Solar activity was very low for 27 June to 02 July and increased to low levels for 03 July. Region 1236 (N17, L=167, class/area Ehi/350 on 15 June), which rotated around west limb on 26 June, produced most of the activity on 27-28 June. Regions 1242 (N17, L=056, class/area Dso/90 on 29 June), 1243 (N16, L=351, class/area Cao/80 on 02 July), and 1244 (N16, L=024, class/area Dso/60 on 03 July) dominated activity for 29 June - 02 July with occasional B-class flares. Region 1244 became the dominant flare producing region on 03 July with a C2/Sf at 1244 UTC. The region also produced a long duration B9/Sf at 03/0024 UTC which was associated with type II and type IV radio sweeps as well as a partial halo CME centered over the southwest limb.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit was at high levels for 27-30 June but dropped to background levels for 01-03 July.

Geomagnetic field activity was predominantly quiet for 27-30 June. Quiet to active levels were observed on 01 July due to a high speed stream from a coronal hole. Quiet to unsettled levels prevailed for 02-03 July with some isolated active periods at high latitudes as the high speed stream slowly subsided. The high speed stream was weak with peak velocity around 450 km/s; enhanced activity intervals corresponded to somewhat enhanced negative Bz intervals (e.g. around -5 to -7 nT late in the day on 30 June and early in the day on 03 July).

#### Space Weather Outlook 06 July - 01 August 2011

Solar activity is expected to be very low to low for most of the outlook interval. There may be an increase in background levels for 10-21 July with the return of old Region 1236 on 10 July which may also increase activity to low levels. There is a chance that new, rapidly emerging flux regions could increase activity to moderate levels at any time during the outlook period.

No proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at background levels initially. An increase to high levels is expected around 20 July and lasting through 26 July in response to a recurrent high speed stream. Background levels are expected to return for 26 July - 01 August.

Geomagnetic field activity is expected to be quiet to unsettled for 6-8 July. Quiet levels are expected for 09-19 July. An increase to unsettled with a chance for active periods is expected for 18-21 July in response to a recurrent high speed stream. Quiet levels are expected to prevail for 24 July - 28 July. Another increase to unsettled levels is expected for 29-30 July due to another recurrent high speed stream, with quiet levels returning for 31 July - 01 August.



## Daily Solar Data

	Radio	Sun	Sunspot	X-ray		Flares								
	Flux	spot	Area	Background		X-ray			Optical					
Date	10.7cm	No.	(10 <sup>-6</sup> hemi.)	Flux	C	M	X	S	1	2	3	4		
27 June	89	30	15	B1.6	0	0	0	2	0	0	0	0		
28 June	87	37	40	B1.5	0	0	0	0	0	0	0	0		
29 June	87	45	140	B1.3	0	0	0	4	0	0	0	0		
30 June	89	34	110	B1.0	0	0	0	0	0	0	0	0		
01 July	88	51	120	B1.1	0	0	0	11	0	0	0	0		
02 July	86	54	110	A9.1	0	0	0	1	0	0	0	0		
03 July	86	42	120	B1.1	1	0	0	10	0	0	0	0		

# Daily Particle Data

		Proton Fluen	Electron Fluence						
	(pr	otons/cm <sup>2</sup> -da	ıy -sr)	(electrons/cm <sup>2</sup> -day -sr)					
Date	>1 MeV	>10 MeV	>100 MeV	>0.6 MeV	>2MeV	>4 MeV			
27 June	1.9e+05	1.3e+04	3.1e+03		2.4e+08				
28 June	2.8e + 05	1.3e+04	3.2e+03		2.1e+08				
29 June	7.7e + 05	1.2e+04	3.0e+03		2.1e+08				
30 June	7.1e+05	1.2e+04	3.1e+03		1.0e + 08				
01 July	1.1e+05	1.2e+04	3.2e+03		1.0e + 06				
02 July	1.6e + 05	1.2e+04	2.9e+03		1.2e+06				
03 July	6.2e+04	1.2e+04	3.0e+03		7.9e + 05				

## Daily Geomagnetic Data

		Middle Latitude		High Latitude		Estimated
		Fredericksburg		College		Planetary
Date	A K-indices		A	K-indices	A	K-indices
27 June	4	1-2-1-1-1-0-1-2	3	1-1-1-1-2-0-0-1	5	1-2-1-1-1-2-2
28 June	2	2-2-0-0-1-0-0-0	1	1-1-0-0-0-0-1	4	2-2-0-0-1-1-0-1
29 June	2	0-1-0-0-1-1-1-0	2	0-1-0-0-0-0-2-1	2	0-0-0-0-0-1-1
30 June	3	1-1-1-0-1-1-2-1	3	2-2-1-0-0-1-1-1	6	2-2-1-0-2-2-3-2
01 July	7	2-3-2-1-2-2-1-2	24	2-4-4-5-5-1-1	13	3-4-3-2-3-3-2-1
02 July	3	0-0-0-1-1-2-2-2	3	0-0-0-1-1-2-2-2	6	0-0-0-1-1-2-2-3
03 July	6	2-2-1-1-2-1-2-2	9	4-4-1-1-1-1-1	8	3-3-1-1-2-2-1-2

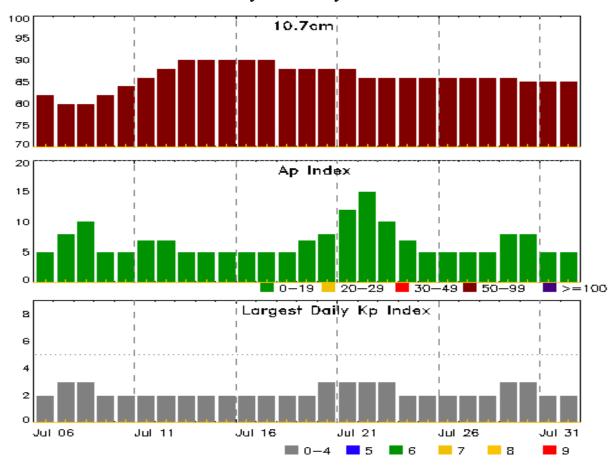


# Alerts and Warnings Issued

Date & Time		Date & Time
of Issue UTC	Type of Alert or Warning	of Event UTC
27 Jun 0507	CONTINUED ALERT: Electron 2MeV Integral Flux >= 1000pfu	23/1455
28 Jun 0510	CONTINUED ALERT: Electron 2MeV Integral Flux >= 1000pfu	23/1455
29 Jun 0504	CONTINUED ALERT: Electron 2MeV Integral Flux >= 1000pfu	23/1455
30 Jun 0947	CONTINUED ALERT: Electron 2MeV Integral Flux >= 1000pfu	23/1455
01 Jul 0545	WARNING: Geomagnetic $K = 4$	01/0545 - 1300
01 Jul 0721	ALERT: Geomagnetic $K = 4$	01/0722
01 Jul 1212	EXTENDED WARNING: Geomagnetic K = 4	01/0545 - 2100
01 Jul 1611	CANCELLATION: Geomagnetic K = 4	
03 Jul 0054	ALERT: Type II Radio Emission	03/0004
03 Jul 0055	ALERT: Type IV Radio Emission	03/0001
03 Jul 0203	WARNING: Geomagnetic K = 4	03/0215 - 0600
03 Jul 0446	CANCELLATION: Geomagnetic K = 4	



## Twenty-seven Day Outlook



	Radio Flux	Planetary	Largest		Radio Flux	Planetary	Largest
Date	10.7cm	A Index	Kp Index	Date	10.7cm	-	Kp Index
06 Jul	82	5	2	20 Jul	88	8	3
07	80	8	3	21	88	12	3
08	80	10	3	22	86	15	3
09	82	5	2	23	86	10	3
10	84	5	2	24	86	7	2
11	86	7	2	25	86	5	2
12	88	7	2	26	86	5	2
13	90	5	2	27	86	5	2
14	90	5	2	28	86	5	2
15	90	5	2	29	86	8	3
16	90	5	2	30	85	8	3
17	90	5	2	31	85	5	2
18	88	5	2	01 Aug	85	5	2
19	88	7	2	-			



# Energetic Events

	Time			X-	-ray	_Optio	Optical Information			Peak		Freq
		Half			Integ	Imp/	Location	Rgn	Radi	o Flux	x Intensi	
Date	Begin	Max	Max	Class	Flux	Brtns	Lat CMD	#	245	2695	II	IV

#### **No Events Observed**

## Flare List

				Optical					
		Time		X-ray	Imp/	Location	Rgn		
Date	Begin	Max	End	Class	Brtns	Lat CMD	#		
27 Jun	0630	0633	0637	B7.5			1236		
27 Jun	0839	0840	0843		SF	N17W35	1241		
27 Jun	1213	1216	1220	B3.2	SF	N20W35	1241		
27 Jun	1528	1542	1616	B6.6			1236		
28 Jun	0027	0107	0158	B6.4			1236		
28 Jun	0644	0647	0649	B3.2			1243		
28 Jun	1305	1321	1350	B9.6			1236		
29 Jun	0020	0032	0057	B7.3			1240		
29 Jun	0931	0941	1007	B5.5	SF	N17W06	1242		
29 Jun	1010	1017	1023		SF	N17W07	1242		
29 Jun	1213	1214	1219		SF	N18E60	1243		
29 Jun	1341	1343	1401		SF	N17W08	1242		
29 Jun	1701	1705	1707	B2.3			1242		
29 Jun	1948	1952	2002	B2.5			1240		
30 Jun	2210	2215	2220	B3.5			1243		
01 Jul	0047	0108	0117	B2.8					
01 Jul	0331	0336	0341	B3.3			1243		
01 Jul	0600	0601	0609		SF	N16E32	1243		
01 Jul	0612	0615	0617	B2.2					
01 Jul	B0704	U0705	A0707		SF	N16E31	1243		
01 Jul	0714	0721	0726	B5.3			1243		
01 Jul	B0754	U0755	A0807		SF	N16E31	1243		
01 Jul	B0809	U0810	A0815		SF	N16E31	1243		
01 Jul	0828	0833	0836	B3.7	SF	N16E31	1243		
01 Jul	B0858	U0939	A1015		SF	N16E30	1243		
01 Jul	B1038	U1104	A1116		SF	N16E29	1243		
01 Jul	1234	1237	1313	B4.1	SF	N14W06	1244		
01 Jul	1323	1323	1332		SF	N14W06	1244		
01 Jul	1346	1349	1356		SF	N17W02	1244		
01 Jul	1404	1410	1413		SF	N17W03	1244		
01 Jul	2105	2111	2117	B2.4			1243		
02 Jul	1117	1121	1125	B1.7			1242		



Flare List

				Optical					
		Time		X-ray	Imp/	Location	Rgn		
Date	Begin	Max	End	Class	Brtns	Lat CMD	#		
02 Jul	2306	2310	2313	B3.7	SF	N16W23	1244		
03 Jul	0001	0024	0033	B9.5	SF	N14W24	1244		
03 Jul	0022	0025	0035		SF	N21W57	1242		
03 Jul	0622	0631	0640	B2.5					
03 Jul	0801	0807	0837	B2.0			1244		
03 Jul	B0924	U0948	1016	B4.8	SF	N15W28	1244		
03 Jul	1018	1018	1024		SF	N15W28	1244		
03 Jul	1025	1031	1038		SF	N15W28	1244		
03 Jul	1044	1045	1052		SF	N15W31	1244		
03 Jul	1054	1102	1155	C2.1	SF	N14W29	1244		
03 Jul	1156	1236	1252	B4.8	SF	N15W32	1244		
03 Jul	1303	1313	1332		SF	N16W30	1244		
03 Jul	1502	1518	1530	B7.8	SF	N16W31	1244		
03 Jul	1502	1518	1530	B7.8	SF	N16W31	1244		



## Region Summary

	Location	Su	inspot C	haracte	ristics				]	Flares	5				
		Helio	Area	Extent	Spot	Spot	Mag	X	K-ray			О	ptica	ıl	
Date	Lat CMD	Lon	10 <sup>-6</sup> hemi.	(helio)	Class	Count	Class	C	M	X	S	1	2	3	4
		Regi	on 1237												
17 Jun	S14E66	132	0	1	Axx	1	A								
18 Jun	S15E53	131	0	1	Axx	1	A				2				
19 Jun	S15E39	133	plage					1			1				
20 Jun	S18E26	132	plage												
21 Jun	S18E13	132	plage												
22 Jun	S18W01	133	plage												
23 Jun	S18W15	134	plage												
24 Jun	S18W29	135	plage												
25 Jun	S18W43	135	plage												
26 Jun	S18W57	137	plage												
27 Jun	S18W71	137	plage												
28 Jun	S18W85	138	plage												
								1	0	0	3	0	0	0	0
	l West Lim														
Absolut	te heliograp	hic lor	ngitude: 1	33											
		Regi	on 1239												
20 Jun	N18E13	146	10	3	Bxo	5	В								
21 Jun	N18W00	145	10	4	Bxo	6	В								
22 Jun	N18W14	146	10	3	Bxo	3	В								
23 Jun	N16W27	145	10	3	Bxo	3	В								
24 Jun	N17W44	149	0		Axx	1	A								
25 Jun	N15W56	148	0		Axx	1	A								
26 Jun	N15W70	150	plage												
27 Jun	N15W84	150	plage												
								0	0	0	0	0	0	0	0

Crossed West Limb. Absolute heliographic longitude: 145



# Region Summary - continued

	Location	on	Su	ınspot C	haracte	eristics					Flares	3			
		Helio	Area	Extent	Spot	Spot	Mag	X	K-ray			O	ptica	ıl	
Date	Lat CMD	Lon	10 <sup>-6</sup> hemi.	(helio)	Class	Count	Class	C	M	X	S	1	2	3	4
		Regi	ion 1240												
20 Jun	S17E42	117	10	1	Axx	1	A								
21 Jun	S17E27	117	10	3	Bxo	3	В								
22 Jun	S19E16	116	10	3	Bxo	5	В								
23 Jun	S18E02	116	50	5	Dro	10	В								
24 Jun	S19W12	117	50	6	Cro	9	В								
25 Jun	S20W26	118	5	1	Axx	2	A								
26 Jun	S20W40	120	plage												
27 Jun	S18W53	119	5	2	Bxo	4	В								
28 Jun	S18W67	119	5	2	Bxo	2	В								
29 Jun	S18W81	121	0		Axx	1	A								
								0	0	0	0	0	0	0	0
Crossec	d West Lim	b.													
Absolu	te heliograp	hic lor	ngitude: 1	16											
		Regi	ion 1241												
24 Jun	N19W08	113	50	5	Dro	8	В								
25 Jun	N18W19	111	10	4	Bxo	3	В								
26 Jun	N18W32	110	10	5	Bxo	4	В								
27 Jun	N18W46	111	10	3	Bxo	6	В				2				
28 Jun	N18W60	113	plage												
29 Jun	N18W74	114	plage												
30 Jun	N18W88	115	plage												
								0	0	0	2	0	0	0	0
Crossec	d West Lim	b.													
Absolu	te heliograp	hic lor	ngitude: 1	13											
		Dage	ion 1242												
		O	ion 1242												
28 Jun	N18W03	56	5	3	Cro	3	В								
29 Jun	N17W17	56	90	4	Dso	9	В				3				
30 Jun	N16W30	56	80	6	Dso	8	В								
01 Jul	N18W45	58	50	5	Dro	5	В								
02 Jul	N18W57	56	20	5	Dro	5	В								
03 Jul	N18W71	58	plage								1				
								0	0	0	4	0	0	0	0
Still on	Disk														

Still on Disk. Absolute heliographic longitude: 56



## Region Summary - continued

	Location	on	Sunspot Characteristics					Flares							
		Helio	Area	Extent	Spot	Spot	Mag	X	K-ray			О	ptica	1	
Date	Lat CMD	Lon 1	0 <sup>-6</sup> hemi.	(helio)	Class	Count	Class	C	M	X	S	1	2	3	4
		Regio	on 1243												
28 Jun	N18E62	350	30	5	Cro	2	В								
29 Jun	N16E50	349	50	7	Cso	5	В				1				
30 Jun	N16E36	350	30	4	Cro	6	В								
01 Jul	N17E22	351	60	6	Cro	10	В				7				
02 Jul	N16E08	351	80	8	Cao	13	В								
03 Jul	N16W05	352	60	8	Dso	10	В								
Still on Absolut	Disk. te heliograp	hic long	gitude: 3	52				0	0	0	8	0	0	0	0
		Regio	on 1244												
01 Jul	N15W11	24	10	7	Bxo	6	BG				4				
02 Jul	N15W24	23	10	6	Bxo	6	В				1				
03 Jul	N16W38	24	60	4	Dso	12	BG	1			9				
								1	0	0	14	0	0	0	0

Still on Disk. Absolute heliographic longitude: 24

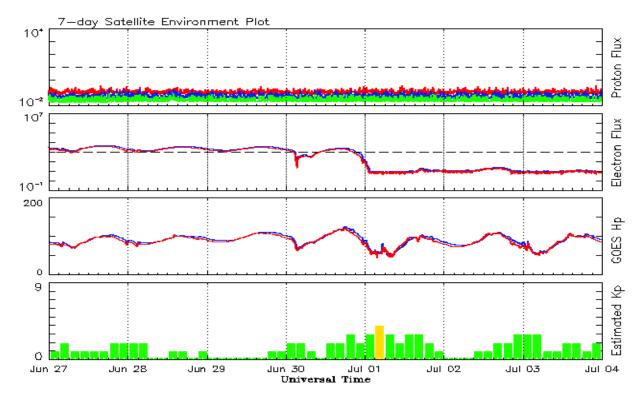


## Recent Solar Indices (preliminary) Observed monthly mean values

Sunspot Numbers Radio Flux Geomagnetic Observed values Ratio Smooth values Penticton Smooth Planetary Smooth											
	Observe		_	Smooth	values	Penticton	Smooth	Planetary	Smooth		
Month	SEC	RI	RI/SEC	SEC	RI	10.7 cm	Value	Ap	Value		
				2	2009			_			
July	5.0	3.2	0.70	5.8	3.6	68.2	71.0	4	3.9		
August	0.3	0.0	0.00	7.7	4.8	67.4	72.1	5	3.8		
September	6.6	4.3	0.64	9.9	6.2	70.5	73.3	4	3.8		
October	7.0	4.8	0.66	11.3	7.1	72.3	74.1	3	4.1		
November		4.1	0.55	12.4	7.6	73.6	74.5	3	4.5		
December	15.7	10.8	0.68	13.6	8.3	76.8	74.9	2	4.8		
				, 2	2010						
January	21.3	13.2	0.62	14.8	9.3	81.1	75.5	3	5.0		
February	31.0	18.8	0.60	16.7	10.6	84.7	76.5	5	5.1		
March	24.7	15.4	0.62	19.1	12.3	83.3	77.5	5	5.3		
April	11.2	8.0	0.71	21.4	14.0	75.9	78.3	10	5.5		
May	19.9	8.7	0.44	23.8	15.5	73.8	79.0	8	5.7		
June	17.9	13.6	0.75	25.2	16.4	72.6	79.7	7	5.8		
July	23.1	16.1	0.70	25.9	16.7	79.9	80.1	5	6.0		
August	28.2	19.6	0.70	27.3	17.4	79.7	80.7	8	6.2		
September		25.2	0.71	30.6	19.6	81.1	82.4	5	6.3		
October	35.0	23.5	0.67	35.9	23.2	81.6	85.3	6	6.4		
November		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	4	2011	83.7		6			
February	53.2	29.6	0.55			94.5		6			
March	81.0	55.8	0.69			115.3		7			
April	81.7	54.4	0.67			112.6		9			
May	61.4	41.6	0.68			95.9		9			
June	55.5	37.0	0.67			95.8		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 27 June 2011

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.

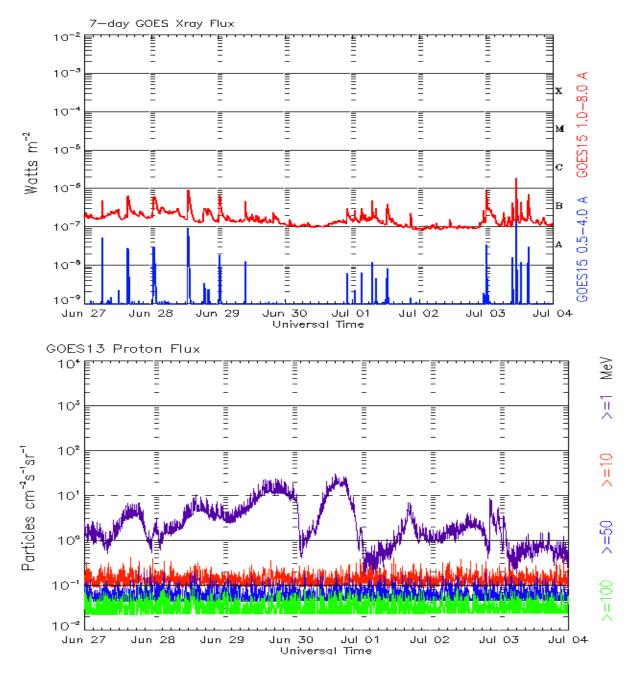
The electron flux plot contains the five-minute averaged integral electron flux (electrons/cm²-sec -sr) with energies greater than 2 MeV by the SWPC Primary GOES satellite.

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.

Kp plot contains the estimated planetary 3-hour K-index (derived by the Air Force Weather Agency) in real time from magnetometers at Meanook, Canada; Sitka, AK; Glenlea, Canada; St. Johns, Canada; Ottawa, Canada; Newport, WA; Fredericksburg, VA; Boulder, CO; Fresno, CA and Hartland, UK. These data are made available through cooperation from the Geological Survey of Canada (GSC), British Geological Survey (BGS) and the US Geological Survey. These may differ from the final Kp values derived from a more extensive network of magnetometers.

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.





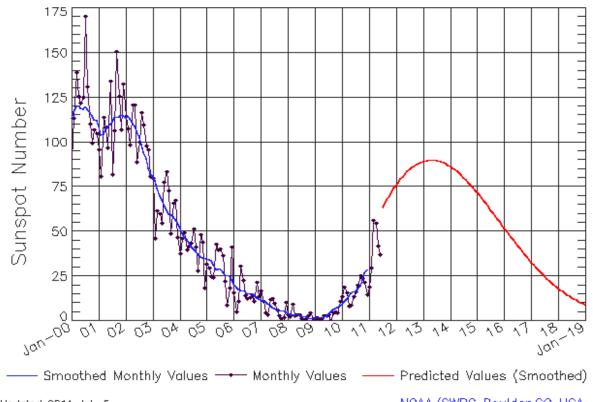
Weekly GOES Satellite X-ray and Proton Plots Week Beginning 27 June 2011

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 Jun 2011



Updated 2011 Jul 5

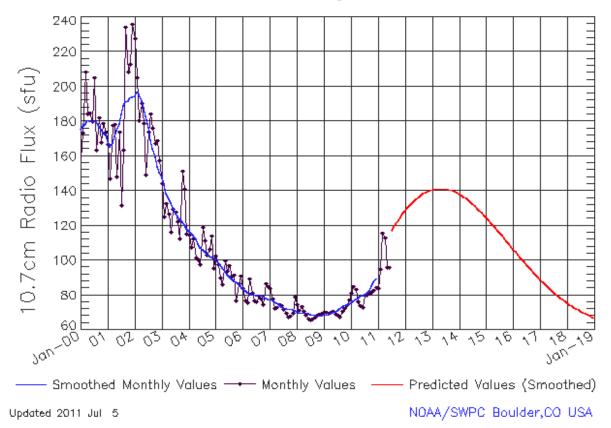
NOAA/SWPC Boulder,CO USA

## Smoothed Sunpot 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	32	36	39	43	47	52	57	61	64	66	69	72
	(1)	(2)	(3)	(5)	(5)	(6)	(7)	(7)	(8)	(9)	(9)	(10)
2012	76	78	79	81	82	84	85	86	87	88	88	89
	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)
2013	89	90	90	90	90	90	90	89	89	89	88	87
	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)
2014	86	86	85	84	83	81	80	79	78	76	75	73
	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)
2015	72	70	69	67	65	64	62	60	59	57	55	54
	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)
2016	52	50	49	47	45	44	42	40	39	37	36	34
	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)
2017	33	31	30	29	27	26	25	24	23	21	20	19
	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)
2018	18	17	16	15	15	14	13	12	12	11	10	10
	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)
2019	9	8	8	7	7	6	6	6	5	5	4	4
	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)



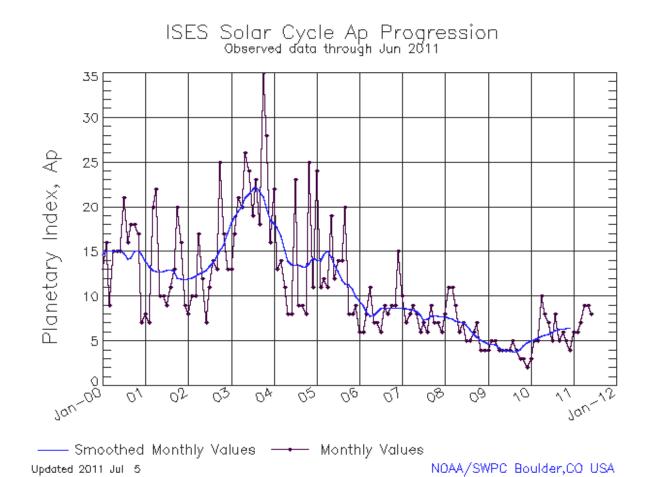
ISES Solar Cycle F10.7cm Radio Flux Progression
Observed data through Jun 2011



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	92	95	99	102	106	109	113	116	118	120	122	125
	(1)	(1)	(2)	(3)	(4)	(4)	(5)	(6)	(7)	(8)	(8)	(9)
2012	128	130	132	133	134	135	136	137	138	139	140	140
	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)
2013	141	141	141	141	141	141	141	141	140	140	139	139
	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)
2014	138	137	136	136	135	134	132	131	130	129	127	126
	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)
2015	125	123	122	120	119	117	116	114	113	111	110	108
	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)
2016	106	105	103	102	100	99	97	96	94	93	92	90
	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)
2017	89	88	86	85	84	83	82	80	79	78	77	76
	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)
2018	75	75	74	73	72	71	71	70	69	69	68	67
	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)
2019	67	66	66	65	65	65	64	64	63	63	63	63
	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)





Solar Cycle Comparison charts are temporarily unavailable.



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

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

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

http://spaceweather.gov/weekly/ -- Current and previous year

http://spaceweather.gov/ftpmenu/warehouse.html -- Online achive from 1997

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

