SIDC Space Weather Briefing

27 April 2025-04 May 2025

de Patoul Judith, Daria Shukhobodskaia

and the SIDC forecaster team

Royal Observatory
of Belgium

Solar Influences
Data analysis Centre
www.sidc.be

Summary Report

Solar activity from 2025-04-27 12:00 to 2025-05-04 23:59

Active regions	Alpha regions up to Beta-Gamma-Delta regions
Flares	# C-class flare: 33 # M-class flare: 4 # X-class flare: 0
Coronal Holes	Large, trans-equatorial and geoeffective coronal holes
CMEs	No Earth directed CMEs

Proton flux	Background level
Electron flux	Above threshold in response of HSS

Solar wind and geomagnetic conditions

ICMEs	No ICME observed
Solar wind conditions	|B|: 1.44 - **14.44 nT** //Bz: **-13.12 nT** to 11.89 nT //Speed: 345.9 - **850.5km/s**
Geomagnetic conditions	max KBel: 4, max Kp(NOAA): 5+, **Minor Storm conditions**

All Quiet Alert: Not quite

Solar Activity

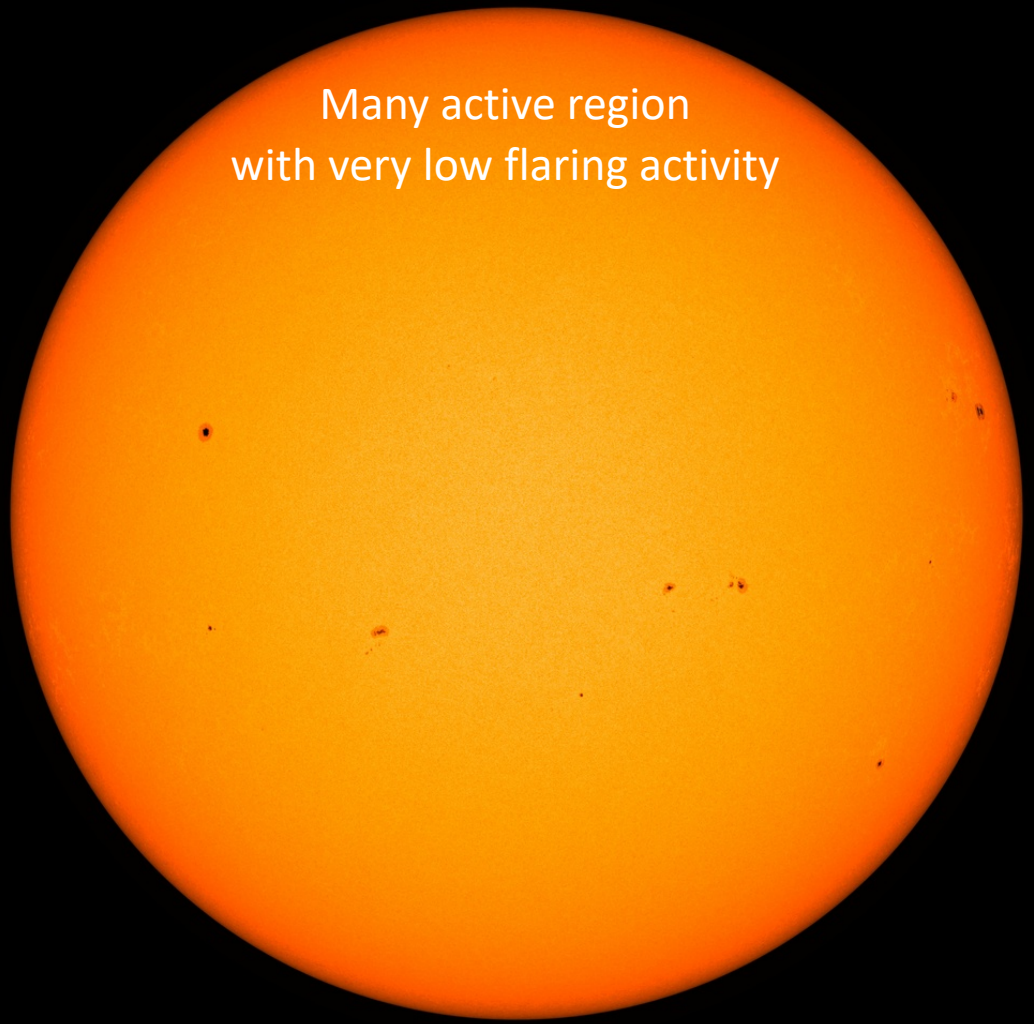
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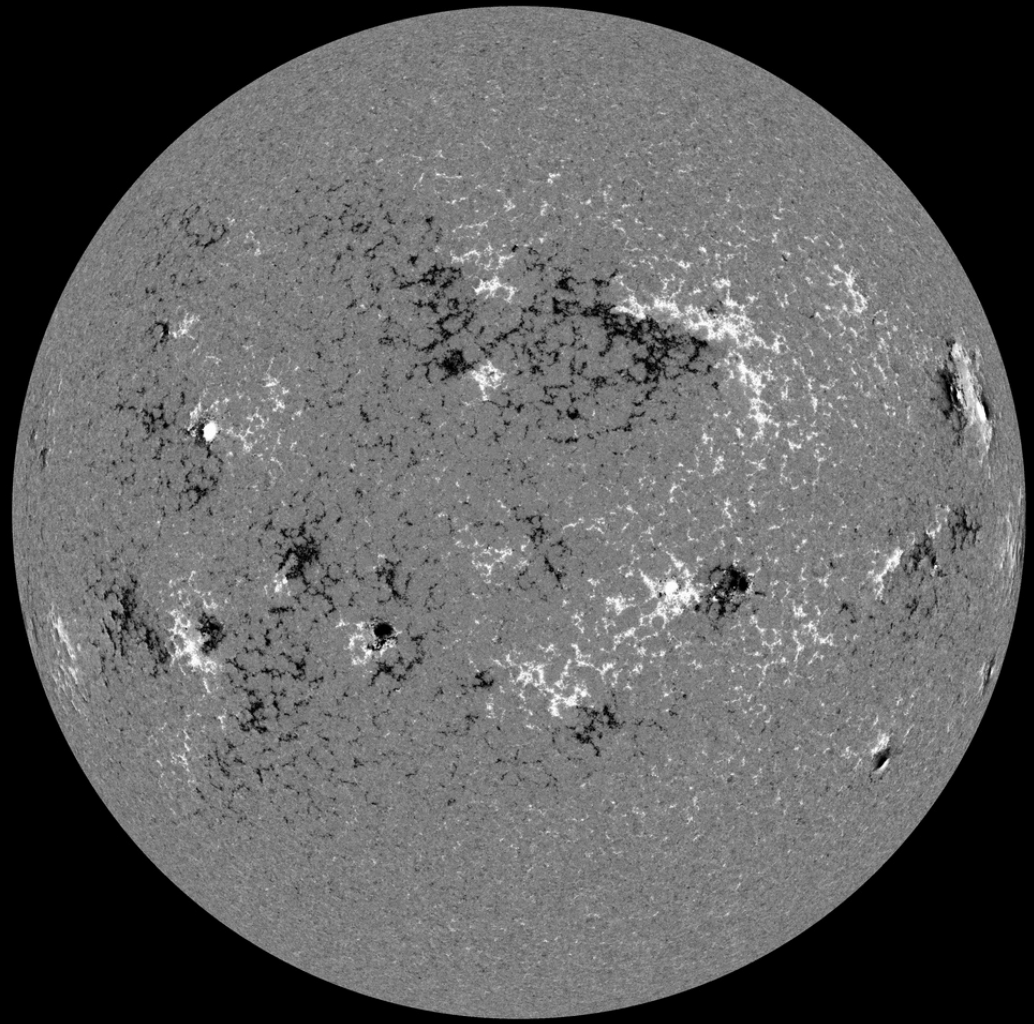
Solar active regions

SDO/HMI White Light 2025-04-27

Many active region
with very low flaring activity

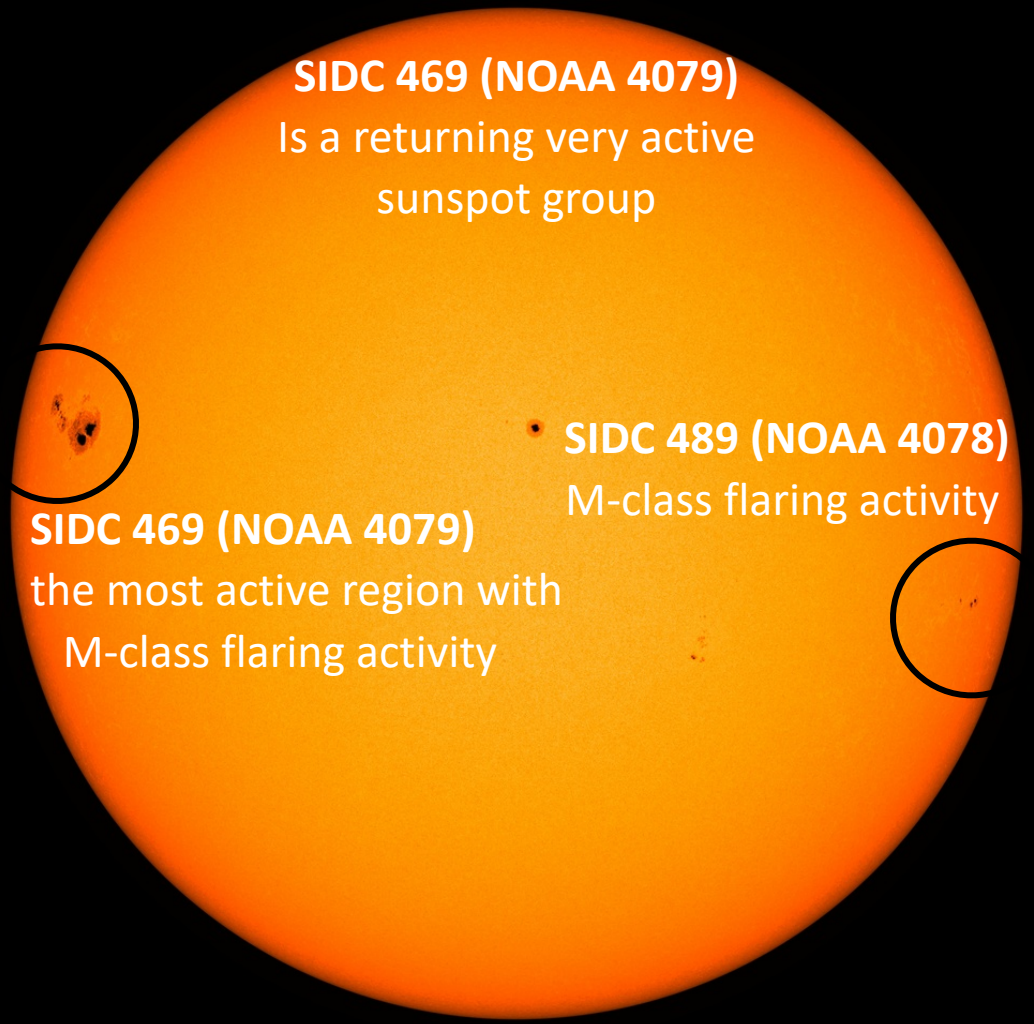


SDO/HMI Magnetogram 2025-04-27

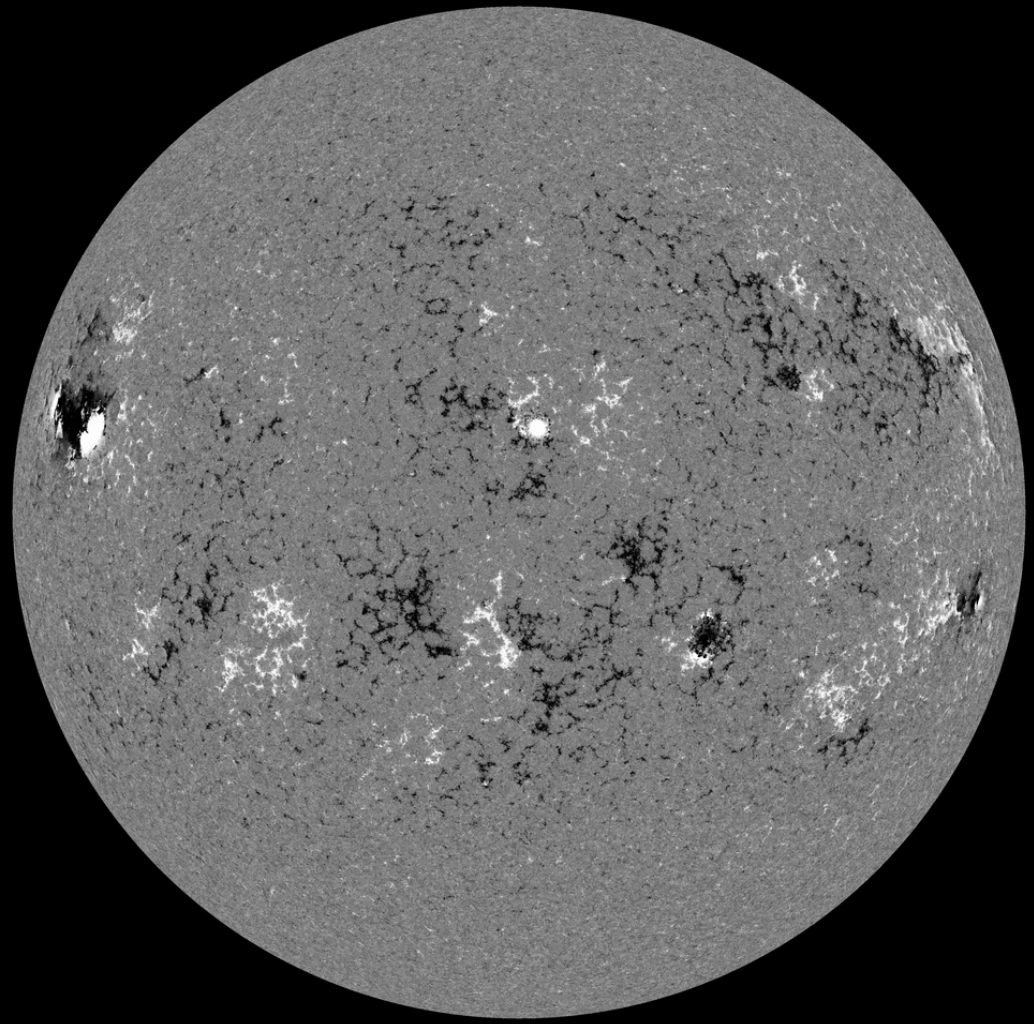


Solar active regions

SDO/HMI White Light 2025-04-30

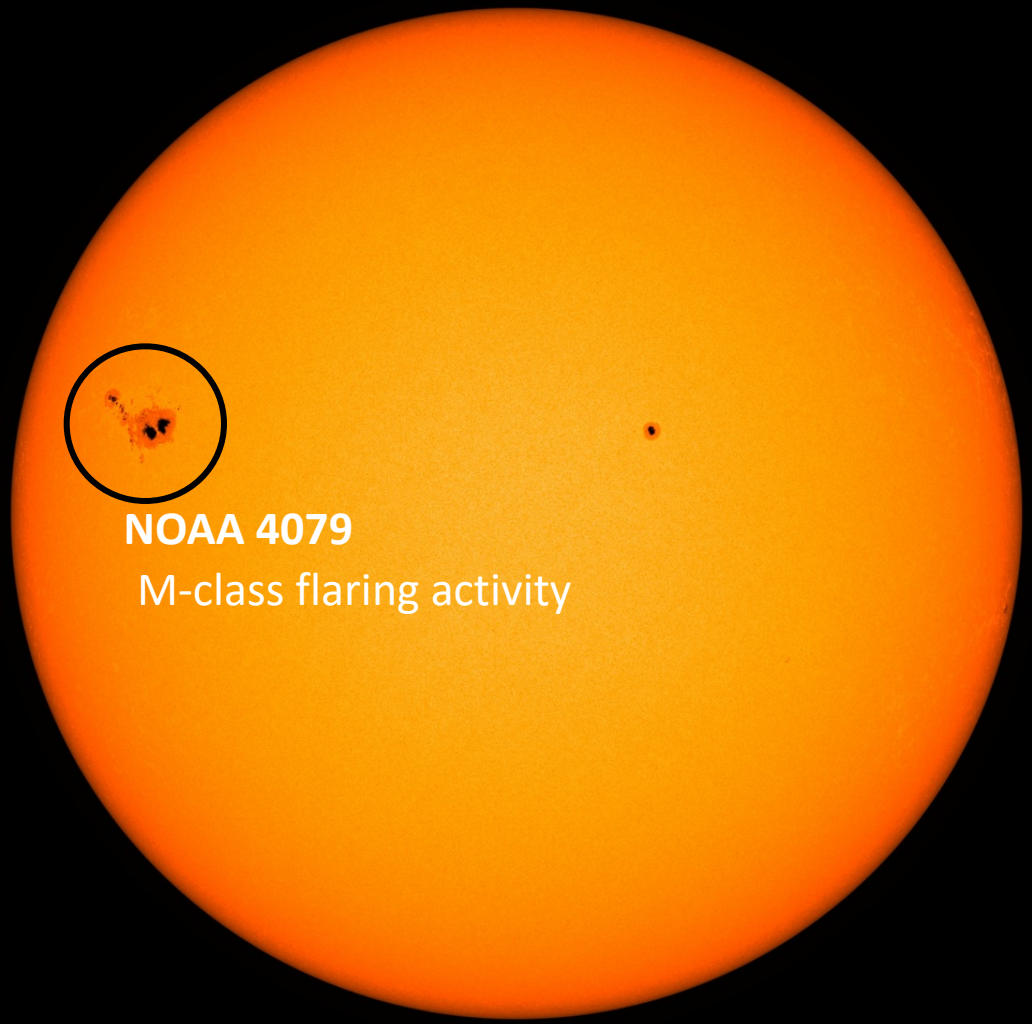


SDO/HMI Magnetogram 2025-04-30

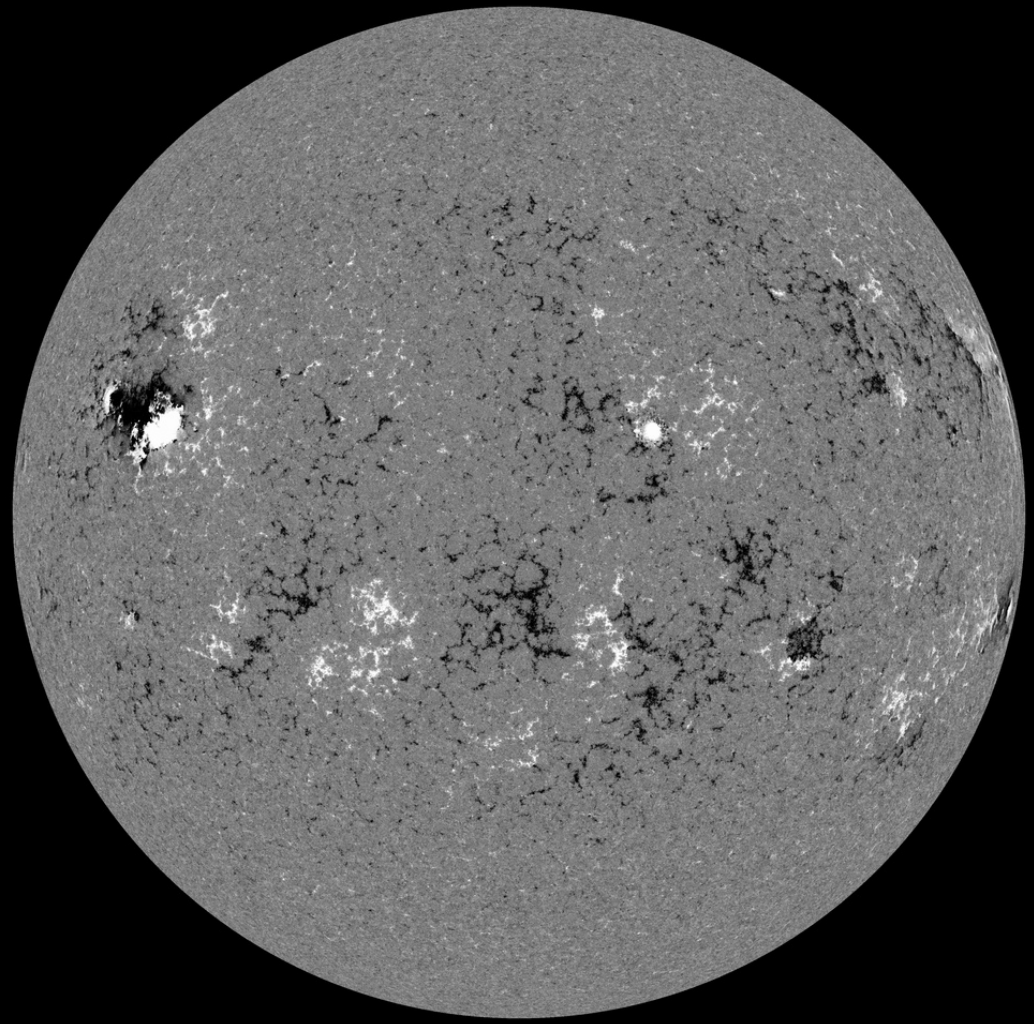


Solar active regions

SDO/HMI White Light 2025-05-01

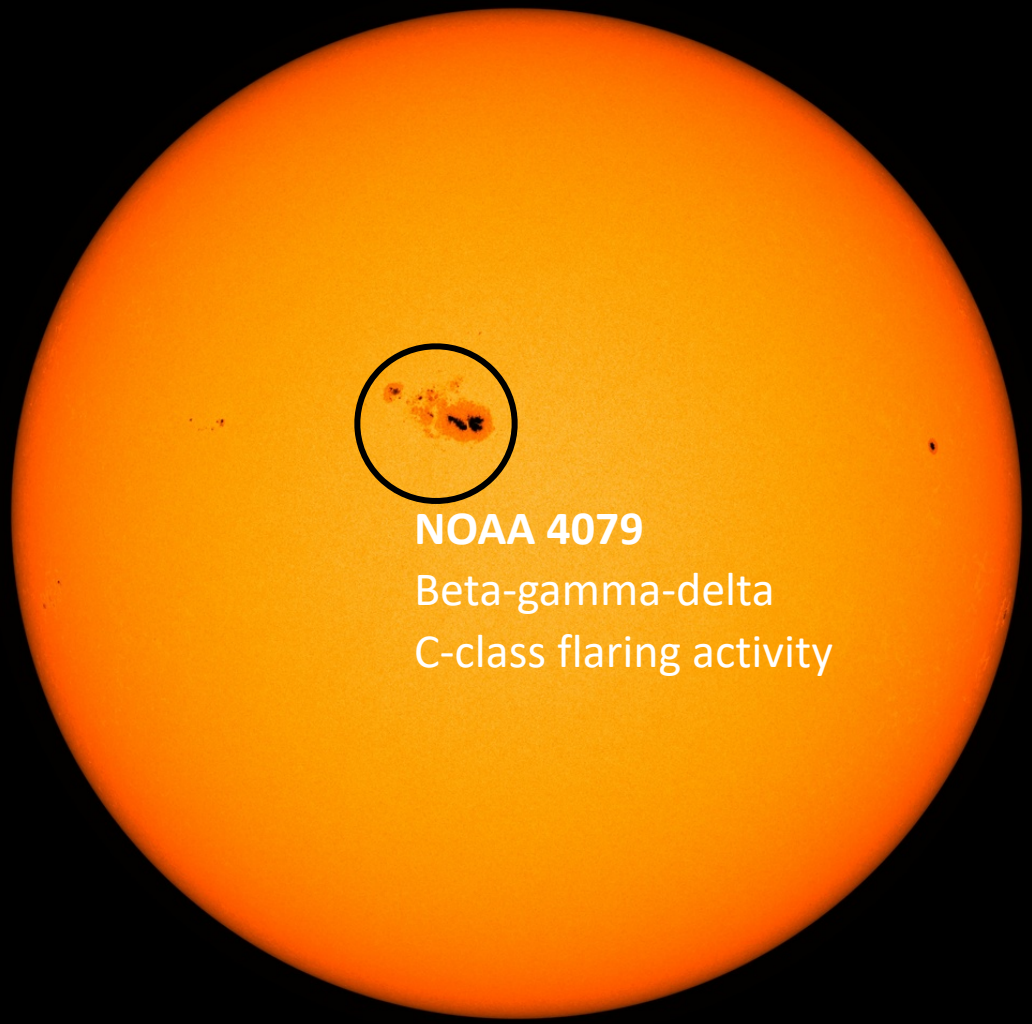


SDO/HMI Magnetogram 2025-05-01

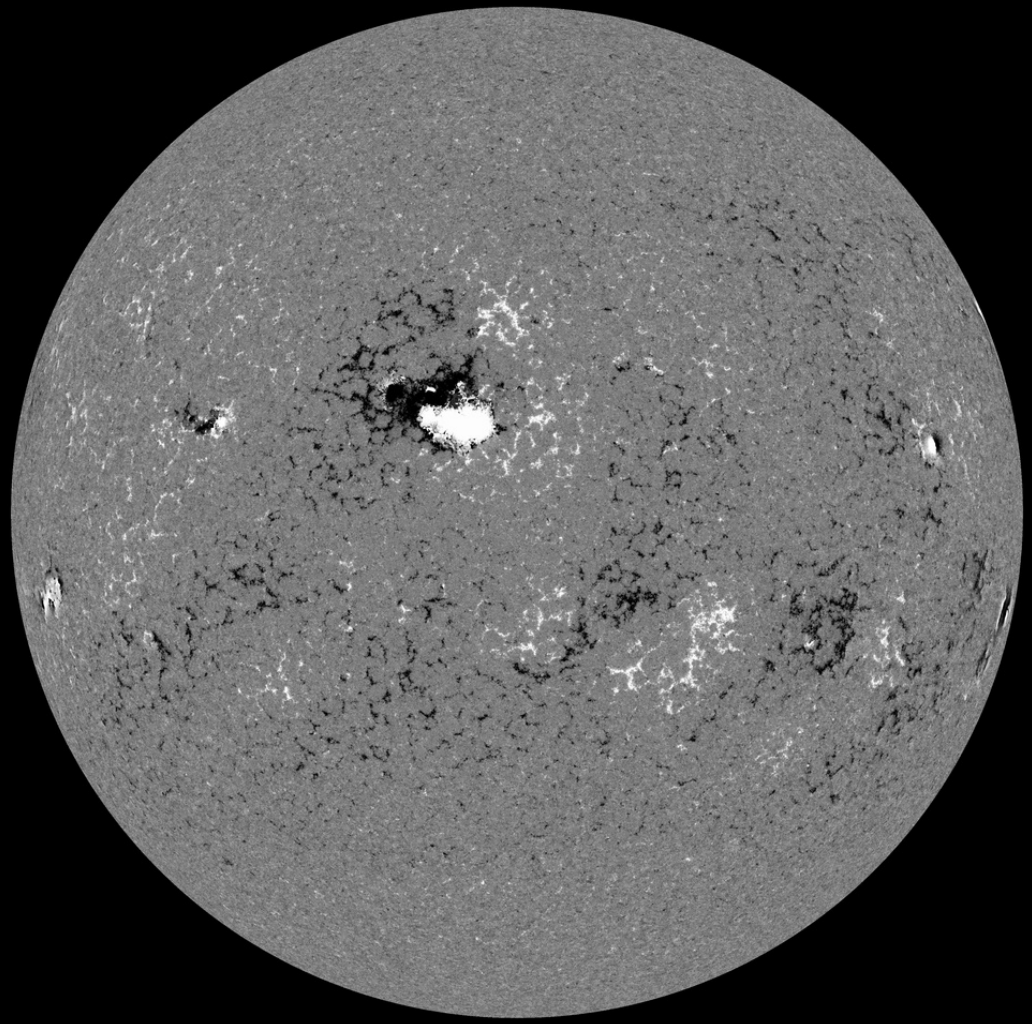


Solar active regions

SDO/HMI White Light 2025-05-04

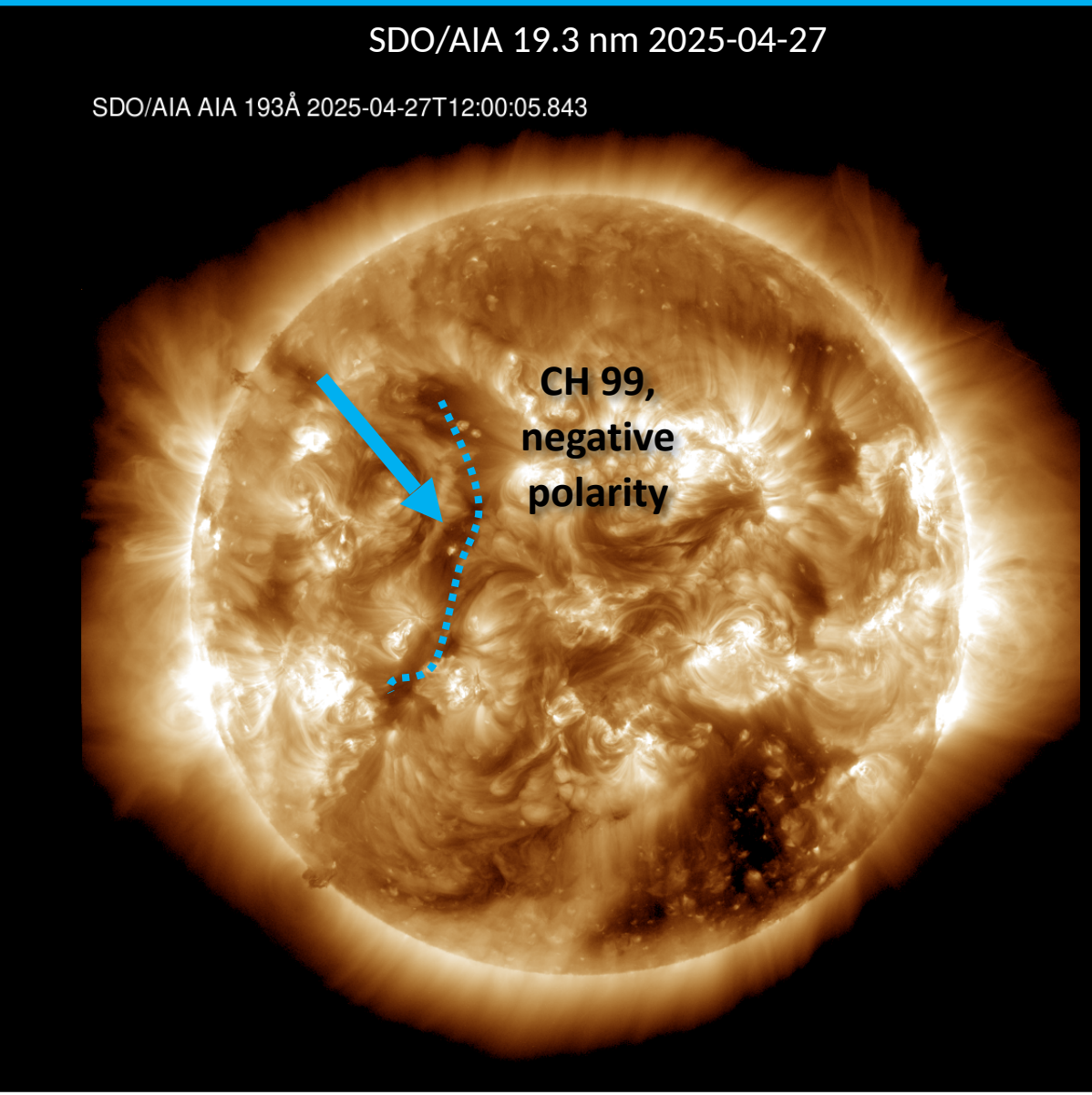


SDO/HMI Magnetogram 2025-05-04

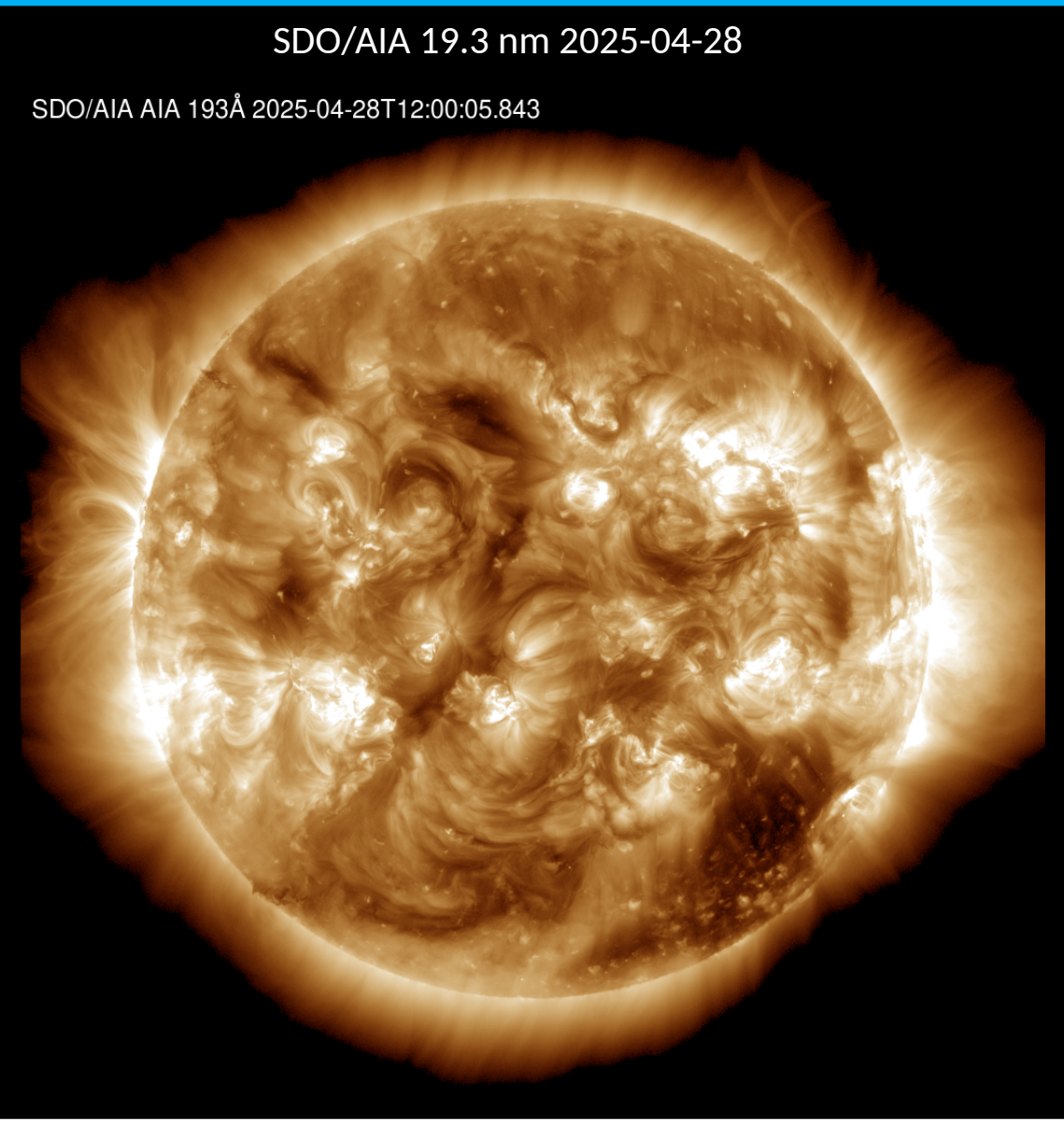


Coronal holes

SDO/AIA 19.3 nm 2025-04-27

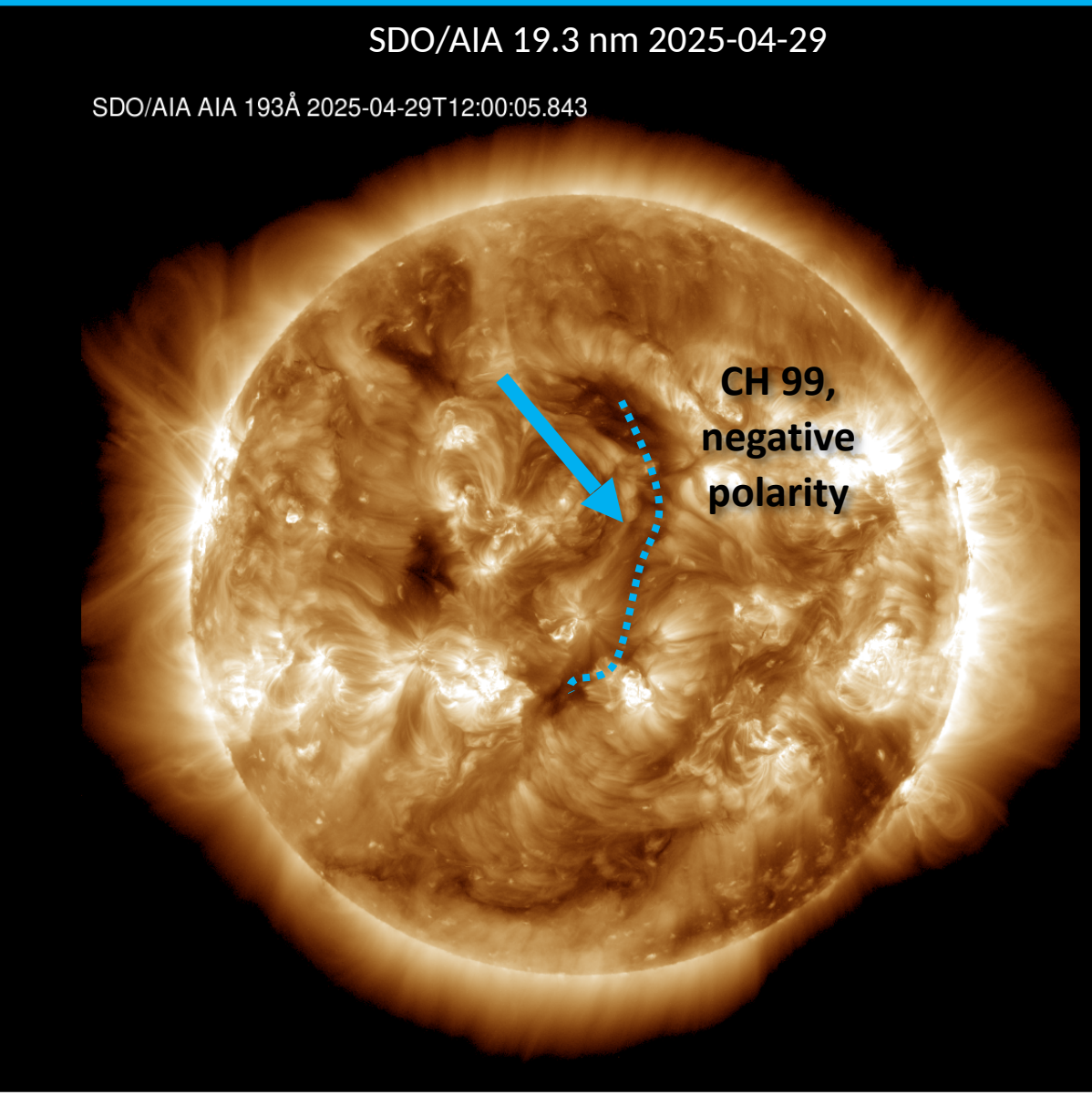


SDO/AIA 19.3 nm 2025-04-28

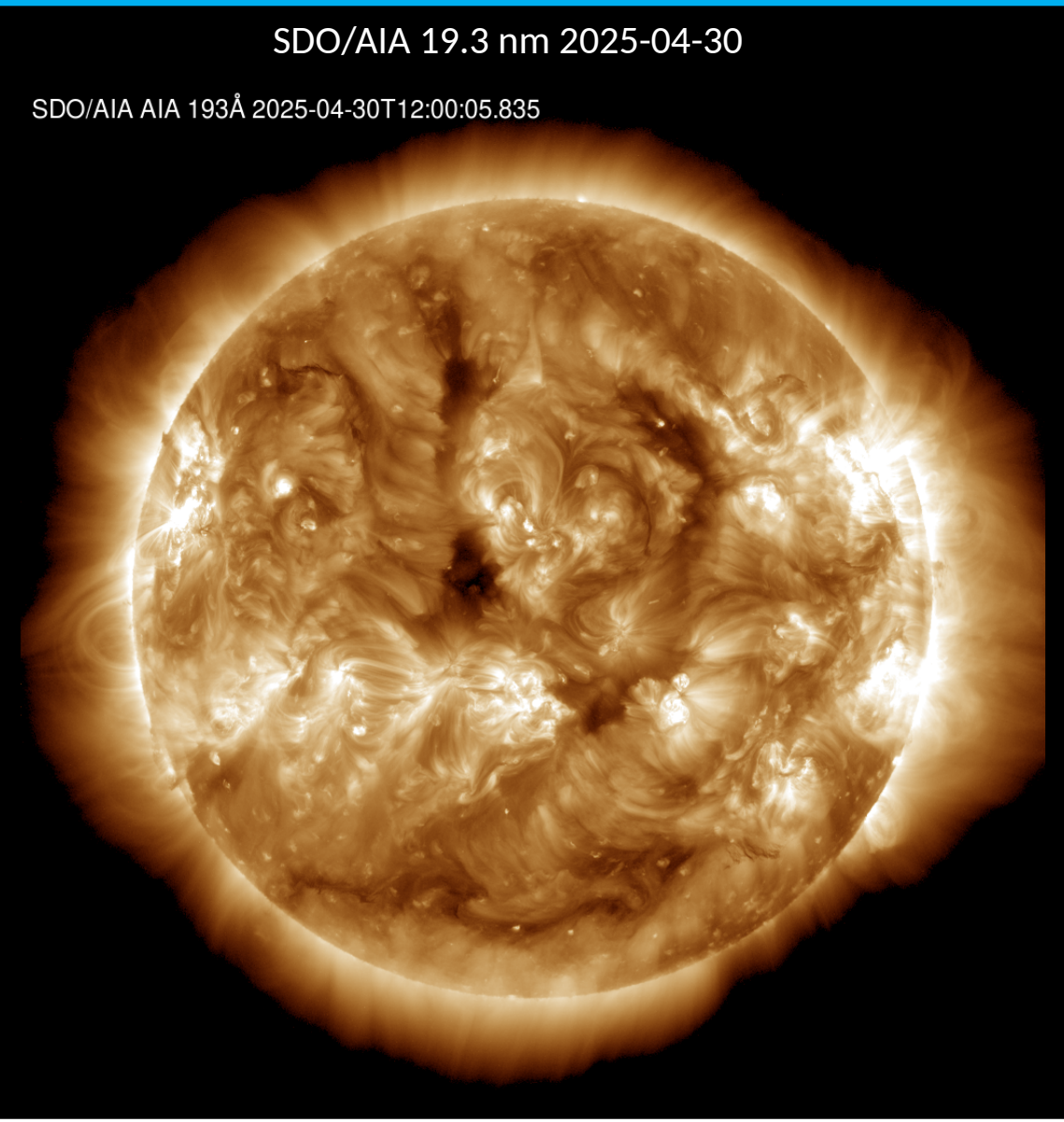


Coronal holes

SDO/AIA 19.3 nm 2025-04-29

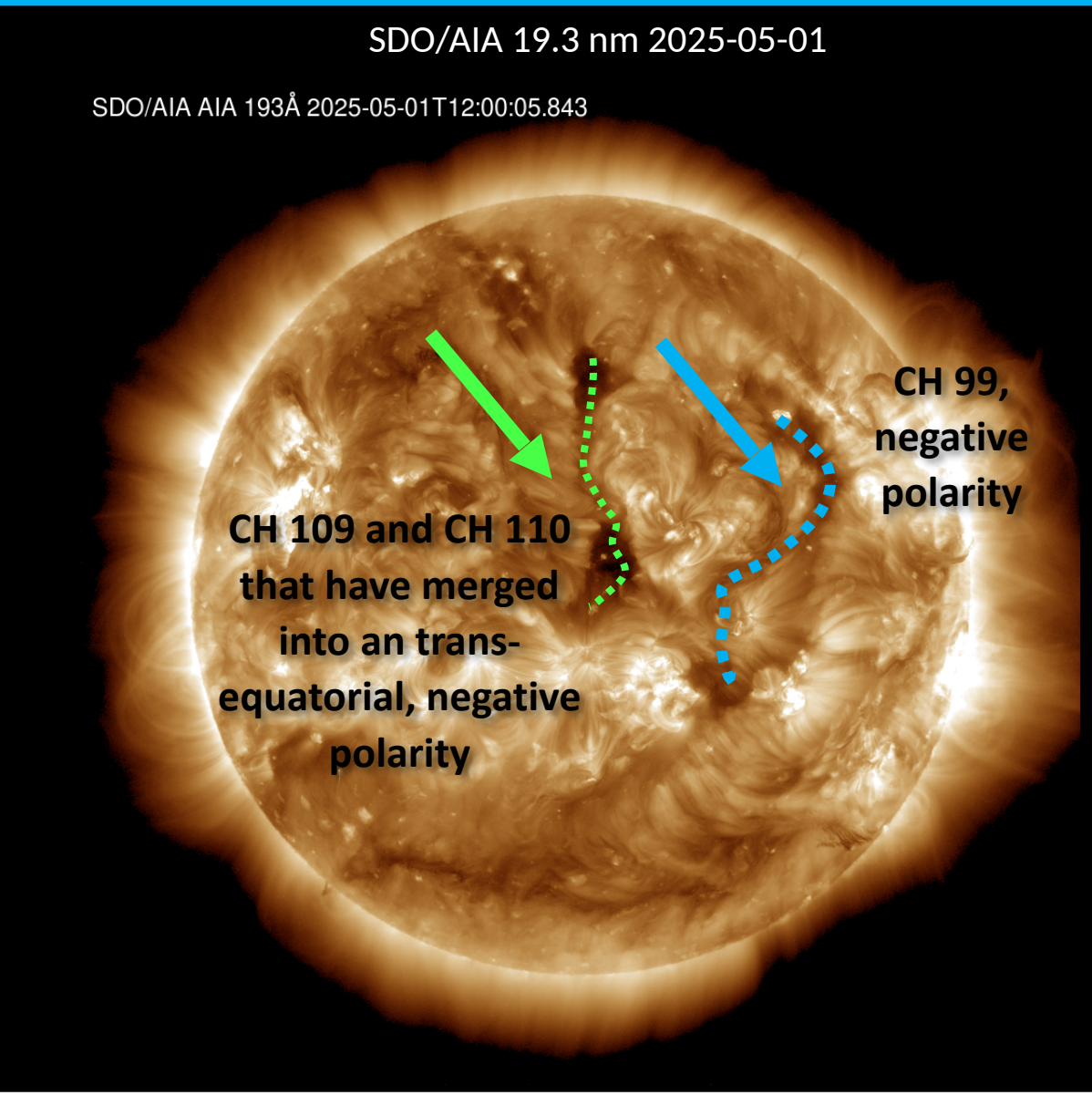


SDO/AIA 19.3 nm 2025-04-30

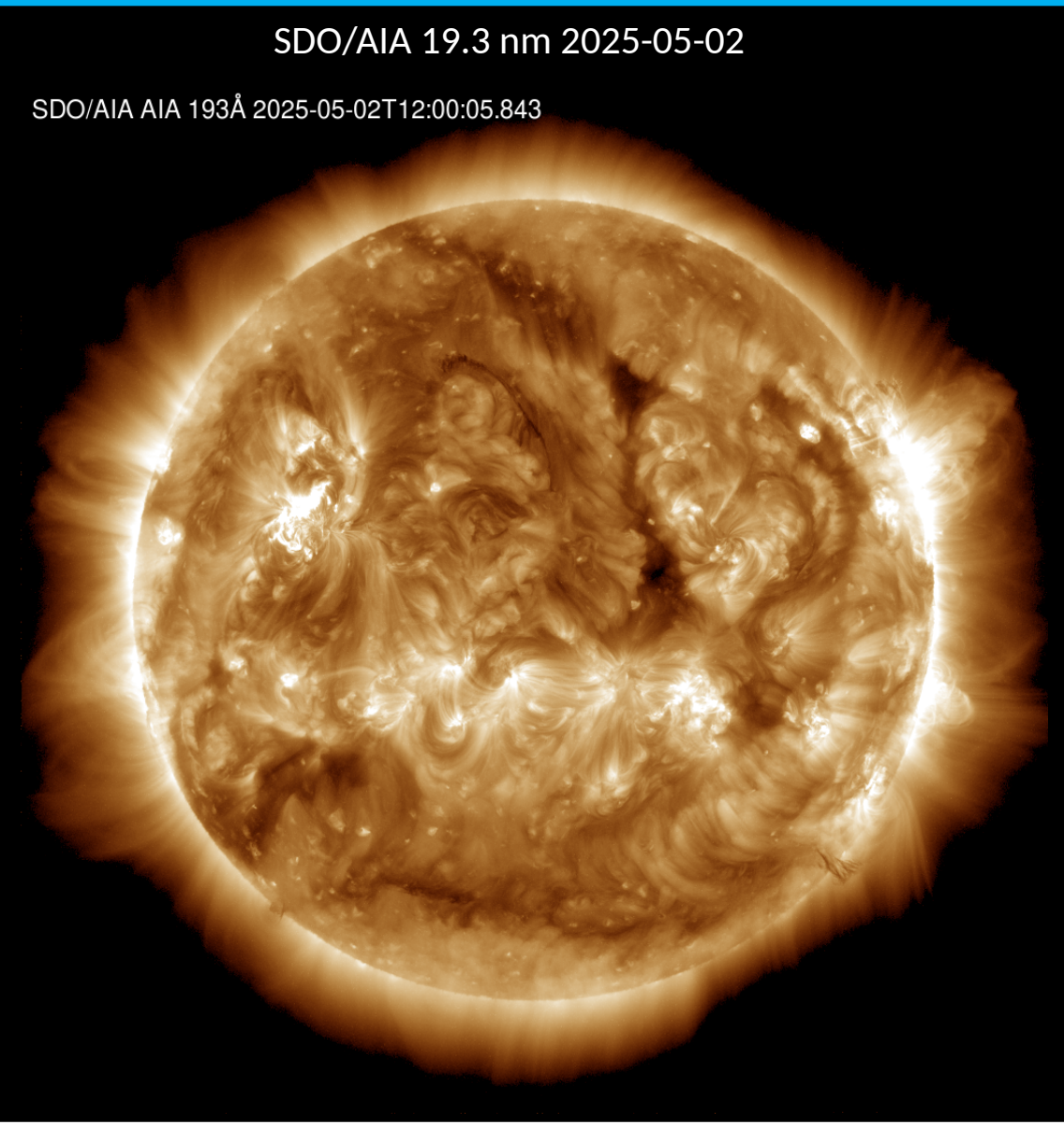


Coronal holes

SDO/AIA 19.3 nm 2025-05-01

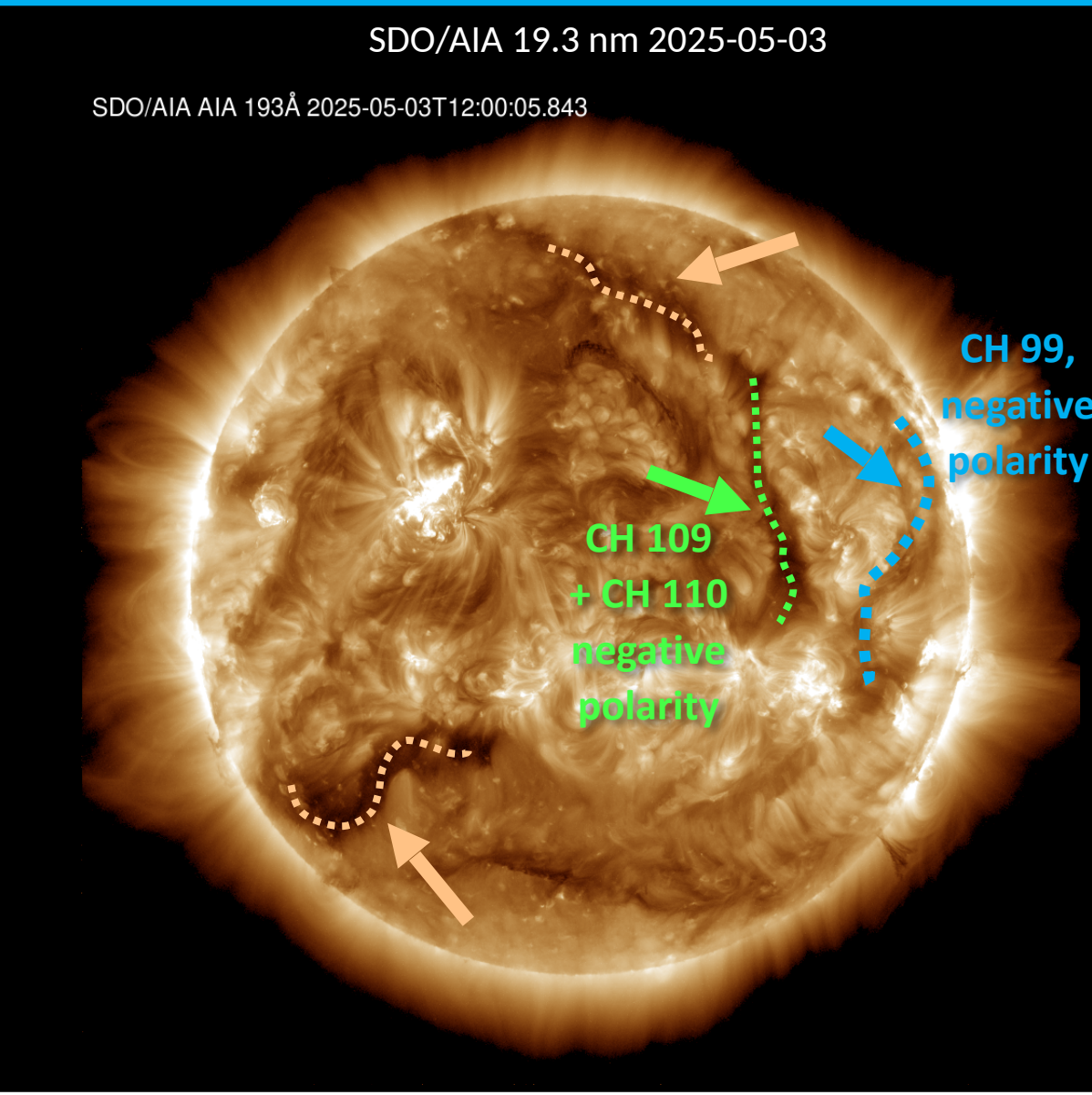


SDO/AIA 19.3 nm 2025-05-02

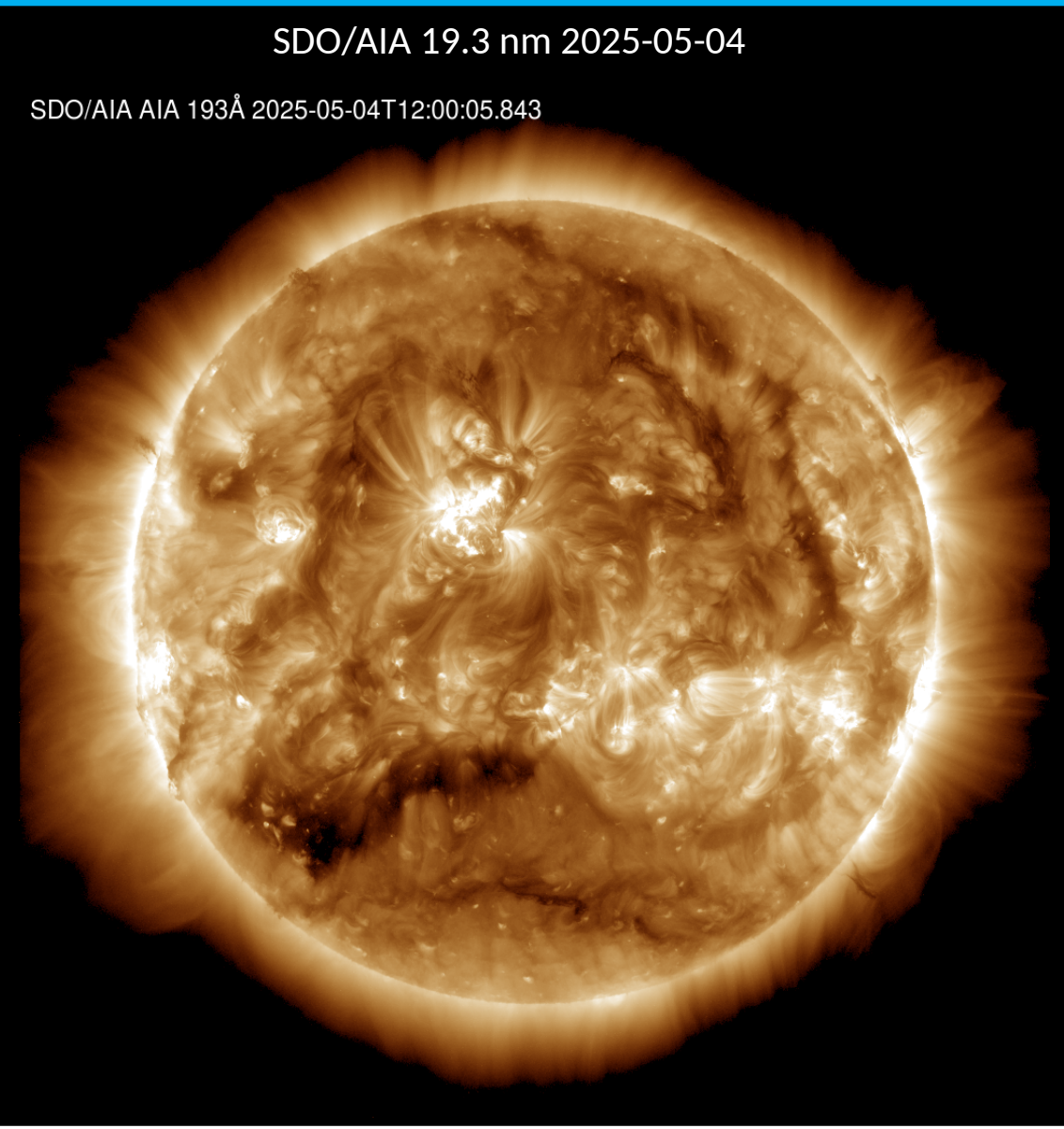


Coronal holes

SDO/AIA 19.3 nm 2025-05-03

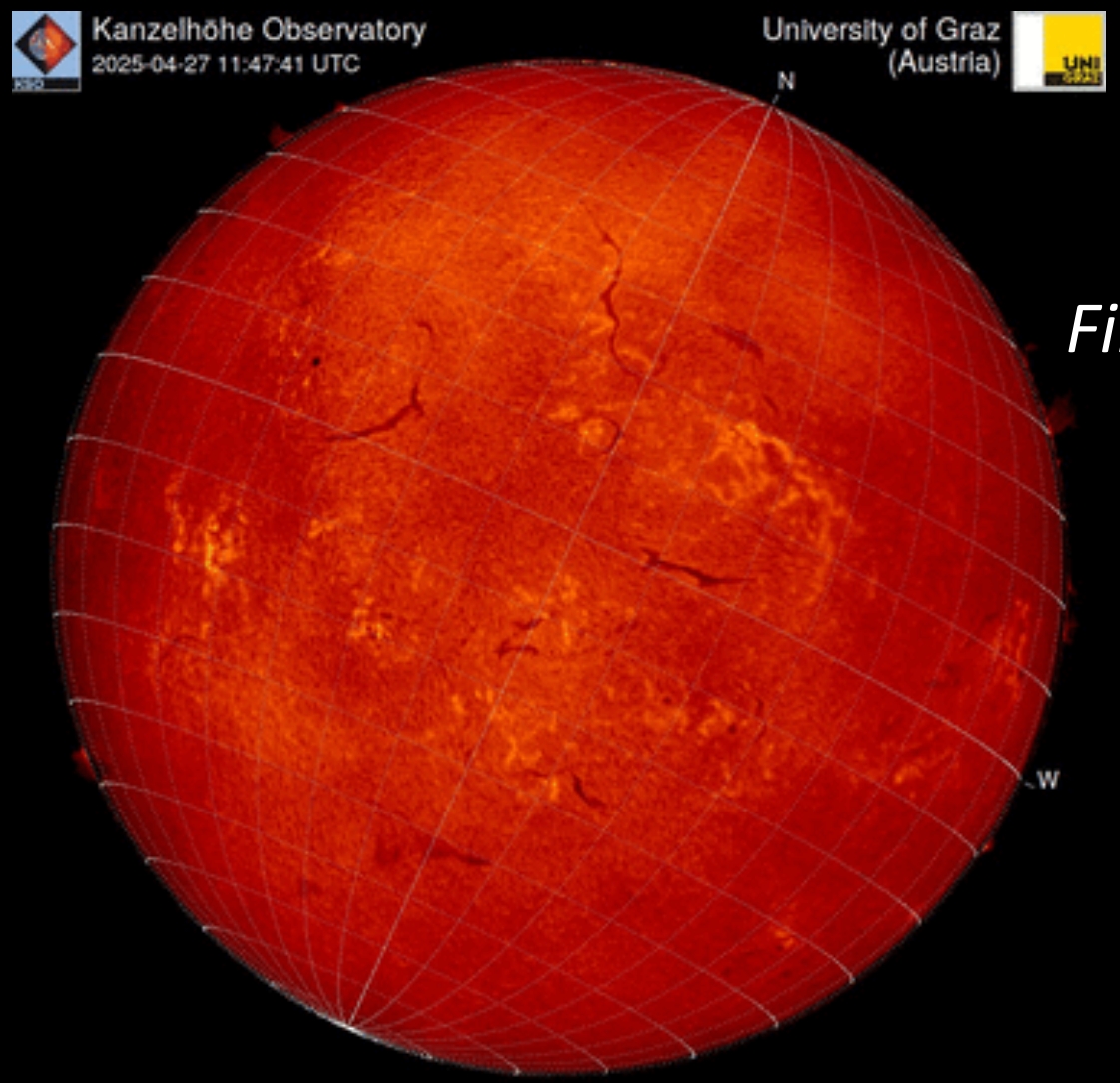


SDO/AIA 19.3 nm 2025-05-04



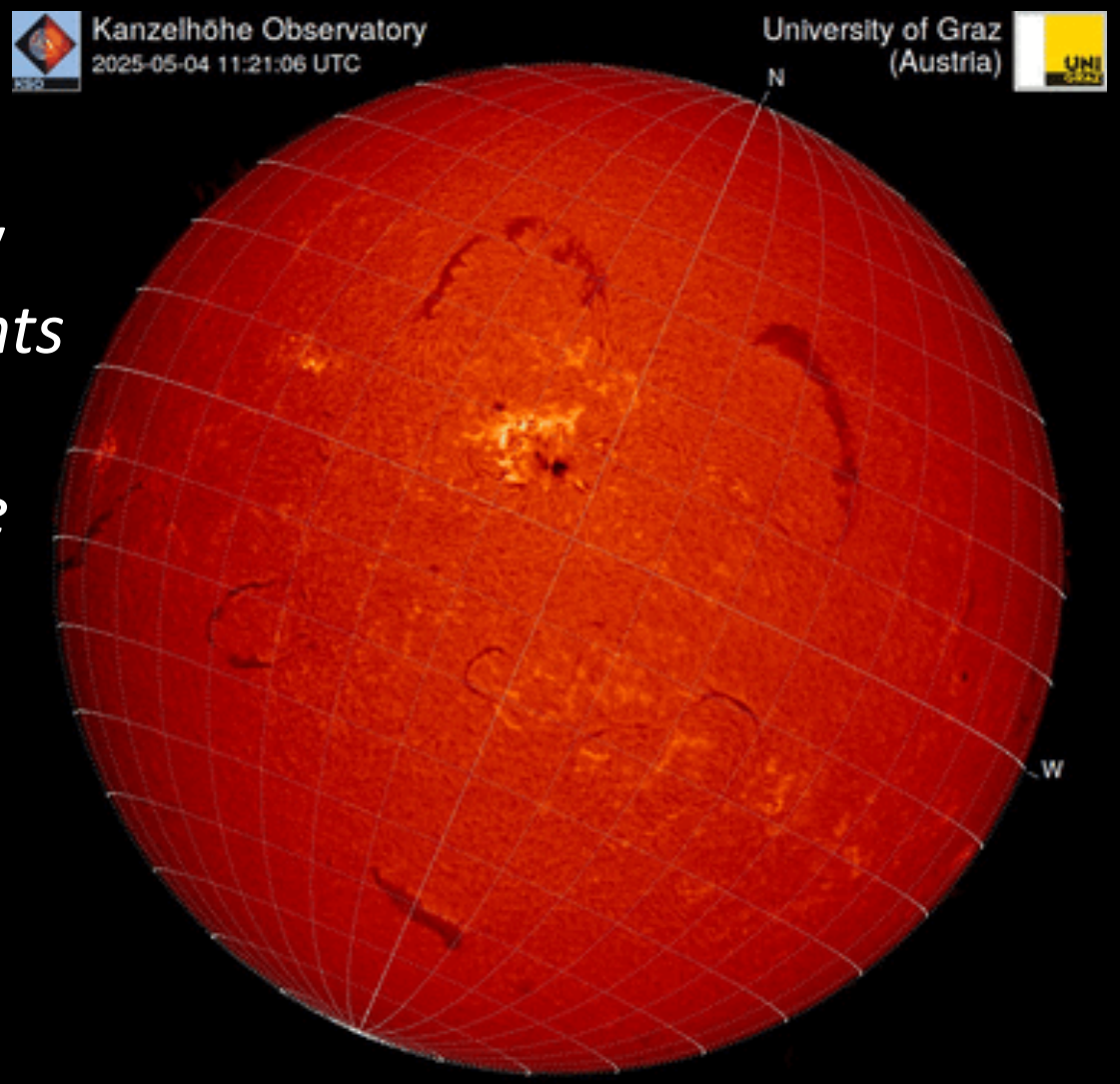
Filaments & Filament eruptions

H-alpha 2025-04-27

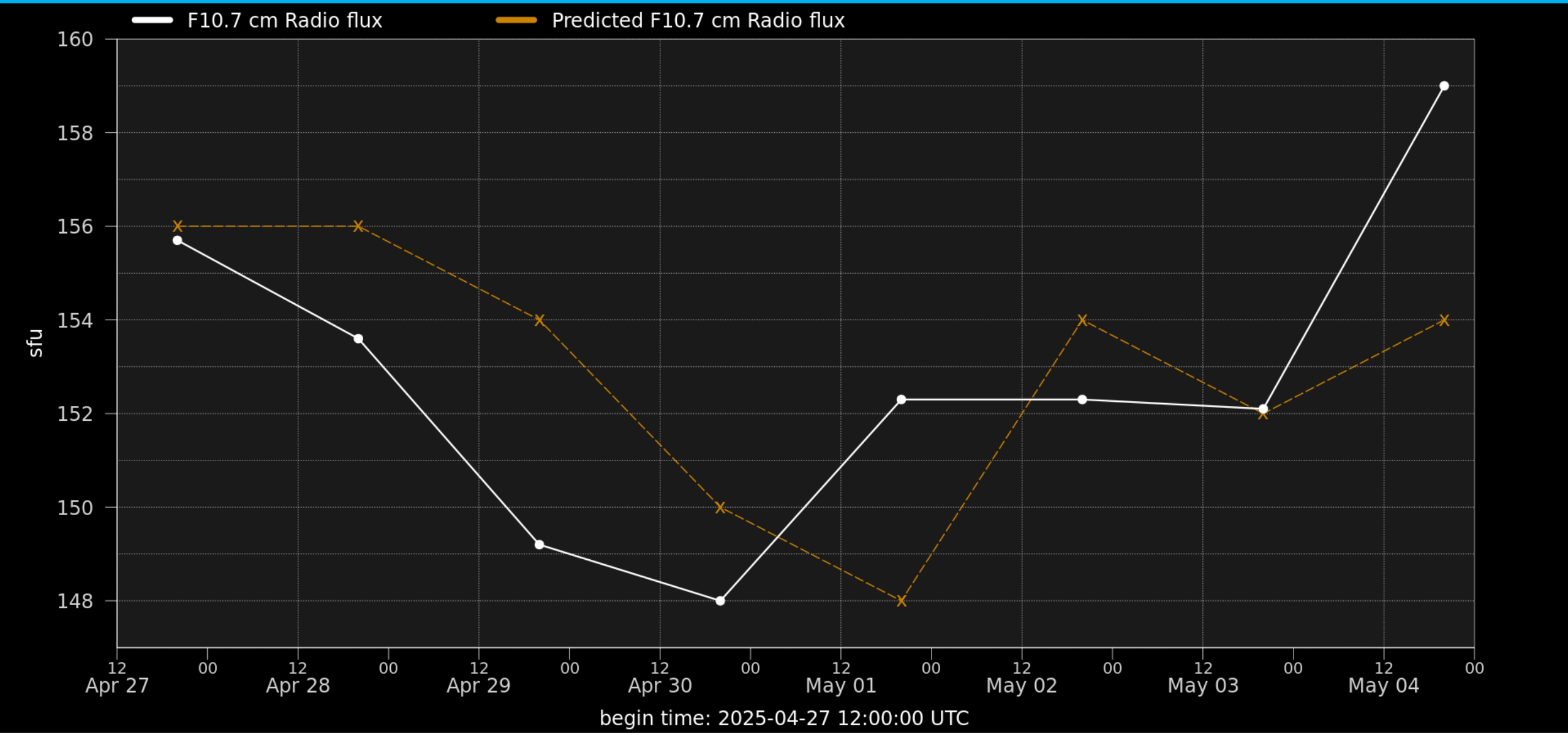


Many Filaments but stable

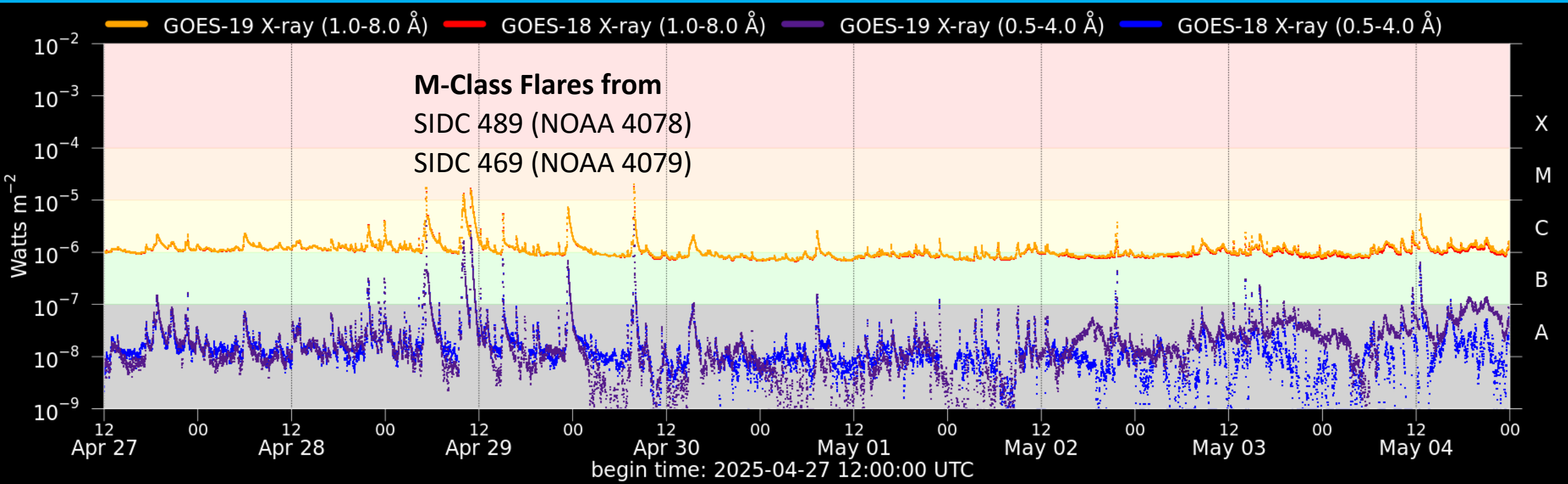
H-alpha 2025-05-04



Solar F10.7cm radio flux



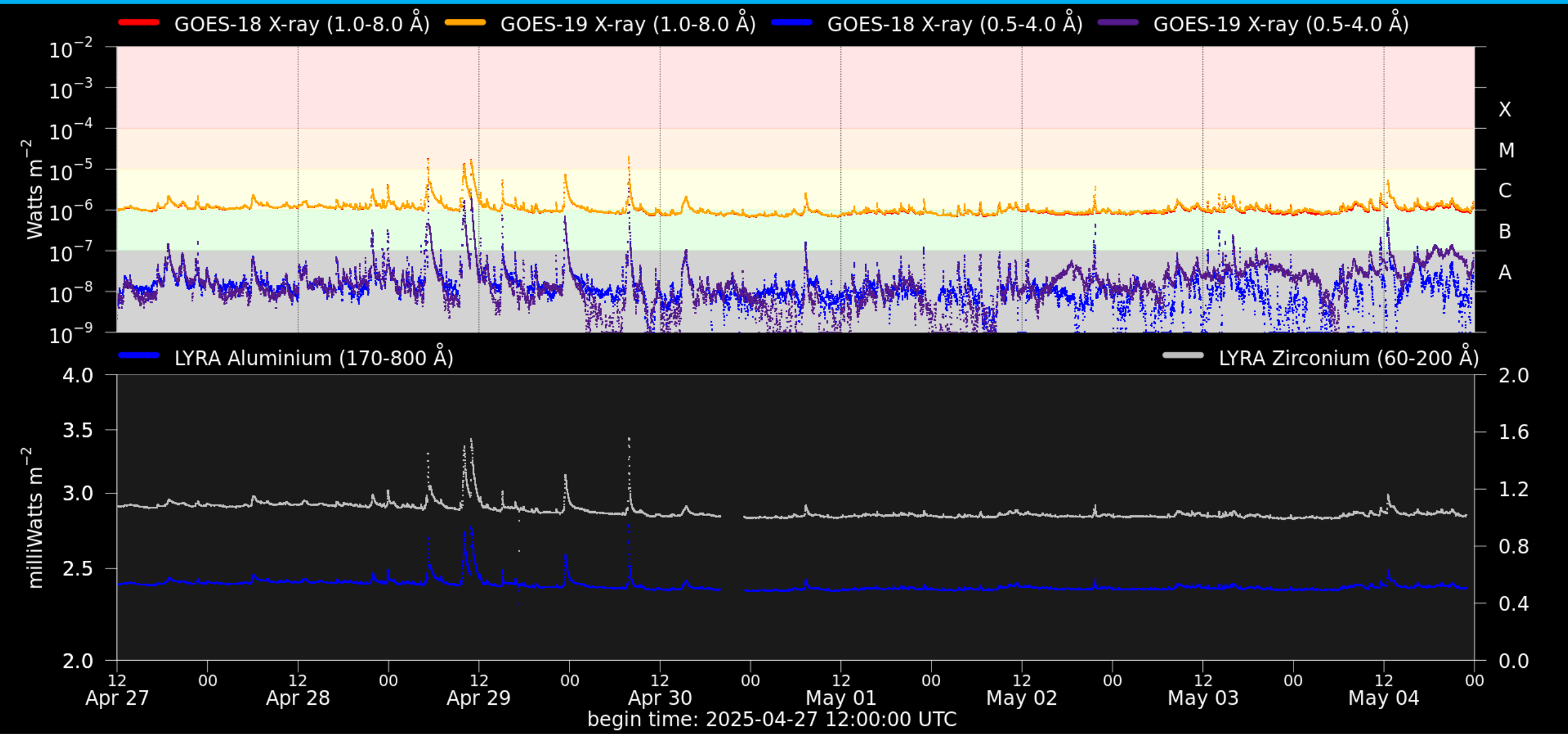
Flaring activity



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

Issue date	2025-04-27	2025-04-28	2025-04-29	2025-04-30	2025-05-01	2025-05-02	2025-05-03	2025-05-04
Probability (%)	90|25|01	92|11|01	98|73|02	97|39|02	85|20|01	86|50|05	99|60|05	99|55|05
Observed (#)	01|00|00	06|03|00	05|01|00	01|00|00	07|00|00	02|00|00	09|00|00	02|00|00

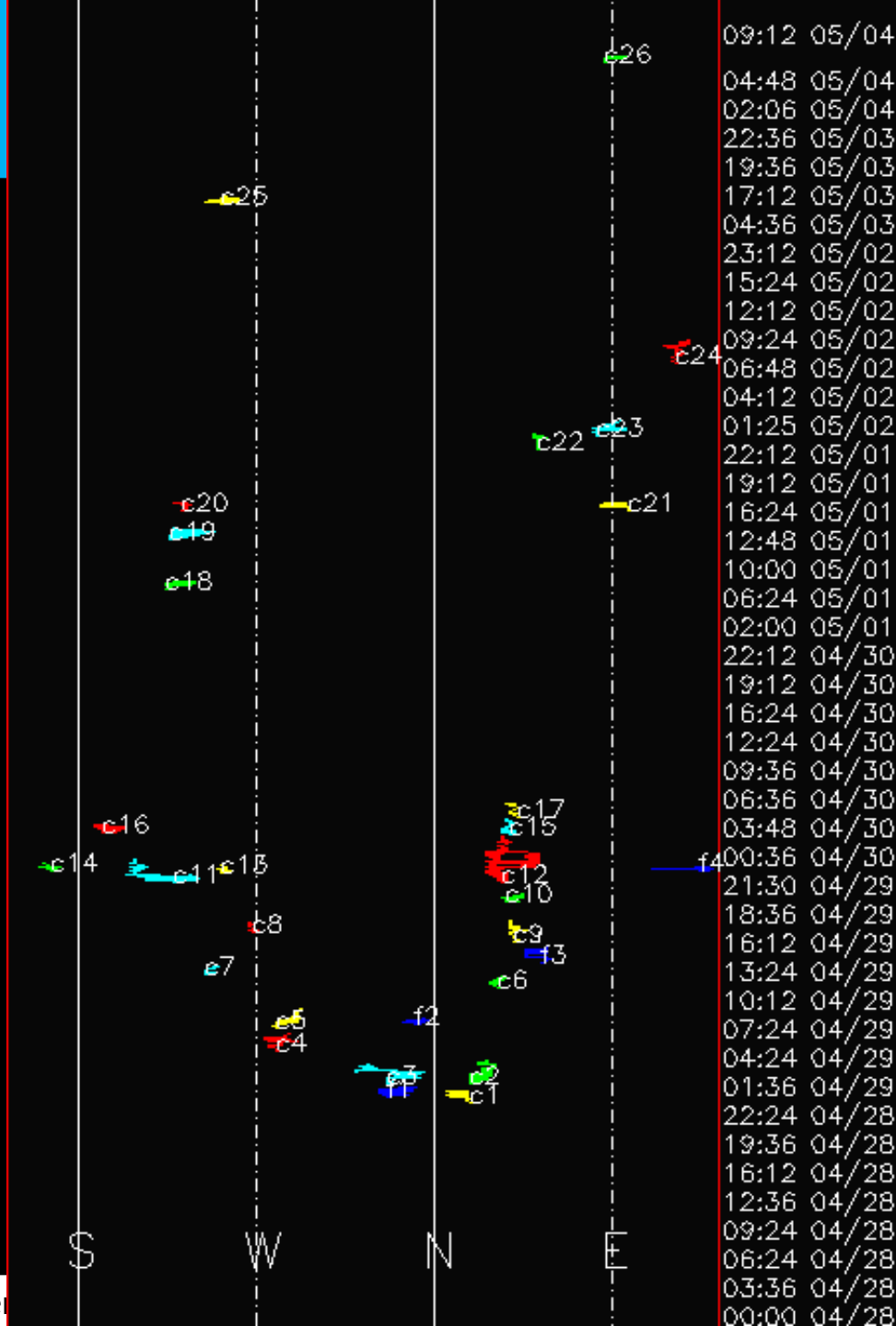
Solar X-Ray and UV flux



Coronal Mass Ejections

Several filaments were visible on the solar disk; however, they appeared stable.

No Earth-directed coronal mass ejections (CMEs) were observed in the available coronagraph imagery over the past week.



Solar Wind and

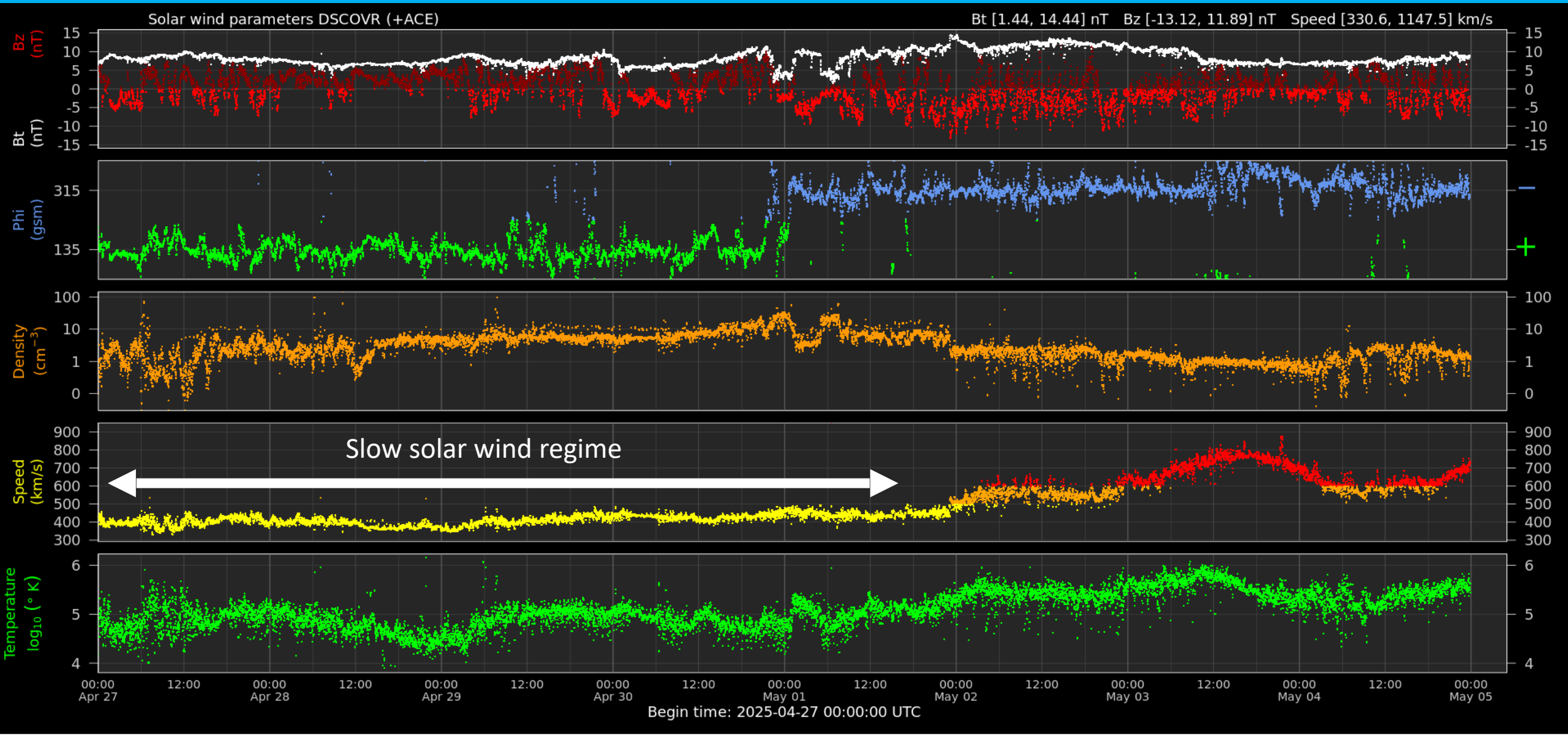
Geomagnetic Activity



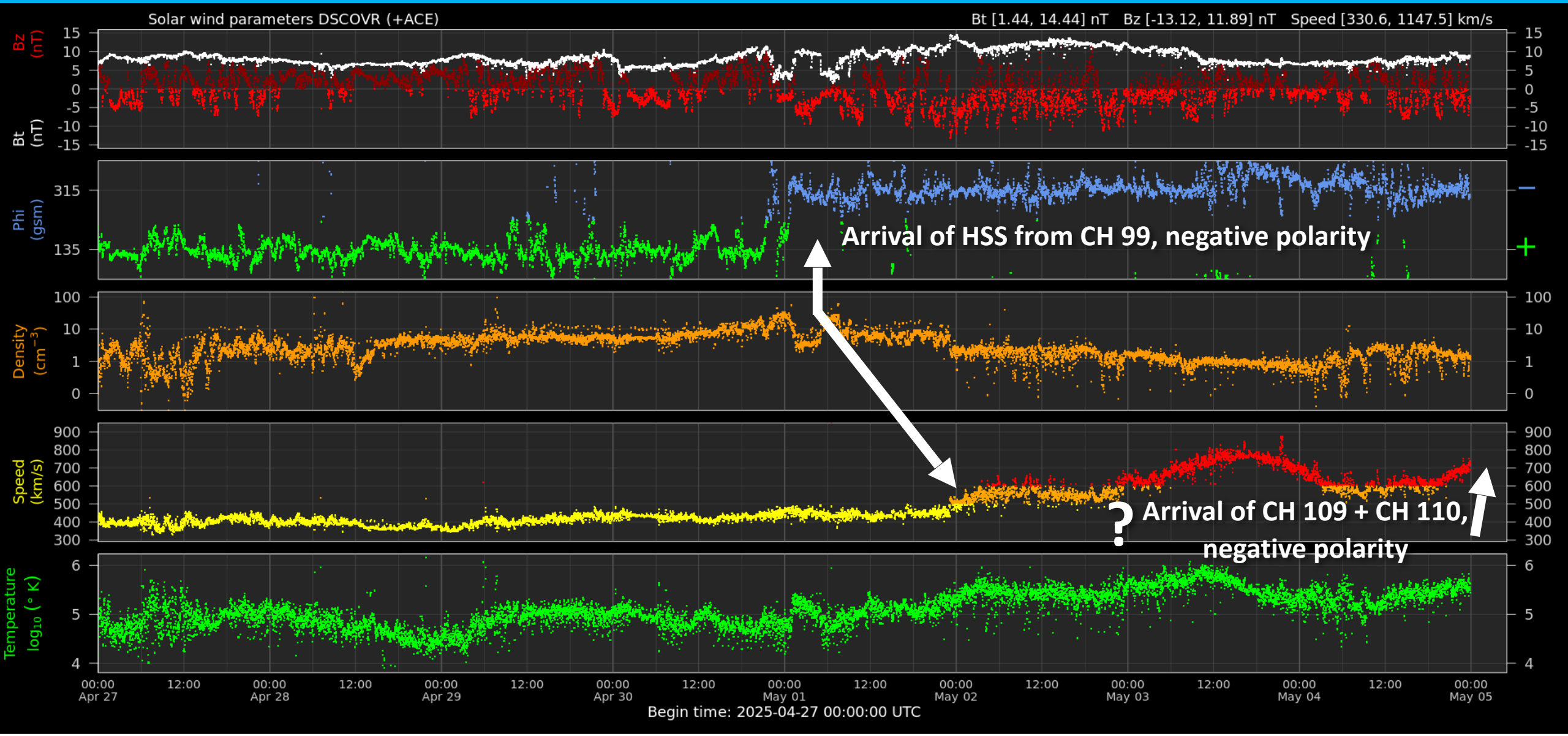
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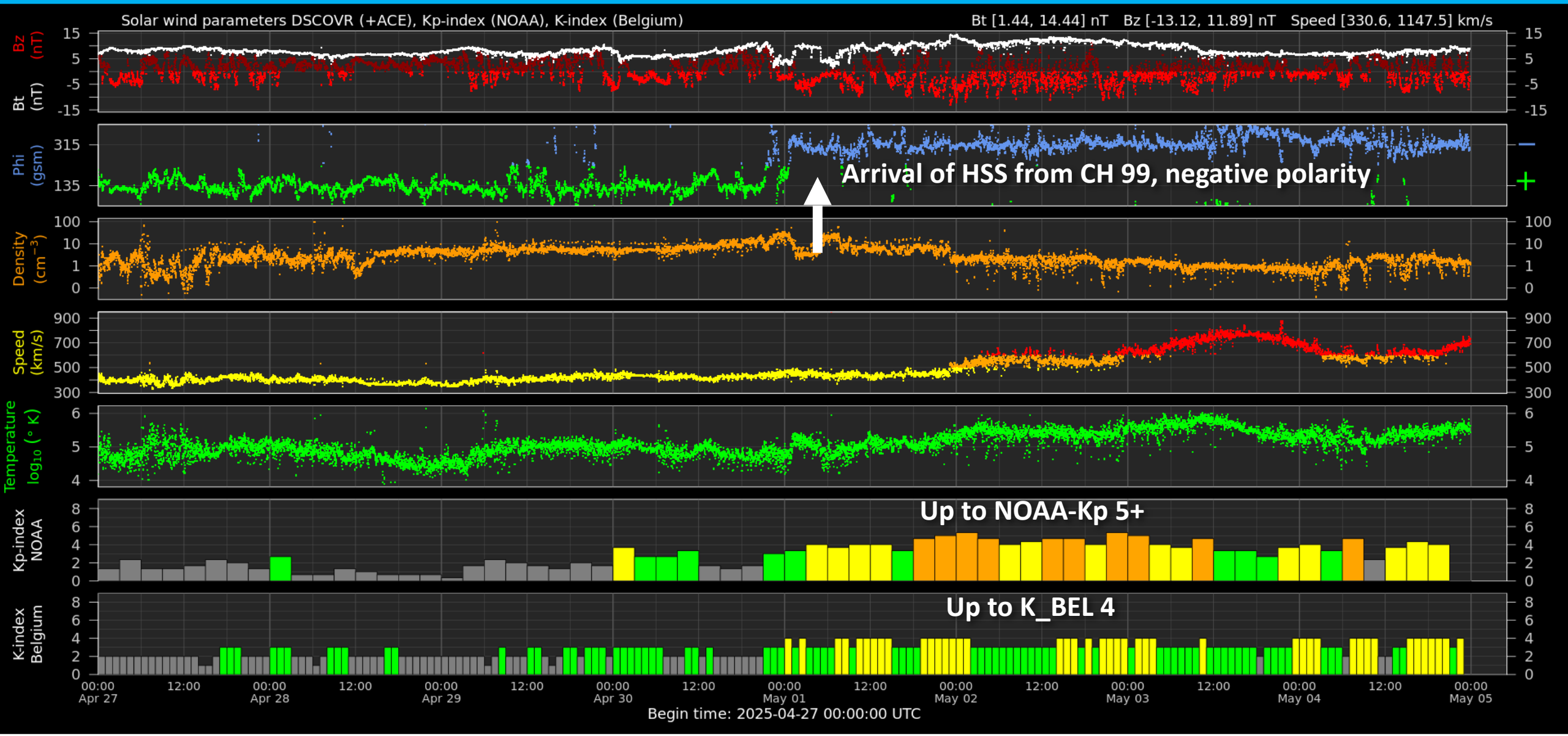
Solar wind parameters



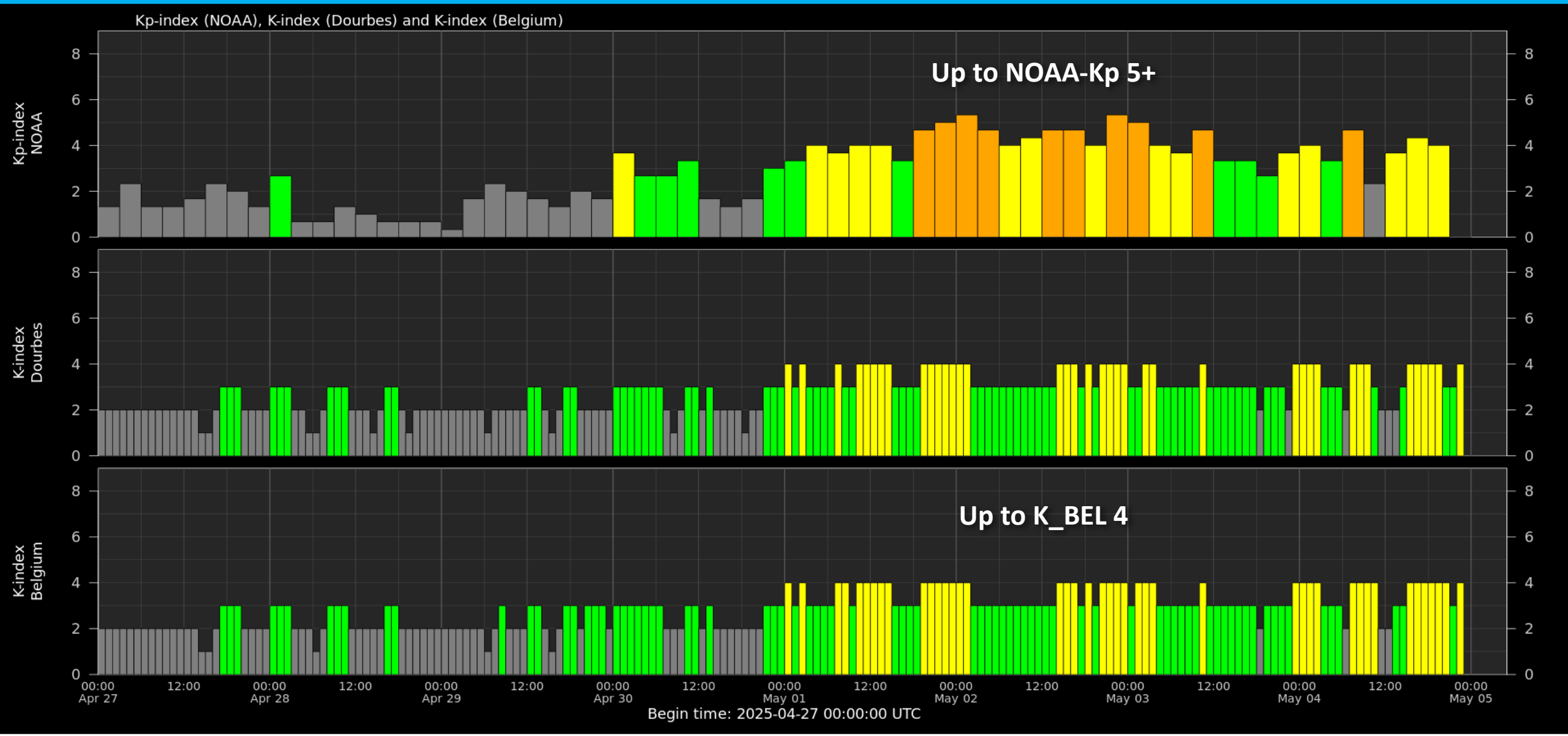
Solar wind parameters



Solar wind parameters & K-indices



Geomagnetic activity (K-indexes)



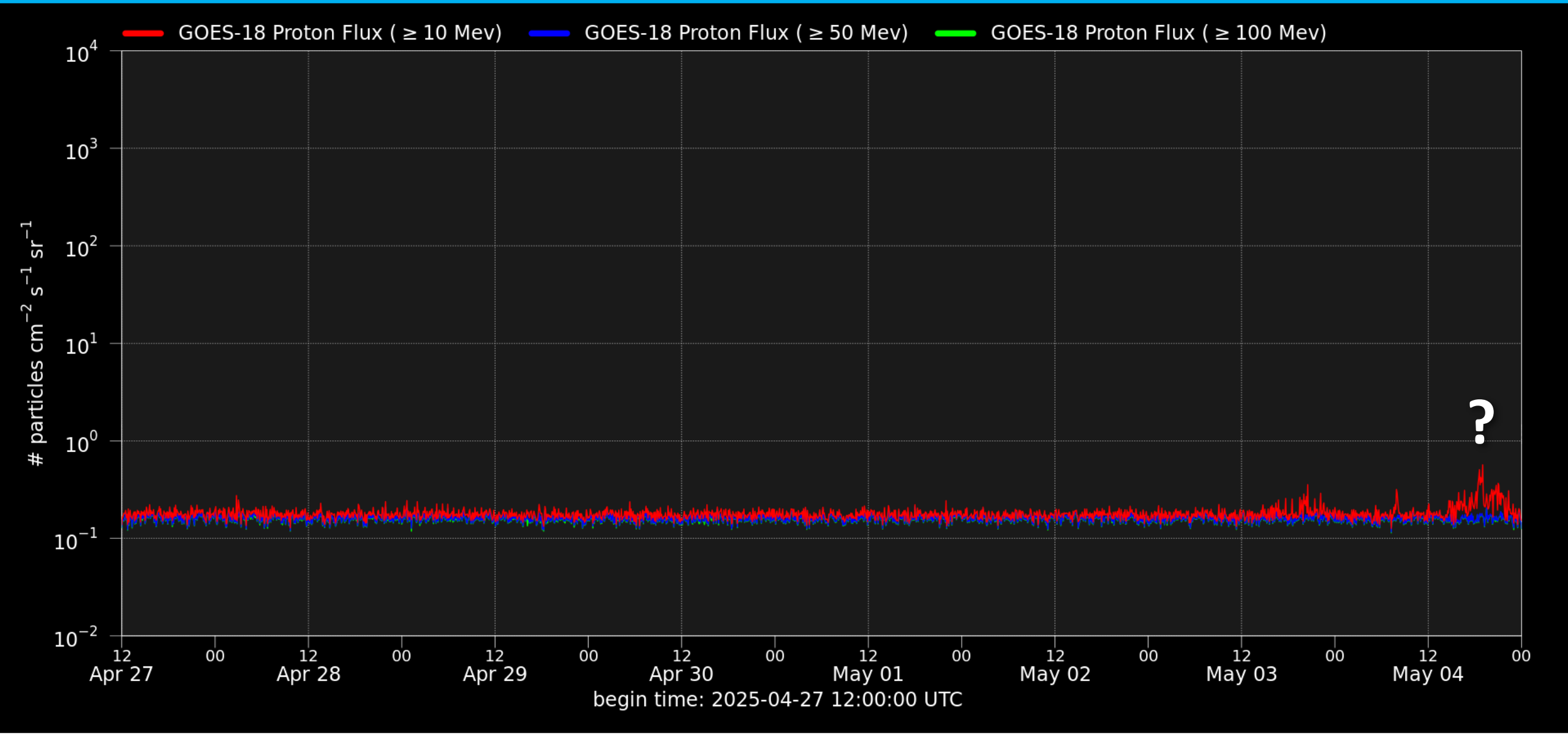
Energetic Particles



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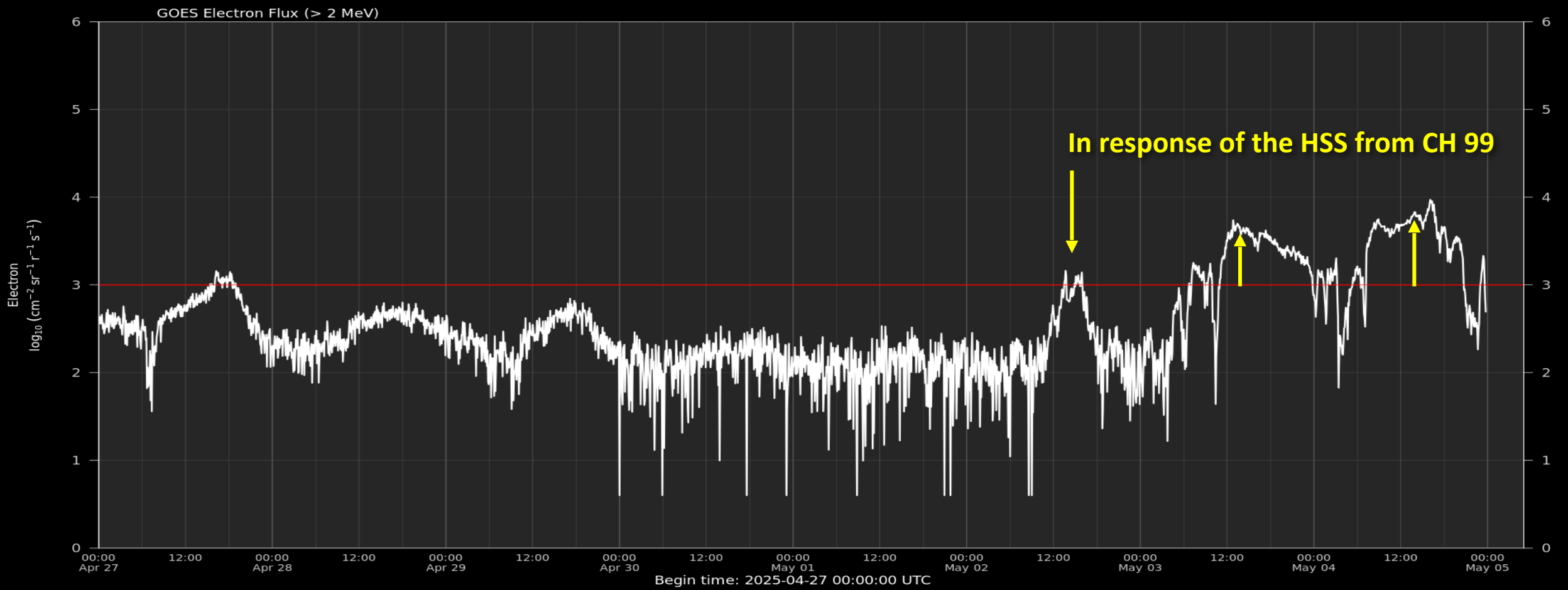
Solar proton flux



Electron flux at GEO

www.stce.be/educational/classification#electrons

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

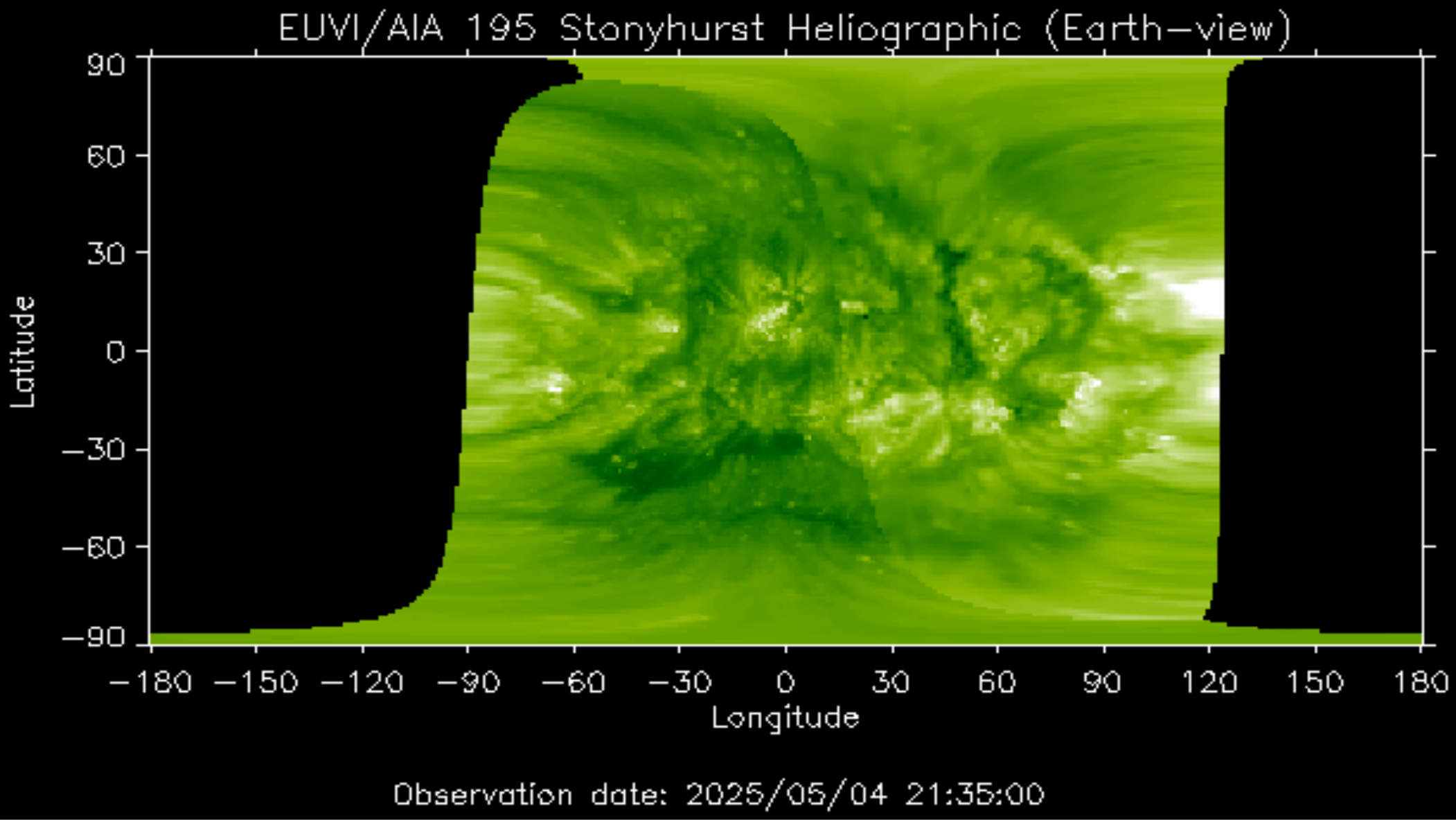


Outlook

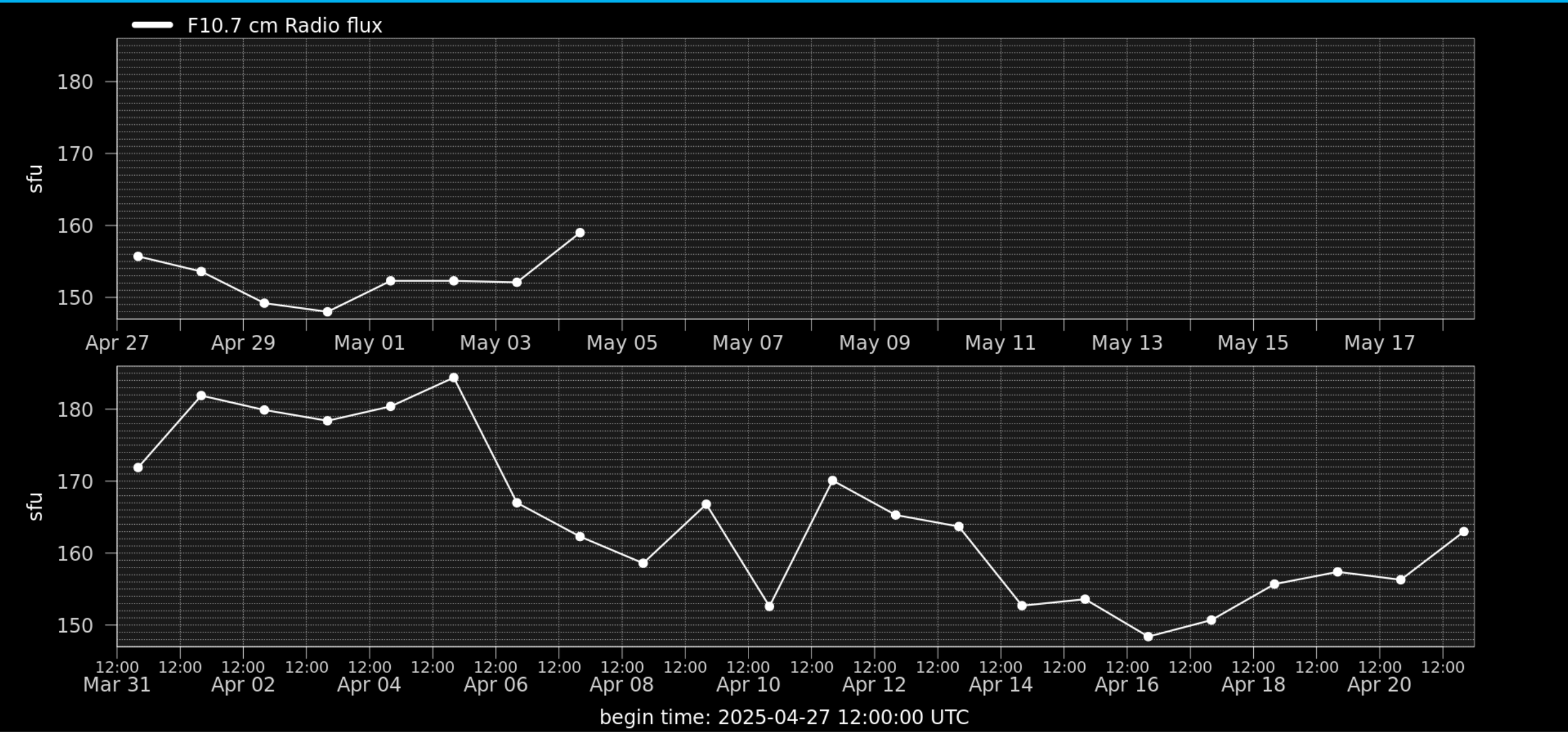
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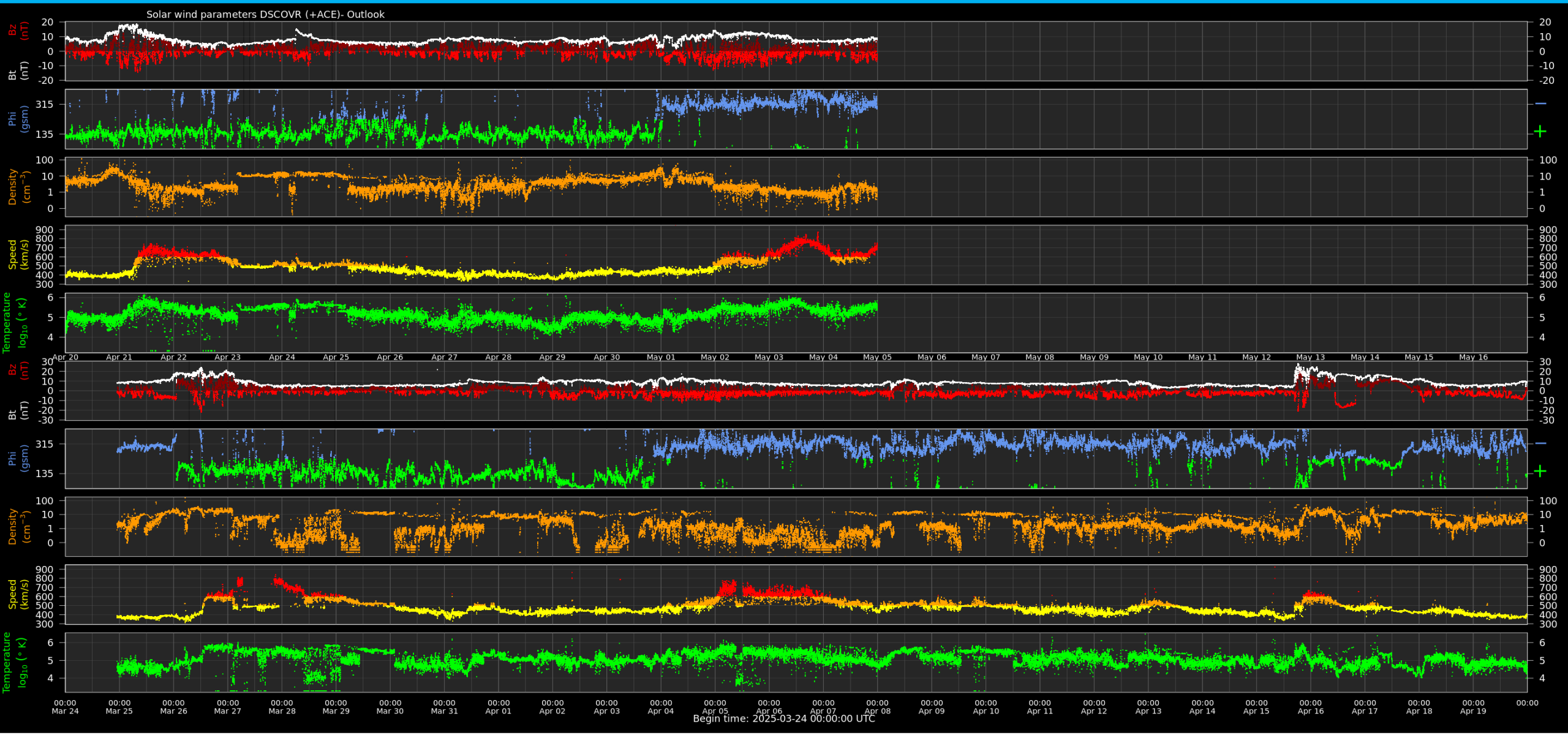
Outlook: Solar activity



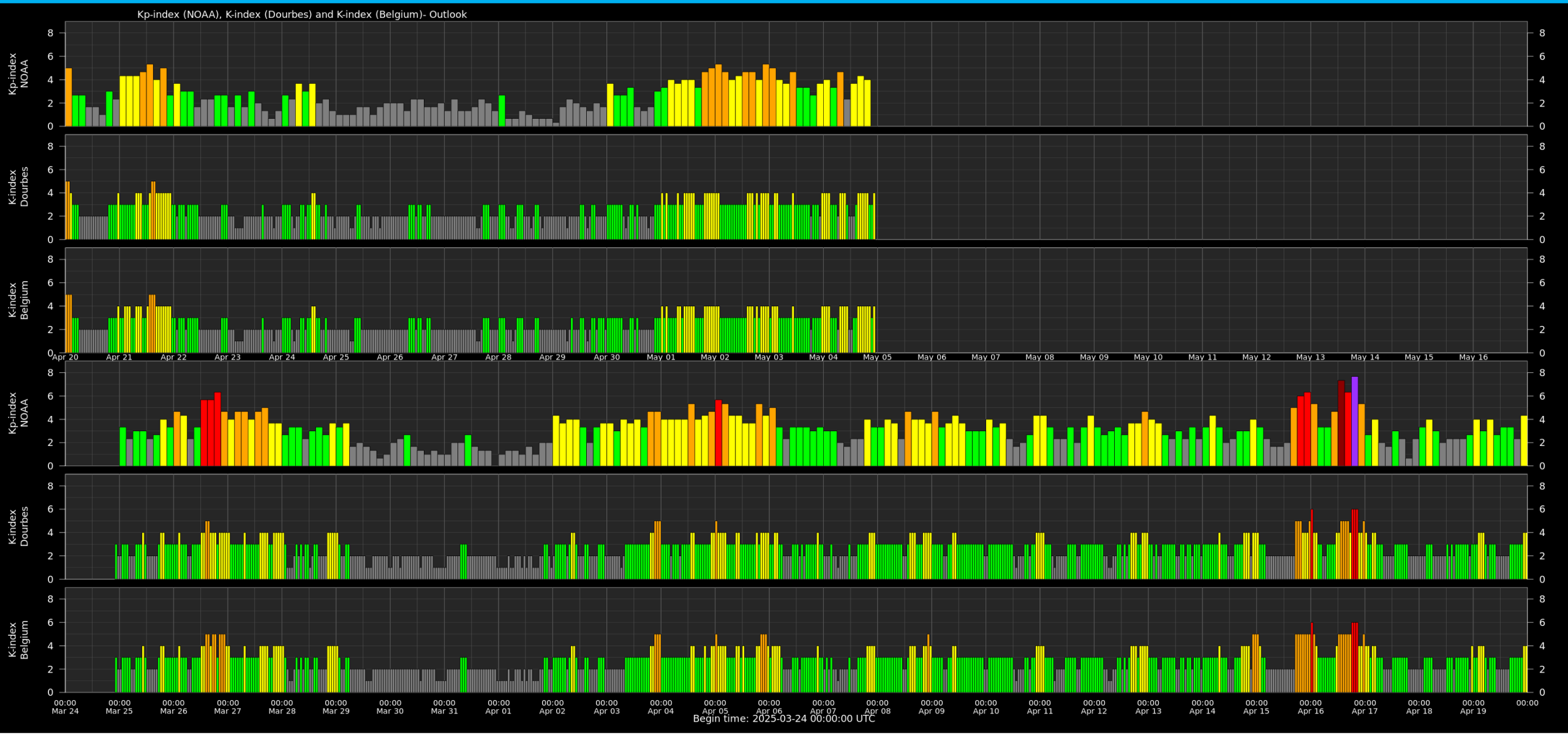
Outlook: Solar F10.7cm radio flux



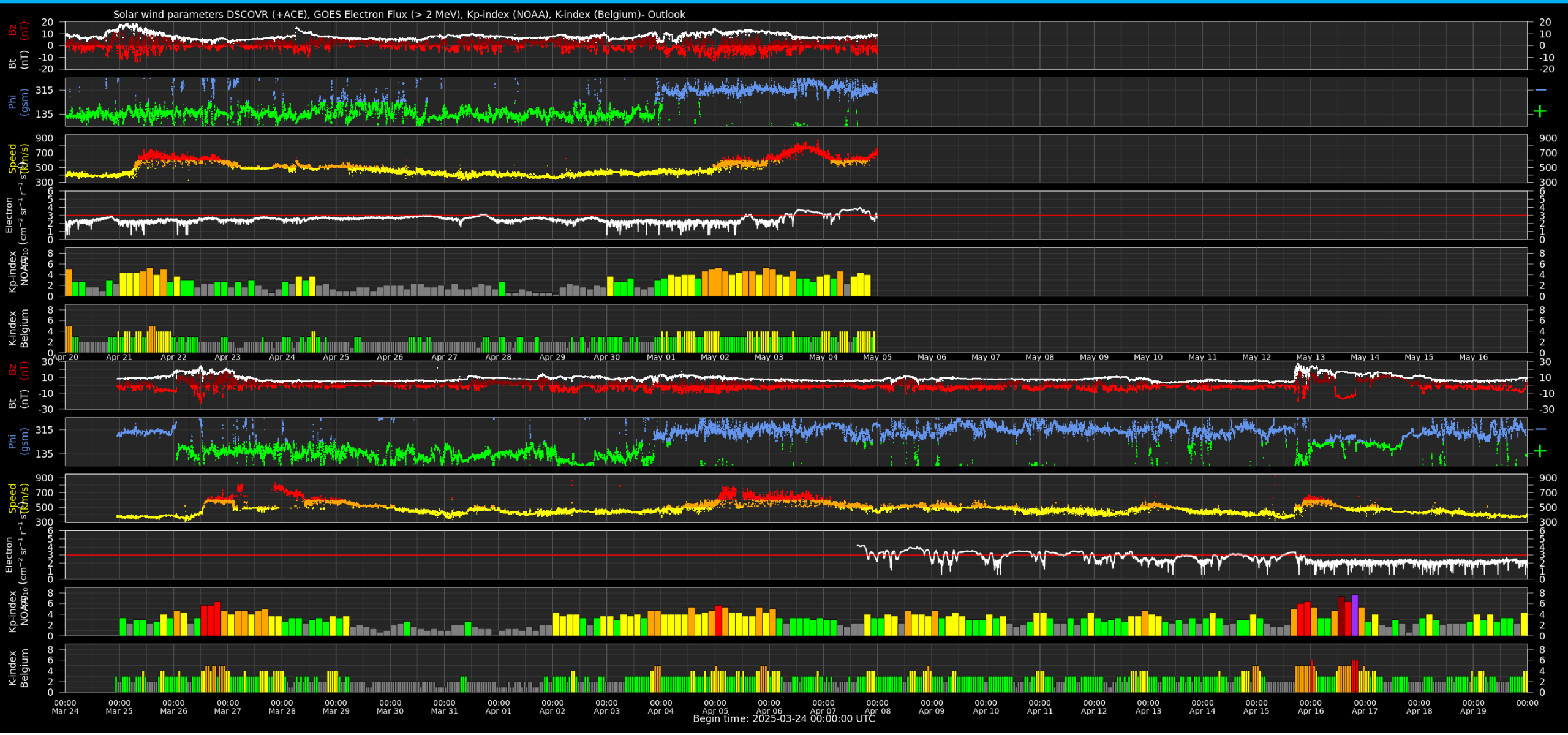
Outlook: Solar wind parameters



Outlook: Geomagnetic activity



Outlook: Electron Flux at GEO Outlook



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Pecasus related events

- Scintillation events
- No PSD event (Kp max = 5+)

SIDC Space Weather Briefing

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