

# SIDC Space Weather Briefing

13 October 2024-20 October 2024

Elisabeth Dom

& 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 2024-10-13 12:00 to 2024-10-20 23:59

Active regions	14 ARs on disk over the week: <b>NOAA AR 3848, 3854 and 3852</b> were the most active
Flares	# C-class flare: 39 # M-class flare: 19 # X-class flare: 0
Coronal Holes	2CH + crossed central Meridian
CMEs	No Earth Directed CMEs

Proton flux	Nominal levels below 10 pfu threshold
Electron flux	Enhancements

## Solar wind and geomagnetic conditions

ICMEs	No ICME arrival
Solar wind conditions	B : 0.55 - 13.11 nT //Bz: -10.99 nT to 9.14 nT //Speed: 311.3 - 486.5km/s
Geomagnetic conditions	max K <sub>Be</sub> : 5.0, max K <sub>p</sub> (NOAA): 4.67, Minor Storm conditions

All Quiet Alert: not ALL Quiet

# Solar Activity

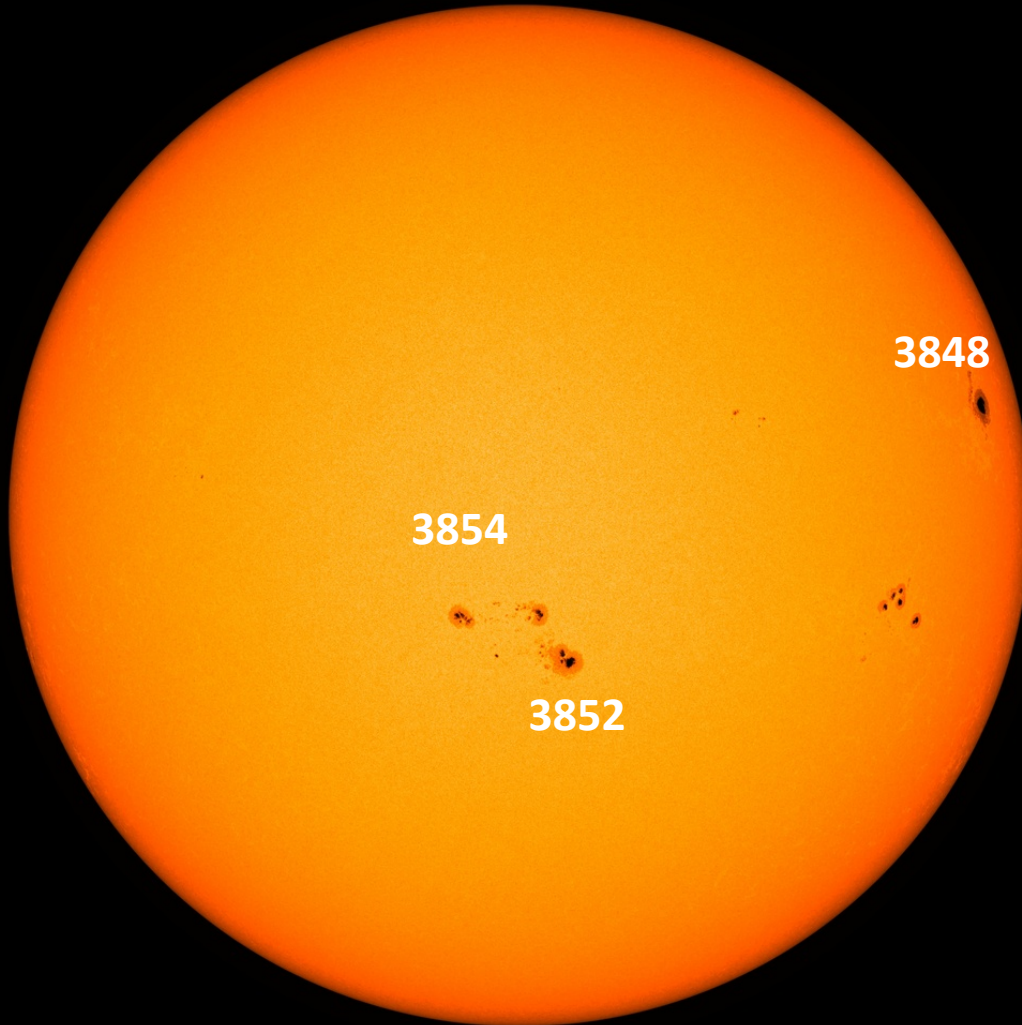


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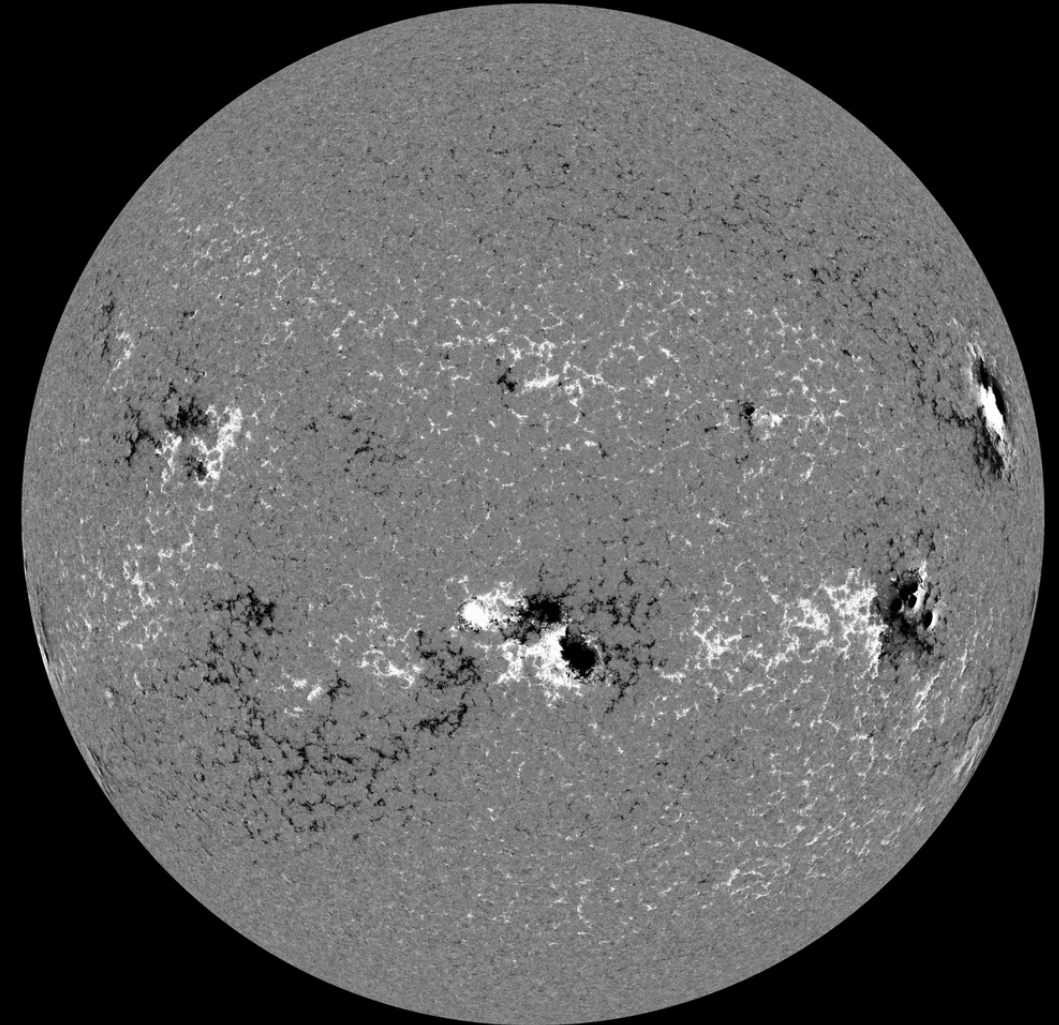
# Solar active regions

SDO/HMI White Light 2024-10-13



SDO/HMI Quick-Look Continuum: 20241013\_114500

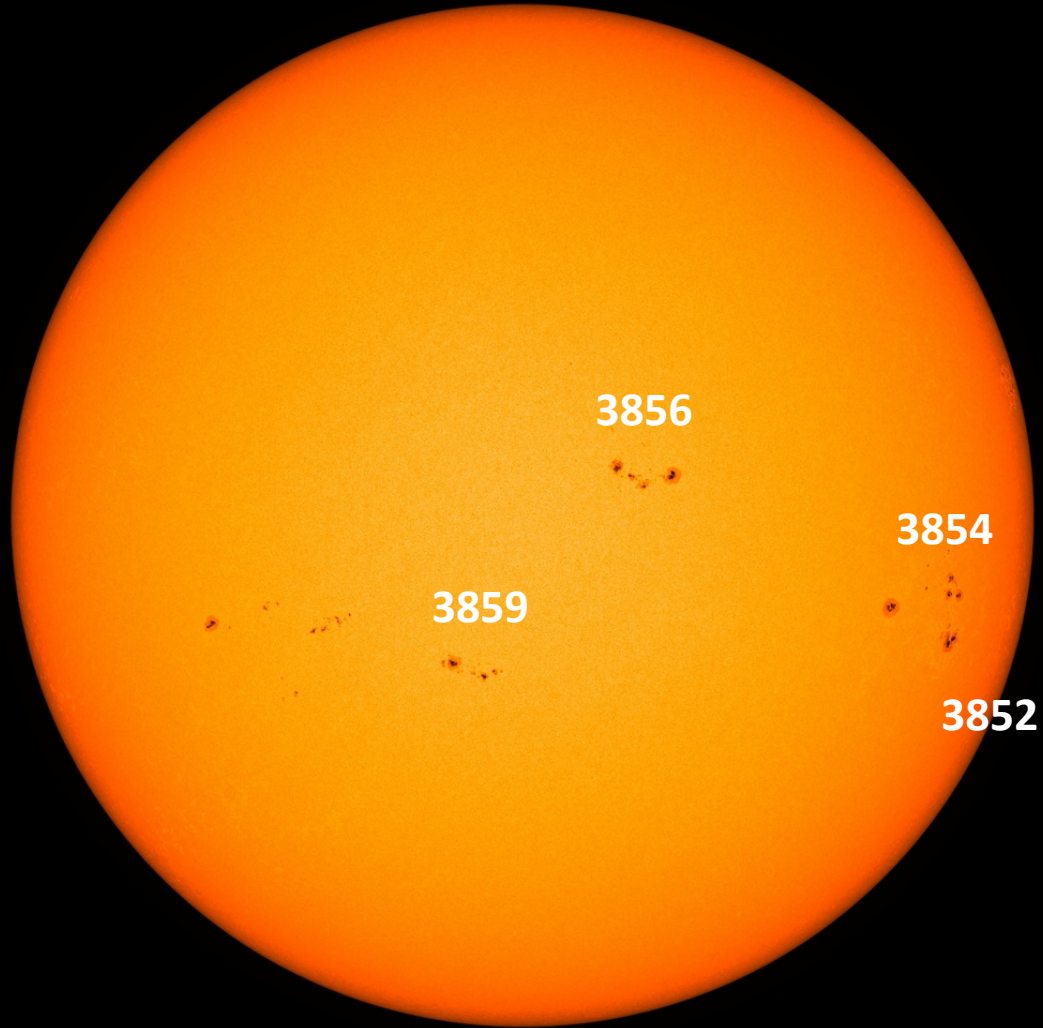
SDO/HMI Magnetogram 2024-10-13



SDO/HMI Quick-Look Magnetogram: 20241013\_114500

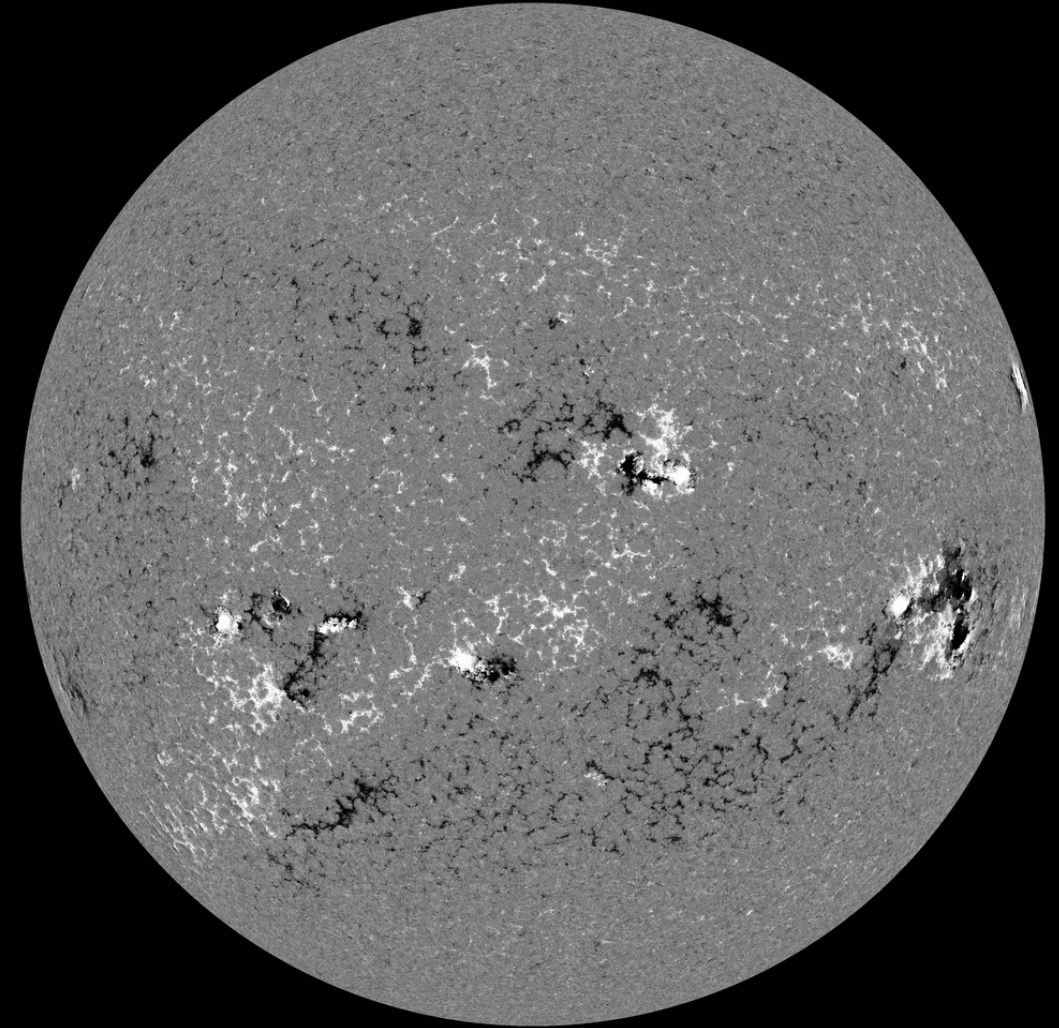
# Solar active regions

SDO/HMI White Light 2024-10-17



SDO/HMI Quick-Look Continuum: 20241017\_114500

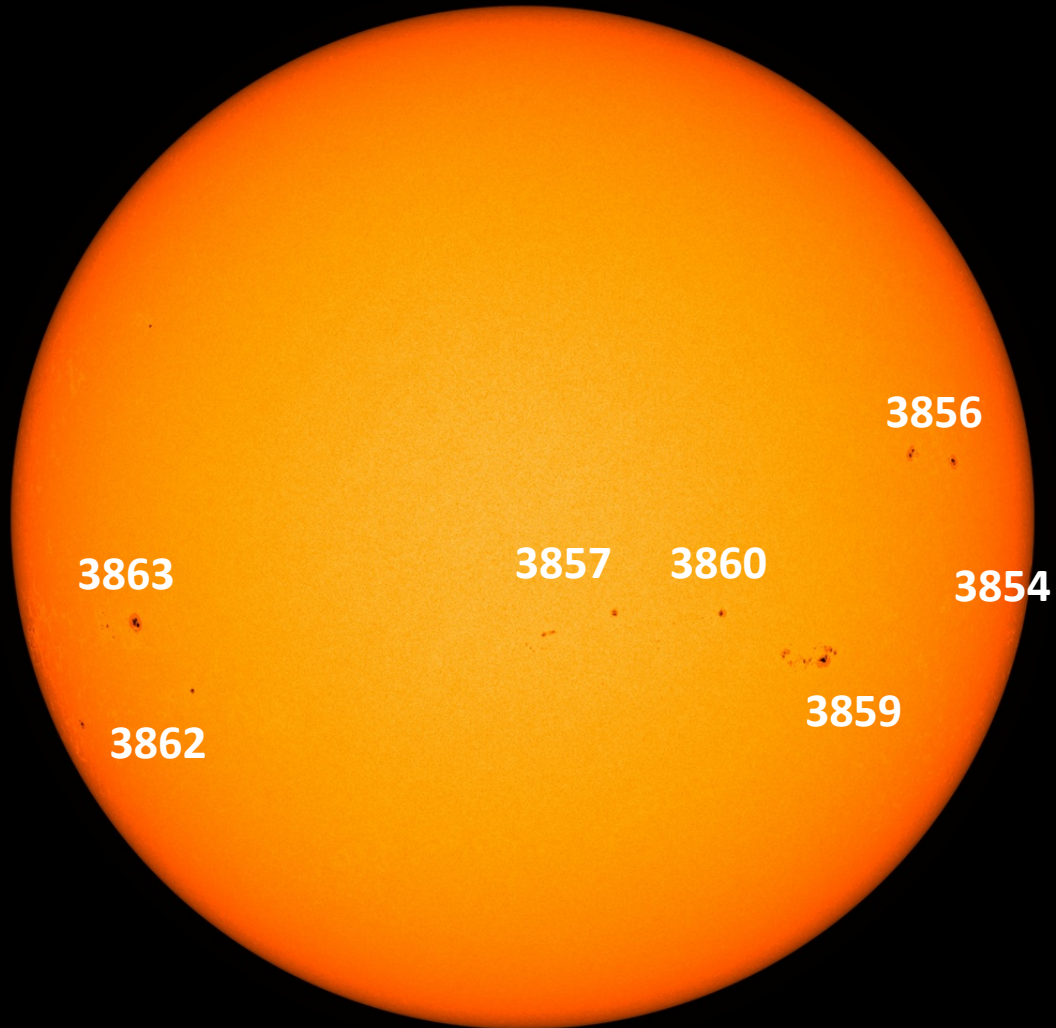
SDO/HMI Magnetogram 2024-10-17



SDO/HMI Quick-Look Magnetogram: 20241017\_114500

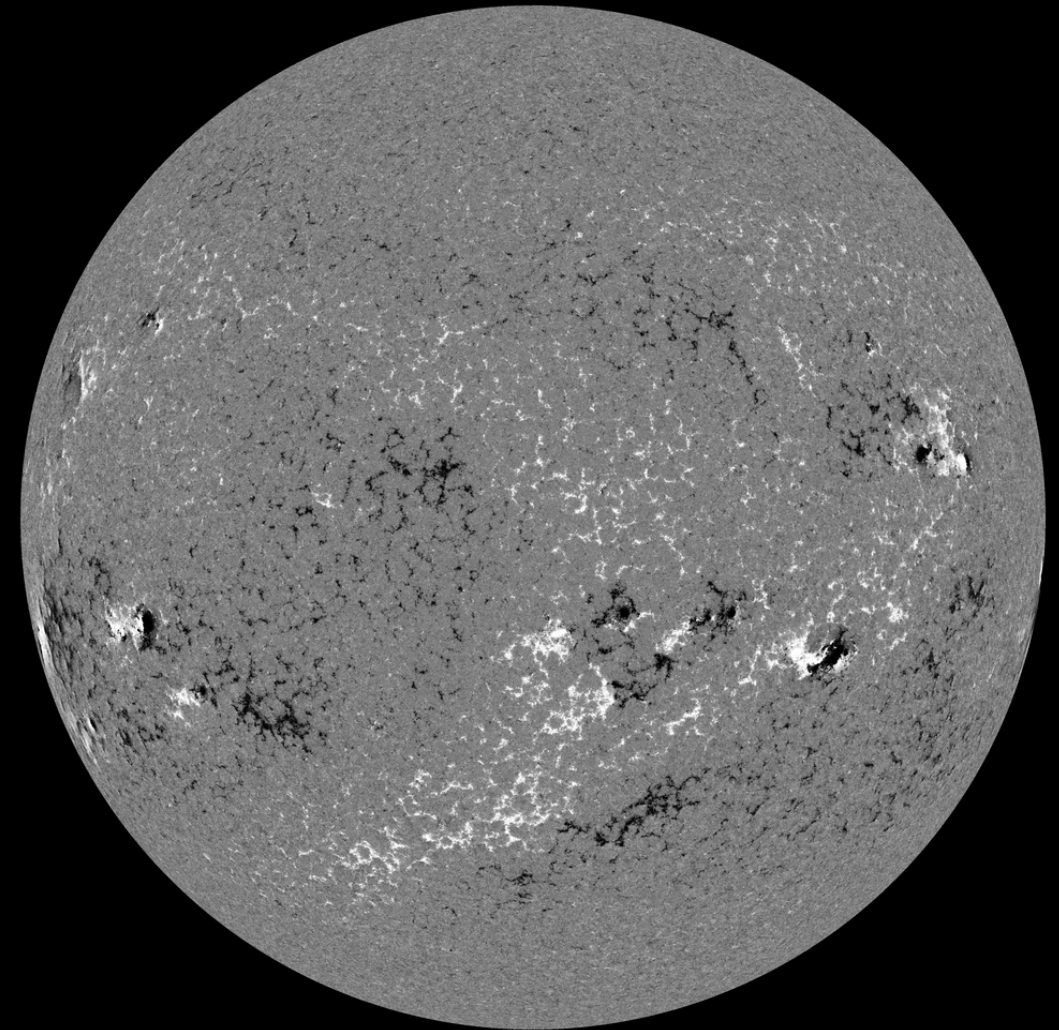
# Solar active regions

SDO/HMI White Light 2024-10-20



SDO/HMI Quick-Look Continuum: 20241020\_114500

SDO/HMI Magnetogram 2024-10-20

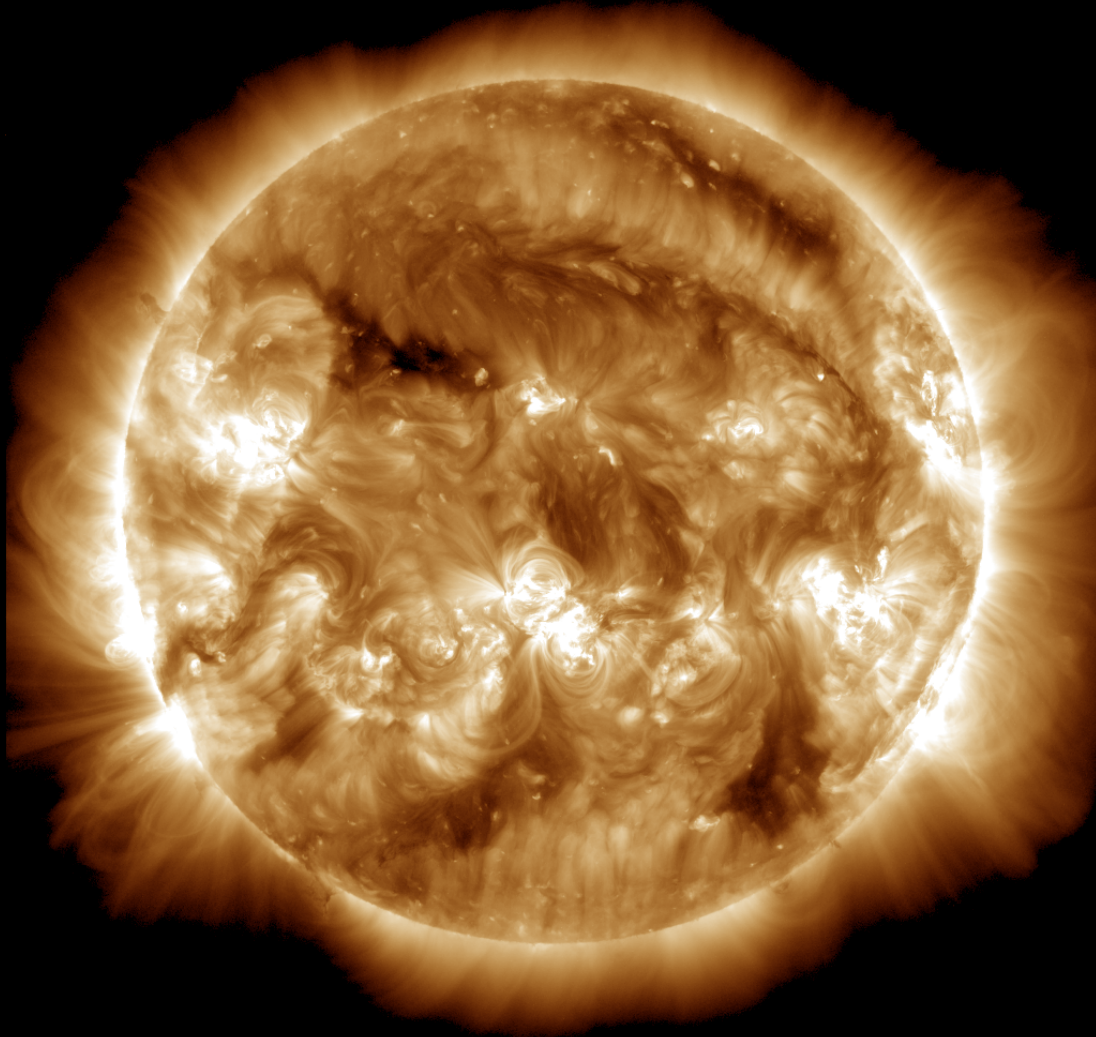


SDO/HMI Quick-Look Magnetogram: 20241020\_114500

# Coronal holes

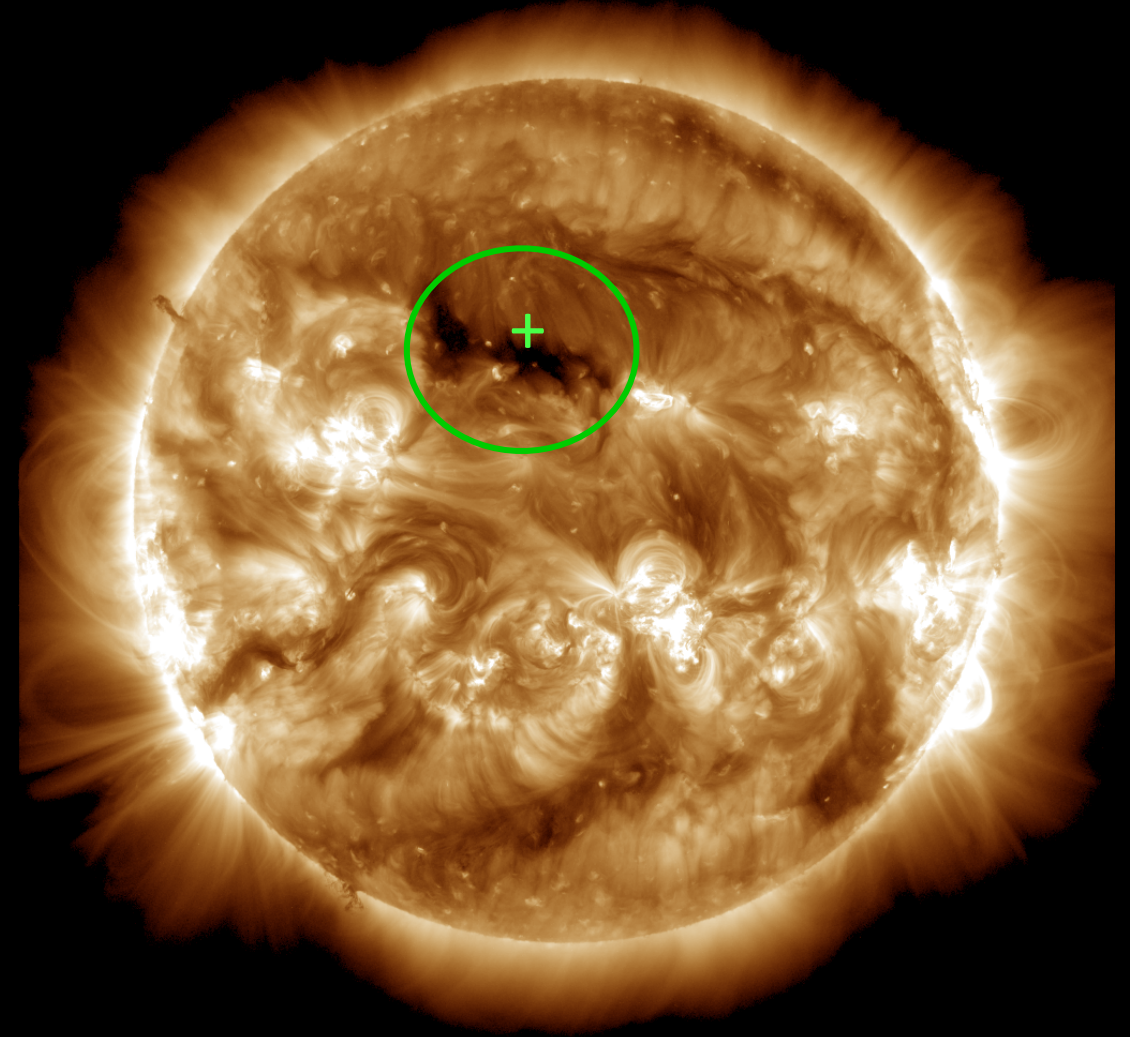
SDO/AIA 19.3 nm 2024-10-13

SDO/AIA AIA 193Å 2024-10-13T12:00:05.843



SDO/AIA 19.3 nm 2024-10-14

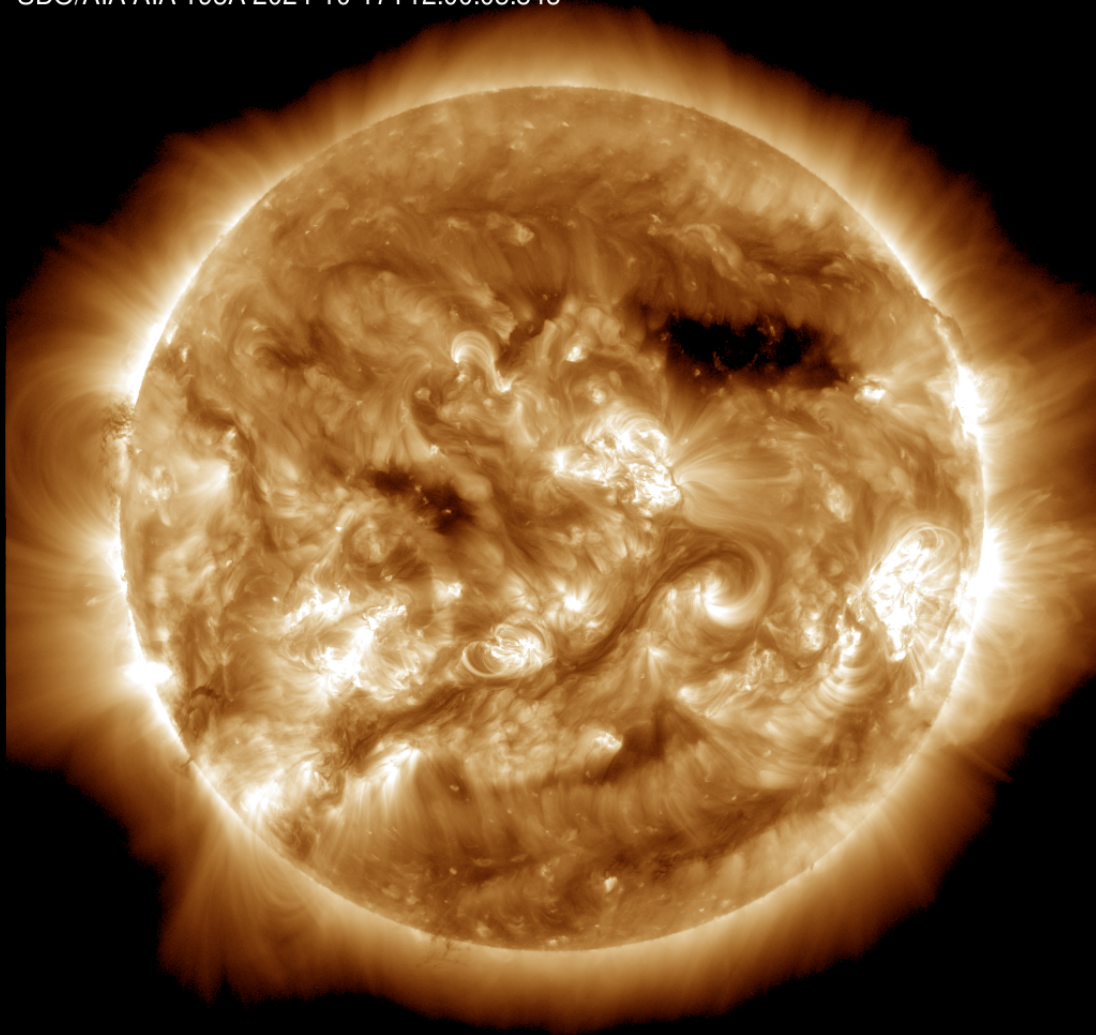
SDO/AIA AIA 193Å 2024-10-14T12:00:05.847



# Coronal holes

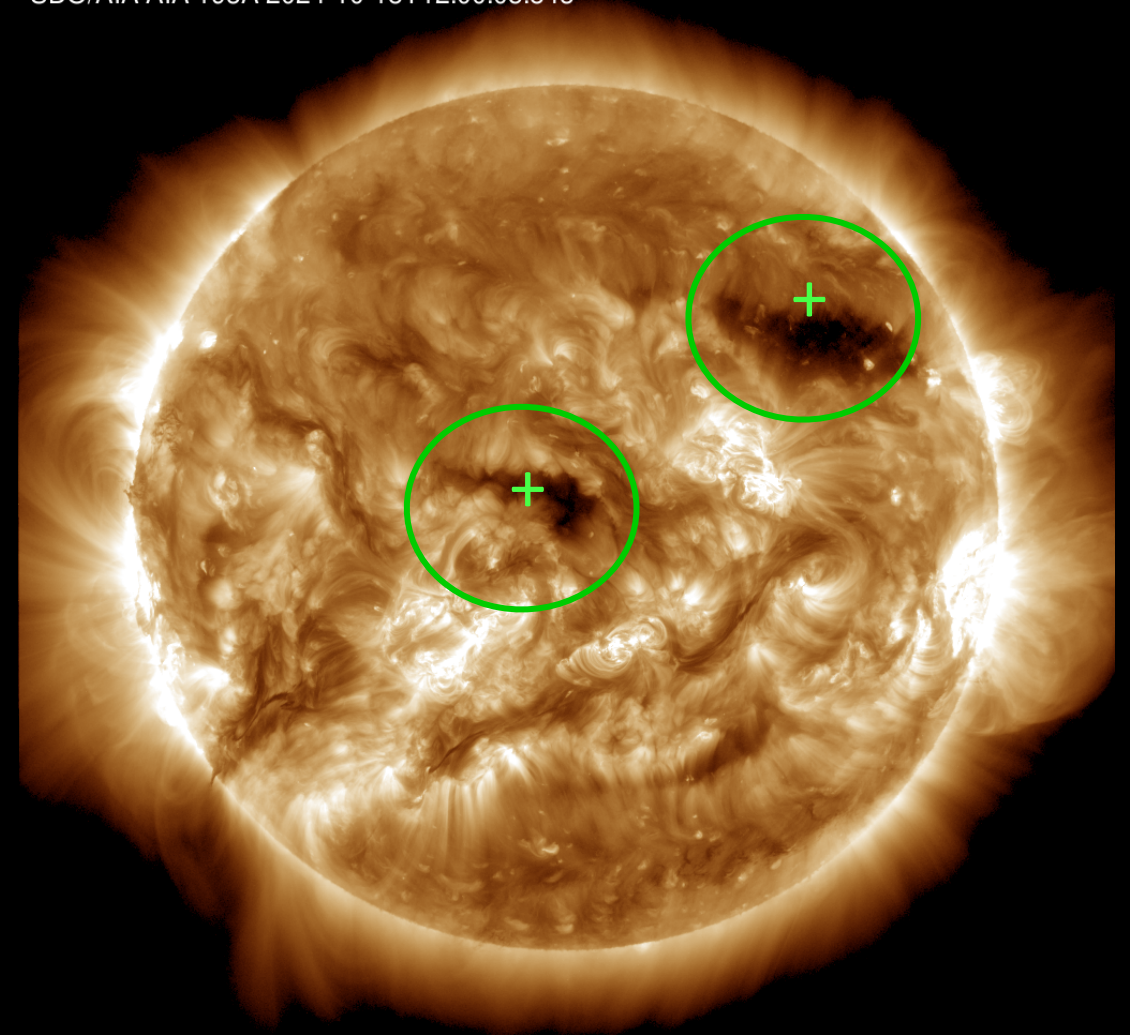
SDO/AIA 19.3 nm 2024-10-17

SDO/AIA AIA 193Å 2024-10-17T12:00:05.843



SDO/AIA 19.3 nm 2024-10-18

SDO/AIA AIA 193Å 2024-10-18T12:00:05.843





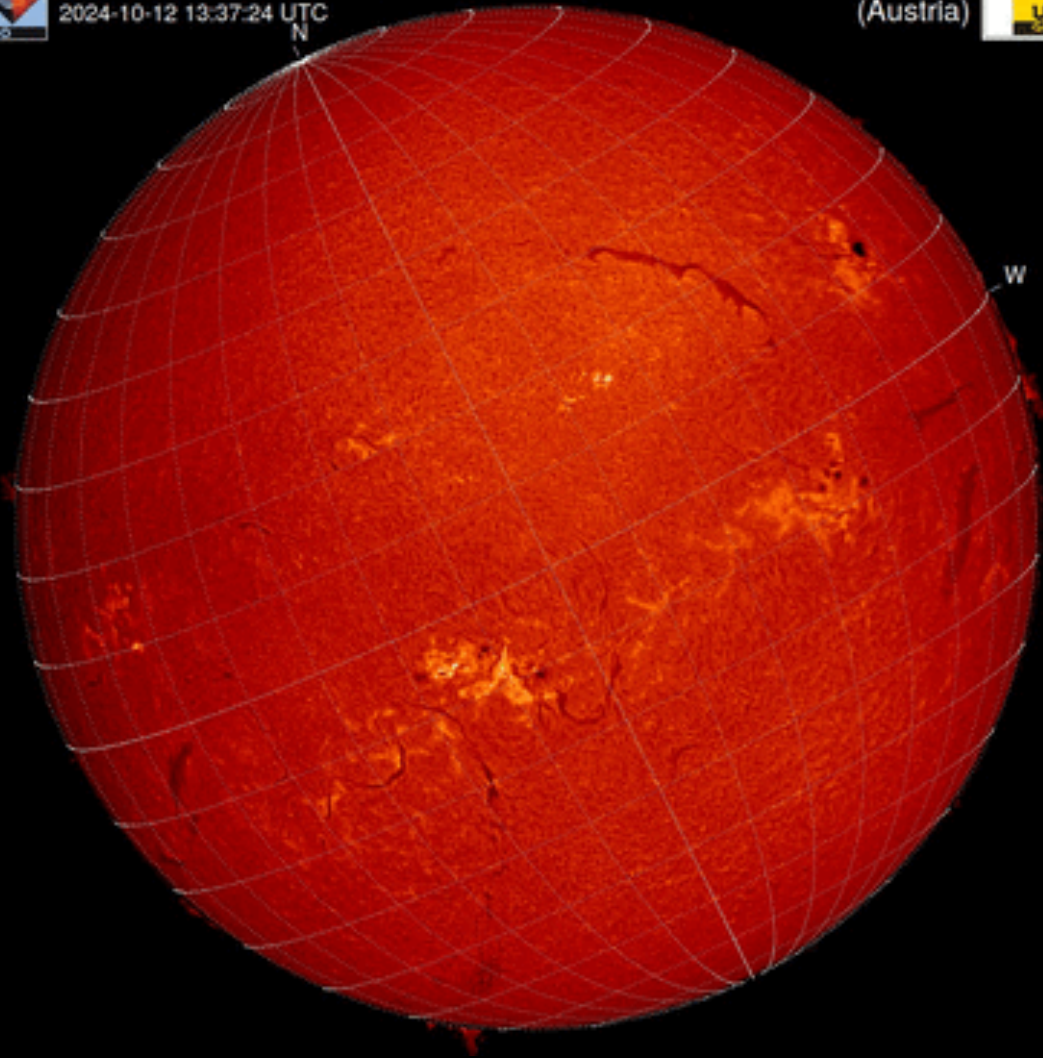
# Filaments & Filament eruptions

H-alpha 2024-10-13



Kanzelhöhe Observatory  
2024-10-12 13:37:24 UTC

University of Graz  
(Austria)

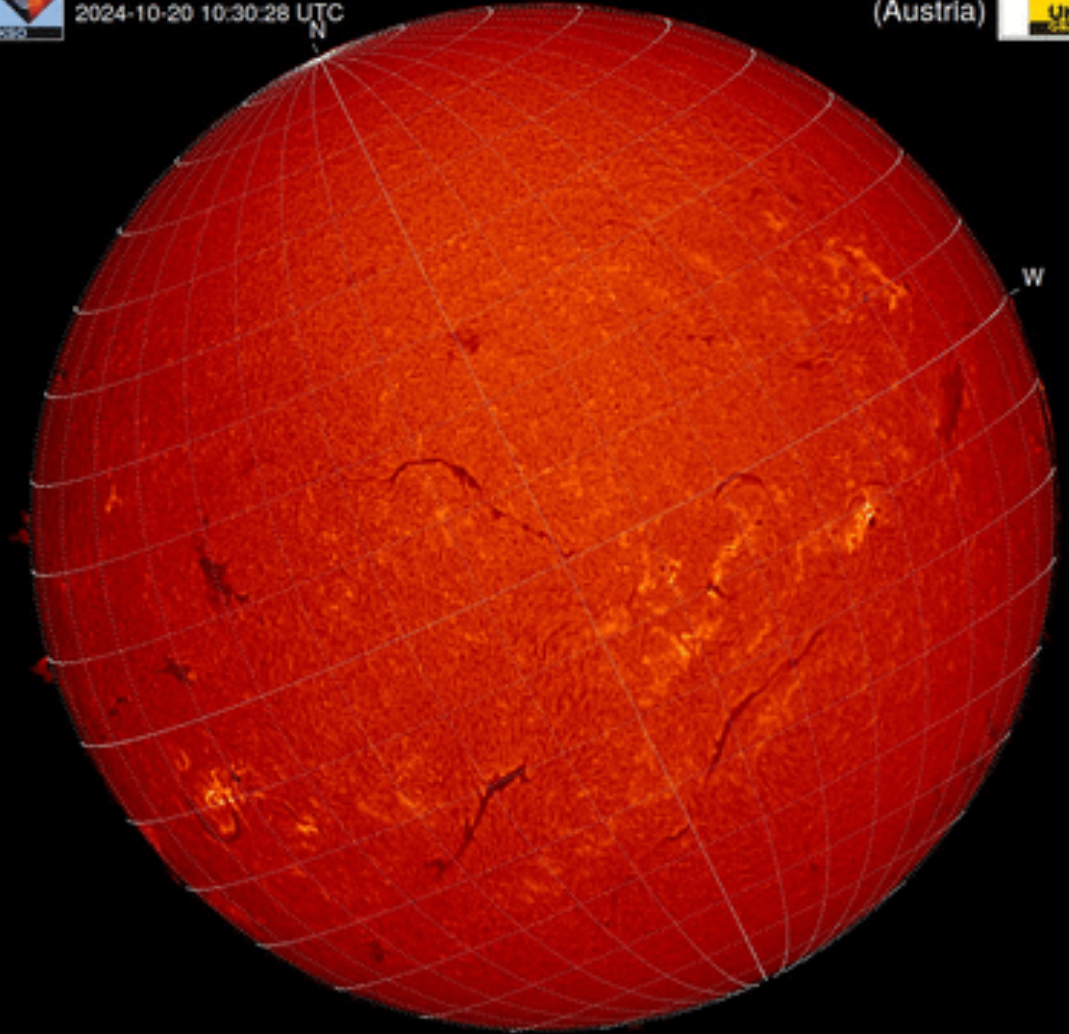


H-alpha 2024-10-20

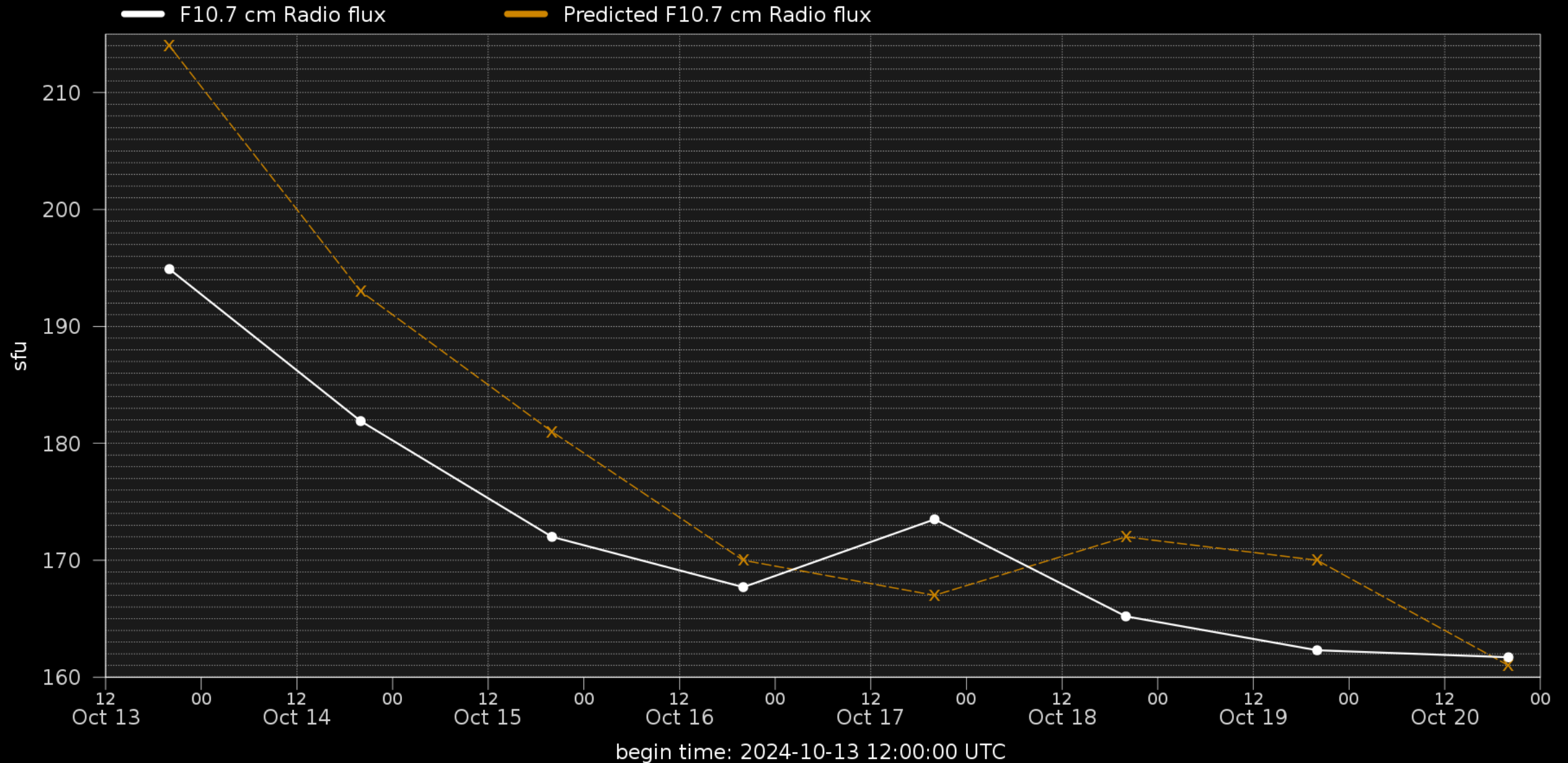


Kanzelhöhe Observatory  
2024-10-20 10:30:28 UTC

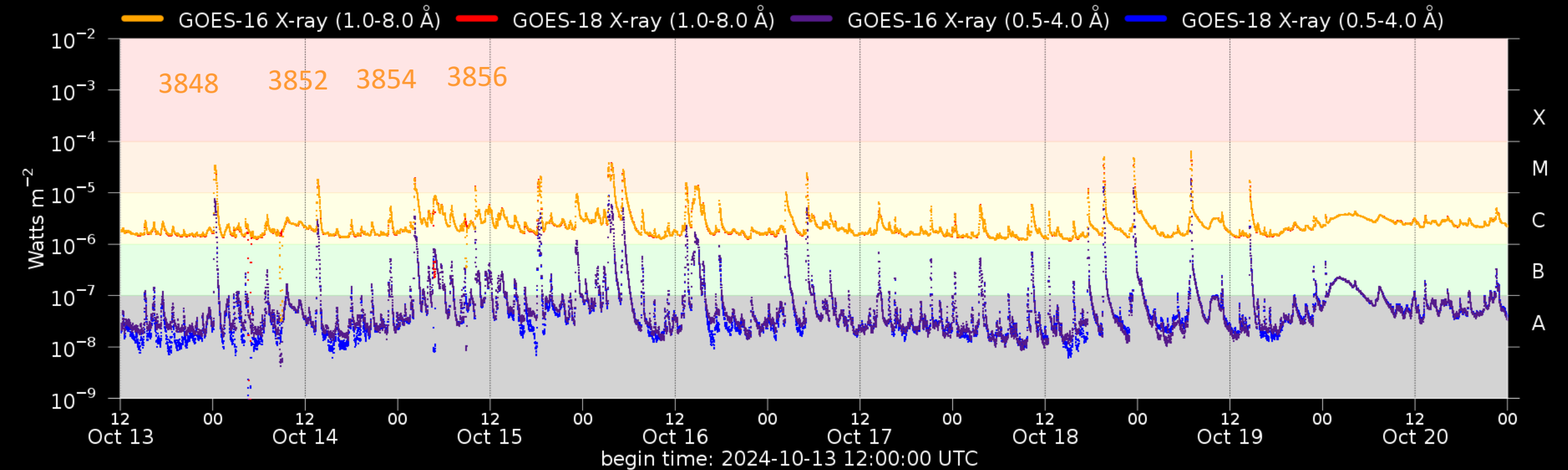
University of Graz  
(Austria)



# Solar F10.7cm radio flux



# Flaring activity

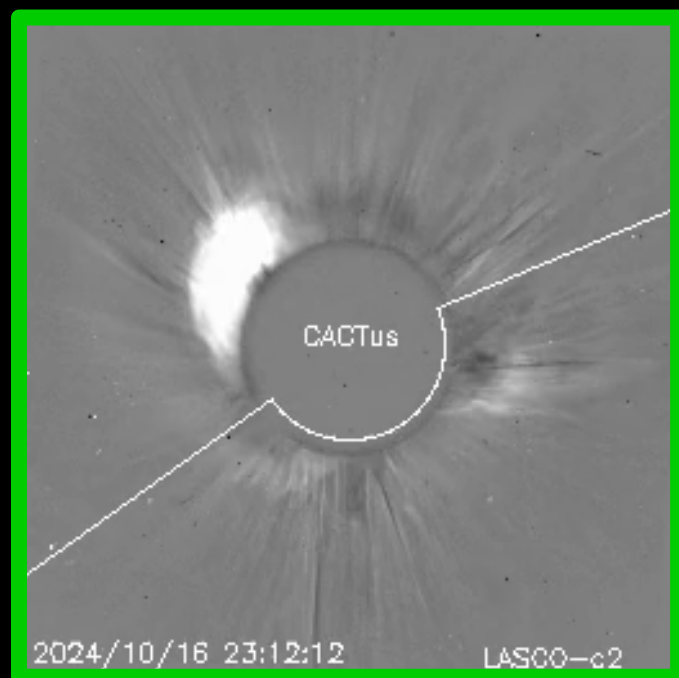


Probabilities (%) and occurrences (#) of C/M/X-flares daily, from noon to noon:

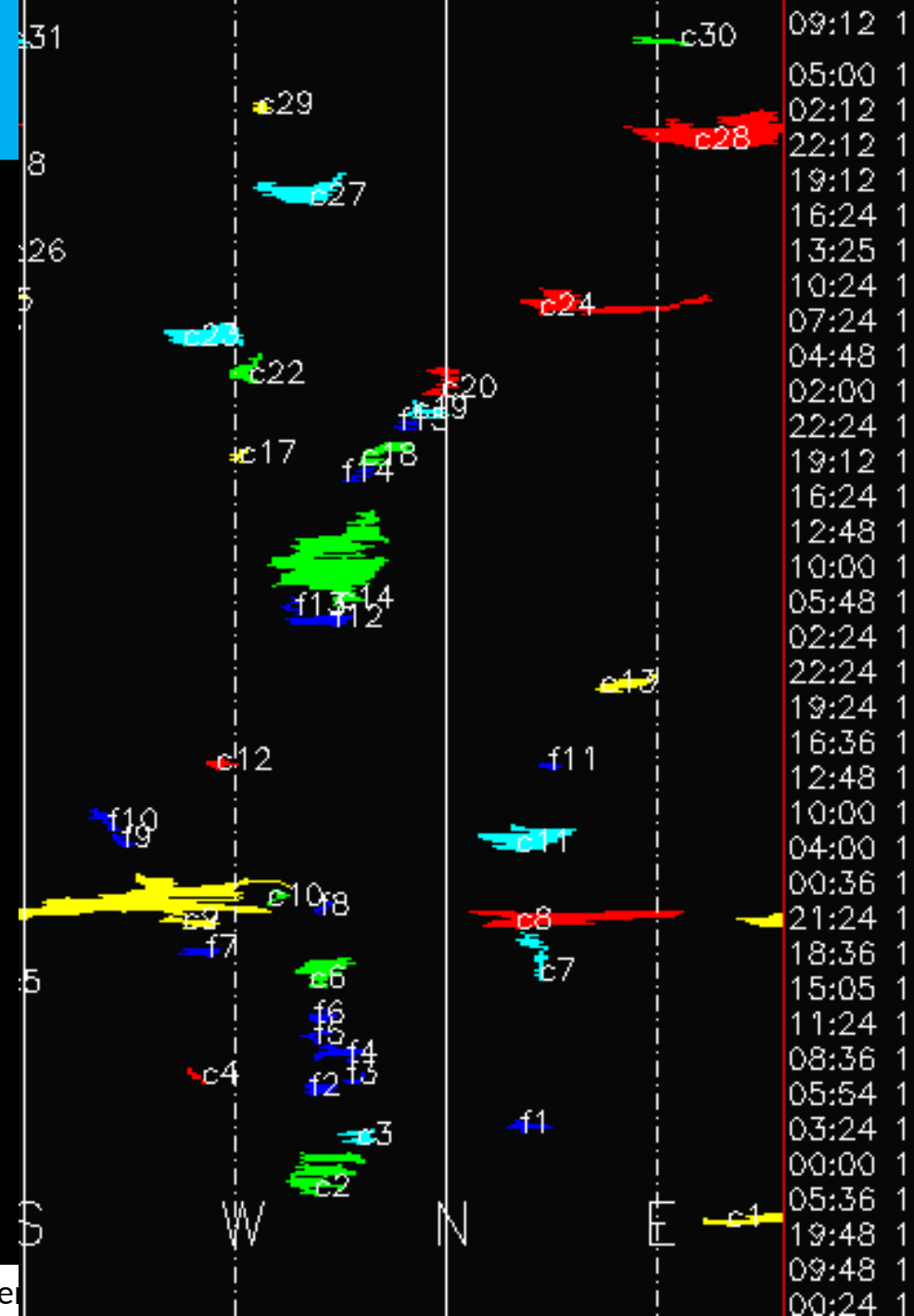
Issue date	2024-10-13	2024-10-14	2024-10-15	2024-10-16	2024-10-17	2024-10-18	2024-10-19	2024-10-20
Probability (%)	99 83 14	99 91 17	99 94 20	99 88 23	99 87 15	99 72 12	90 60 05	92 38 01
Observed (#)	06 01 00	09 03 00	06 05 00	04 05 00	08 00 00	03 04 00	02 01 00	01 00 00

# Coronal Mass Ejections

No Earth directed CMEs detected this week



Halo CME detected 16 OCT 23h12 is backsided



Solar Wind and

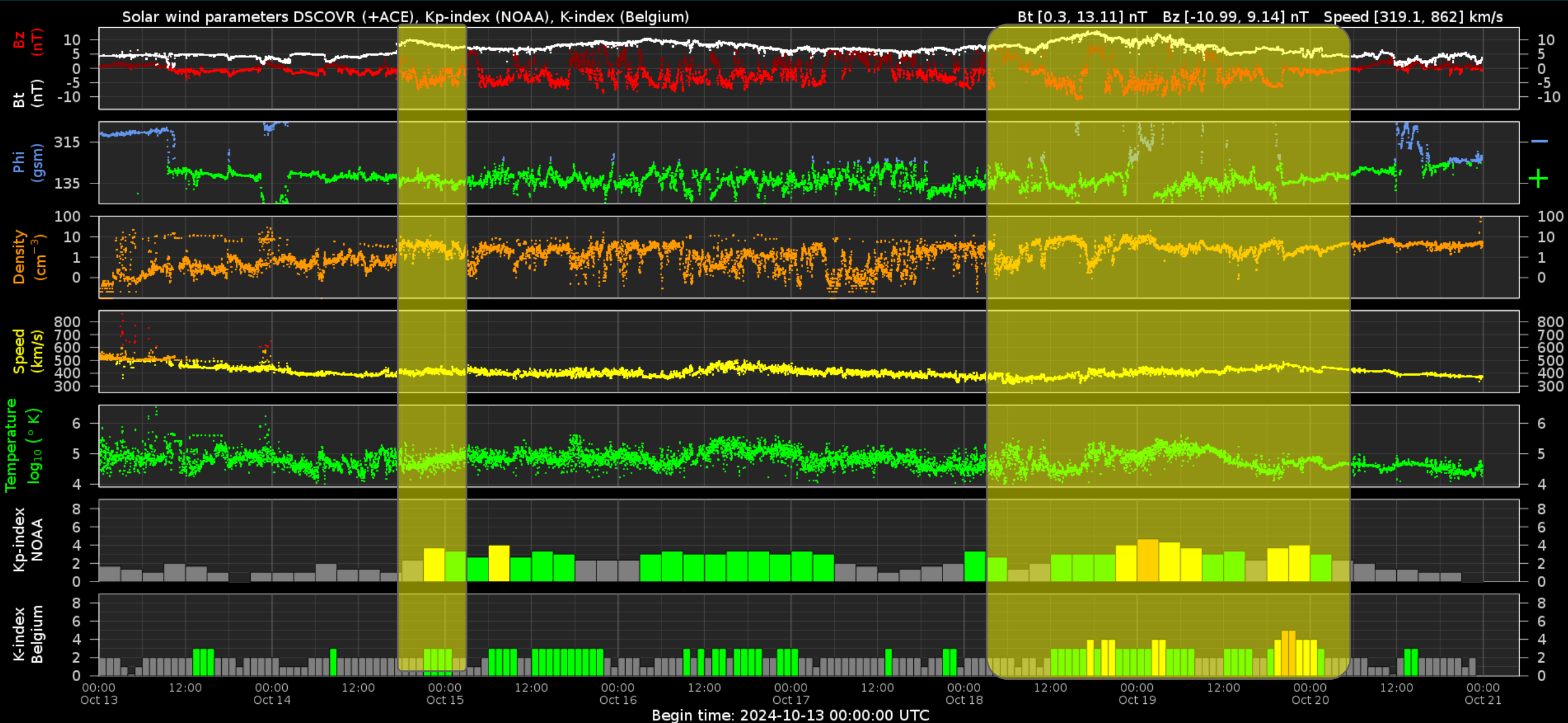
# Geomagnetic Activity



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# Solar wind parameters & K-indices



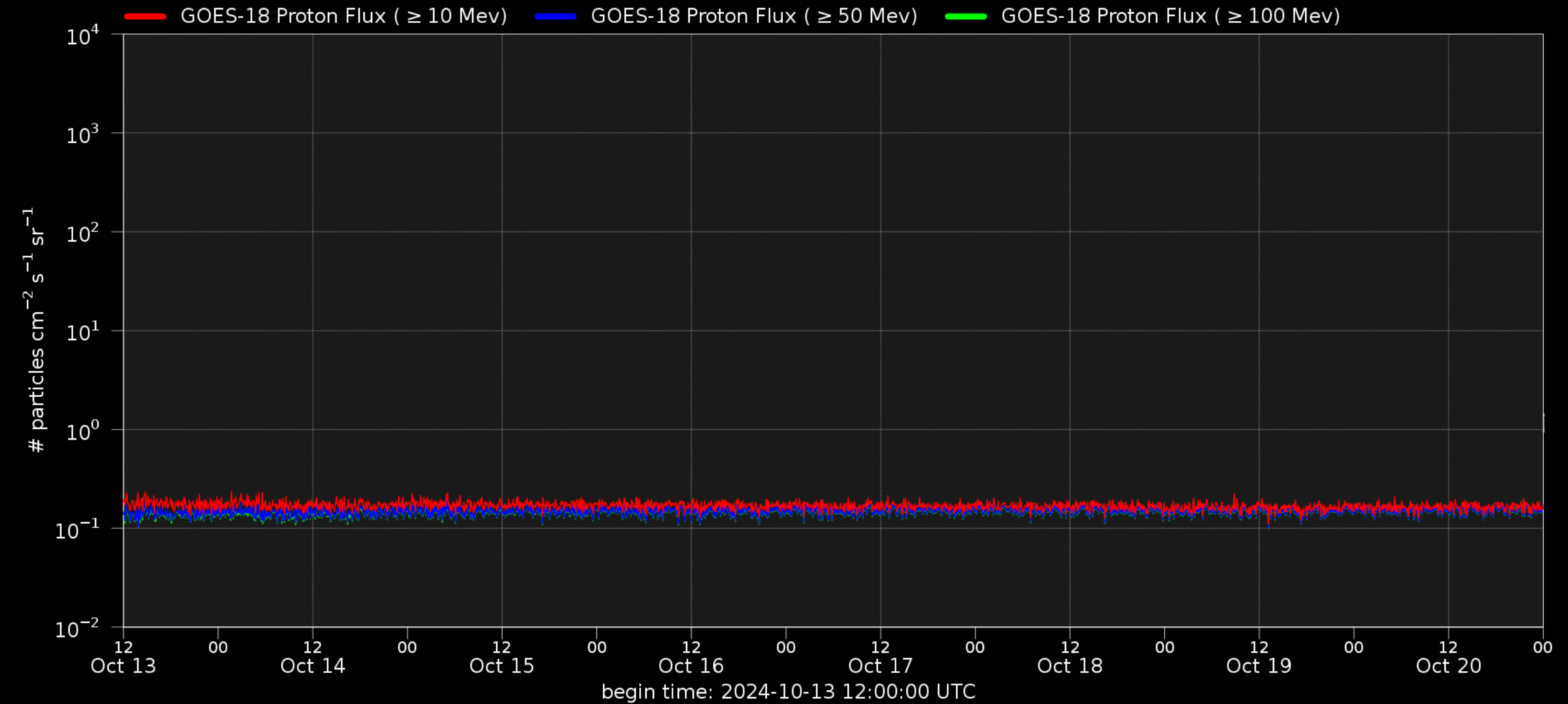
# Energetic Particles



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# Solar proton flux

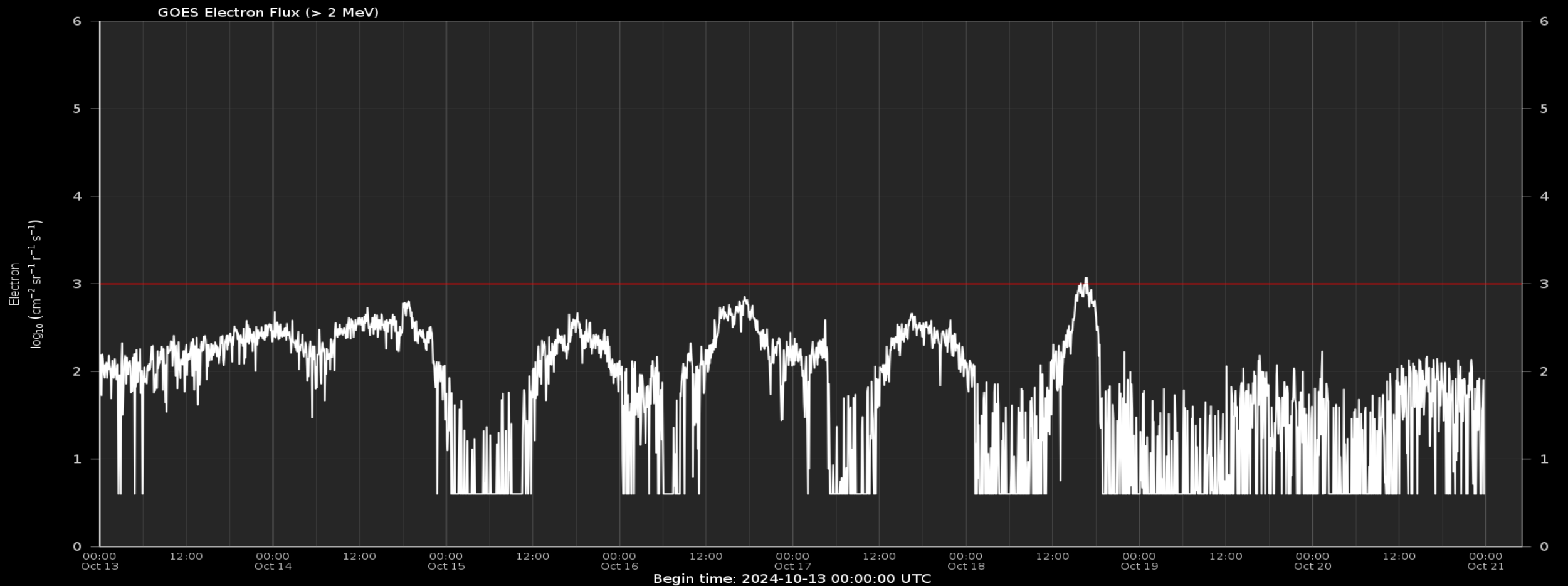




# Electron flux at GEO

[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)



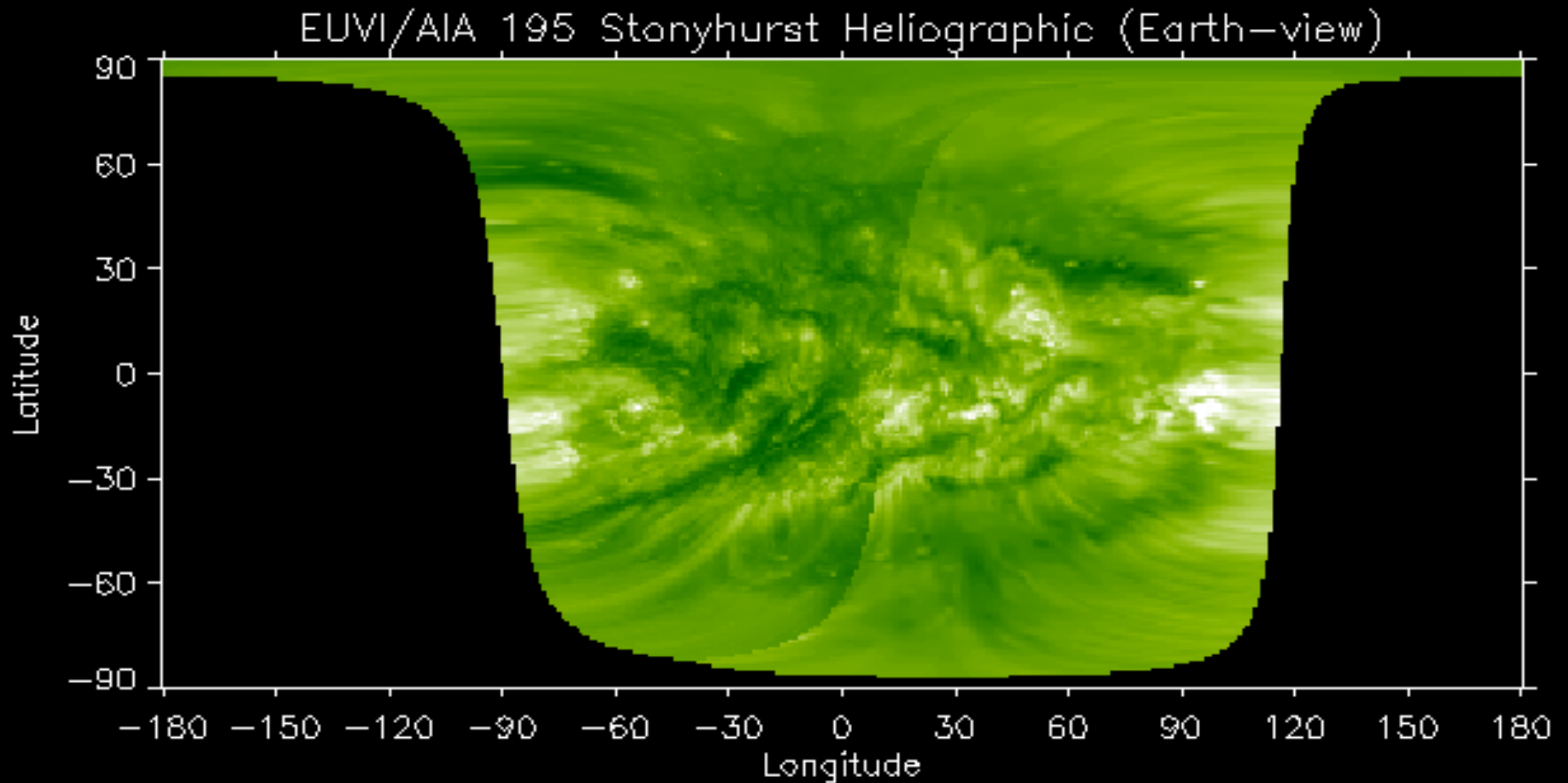
# Outlook



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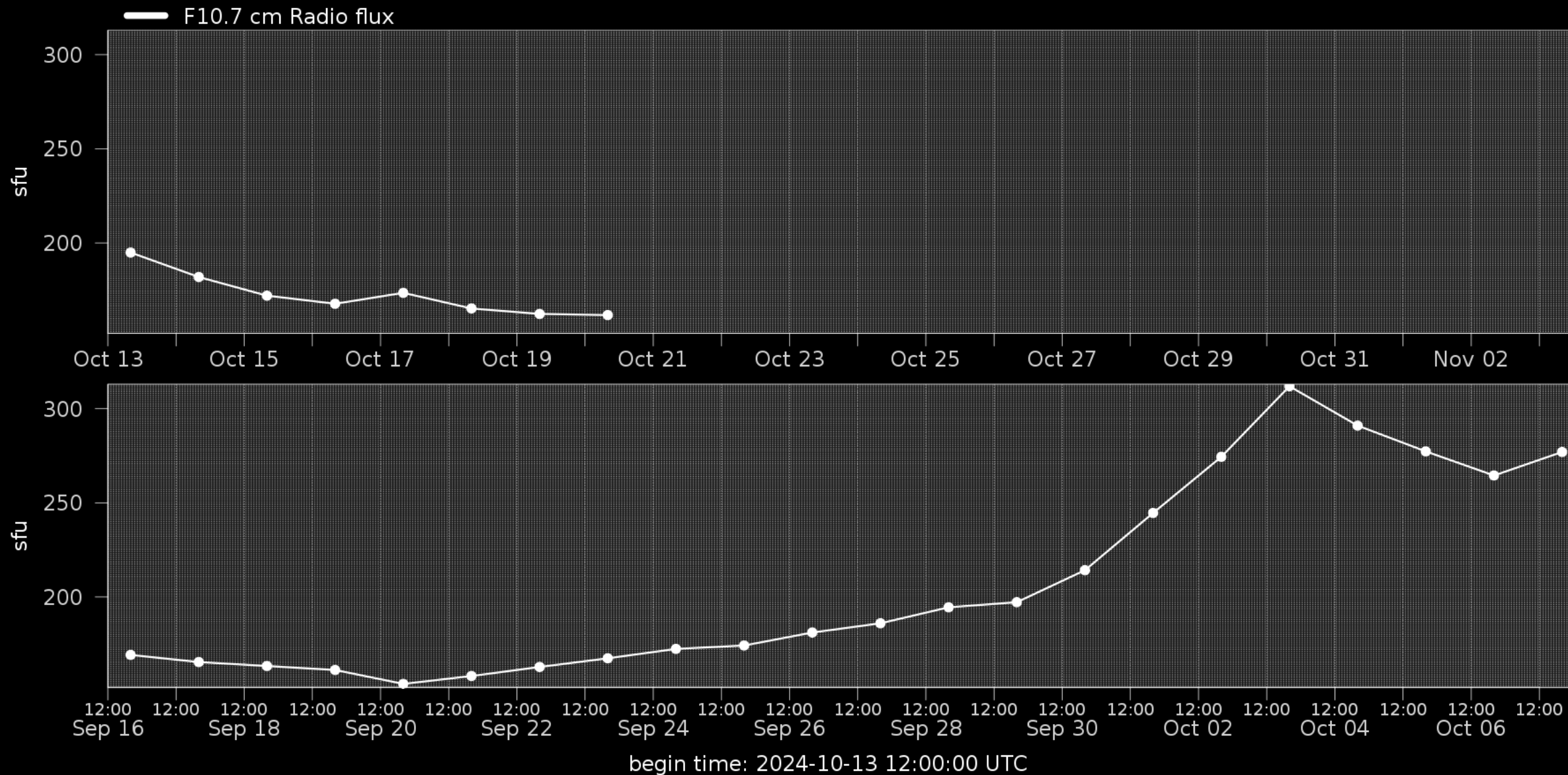
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# Outlook: Solar activity

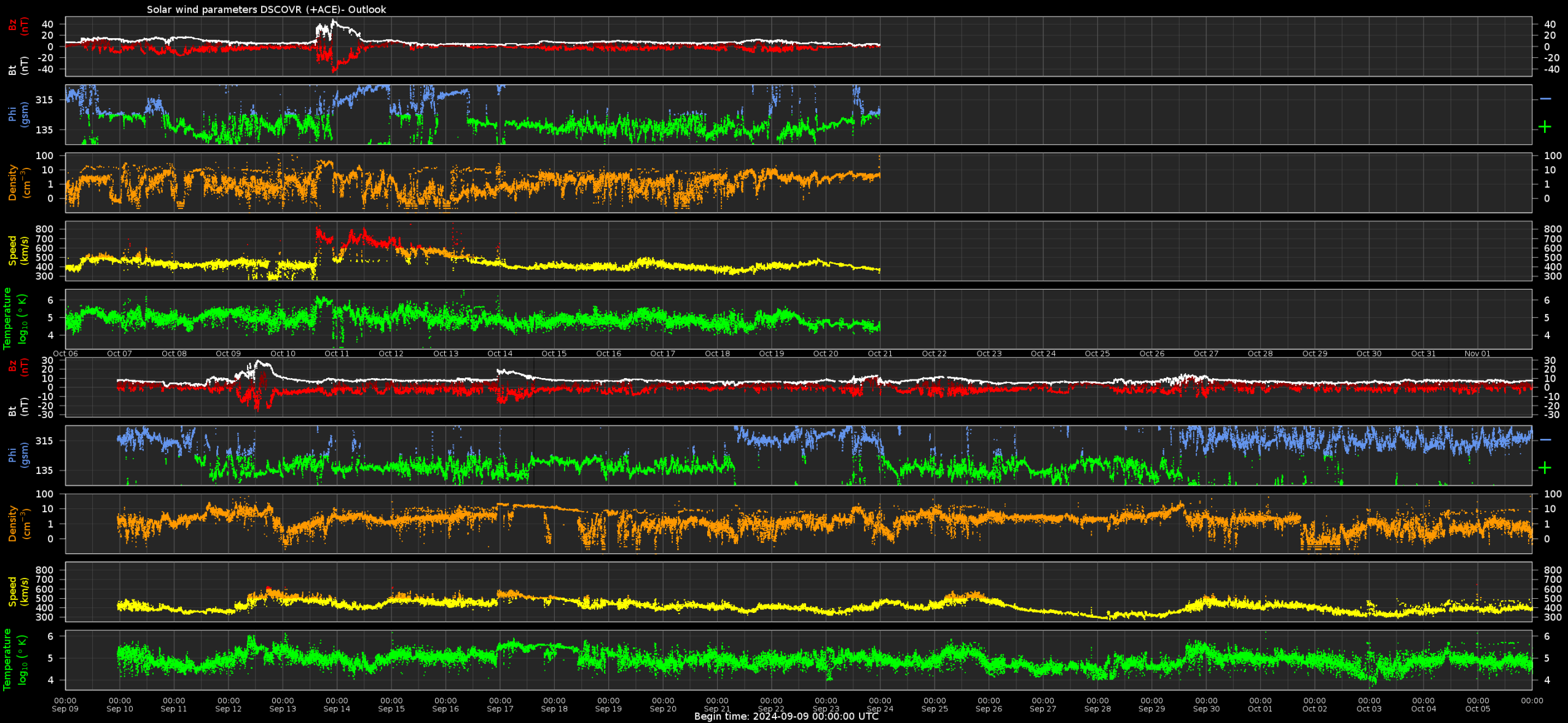


Observation date: 2024/10/20 13:35:00

# Outlook: Solar F10.7cm radio flux



# Outlook: Solar wind parameters



# Outlook: Geomagnetic activity



# Outlook: Electron Flux at GEO Outlook



PECASUS



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# Pegasus related events

AS/PS Scintillation

VTEC

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