

Solar activity was very low throughout the period.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit reached moderate levels on 10 Mar with normal levels observed through the remainder of the week.

Geomagnetic field activity reached active levels late on 09 Mar and early on 10 Mar due to the combined influences of a coronal hole high speed stream and a weak transient solar wind feature.

Space Weather Outlook
12 March - 07 April 2018

Solar activity is expected to continue at very low levels throughout the outlook period.

No proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to reach high levels on 18-25 Mar with moderate levels expected on 17, 26-30 Mar. Normal flux levels are expected throughout the remainder of the outlook period.

Geomagnetic field activity is expected to reach G1 (Minor) geomagnetic storm levels on 18 and 26 Mar and active levels are expected on 15-17, and 21 Mar due to the influences of multiple, recurrent coronal hole high speed streams. Generally quiet and quiet to unsettled conditions are expected for the rest of the outlook period as a nominal solar wind regime prevails.



Daily Solar Data

Date	Radio	Sun	Sunspot	X-ray		Flares							
	Flux	spot	Area	Background		X-ray			Optical				
	10.7cm	No.	(10 ⁻⁶ hemi.)	Flux		C	M	X	S	1	2	3	4
05 March	68	0	0	A0.0	0	0	0	0	0	0	0	0	0
06 March	68	0	0	A0.0	0	0	0	0	0	0	0	0	0
07 March	68	0	0	A0.0	0	0	0	0	0	0	0	0	0
08 March	67	0	0	A0.0	0	0	0	0	0	0	0	0	0
09 March	68	0	0	A0.0	0	0	0	0	0	0	0	0	0
10 March	68	0	0	A0.0	0	0	0	0	0	0	0	0	0
11 March	68	0	0	A0.0	0	0	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
05 March	2.1e+05	1.5e+04	3.4e+03	2.2e+06		
06 March	1.7e+05	1.6e+04	3.5e+03	1.7e+06		
07 March	2.3e+05	1.6e+04	3.6e+03	1.4e+06		
08 March	2.7e+05	1.6e+04	3.4e+03	1.6e+06		
09 March	5.2e+05	1.6e+04	3.5e+03	1.4e+06		
10 March	4.9e+05	1.6e+04	3.5e+03	2.3e+06		
11 March	2.2e+05	1.6e+04	3.7e+03	1.5e+06		

Daily Geomagnetic Data

Date	Middle Latitude Fredericksburg		High Latitude College		Estimated Planetary	
	A	K-indices	A	K-indices	A	K-indices
05 March	5	1-1-1-2-2-2-1-1	5	1-0-1-2-3-2-2-0	5	2-1-1-1-1-2-1-1
06 March	4	1-1-1-1-1-2-1-1	5	1-0-0-3-3-1-0-0	5	2-1-1-1-1-2-1-1
07 March	3	0-1-1-0-1-1-2-1	2	0-1-1-0-0-0-1-1	4	1-0-1-0-0-0-2-1
08 March	3	0-1-2-1-1-1-1-0	0	0-0-1-0-0-0-0-0	4	0-1-2-1-0-0-1-1
09 March	10	3-3-1-1-2-1-2-4	3	1-1-0-2-1-0-1-2	12	3-3-1-1-1-1-3-4
10 March	9	3-3-2-2-2-1-2-2	22	3-4-5-5-4-1-1-1	12	4-4-3-2-2-1-2-2
11 March	7	3-2-2-1-2-2-2-1	4	2-1-2-2-0-1-1-0	12	3-2-2-1-1-1-1-1

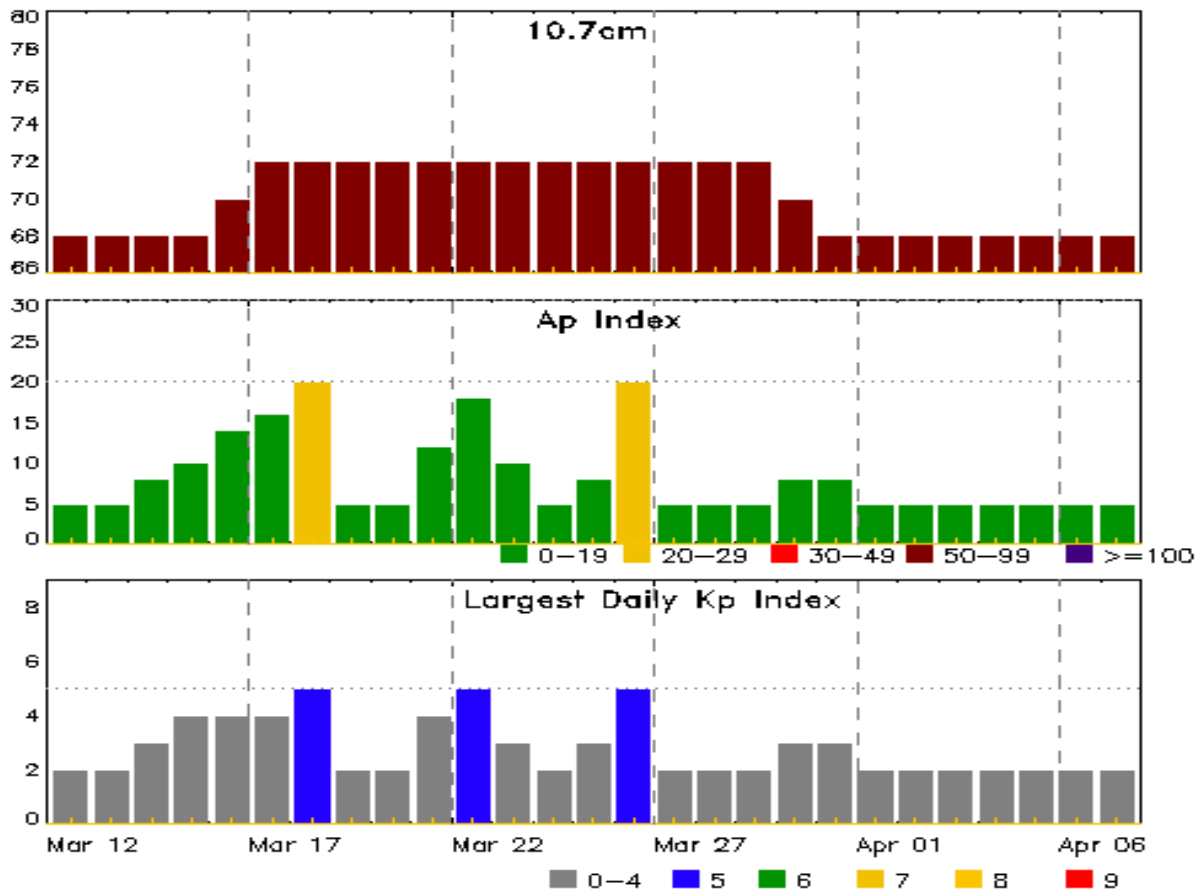


Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
09 Mar 0306	WARNING: Geomagnetic K = 4	09/0305 - 0900
09 Mar 2244	WARNING: Geomagnetic K = 4	09/2245 - 10/0900
09 Mar 2318	ALERT: Geomagnetic K = 4	09/2315
10 Mar 0029	WARNING: Geomagnetic K = 5	10/0025 - 0600
10 Mar 0558	EXTENDED WARNING: Geomagnetic K = 5	10/0025 - 1200
10 Mar 0558	EXTENDED WARNING: Geomagnetic K = 4	09/2245 - 10/1500
10 Mar 1455	EXTENDED WARNING: Geomagnetic K = 4	09/2245 - 10/2100
10 Mar 2055	EXTENDED WARNING: Geomagnetic K = 4	09/2245 - 11/0600



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
12 Mar	68	5	2	26 Mar	72	20	5
13	68	5	2	27	72	5	2
14	68	8	3	28	72	5	2
15	68	10	4	29	72	5	2
16	70	14	4	30	72	8	3
17	72	16	4	31	68	8	3
18	72	20	5	01 Apr	68	5	2
19	72	5	2	02	68	5	2
20	72	5	2	03	68	5	2
21	72	12	4	04	68	5	2
22	72	18	5	05	68	5	2
23	72	10	3	06	68	5	2
24	72	5	2	07	68	5	2
25	72	8	3				

Energetic Events

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

No Events Observed

Flare List

Date	Time			X-ray Class	Optical		
	Begin	Max	End		Imp/ Brtns	Location Lat CMD	Rgn #
No Flares Observed							

No Flares Observed



Region Summary

Location		Sunspot Characteristics						Flares							
Date	Lat CMD	Helio	Area	Extent	Spot	Spot	Mag	X-ray			Optical				
		Lon	10 ⁻⁶ hemi.	(helio)	Class	Count	Class	C	M	X	S	1	2	3	4
Region 2700															
26 Feb	N06W13	328	30	4	Cro	6	B				1				
27 Feb	N06W28	330	10	5	Bxo	5	B								
28 Feb	N07W41	330	10	1	Axx	1	A				1				
01 Mar	N08W55	330	plage	1											
02 Mar	N07W68	330	10		Axx	1	A	1			1				
03 Mar	N07W82	331	plage												
								1	0	0	3	0	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 328

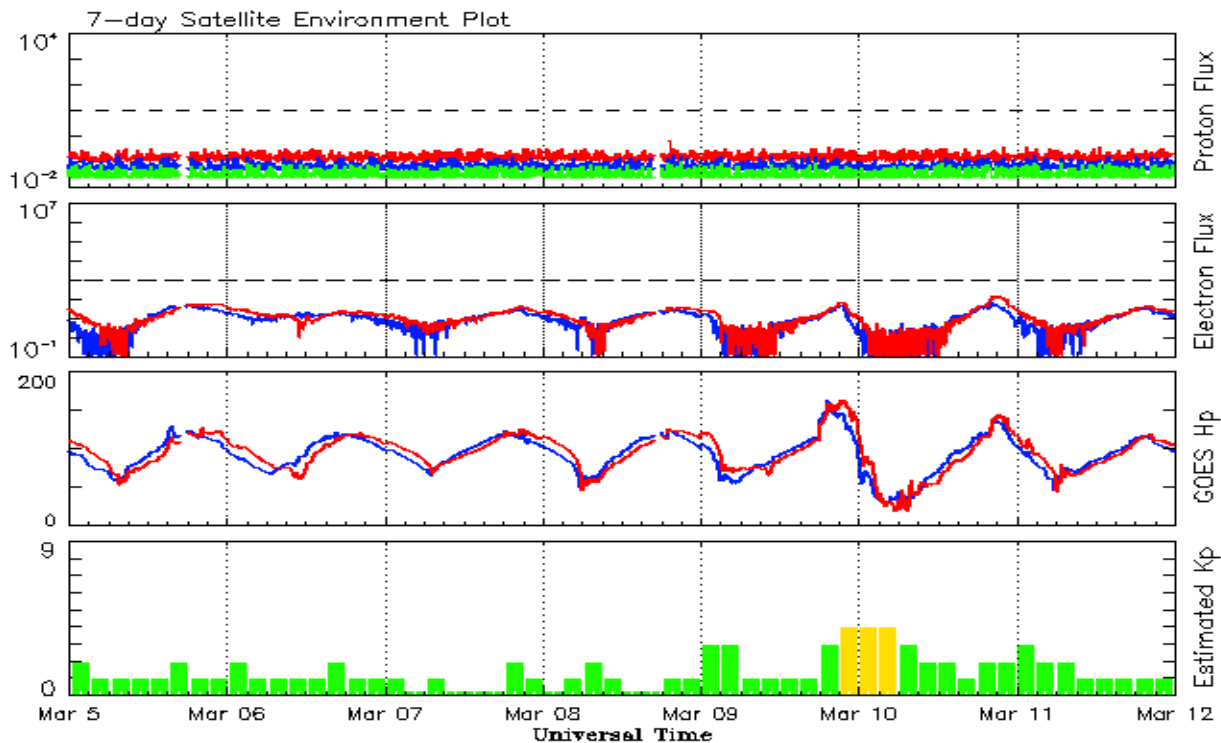


Recent Solar Indices (preliminary)
Observed monthly mean values

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
2016									
March	40.9	32.5	0.80	47.7	30.2	91.6	96.6	11	11.8
April	39.2	22.7	0.58	45.0	28.7	93.4	95.3	10	11.8
May	48.9	30.9	0.64	42.1	26.9	93.1	93.2	12	11.7
June	19.3	12.3	0.65	39.0	24.9	81.9	90.4	9	11.4
July	36.8	19.4	0.53	36.5	23.1	85.9	87.7	10	11.2
August	50.4	30.1	0.60	34.2	21.6	85.0	85.5	10	11.2
September	37.4	26.8	0.72	32.1	19.9	87.8	83.7	16	11.3
October	30.0	20.0	0.67	31.1	18.9	86.1	82.5	16	11.6
November	22.4	12.8	0.57	29.4	17.9	78.7	81.1	10	11.6
December	17.6	11.1	0.64	28.1	17.1	75.1	80.0	10	11.4
2017									
January	28.1	15.7	0.55	27.3	16.7	77.4	79.4	10	11.3
February	22.0	15.8	0.71	25.5	15.9	76.9	78.7	10	11.3
March	25.4	10.6	0.42	24.6	15.4	74.6	78.6	15	11.5
April	30.4	19.4	0.64	24.3	14.9	80.9	78.4	13	11.5
May	18.1	11.3	0.62	23.1	14.0	73.5	77.7	9	11.3
June	18.0	11.5	0.64	22.0	13.3	74.8	77.3	7	11.3
July	18.8	10.7	0.59	20.8	12.6	77.7	76.8	9	11.0
August	25.0	19.6	0.80	19.7	11.7	77.9	76.3	12	10.7
September	42.2	26.2	0.62			92.0		19	
October	16.0	7.9	0.49			76.4		11	
November	7.7	3.4	0.44			72.1		11	
December	7.6	4.9	0.64			71.5		8	
2018									
January	7.8	4.0	0.51			70.0		6	
February	16.0	6.4	0.40			72.0		7	

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 05 March 2018*

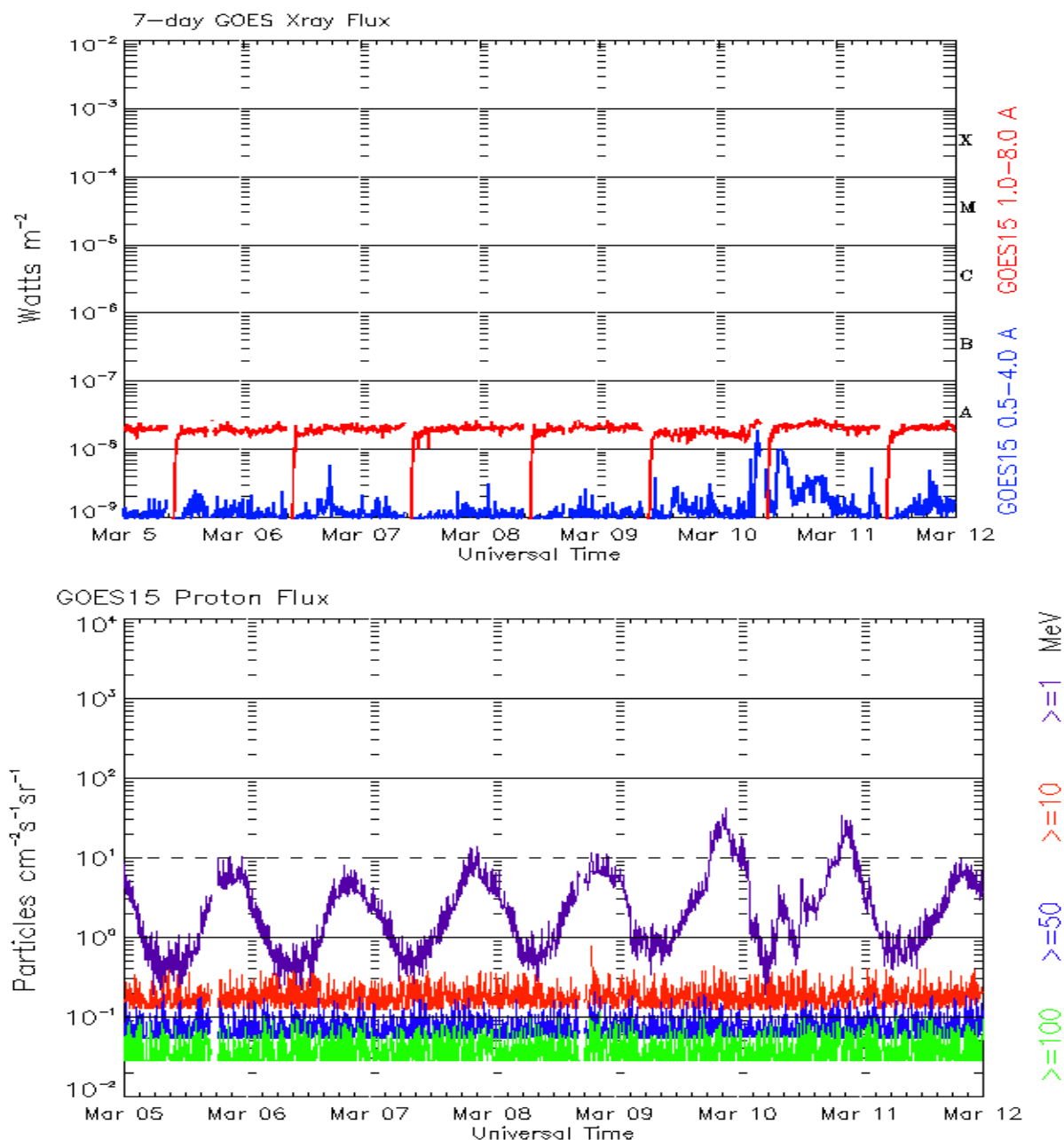
The proton flux plot contains the five-minute averaged integral proton flux (protons/cm²-sec -sr) as measured by the SWPC Primary GOES satellite, near West 75, for each of three energy thresholds: greater than 10, 50, and 100 MeV.

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 05 March 2018*

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 integral 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.



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U.S. Department of Commerce
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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

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