

# SIDC Space Weather Briefing

26 March 2023-02 April 2023

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& the SIDC forecaster team



Royal Observatory  
of Belgium

Solar Influences  
Data analysis Centre  
[www.sidc.be](http://www.sidc.be)

# Summary Report

Solar activity from 2023-03-26 12:00 to 2023-04-02 23:59

Active regions	11 numbered ARs (most notable: NOAA ARs 3256)
Flares	# C-class flare: 35 # M-class flare: 3 # X-class flare: 1
Coronal Holes	1 large equatorial negative polarity CH, 2 small equatorial negative polarity CHs
CMEs	Full halo back-sided CME and multiple limb events

Proton flux	Below event threshold
Electron flux	Above threshold, due to arrival of HSS

## Solar wind and geomagnetic conditions

ICMEs	None
Solar wind conditions	B : 2 - 9 nT //Bz: -6 nT to 5 nT //Speed: 350 - 600/s
K-indices	max K-index (KBel): 5 max Kp-index (NOAA): 4

# Solar Activity

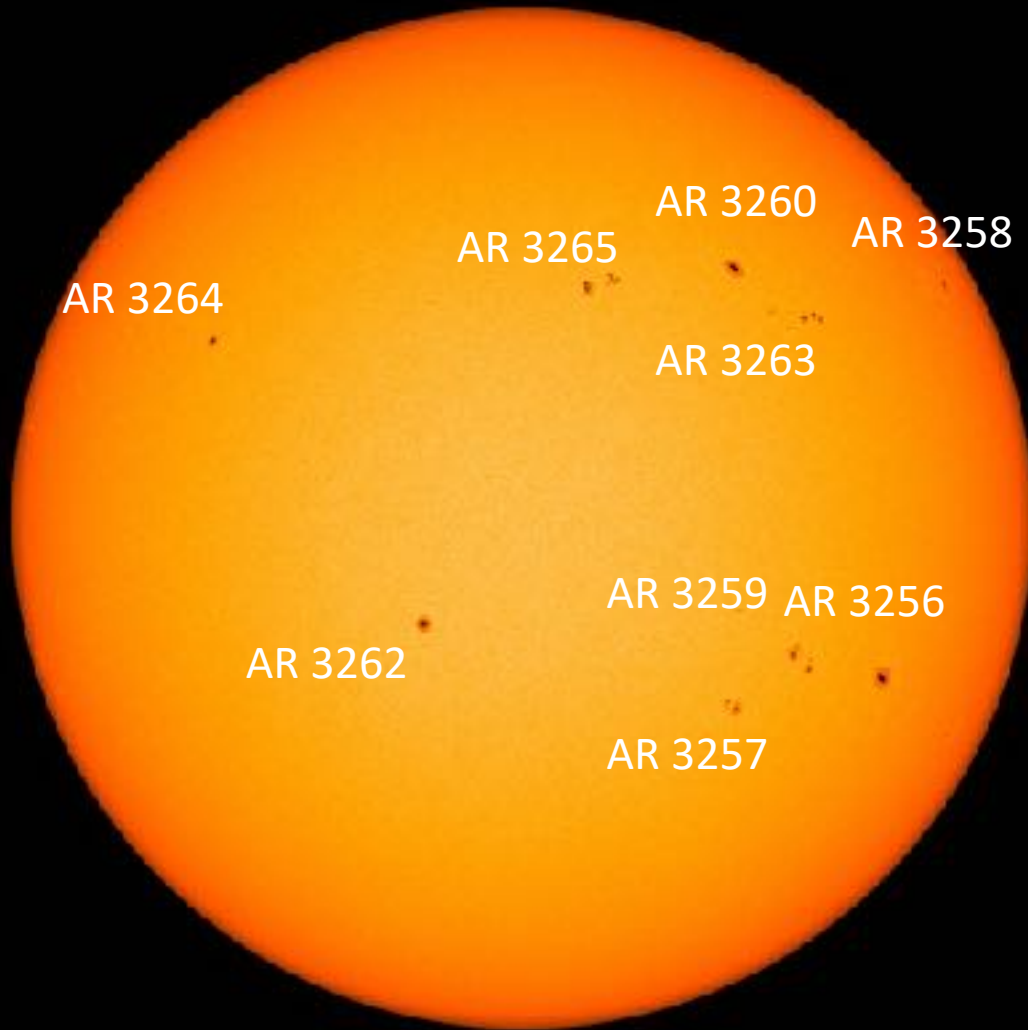


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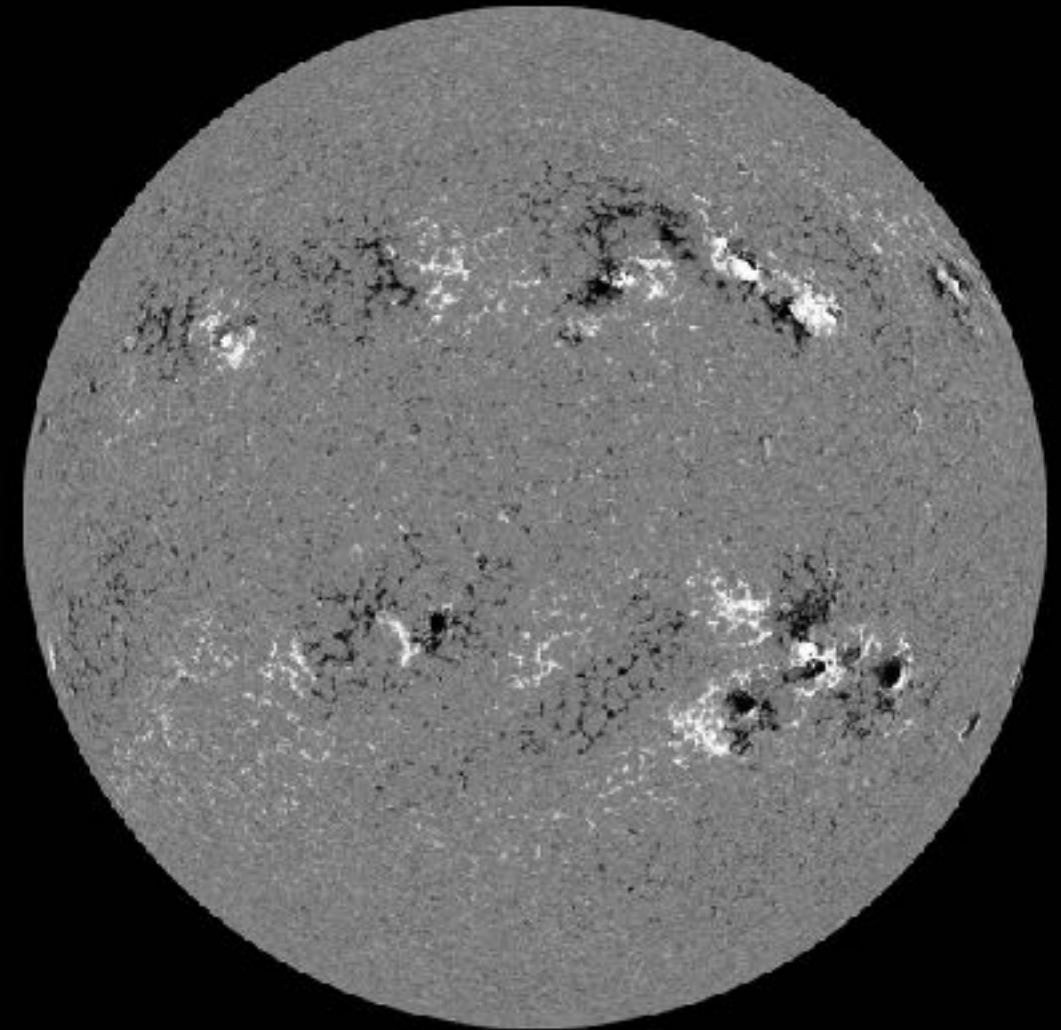
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# Solar active regions

SDO/HMI White Light 2023-03-27

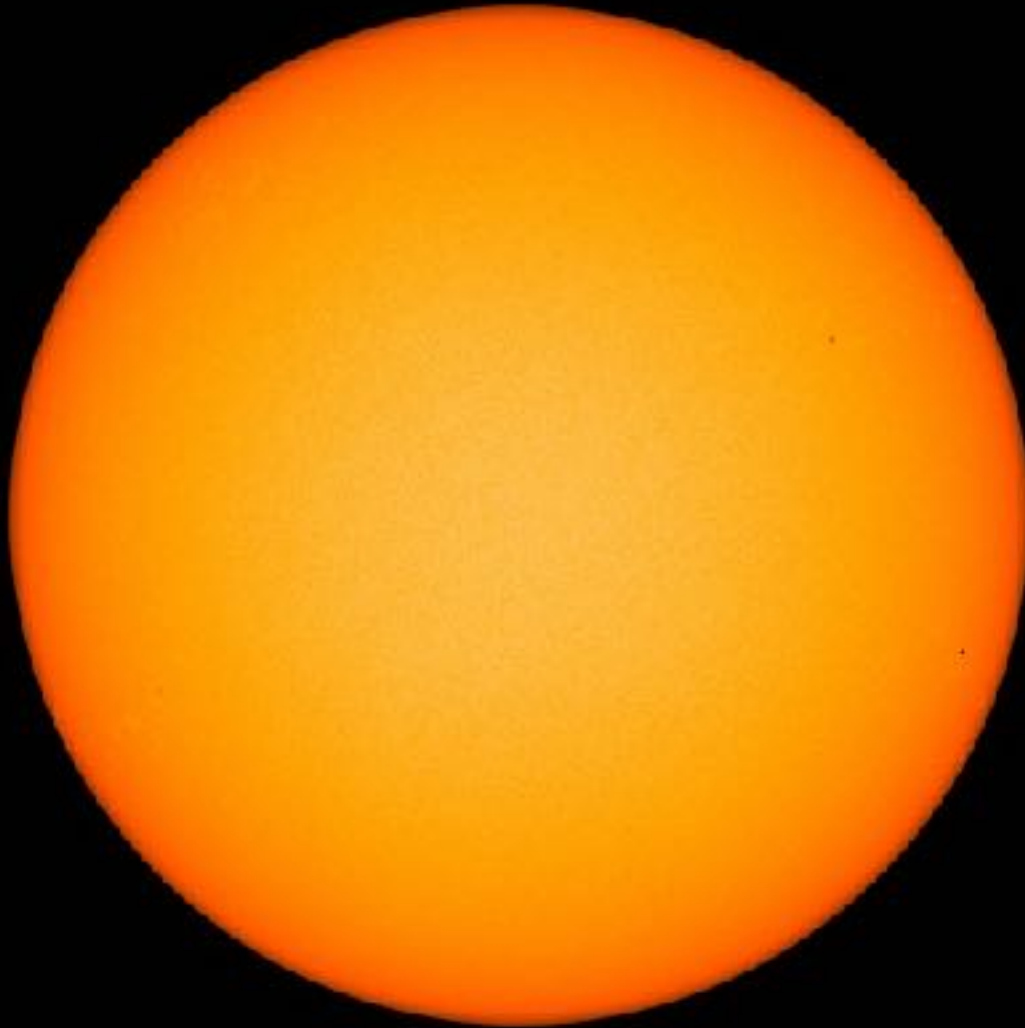


SDO/HMI Magnetogram 2023-03-27

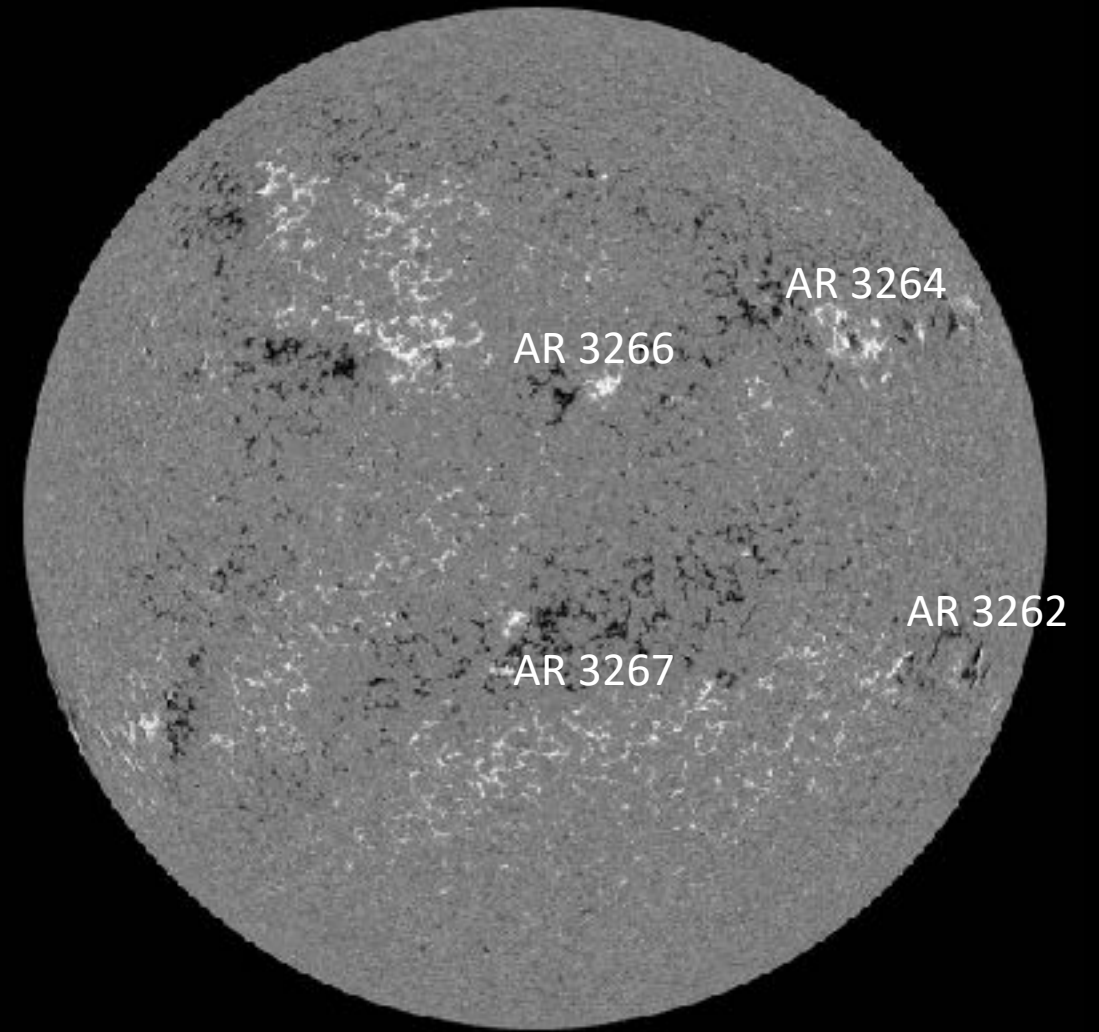


# Solar active regions

SDO/HMI White Light 2023-04-02



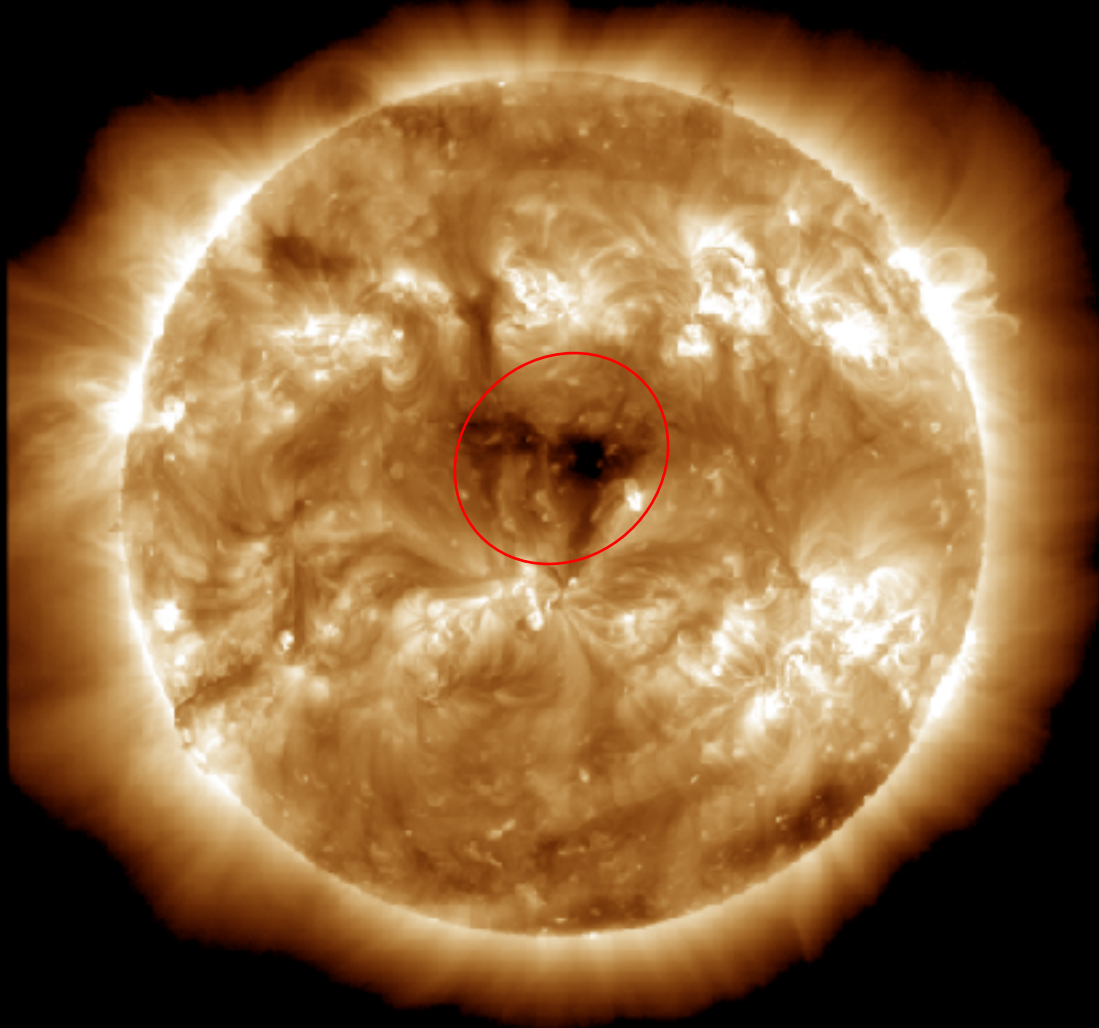
SDO/HMI Magnetogram 2023-04-02



# Coronal holes

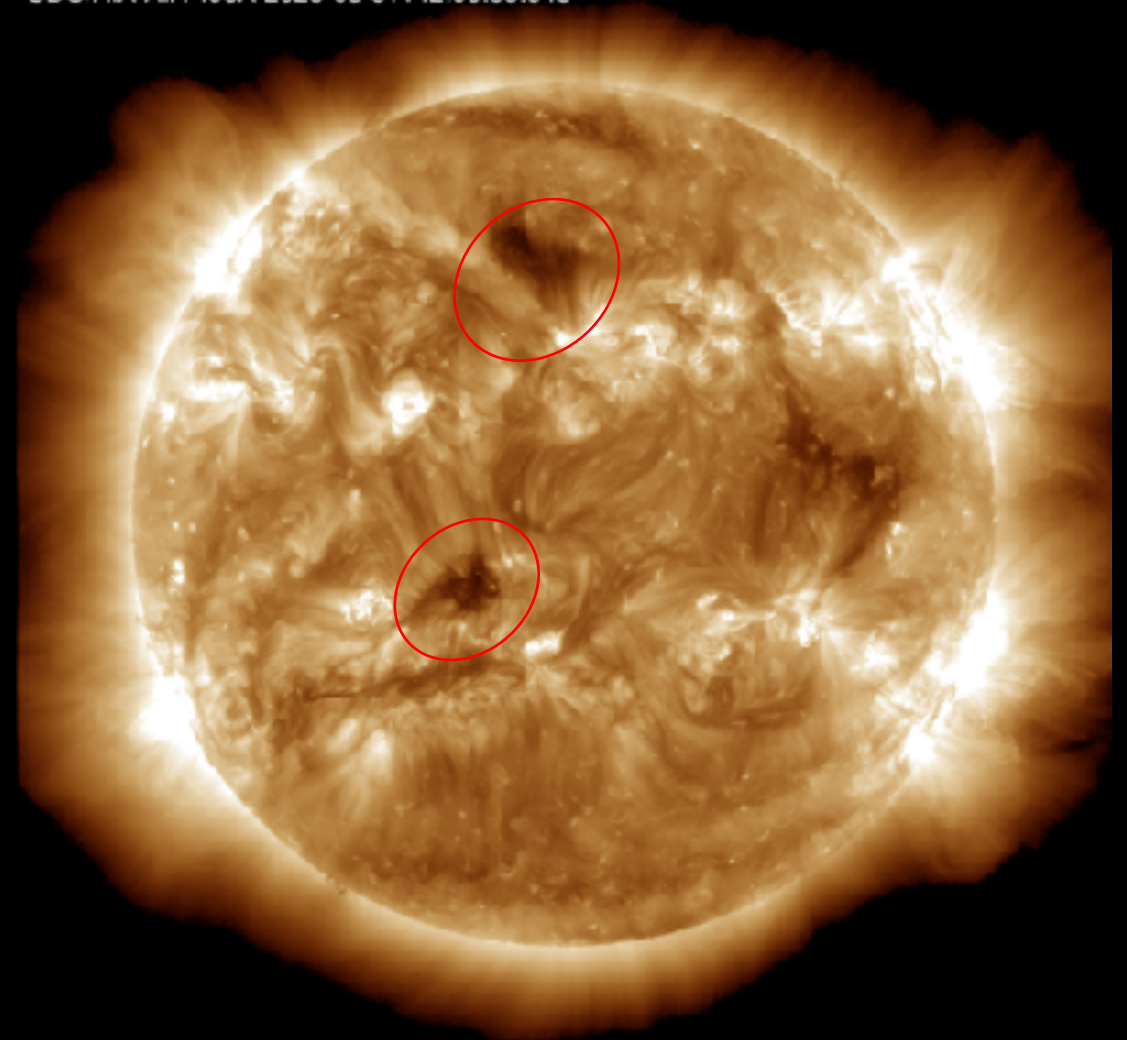
SDO/AIA 19.3 nm 2023-03-28

SDO/AIA AIA\_193A\_2023\_03\_28T12:00:05.843



SDO/AIA 19.3 nm 2023-03-31

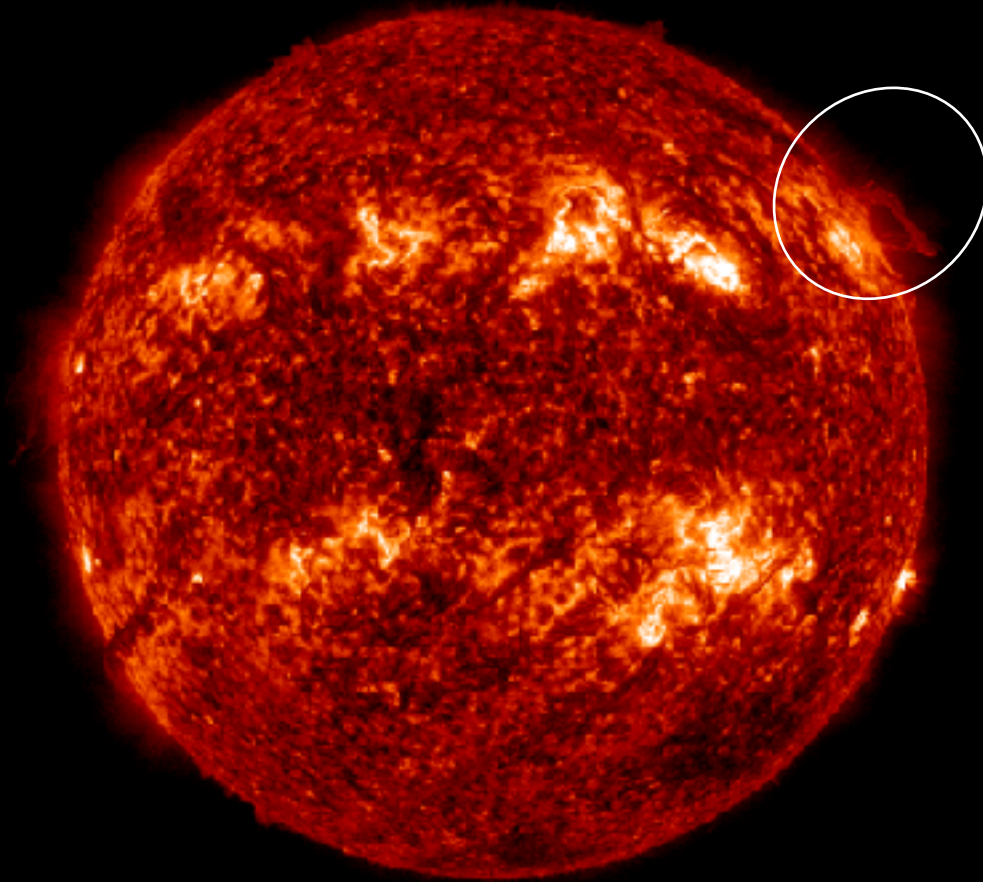
SDO/AIA AIA\_193A\_2023\_03\_31T12:00:05.843



# Filaments

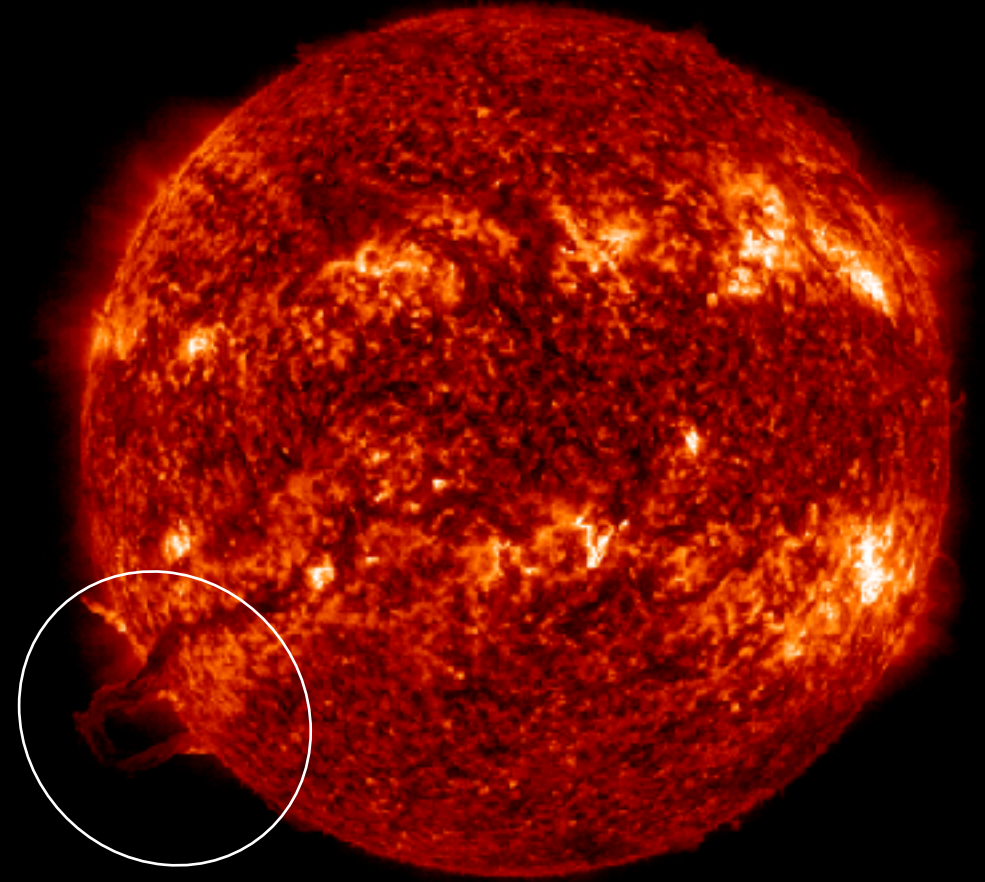
SDO/AIA 30.4 nm 2023-03-27

SDO/AIA AIA 304Å 2023-03-27T12:00:06.684



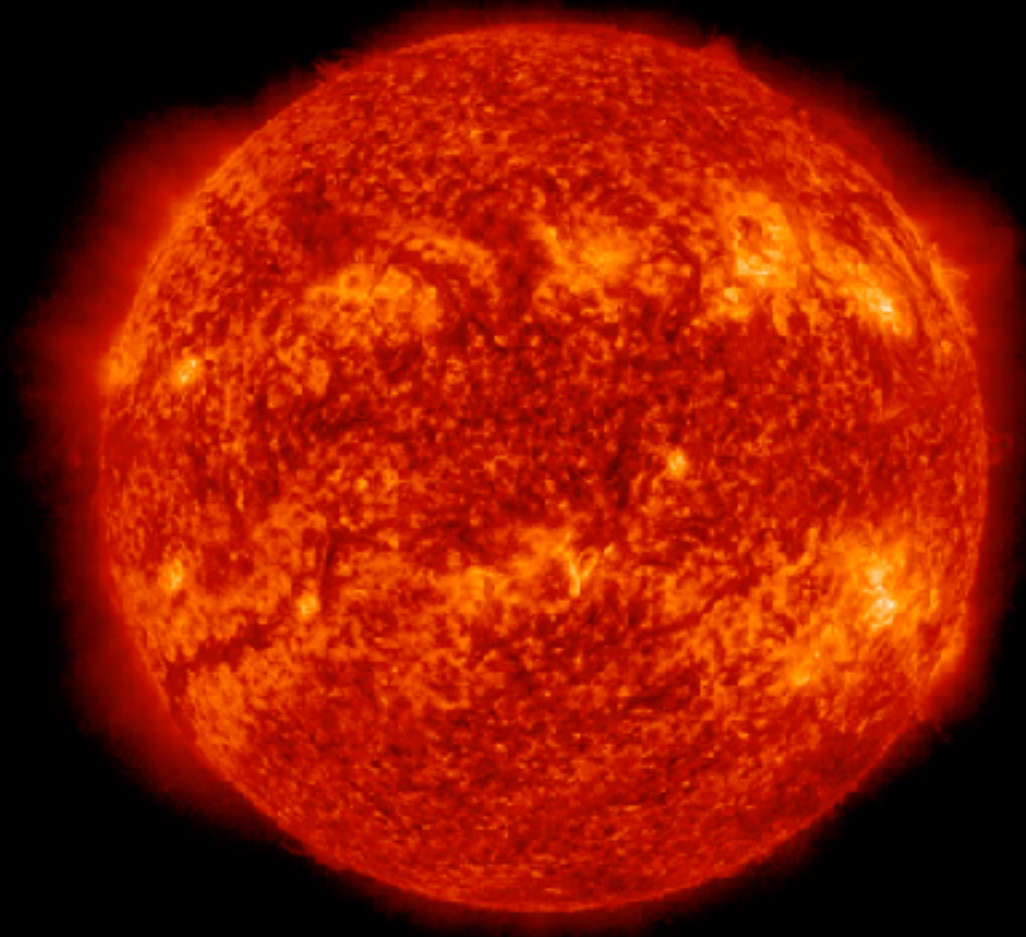
SDO/AIA 30.4 nm 2023-03-29

SDO/AIA AIA 304Å 2023-03-29T12:00:06.672



# Filaments

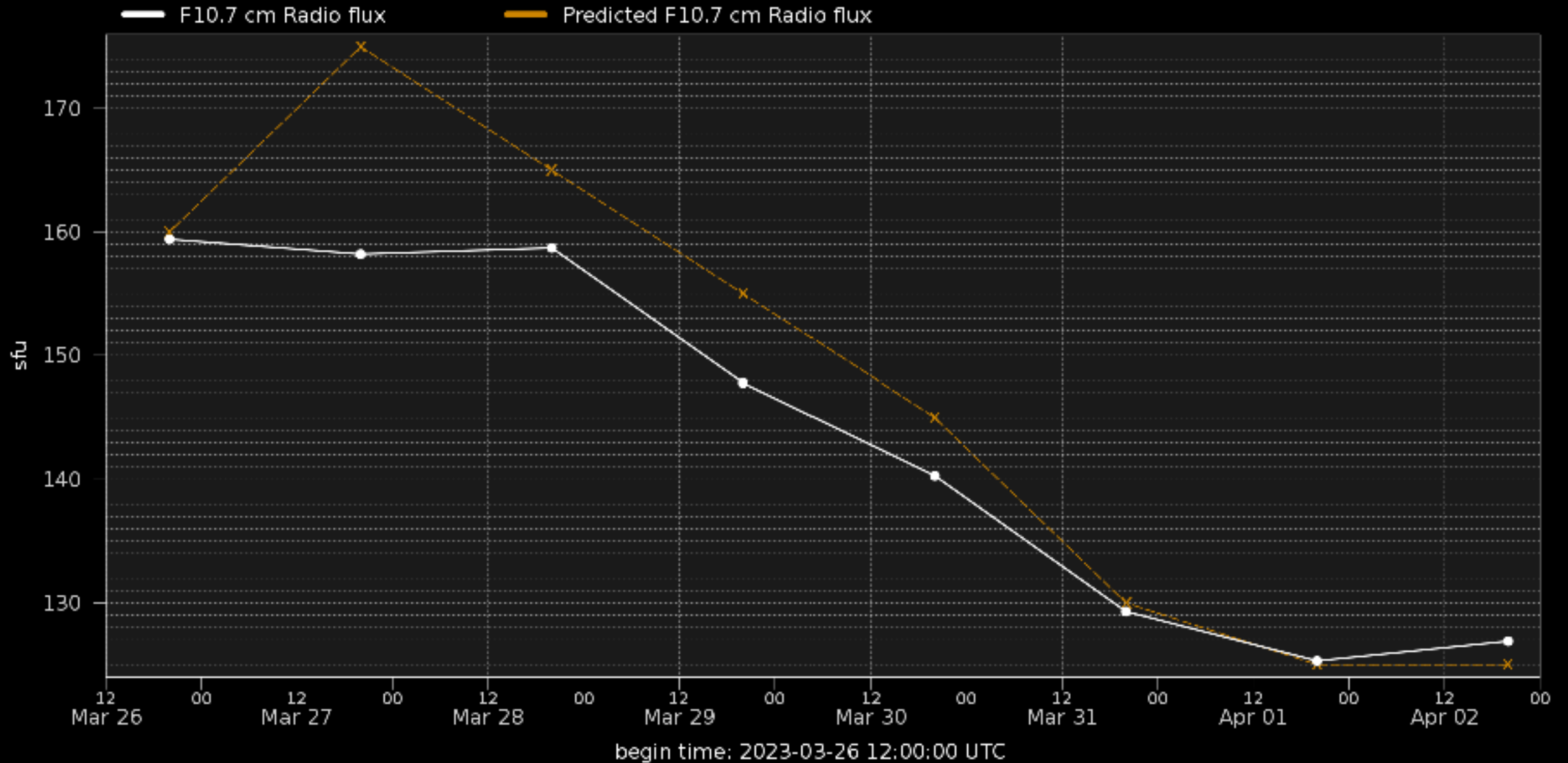
SDO/AIA 30.4 nm



SDO/AIA 304 2023-03-29 00:08:13 UT

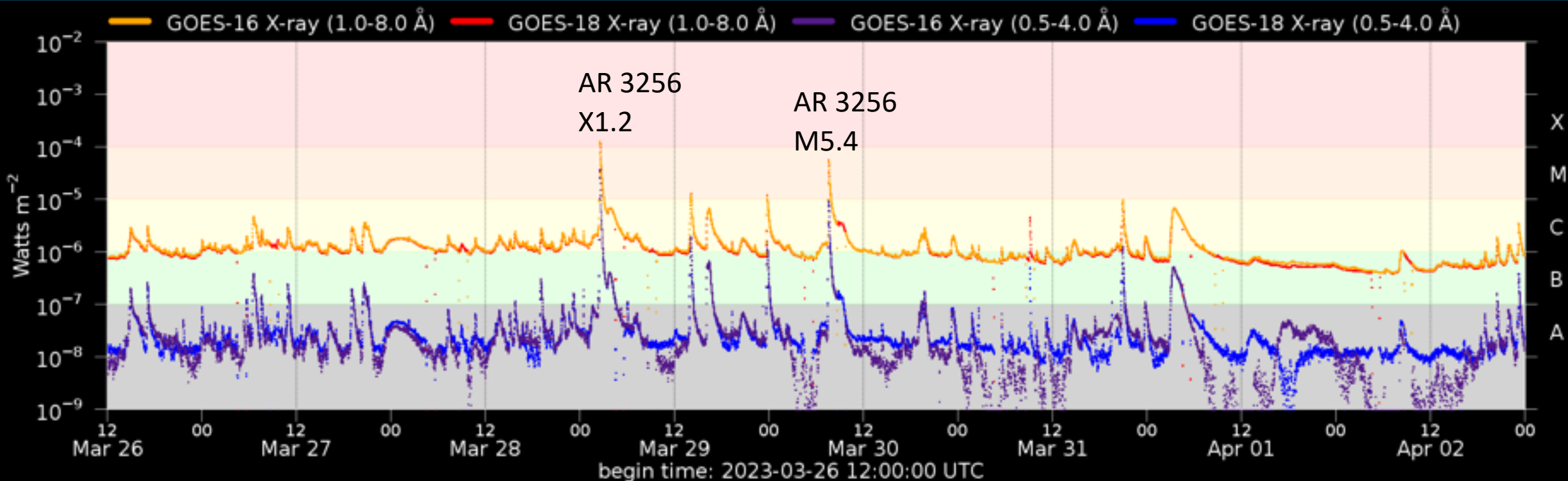


# Solar F10.7cm radio flux



# Flaring activity

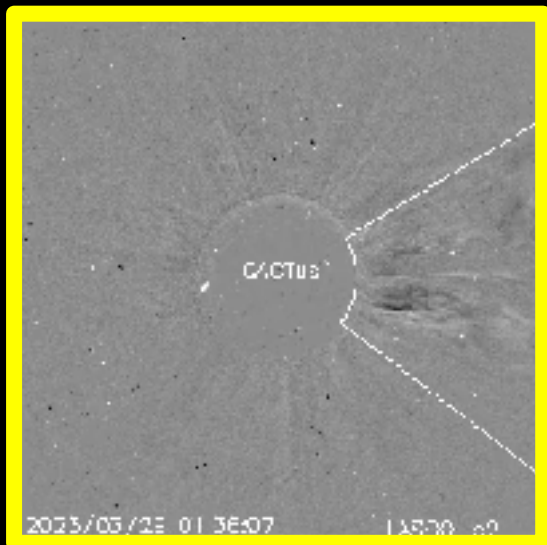
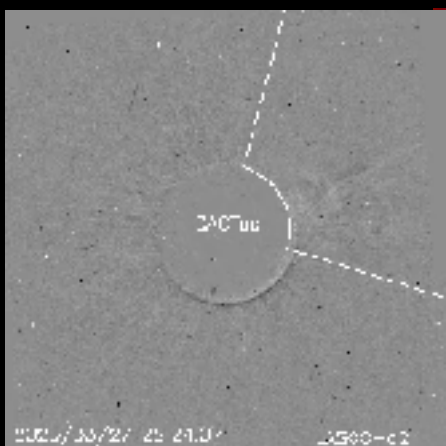
NOAA ARs 3256, 3259, 3262, 3263



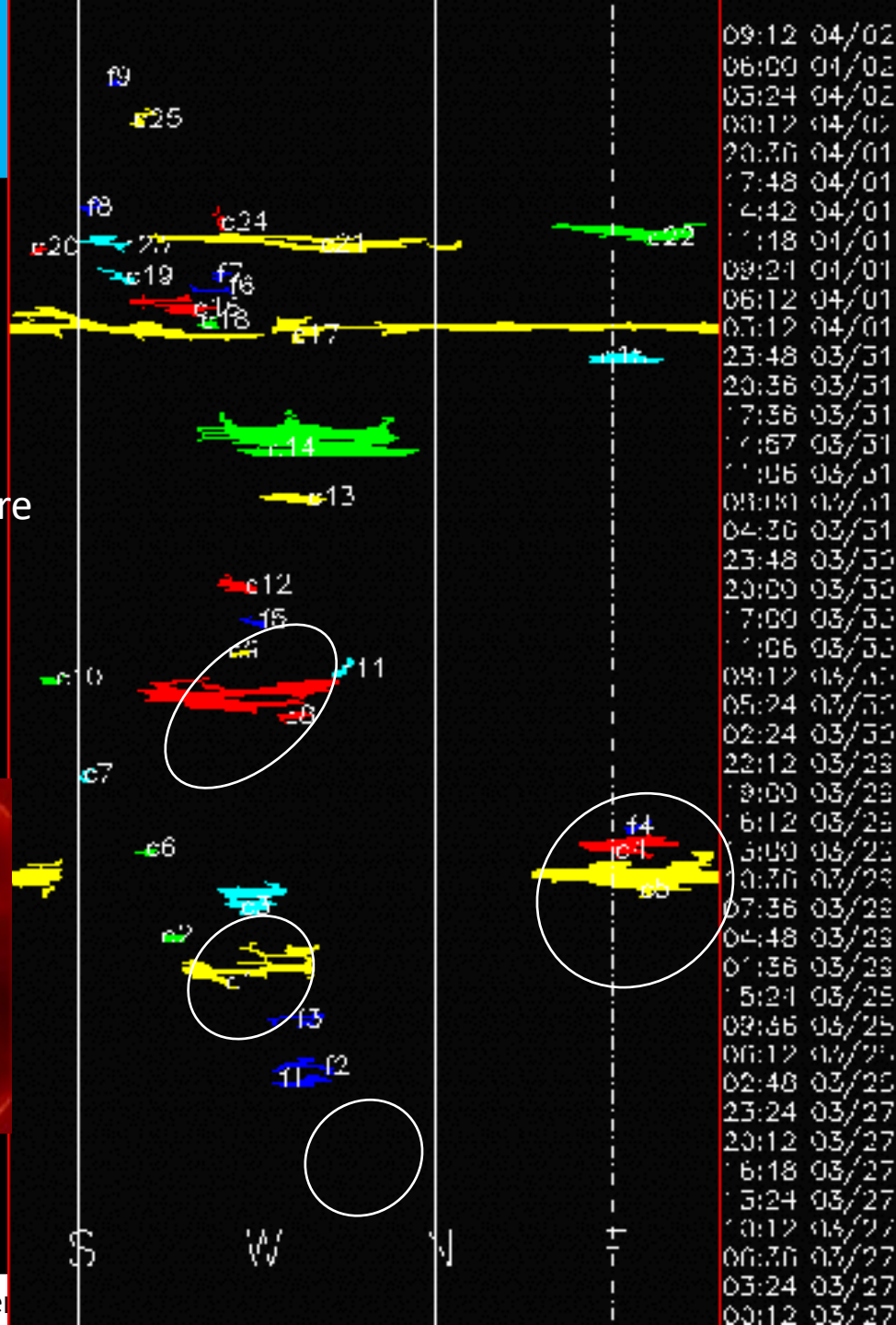
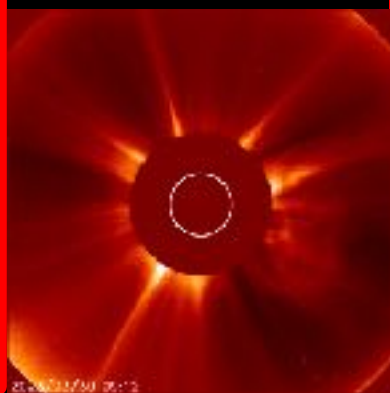
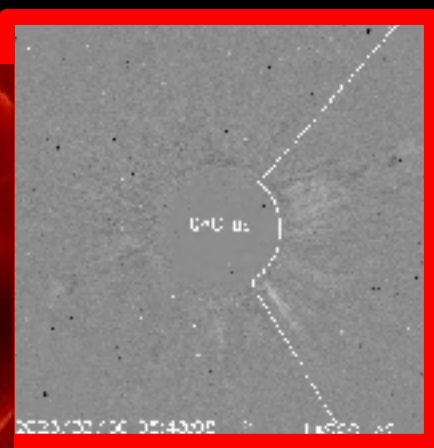
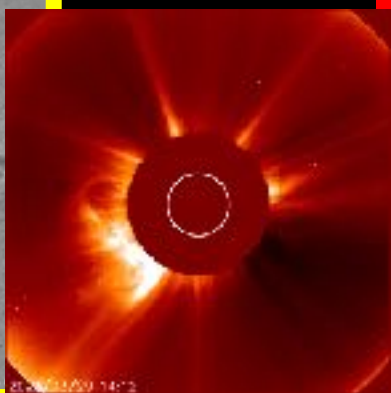
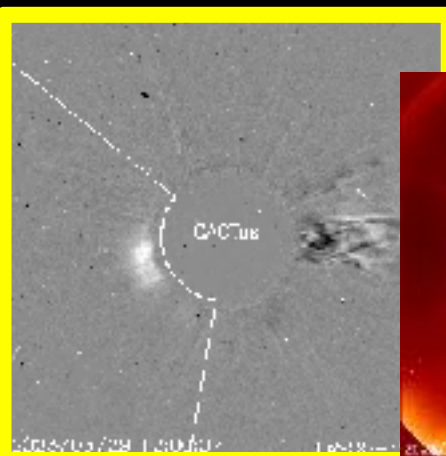
Probabilities (%) and occurrences (#) of C/M/X-flares daily, from noon to noon:

Issue date	2023-03-26	2023-03-27	2023-03-28	2023-03-29	2023-03-30	2023-03-31	2023-04-01	2023-04-02
Probability (%)	85   15   05	80   10   01	95   10   01	95   15   01	90   25   05	85   10   01	60   05   01	25   01   01
Observed (#)	06   00   00	04   00   00	05   00   01	02   03   00	08   00   00	06   00   00	01   00   00	03   00   00

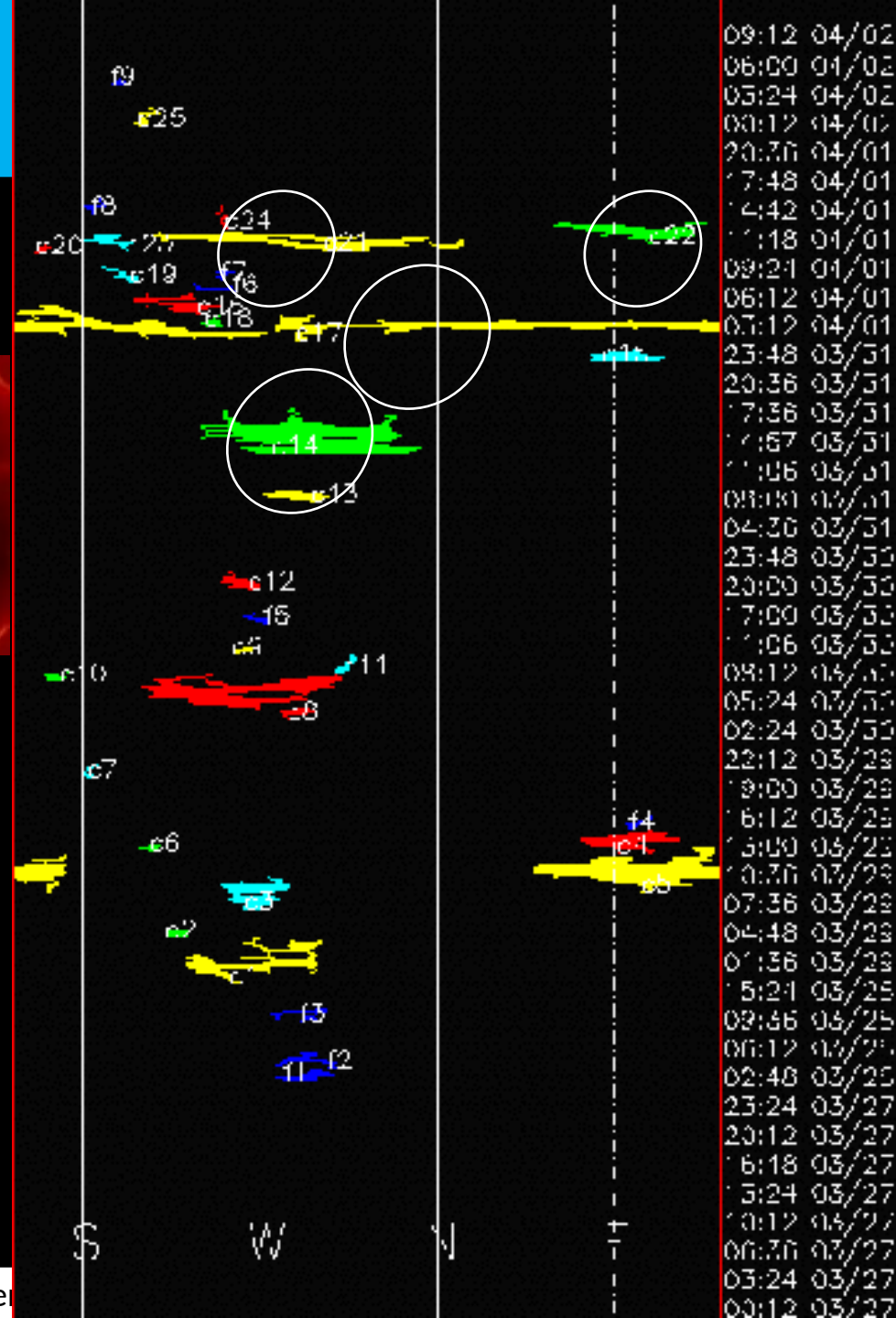
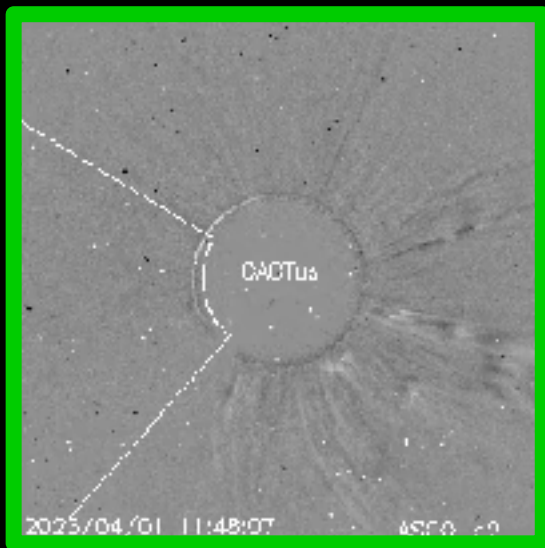
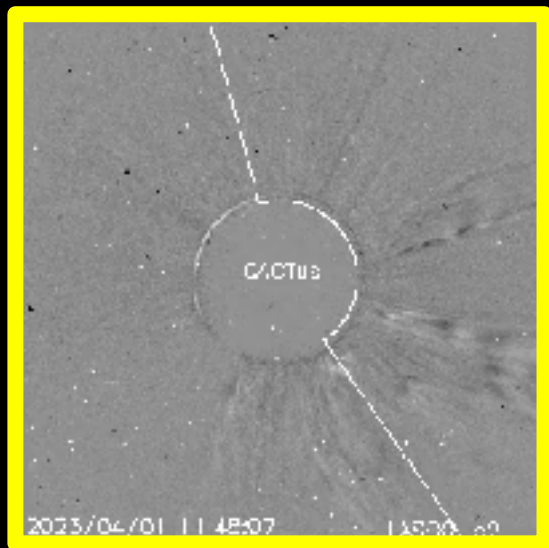
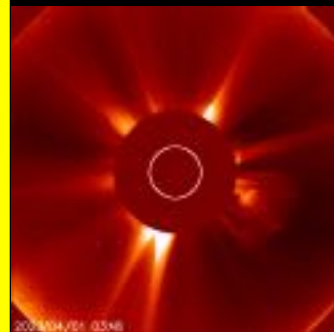
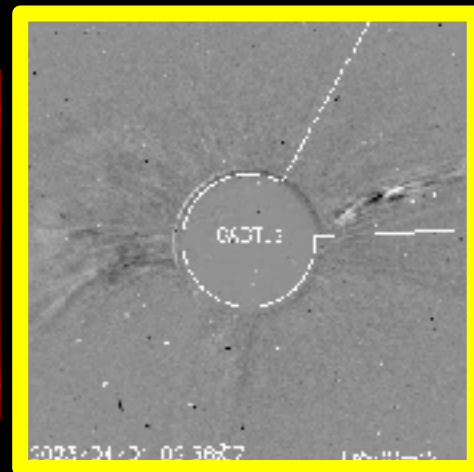
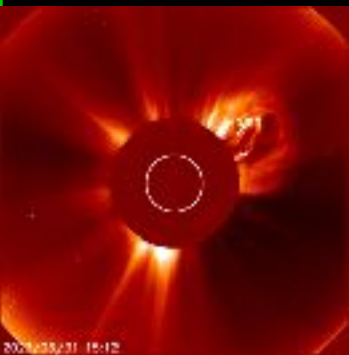
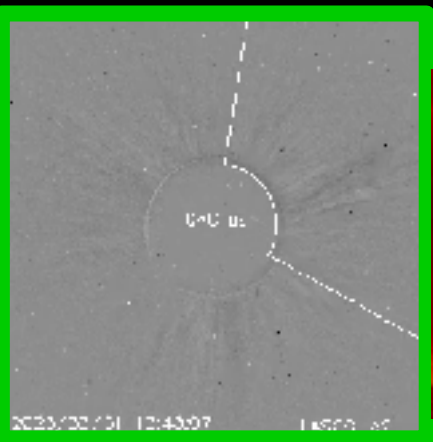
# Coronal Mass Ejections



Related to X1.1 class flare



# Coronal Mass Ejections



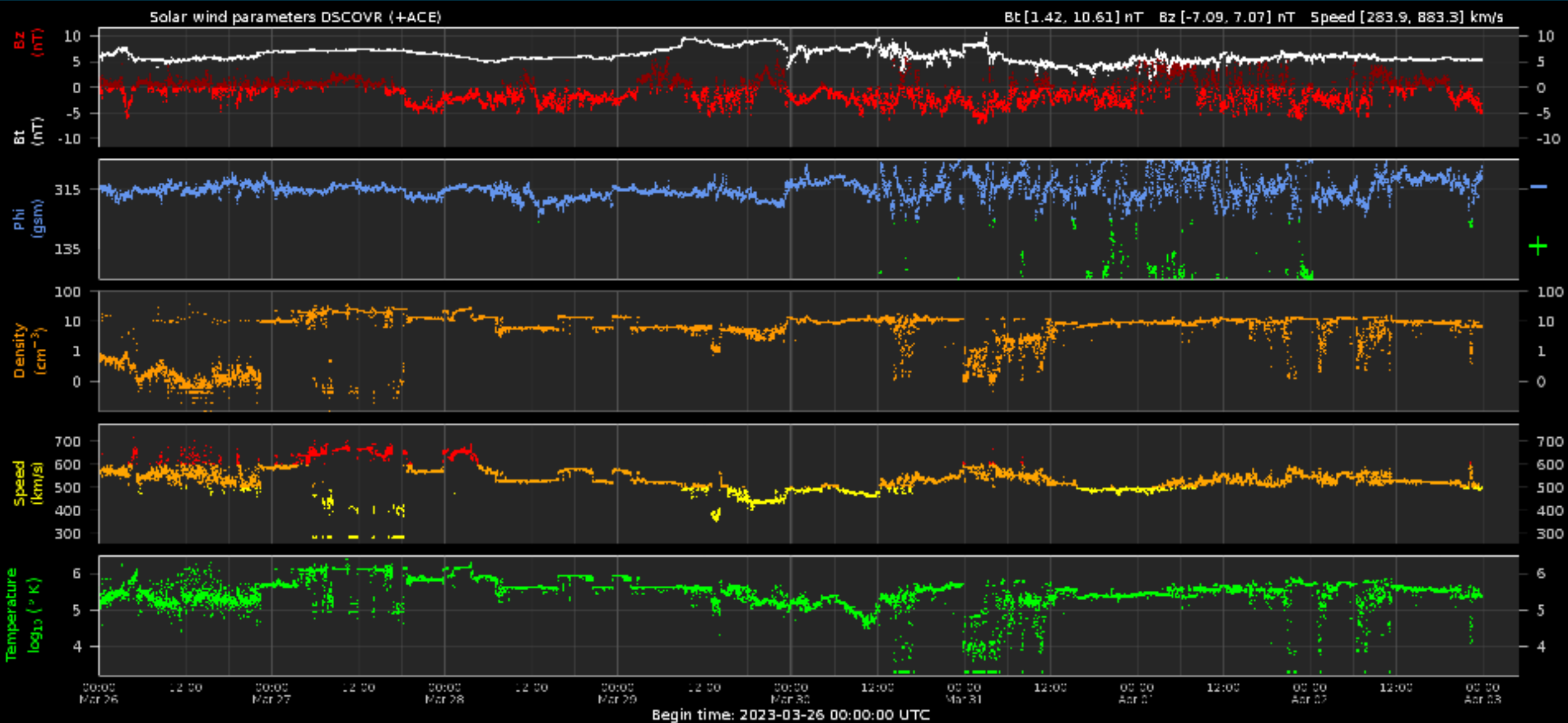
# Solar Wind and Geomagnetic Activity



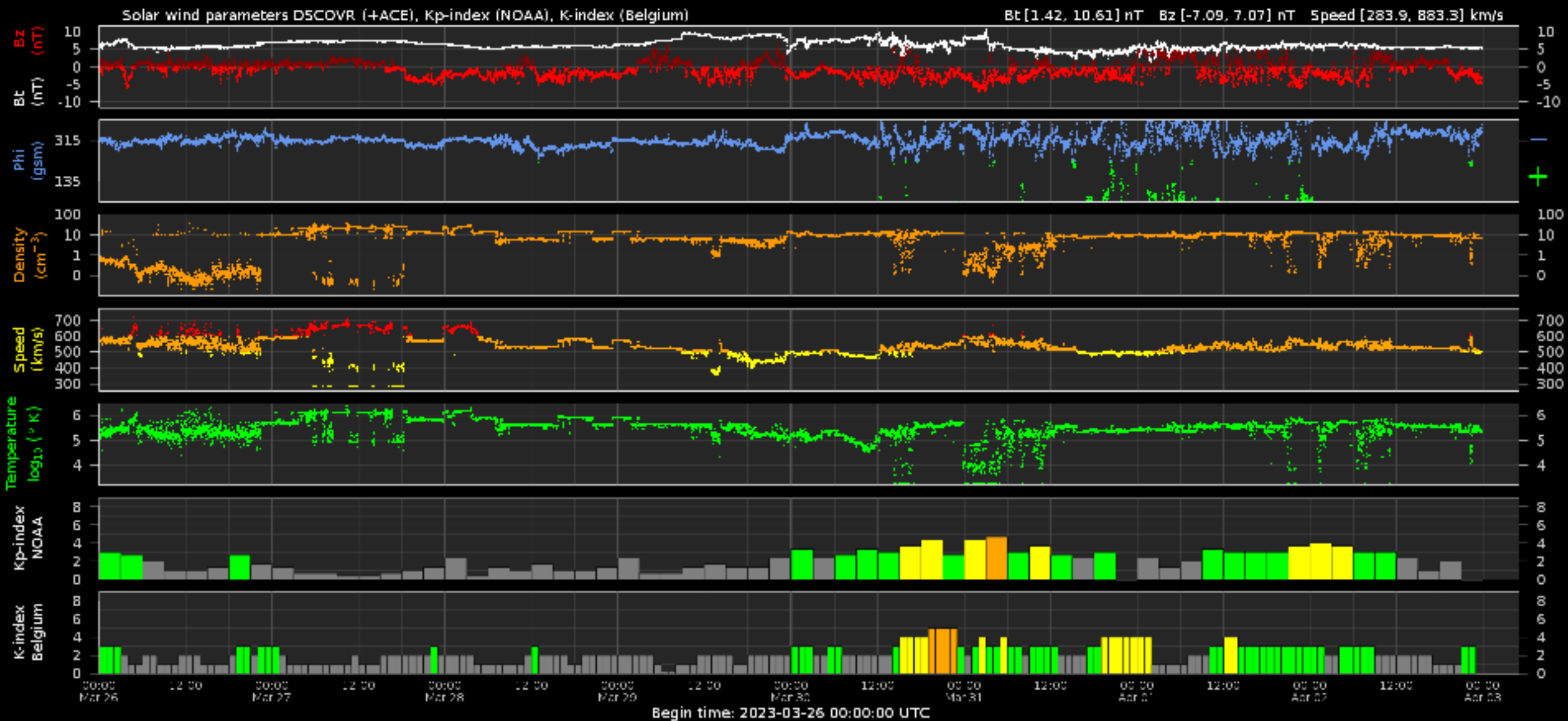
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# Solar wind parameters



# Solar wind parameters & K-indices



# Energetic Particles

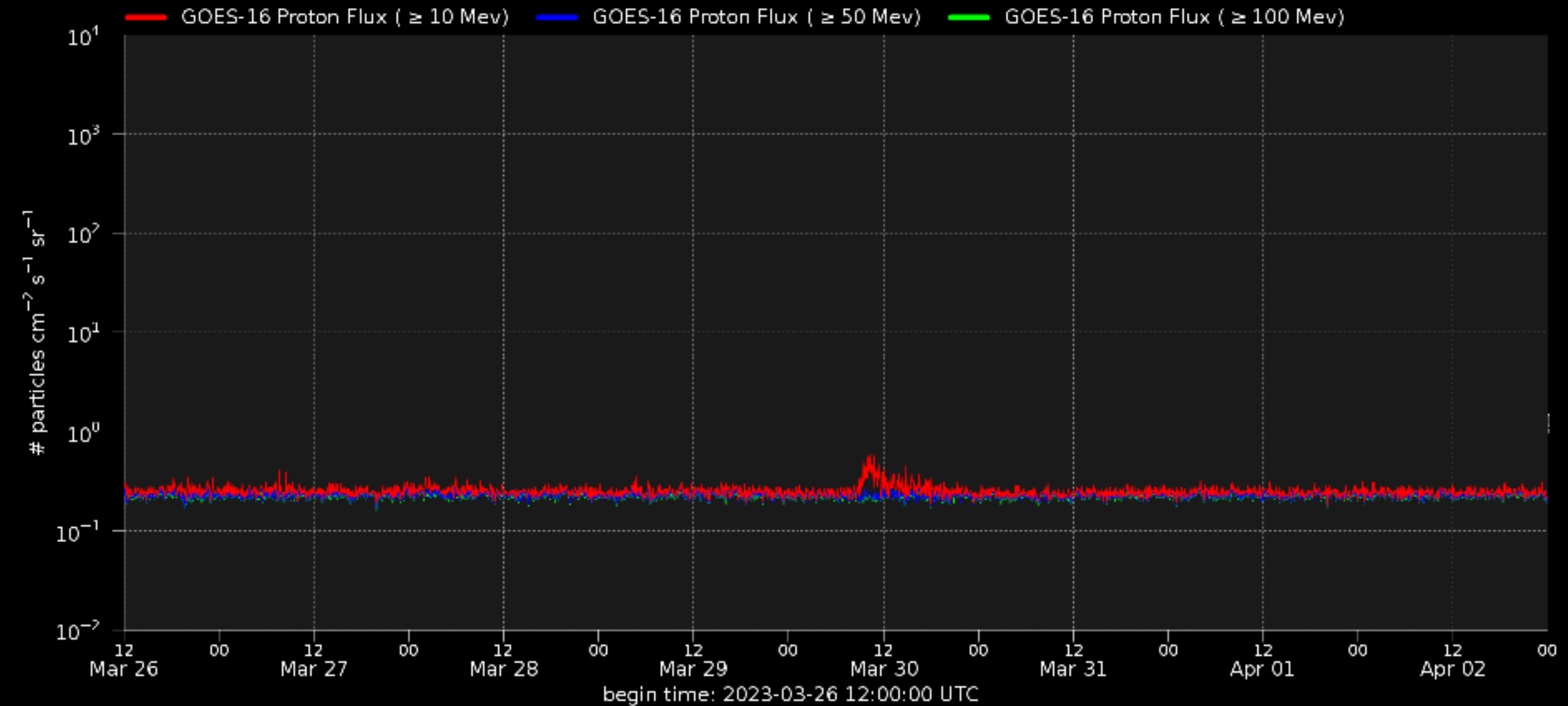


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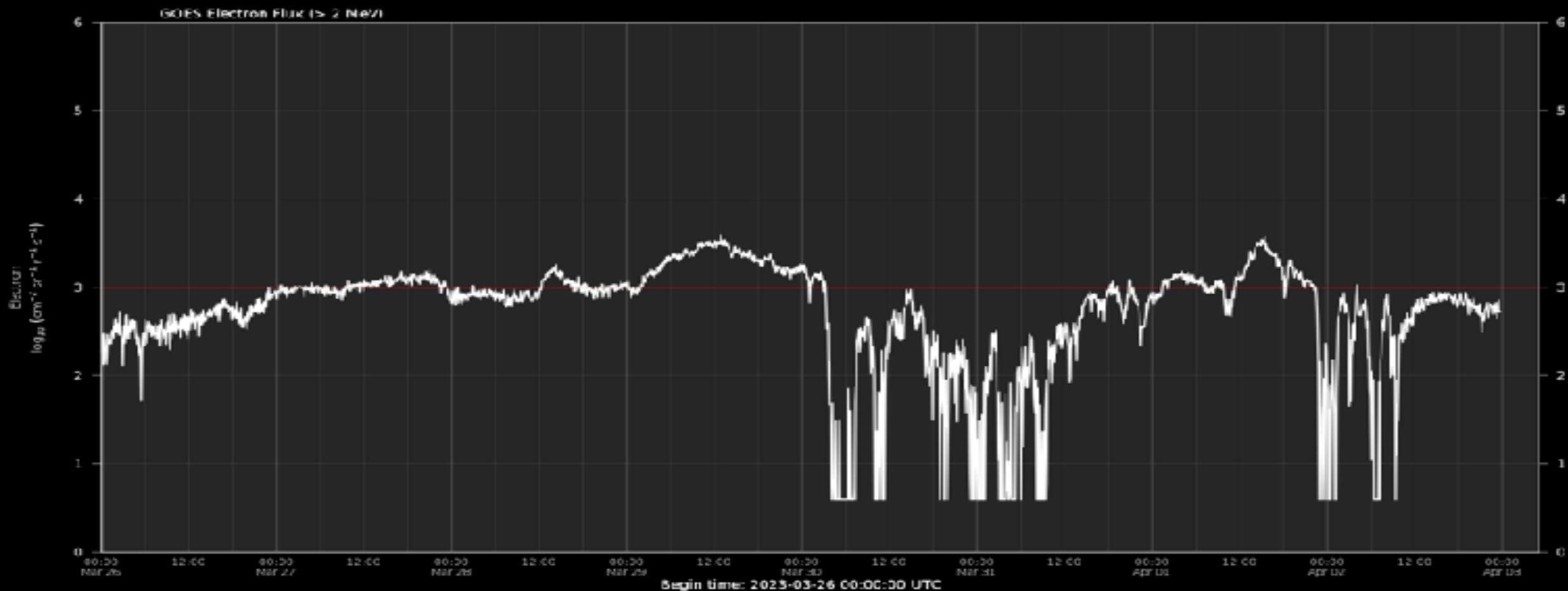
# Solar proton flux



# Electron flux at GEO

[www.stce.be/educational/classification#electrons](http://www.stce.be/educational/classification#electrons)

[www.spaceweather.gc.ca/forecast-prevision/space-spatiale/sffl-en.php](http://www.spaceweather.gc.ca/forecast-prevision/space-spatiale/sffl-en.php)



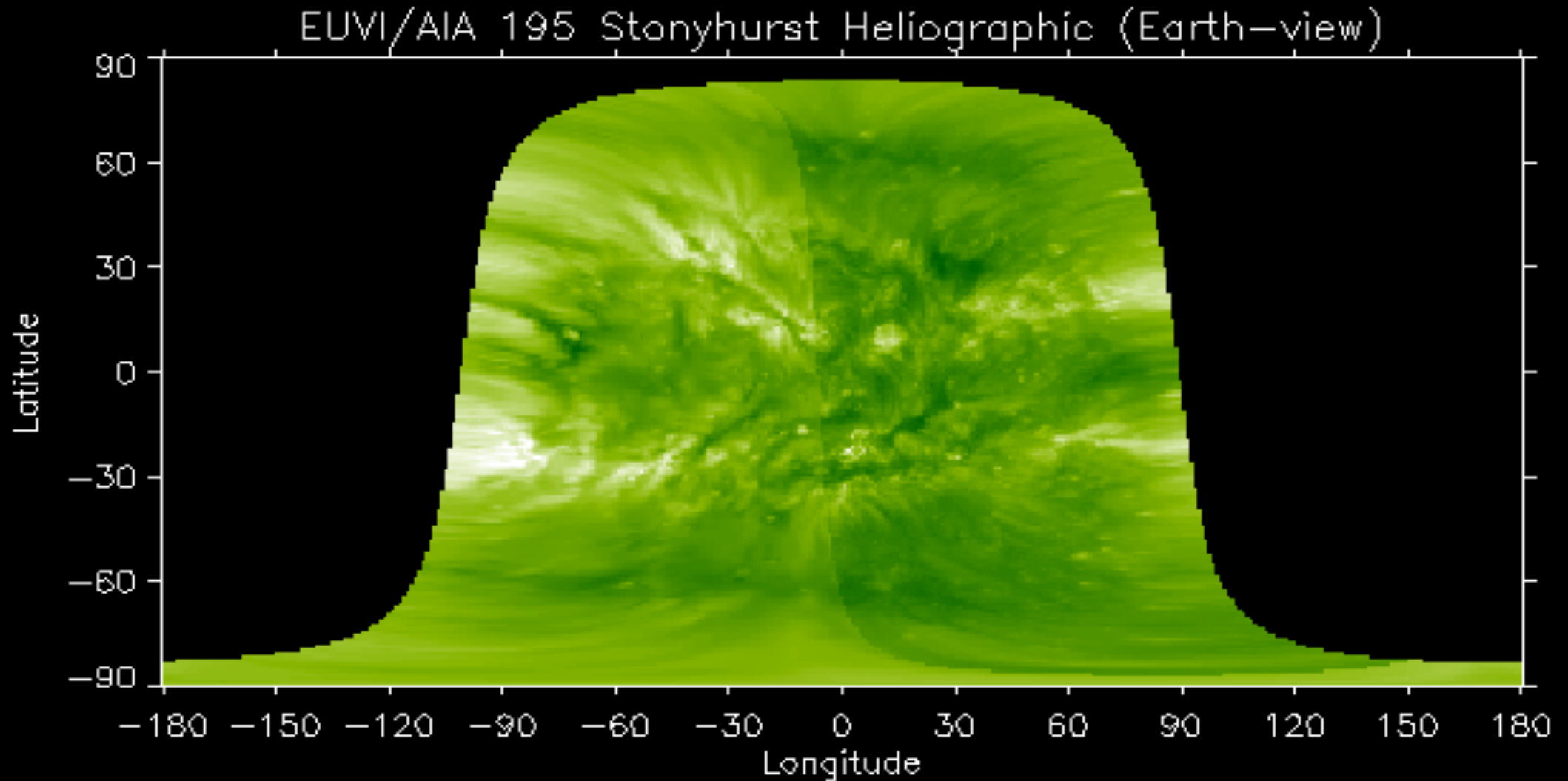
# Outlook



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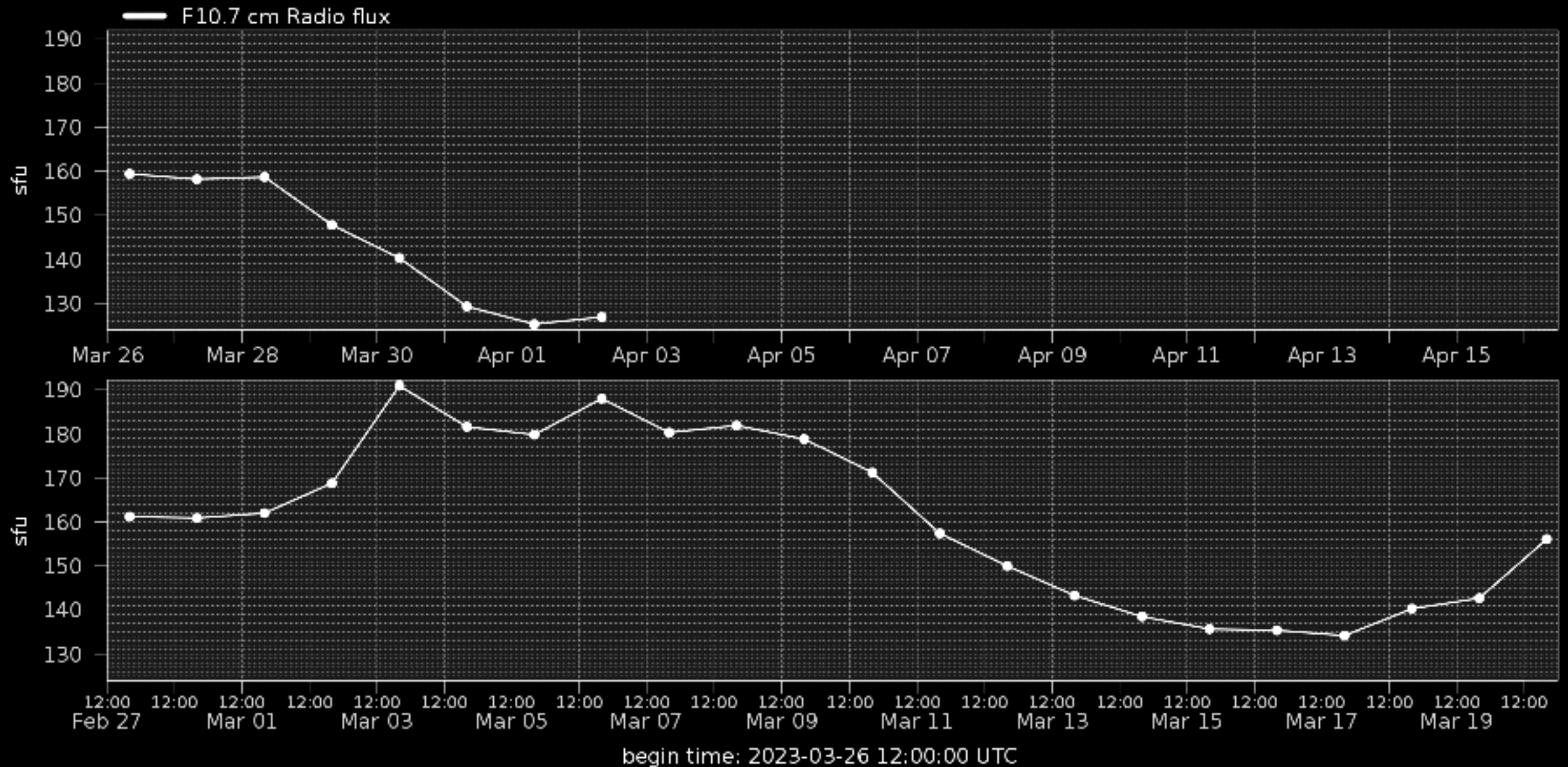
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# Outlook: Solar activity

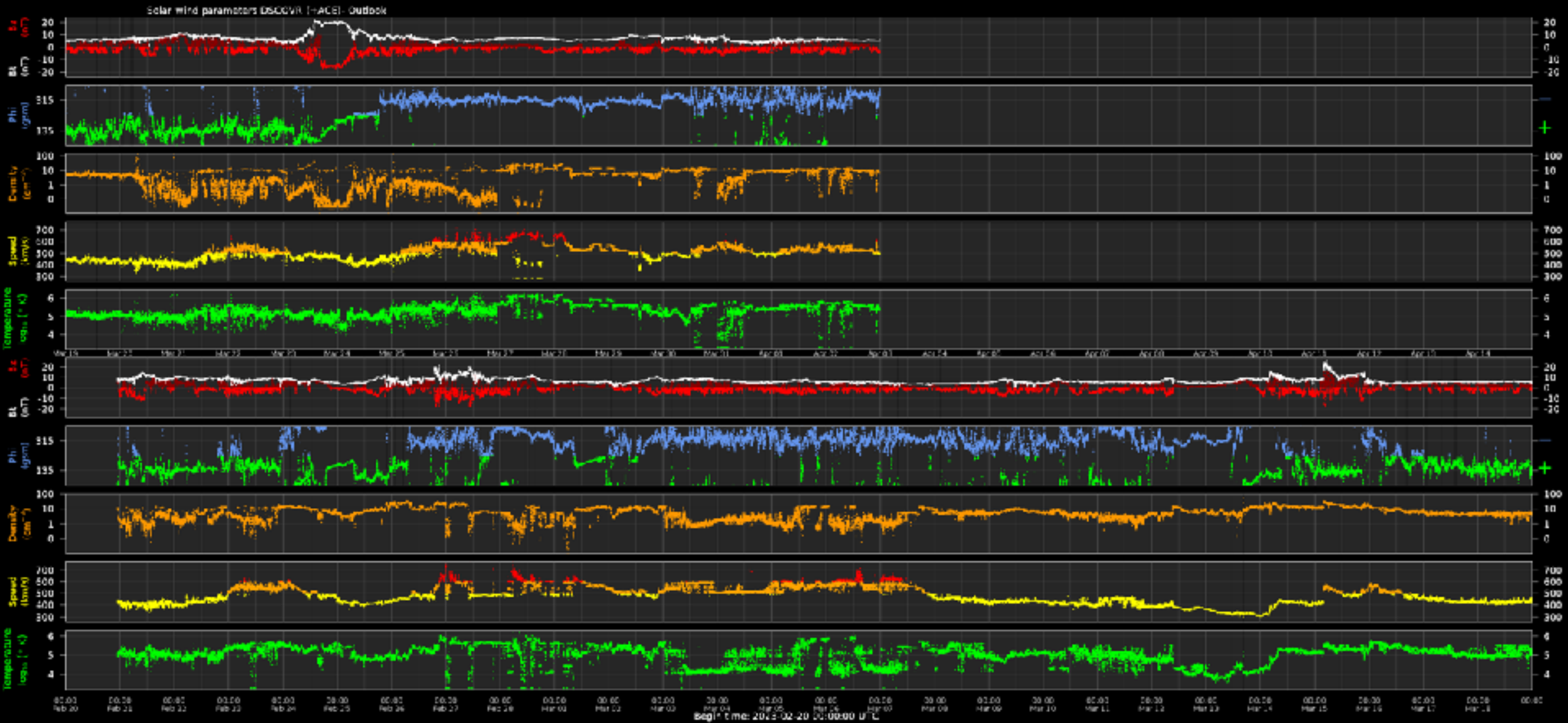


Observation date: 2023/04/02 23:05:00

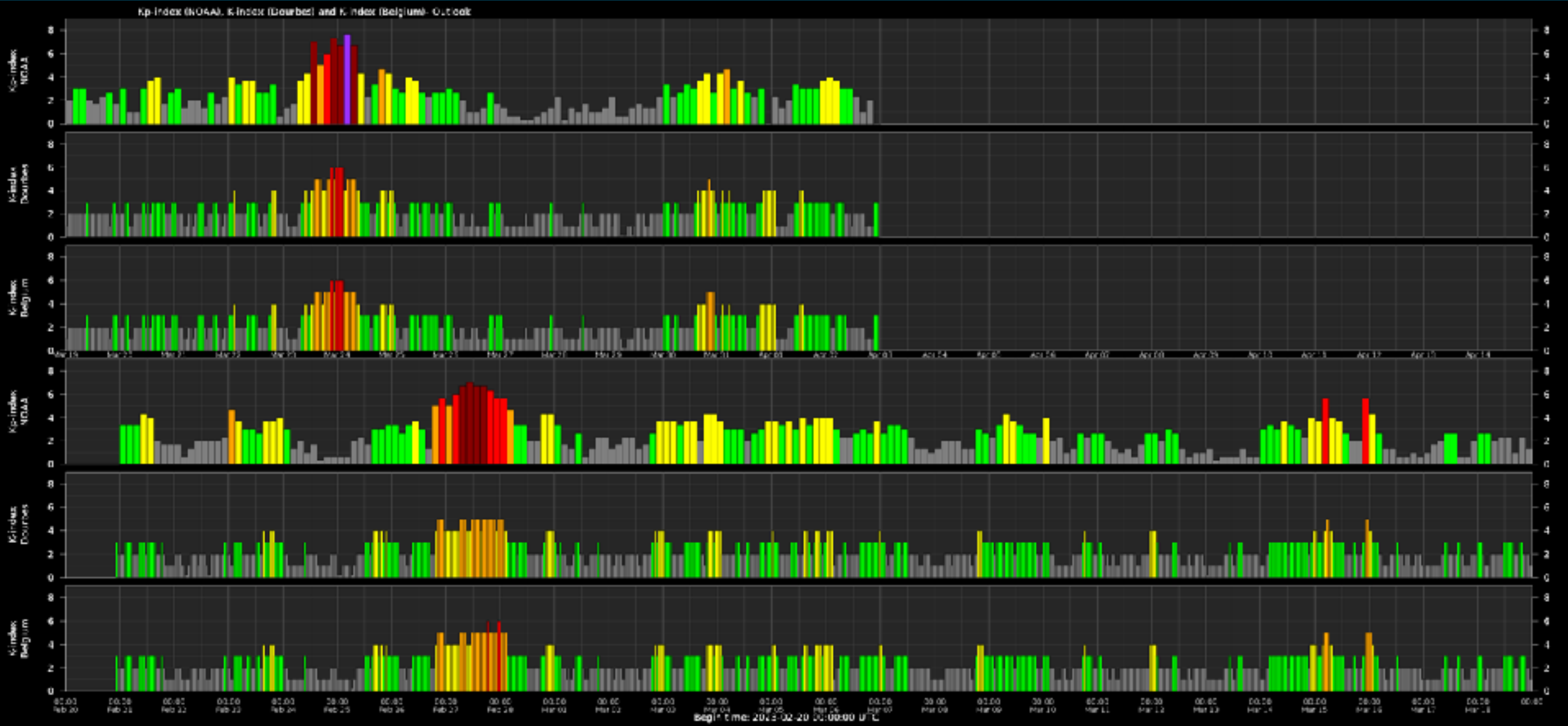
# Outlook: Solar F10.7cm radio flux



# Outlook: Solar wind parameters



# Outlook: Geomagnetic activity



# Pegasus: PSD (at start of week)



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