

SIDC Space Weather Briefing

09 June 2025-15 June 2025

de Patoul Judith

& the SIDC forecaster team



Royal Observatory
of Belgium

Solar Influences
Data analysis Centre
www.sidc.be

Summary Report

Solar activity from 2025-06-09 00:00 to 2025-06-15 23:59

Active regions	Several SIDC Sunspot groups, complex with regions and flaring activities
Flares	# C-class flare: 38 # M-class flare: 6 # X-class flare: 0
Coronal Holes	Equatorial CH (negative, Jun 8) and Mid-latitude South (positive, June 12)
CMEs	West side CME on Jun 15

Proton flux	Background level
Electron flux	Close to the threshold level

Solar wind and geomagnetic conditions

ICMEs	One glancing observed, one potentially in it's way
Solar wind conditions	B : 0.75 - 18.67 nT //Bz: -16.38 nT to 15.82 nT //Speed: 347.0 - 596.2km/s
Geomagnetic conditions	max KBel: 5.0, max Kp(NOAA): 6.33 , Moderate Storm conditions

All Quiet Alert: OFF (not quite)

Solar Activity

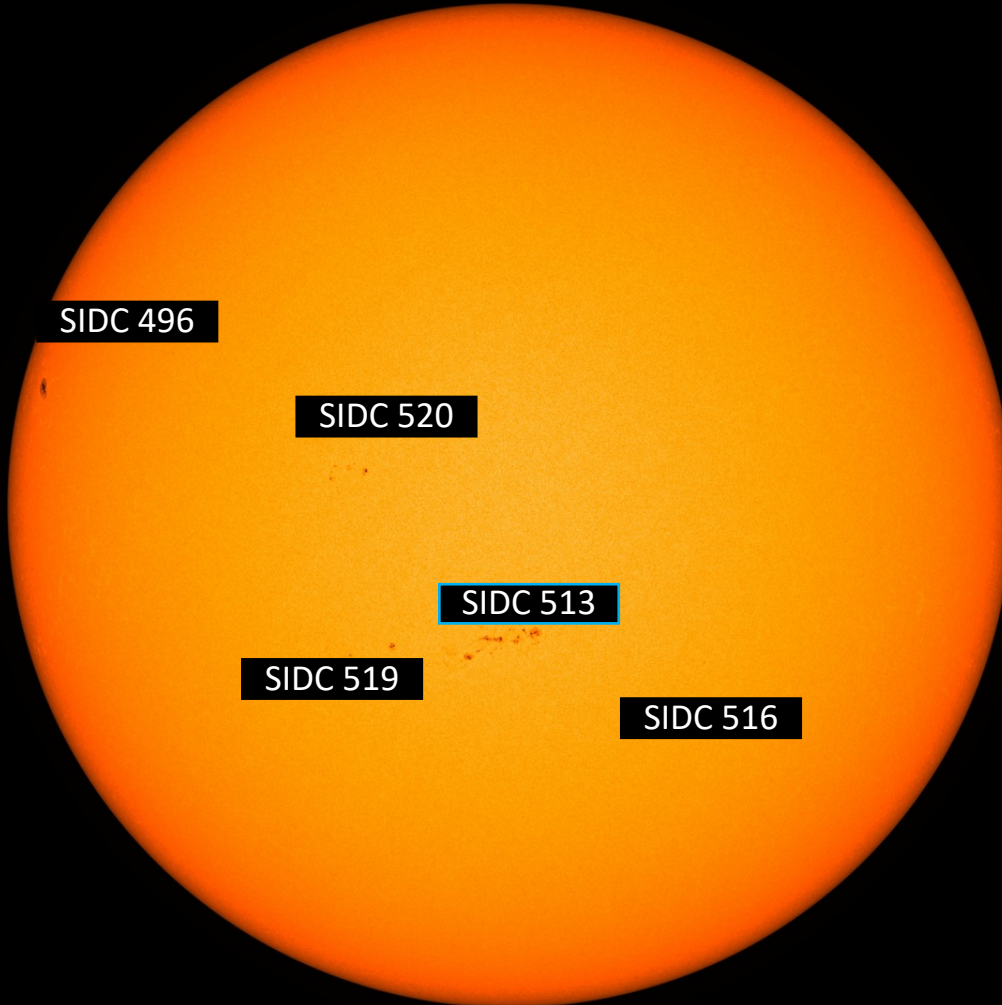


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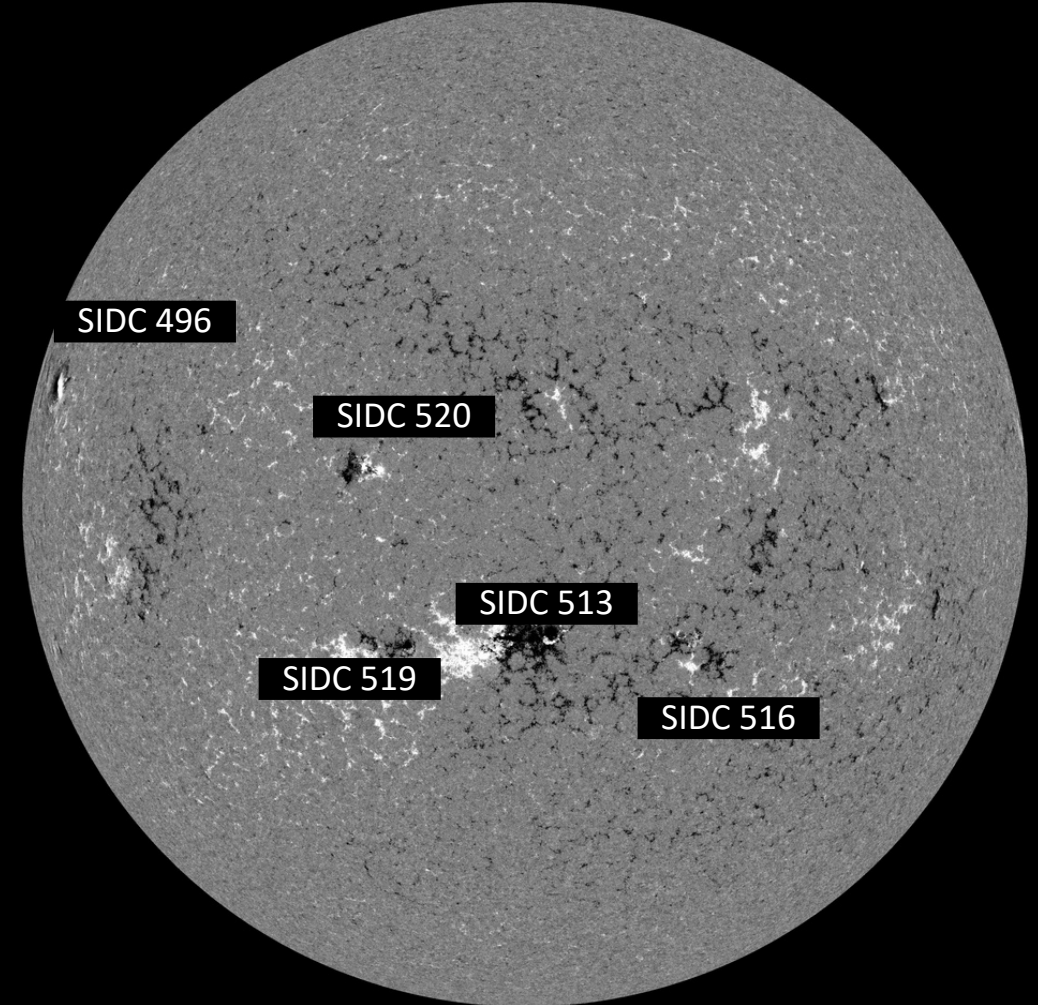
Solar active regions

SDO/HMI White Light 2025-06-09



SDO/HMI Quick-Look Continuum: 20250609_114500

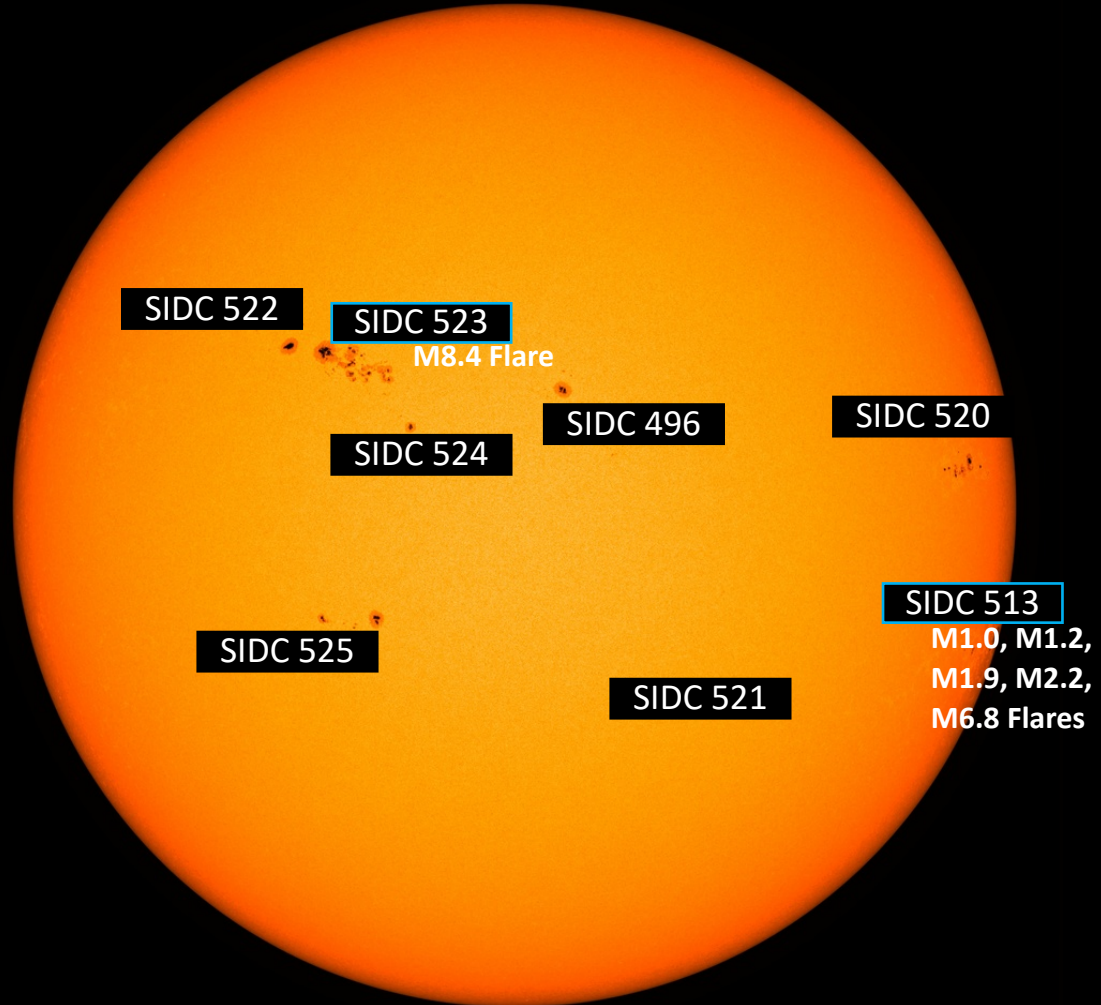
SDO/HMI Magnetogram 2025-06-09



SDO/HMI Quick-Look Magnetogram: 20250609_114500

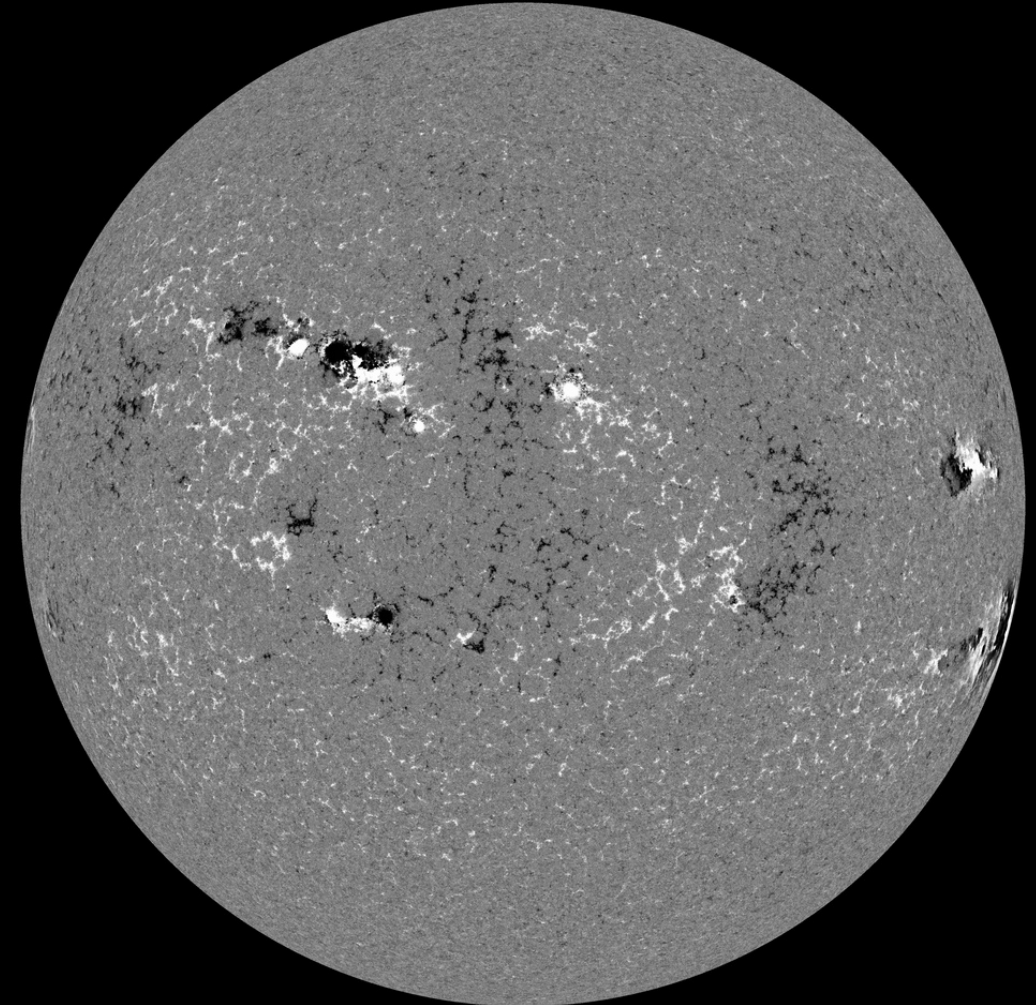
Solar active regions

SDO/HMI White Light 2025-06-15



SDO/HMI Quick-Look Continuum: 20250615_114500

SDO/HMI Magnetogram 2025-06-15

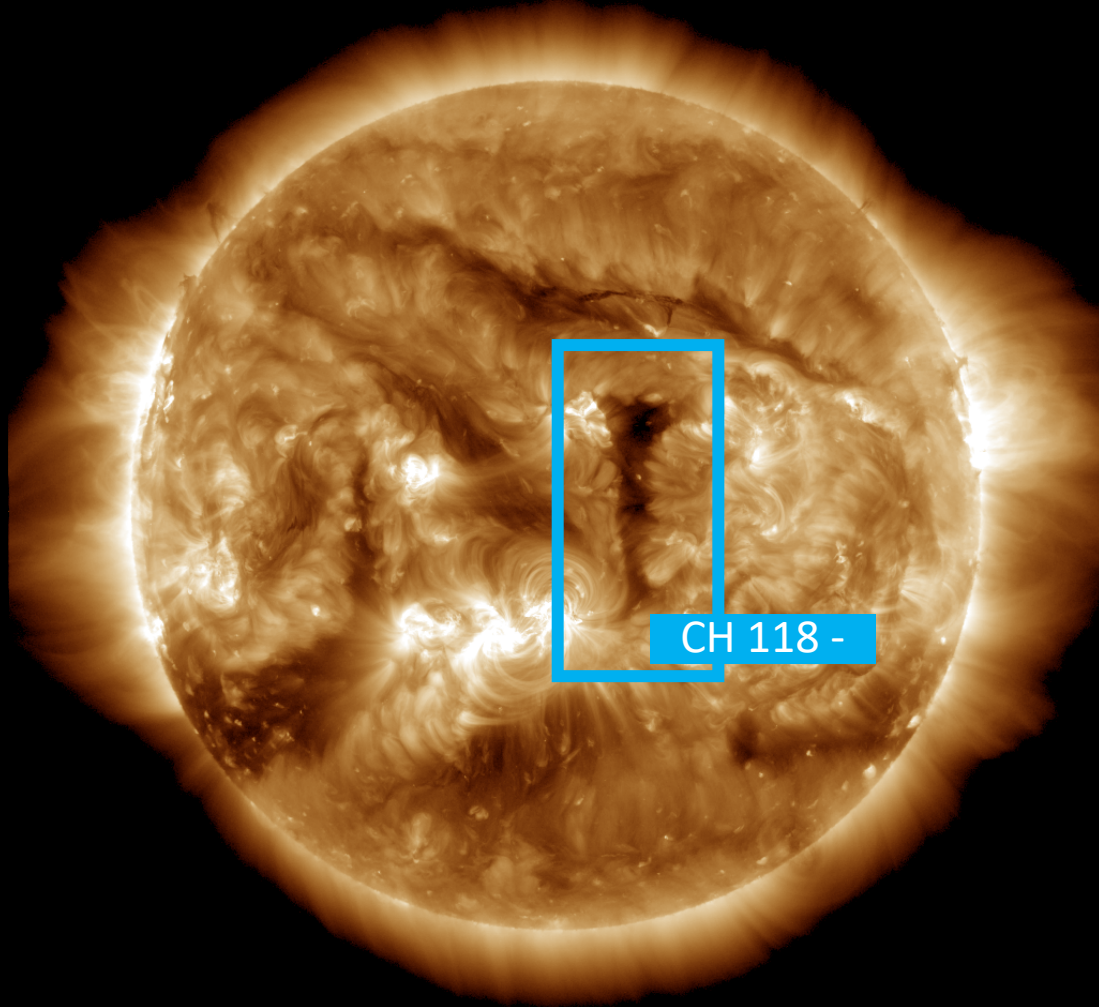


SDO/HMI Quick-Look Magnetogram: 20250615_114500

Coronal holes

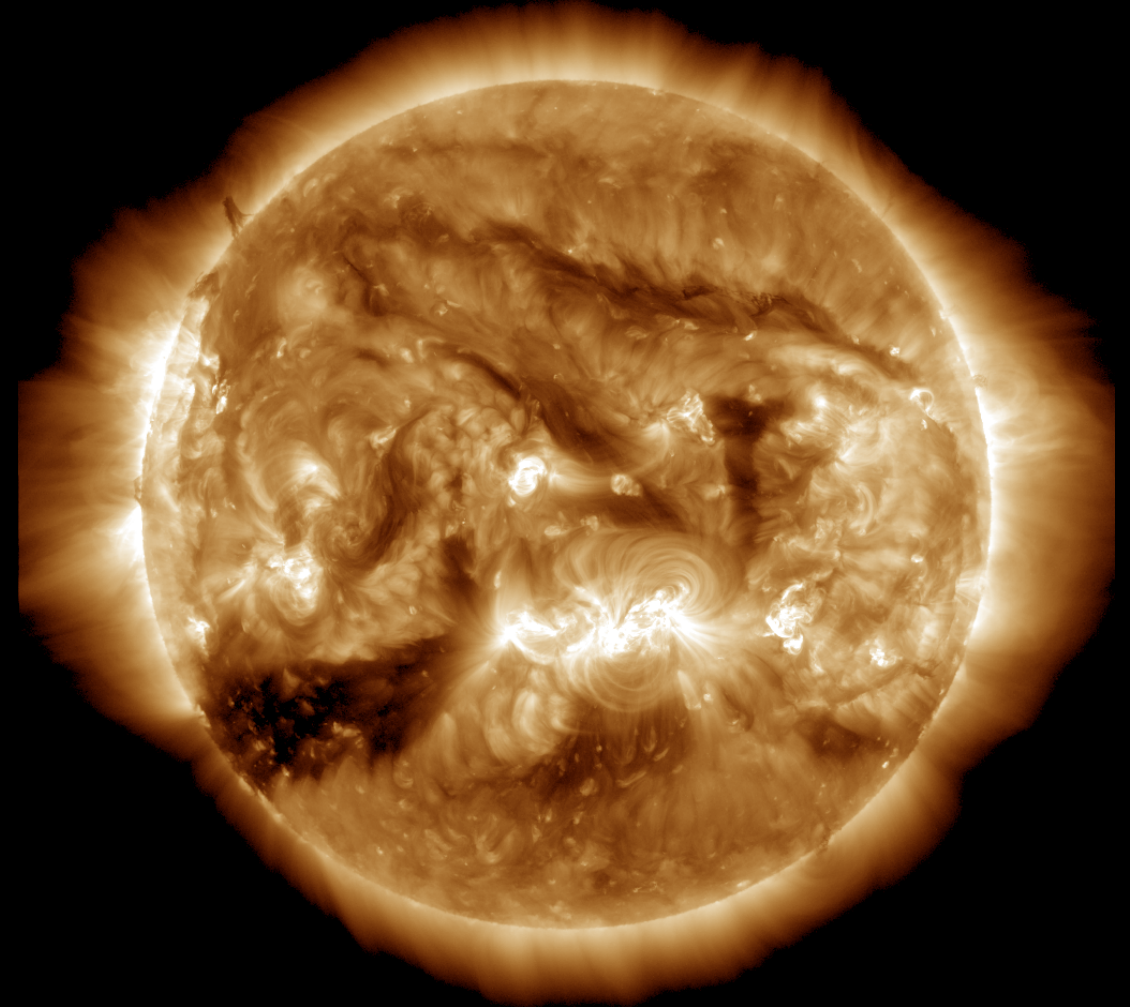
SDO/AIA 19.3 nm 2025-06-09

SDO/AIA AIA 193Å 2025-06-09T12:00:05.843



SDO/AIA 19.3 nm 2025-06-10

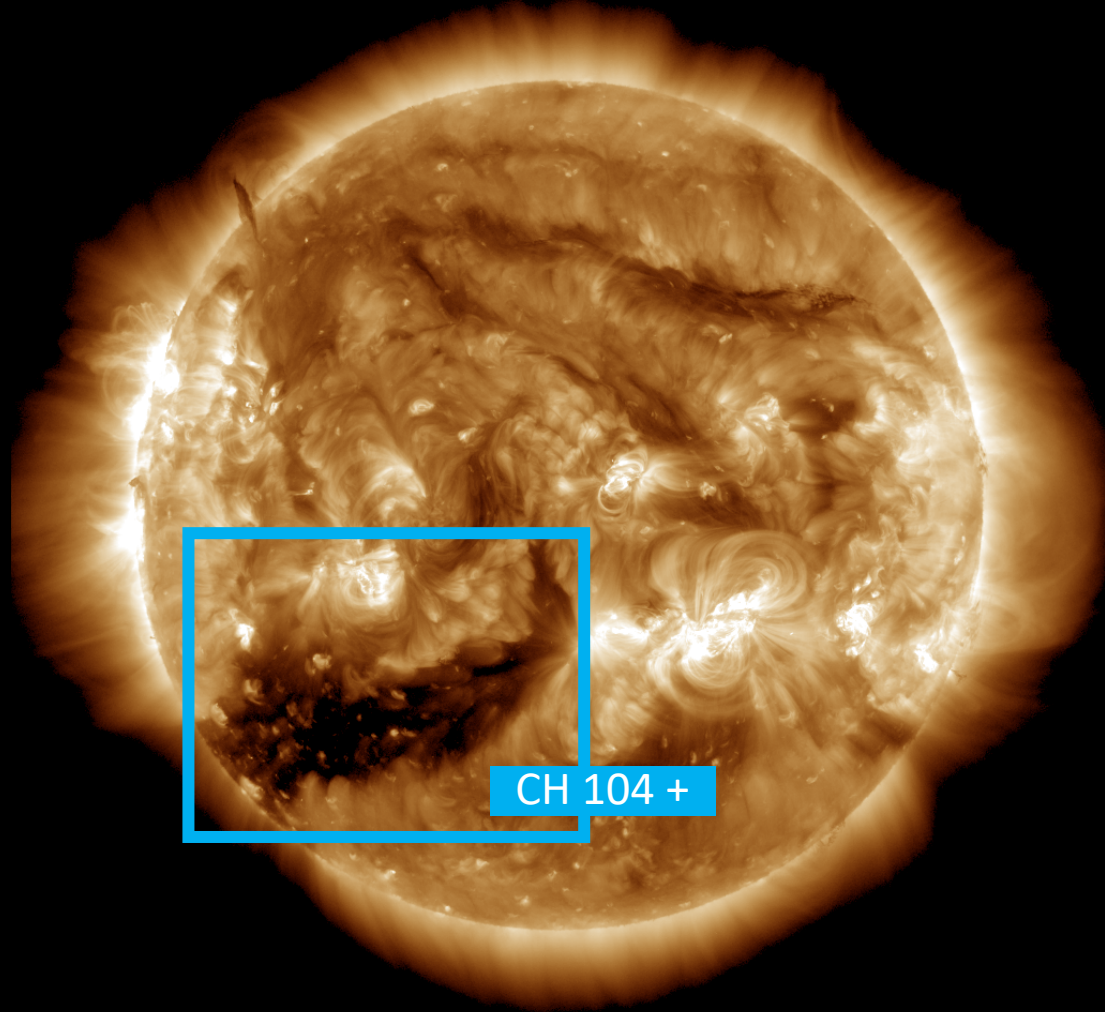
SDO/AIA AIA 193Å 2025-06-10T12:00:05.846



Coronal holes

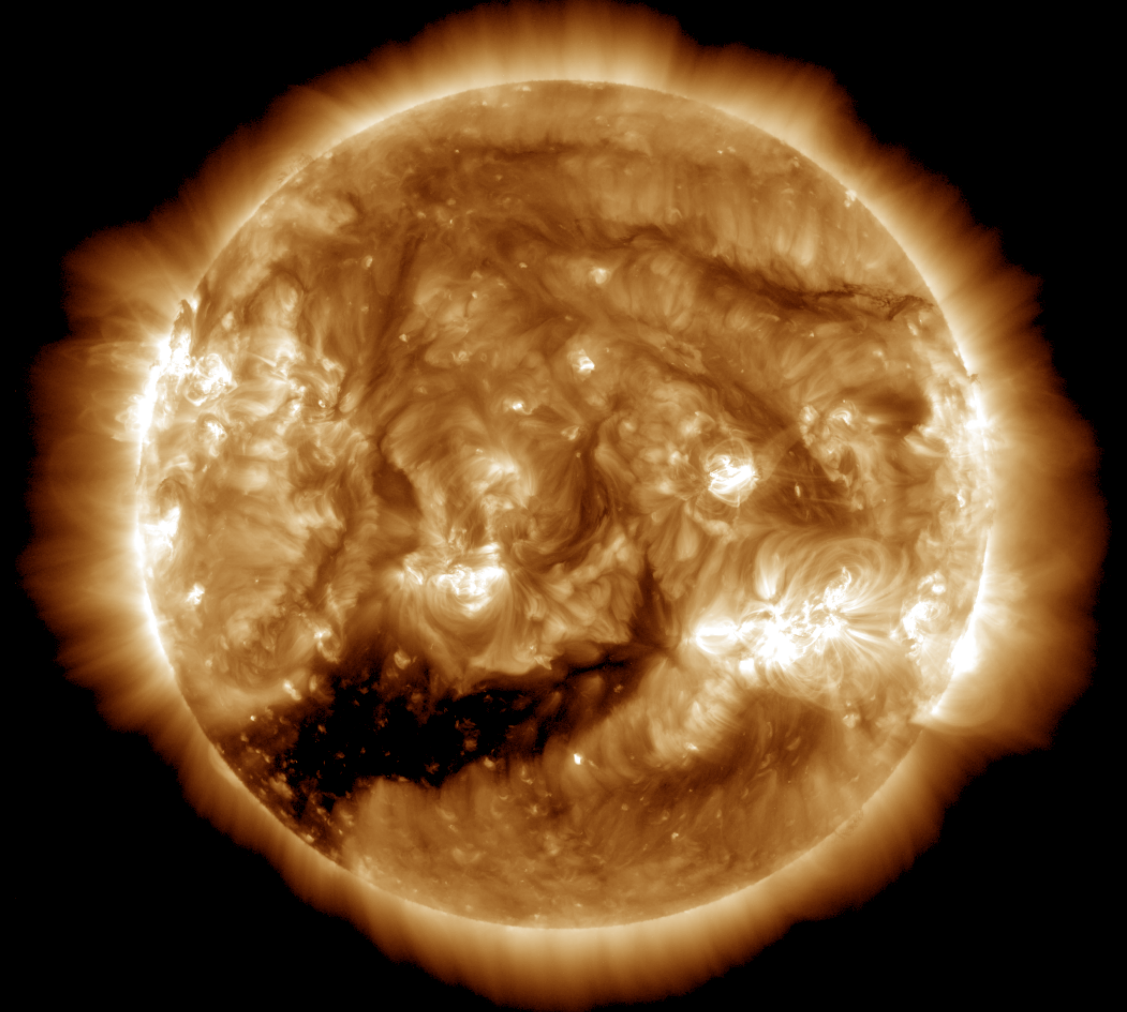
SDO/AIA 19.3 nm 2025-06-11

SDO/AIA AIA 193Å 2025-06-11T12:00:05.843



SDO/AIA 19.3 nm 2025-06-12

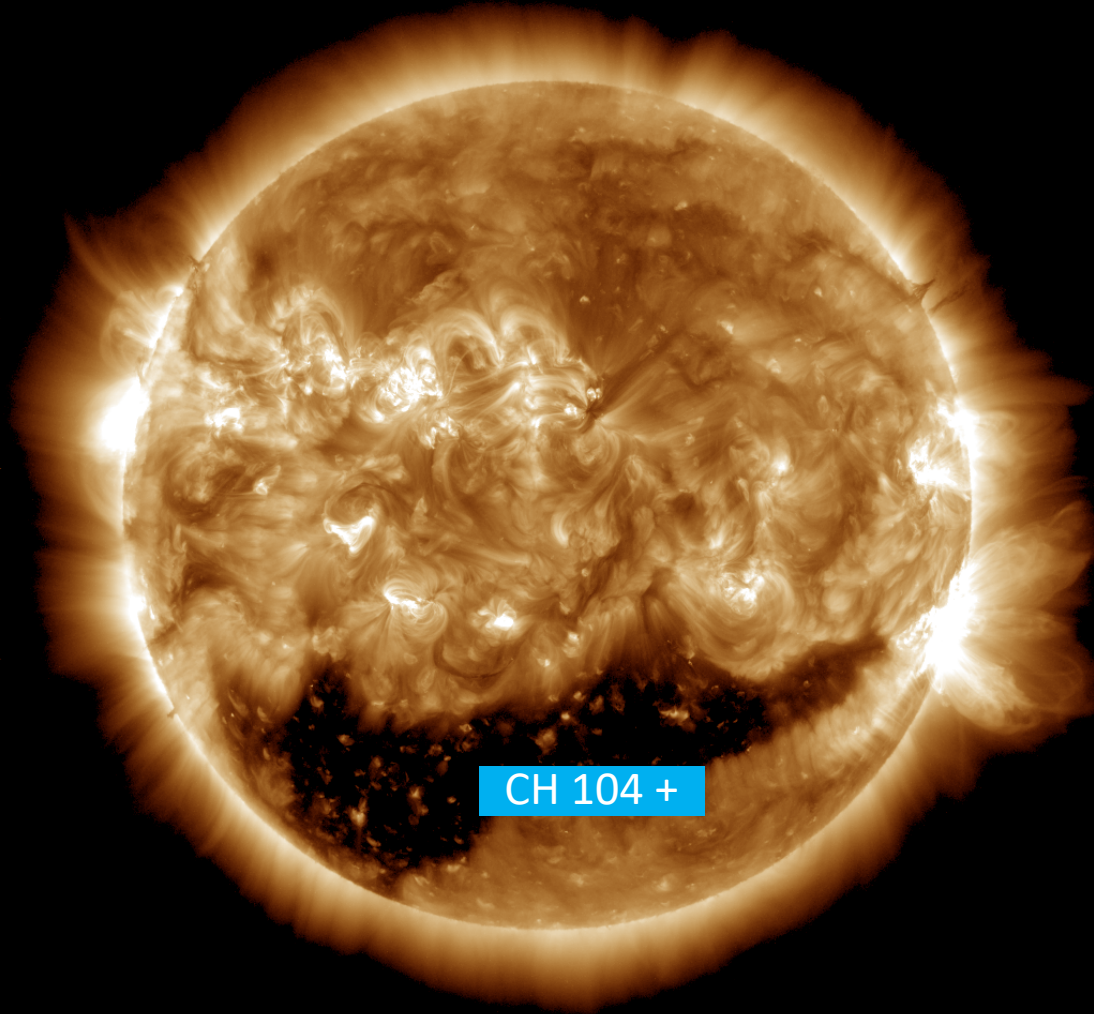
SDO/AIA AIA 193Å 2025-06-12T12:00:05.843



Coronal holes

SDO/AIA 19.3 nm 2025-06-15

SDO/AIA AIA 193Å 2025-06-15T12:00:05.843



CH 104 +

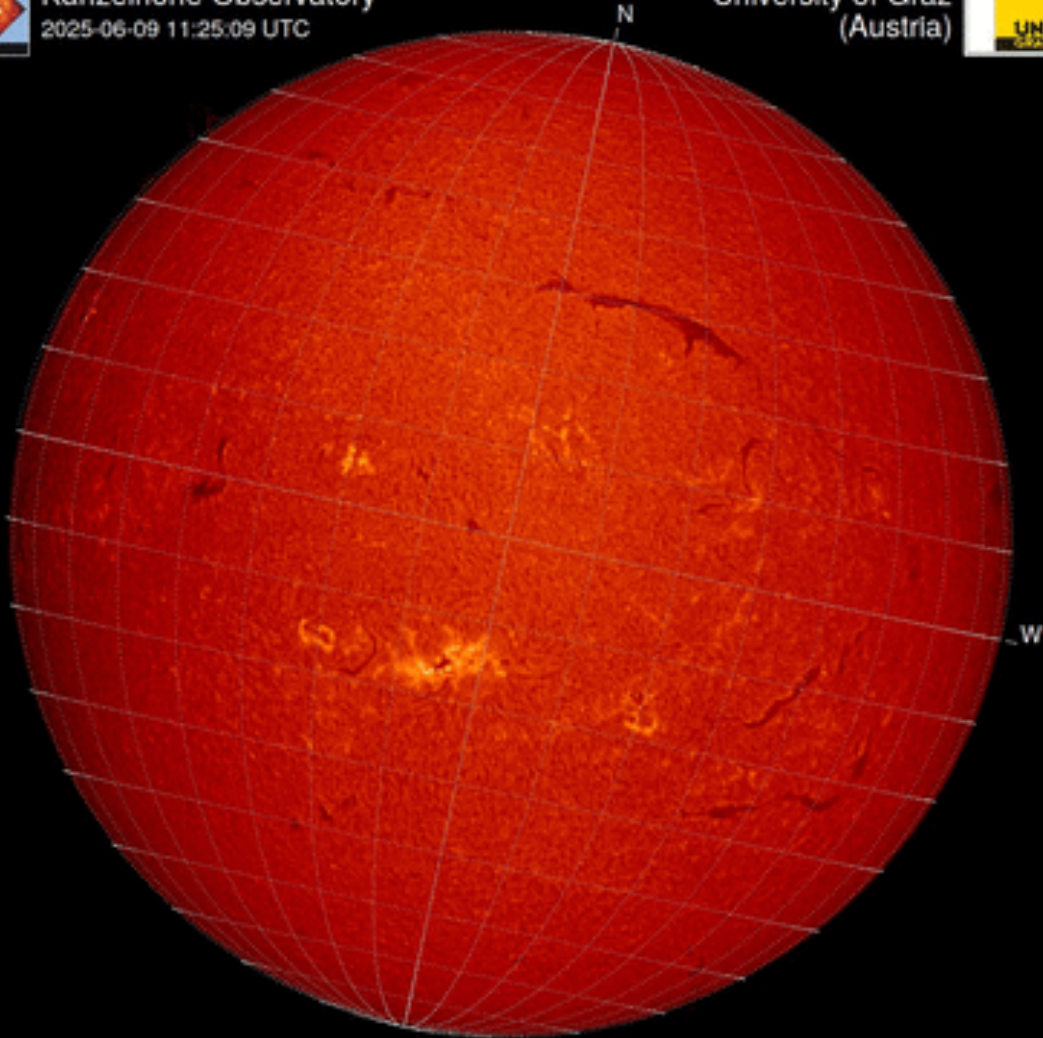
Filaments & Filament eruptions

H-alpha 2025-06-09



Kanzelhöhe Observatory
2025-06-09 11:25:09 UTC

University of Graz
(Austria)

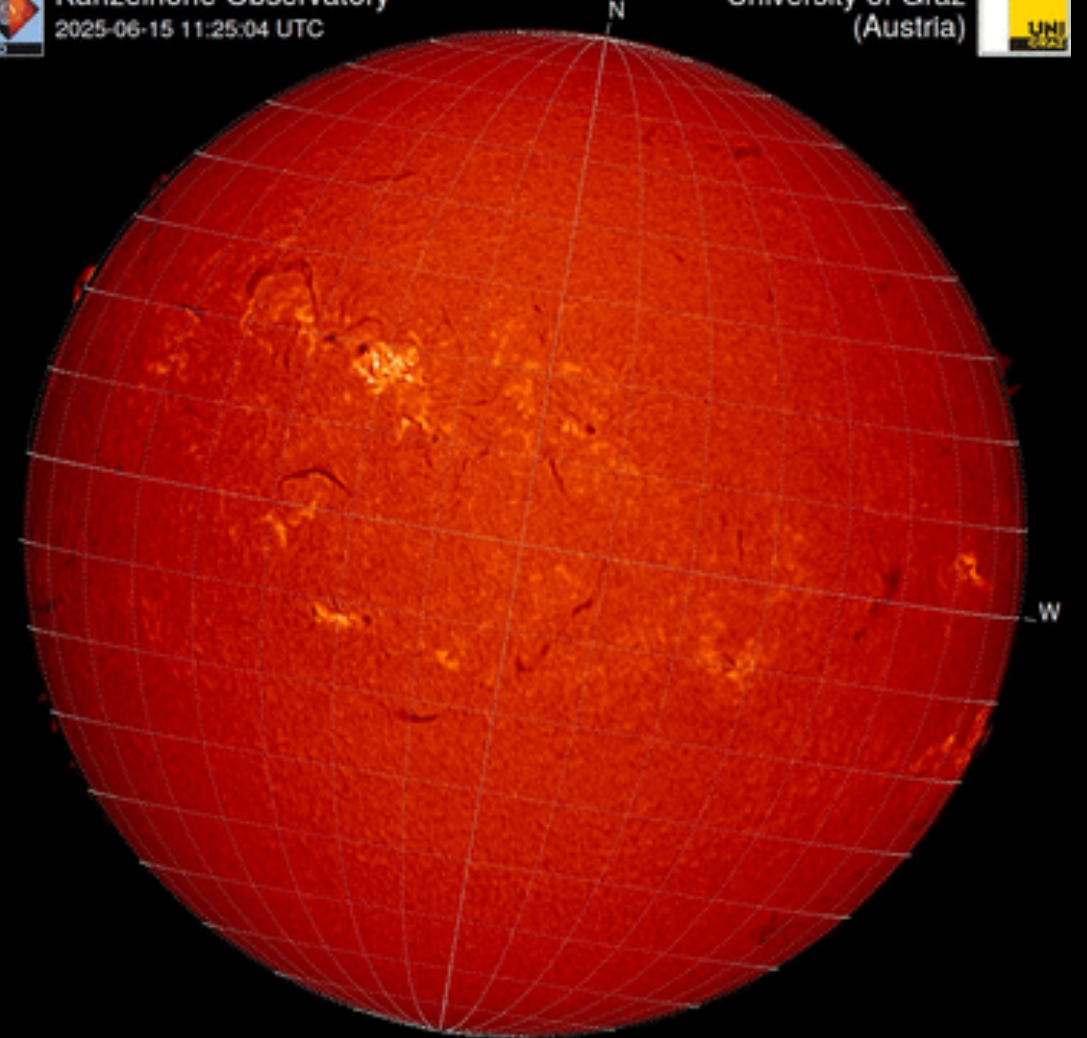


H-alpha 2025-06-15

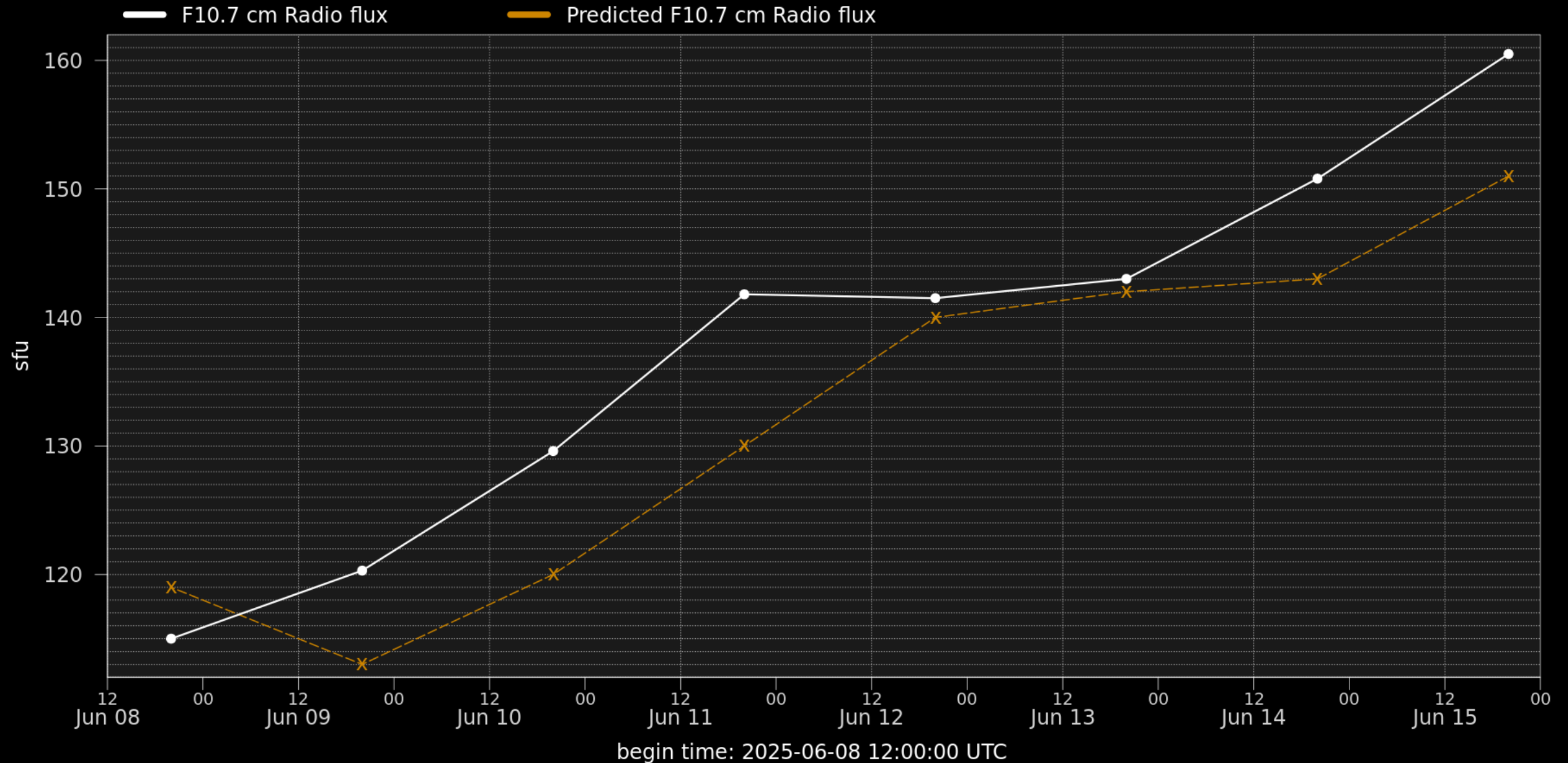


Kanzelhöhe Observatory
2025-06-15 11:25:04 UTC

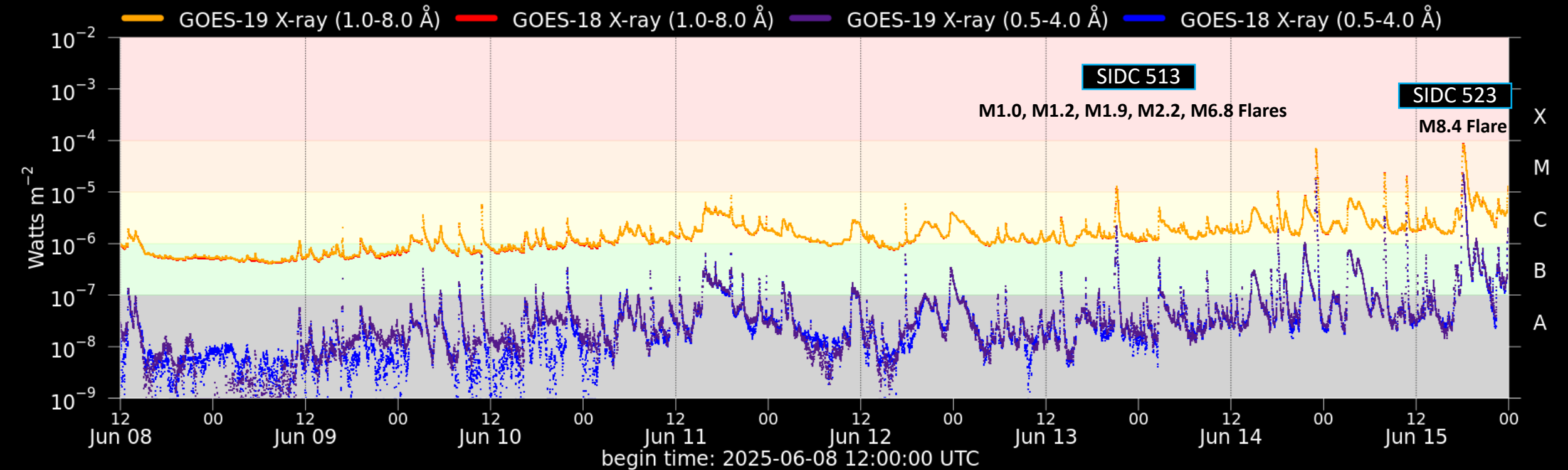
University of Graz
(Austria)



Solar F10.7cm radio flux



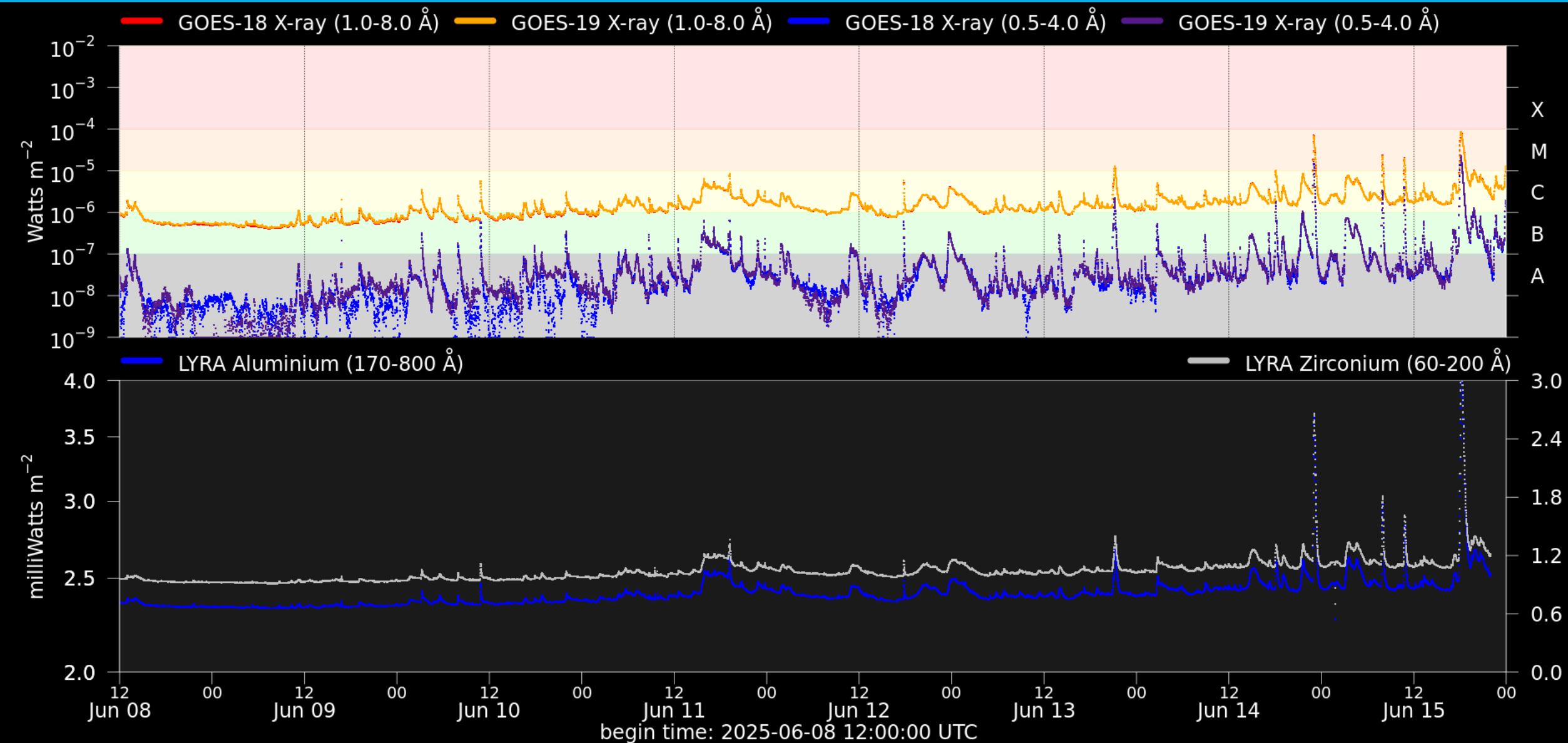
Flaring activity



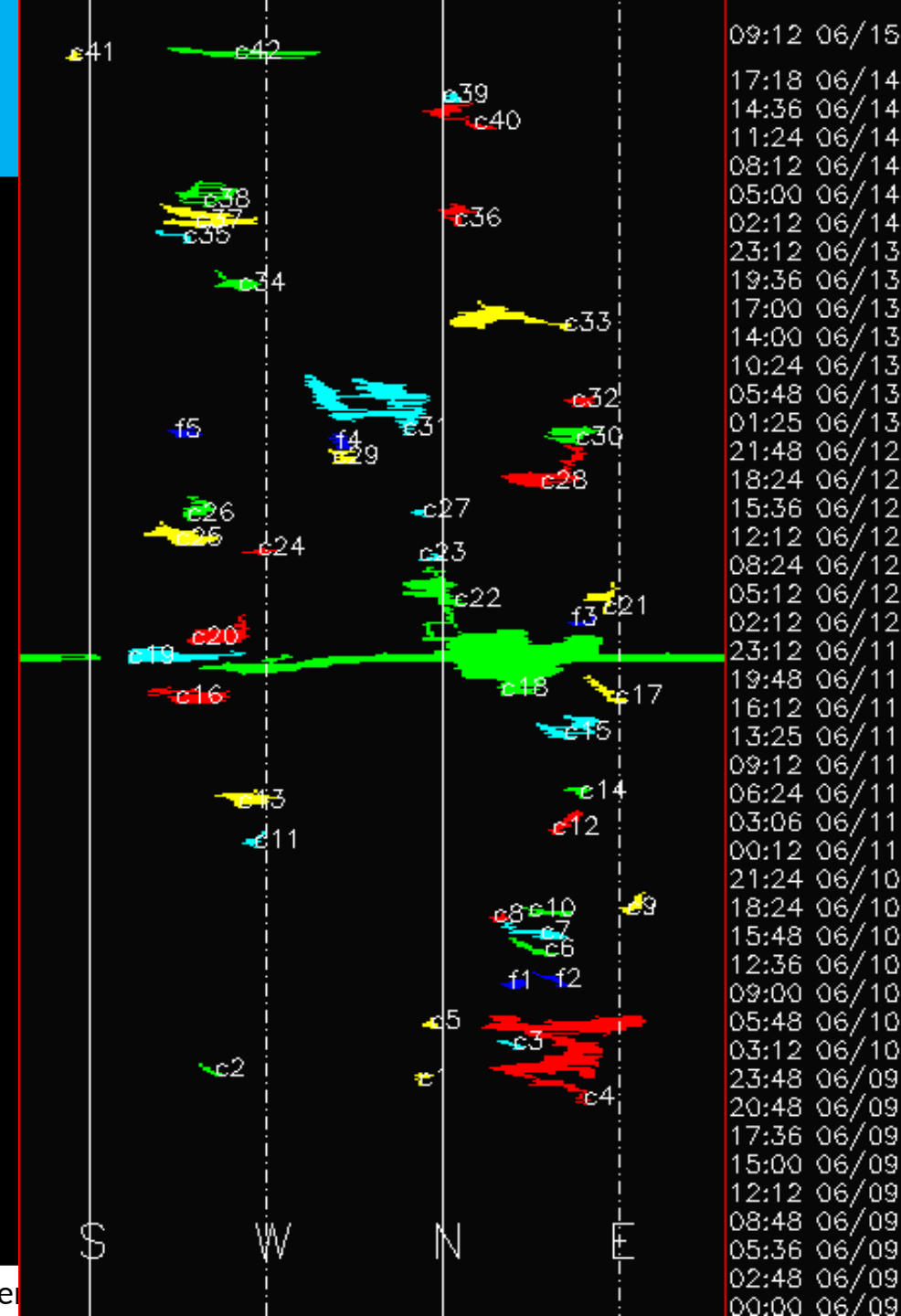
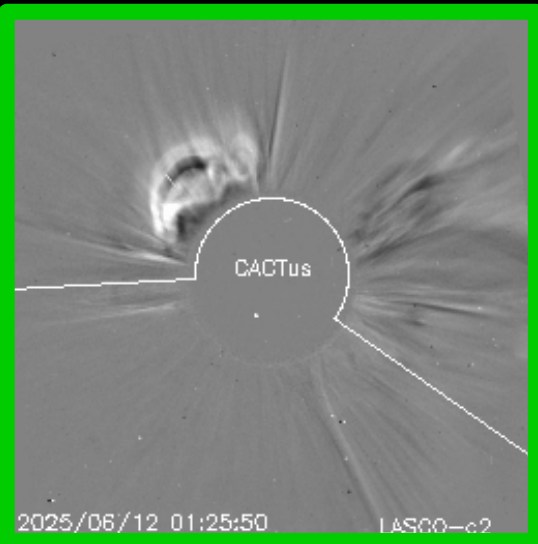
Probabilities (%) and occurrences (#) of C/M/X-flares daily, from noon to noon:

Issue date	2025-06-08	2025-06-09	2025-06-10	2025-06-11	2025-06-12	2025-06-13	2025-06-14	2025-06-15
Probability (%)	95 20 05	91 15 01	99 10 01	99 33 07	99 37 05	99 41 07	99 60 05	99 73 15
Observed (#)	01 00 00	07 00 00	06 00 00	06 00 00	03 00 00	06 01 00	03 04 00	06 01 00

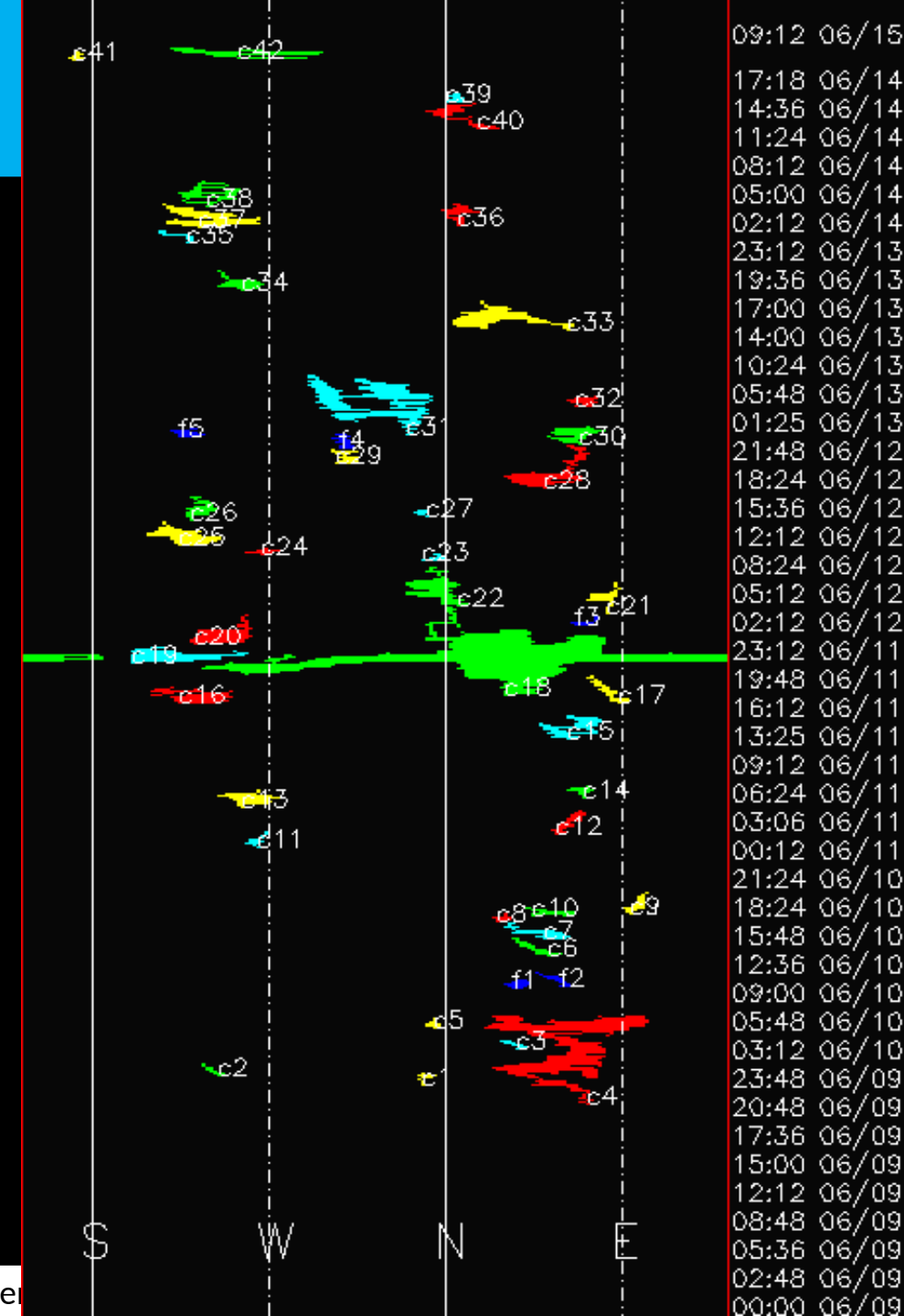
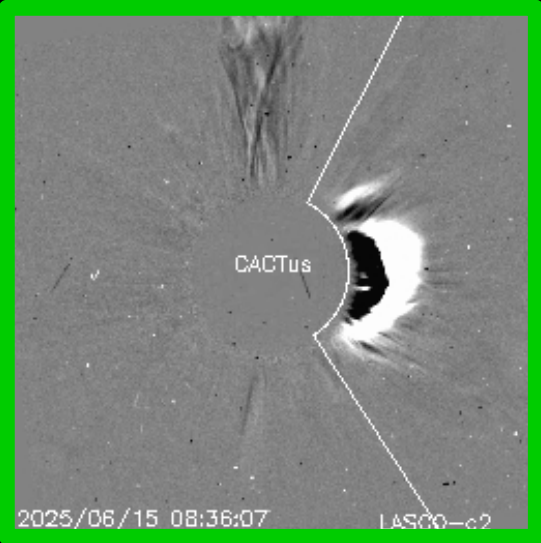
Solar X-Ray and UV flux



Coronal Mass Ejections

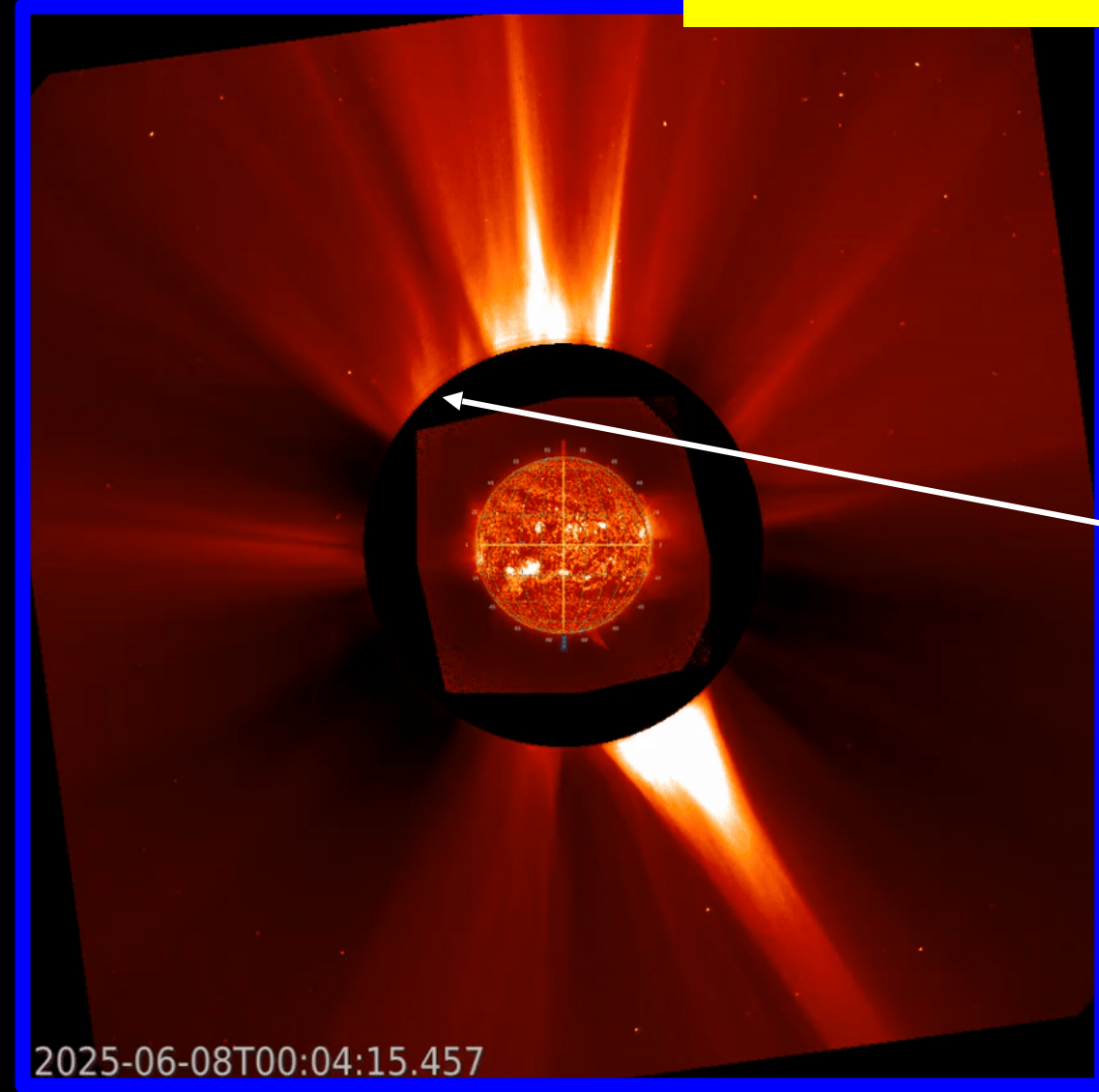


Coronal Mass Ejections



Coronal Mass Ejections

Remember: CME 516 on the past Week

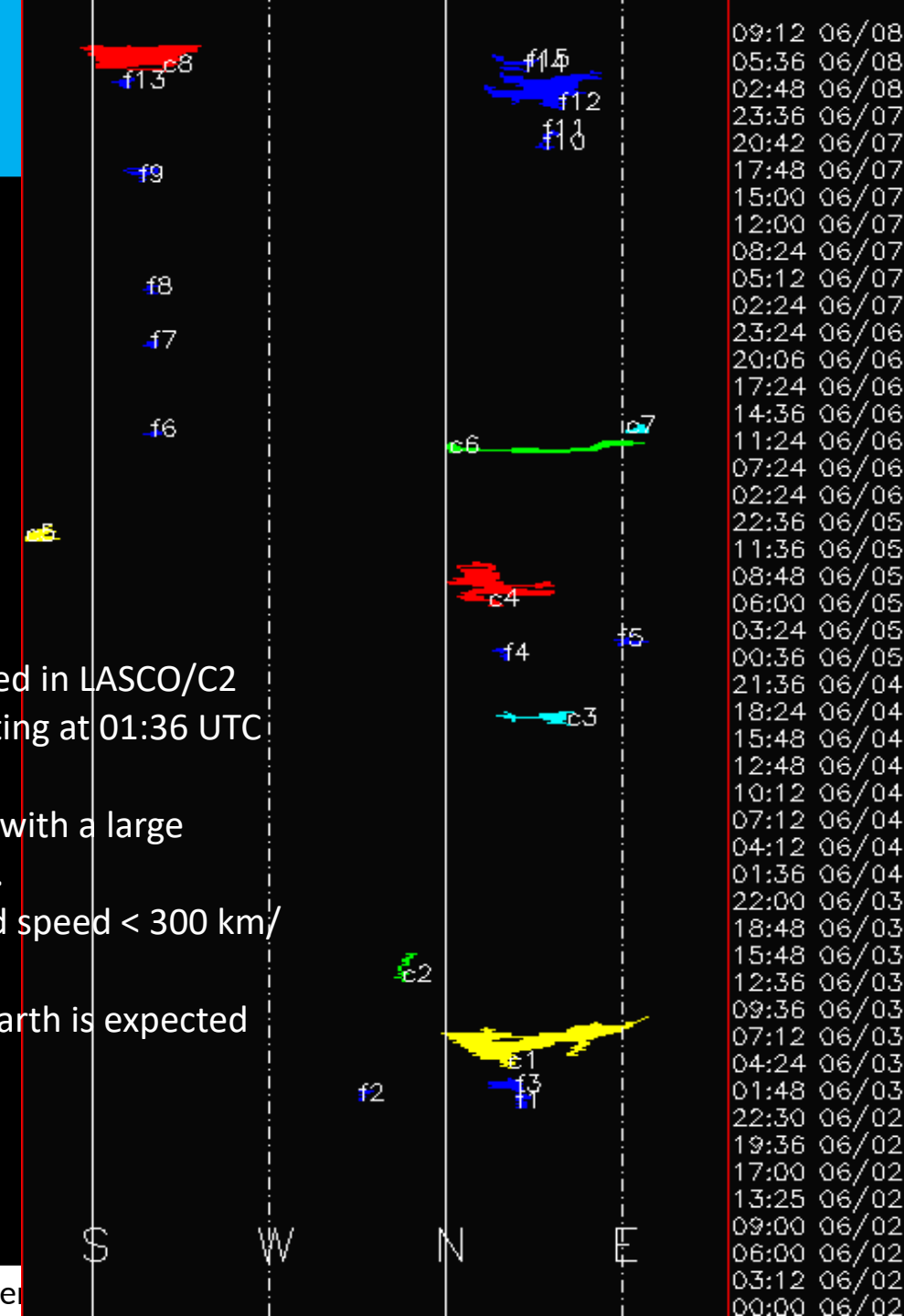


SIDC CME 516 (observed in LASCO/C2 coronagraph data starting at 01:36 UTC on June 08).

The CME is associated with a large dimming near N10E40.

CME is slow (estimated speed < 300 km/s)

No or little impact at Earth is expected



Solar Wind and

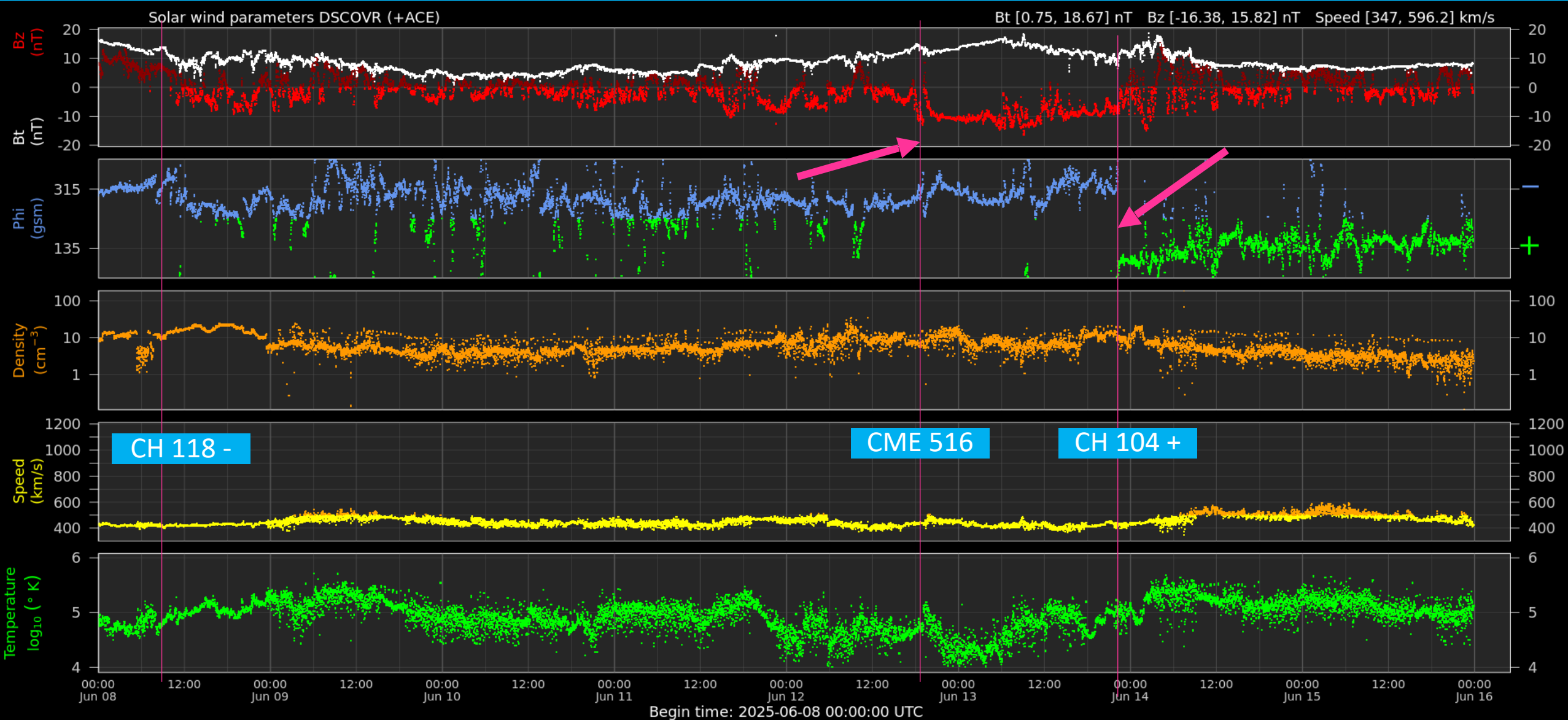
Geomagnetic Activity



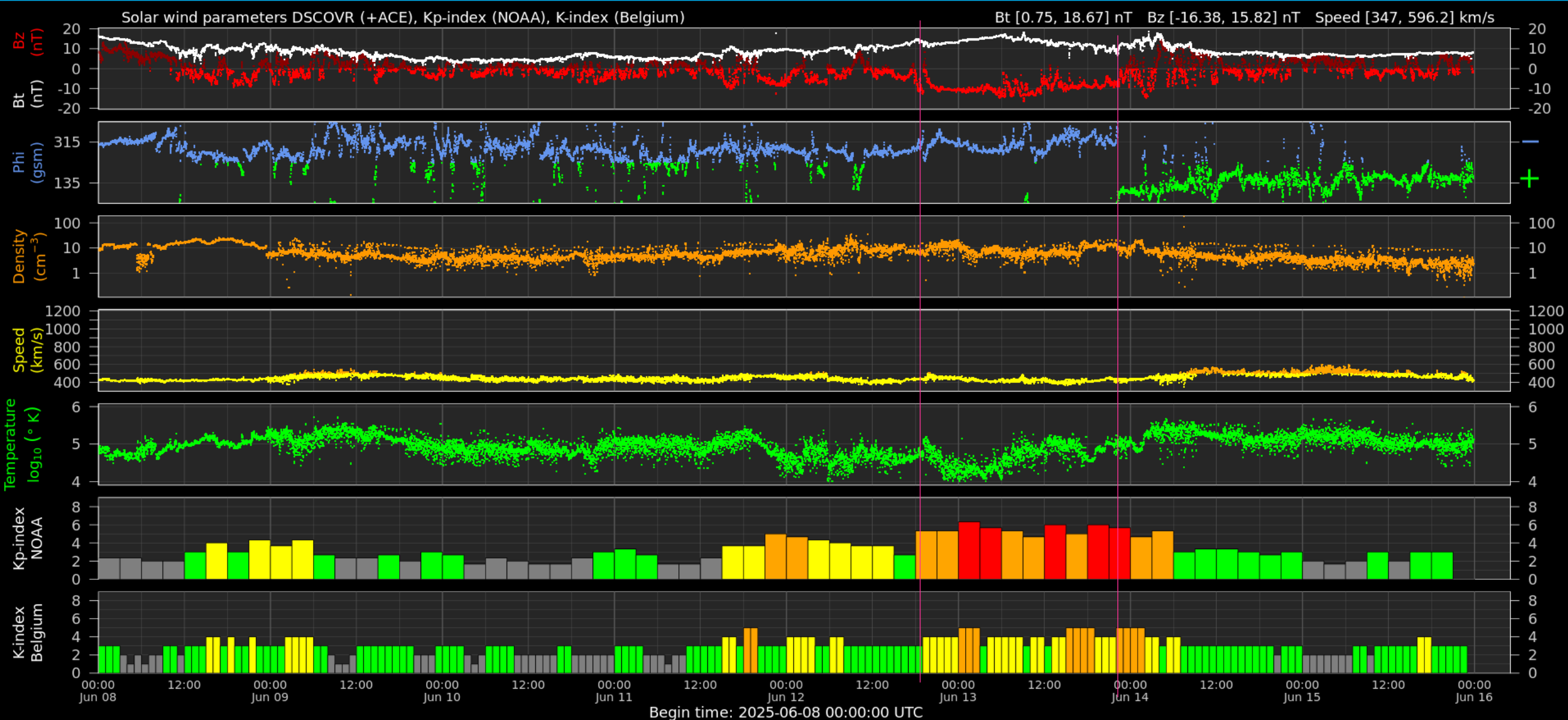
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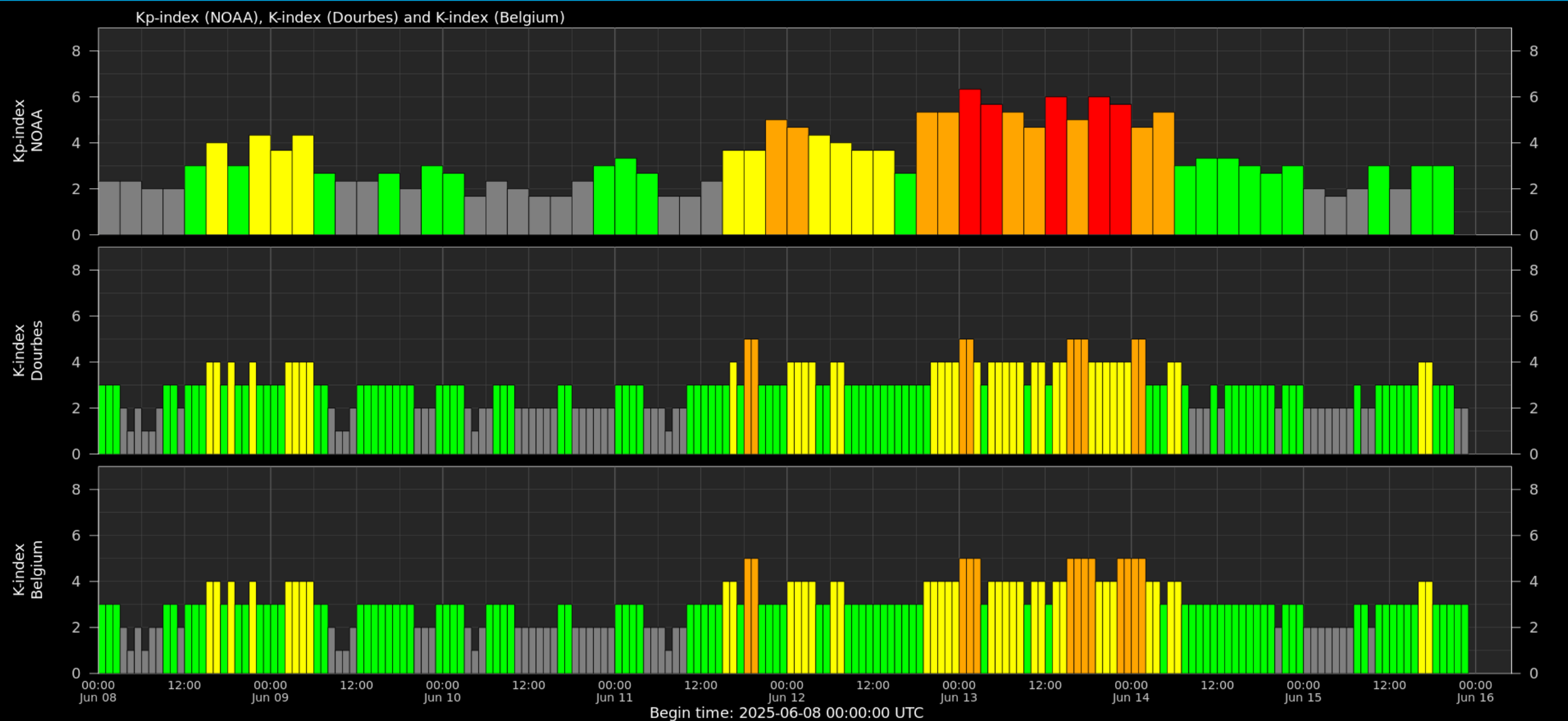
Solar wind parameters



Solar wind parameters & K-indices



Geomagnetic activity (K-indexes)



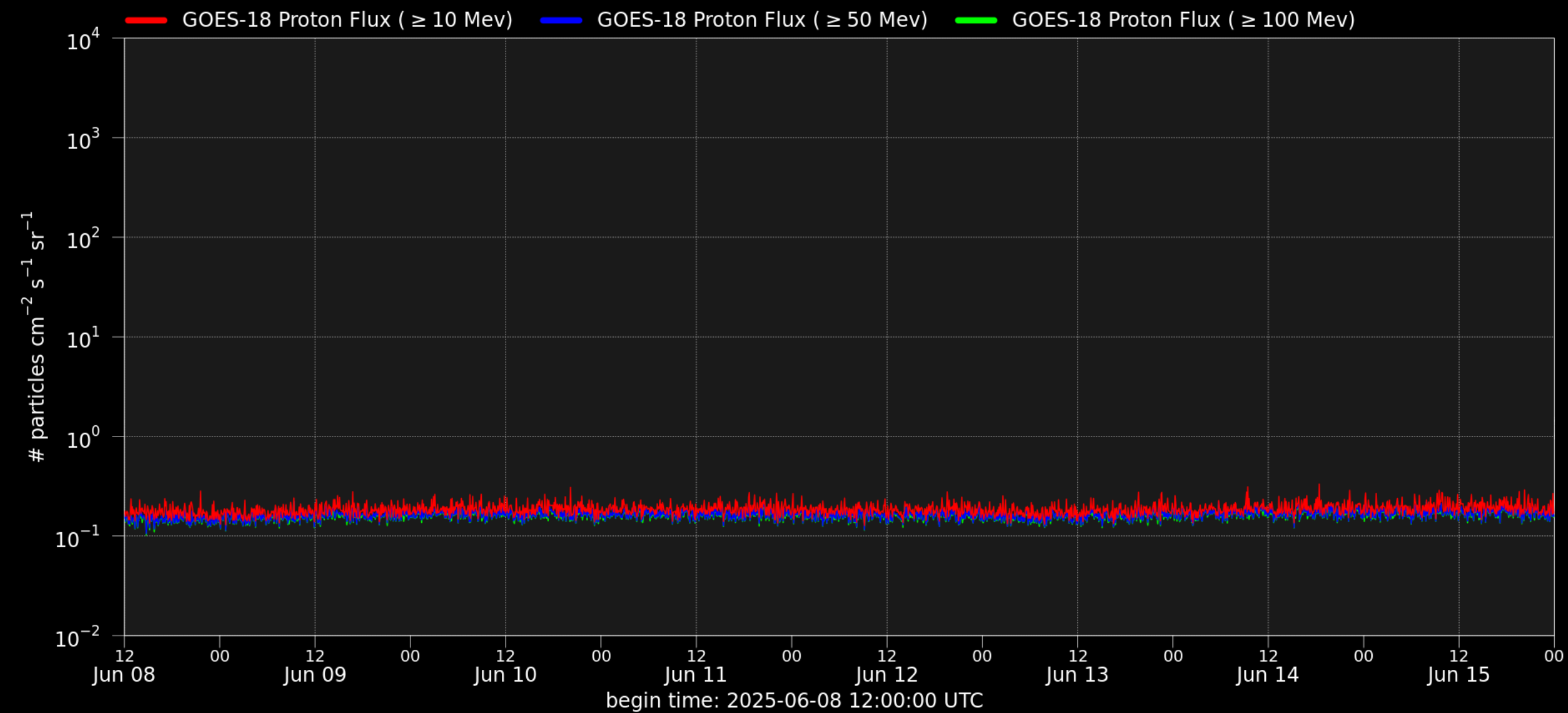
Energetic Particles



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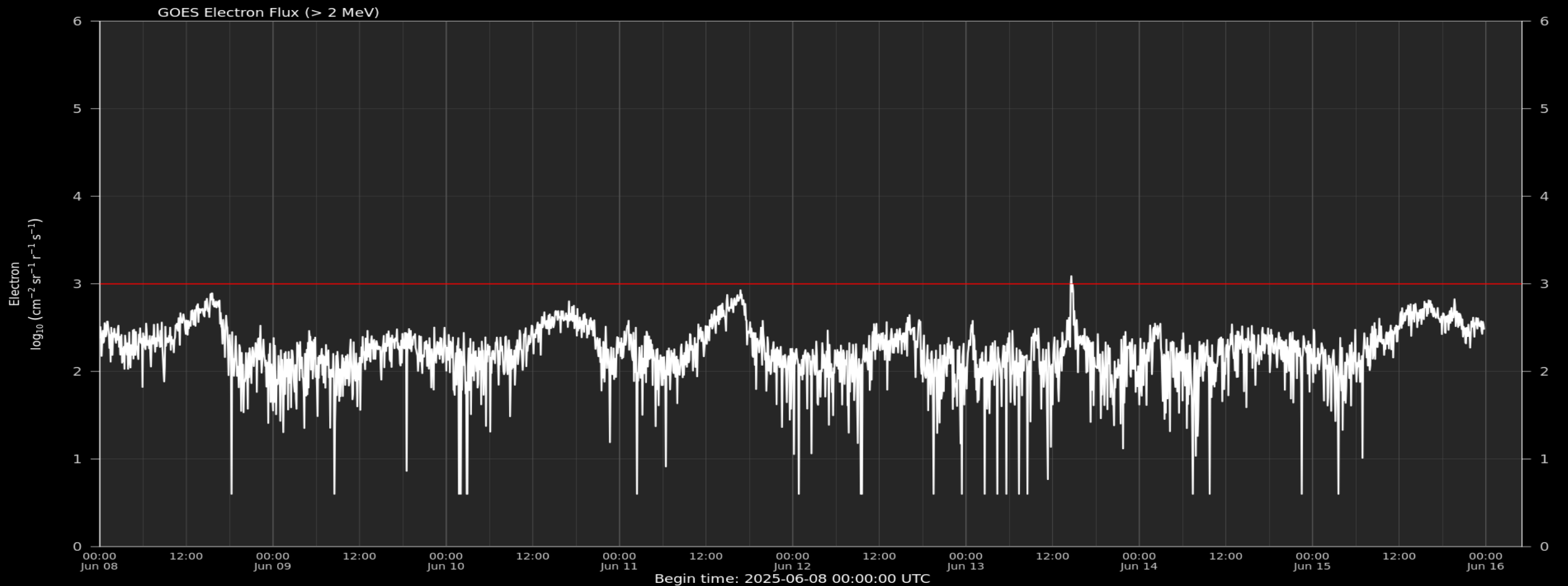
Solar proton flux



Electron flux at GEO

www.stce.be/educational/classification#electrons

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



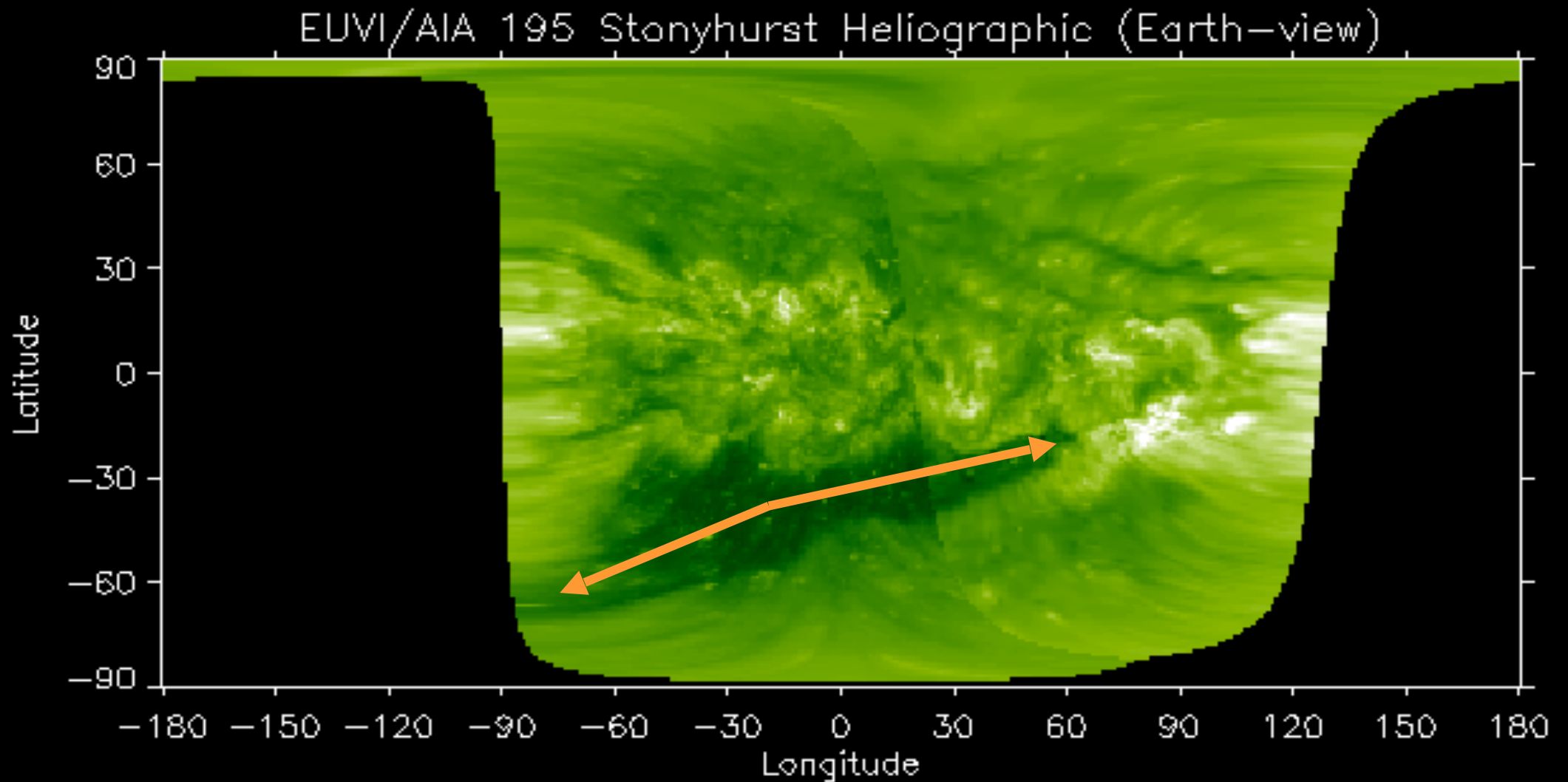
Outlook



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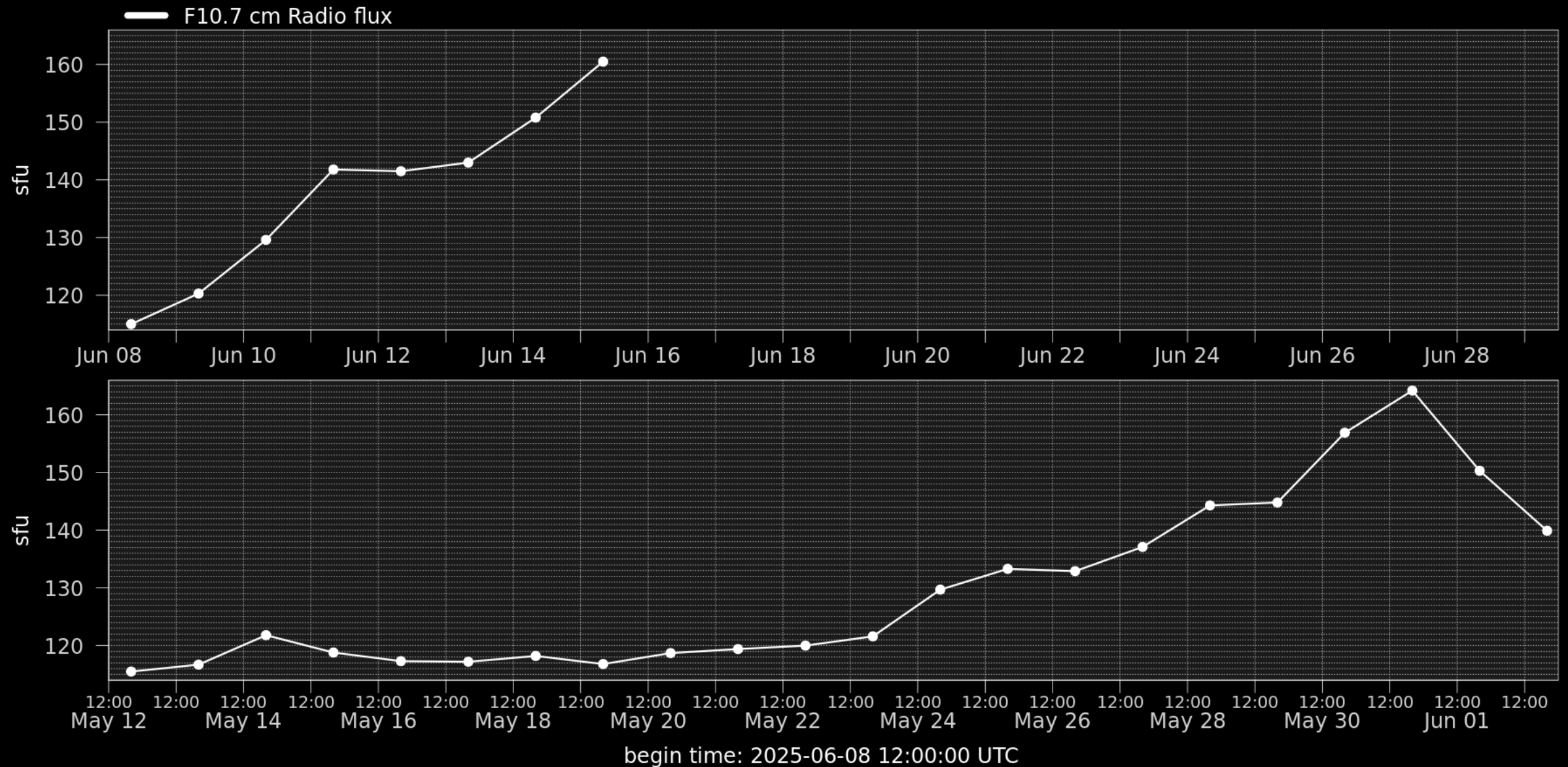
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Outlook: Solar activity

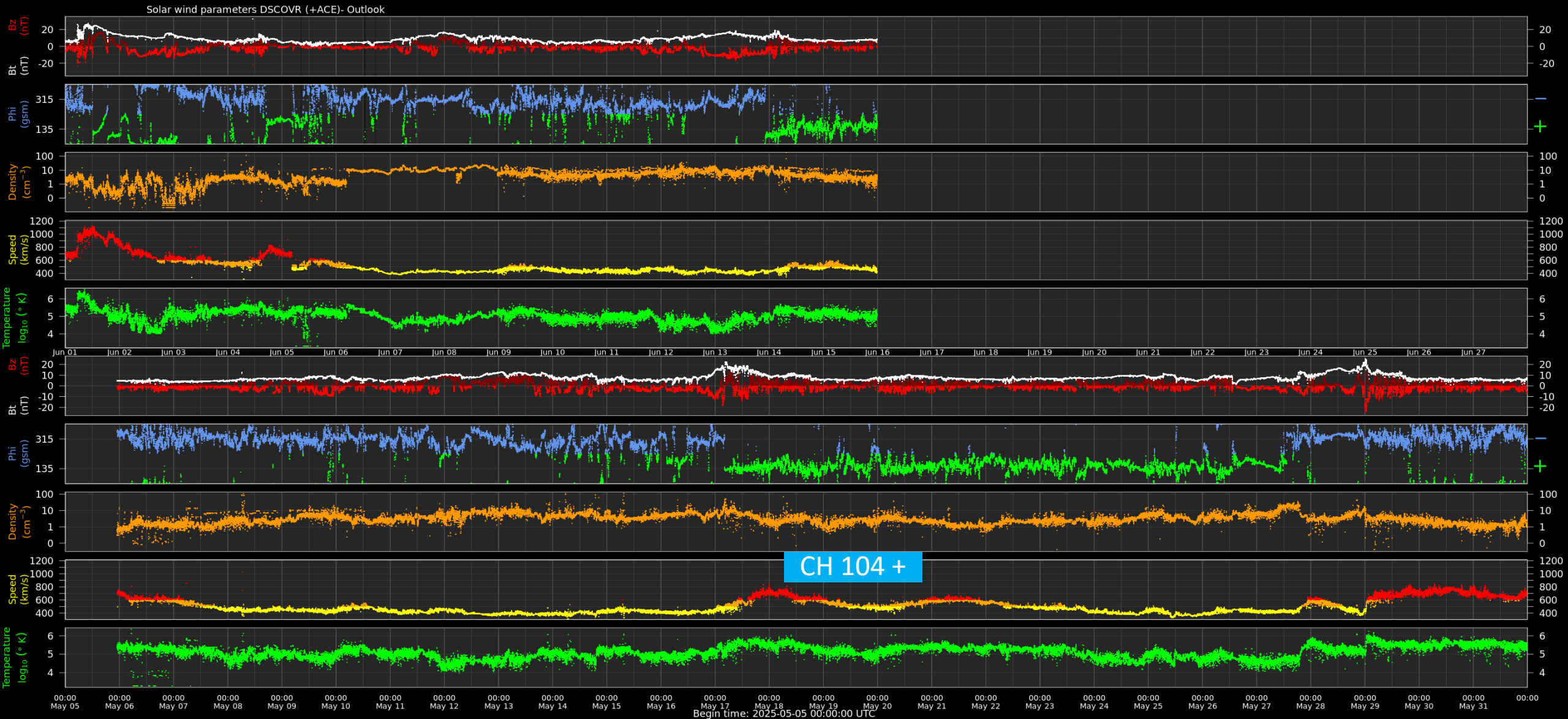


Observation date: 2025/06/15 23:05:00

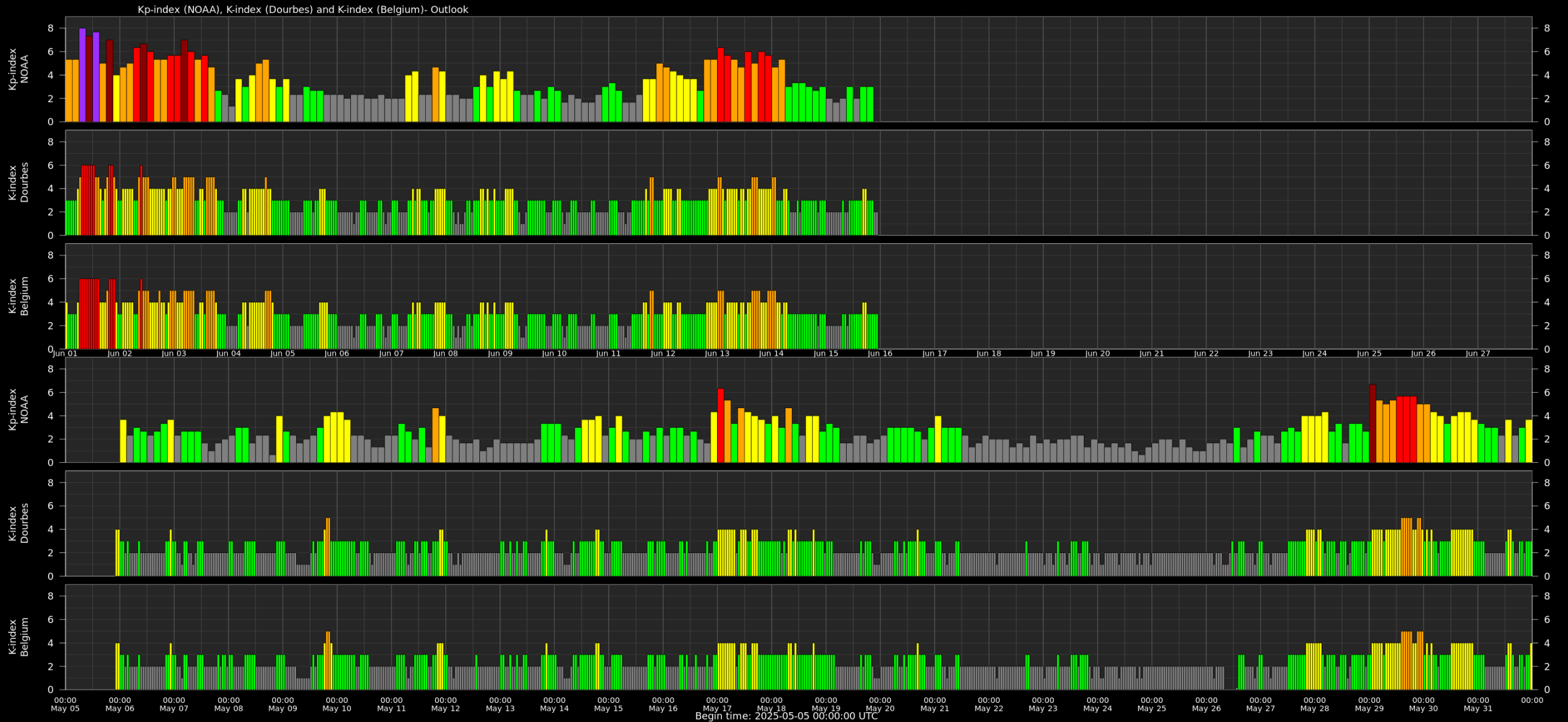
Outlook: Solar F10.7cm radio flux



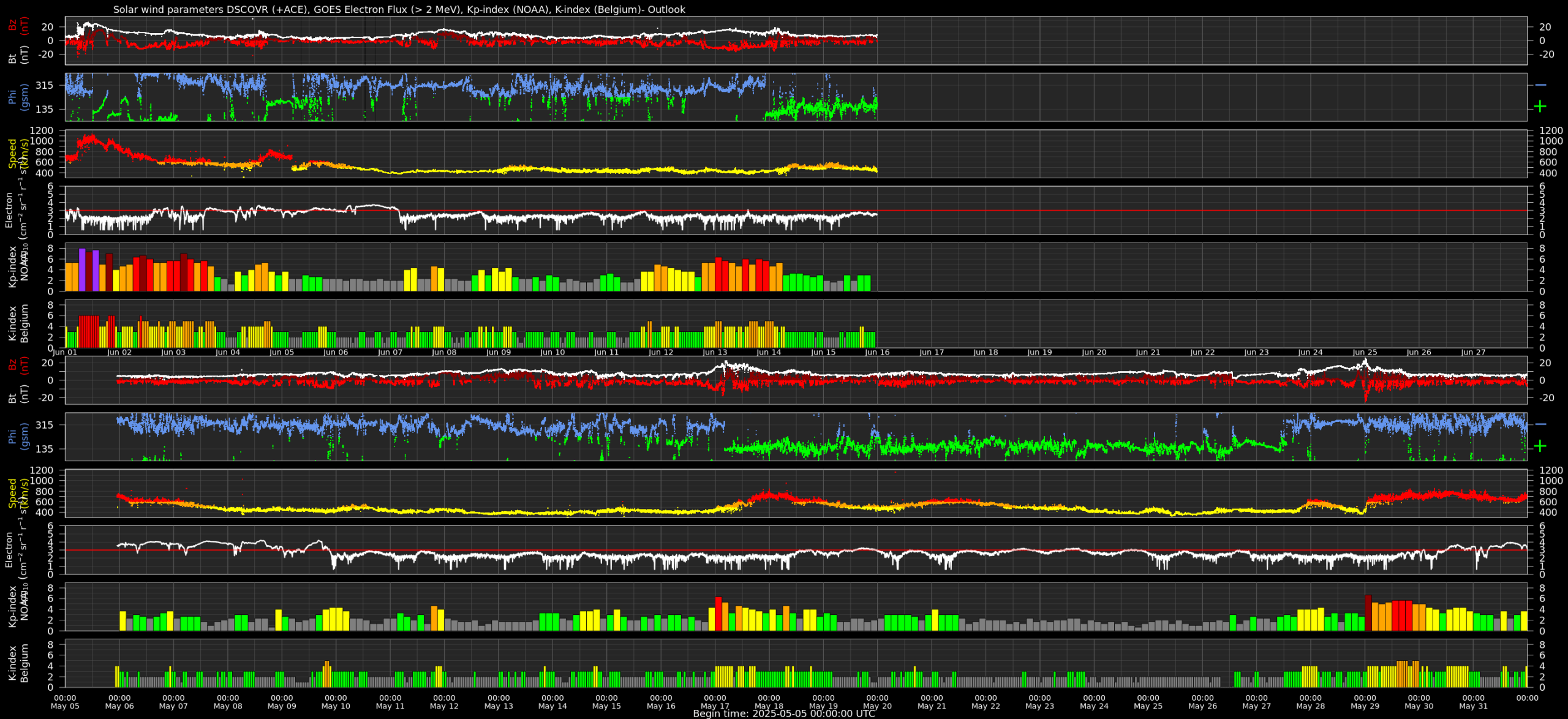
Outlook: Solar wind parameters



Outlook: Geomagnetic activity



Outlook: Electron Flux at GEO Outlook



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Pegasus related events



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