

Solar activity was at low levels with C-class flare activity for most of the week with an isolated period of moderate solar activity observed on 04 Feb. Region 2277 (N08, L=330, class/area=Fkc/510 on 30 Jan) produced the only R1 (Minor) or greater radio blackout of the period, an M1/2n flare at 04/0215 UTC, but produced only low-level C-class flare activity for the remainder of the period. Region 2280 (S07, L=283, class/area=Dac/210 on 08 Feb) also produced numerous C-class flares since rotating onto the visible disk on 02 Feb, but activity was limited to the low C-class range. No Earth-directed coronal mass ejections were observed throughout the 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 throughout the period. Electron flux values began the week at low to moderate levels on 02 Feb but increased to moderate to high levels for 03-05 Feb, reaching a peak value of 7,430 pfu at 1525 UTC on 04 Feb, in response to an enhanced solar wind environment due to coronal hole high speed stream (CH HSS) effects earlier in the period. Low to moderate electron flux values returned for 06-08 Feb as CH HSS effects ceased.

Geomagnetic field activity ranged from quiet to G1 (Minor) geomagnetic storm levels throughout the period. G1 (Minor) geomagnetic storm conditions were observed early (0000-0600 UTC) on 02 Feb, with periods of moderate geomagnetic storm conditions observed at high latitudes, in response to a co-rotating interaction region (CIR) followed by effects from an extension of a recurrent negative polarity CH HSS in the southern solar hemisphere. Unsettled to active conditions were observed for the remainder of 02 Feb and early on 03 Feb as CH HSS influence weakened. The solar wind regime returned to a mostly nominal state for remainder of the period with predominately quiet to unsettled geomagnetic field conditions observed on 04-08 Feb, although an isolated period of active field conditions were observed between 1500-1800 UTC on 05 Feb which was attributed to the subsiding influence of the negative polarity CH HSS.

Space Weather Outlook

09 February - 07 March 2015

Solar activity is expected to be at predominately low to moderate levels throughout the period with only low levels of solar activity expected for 14-15 Feb. Low to moderate solar activity is expected for the remainder of the period as Region 2280 (S07, L=283) continues its transit of the visible disk and as Region 2268 (S11, L=048) and Region 2277 (N08, L=330) return on 16 Feb and 22 Feb, respectively. Regions 2268 and 2277 were previously credited with R1 (Minor) radio blackout event production during their previous appearance to the visible disk.

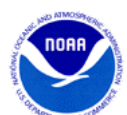
No proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to reach moderate



levels on 09-11, 17, 19-21, and 25 Feb as well as 01 and 05-07 Mar with high levels anticipated on 02-04 Mar in response to coronal hole high speed stream (CH HSS) influence.

Geomagnetic field activity is expected to be at predominately quiet to unsettled levels throughout the outlook period with periods of active conditions expected on 15, 17, 22-23 Feb and 02 Mar with isolated periods of G1 (Minor) geomagnetic storm conditions likely on 28 Feb and 01 Mar, all due to recurrent CH HSS effects.



Daily Solar Data

Date	Radio Flux 10.7cm	Sun spot No.	Sunspot Area (10 ⁻⁶ hemi.)	X-ray Background Flux	Flares							
					X-ray			Optical				
					C	M	X	S	1	2	3	4
02 February	144	117	680	B6.8	3	0	0	9	1	0	0	0
03 February	149	112	830	B7.8	7	0	0	22	1	0	0	0
04 February	145	85	700	B7.5	2	1	0	13	0	1	0	0
05 February	142	86	560	B5.9	3	0	0	4	1	0	0	0
06 February	143	71	440	B6.2	3	0	0	10	0	0	0	0
07 February	153	80	480	B7.5	7	0	0	7	0	0	0	0
08 February	153	94	510	B7.3	7	0	0	16	2	0	0	0

Daily Particle Data

Date	Proton Fluence (protons/cm ² -day -sr)			Electron Fluence (electrons/cm ² -day -sr)		
	>1 MeV	>10 MeV	>100 MeV	>0.6 MeV	>2MeV	>4 MeV
	02 February	1.5e+06	1.1e+04	2.5e+03		1.1e+07
03 February	6.5e+05	1.1e+04	2.5e+03		8.7e+07	
04 February	4.3e+05	1.2e+04	2.5e+03		1.9e+08	
05 February	7.2e+05	1.1e+04	2.7e+03		1.7e+08	
06 February	1.1e+05	1.1e+04	2.7e+03		2.7e+07	
07 February	2.9e+05	1.1e+04	2.6e+03		2.3e+07	
08 February	8.9e+04	1.1e+04	2.5e+03		1.0e+07	

Daily Geomagnetic Data

Date	Middle Latitude Fredericksburg		High Latitude College		Estimated Planetary	
	A	K-indices	A	K-indices	A	K-indices
	02 February	17	4-4-3-3-3-3-2	44	4-5-5-6-4-6-4-3	27
03 February	12	3-4-2-2-2-2-3	28	3-3-5-5-4-5-3-2	17	4-4-3-2-2-3-3-3
04 February	5	2-1-1-2-2-2-1-1	14	1-2-2-3-5-3-2-2	9	3-2-2-2-3-3-1-2
05 February	10	1-3-1-3-3-3-2-2	21	0-2-1-3-5-6-2-2	13	2-3-1-3-3-4-3-2
06 February	4	0-1-2-2-2-2-1-0	4	1-1-1-2-2-1-1-0	5	1-1-2-2-2-1-1-0
07 February	9	1-0-3-4-2-2-1-2	23	0-0-3-6-5-4-2-1	9	1-0-3-3-2-3-2-2
08 February	7	1-2-2-2-2-2-2-2	14	1-2-5-4-2-2-2-2	10	2-3-3-2-2-2-3-3

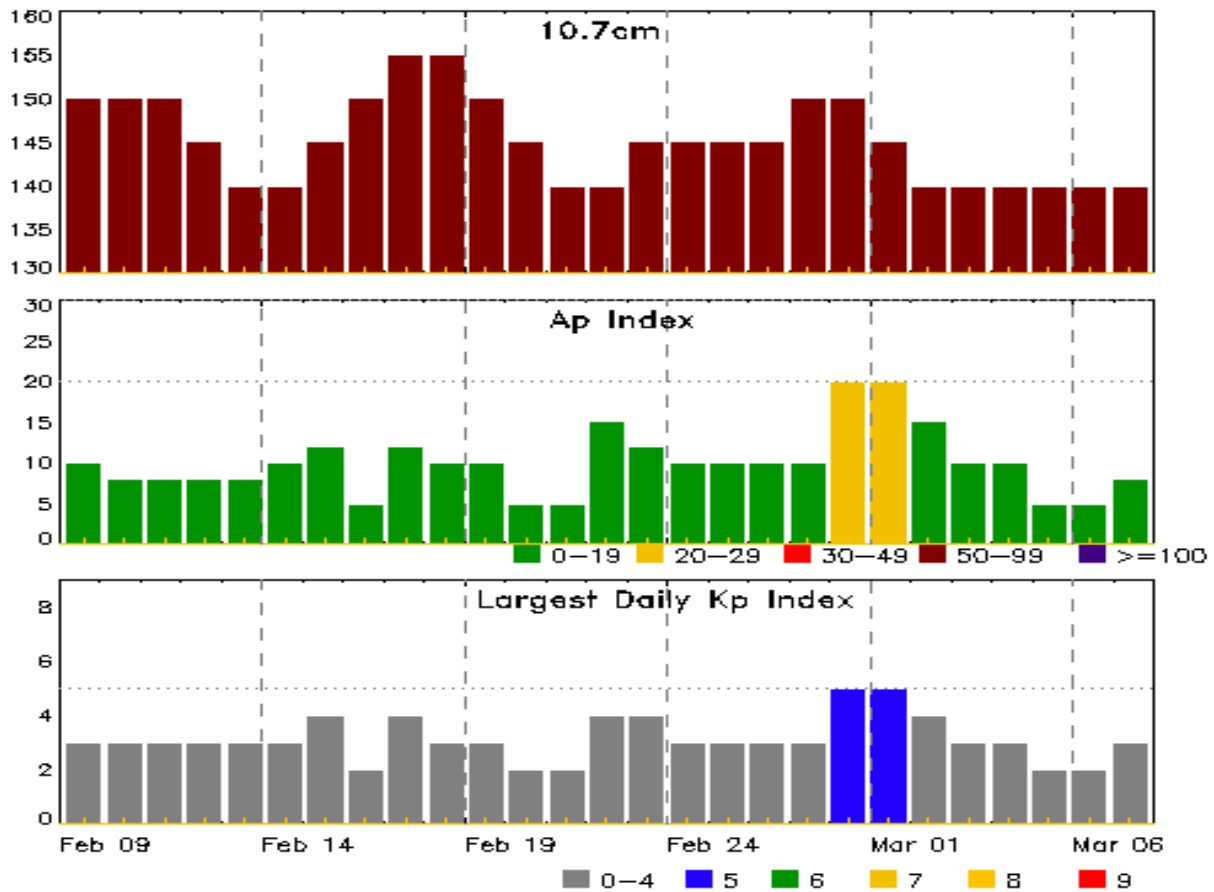


Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
02 Feb 0339	EXTENDED WARNING: Geomagnetic K = 5	01/2105 - 02/1300
02 Feb 1227	EXTENDED WARNING: Geomagnetic K = 5	01/2105 - 03/0000
02 Feb 1855	EXTENDED WARNING: Geomagnetic K = 4	31/2305 - 02/0400
02 Feb 2042	WARNING: Geomagnetic K = 4	02/2040 - 03/0400
03 Feb 0348	EXTENDED WARNING: Geomagnetic K = 4	02/2040 - 03/1400
03 Feb 1321	ALERT: Electron 2MeV Integral Flux \geq 1000pfu	03/1305
03 Feb 1653	WARNING: Geomagnetic K = 4	03/1655 - 2300
03 Feb 2255	EXTENDED WARNING: Geomagnetic K = 4	03/1655 - 04/0400
04 Feb 1025	CONTINUED ALERT: Electron 2MeV Integral Flux \geq 1000pfu	03/1305
05 Feb 0453	WARNING: Geomagnetic K = 4	05/0452 - 1400
05 Feb 0506	CONTINUED ALERT: Electron 2MeV Integral Flux \geq 1000pfu	03/1305
05 Feb 1320	EXTENDED WARNING: Geomagnetic K = 4	05/0452 - 1900
05 Feb 1701	ALERT: Geomagnetic K = 4	05/1700
07 Feb 1041	WARNING: Geomagnetic K = 4	07/1041 - 1600
08 Feb 2318	ALERT: Type II Radio Emission	08/2238



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 Feb	150	10	3	23 Feb	145	12	4
10	150	8	3	24	145	10	3
11	150	8	3	25	145	10	3
12	145	8	3	26	145	10	3
13	140	8	3	27	150	10	3
14	140	10	3	28	150	20	5
15	145	12	4	01 Mar	145	20	5
16	150	5	2	02	140	15	4
17	155	12	4	03	140	10	3
18	155	10	3	04	140	10	3
19	150	10	3	05	140	5	2
20	145	5	2	06	140	5	2
21	140	5	2	07	140	8	3
22	140	15	4				



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	Radio Flux 2695	Intensity II	Intensity IV
04 Feb	0208	0215	0221	M1.2	0.006	2N	N10W14	2277				

Flare List

Date	Time			X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
	Begin	Max	End				
02 Feb	0240	0240	0256		SF	S10W55	2268
02 Feb	0401	0402	0413		SF	N08E12	2277
02 Feb	0621	0624	0627	C1.0			2277
02 Feb	B1323	U1326	A1336		SF	S15W62	2268
02 Feb	1426	1437	1444	C1.7			2280
02 Feb	1540	1550	1608		SF	S12W65	2268
02 Feb	1601	1608	1612		SF	S09E61	2268
02 Feb	1624	1633	1650		1F	S09E61	
02 Feb	1707	1710	1712		SF	S09E61	
02 Feb	2021	2025	2033		SF	S19W56	2279
02 Feb	2301	2305	2332	C2.6	SF	N10E14	2277
02 Feb	2303	2305	2315		SF	S08E57	2280
03 Feb	0059	0101	0112		SF	S20W60	2279
03 Feb	0410	0414	0434		SF	N06E04	2277
03 Feb	0439	0445	0452		SF	S08E55	2280
03 Feb	0738	0743	0745		SF	N06W02	2277
03 Feb	0826	0829	0843		SF	S20W64	2270
03 Feb	0906	0912	0917	C1.4	SF	N07W02	2277
03 Feb	0918	0919	0921		SF	N07W02	2277
03 Feb	0942	0947	0956	C2.7	SF	S11E52	2280
03 Feb	1039	U1049	A1136	C3.9	1F	N06W03	2277
03 Feb	B1255	U1257	1258		SF	N07W04	2277
03 Feb	1420	1425	1439		SF	S19W68	2279
03 Feb	1438	1444	1456		SF	N07W05	2277
03 Feb	1508	1511	1526	C1.4	SF	N07W04	2277
03 Feb	1517	1518	1524		SF	S20W69	2279
03 Feb	1527	1534	1554		SF	S20W69	2279
03 Feb	1611	1611	1619		SF	S20W69	2279
03 Feb	1721	1726	1731	C1.5	SF	S09E47	2280
03 Feb	1815	1832	1845		SF	N06W08	2277



Flare List

Date	Time			Optical			
	Begin	Max	End	X-ray Class	Imp/Brtns	Location Lat CMD	Rgn #
03 Feb	1847	1850	1855		SF	S09E47	2280
03 Feb	2059	2111	2139	C1.9	SF	N06W09	2277
03 Feb	2251	2254	2319	C2.1	SF	N07W09	2277
03 Feb	2344	2352	0001		SF	N07W10	2277
03 Feb	2345	2347	2348		SF	N07W11	2277
04 Feb	0012	0015	0036		SF	N08W09	2277
04 Feb	0208	0215	0221	M1.2	2N	N10W14	2277
04 Feb	0235	0236	0237		SF	S08E38	2280
04 Feb	0246	0253	0301		SF	N12E66	2281
04 Feb	0333	0335	0338		SF	N08W13	2277
04 Feb	0347	0348	0351		SF	N11W08	2277
04 Feb	0749	0755	0812		SF	N12E65	2281
04 Feb	0822	0923	0939		SF	N13E64	2281
04 Feb	0921	0922	0924		SF	N09W17	2277
04 Feb	0952	0953	0959		SF	N12E63	2281
04 Feb	1003	1007	1009	C2.2	SF	N04W24	2277
04 Feb	1458	1502	1516		SF	N07W16	2277
04 Feb	1843	1912	1937	C3.0	SF	S09E47	2280
04 Feb	2319	2333	2340		SF	N09W19	2277
05 Feb	0258	0259	0300		SF	N12W11	2277
05 Feb	0507	0516	0520	C1.1	SF	N13W11	2277
05 Feb	0723	0726	0731	C1.3			2277
05 Feb	0735	0735	0739		SF	N13W12	2277
05 Feb	0945	0953	1004	C3.3	1F	N12W14	2277
05 Feb	1000	1001	1007		SF	S09E25	2280
06 Feb	0228	0229	0235		SF	S11E12	2280
06 Feb	0305	0315	0324	C1.1	SF	N13E53	2281
06 Feb	0358	0402	0406		SF	N13E53	2281
06 Feb	0859	0908	0917		SF	N14E44	2281
06 Feb	0949	0950	0951		SF	S06W76	2276
06 Feb	1002	1017	1029	C1.4	SF	S09E12	2280
06 Feb	1625	1627	1632		SF	N15E41	2281
06 Feb	1720	1720	1722		SF	N14E40	2281
06 Feb	2256	2302	2314	C1.5	SF	N10W38	2277
07 Feb	0052	0058	0101		SF	S07E02	2280
07 Feb	0105	0121	0129	C1.4	SF	S07E02	2280
07 Feb	0819	0819	0823		SF	S07W01	2280
07 Feb	0833	0834	0839		SF	S07W01	2280



Flare List

Date	Time			X-ray Class	Optical		Rgn #
	Begin	Max	End		Imp/ Brtns	Location Lat CMD	
07 Feb	1042	1050	1057	C1.8			2277
07 Feb	1136	1151	1155	C1.2			
07 Feb	1218	1222	1225	C1.9			2280
07 Feb	1307	1335	1343	C1.4			
07 Feb	1611	1612	1615		SF	N06W60	2277
07 Feb	1744	1754	1804	C2.3			
07 Feb	1928	1938	1951	C2.3	SF	N08W58	2277
07 Feb	2054	2104	2122		SF	S07W10	2280
08 Feb	0111	0113	0117		SF	S08W10	2280
08 Feb	0126	0130	0144		SF	S07W10	2280
08 Feb	0507	0518	0523	C2.6	SF	N10W56	2277
08 Feb	0541	0558	0633	C2.6			2277
08 Feb	0548	0553	0612		SF	S08W15	2280
08 Feb	0551	0559	0600		SF	N10W56	2277
08 Feb	0613	0615	0617		SF	S09W12	2280
08 Feb	0623	0625	0628		SF	N07W67	2277
08 Feb	0721	0722	0724		SF	N12E81	2282
08 Feb	0809	0812	0813		SF	S08W16	2280
08 Feb	0846	0913	0925	C1.8	1F	N12E78	2282
08 Feb	0927	0930	0934		SF	N15E79	2282
08 Feb	0942	0949	1000		SF	S08W17	2280
08 Feb	1027	U1047	A1136	C1.7	1F	S08W17	2280
08 Feb	1032	1100	1116	C2.6			2280
08 Feb	1142	U1144	1151		SF	S08W17	2280
08 Feb	1224	U1226	1230		SF	N07W65	2277
08 Feb	1428	1506	1525	C1.7	SF	S07W19	2280
08 Feb	2023	2104	2116	C3.1	SF	N06W70	2277
08 Feb	2101	2104	2114		SF	S07W24	2280



Region Summary

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							
Region 2268																							
22 Jan	S10E67		54	230	3	Dao	1	B	3	1													
23 Jan	S10E60		49	420	14	Ekc	7	BG	4			6											
24 Jan	S10E48		48	460	15	Ekc	8	BG	2			2	1										
25 Jan	S10E35		48	360	15	Eki	10	BG	1														
26 Jan	S11E22		46	430	15	Eki	16	BG	4	1		11											
27 Jan	S10E09		46	480	16	Fkc	24	BG	2			5											
28 Jan	S10W05		48	410	16	Fkc	29	BG	3	1		4	1	1									
29 Jan	S10W17		47	510	16	Fhc	35	BG	2	1		3	2										
30 Jan	S10W31		48	500	17	Fhc	38	BG	1	2		1											
31 Jan	S10W44		48	480	18	Fkc	23	BG	2			1											
01 Feb	S11W57		48	320	18	Fki	18	BG	3			1		1									
02 Feb	S11W71		48	220	17	Fai	12	BG				4											
03 Feb	S11W85		49	220	17	Fai	12	BG															
									35	6	0	38	4	2	0	0							

Crossed West Limb.

Absolute heliographic longitude: 48

Region 2270

23 Jan	S18E55		54	10	1	Axx	2	A	2												
24 Jan	S18E41		55	plage																	
25 Jan	S18E27		56	plage																	
26 Jan	S18E13		57	plage																	
27 Jan	S18W01		57	plage																	
28 Jan	S18W15		58	plage																	
29 Jan	S18W29		59	plage																	
30 Jan	S18W43		60	plage																	
31 Jan	S18W57		61	plage																	
01 Feb	S18W71		62	plage																	
02 Feb	S18W85		62	plage																	
									2	0	0	0	0	0	0	0	0	0	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 57



Region Summary - continued

Date	Location		Sunspot Characteristics					Flares															
	Lat CMD	Lon	Helio 10 ⁻⁶ hemi.	Area	Extent (helio)	Spot Class	Spot Count	Mag Class	X-ray			Optical											
									C	M	X	S	1	2	3	4							
Region 2271																							
25 Jan	N18E09		74	40	6	Cao	9	B															
26 Jan	N17W04		73	60	5	Dai	10	BG	2														
27 Jan	N18W18		74	120	8	Dai	10	BG															
28 Jan	N18W30		73	110	8	Dai	10	BG															
29 Jan	N17W44		74	170	10	Dac	20	BG	1				1										
30 Jan	N17W58		75	230	10	Dac	13	BG	1														
31 Jan	N17W70		74	220	11	Eao	6	B															
01 Feb	N18W84		75	180	12	Eao	3	B															
									4	0	0		1	0	0	0	0	0					

Crossed West Limb.
Absolute heliographic longitude: 73

Region 2272																							
26 Jan	N13E60		10	30	3	Cao	2	B															
27 Jan	N13E49		6	40	6	Cso	3	B					1										
28 Jan	N12E31		9	30	2	Hax	1	A															
29 Jan	N12E18		12	20	2	Hax	2	A															
30 Jan	N12E05		12	20	1	Hax	1	A															
31 Jan	N12W09		13	20	1	Hax	1	A															
01 Feb	N13W22		13	20	1	Hrx	2	A															
02 Feb	N13W36		13	10	1	Axx	3	A															
03 Feb	N13W50		14	plage																			
04 Feb	N13W64		15	plage																			
05 Feb	N13W78		16	plage																			
									0	0	0		1	0	0	0	0	0					

Crossed West Limb.
Absolute heliographic longitude: 12

Region 2273																							
26 Jan	S03E03		67	10	3	Bxo	3	B					1										
27 Jan	S03W12		67	90	5	Dao	6	B	1				6										
28 Jan	N03W26		69	50	5	Cao	4	B															
29 Jan	S04W41		71	40	2	Cao	5	B															
30 Jan	S03W55		72	30	5	Cao	5	B															
31 Jan	S03W69		73	20	1	Hrx	2	A															
01 Feb	S03W82		73	10	1	Axx	1	A															
									1	0	0		7	0	0	0	0	0					

Crossed West Limb.
Absolute heliographic longitude: 67



Region Summary - continued

Date	Location		Sunspot Characteristics				Flares													
	Lat CMD	Lon	Helio 10 ⁶ hemi.	Area	Extent (helio)	Spot Class	Spot Count	Mag Class	X-ray			Optical								
									C	M	X	S	1	2	3	4				
Region 2275																				
26 Jan	S16W14		83	10	3	Cso	3	B												
27 Jan	S17W26		82	90	4	Dai	11	BG					4							
28 Jan	S17W40		83	200	6	Dai	11	BG												
29 Jan	S17W53		83	140	6	Dao	10	BG												
30 Jan	S17W67		84	140	6	Dao	7	B												
31 Jan	S17W80		84	80	8	Dao	5	B	1											
01 Feb	S17W94		85	60	7	Cao	2	B	1											
									2	0	0	4	0	0	0	0	0			

Crossed West Limb.

Absolute heliographic longitude: 83

Region 2276																				
28 Jan	S07E25		18	10	3	Bxo	3	B	1											
29 Jan	S07E12		18	10	5	Bxo	6	B	1				2							
30 Jan	S07W01		18	10	3	Bxo	3	B	1											
31 Jan	S07W16		20	10	3	Bxo	3	B												
01 Feb	S07W31		22	plage																
02 Feb	S07W46		23	plage																
03 Feb	S07W61		25	plage																
04 Feb	S07W76		27	plage																
									3	0	0	2	0	0	0	0	0			

Died on Disk.

Absolute heliographic longitude: 18



Region Summary - continued

Date	Location		Sunspot Characteristics					Flares															
	Lat CMD	Lon	Helio 10 ⁻⁶ hemi.	Area	Extent (helio)	Spot Class	Spot Count	Mag Class	X-ray			Optical											
									C	M	X	S	1	2	3	4							
Region 2277																							
28 Jan	N07E67	336	30	2	Hax	1	A	1	1		3												
29 Jan	N07E61	329	260	20	Fhc	17	BG	12			14	1											
30 Jan	N08E47	330	510	21	Fkc	41	BG	1	1		3												
31 Jan	N08E33	331	480	22	Fkc	32	BG	2			1												
01 Feb	N08E20	331	440	26	Fkc	46	BG	2			5												
02 Feb	N08E06	331	400	27	Fki	40	B	2			2												
03 Feb	N09W06	329	440	28	Fko	36	BG	5			12	1											
04 Feb	N08W18	328	490	28	Fki	34	BG	1	1		7		1										
05 Feb	S08W32	330	340	28	Fki	42	BG	3			3	1											
06 Feb	N09W44	329	200	28	Fai	20	BG	1			1												
07 Feb	N09W57	329	200	27	Fai	14	BG	2			2												
08 Feb	N09W70	328	100	25	Fai	14	BG	3			5												
								35	3	0	58	3	1	0	0								

Still on Disk.

Absolute heliographic longitude: 331

Region 2278

29 Jan	S09E24	6	10	6	Bxo	6	B														
30 Jan	S08E10	7	10	5	Bxo	5	B														
31 Jan	S08W04	8	10	1	Axx	1	A														
01 Feb	S08W18	9	plage																		
02 Feb	S08W32	9	plage																		
03 Feb	S08W46	10	plage																		
04 Feb	S08W60	11	plage																		
05 Feb	S08W74	12	plage																		
06 Feb	S08W88	13	plage																		
								0	0	0	0	0	0	0	0	0	0	0	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 8

Region 2279

02 Feb	S19W58	35	30	4	Cro	6	B				1										
03 Feb	S21W71	34	30	6	Cro	3	B				5										
04 Feb	S19W85	35	10	1	Axx	1	A														
								0	0	0	6	0	0	0	0	0	0	0	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 35



Region Summary - continued

Date	Location		Sunspot Characteristics					Flares															
	Lat CMD	Lon	Helio 10 ⁻⁶ hemi.	Area	Extent (helio)	Spot Class	Spot Count	Mag Class	X-ray			Optical											
									C	M	X	S	1	2	3	4							
Region 2280																							
02 Feb	S09E55	282	20	5	Bxo	6	B	1				1											
03 Feb	S06E42	281	80	5	Dai	10	B	2				4											
04 Feb	S08E30	280	150	10	Dac	7	B	1				2											
05 Feb	S08E15	283	140	10	Dac	9	BG					1											
06 Feb	S07E01	284	160	10	Dac	16	BG	1				3											
07 Feb	S08W13	285	180	9	Dac	19	BG	2				5											
08 Feb	S07W25	283	210	9	Dac	28	BGD	3				9	1										
								10	0	0		25	1	0	0	0	0						

Still on Disk.

Absolute heliographic longitude: 284

Region 2281

03 Feb	N13E75	249	60	2	Cao	1	B														
04 Feb	N13E61	249	50	10	Cao	3	B					4									
05 Feb	N13E46	252	80	10	Cao	5	B														
06 Feb	N14E34	251	80	8	Cao	5	B	1				5									
07 Feb	N13E23	249	70	4	Dao	6	BG														
08 Feb	N14E09	249	110	6	Dac	10	BG														
								1	0	0		9	0	0	0	0	0				

Still on Disk.

Absolute heliographic longitude: 249

Region 2282

07 Feb	N15E76	196	30	2	Hsx	1	A														
08 Feb	N15E65	193	90	3	Cao	2	B	1				2	1								
								1	0	0		2	1	0	0	0	0				

Still on Disk.

Absolute heliographic longitude: 193

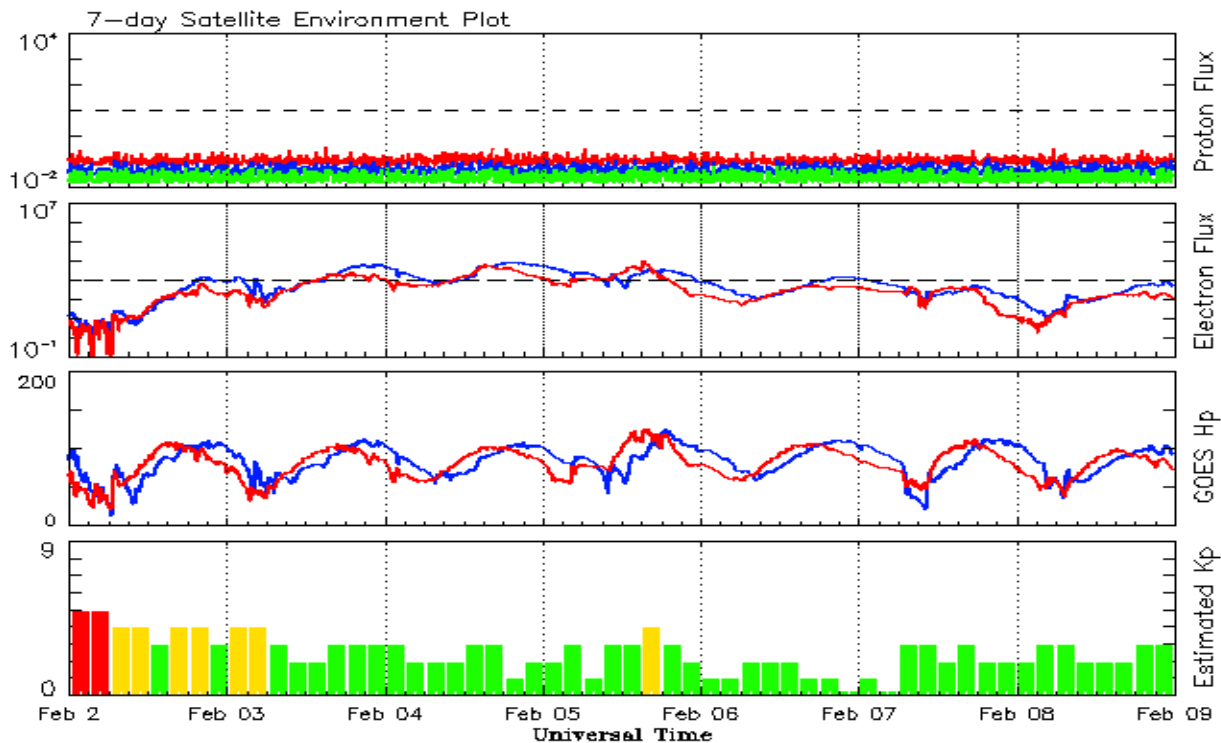


Recent Solar Indices (preliminary)
Observed monthly mean values

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
2013									
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	85.7	57.6	111.2	117.1	9	7.4
April	112.8	72.4	0.64	86.7	57.9	125.0	116.6	5	7.2
May	125.5	78.7	0.63	90.5	59.9	131.3	118.1	10	7.0
June	80.1	52.5	0.66	94.4	62.6	110.2	120.9	13	7.1
July	86.1	57.0	0.66	97.9	65.5	115.6	123.9	9	7.3
August	90.2	66.0	0.73	103.7	68.9	114.7	127.9	9	7.6
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
2014									
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	78.6	137.3	145.2	5	8.8
August	106.2	74.6	0.70			124.7		9	
September	127.4	87.6	0.69			146.1		11	
October	92.0	60.6	0.66			153.7		10	
November	101.8	70.1	0.69			155.3		10	
December	120.0	78.0	0.65			158.7		12	
2015									
January	101.2	67.0	0.66			141.7		10	

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 February 2015*

The proton flux plot contains the five-minute averaged integral proton flux (protons/cm²-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.

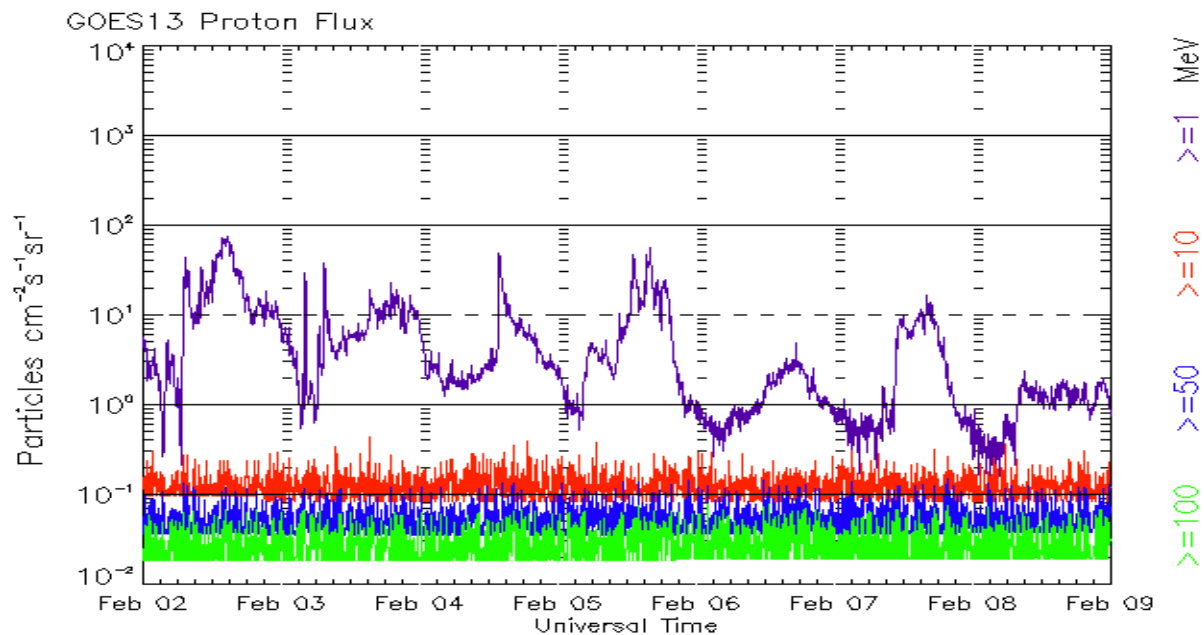
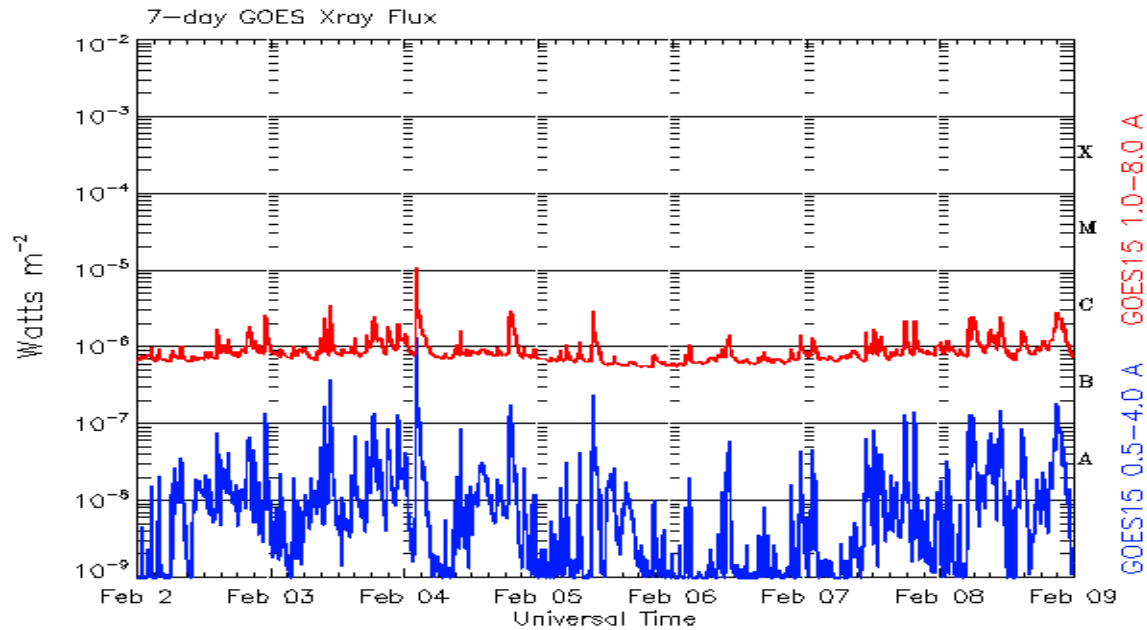
The electron flux plot contains the five-minute averaged integral electron flux (electrons/cm²-sec -sr) with energies greater than 2 MeV by the SWPC Primary GOES satellite.

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 February 2015

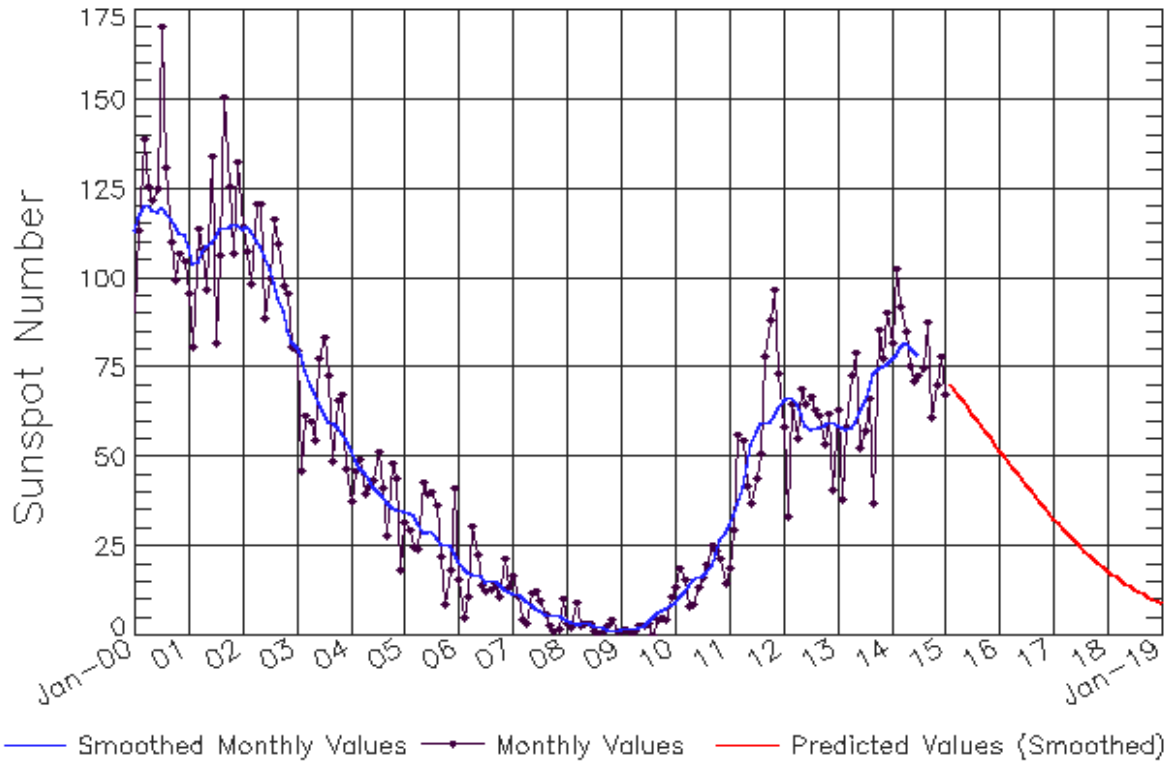
The x-ray plots contains five-minute averages x-ray flux (Watt/ m^2) as measure by the SWPC primary GOES X-ray satellite, usually at West 105 longitude, in two wavelength bands, 0.05 - 0.4 and 0.1 - 0.8 nm. The letters A, B, C, M and X refer to x-ray event levels for the 0.1 - 0.8 nm band.

The proton plot contains the five-minute averaged intergral flux units (pfu = protons/ 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 Jan 2015



Updated 2015 Feb 9

NOAA/SWPC Boulder, CO USA

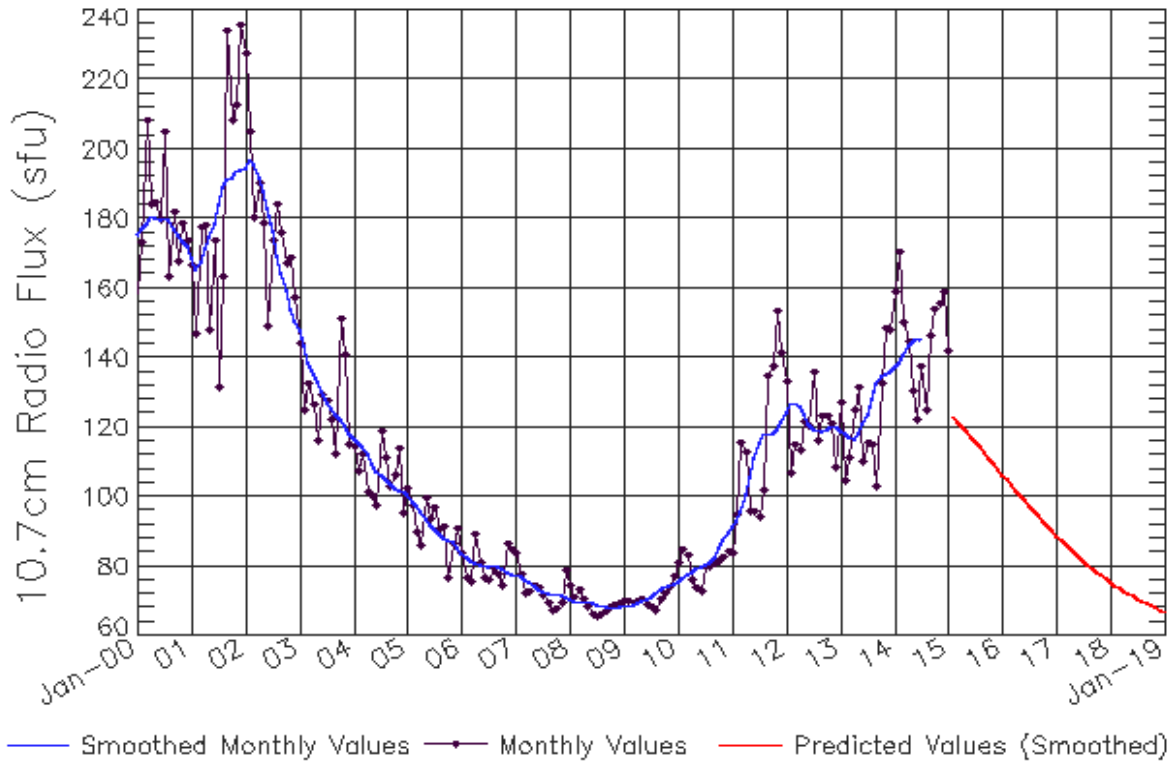
Smoothed Sunspot Number Prediction

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 (**)	58 (**)	58 (**)	60 (**)	63 (**)	66 (**)	69 (**)	73 (**)	75 (**)	75 (**)	76 (**)
2014	77 (**)	78 (**)	81 (**)	82 (**)	81 (**)	80 (**)	79 (**)	77 (1)	74 (2)	73 (3)	72 (5)	71 (5)
2015	70 (6)	69 (7)	67 (7)	66 (8)	65 (9)	64 (9)	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 Jan 2015



Updated 2015 Feb 9

NOAA/SWPC Boulder, CO USA

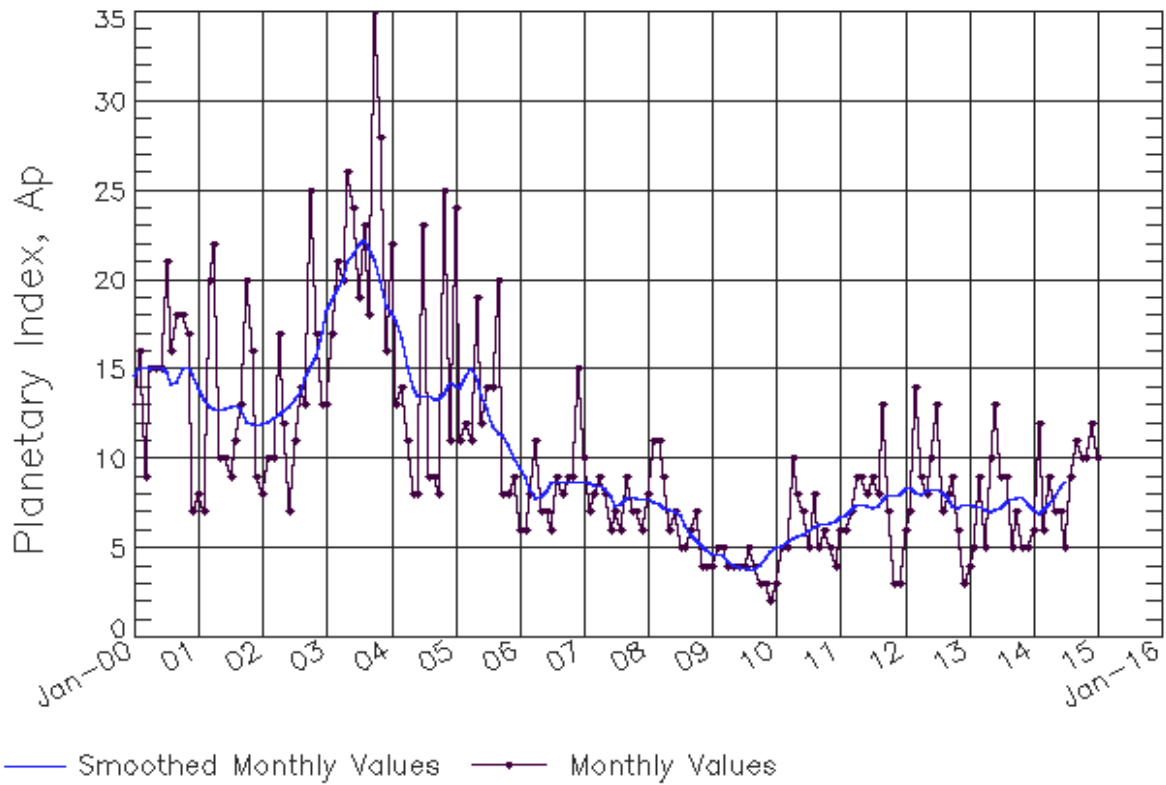
Smoothed F10.7cm Radio Flux Prediction

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 (**)	117 (**)	117 (**)	118 (**)	121 (**)	124 (**)	128 (**)	132 (**)	135 (**)	135 (**)	136 (**)
2014	137 (**)	139 (**)	141 (**)	144 (**)	145 (**)	146 (**)	145 (**)	143 (1)	139 (1)	137 (2)	136 (3)	135 (4)
2015	134 (4)	133 (5)	131 (6)	128 (7)	124 (8)	120 (8)	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 Jan 2015



Updated 2015 Feb 9

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Solar Cycle Comparison charts are temporarily unavailable.



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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

The Weekly has been published continuously since 1951 and is available online since 1997.

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<http://spaceweather.gov/ftpmenu/> -- Some content as ascii text

<http://spaceweather.gov/SolarCycle/> -- Solar Cycle Progression web site

<http://spaceweather.gov/contacts.html> -- Contact and Copyright information

http://spaceweather.gov/weekly/Usr_guide.pdf -- User Guide

