

SIDC Space Weather Briefing

09 April 2023-16 April 2023

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& the SIDC forecaster team



Royal Observatory
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Summary Report

Solar activity from 2023-04-09 12:00 to 2023-04-16 23:59

Active regions	15 ARs (most notable: NOAA AR 3272 and 3282)
Flares	# C-class flare: 61 # M-class flare: 4 # X-class flare: 0
Coronal Holes	2 small CHs
CMEs	2 halo CMEs on April 15

Proton flux	Below event threshold
Electron flux	Above threshold shortly early in the week

Solar wind and geomagnetic conditions

ICMEs	22:00 UT April 9
Solar wind conditions	B : 4 - 12 nT //Bz: -9 nT to 6 nT //Speed: 320 - 530 km/s
K-indices	max K-index (KBel): 3 max Kp-index (NOAA): 3

Solar Activity

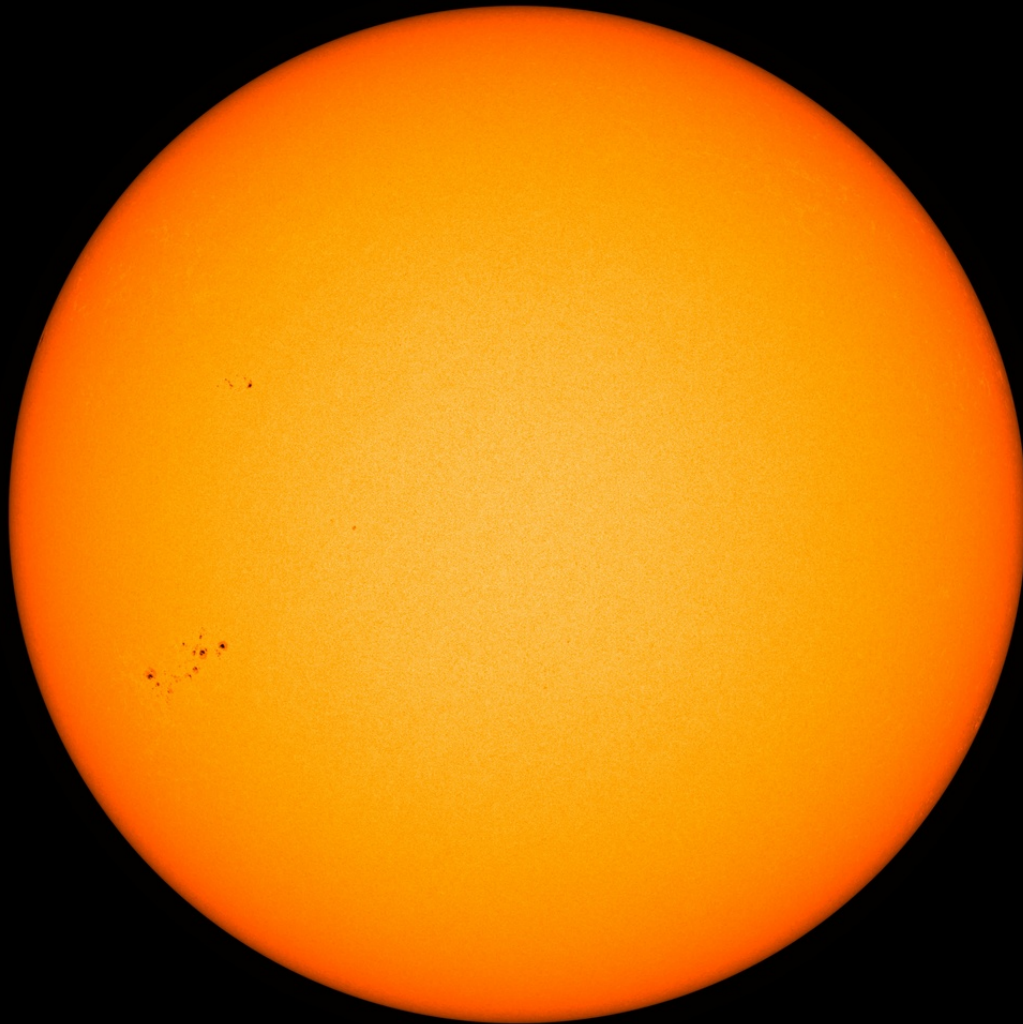


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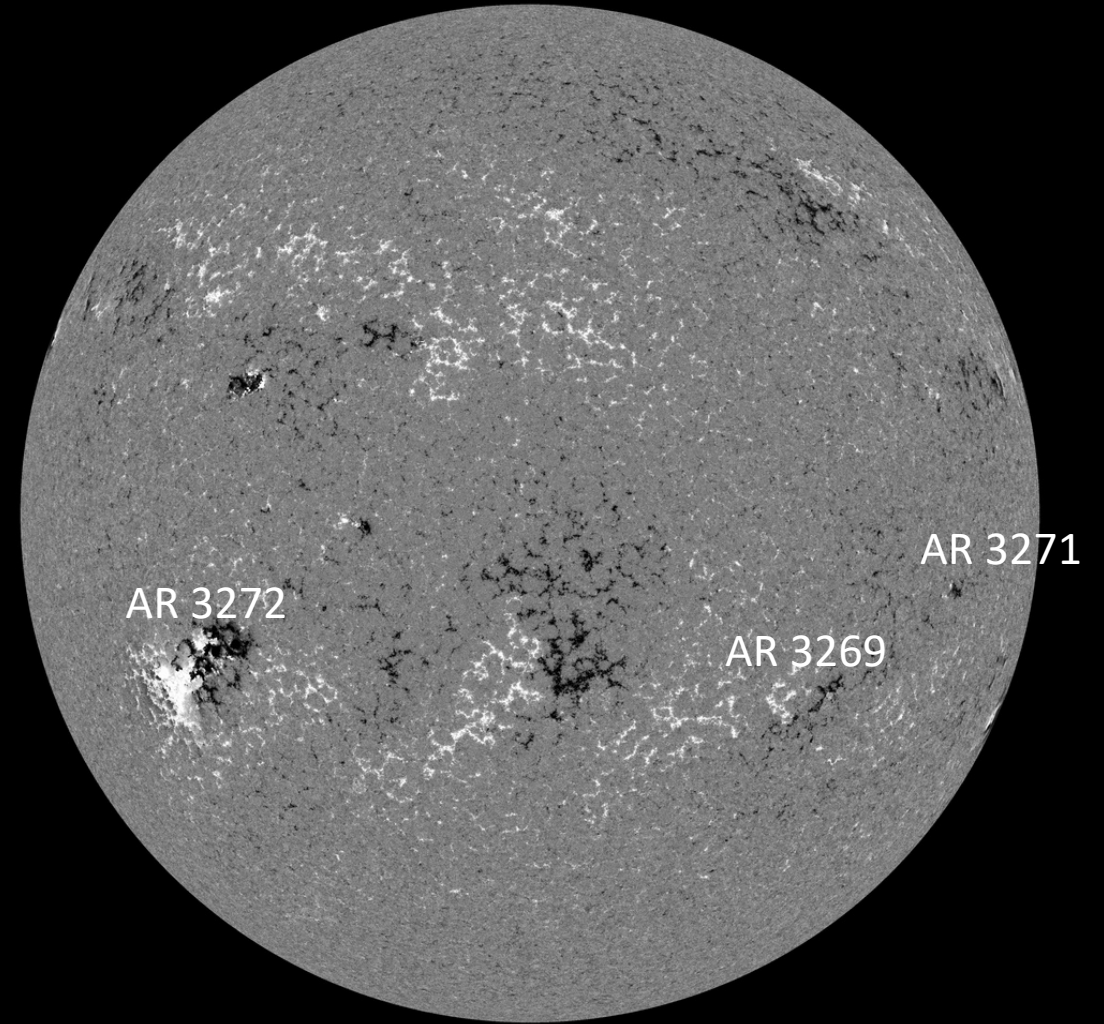
Solar active regions

SDO/HMI White Light 2023-04-09



SDO/HMI Quick-Look Continuum: 20230409_114500

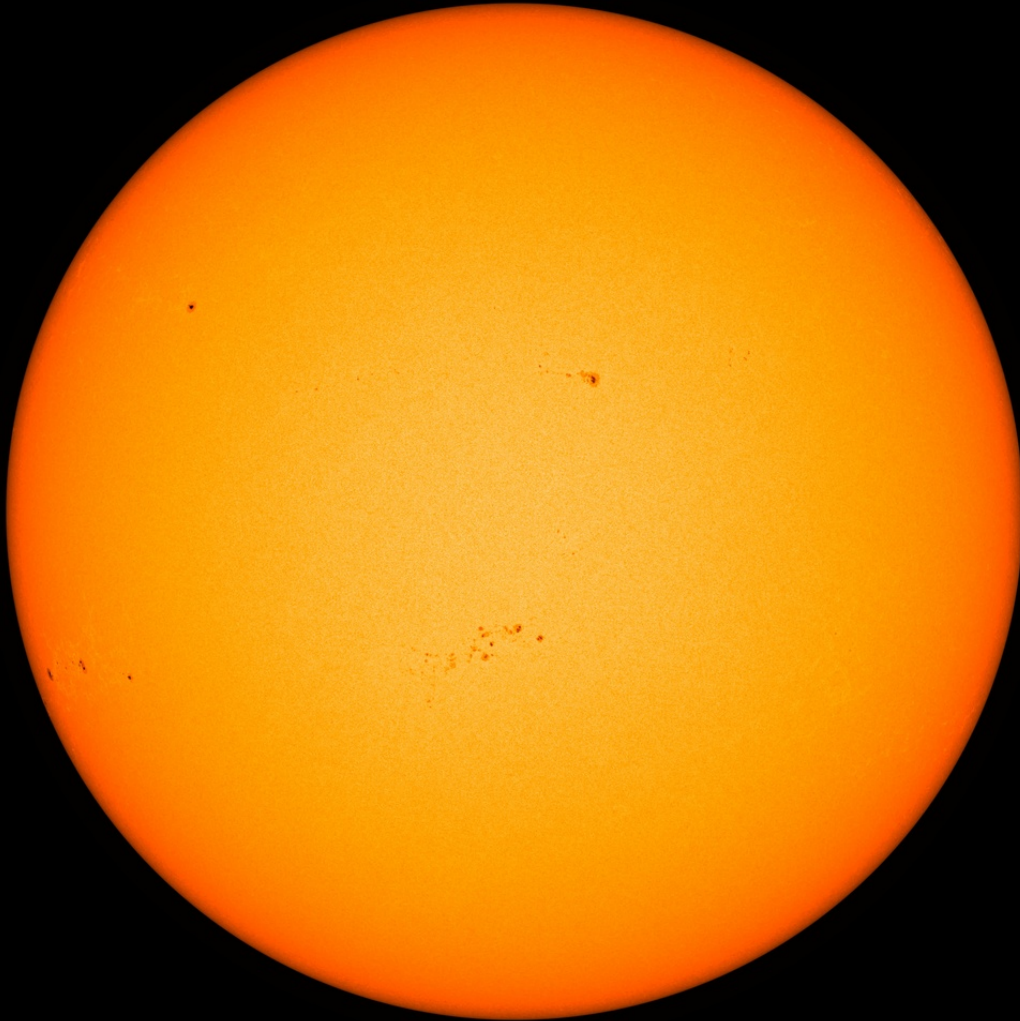
SDO/HMI Magnetogram 2023-04-09



SDO/HMI Quick-Look Magnetogram: 20230409_114500

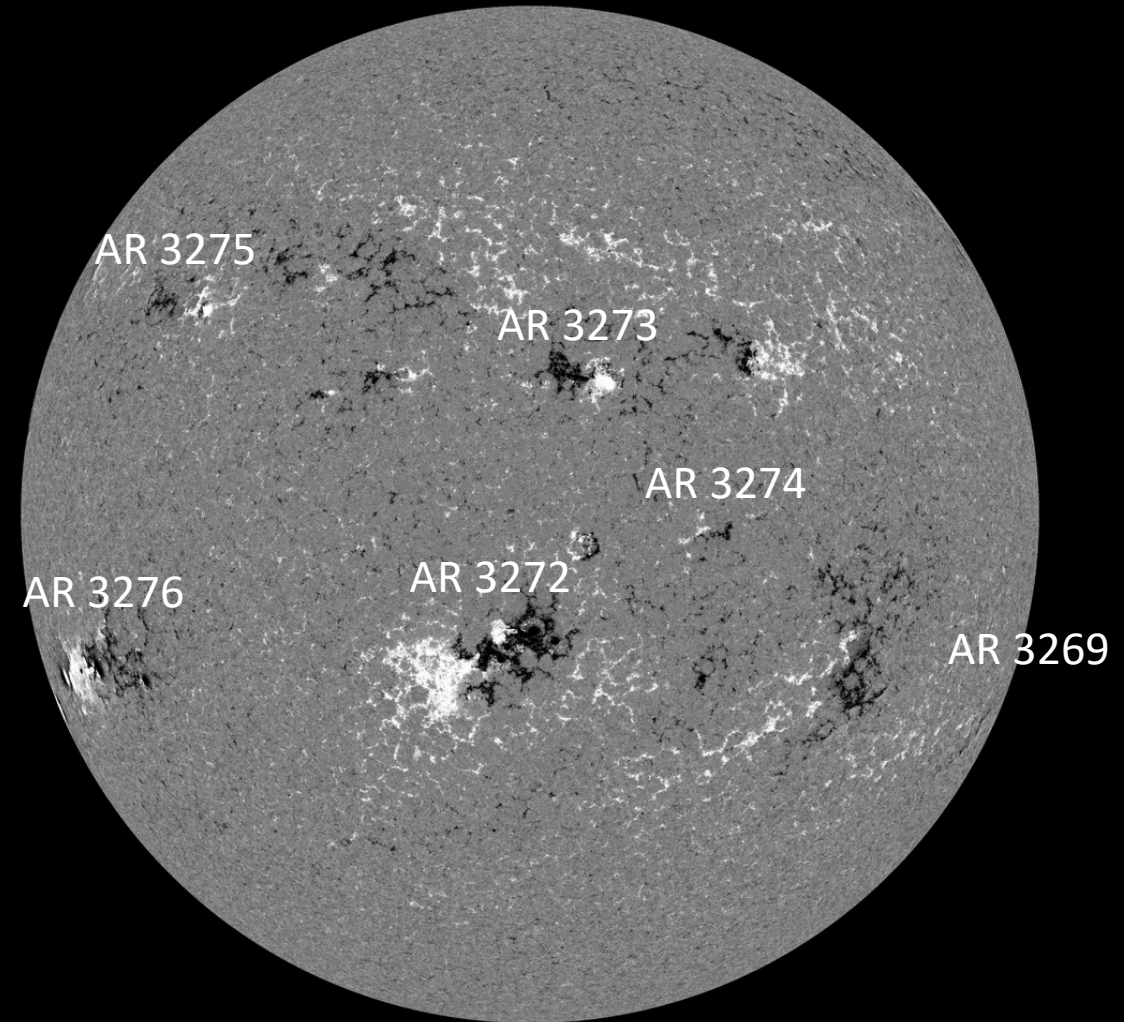
Solar active regions

SDO/HMI White Light 2023-04-12



SDO/HMI Quick-Look Continuum: 20230412_114500

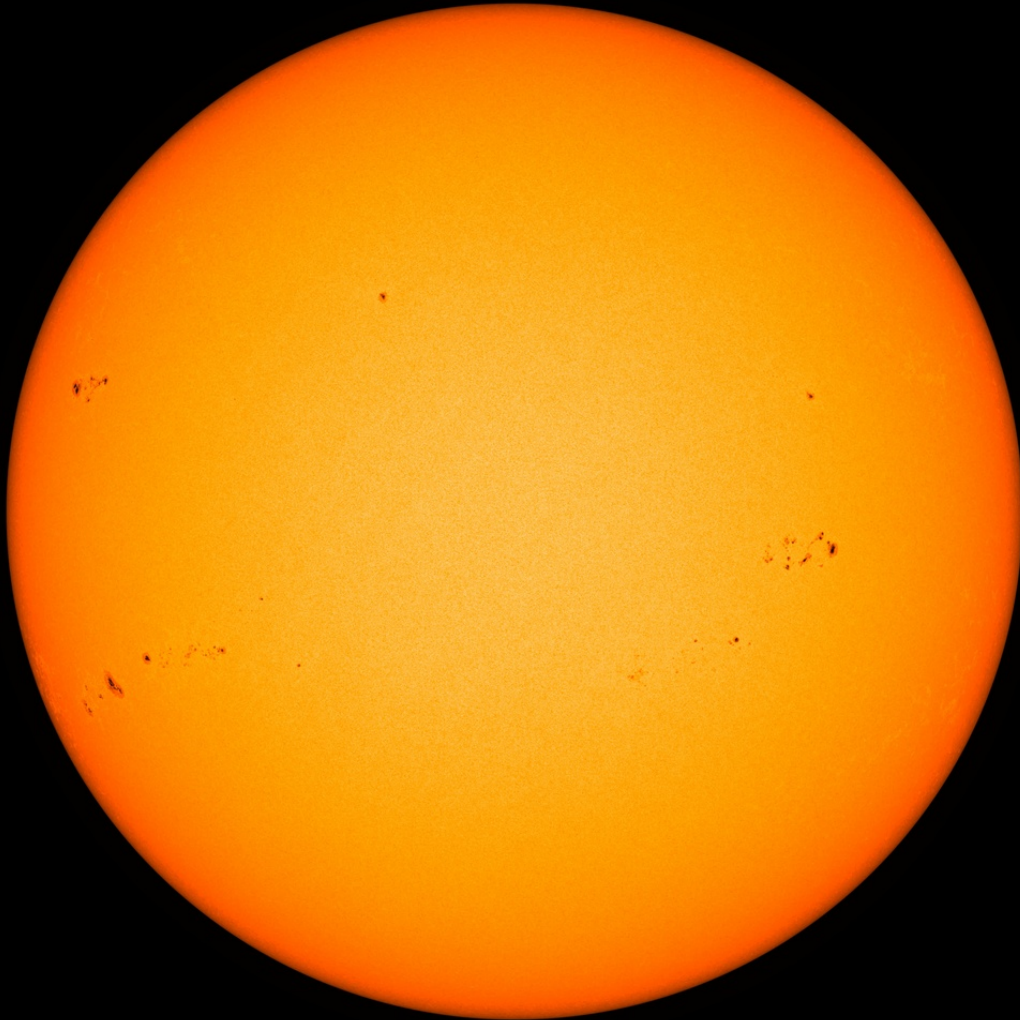
SDO/HMI Magnetogram 2023-04-12



SDO/HMI Quick-Look Magnetogram: 20230412_114500

Solar active regions

SDO/HMI White Light 2023-04-14



SDO/HMI Quick-Look Continuum: 20230414_114500

SDO/HMI Magnetogram 2023-04-14

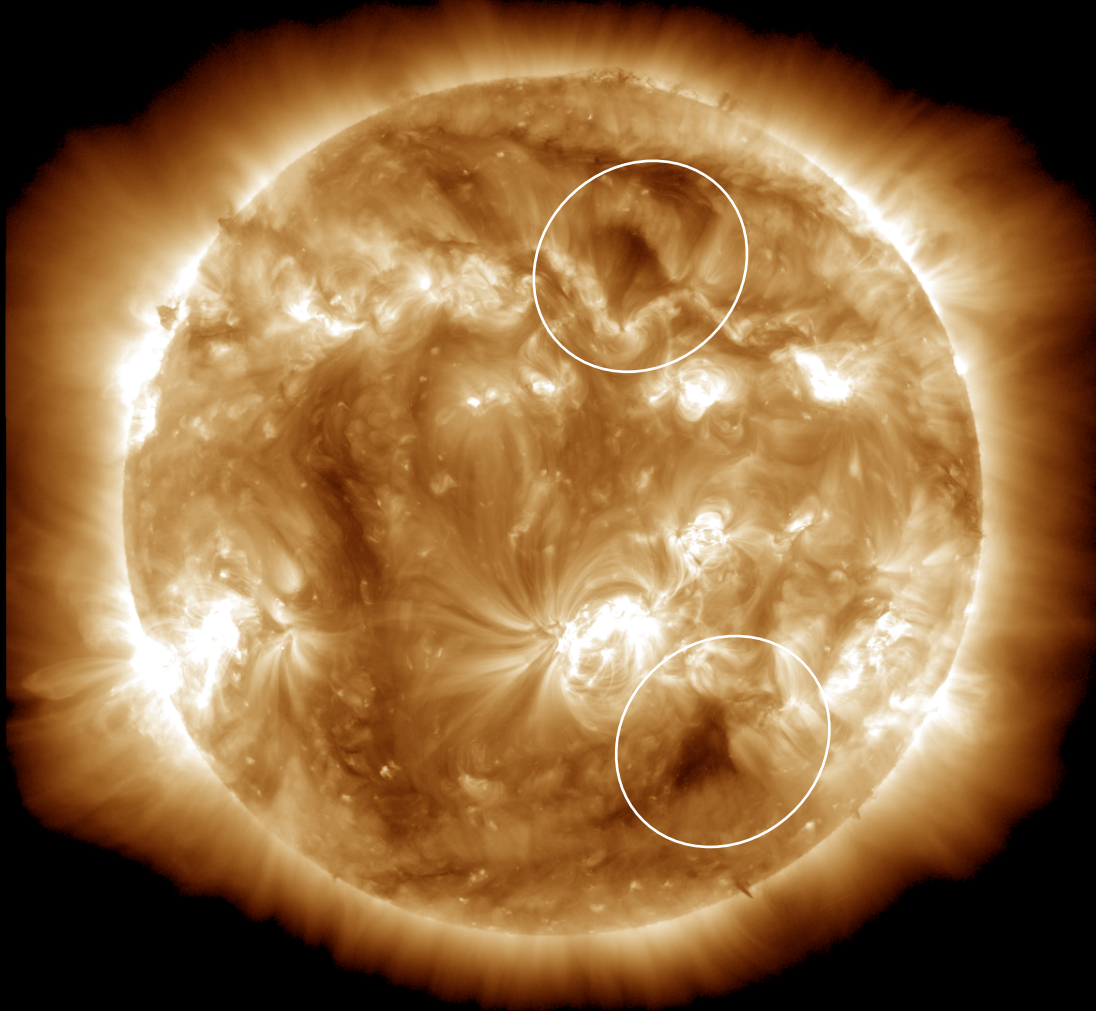


SDO/HMI Quick-Look Magnetogram: 20230414_114500

Coronal holes

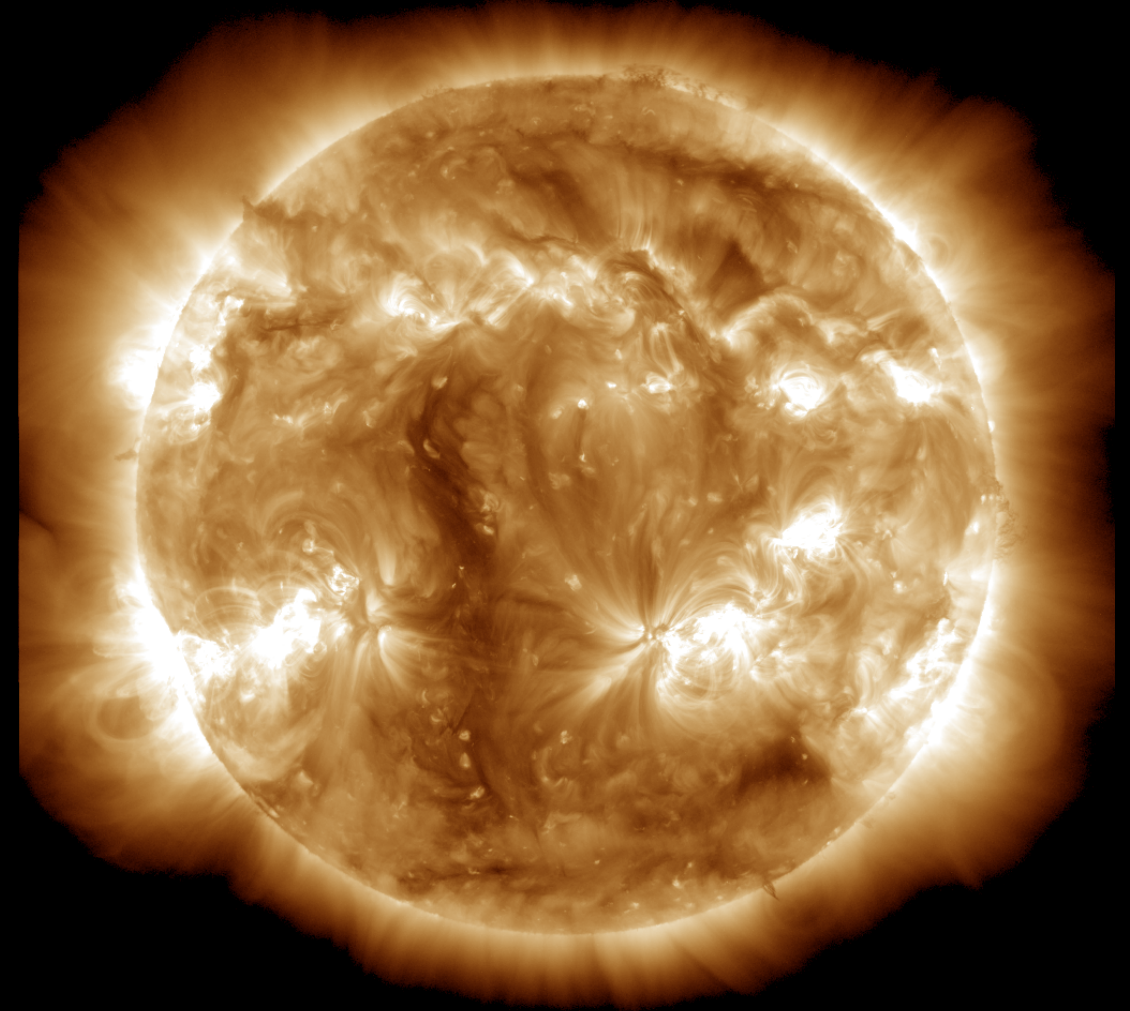
SDO/AIA 19.3 nm 2023-04-13

SDO/AIA AIA 193Å 2023-04-13T12:00:05.843



SDO/AIA 19.3 nm 2023-04-14

SDO/AIA AIA 193Å 2023-04-14T12:00:05.843

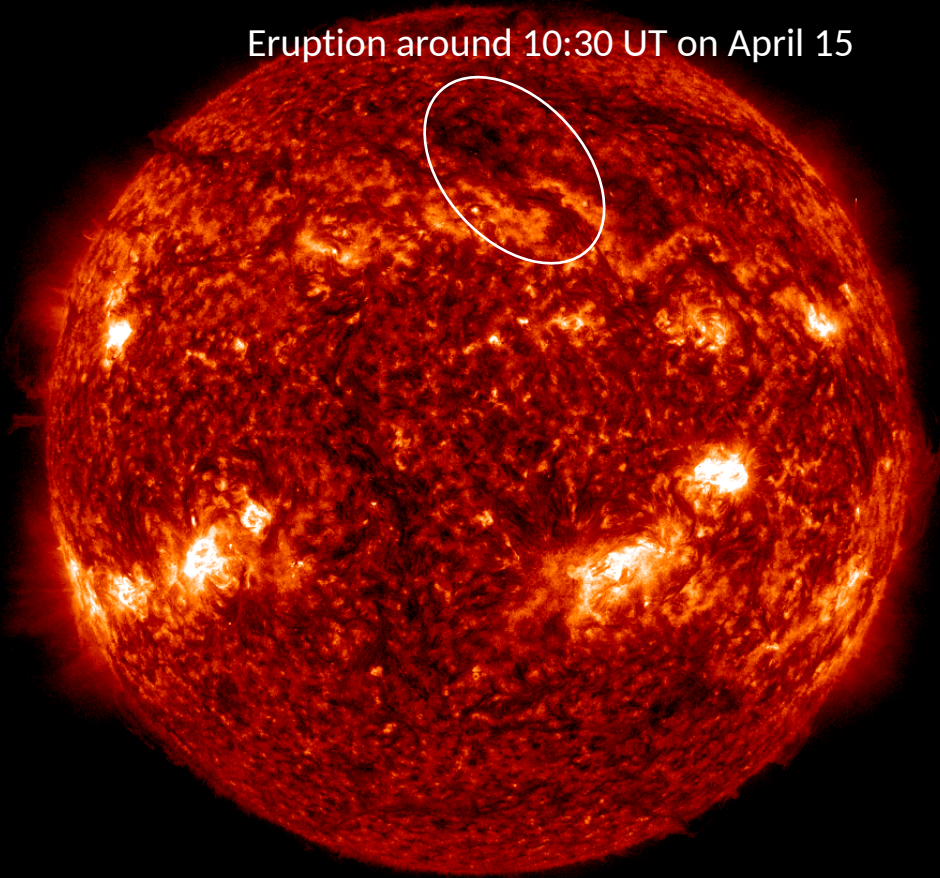


Filaments

SDO/AIA 30.4 nm 2023-04-14

SDO/AIA AIA 304Å 2023-04-14T12:00:06.580

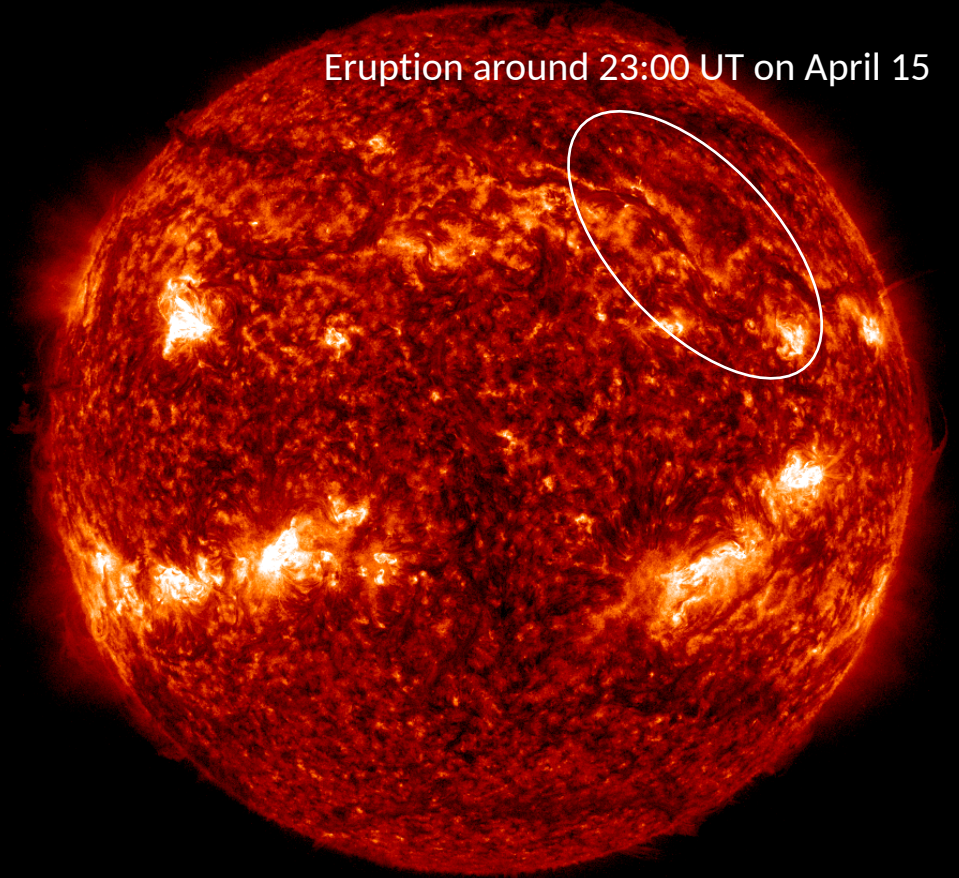
Eruption around 10:30 UT on April 15



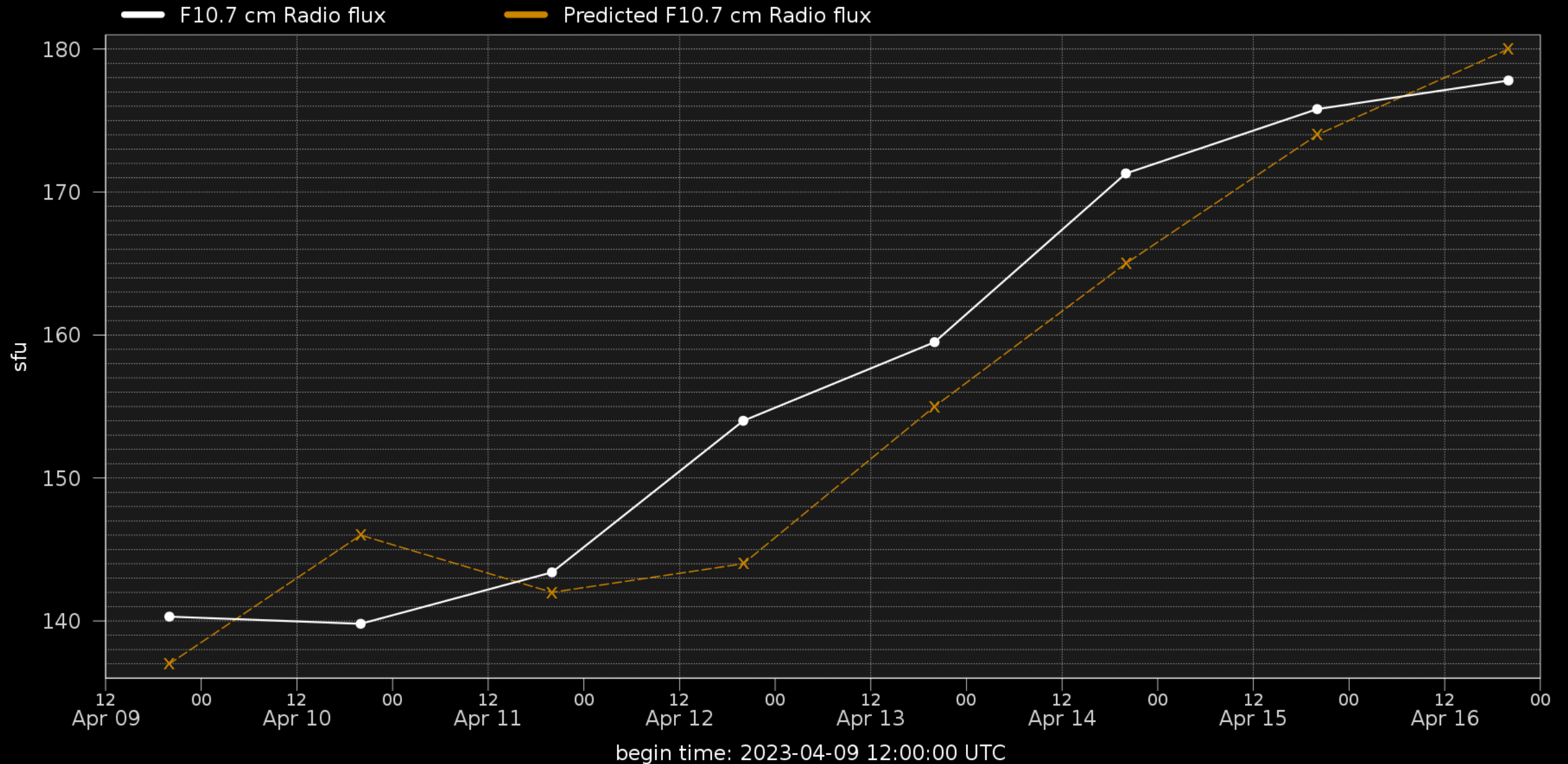
SDO/AIA 30.4 nm 2023-04-15

SDO/AIA AIA 304Å 2023-04-15T12:00:06.572

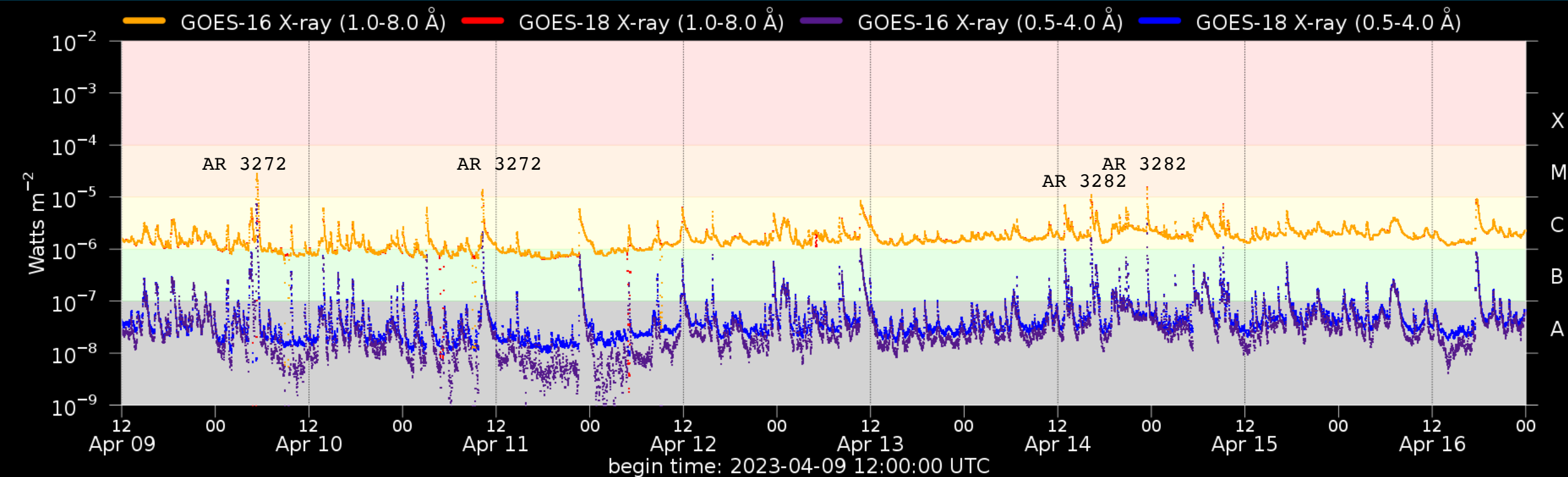
Eruption around 23:00 UT on April 15



Solar F10.7cm radio flux



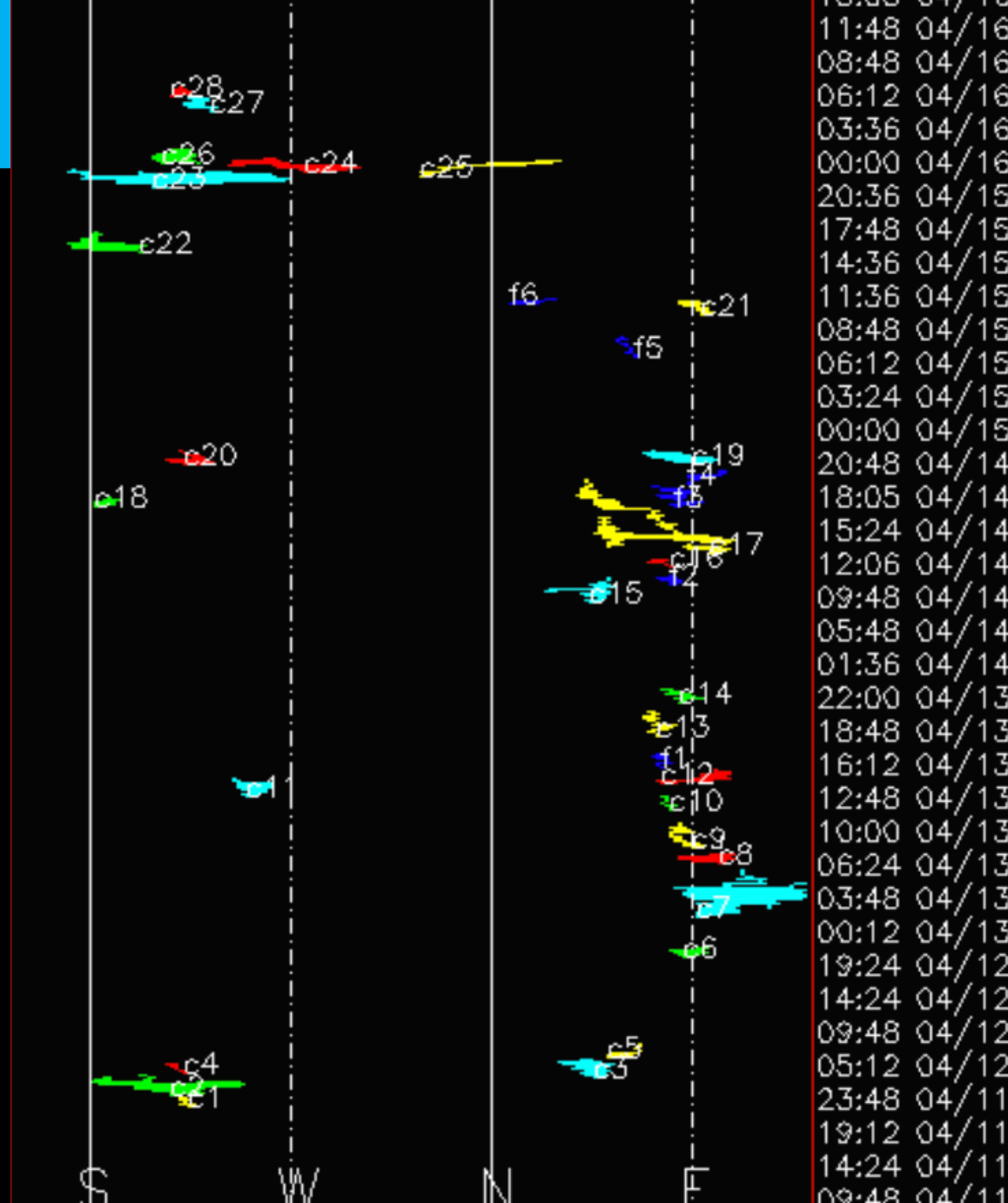
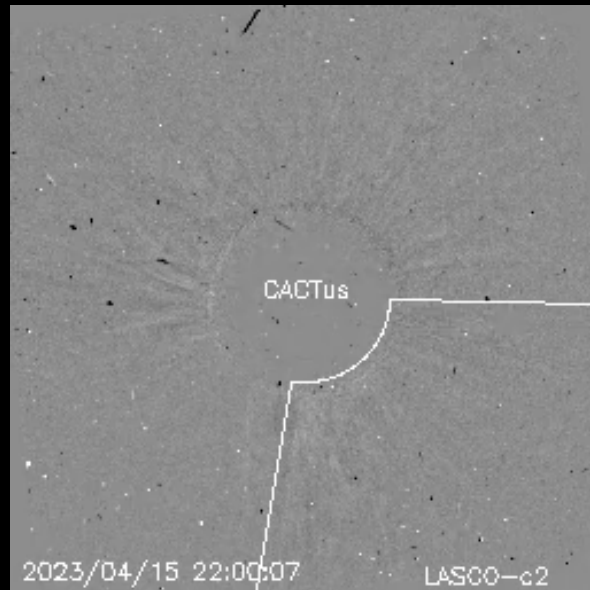
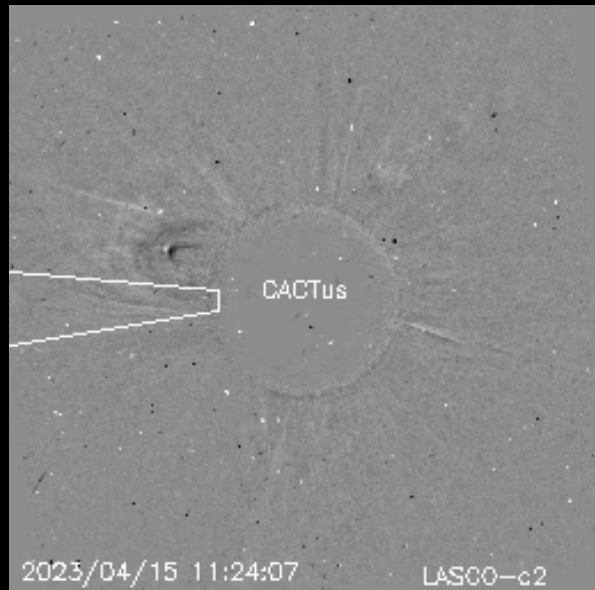
Flaring activity



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

Issue date	2023-04-09	2023-04-10	2023-04-11	2023-04-12	2023-04-13	2023-04-14	2023-04-15	2023-04-16
Probability (%)	65 15 01	95 15 01	95 40 01	95 35 01	95 40 01	95 35 01	95 45 01	95 40 01
Observed (#)	07 01 00	13 01 00	05 00 00	12 00 00	03 00 00	14 02 00	06 00 00	01 00 00

Coronal Mass Ejections



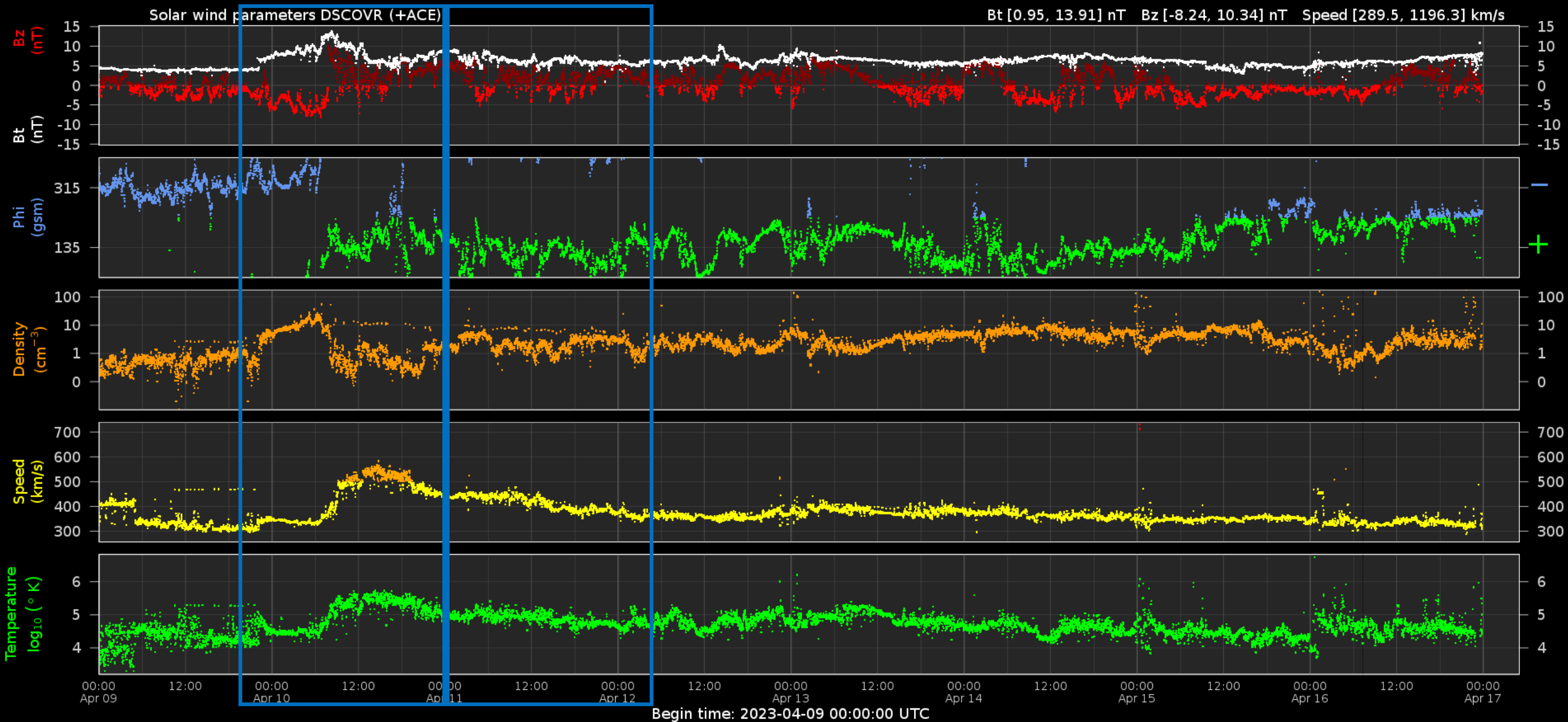
Solar Wind and Geomagnetic Activity



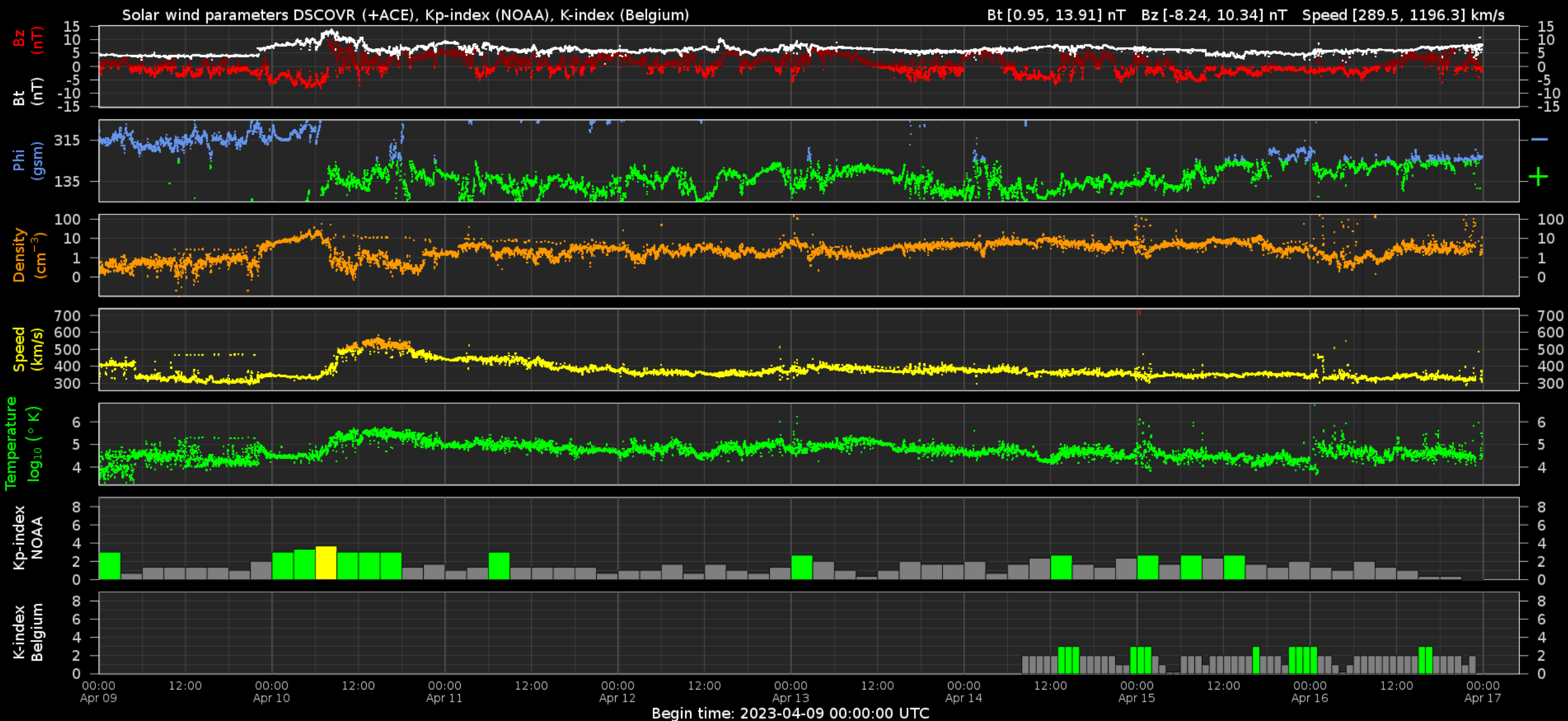
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Solar wind parameters



Solar wind parameters & K-indices



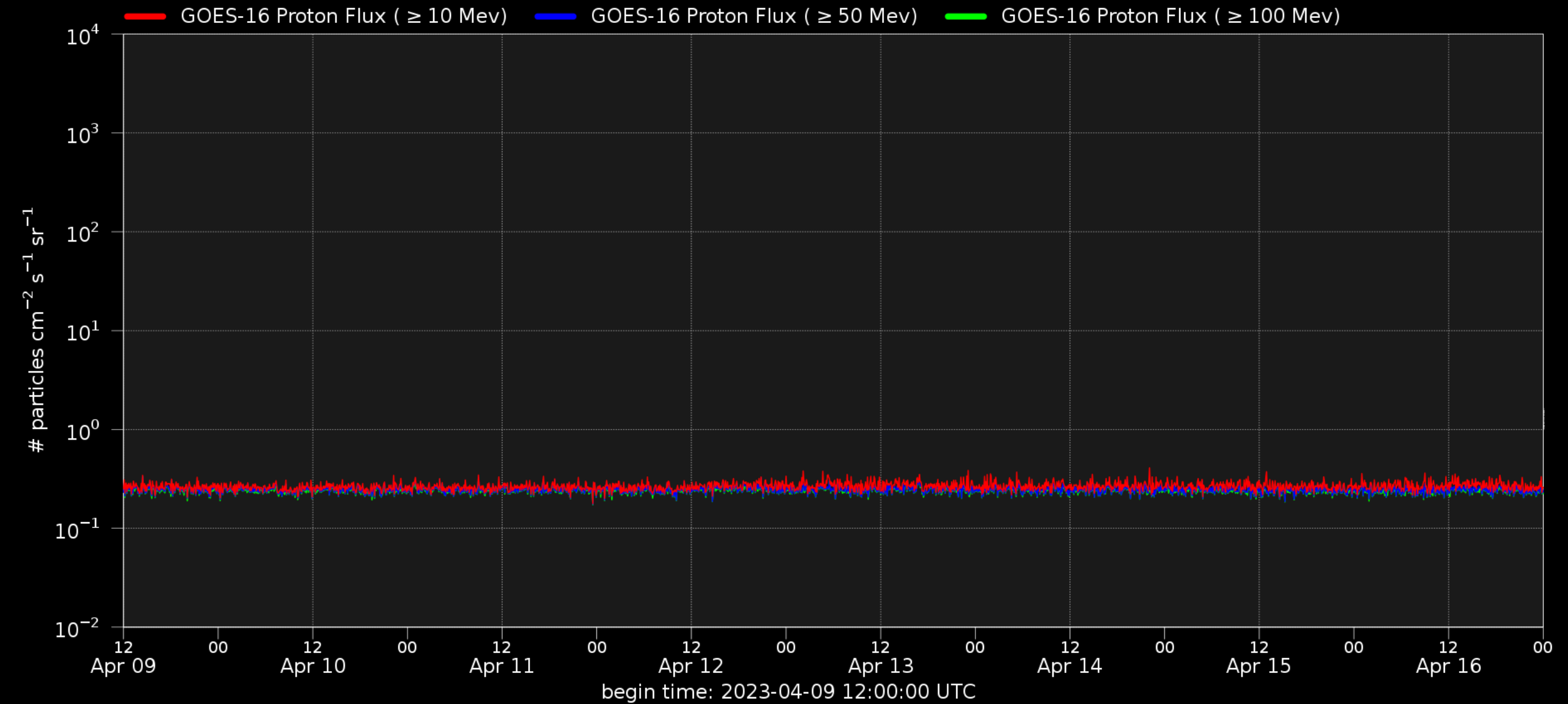
Energetic Particles



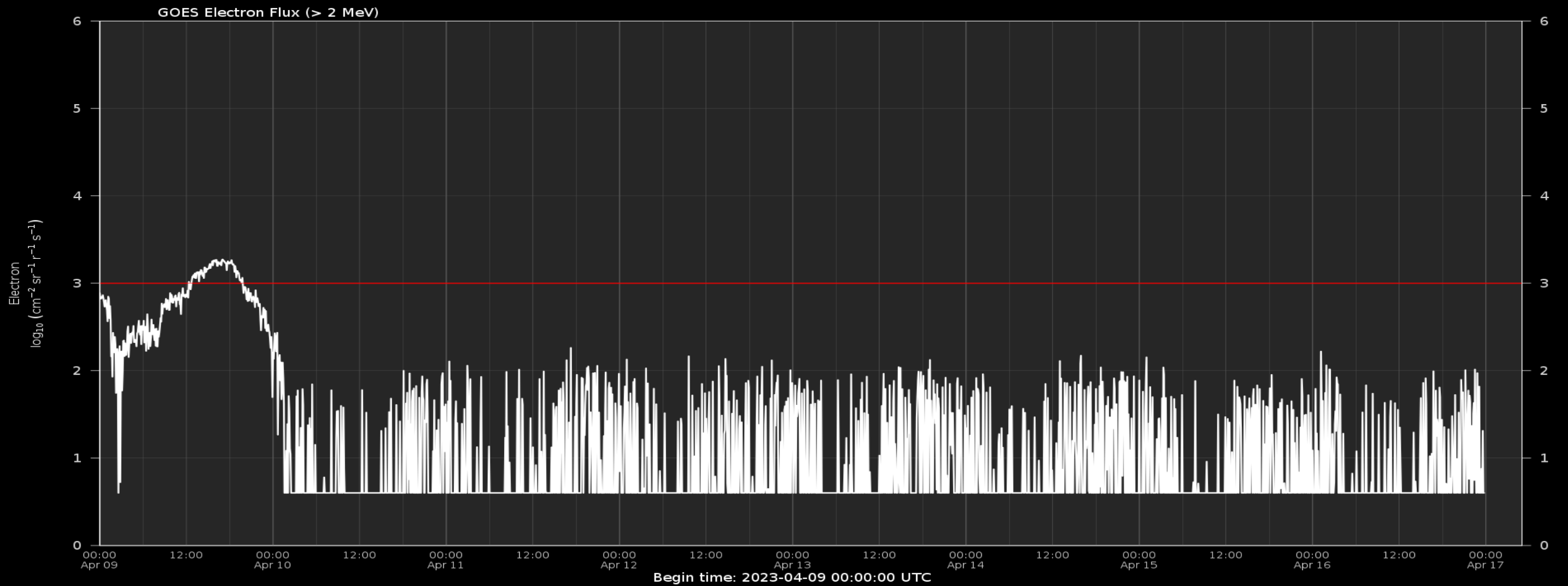
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Solar proton flux



Electron flux at GEO



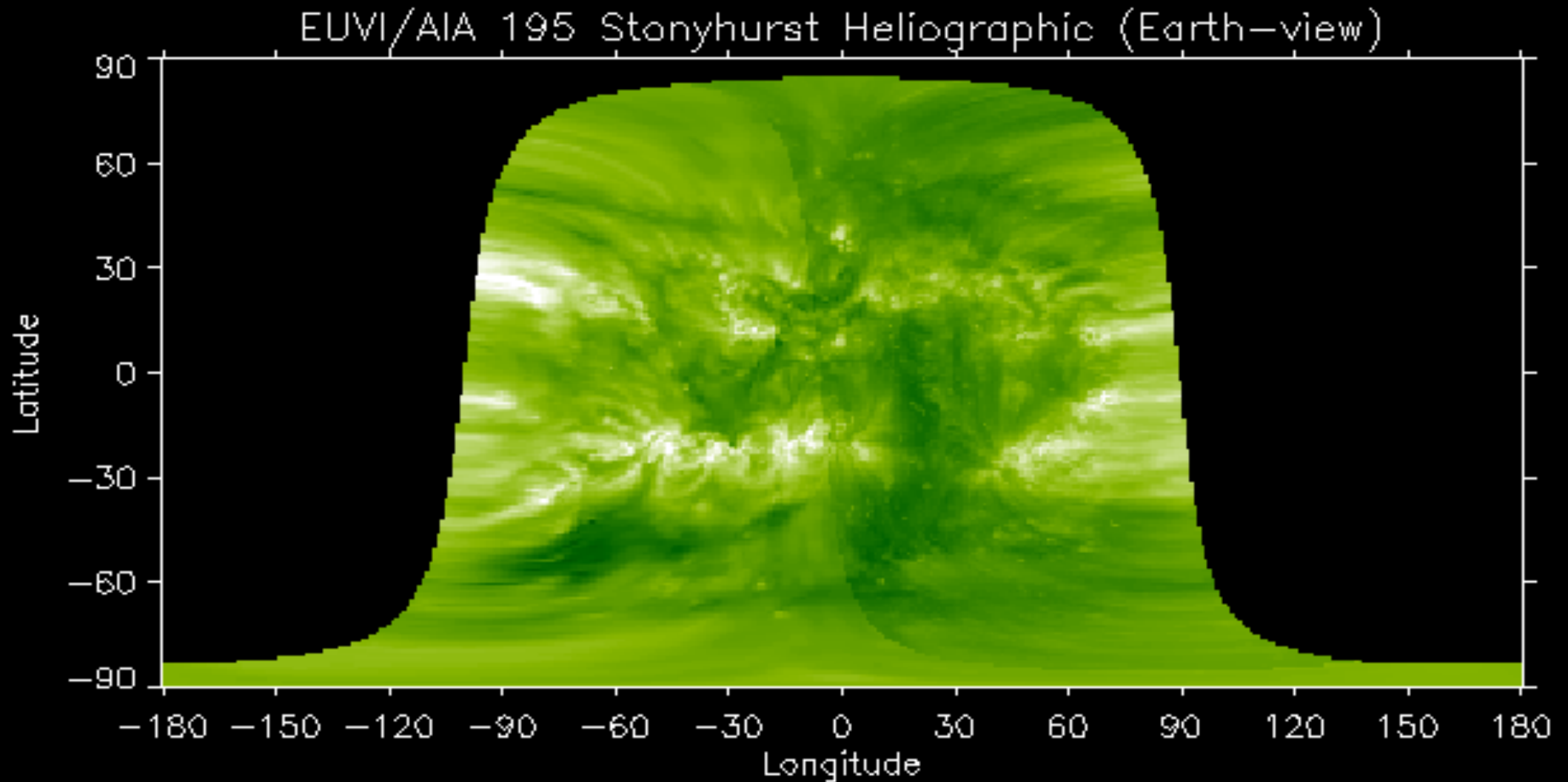
Outlook



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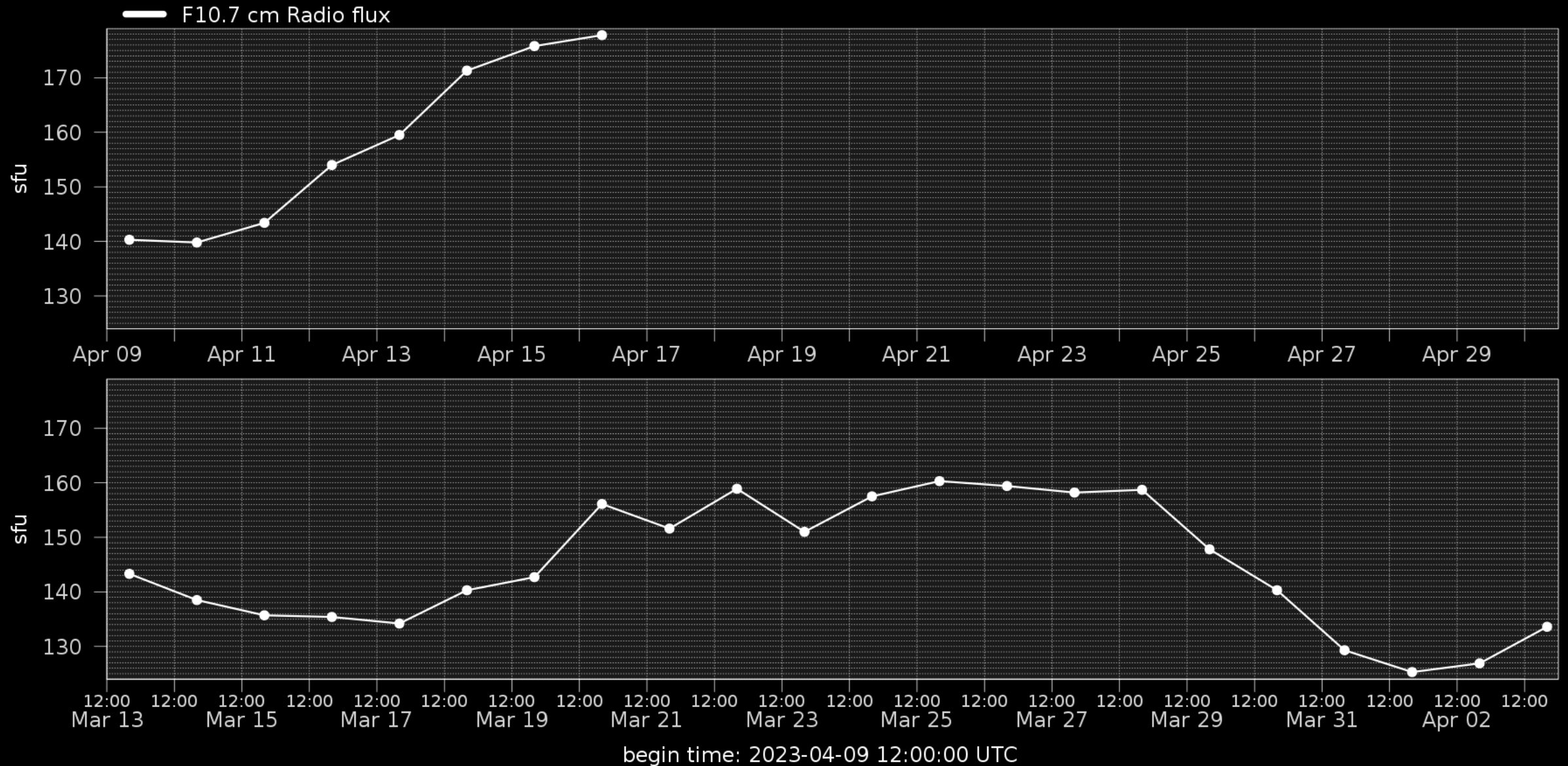
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Outlook: Solar activity

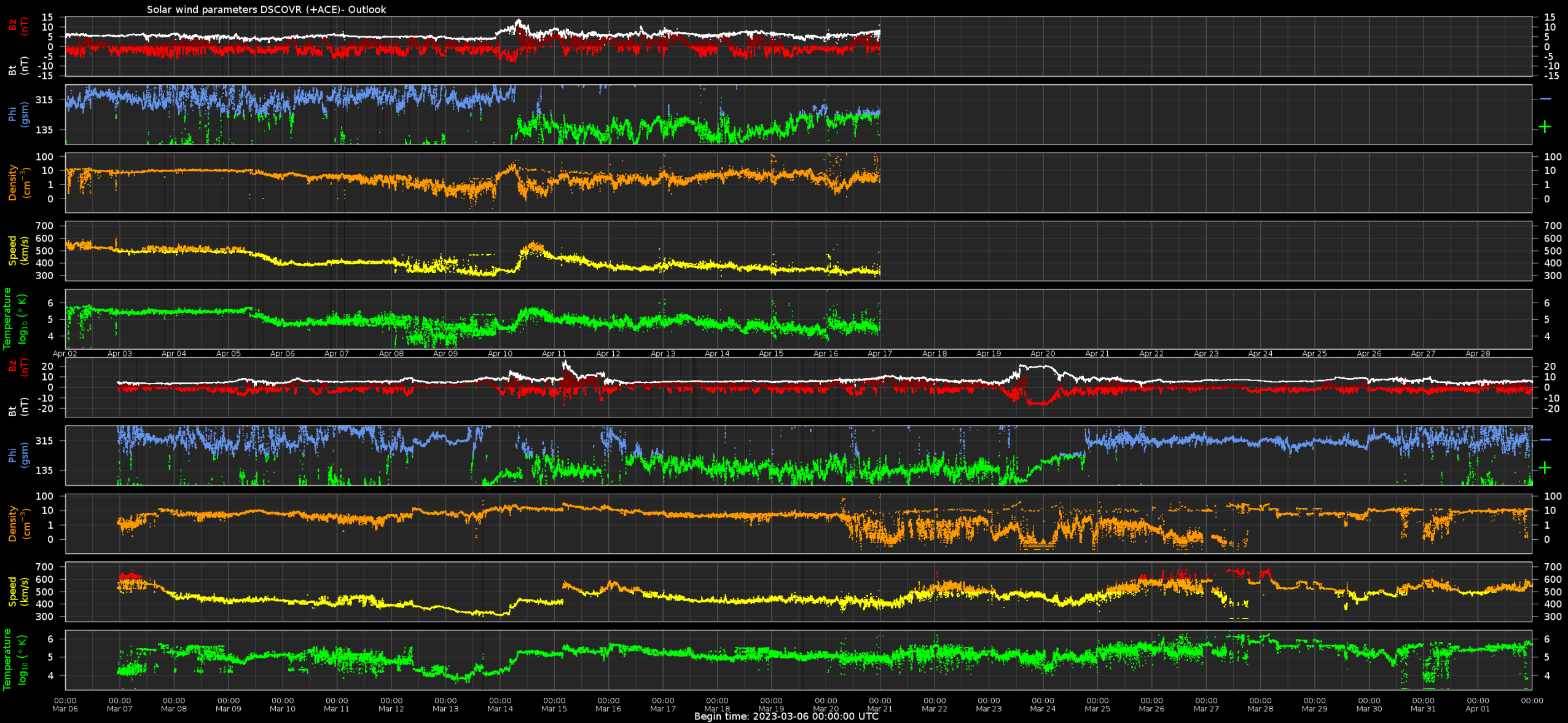


Observation date: 2023/04/16 23:05:00

Outlook: Solar F10.7cm radio flux



Outlook: Solar wind parameters



Outlook: Geomagnetic activity



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See you at our next briefing!

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