

Solar activity was low. The largest flares of the week, both C4s, were attributed to Region 1575 (N08, L=181, class/area=Eko/320 on 22 Sep) at 01/0147Z and again at 01/1313Z as it rotated beyond the west limb. The remainder of the week was characterized by x-ray flares in the mid-to-upper B class and low C class range. An exceptionally long duration B7 flare (7hr 29min) from Region 1584 (S23, L=70, class/area=Dso/40 on 01 Oct) peaked at 05/0730Z and was associated with an earth-directed CME. The CME was observed in SOHO/LASCO C3 imagery at 05/0730Z and had an estimated speed of approximately 590 km/s. It was expected to reach earth late on 08 October. Another CME was observed later in the week when a 30 degree long filament, centered near S65W15, erupted on 07 October. SDO imagery first observed movement along the filament channel at approximately 06/2000Z with ejecta visible off the SW limb at about 07/0700Z. LASCO C2 imagery observed a partial-halo CME lifting off the SW limb first visible at 07/0812Z. Subsequent WSA-Enlil model output indicated a possible weak, earth-directed component of this CME.

No proton events were observed at geosynchronous orbit.

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

Geomagnetic field activity began the week at severe storm levels after an earth-directed CME from 27 September arrived late on 30 September. Severe storm levels were observed for the 01/00-03Z synoptic period, decreasing in the subsequent periods to major storm levels for 01/03-06Z, and then active levels for the 01/06-09Z period. The remainder of the week saw quiet geomagnetic conditions with the exception of the first synoptic period on 03 October which was unsettled.

Space Weather Outlook **08 October - 03 November 2012**

Solar activity is expected to be at generally low levels with a chance for an M-class event, particularly during 12-26 October when Old Region 1583 (N12, L=187, class/area=Dso/90) returns.

No proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at high levels on 11-13 October as a result of a coronal hole high speed stream. Flux for the remainder of the forecast period is expected to be at background levels.

Geomagnetic field activity is expected to begin at quiet to unsettled levels, increasing to active to minor storm levels late on 08 October with the arrival of the earth-directed CME from 05 October. Minor storm levels are expected to continue through 09 October. Then geomagnetic field activity is expected to decrease to unsettled to active levels for 10-11 October under the influence of a coronal hole high speed stream. Quiet conditions return on 12-14 October before



subsequent coronal hole high speed streams bring unsettled to active conditions on 15-17 October.



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
01 October	128	59	580	B7.6	8	0	0	0	0	0	0	0
02 October	118	55	550	B4.3	1	0	0	2	0	0	0	0
03 October	113	58	710	B2.1	0	0	0	3	0	0	0	0
04 October	110	56	640	B1.8	0	0	0	1	0	0	0	0
05 October	106	55	560	B2.1	0	0	0	0	0	0	0	0
06 October	99	39	520	B1.7	0	0	0	1	0	0	0	0
07 October	98	37	480	B1.9	1	0	0	0	0	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
	01 October	5.8e+06	2.0e+04	2.4e+03		7.4e+05
02 October	8.2e+05	1.2e+04	2.5e+03		9.3e+05	
03 October	3.8e+05	1.2e+04	2.8e+03		1.0e+06	
04 October	1.9e+05	1.2e+04	3.1e+03		1.2e+06	
05 October	3.8e+05	1.2e+04	2.9e+03		1.6e+06	
06 October	9.3e+05	1.2e+04	2.7e+03		1.7e+06	
07 October	3.4e+06	1.2e+04	2.5e+03		2.5e+06	

Daily Geomagnetic Data

Date	Middle Latitude Fredericksburg		High Latitude College		Estimated Planetary	
	A	K-indices	A	K-indices	A	K-indices
	01 October	21	5-5-4-2-3-2-2-2	23	5-5-5-4-2-1-1-0	31
02 October	5	2-0-0-1-3-2-1-2	11	1-0-0-5-4-1-1-2	5	2-0-1-2-2-2-2-2
03 October	5	2-2-1-1-2-2-1-0	2	2-0-1-2-0-0-0-0	5	3-2-2-1-1-1-1-0
04 October	3	1-0-1-1-1-2-1-0	2	0-0-1-3-0-0-0-0	3	0-0-1-1-1-1-0-0
05 October	3	0-0-0-1-2-2-1-2	3	0-0-0-2-1-2-1-1	4	0-0-0-1-1-2-1-2
06 October	5	2-1-1-2-2-2-1-1	14	1-1-1-4-5-3-1-2	6	2-1-1-2-2-2-1-2
07 October	4	0-2-1-2-1-1-1-2	6	1-1-2-4-0-0-1-1	5	1-2-1-2-1-1-1-2

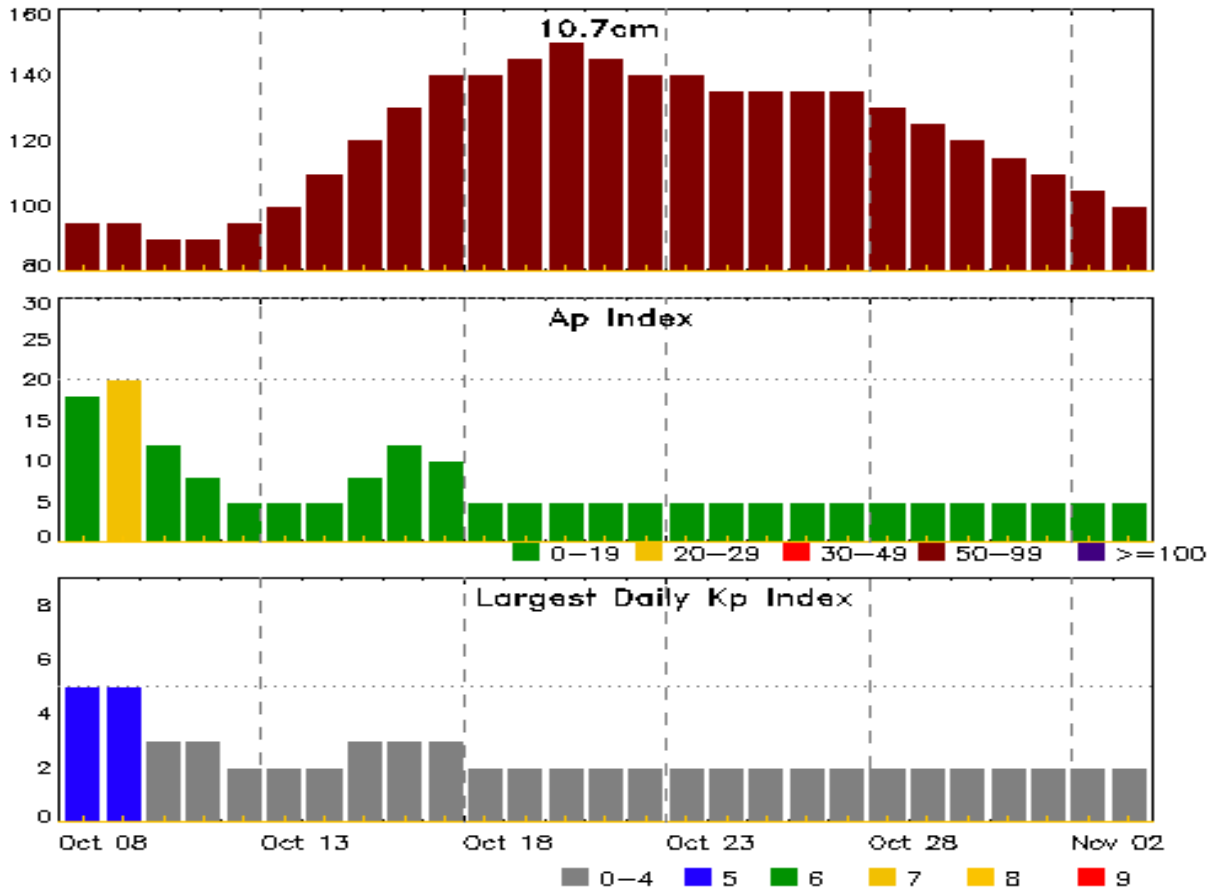


Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
01 Oct 0007	WARNING: Geomagnetic K = 5	01/0030 - 0600
01 Oct 0109	ALERT: Geomagnetic K = 5	01/0107
01 Oct 0140	WARNING: Geomagnetic K = 6	01/0145 - 0600
01 Oct 0151	ALERT: Geomagnetic K = 6	01/0148
01 Oct 0243	WARNING: Geomagnetic K >= 7	01/0245 - 0600
01 Oct 0244	EXTENDED WARNING: Geomagnetic K = 6	01/0145 - 0900
01 Oct 0305	ALERT: Geomagnetic K = 7	01/0300
01 Oct 0319	EXTENDED WARNING: Geomagnetic K = 5	01/0030 - 0900
01 Oct 0443	ALERT: Geomagnetic K = 6	01/0439
05 Oct 2036	WATCH: Geomagnetic Storm Category G1 predicted	
07 Oct 1210	WATCH: Geomagnetic Storm Category G1 predicted	



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
08 Oct	95	18	5	22 Oct	140	5	2
09	95	20	5	23	140	5	2
10	90	12	3	24	135	5	2
11	90	8	3	25	135	5	2
12	95	5	2	26	135	5	2
13	100	5	2	27	135	5	2
14	110	5	2	28	130	5	2
15	120	8	3	29	125	5	2
16	130	12	3	30	120	5	2
17	140	10	3	31	115	5	2
18	140	5	2	01 Nov	110	5	2
19	145	5	2	02	105	5	2
20	150	5	2	03	100	5	2
21	145	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 #	
01 Oct	0129	0135	0137	C1.7				1575
01 Oct	0142	0147	0150	C4.8				1575
01 Oct	0348	0351	0354	C1.6				1575
01 Oct	0458	0504	0509	C1.8				1575
01 Oct	0617	1006	1147	C1.8				
01 Oct	0816	1006	1110	C1.9				
01 Oct	1300	1313	1326	C4.8				1575
01 Oct	1516	1522	1529	C2.3				1575
02 Oct	0152	0155	0158	B9.8				
02 Oct	0900	0904	0906	C1.1	SF	S14W04		1582
02 Oct	1228	1234	1251		SF	S16E79		
02 Oct	2225	2254	2308	B6.5				
03 Oct	0712	0712	0721		SF	S16E65		1585
03 Oct	1335	1338	1341	B3.4	SF	S16E62		1585
03 Oct	1418	1422	1424	B4.3	SF	S15E59		1585
04 Oct	0048	0053	0058	B6.0				
04 Oct	0619	0620	0623		SF	N05W16		
04 Oct	1349	1354	1359	B3.0				
04 Oct	1507	1509	1512	B3.3				
04 Oct	1631	1637	1642	B3.5				
05 Oct	0317	0730	1046	B7.8				1584
06 Oct	0037	0041	0045	B3.0				1579
06 Oct	0205	0210	0215	B3.2				1579
06 Oct	0523	0530	0535	B4.0				1585
06 Oct	0706	0713	0717	B3.2				1585
06 Oct	1119	1124	1130	B5.3	SF	S18E24		1585
07 Oct	0316	0333	0348	B4.5				1585
07 Oct	1222	1246	1312	B4.9				1585
07 Oct	2021	2046	2114	C1.2				



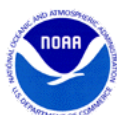
Region Summary

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 1575																		
18 Sep	N07E75	185	140	4	Dao	2	B	1										
19 Sep	N10E62	183	220	12	Eao	4	B					1						
20 Sep	N07E50	182	280	12	Eko	6	B											
21 Sep	N08E37	180	250	12	Eko	4	B											
22 Sep	N08E24	181	320	12	Eko	10	BG											
23 Sep	N08E11	181	260	13	Eho	13	BG											
24 Sep	N09W03	182	200	13	Eso	13	BG					2						
25 Sep	N08W16	182	180	13	Eso	11	BG	1				2						
26 Sep	N08W29	182	170	9	Dso	7	BG											
27 Sep	N09W46	185	130	3	Hax	4	A											
28 Sep	N08W60	186	100	6	Hsx	6	A											
29 Sep	N07W73	186	100	2	Hsx	1	A	5				3						
30 Sep	N07W87	187	100	2	Hsx	1	A	6				6						
								15	0	0	14	0	0	0	0			

Crossed West Limb.
 Absolute heliographic longitude: 182

Region 1576																		
19 Sep	S22E62	183	50	9	Dso	4	B	2				2						
20 Sep	S21E52	180	70	7	Dso	3	B											
21 Sep	S21E43	177	50	6	Dso	2	B											
22 Sep	S21E30	175	50	6	Dao	2	B											
23 Sep	S22E17	175	50	6	Dso	2	B											
24 Sep	S21E04	175	40	7	Dso	2	B											
25 Sep	S21W09	175	30	7	Cro	3	B											
26 Sep	S20W21	174	10	5	Bxo	2	B											
27 Sep	S20W35	174	5		Axx	1	A											
28 Sep	S21W47	173	0	1	Axx	1	A											
29 Sep	S21W61	174	plage															
30 Sep	S21W75	175	plage															
01 Oct	S21W88	175	plage															
								2	0	0	2	0	0	0	0			

Crossed West Limb.
 Absolute heliographic longitude: 175



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 1577																		
22 Sep	N08E43	162	20	3	Cao	4	B											
23 Sep	N08E30	162	100	6	Dai	12	B											
24 Sep	N09E17	161	80	8	Dao	8	B											
25 Sep	N09E03	163	60	8	Cso	7	B	1				1						
26 Sep	N09W12	165	40	10	Dso	5	B											
27 Sep	N09W26	165	15	4	Cso	3	B	1						1				
28 Sep	N08W41	167	10	3	Bxo	4	B					1						
29 Sep	N09W54	167	90	6	Dao	8	B	5				2						
30 Sep	N09W68	168	90	6	Dao	8	B	2				1						
01 Oct	N09W82	169	40	4	Dso	1	B											
02 Oct	N09W95	169	plage															
								9	0	0	5	1	0	0	0	0		

Crossed West Limb.
 Absolute heliographic longitude: 163

Region 1578																		
24 Sep	N21E10	169	20	3	Cro	5	B	1										
25 Sep	N21W04	170	10	4	Bxo	3	B											
26 Sep	N21W17	170	plage															
27 Sep	N21W31	169	5	1	Axx	1	A											
28 Sep	N21W45	171	plage															
29 Sep	N21W59	172	plage															
30 Sep	N21W75	174	10	4	Cao	2	B											
01 Oct	N21W88	174	20	3	Hsx	1	A											
								1	0	0	0	0	0	0	0	0	0	

Crossed West Limb.
 Absolute heliographic longitude: 170



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 1579																	
24 Sep	S09E70	109	120	3	Hax	1	A										
25 Sep	S09E58	108	180	7	Cso	3	B										
26 Sep	S09E45	108	160	6	Cso	3	B										
27 Sep	S10E33	106	160	3	Hsx	2	A	1									
28 Sep	S09E20	106	200	4	Cso	3	B										
29 Sep	S08E05	106	190	5	Cso	5	B										
30 Sep	S09W08	107	180	2	Cso	4	B										
01 Oct	S09W21	107	170	3	Cao	2	B										
02 Oct	S09W34	106	160	3	Cso	3	B										
03 Oct	S10W47	107	180	3	Cso	4	B										
04 Oct	S10W60	107	160	5	Cso	5	B										
05 Oct	S10W73	107	150	4	Cso	2	B										
06 Oct	S11W87	107	150	4	Cso	2	B										
								1	0	0	0	0	0	0	0	0	0

Crossed West Limb.
 Absolute heliographic longitude: 106

Region 1580																	
25 Sep	N17E67	99	30	5	Cro	3	B	1				2					
26 Sep	N17E53	100	30	6	Cro	4	B										
27 Sep	N17E40	100	20	9	Cso	3	B										
28 Sep	N19E28	98	0	1	Axx	2	A										
29 Sep	N19E14	99	plage					1				2					
30 Sep	N19W00	100	plage														
01 Oct	N19W14	101	plage														
02 Oct	N19W28	101	plage														
03 Oct	N19W42	102	plage														
04 Oct	N19W56	103	plage														
05 Oct	N19W69	103	plage														
06 Oct	N19W83	104	plage														
								3	0	0	4	0	0	0	0	0	0

Crossed West Limb.
 Absolute heliographic longitude: 100



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 1581																	
25 Sep	N22E03	163	20	4	Cao	3	B										
26 Sep	N22W10	163	30	5	Cao	3	B										
27 Sep	N22W24	163	5	1	Axx	2	A										
28 Sep	N22W38	164	plage														
29 Sep	N22W52	165	plage														
30 Sep	N22W66	166	plage														
01 Oct	N22W80	167	plage														
								0	0	0	0	0	0	0	0	0	

Crossed West Limb.
 Absolute heliographic longitude: 163

Region 1582																	
26 Sep	S12E68	85	200	4	Hsx	1	A	1									
27 Sep	S13E55	84	260	4	Hhx	1	A										
28 Sep	S12E42	84	280	4	Hhx	1	A										
29 Sep	S11E28	85	360	4	Hhx	1	A										
30 Sep	S12E15	84	350	3	Hhx	1	A										
01 Oct	S11E02	84	310	4	Hhx	1	A										
02 Oct	S12W12	85	310	6	Dho	7	B	1			1						
03 Oct	S08W25	85	270	5	Cho	5	B										
04 Oct	S12W38	85	250	4	Hhx	2	A										
05 Oct	S12W51	85	230	3	Hsx	1	A										
06 Oct	S12W64	84	220	3	Hsx	1	A										
07 Oct	S13W77	84	270	3	Hhx	1	A										
								2	0	0	1	0	0	0	0	0	

Still on Disk.
 Absolute heliographic longitude: 84

Region 1583																	
29 Sep	N13W75	188	90	8	Dso	5	B					2					
30 Sep	N12W88	187	90	5	Dso	6	B		1			1					
								0	1	0	3	0	0	0	0	0	

Crossed West Limb.
 Absolute heliographic longitude: 188



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 1584																	
30 Sep	S23E28	71	10	2	Cao	3	B	1			2						
01 Oct	S23E16	70	40	6	Dso	4	B										
02 Oct	S22W01	72	30	2	Hsx	1	A										
03 Oct	S23W12	72	20	2	Hax	2	A										
04 Oct	S22W26	73	10	2	Axx	2	A										
05 Oct	S22W40	74	0	1	Axx	2	A										
06 Oct	S22W54	75	plage														
07 Oct	S22W68	75	plage														
								1	0	0	2	0	0	0	0	0	

Still on Disk.

Absolute heliographic longitude: 72

Region 1585																	
02 Oct	S16E63	9	50	2	Dso	4	B										
03 Oct	S17E52	8	240	7	Dso	7	B				3						
04 Oct	S18E39	8	220	6	Dao	7	B										
05 Oct	S19E26	8	180	7	Dao	10	B										
06 Oct	S20E12	8	150	6	Dso	6	B				1						
07 Oct	S21W01	8	120	7	Cso	5	B										
								0	0	0	4	0	0	0	0	0	

Still on Disk.

Absolute heliographic longitude: 8

Region 1586																	
07 Oct	S12E66	301	90	2	Hsx	1	A										
								0	0	0	0	0	0	0	0	0	

Still on Disk.

Absolute heliographic longitude: 301

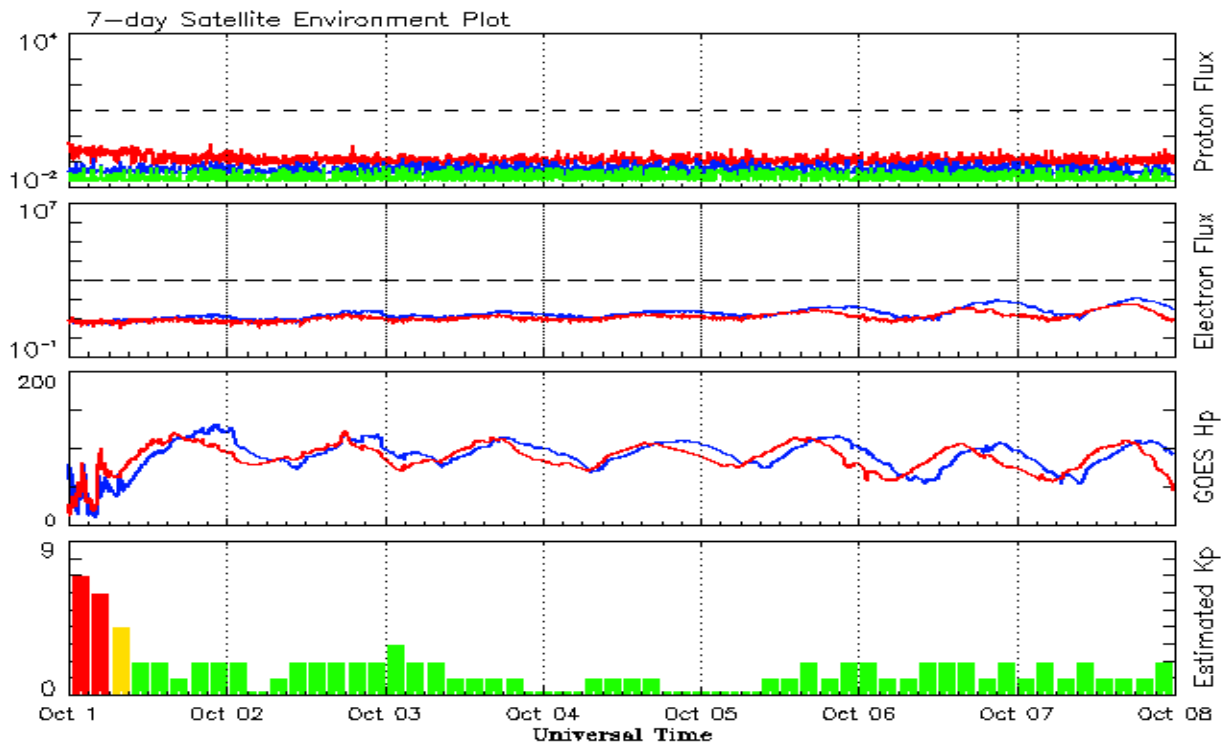


Recent Solar Indices (preliminary)
Observed monthly mean values

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
2010									
October	35.0	23.5	0.67	35.9	23.2	81.6	85.3	6	6.4
November	36.1	21.5	0.60	40.5	26.5	82.5	87.7	5	6.4
December	22.0	14.4	0.66	43.8	28.8	84.3	89.6	4	6.5
2011									
January	32.1	18.8	0.59	47.2	30.9	83.7	91.2	6	6.7
February	53.2	29.6	0.55	50.6	33.4	94.5	92.7	6	6.8
March	81.0	55.8	0.69	55.2	36.9	115.3	95.8	7	7.2
April	81.7	54.4	0.67	61.5	41.8	112.6	100.4	9	7.5
May	61.4	41.5	0.68	69.0	47.6	95.9	105.6	9	7.5
June	55.5	37.0	0.67	76.5	53.2	95.8	110.9	8	7.4
July	67.0	43.8	0.66	82.5	57.2	94.2	115.4	9	7.3
August	66.1	50.6	0.77	84.9	59.0	101.7	117.9	8	7.4
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
2012									
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			113.1		9	
May	99.5	69.0	0.69			121.5		8	
June	88.6	64.5	0.73			120.5		10	
July	99.6	66.5	0.67			135.6		13	
August	85.8	63.1	0.74			115.7		7	
September	84.0	61.5	0.73			123.2		8	

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 01 October 2012*

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.

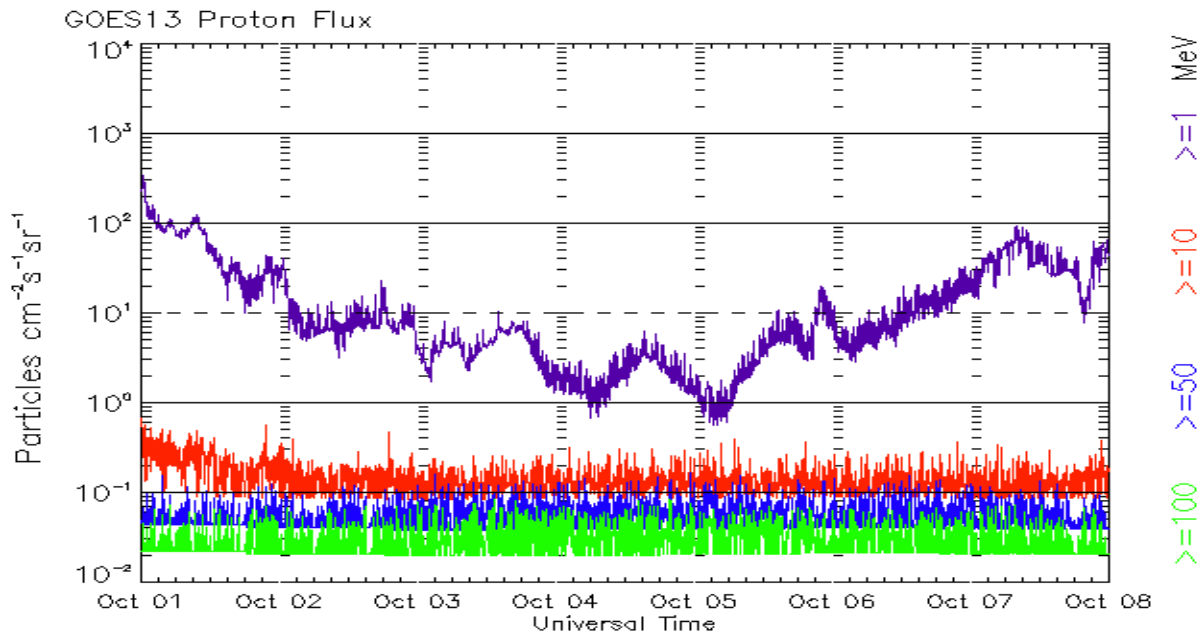
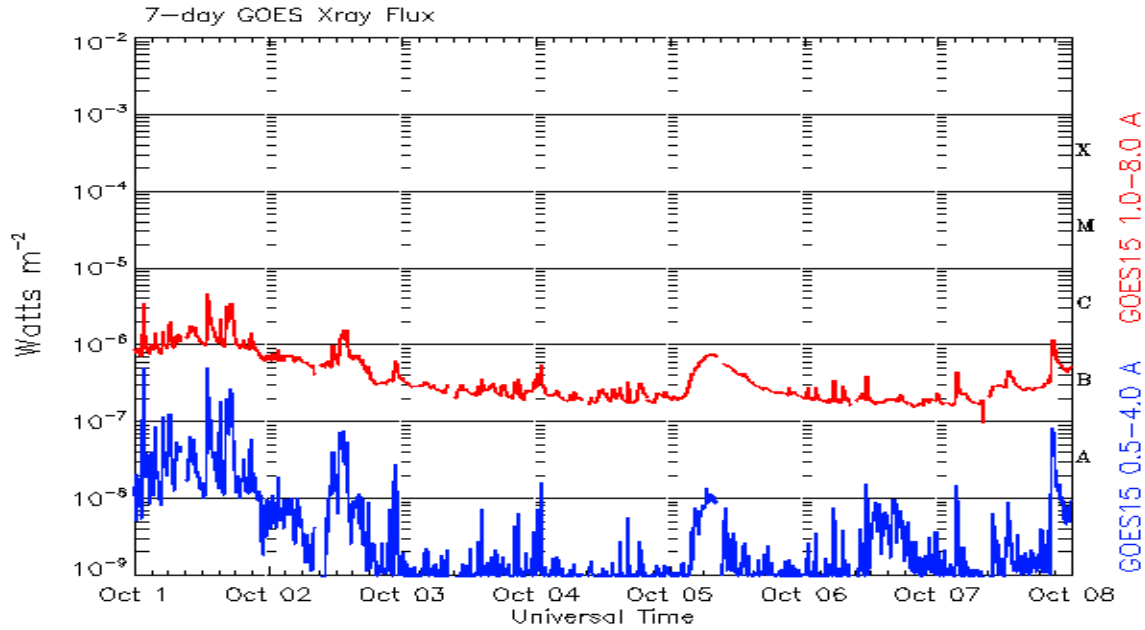
The electron flux plot contains the five-minute averaged integral electron flux (electrons/cm²-sec -sr) with energies greater than 2 MeV by the SWPC Primary GOES satellite.

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 01 October 2012

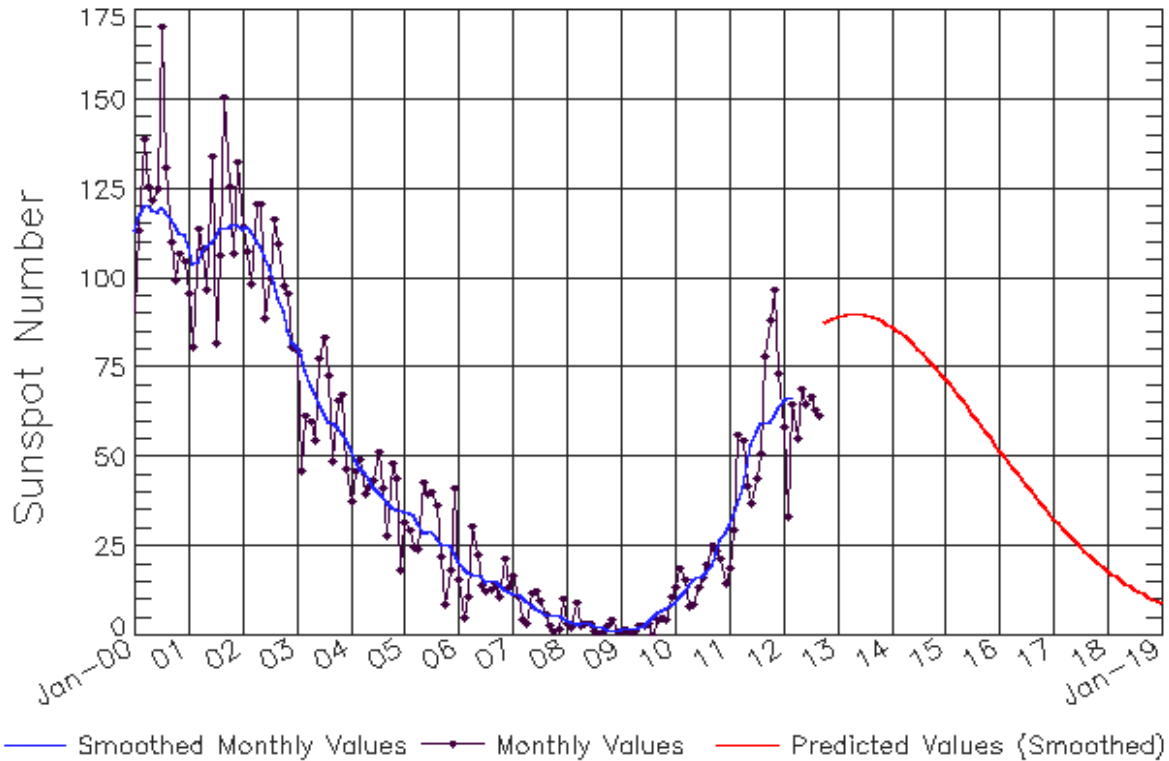
The x-ray plots contains five-minute averages x-ray flux ($Watt/m^2$) as measure by the SWPC primary GOES X-ray satellite, usually at West 105 longitude, in two wavelength bands, 0.05 - 0.4 and 0.1 - 0.8 nm. The letters A, B, C, M and X refer to x-ray event levels for the 0.1 - 0.8 nm band.

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 Sep 2012



Updated 2012 Oct 8

NOAA/SWPC Boulder, CO USA

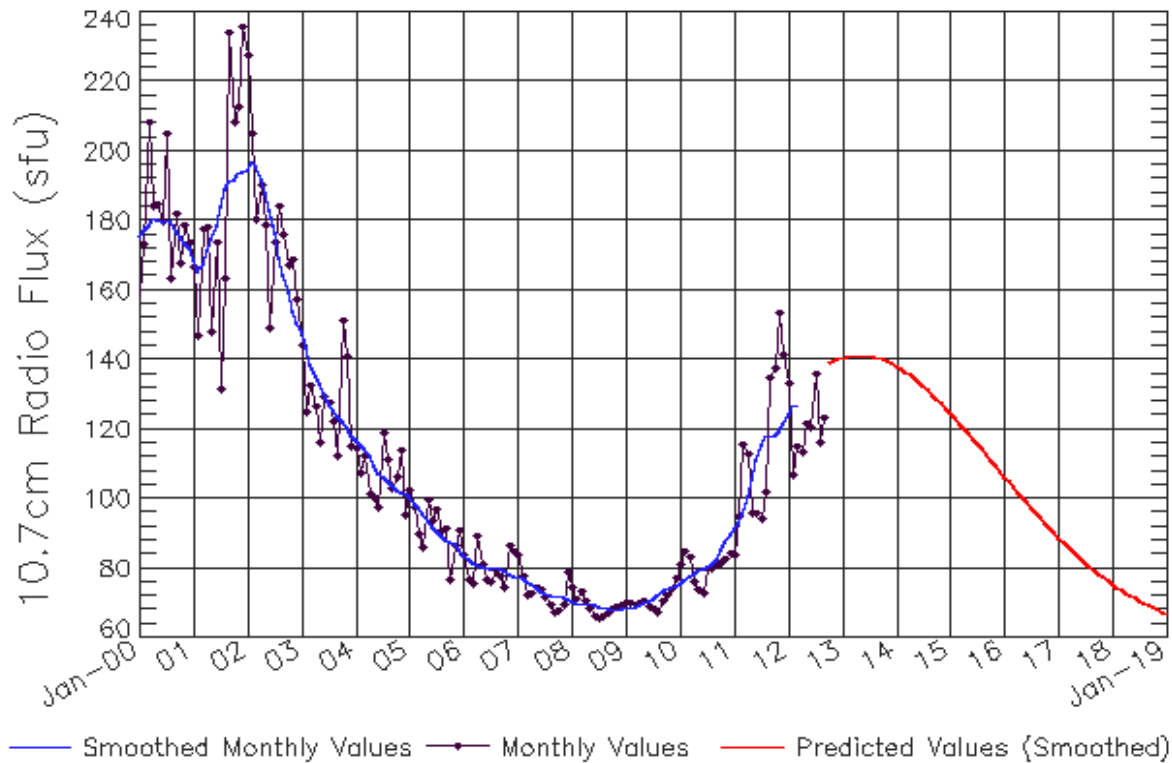
Smoothed Sunspot Number Prediction

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 (***)	66 (1)	66 (2)	66 (3)	68 (5)	72 (5)	75 (6)	78 (7)	80 (7)	82 (8)
2013	84 (9)	86 (9)	88 (10)	90 (10)	90 (10)	90 (10)	90 (10)	89 (10)	89 (10)	89 (10)	88 (10)	87 (10)
2014	86 (10)	86 (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 Sep 2012



Updated 2012 Oct 8

NOAA/SWPC Boulder, CO USA

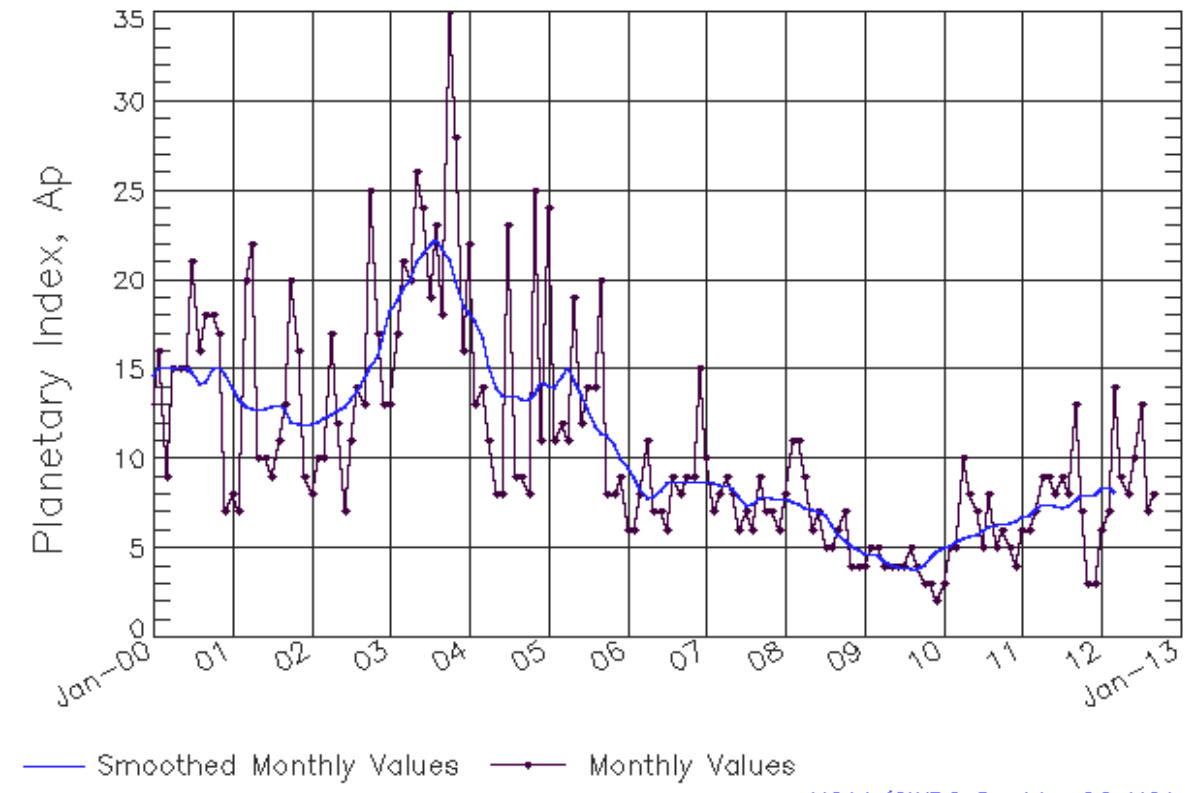
Smoothed F10.7cm Radio Flux Prediction

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 (1)	126 (1)	125 (2)	126 (3)	127 (4)	130 (4)	132 (5)	134 (6)	136 (7)
2013	137 (8)	138 (8)	140 (9)	141 (9)	141 (9)	141 (9)	141 (9)	141 (9)	140 (9)	140 (9)	139 (9)	139 (9)
2014	138 (9)	137 (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 Sep 2012



Updated 2012 Oct 8

NOAA/SWPC Boulder, CO USA

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

