

# SIDC Space Weather Briefing

12 May 2024-19 May 2024

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& 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 2024-05-12 12:00 to 2024-05-19 23:59

Active regions	NOAA AR 3664 &3685
Flares	# C-class flare: 21 # M-class flare: 12 # X-class flare: 5
Coronal Holes	No CH crossing of the solar meridian
CMEs	Four Earth-directed CME

Proton flux	Proton event 13-16 May
Electron flux	At 1000 pfu alert threshold 14-15 May. Localised event on 17 May.

## Solar wind and geomagnetic conditions

ICMEs	Two short-lived CME arrived on 16 and 17 May
Solar wind conditions	B : 1.42 - 17.14 nT //Bz: -15.06 nT to 13.59 nT //Speed: 311.4 - 979.5km/s
Geomagnetic conditions	max KBel: 5, max Kp(NOAA): 6, Moderate Storm conditions

All Quiet Alert: Not quiet

# Solar Activity

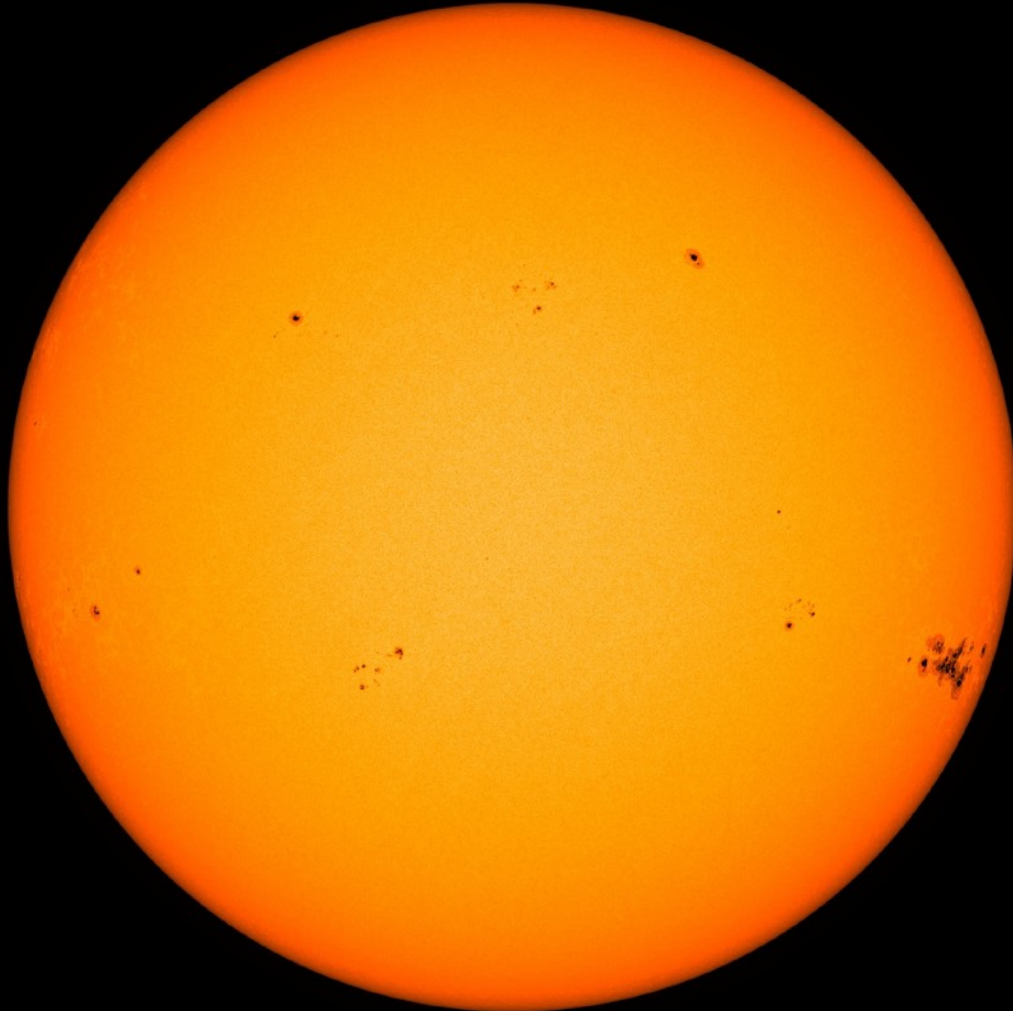


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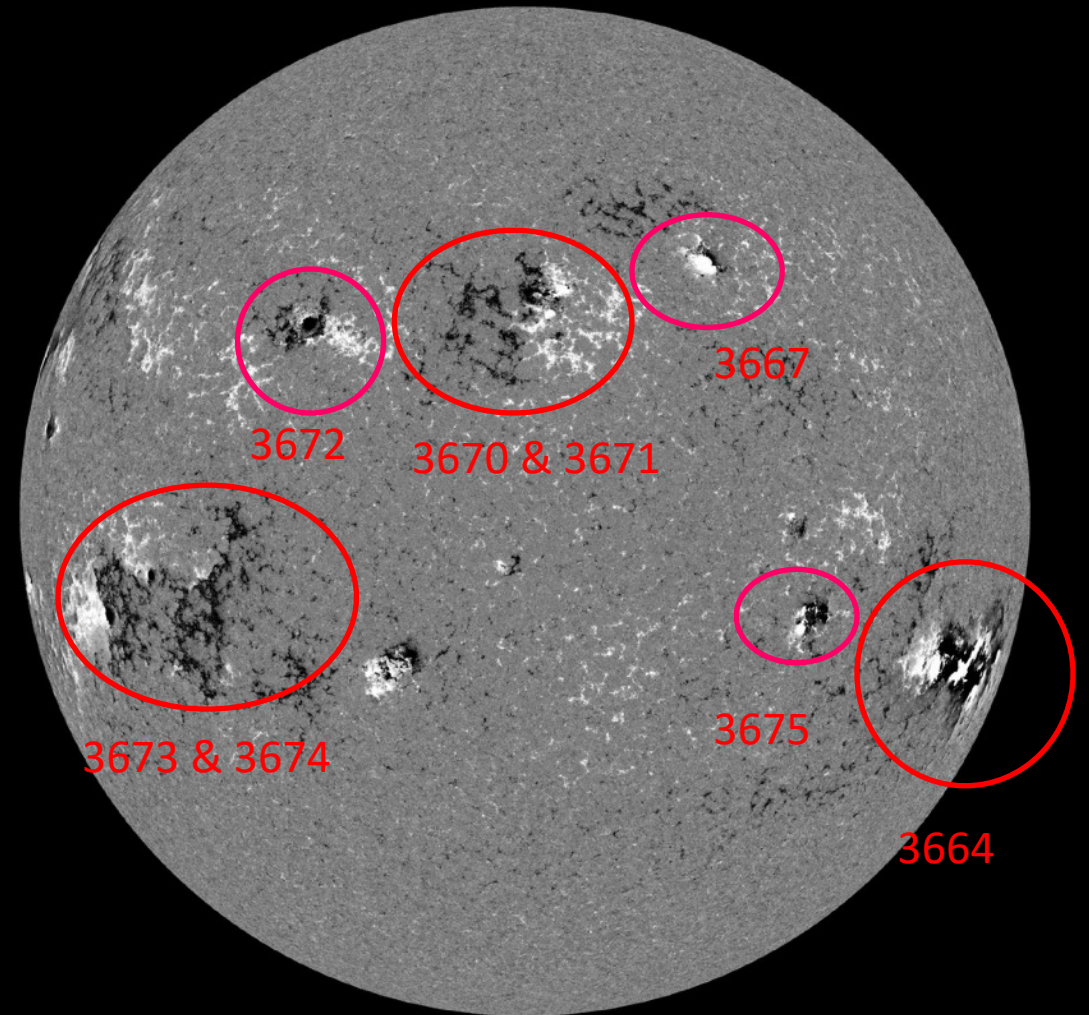
# Solar active regions

SDO/HMI White Light 2024-05-12



SDO/HMI Quick-look Continuum: 20240512\_114500

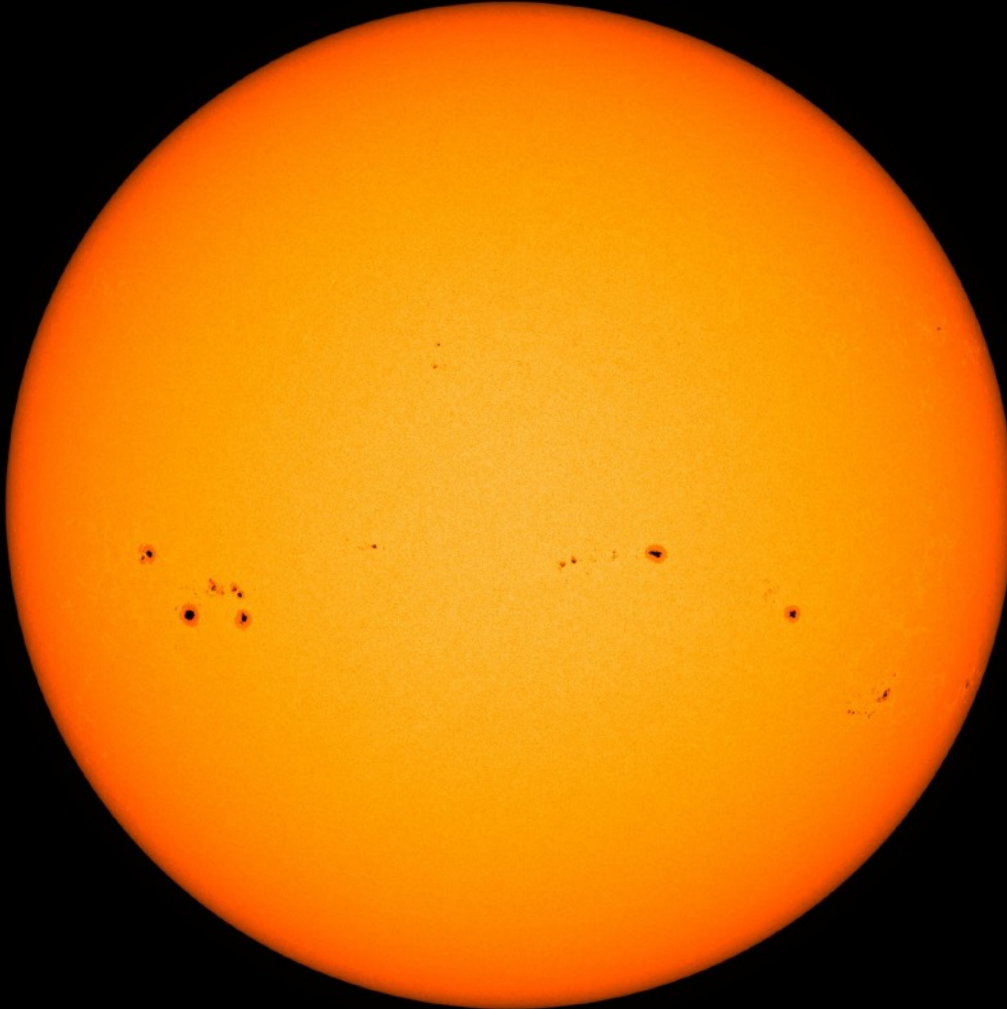
SDO/HMI Magnetogram 2024-05-12



SDO/HMI Quick-look Magnetogram: 20240512\_114500

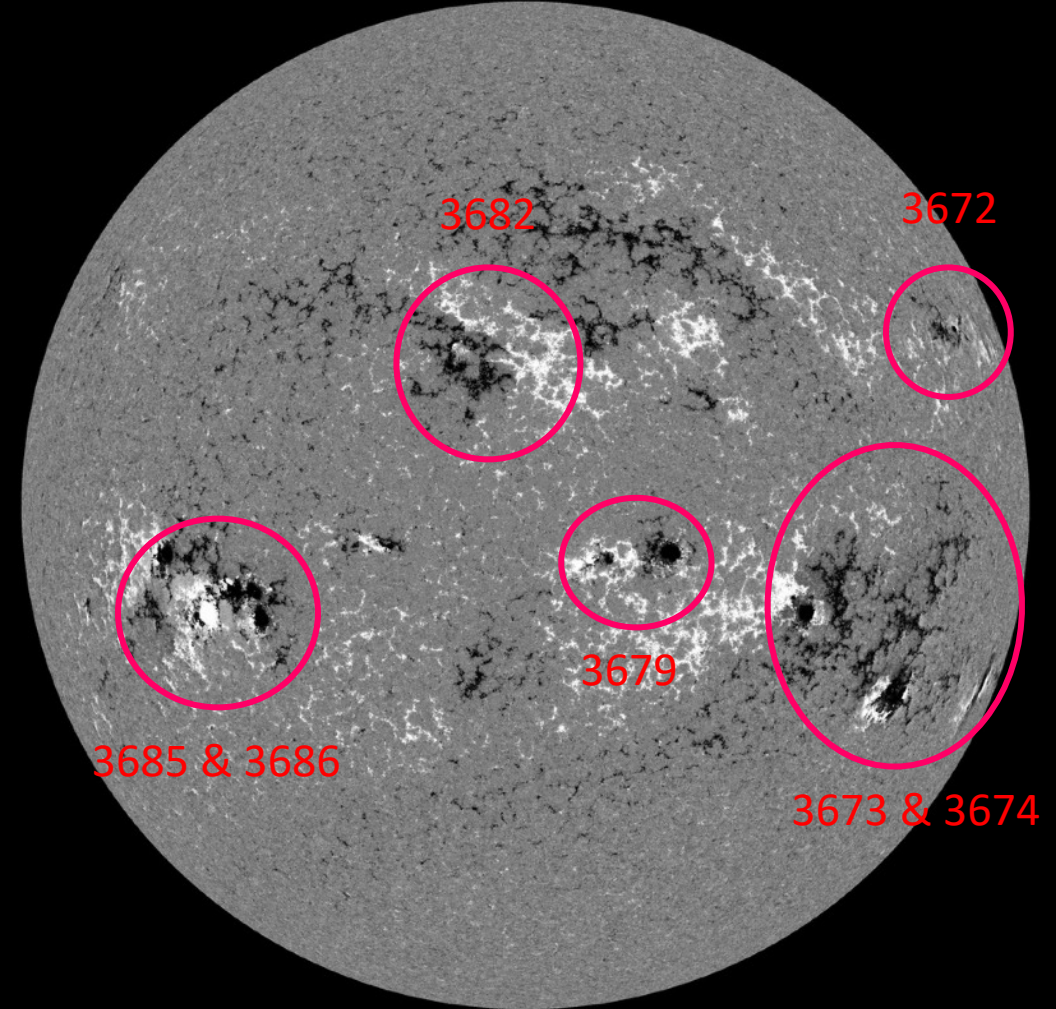
# Solar active regions

SDO/HMI White Light 2024-05-19



SDO/HMI Quick-Look Continuum: 20240519\_114500

SDO/HMI Magnetogram 2024-05-19

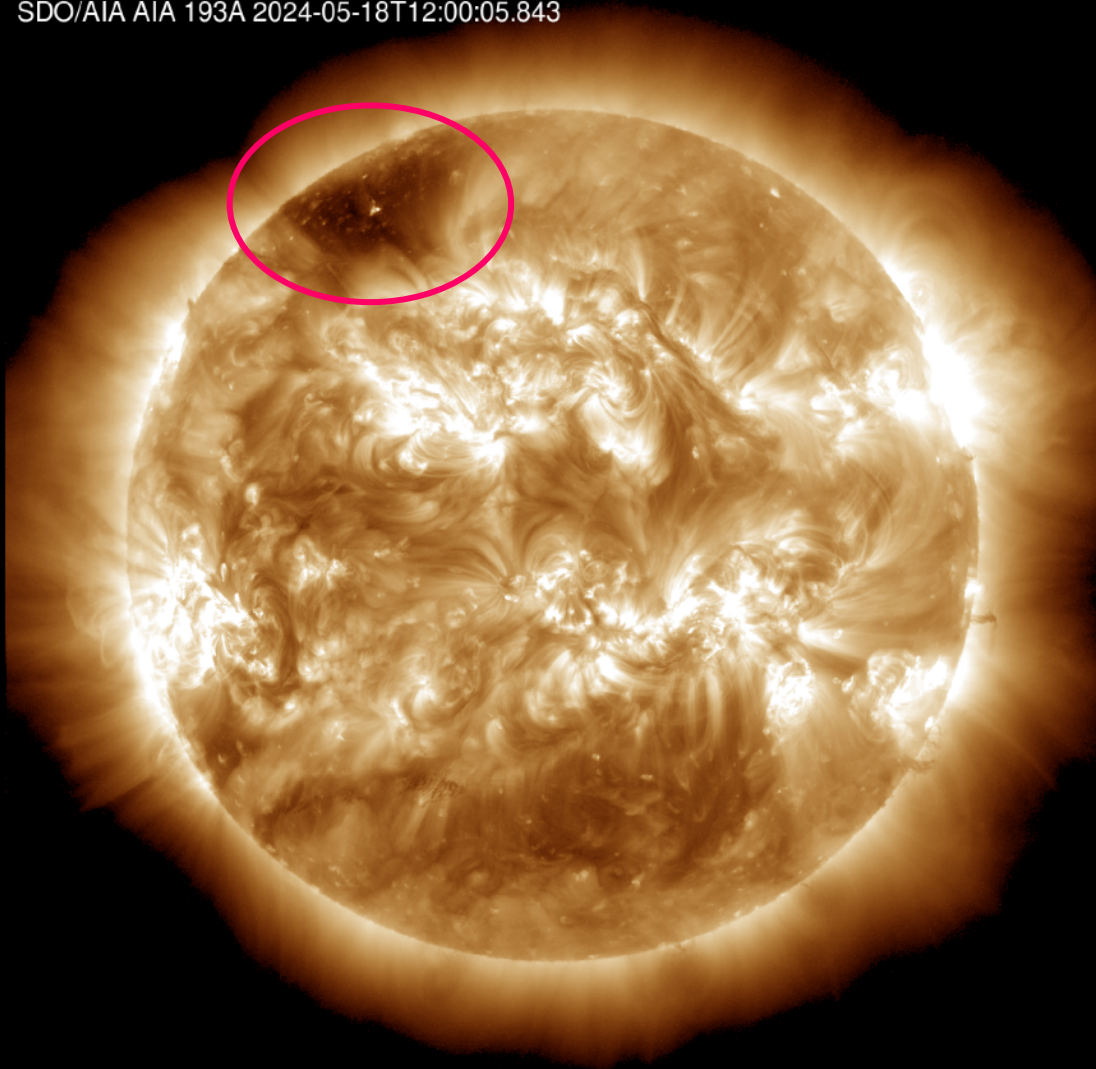


SDO/HMI Quick-Look Magnetogram: 20240519\_114500

# Coronal holes

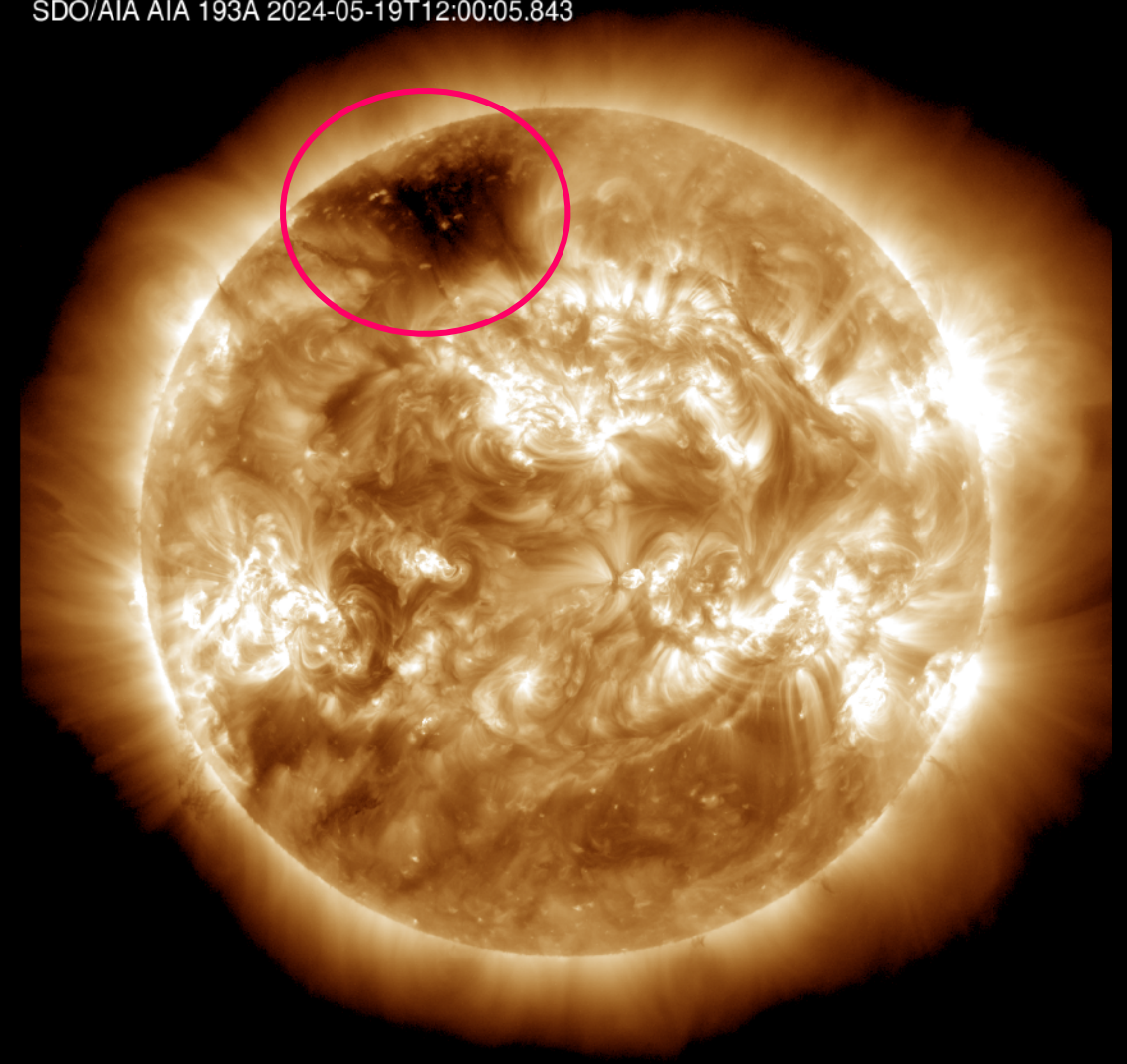
SDO/AIA 19.3 nm 2024-05-18

SDO/AIA AIA 193Å 2024-05-18T12:00:05.843



SDO/AIA 19.3 nm 2024-05-19

SDO/AIA AIA 193Å 2024-05-19T12:00:05.843



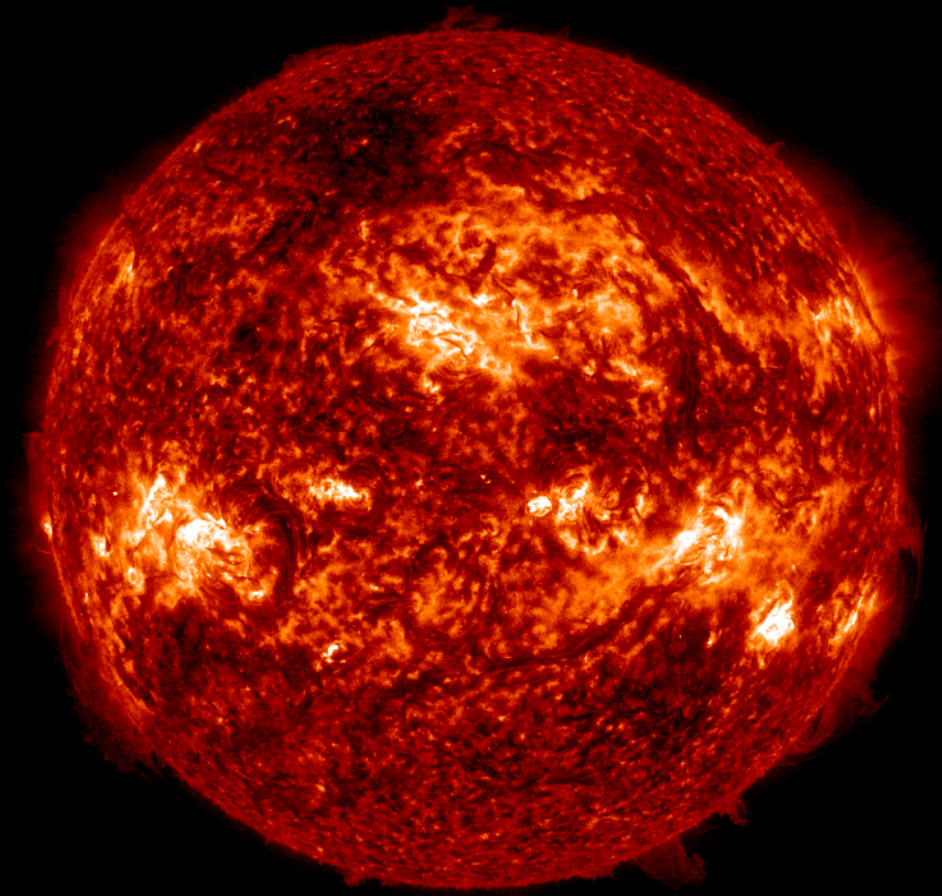
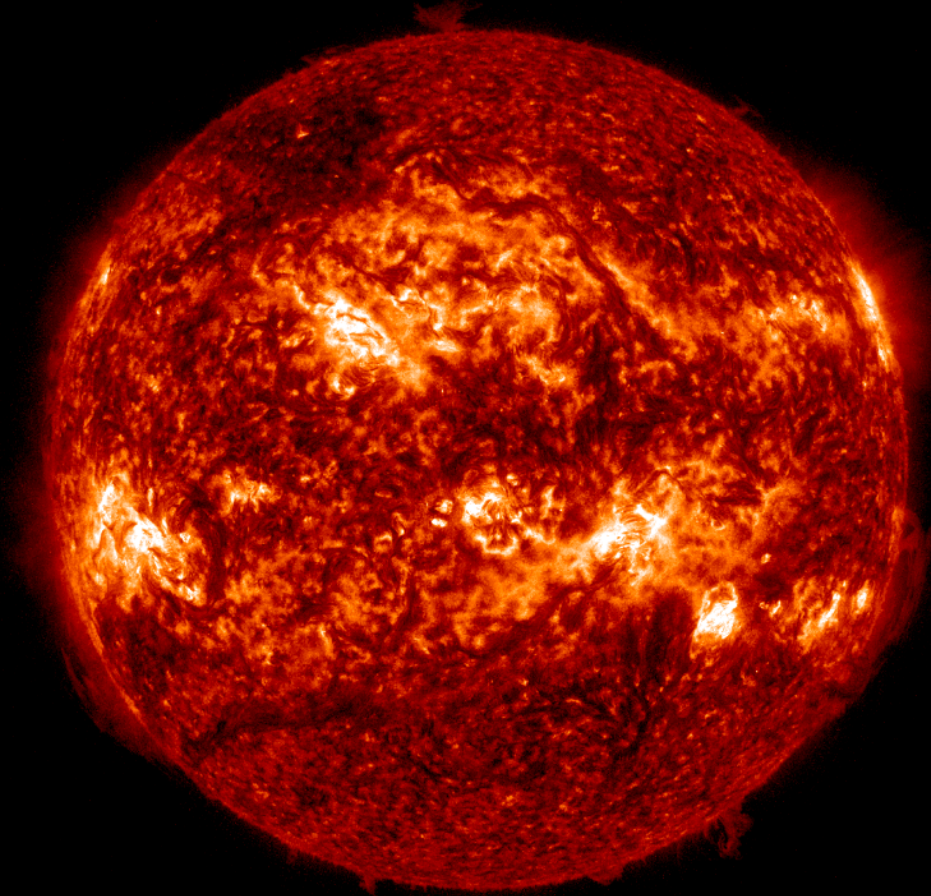
# Filaments

SDO/AIA 30.4 nm 2024-05-18

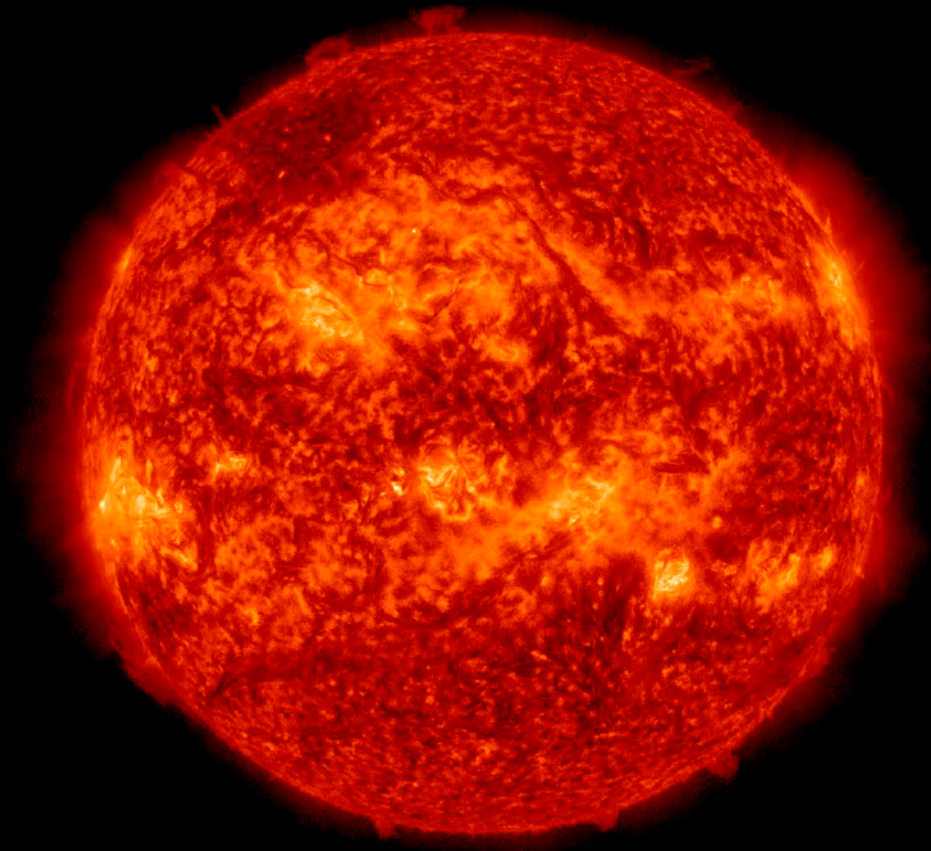
SDO/AIA AIA 304Å 2024-05-18T12:00:06.580

SDO/AIA 30.4 nm 2024-05-19

SDO/AIA AIA 304Å 2024-05-19T12:00:06.597



# Filaments



SDO/AIA 304 2024-05-18 00:08:54 UT



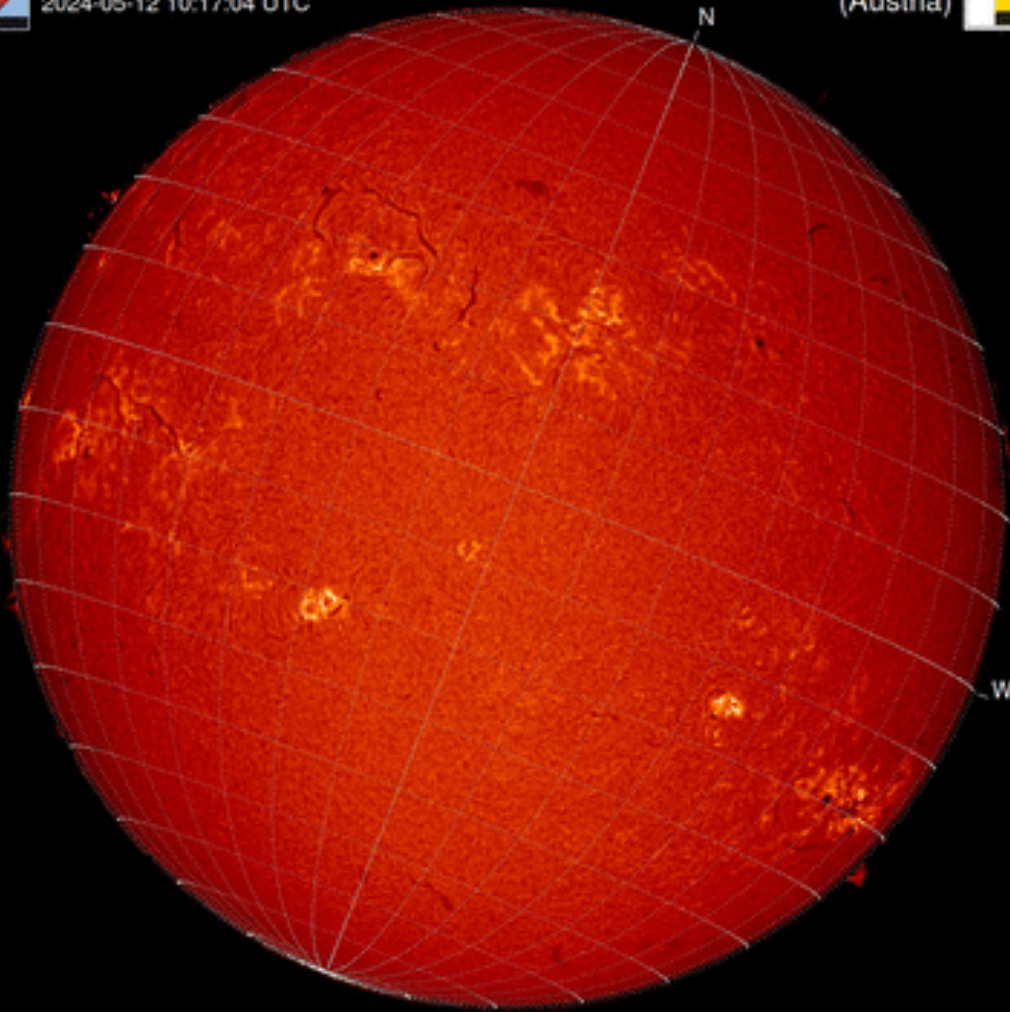
# Filaments & Filament eruptions

H-alpha 2024-05-12



Kanzelhöhe Observatory  
2024-05-12 10:17:04 UTC

University of Graz  
(Austria)

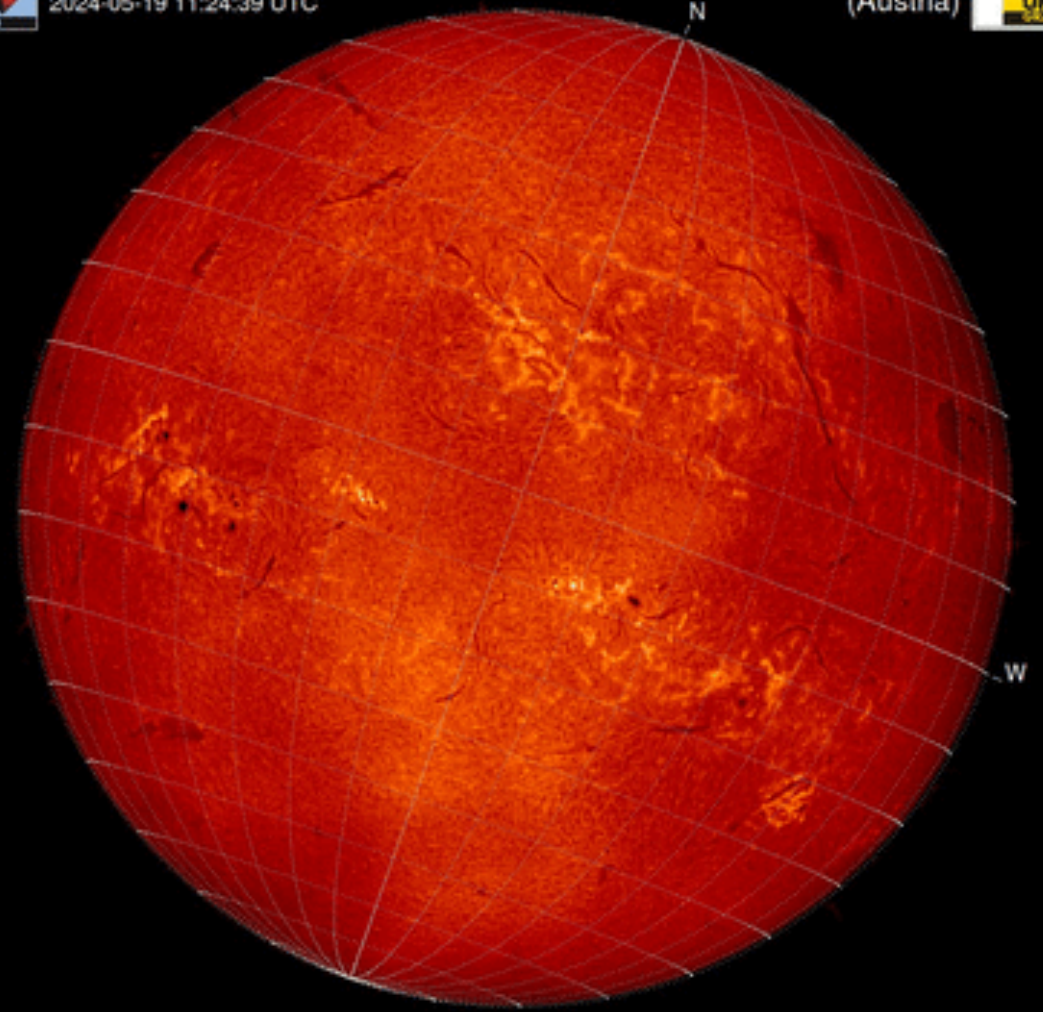


H-alpha 2024-05-19

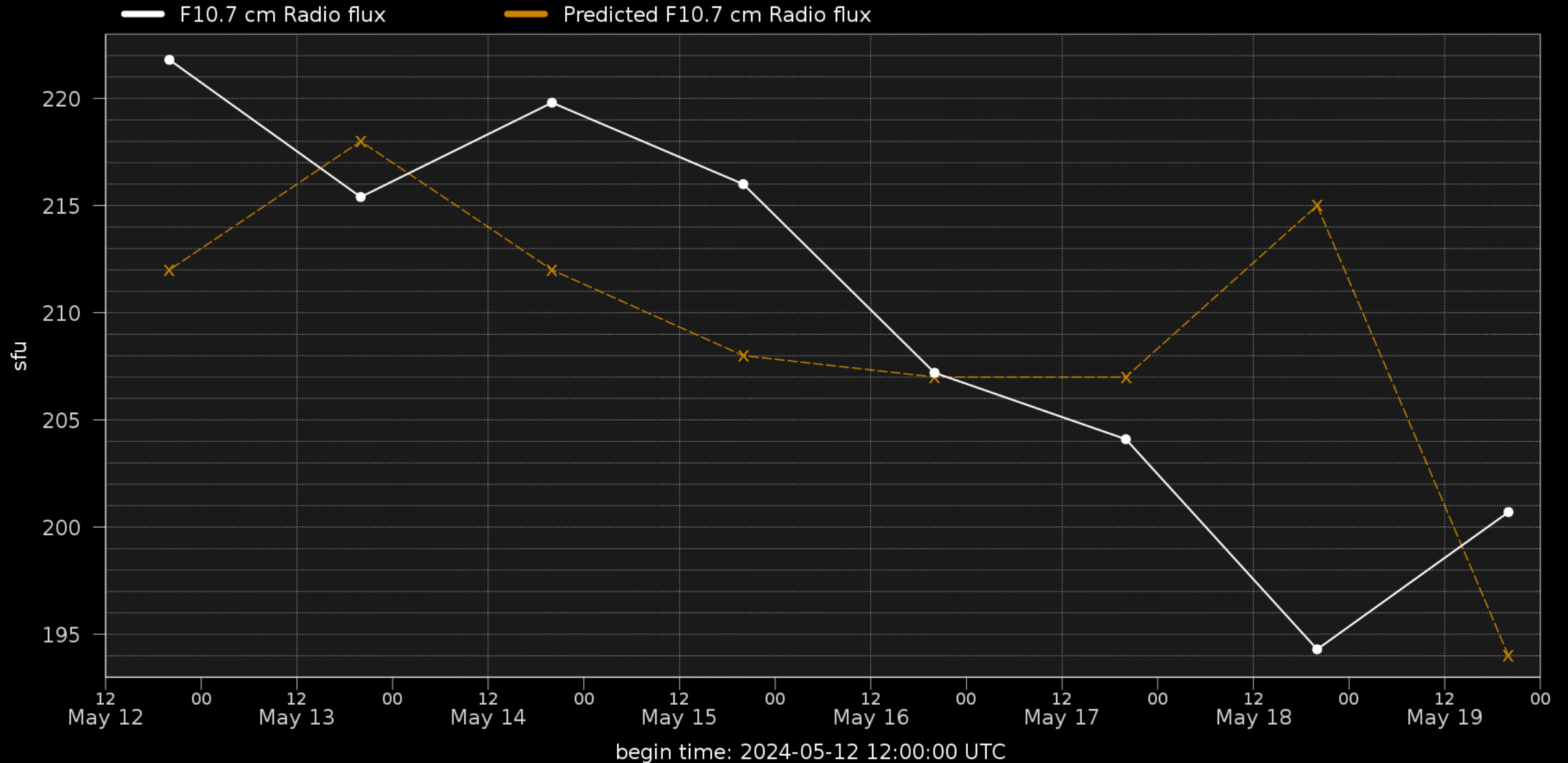


Kanzelhöhe Observatory  
2024-05-19 11:24:39 UTC

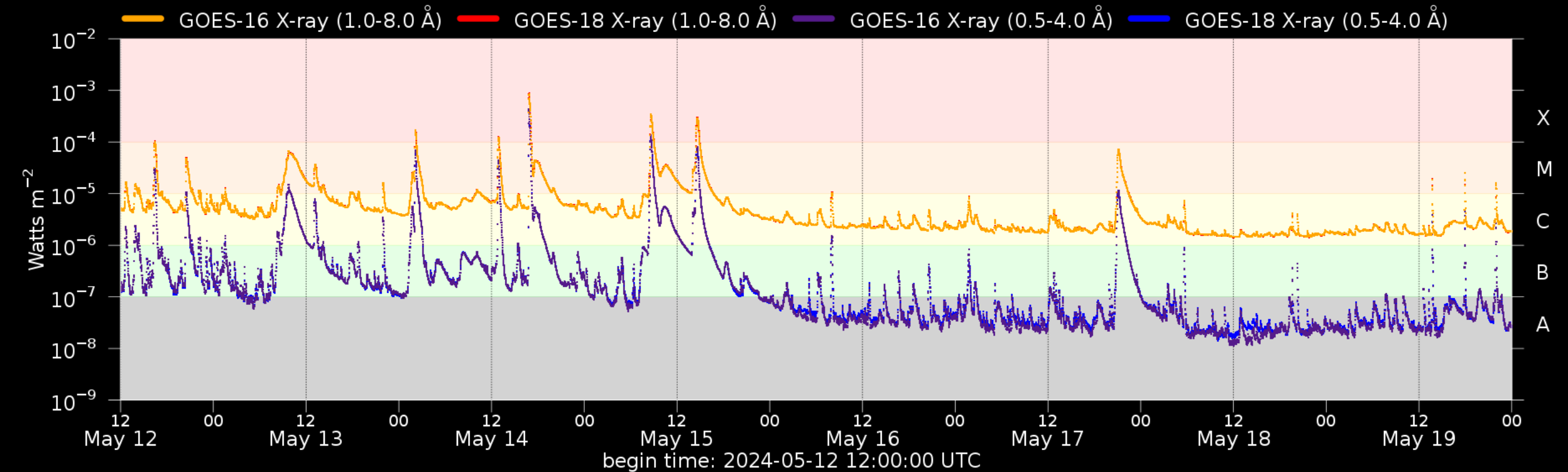
University of Graz  
(Austria)



# Solar F10.7cm radio flux



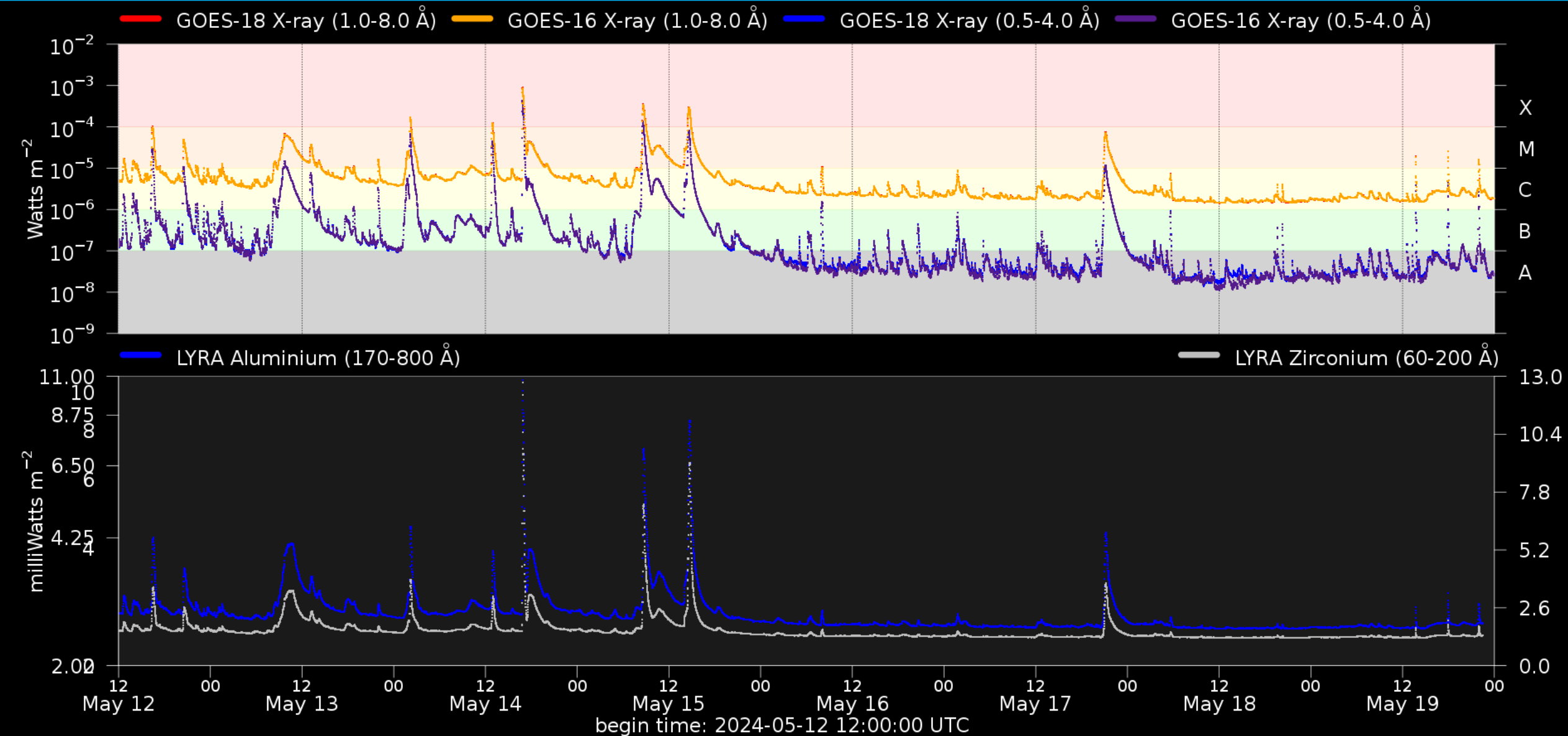
# Flaring activity



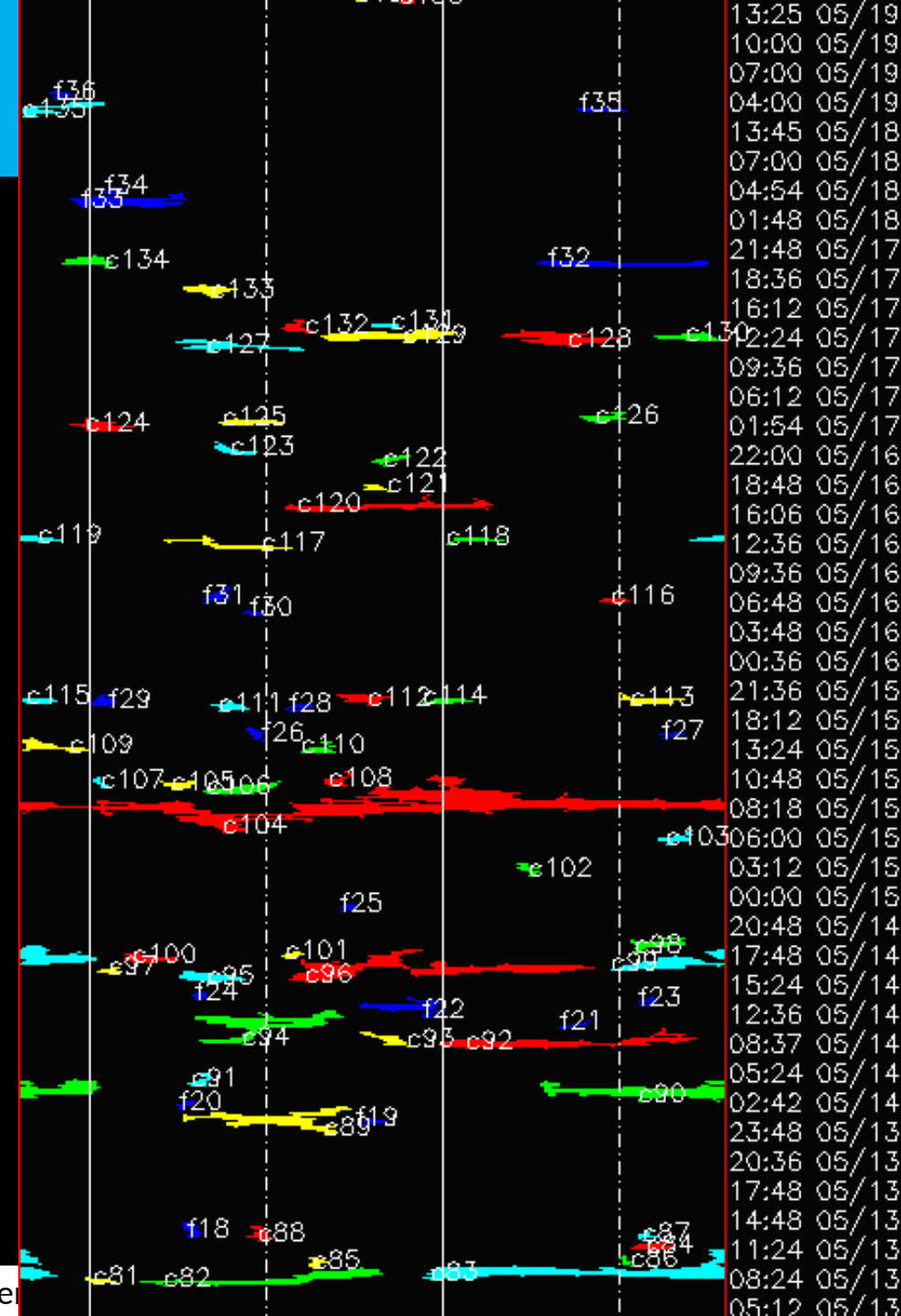
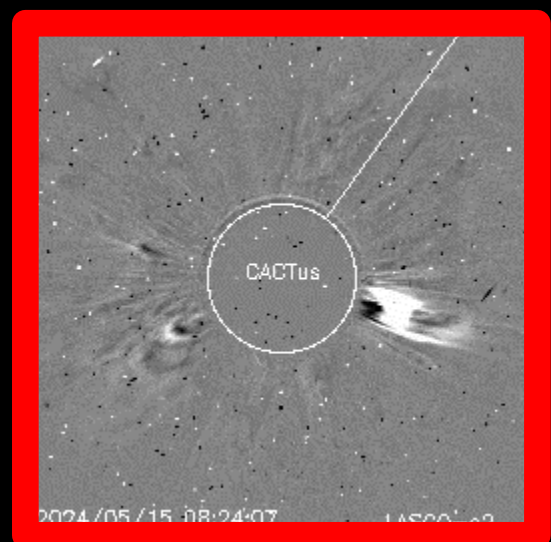
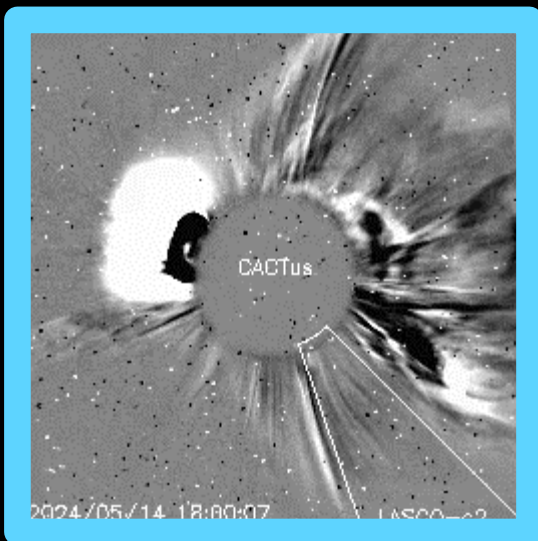
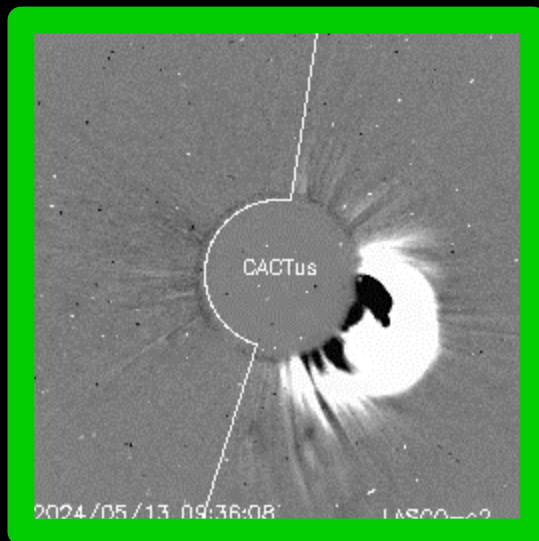
Probabilities (%) and occurrences (#) of C/M/X-flares daily, from noon to noon:

Issue date	2024-05-12	2024-05-13	2024-05-14	2024-05-15	2024-05-16	2024-05-17	2024-05-18	2024-05-19
Probability (%)	90 80 40	99 99 45	99 95 45	99 95 35	99 90 30	99 70 10	99 80 25	99 75 30
Observed (#)	07 06 01	00 02 01	01 00 03	02 01 01	05 00 00	03 00 00	03 00 00	00 03 00

# Solar X-Ray and UV flux



# Coronal Mass Ejections



Solar Wind and

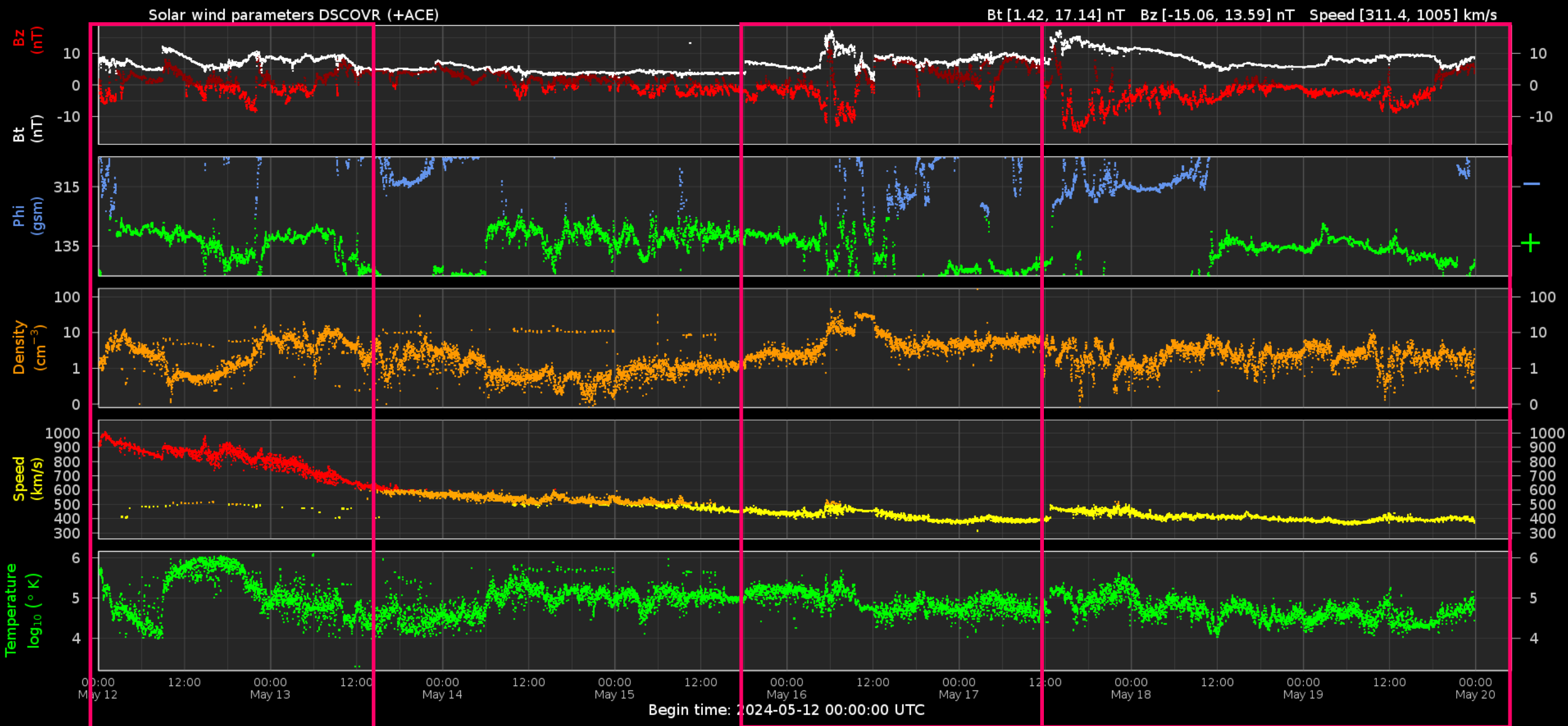
# Geomagnetic Activity



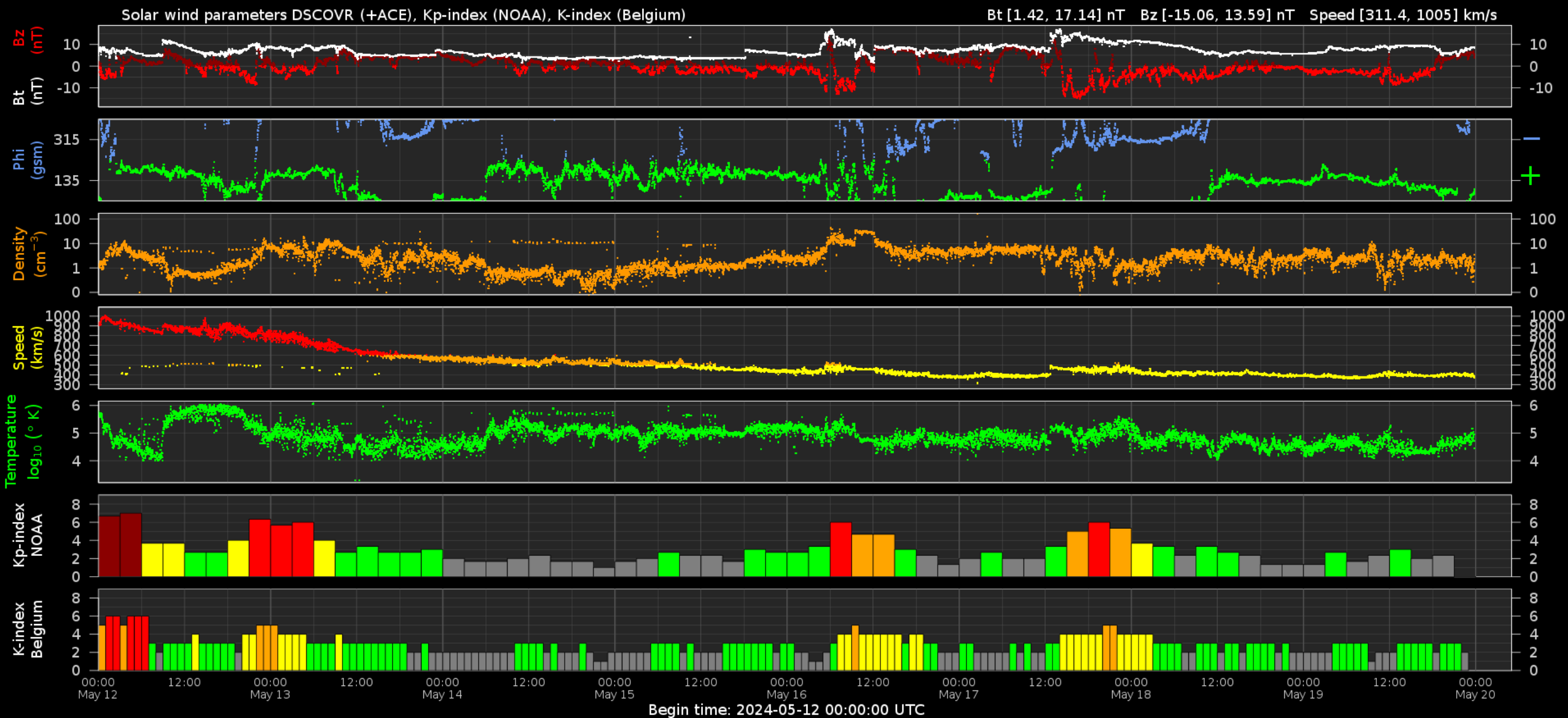
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# Solar wind parameters

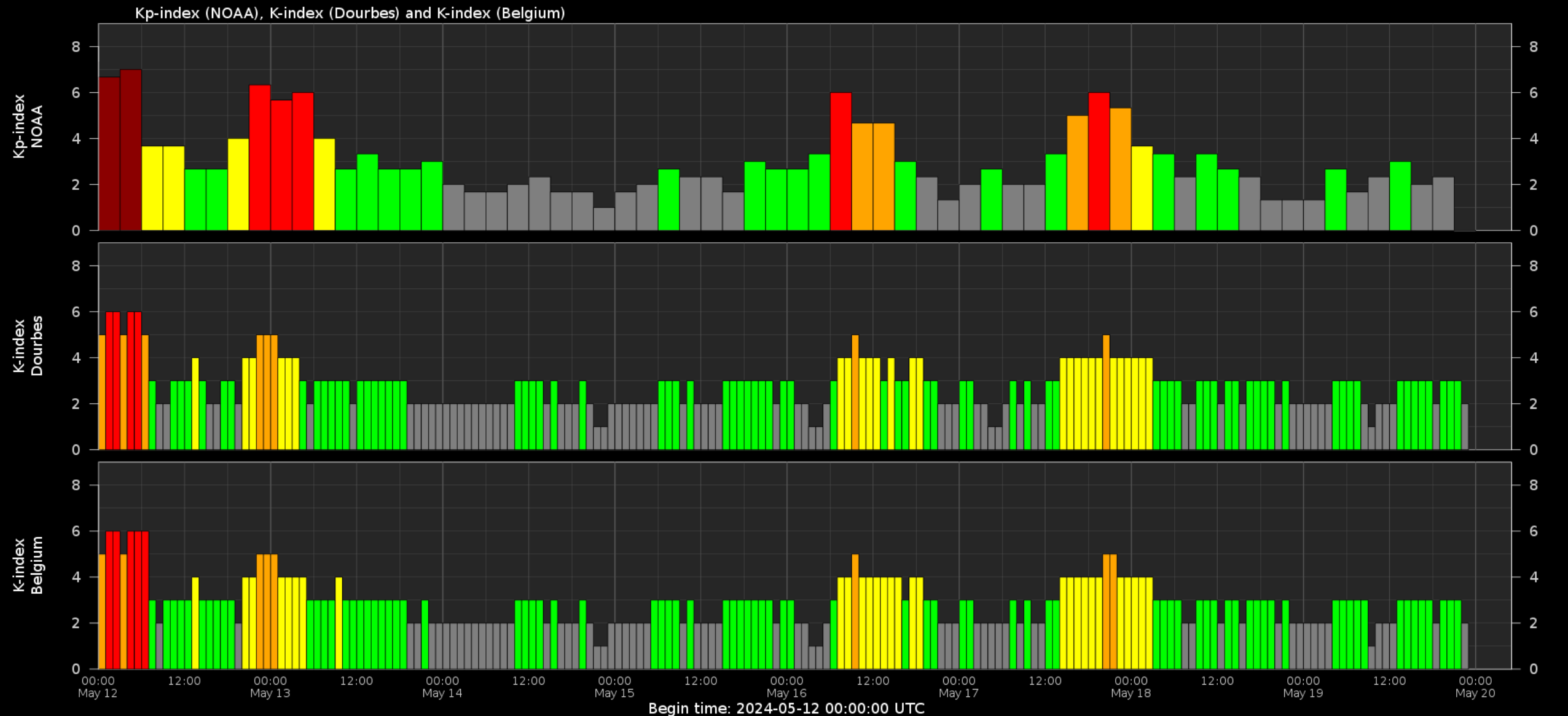


# Solar wind parameters & K-indices





# Geomagnetic activity (K-indexes)



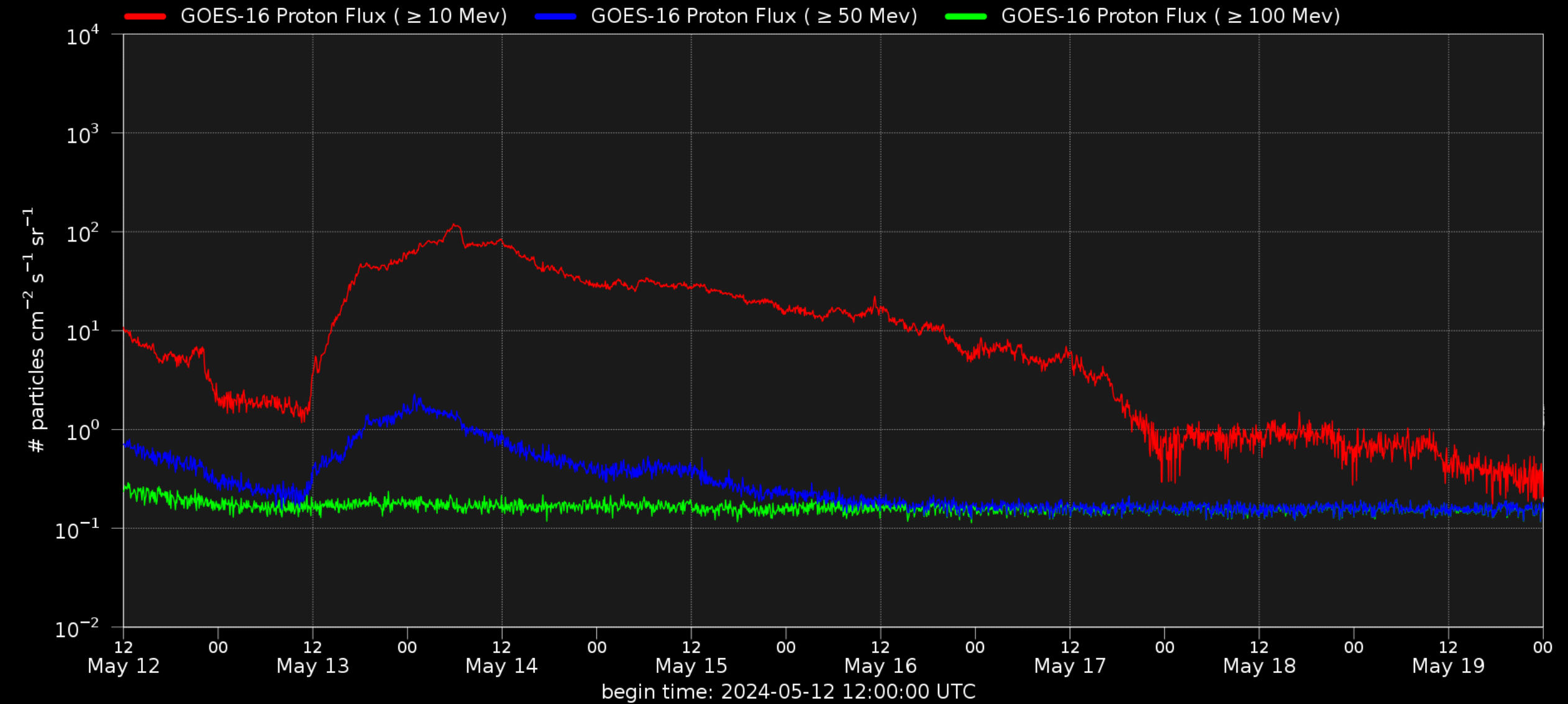
# Energetic Particles



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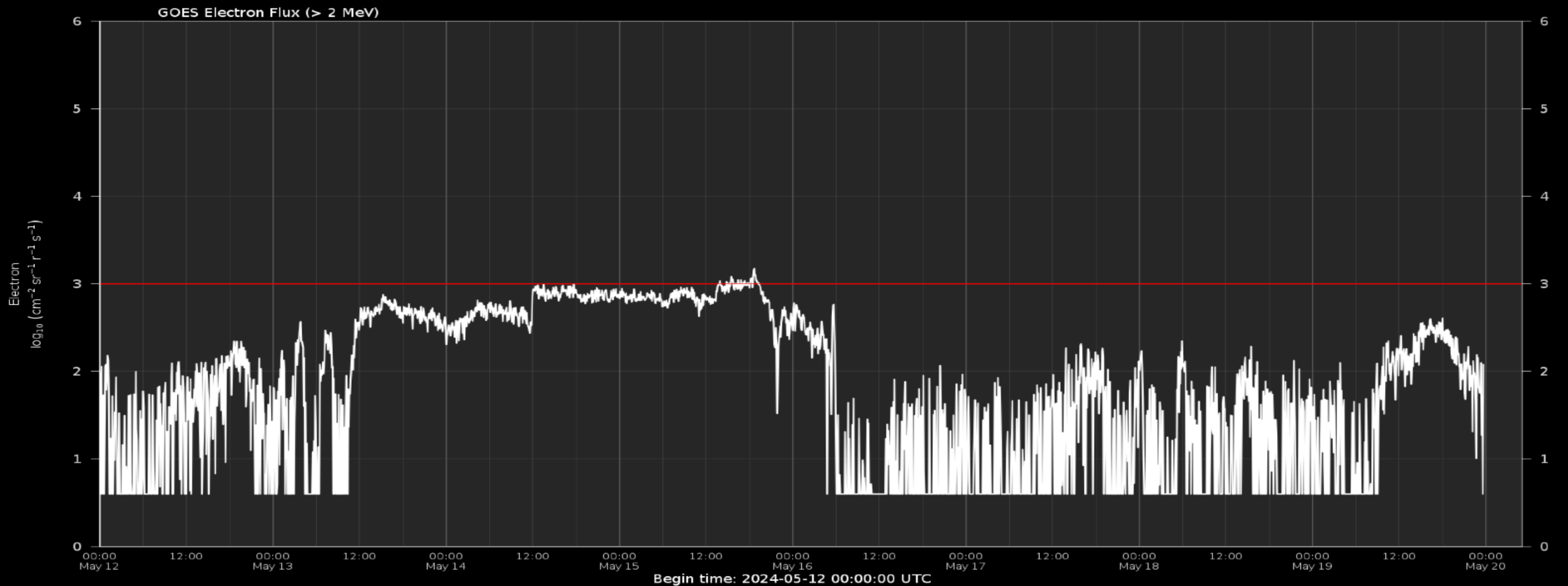
# Solar proton flux



# Electron flux at GEO

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



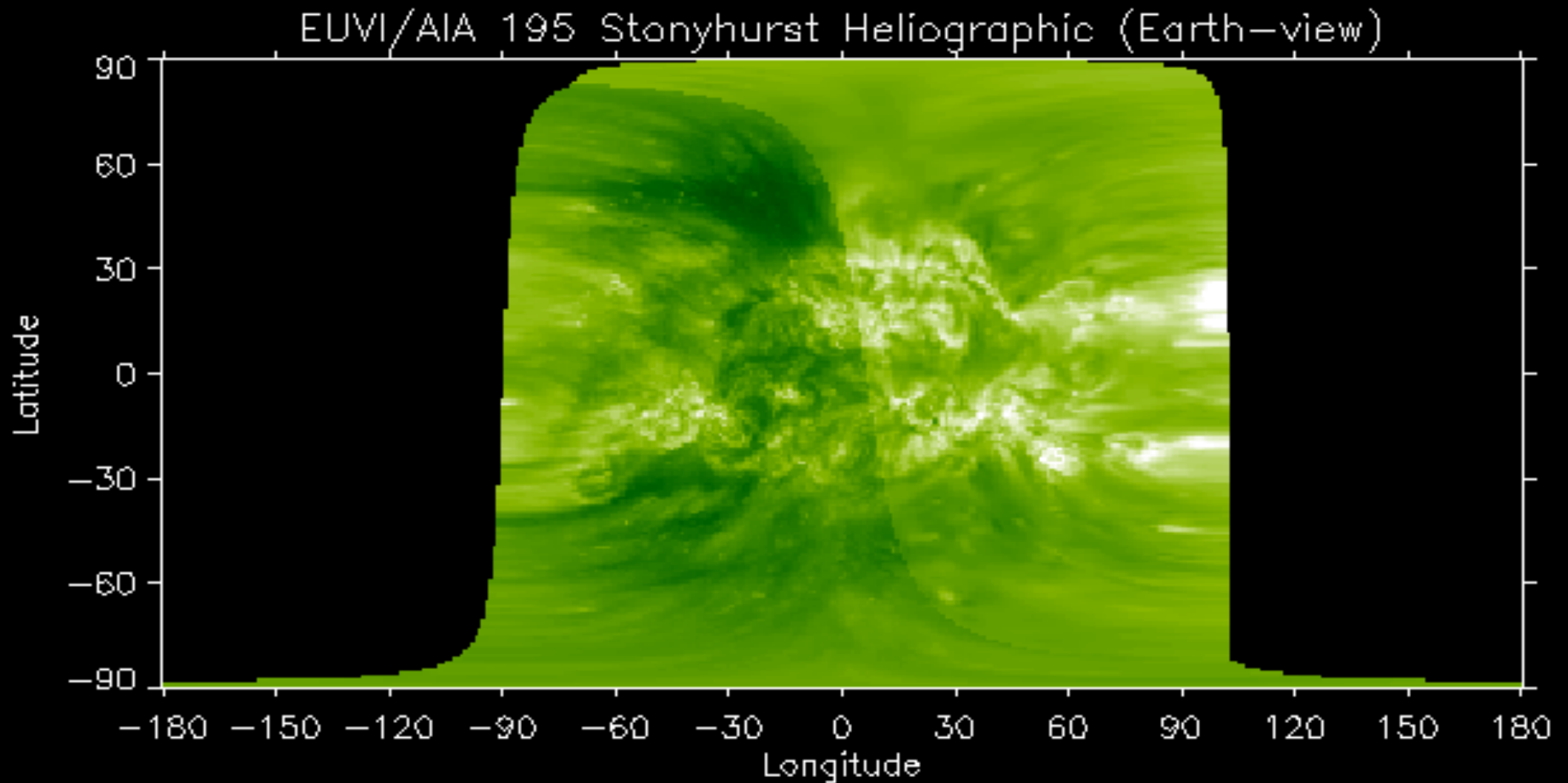
# Outlook



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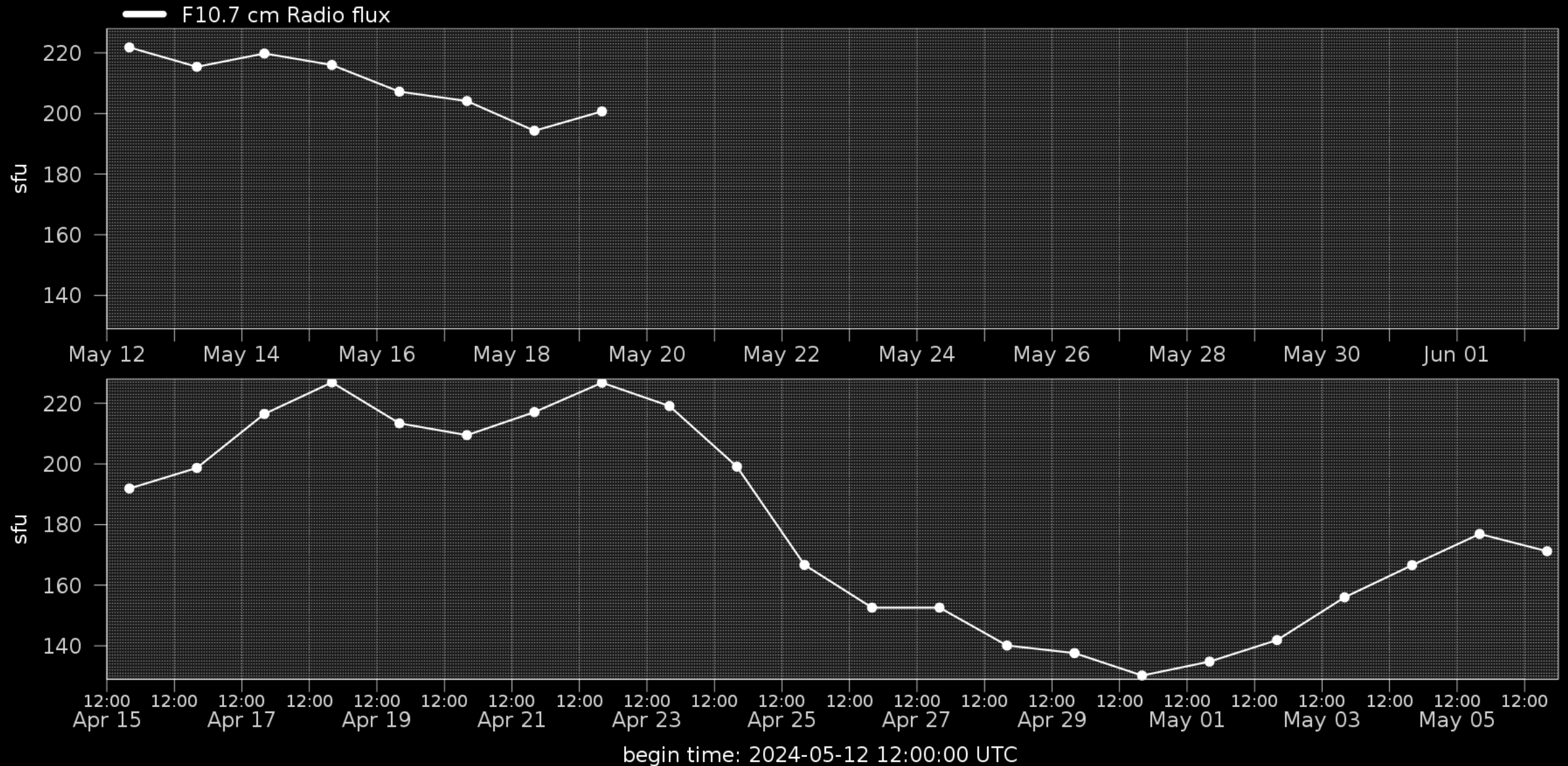
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Data analysis Centre  
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# Outlook: Solar activity

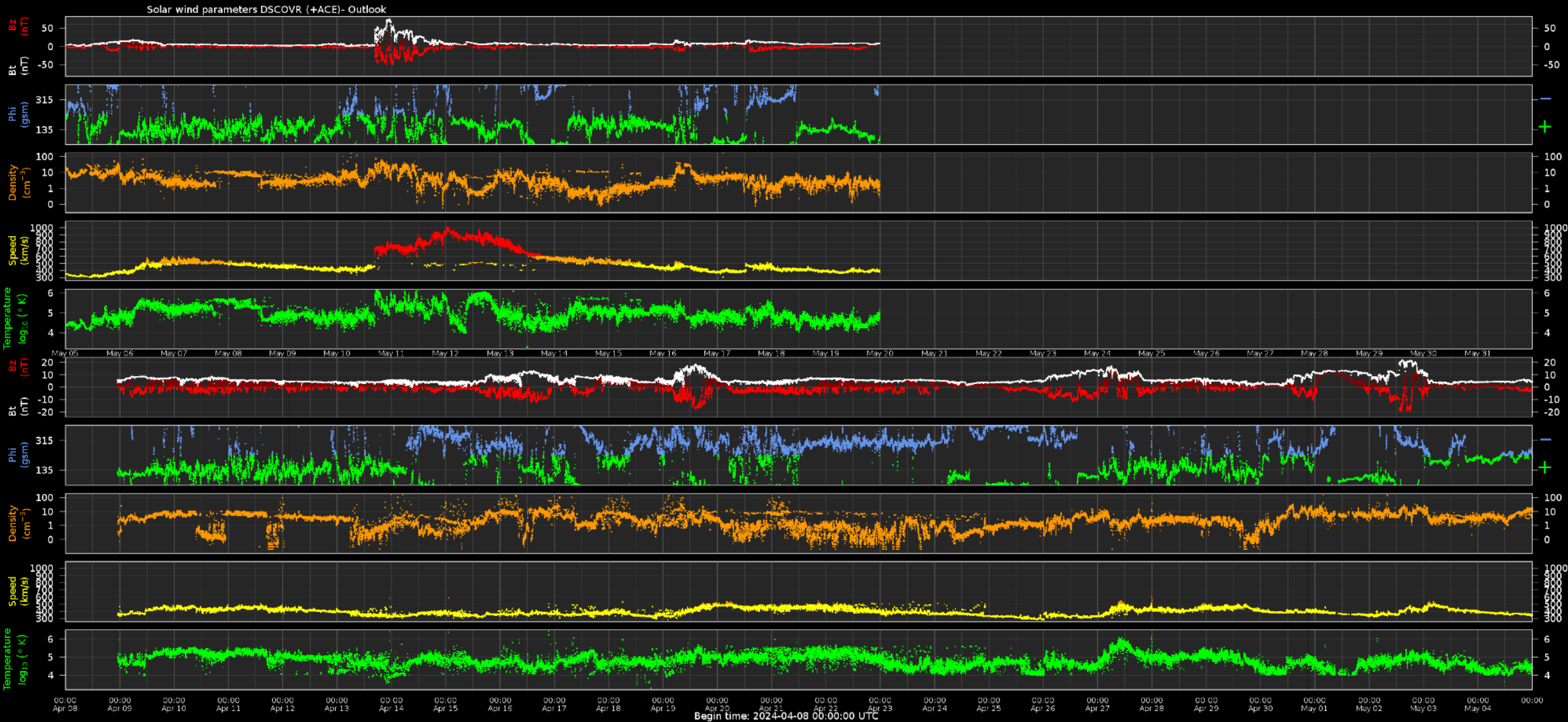


Observation date: 2024/05/19 20:55:00

# Outlook: Solar F10.7cm radio flux

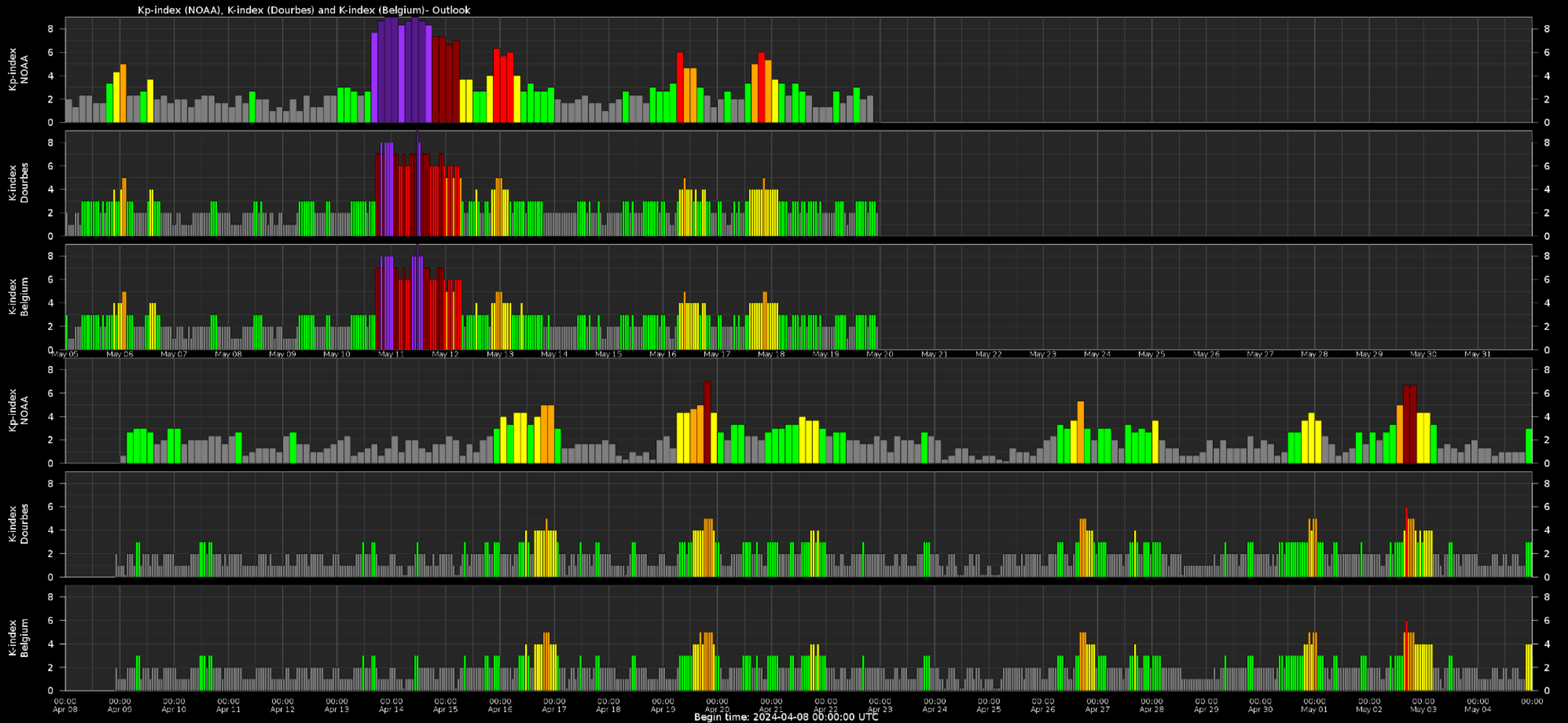


# Outlook: Solar wind parameters





# Outlook: Geomagnetic activity



# Outlook: Electron Flux at GEO Outlook



PECASUS



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# Pecarus related events

37 HF COM advisories

9 GNSS advisories

SIDC Space Weather Briefing

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