

SIDC Space Weather Briefing

20 - 27 August 2023

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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 2023-08-20 12:00 to 2023-08-27 23:59

Active regions	NOAA ARs 3403 to 3416
Flares	# C-class flare: 23 # M-class flare: 3 # X-class flare: 0
Coronal Holes	None significant
CMEs	2 with a possible Earth directed component

Proton flux	Below threshold
Electron flux	Below threshold

Solar wind and geomagnetic conditions

ICMEs	None clear, one with very weak signatures
Solar wind conditions	B : 0.35 - 9.03 nT //Bz: -7.63 nT to 7.85 nT //Speed: 325.5 - 675.2km/s
K-indices	max K-index (KBel): 4 max Kp-index (NOAA): 4

All Quiet Alert: Off

Solar Activity

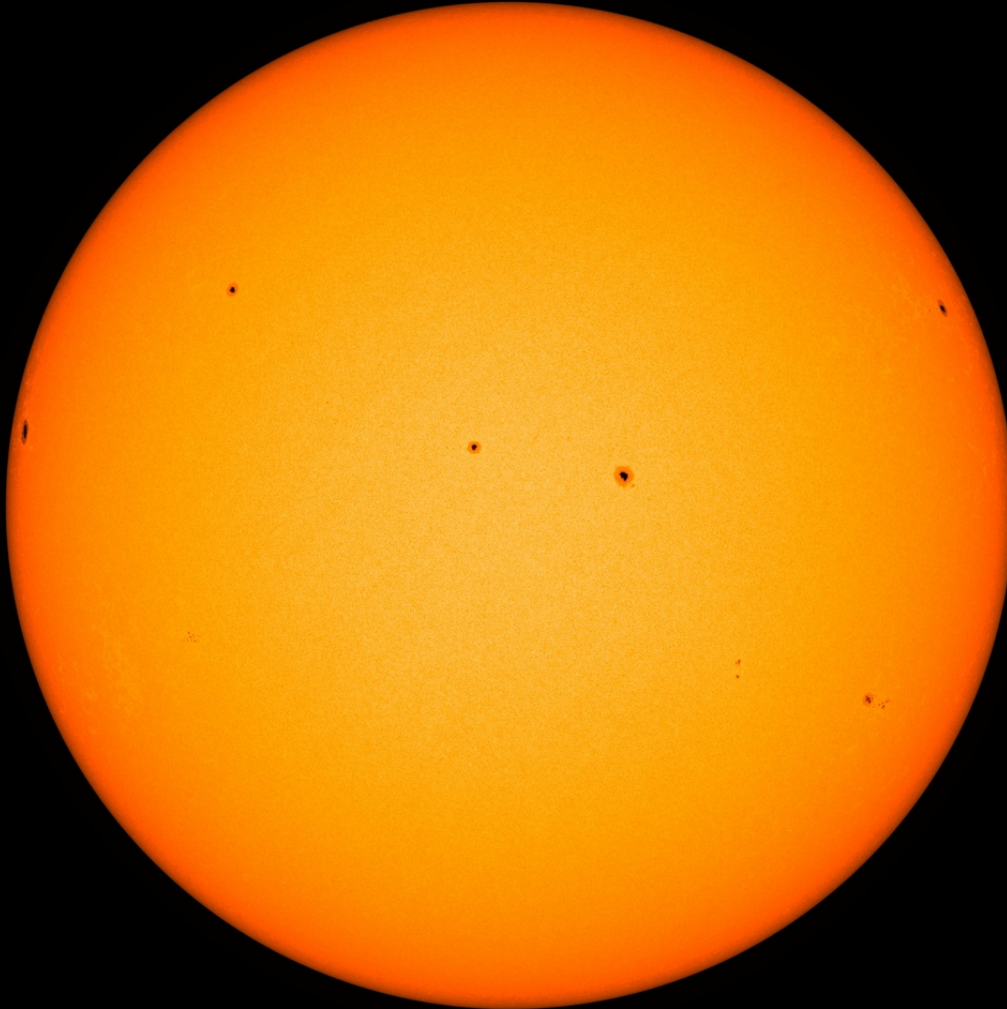


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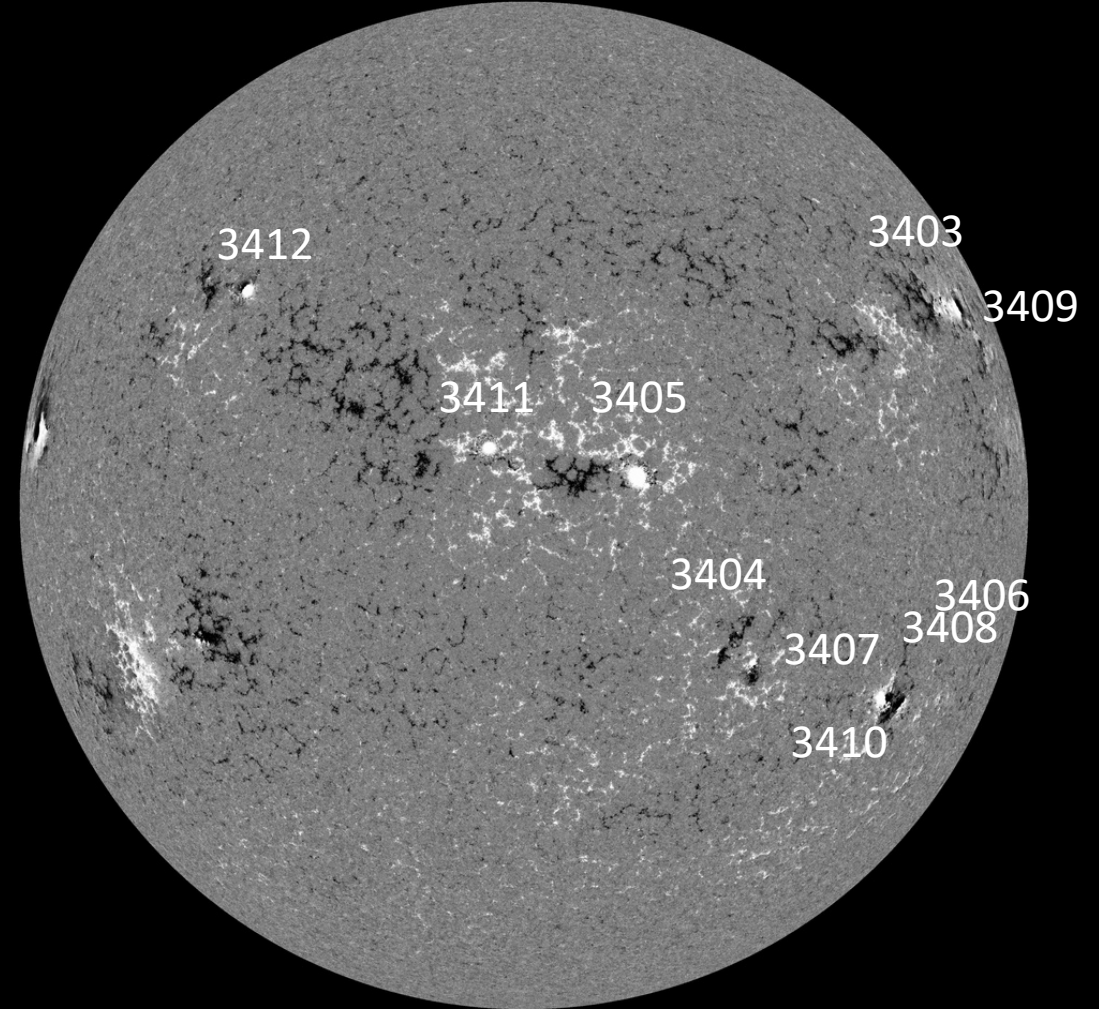
Solar active regions

SDO/HMI White Light 2023-08-21



SDO/HMI Quick-Look Continuum: 20230821_114500

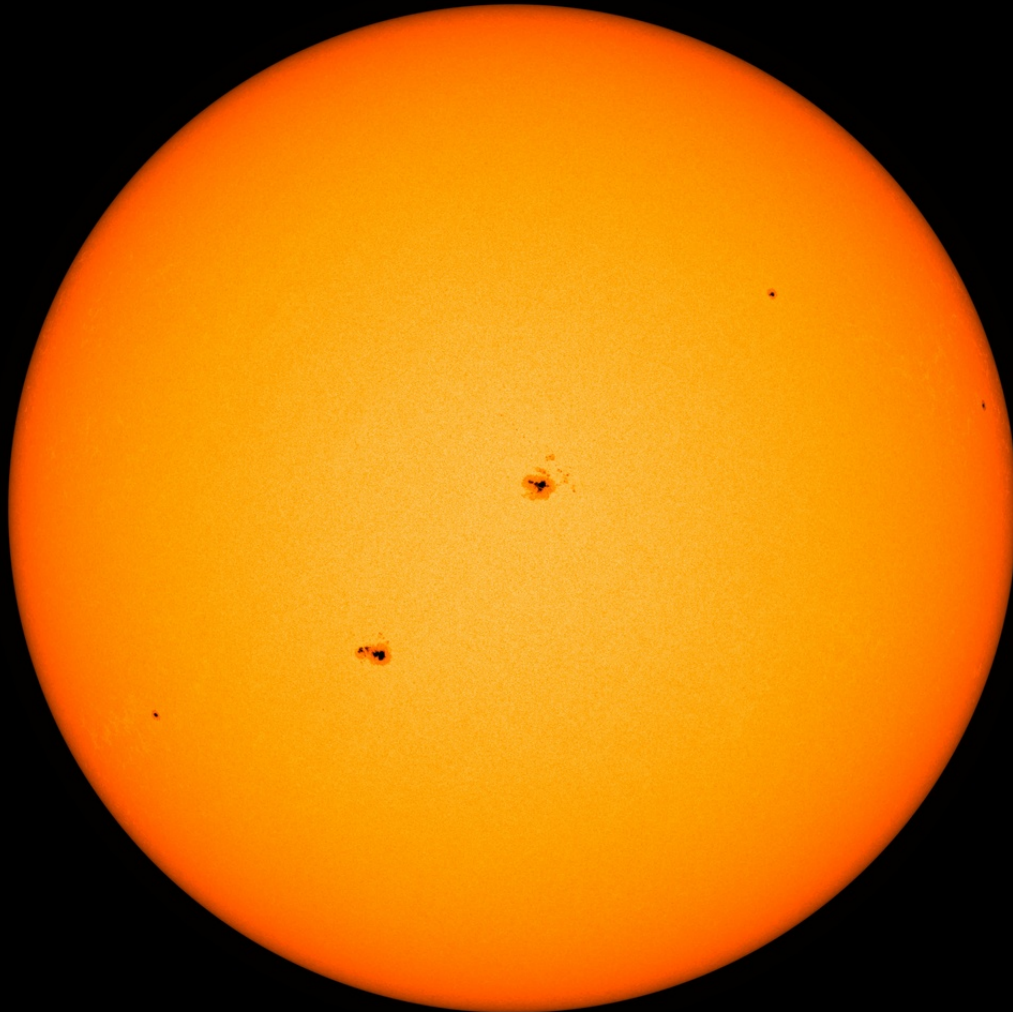
SDO/HMI Magnetogram 2023-08-21



SDO/HMI Quick-Look Magnetogram: 20230821_114500

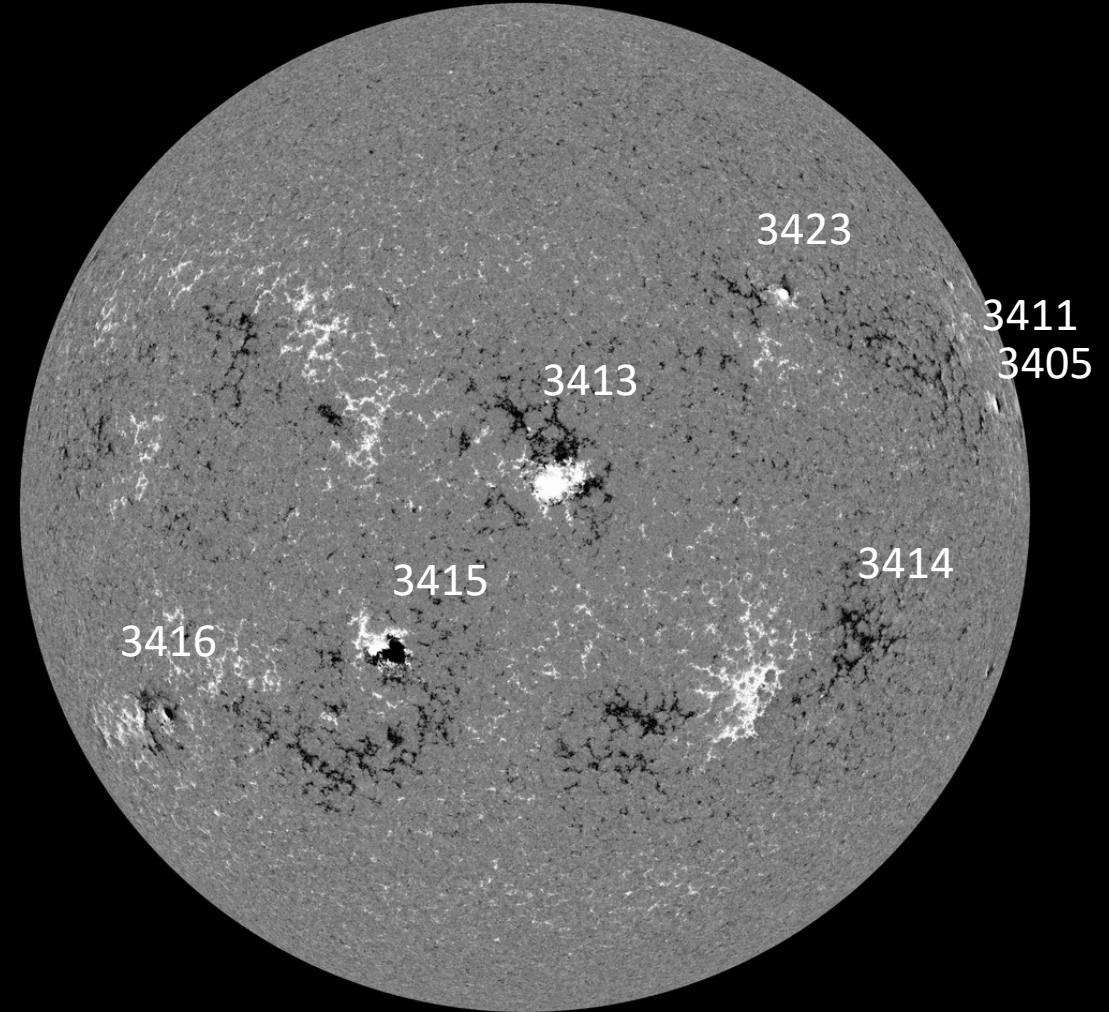
Solar active regions

SDO/HMI White Light 2023-08-27



SDO/HMI Quick-Look Continuum: 20230827_114500

SDO/HMI Magnetogram 2023-08-27

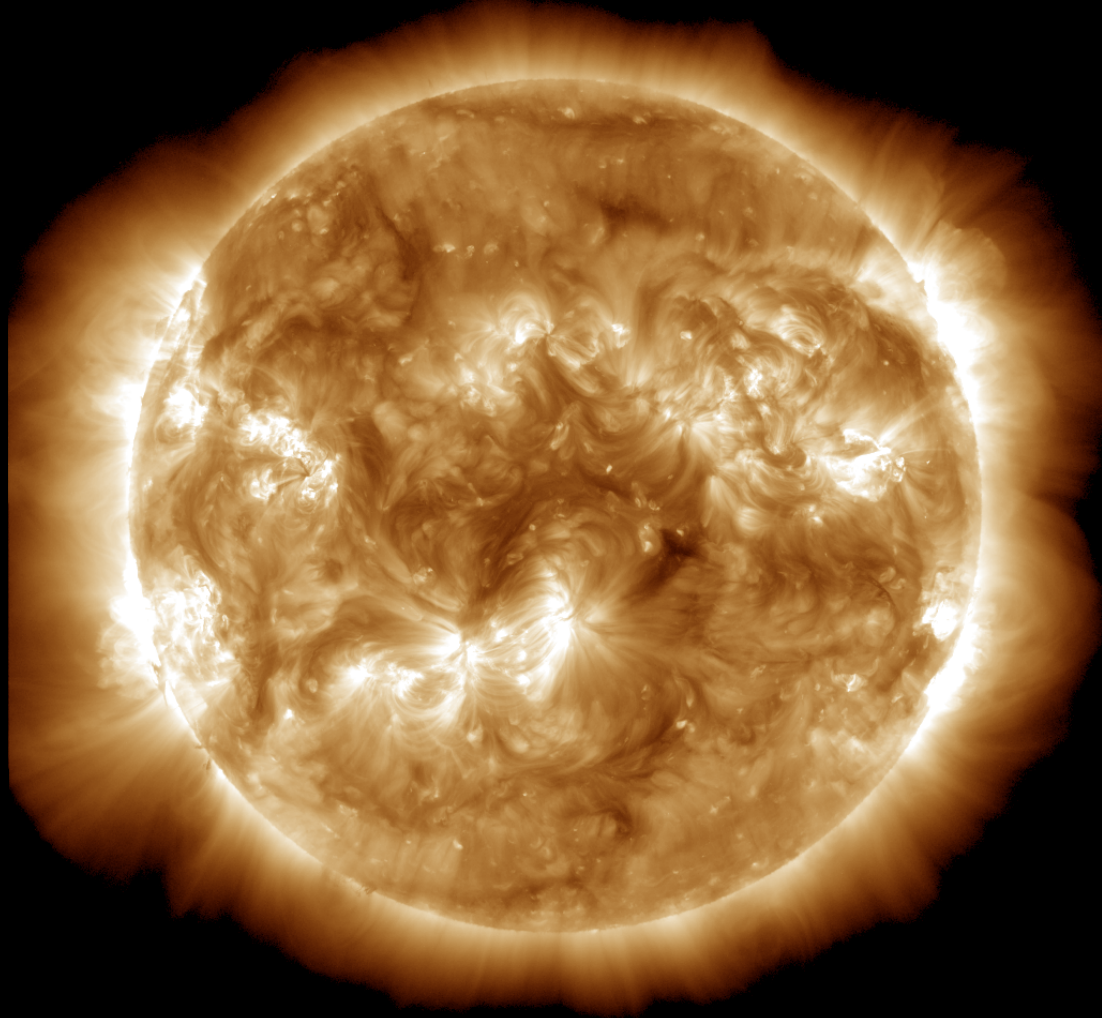


SDO/HMI Quick-Look Magnetogram: 20230827_114500

Coronal holes

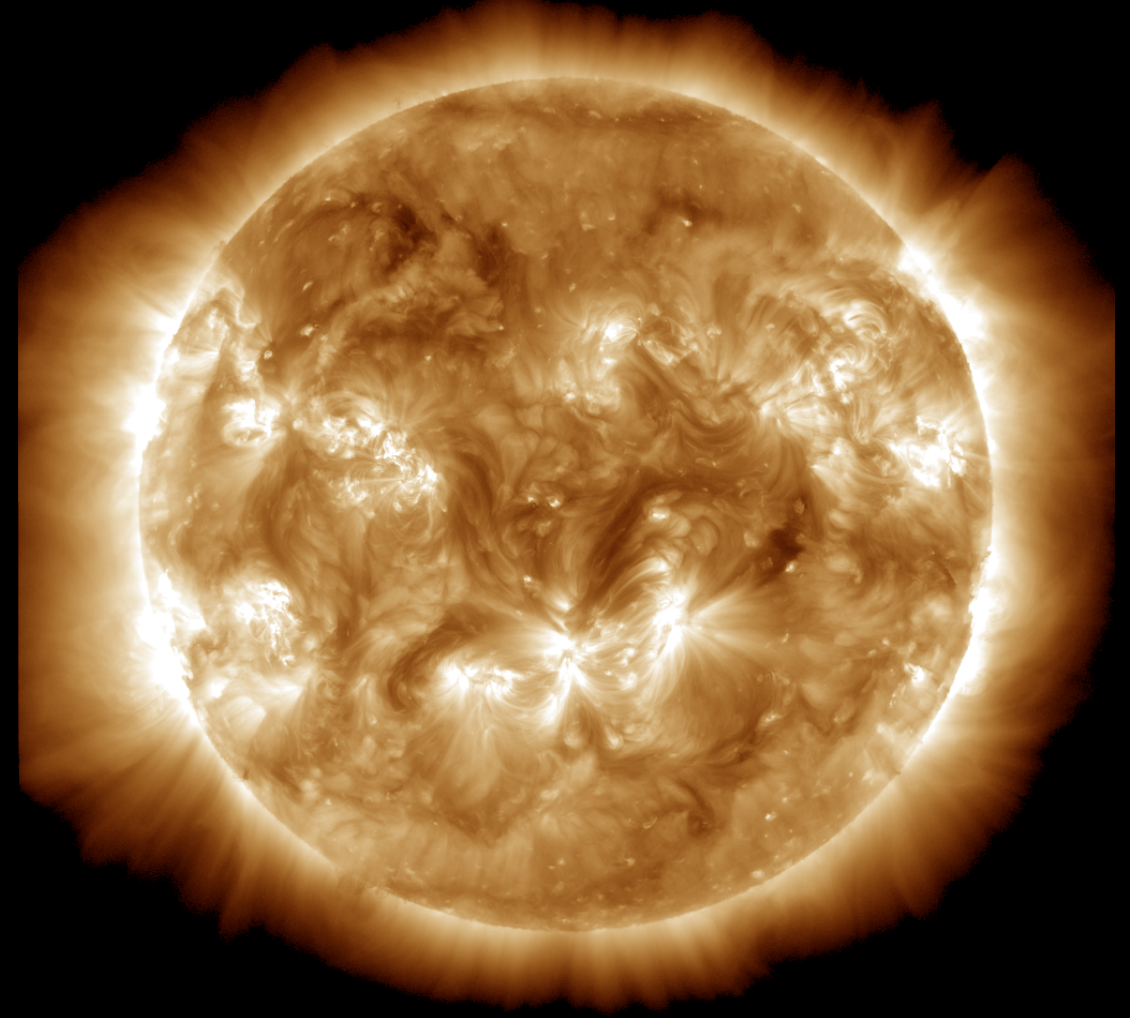
SDO/AIA 19.3 nm 2023-08-24

SDO/AIA AIA 193Å 2023-08-24T12:00:05.843

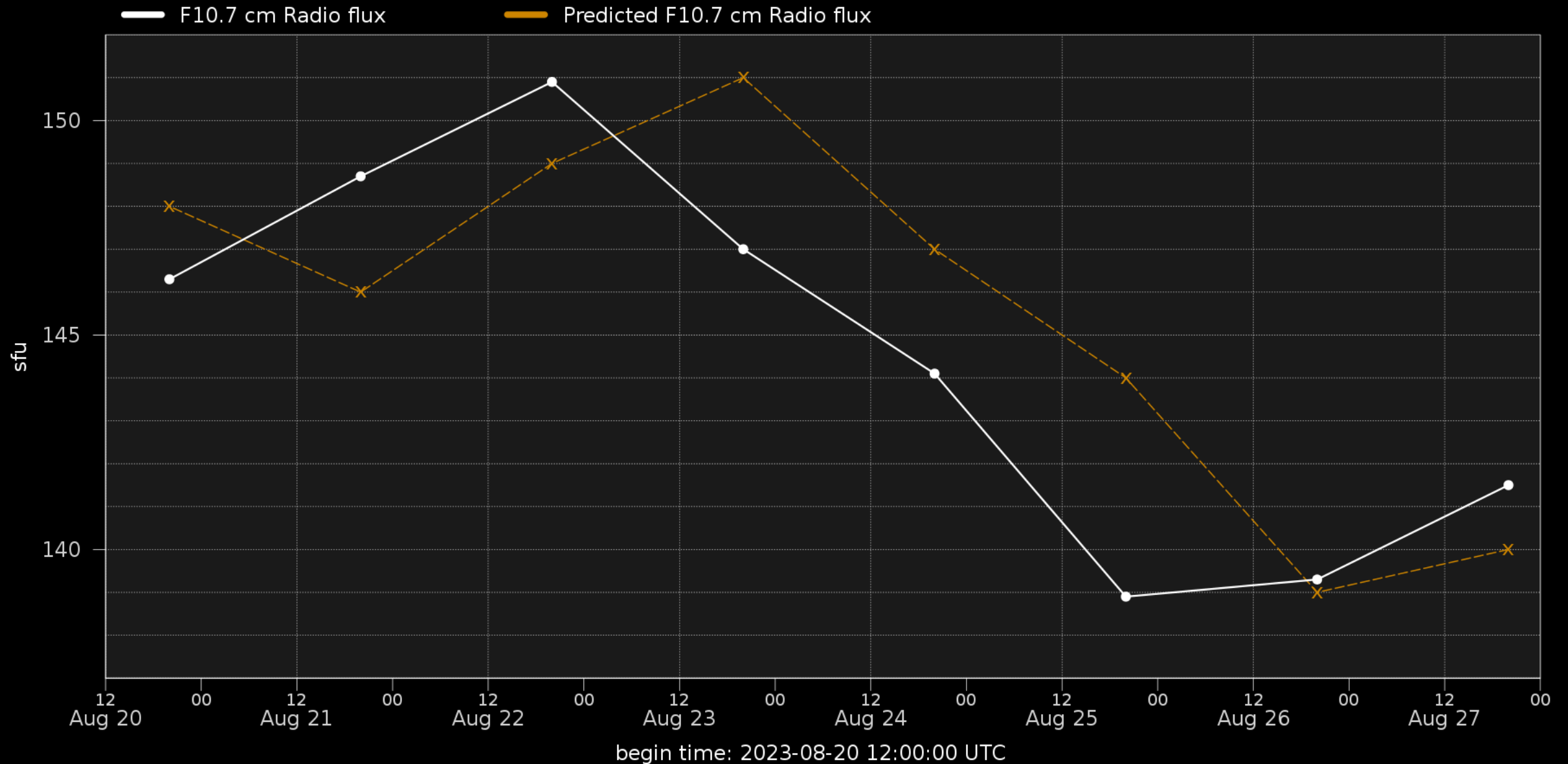


SDO/AIA 19.3 nm 2023-08-25

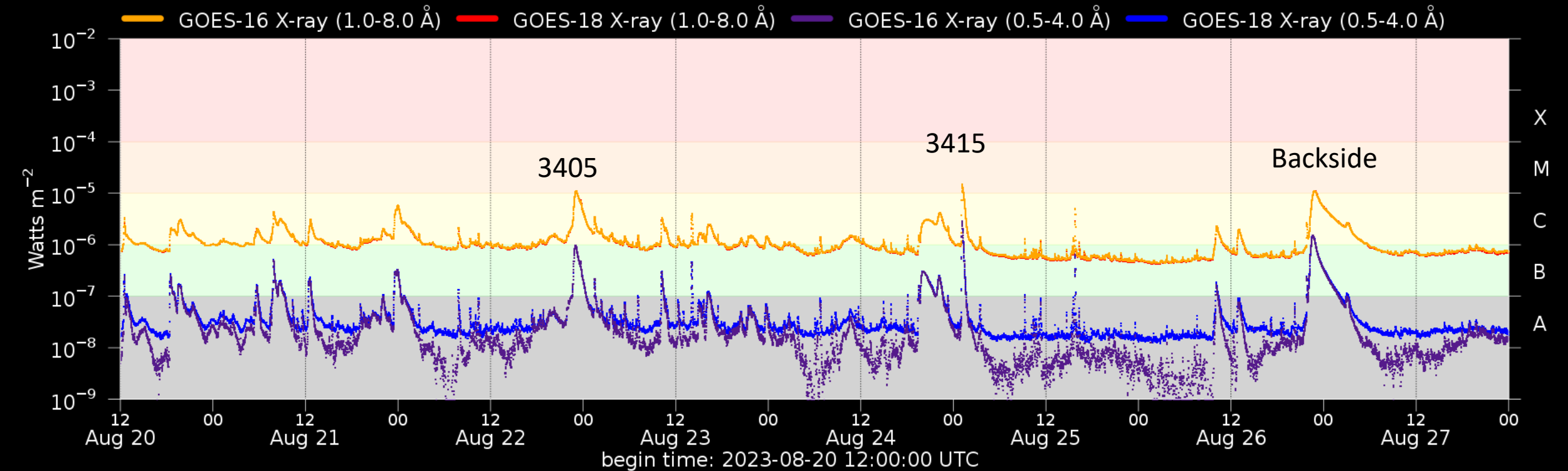
SDO/AIA AIA 193Å 2023-08-25T12:00:05.843



Solar F10.7cm radio flux



Flaring activity



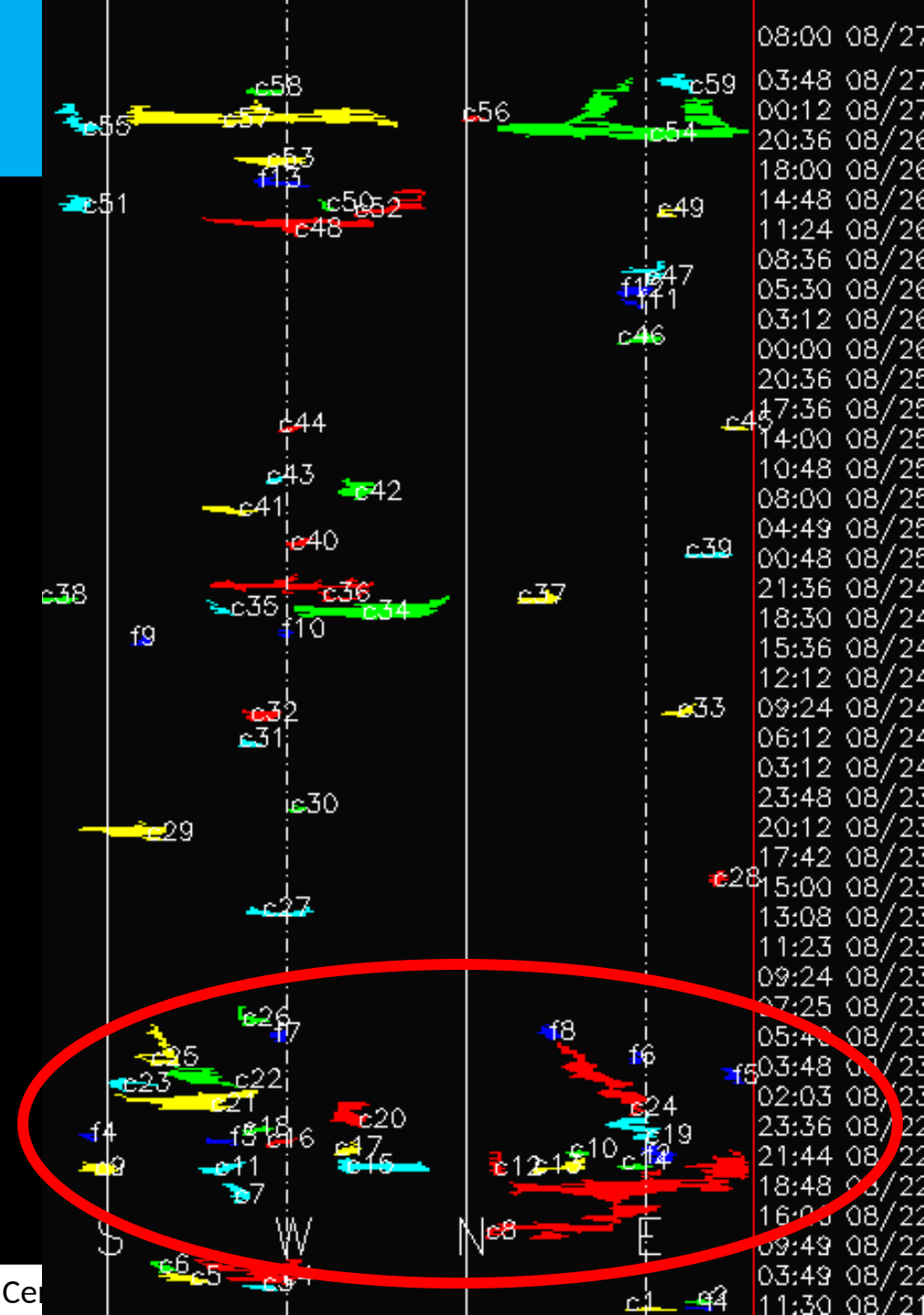
Probabilities (%) and occurrences (#) of C/M/X-flares daily, from noon to noon:

Issue date	2023-08-20	2023-08-21	2023-08-22	2023-08-23	2023-08-24	2023-08-25	2023-08-26	2023-08-27
Probability (%)	95 10 01	90 25 05	80 15 05	85 40 10	70 10 01	85 40 15	75 35 05	85 50 15
Observed (#)	02 00 00	04 00 00	03 00 00	04 00 00	04 01 00	03 00 00	03 00 00	00 00 00

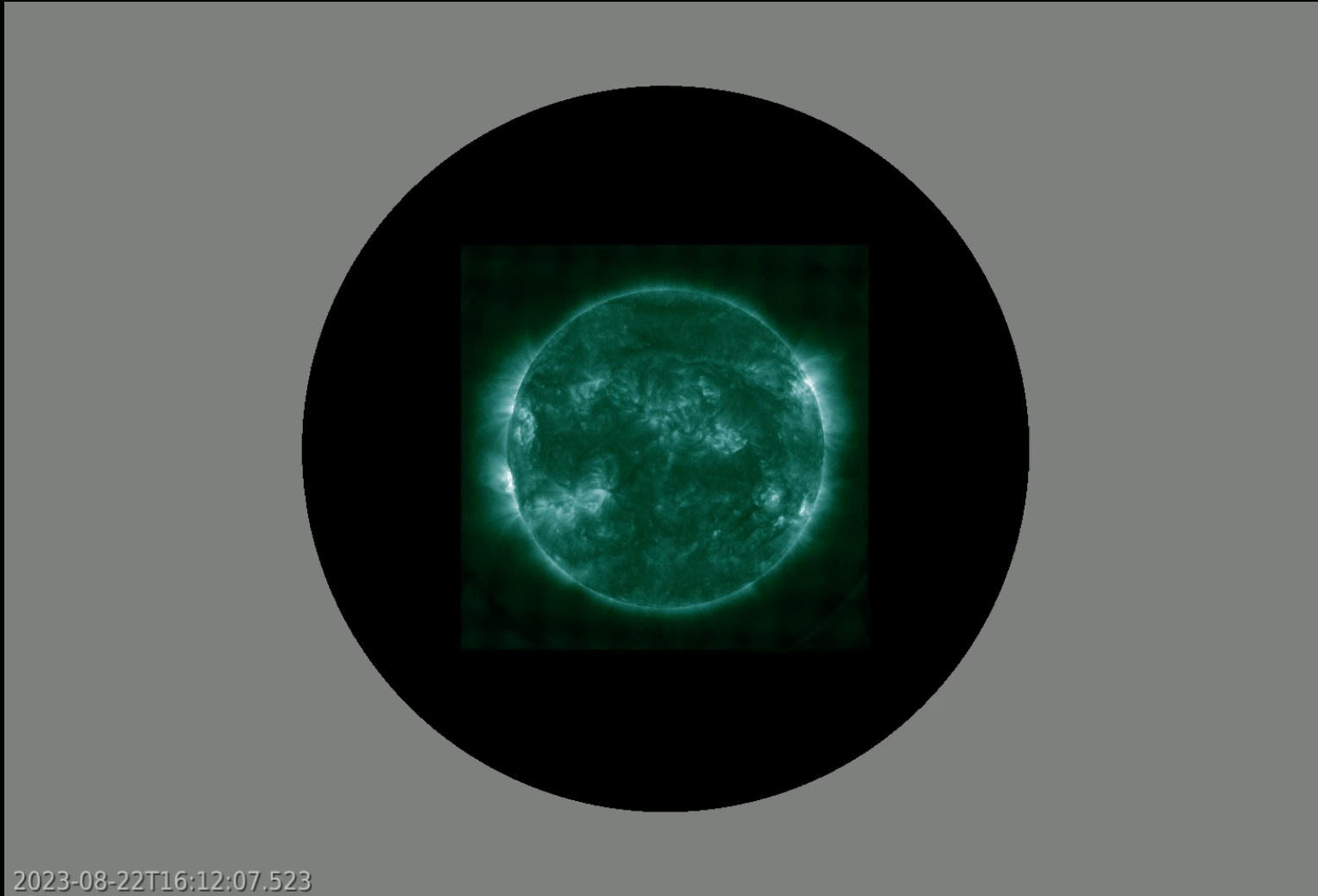
Coronal Mass Ejections



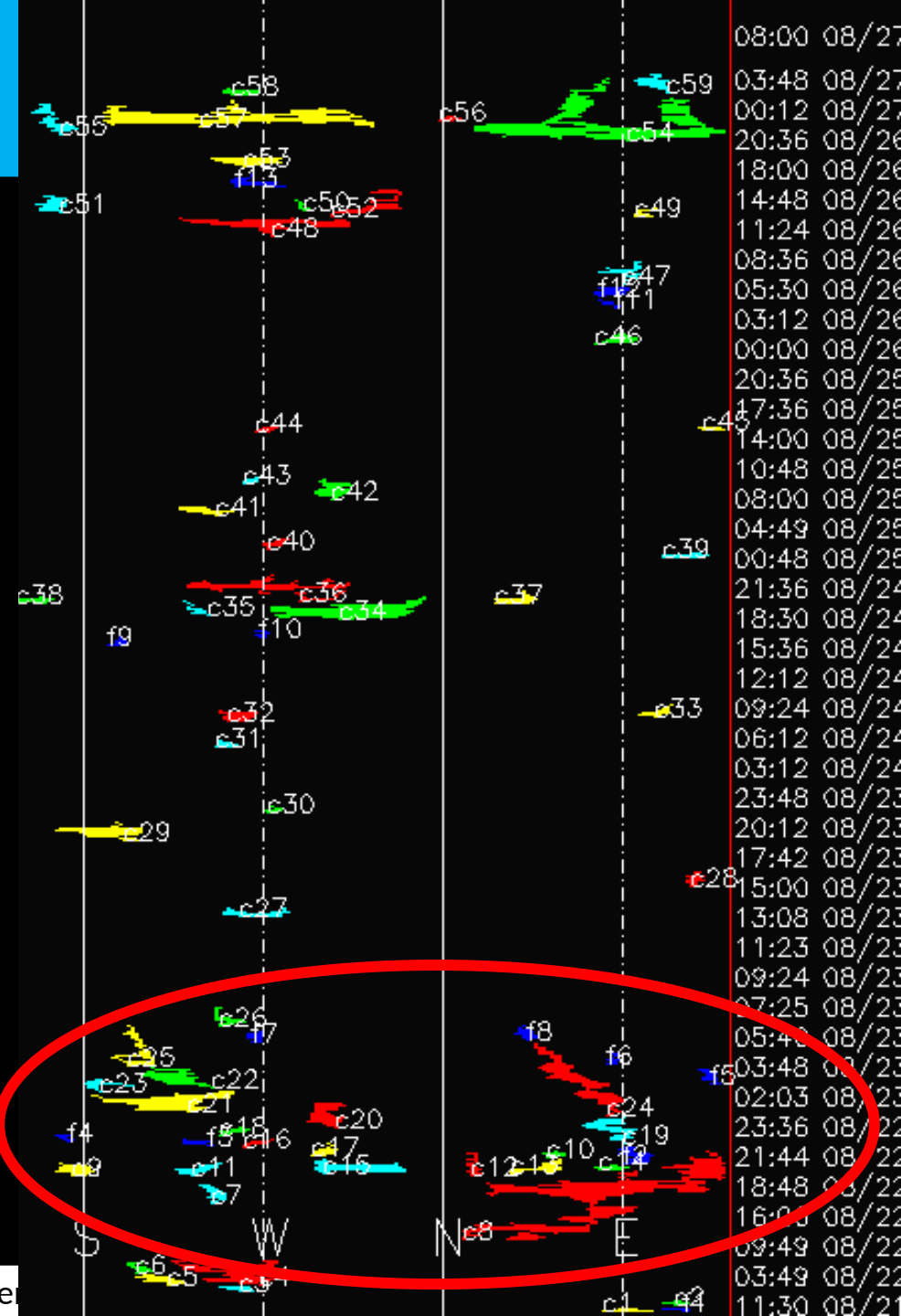
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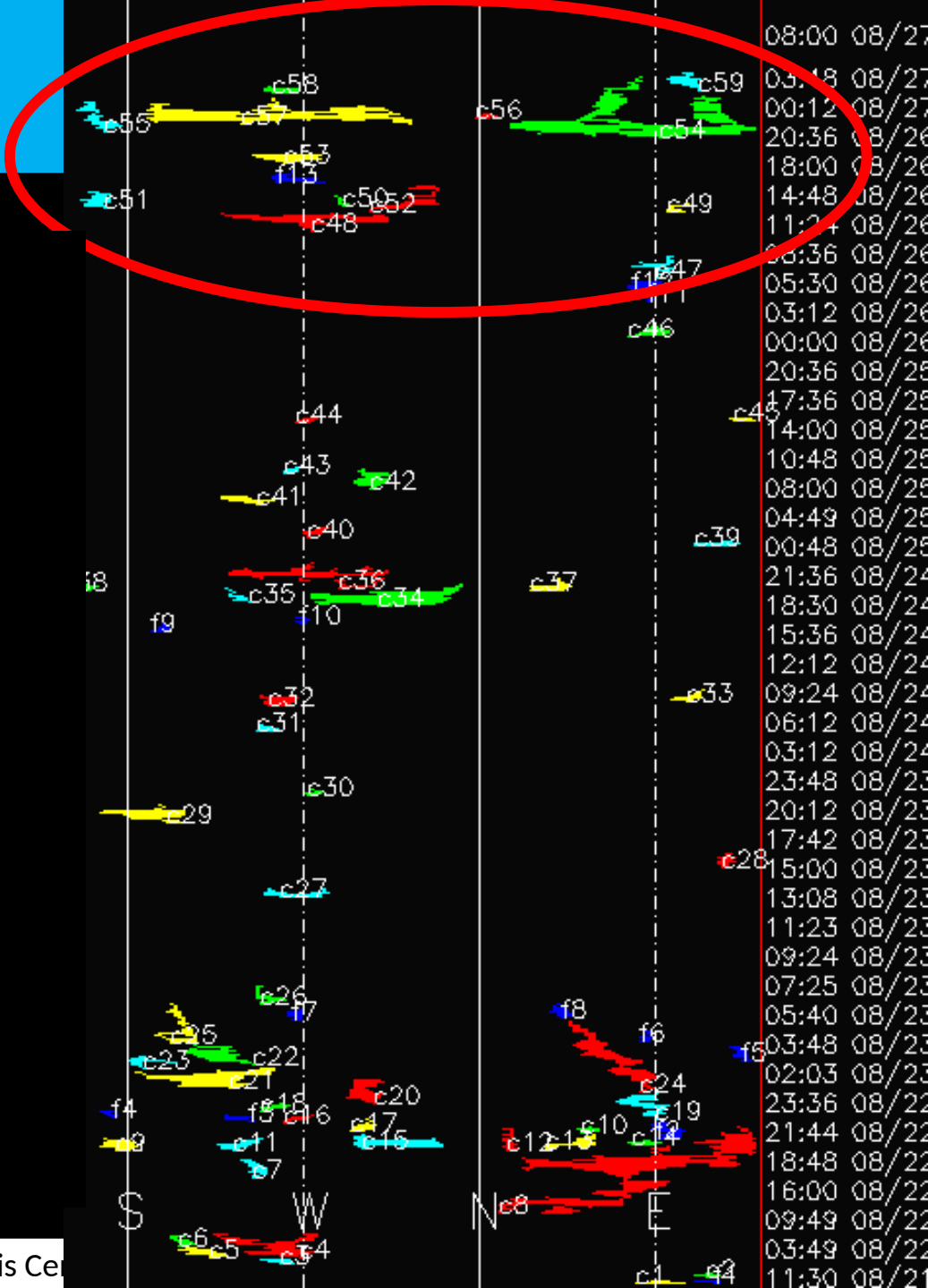
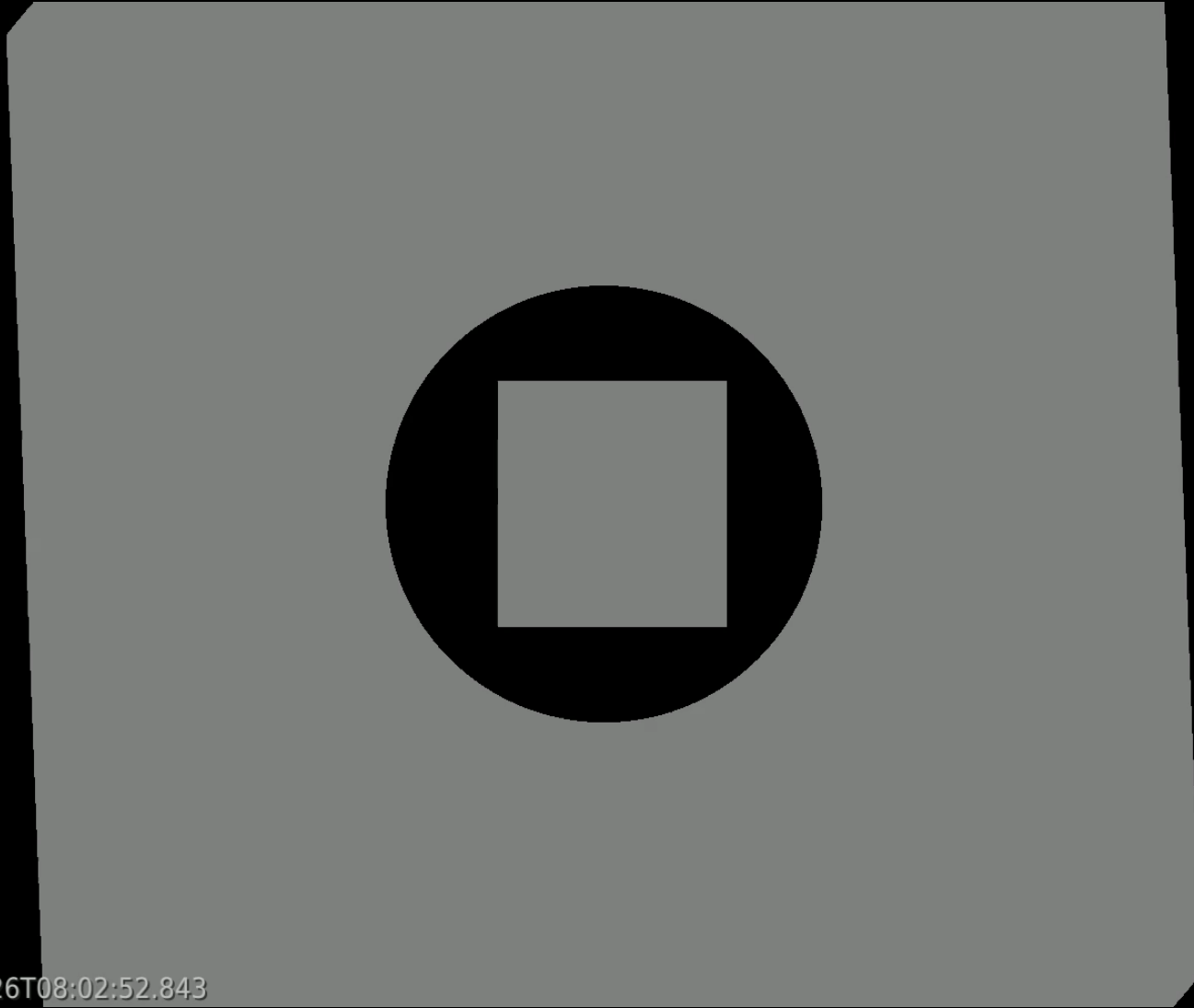
Coronal Mass Ejections



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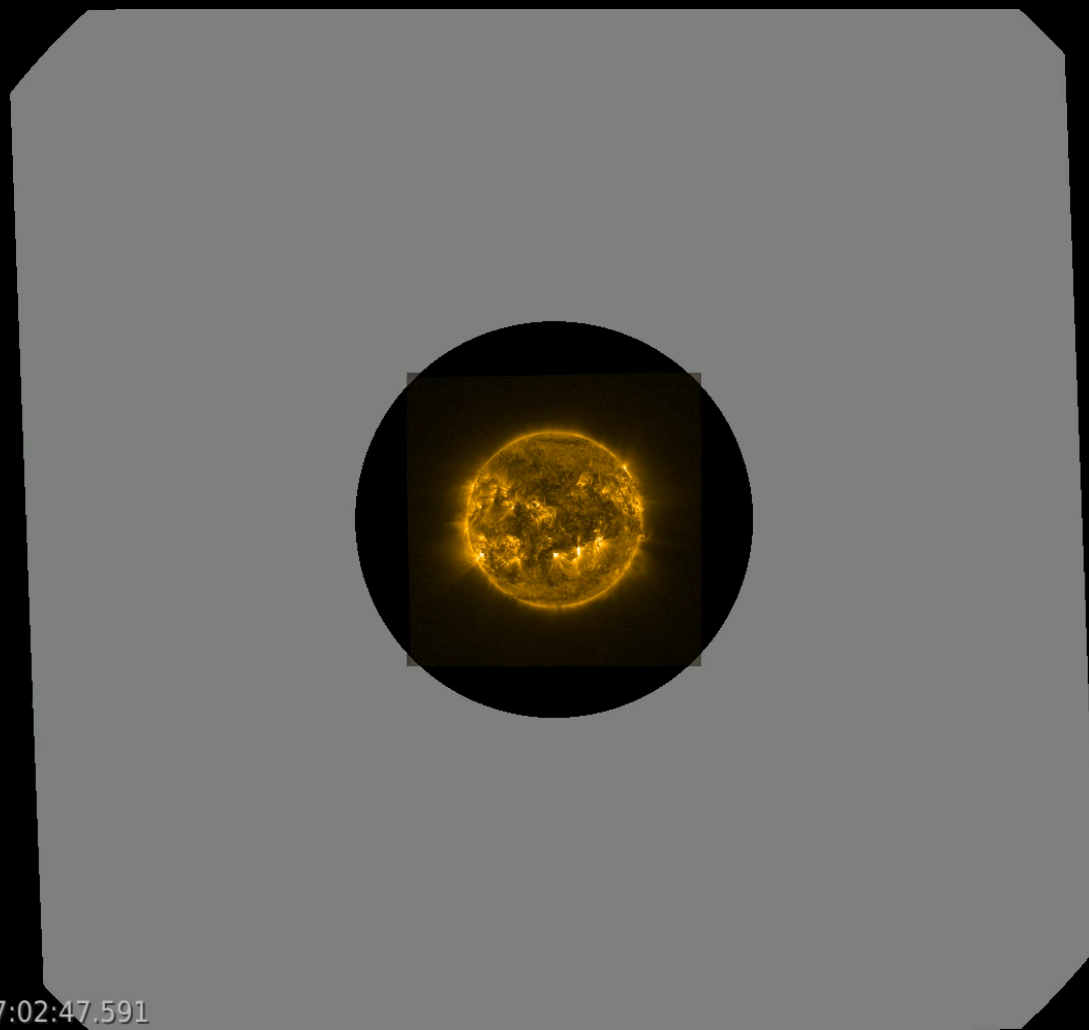


Coronal Mass Ejections

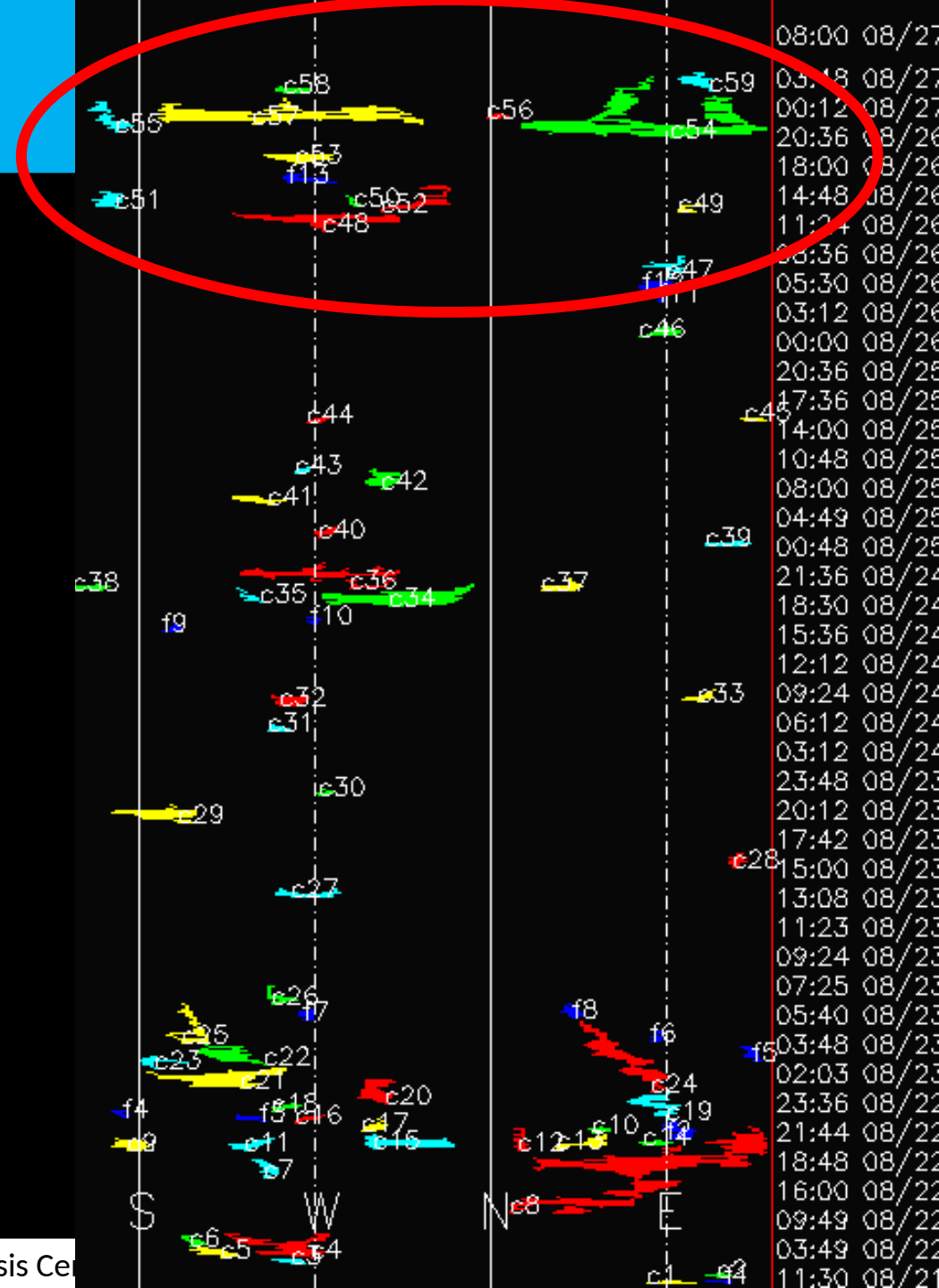


2023-08-26T08:02:52.843

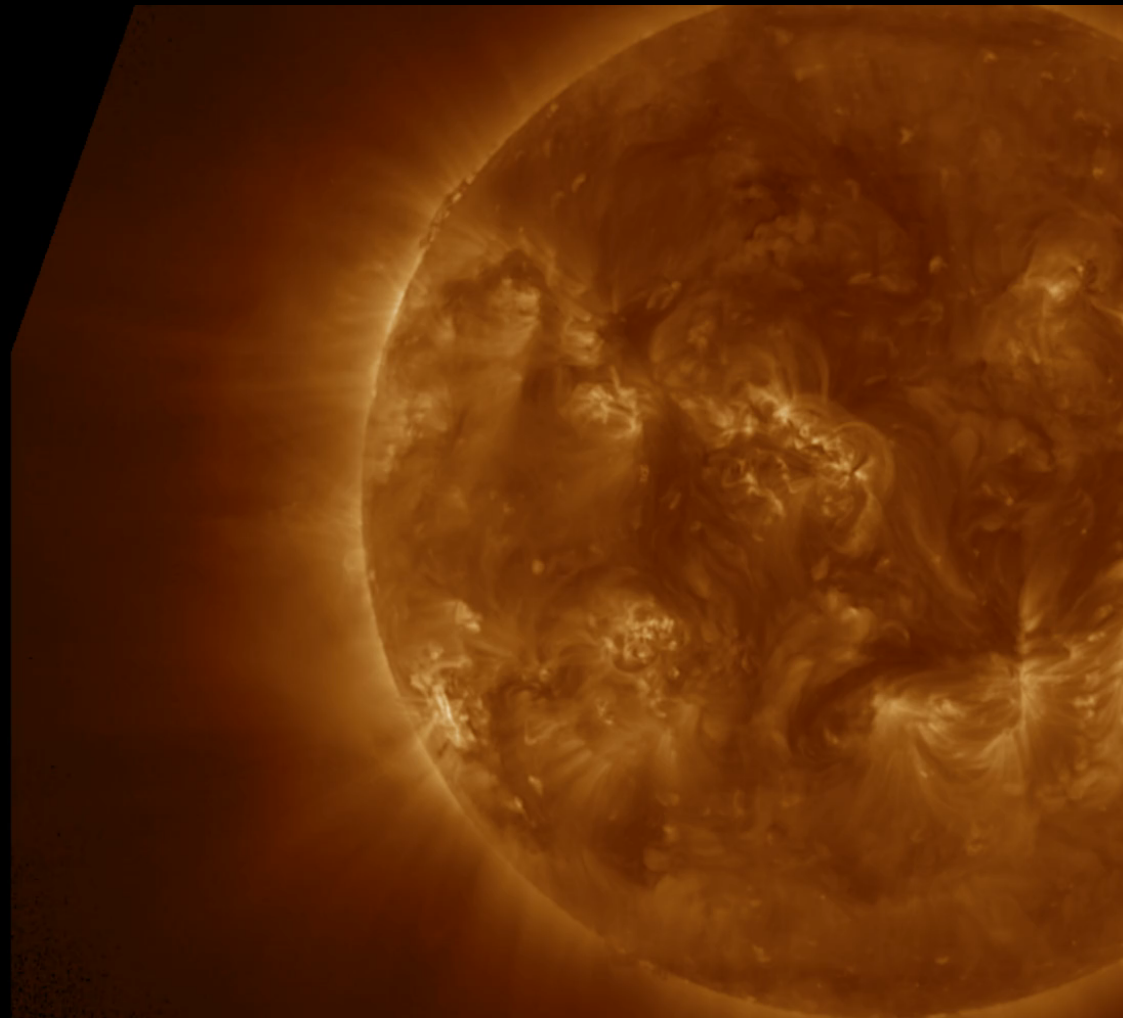
Coronal Mass Ejections



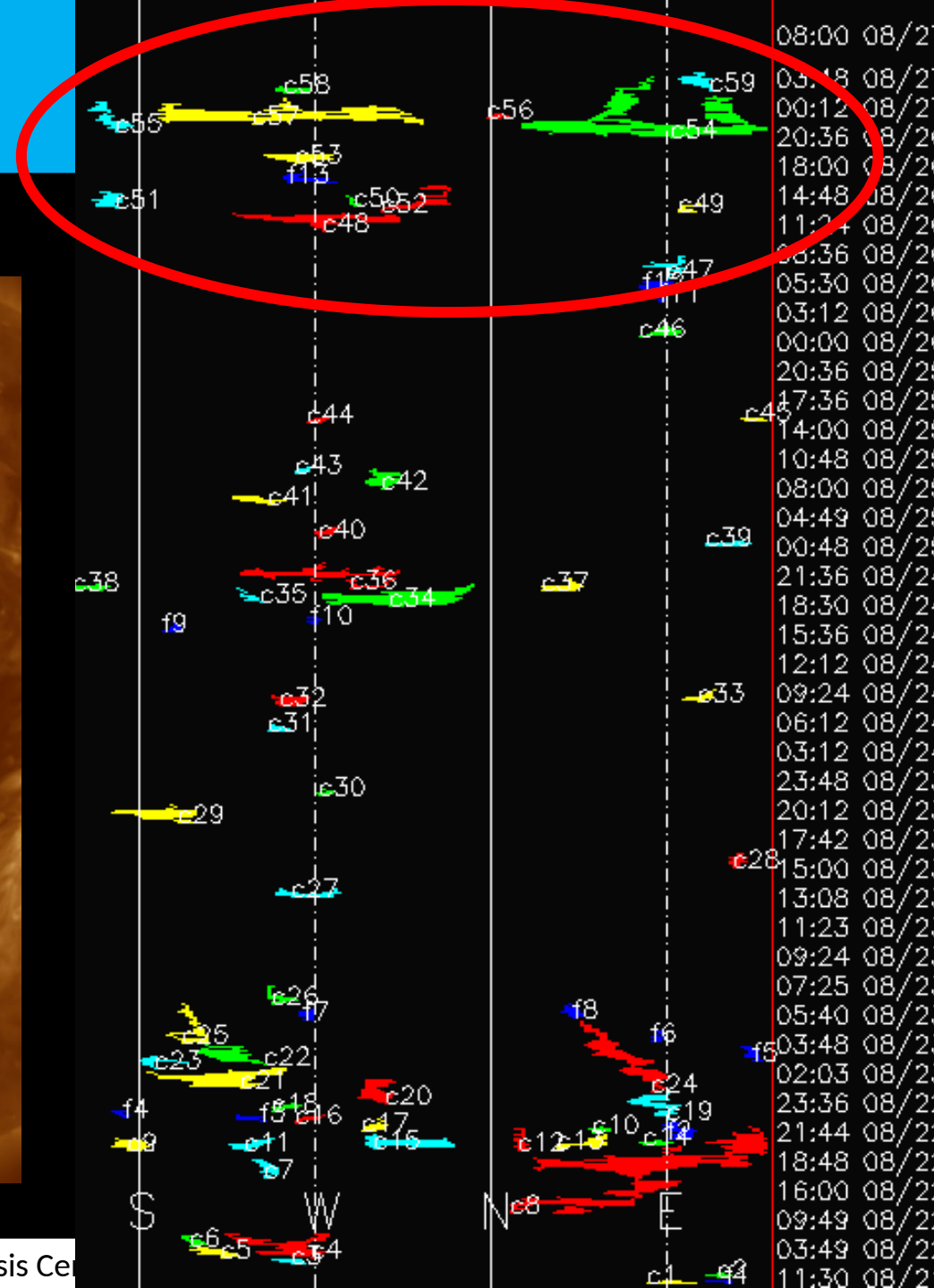
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Coronal Mass Ejections



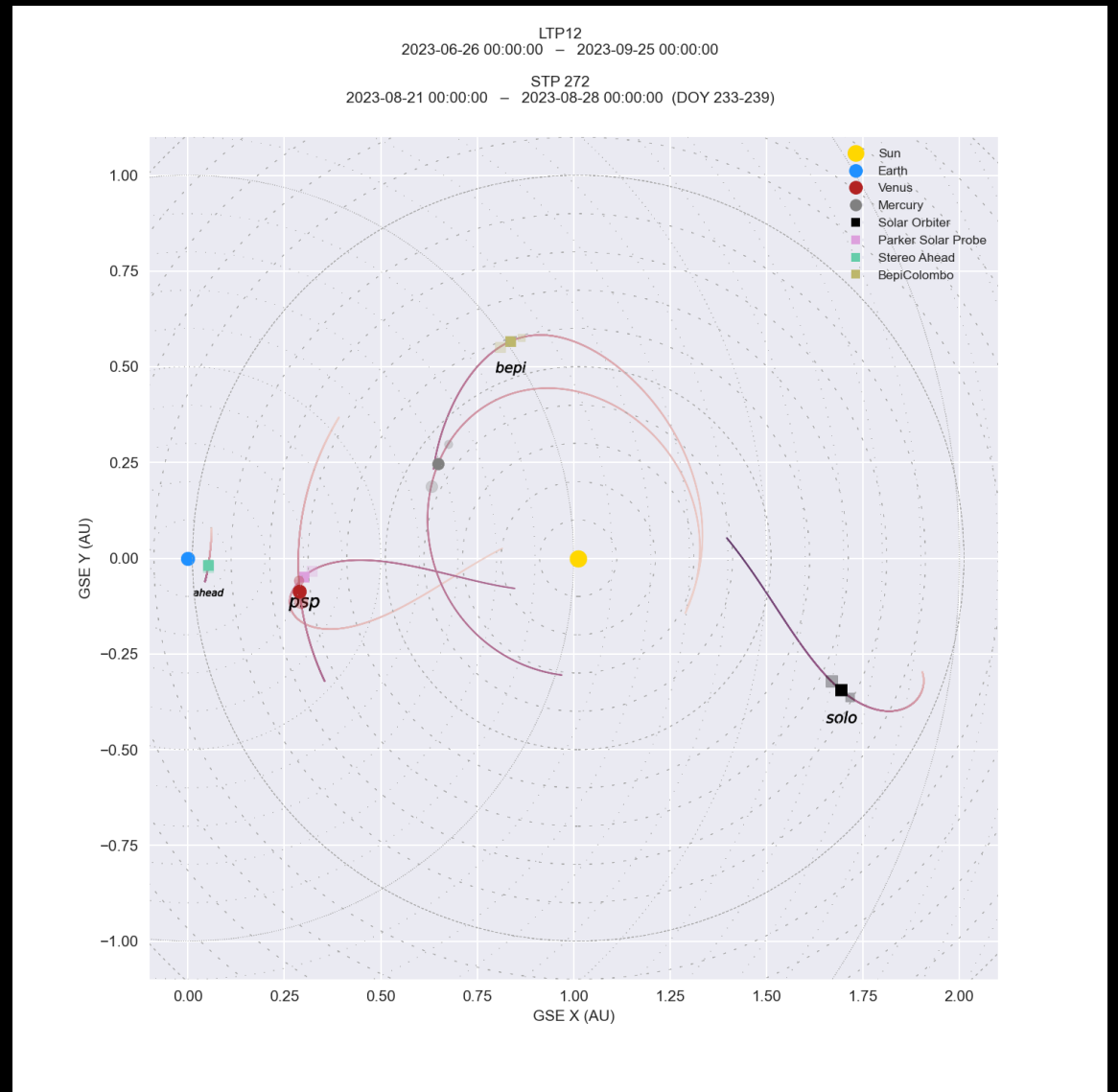
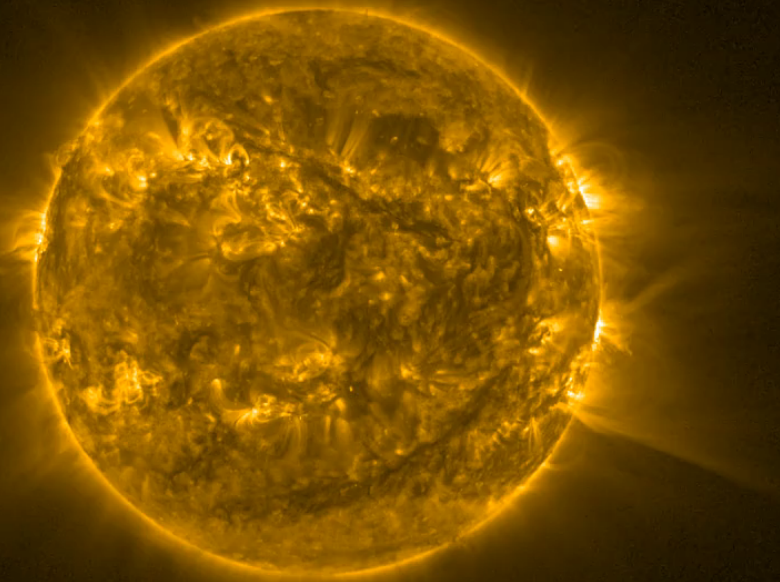
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Coronal Mass Ejections - EUI

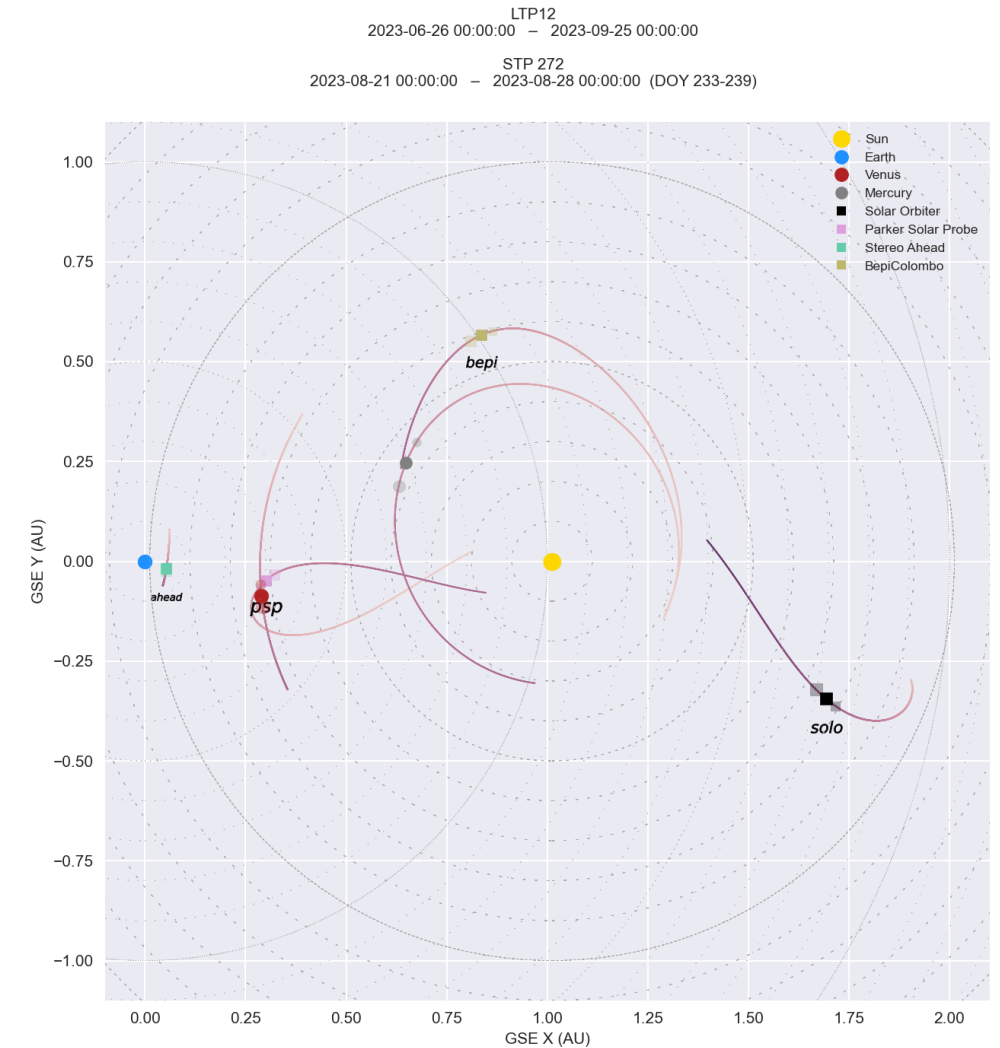
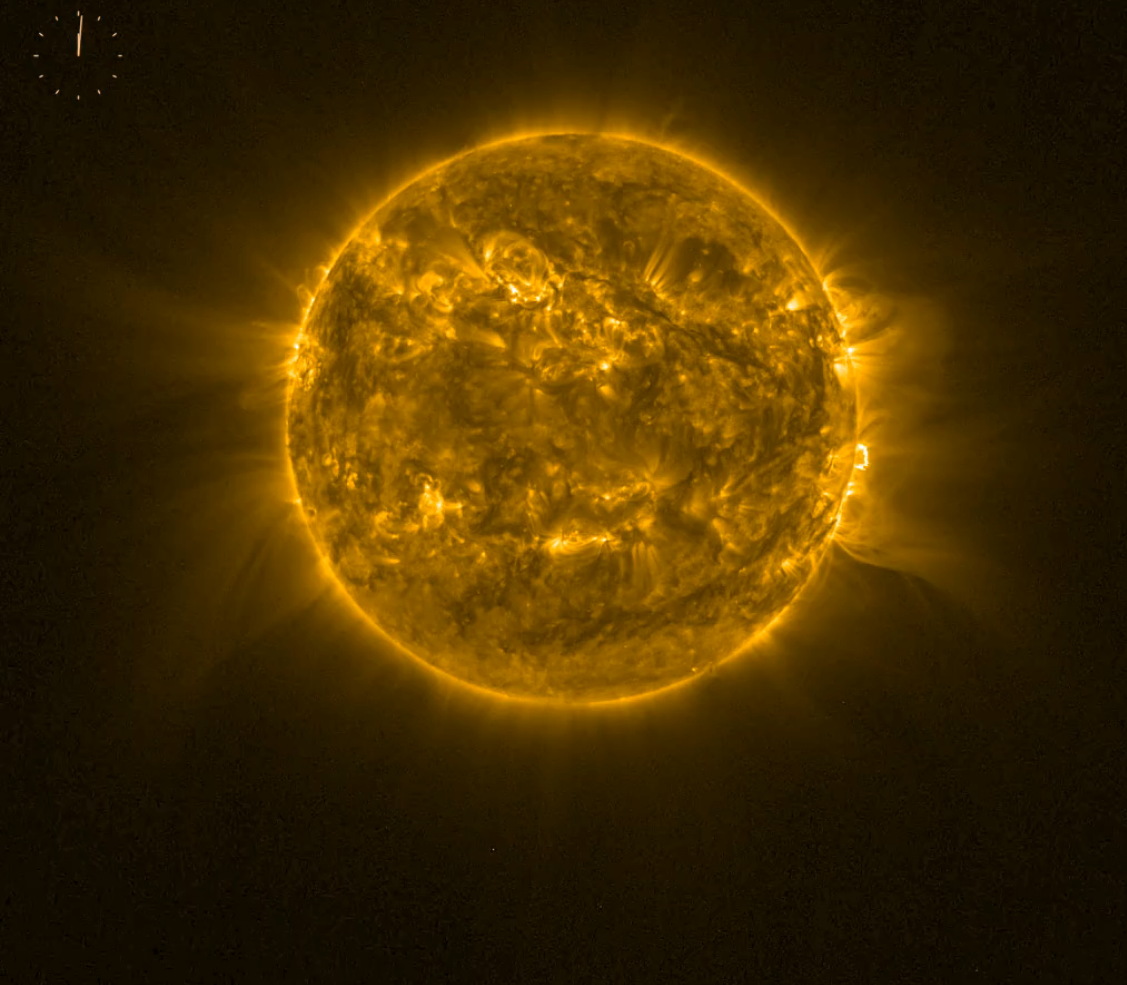
Solar Orbiter/EUI FSI 174
Zirconium_174_n25 L1 priority 0
combitpp 7 (bpp 0.28, Lossy-strong)
crota -7.069 (deg) dsun_au 0.751 (AU)
crval1,2 106.18,113.63 (arcsec) v110_20230826_001+flown

2023-08-26 00:01:00 (UTC)



Coronal Mass Ejections - EUI

Solar Orbiter/EUI FSI 174
Zirconium_174_n25 L1 priority 0
combitpp 7 (bpp 0.28, Lossy-strong)
crota -7.015 (deg) dsun_au 0.742 (AU)
crval1,2 105.03,113.41 (arcsec) v110_20230827_001+flown
2023-08-27 00:01:00 (UTC)



Coronal Mass Ejections

CME summary

- 22 August CME -> low changes of ICME arrival on 26 August
- 26 August CME -> low changes of ICME arrival on 30 August

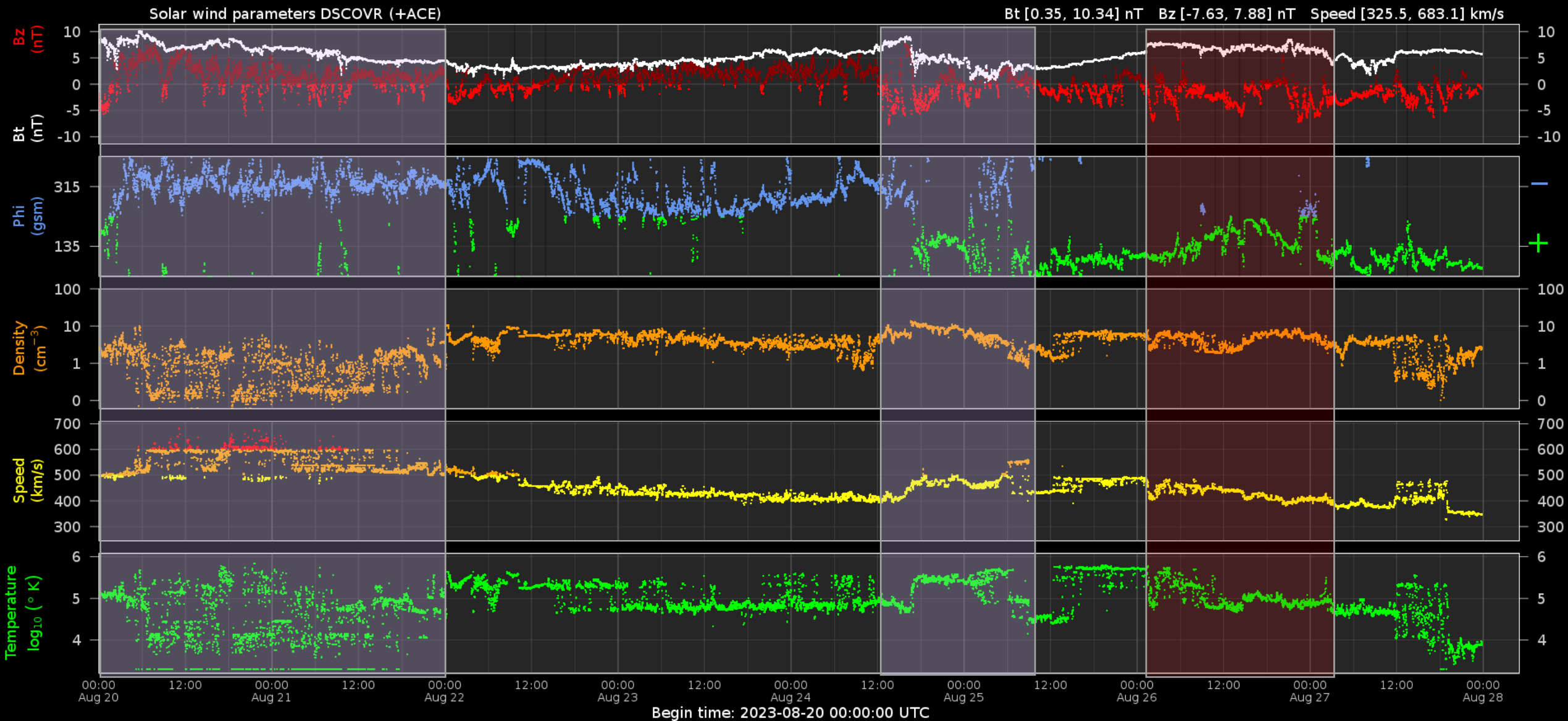
Solar Wind and Geomagnetic Activity



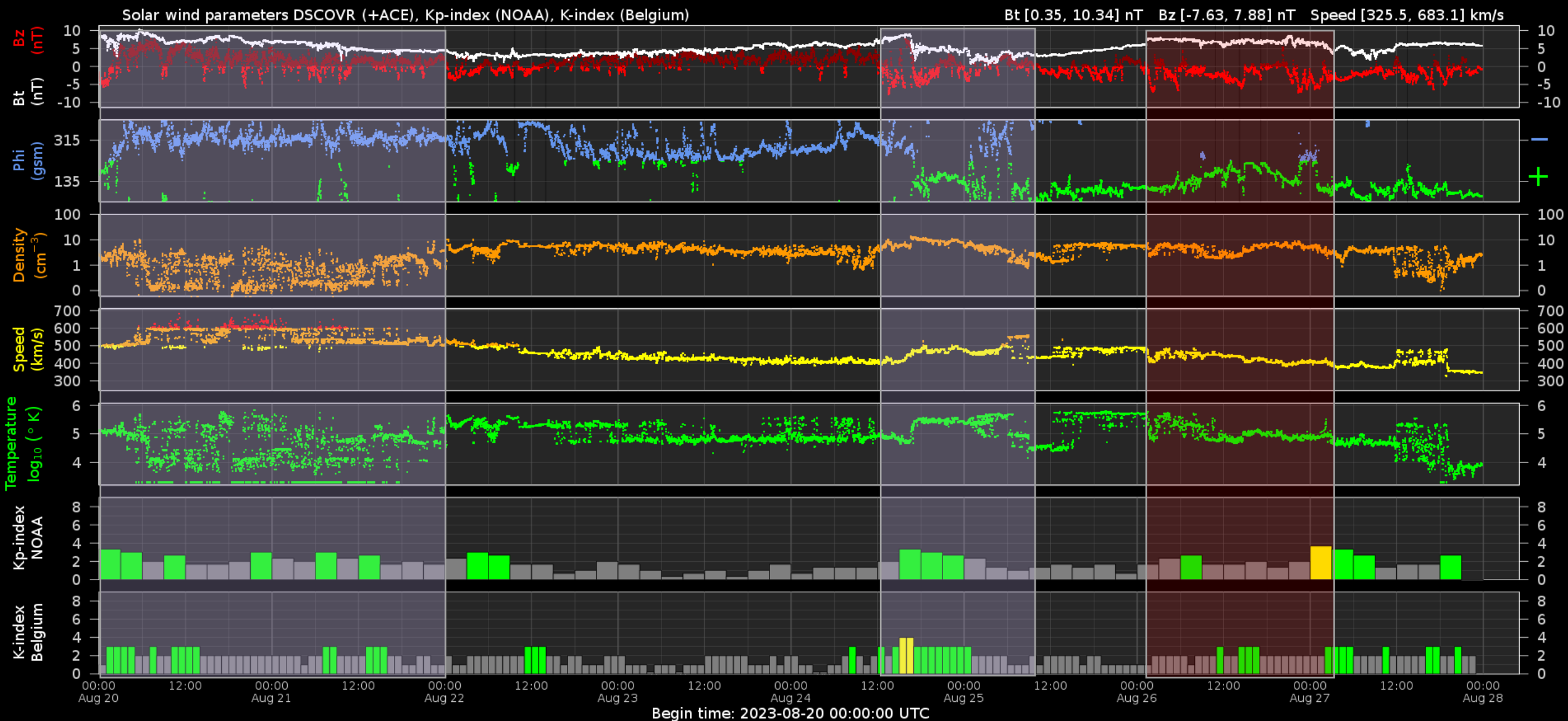
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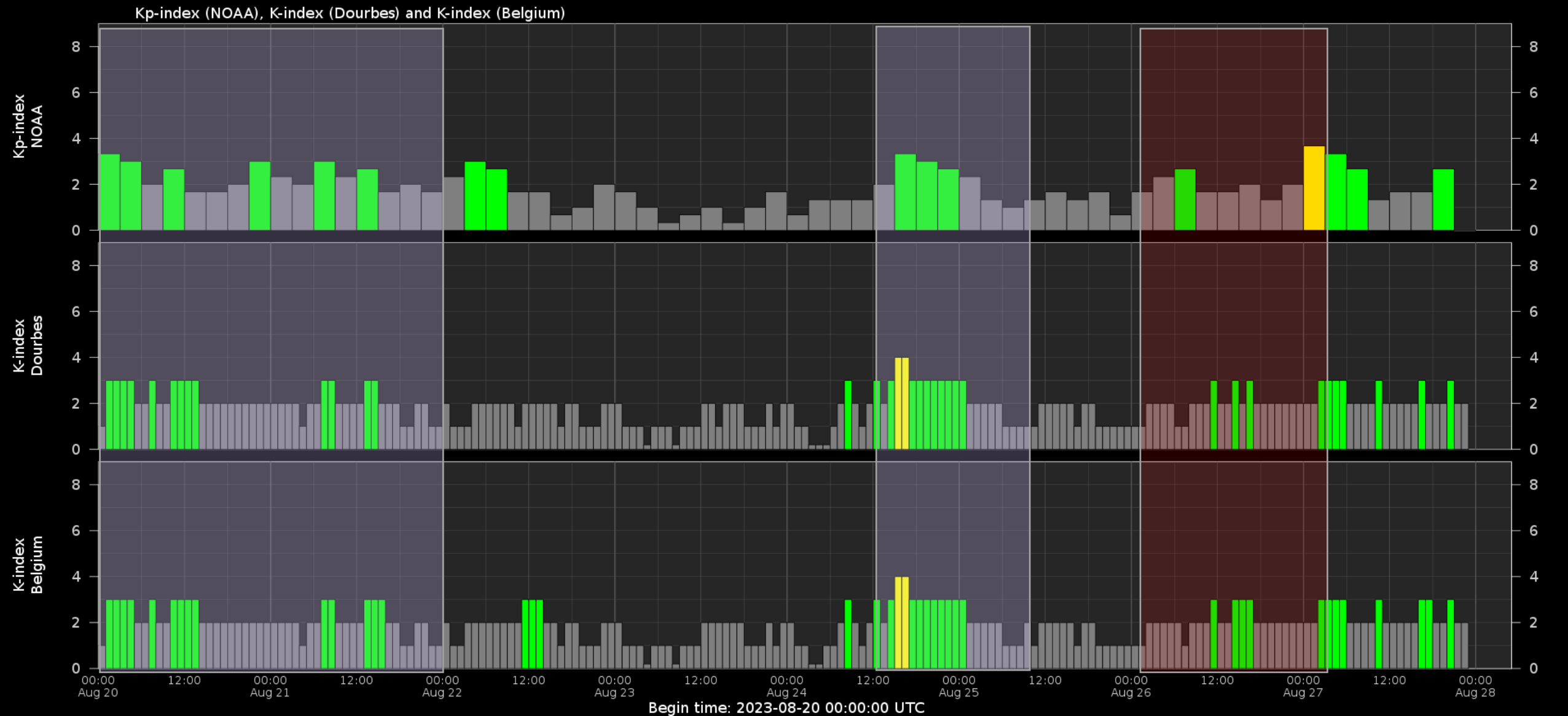
Solar wind parameters



Solar wind parameters & K-indices



Geomagnetic activity (K-indexes)



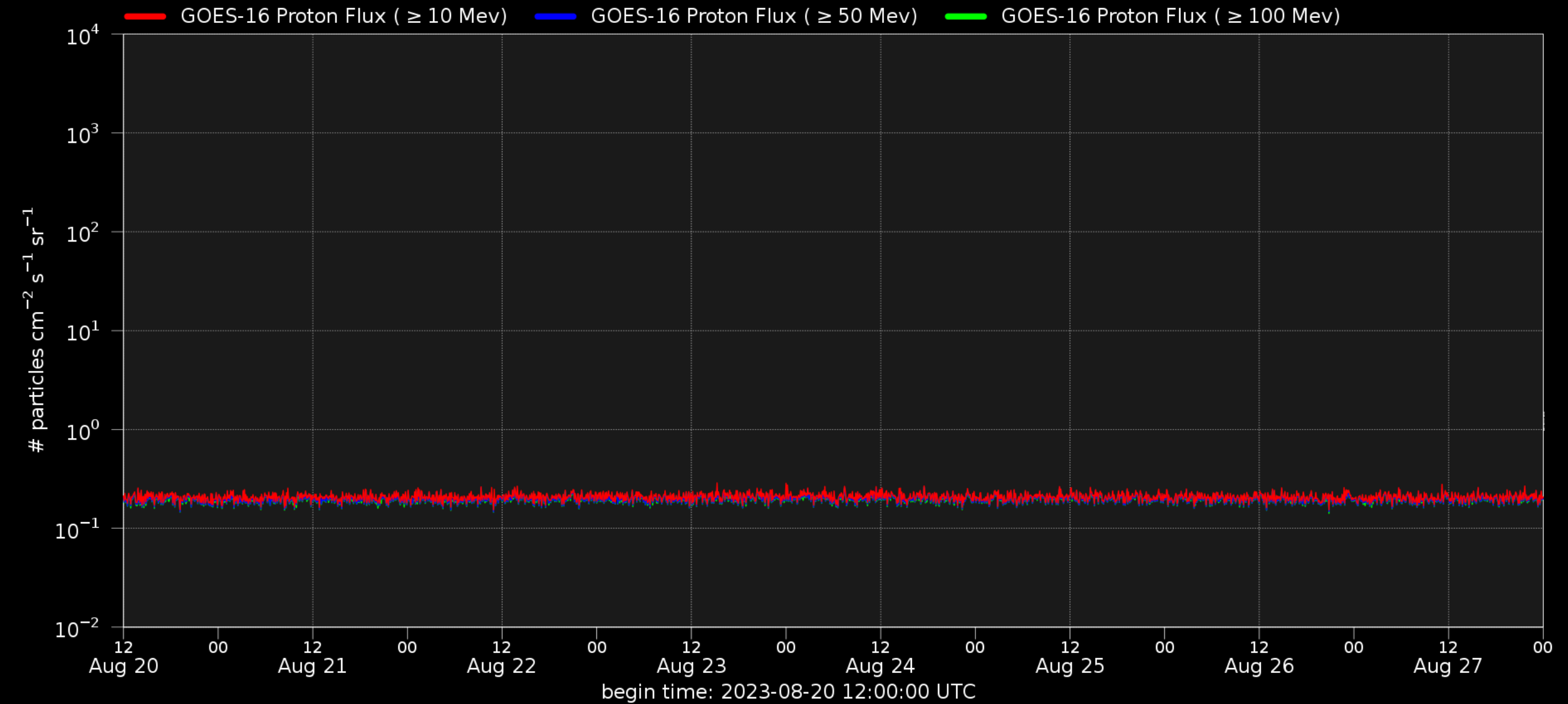
Energetic Particles



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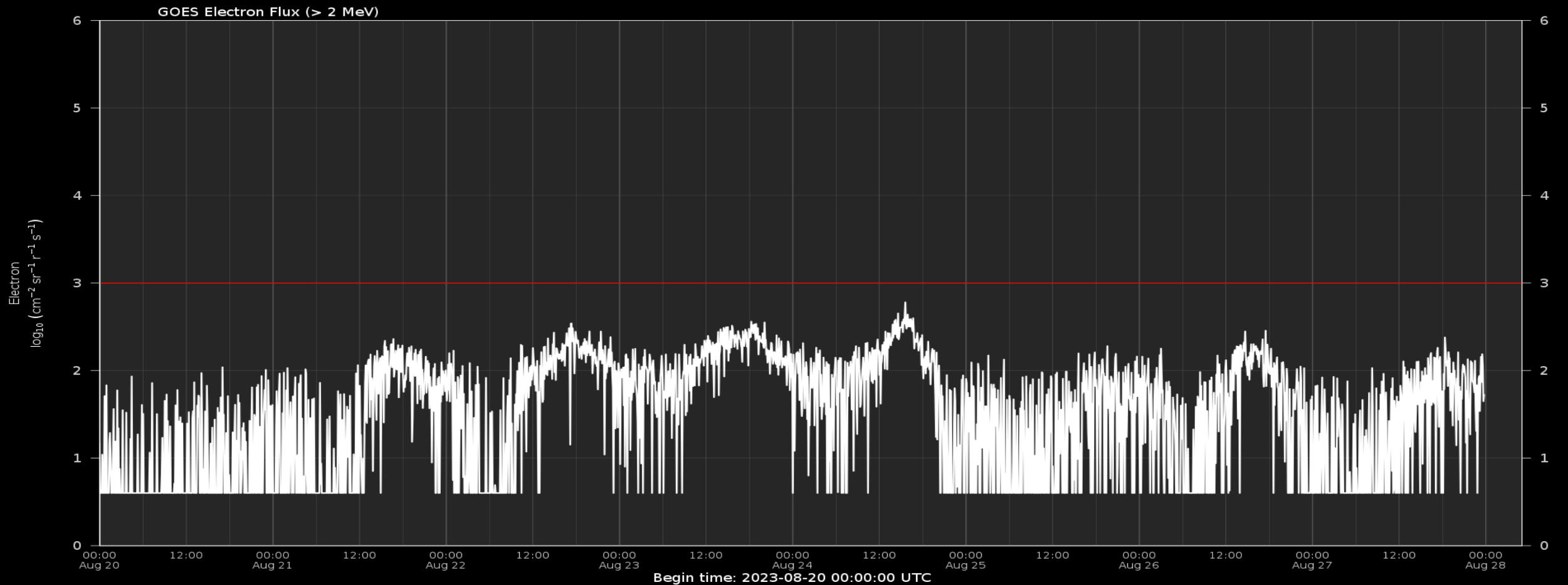
Solar proton flux



Electron flux at GEO

www.stce.be/educational/classification#electrons

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



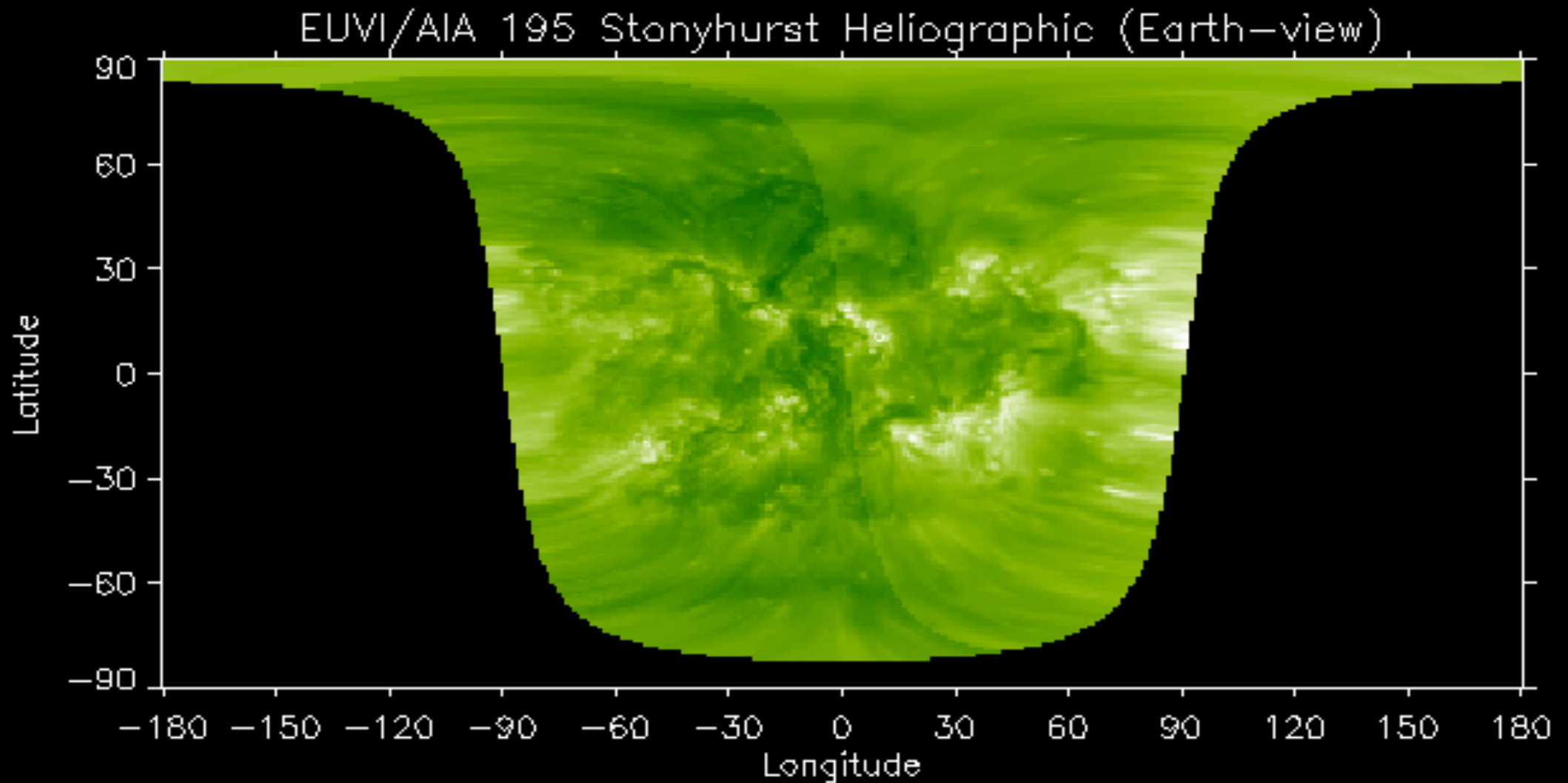
Outlook



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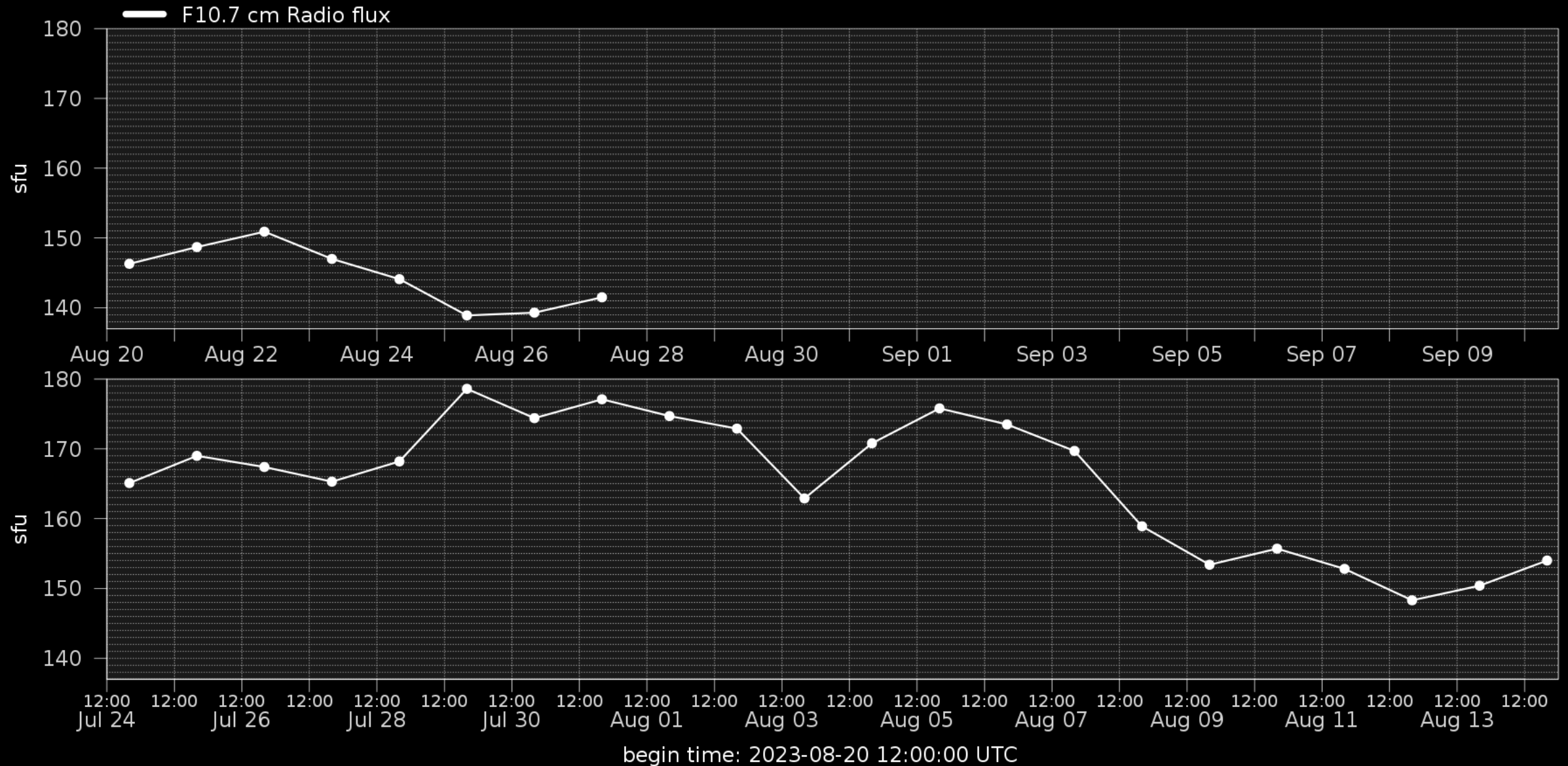
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Outlook: Solar activity



Observation date: 2023/08/27 16:55:00

Outlook: Solar F10.7cm radio flux



Outlook: Solar wind parameters



Outlook: Geomagnetic activity



Pegasus



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Pegasus related events

Regular scincilation events in the local evening

SIDC Space Weather Briefing

See you at our next briefing!

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