

Solar activity ranged from low to moderate levels. A few weak C-class flares were observed on 28 - 29 July from Regions 2125 (S13, L=264, class/area Cao/050 on 28 Jul), 2126 (S09, L=324, class/area Dai/120 on 30 Jul) and 2130 (S07, L=229, class/area Dkc/290 on 31 Jul). On 30 July, Region 2127 (S09, L=247, class/area Dkc/300 on 30 Jul) produced a C9/1f event at 30/1617 UTC. Earlier on 30 July at about 0422 UTC, a 31 degree long filament, centered near N08E32, was observed erupting. A coronal mass ejection (CME) was evident in STEREO imagery and subsequent WSA-Enlil model analysis suggested a weak Earth-directed component was associated with this eruption. A glancing blow was expected mid to late on 02 August. An additional filament eruption was observed at about 30/1645 UTC. This 9 degree filament was centered near S32E62; WSA-Enlil analysis suggested no Earth-directed component was associated with the subsequent CME.

Activity levels increased to moderate on 31 July and 01 August. Region 2130 produced an M2 flare at 31/1114 UTC and an M2/Sf at 01/1448 UTC. The second M-class event had associated weak discrete frequency radio emissions including a 340 sfu Tenflare. At 01/1813 UTC, Region 2127 produced a long-duration M1 flare with Type II (563 km/s shock velocity) and Type IV radio emissions. No Earth-directed CMEs were observed with the M-class activity.

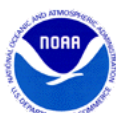
Low levels returned on 02 and 03 August with a few weak C-class events observed from Regions 2130, 2132 (S19, L=213, class/area Eai/220 on 03 Aug), 2133 (N18, L=184, class/area Hrx/020 on 02 Aug) and 2134 (N09, L=176, class/area Dao/150 on 03 Aug). At about 03/1805 UTC, a 15 degree long filament, centered near N13E32, was observed erupting. A narrow CME was observed in LASCO C2 imagery off the NE limb, but was not expected to impact Earth.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit was at normal levels.

Geomagnetic field activity ranged from quiet to active levels. Quiet to unsettled periods were observed on 28 July due to waning effects from a negative polarity coronal hole high speed stream (CH HSS). Mostly quiet levels dominated during 29 July to late on 01 August. Late on 01 August through early on 03 August, quiet to active levels were observed due to a geoeffective, positive CH HSS coupled with possible CME effects from the 30 July CME. Quiet levels closed out the summary period.

Solar wind parameters reflected the quiet to active levels observed during the summary period. Solar wind speeds averaged about 425 km/s early on declining to near 300 km/s by late on 29 July. Speeds remained low through 01 August when a gradual increase became evident, peaking at about 475 km/s midday on 02 August. The period ended with wind speeds just above 400 km/s. Total field ranged from about 5 nT to 12 nT on 28 July with a weak field (4 nT) observed on 29 - 31 July. The remainder of the period saw a gradual increase in the total field with a peak of 11 nT midday on 01 August. The Bz component displayed a similar trend with variable readings of -8 nT to +11 nT on 28 July, +/- 4 nT readings from 29 - 31 July and -8 nT to +10 nT



readings through the balance of the period. The phi component began the period in a predominately negative (towards) orientation before a sector boundary crossing to a positive (away) orientation was observed at about 31/1130 UTC. The phi angle remained mostly positive through the remainder of the period.

Space Weather Outlook

04 August - 30 August 2014

Solar activity is expected to be at predominately low levels through the outlook period with a chance for moderate activity (R1-R2, minor to moderate) from 04 - 10 August and again from 21 - 30 August due to the presence of several complex regions on the disk.

No proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at mostly normal to occasional moderate levels.

Geomagnetic field activity is expected to be at mostly quiet levels for a majority of the outlook period in the absence of transient features. Unsettled to active conditions are possible associated with high speed solar wind streams on 04 - 05, 07 - 08, 22, 24 and 28 - 29 August.



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
28 July	132	143	540	B5.0	2	0	0	5	1	0	0	0
29 July	142	160	890	B5.1	8	0	0	7	0	0	0	0
30 July	152	145	900	B7.1	5	0	0	2	1	0	0	0
31 July	156	139	860	B6.7	6	1	0	5	0	0	0	0
01 August	168	165	890	B8.2	2	2	0	15	2	0	0	0
02 August	156	178	850	B7.8	4	0	0	14	0	0	0	0
03 August	152	152	680	B6.3	7	0	0	13	1	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
	28 July	8.5e+04	1.0e+04	2.5e+03		2.7e+04
29 July	5.9e+04	1.1e+04	2.6e+03		2.5e+04	
30 July	5.2e+04	1.0e+04	2.6e+03		2.8e+04	
31 July	8.8e+04	1.0e+04	2.8e+03		2.9e+04	
01 August	1.0e+05	1.1e+04	2.7e+03		2.5e+04	
02 August	1.5e+05	1.0e+04	2.6e+03		1.6e+05	
03 August	1.1e+05	1.1e+04	2.5e+03		5.9e+05	

Daily Geomagnetic Data

Date	Middle Latitude Fredericksburg		High Latitude College		Estimated Planetary	
	A	K-indices	A	K-indices	A	K-indices
	28 July	12	2-3-4-2-3-3-2-1	11	1-2-3-3-2-4-2-1	9
29 July	6	1-2-0-2-2-3-2-1	2	1-1-0-1-0-0-1-1	4	1-1-0-1-1-1-1-1
30 July	7	2-2-1-2-3-2-2-1	2	2-2-0-1-0-0-0-0	5	3-1-1-1-1-1-1-1
31 July	7	1-1-1-2-3-2-2-2	2	1-2-1-0-0-0-0-1	5	1-1-1-2-1-1-1-2
01 August	14	2-2-1-3-4-2-3-4	10	2-2-1-4-2-1-3-2	10	2-2-1-2-2-2-3-4
02 August	12	2-2-2-3-4-3-2-2	23	3-3-3-5-4-5-2-2	11	3-2-2-3-4-3-2-2
03 August	7	1-3-1-2-2-2-2-2	5	2-2-1-2-0-1-1-2	7	1-3-1-2-1-1-2-2

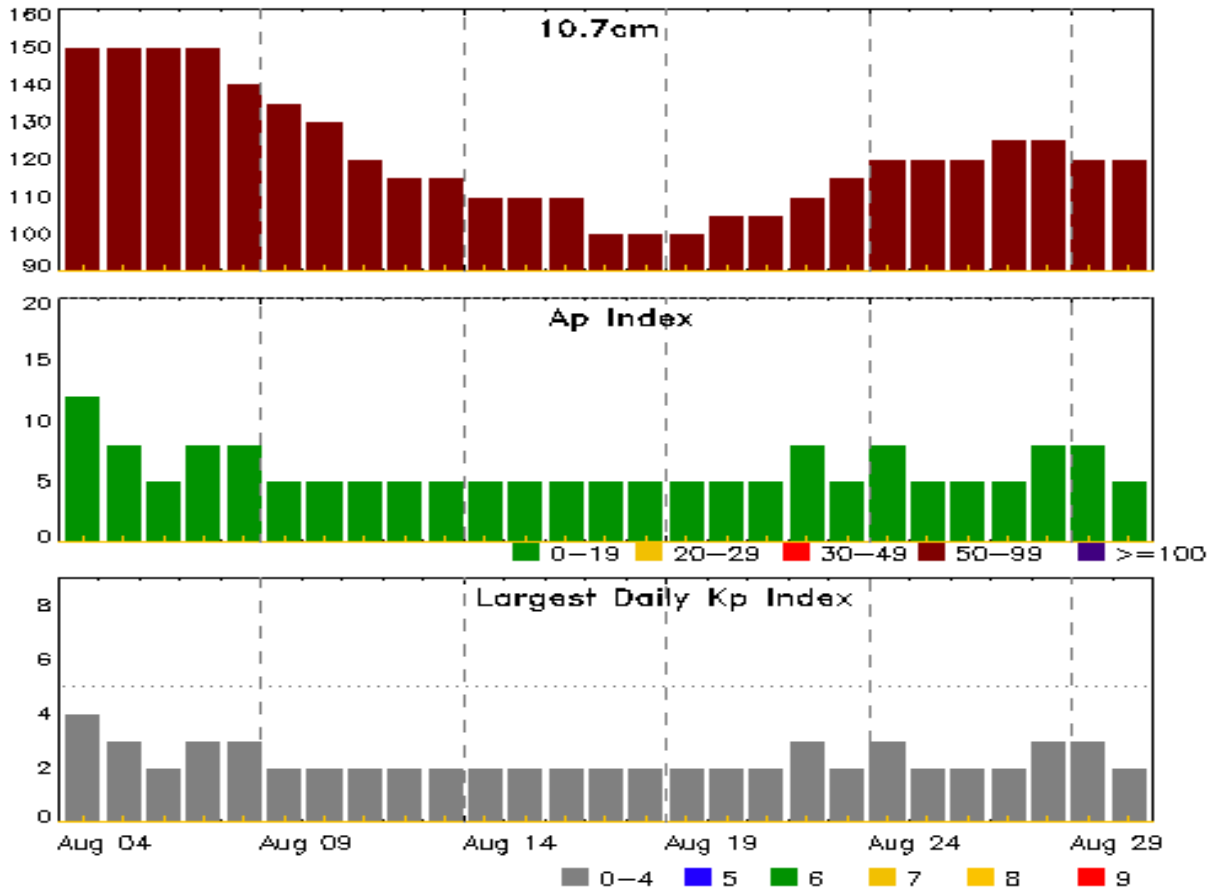


Alerts and Warnings Issued

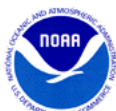
Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
01 Aug 1506	SUMMARY: 10cm Radio Burst	01/1447 - 1448
01 Aug 1900	ALERT: Type II Radio Emission	01/1818
01 Aug 1901	ALERT: Type IV Radio Emission	01/1818
02 Aug 0004	WARNING: Geomagnetic K = 4	01/2359 - 02/1300
02 Aug 0005	ALERT: Geomagnetic K = 4	02/0000
02 Aug 1411	WARNING: Geomagnetic K = 4	02/1411 - 1900
02 Aug 1415	ALERT: Geomagnetic K = 4	02/1415
02 Aug 1857	EXTENDED WARNING: Geomagnetic K = 4	02/1411 - 03/0300
03 Aug 0255	EXTENDED WARNING: Geomagnetic K = 4	02/1411 - 03/1300



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
04 Aug	150	12	4	18 Aug	100	5	2
05	150	8	3	19	100	5	2
06	150	5	2	20	105	5	2
07	150	8	3	21	105	5	2
08	140	8	3	22	110	8	3
09	135	5	2	23	115	5	2
10	130	5	2	24	120	8	3
11	120	5	2	25	120	5	2
12	115	5	2	26	120	5	2
13	115	5	2	27	125	5	2
14	110	5	2	28	125	8	3
15	110	5	2	29	120	8	3
16	110	5	2	30	120	5	2
17	100	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 #	245	2695	II	IV
31 Jul	1101	1114	1121	M2.5	0.017			2130				
01 Aug	1443	1448	1457	M2.0	0.011			2130	46	340		
01 Aug	1755	1813	1848	M1.5	0.035			2127		97	2	1

Flare List

Date	Time			X-ray Class	Imp/ Brtns	Optical		Rgn #
	Begin	Max	End			Location Lat CMD	Rgn #	
28 Jul	0257	0258	0301		SF	S13E60		2125
28 Jul	0303	0303	0314		SF	N14E49		
28 Jul	0310	0312	0315		SF	S12E60		2125
28 Jul	0646	0647	0656		SF	S13E58		2125
28 Jul	1140	1145	1151	C1.2				2125
28 Jul	1356	1410	1433	C2.4	1F	S08E51		2125
28 Jul	1447	1448	1452		SF	S09W06		2126
28 Jul	2036	2041	2045	B9.6				2127
28 Jul	2304	2307	2310	B7.6				2121
29 Jul	0004	0009	0012	C1.6	SF	S09W11		2126
29 Jul	0357	0402	0418	C1.2	SF	S10W14		2126
29 Jul	0453	0500	0518	C1.3				2126
29 Jul	0601	0609	0616	C1.8	SF	S10W14		2126
29 Jul	0634	0636	0640		SF	S04E64		2127
29 Jul	B1122	U1123	A1132		SF	S10W16		2126
29 Jul	1623	1633	1639	C4.6	SF	S08E77		2130
29 Jul	1801	1815	1831	C1.6				2130
29 Jul	1948	1952	1955	C1.0	SF	S10E80		2130
29 Jul	2358	0002	0005	C1.0				
30 Jul	0042	0046	0049	C1.3				2125
30 Jul	0243	0246	0250	C3.7				2130
30 Jul	0542	0548	0559	C1.9	SF	S09E48		2127
30 Jul	1559	1609	1656	C9.0	1F	S10E38		2127
30 Jul	1842	1848	1853	C3.6	SF	S08E42		2127
31 Jul	0204	0208	0210	C1.3				2127
31 Jul	0439	U0440	A0509		SF	S05E30		2127
31 Jul	0505	0510	0514	C1.7	SN	S07E54		2130
31 Jul	0914	0918	0941	C1.8	SF	S08E54		2130



Flare List

Date	Time			X-ray Class	Imp/ Brtns	Optical		Rgn #
	Begin	Max	End			Location Lat CMD		
31 Jul	1101	1114	1121	M2.5				2130
31 Jul	1510	1517	1527	C3.5	SF	S09E49		2130
31 Jul	B1614	U1623	A1636		SF	S16E65		
31 Jul	1834	1855	1907	C1.9				2130
31 Jul	2110	2117	2127	C2.4				2130
01 Aug	0012	0018	0032	C8.6	SF	S17E60		2132
01 Aug	B0112	0117	0343		1F	S18E58		2132
01 Aug	0346	0359	0403		SF	S18E58		2132
01 Aug	0414	0414	0415		SF	S17E58		2132
01 Aug	0419	0419	0421		SF	S18E58		2132
01 Aug	B0503	U0529	A0531		SF	S16E57		2132
01 Aug	B0522	U0522	A0531		SF	S17E32		2131
01 Aug	B0719	0735	A0746		SF	S18E55		2132
01 Aug	0823	0827	0834		SF	S18E55		2132
01 Aug	0844	0844	0848		SF	S07E61		2130
01 Aug	1038	1143	1157	C4.8				2130
01 Aug	B1111	U1112	1115		SF	S05E47		2130
01 Aug	1135	U1142	1158		1N	S08E37		2130
01 Aug	1140	U1140	1209		SF	N12W01		2130
01 Aug	1152	U1153	1208		SF	S16E54		2132
01 Aug	1353	1355	1401		SF	S09E35		2130
01 Aug	1408	1410	1413		SF	S14E53		2132
01 Aug	1411	1411	1414		SF	S17E27		2131
01 Aug	1443	1448	1457	M2.0				2130
01 Aug	1755	1813	1848	M1.5				2127
02 Aug	0000	0005	0009	C2.6	SF	S11E32		2130
02 Aug	0046	0047	0053		SF	S07W63		2126
02 Aug	0307	0314	0333		SF	N09W80		2134
02 Aug	0719	0723	0725		SF	S18E17		2131
02 Aug	0733	0734	0738		SF	S05E35		2130
02 Aug	0747	0751	0809		SF	S06W69		2129
02 Aug	0950	0953	1005		SF	S17E44		2132
02 Aug	1043	1047	1057	C1.6	SF	S19E44		2132
02 Aug	1222	1223	1225		SF	S19E44		2132
02 Aug	1300	1303	1306	C1.6	SF	S18E40		2132
02 Aug	1312	1328	1338	C2.7	SF	S18E40		2132
02 Aug	1400	U1409	1422		SF	S16E34		2132
02 Aug	1419	1423	1424		SF	S19E13		2131



Flare List

Date	Time			Optical			
	Begin	Max	End	X-ray Class	Imp/Brtns	Location Lat CMD	Rgn #
02 Aug	1459	1502	1506		SF	S17E40	2132
03 Aug	0140	0146	0153	C2.3	SF	N09E69	2134
03 Aug	0235	0239	0247	C1.3	SN	N09E71	2134
03 Aug	0303	0312	0327	C2.5	1F	S21E43	2132
03 Aug	0527	0541	0610		SF	N13E69	2134
03 Aug	0543	0545	0550		SF	S19E34	2132
03 Aug	0613	0616	0623	C1.1	SF	S19E33	2132
03 Aug	0826	0827	0839		SF	S04E12	2130
03 Aug	0926	0928	0933		SF	N09E63	2134
03 Aug	1012	1013	1025		SF	S19E32	2132
03 Aug	1214	1219	1223	C1.0			
03 Aug	1324	U1330	A1342		SF	N12E64	2134
03 Aug	1330	U1330	A1334		SF	S18E29	2132
03 Aug	1408	1454	1540		SF	S18E28	2132
03 Aug	1450	1456	1514		SF	S09W09	2127
03 Aug	1622	1625	1627		SF	S16E21	2132
03 Aug	1759	1808	1836	C1.2			2130
03 Aug	1923	1939	1955	C1.1			2133



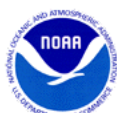
Region Summary

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 2121																		
22 Jul	N07E66	322	90	4	Dsi	2	B											
23 Jul	N06E57	319	120	9	Dai	5	B						6					
24 Jul	N07E45	317	210	15	Cao	9	B	1					2	1				
25 Jul	N08E30	320	160	16	Cai	18	BG	1					2	1				
26 Jul	N08E17	320	150	14	Cai	11	BG											
27 Jul	N08E04	319	130	15	Cao	12	B						1					
28 Jul	N08W11	321	110	6	Cao	9	B											
29 Jul	N08W23	320	150	6	Cao	12	B											
30 Jul	N08W39	322	100	4	Cao	10	B											
31 Jul	N08W54	325	90	5	Cai	11	B											
01 Aug	N08W69	326	40	5	Cai	8	B											
02 Aug	N08W83	327	10	5	Bxo	2	B											
								2	0	0	11	2	0	0	0	0		

Crossed West Limb.
 Absolute heliographic longitude: 319

Region 2122																		
22 Jul	S12E49	339	30	3	Cao	3	B											
23 Jul	S15E34	341	20	3	Cro	5	B											
24 Jul	S13E23	338	20	3	Cro	3	B											
25 Jul	S13E09	341	10	1	Axx	2	A											
26 Jul	S13W05	342	plage															
27 Jul	S13W19	342	plage															
28 Jul	S13W33	343	plage															
29 Jul	S13W47	344	plage															
30 Jul	S13W61	345	plage															
31 Jul	S13W75	346	plage															
01 Aug	S13W89	346	plage															
								0	0	0	0	0	0	0	0	0	0	

Crossed West Limb.
 Absolute heliographic longitude: 342



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 2123																							
23 Jul	S13E51	324	20	3	Cro	2	B																
24 Jul	S14E39	323	40	4	Dao	2	B							1									
25 Jul	S15E24	326	40	6	Dso	4	B																
26 Jul	S15E13	324	30	7	Dso	3	B	3					5										
27 Jul	S14W00	323	40	6	Cao	9	B																
28 Jul	S15W12	322	30	4	Cao	7	B																
29 Jul	S15W25	322	10	3	Cro	2	B																
30 Jul	S14W38	321	10	3	Axx	2	A																
31 Jul	S14W52	323	plage																				
01 Aug	S14W66	323	plage																				
02 Aug	S14W80	324	plage																				
										3	0	0	6	0	0	0	0	0					

Crossed West Limb.
Absolute heliographic longitude: 323

Region 2124																							
26 Jul	S21E64	273	10	1	Axx	1	A																
27 Jul	S22E49	274	10	1	Axx	1	A																
28 Jul	S21E36	274	10	1	Axx	2	A																
29 Jul	S21E23	274	10	1	Axx	2	A																
30 Jul	S21E09	275	plage																				
31 Jul	S21W05	276	plage																				
01 Aug	S21W19	276	plage																				
02 Aug	S21W33	277	plage																				
03 Aug	S21W47	278	plage																				
										0	0	0	0	0	0	0	0	0					

Still on Disk.
Absolute heliographic longitude: 276



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		
Region 2125																	
26 Jul	S12E69	268	20	6	Cro	3	B	1			1						
27 Jul	S13E57	266	40	4	Cao	4	B	1			5						
28 Jul	S13E46	264	50	7	Cao	6	B	2			3	1					
29 Jul	S13E31	266	40	7	Hax	3	A										
30 Jul	S14E16	267	20	1	Hax	1	A	1									
31 Jul	S14E03	268	20	1	Hsx	1	A										
01 Aug	S14W11	268	20	1	Hsx	1	A										
02 Aug	S14W25	269	10	1	Axx	1	A										
03 Aug	S14W39	270	plage														
								5	0	0	9	1	0	0	0		

Still on Disk.

Absolute heliographic longitude: 268

Region 2126																	
26 Jul	S10E16	321	30	3	Cro	8	B										
27 Jul	S10E03	320	50	8	Dao	10	B										
28 Jul	S10W11	321	80	9	Dai	22	BG				1						
29 Jul	S09W28	325	90	11	Eai	21	BG	4			4						
30 Jul	S09W41	324	120	9	Dai	16	B										
31 Jul	S09W54	325	100	10	Dao	7	B										
01 Aug	S09W68	325	70	12	Cao	8	B										
02 Aug	S09W82	326	60	13	Cso	7	B				1						
03 Aug	S09W96	327	10	5	Bxo	2	B										
								4	0	0	6	0	0	0	0		

Still on Disk.

Absolute heliographic longitude: 320

Region 2127																	
27 Jul	S08E75	248	80	5	Dao	3	B	1									
28 Jul	S08E62	248	210	5	Dac	7	BD										
29 Jul	S08E48	249	250	5	Dkc	6	BD				1						
30 Jul	S09E36	247	300	5	Dkc	12	BG	3			2	1					
31 Jul	S09E22	249	270	5	Dkc	10	BG	1			1						
01 Aug	S09E08	249	240	5	Dac	11	BG		1								
02 Aug	S08W06	250	180	5	Dac	10	B										
03 Aug	S08W20	251	80	5	Hsx	7	A				1						
								5	1	0	5	1	0	0	0		

Still on Disk.

Absolute heliographic longitude: 250



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 2128																					
27 Jul	S21E75	248	30	3	Hrx	1	A														
28 Jul	S21E61	249	30	2	Hsx	1	A														
29 Jul	S20E47	250	30	2	Hsx	1	A														
30 Jul	S20E33	251	30	2	Hax	1	A														
31 Jul	S20E21	250	30	1	Hsx	1	A														
01 Aug	S21E07	250	20	1	Hsx	1	A														
02 Aug	S21W05	249	20	1	Hrx	1	A														
03 Aug	S21W19	250	10	1	Axx	1	A														
												0	0	0	0	0	0	0	0	0	

Still on Disk.

Absolute heliographic longitude: 249

Region 2129																					
28 Jul	S06W07	317	20	4	Cro	9	B														
29 Jul	S06W23	320	10	3	Axx	2	A														
30 Jul	S05W36	319	10	1	Axx	2	A														
31 Jul	S05W51	322	plage																		
01 Aug	S05W65	322	10	2	Bxo	2	B														
02 Aug	S05W79	323	plage										1								
												0	0	0	1	0	0	0	0	0	

Crossed West Limb.

Absolute heliographic longitude: 317

Region 2130																					
29 Jul	S07E71	226	290	6	Dki	8	BG	3					2								
30 Jul	S08E56	227	290	8	Dkc	7	BGD	1													
31 Jul	S07E42	229	290	8	Dkc	19	BG	5	1				3								
01 Aug	S07E27	230	260	14	Ekc	22	BG	1	1				4	1							
02 Aug	S07E16	228	200	15	Eac	18	BG	1					2								
03 Aug	S07E02	229	160	17	Fac	23	BGD	1					1								
								12	2	0	12	1	0	0	0	0					

Still on Disk.

Absolute heliographic longitude: 229



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			
Region 2131																		
29 Jul	S18E59	238	10	3	Cao	3	B											
30 Jul	S19E45	238	20	5	Dro	4	B											
31 Jul	S18E33	238	30	5	Dro	5	B											
01 Aug	S18E19	238	30	5	Cro	6	B					2						
02 Aug	S18E05	239	40	6	Dai	9	B					2						
03 Aug	S19W09	240	30	6	Dai	6	B											
								0	0	0	4	0	0	0	0			

Still on Disk.
Absolute heliographic longitude: 239

Region 2132																		
31 Jul	S18E60	211	30	4	Cro	5	B											
01 Aug	S19E46	211	200	7	Dac	16	BGD	1			9	1						
02 Aug	S19E32	212	220	9	Dai	23	BGD	3			7							
03 Aug	S19E18	213	220	11	Eai	23	BG	2			6	1						
								6	0	0	22	2	0	0	0			

Still on Disk.
Absolute heliographic longitude: 213

Region 2133																		
02 Aug	N18E60	184	20	1	Hrx	1	A											
03 Aug	N18E46	185	20	1	Hrx	1	A	1										
								1	0	0	0	0	0	0	0			

Still on Disk.
Absolute heliographic longitude: 185

Region 2134																		
02 Aug	N09E69	175	90	10	Dao	6	B				1							
03 Aug	N09E55	176	150	10	Dao	9	B	2			5							
								2	0	0	6	0	0	0	0			

Still on Disk.
Absolute heliographic longitude: 176

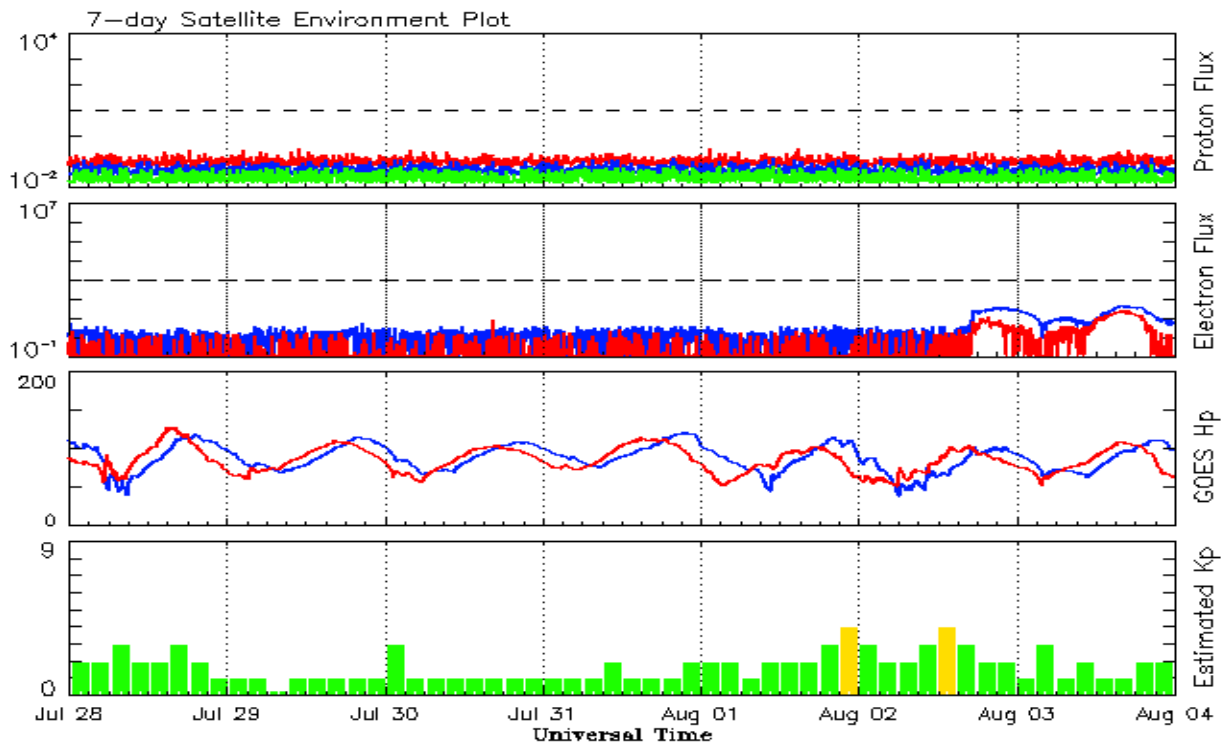


Recent Solar Indices (preliminary)
Observed monthly mean values

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
2012									
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
2013									
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	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			170.3		12	
March	141.1	91.9	0.65			149.9		6	
April	130.5	84.7	0.65			144.3		9	
May	116.8	75.2	0.64			130.0		7	
June	107.7	71.0	0.66			122.2		7	
July	113.6	72.5	0.64			137.3		5	

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 28 July 2014*

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.

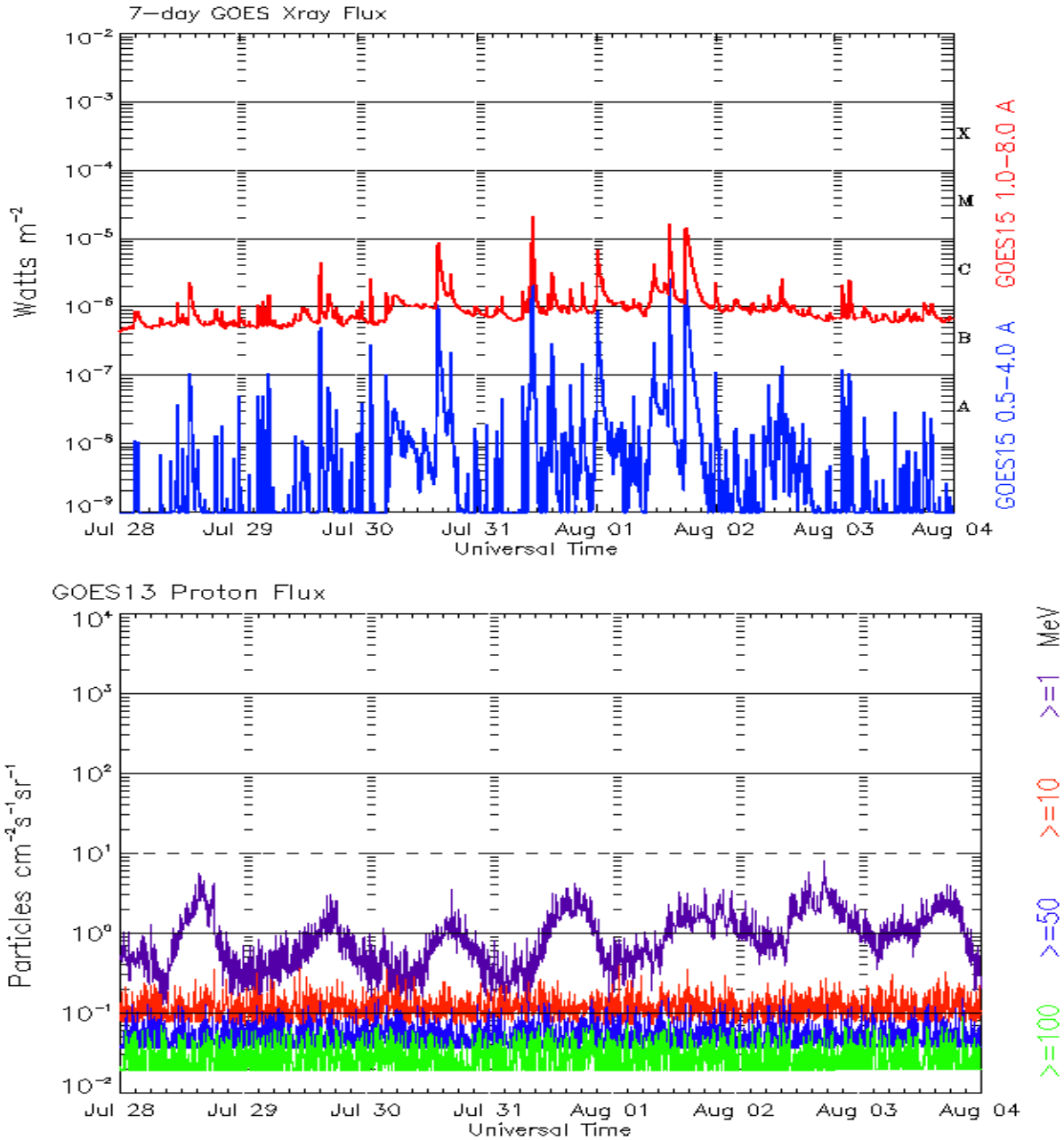
The electron flux plot contains the five-minute averaged integral electron flux (electrons/cm²-sec -sr) with energies greater than 2 MeV by the SWPC Primary GOES satellite.

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 28 July 2014*

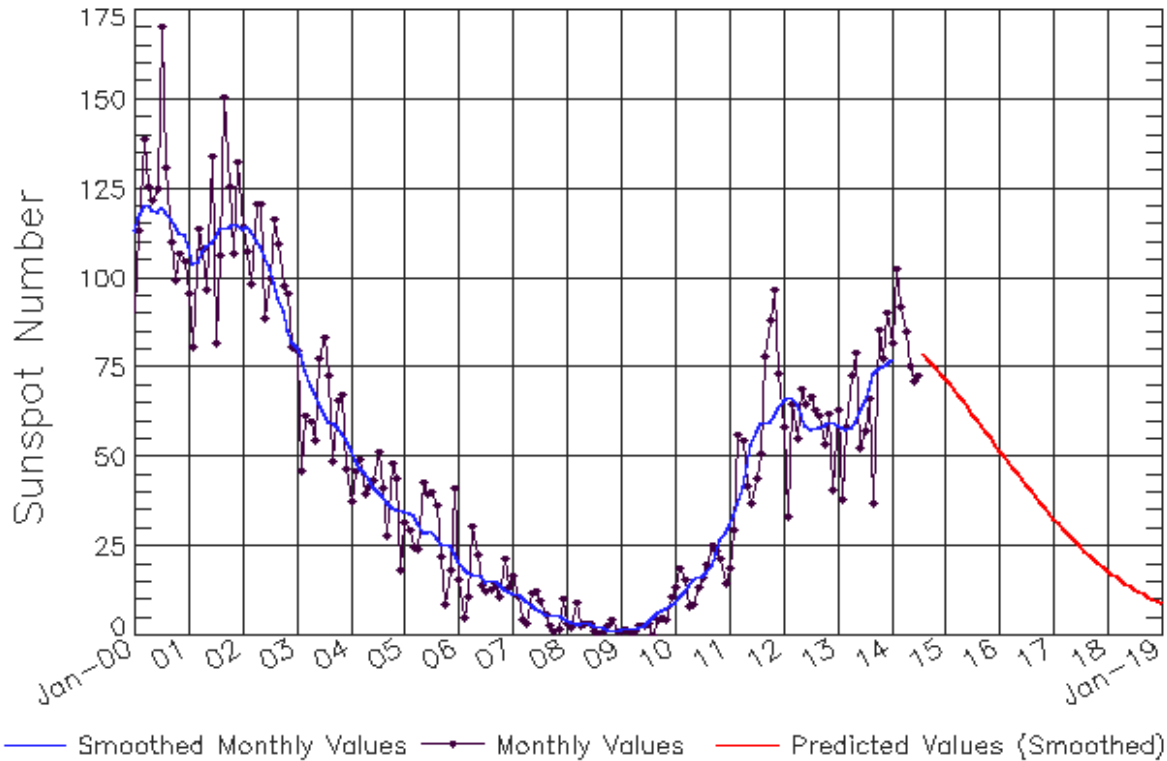
The x-ray plots contains five-minute averages x-ray flux (Watt/m²) as measure by the SWPC primary GOES X-ray satellite, usually at West 105 longitude, in two wavelength bands, 0.05 - 0.4 and 0.1 - 0.8 nm. The letters A, B, C, M and X refer to x-ray event levels for the 0.1 - 0.8 nm band.

The proton plot contains the five-minute averaged intergral flux units (pfu = protons/cm² -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 Jul 2014



Updated 2014 Aug 4

NOAA/SWPC Boulder, CO USA

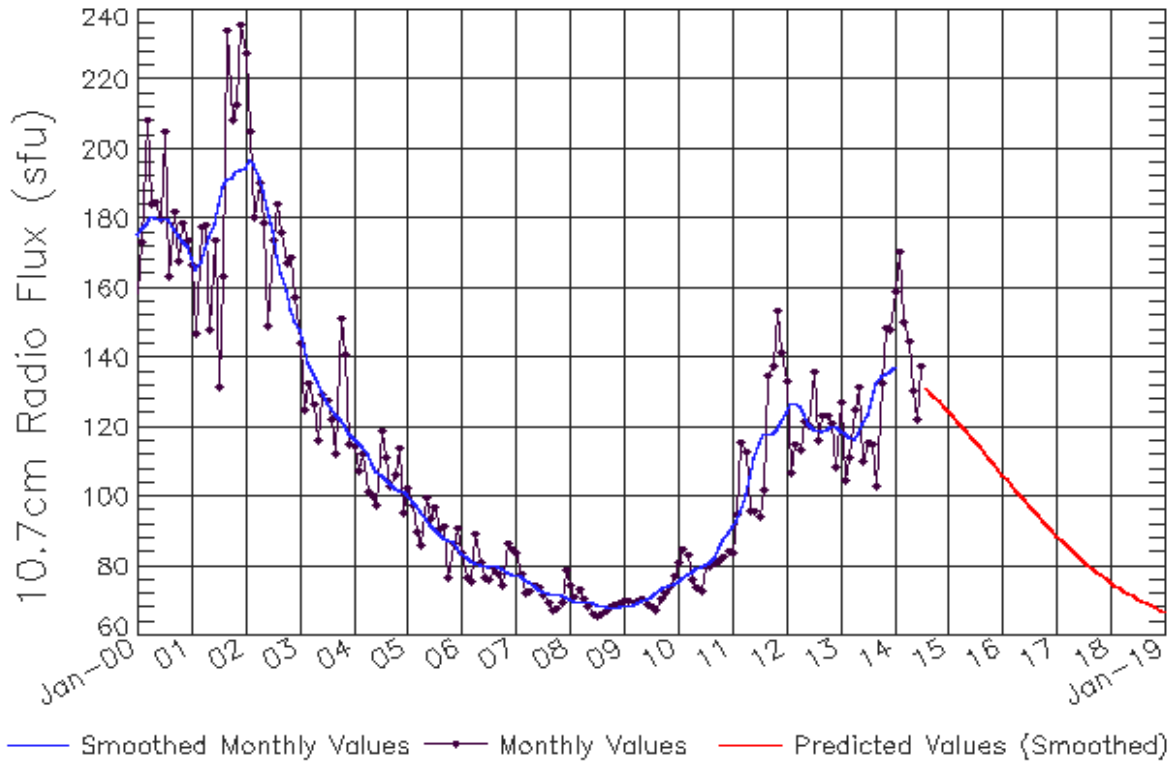
Smoothed Sunspot Number Prediction

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 (**)	79 (1)	81 (2)	82 (3)	82 (5)	81 (5)	80 (6)	78 (7)	76 (7)	74 (8)	73 (9)	72 (9)
2015	71 (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 Jul 2014



Updated 2014 Aug 4

NOAA/SWPC Boulder, CO USA

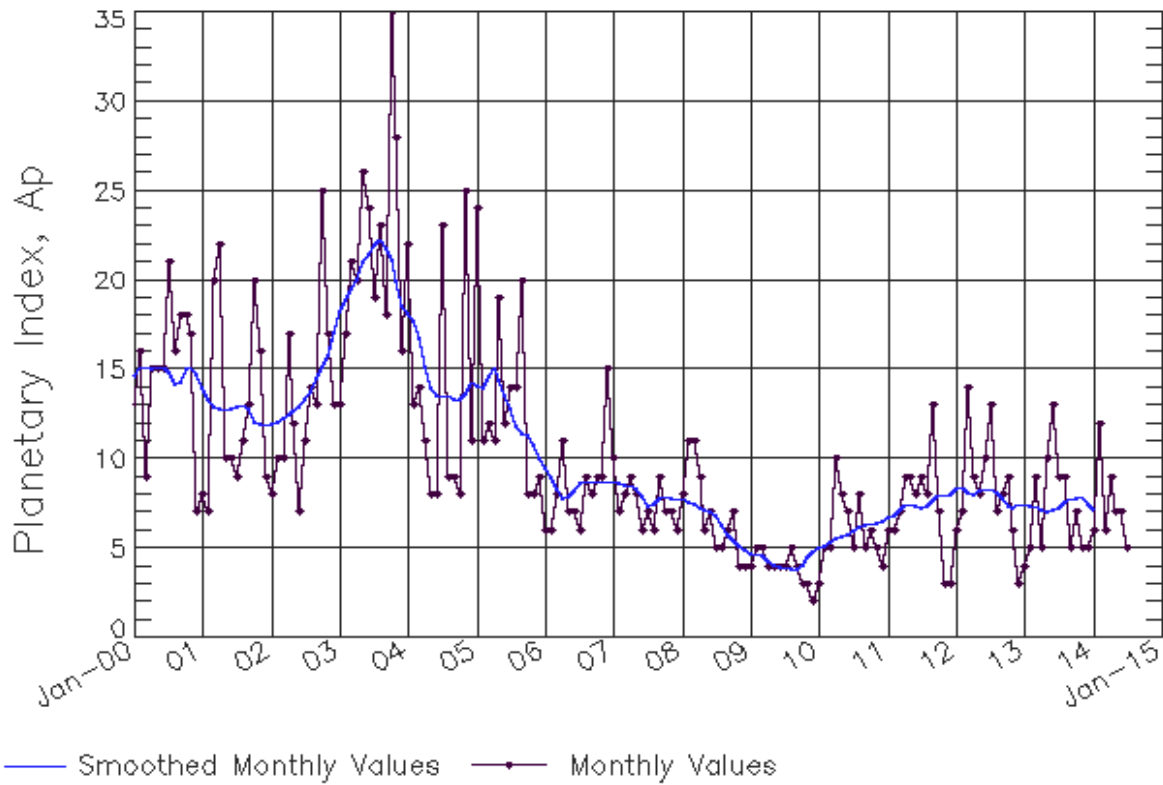
Smoothed F10.7cm Radio Flux Prediction

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 (1)	141 (1)	142 (2)	141 (3)	139 (4)	137 (4)	133 (5)	130 (6)	128 (7)	126 (8)	126 (8)
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

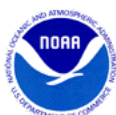
Observed data through Jul 2014



Updated 2014 Aug 4

NOAA/SWPC Boulder, CO USA

Solar Cycle Comparison charts are temporarily unavailable.



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

Published every Monday by the Space Weather Prediction Center.

U.S. Department of Commerce
NOAA / National Weather Service
Space Weather Prediction Center
325 Broadway, Boulder CO 80305

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

