

SIDC Space Weather Briefing

14 - 21 May 2023

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& the SIDC forecaster team



Royal Observatory
of Belgium

Solar Influences
Data analysis Centre
www.sidc.be

Summary Report

Solar activity from 2023-05-14 12:00 to 2023-05-21 23:59

Active regions	15 Active Regions
Flares	# C-class flare: 49 # M-class flare: 19 # X-class flare: 0
Coronal Holes	CH- effecting Earth since May 19th, CH- expected to arrive on May 23-24
CMEs	CMEs from May 17

Proton flux	Nominal levels
Electron flux	Below event threshold

Solar wind and geomagnetic conditions

ICMEs	13:40UTC on May 22 (possible source 16:36UTC, May 17)
Solar wind conditions	B : 0.46 - 21.35 nT //Bz: -17.18 nT to 15.3 nT //Speed: 283.9 - 634.6km/s
K-indices	max K-index (KBel): 5 max Kp-index (NOAA): 6-

All Quiet Alert: Not all quiet

Solar Activity

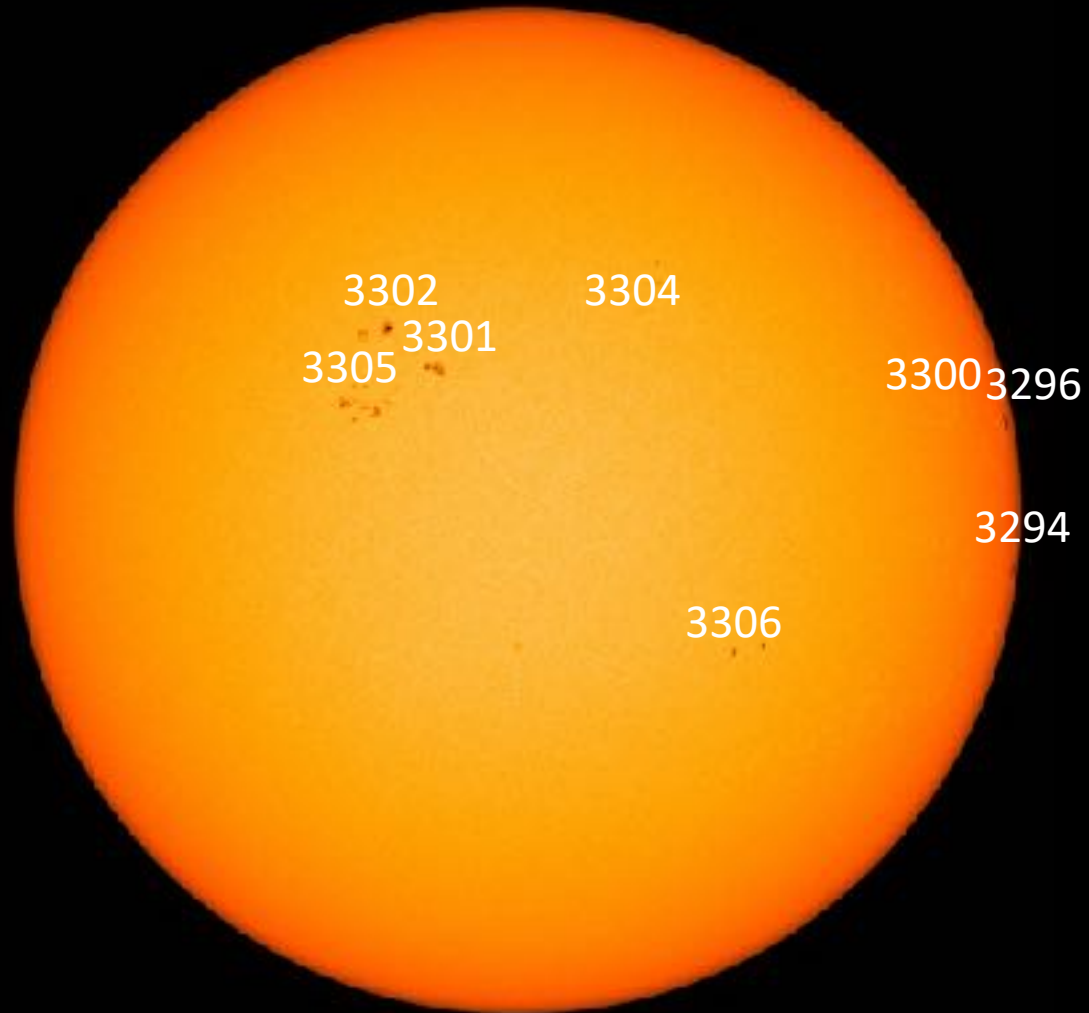


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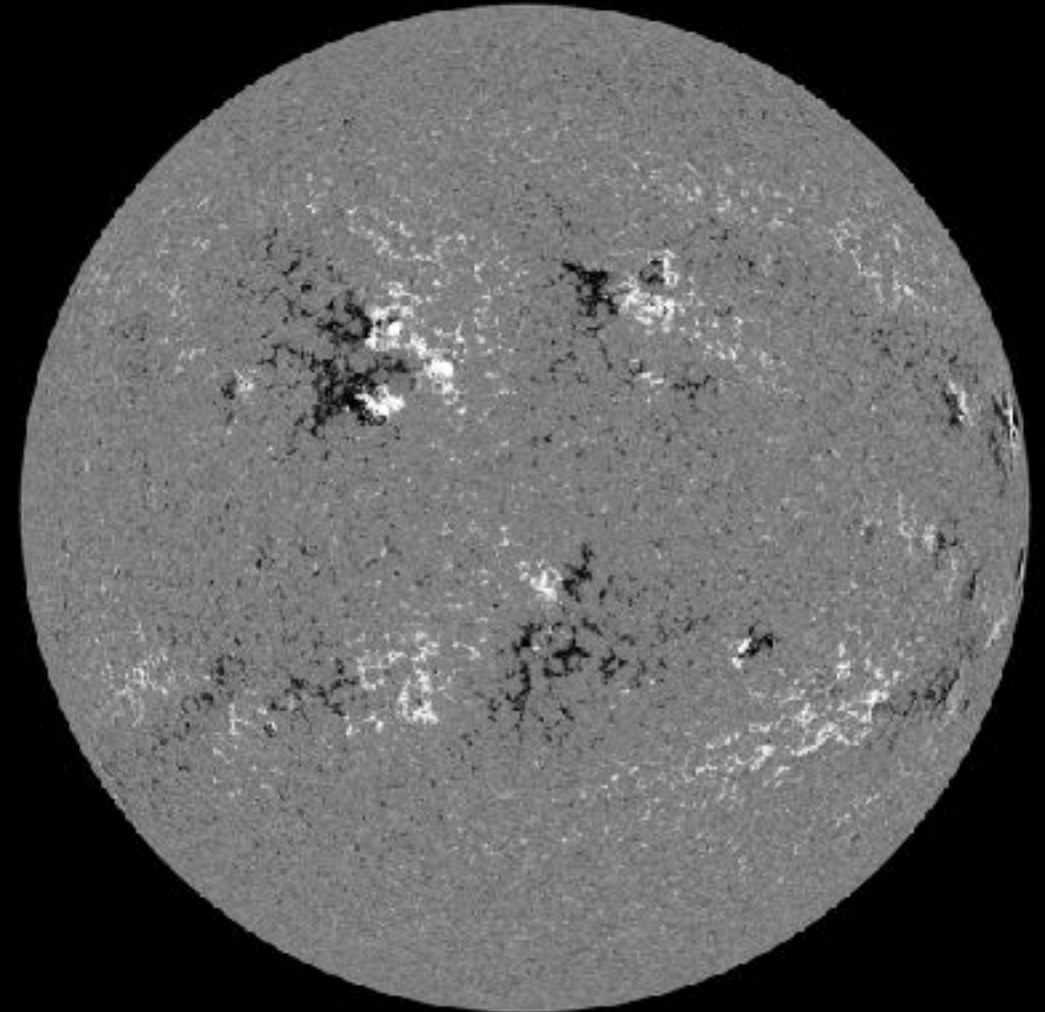
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Solar active regions

SDO/HMI White Light 2023-05-14

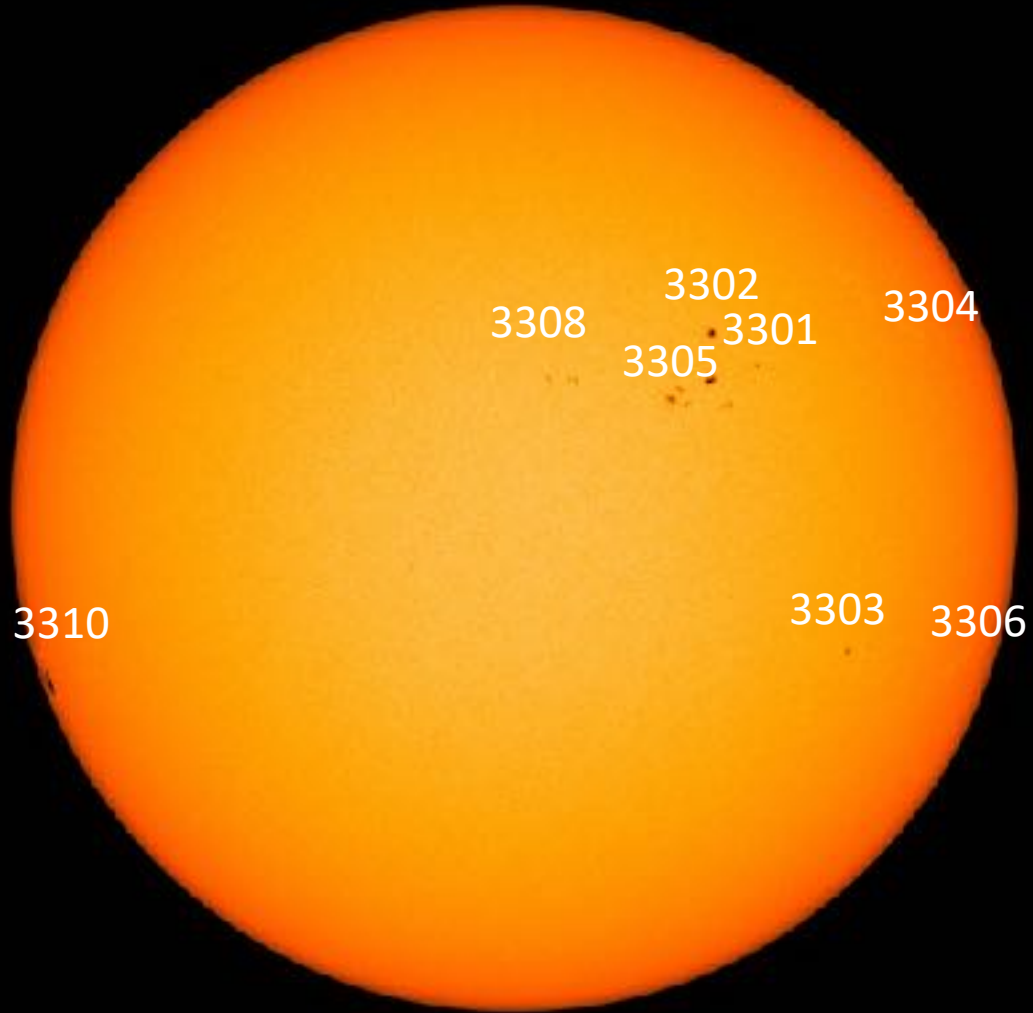


SDO/HMI Magnetogram 2023-05-14



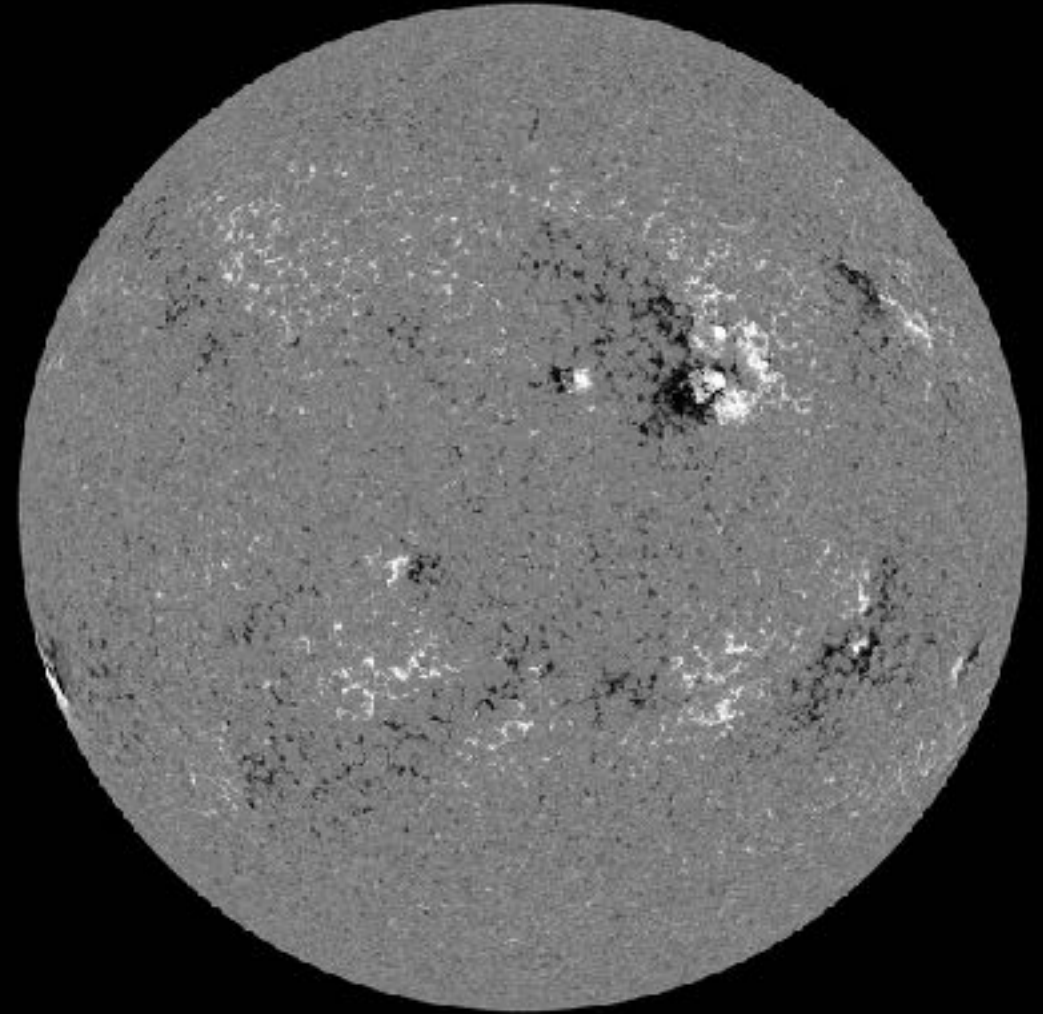
Solar active regions

SDO/HMI White Light 2023-05-17



SDO/HMI White Light 2023-05-17 14:00

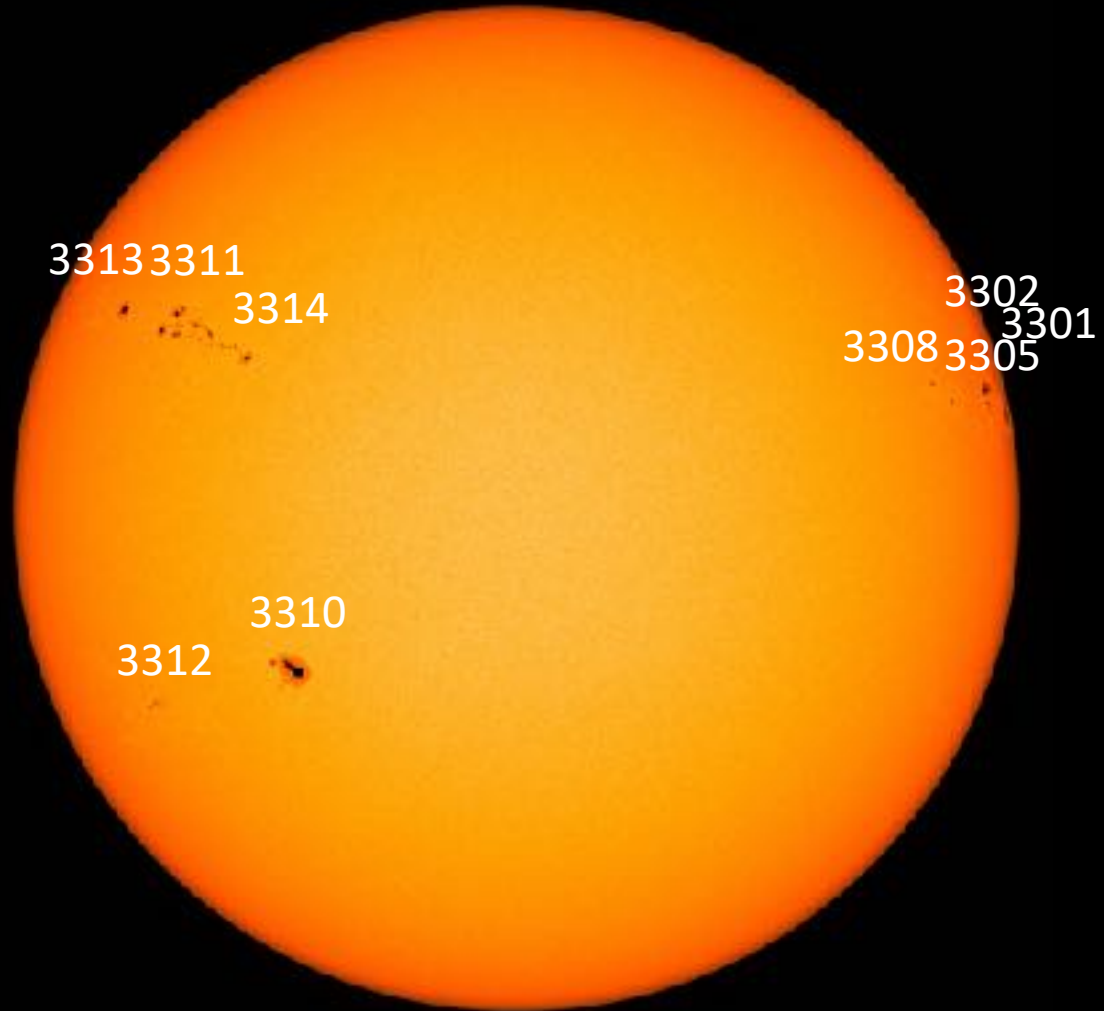
SDO/HMI Magnetogram 2023-05-17



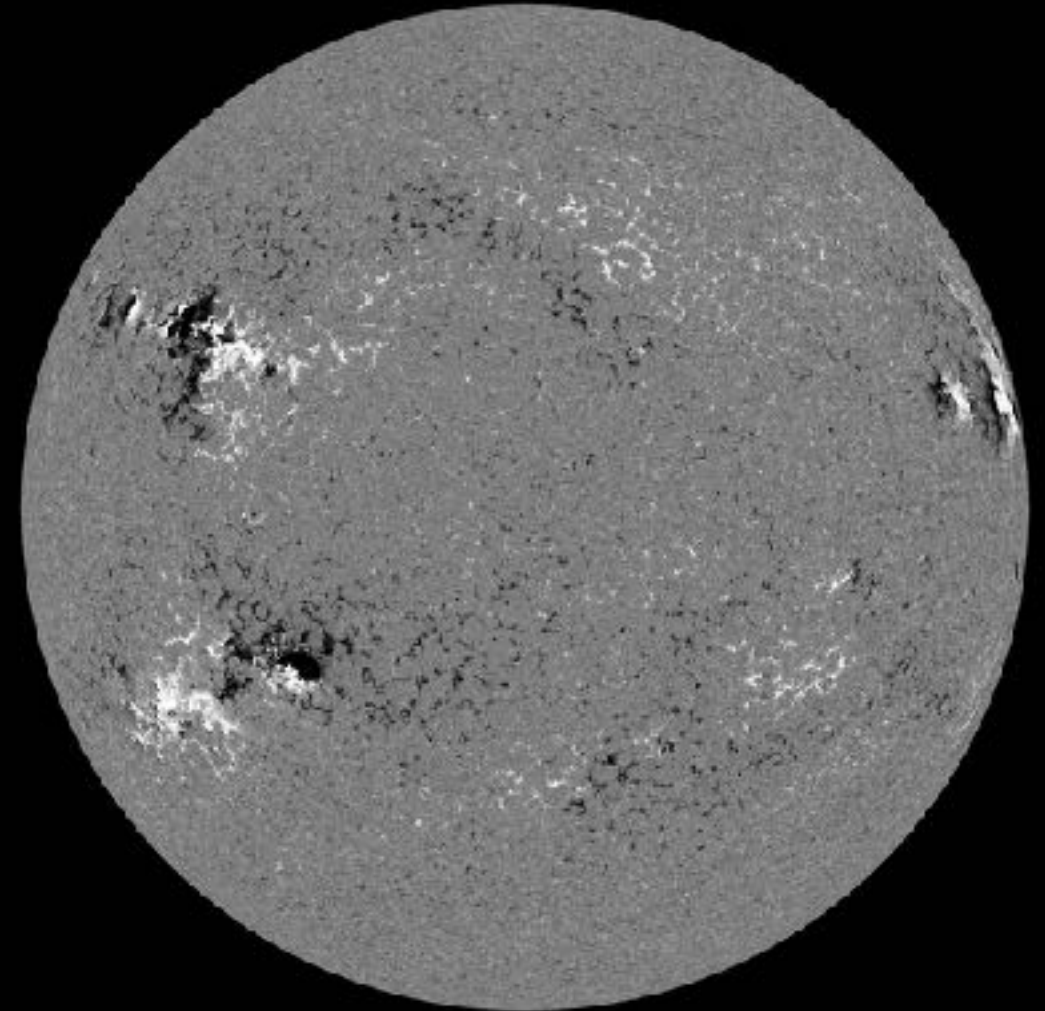
SDO/HMI Magnetogram 2023-05-17 14:00

Solar active regions

SDO/HMI White Light 2023-05-21



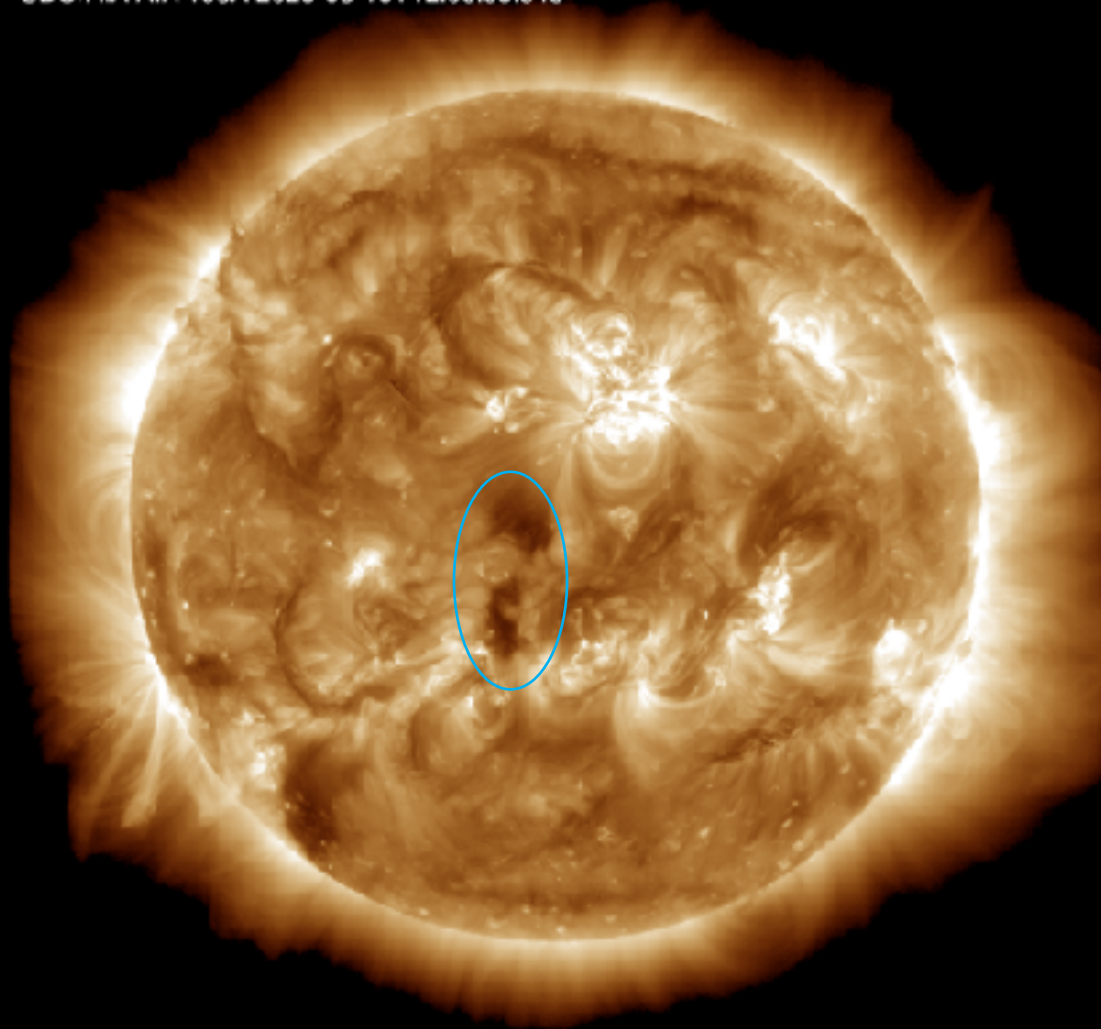
SDO/HMI Magnetogram 2023-05-21



Coronal holes

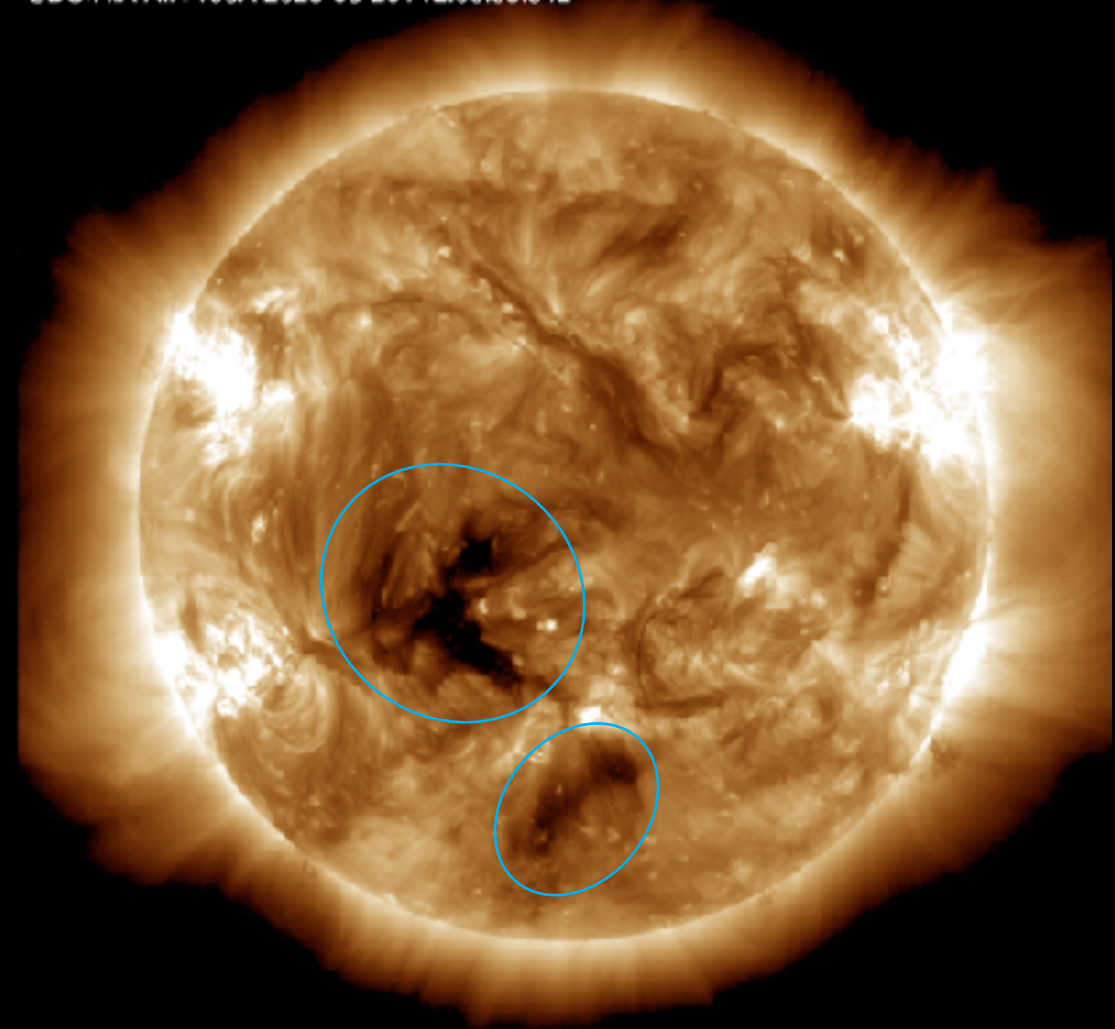
SDO/AIA 19.3 nm 2023-05-16

SDO/AIA AIA 193Å 2023-05-16T12:00:05.843



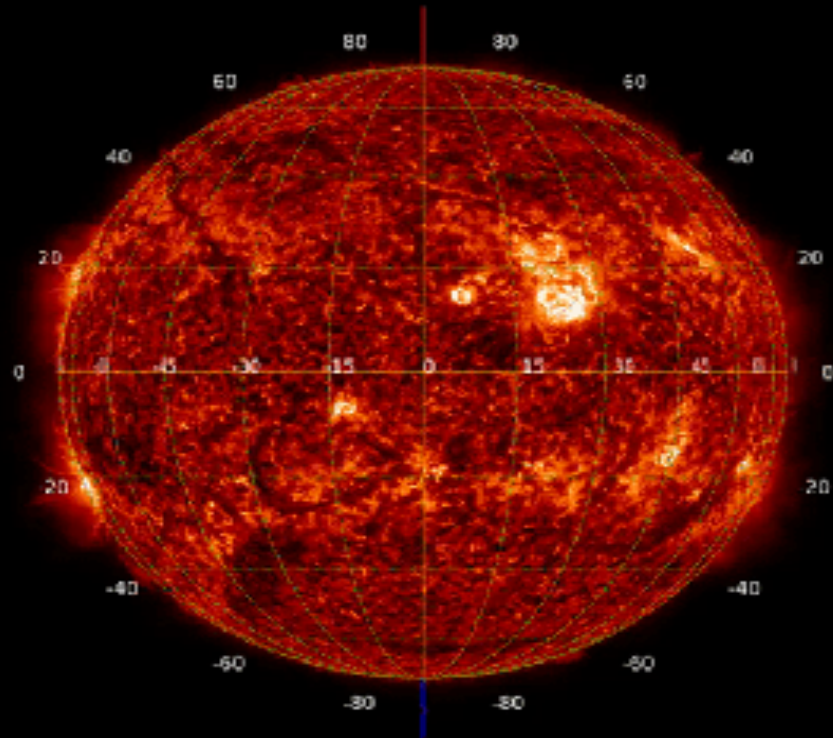
SDO/AIA 19.3 nm 2023-05-20

SDO/AIA AIA 193Å 2023-05-20T12:00:05.842



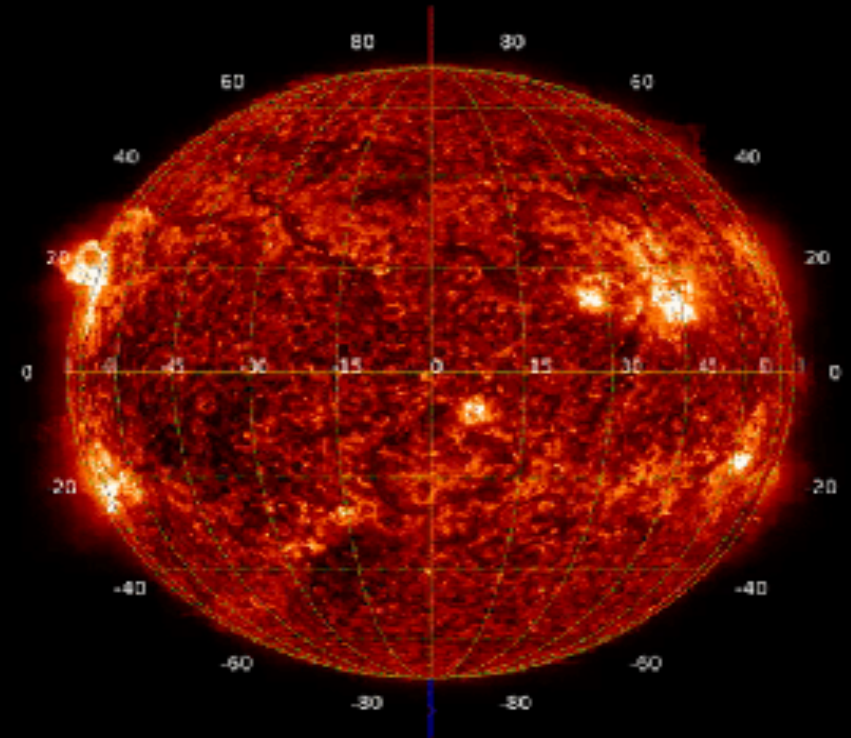
Filaments

SDO/AIA 30.4 nm 2023-05-17



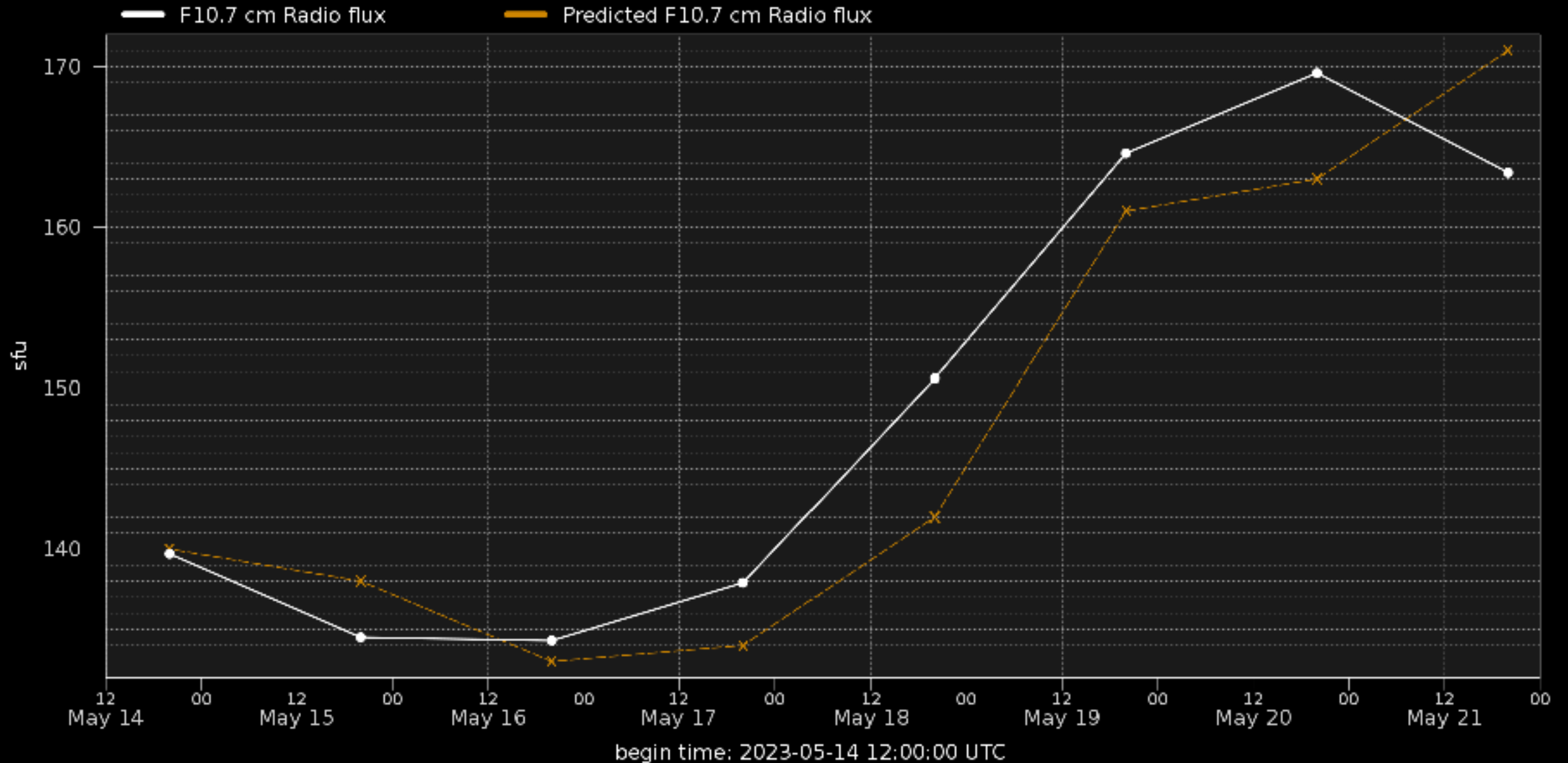
2023-05-17T13:00:41.132

SDO/AIA 30.4 nm 2023-05-19

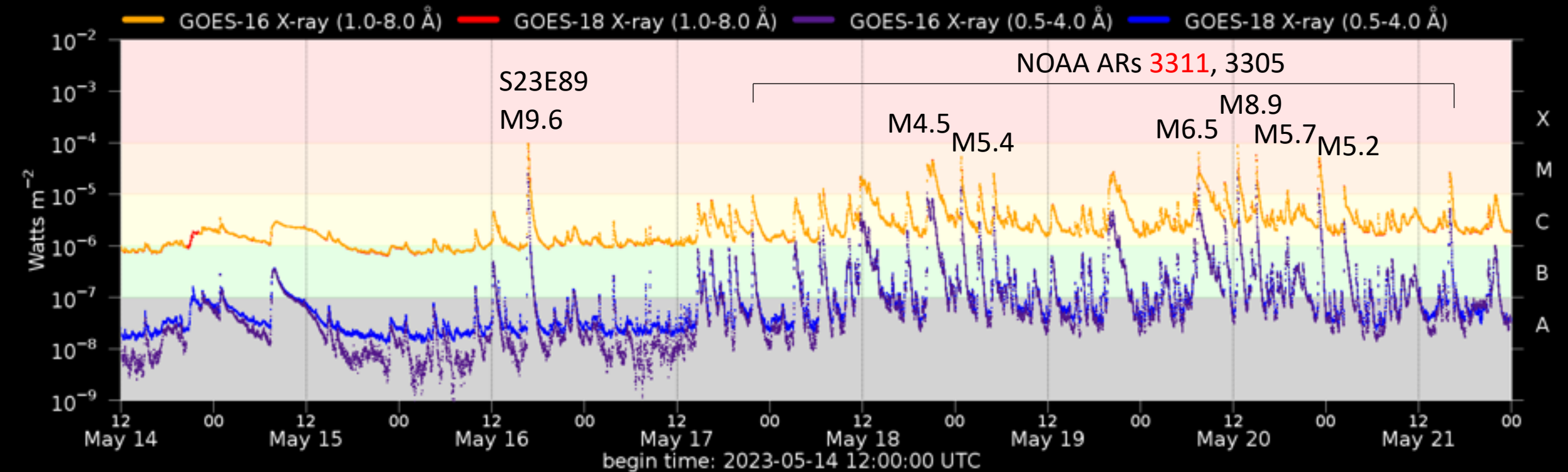


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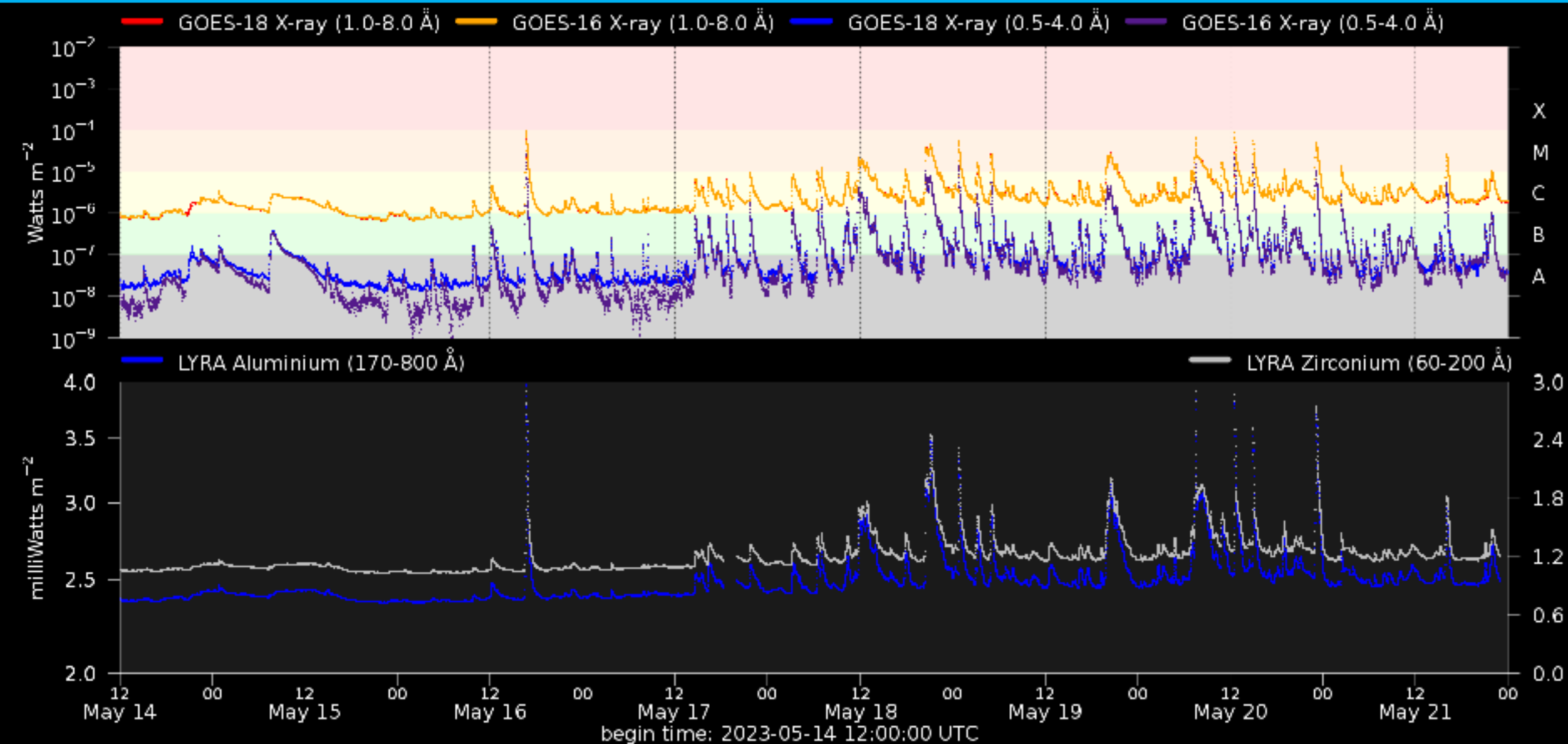
Solar F10.7cm radio flux



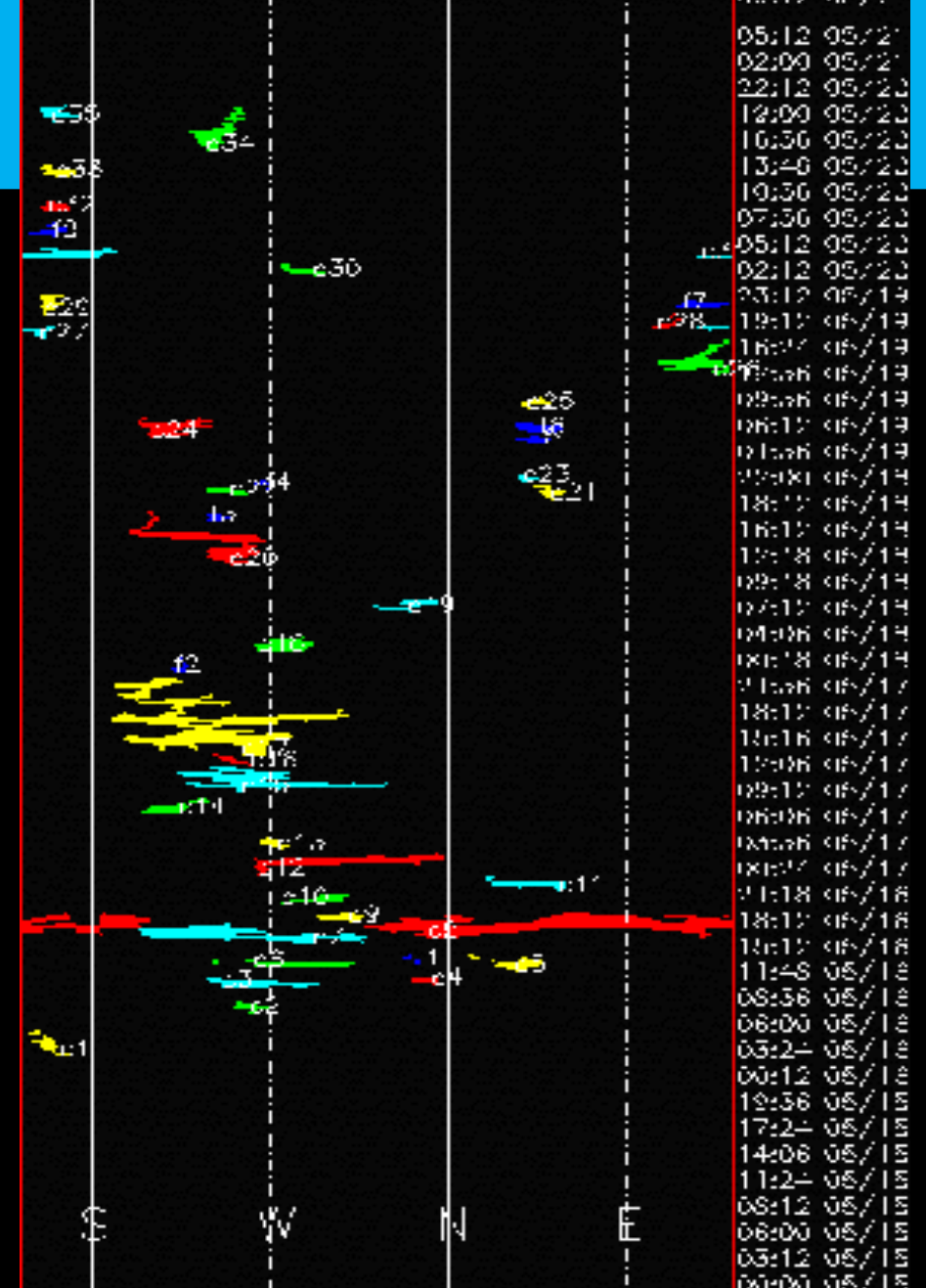
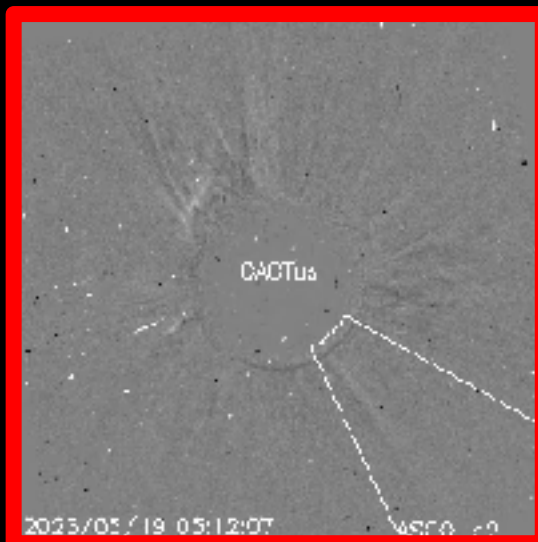
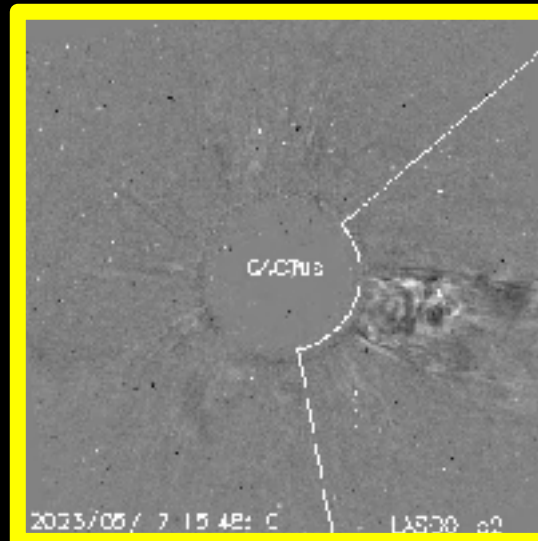
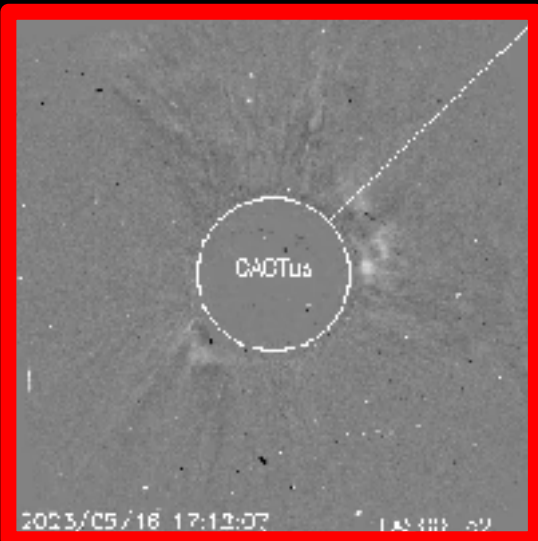
Flaring activity



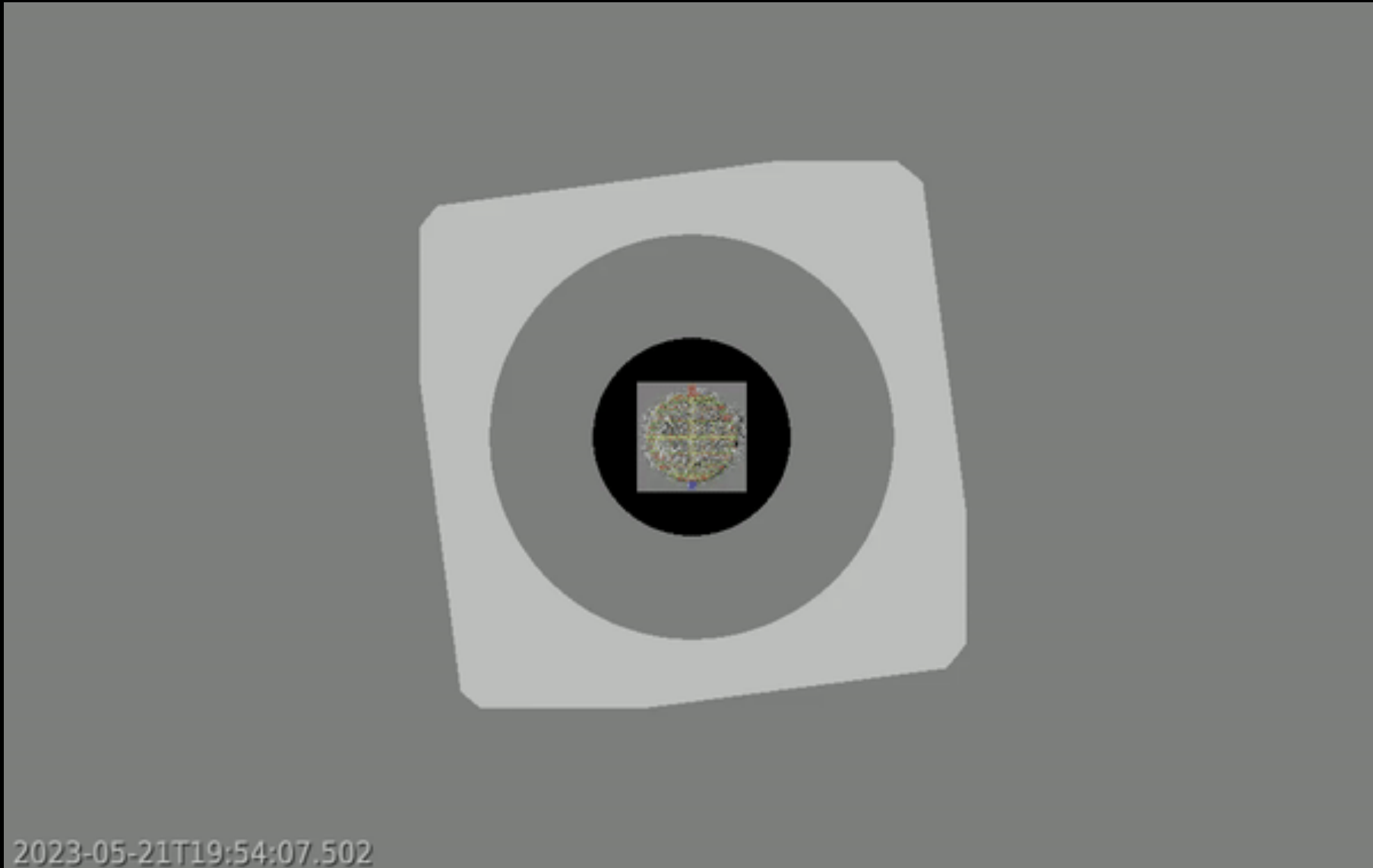
Solar X-Ray and UV flux



Coronal Mass Ejections



Coronal Mass Ejections



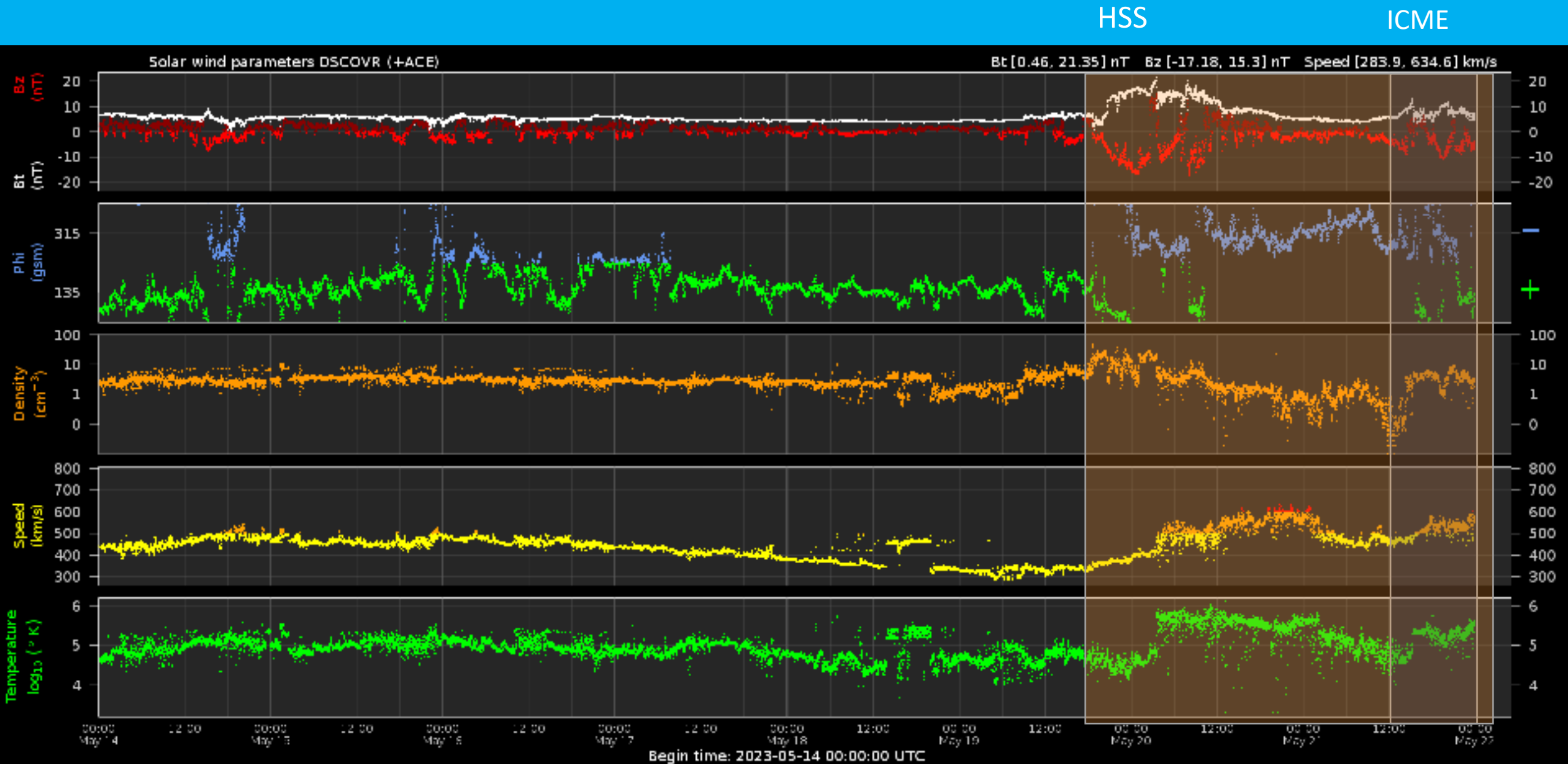
Solar Wind and Geomagnetic Activity



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Solar wind parameters



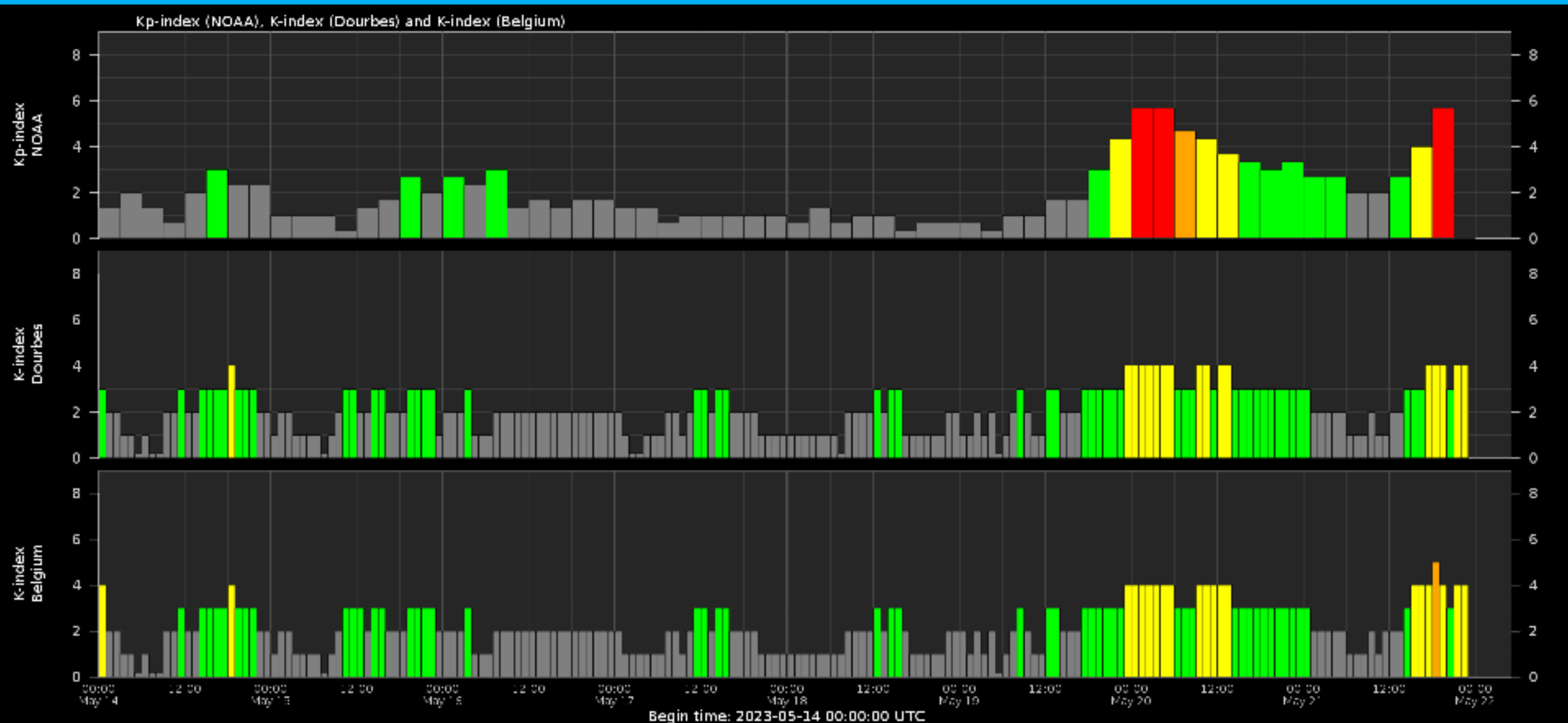
Solar wind parameters & K-indices

HSS

ICME



Geomagnetic activity (K-indexes)



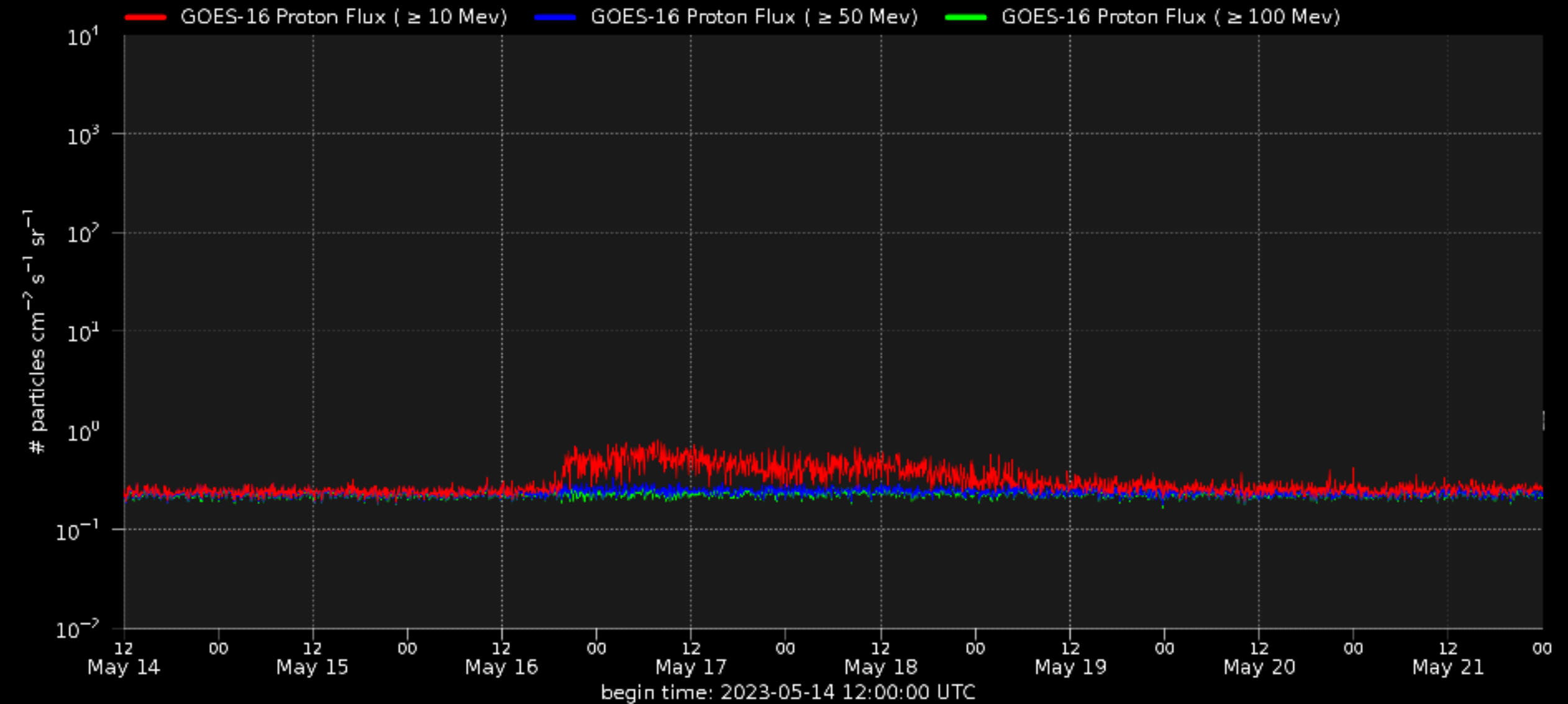
Energetic Particles



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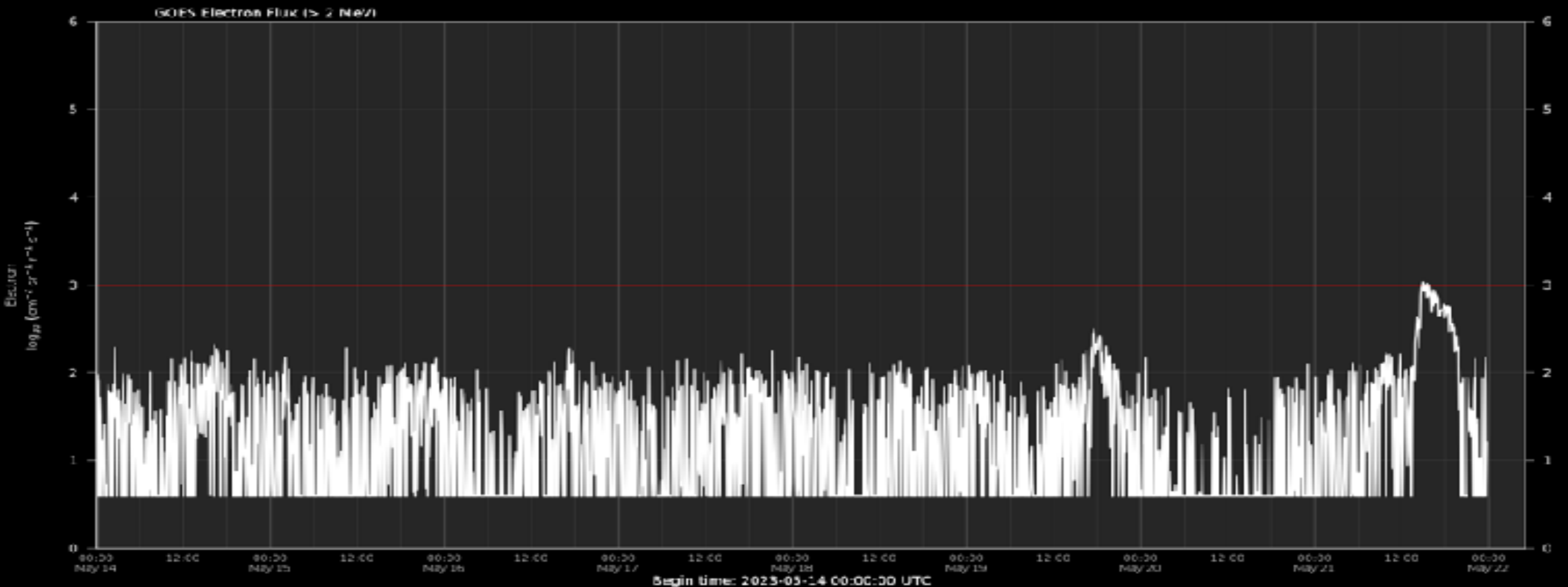
Solar proton flux



Electron flux at GEO

www.stce.be/educational/classification#electrons

www.spaceweather.gc.ca/forecast-prevision/space-spatiale/sffl-en.php



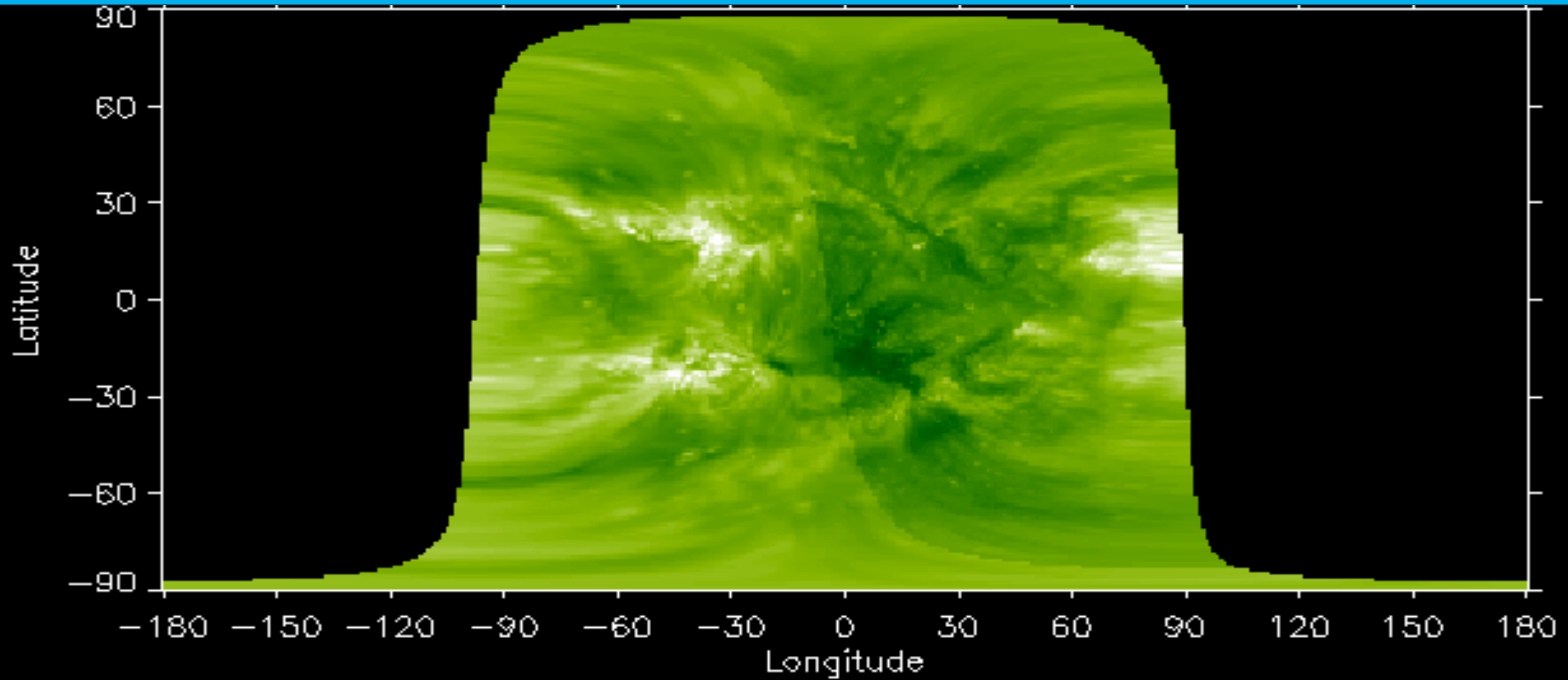
Outlook



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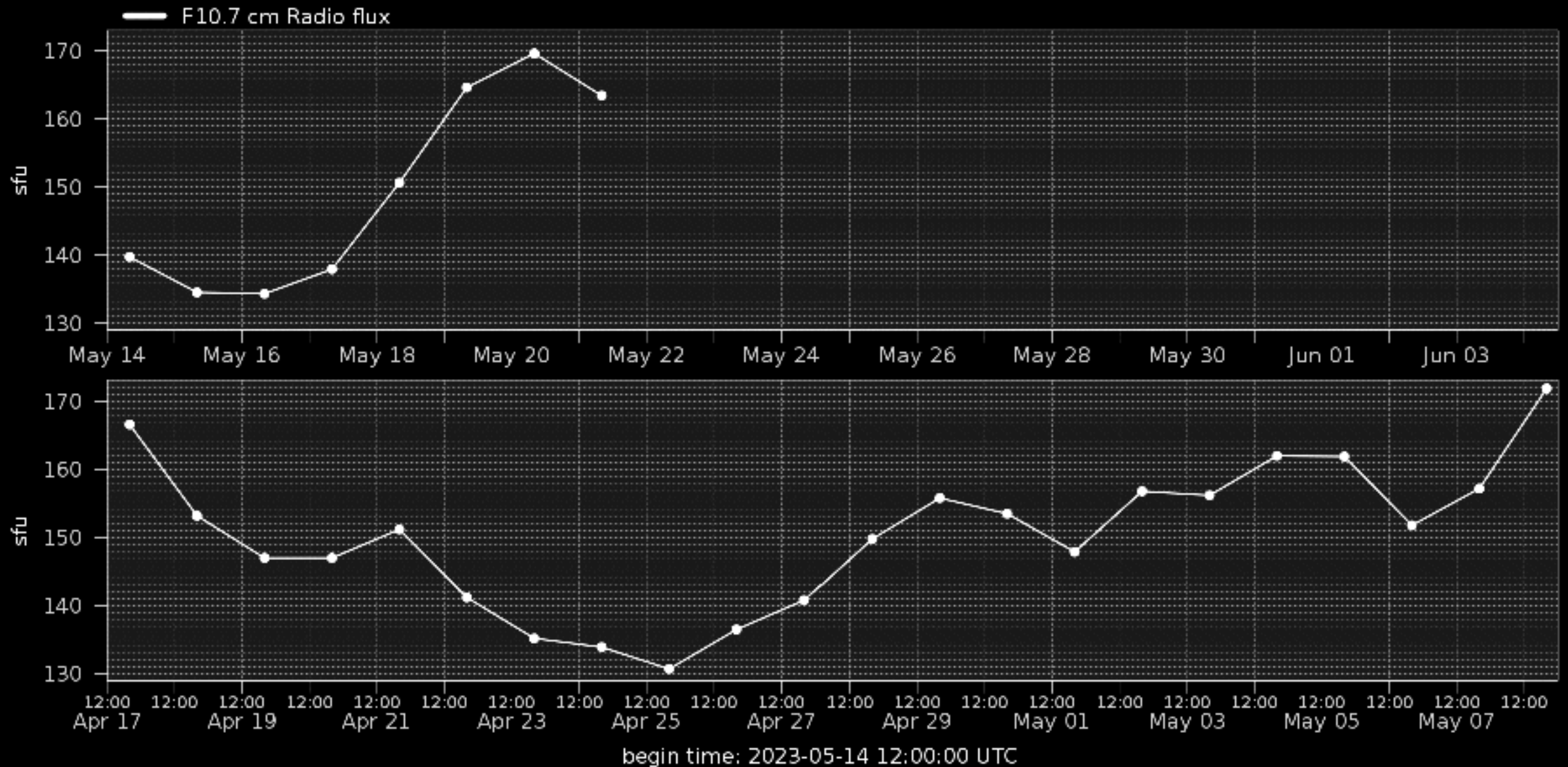
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Outlook: Solar activity

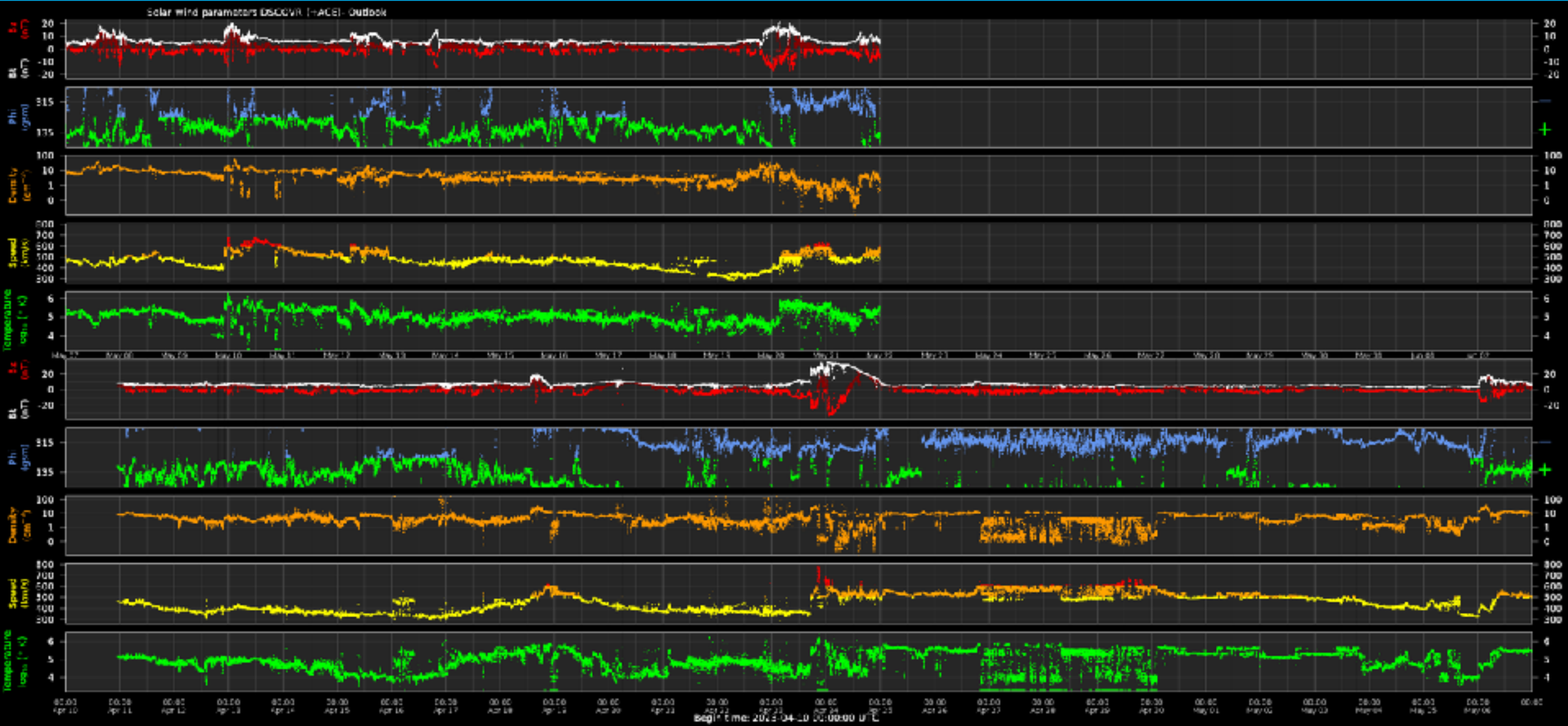


Observation date: 2023/05/21 23:05:00

Outlook: Solar F10.7cm radio flux



Outlook: Solar wind parameters



Outlook: Geomagnetic activity



Outlook: Electron Flux at GEO Outlook



SIDC Space Weather Briefing

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