

SIDC Space Weather Briefing

08 September 2025-14 September 2025

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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 2025-09-08 00:00 to 2025-09-14 23:59

Active regions	11 NOAA Active Regions: NOAA AR 4205 – 4207, 4210 – 4217
Flares	# C-class flare: >50 # M-class flare: 0 # X-class flare: 0
Coronal Holes	1 CH+, 1 CH-
CMEs	1 wide CME on Sep 11

Proton flux	Below 10 pfu threshold level
Electron flux	Exceeded 1000 pfu threshold level

Solar wind and geomagnetic conditions

ICMEs	1 ICME arrival (Sep 11 CME)?
Solar wind conditions	B : 0.16 - 20.0 nT //Bz: -16.68 nT to 17.04 nT //Speed: 315 - 655 km/s
Geomagnetic conditions	max K _{Be} : 4.0, max K _p (NOAA): 5.67, Moderate Storm conditions

All Quiet Alert: All quiet off

Solar Activity

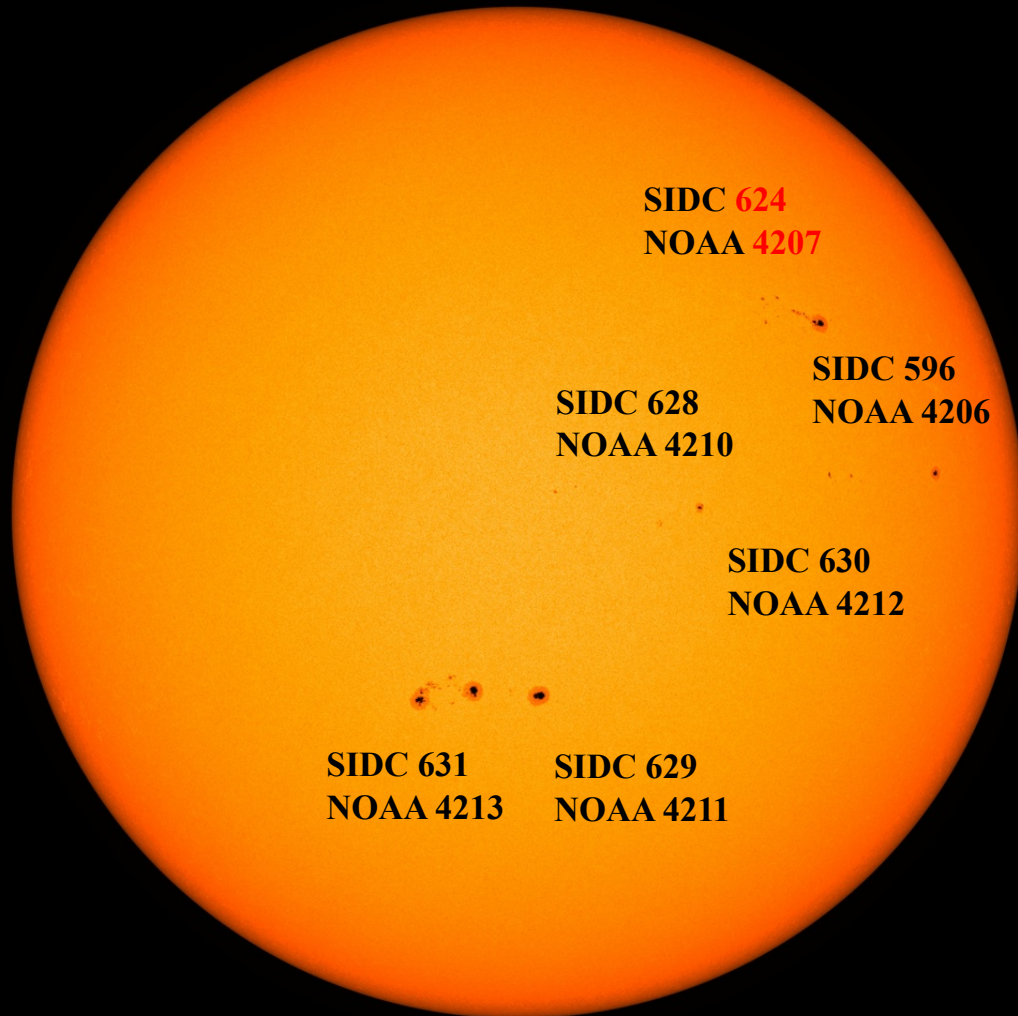


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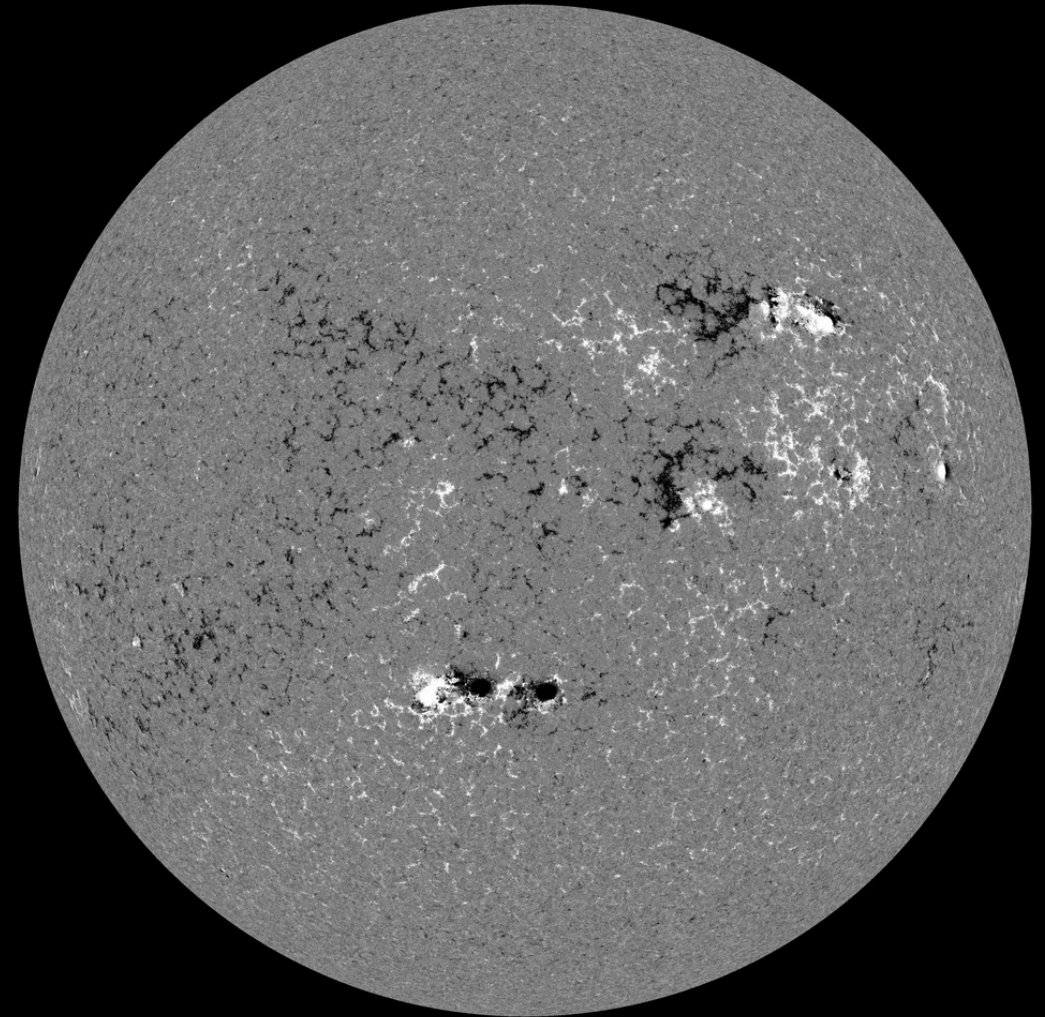
Solar active regions

SDO/HMI White Light 2025-09-08



SDO/HMI Quick-Look Continuum: 20250908_114500

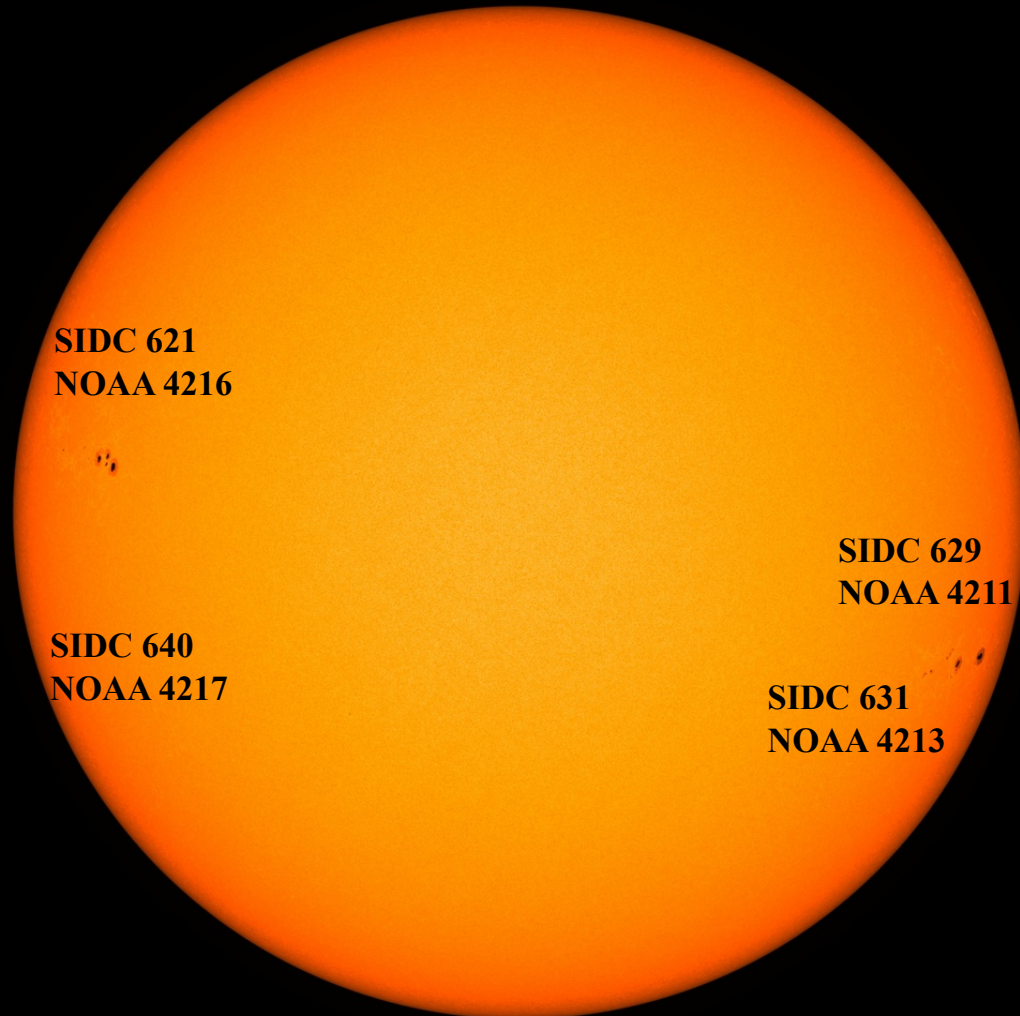
SDO/HMI Magnetogram 2025-09-08



SDO/HMI Quick-Look Magnetogram: 20250908_114500

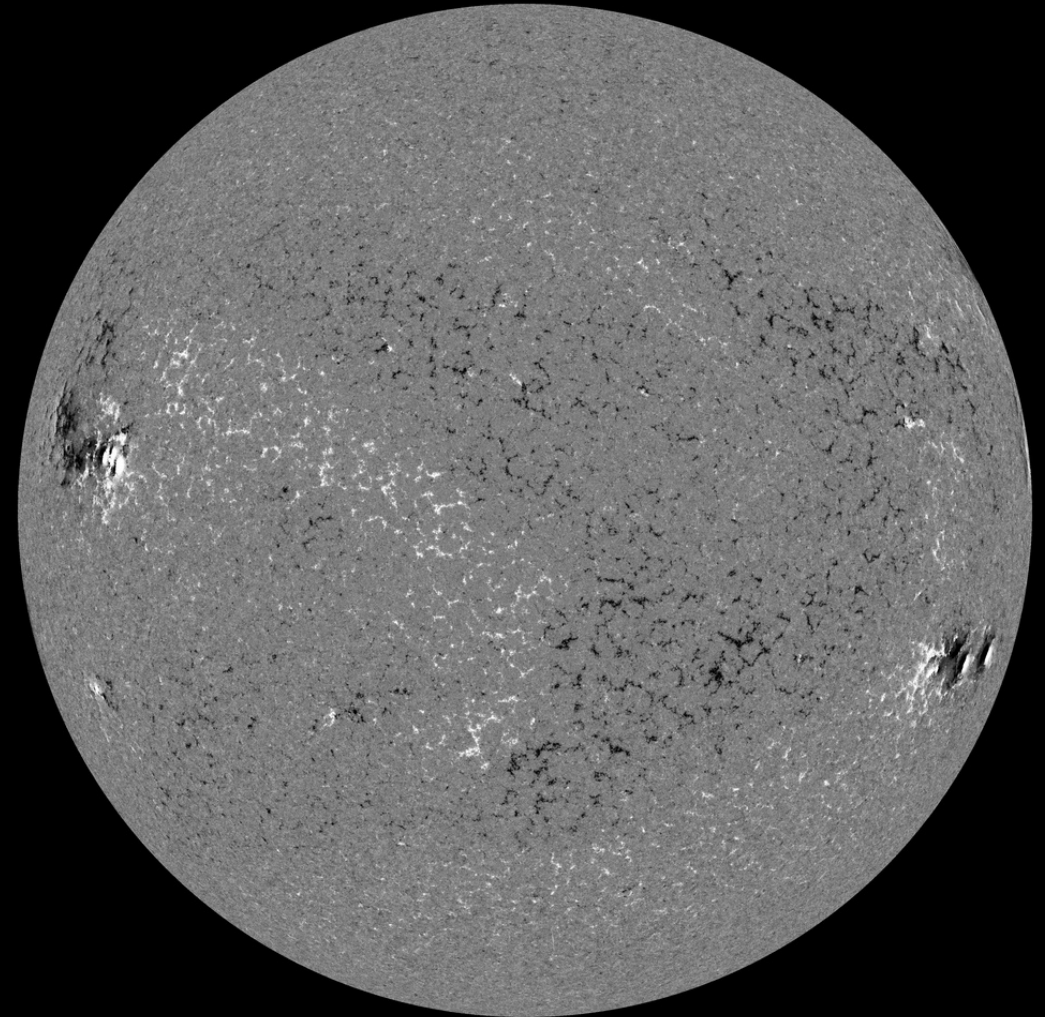
Solar active regions

SDO/HMI White Light 2025-09-14



SDO/HMI Quick-Look Continuum: 20250913_114500

SDO/HMI Magnetogram 2025-09-14

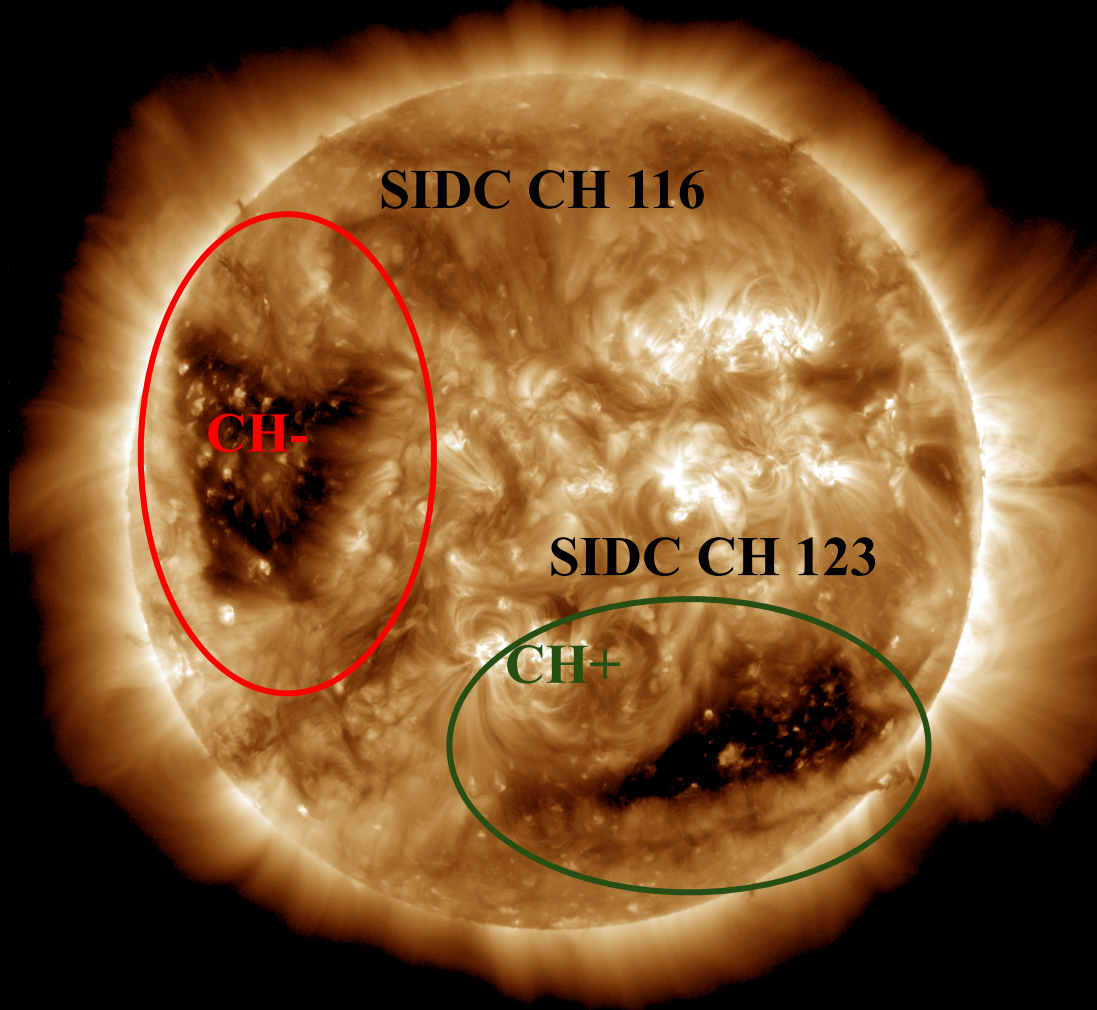


SDO/HMI Quick-Look Magnetogram: 20250913_114500

Coronal holes

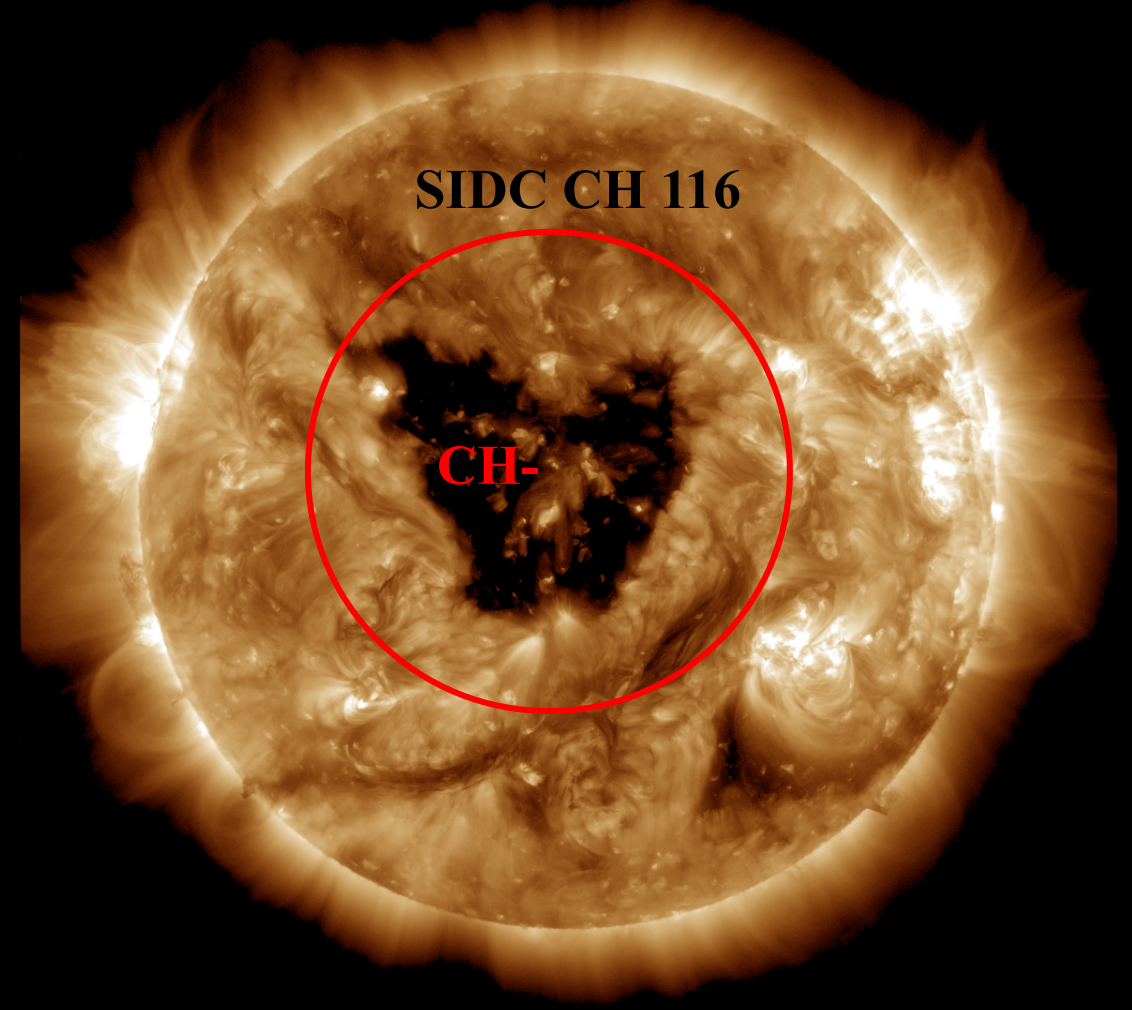
SDO/AIA 19.3 nm 2025-09-08

SDO/AIA AIA 193Å 2025-09-08T12:00:05.846



SDO/AIA 19.3 nm 2025-09-11

SDO/AIA AIA 193Å 2025-09-11T12:00:05.843



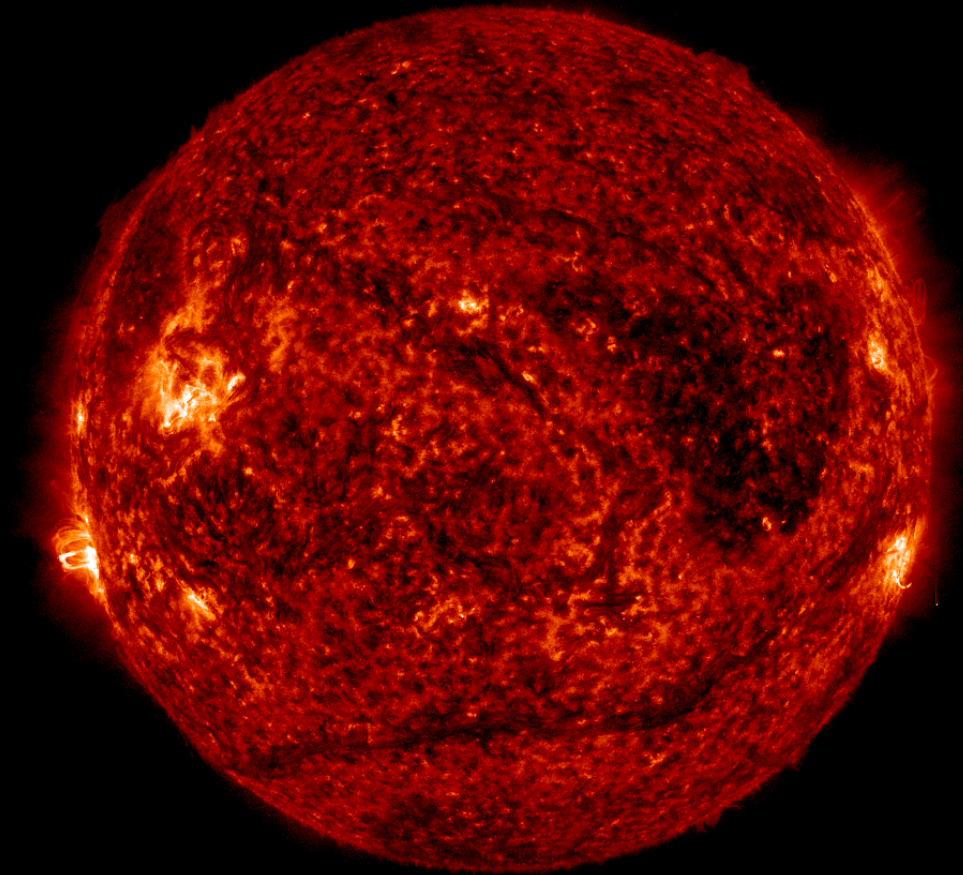
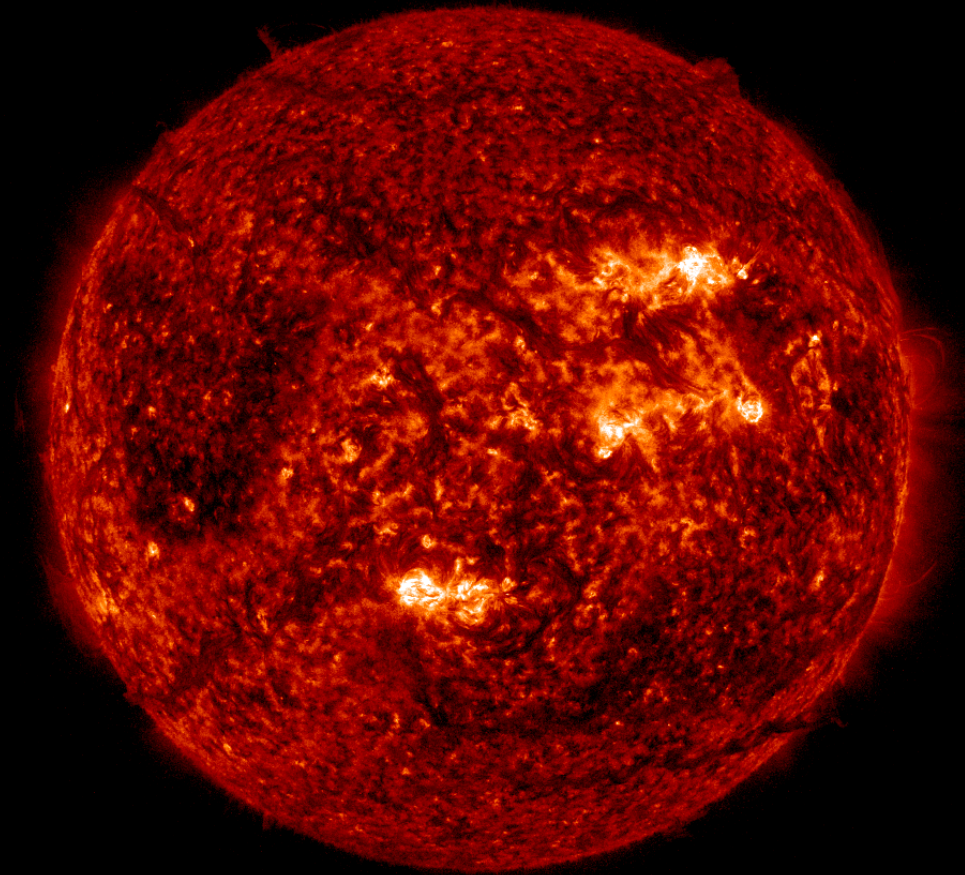
Filaments

SDO/AIA 30.4 nm 2025-09-08

SDO/AIA AIA 304Å 2025-09-08T12:00:06.584

SDO/AIA 30.4 nm 2025-09-14

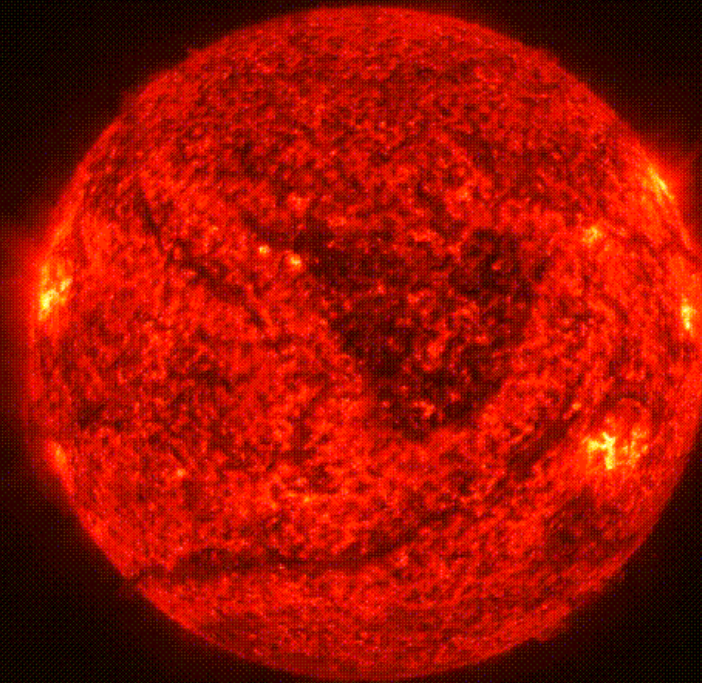
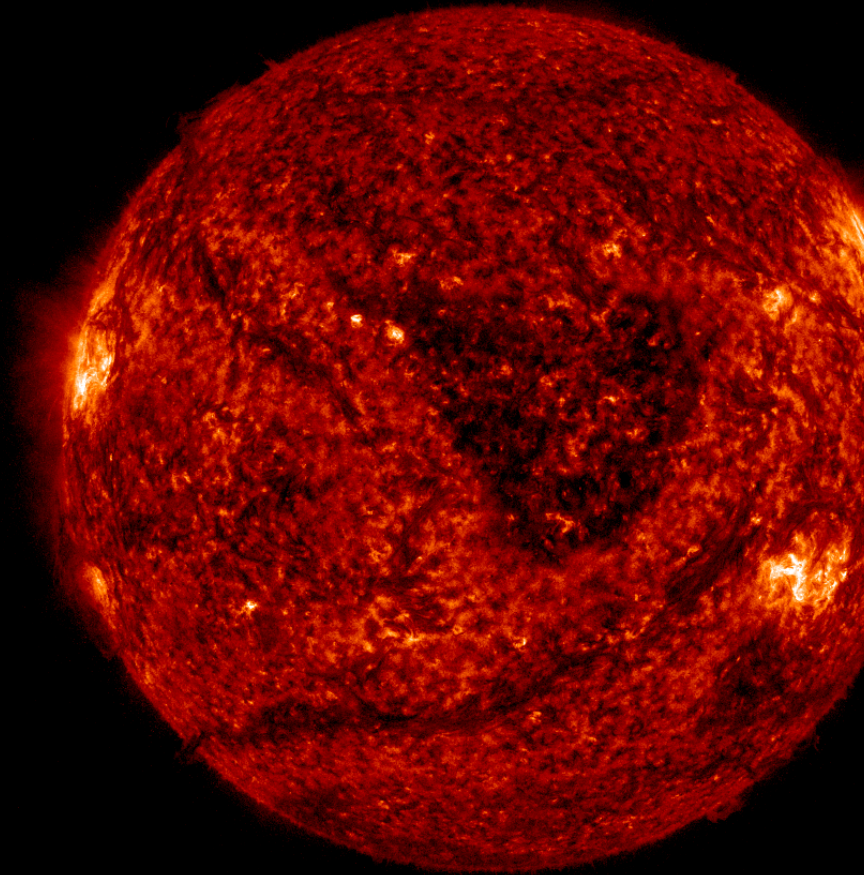
SDO/AIA AIA 304Å 2025-09-14T12:00:06.580



Filaments

SDO/AIA 30.4 nm 2025-09-12

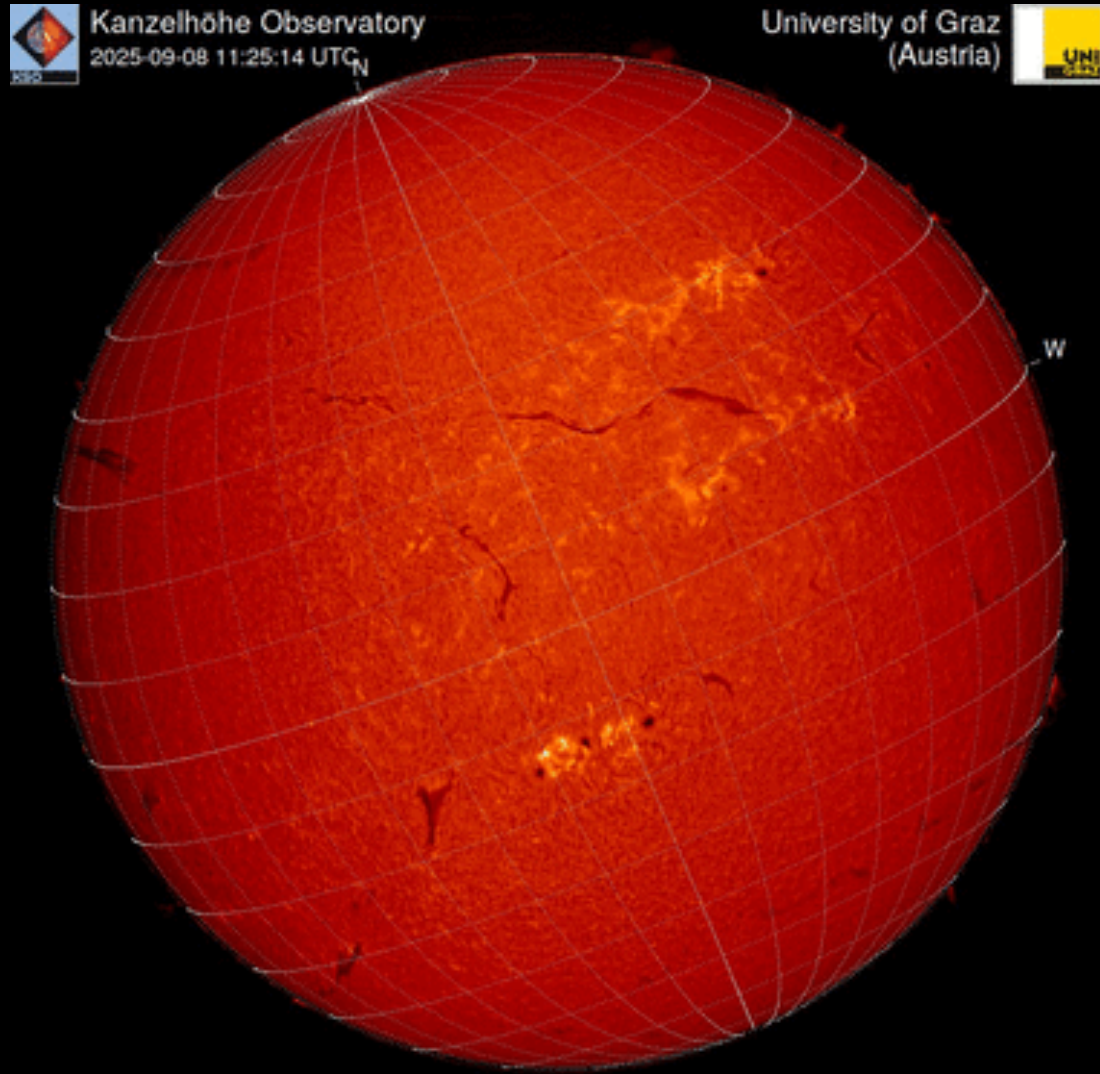
SDO/AIA AIA 304Å 2025-09-12T12:00:18.591



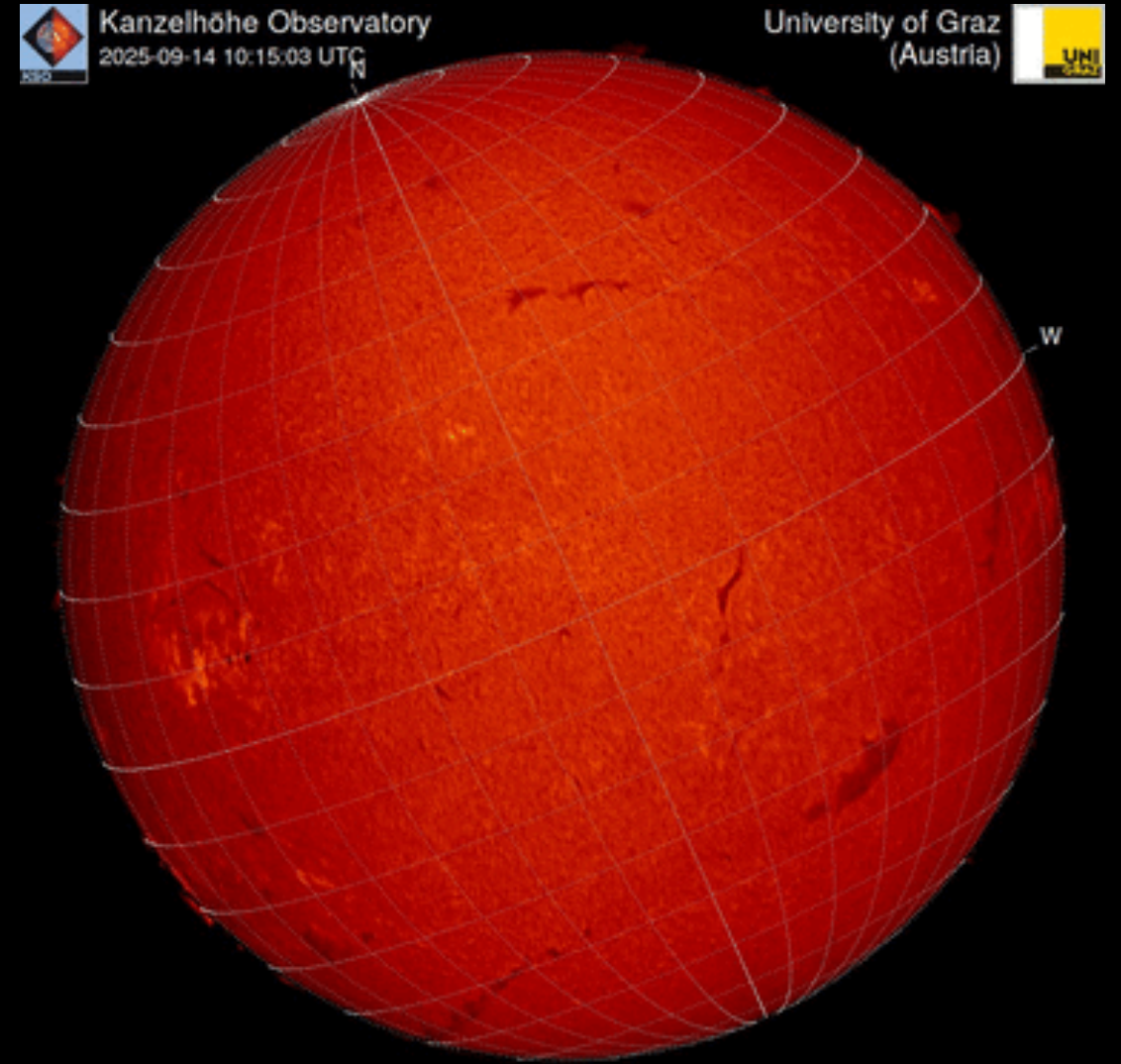
2025-09-12T13:00:17.141

Filaments & Filament eruptions

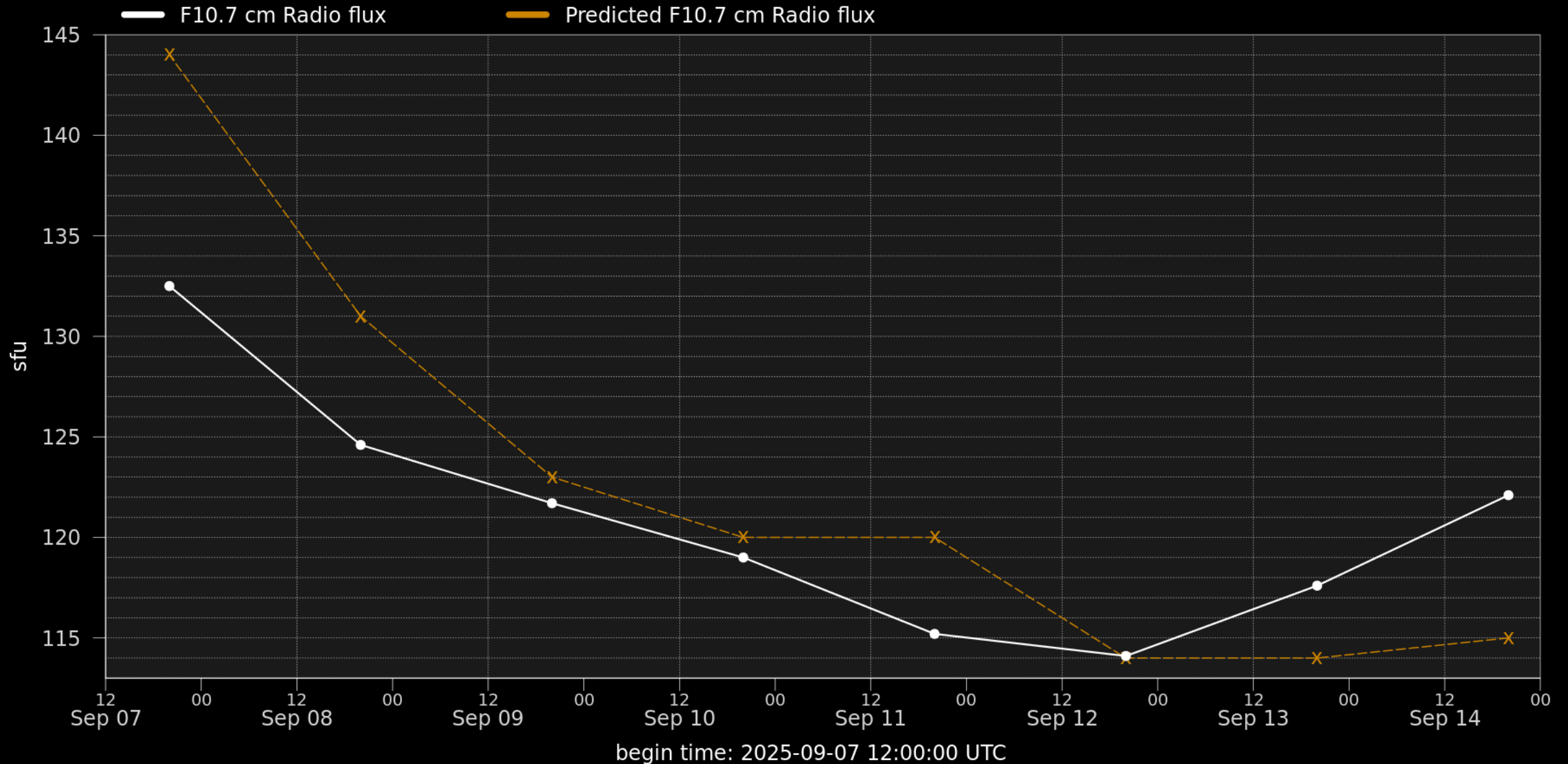
H-alpha 2025-09-08



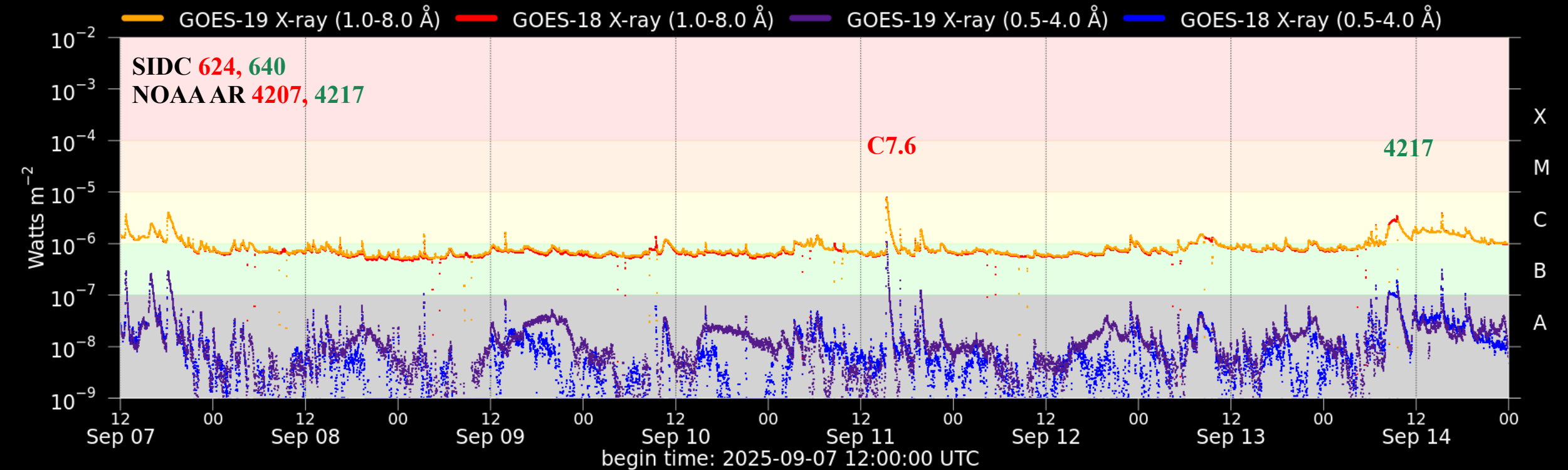
H-alpha 2025-09-14



Solar F10.7cm radio flux



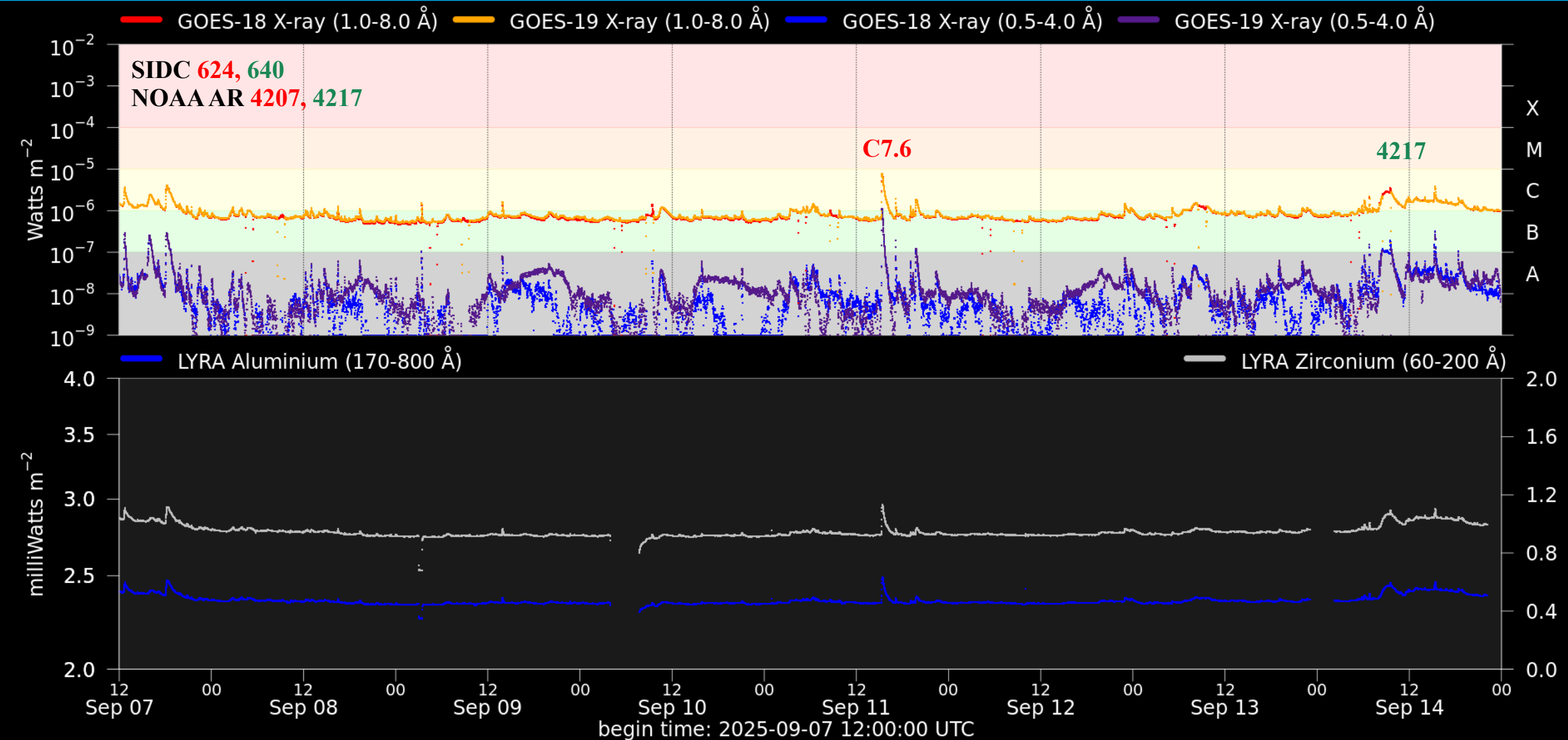
Flaring activity



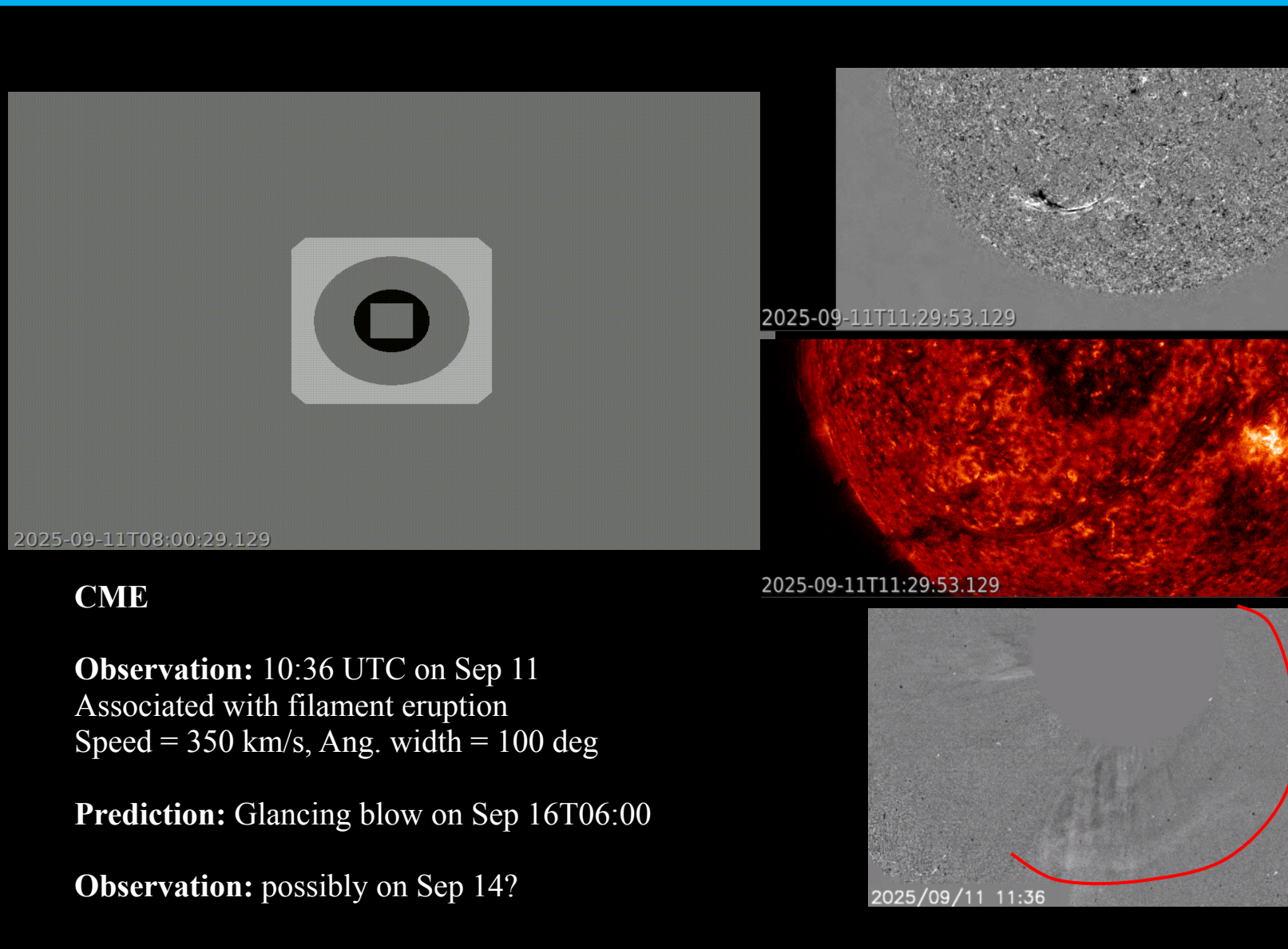
Probabilities (%) and occurrences (#) of C/M/X-flares daily, from noon to noon:

Issue date	2025-09-07	2025-09-08	2025-09-09	2025-09-10	2025-09-11	2025-09-12	2025-09-13	2025-09-14
Probability (%)	98 64 10	90 55 10	90 49 15	90 49 10	90 49 15	90 49 10	90 49 20	90 49 15
Observed (#)	03 00 00	04 00 00	01 00 00	01 00 00	04 00 00	03 00 00	03 00 00	03 00 00

Solar X-Ray and UV flux



Coronal Mass Ejections

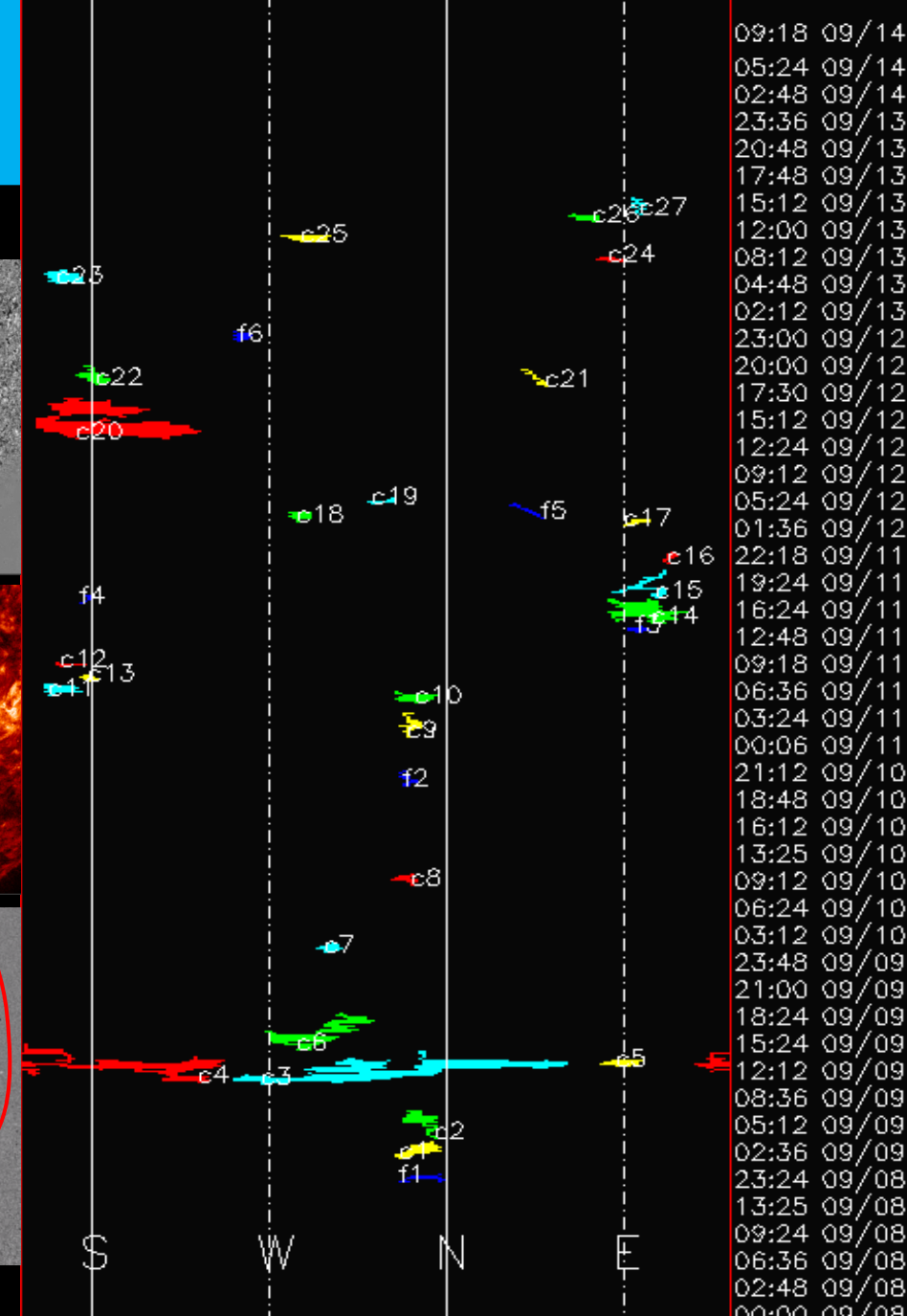


CME

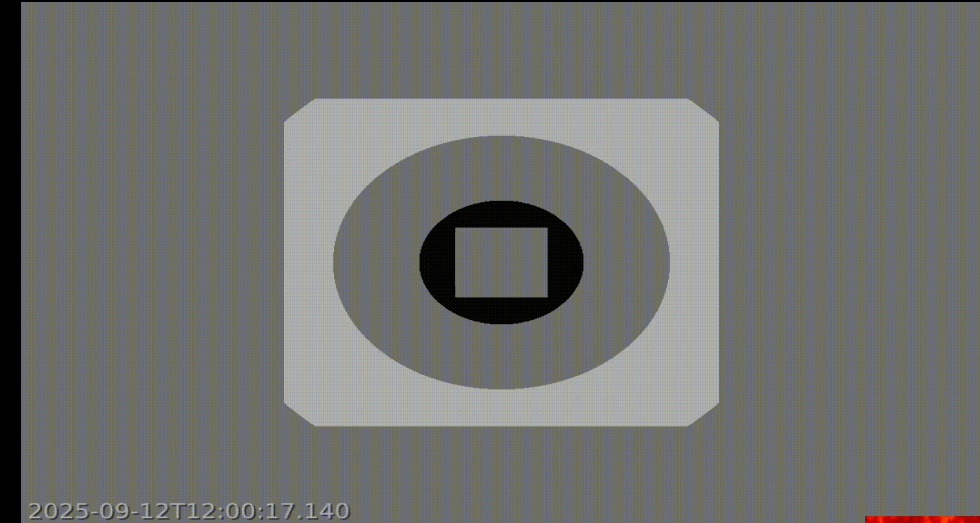
Observation: 10:36 UTC on Sep 11
Associated with filament eruption
Speed = 350 km/s, Ang. width = 100 deg

Prediction: Glancing blow on Sep 16T06:00

Observation: possibly on Sep 14?



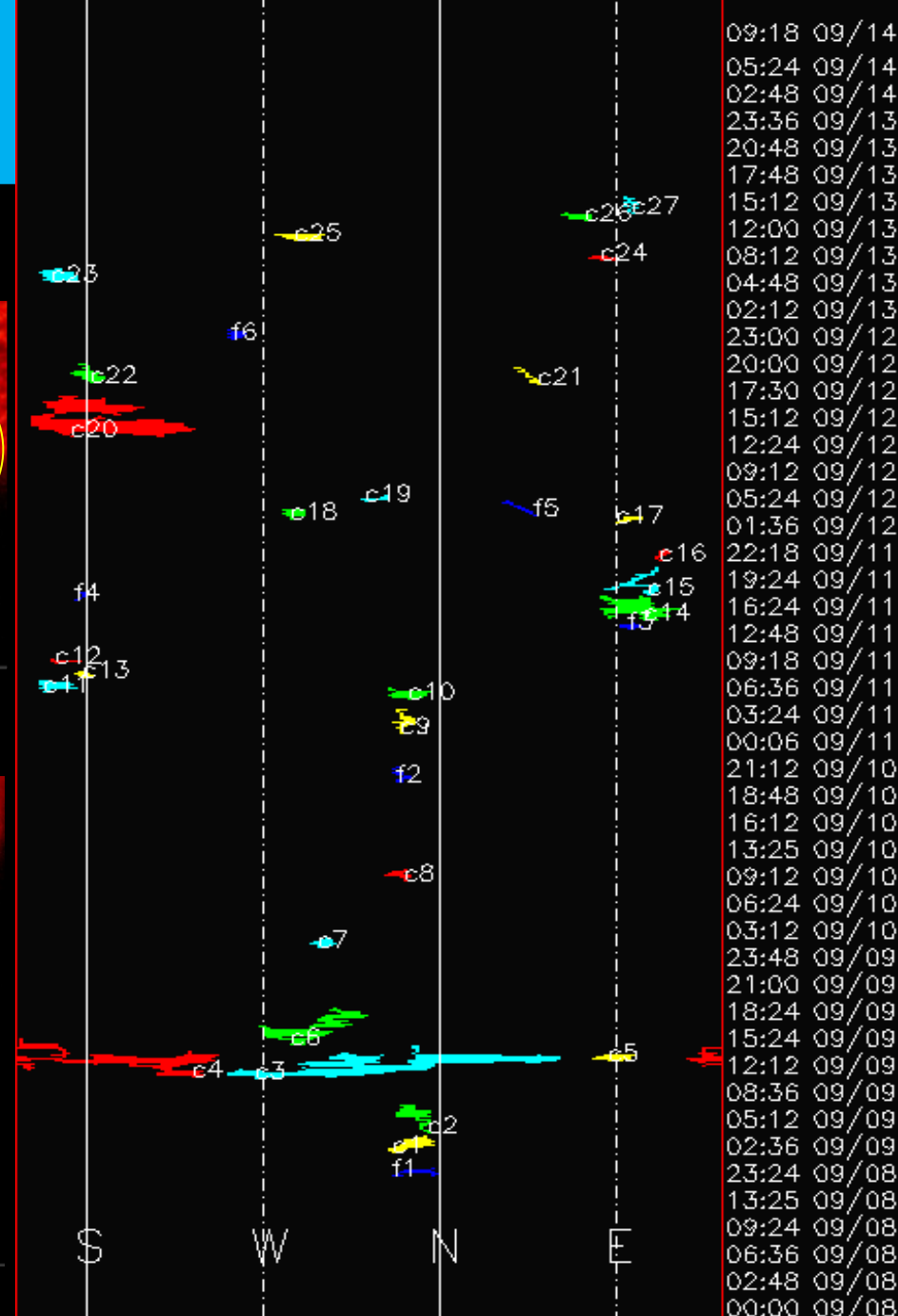
Coronal Mass Ejections

A large, bright orange-red sun with visible solar flares and a dark, silhouetted structure in the foreground. The sun's surface is covered in a dense pattern of bright, irregular spots and streaks, indicating intense solar activity. A dark, silhouetted structure, possibly a building or a large tree, is visible in the lower right foreground, partially obscuring the sun. The overall scene is set against a dark background, emphasizing the brightness of the sun.

2025-09-12 15:08:54 UT

Observation: 15:00 UTC on Sep 12
Associated with prominence eruption, mostly
back-sided and towards South

Prediction: Not expected at Earth



Solar Wind and

Geomagnetic Activity



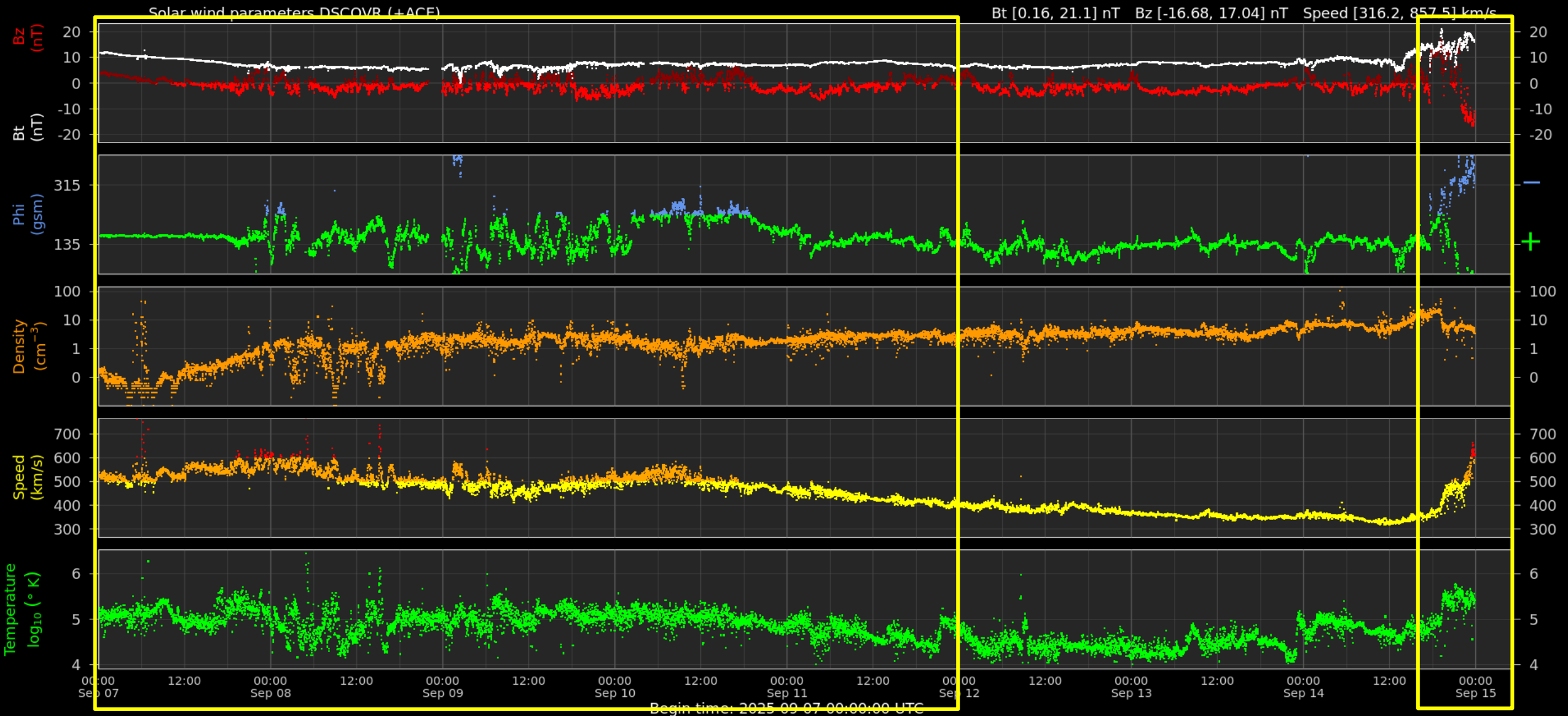
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Solar wind parameters

HSS: CH 123 +

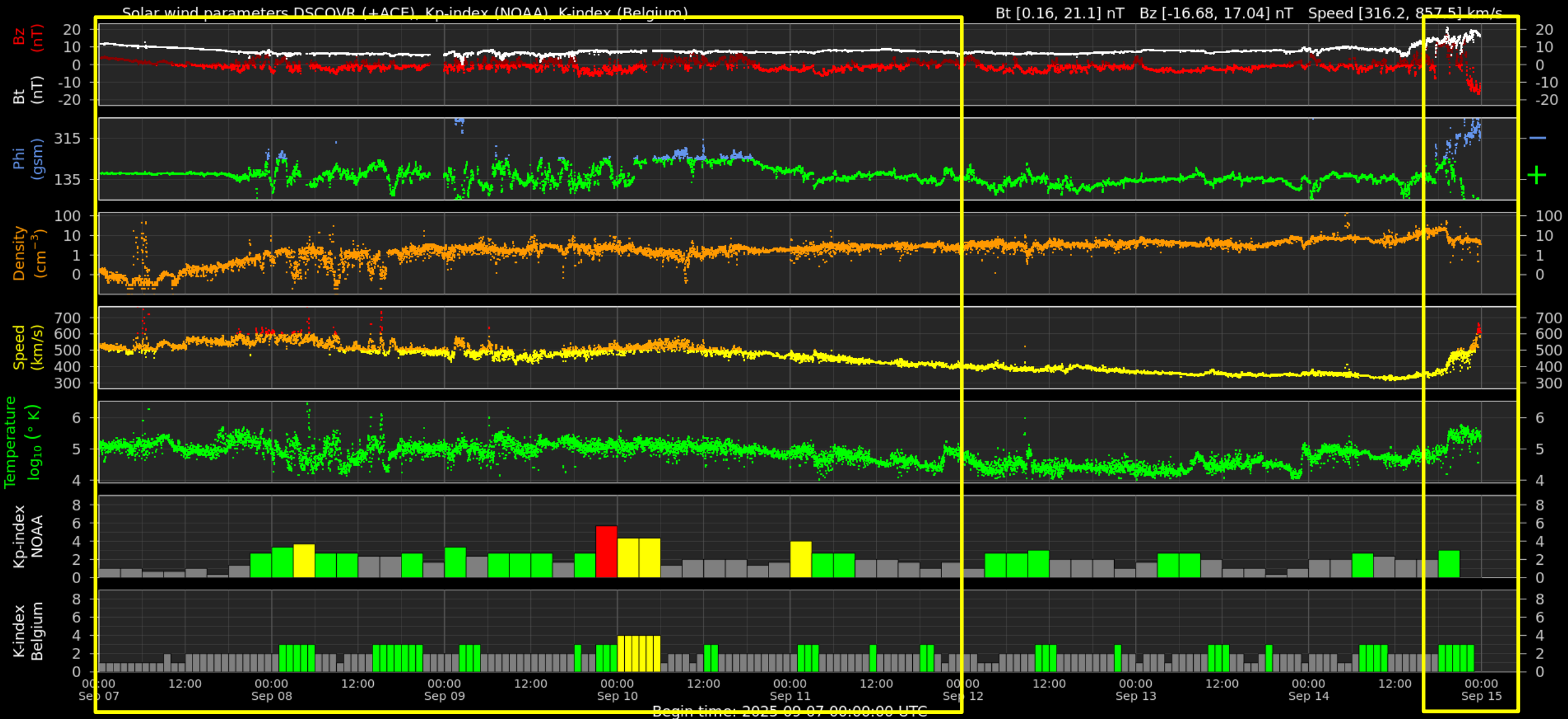
HSS: CH 116 -
ICME-CME on Sep 11?



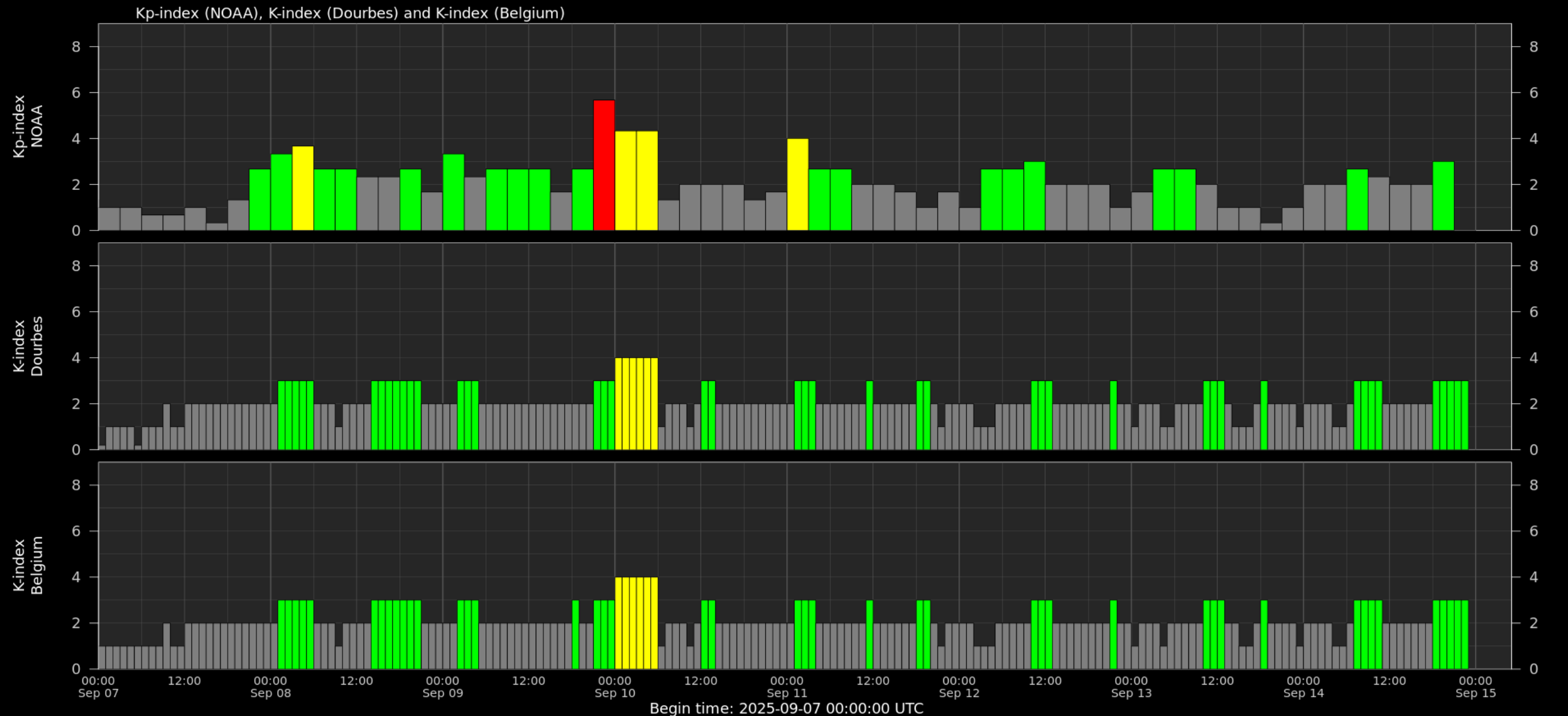
Solar wind parameters & K-indices

HSS: CH 123 +

HSS: CH 116 -
ICME-CME on Sep 11?



Geomagnetic activity (K-indexes)



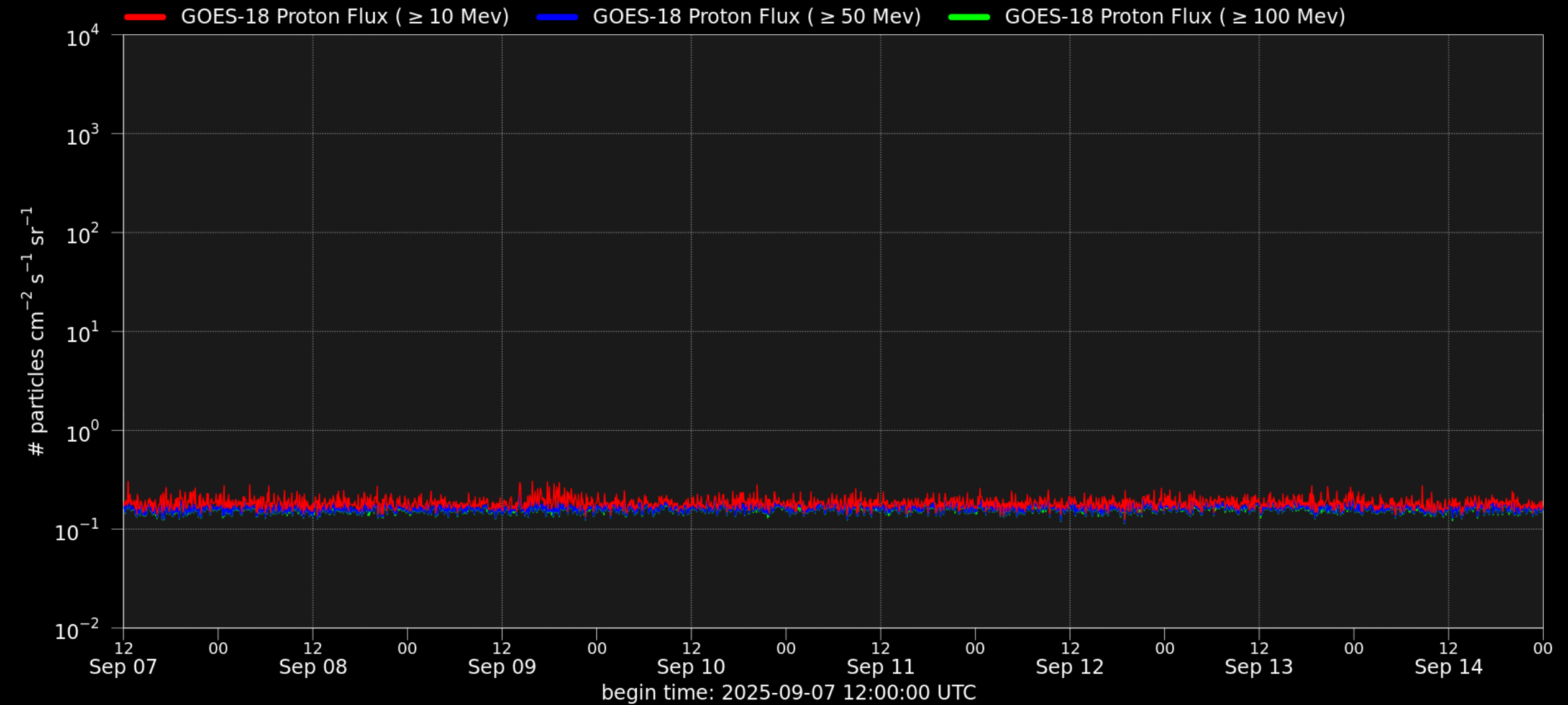
Energetic Particles



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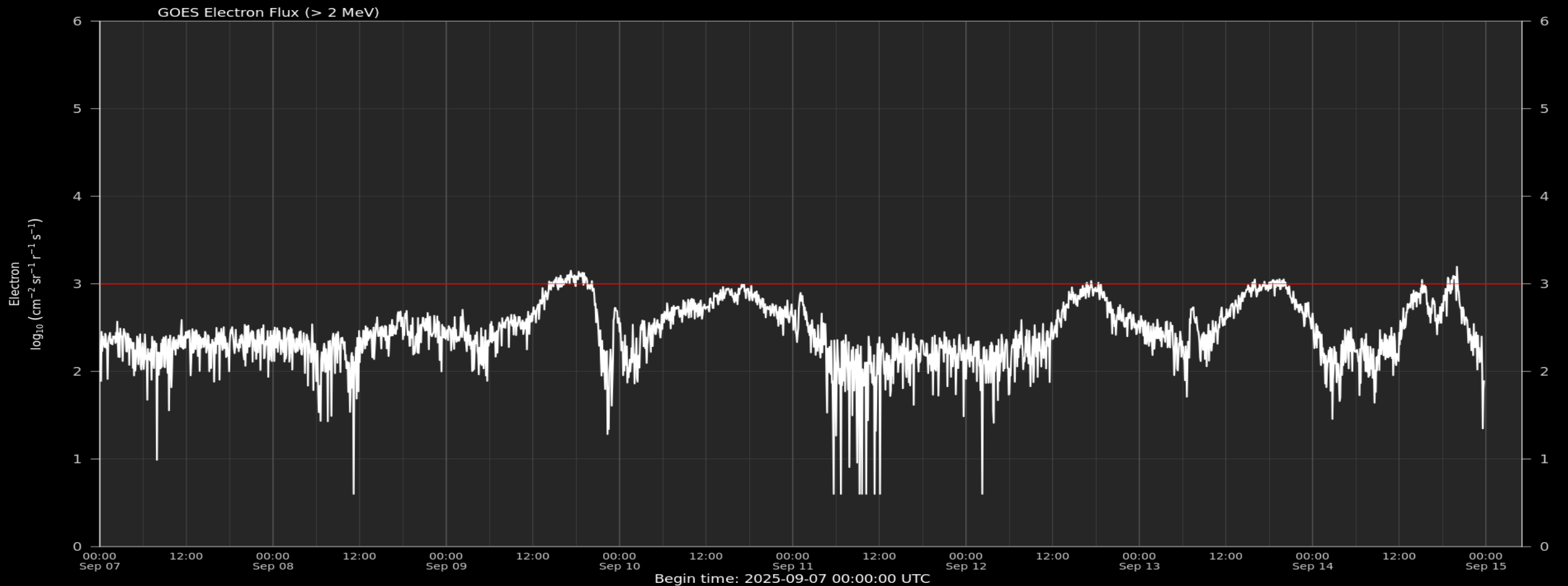
Solar proton flux



Electron flux at GEO

www.stce.be/educational/classification#electrons

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



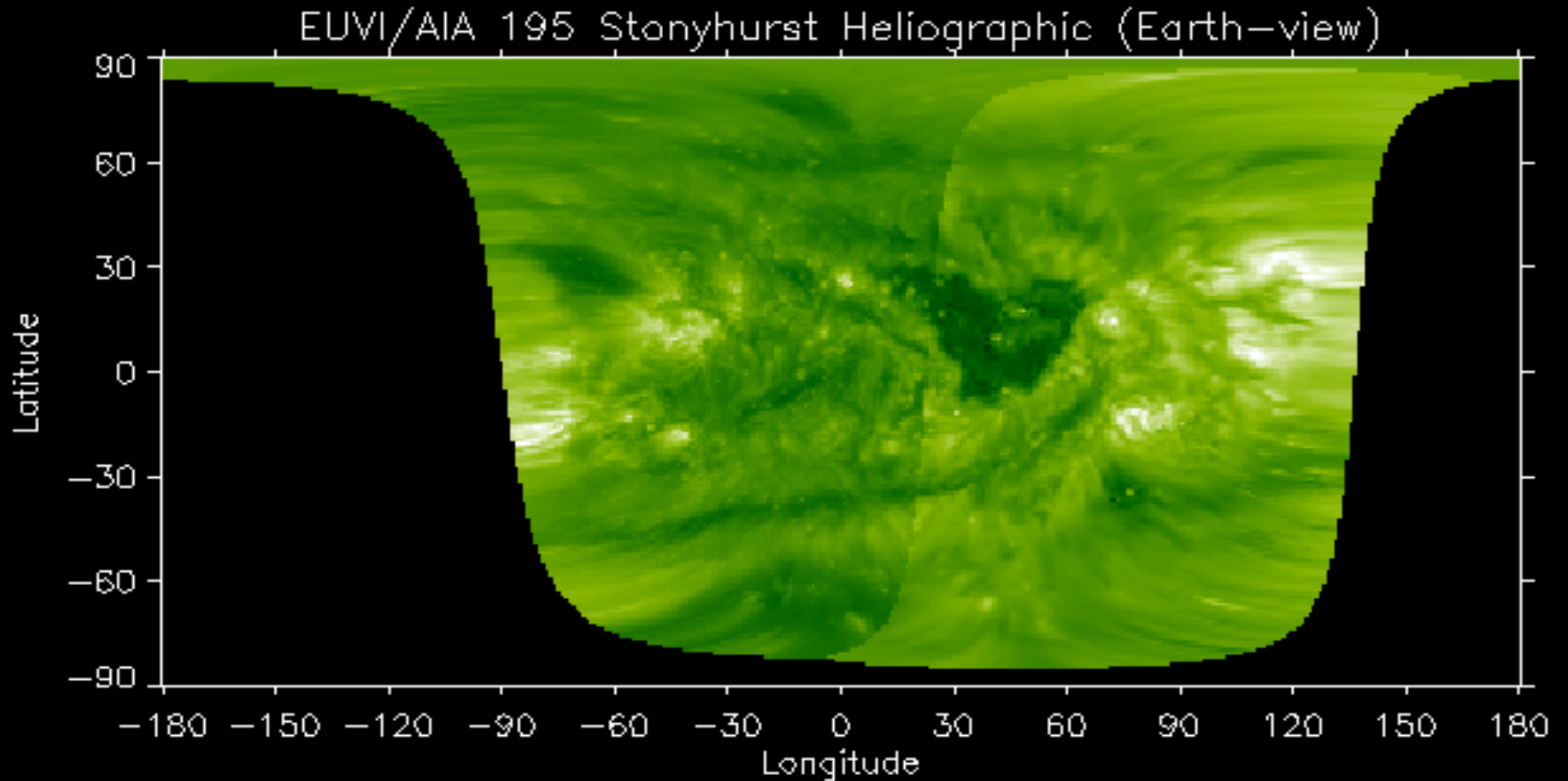
Outlook



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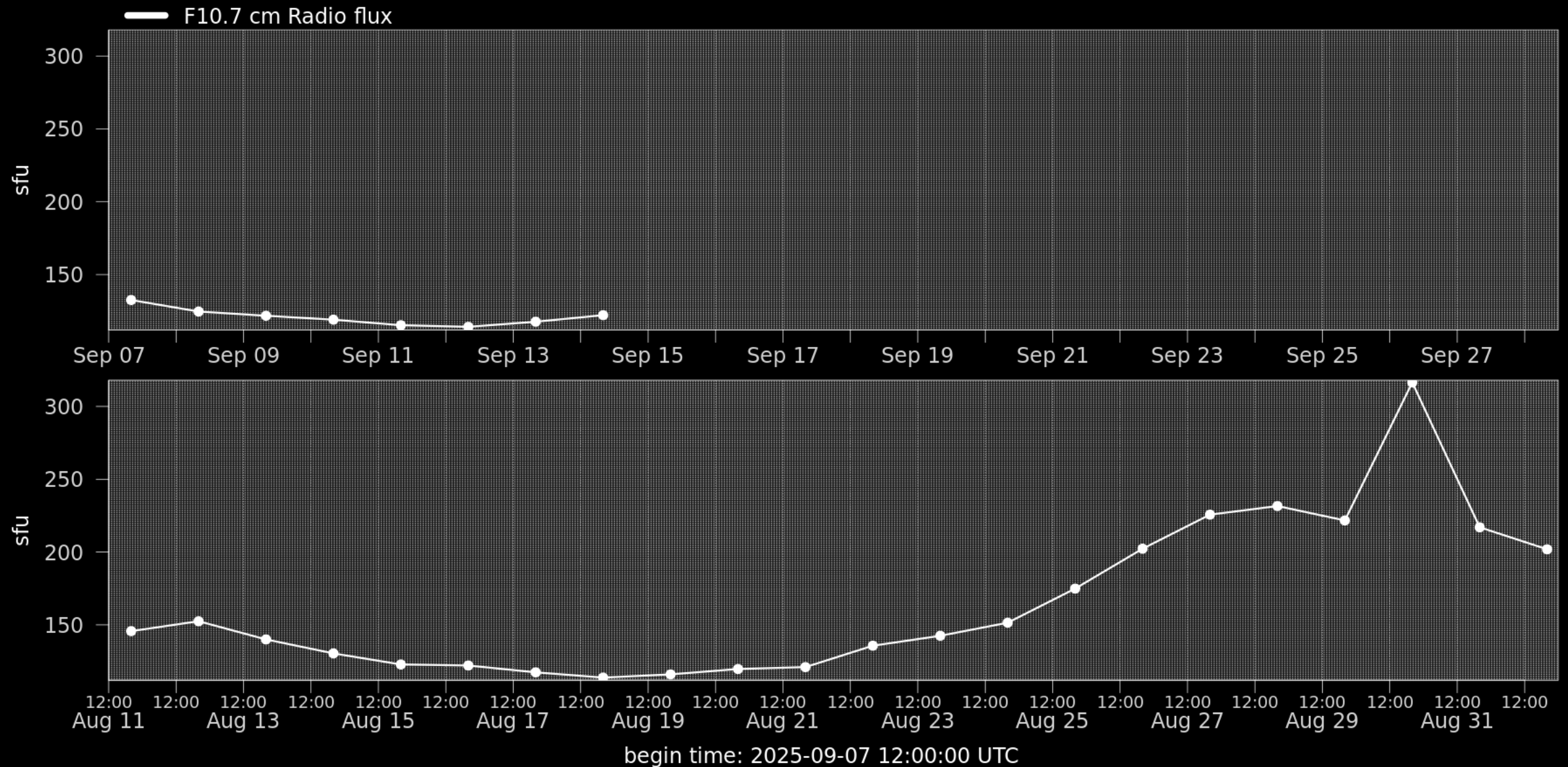
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Outlook: Solar activity

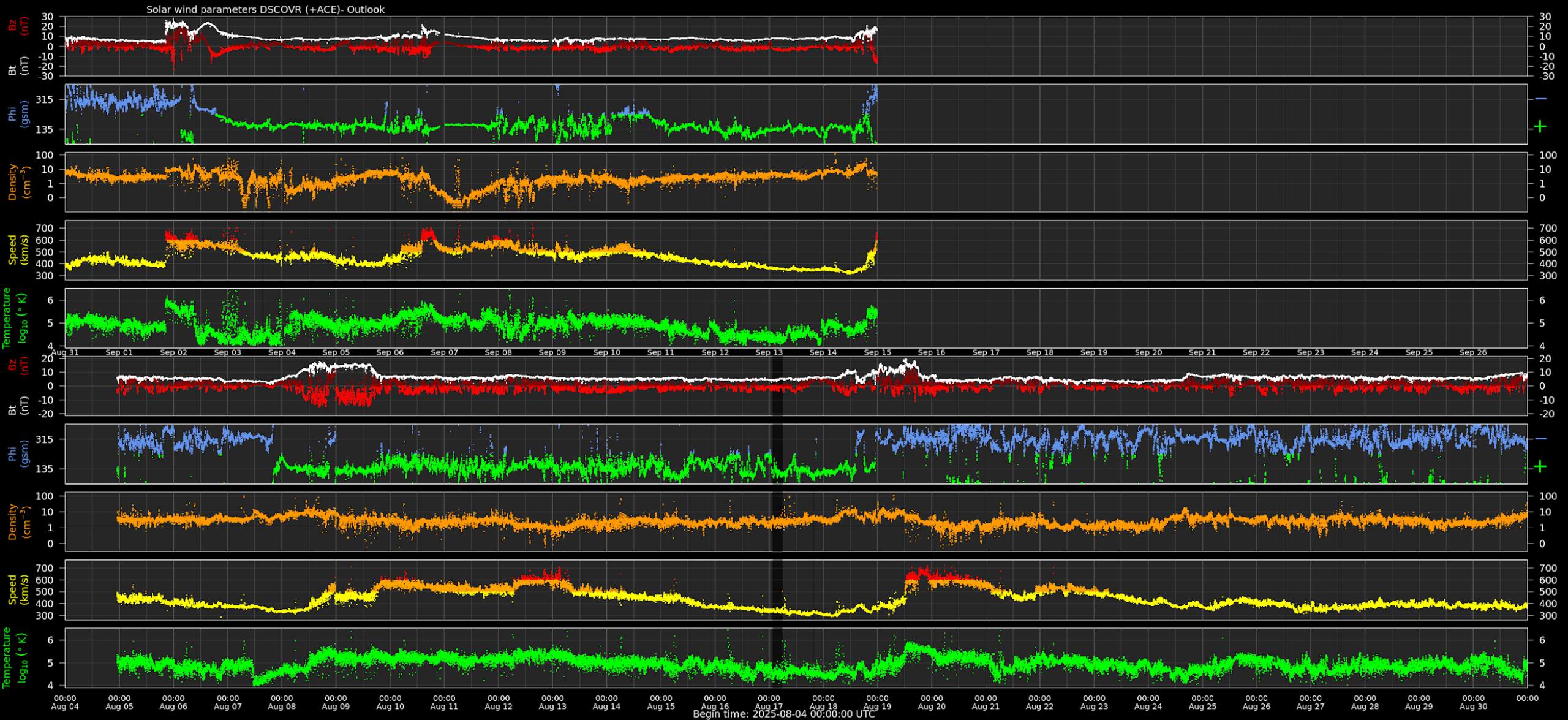


Observation date: 2025/09/14 23:05:00

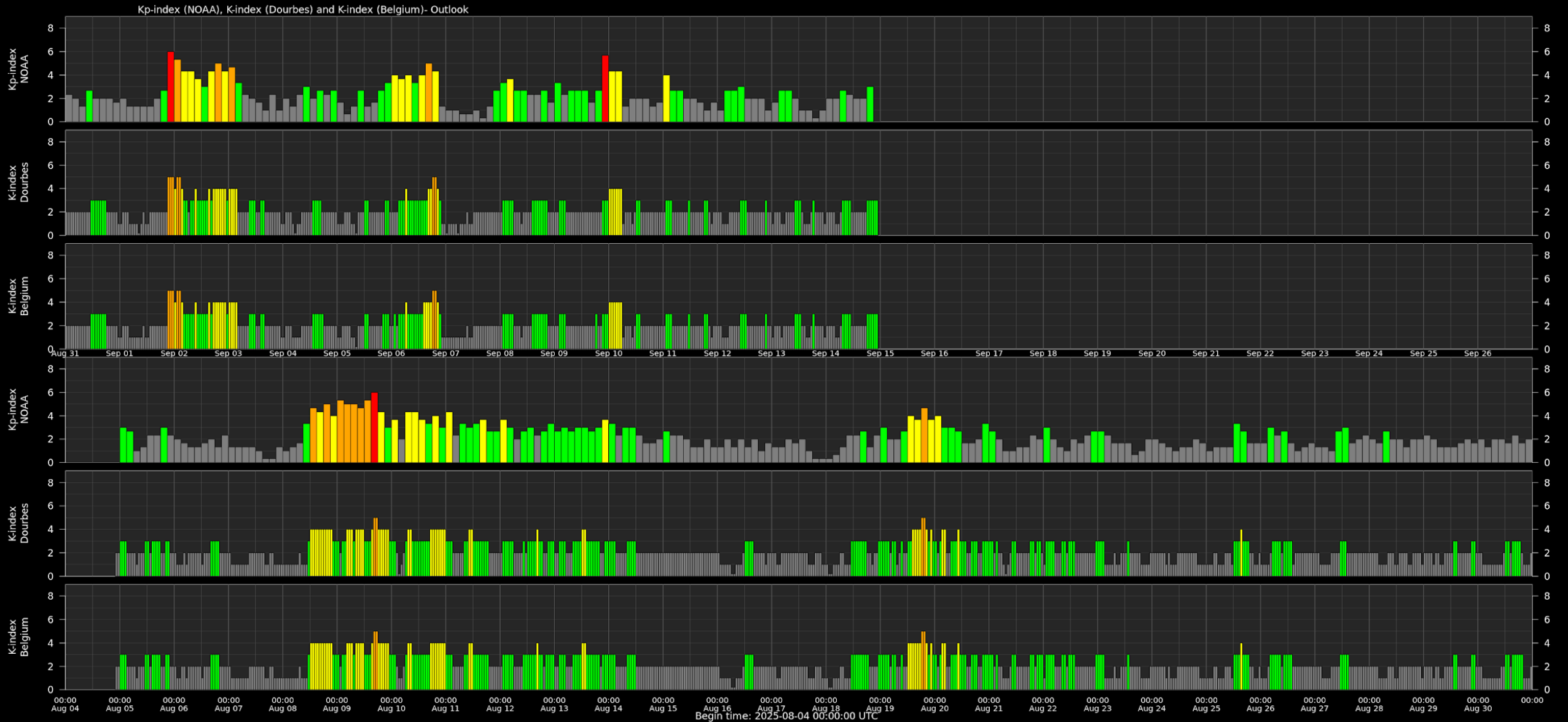
Outlook: Solar F10.7cm radio flux



Outlook: Solar wind parameters



Outlook: Geomagnetic activity



Outlook: Electron Flux at GEO Outlook



PECASUS



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Pecarus related events

Several advisory issued for HF-COM/PSD

Amplitude and Phase Scintillations, Vertical TEC

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See you at our next briefing!

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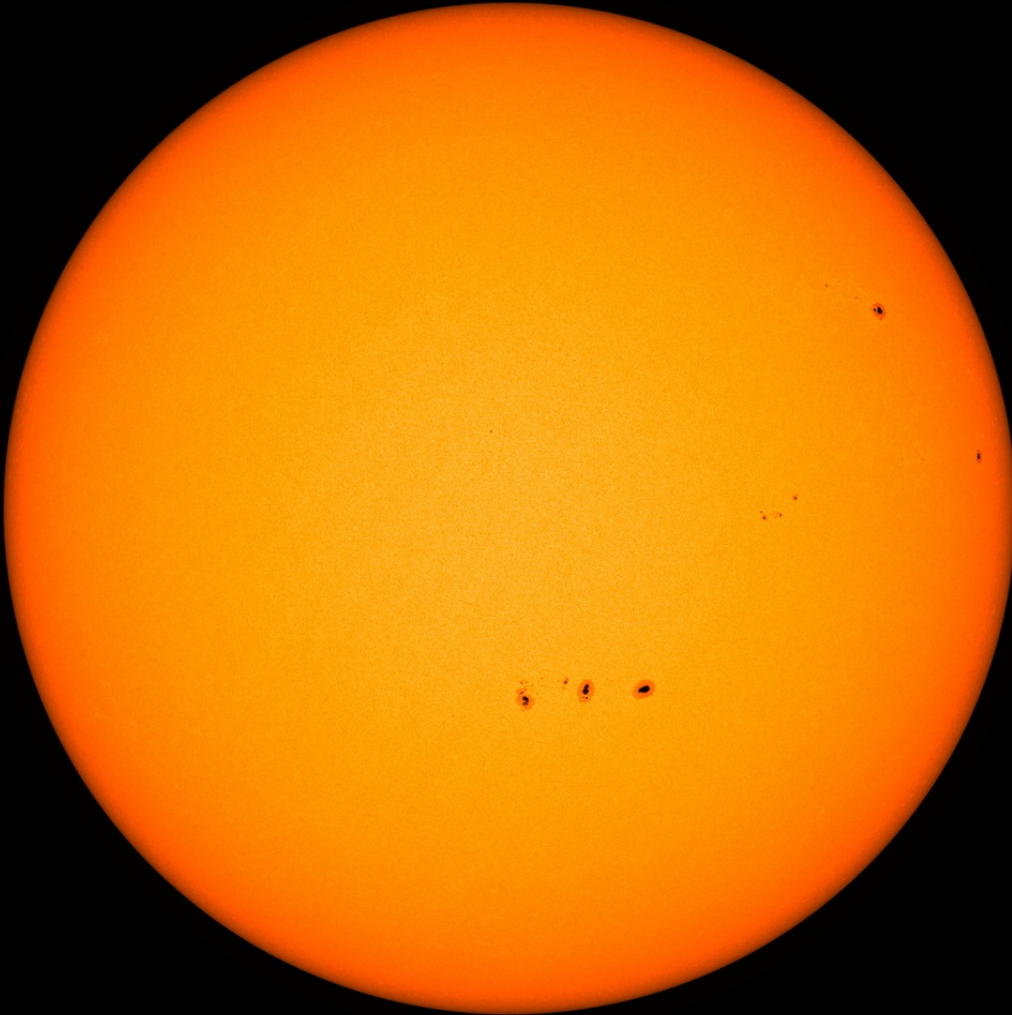
Some tips. Erase this slide

For Color suggestion of next slide: https://www.sidc.be/spaceweatherservices-private/data/PrefabBriefing/SWbriefing_ColorCodeSuggestion.pdf

If you need more help with the briefing: <https://www.sidc.be/spaceweatherservices-private/data/PrefabBriefing/Help.txt>

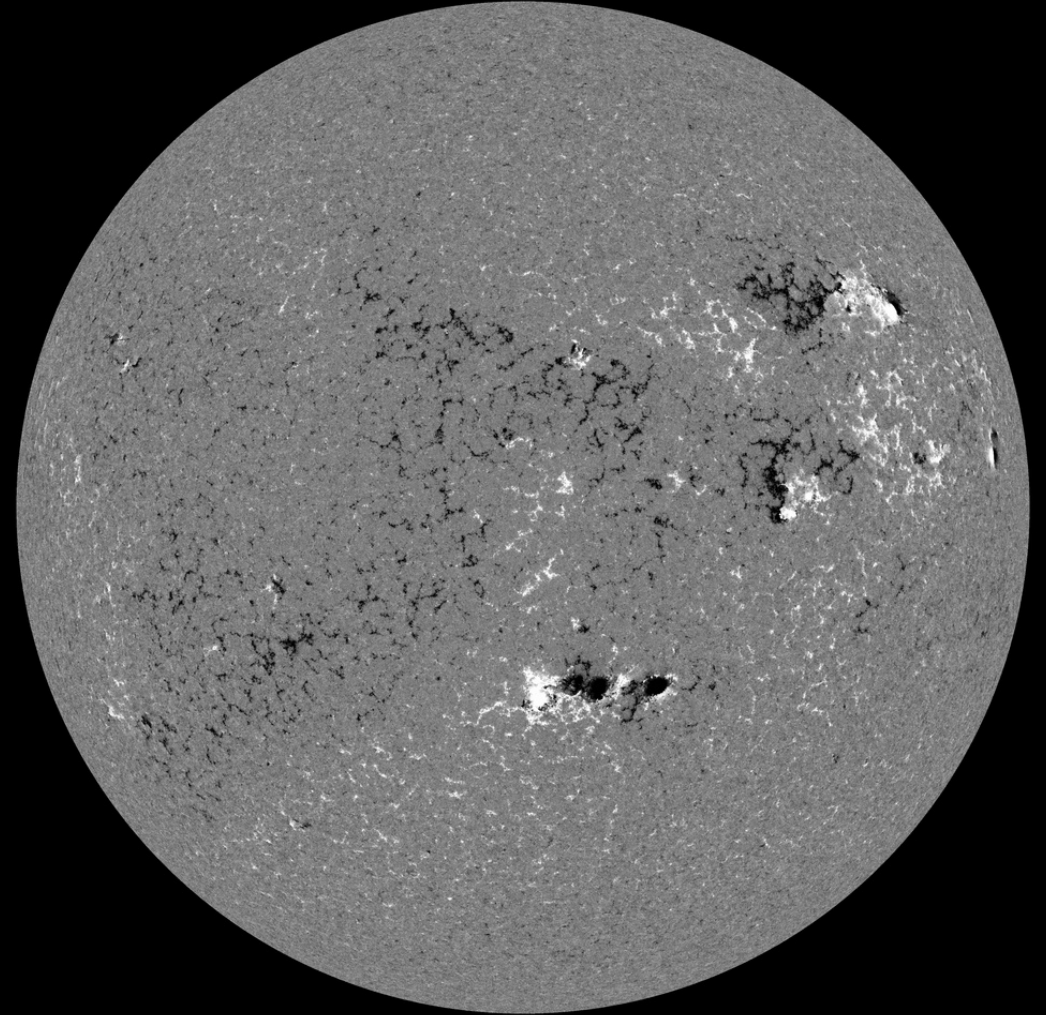
Solar active regions

SDO/HMI White Light 2025-09-09



SDO/HMI Quick-Look Continuum: 20250909_114500

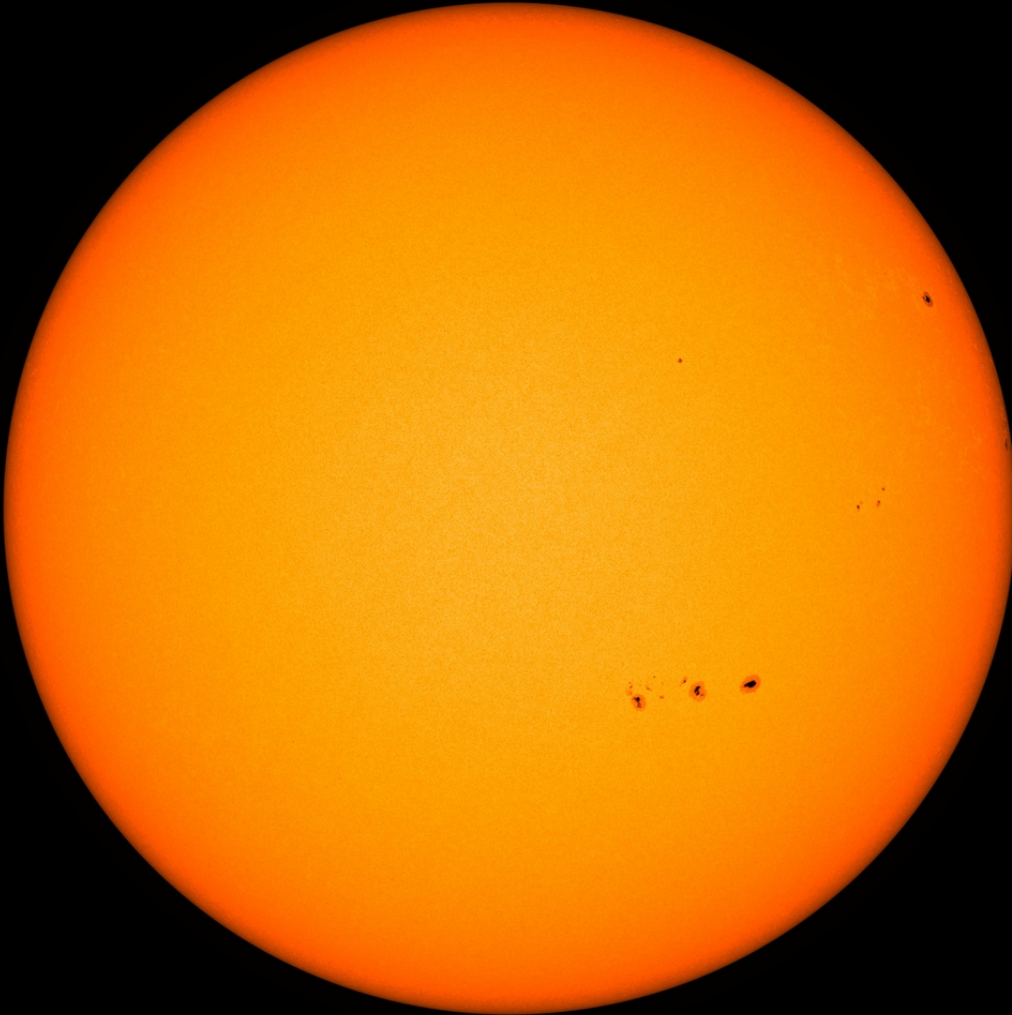
SDO/HMI Magnetogram 2025-09-09



SDO/HMI Quick-Look Magnetogram: 20250909_114500

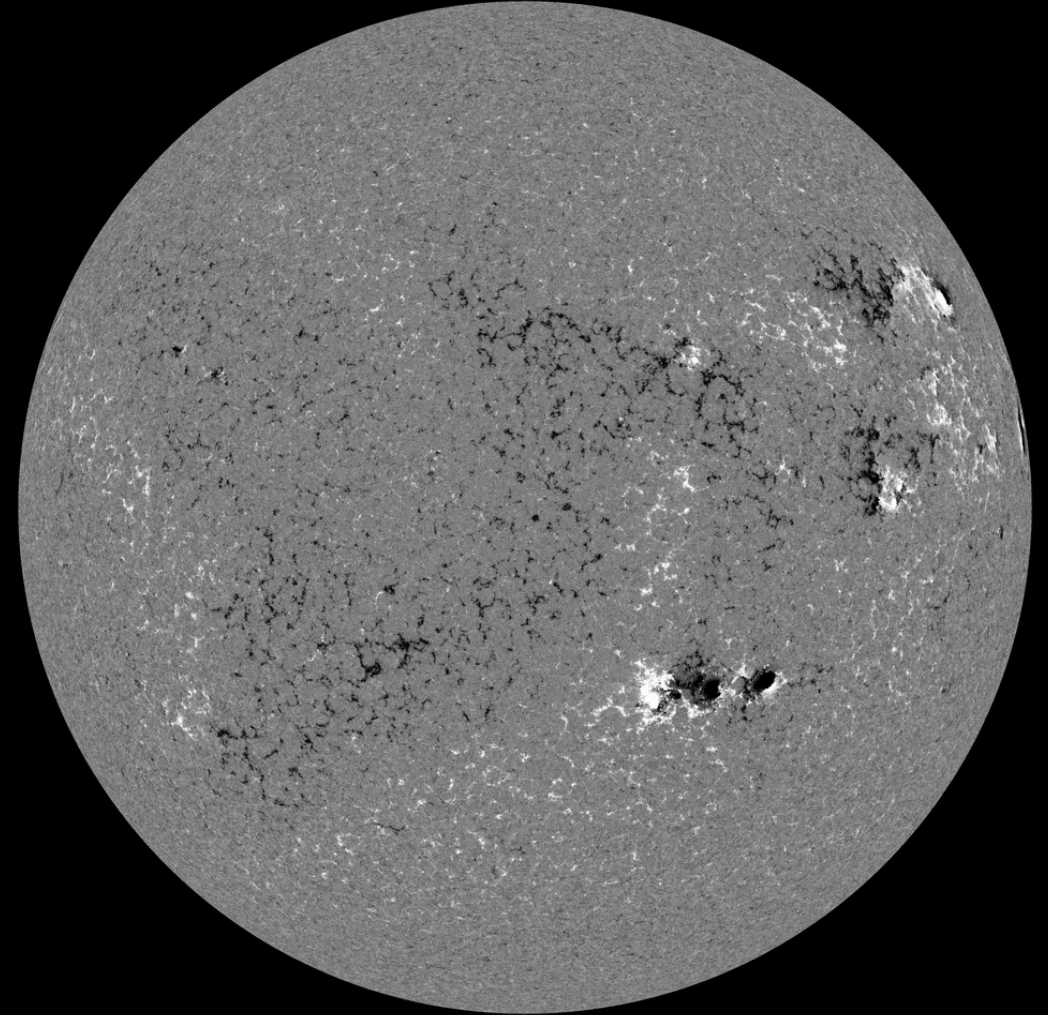
Solar active regions

SDO/HMI White Light 2025-09-10



SDO/HMI Quick-Look Continuum: 20250910_114500

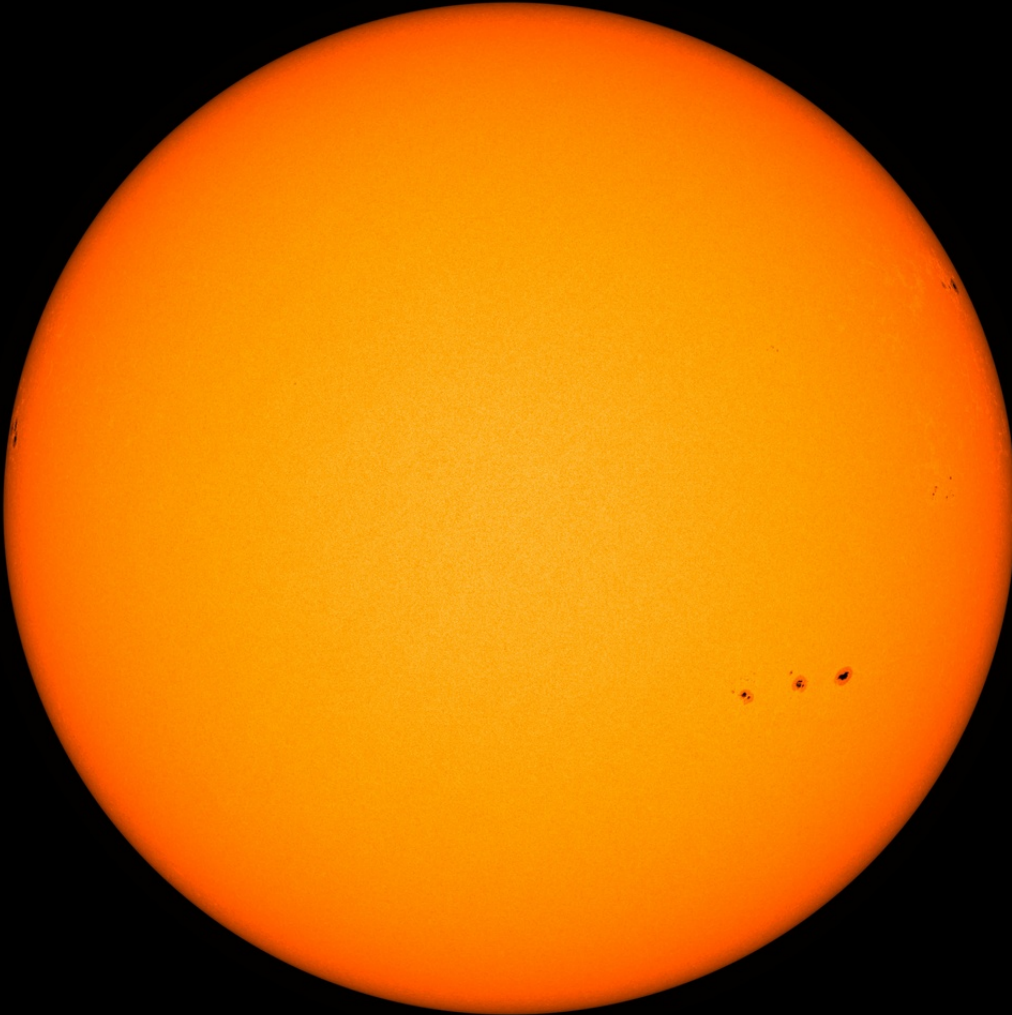
SDO/HMI Magnetogram 2025-09-10



SDO/HMI Quick-Look Magnetogram: 20250910_114500

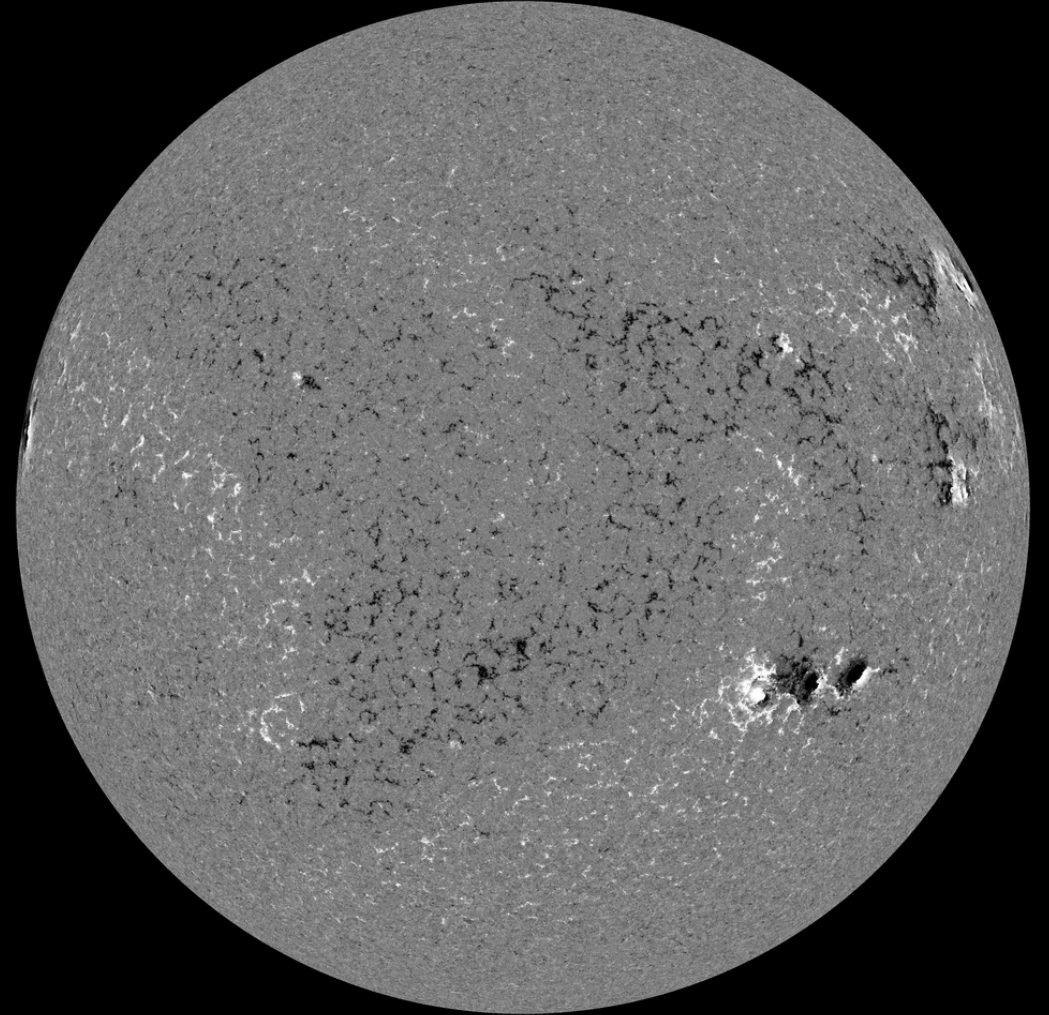
Solar active regions

SDO/HMI White Light 2025-09-11



SDO/HMI Quick-Look Continuum: 20250911_114500

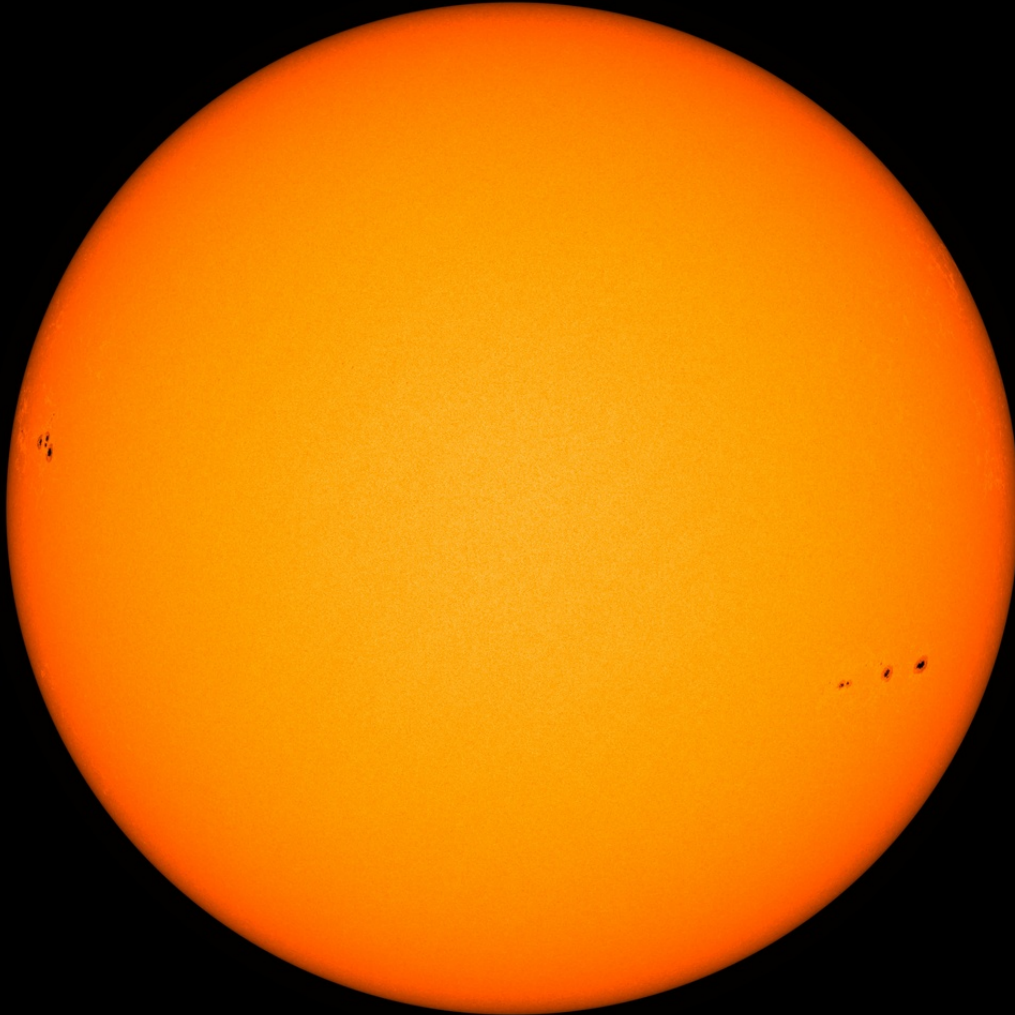
SDO/HMI Magnetogram 2025-09-11



SDO/HMI Quick-Look Magnetogram: 20250911_114500

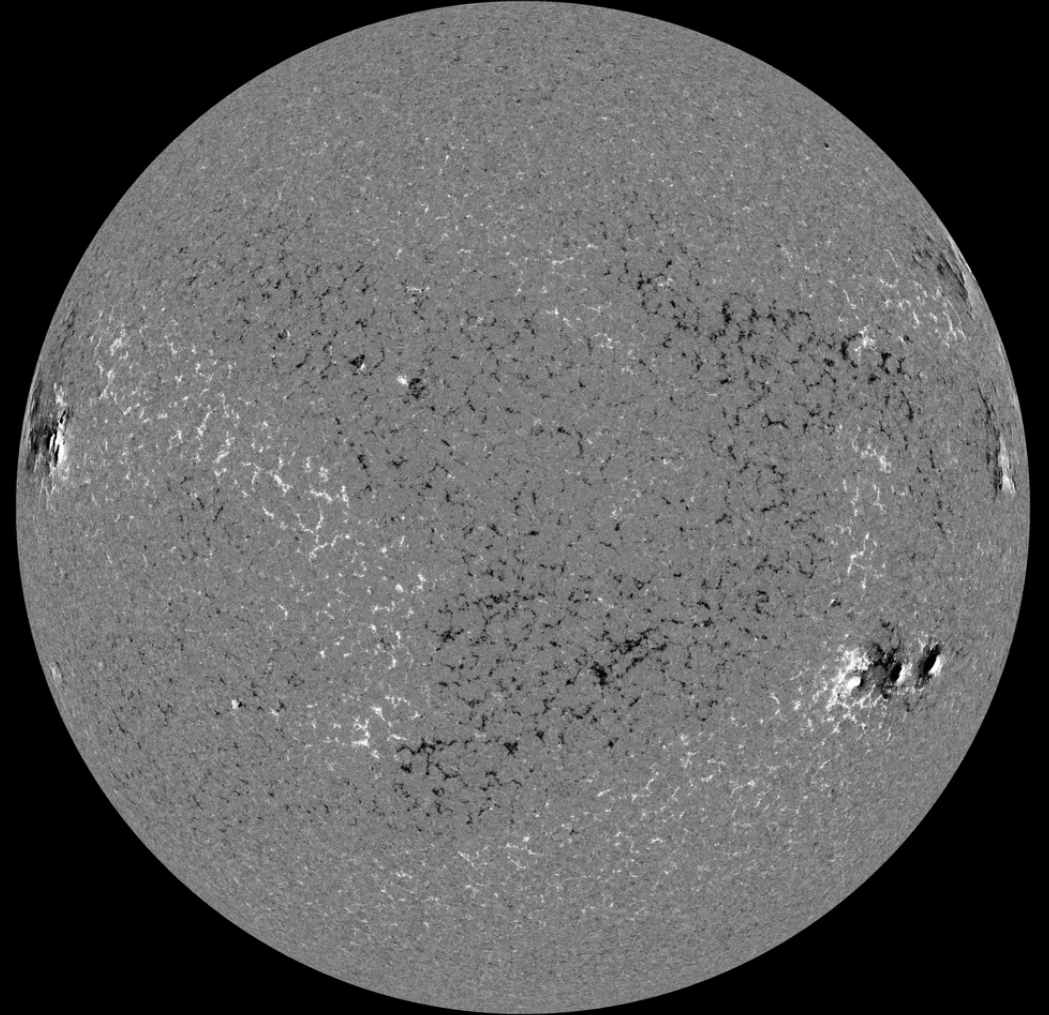
Solar active regions

SDO/HMI White Light 2025-09-12



SDO/HMI Quick-Look Continuum: 20250912_114500

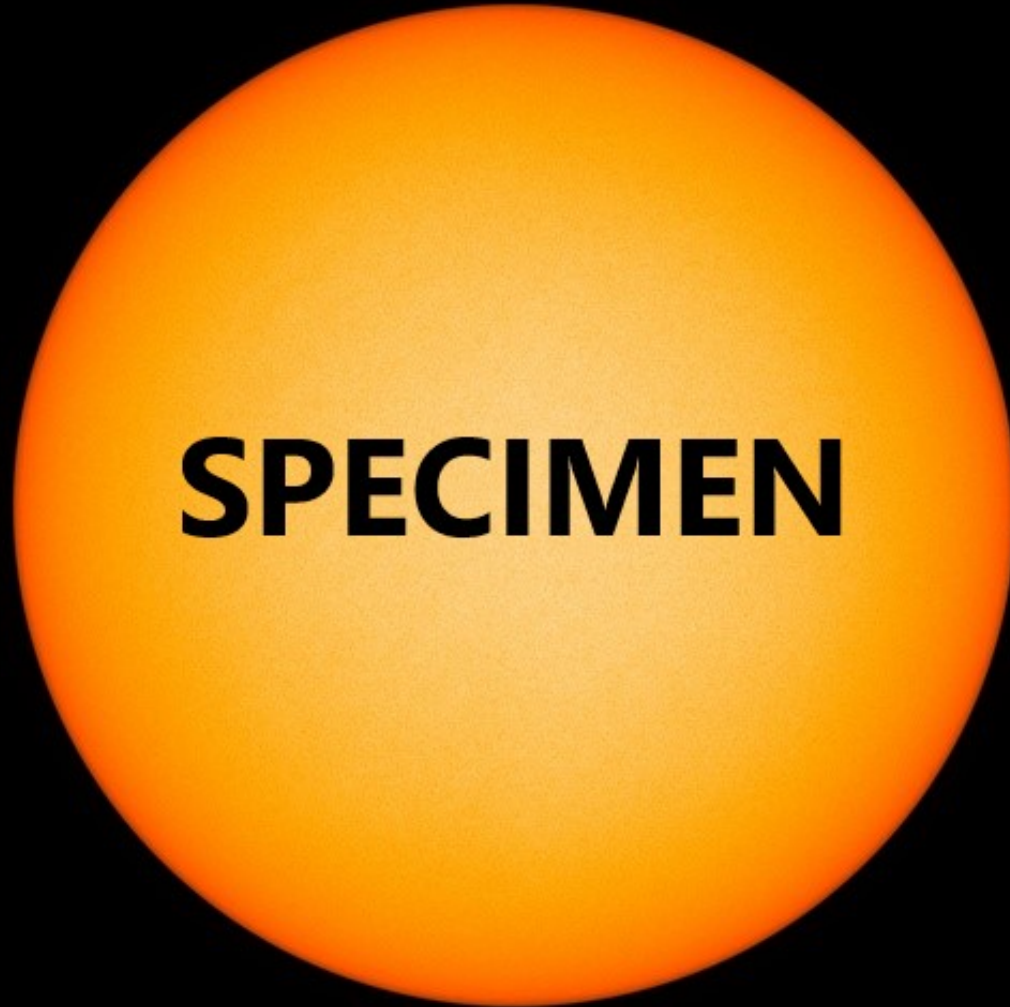
SDO/HMI Magnetogram 2025-09-12



SDO/HMI Quick-Look Magnetogram: 20250912_114500

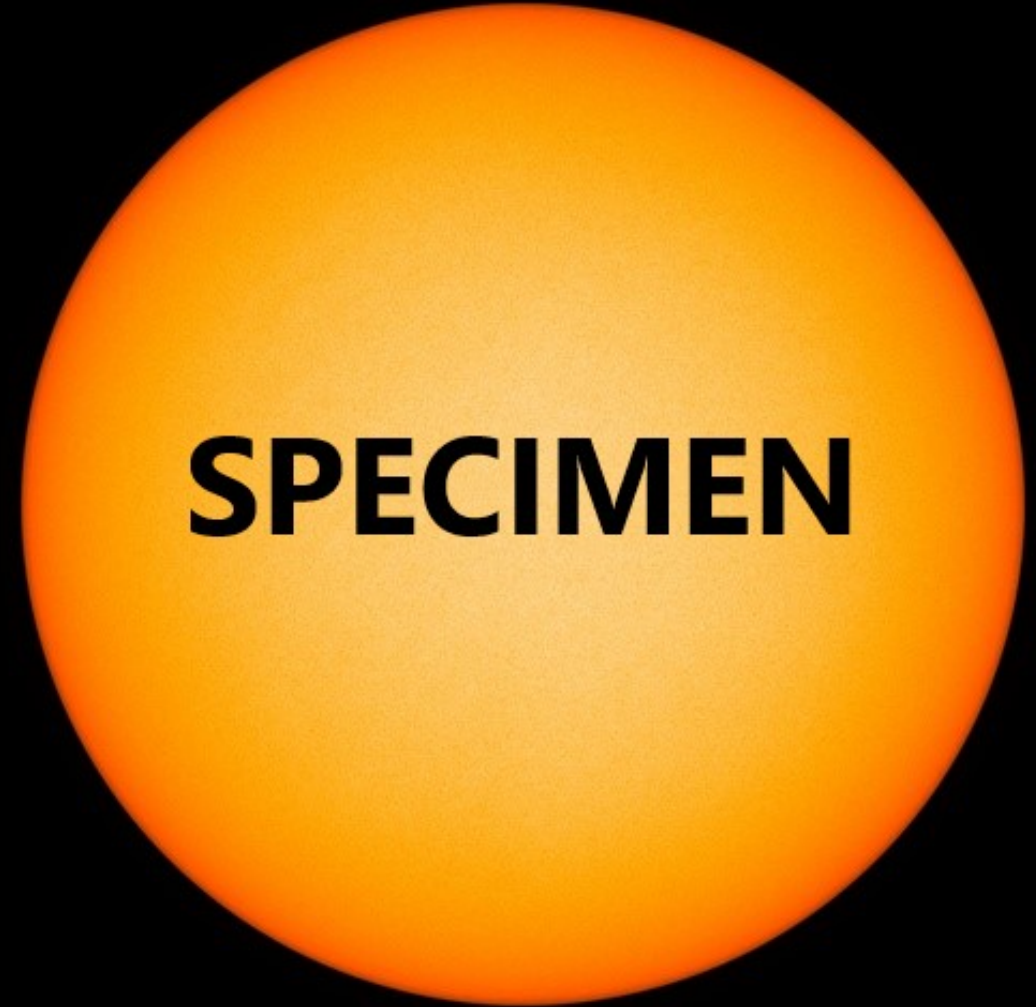
Solar active regions

SDO/HMI White Light 2025-09-13



SDO/HMI Quick-Look Continuum: 20250707_150000

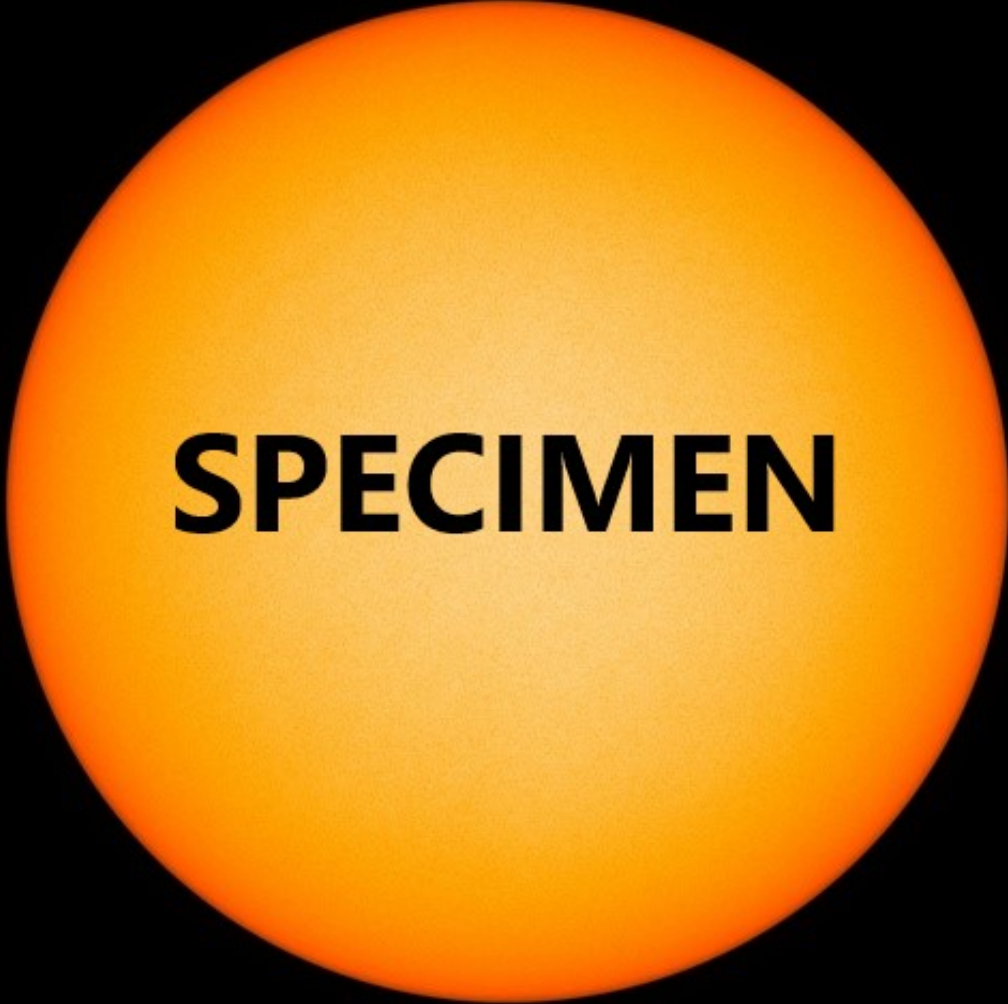
SDO/HMI Magnetogram 2025-09-13



SDO/HMI Quick-Look Continuum: 20250707_150000

Solar active regions

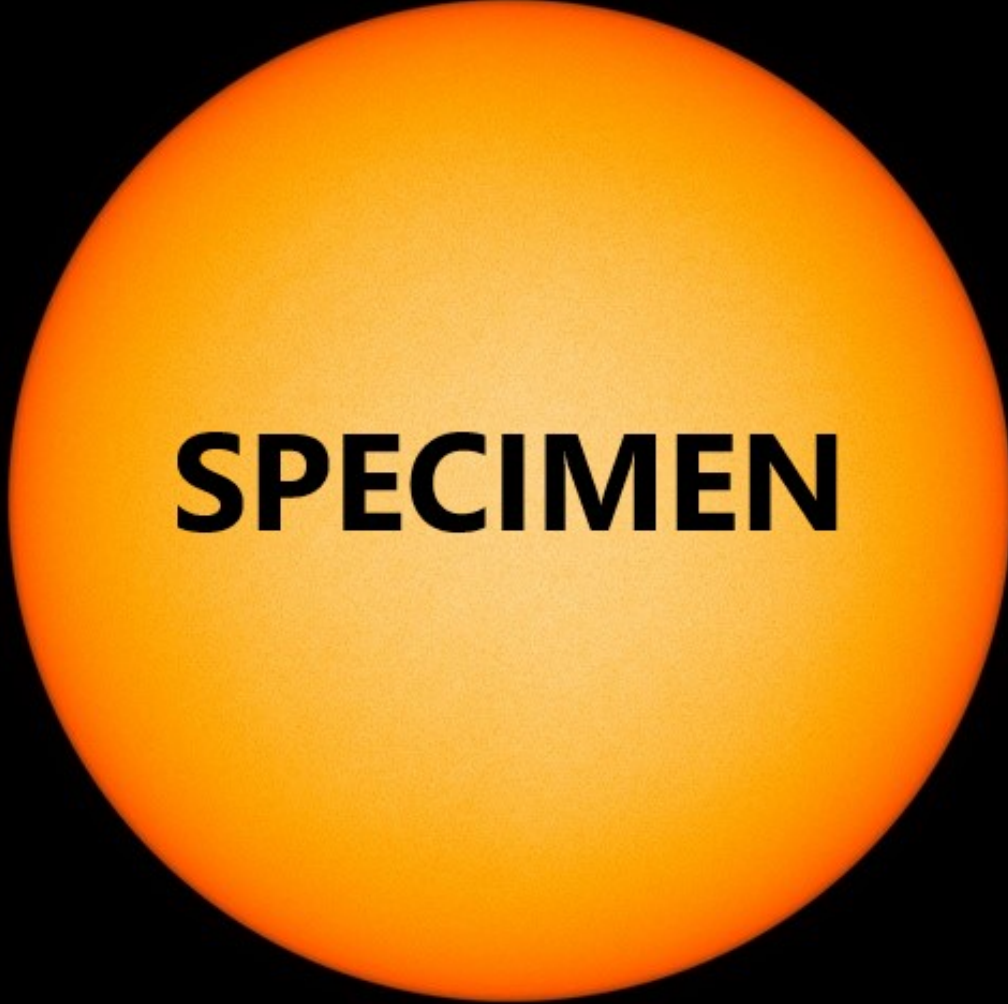
SDO/HMI White Light 2025-09-15



SPECIMEN

SDO/HMI Quick-Look Continuum: 20250707_150000

SDO/HMI Magnetogram 2025-09-15



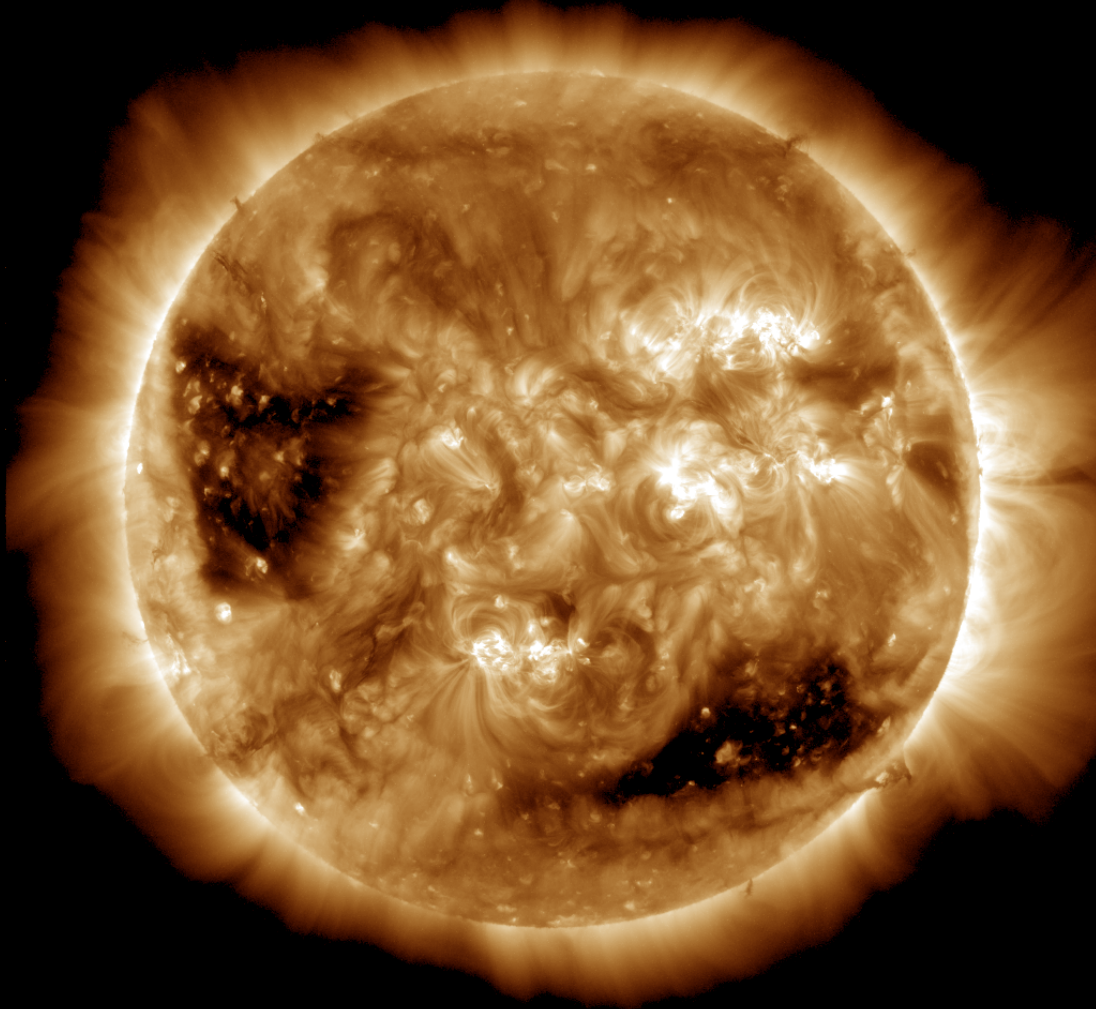
SPECIMEN

SDO/HMI Quick-Look Continuum: 20250707_150000

Coronal holes

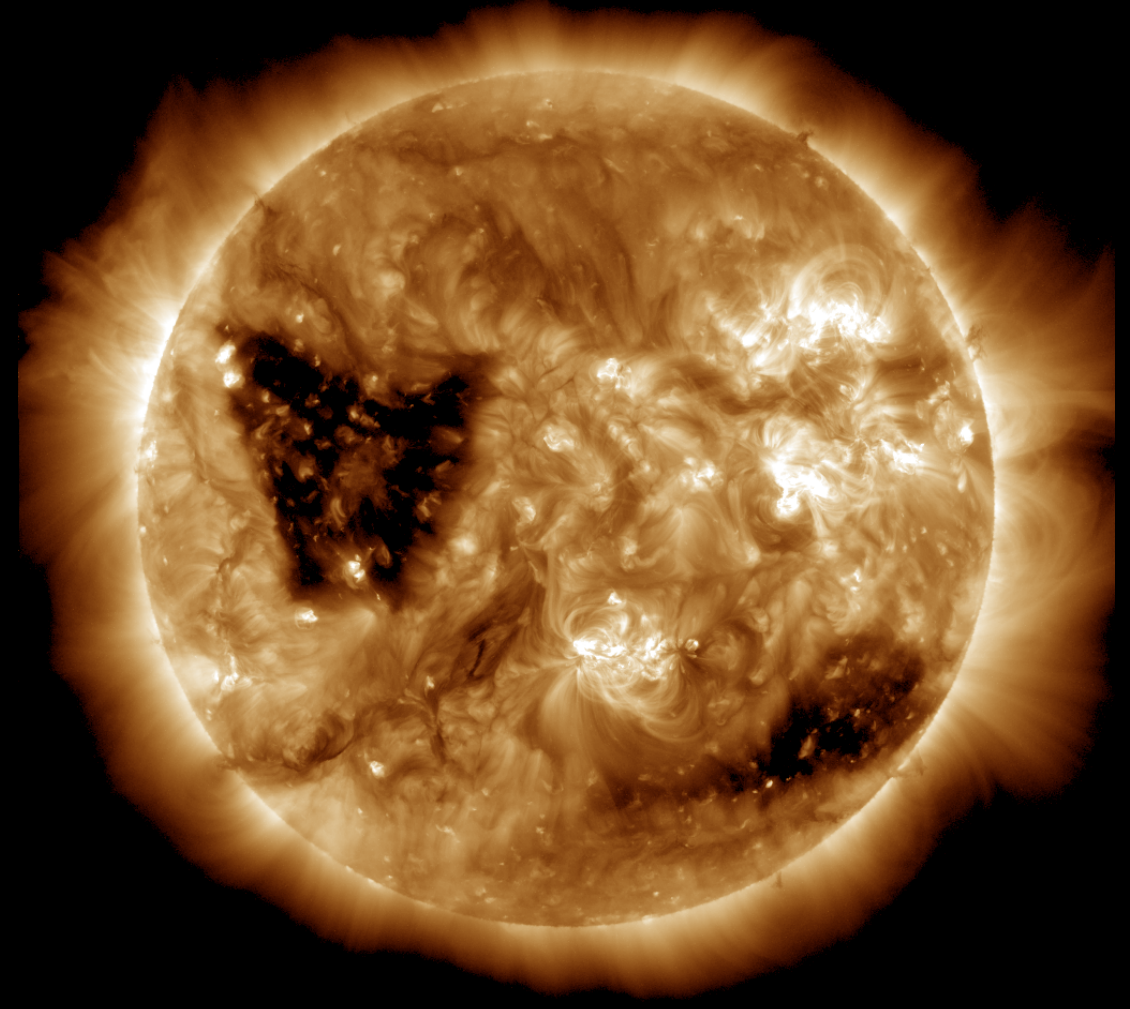
SDO/AIA 19.3 nm 2025-09-08

SDO/AIA AIA 193Å 2025-09-08T12:00:05.846



SDO/AIA 19.3 nm 2025-09-09

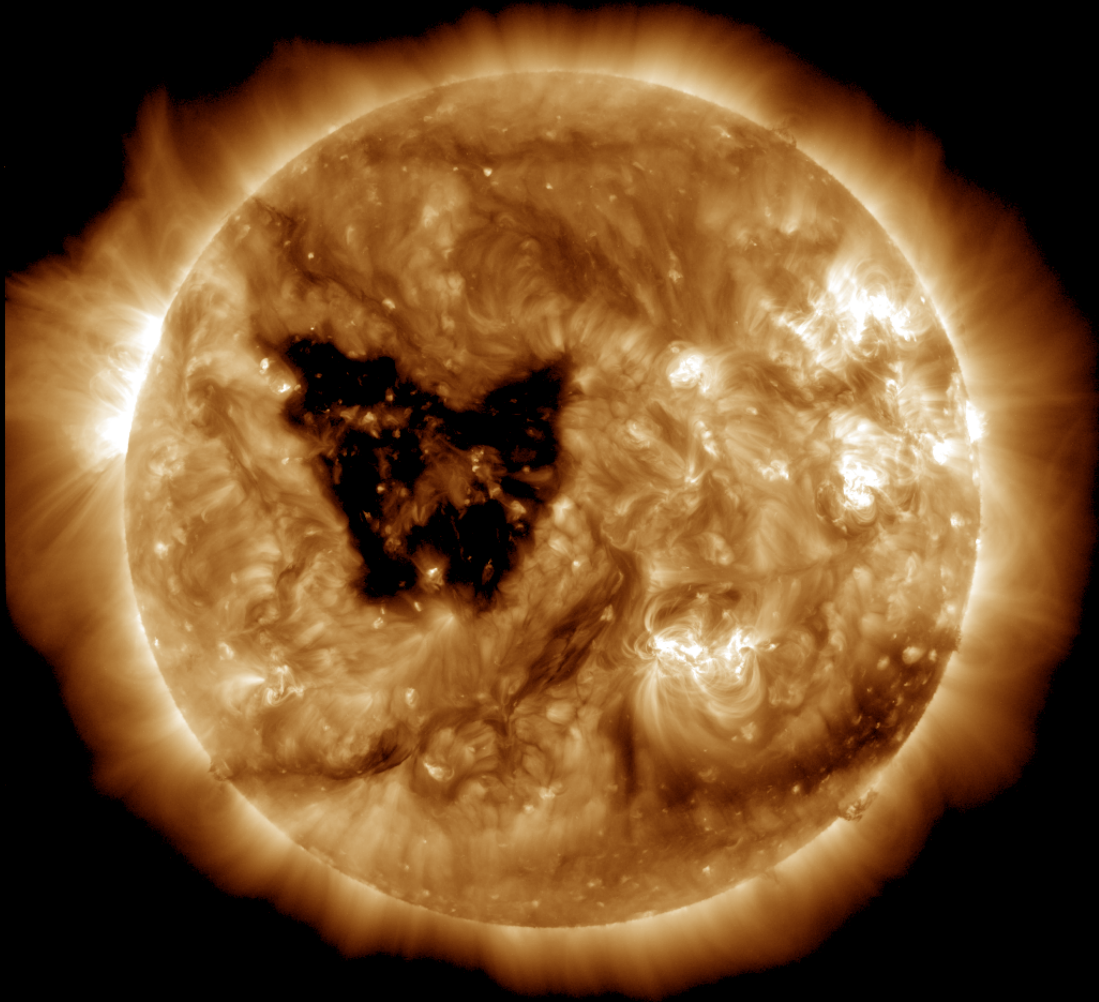
SDO/AIA AIA 193Å 2025-09-09T12:00:05.843



Coronal holes

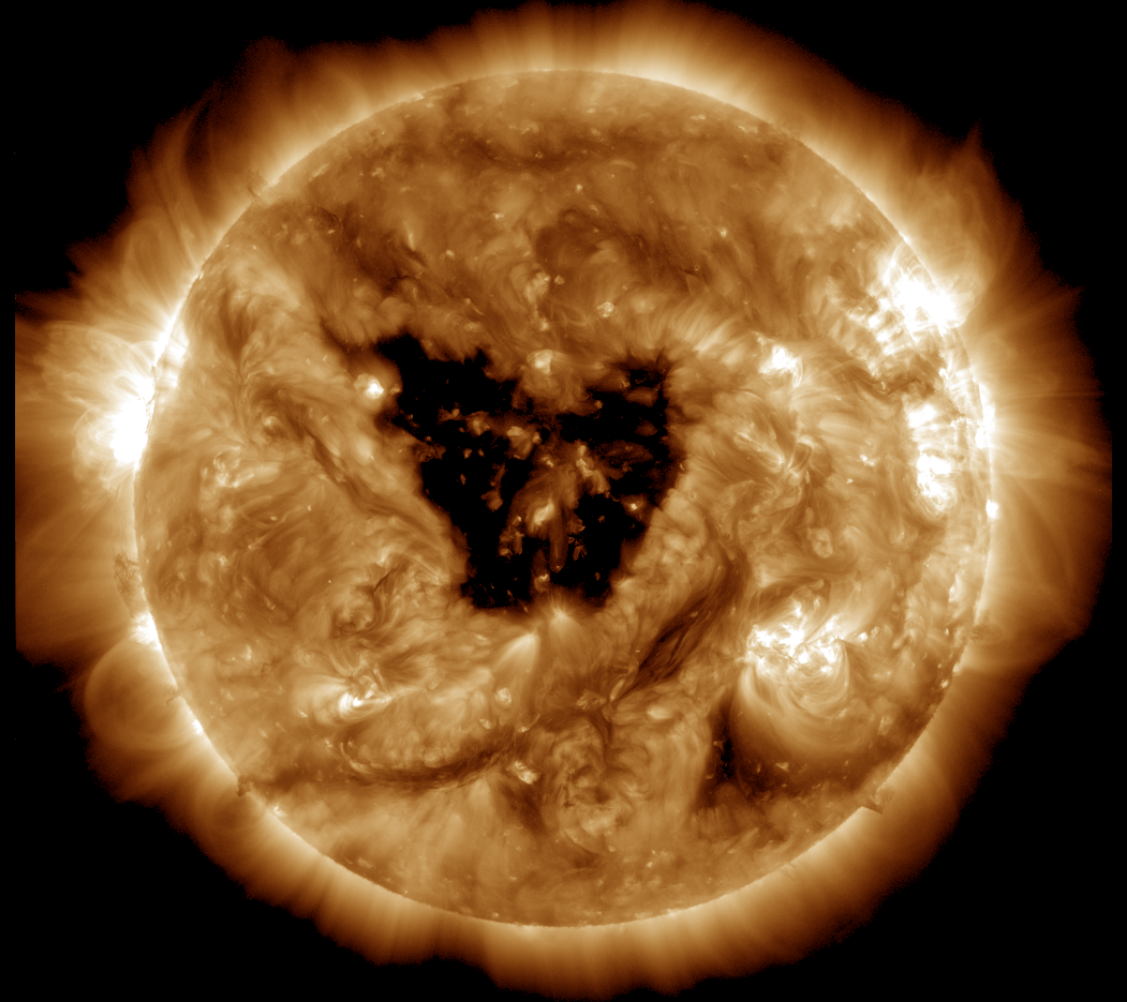
SDO/AIA 19.3 nm 2025-09-10

SDO/AIA AIA 193Å 2025-09-10T12:00:05.846



SDO/AIA 19.3 nm 2025-09-11

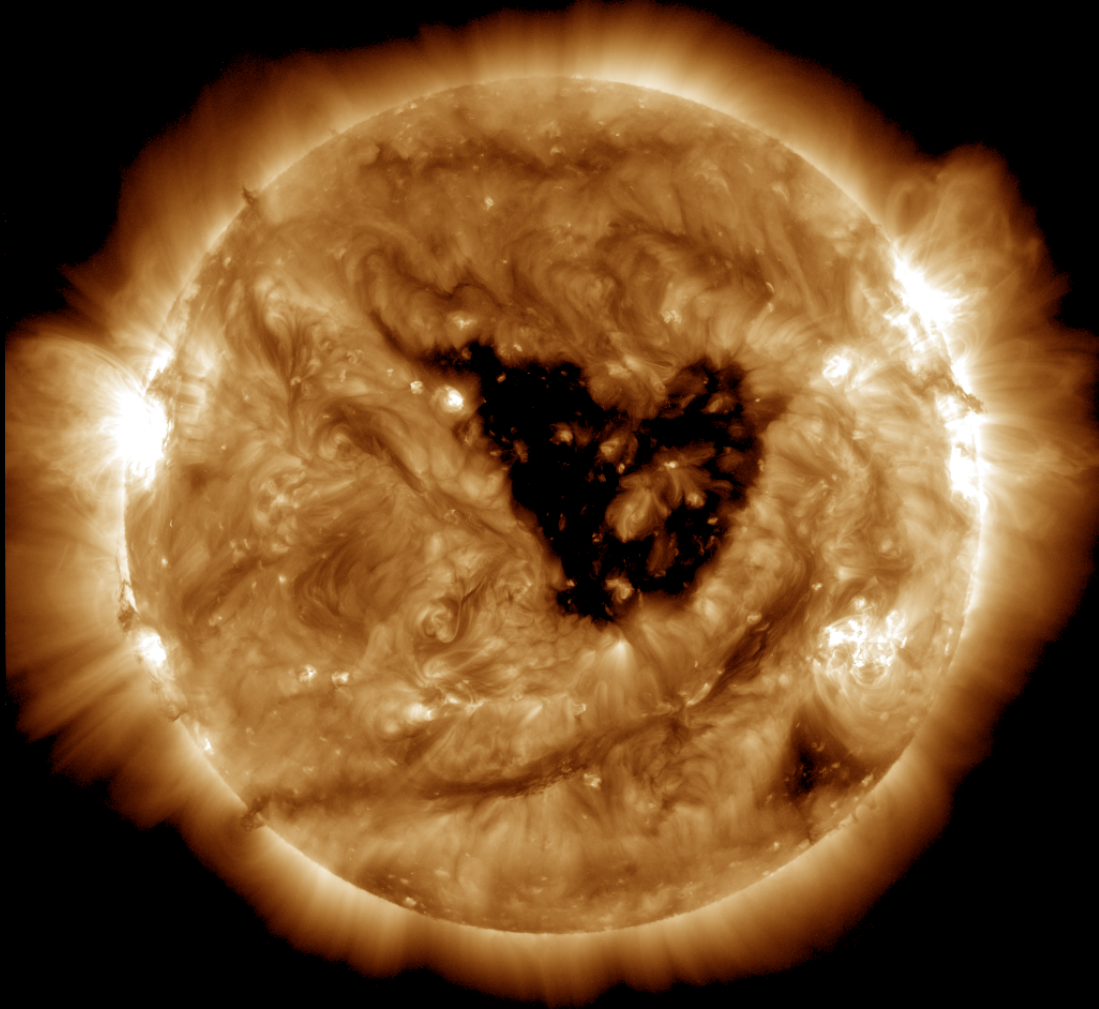
SDO/AIA AIA 193Å 2025-09-11T12:00:05.843



Coronal holes

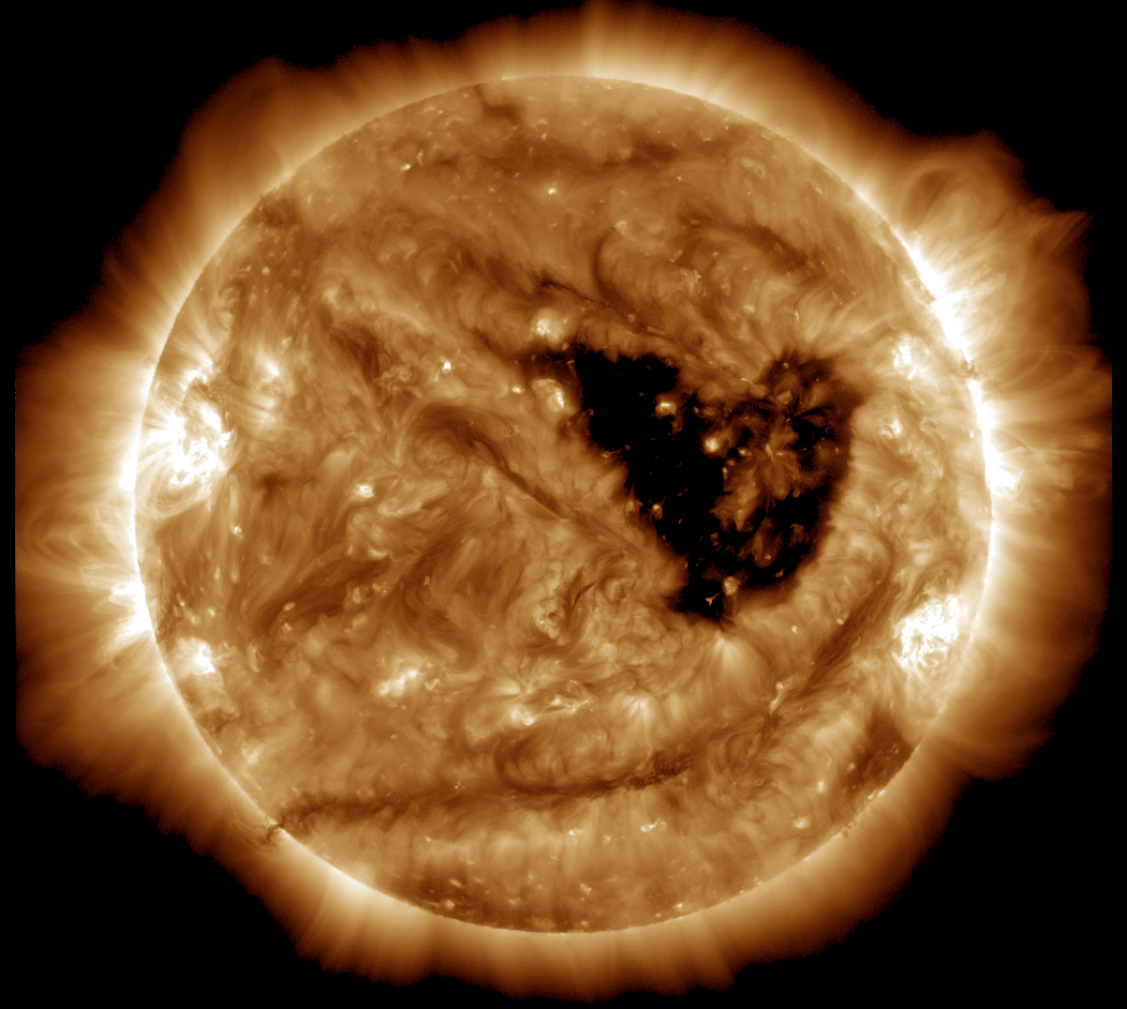
SDO/AIA 19.3 nm 2025-09-12

SDO/AIA AIA 193Å 2025-09-12T12:00:17.843



SDO/AIA 19.3 nm 2025-09-13

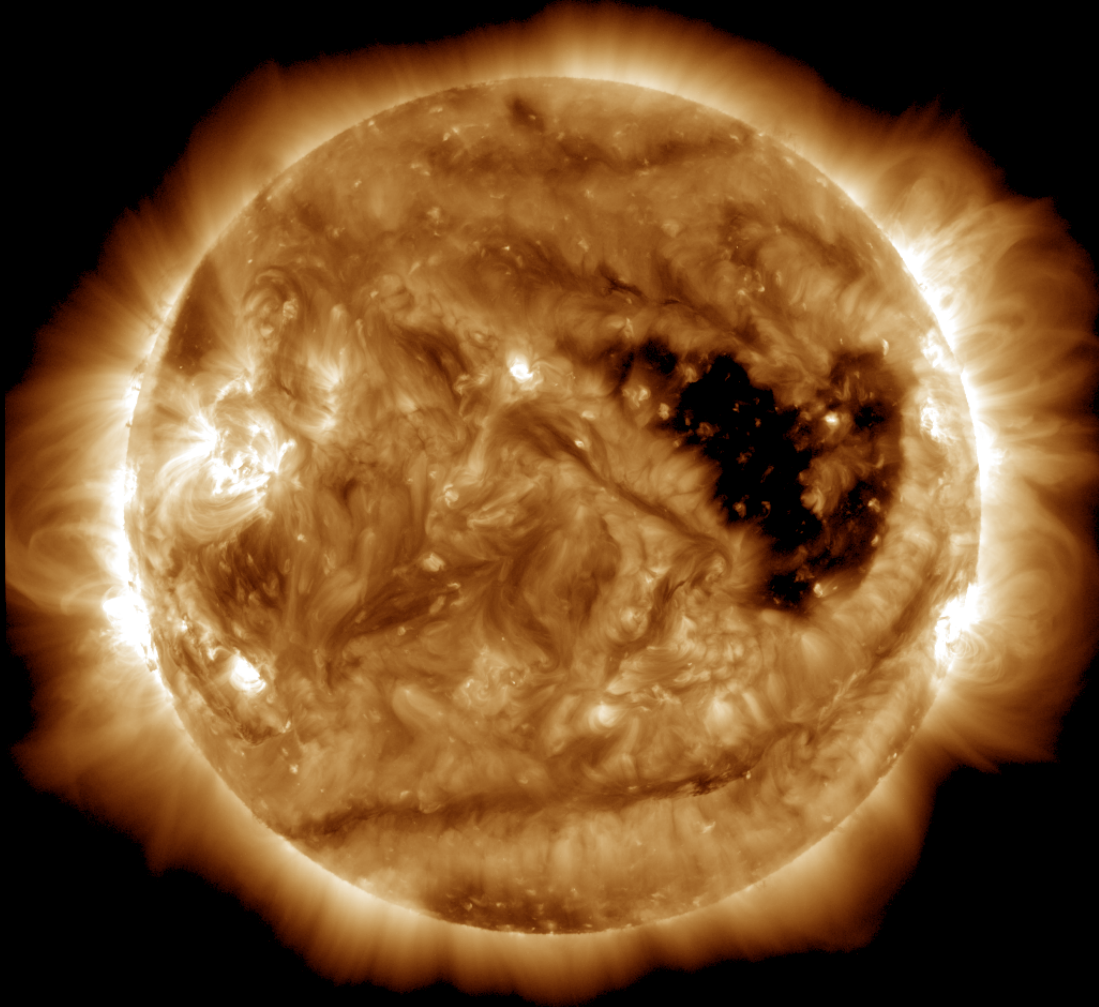
SDO/AIA AIA 193Å 2025-09-13T12:00:05.843



Coronal holes

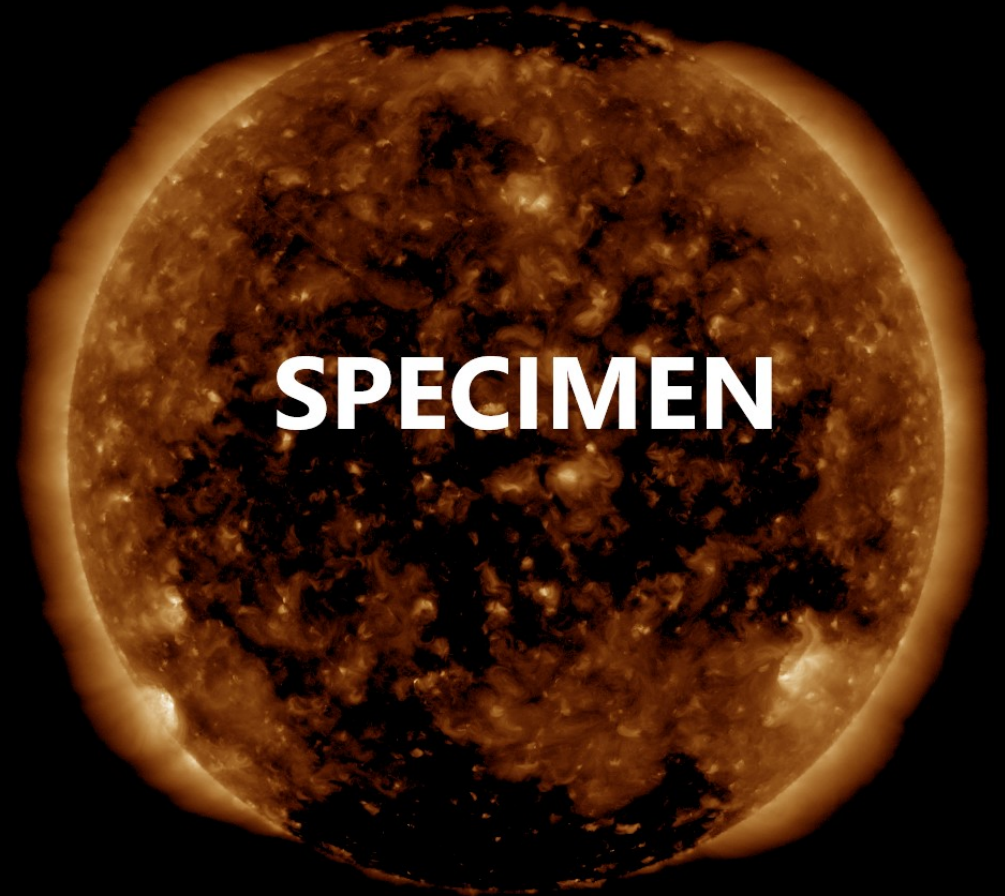
SDO/AIA 19.3 nm 2025-09-14

SDO/AIA AIA 193Å 2025-09-14T12:00:05.843



SDO/AIA 19.3 nm 2025-09-15

SDO/AIA AIA 193Å 2020-01-01T12:03:05.84



SPECIMEN

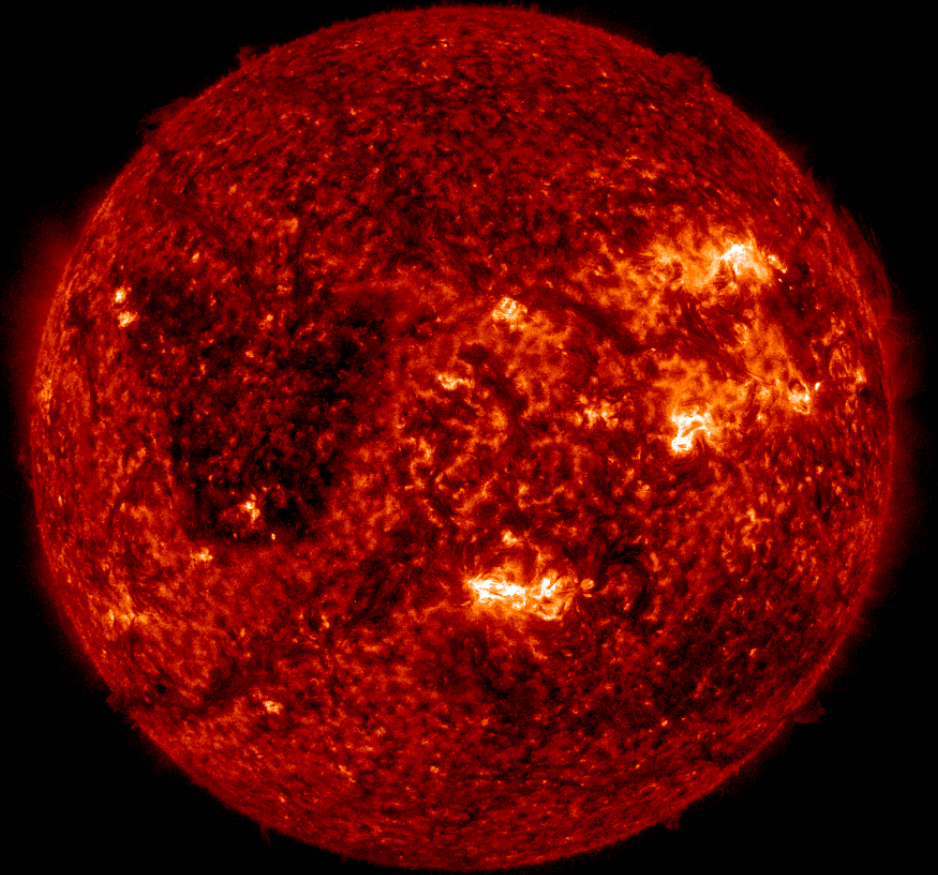
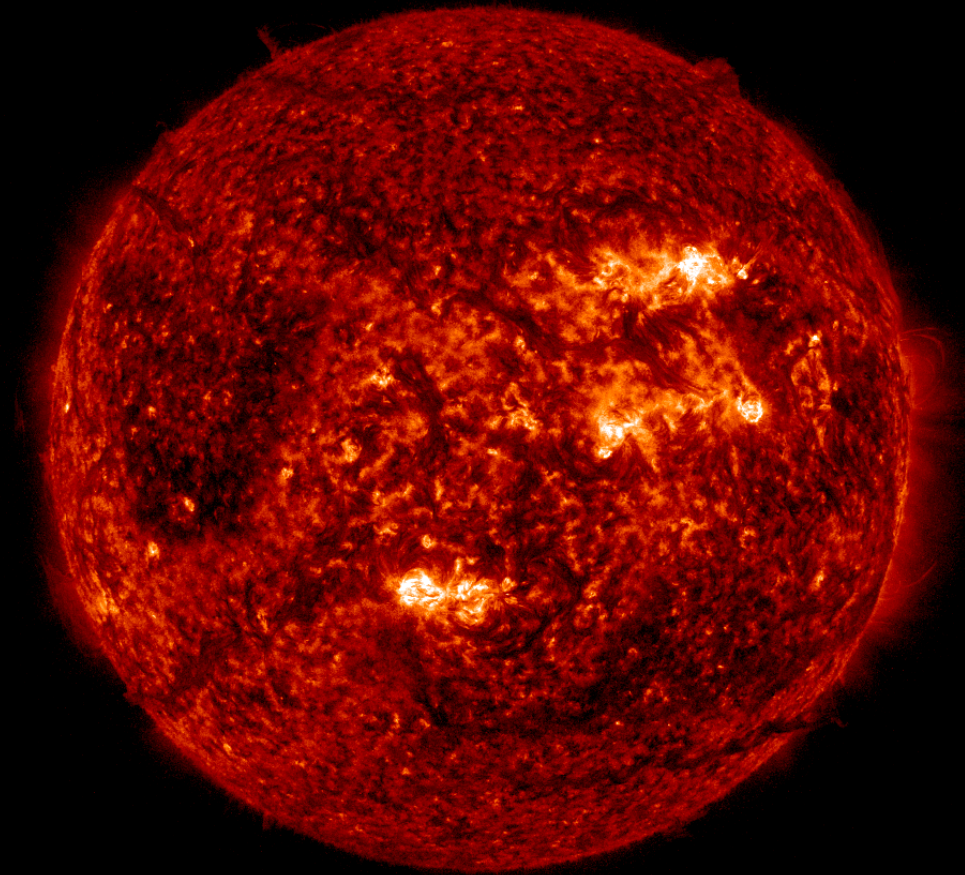
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SDO/AIA AIA 304Å 2025-09-08T12:00:06.584

SDO/AIA 30.4 nm 2025-09-09

SDO/AIA AIA 304Å 2025-09-09T12:00:06.581



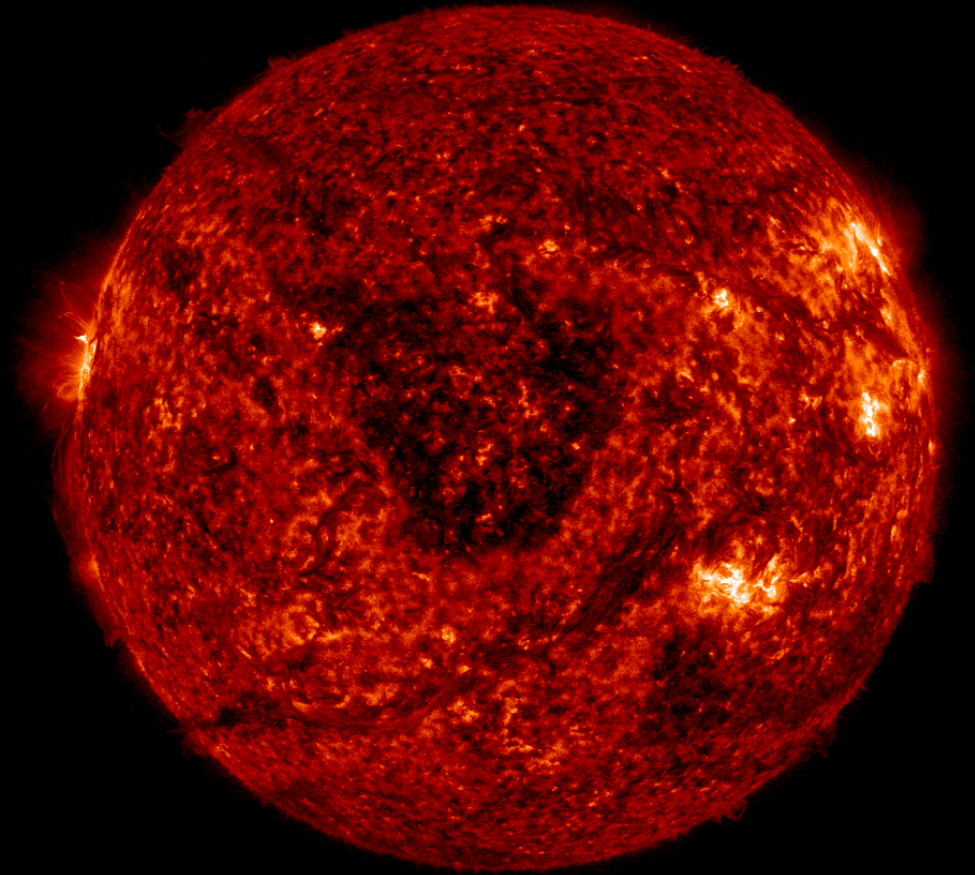
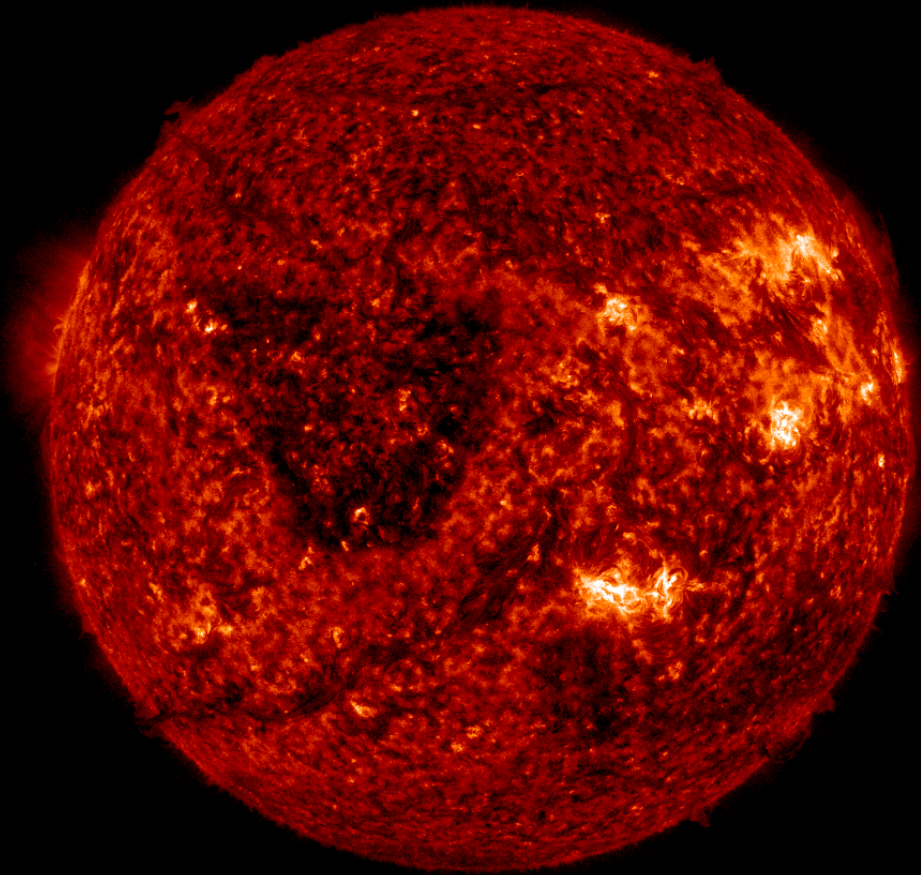
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SDO/AIA 30.4 nm 2025-09-10

SDO/AIA AIA 304Å 2025-09-10T12:00:06.580

SDO/AIA 30.4 nm 2025-09-11

SDO/AIA AIA 304Å 2025-09-11T12:00:06.580



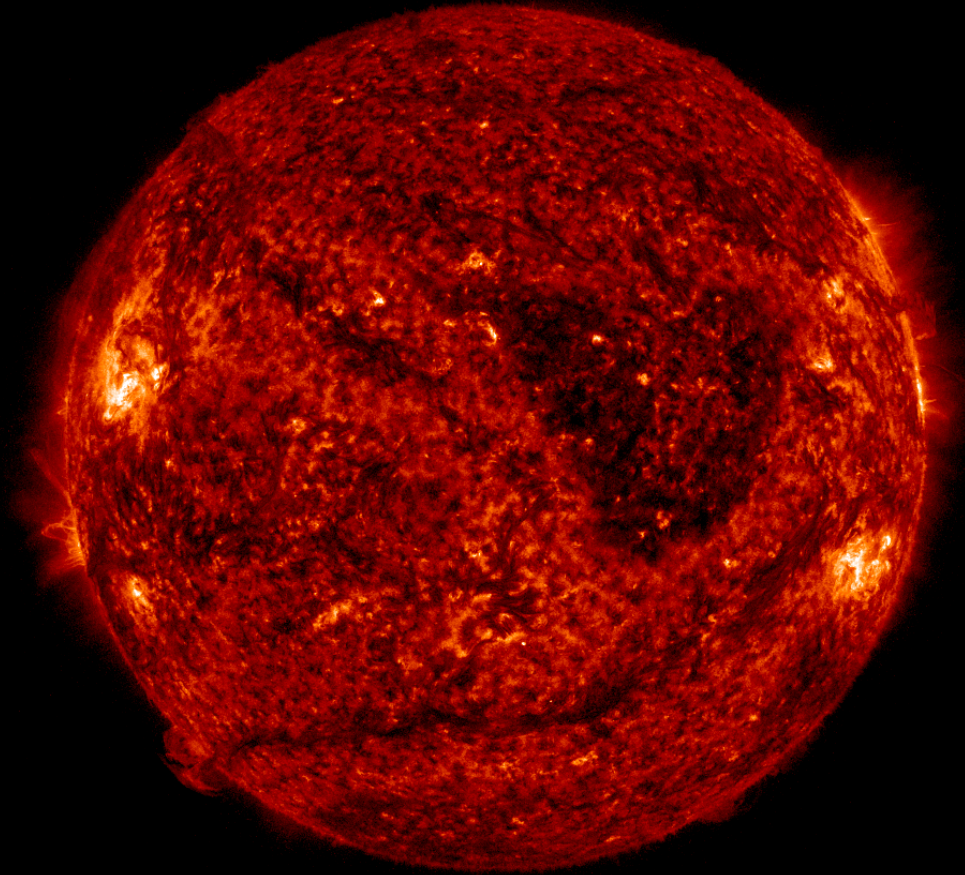
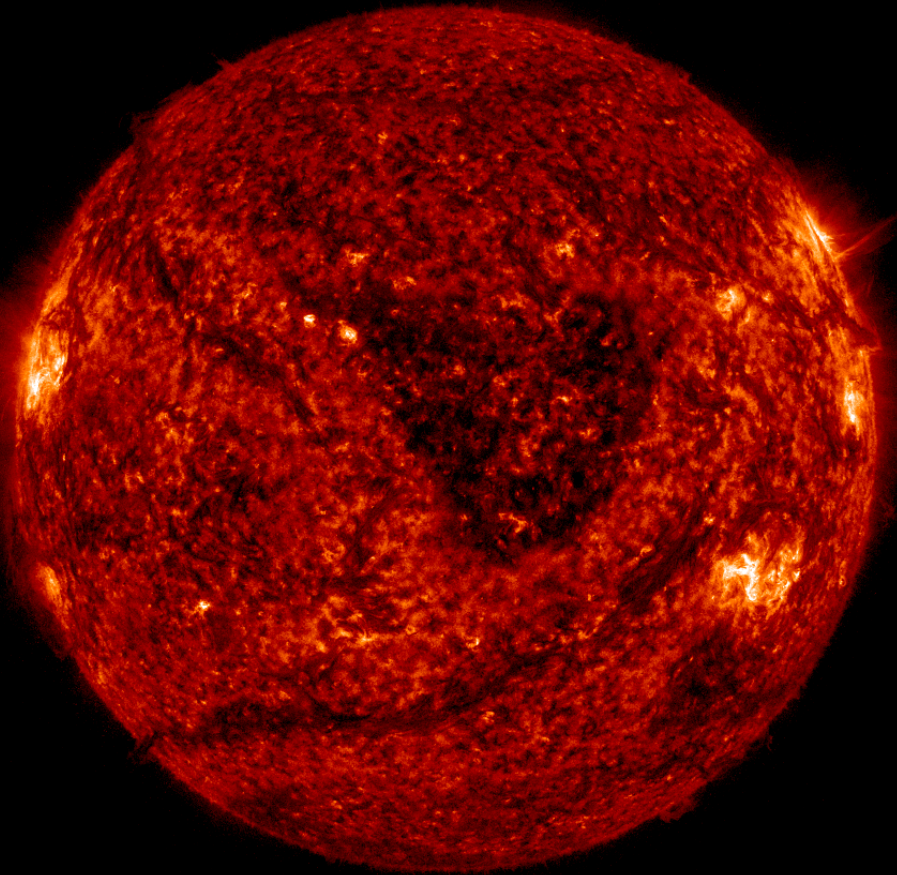
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SDO/AIA AIA 304Å 2025-09-12T12:00:18.591

SDO/AIA 30.4 nm 2025-09-13

SDO/AIA AIA 304Å 2025-09-13T12:00:06.573



Filaments

SDO/AIA 30.4 nm 2025-09-14

SDO/AIA AIA 304Å 2025-09-14T12:00:06.580

SDO/AIA 30.4 nm 2025-09-15

SDO/AIA AIA 304Å 2020-01-01T12:03:06.58

SPECIMEN