

SIDC Space Weather Briefing

25 August 2024-01 September 2024

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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 2024-08-25 12:00 to 2024-09-01 23:59

Active regions	19 Active Regions: NOAA AR 3790, 3792 – 3794, 3796, 3798 – 3811
Flares	# C-class flare: 54 # M-class flare: 13 # X-class flare: 0
Coronal Holes	Three positive polarity CHs
CMEs	Halo CME at 04:12 UTC on August 28 and at 12:00 UTC on September 1

Proton flux	Started to rise following M5.5 flare, but remained below 10pfu threshold
Electron flux	Below event threshold

Solar wind and geomagnetic conditions

ICMEs	07:32 UTC on August 27 (CME at 02:00 UTC on August 23)
Solar wind conditions	B : 0.77 - 20.26 nT //Bz: -15.74 nT to 19.02 nT //Speed: 233.0 - 498.4km/s
Geomagnetic conditions	max K _{Bel} : 4.0, max K _p (NOAA): 6-, Moderate Storm conditions globally

All Quiet Alert: Not all quiet

Solar Activity

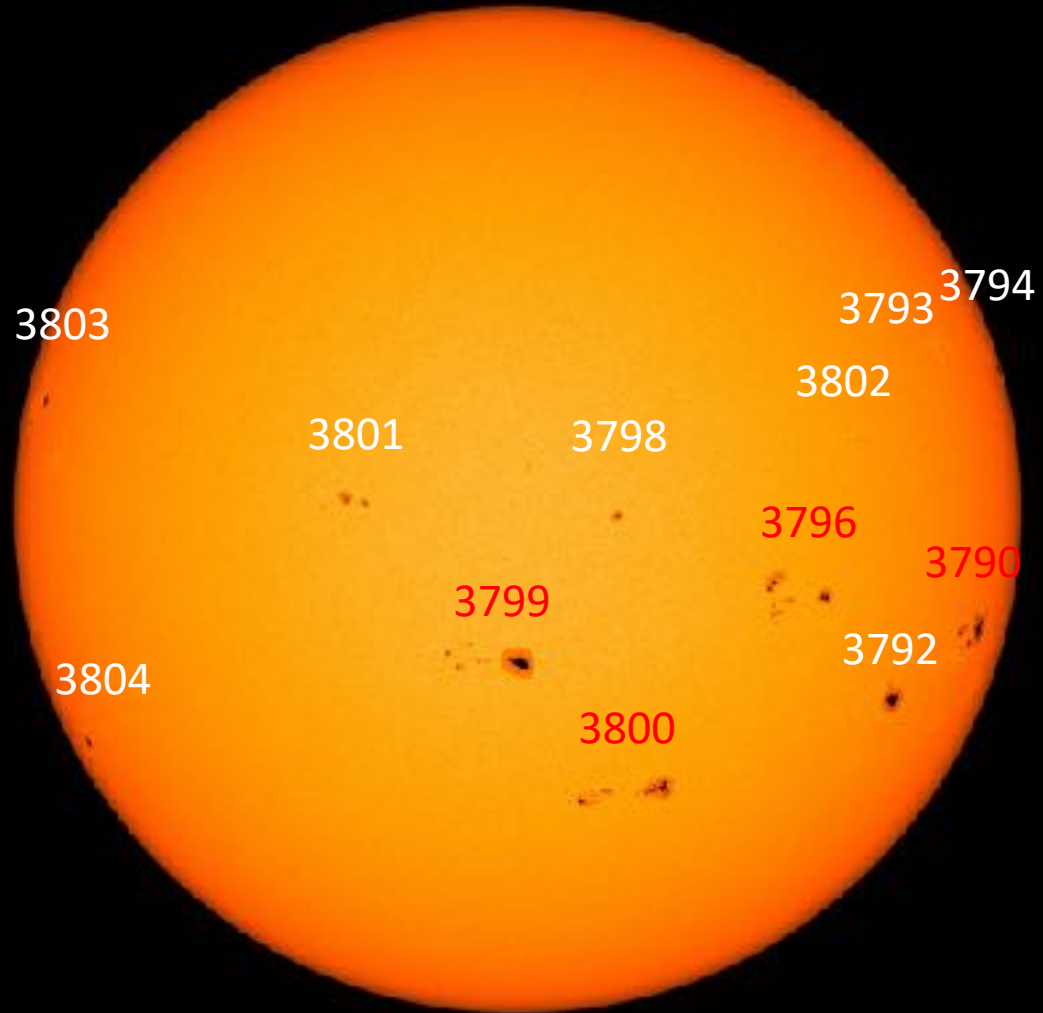


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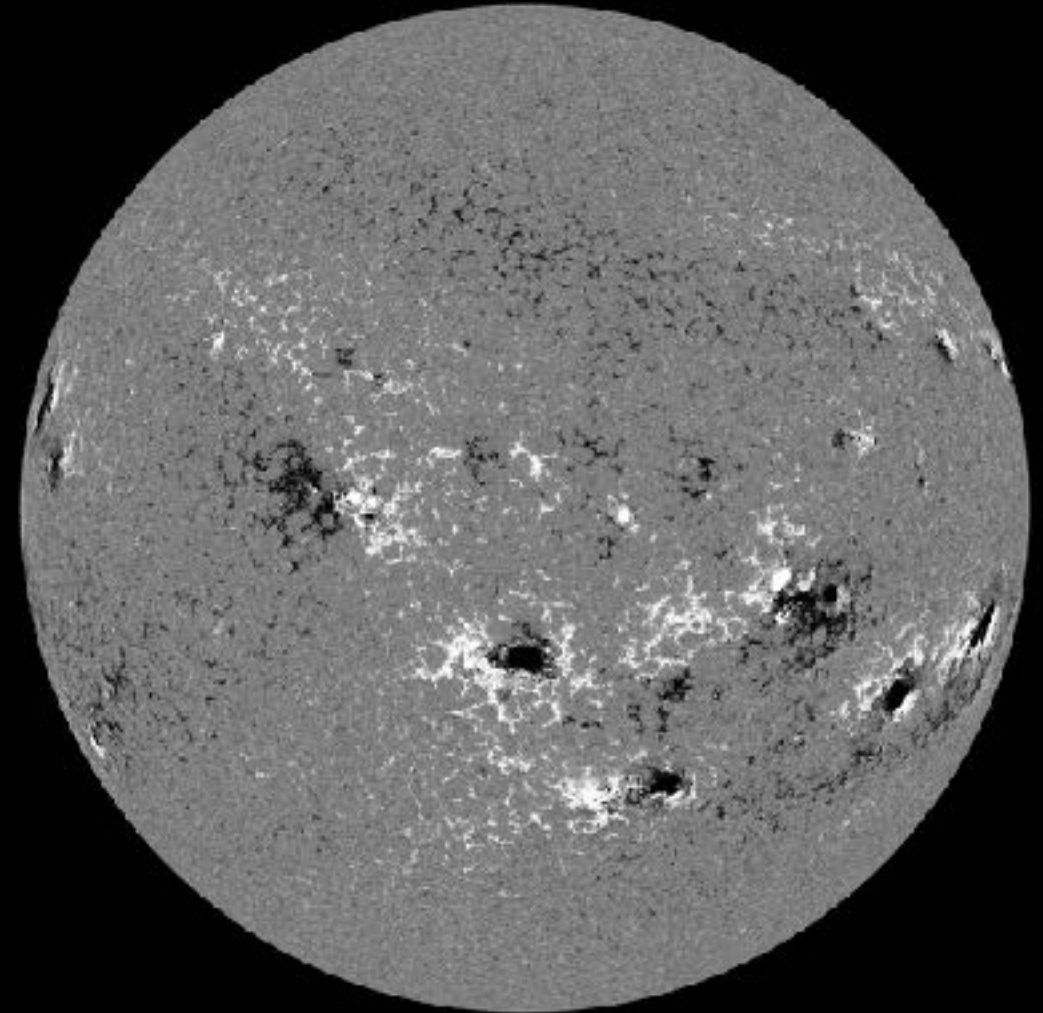
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Solar active regions

SDO/HMI White Light 2024-08-26

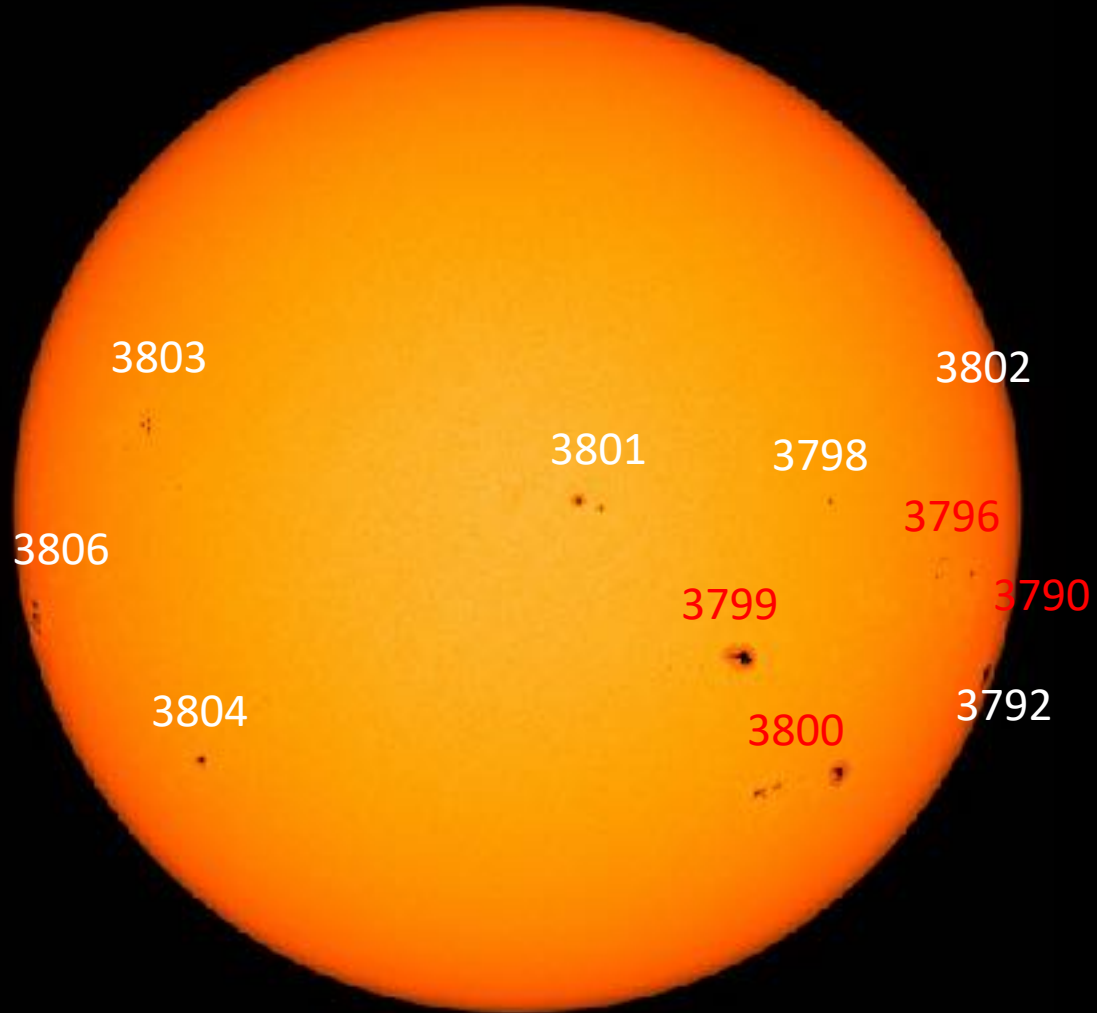


SDO/HMI Magnetogram 2024-08-26

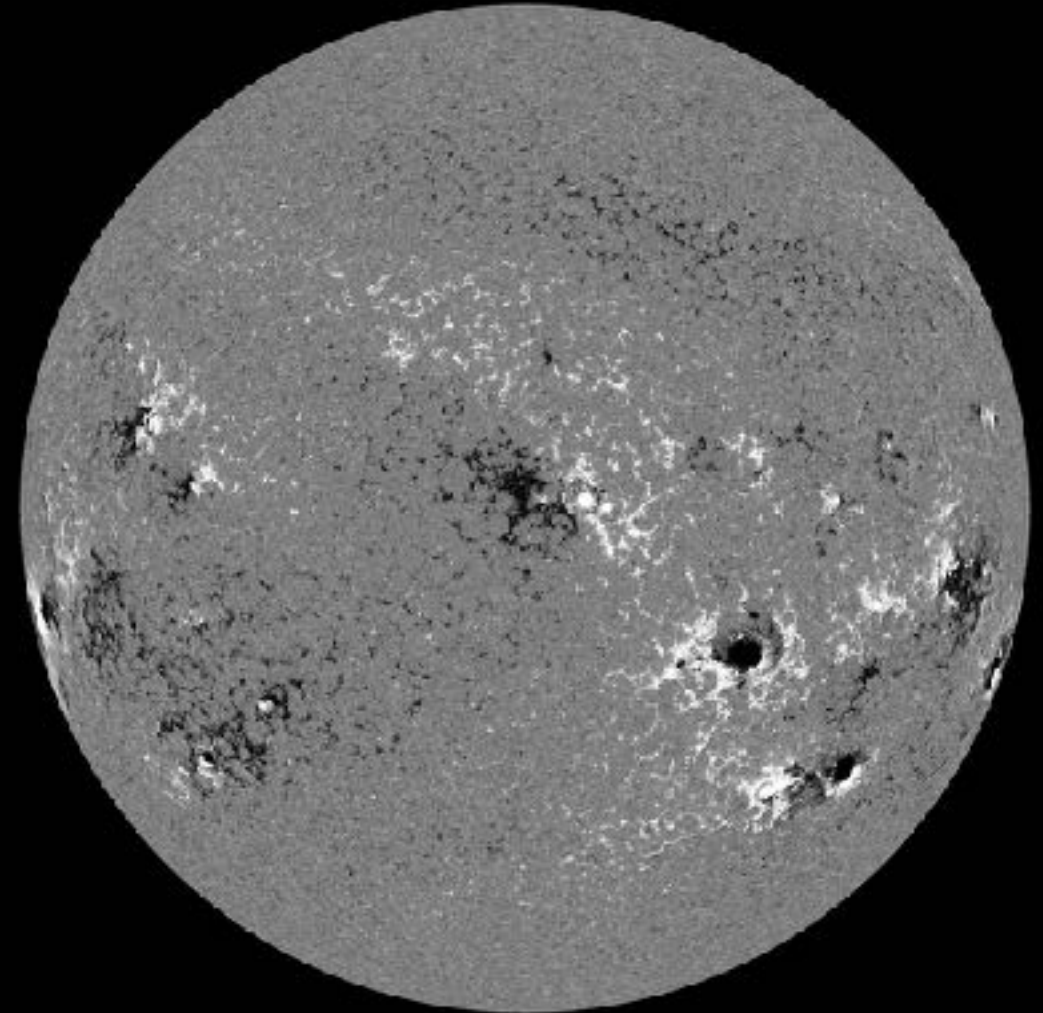


Solar active regions

SDO/HMI White Light 2024-08-28

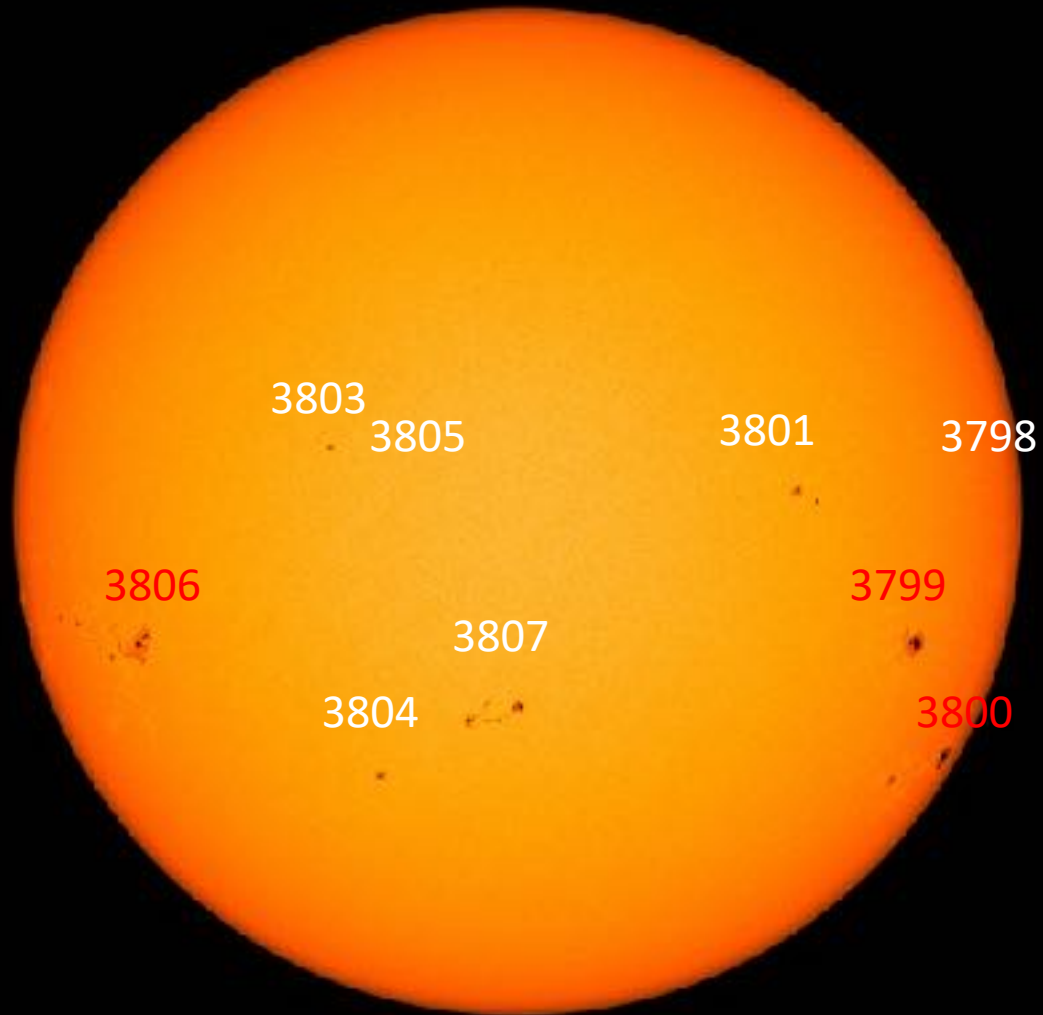


SDO/HMI Magnetogram 2024-08-28

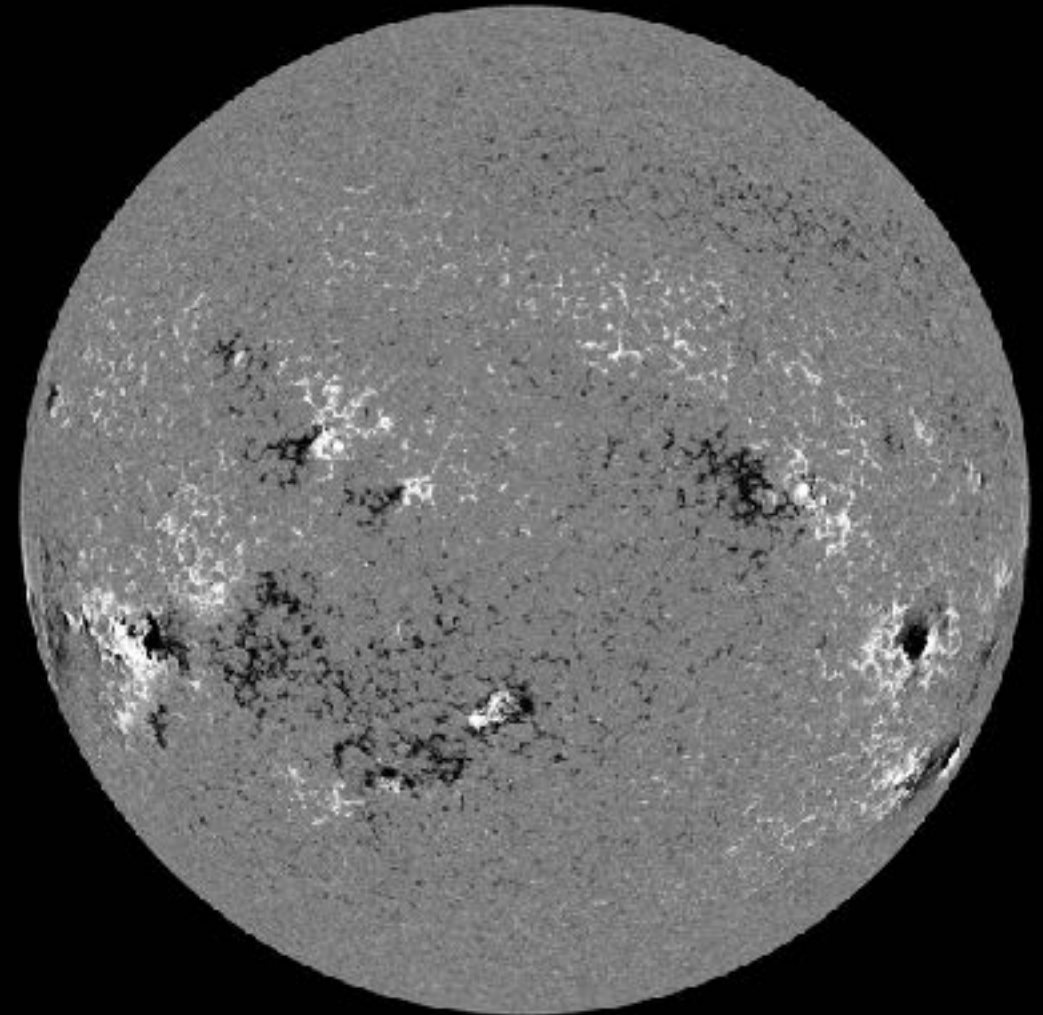


Solar active regions

SDO/HMI White Light 2024-08-30

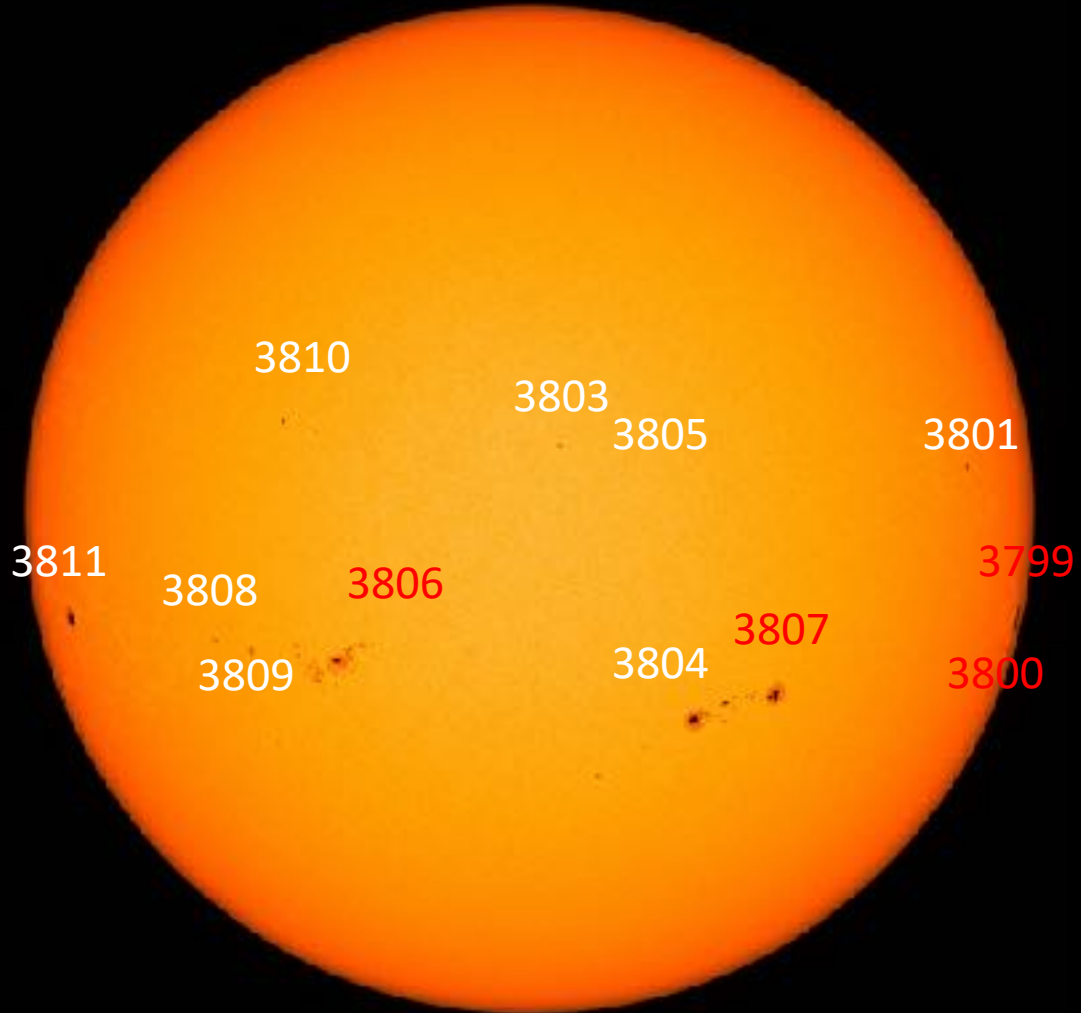


SDO/HMI Magnetogram 2024-08-30

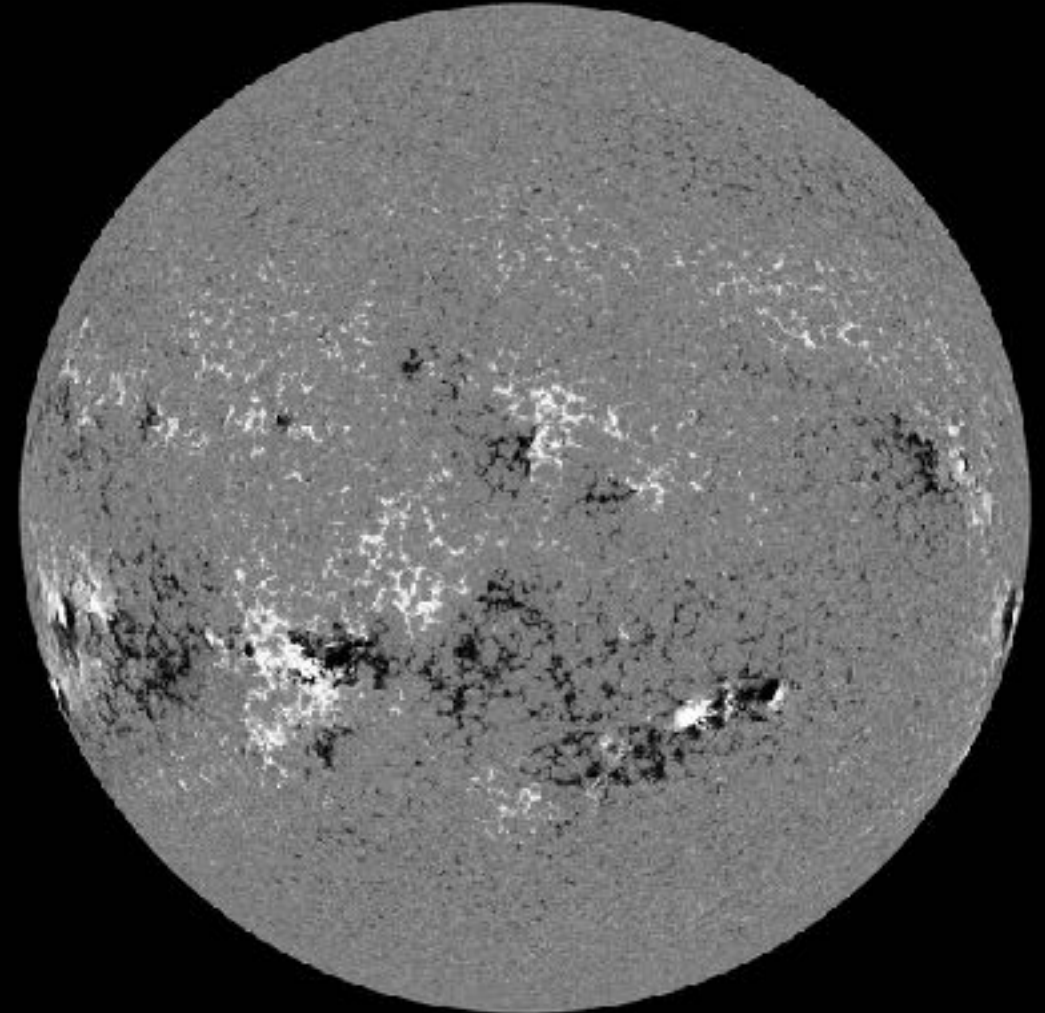


Solar active regions

SDO/HMI White Light 2024-09-01



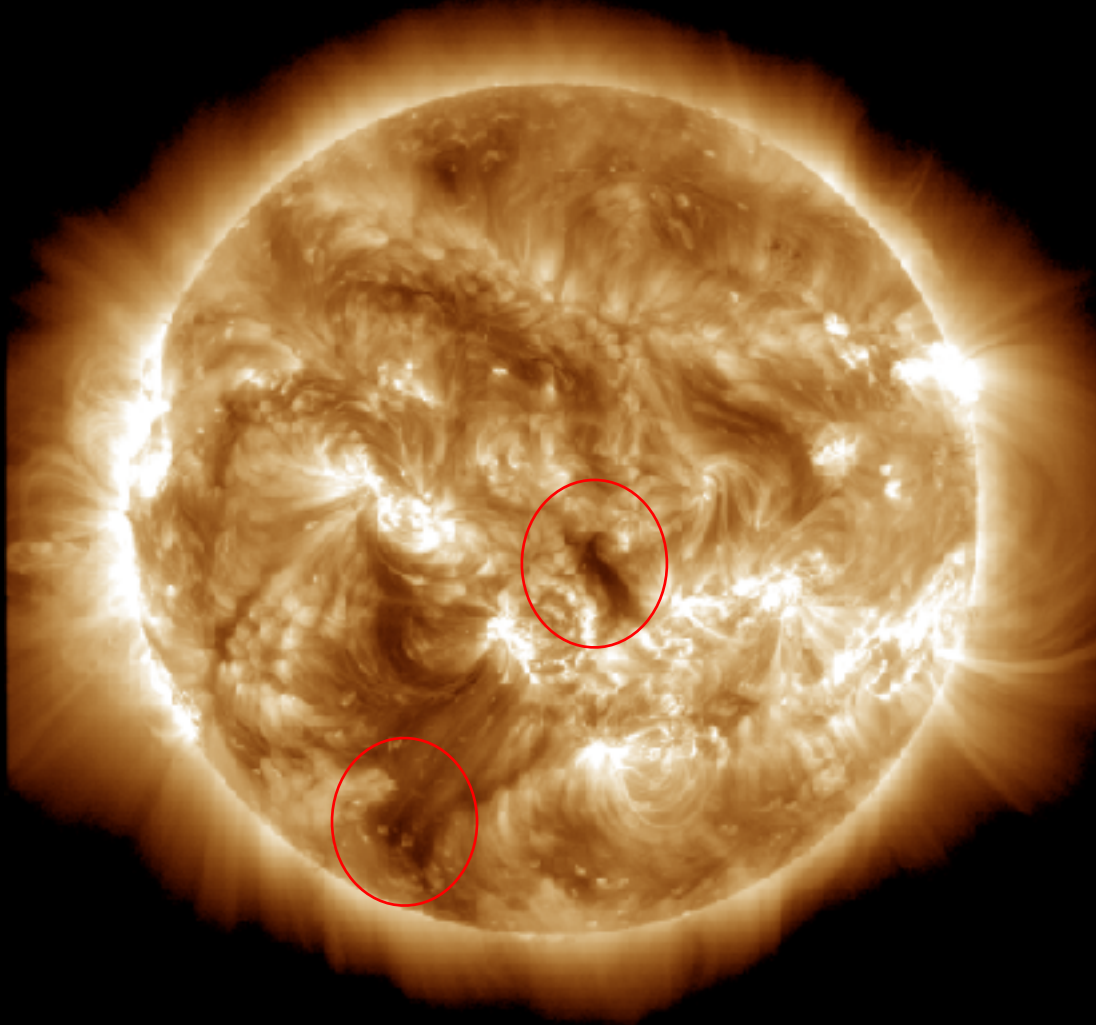
SDO/HMI Magnetogram 2024-09-01



Coronal holes

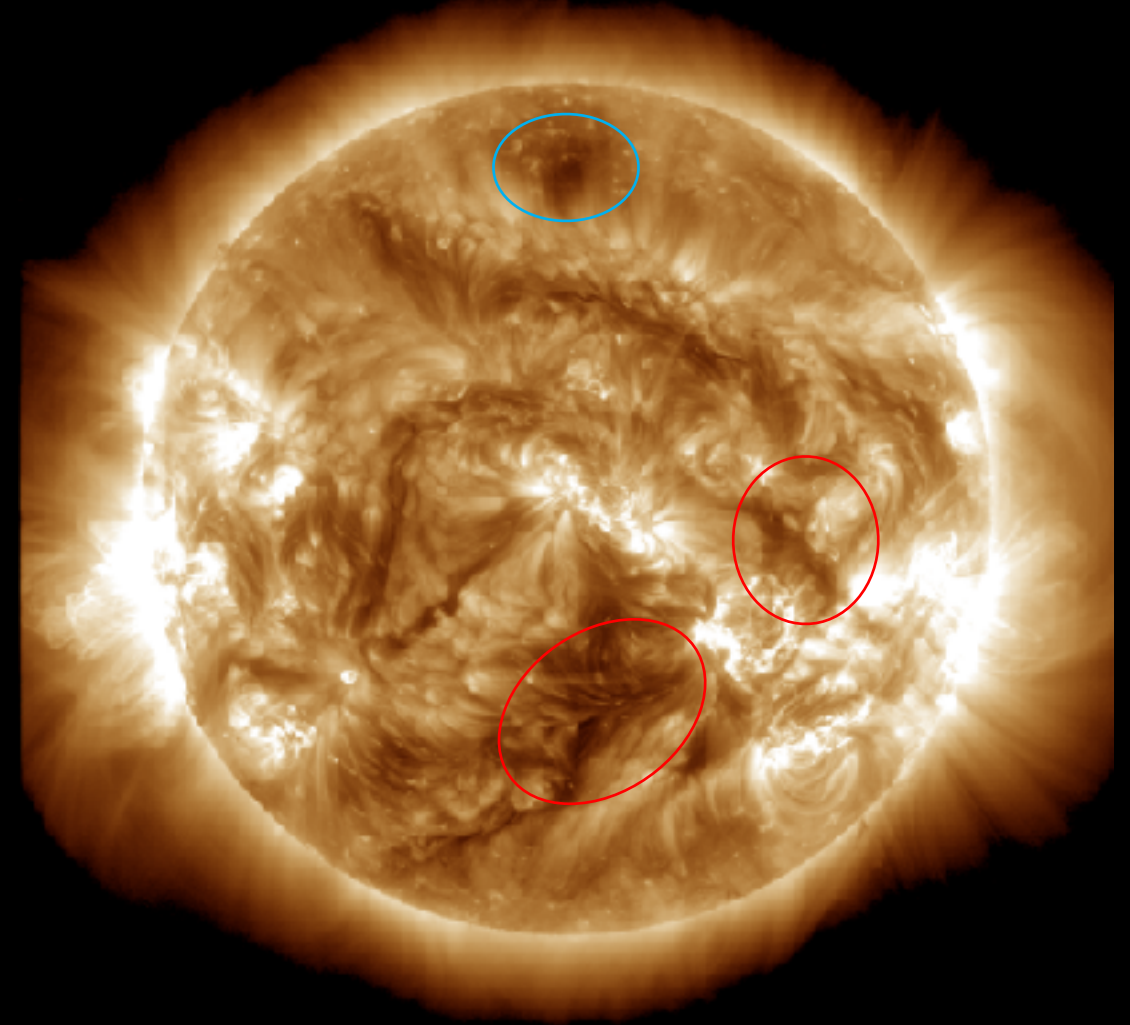
SDO/AIA 19.3 nm 2024-08-26

SDO/AIA AIA_193Å 2024-08-26T12:00:06.869



SDO/AIA 19.3 nm 2024-08-27

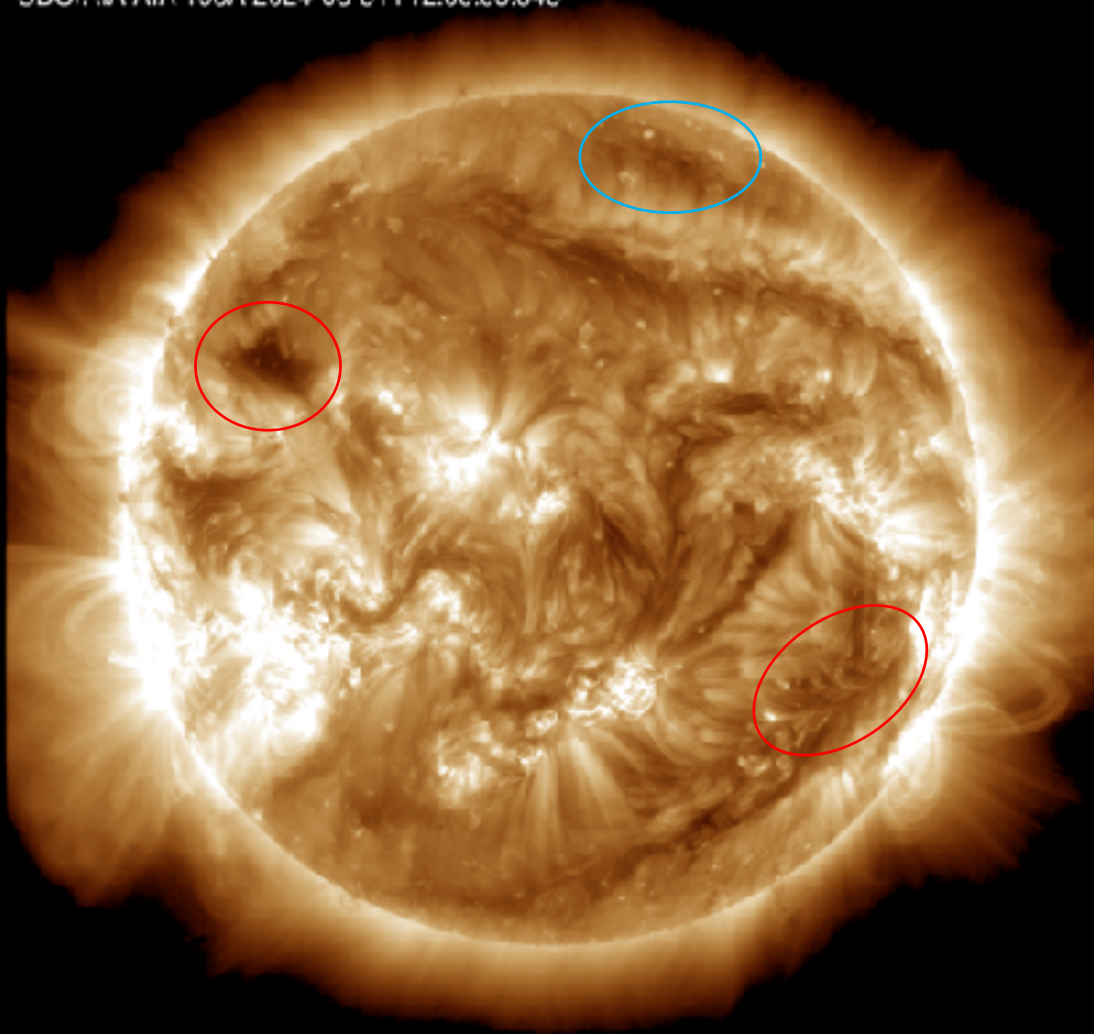
SDO/AIA AIA_193Å 2024-08-27T12:00:05.847



Coronal holes

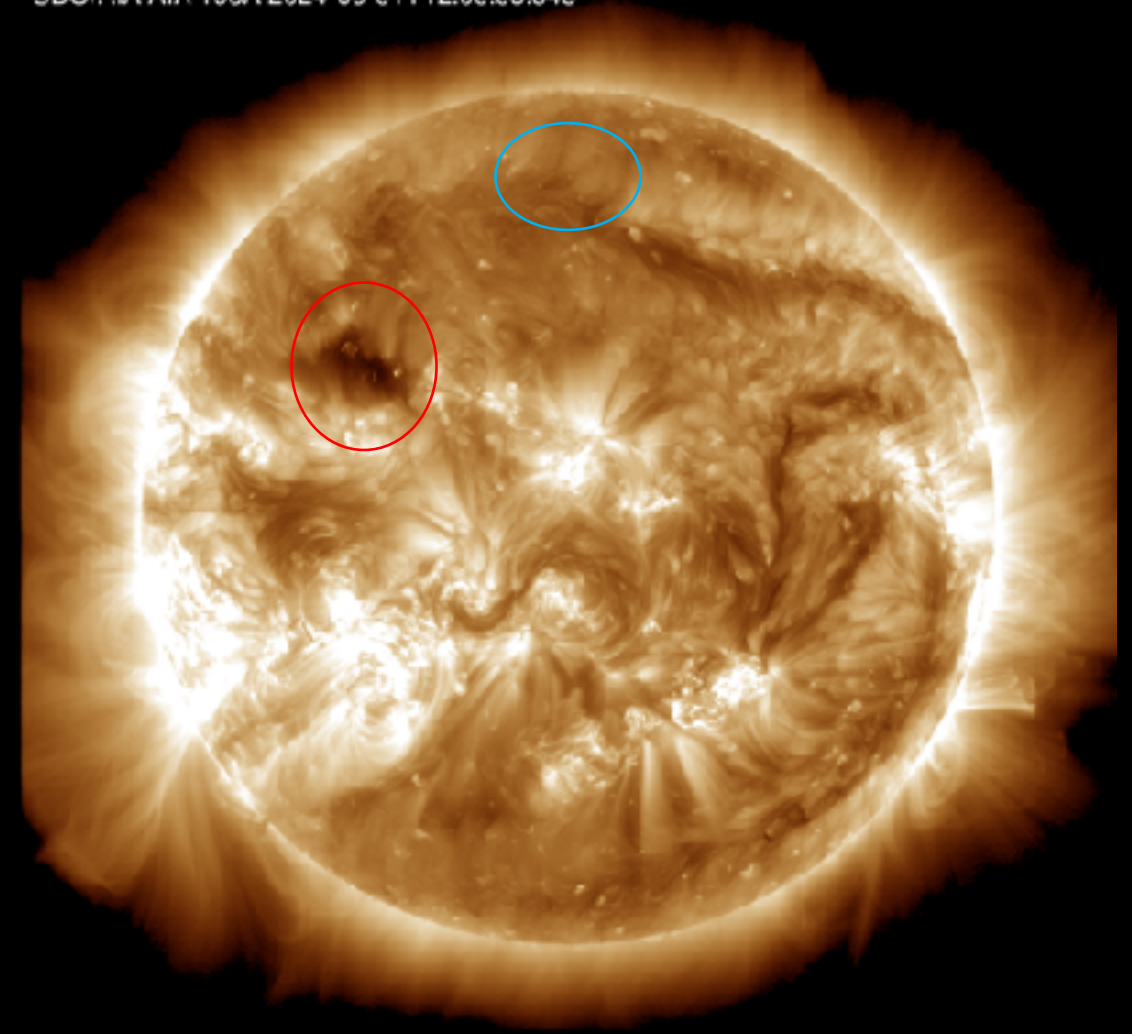
SDO/AIA 19.3 nm 2024-08-31

SDO/AIA AIA 193Å 2024-08-31T12:00:05.843



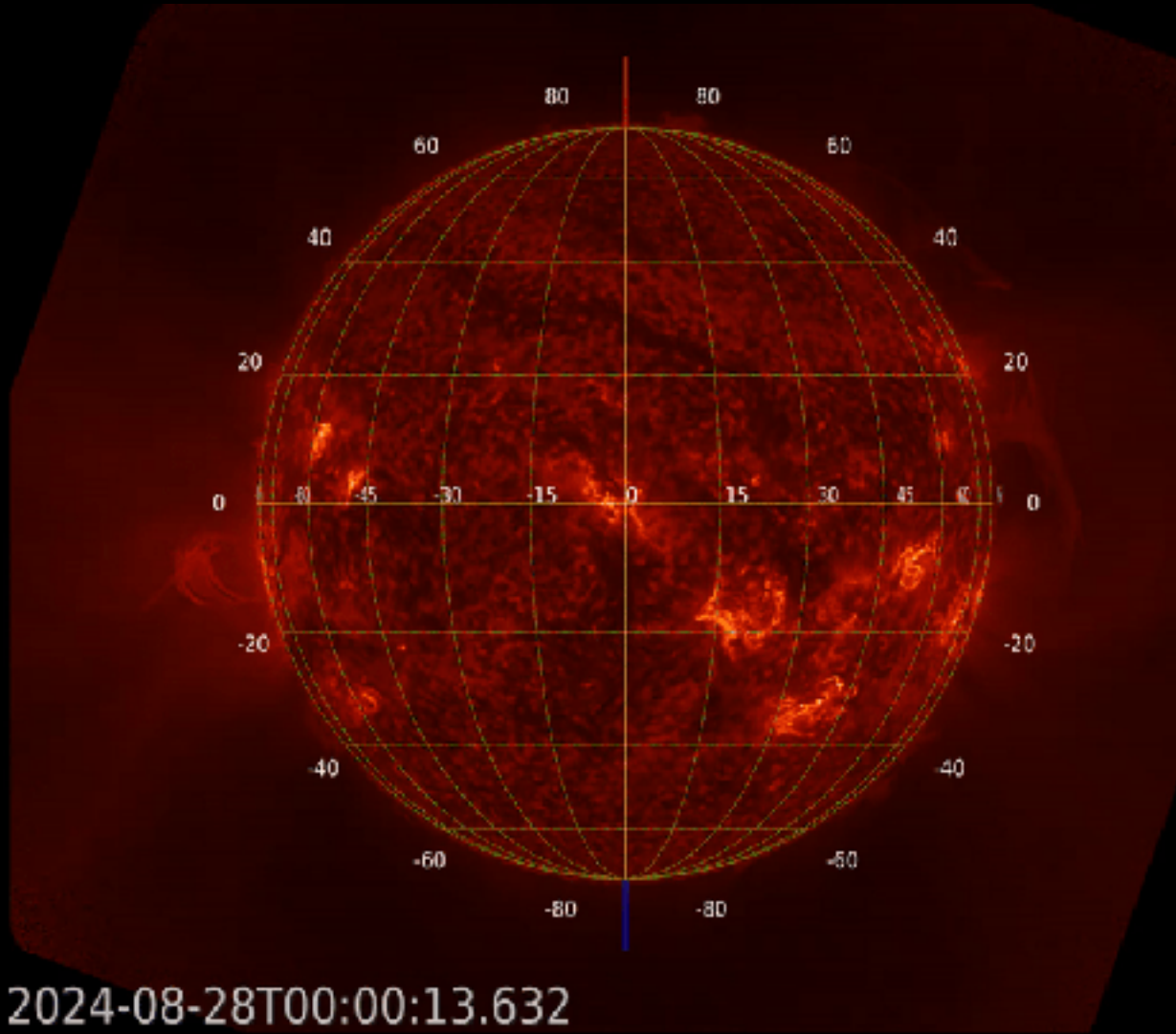
SDO/AIA 19.3 nm 2024-09-01

SDO/AIA AIA 193Å 2024-09-01T12:00:05.843

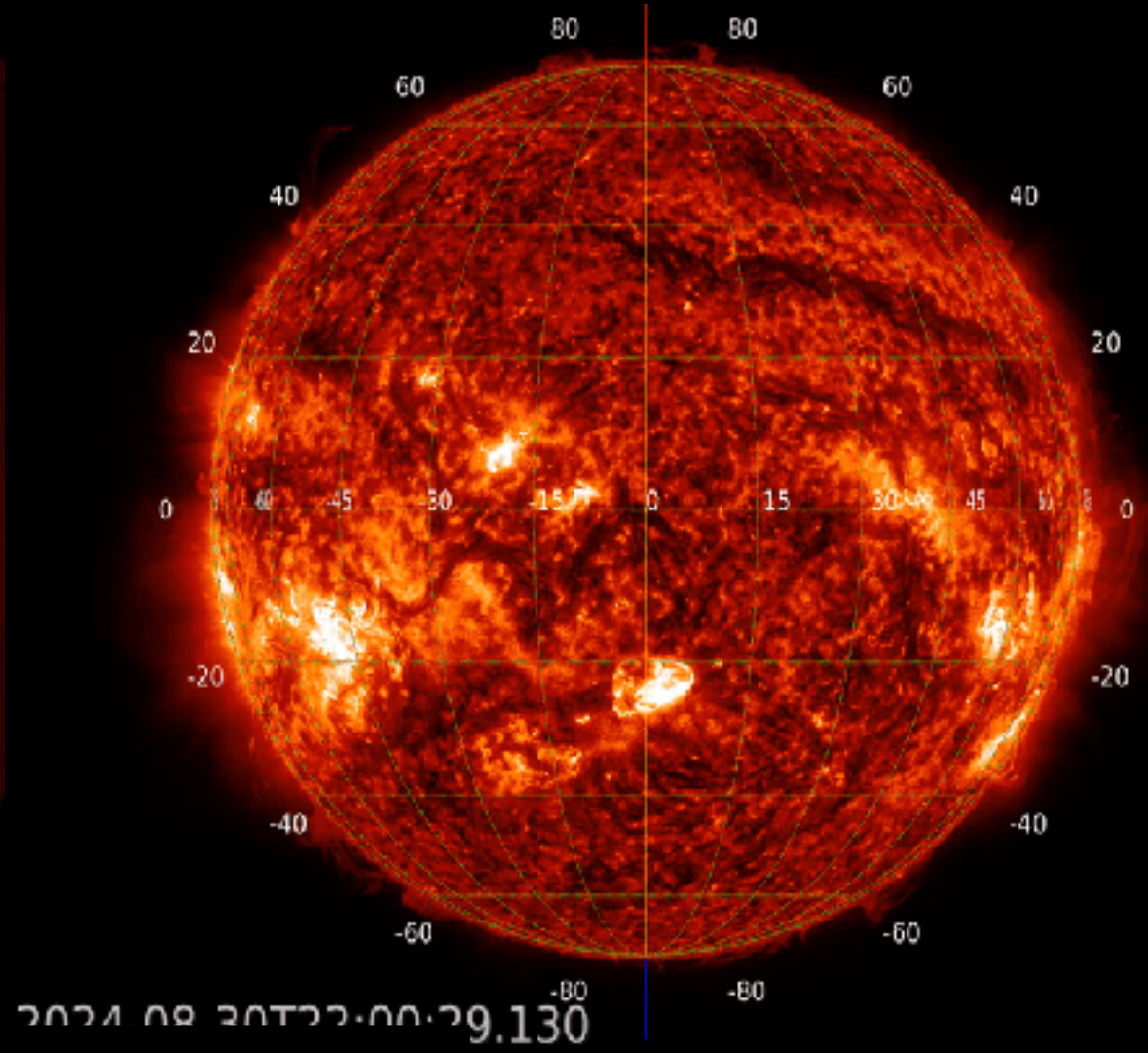


Filaments

GOES/SUVI 30.4 nm 2024-08-28



GOES/SUVI 30.4 nm 2024-08-30



Filaments & Filament eruptions

H-alpha 2024-08-25



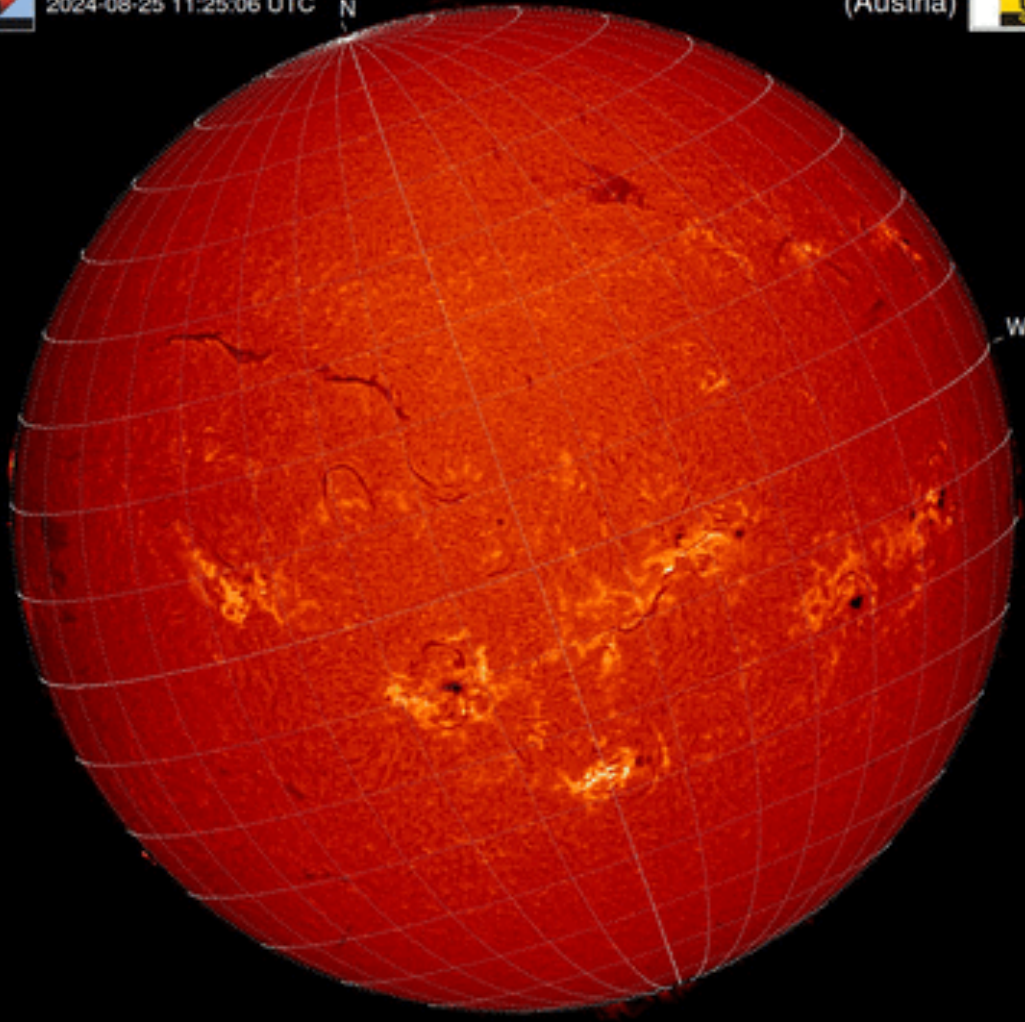
Kanzelhöhe Observatory
2024-08-25 11:25:06 UTC

N

University of Graz
(Austria)



W



H-alpha 2024-09-01



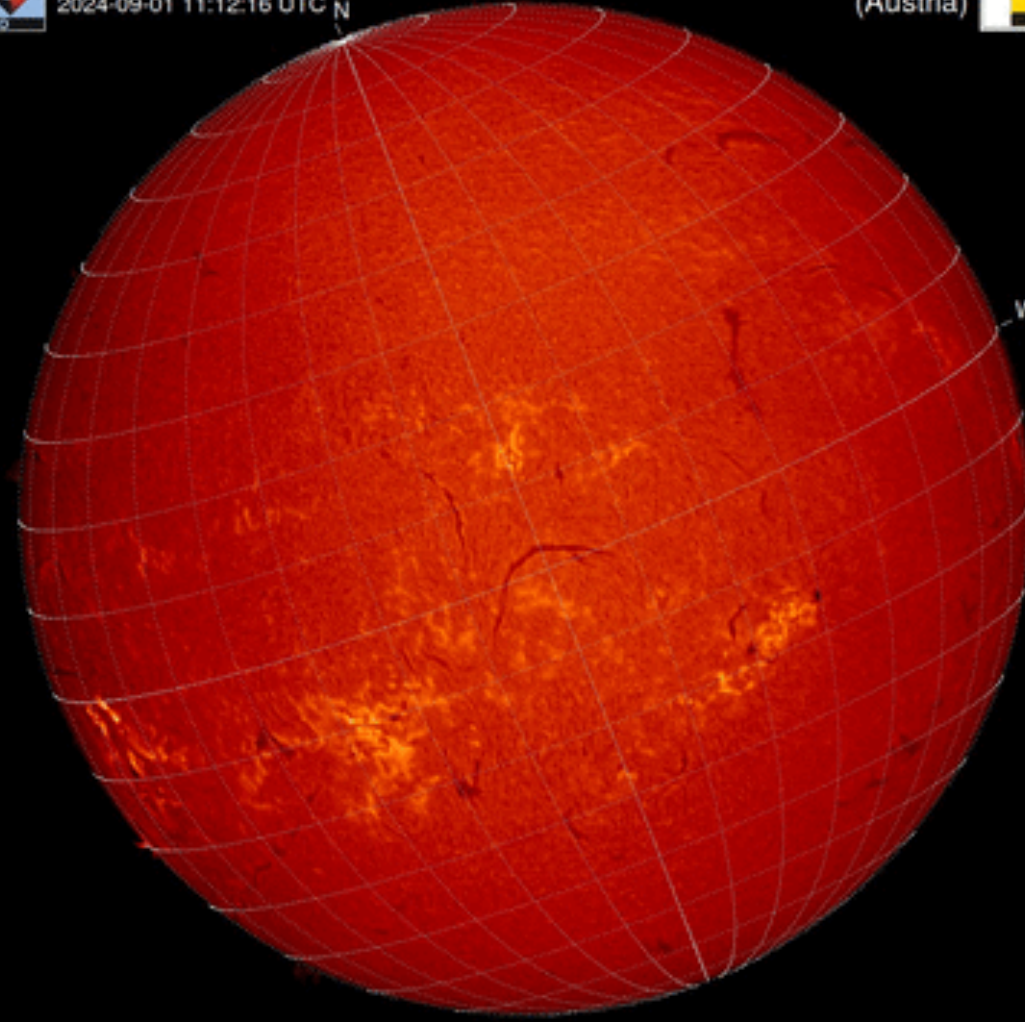
Kanzelhöhe Observatory
2024-09-01 11:12:16 UTC

N

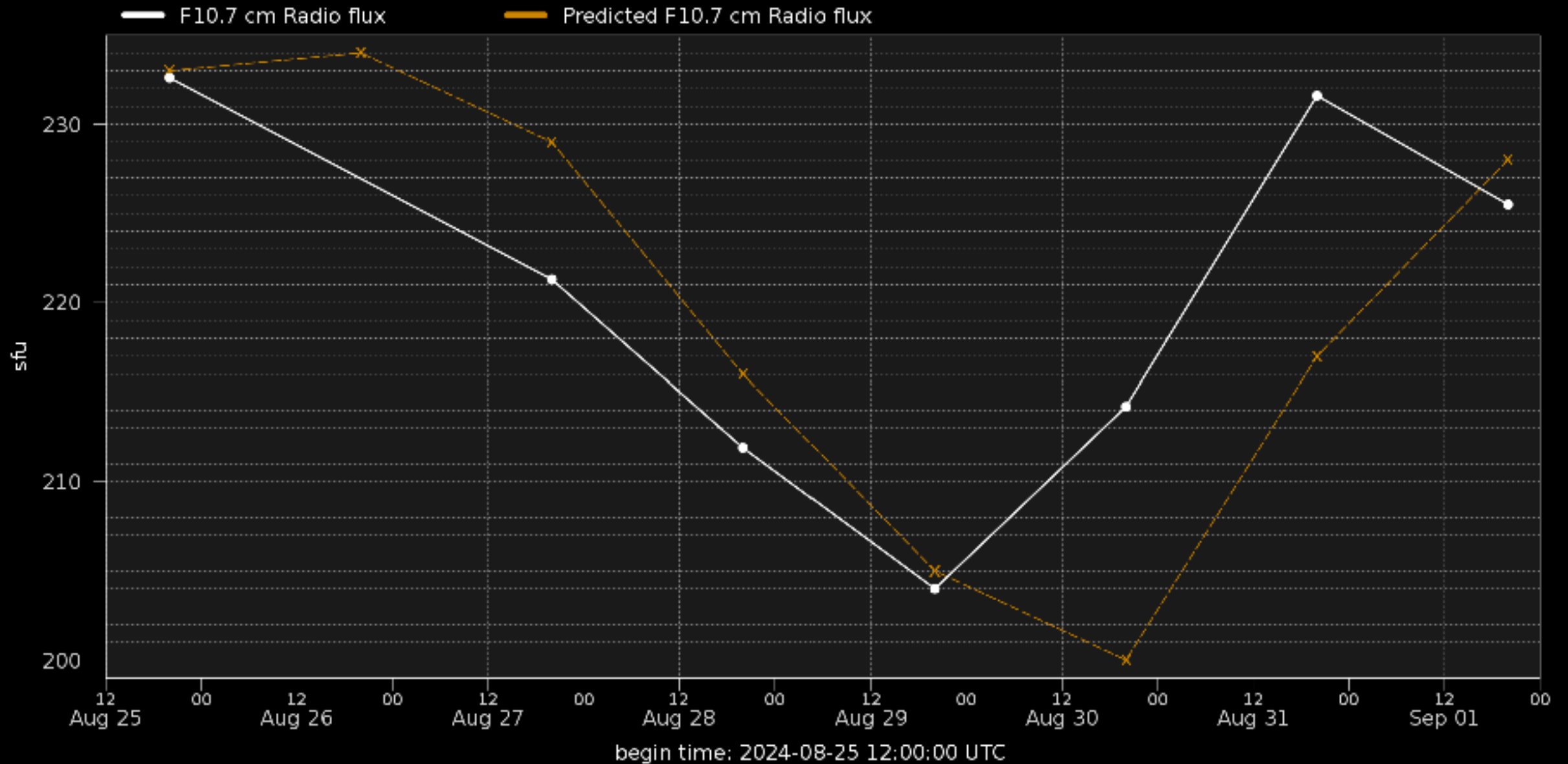
University of Graz
(Austria)



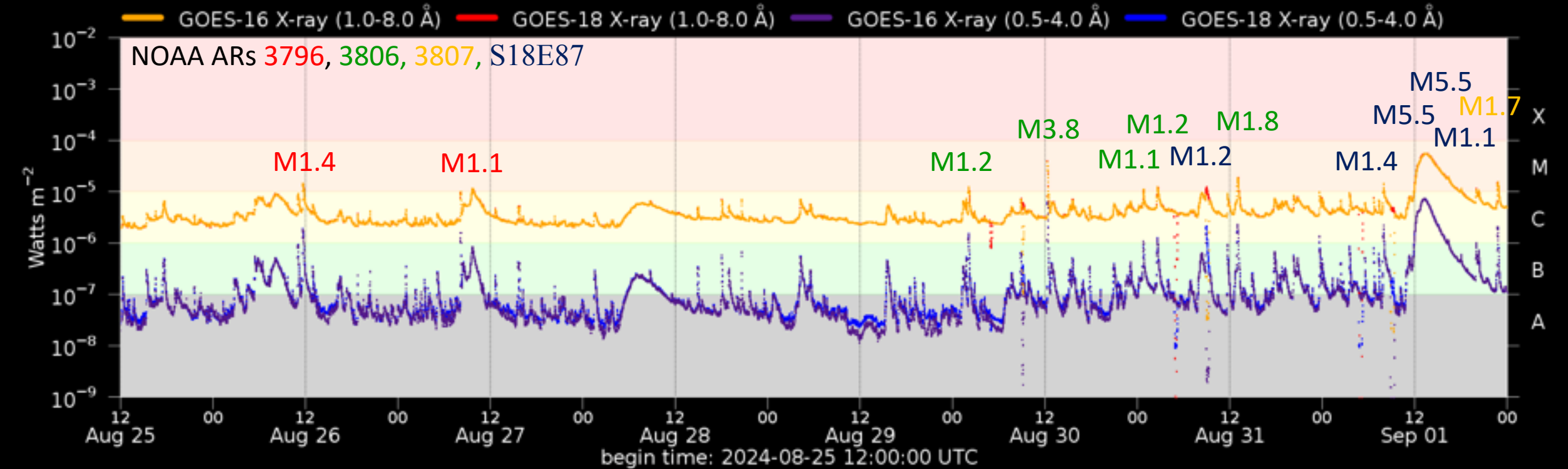
W



Solar F10.7cm radio flux



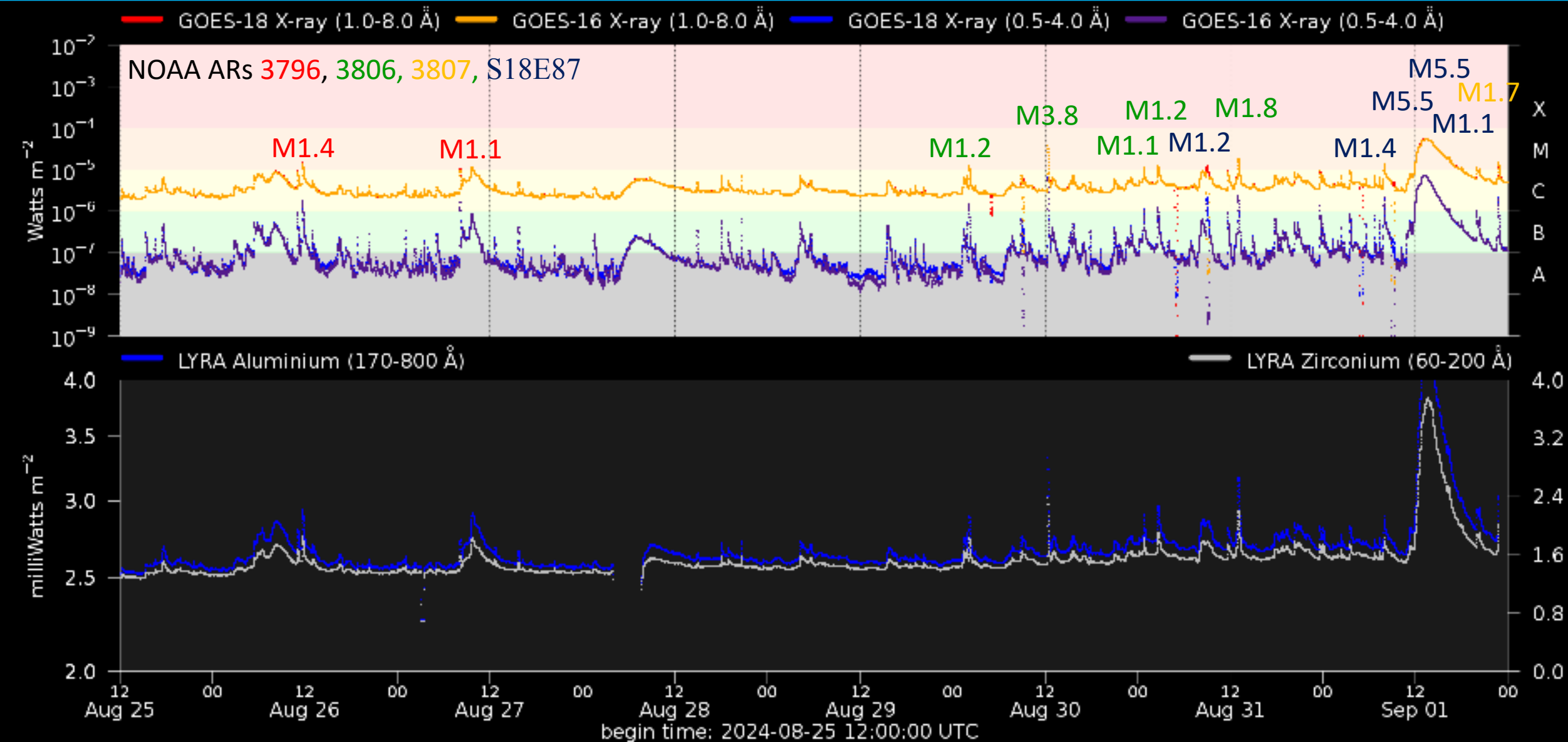
Flaring activity



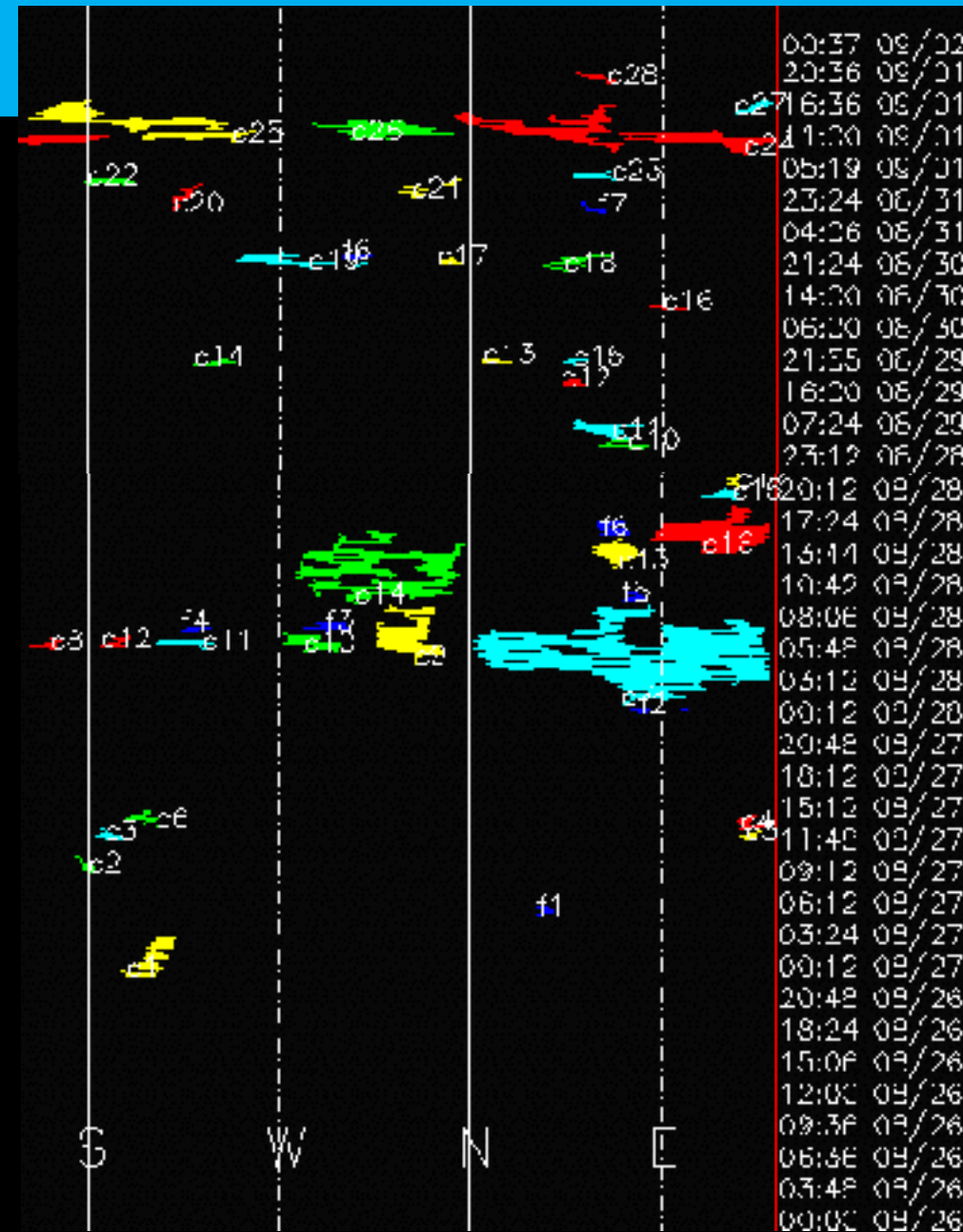
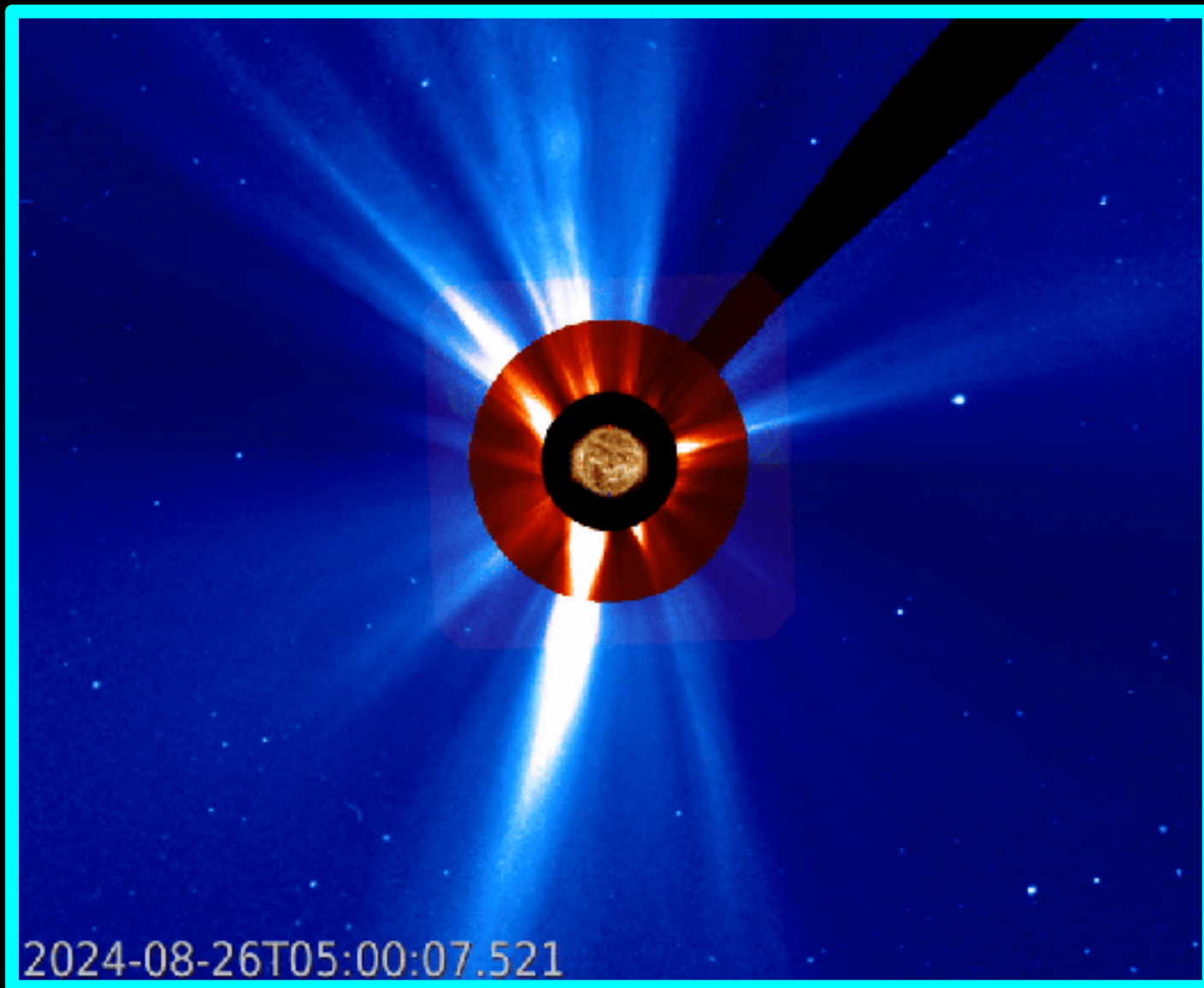
Probabilities (%) and occurrences (#) of C/M/X-flares daily, from noon to noon:

Issue date	2024-08-25	2024-08-26	2024-08-27	2024-08-28	2024-08-29	2024-08-30	2024-08-31	2024-09-01
Probability (%)	99 85 05	99 70 15	99 65 20	99 65 20	99 50 10	99 60 10	99 65 15	99 60 15
Observed (#)	11 01 00	08 01 00	03 00 00	06 00 00	08 01 00	06 04 00	12 03 00	00 03 00

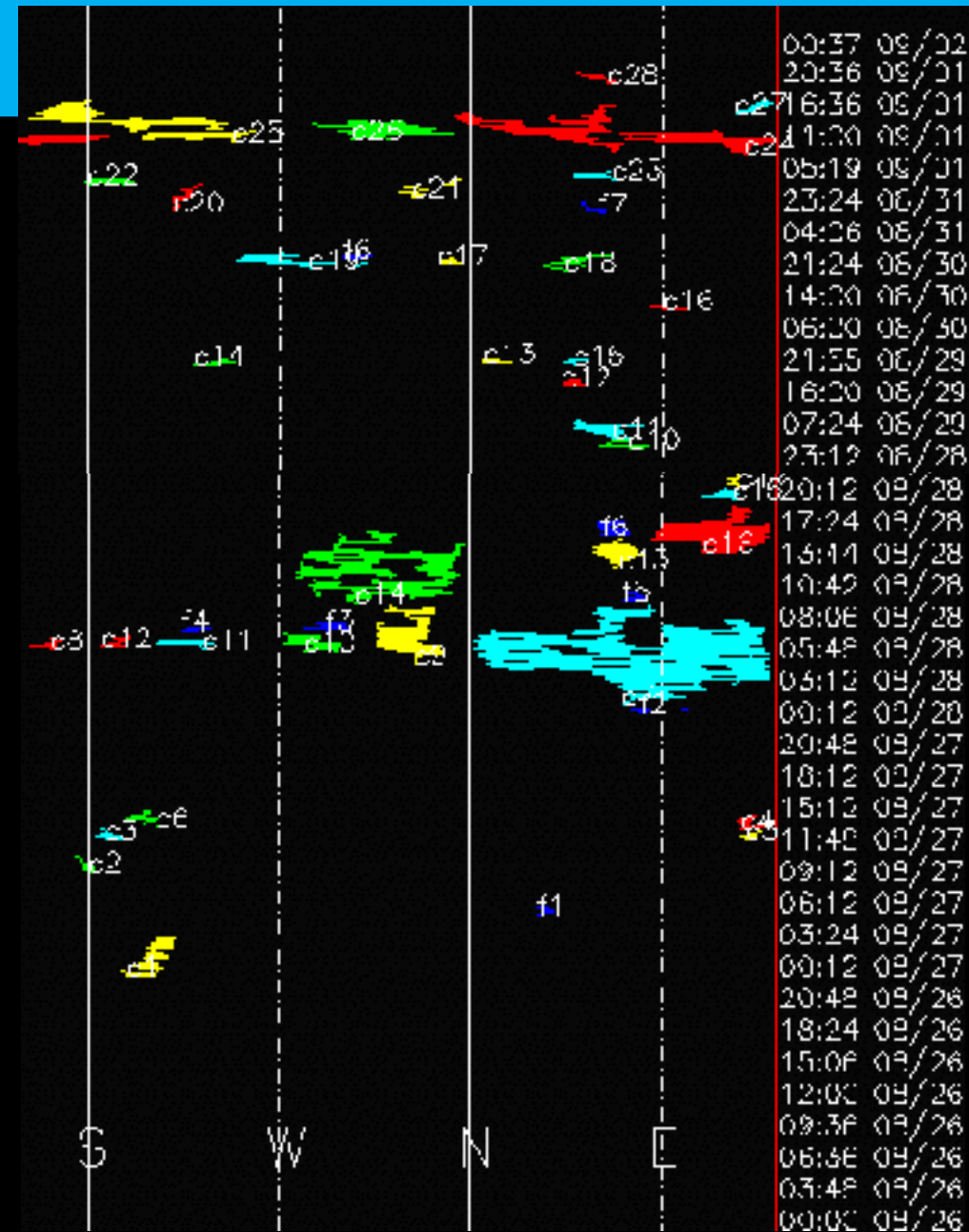
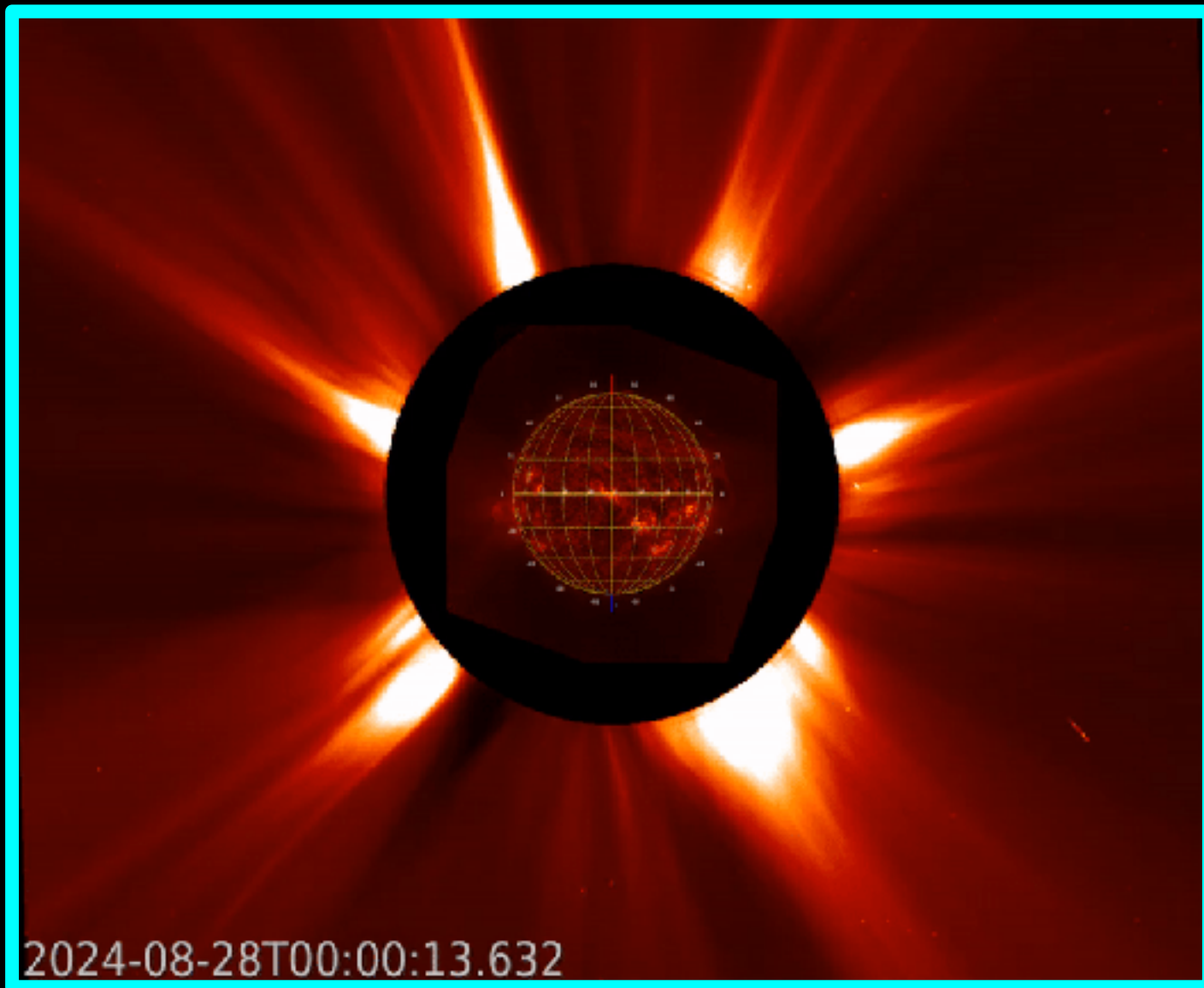
Solar X-Ray and UV flux



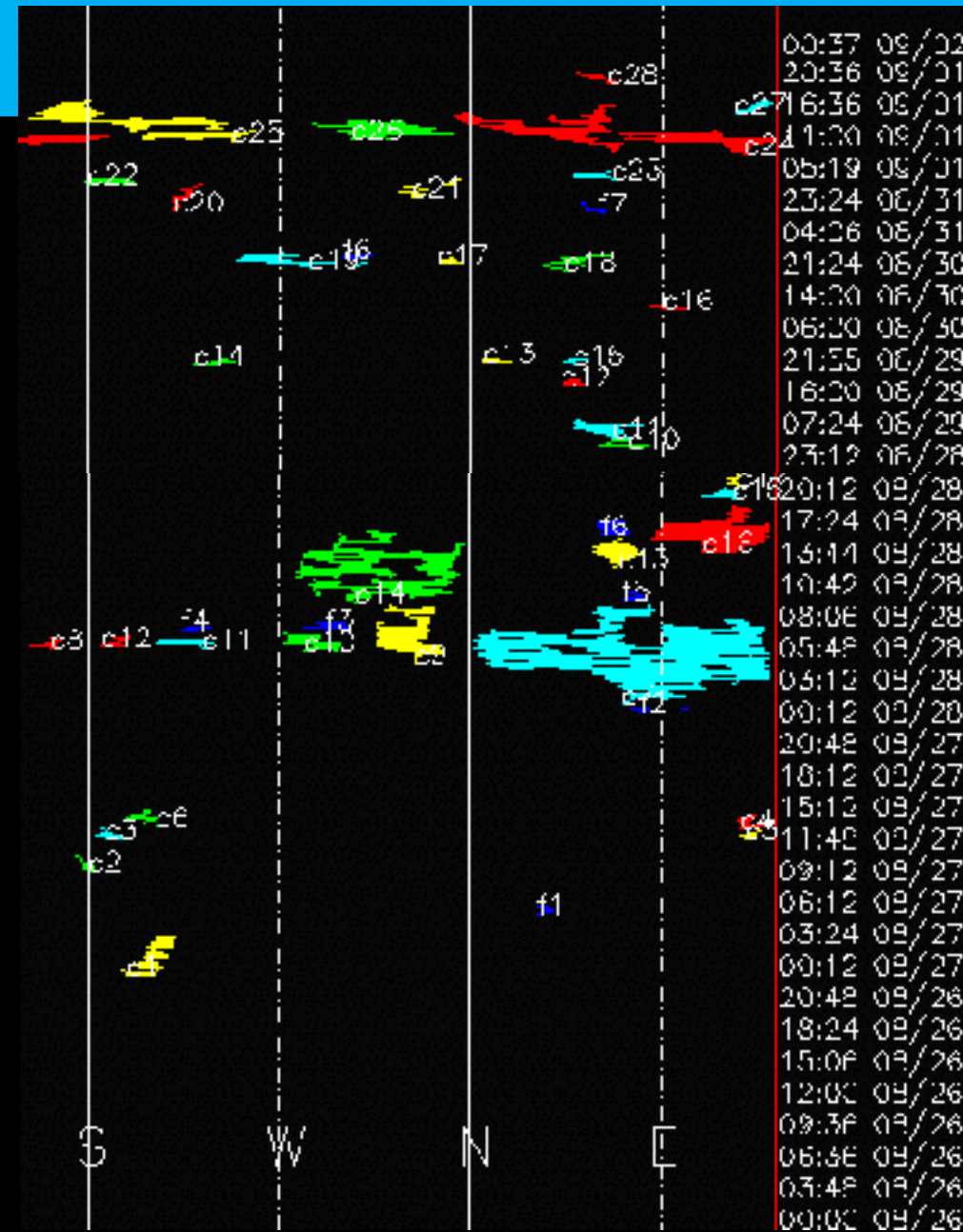
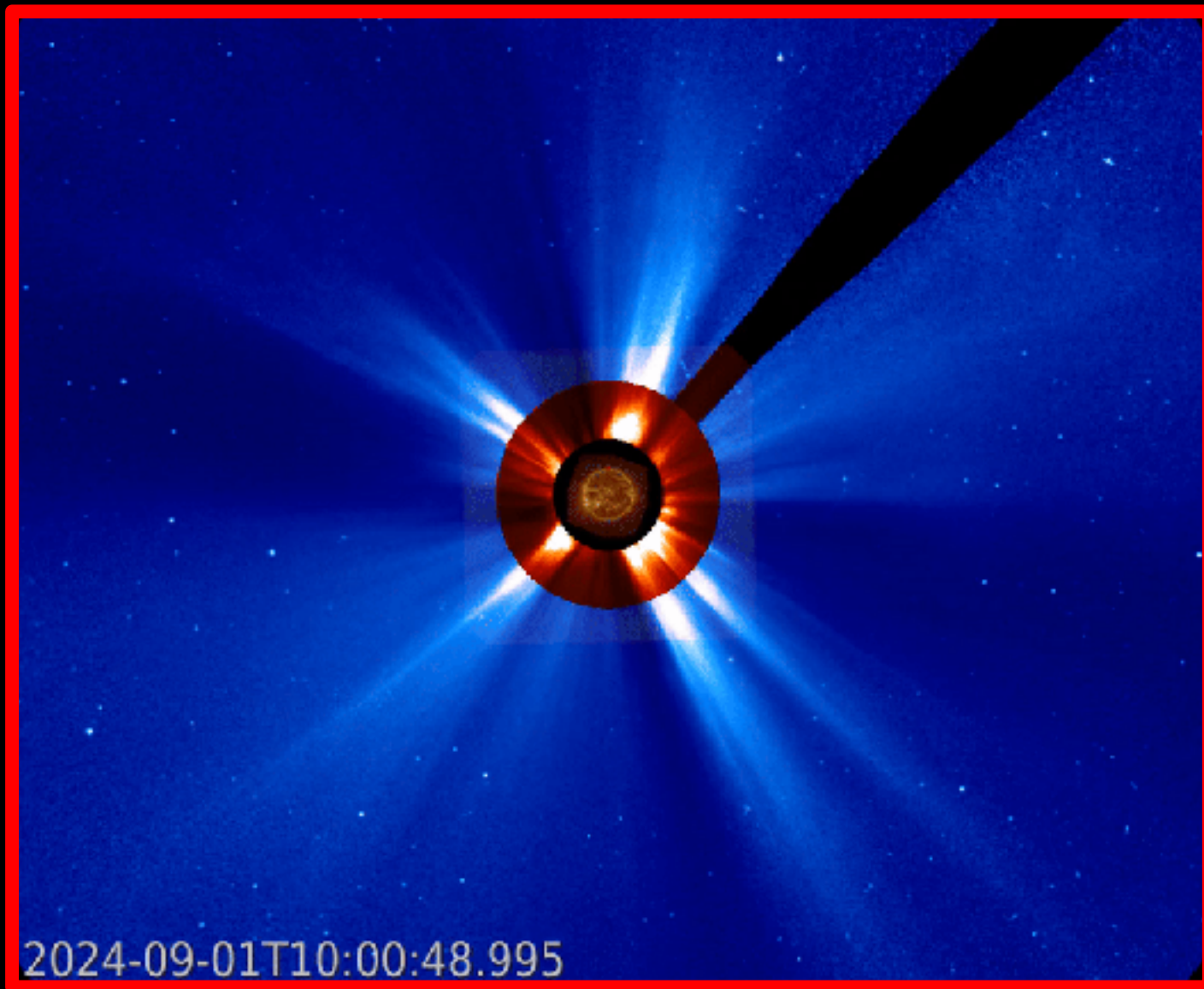
Coronal Mass Ejections



Coronal Mass Ejections



Coronal Mass Ejections



Solar Wind and

Geomagnetic Activity



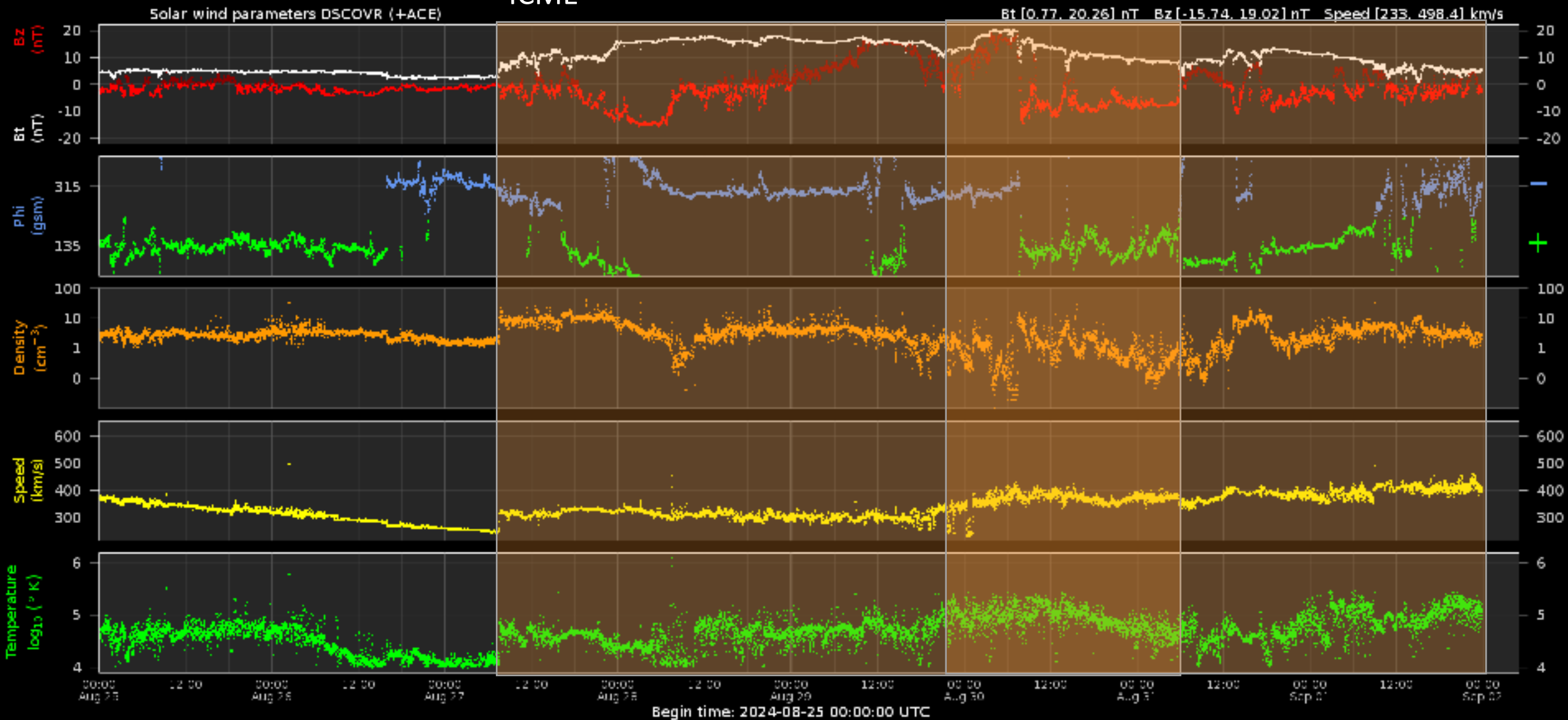
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Solar wind parameters

ICME

HSS

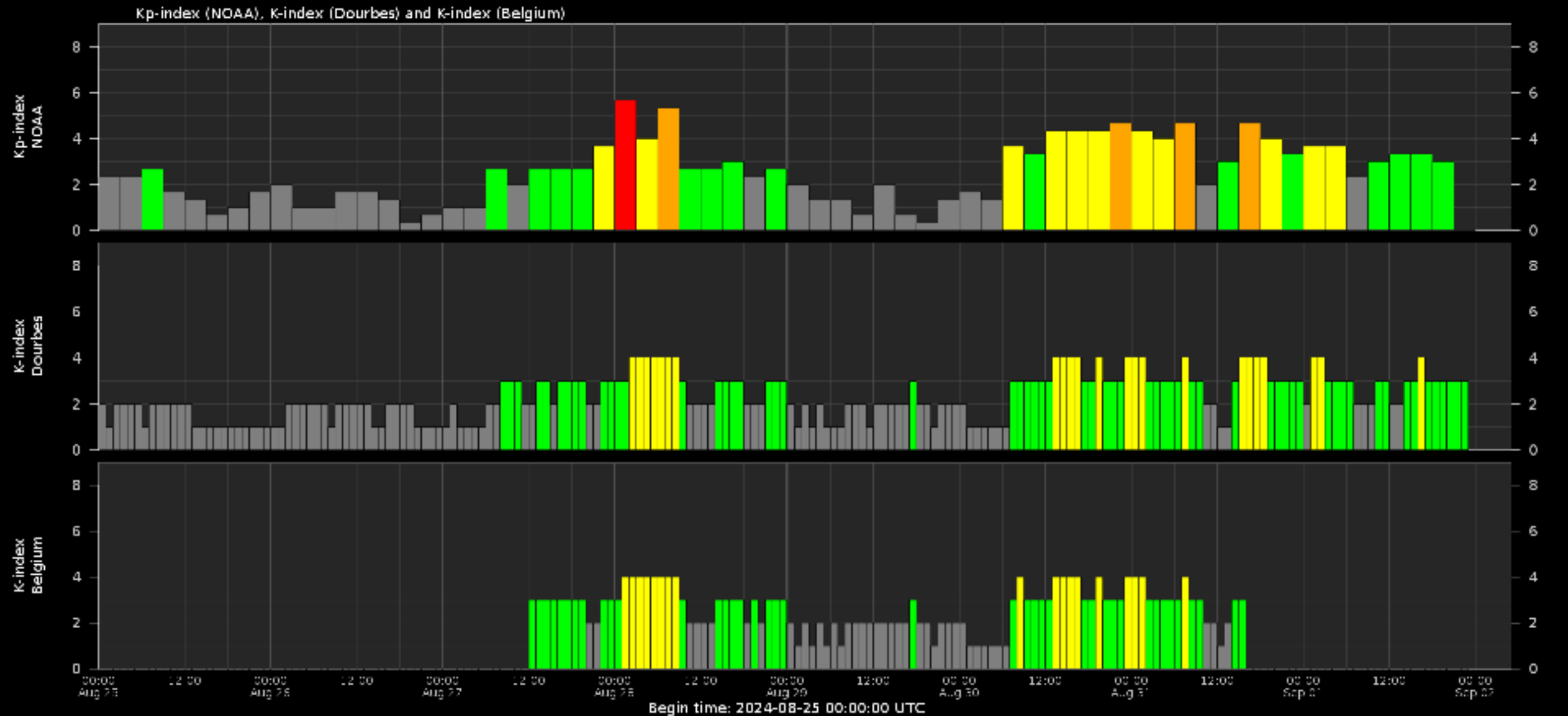


Solar wind parameters & K-indices

HSS



Geomagnetic activity (K-indexes)



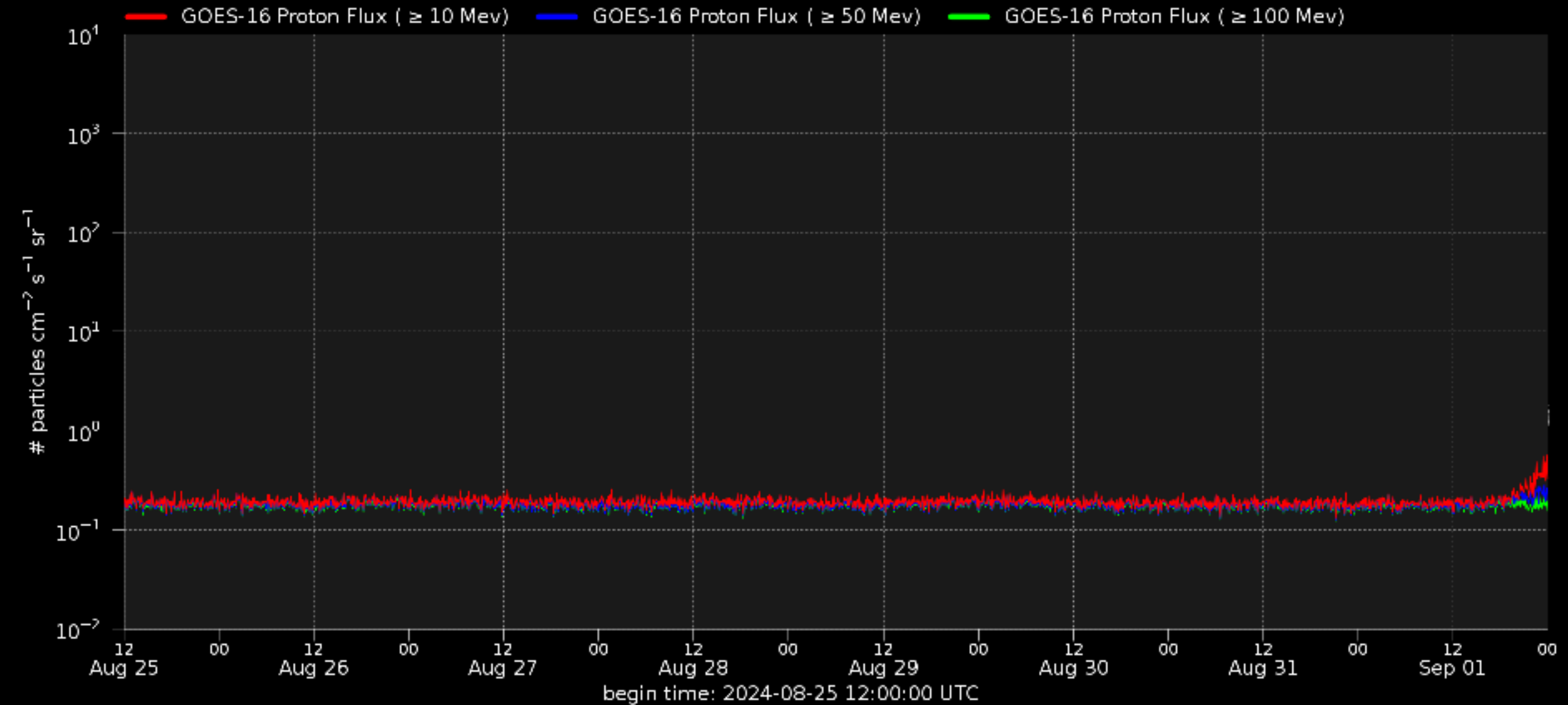
Energetic Particles



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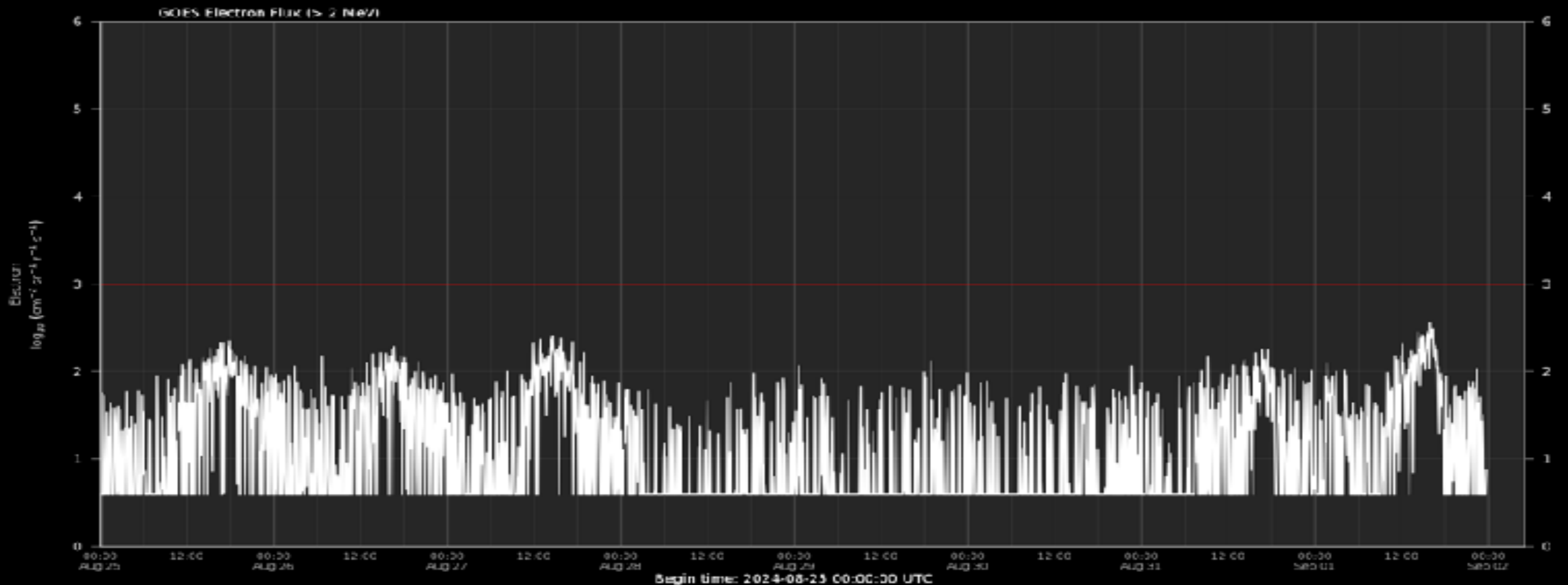
Solar proton flux



Electron flux at GEO

www.stce.be/educational/classification#electrons

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



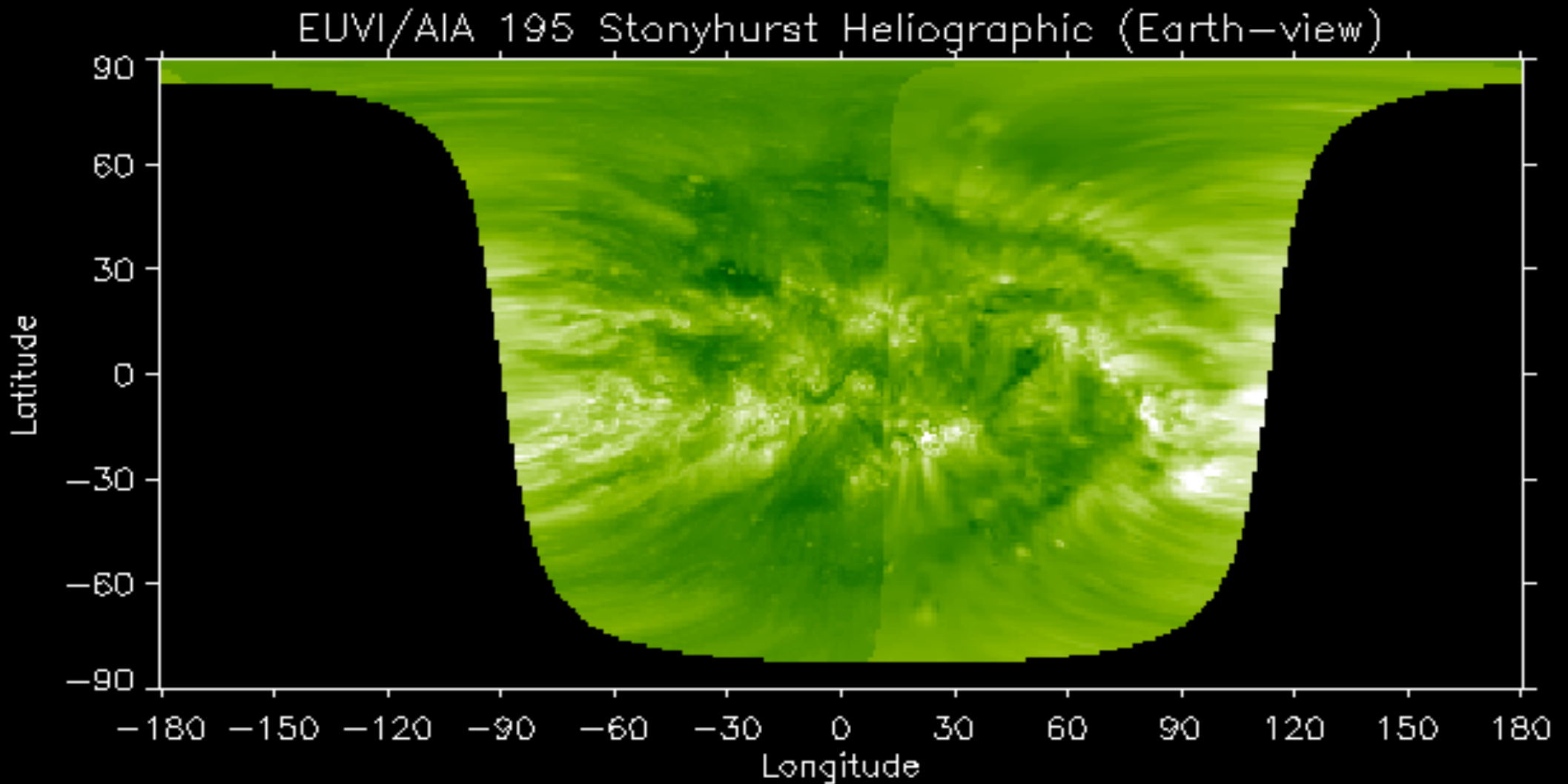
Outlook



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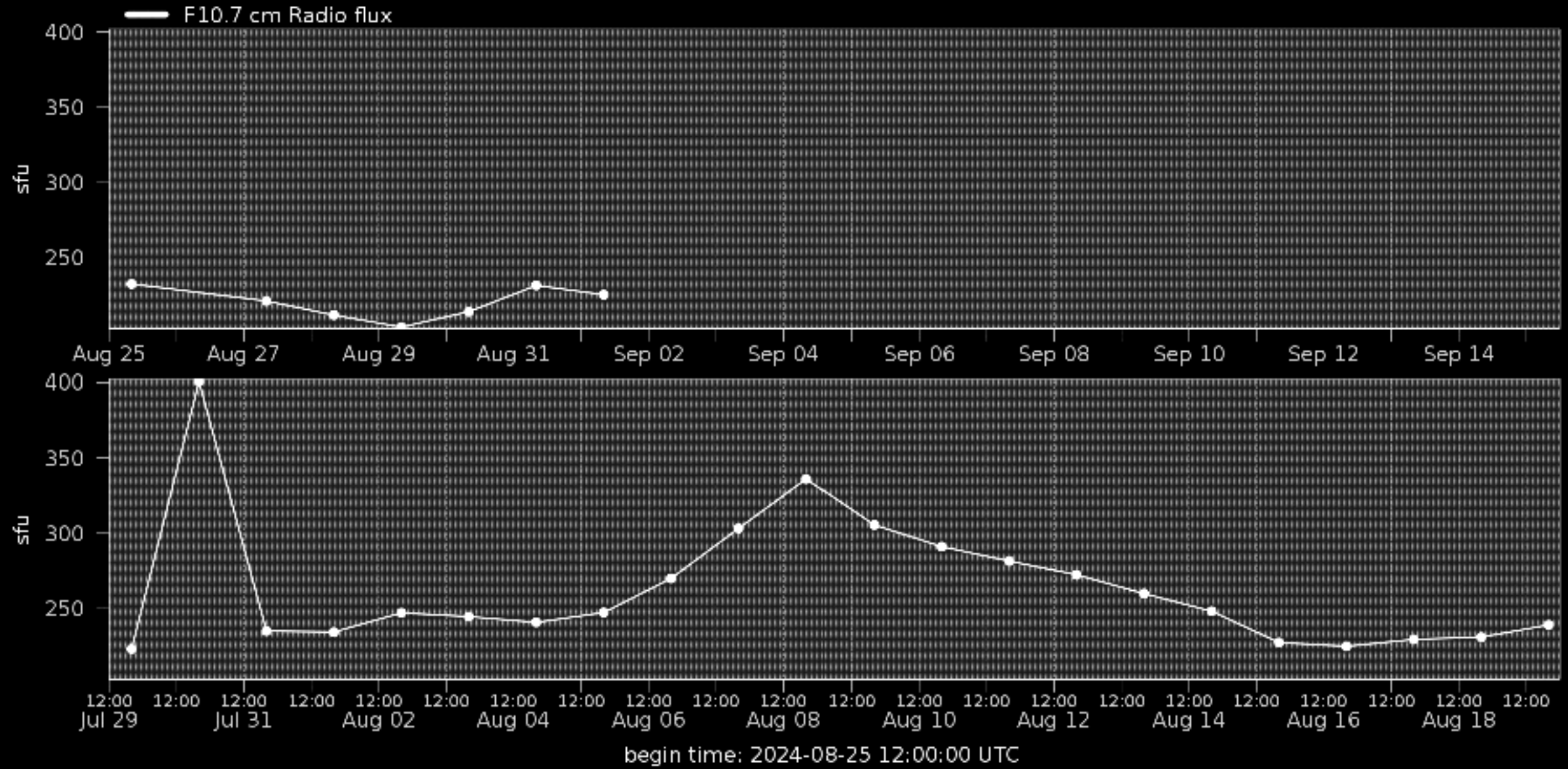
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Outlook: Solar activity

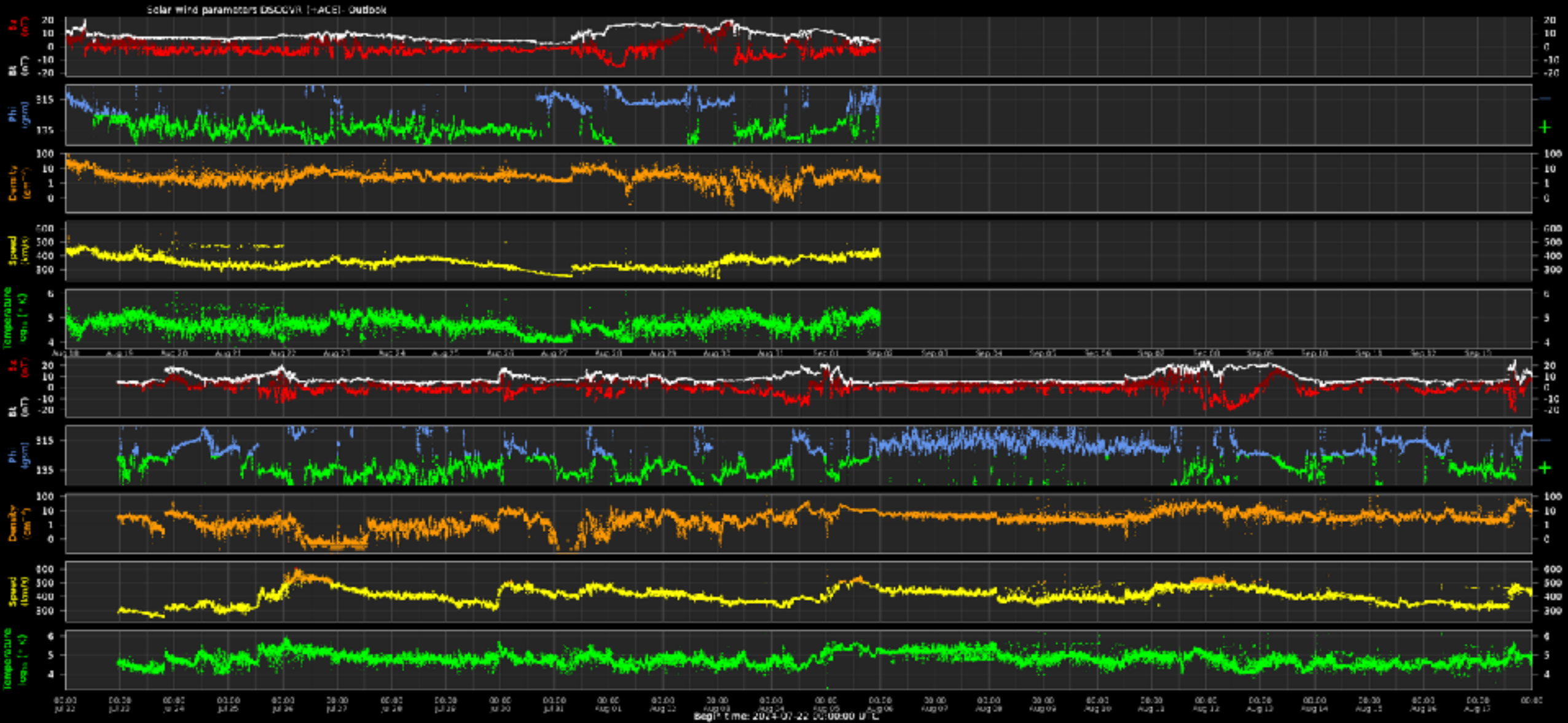


Observation date: 2024/09/01 23:05:00

Outlook: Solar F10.7cm radio flux



Outlook: Solar wind parameters



Outlook: Geomagnetic activity



Outlook: Electron Flux at GEO Outlook



PECASUS



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