SIDC Space Weather Briefing

09 February 2025-16 February 2025

Dimitrios Millas

& the SIDC forecaster team

Royal Observatory
of Belgium

Solar Influences
Data analysis Centre
www.sidc.be

Summary Report

Solar activity from 2025-02-09 12:00 to 2025-02-16 23:59

Active regions	19 numbered
Flares	# C-class flare: 39 # M-class flare: 6 # X-class flare: 0
Coronal Holes	2 negative CH, 1 positive
CMEs	A few, not Earth-directed / low probability for glancing blow on 20/2

Proton flux	Nominal levels
Electron flux	Above the 1000 efu threshold

Solar wind and geomagnetic conditions

ICMEs	None
Solar wind conditions	|B|: 1.62 - 21.91 nT //Bz: -15 nT to 13 nT //Speed: 440 - 630km/s
Geomagnetic conditions	max KBel: 5.0, max Kp(NOAA): 5.0, Minor Storm conditions

Solar Activity

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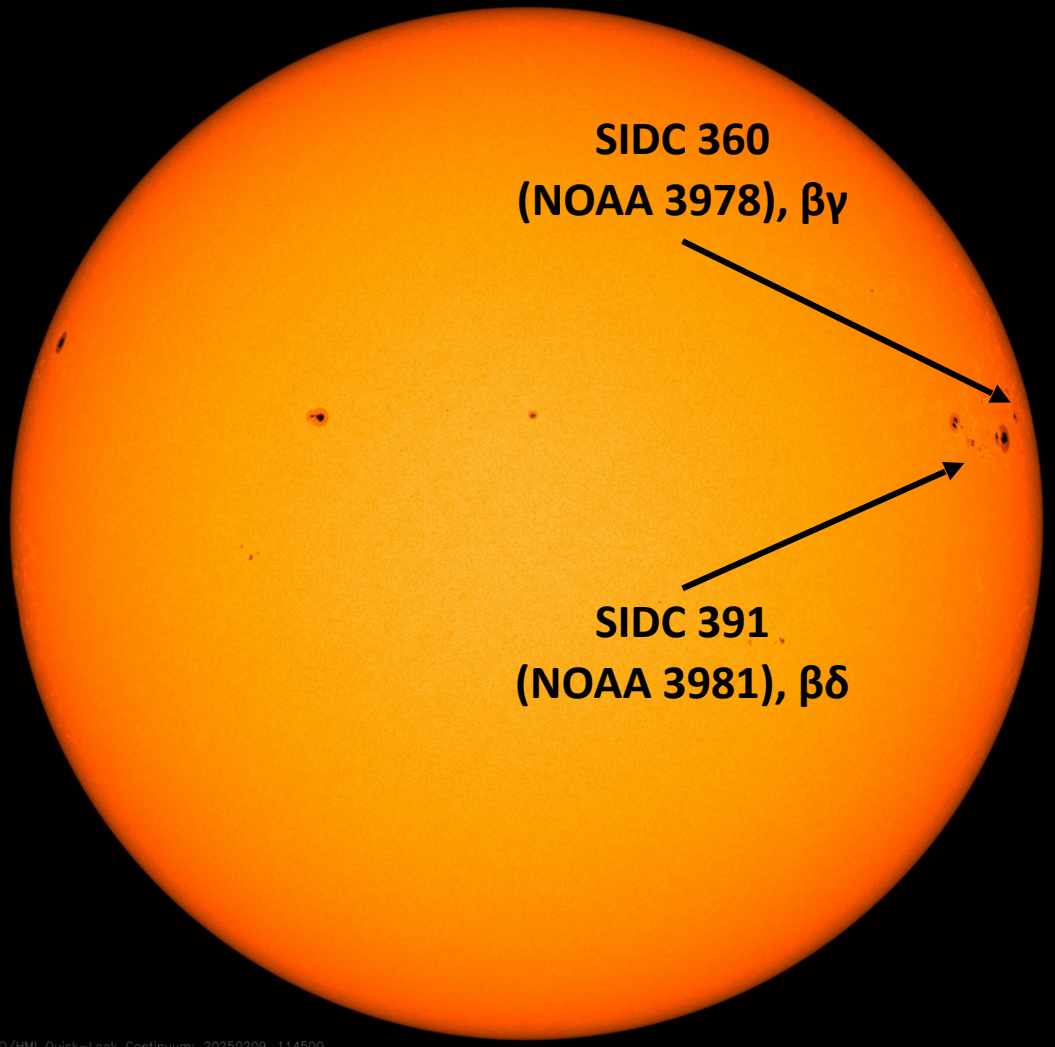
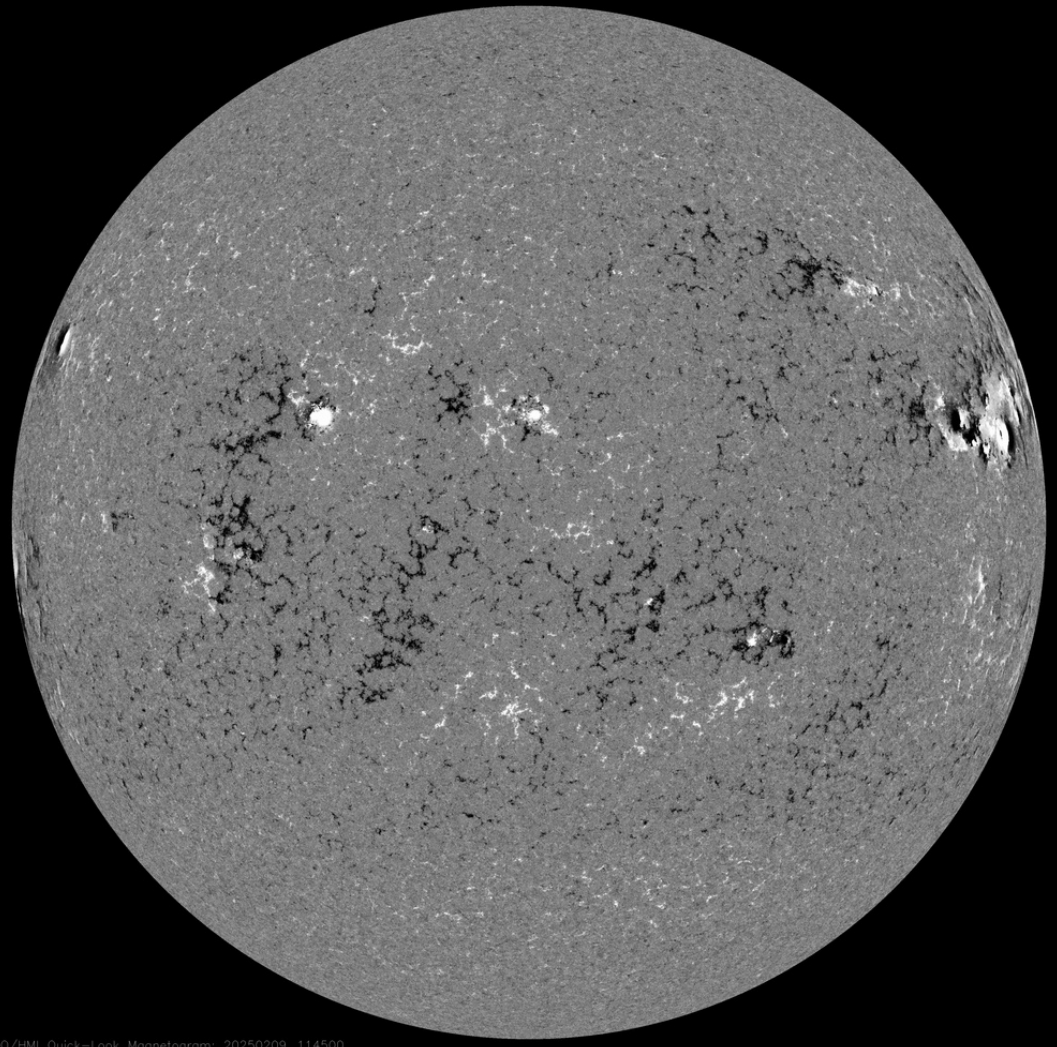
Solar active regions

SDO/HMI White Light 2025-02-09

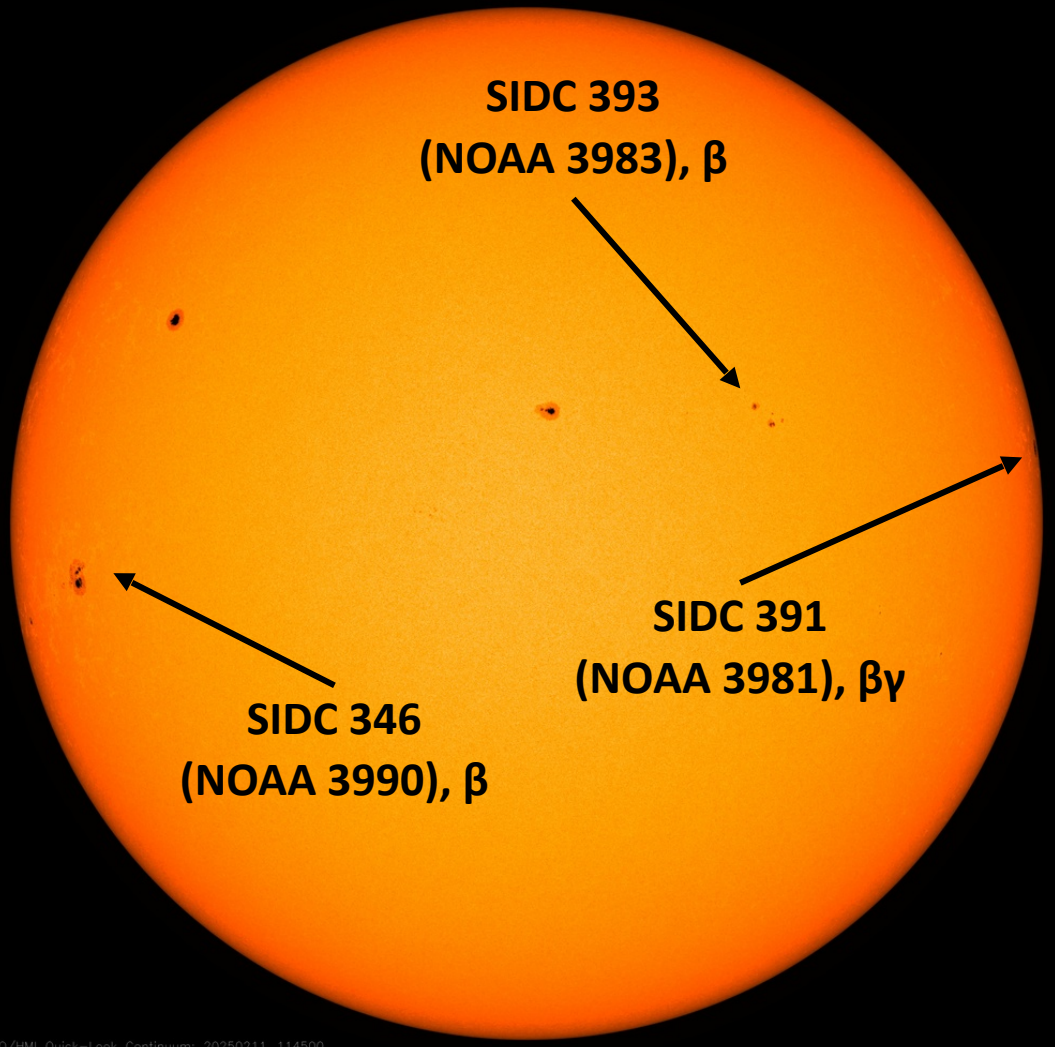


SDO/HMI Magnetogram 2025-02-09

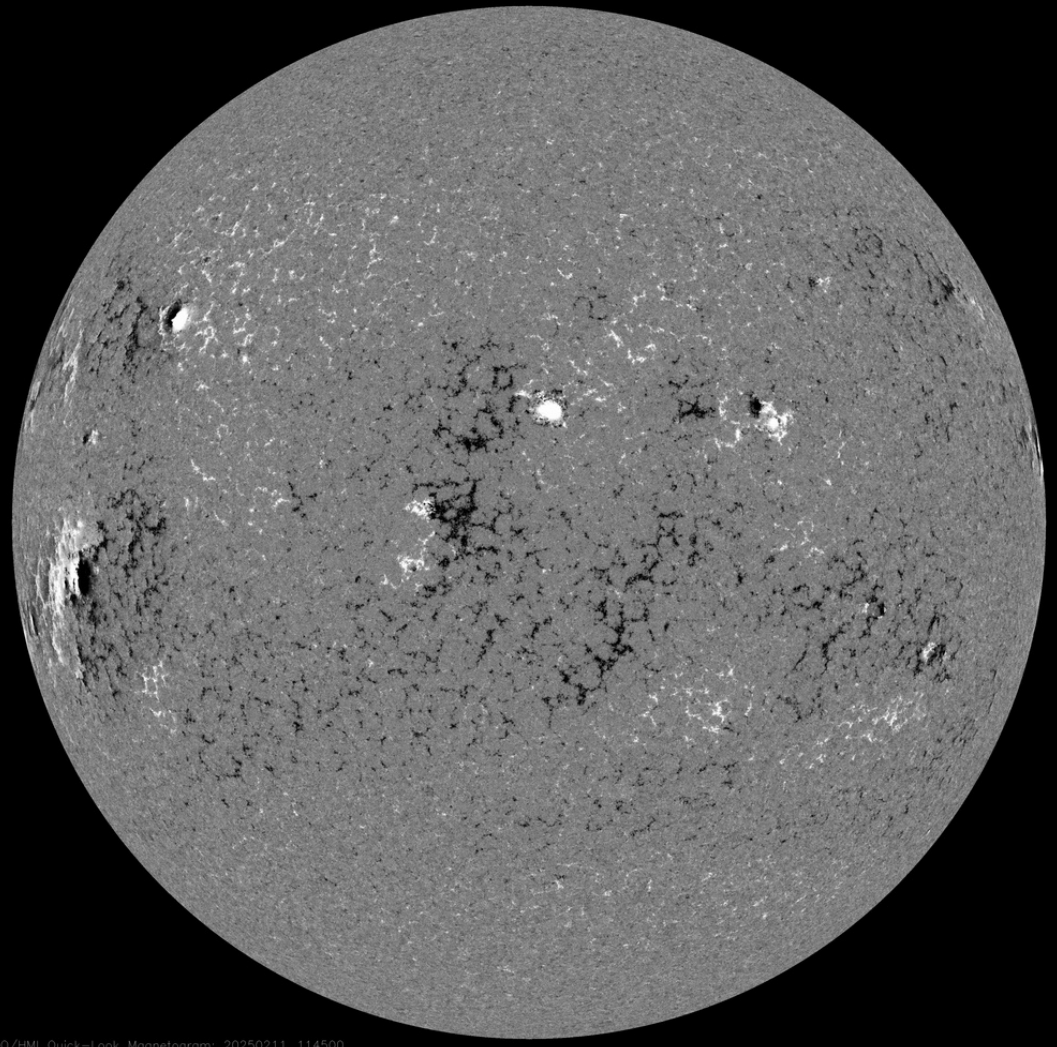


Solar active regions

SDO/HMI White Light 2025-02-11

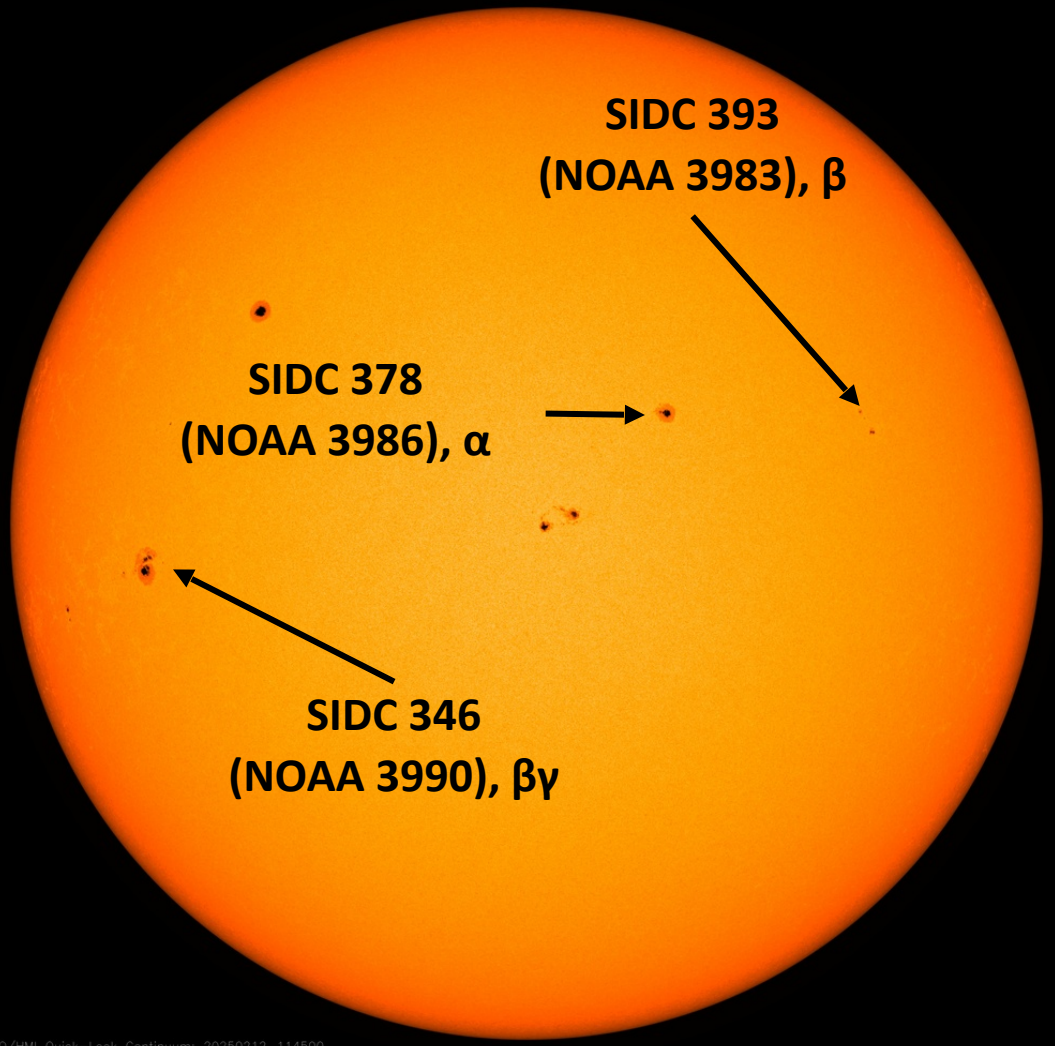


SDO/HMI Magnetogram 2025-02-11

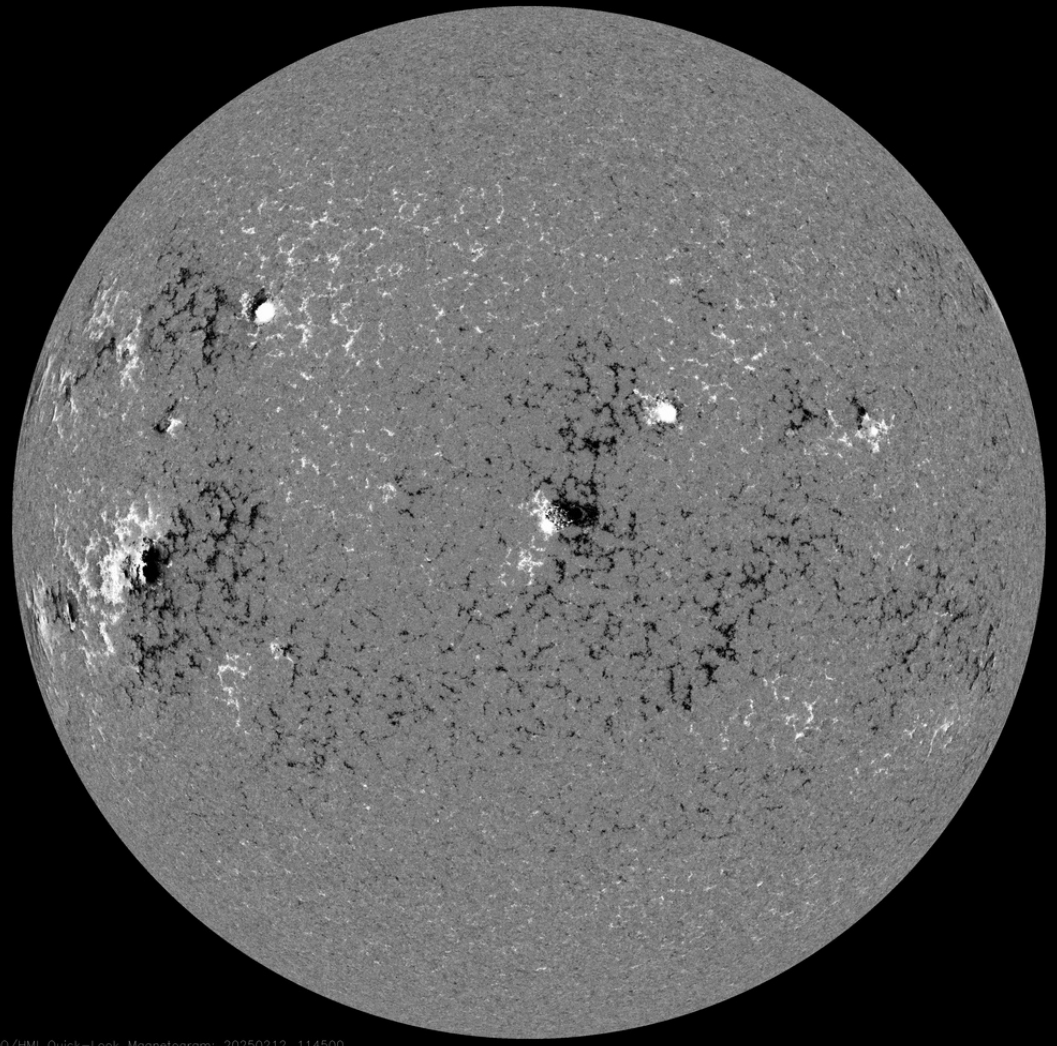


Solar active regions

SDO/HMI White Light 2025-02-12

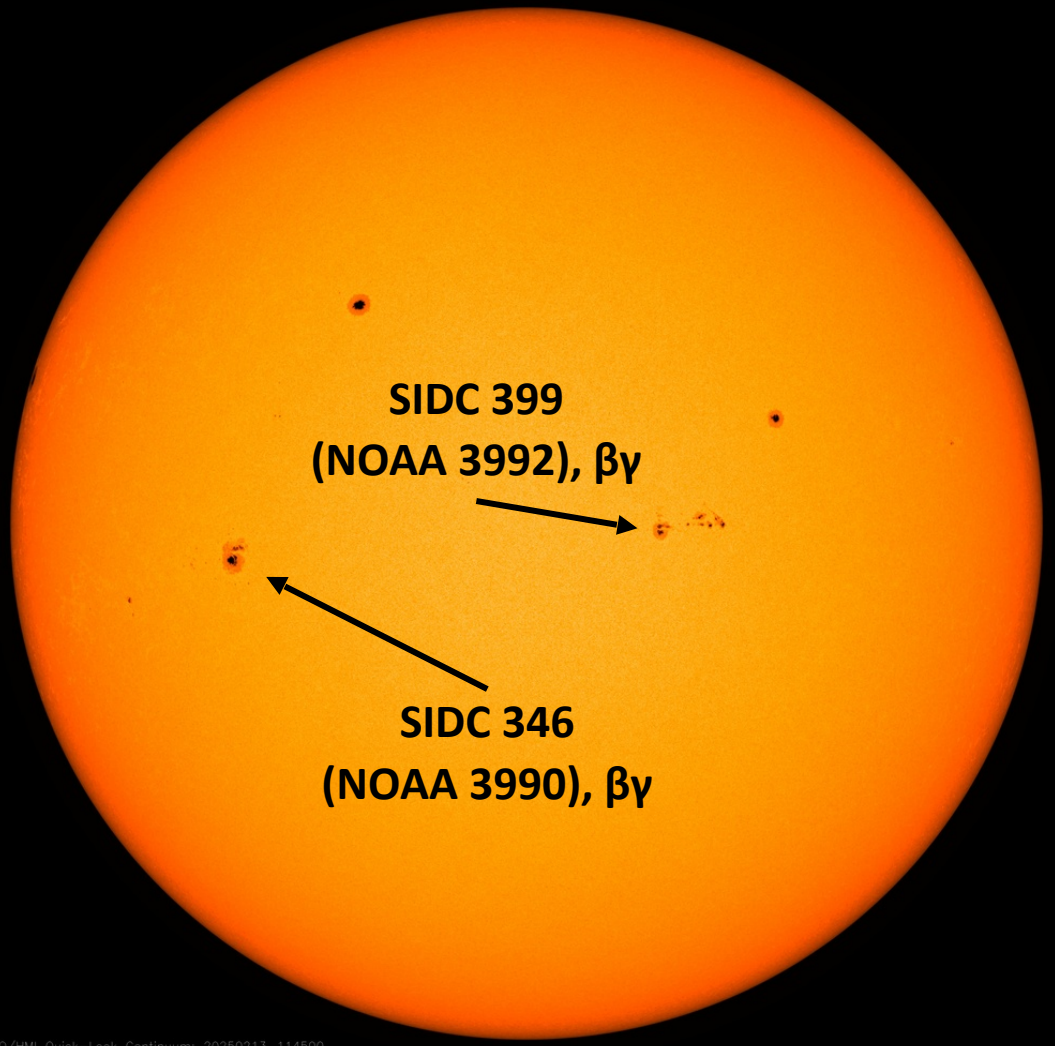


SDO/HMI Magnetogram 2025-02-12

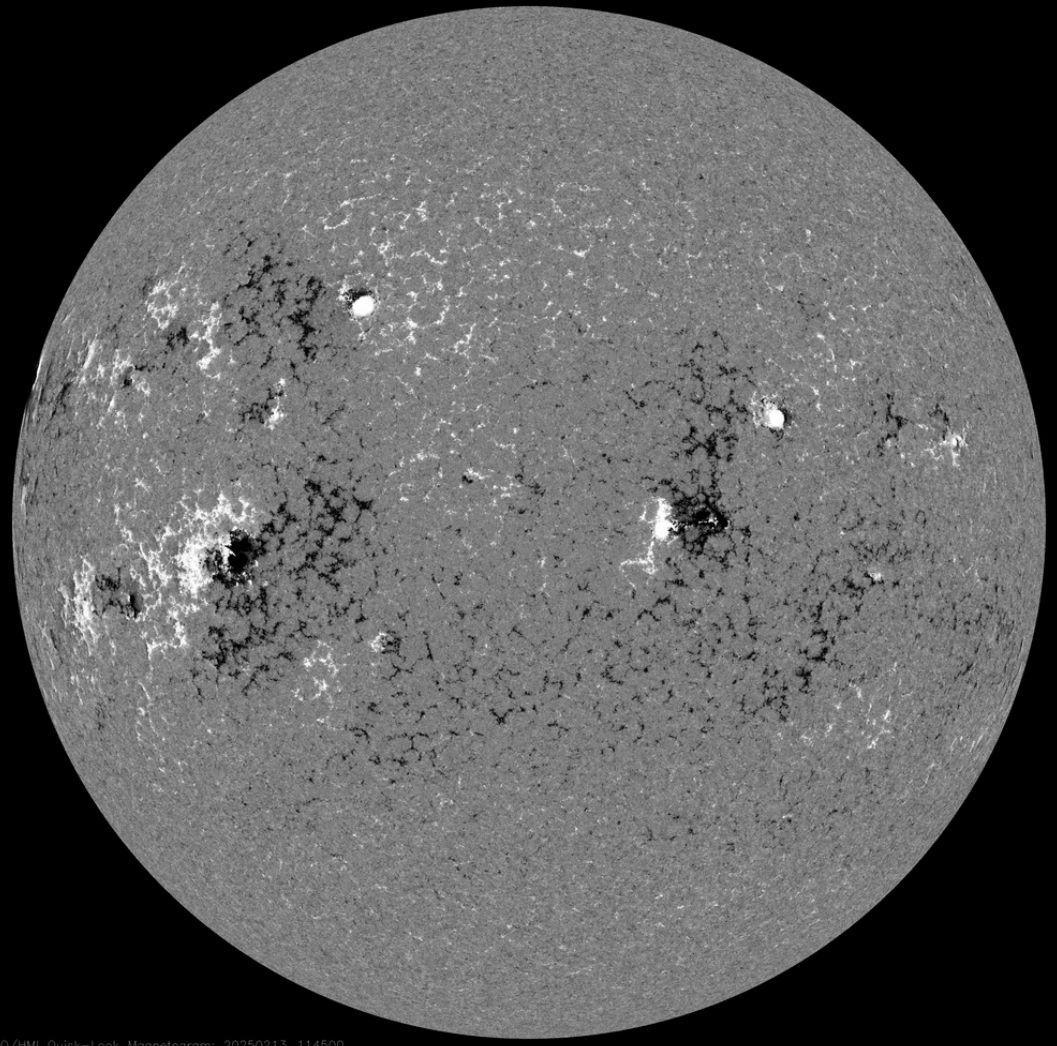


Solar active regions

SDO/HMI White Light 2025-02-13

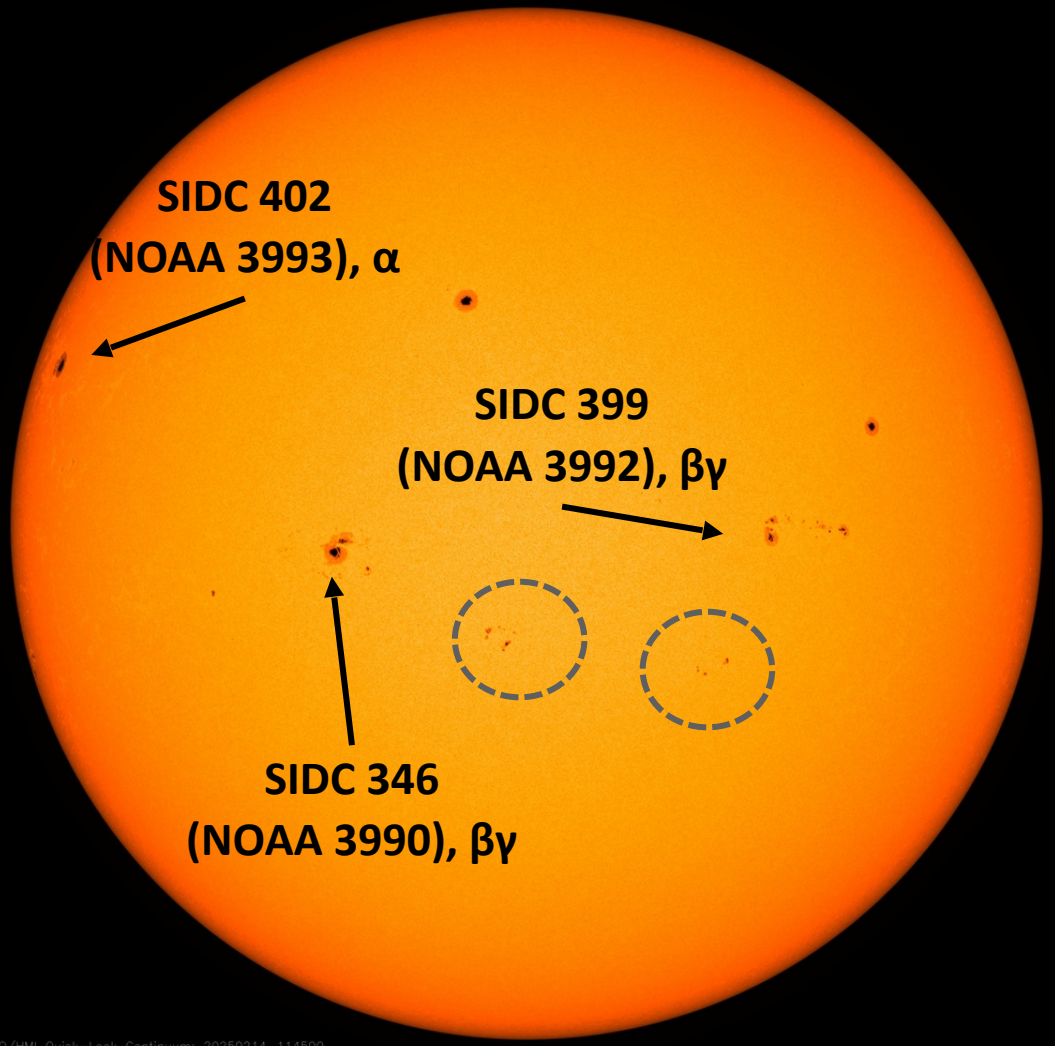


SDO/HMI Magnetogram 2025-02-13

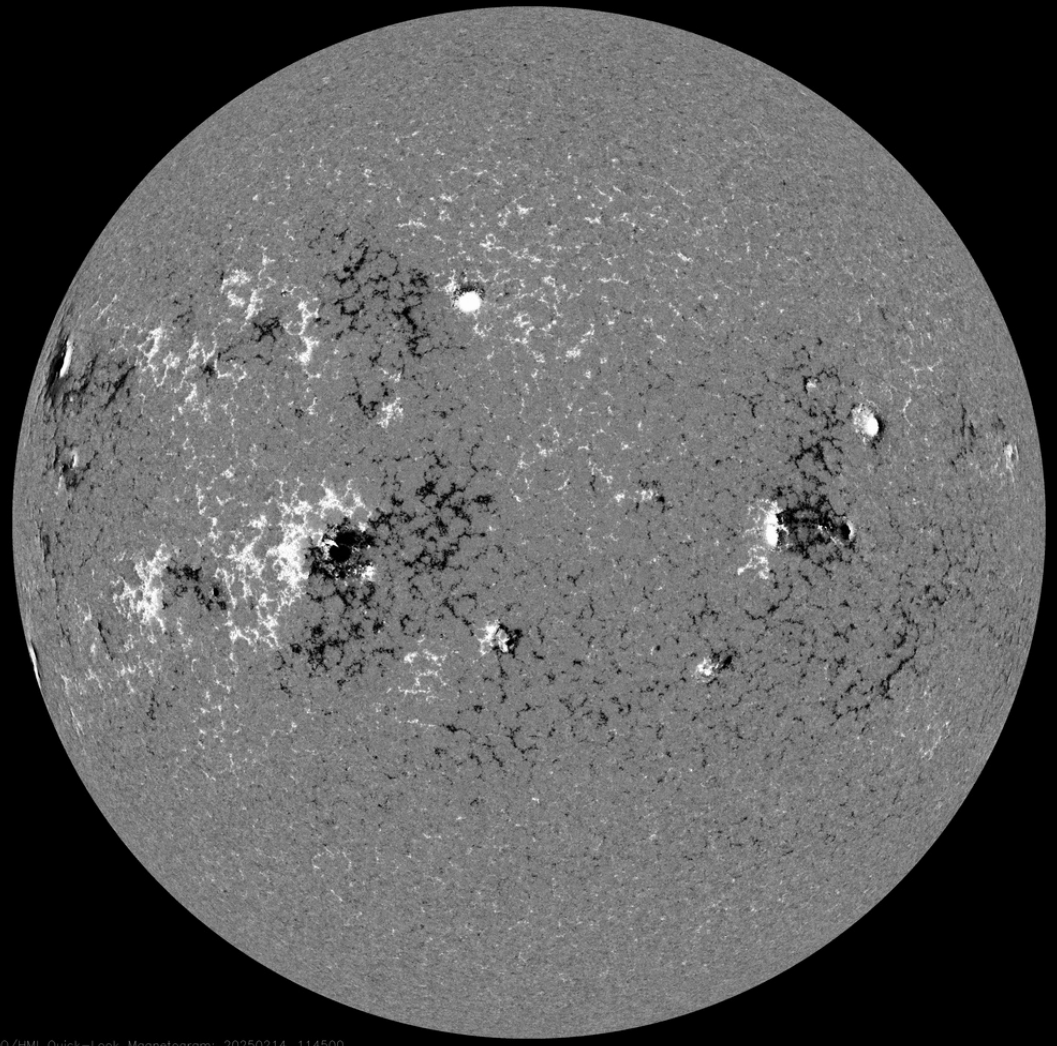


Solar active regions

SDO/HMI White Light 2025-02-14

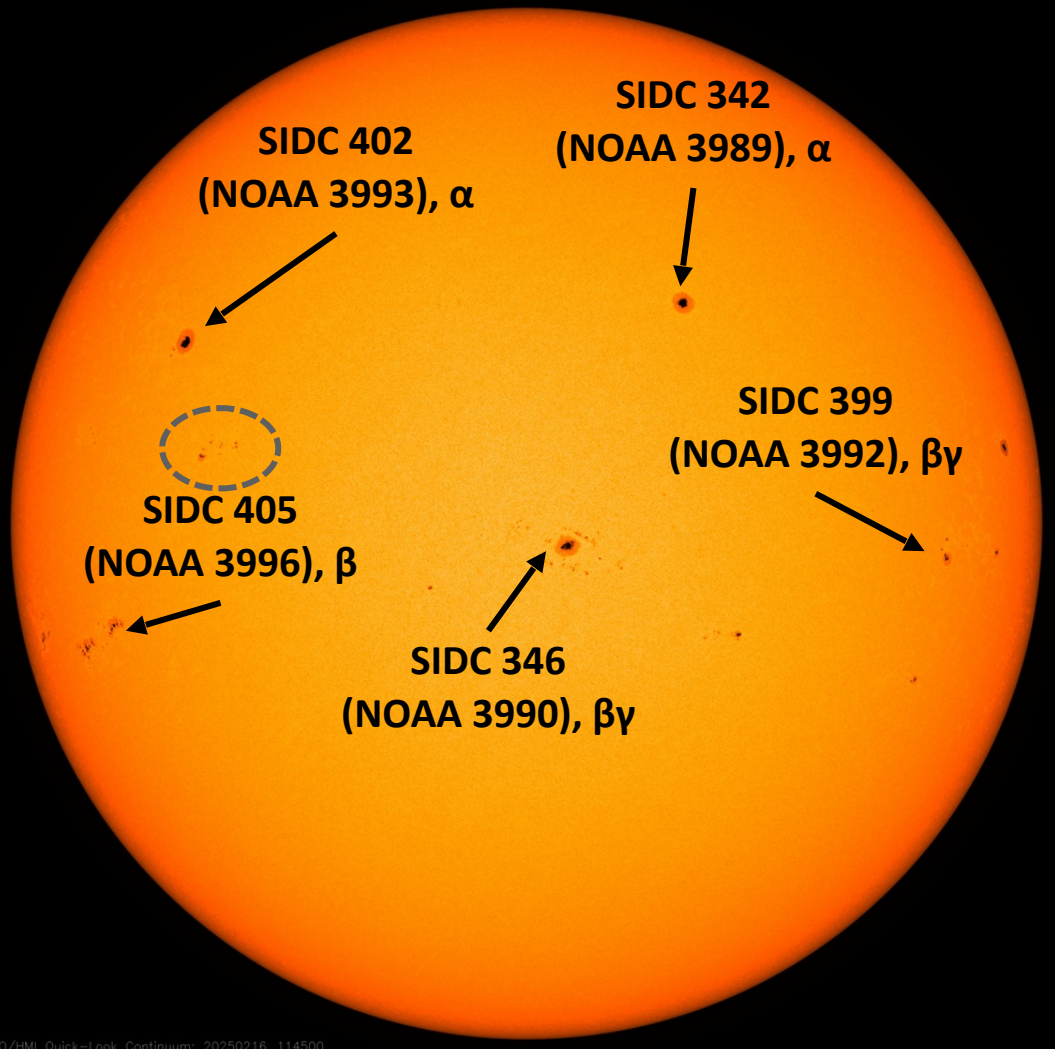


SDO/HMI Magnetogram 2025-02-14

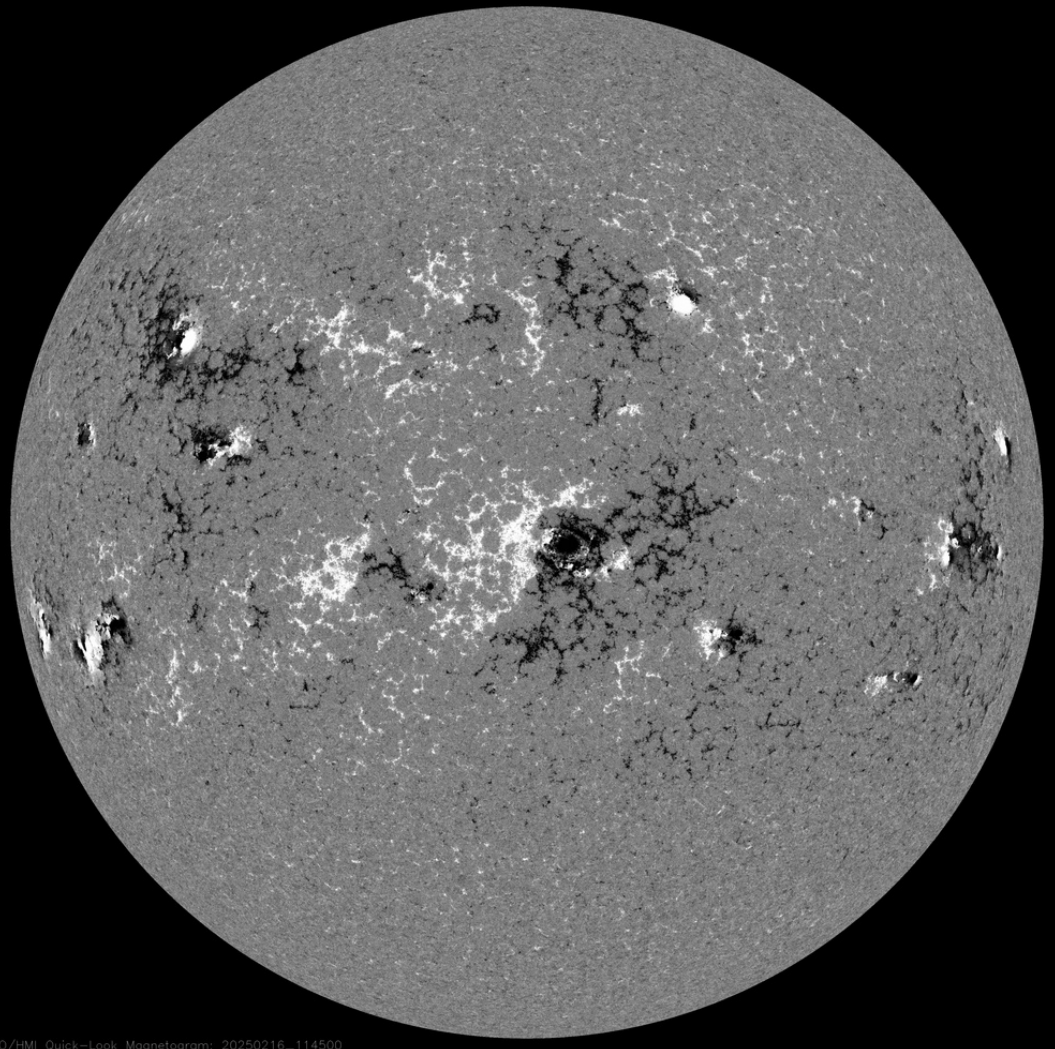


Solar active regions

SDO/HMI White Light 2025-02-16

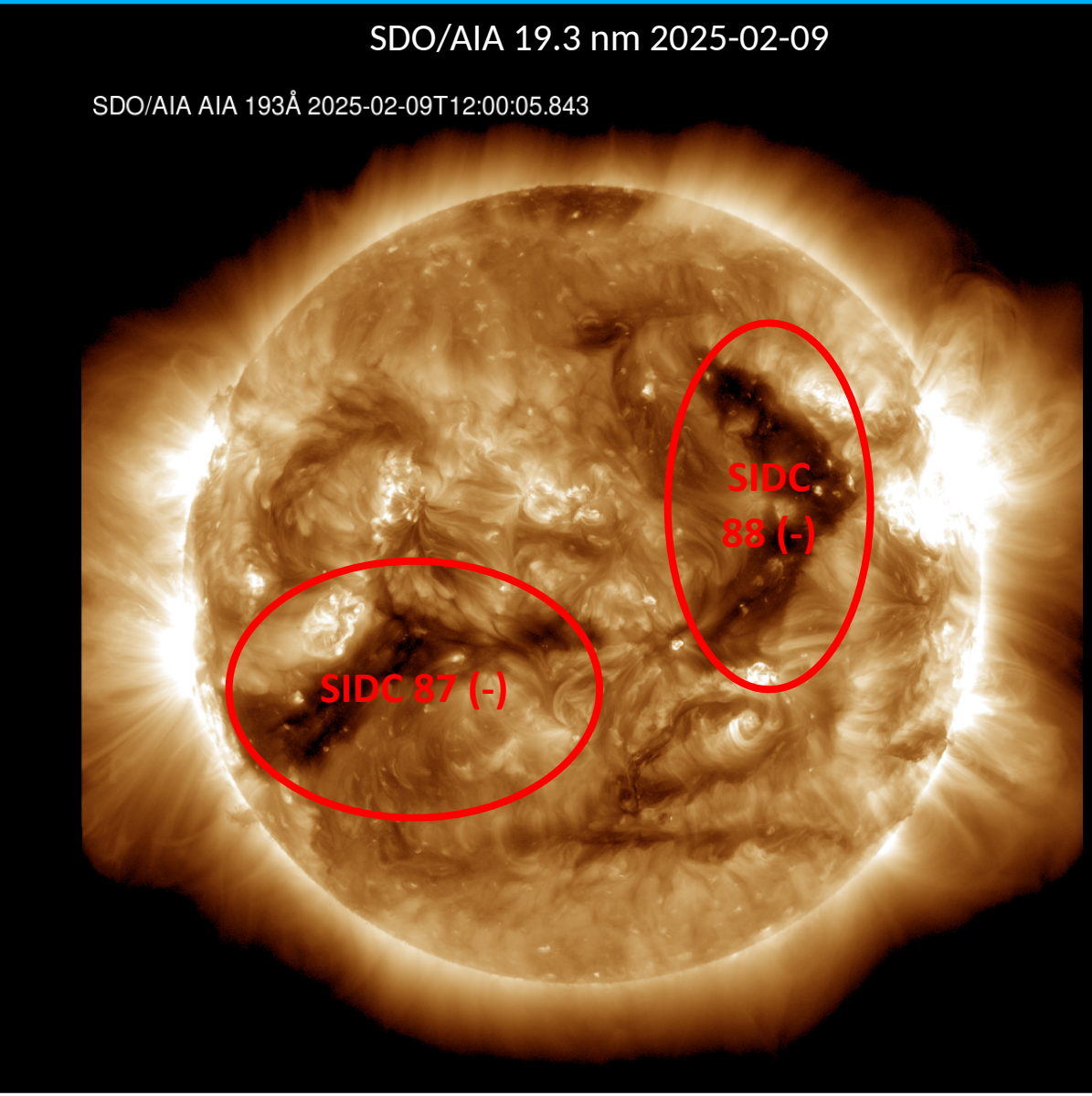


SDO/HMI Magnetogram 2025-02-16

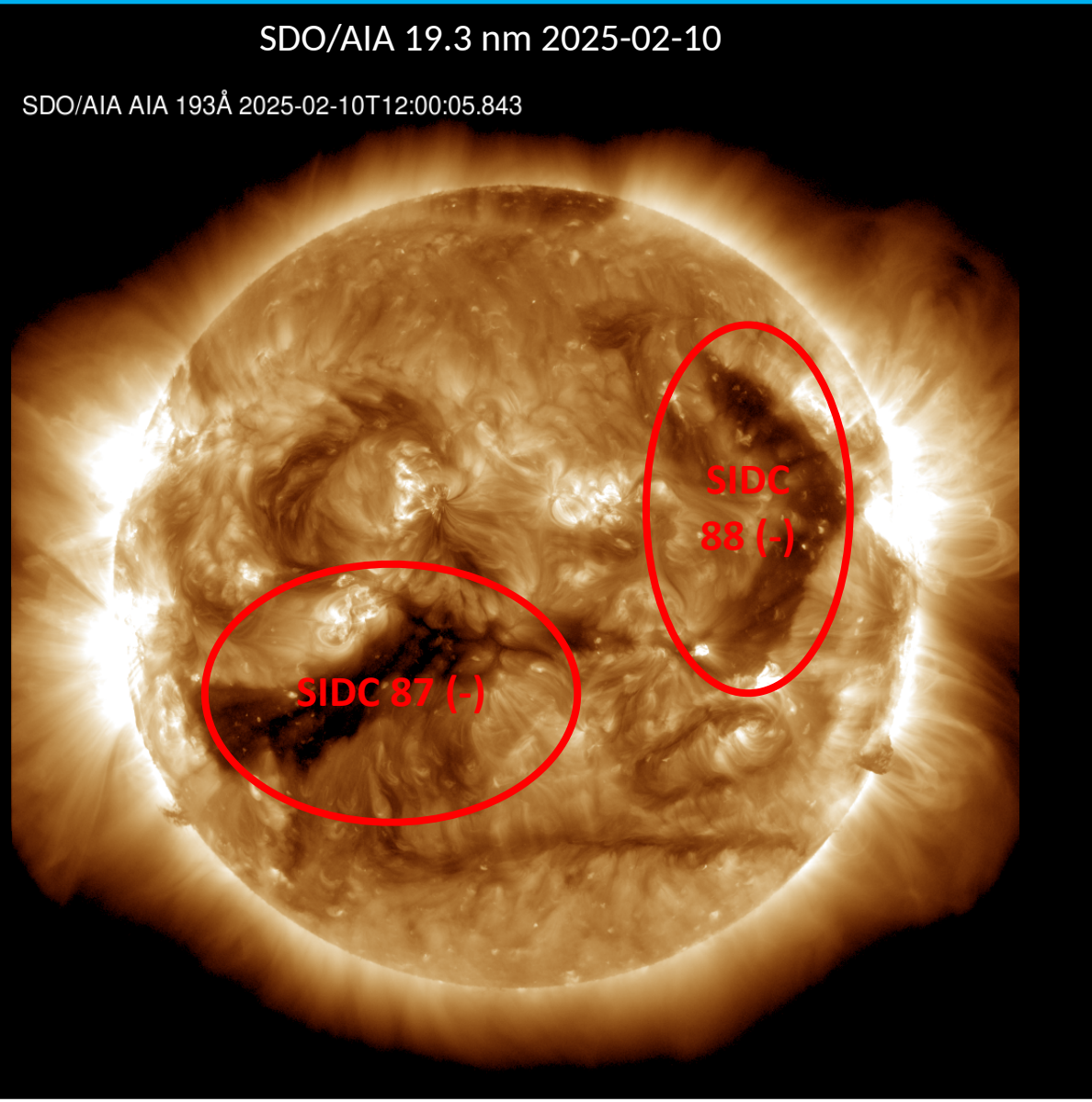


Coronal holes

SDO/AIA 19.3 nm 2025-02-09

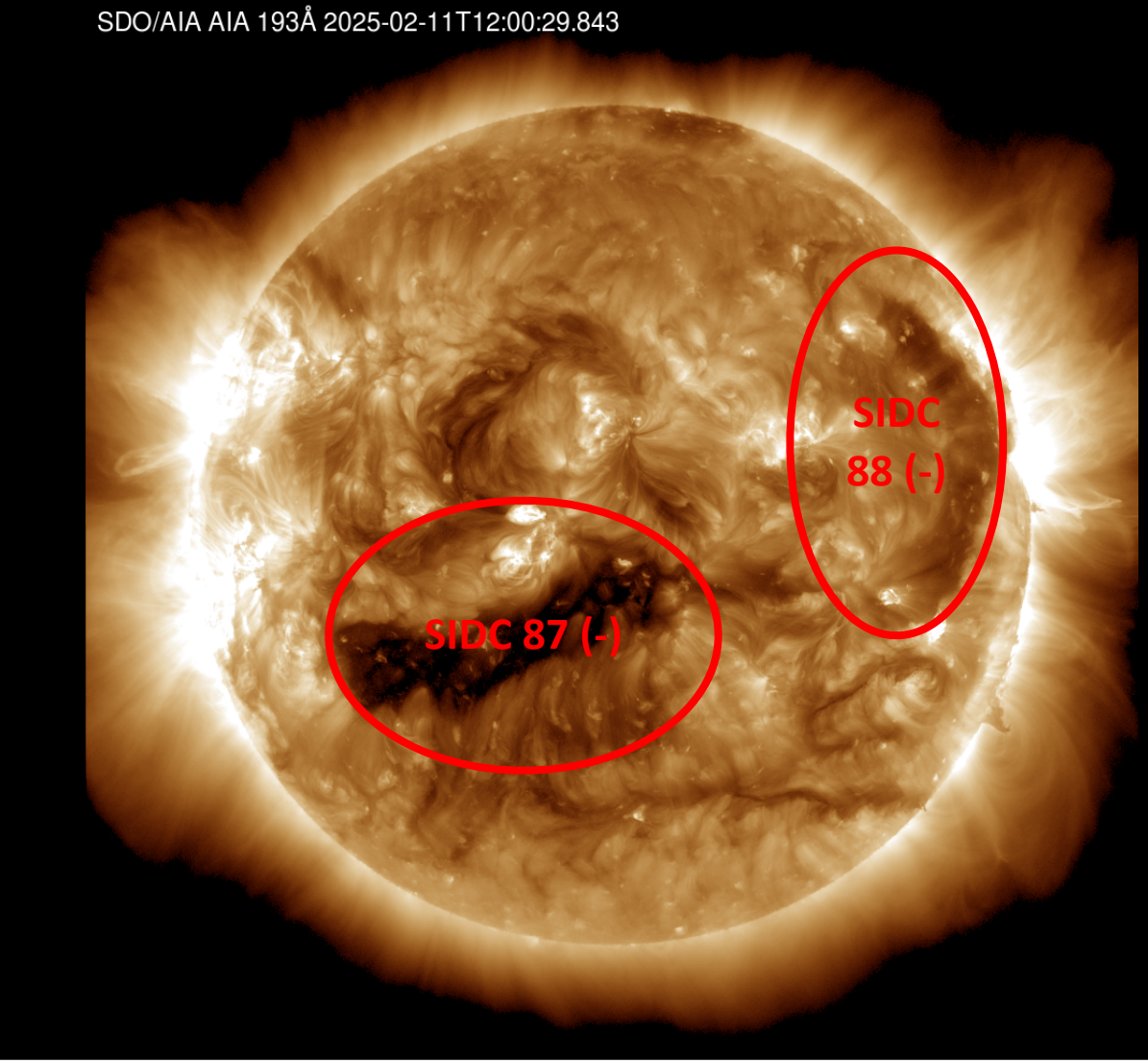


SDO/AIA 19.3 nm 2025-02-10

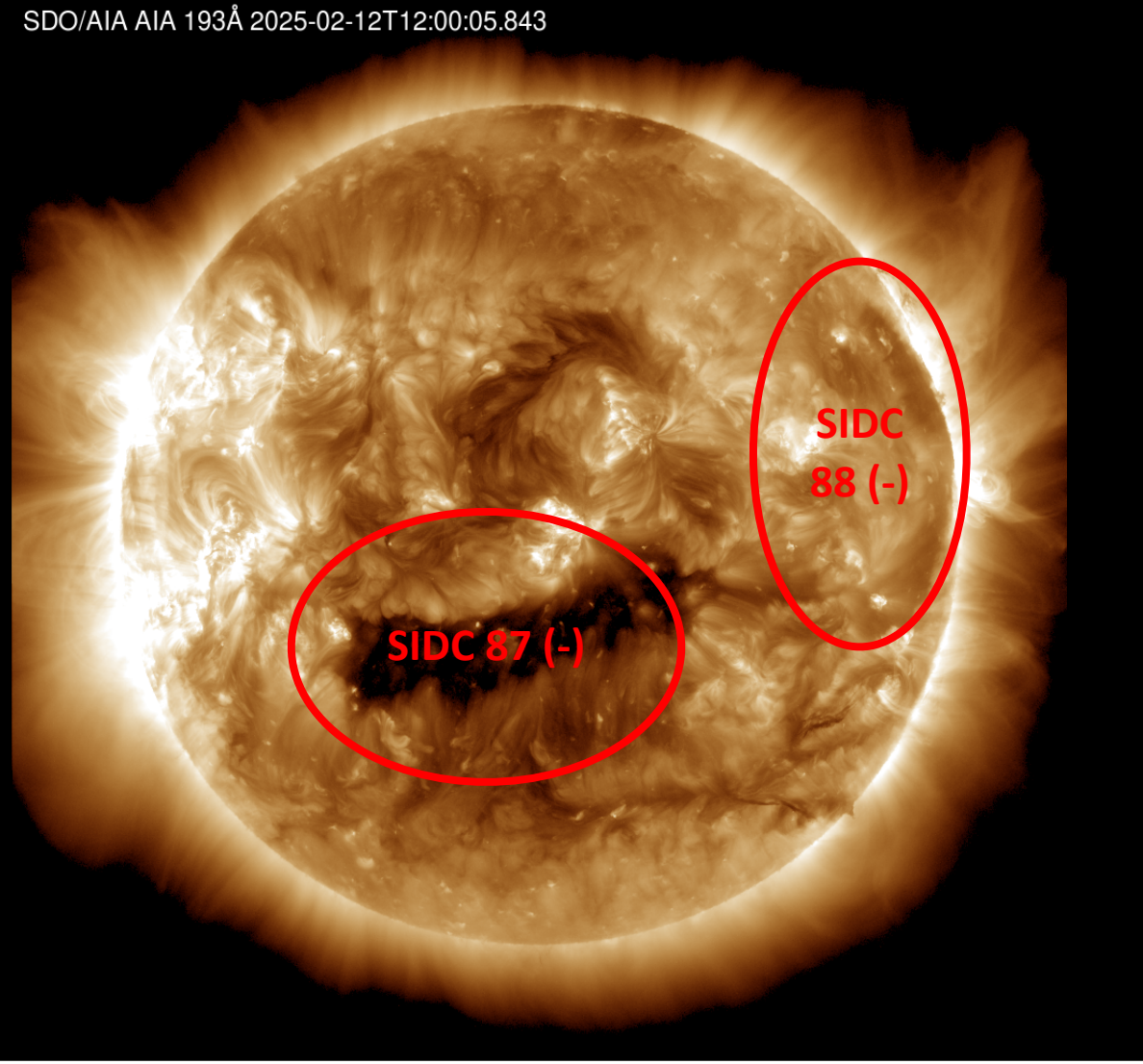


Coronal holes

SDO/AIA 19.3 nm 2025-02-11

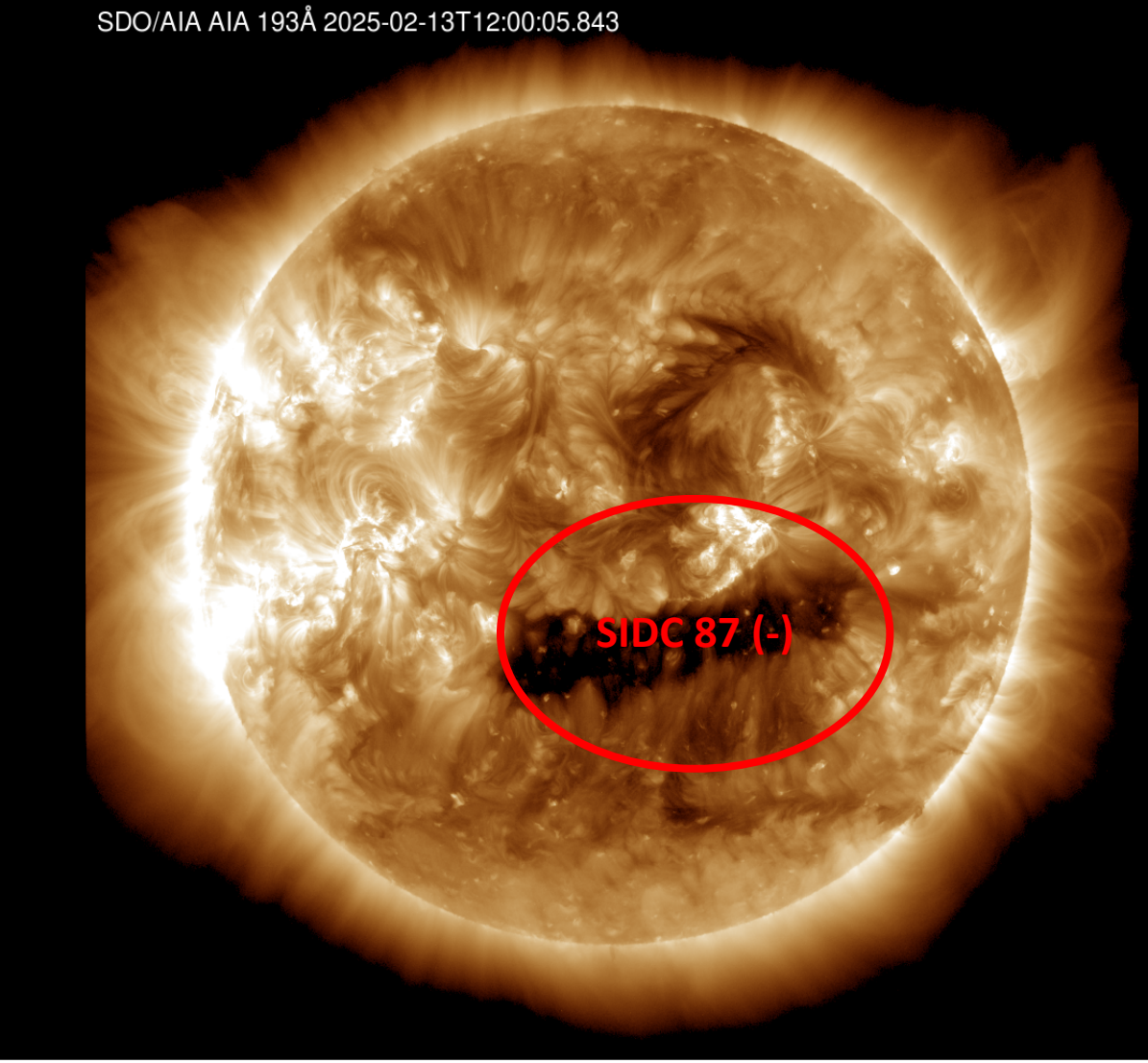


SDO/AIA 19.3 nm 2025-02-12

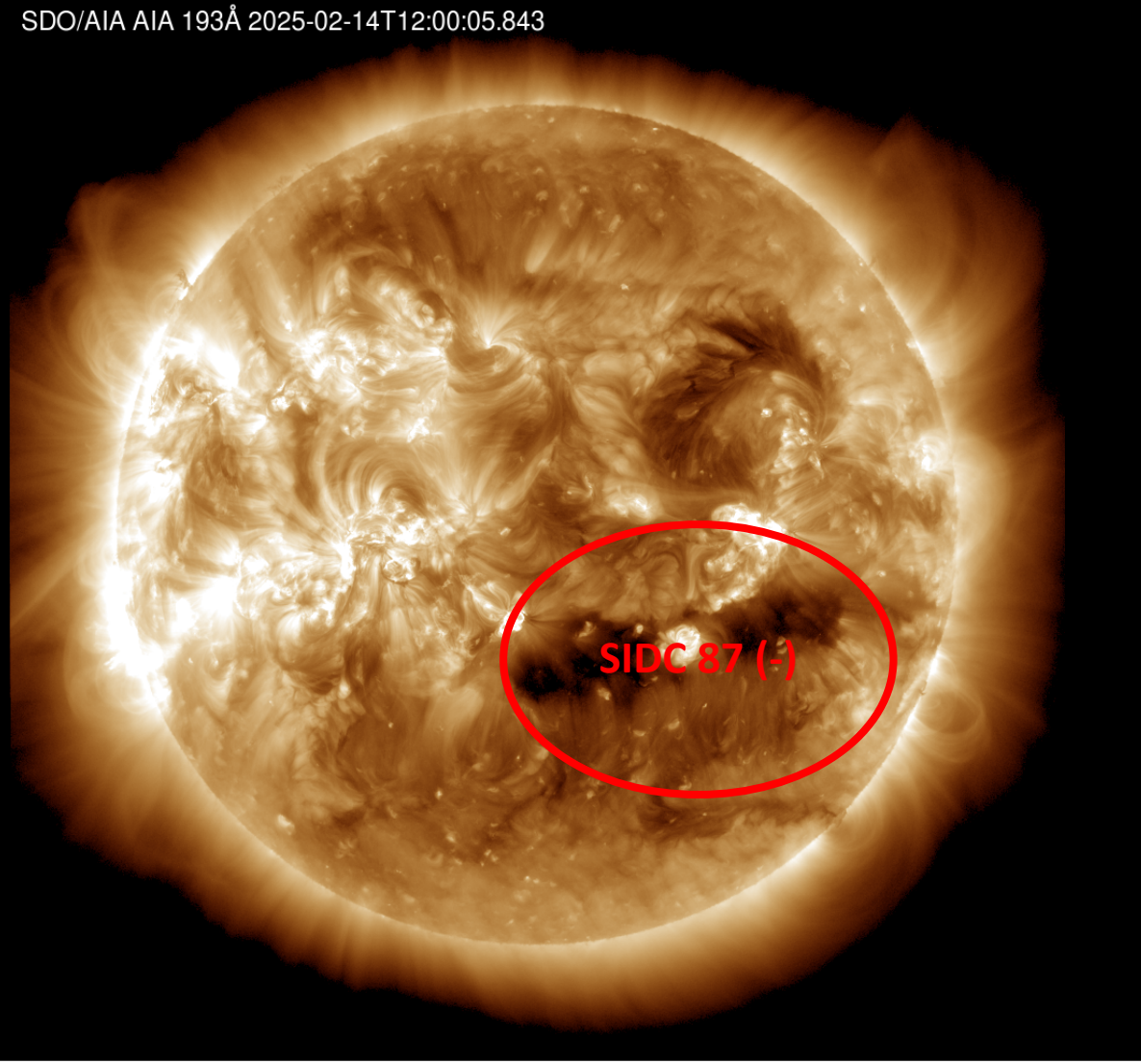


Coronal holes

SDO/AIA 19.3 nm 2025-02-13

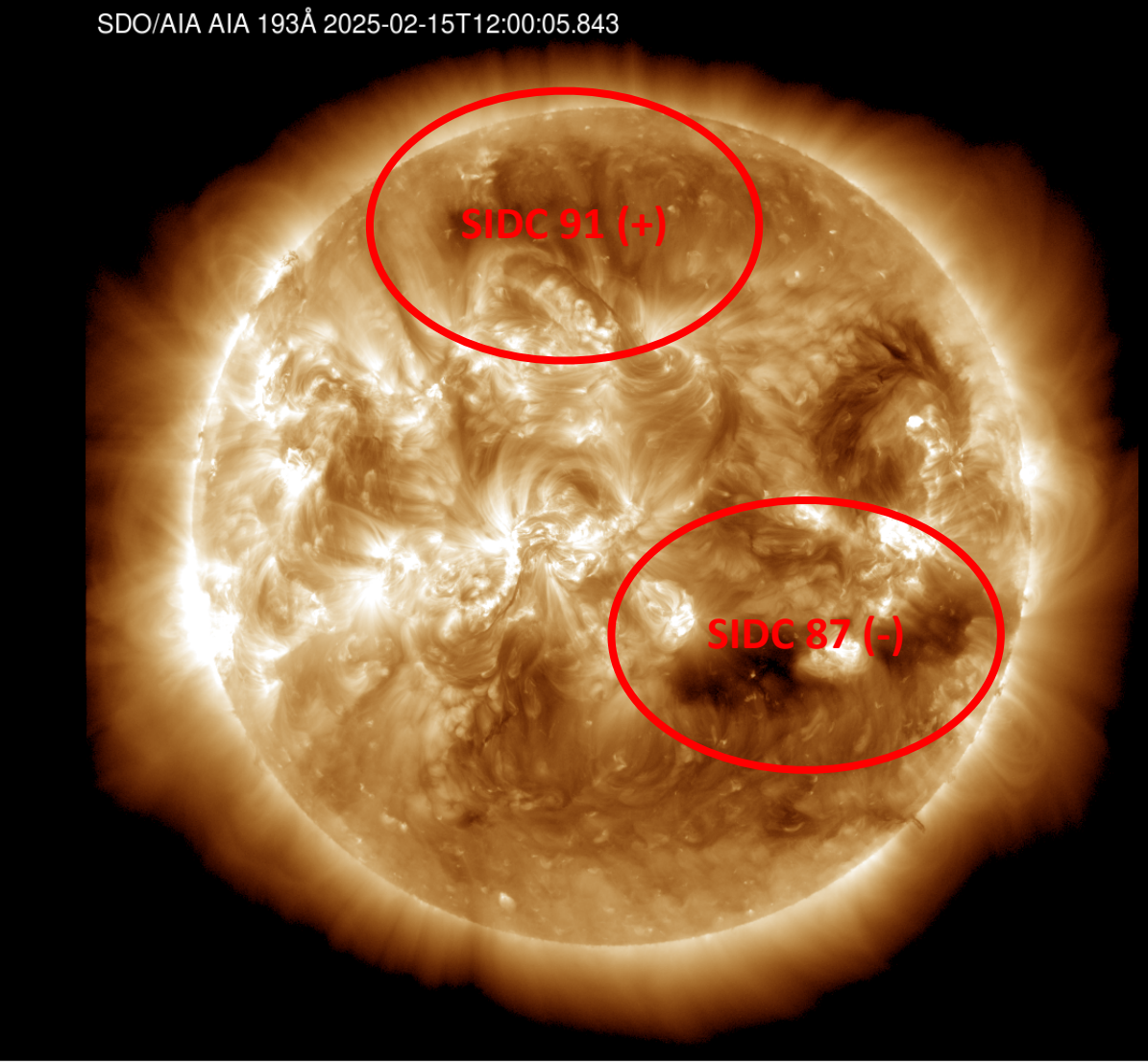


SDO/AIA 19.3 nm 2025-02-14

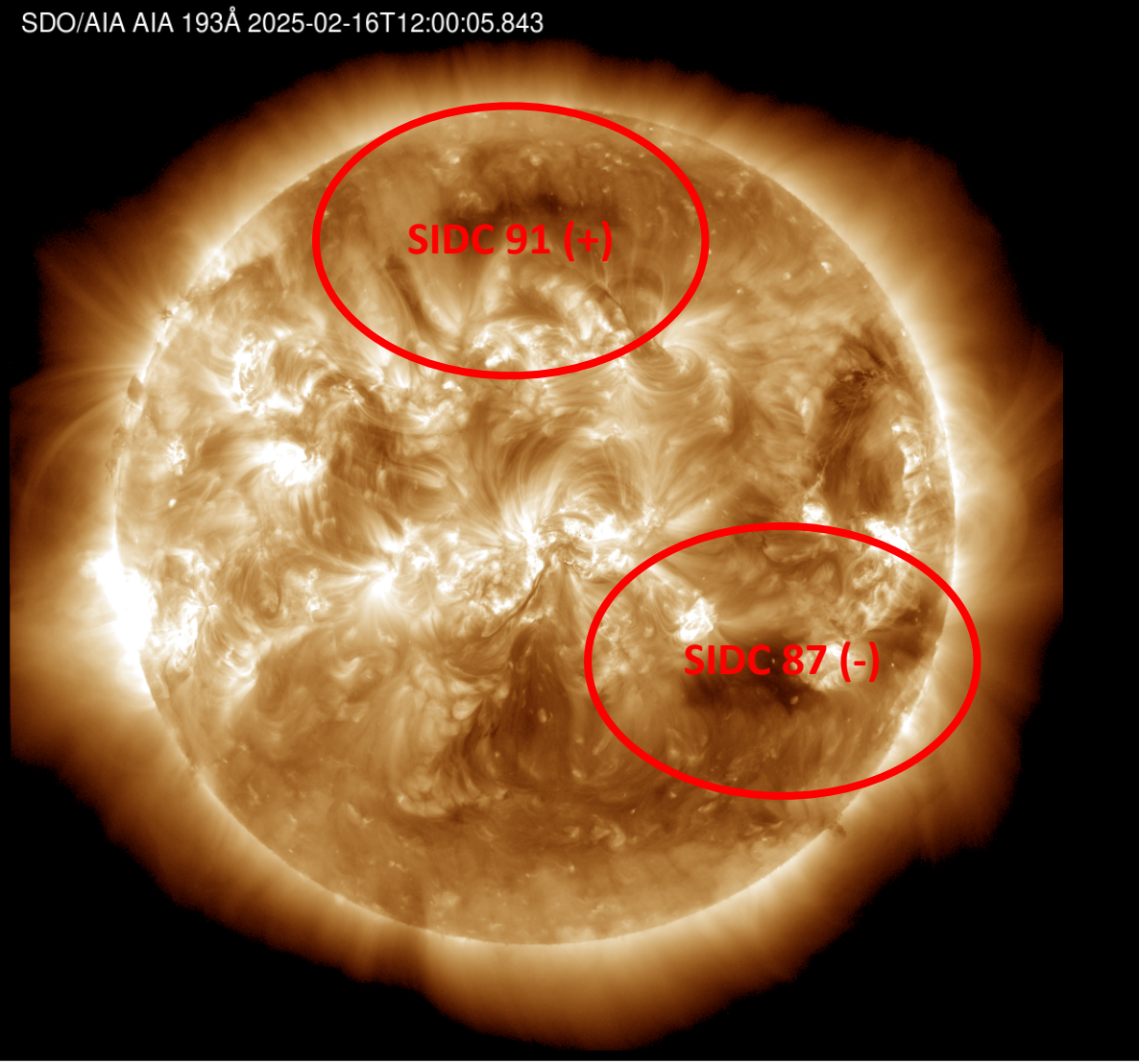


Coronal holes

SDO/AIA 19.3 nm 2025-02-15

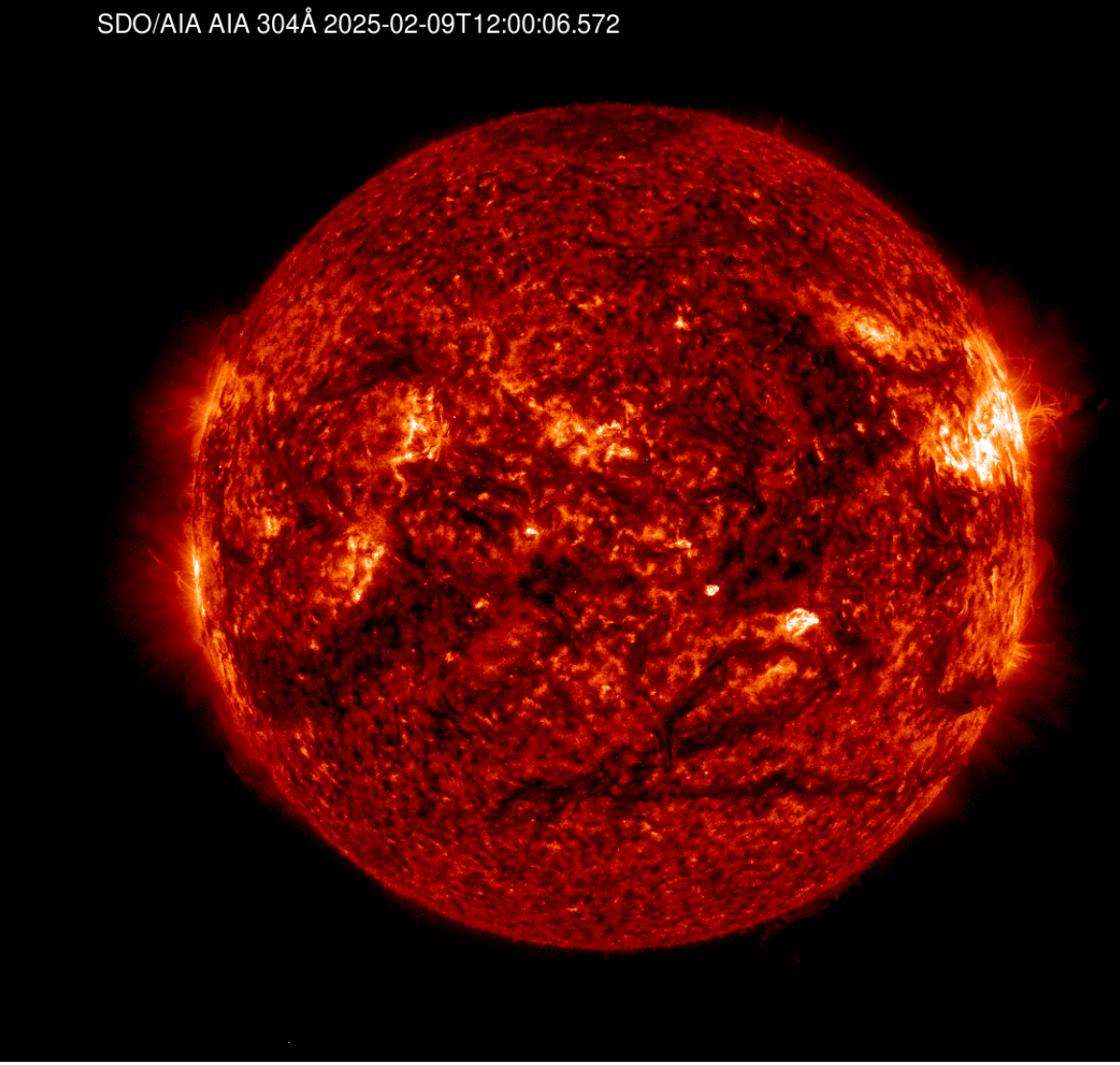


SDO/AIA 19.3 nm 2025-02-16

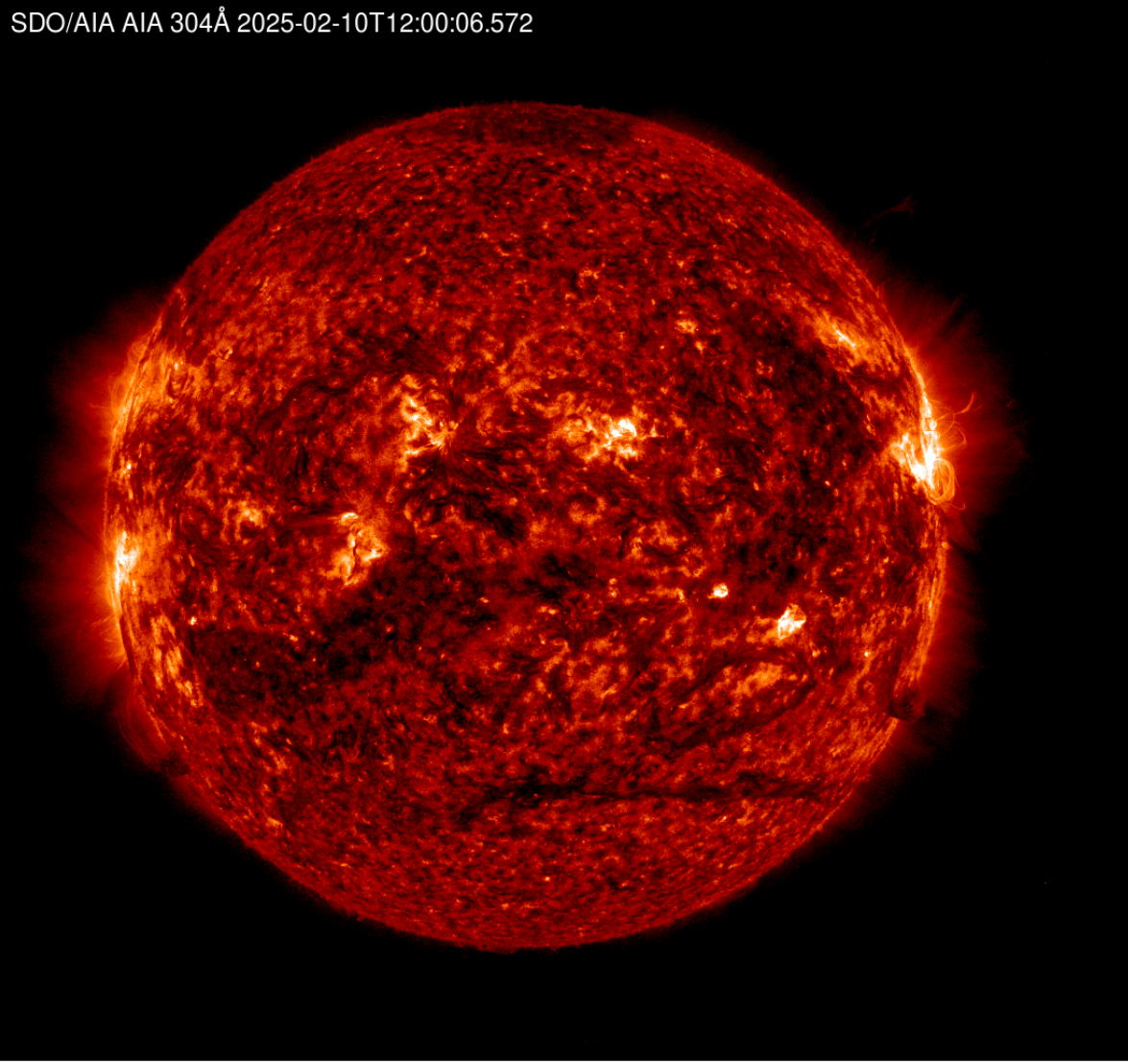


Filaments

SDO/AIA 30.4 nm 2025-02-09

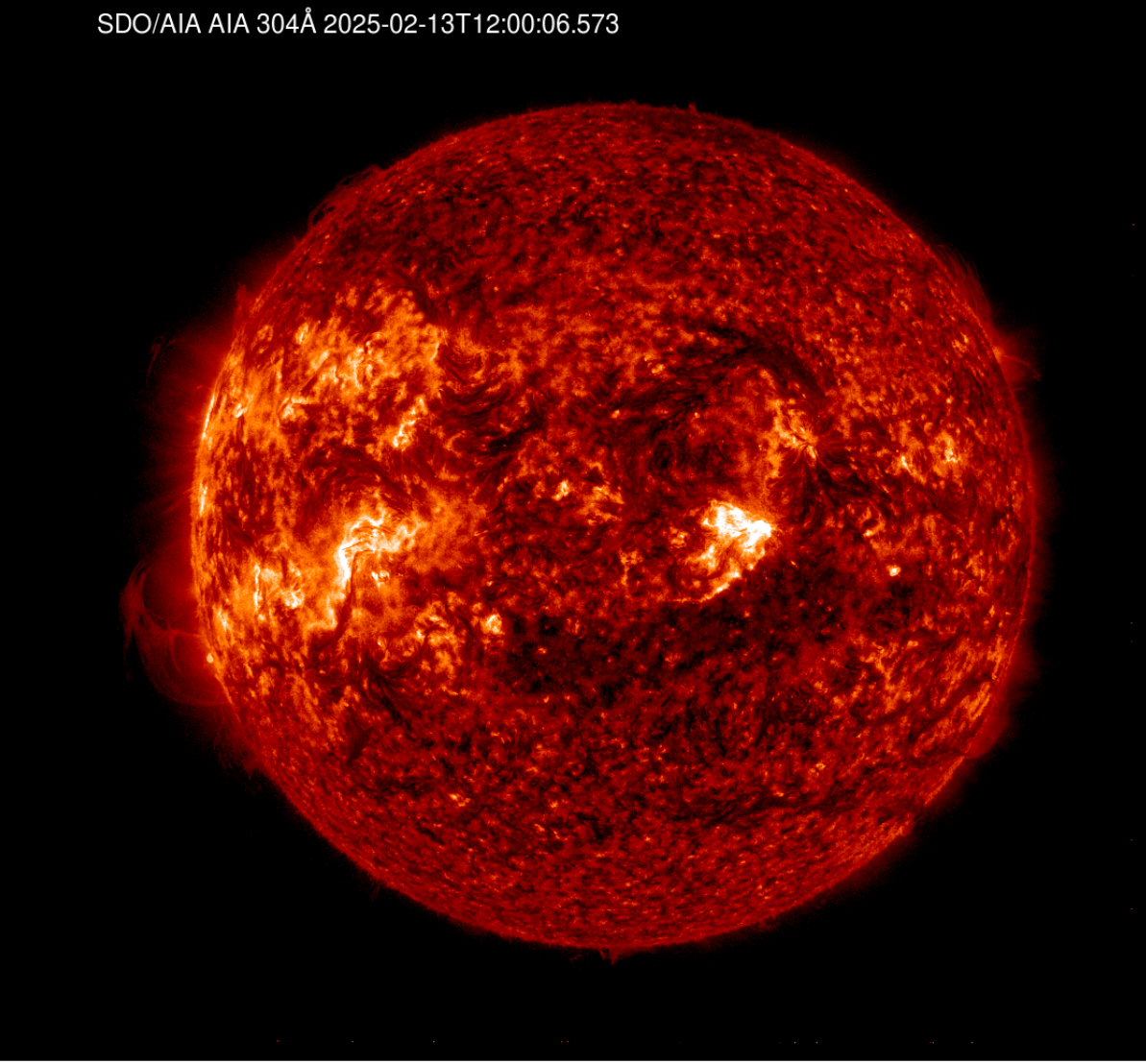


SDO/AIA 30.4 nm 2025-02-10

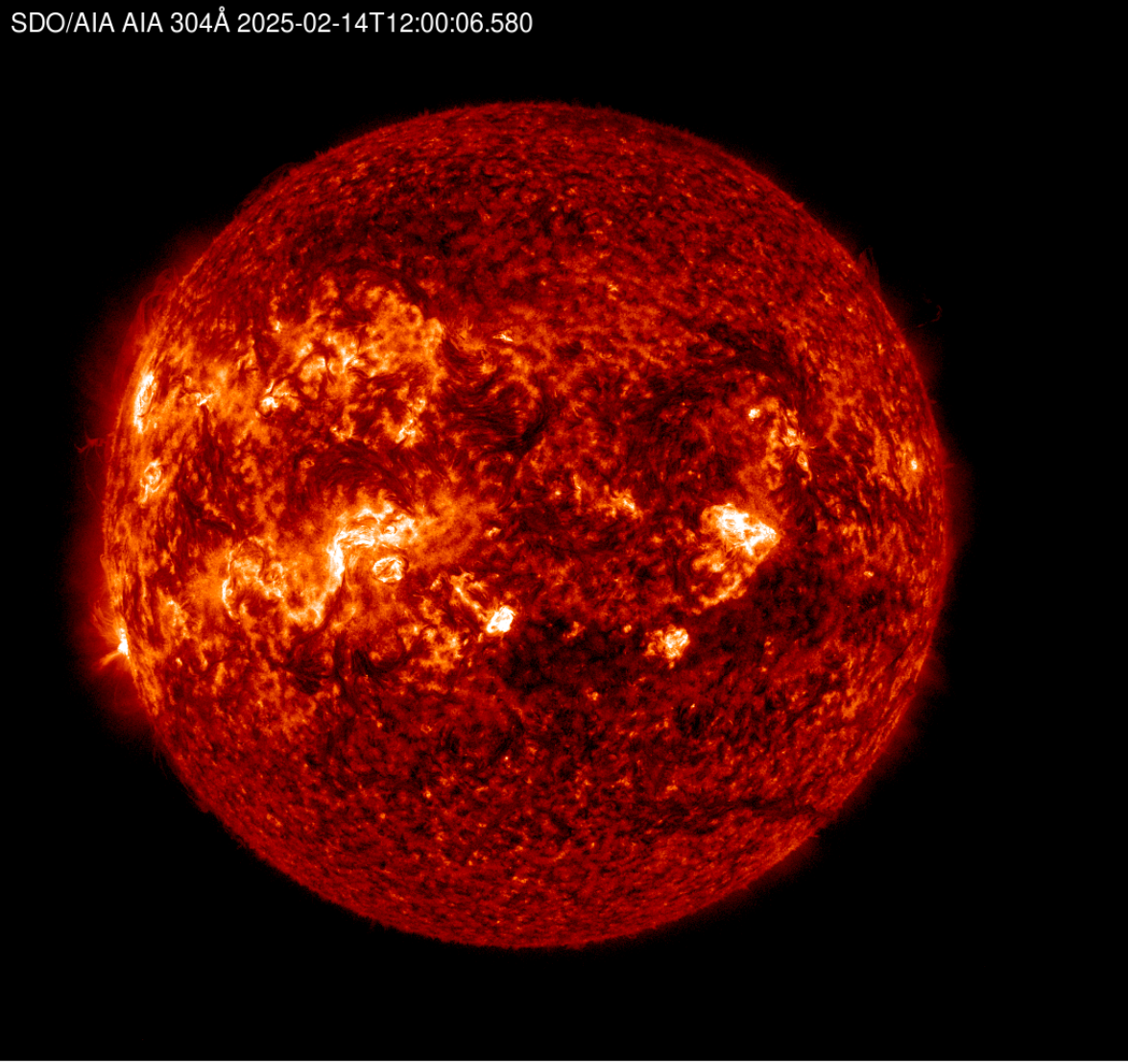


Filaments

SDO/AIA 30.4 nm 2025-02-13

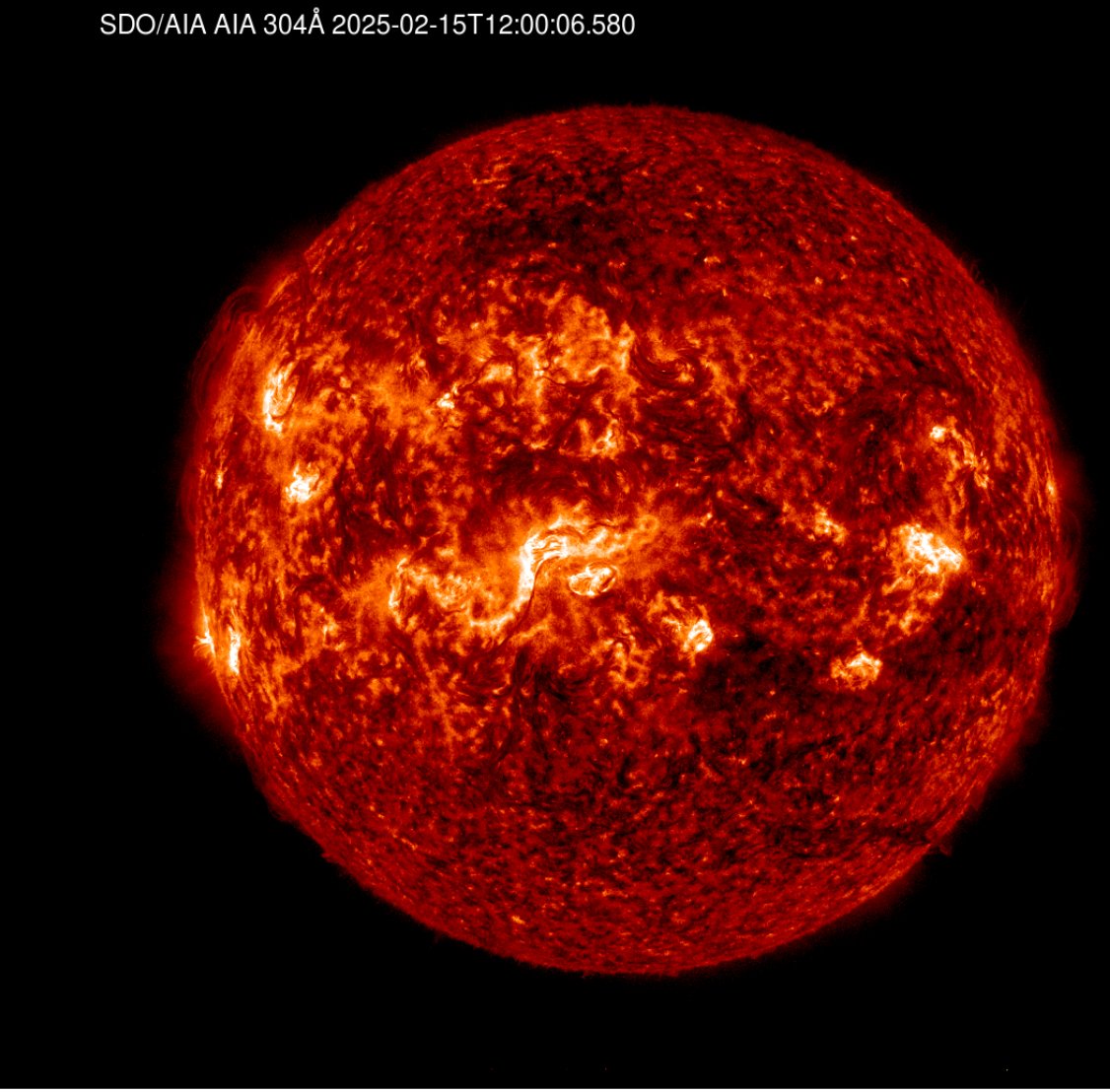


SDO/AIA 30.4 nm 2025-02-14

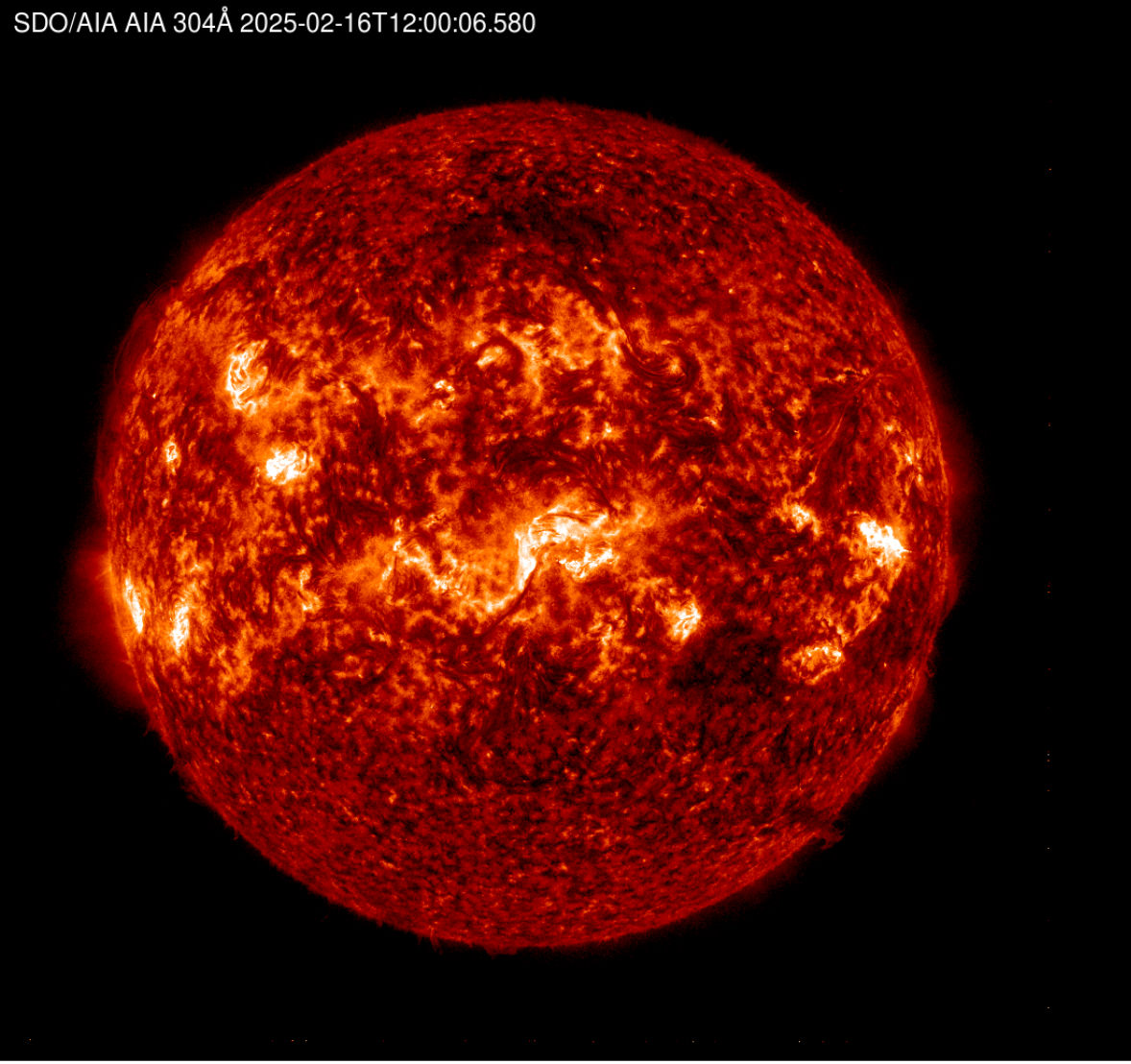


Filaments

SDO/AIA 30.4 nm 2025-02-15

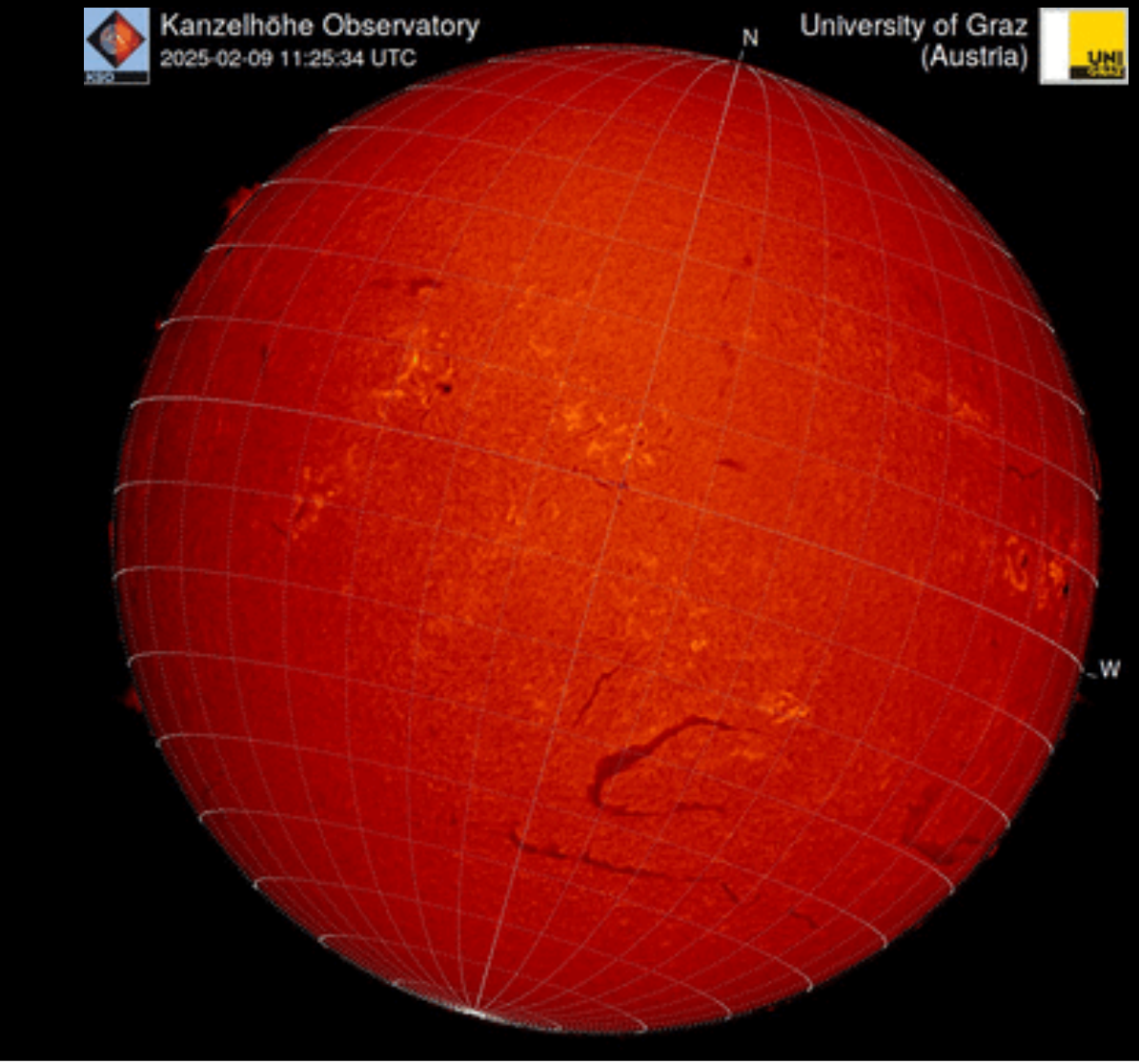


SDO/AIA 30.4 nm 2025-02-16

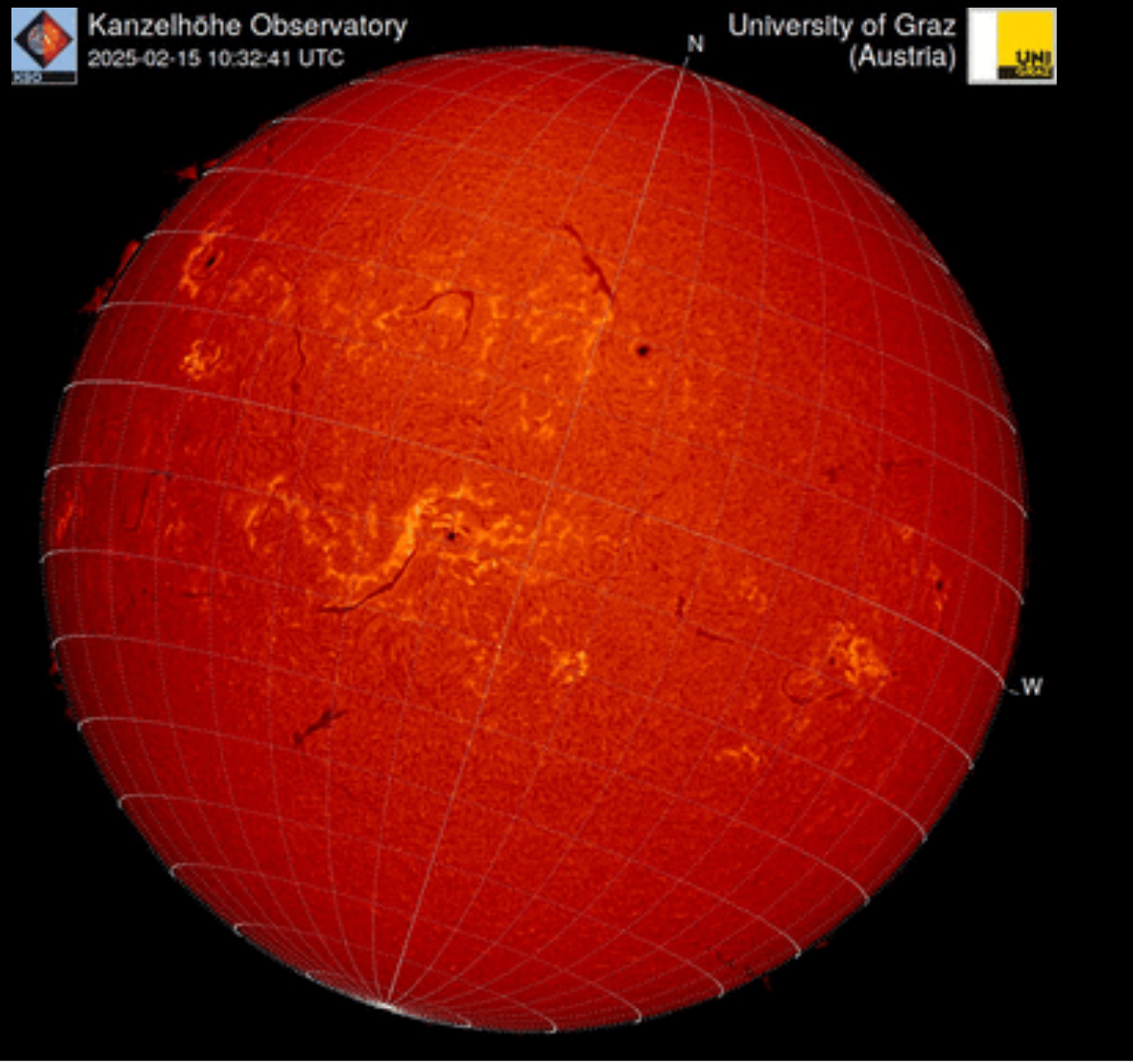


Filaments & Filament eruptions

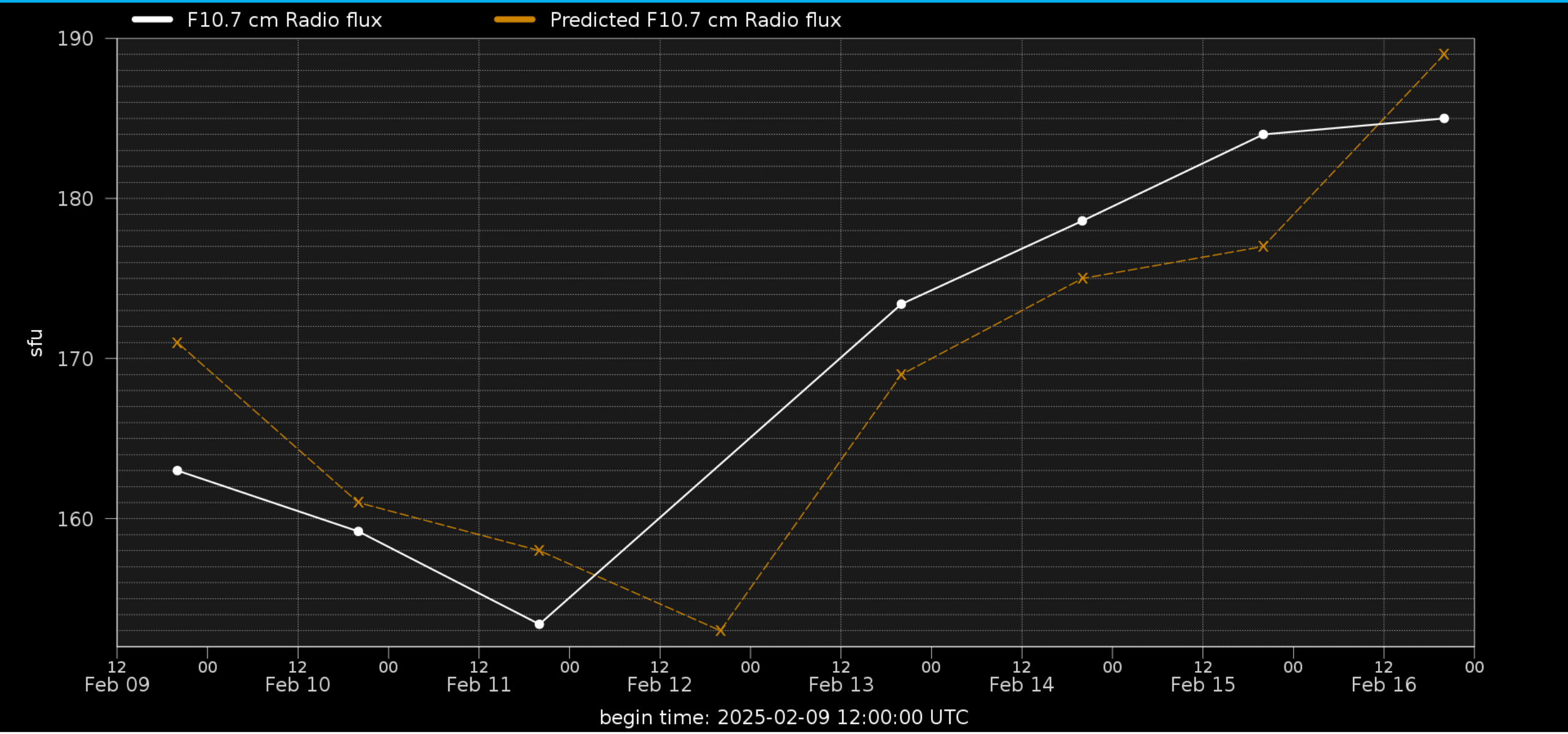
H-alpha 2025-02-09



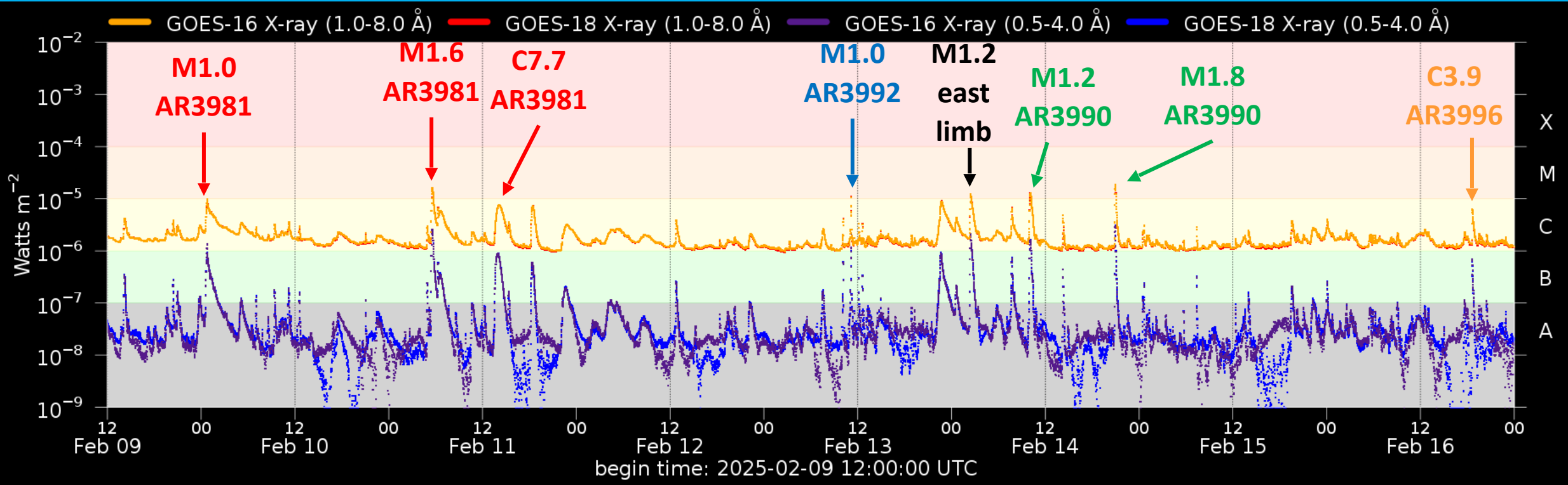
H-alpha 2025-02-16



Solar F10.7cm radio flux



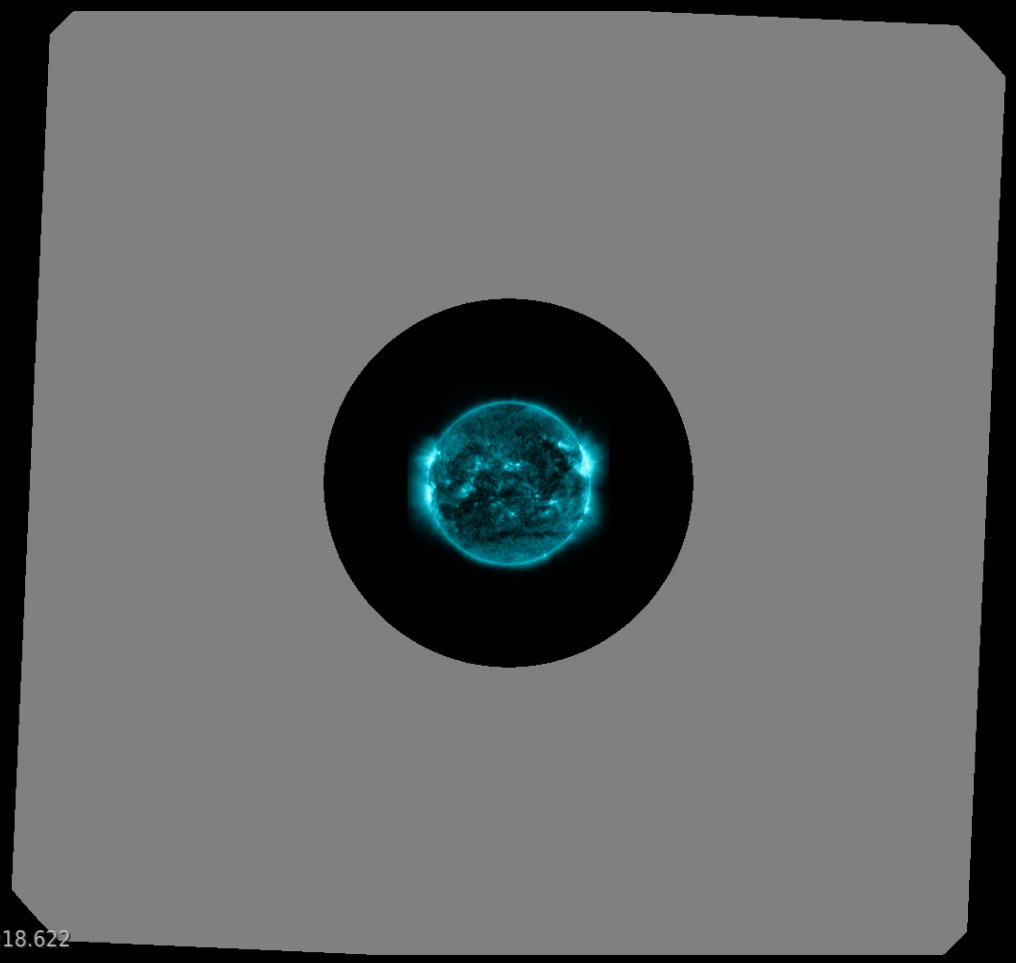
Flaring activity



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

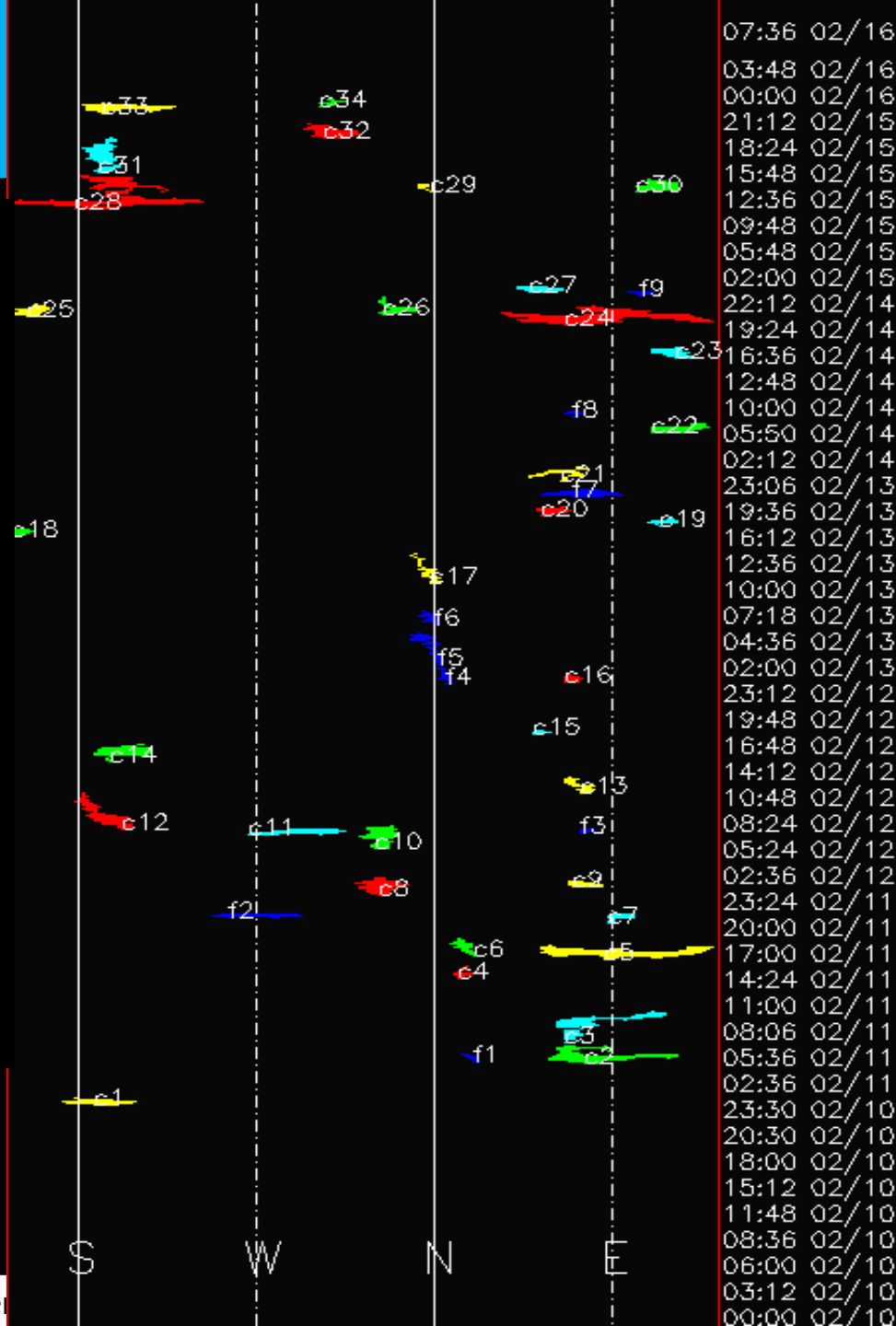
Issue date	2025-02-09	2025-02-10	2025-02-11	2025-02-12	2025-02-13	2025-02-14	2025-02-15	2025-02-16
Probability (%)	99|70|15	96|48|05	96|47|05	97|55|04	98|56|04	99|68|10	99|77|06	99|72|14
Observed (#)	06|01|00	05|01|00	02|00|00	04|01|00	07|02|00	06|01|00	06|00|00	03|00|00

Coronal Mass Ejections

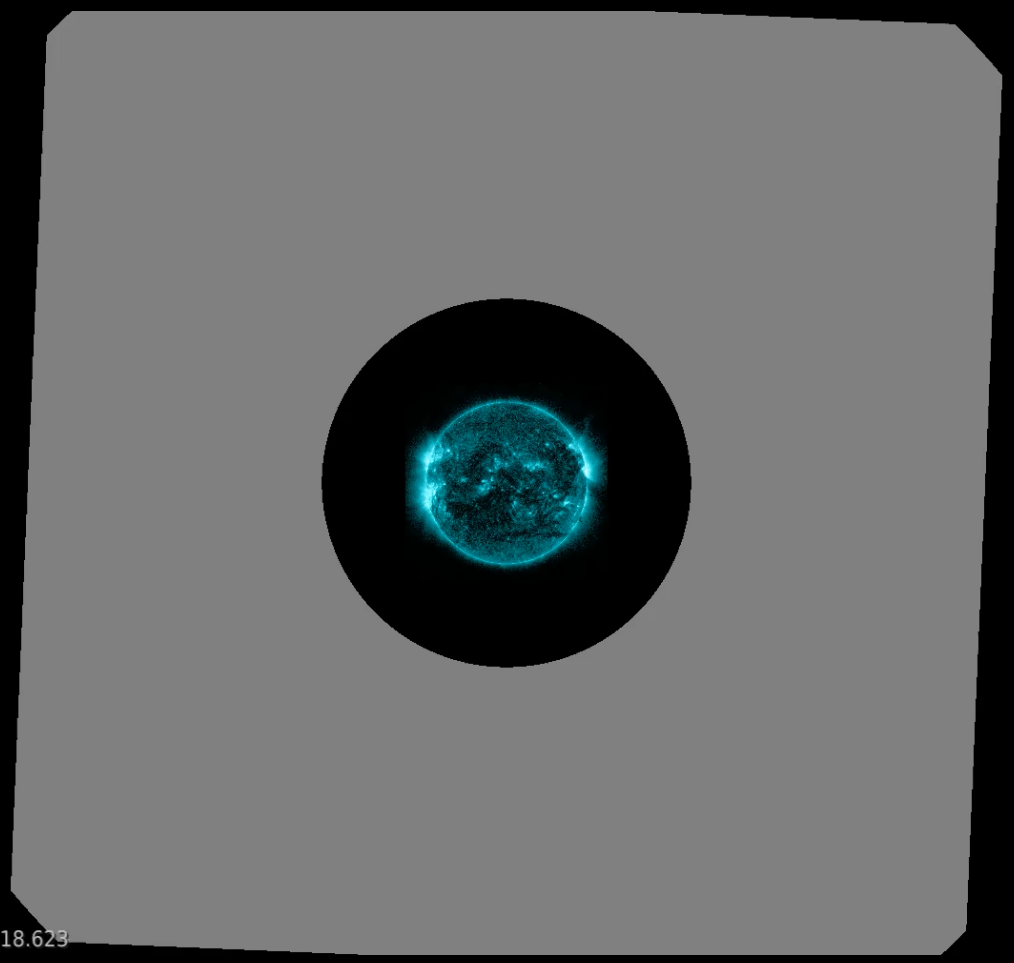


East: Prominence eruption

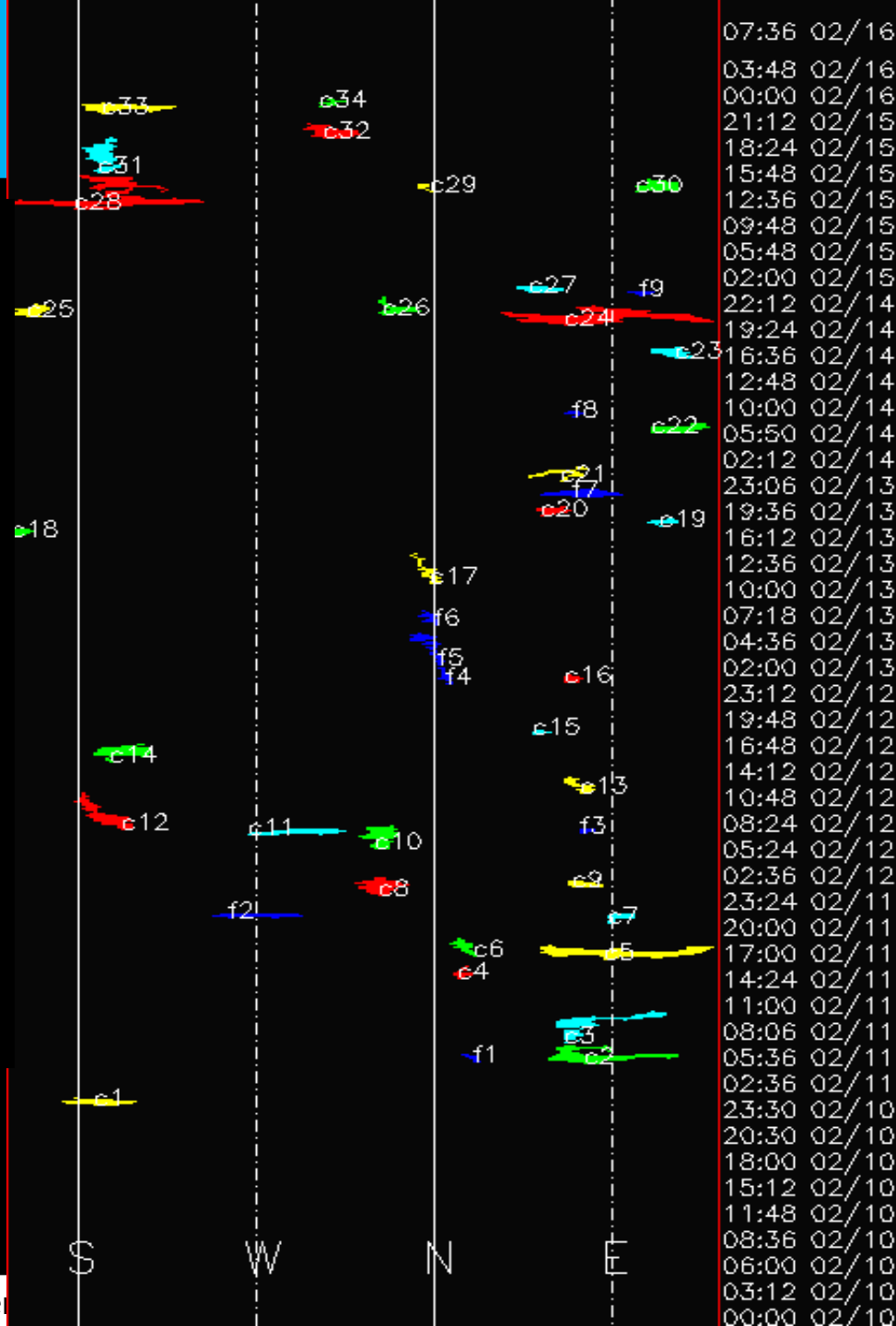
West: M1.0 flare + filament eruption (near AR3981)



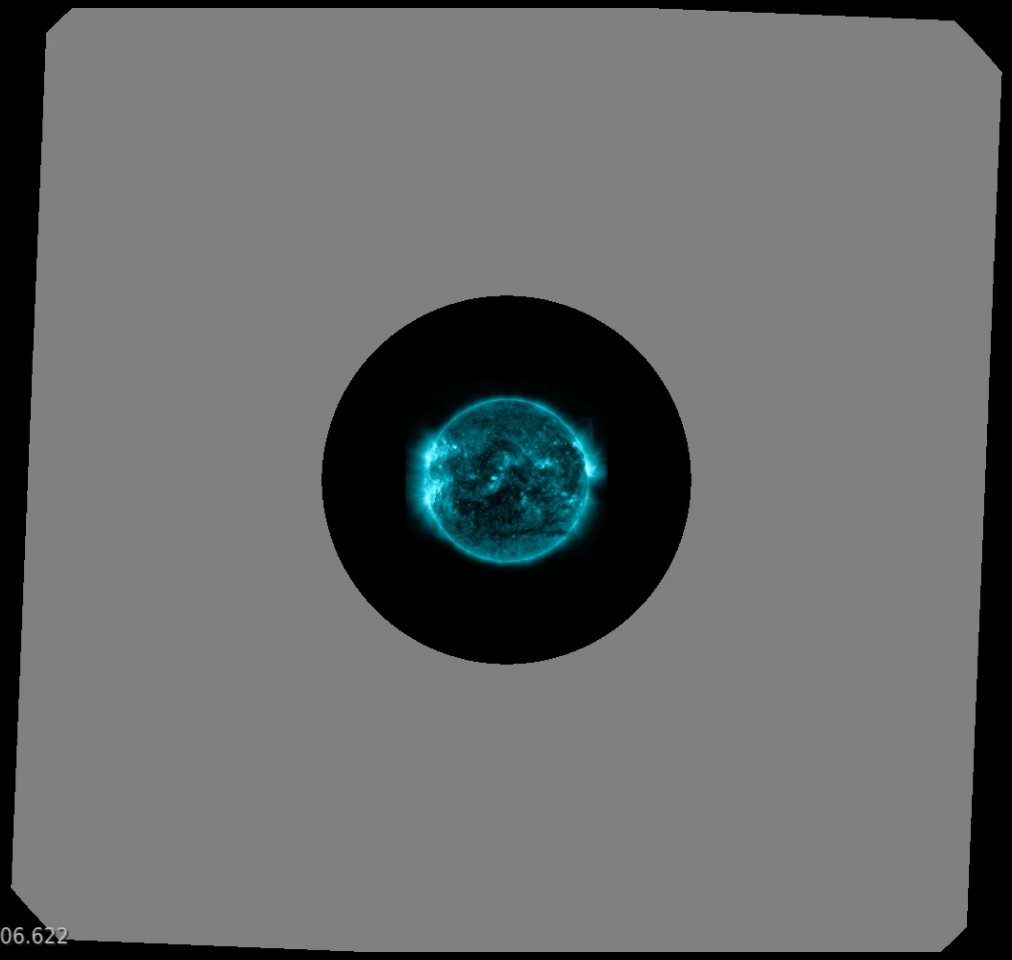
Coronal Mass Ejections



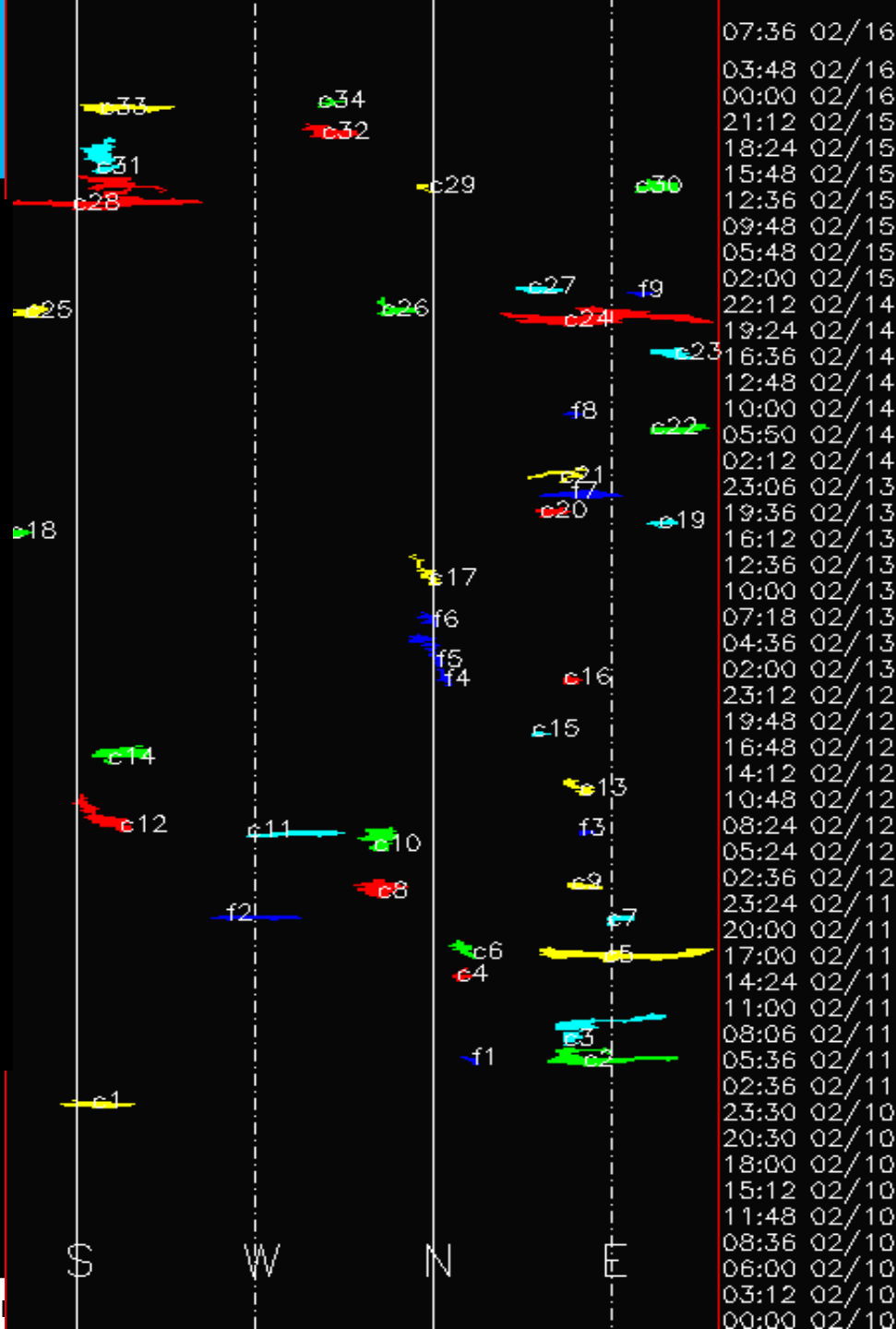
East: Filament eruption
West: M1.6 flare (AR3981)



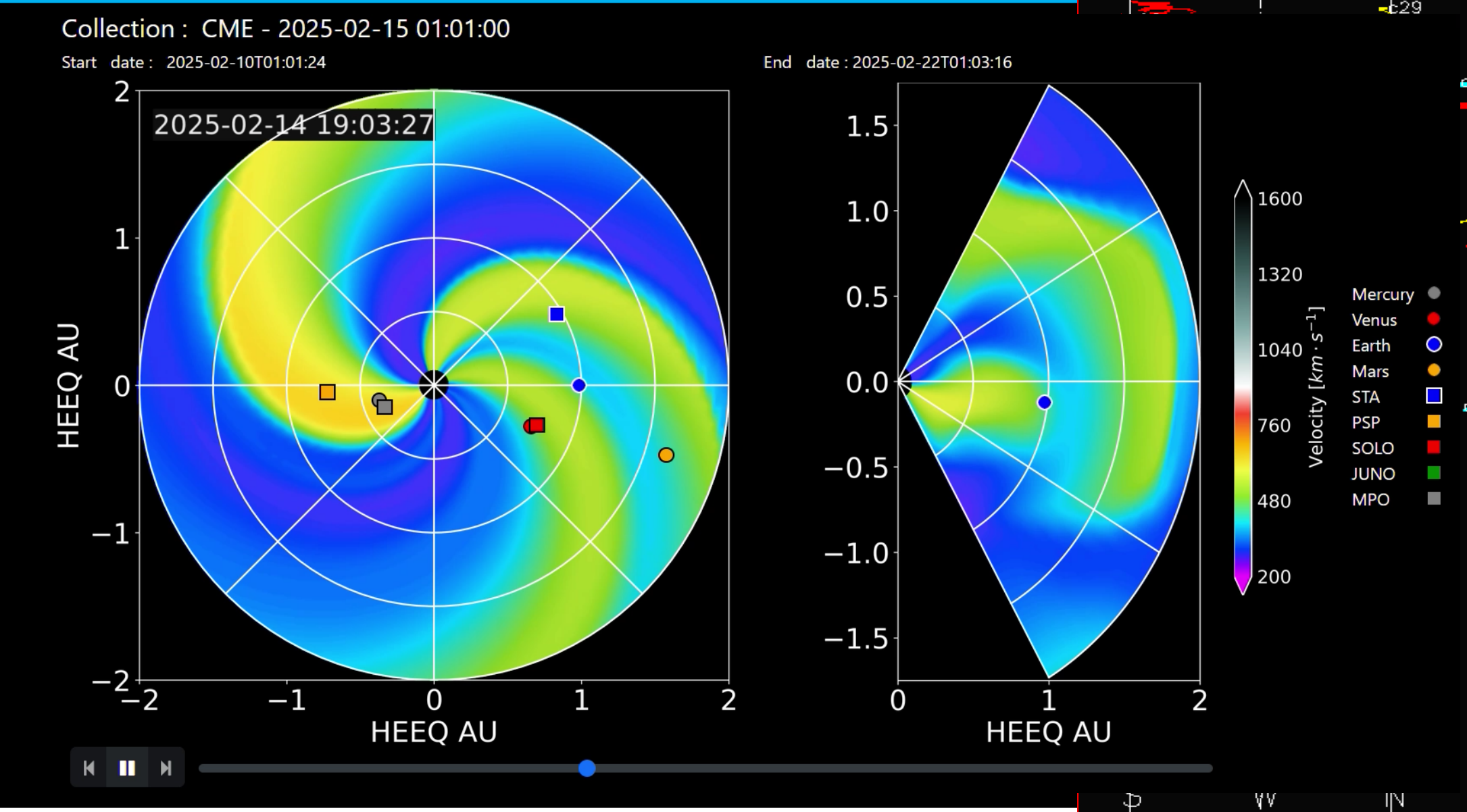
Coronal Mass Ejections

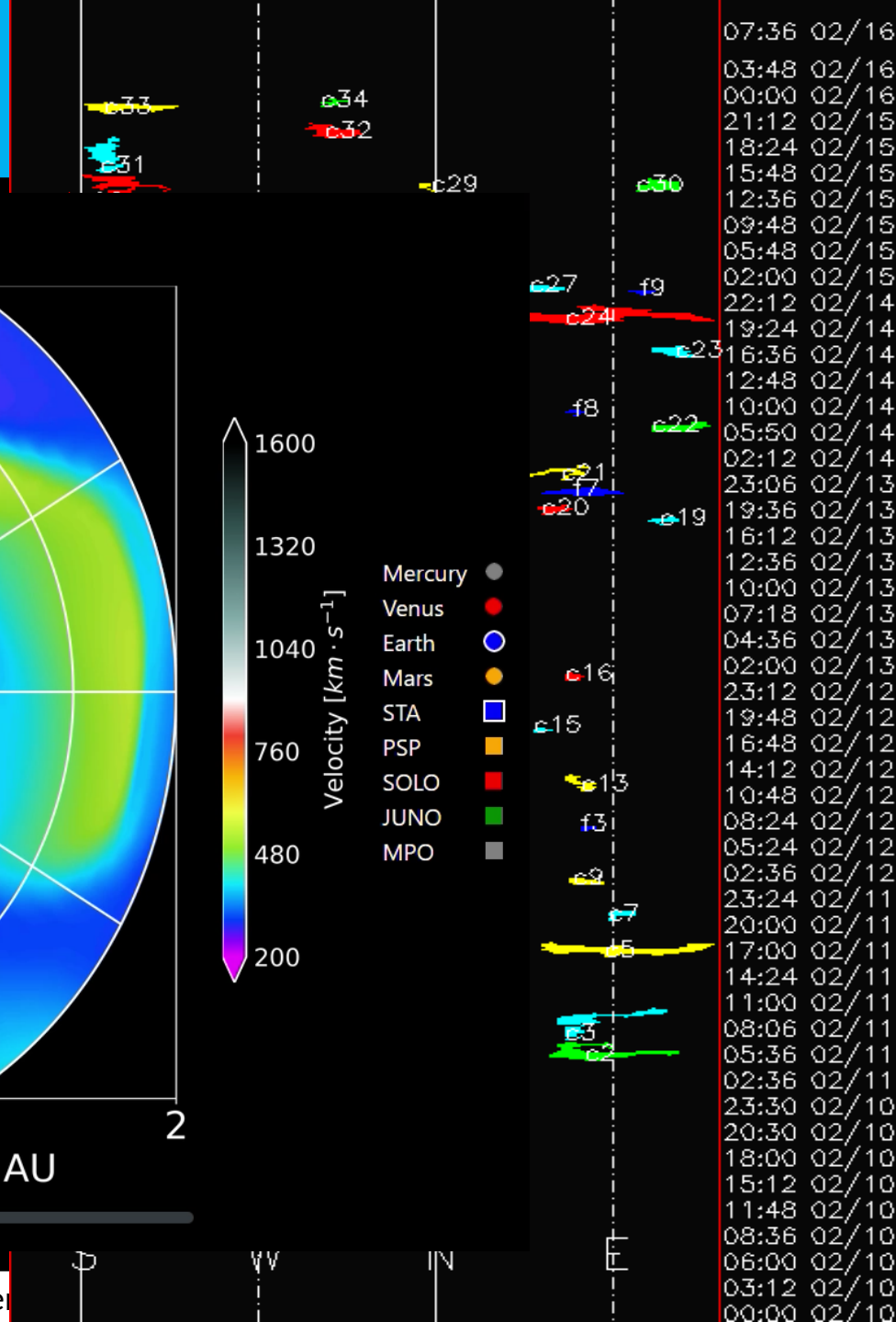


East: C7.2 flare + filament eruption (near AR 3991)
West: (2 CMEs) eruptions near AR3981

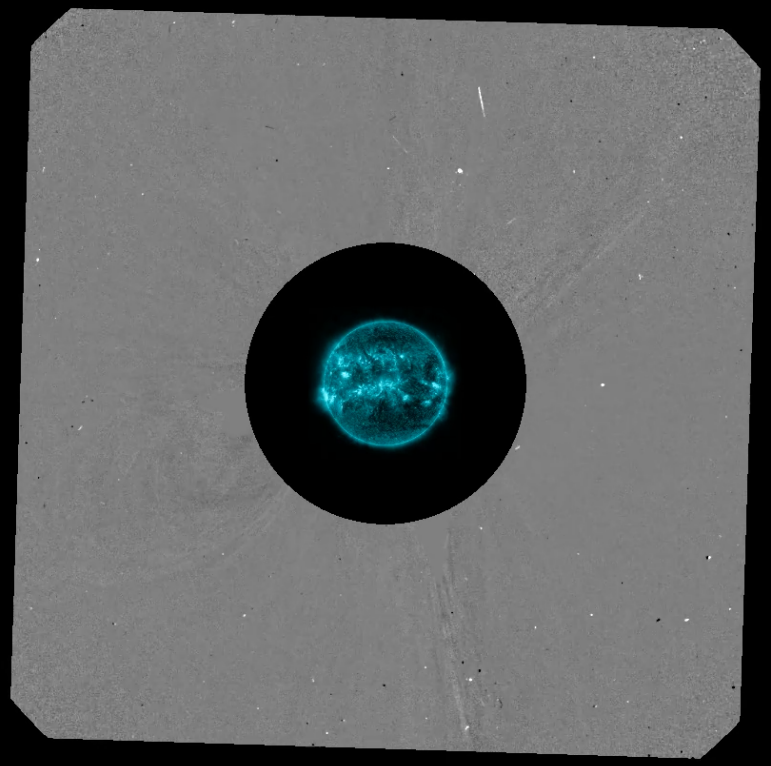


Coronal Mass Ejections



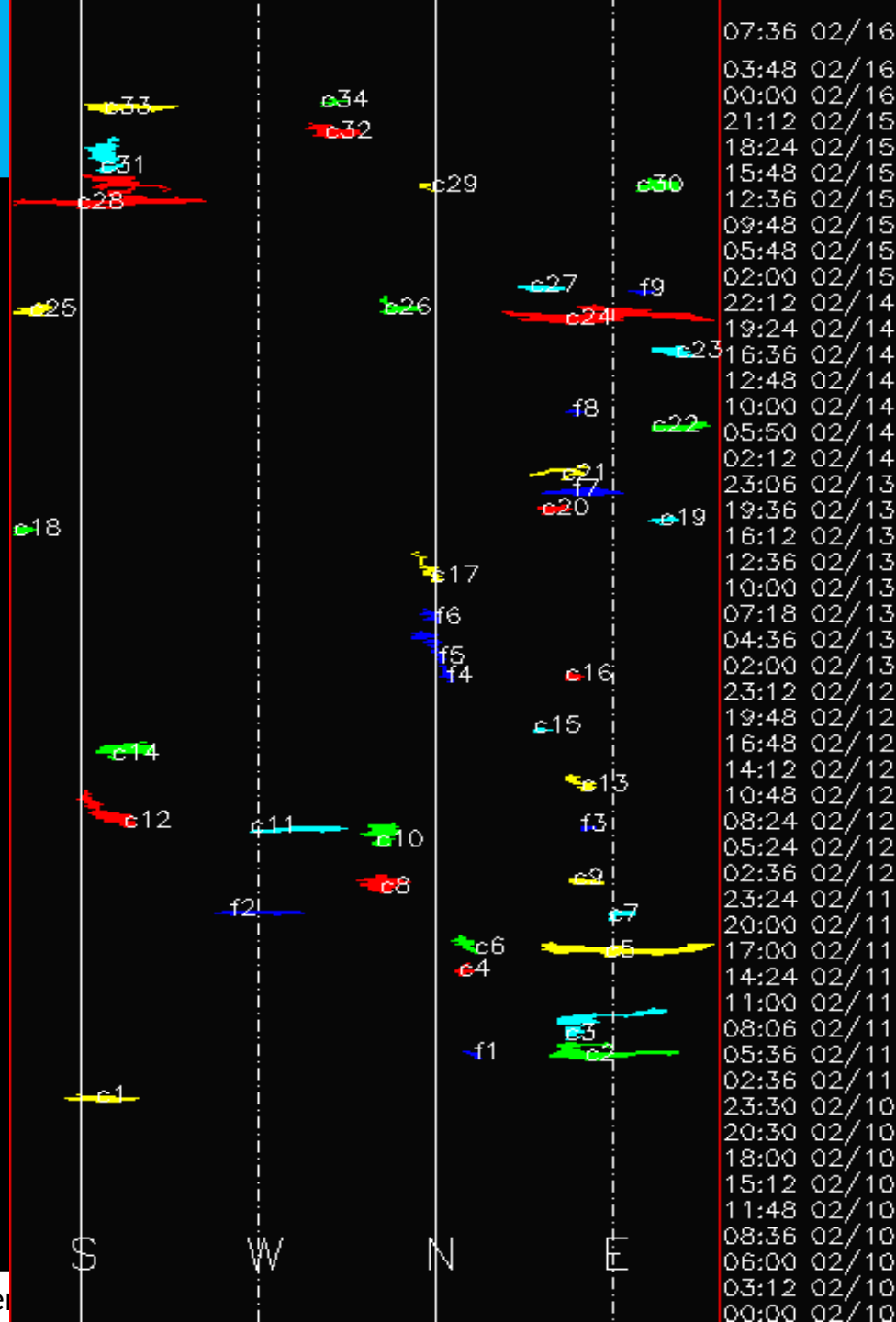


Coronal Mass Ejections



2025-02-16T05:48:07.684

NW: Low probability for a glancing blow early on 20/2



Solar Wind and

Geomagnetic Activity

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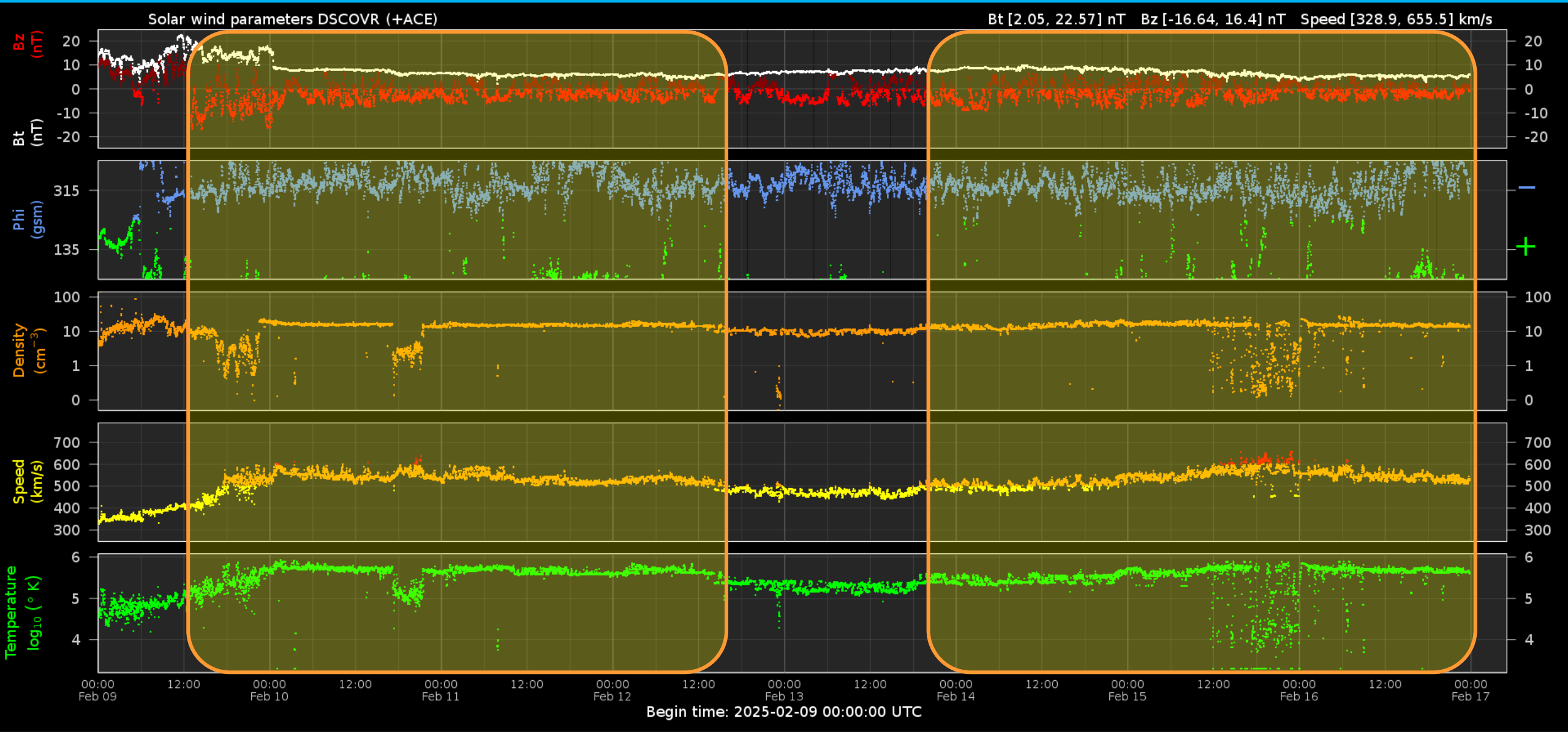
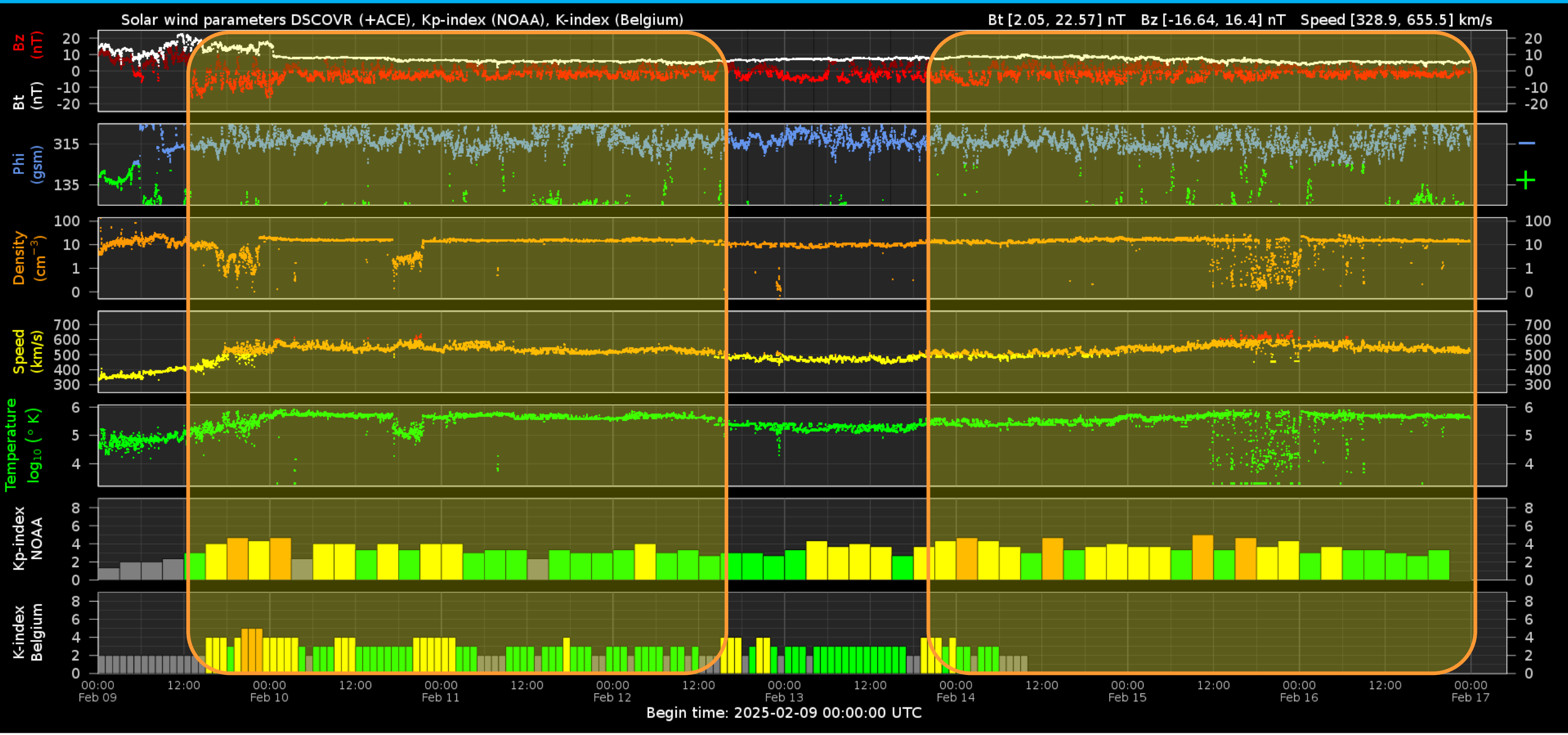
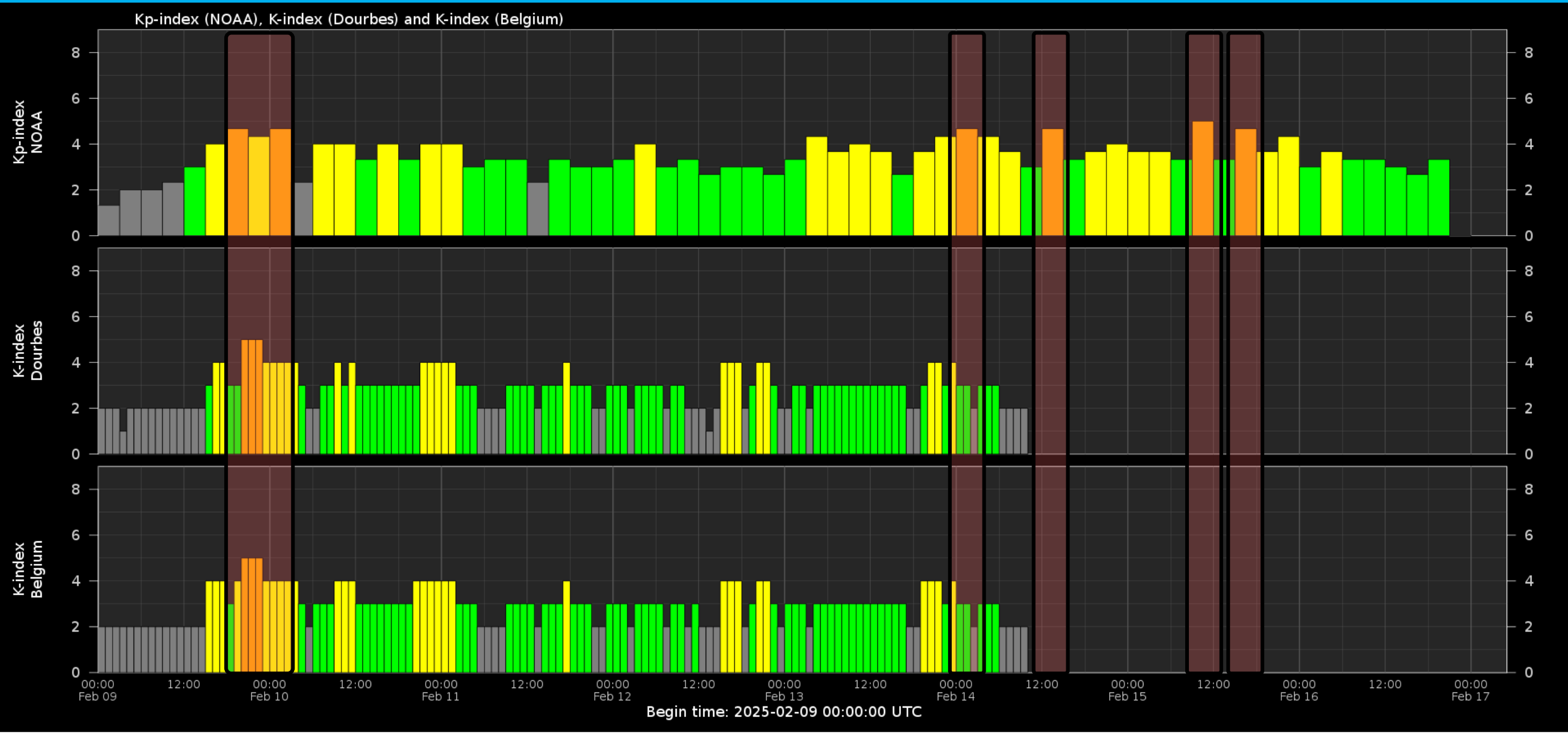
Solar wind parameters



Solar wind parameters & K-indices



Geomagnetic activity (K-indexes)



Energetic Particles

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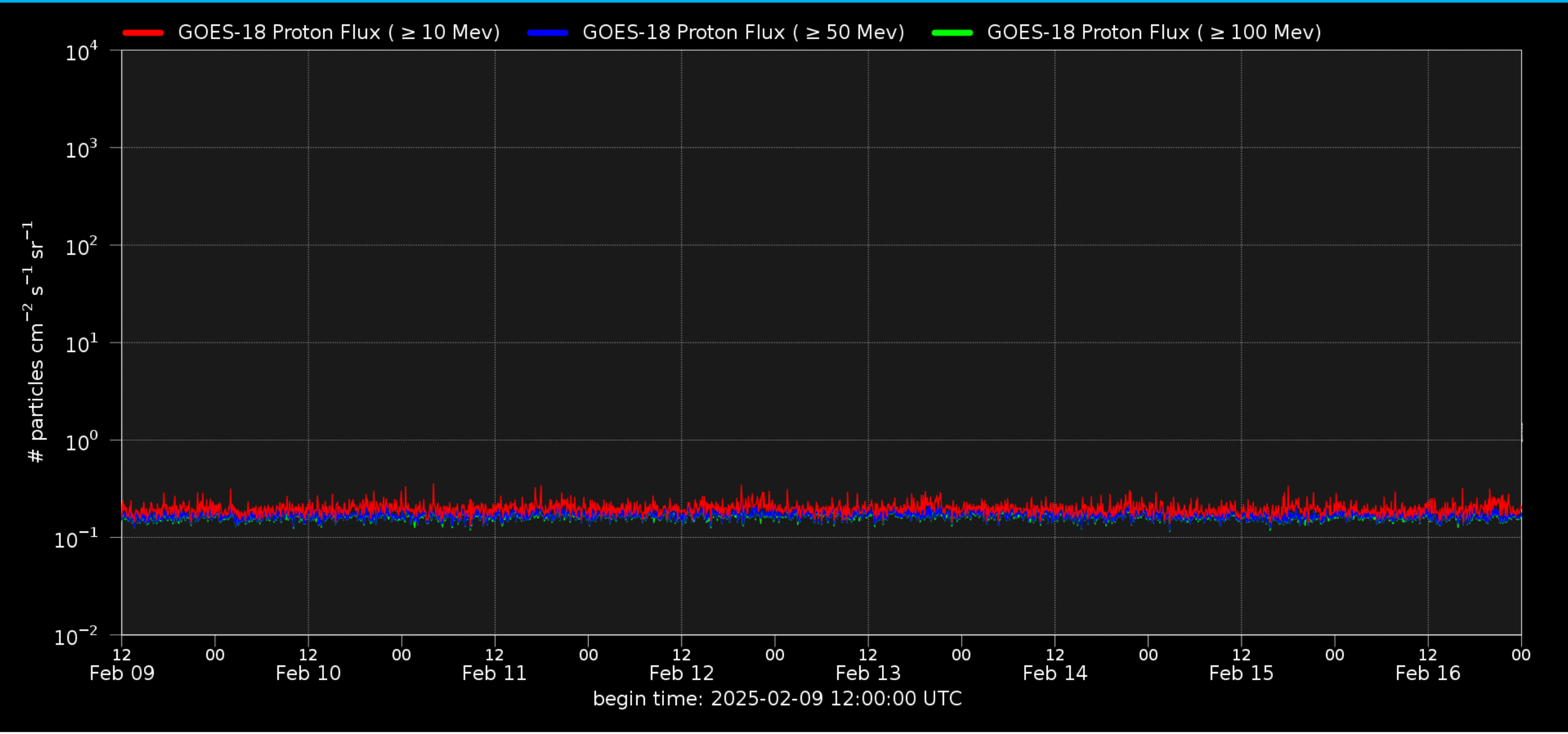
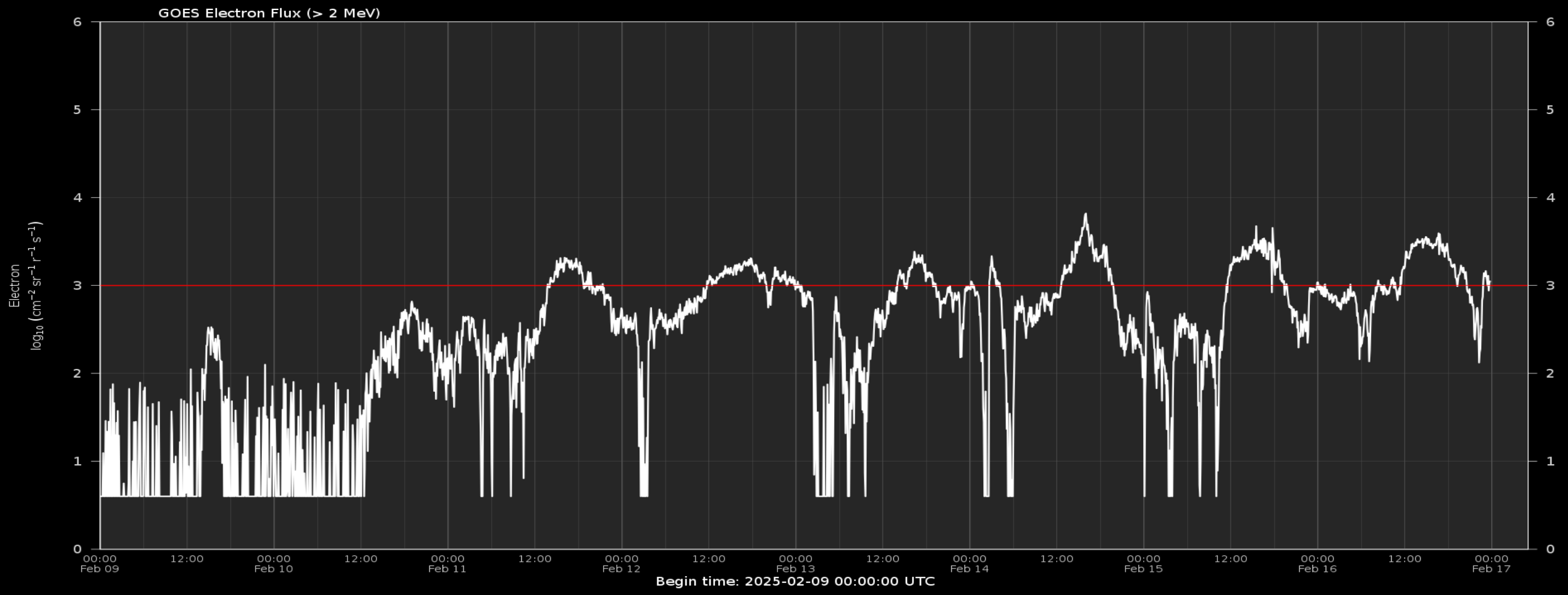
Solar proton flux



Electron flux at GEO

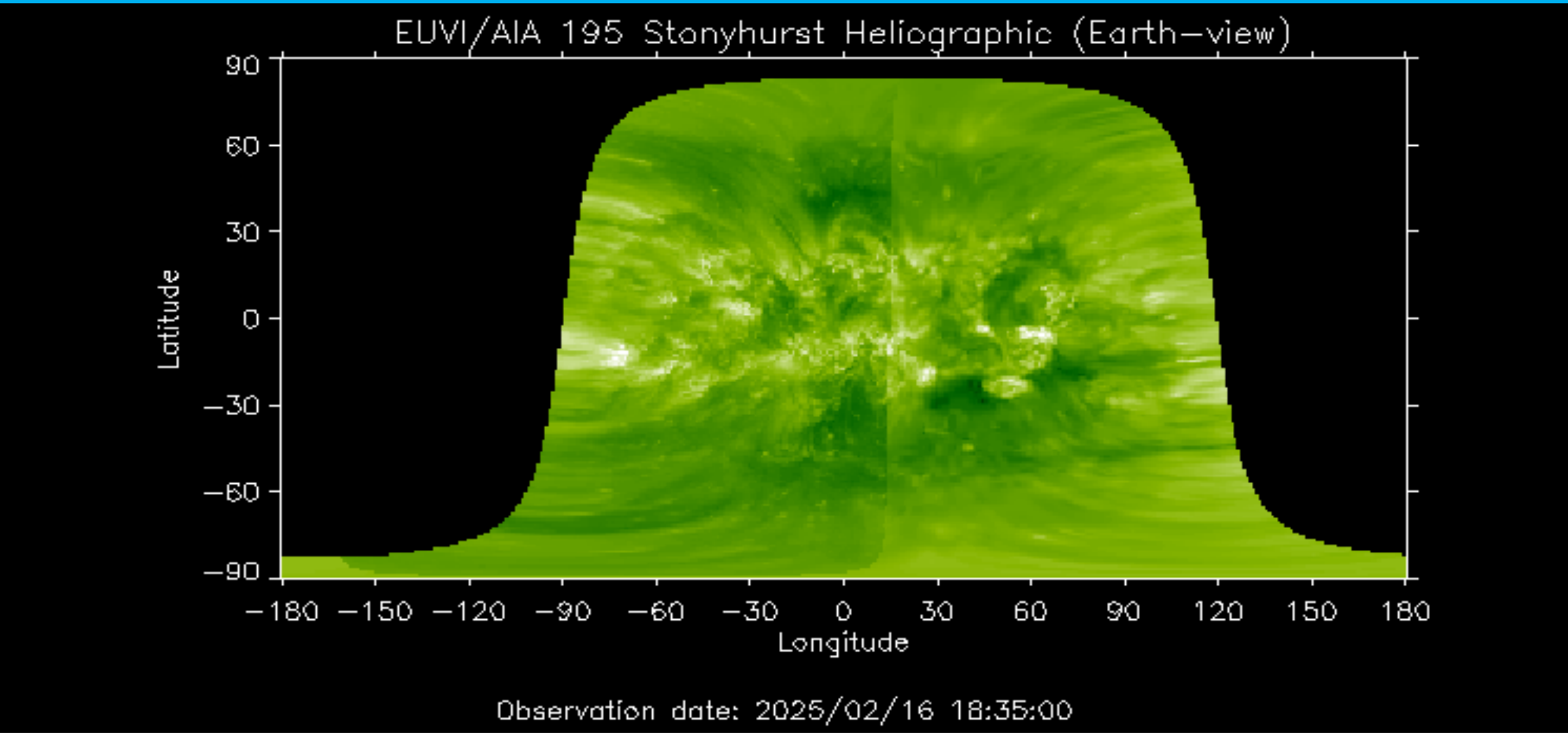
www.stce.be/educational/classification#electrons

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

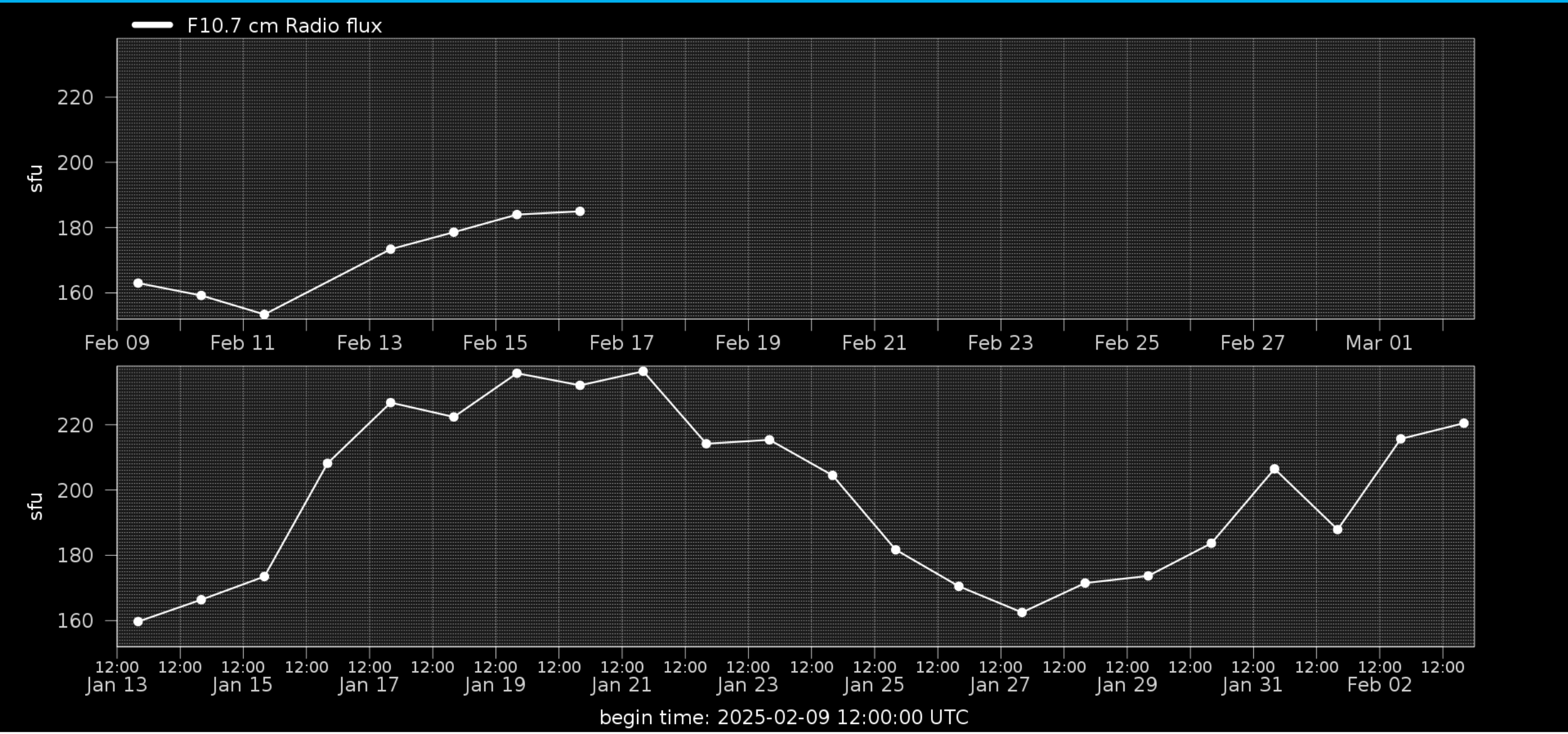


Outlook

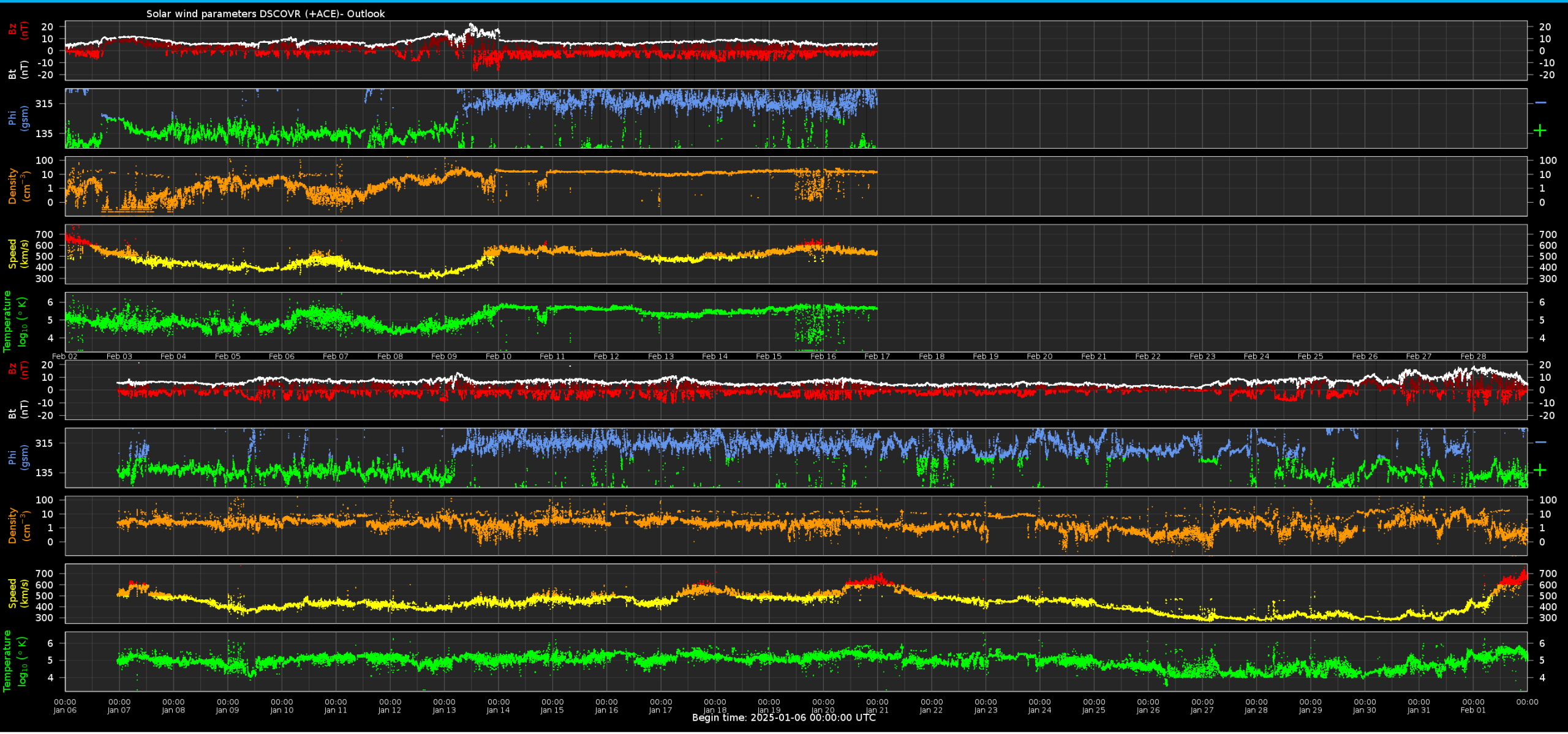
Outlook: Solar activity



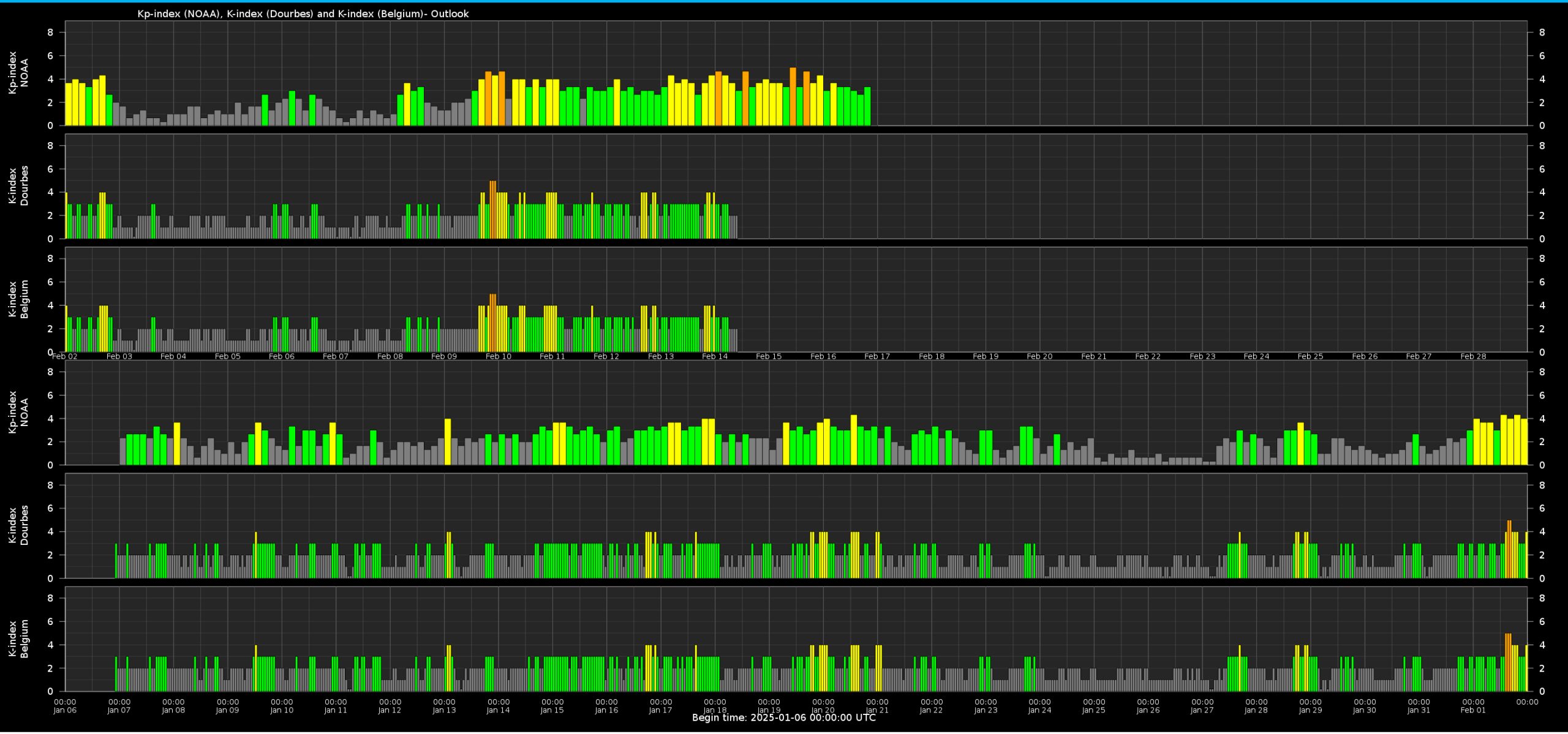
Outlook: Solar F10.7cm radio flux



Outlook: Solar wind parameters



Outlook: Geomagnetic activity



Outlook: Electron Flux at GEO Outlook

PECASUS

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Pecasus related events

GNSS advisories

- Scintillations
- VTEC

ODC period starting tomorrow

See you at our next briefing!

Or visit us at www.sidc.be

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