

# SIDC Space Weather Briefing

24 September 2023-01 October 2023

Vansintjan Robbe

& the SIDC forecaster team



Royal Observatory  
of Belgium

Solar Influences  
Data analysis Centre  
[www.sidc.be](http://www.sidc.be)

# Summary Report

Solar activity from 2023-09-24 12:00 to 2023-10-01 23:59

Active regions	13 ARs
Flares	# C-class flare: 45 # M-class flare: 4 # X-class flare: 0
Coronal Holes	Several small or high latitude (1 negative and 2 positive polarity)
CMEs	No Earth directed halo CMEs

Proton flux	At background level.
Electron flux	Above threshold.

## Solar wind and geomagnetic conditions

ICMEs	Influence of an ICME at the start of the week
Solar wind conditions	B : 0.83 - 34.2 nT //Bz: -24.68 nT to 33.17 nT //Speed: 285.5 - 532.1km/s
Geomagnetic conditions	max K <sub>Be</sub> : 5, max K <sub>p</sub> (NOAA): 6, Minor Storm conditions

All Quiet Alert: Off

# Solar Activity

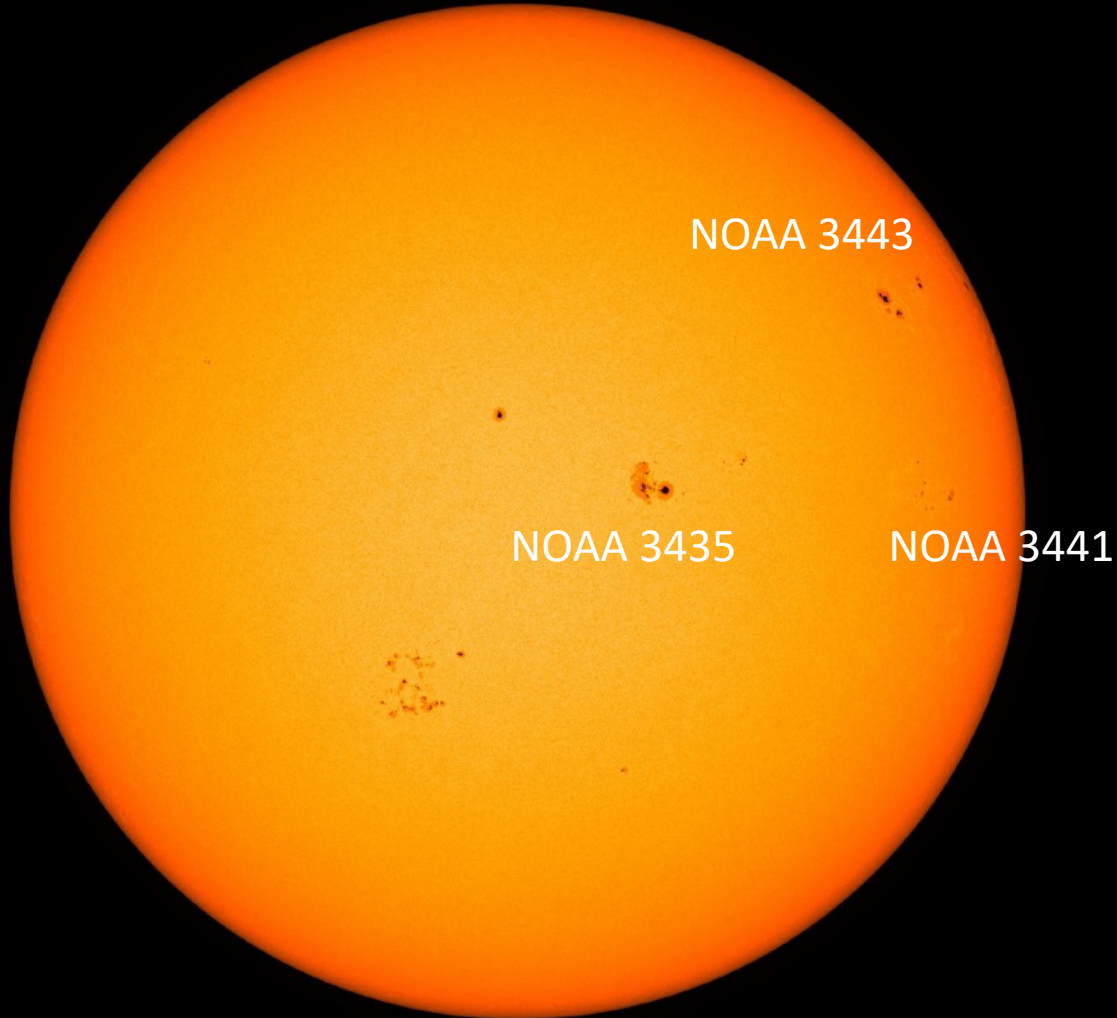


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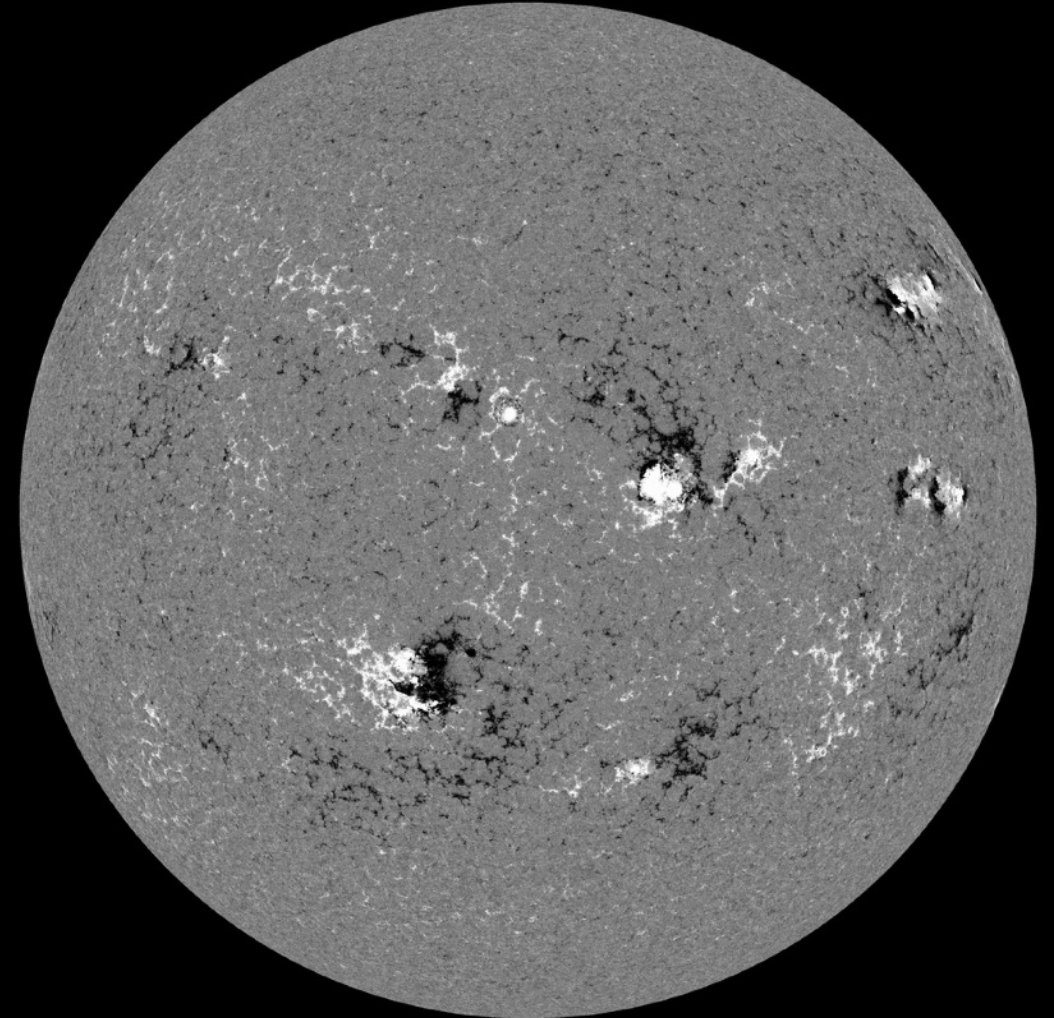
# Solar active regions

SDO/HMI White Light 2023-09-24



SDO/HMI Quick-Look Continuum: 20230924\_114500

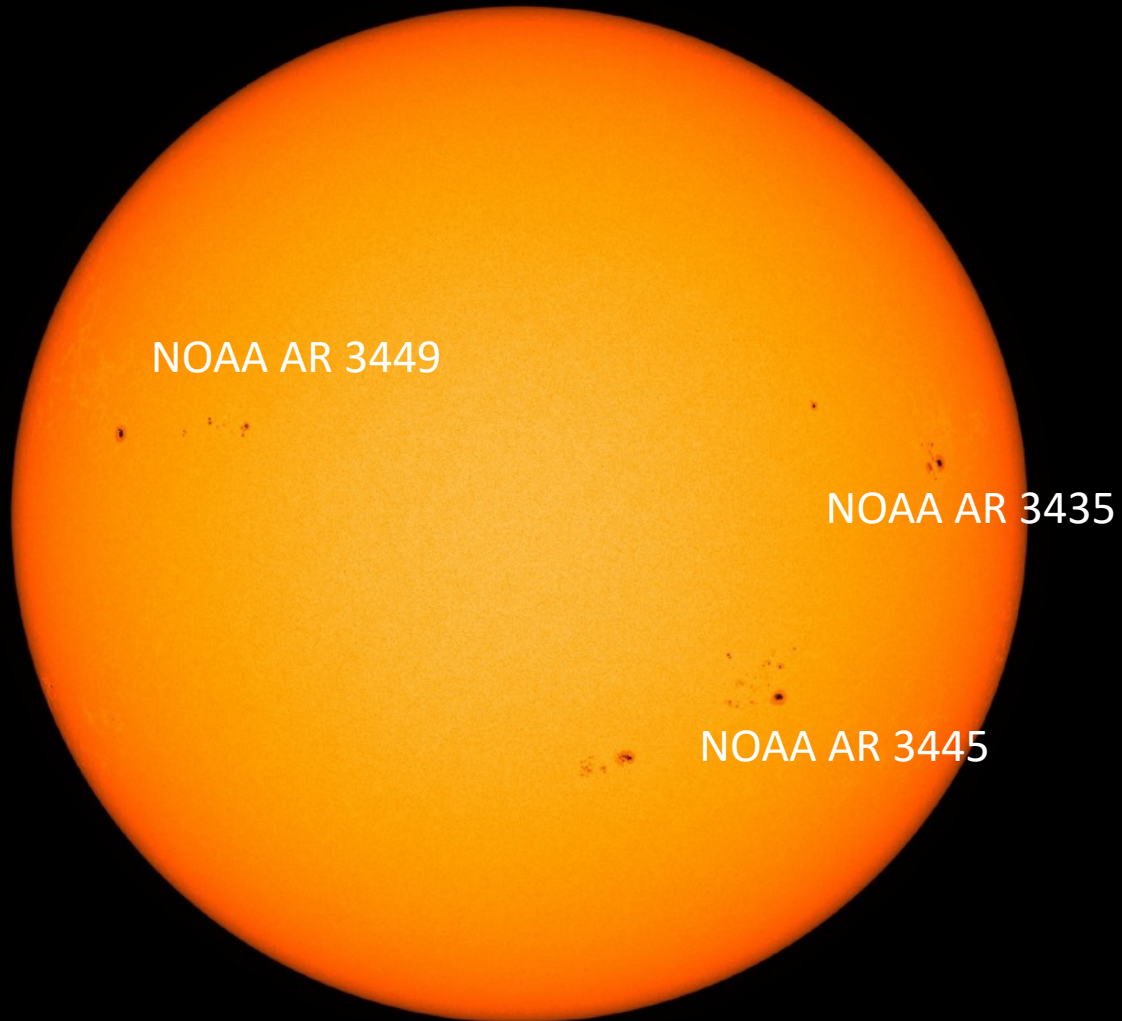
SDO/HMI Magnetogram 2023-09-24



SDO/HMI Quick-Look Magnetogram: 20230924\_114500

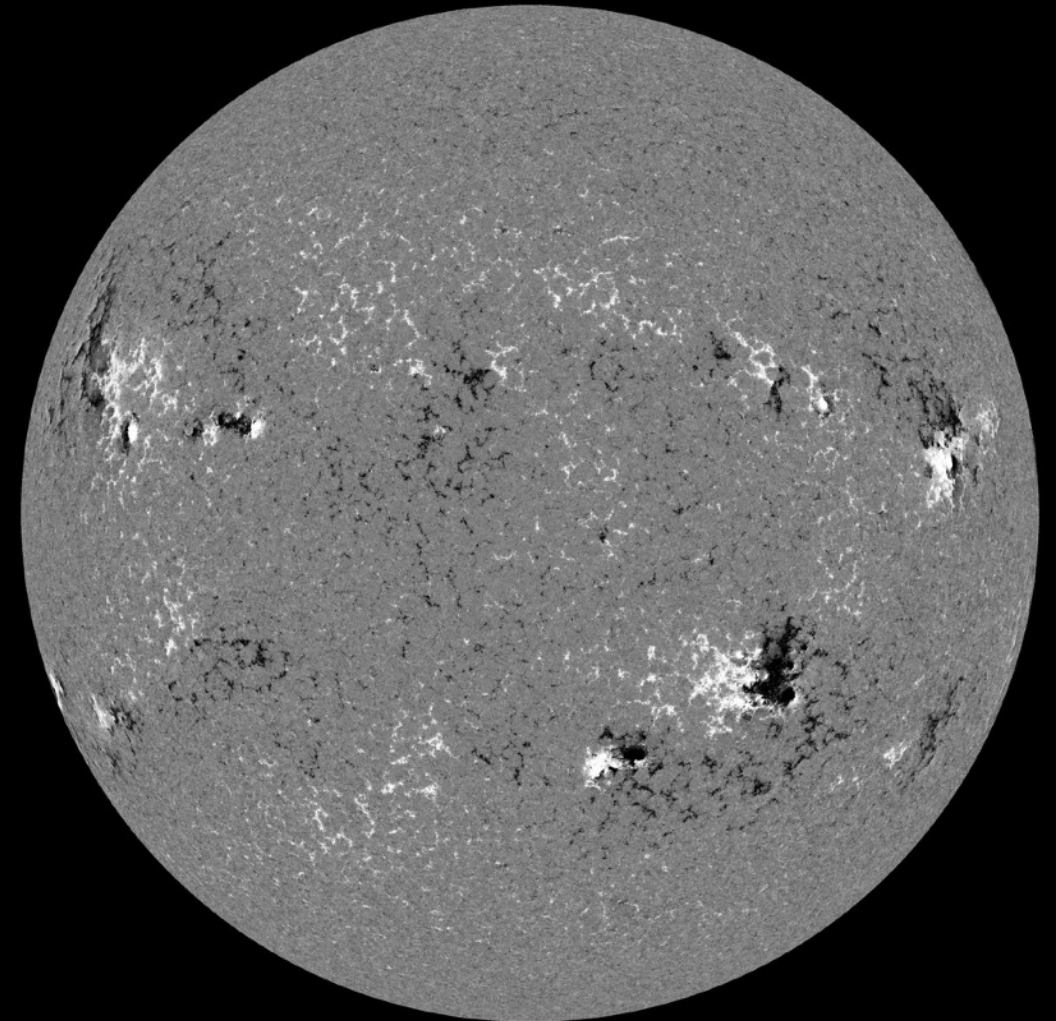
# Solar active regions

SDO/HMI White Light 2023-09-27



SDO/HMI Quick-Look Continuum: 20230927\_114500

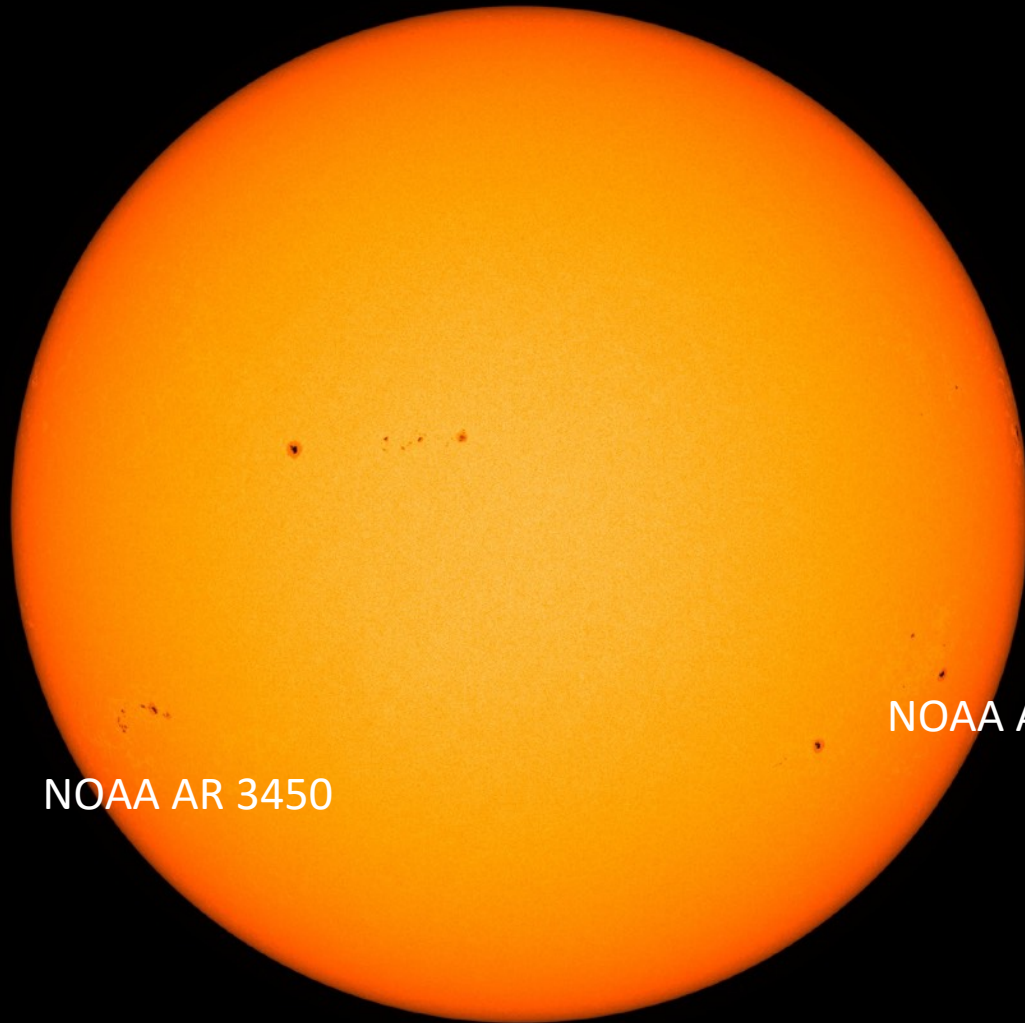
SDO/HMI Magnetogram 2023-09-27



SDO/HMI Quick-Look Magnetogram: 20230927\_114500

# Solar active regions

SDO/HMI White Light 2023-09-29

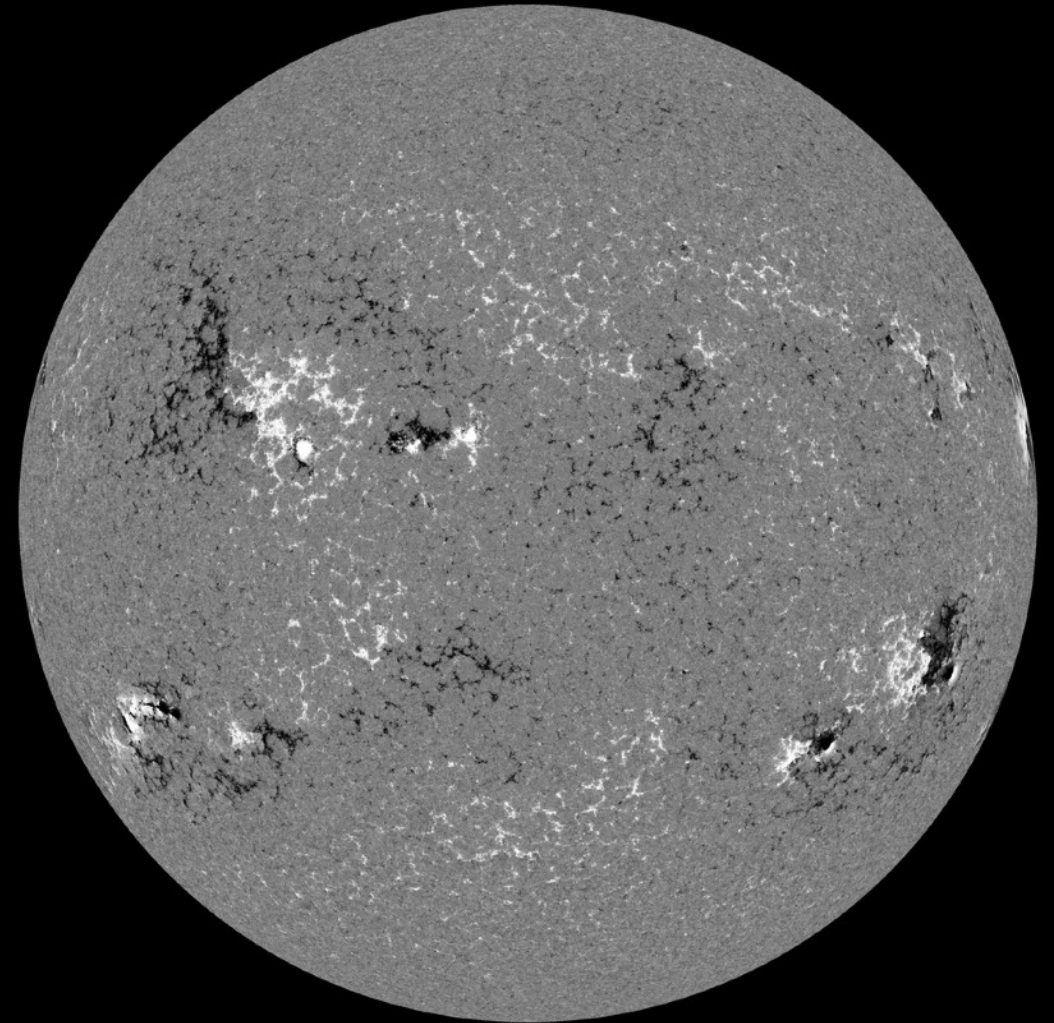


NOAA AR 3450

NOAA AR 3445

SDO/HMI Quick-Look Continuum: 20230929\_114500

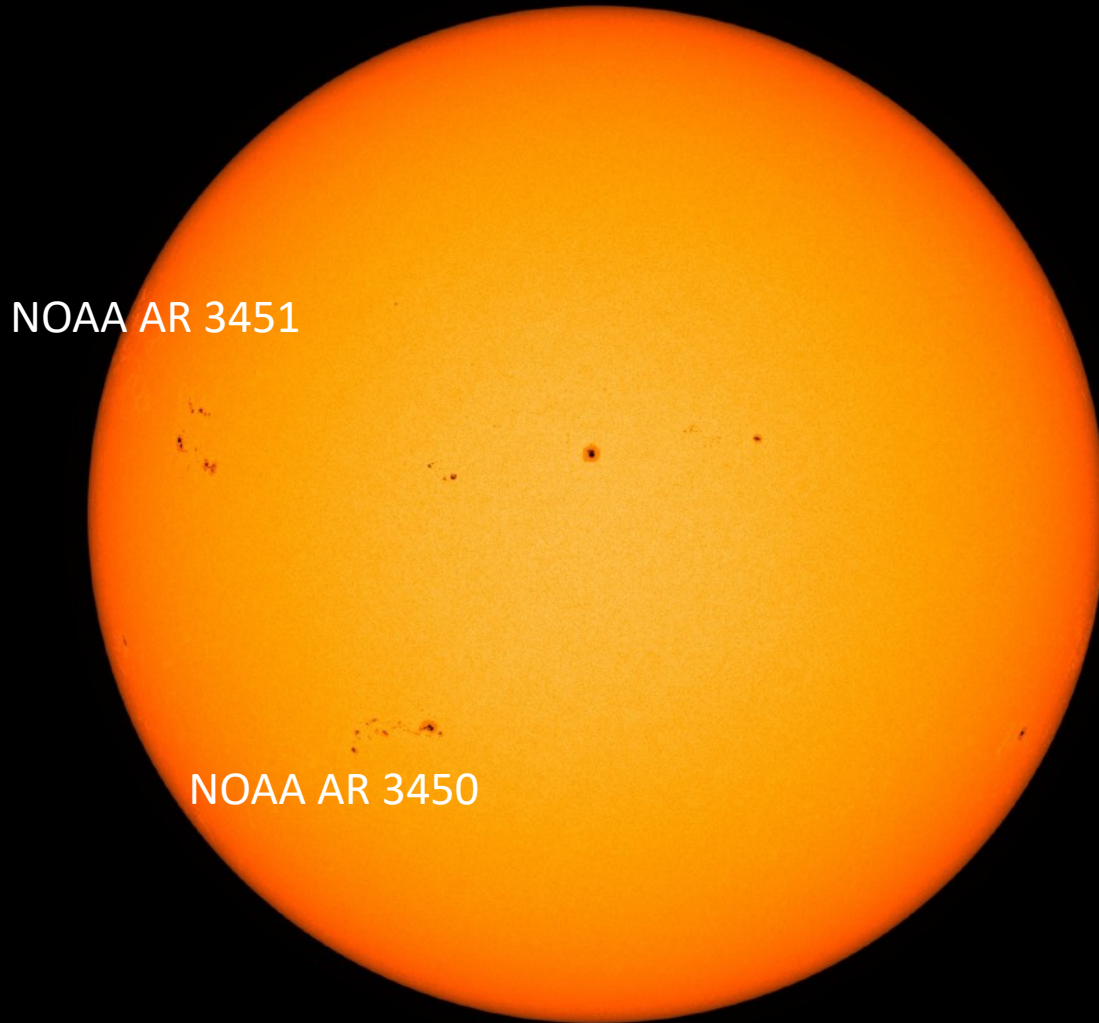
SDO/HMI Magnetogram 2023-09-29



SDO/HMI Quick-Look Magnetogram: 20230929\_114500

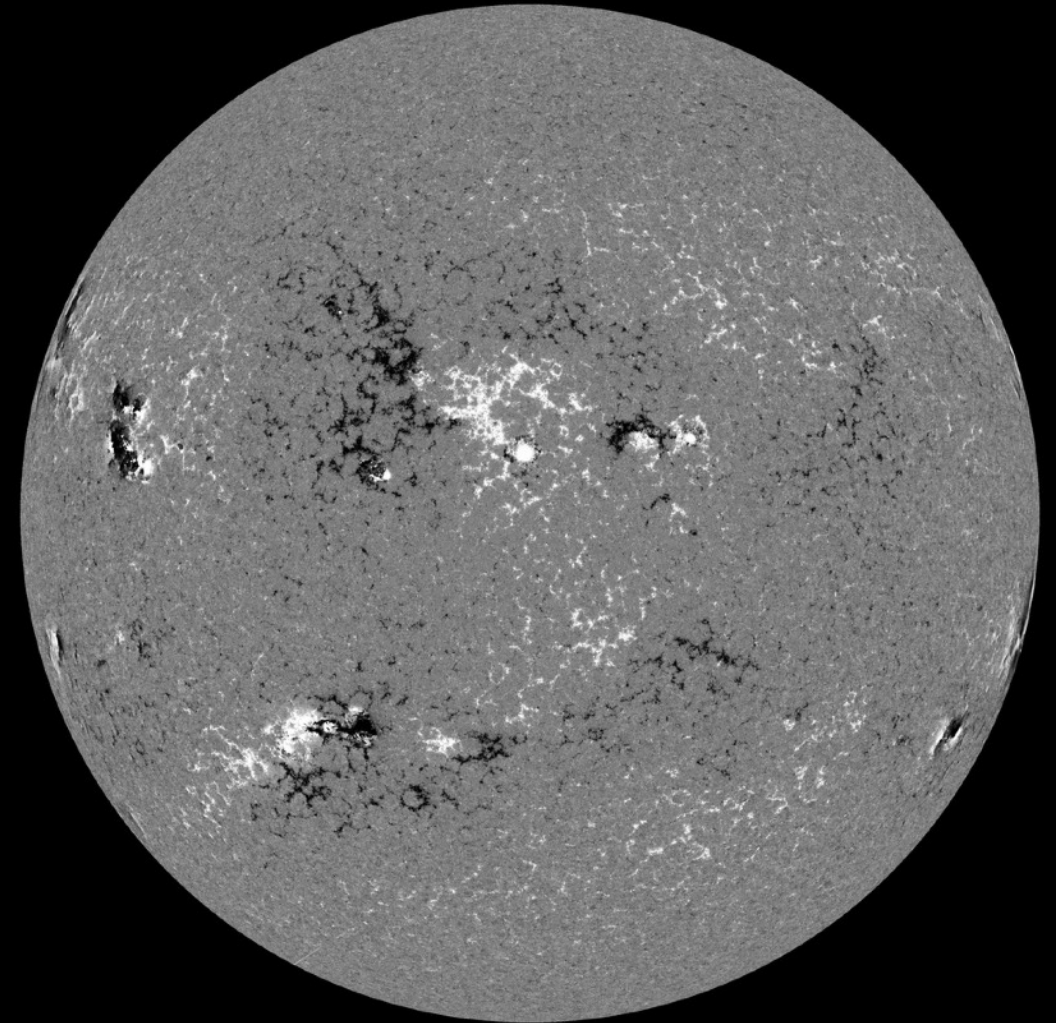
# Solar active regions

SDO/HMI White Light 2023-10-01



SDO/HMI Quick-Look Continuum: 20231001\_114500

SDO/HMI Magnetogram 2023-10-01

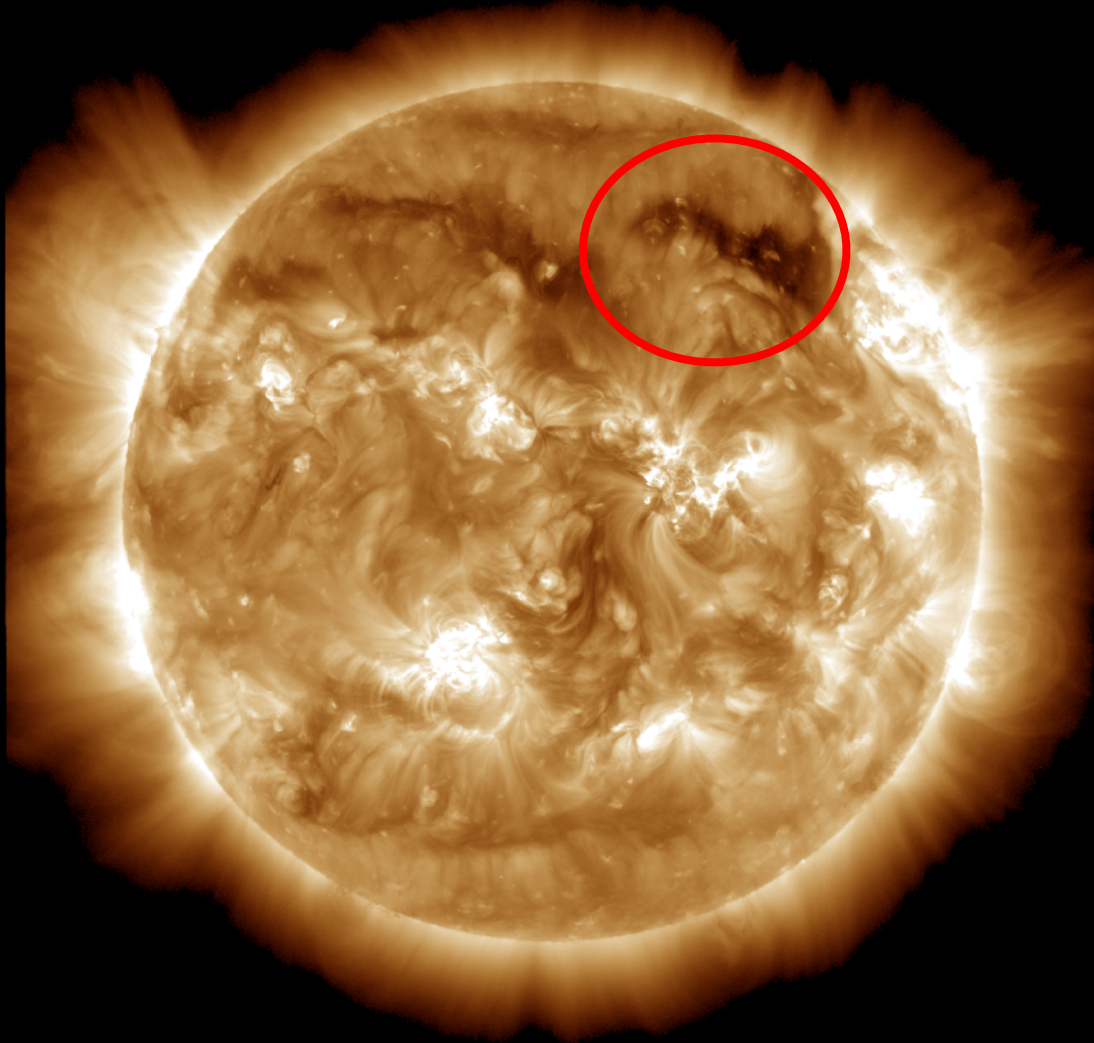


SDO/HMI Quick-Look Magnetogram: 20231001\_114500

# Coronal holes

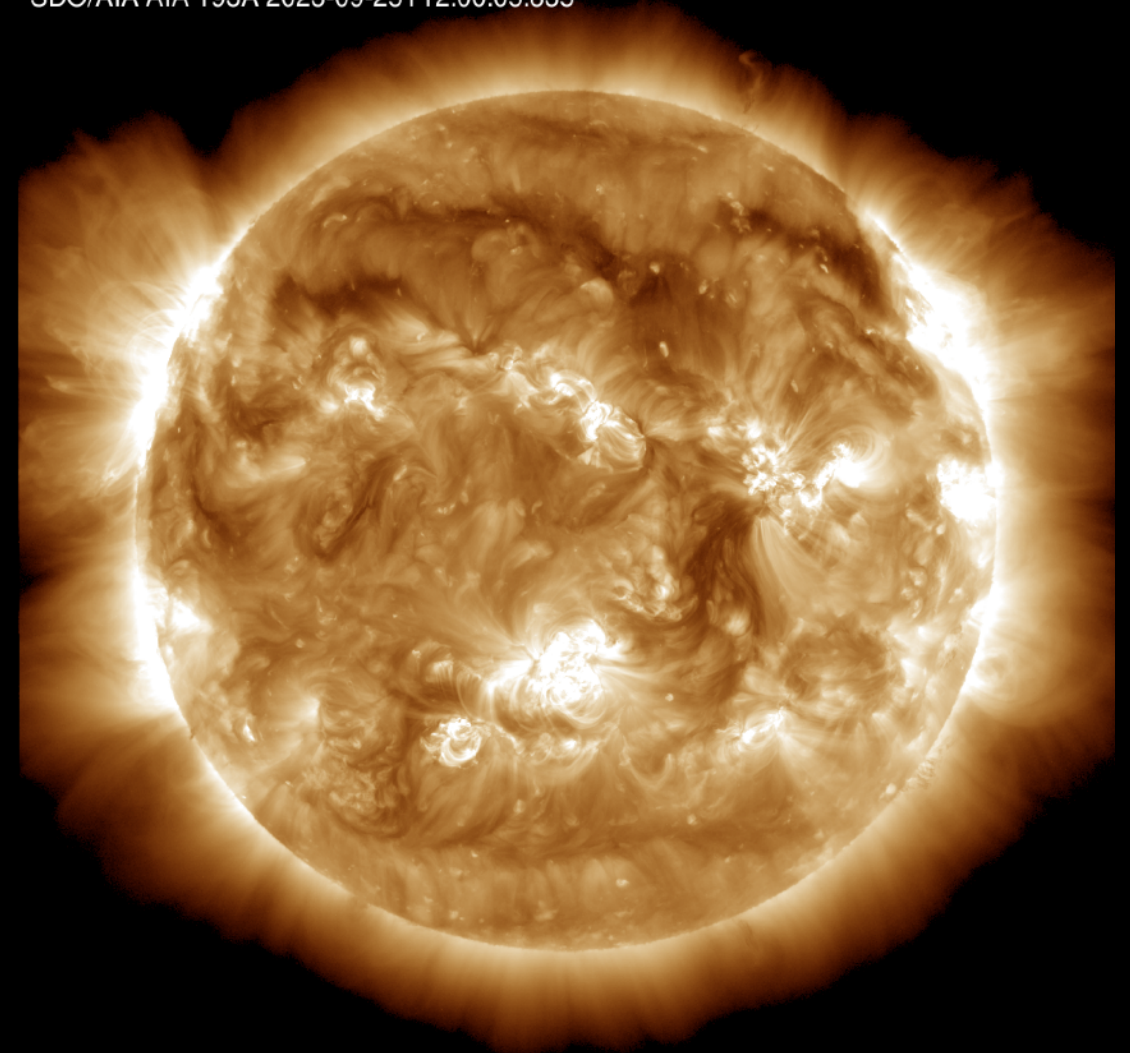
SDO/AIA 19.3 nm 2023-09-24

SDO/AIA AIA 193Å 2023-09-24T12:00:05.843



SDO/AIA 19.3 nm 2023-09-25

SDO/AIA AIA 193Å 2023-09-25T12:00:05.835

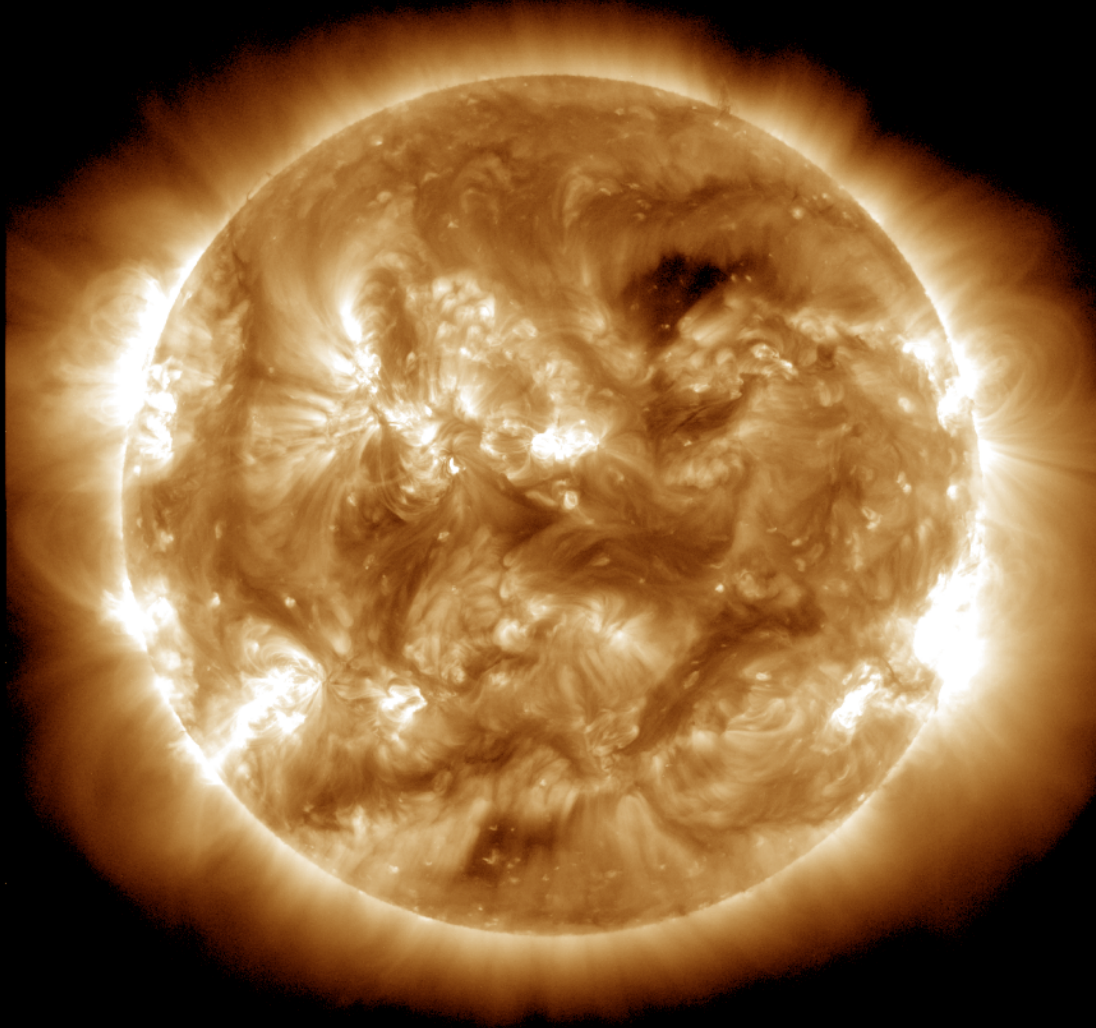




# Coronal holes

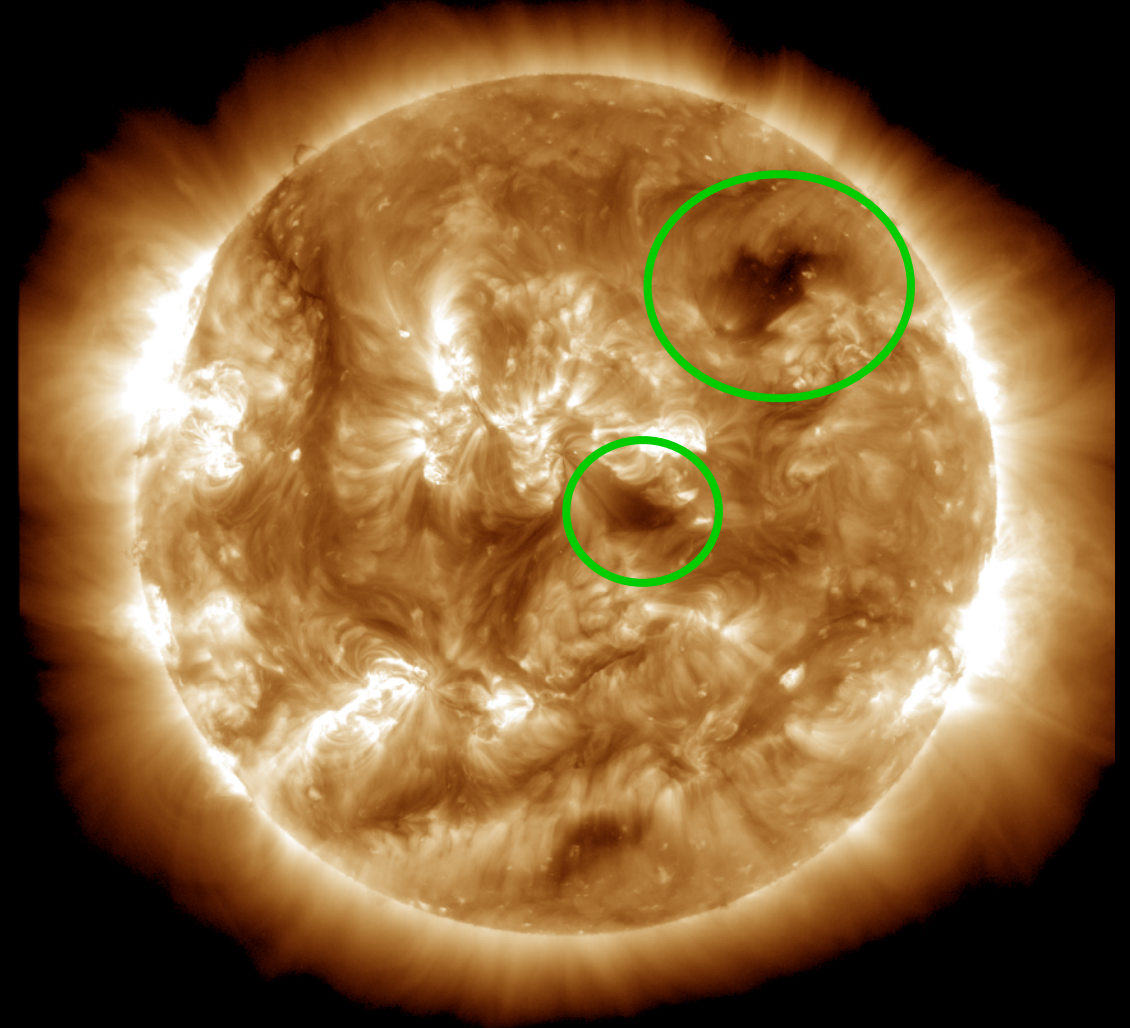
SDO/AIA 19.3 nm 2023-09-30

SDO/AIA AIA 193Å 2023-09-30T12:00:07.162



SDO/AIA 19.3 nm 2023-10-01

SDO/AIA AIA 193Å 2023-10-01T12:00:05.843



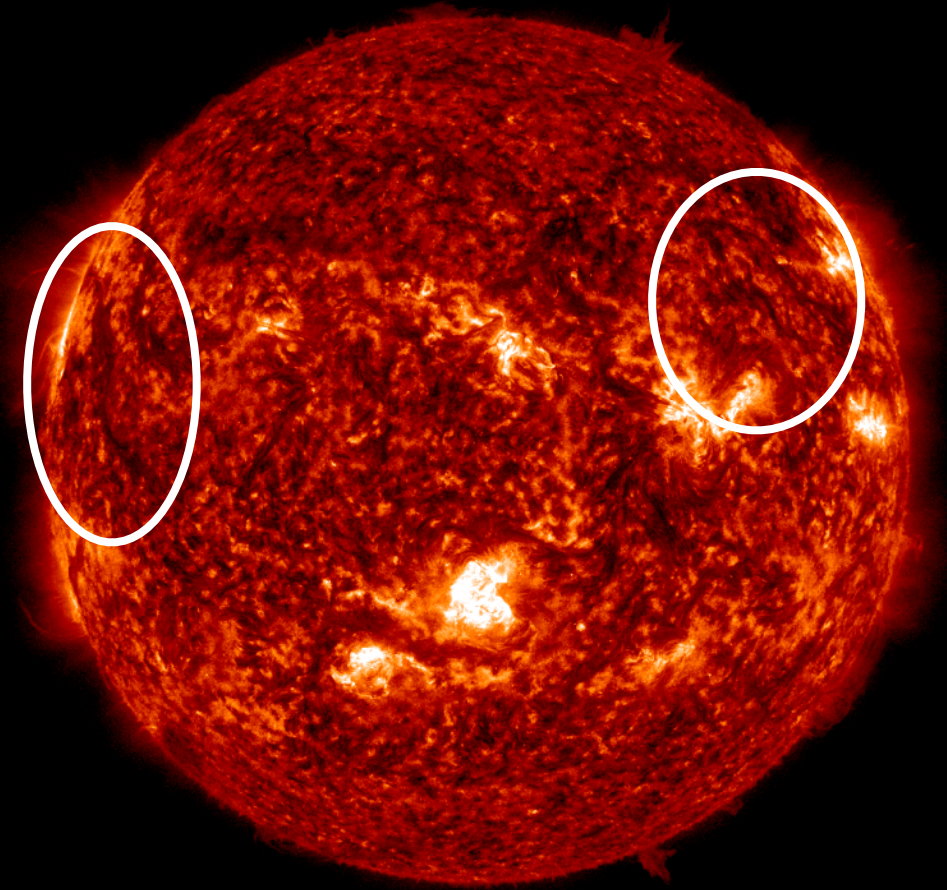
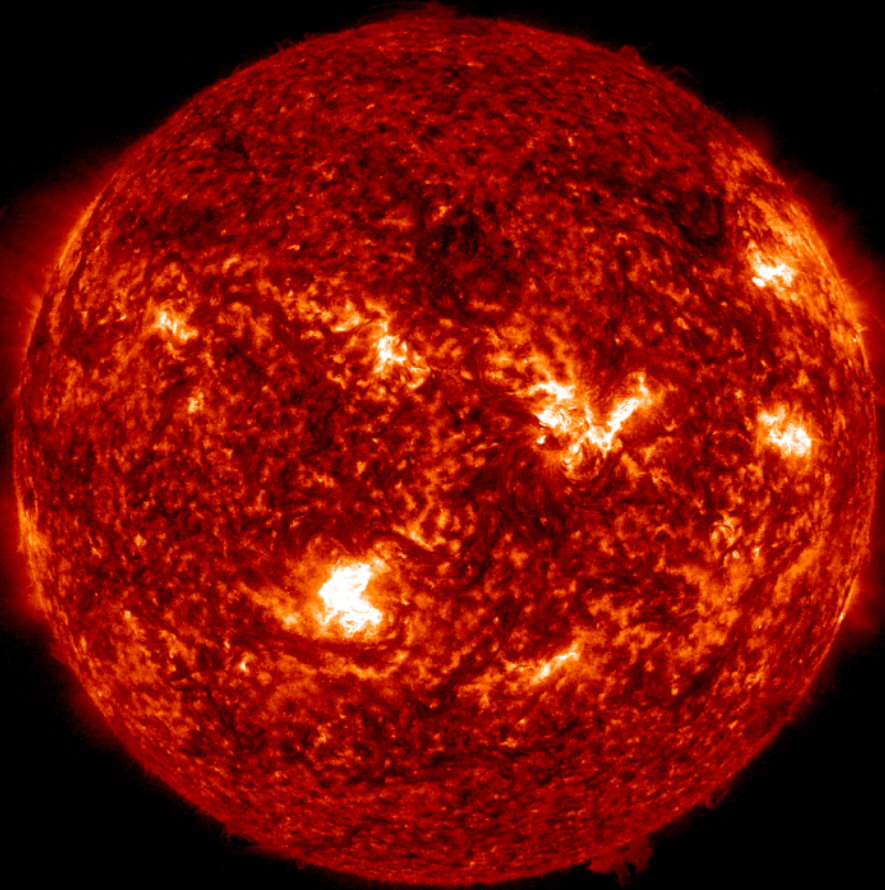
# Filaments

SDO/AIA 30.4 nm 2023-09-24

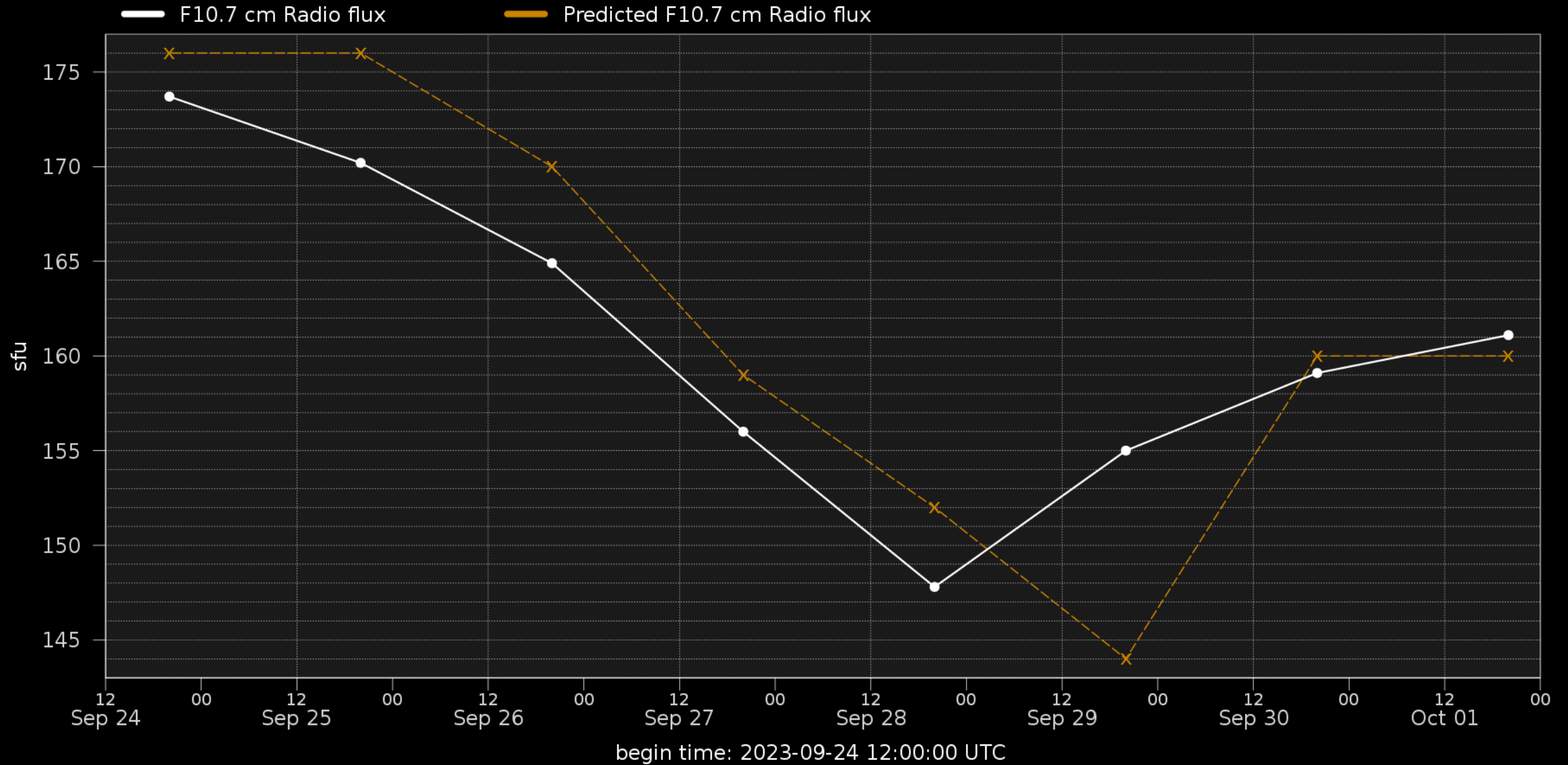
SDO/AIA AIA 304Å 2023-09-24T12:00:06.575

SDO/AIA 30.4 nm 2023-09-25

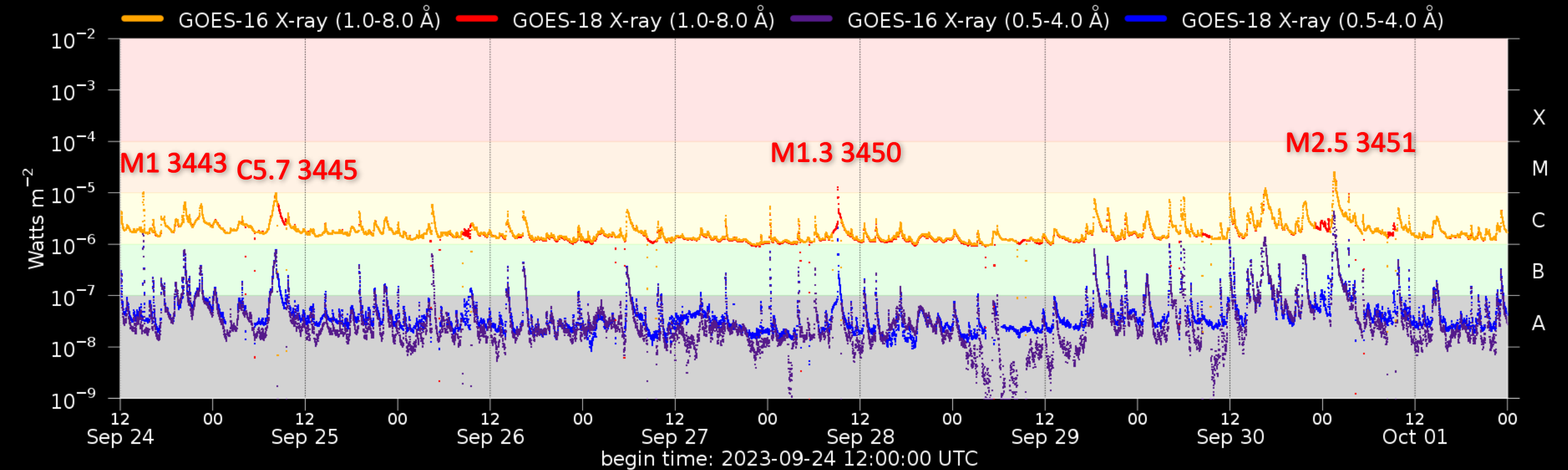
SDO/AIA AIA 304Å 2023-09-25T12:00:06.584



# Solar F10.7cm radio flux



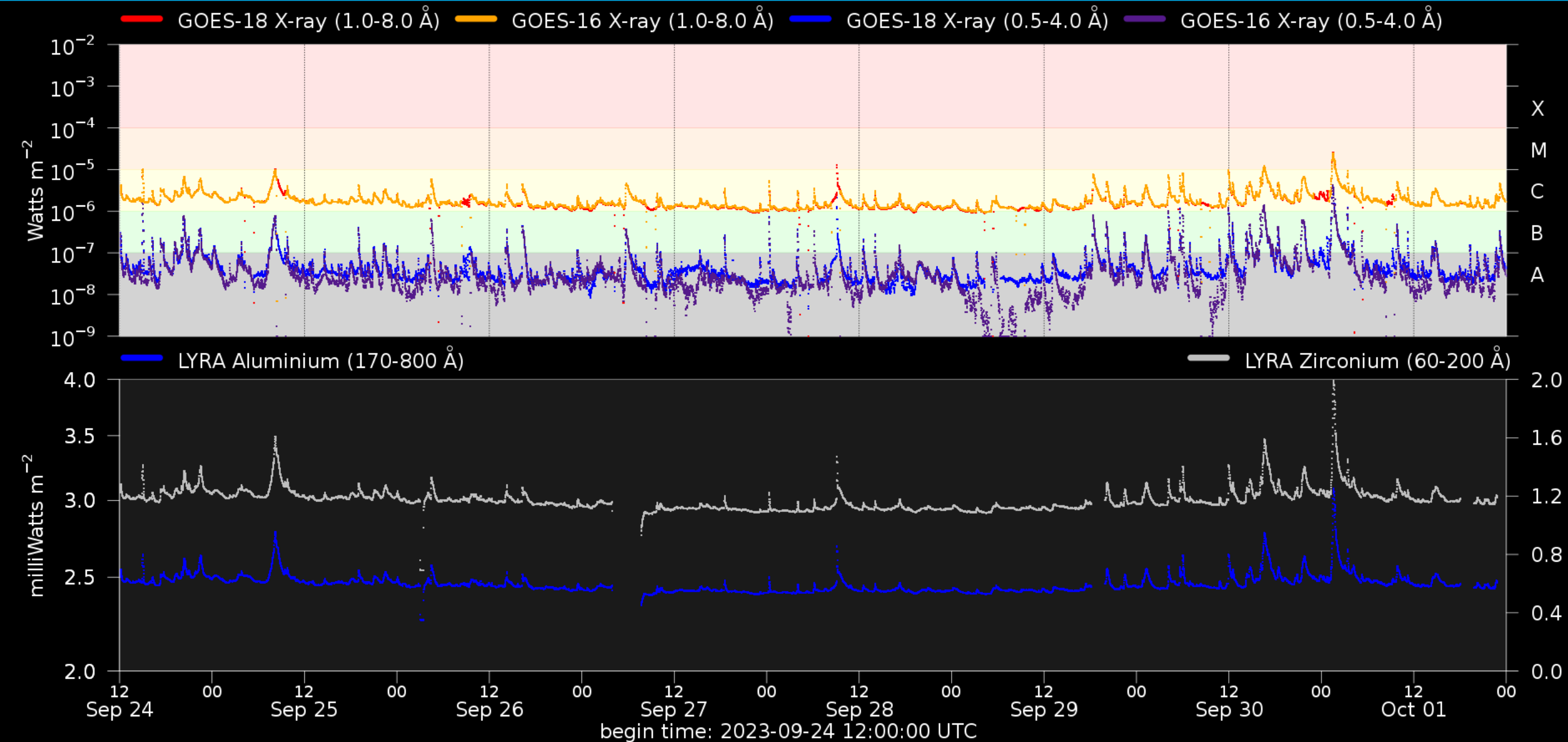
# Flaring activity



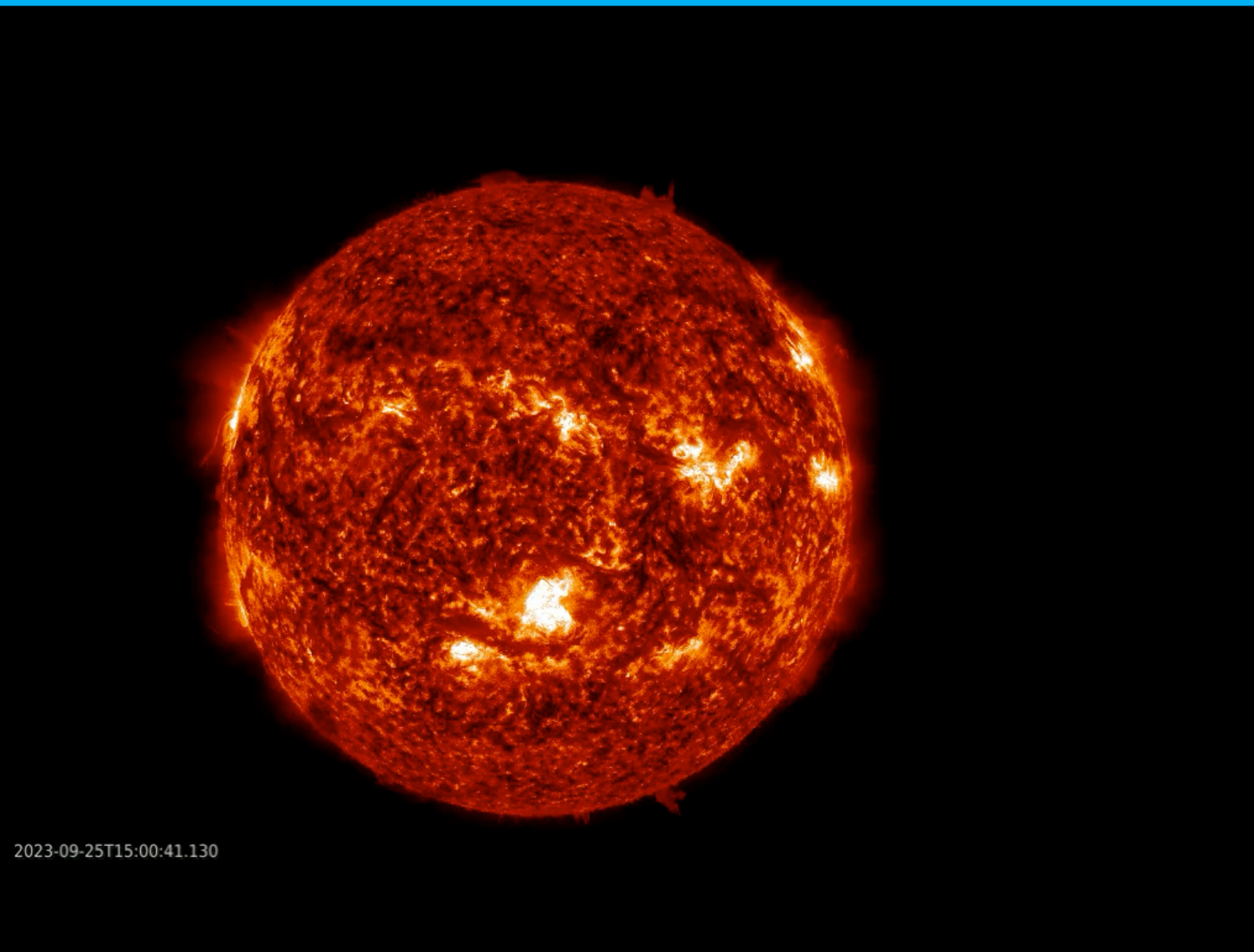
Probabilities (%) and occurrences (#) of C/M/X-flares daily, from noon to noon:

Issue date	2023-09-24	2023-09-25	2023-09-26	2023-09-27	2023-09-28	2023-09-29	2023-09-30	2023-10-01
Probability (%)	95   65   30	99   70   25	99   45   20	95   40   10	95   37   05	90   30   05	99   35   05	99   52   05
Observed (#)	07   01   00	02   00   00	05   00   00	04   01   00	03   00   00	10   00   00	11   02   00	03   00   00

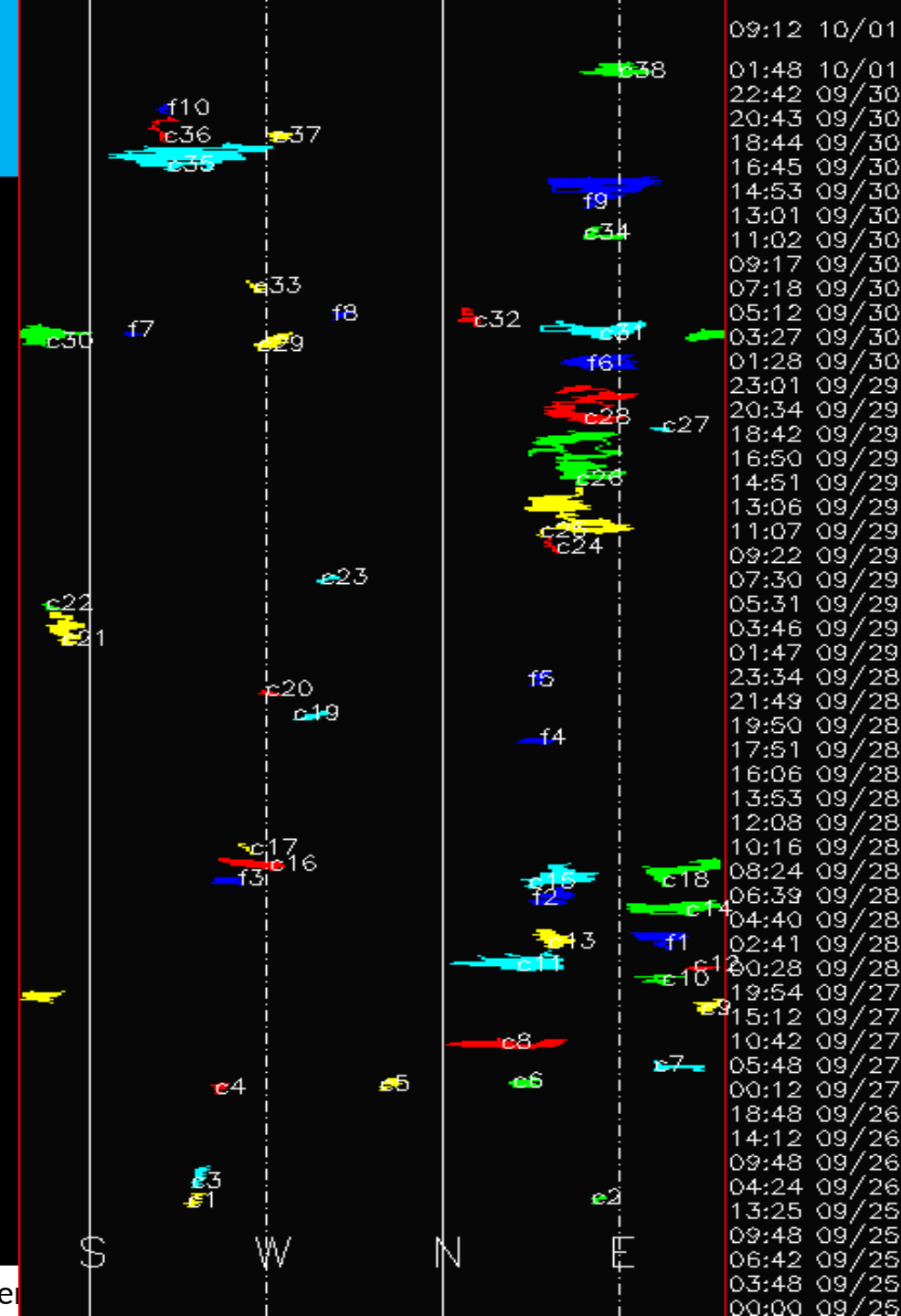
# Solar X-Ray and UV flux



# Coronal Mass Ejections



2023-09-25T15:00:41.130



Solar Wind and

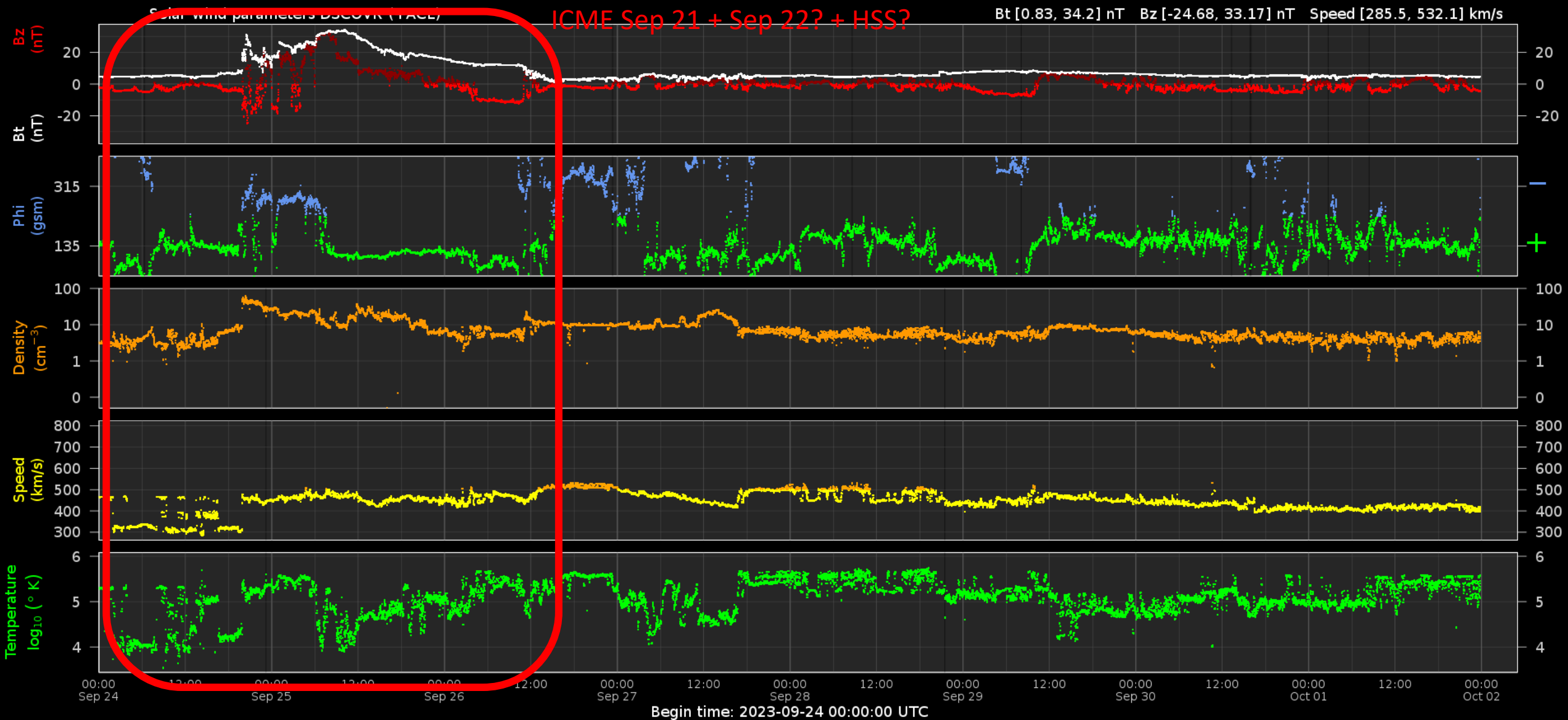
# Geomagnetic Activity



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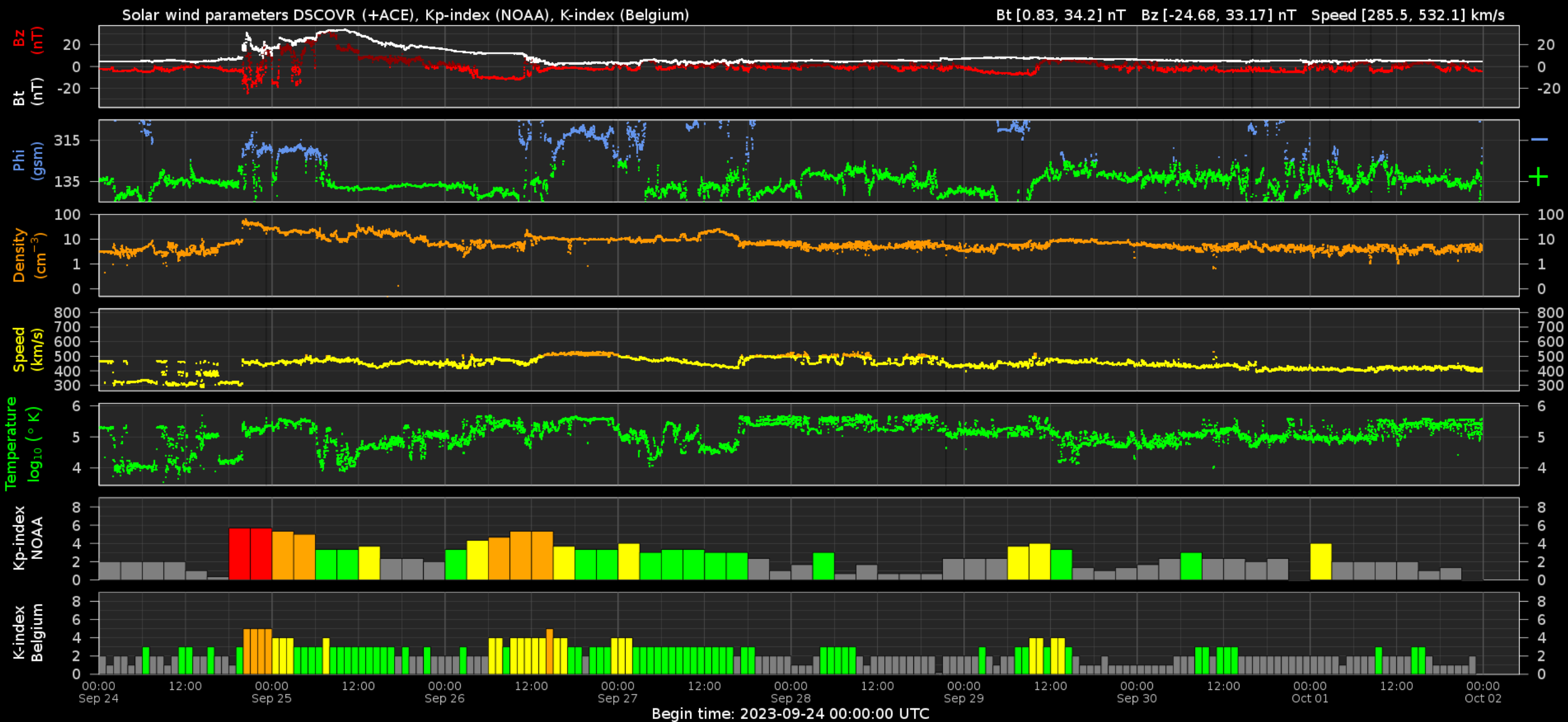
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# Solar wind parameters

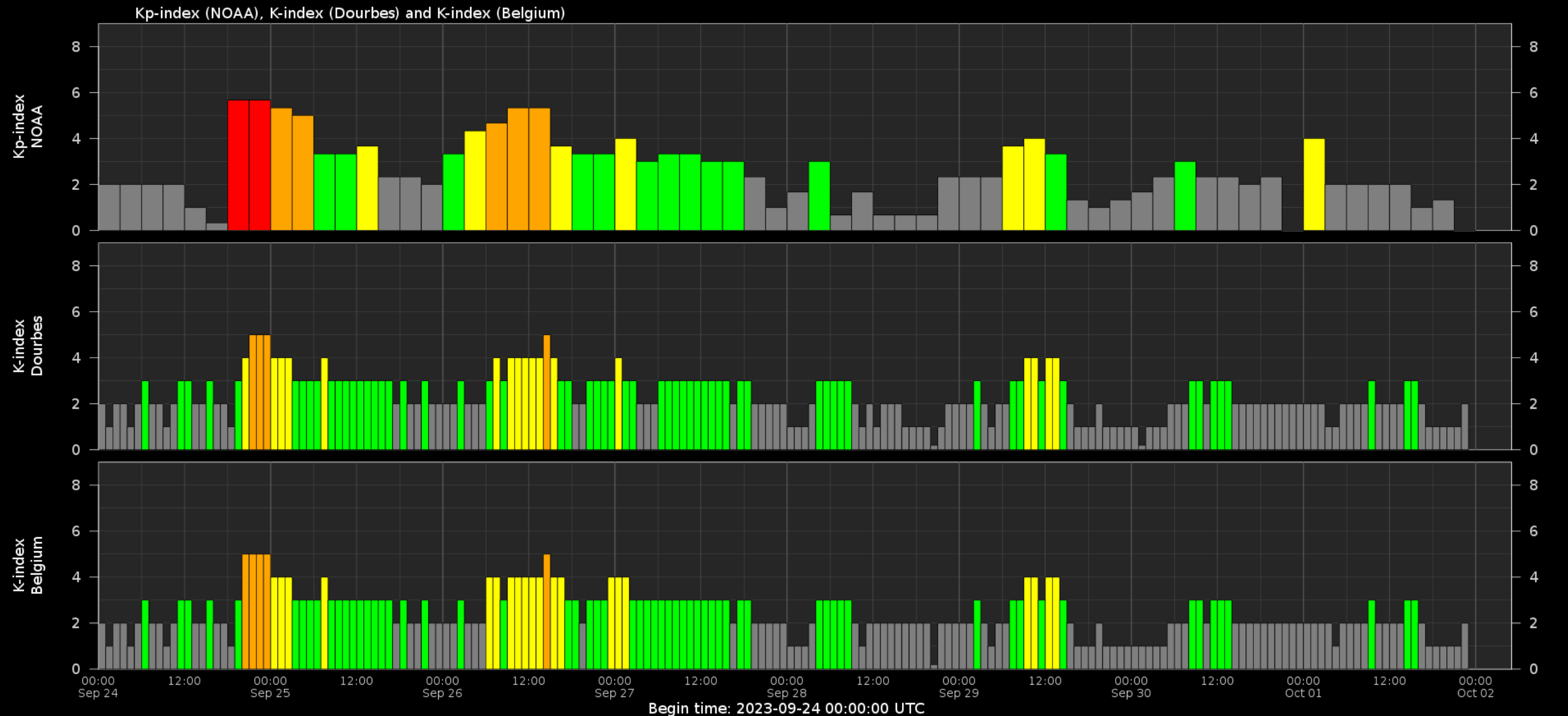




# Solar wind parameters & K-indices



# Geomagnetic activity (K-indexes)



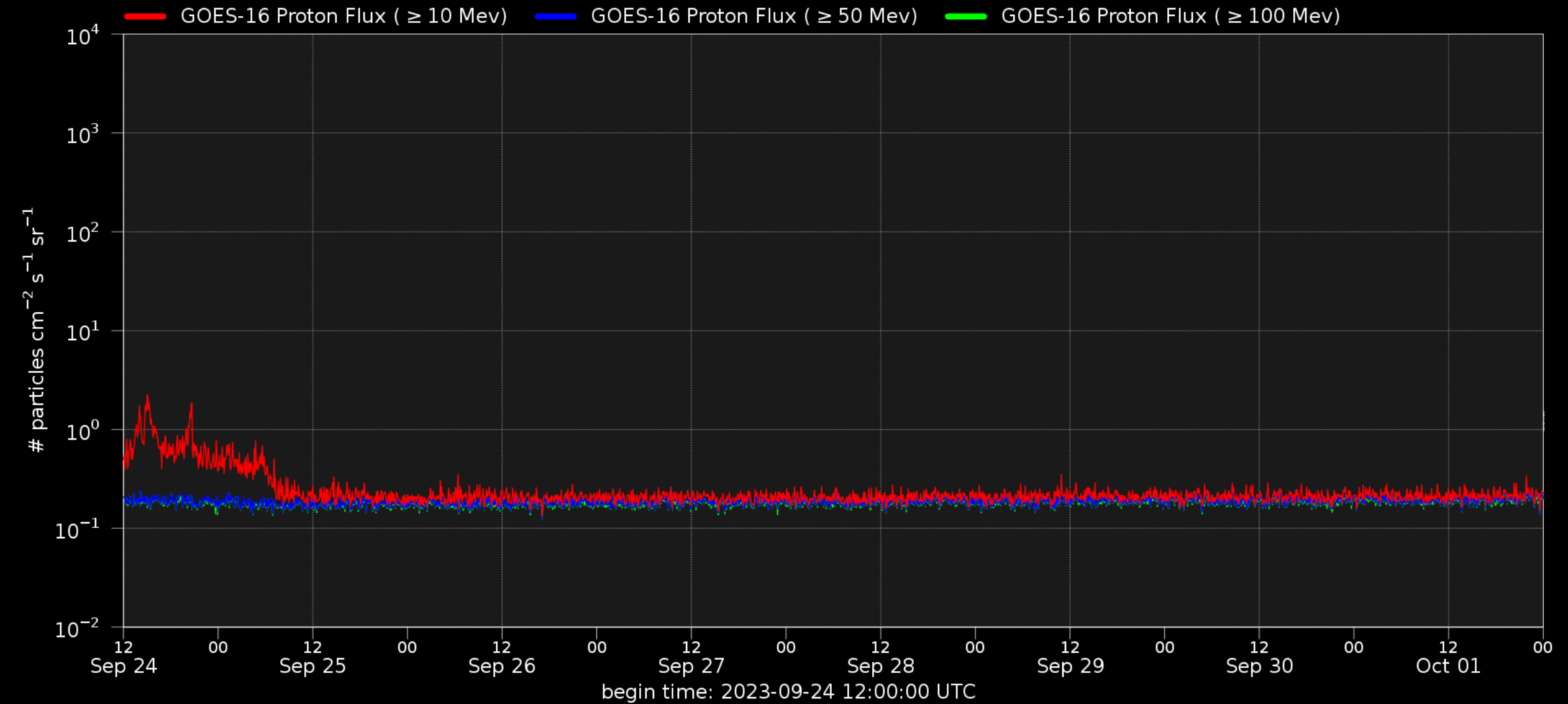
# Energetic Particles



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# Solar proton flux



# Electron flux at GEO

[www.stce.be/educational/classification#electrons](http://www.stce.be/educational/classification#electrons)

[www.spaceweather.gc.ca/forecast-prevision/space-spatiale/sffl-en.php](http://www.spaceweather.gc.ca/forecast-prevision/space-spatiale/sffl-en.php)



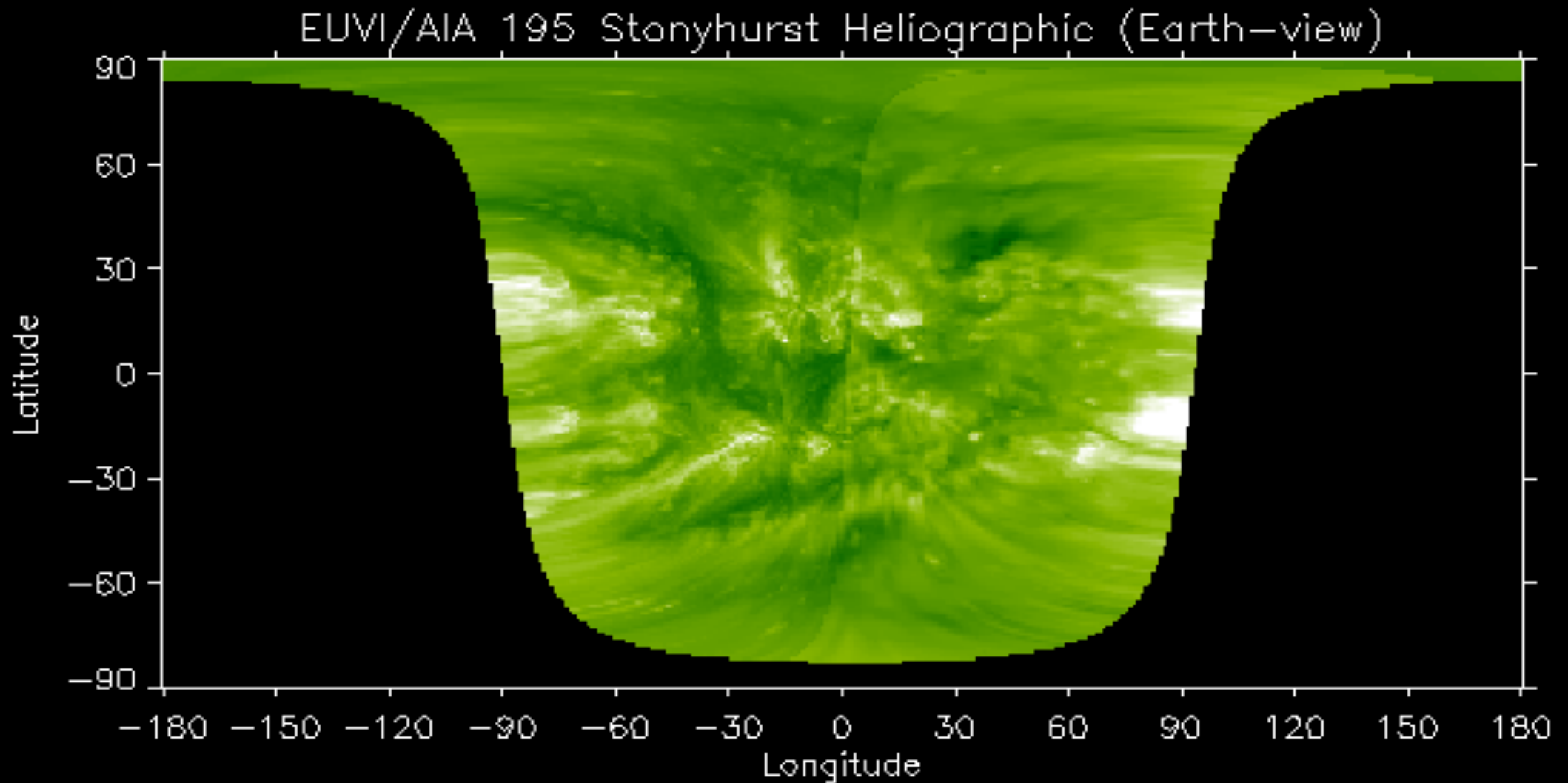
# Outlook



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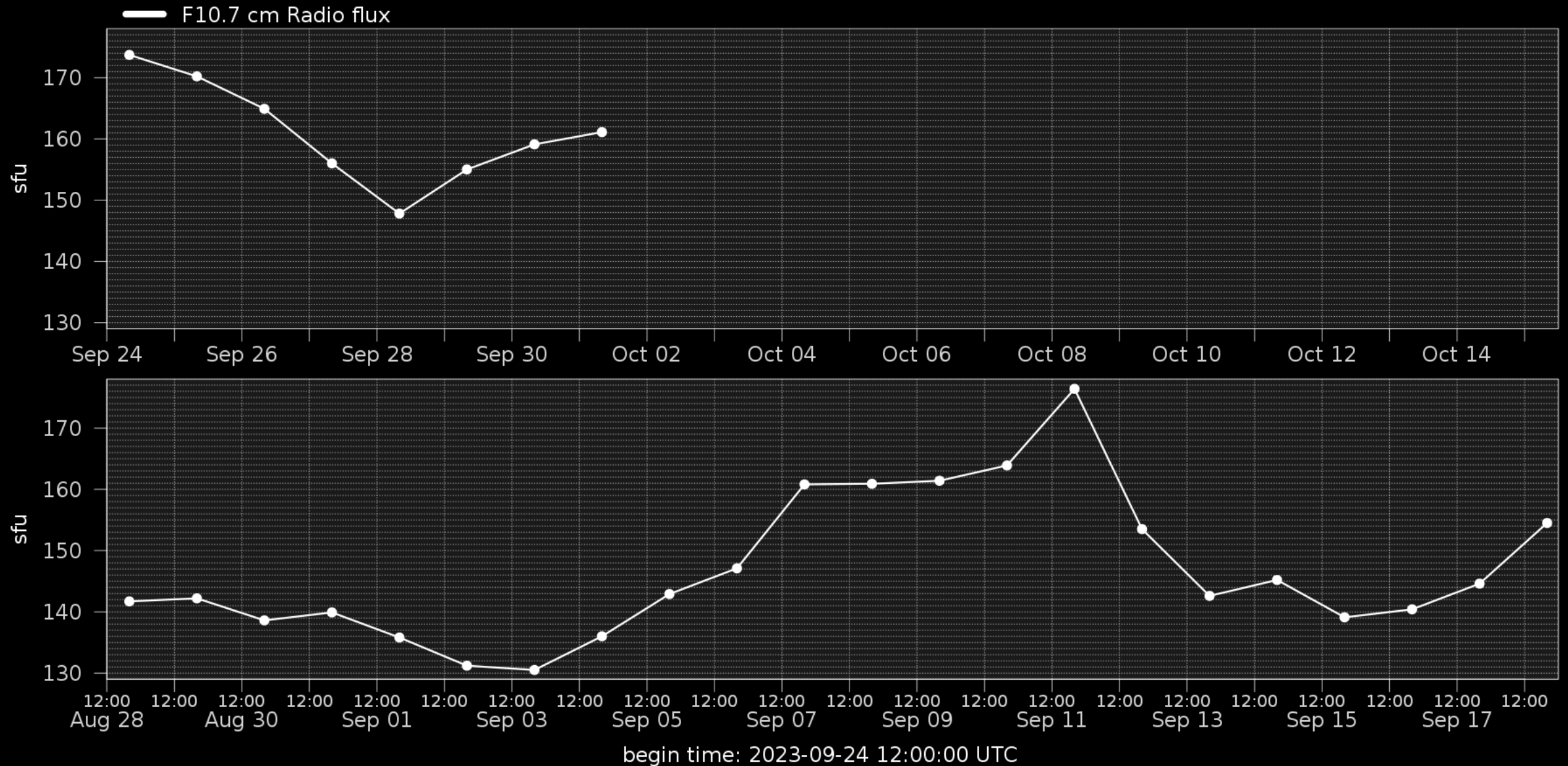
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# Outlook: Solar activity



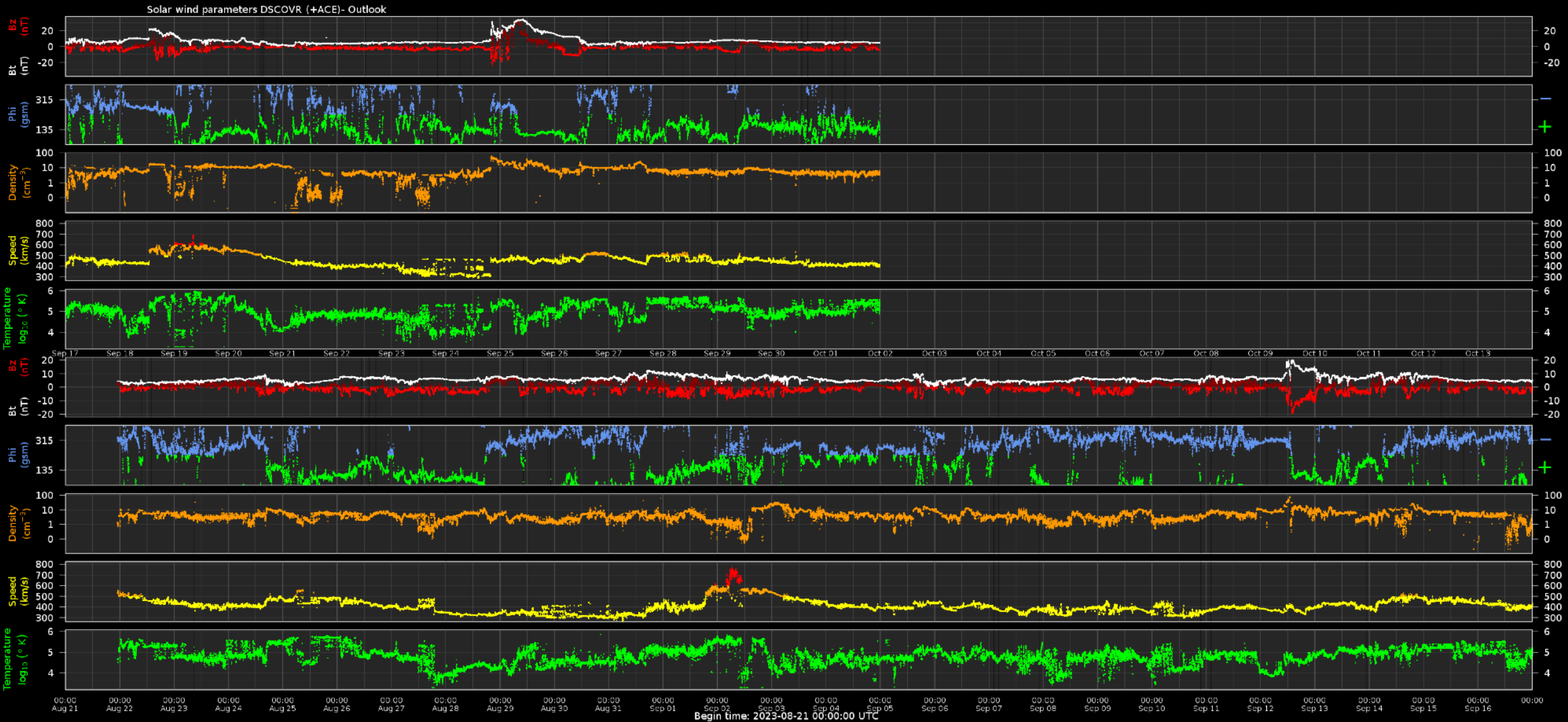
Observation date: 2023/10/01 15:05:00

# Outlook: Solar F10.7cm radio flux

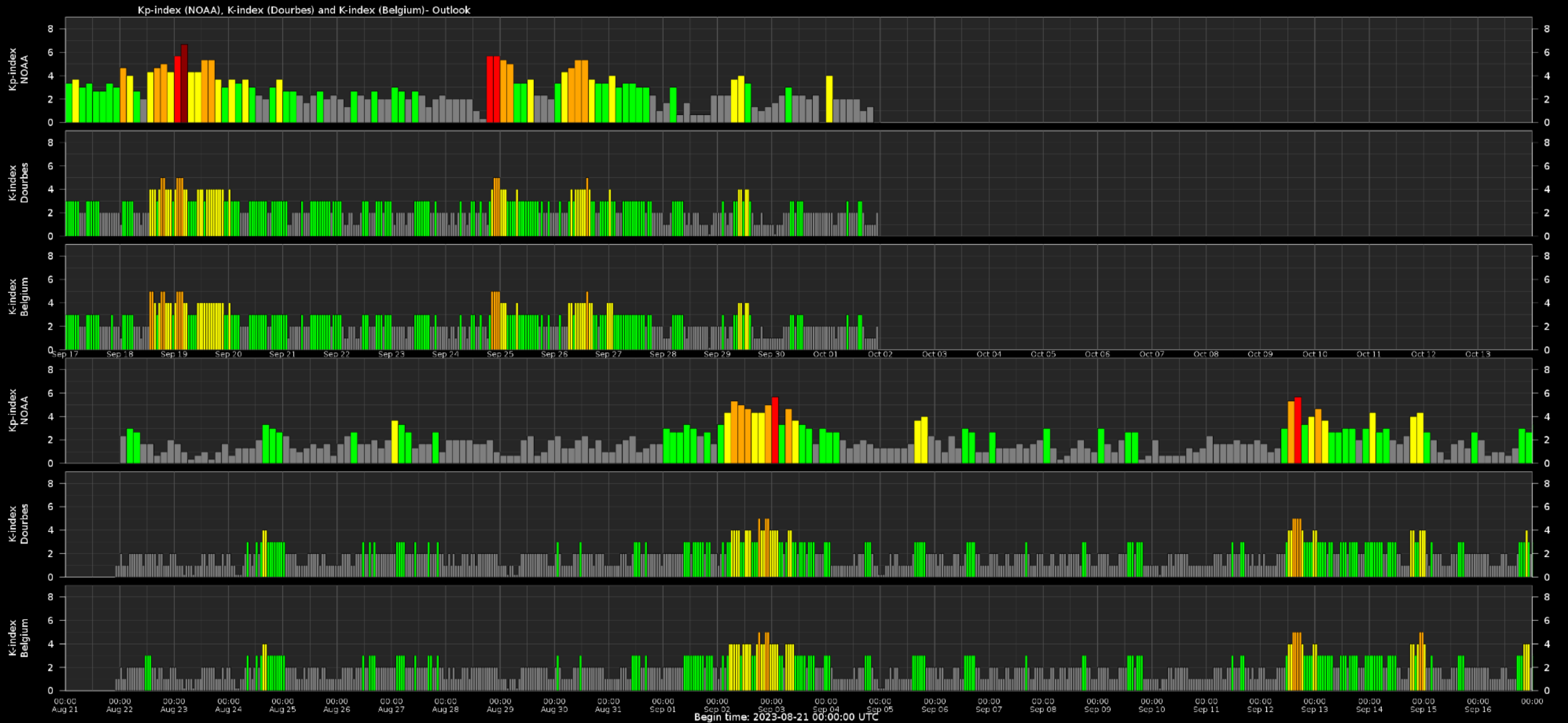




# Outlook: Solar wind parameters



# Outlook: Geomagnetic activity



# Outlook: Electron Flux at GEO Outlook



Pegasus



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# Pegasus related events

Anything notable that is Pegasus related?

SIDC Space Weather Briefing

See you at our next briefing!

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