1e+04	2.6e+03		2.3e+07	
12 September	1.1e+06	1.1e+04	2.4e+03		3.2e+08	
13 September	8.4e+05	1.1e+04	2.5e+03		3.4e+08	

### *Daily Geomagnetic Data*

Date	Middle Latitude Fredericksburg		High Latitude College		Estimated Planetary	
	A	K-indices	A	K-indices	A	K-indices
	07 September	27	1-3-3-3-4-5-5-5	84	2-4-6-5-7-8-6-5	46
08 September	0	5-5-2-2-3-0-0-0	0	5-5-2-1-2-0-0-0	29	6-6-3-2-2-1-2-4
09 September	0	0-0-0-0-0-0-0-0	0	0-0-0-0-0-0-0-0	59	4-6-6-5-6-4-6-6
10 September	10	3-0-2-1-3-2-3-3	20	4-1-2-3-3-5-4-3	13	3-1-2-2-2-3-4-3
11 September	36	2-4-6-4-5-5-4-4	70	2-4-7-7-6-7-2-3	59	3-4-7-6-5-6-4-4
12 September	13	3-3-4-3-2-2-2-2	24	3-3-5-6-3-2-2-1	16	4-3-4-4-2-2-2-2
13 September	8	1-1-2-3-2-3-2-2	32	1-1-4-6-5-6-3-1	11	1-2-2-3-2-3-3-3



### *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>
07 Sep 0625	CONTINUED ALERT: Electron 2MeV Integral Flux $\geq$ 1000pfu	05/1315
07 Sep 1055	EXTENDED WARNING: Geomagnetic K = 4	06/1905 - 07/1900
07 Sep 1440	WARNING: Geomagnetic K = 5	07/1440 - 1900
07 Sep 1505	ALERT: Geomagnetic K = 5	07/1500
07 Sep 1549	ALERT: Geomagnetic K = 5	07/1548
07 Sep 1618	WATCH: Geomagnetic Storm Category G1 predicted	
07 Sep 1620	WARNING: Geomagnetic K = 6	07/1620 - 2200
07 Sep 1620	EXTENDED WARNING: Geomagnetic K = 5	07/1440 - 08/0700
07 Sep 1620	EXTENDED WARNING: Geomagnetic K = 4	06/1905 - 08/1000
07 Sep 1622	ALERT: Geomagnetic K = 6	07/1625
07 Sep 1910	ALERT: Geomagnetic K = 5	07/1910
07 Sep 2029	EXTENDED WARNING: Geomagnetic K = 6	07/1620 - 0700
07 Sep 2029	WATCH: Geomagnetic Storm Category G2 predicted	
07 Sep 2040	EXTENDED WARNING: Geomagnetic K = 6	07/1620 - 08/0700
07 Sep 2042	ALERT: Geomagnetic K = 6	07/2040
07 Sep 2145	ALERT: Geomagnetic K = 5	07/2145
07 Sep 2312	ALERT: Geomagnetic K = 6	07/2312
08 Sep 0117	ALERT: Geomagnetic K = 5	08/0116
08 Sep 0206	ALERT: Geomagnetic K = 6	08/0205
08 Sep 0323	WARNING: Geomagnetic K $\geq$ 7	08/0321 - 0900
08 Sep 0323	EXTENDED WARNING: Geomagnetic K = 5	07/1440 - 08/1000
08 Sep 0323	EXTENDED WARNING: Geomagnetic K = 6	07/1620 - 08/0900
08 Sep 0325	ALERT: Geomagnetic K = 5	08/0324
08 Sep 0425	ALERT: Geomagnetic K = 6	08/0424
08 Sep 0640	EXTENDED WARNING: Geomagnetic K = 4	06/1905 - 08/2000
08 Sep 1340	CANCELLATION: Geomagnetic Storm Category G2 predicted	
08 Sep 2214	WARNING: Geomagnetic K = 4	08/2215 - 09/0600
09 Sep 0000	ALERT: Geomagnetic K = 4	08/2357



### *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>
09 Sep 0311	WARNING: Geomagnetic K = 5	09/0310 - 0600
09 Sep 0413	ALERT: Geomagnetic K = 5	09/0406
09 Sep 0502	EXTENDED WARNING: Geomagnetic K = 5	09/0310 - 1300
09 Sep 0502	WARNING: Geomagnetic K = 6	09/0500 - 1000
09 Sep 0502	EXTENDED WARNING: Geomagnetic K = 4	08/2215 - 09/1400
09 Sep 0534	ALERT: Geomagnetic K = 6	09/0526
09 Sep 0703	ALERT: Geomagnetic K = 5	09/0651
09 Sep 0859	ALERT: Geomagnetic K = 6	09/0845
09 Sep 0948	EXTENDED WARNING: Geomagnetic K = 6	09/0500 - 1300
09 Sep 1023	ALERT: Geomagnetic K = 5	09/1016
09 Sep 1228	EXTENDED WARNING: Geomagnetic K = 4	08/2215 - 10/1000
09 Sep 1228	EXTENDED WARNING: Geomagnetic K = 5	09/0310 - 10/0700
09 Sep 1228	EXTENDED WARNING: Geomagnetic K = 6	09/0500 - 1600
09 Sep 1228	WATCH: Geomagnetic Storm Category G1 predicted	
09 Sep 1349	ALERT: Geomagnetic K = 5	09/1347
09 Sep 1523	ALERT: Geomagnetic K = 6	09/1500
09 Sep 1857	WATCH: Geomagnetic Storm Category G2 predicted	
09 Sep 1857	WARNING: Geomagnetic K = 6	09/1855 - 10/0400
09 Sep 1857	ALERT: Geomagnetic K = 5	09/1855
09 Sep 2034	ALERT: Geomagnetic K = 6	09/2033
09 Sep 2254	ALERT: Geomagnetic K = 5	09/2250
10 Sep 0005	ALERT: Geomagnetic K = 6	09/2357
10 Sep 1035	ALERT: Electron 2MeV Integral Flux $\geq$ 1000pfu	10/1020
10 Sep 1444	CANCELLATION: Geomagnetic Storm Category G2 predicted	
10 Sep 1500	WATCH: Geomagnetic Storm Category G1 predicted	
10 Sep 1751	WARNING: Geomagnetic K = 4	10/1750 - 2300
10 Sep 1951	ALERT: Geomagnetic K = 4	10/1950
10 Sep 2255	EXTENDED WARNING: Geomagnetic K = 4	10/1750 - 11/1100

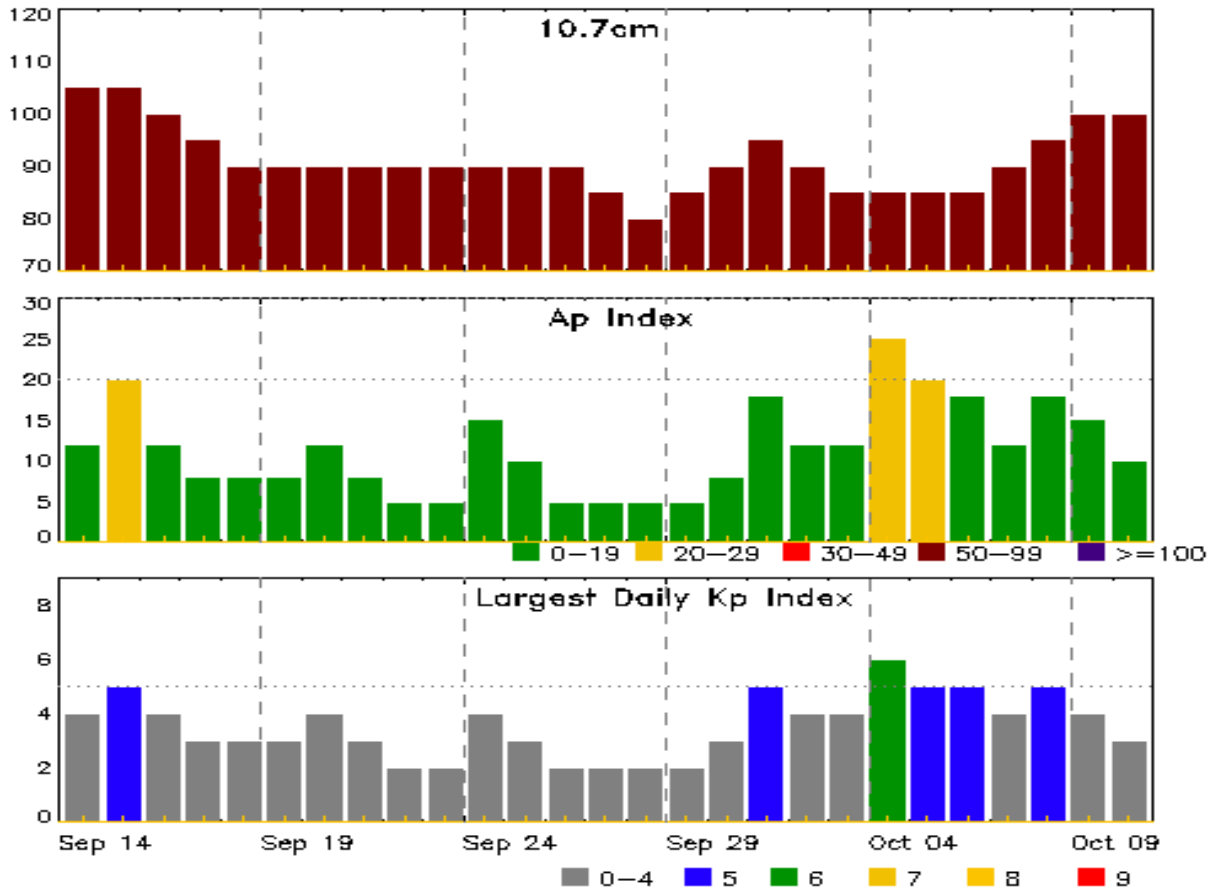


## *Alerts and Warnings Issued*

<b>Date &amp; Time of Issue UTC</b>	<b>Type of Alert or Warning</b>	<b>Date &amp; Time of Event UTC</b>
11 Sep 0524	EXTENDED WARNING: Geomagnetic K = 4	10/1750 - 11/2000
11 Sep 0524	WARNING: Geomagnetic K = 5	11/0522 - 1400
11 Sep 0840	WARNING: Geomagnetic K = 6	11/0836 - 1400
11 Sep 0848	ALERT: Geomagnetic K = 5	11/0847
11 Sep 0854	WARNING: Geomagnetic K >= 7	11/0850 - 1400
11 Sep 0855	ALERT: Geomagnetic K = 6	11/0850
11 Sep 0859	ALERT: Geomagnetic K = 7	11/0859
11 Sep 0936	ALERT: Geomagnetic K = 5	11/0936
11 Sep 1001	ALERT: Geomagnetic K = 6	11/1000
11 Sep 1347	EXTENDED WARNING: Geomagnetic K = 6	11/0836 - 2100
11 Sep 1347	EXTENDED WARNING: Geomagnetic K = 4	10/1750 - 12/1200
11 Sep 1347	EXTENDED WARNING: Geomagnetic K = 5	11/0522 - 12/0600
11 Sep 1359	ALERT: Geomagnetic K = 5	11/1359
11 Sep 1529	ALERT: Geomagnetic K = 5	11/1528
11 Sep 1547	WATCH: Geomagnetic Storm Category G2 predicted	
11 Sep 1550	ALERT: Geomagnetic K = 6	11/1549
11 Sep 1614	CONTINUED ALERT: Electron 2MeV Integral Flux >= 1000pfu	10/1020
11 Sep 1659	WARNING: Geomagnetic K >= 7	11/1658 - 2100
11 Sep 2044	EXTENDED WARNING: Geomagnetic K = 6	11/0836 - 12/0600
12 Sep 0528	EXTENDED WARNING: Geomagnetic K = 4	10/1750 - 12/2300
12 Sep 0528	EXTENDED WARNING: Geomagnetic K = 5	11/0522 - 12/1300
12 Sep 1014	CONTINUED ALERT: Electron 2MeV Integral Flux >= 1000pfu	10/1020
13 Sep 0502	CONTINUED ALERT: Electron 2MeV Integral Flux >= 1000pfu	10/1020
13 Sep 1808	WARNING: Geomagnetic K = 4	13/1806 - 2359



## 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
14 Sep	105	12	4	28 Sep	80	5	2
15	105	20	5	29	85	5	2
16	100	12	4	30	90	8	3
17	95	8	3	01 Oct	95	18	5
18	90	8	3	02	90	12	4
19	90	8	3	03	85	12	4
20	90	12	4	04	85	25	6
21	90	8	3	05	85	20	5
22	90	5	2	06	85	18	5
23	90	5	2	07	90	12	4
24	90	15	4	08	95	18	5
25	90	10	3	09	100	15	4
26	90	5	2	10	100	10	3
27	85	5	2				



## *Energetic Events*

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

**No Events Observed**

## *Flare List*

Date	Time			X-ray Class	Imp/ Brtns	Optical		Rgn #
	Begin	Max	End			Location Lat CMD	Rgn #	
08 Sep	2125	2128	2128		SF	N07W31		2409
11 Sep	0239	0245	0308	B4.2				2415
11 Sep	B0526	U0544	0558		SF	S10W08		2414
11 Sep	0600	0603	0623		SF	S11W09		2414
11 Sep	B0634	U0650	0700		SF	S11W09		2414
11 Sep	0749	0803	0804		SF	S09W11		2414
11 Sep	0831	U0833	A0847		SF	S10W11		2414
11 Sep	B0936	U0936	A0942		SF	S10W12		2414
11 Sep	B0945	U0954	A1002		SF	S10W12		2414
11 Sep	B1026	U1028	A1034		SF	S10W13		2414
11 Sep	1225	1229	1232	B3.6				2415
11 Sep	1252	1312	1317	B6.7				2415
11 Sep	1623	1627	1633	B3.3				2415
11 Sep	1643	1646	1649	B4.3	SF	S09W17		2414
11 Sep	2103	2107	2110	B3.6				2415
11 Sep	2130	2137	2143	C1.3	SF	S08W18		2414
12 Sep	0859	0859	0906		SF	S18E62		2415
12 Sep	1004	1005	1009		SF	S18E62		2415
12 Sep	1404	1404	1407		SF	S19E62		2415
12 Sep	1732	1733	1734		SF	S22E59		2415
12 Sep	1755	1756	1808		SF	S22E59		2415
13 Sep	0415	0420	0429	B6.4				2414
13 Sep	0520	0524	0533	B6.1	SF	S11W35		2414
13 Sep	1235	1239	1243	B4.5	SF	S19E49		2415





## Region Summary

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

### Region 2405

27 Aug	S21E45	91	10	1	Axx	1	A										
28 Aug	S23E35	88	10	3	Bxo	5	B	2				1					
29 Aug	S19E21	89	20	5	Cro	3	B	1				1					
30 Aug	S20E09	87	10	5	Bxo	3	B	1				1					
31 Aug	S21W03	86	0		Axx	1	A					1					
01 Sep	S21W17	87	plage														
02 Sep	S21W31	88	plage														
03 Sep	S21W45	89	plage														
04 Sep	S21W59	89	plage														
05 Sep	S21W73	90	plage														
06 Sep	S21W87	91	plage														
								4	0	0	4	0	0	0	0	0	

Crossed West Limb.

Absolute heliographic longitude: 86

### Region 2406

29 Aug	N03E34	76	10	1	Axx	1	A										
30 Aug	N03E22	73	10	2	Axx	2	A										
31 Aug	N03E09	74	20	5	Cro	3	B										
01 Sep	N03W05	75	10	4	Bxo	9	B										
02 Sep	N03W18	75	10	1	Axx	2	A										
03 Sep	N03W33	77	plage														
04 Sep	N03W48	78	plage														
05 Sep	N03W63	80	plage														
06 Sep	N03W76	80	plage														
								0	0	0	0	0	0	0	0	0	

Died on Disk.

Absolute heliographic longitude: 75



### *Region Summary - continued*

Date	Location		Sunspot Characteristics				Flares																
	Lat	CMD	Helio Lon	Area 10 <sup>6</sup> hemi.	Extent (helio)	Spot Class	Spot Count	Mag Class	X-ray			Optical											
									C	M	X	S	1	2	3	4							
<b>Region 2409</b>																							
01 Sep	N05E54		16	30	4	Dro	5	B					3										
02 Sep	N04E39		17	30	4	Dro	6	B															
03 Sep	N03E26		18	30	4	Cro	5	B															
04 Sep	N06E11		19	30	4	Cro	2	B					1										
05 Sep	N06W02		19	10	2	Bxo	3	B															
06 Sep	N04W14		18	20	3	Cro	3	B															
07 Sep	N05W25		16	0		Axx	1	A															
08 Sep	N05W36		14	10	3	Bxo	2	B					1										
09 Sep	N06W50		14	0		Axx	1	A															
10 Sep	N06W65		16	plage																			
11 Sep	N06W80		18	plage																			
										0	0	0	5	0	0	0	0	0					

Crossed West Limb.  
Absolute heliographic longitude: 19

<b>Region 2410</b>																							
03 Sep	S19E23		21	10	2	Bxo	2	B															
04 Sep	S19E09		21	20	2	Cro	3	B															
05 Sep	S19W05		22	plage																			
06 Sep	S19W18		22	plage																			
07 Sep	S19W32		23	plage																			
08 Sep	S19W46		24	plage																			
09 Sep	S19W60		24	plage																			
10 Sep	S19W74		25	plage																			
11 Sep	S19W88		26	plage																			
										0	0	0	0	0	0	0	0	0					

Crossed West Limb.  
Absolute heliographic longitude: 22



### *Region Summary - continued*

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

#### ***Region 2411***

04 Sep	N14E64	326	10	2	Hsx	1	A										
05 Sep	N13E50	327	40	1	Hsx	1	A										
06 Sep	N14E38	326	30	3	Cso	2	B										
07 Sep	N14E24	327	30	2	Hsx	1	A										
08 Sep	N14E10	328	20	1	Hsx	1	A										
09 Sep	N14W02	326	30	1	Hsx	1	A										
10 Sep	N14W15	326	20	1	Hsx	2	A										
11 Sep	N15W28	326	20	1	Hax	1	A										
12 Sep	N14W41	326	10	1	Hsx	1	A										
13 Sep	N15W54	326	10	1	Axx	1	A										
										0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 326

#### ***Region 2412***

06 Sep	S08E58	306	20	3	Cro	3	B										
07 Sep	S07E44	307	40	7	Dao	4	B										
08 Sep	S07E30	308	30	8	Cso	7	B										
09 Sep	S08E17	307	30	7	Cro	6	B										
10 Sep	S08E04	307	30	7	Cro	9	B										
11 Sep	S07W09	307	20	7	Cri	9	B										
12 Sep	S07W22	307	10	5	Bxo	4	B										
13 Sep	S07W35	307	10	2	Axx	3	A										
										0	0	0	0	0	0	0	0

Still on Disk.

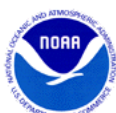
Absolute heliographic longitude: 307

#### ***Region 2413***

07 Sep	N02W47	38	10	1	Hrx	1	A										
08 Sep	N02W62	40	plage														
09 Sep	N02W77	41	plage														
										0	0	0	0	0	0	0	0

Died on Disk.

Absolute heliographic longitude: 38



**Region Summary - continued**

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

**Region 2414**

09 Sep	S10E07	317	10	1	Axx	1	A											
10 Sep	S10W09	320	10	1	Axx	1	A											
11 Sep	S10W20	318	80	6	Dai	10	BG	1				10						
12 Sep	S11W34	319	180	9	Dai	12	BG											
13 Sep	S10W49	321	190	10	Dai	9	B					1						
								1	0	0		11	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 317

**Region 2415**

11 Sep	S21E68	230	100	5	Dao	7	B											
12 Sep	S21E53	232	130	8	Dai	7	B					5						
13 Sep	S22E41	231	170	10	Dai	11	BG					1						
								0	0	0		6	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 231

**Region 2416**

11 Sep	S13W36	334	10	2	Bxo	2	B											
12 Sep	S14W50	335	10	2	Bxo	2	B											
13 Sep	S14W64	336	plage															
								0	0	0		0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 334

**Region 2417**

12 Sep	N23W48	333	10	1	Hrx	1	A											
13 Sep	N25W62	334	plage															
								0	0	0		0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 333

**Region 2418**

13 Sep	S15E69	203	120	3	Hsx	1	A											
								0	0	0		0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 203

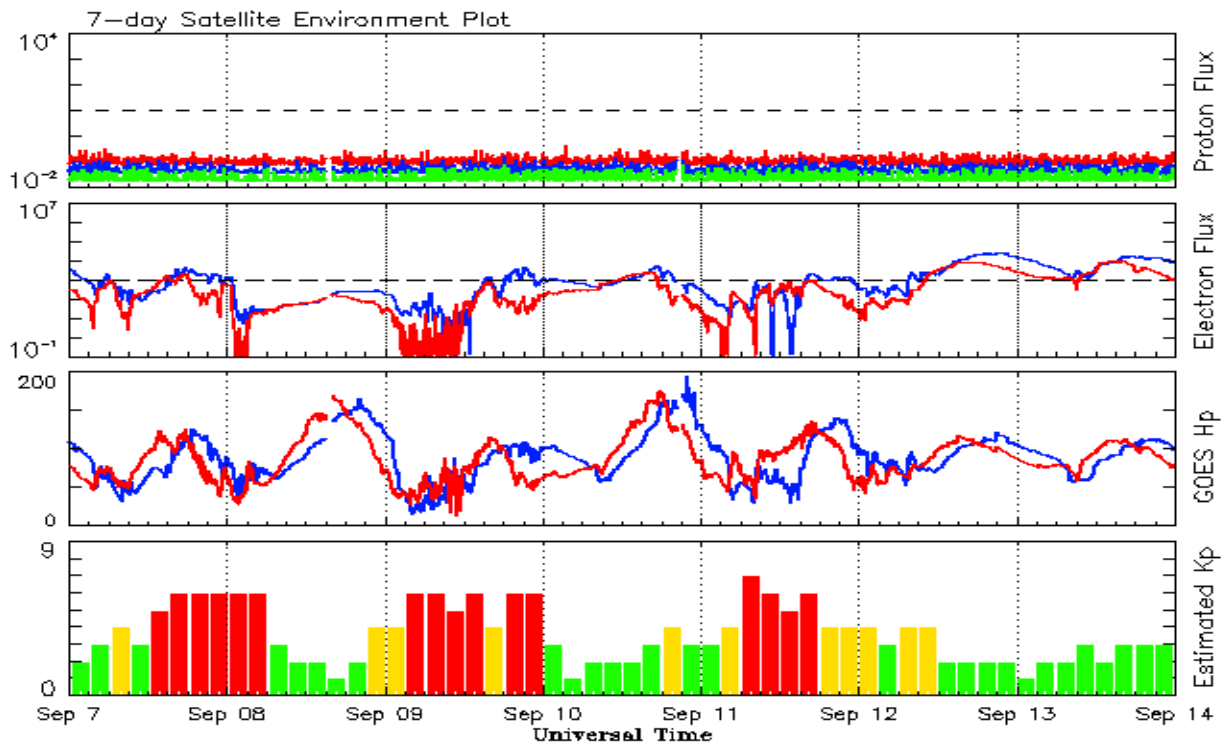


**Recent Solar Indices (preliminary)**  
**Observed monthly mean values**

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>2013</b>									
September	55.0	37.0	0.67	111.0	73.0	102.7	132.3	5	7.8
October	127.1	85.6	0.67	114.3	74.9	132.3	134.7	7	7.8
November	125.7	77.6	0.62	114.6	75.3	148.4	135.4	5	7.9
December	118.2	90.3	0.76	115.4	75.9	147.7	135.9	5	7.5
<b>2014</b>									
January	125.9	81.8	0.65	117.7	77.3	158.6	137.3	6	7.1
February	174.6	102.3	0.59	119.5	78.3	170.3	138.6	12	6.9
March	141.1	91.9	0.65	123.2	80.8	149.9	140.8	6	7.2
April	130.5	84.7	0.65	124.8	81.9	144.3	143.5	9	7.5
May	116.8	75.2	0.64	122.3	80.5	130.0	144.7	7	7.9
June	107.7	71.0	0.66	121.4	79.7	122.2	145.5	7	8.4
July	113.6	72.4	0.64	120.4	78.5	137.3	145.2	5	8.8
August	106.2	74.6	0.70	115.1	75.5	124.7	142.8	9	8.9
September	127.4	87.6	0.69	107.4	70.8	146.1	140.1	11	9.3
October	92.0	60.6	0.66	101.7	67.3	153.7	138.4	10	9.9
November	101.8	70.2	0.69	97.9	65.4	155.3	137.4	10	10.1
December	120.0	76.7	0.65	95.2	56.0	158.7	137.0	12	10.5
<b>2015</b>									
January	101.2	67.0	0.66	92.1	53.9	141.7	135.8	10	11.0
February	70.6	44.8	0.63	88.3	52.0	128.8	133.8	10	11.5
March	61.7	38.4	0.62			126.0		17	
April	72.5	54.4	0.75			129.2		12	
May	83.0	58.8	0.71			120.1		9	
June	77.3	41.0	0.53			123.2		14	
July	68.4	39.8	0.58			107.0		10	
August	61.6	38.8	0.63			106.2		16	

**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 07 September 2015*

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.

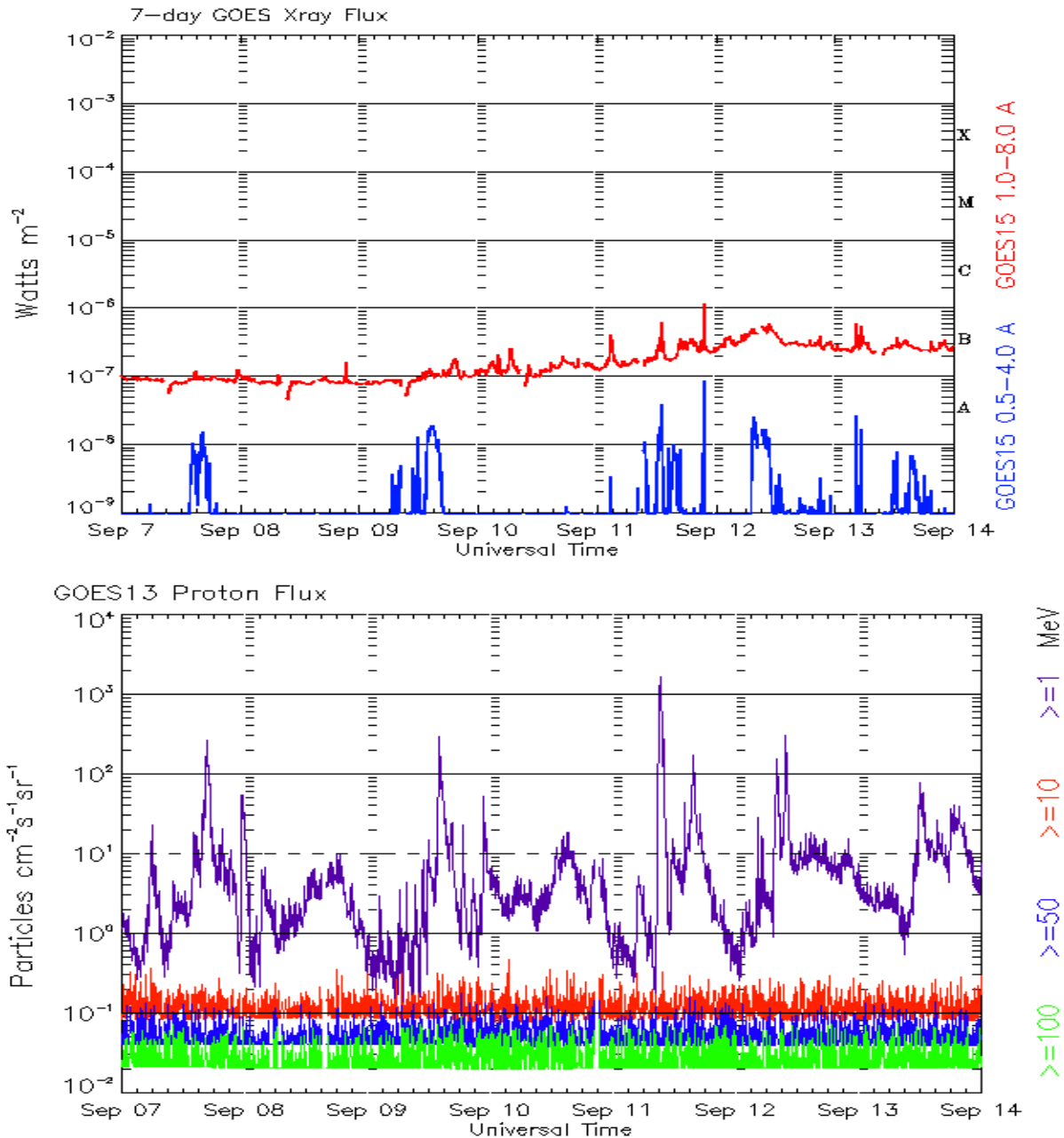
The electron flux plot contains the five-minute averaged integral electron flux (electrons/cm<sup>2</sup>-sec -sr) with energies greater than 2 MeV by the SWPC Primary GOES satellite.

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 07 September 2015*

The x-ray plots contains five-minute averages x-ray flux (Watt/m<sup>2</sup>) 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 intergral flux units (pfu = protons/cm<sup>2</sup> -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.



## ***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

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