

SIDC Space Weather Briefing

06 April 2025-13 April 2025

Yana Maneva

& the SIDC forecaster team



Royal Observatory
of Belgium

Solar Influences
Data analysis Centre
www.sidc.be

Summary Report

Solar activity from 2025-04-06 12:00 to 2025-04-13 23:59

Active regions	> 18 ARs, SIDC 461/NOAA 4048 and SIDC 469/NOAA 4055
Flares	# C-class flare: 34 # M-class flare: 16 # X-class flare: 0
Coronal Holes	Multiple CH- and 2 CH+
CMEs	1 partial halo CME, 1 halo CME

Proton flux	Nominal
Electron flux	Moderate

Solar wind and geomagnetic conditions

ICMEs	None
Solar wind conditions	B : 0.83 - 11.47 nT //Bz: -11.32 nT to 11.08 nT //Speed: 358.4 - 723.8km/s
Geomagnetic conditions	max KBel: 5.0, max Kp(NOAA): 4.67, Minor Storm conditions

All Quiet Alert: Off (= Not Quiet)

Solar Activity



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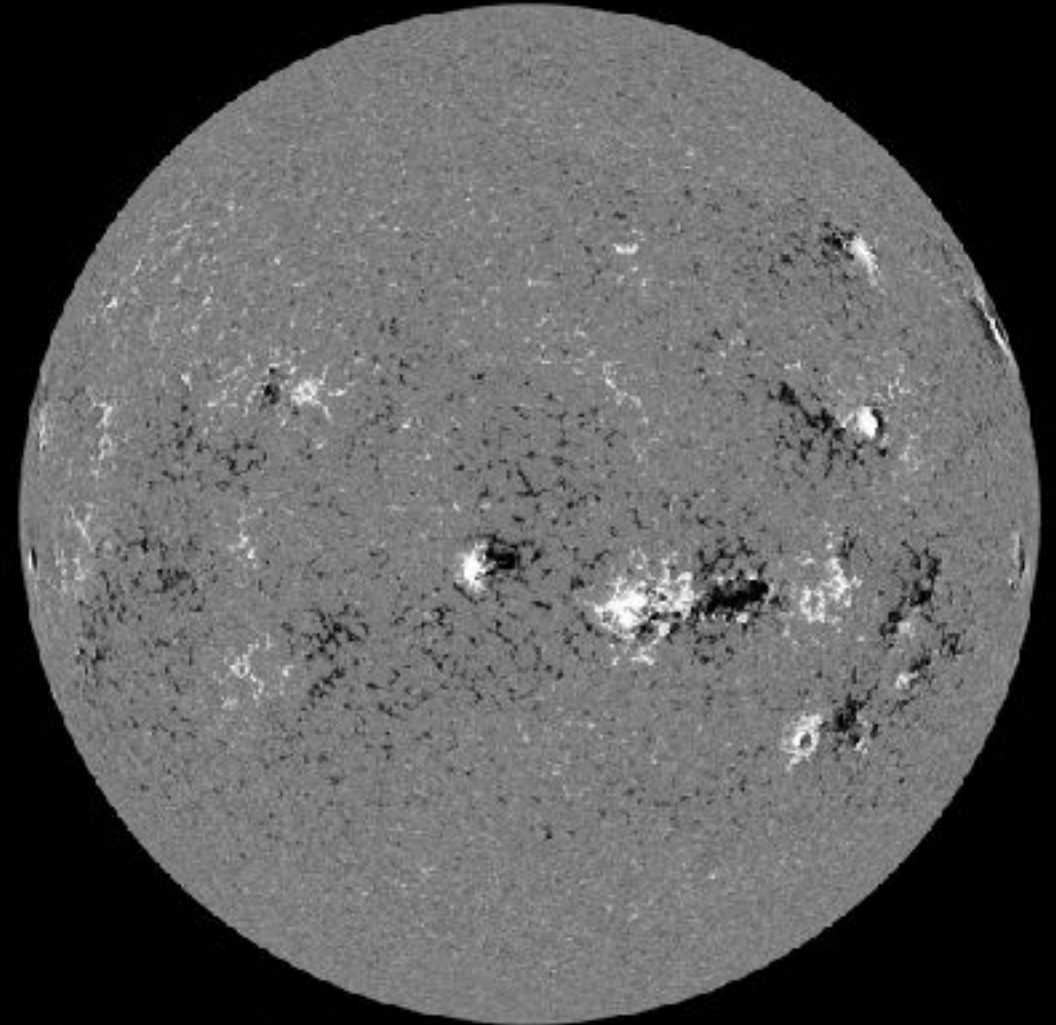
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Solar active regions

SDO/HMI White Light 2025-04-06

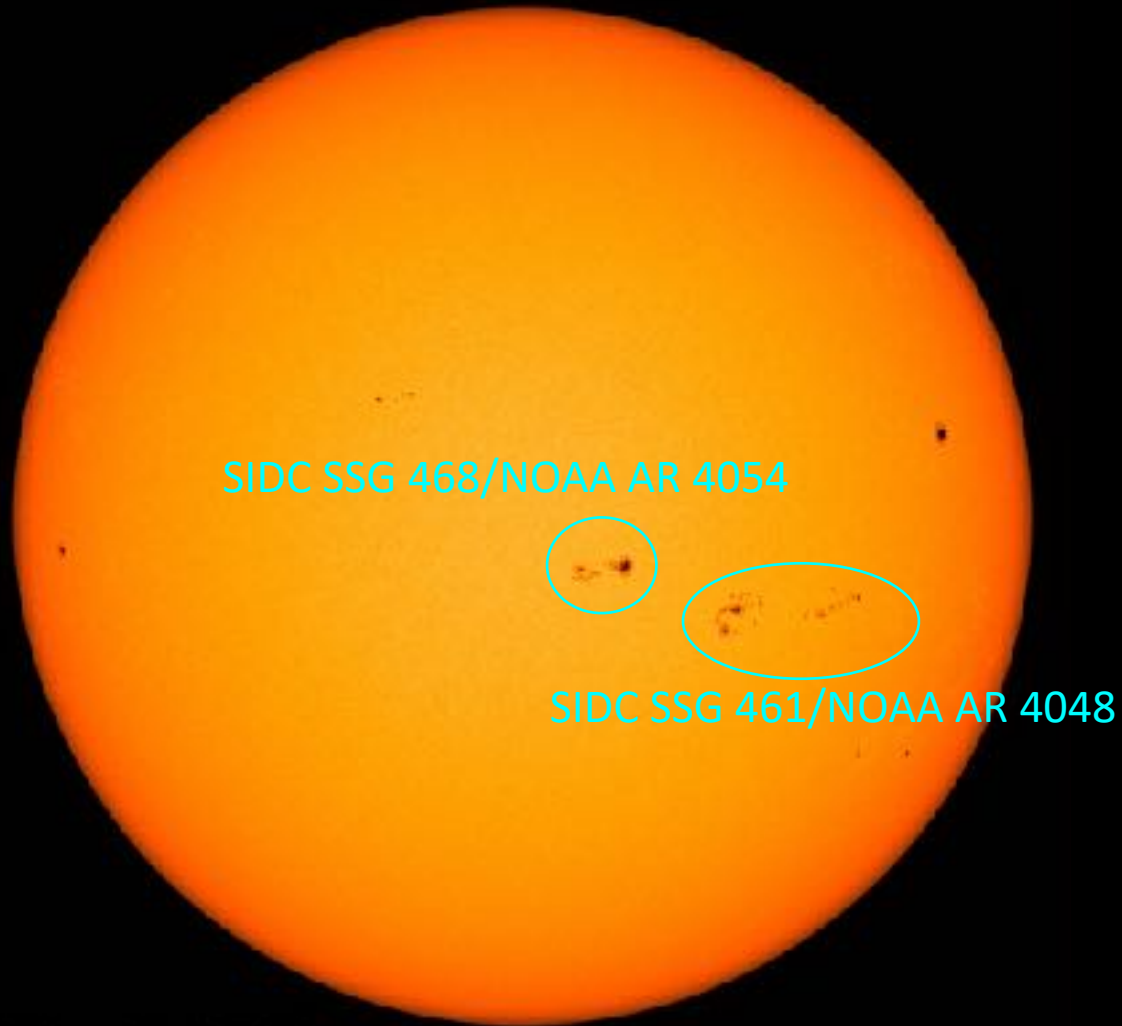


SDO/HMI Magnetogram 2025-04-06

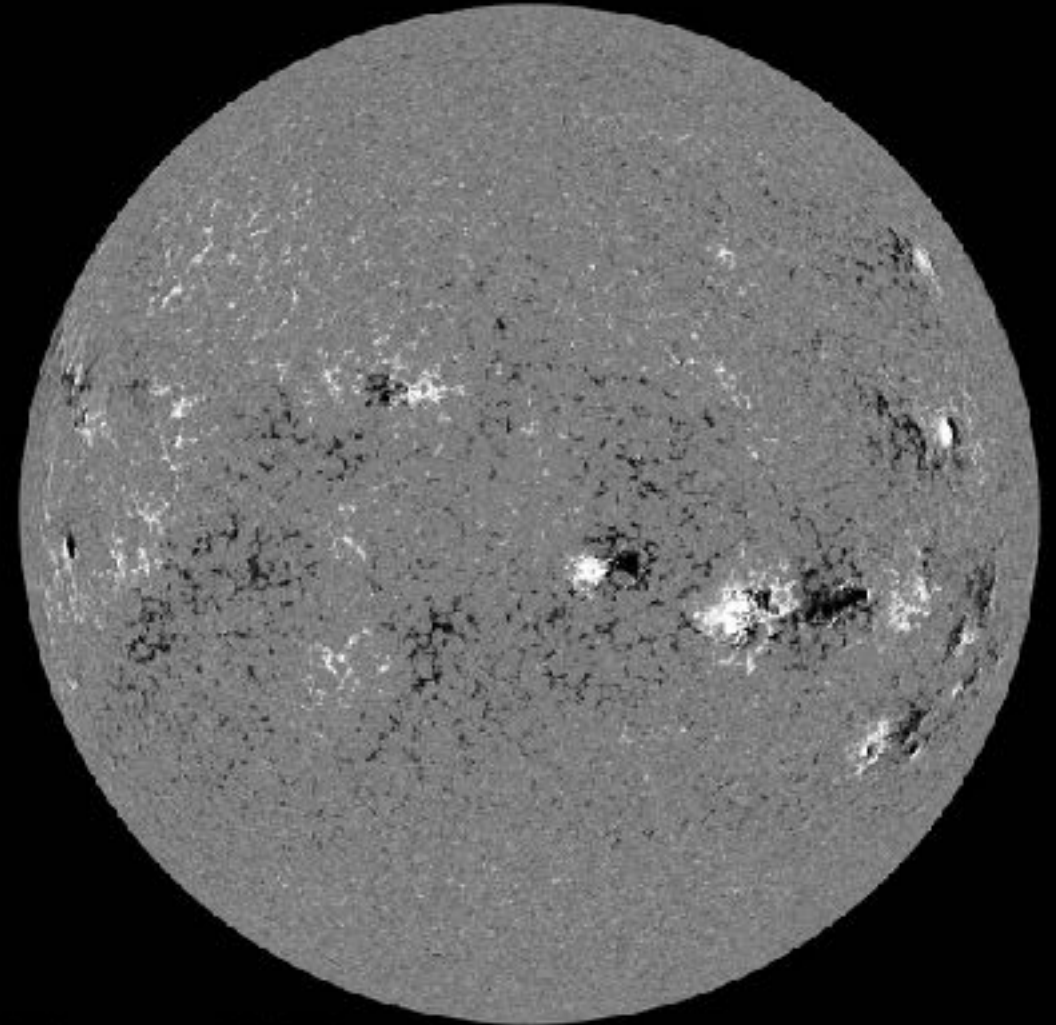


Solar active regions

SDO/HMI White Light 2025-04-07

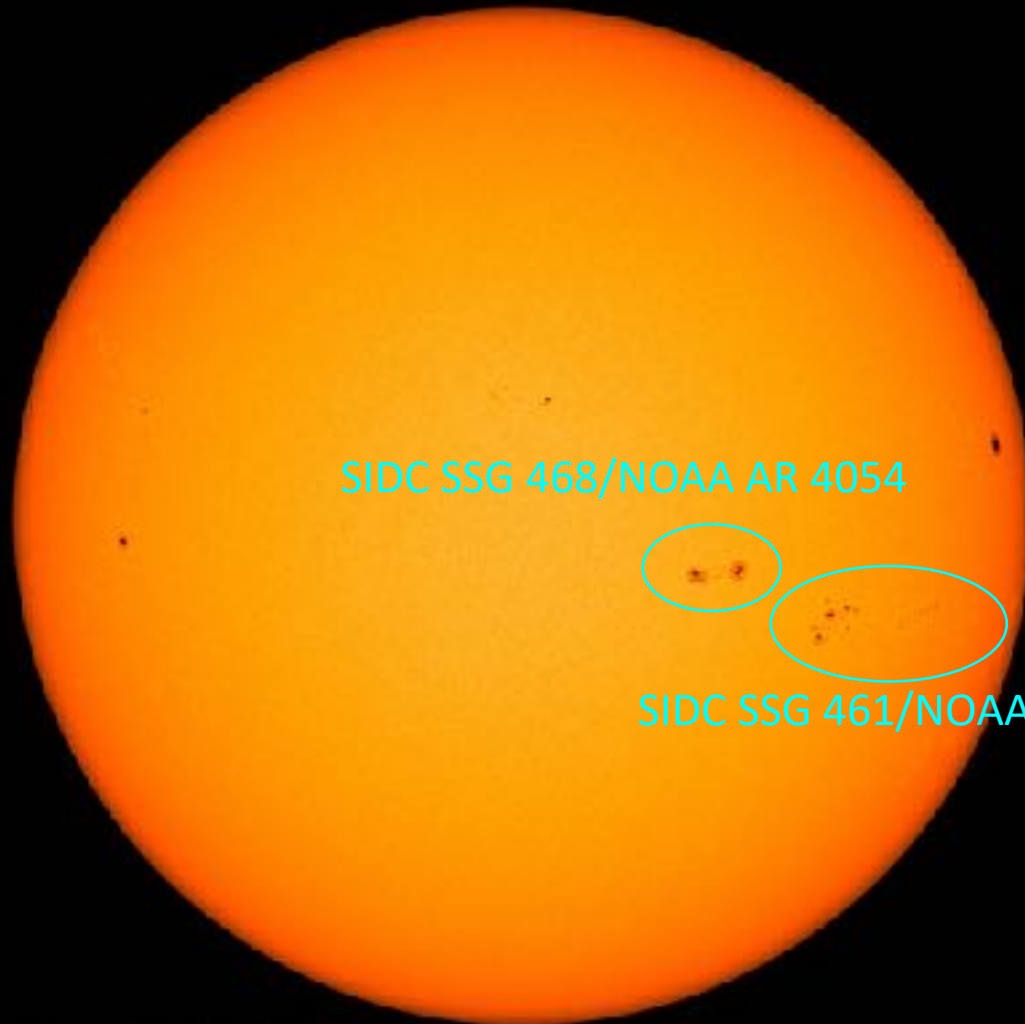


SDO/HMI Magnetogram 2025-04-07

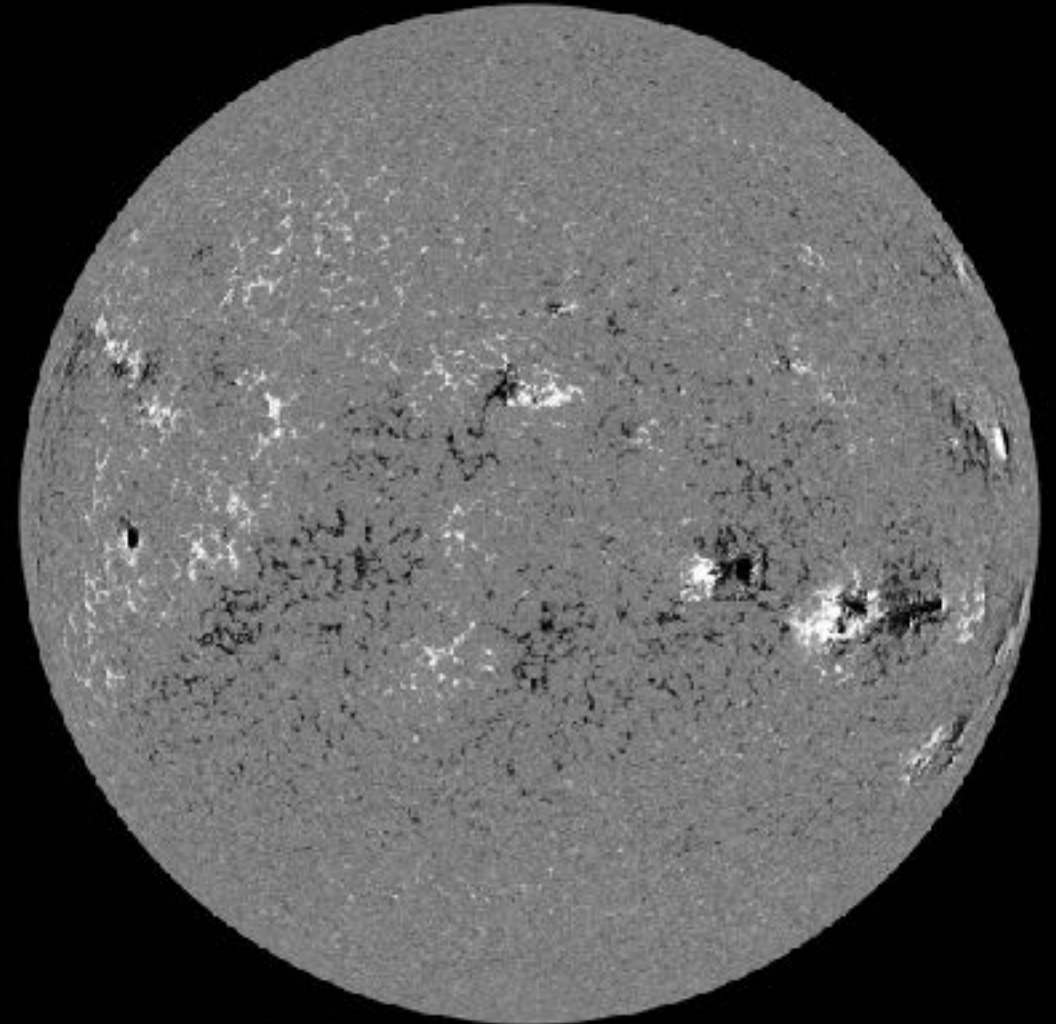


Solar active regions

SDO/HMI White Light 2025-04-08

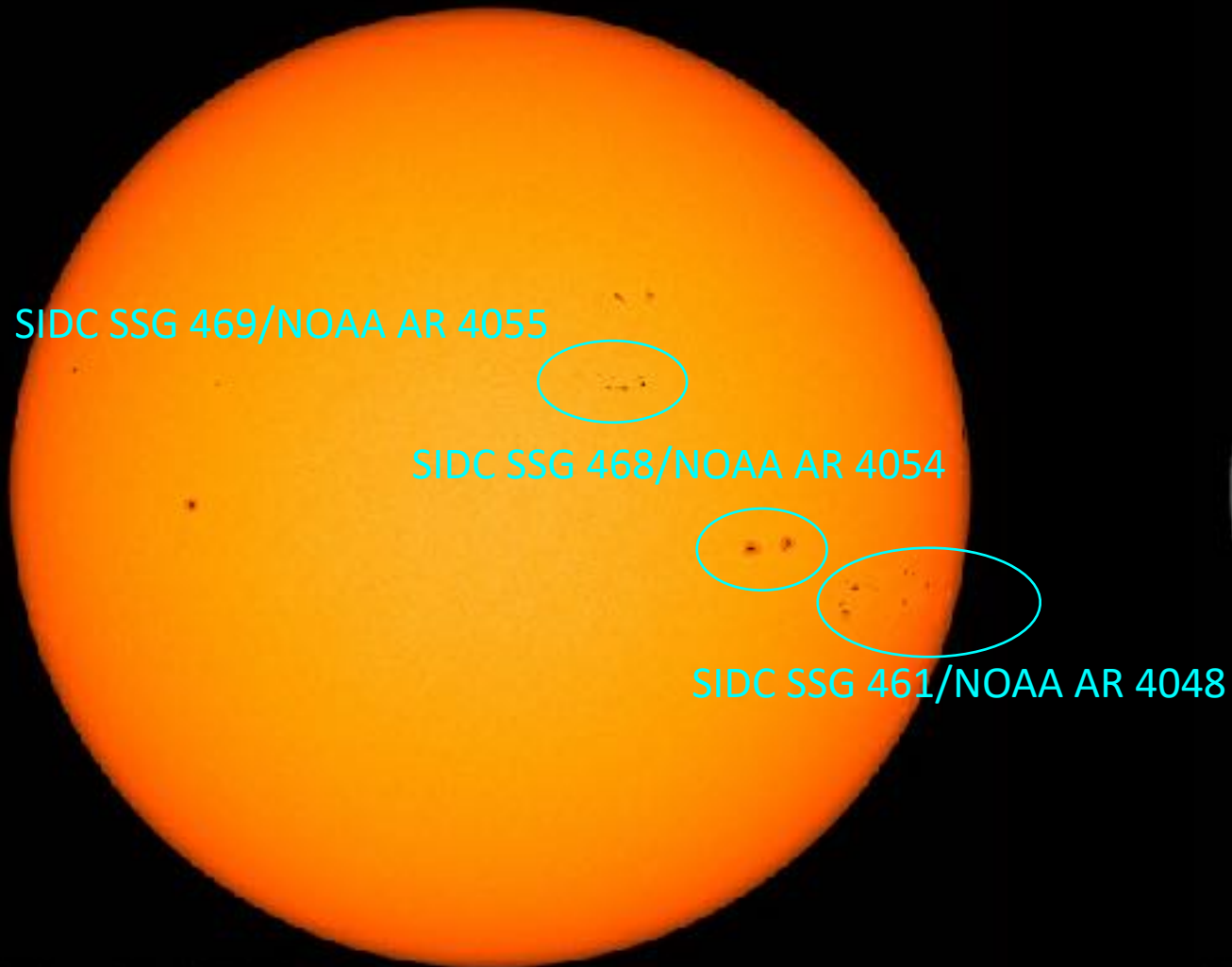


SDO/HMI Magnetogram 2025-04-08

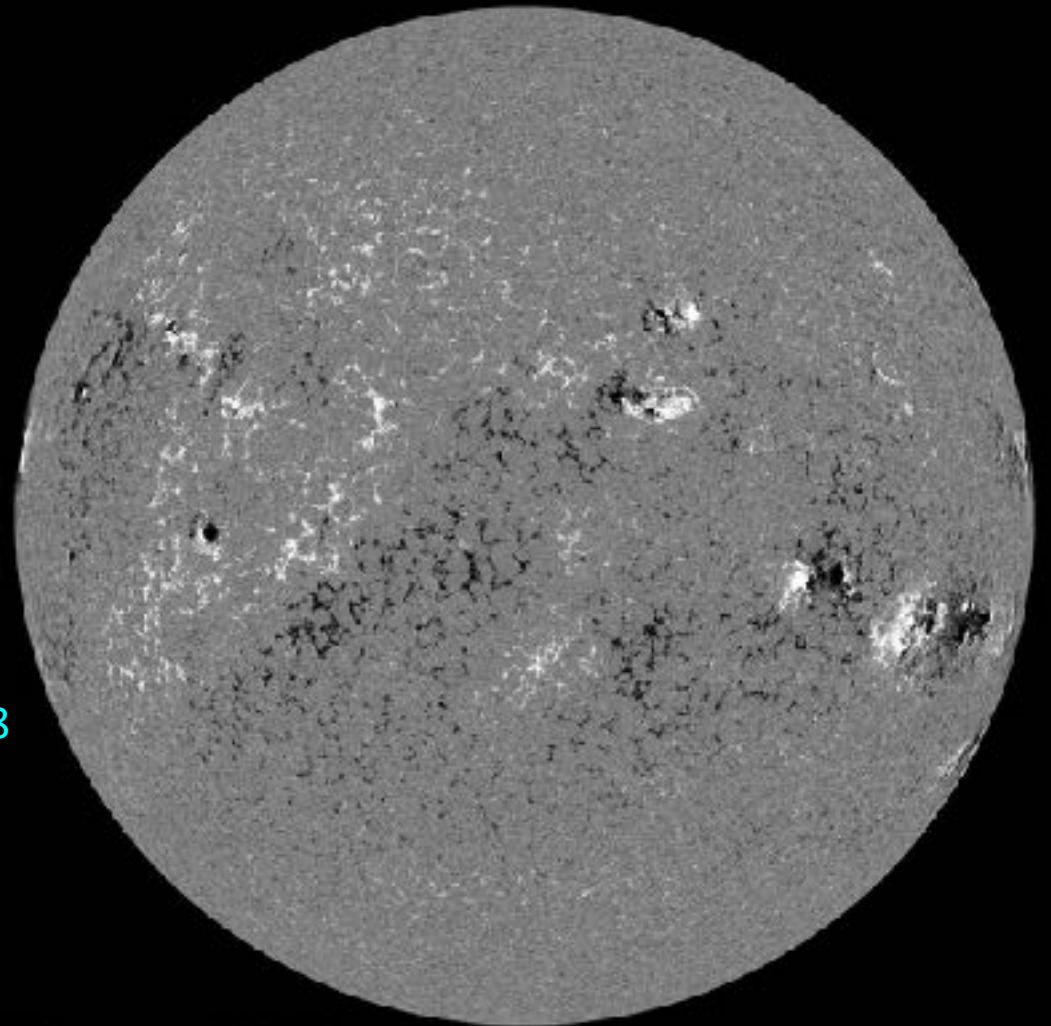


Solar active regions

SDO/HMI White Light 2025-04-09

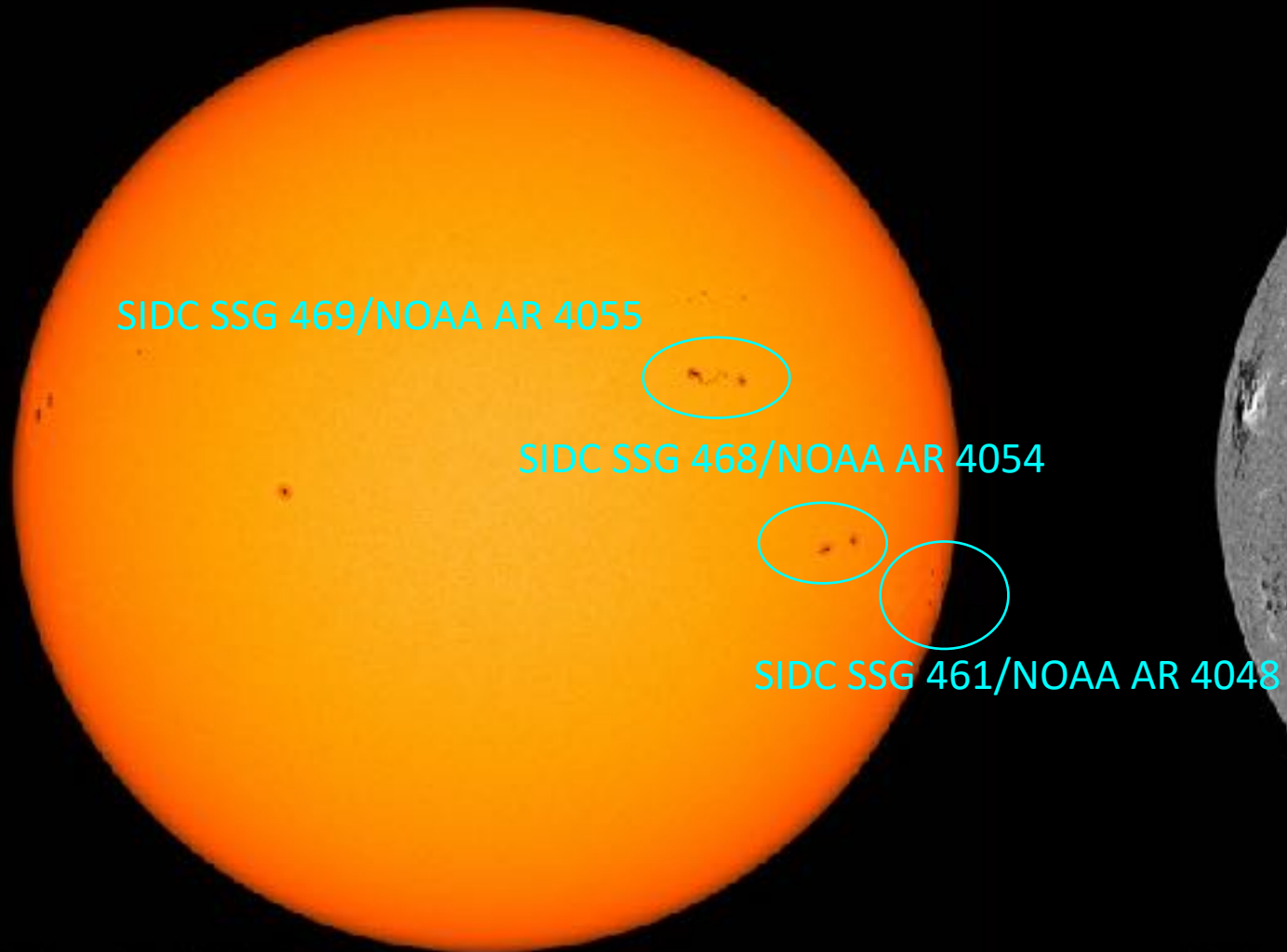


SDO/HMI Magnetogram 2025-04-09

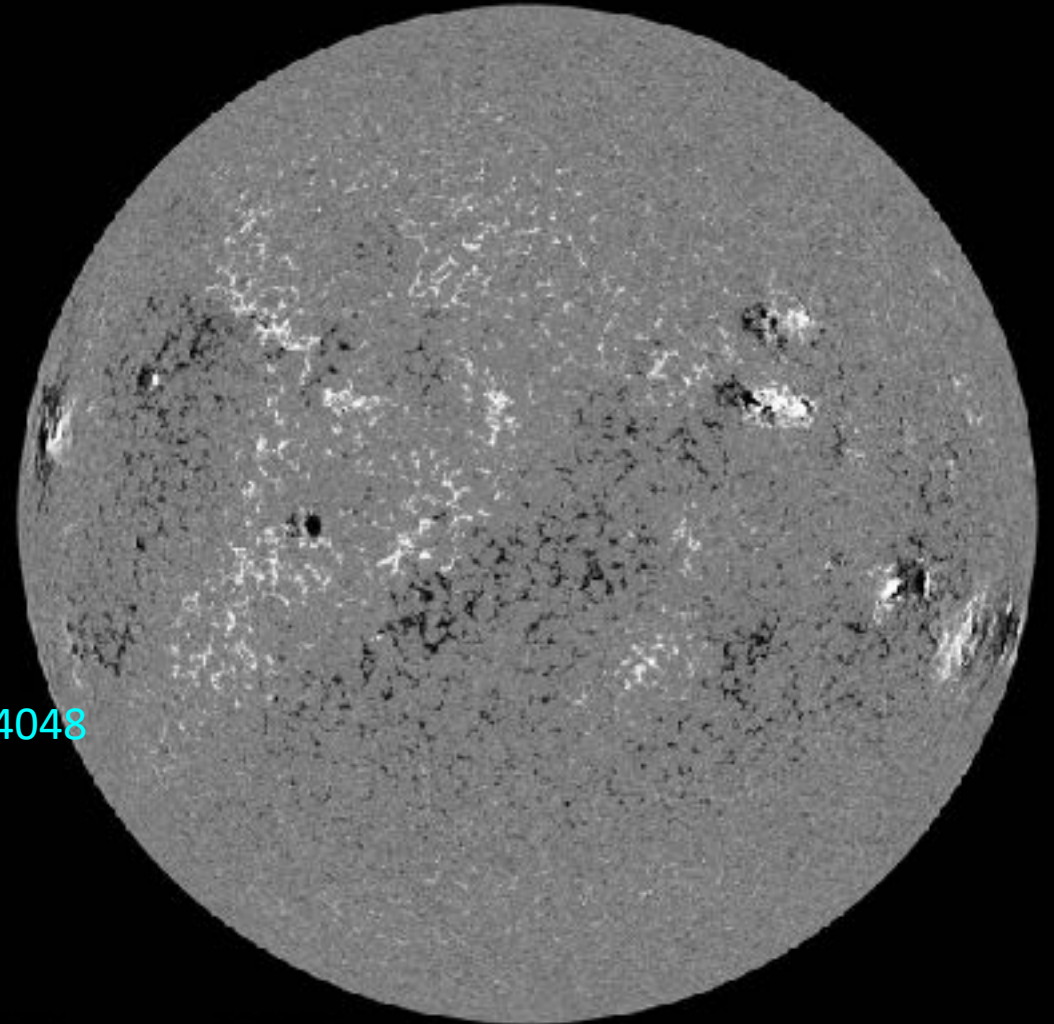


Solar active regions

SDO/HMI White Light 2025-04-10

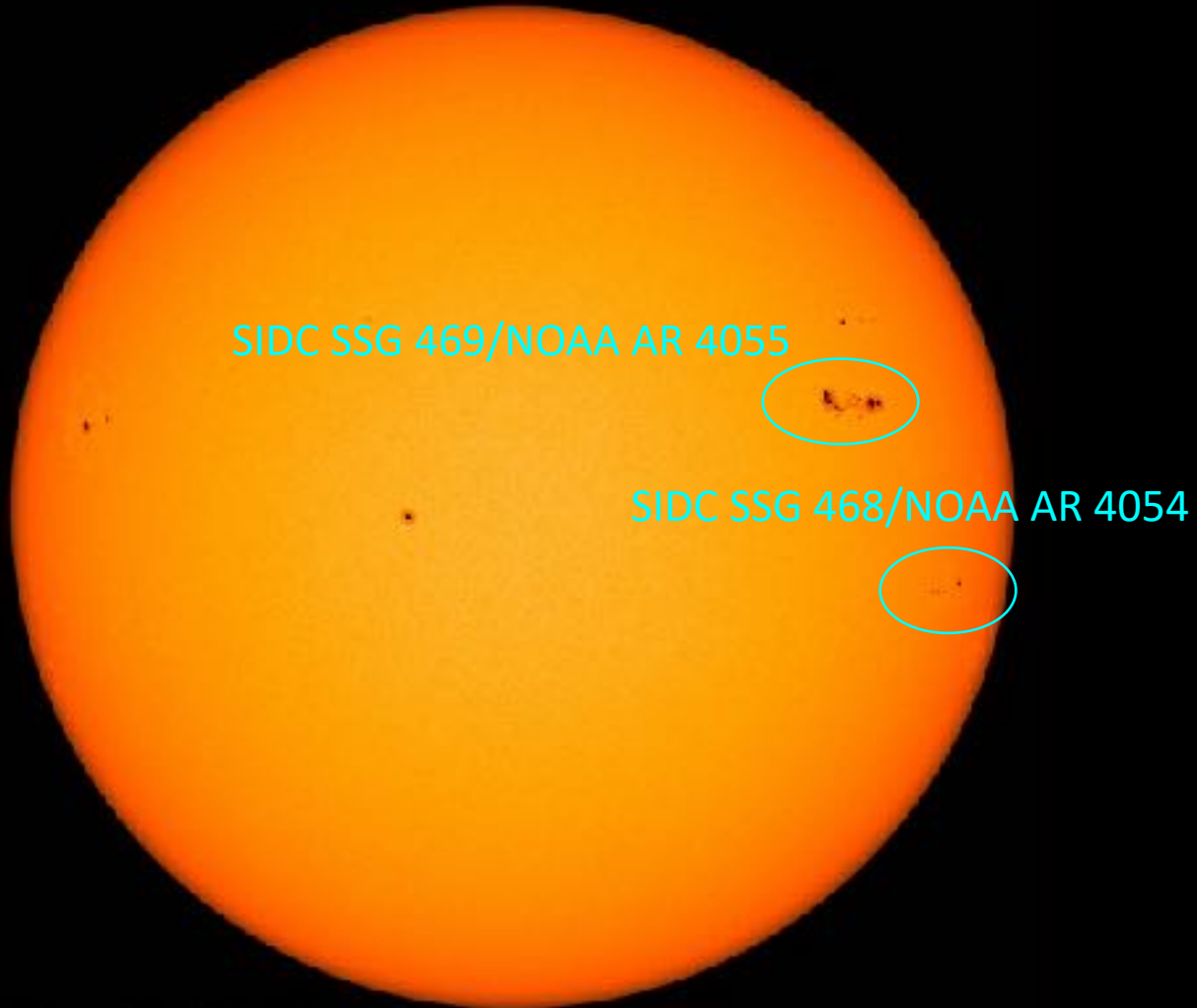


SDO/HMI Magnetogram 2025-04-10

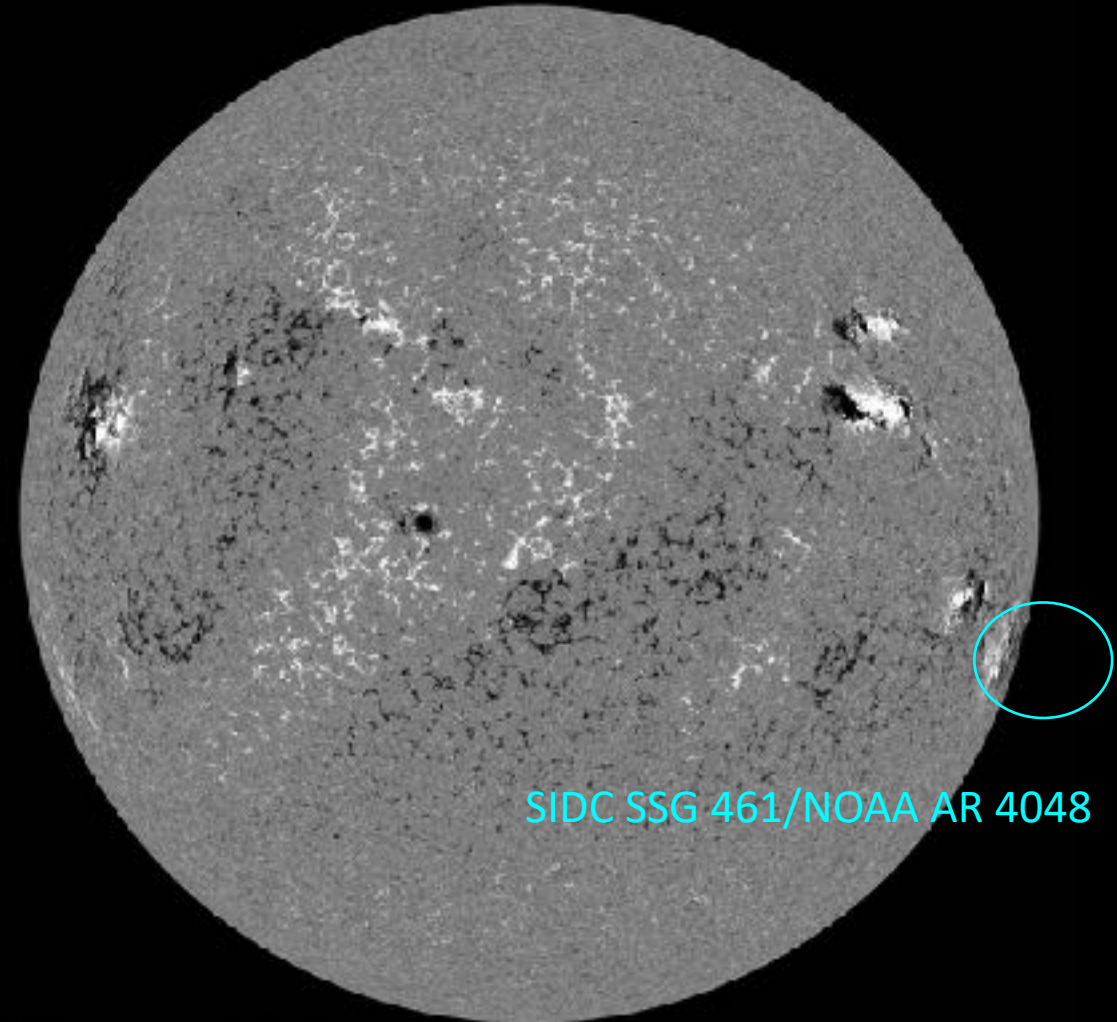


Solar active regions

SDO/HMI White Light 2025-04-11

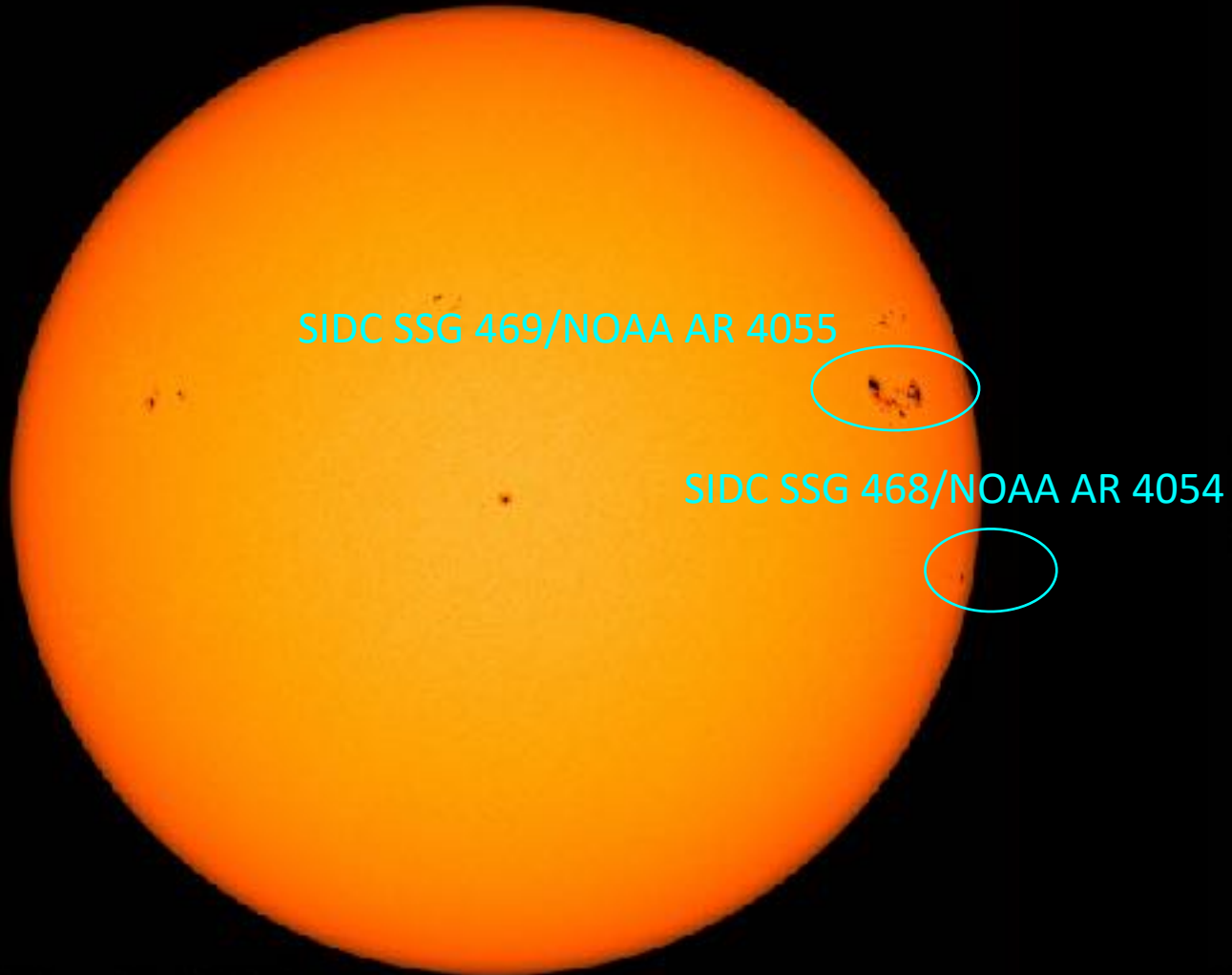


SDO/HMI Magnetogram 2025-04-11

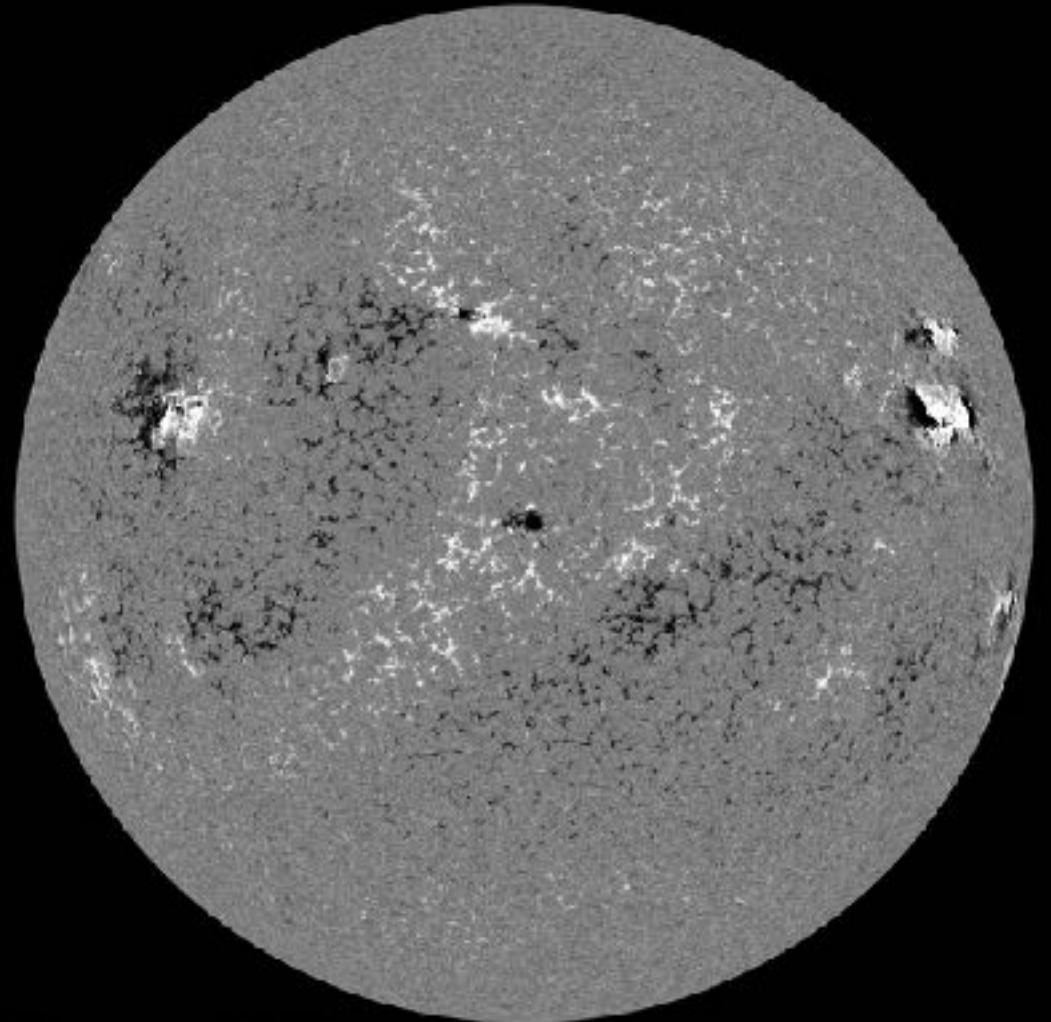


Solar active regions

SDO/HMI White Light 2025-04-12



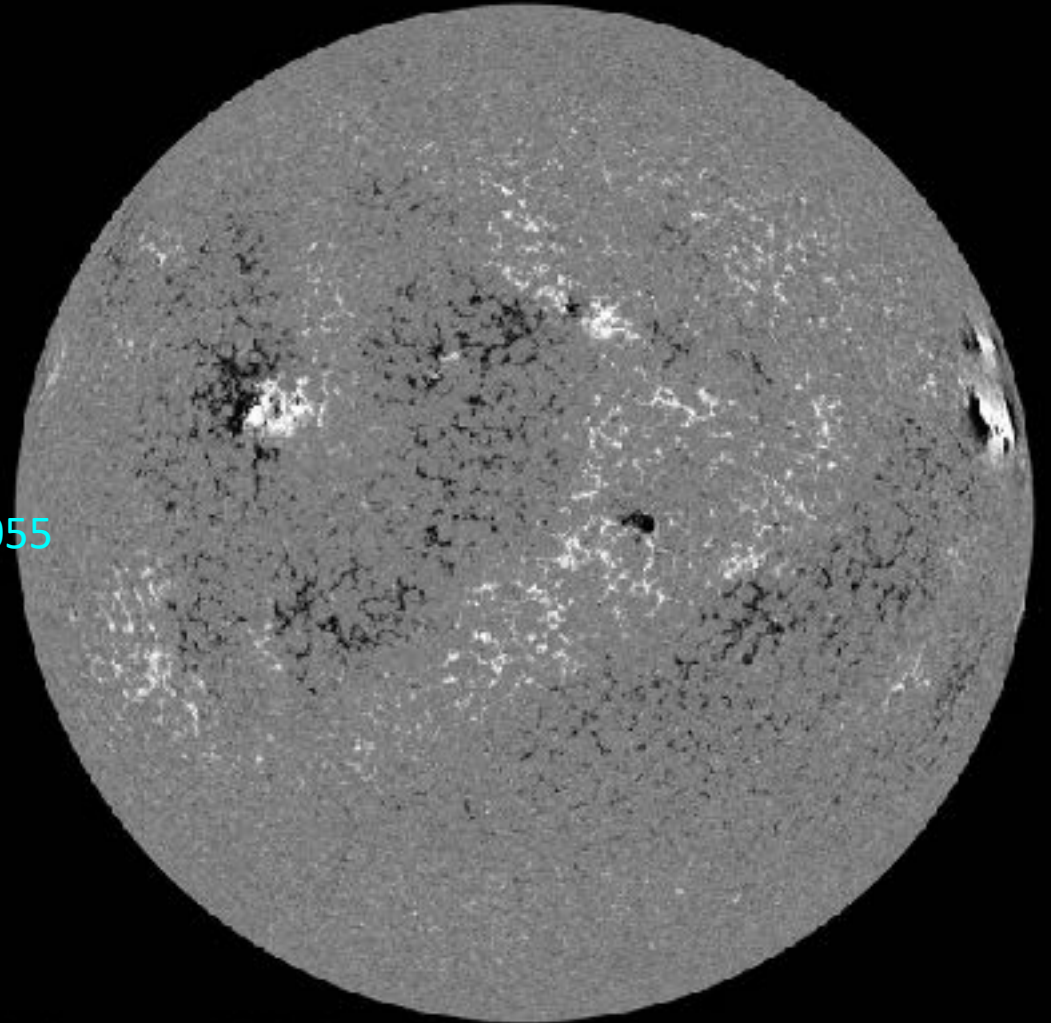
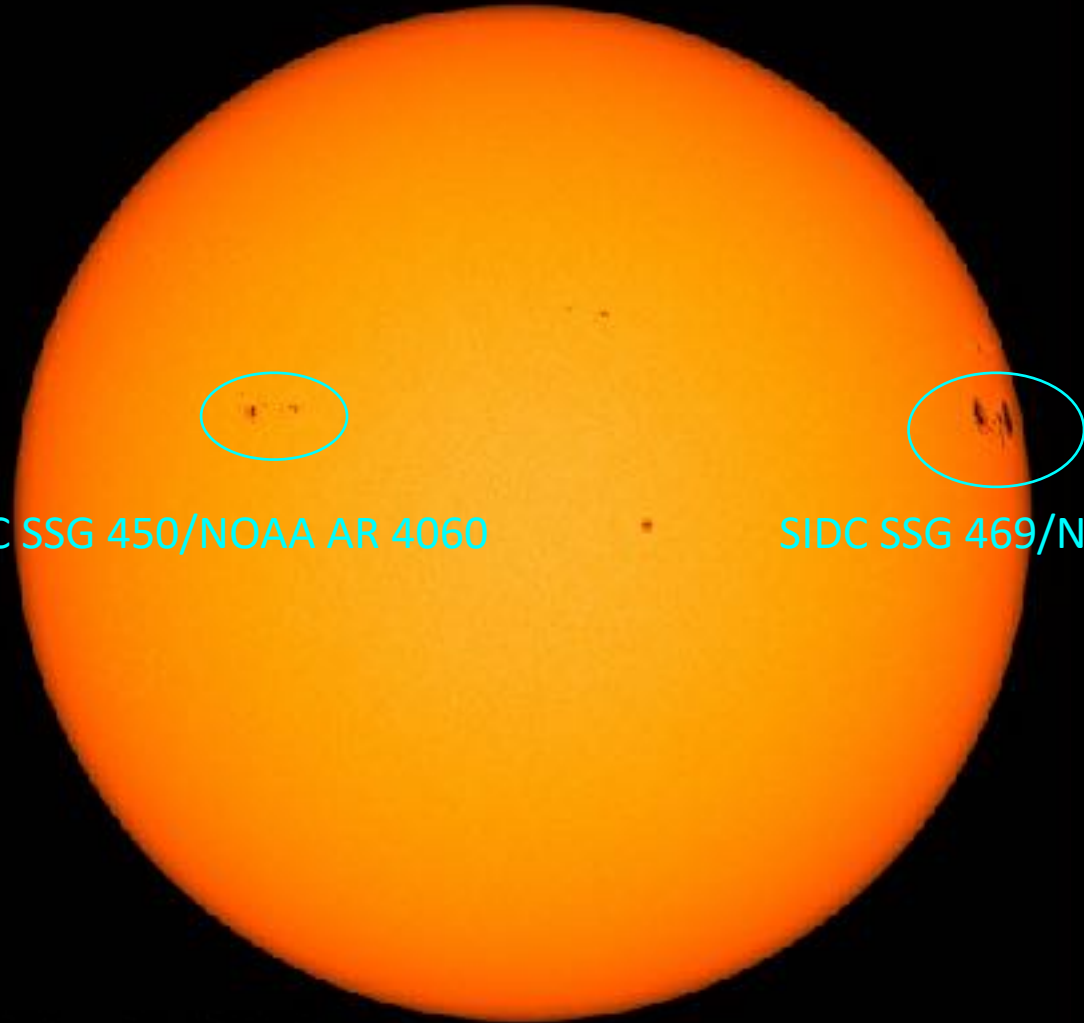
SDO/HMI Magnetogram 2025-04-12



Solar active regions

SDO/HMI White Light 2025-04-13

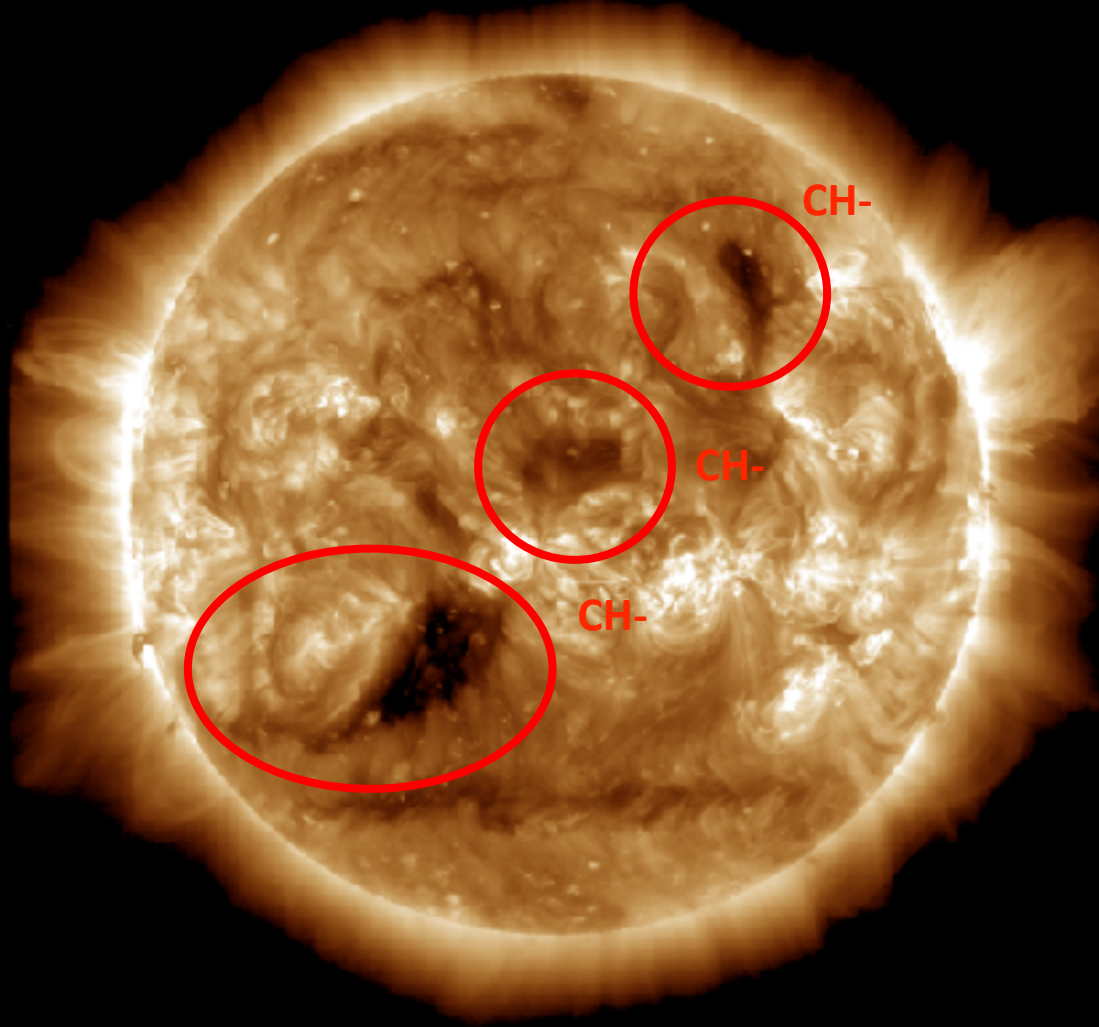
SDO/HMI Magnetogram 2025-04-13



Coronal holes

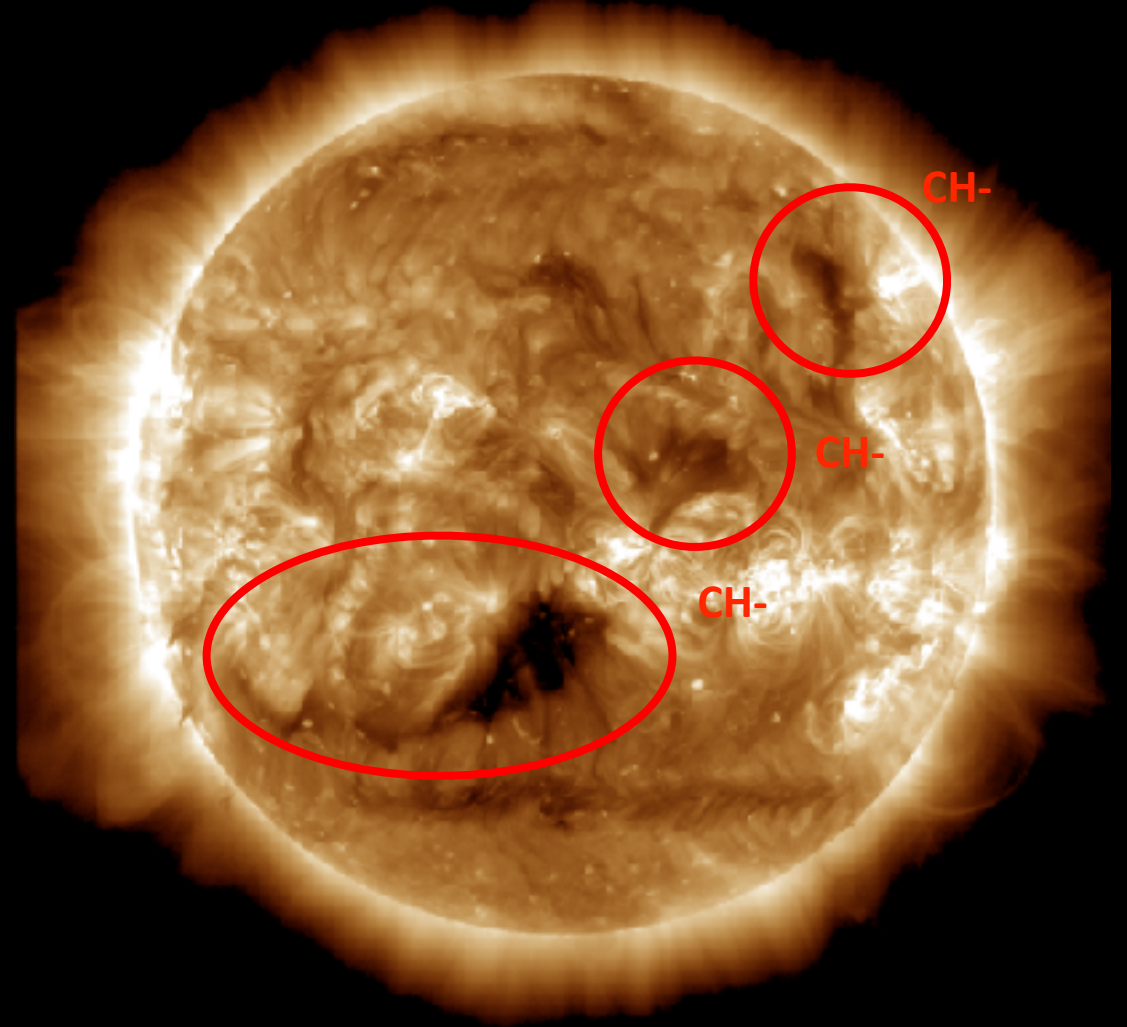
SDO/AIA 19.3 nm 2025-04-06

SDO/AIA AIA 193Å 2025-04-06T12:00:05.835



SDO/AIA 19.3 nm 2025-04-07

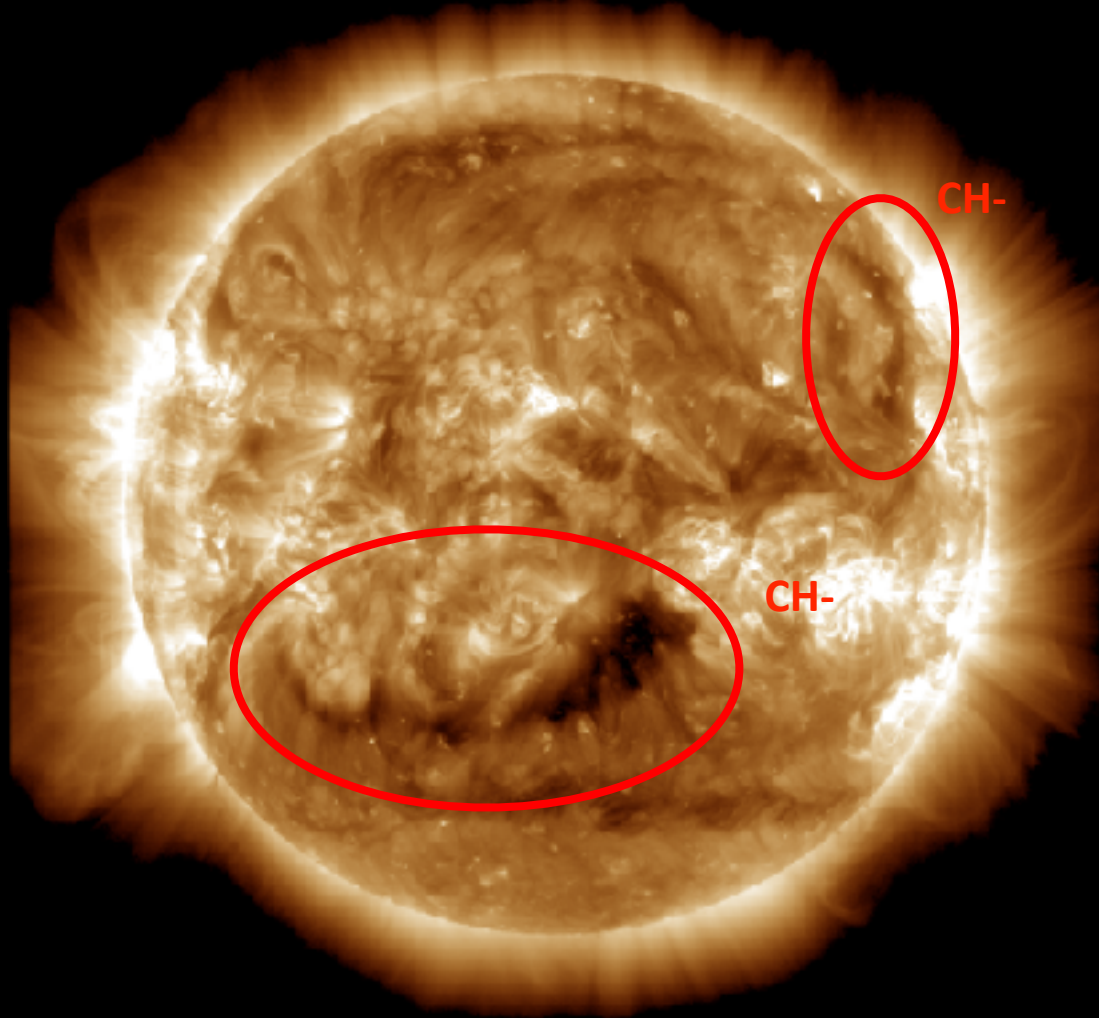
SDO/AIA AIA 193Å 2025-04-07T12:00:05.843



Coronal holes

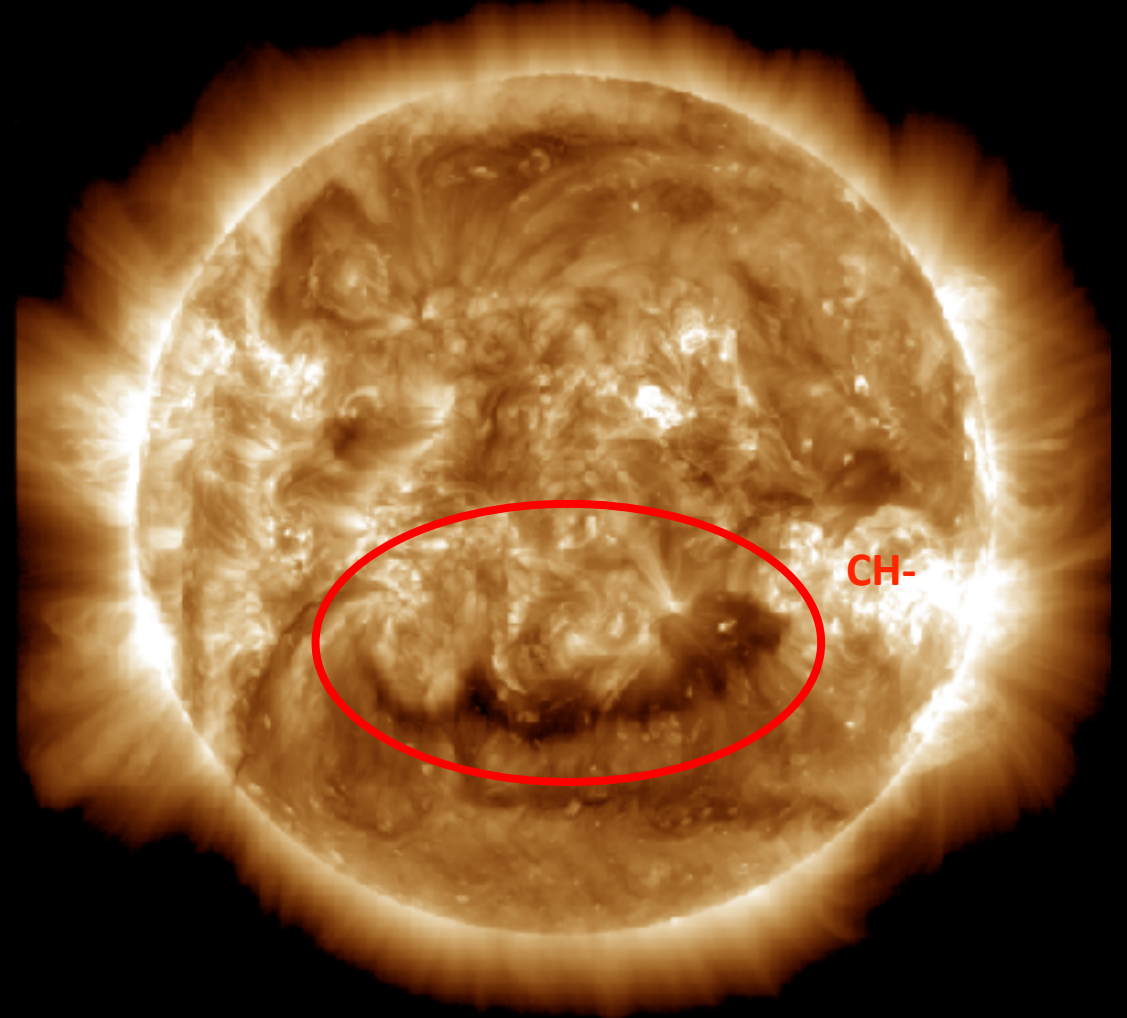
SDO/AIA 19.3 nm 2025-04-08

SDO/AIA AIA 193Å 2025-04-08T12:00:29.843



SDO/AIA 19.3 nm 2025-04-09

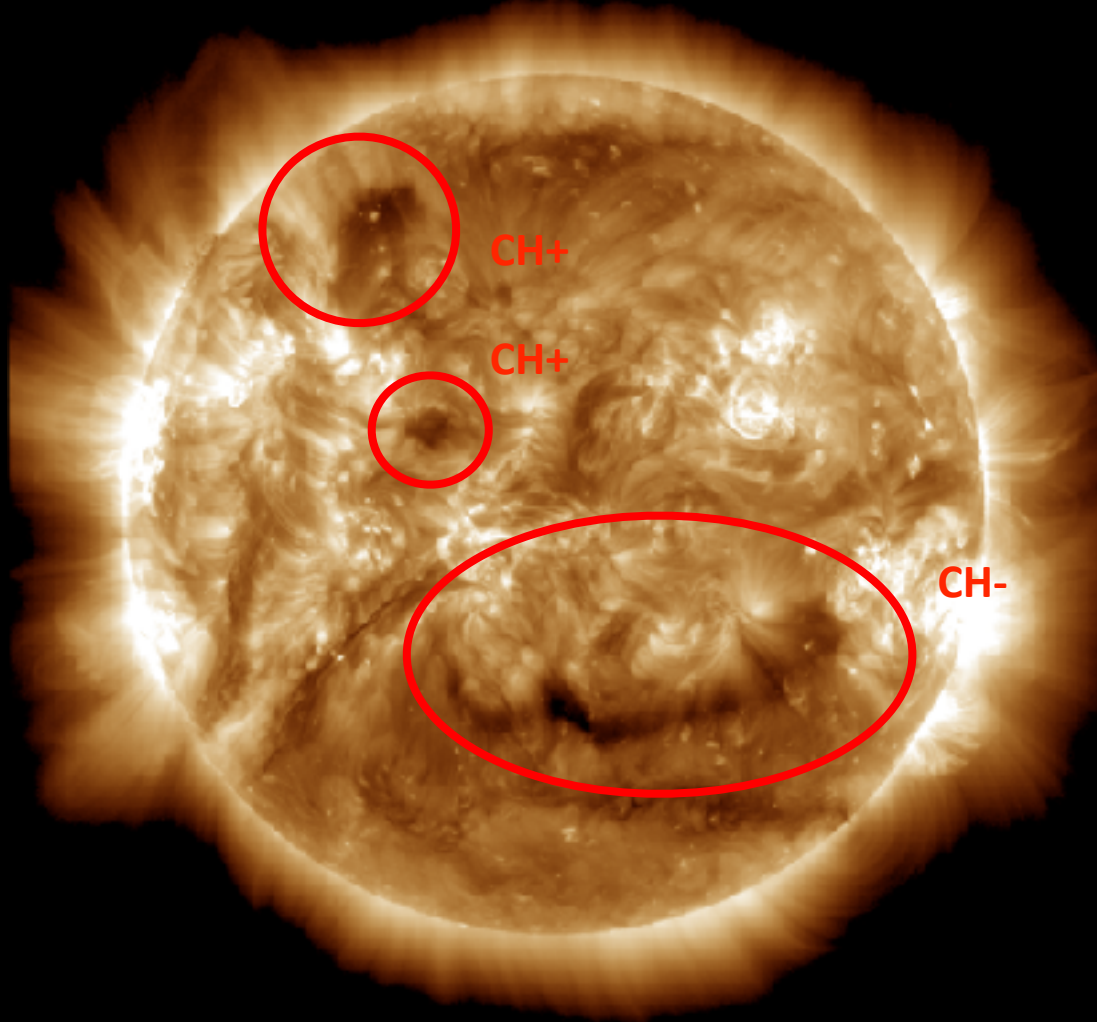
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Coronal holes

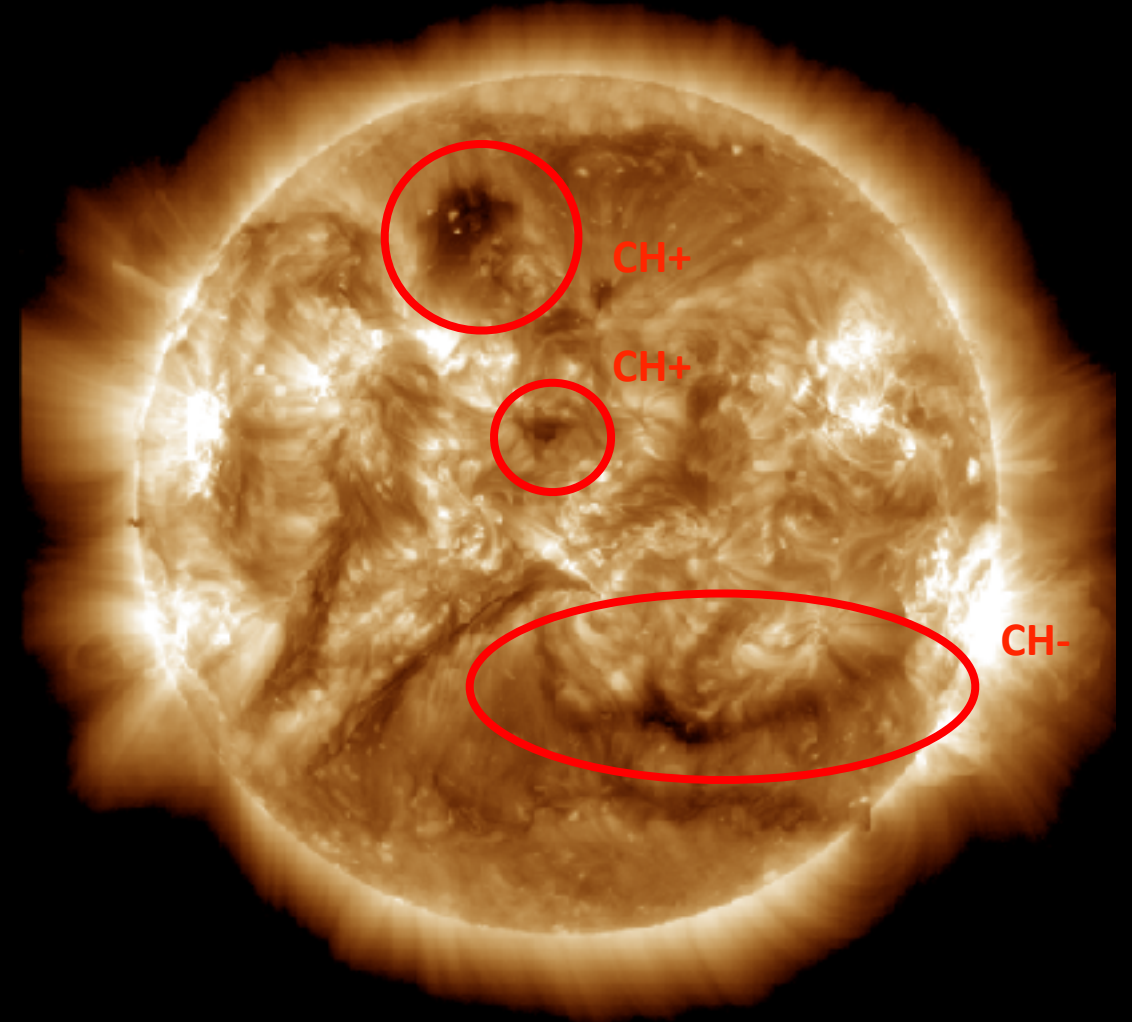
SDO/AIA 19.3 nm 2025-04-10

SDO/AIA AIA 193Å 2025-04-10T12:00:05.843



SDO/AIA 19.3 nm 2025-04-11

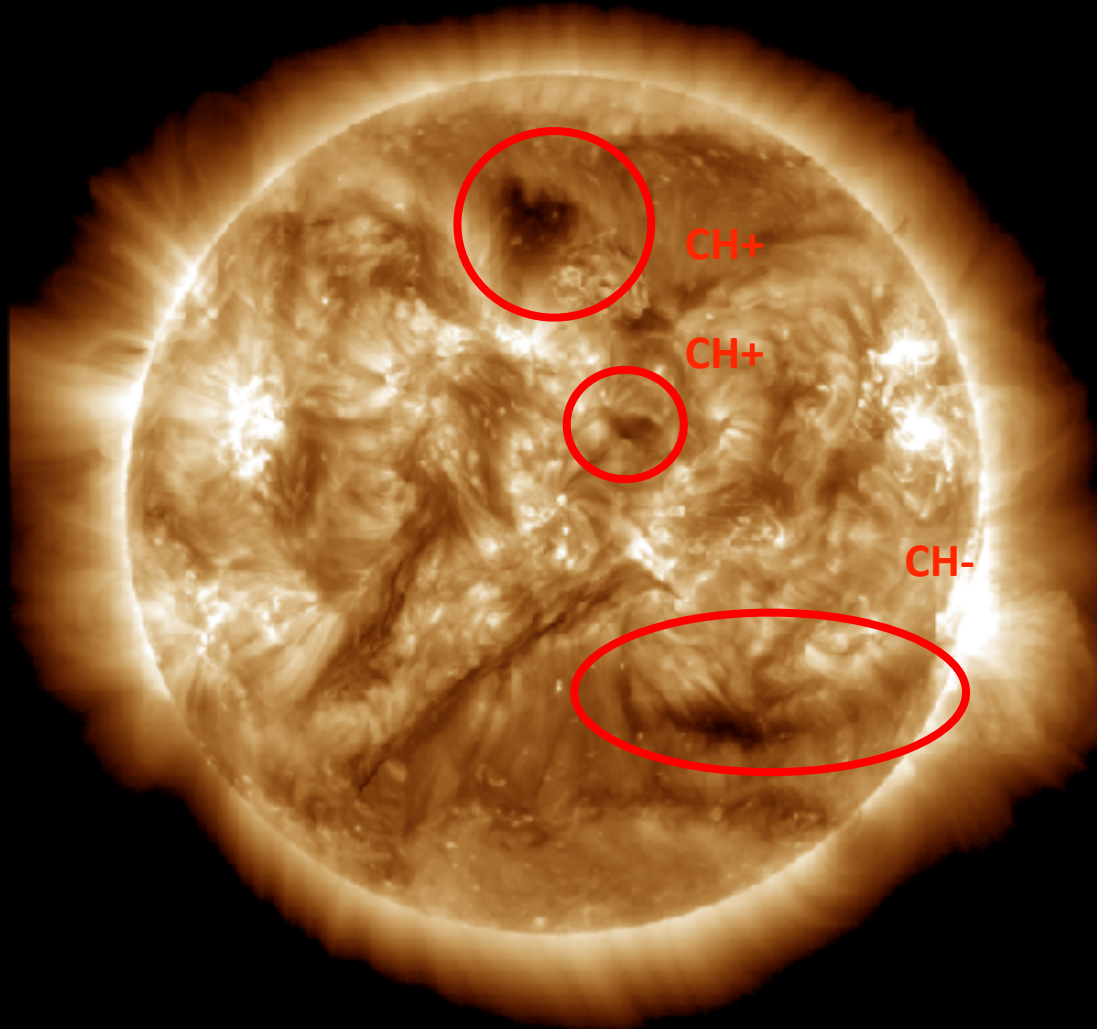
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Coronal holes

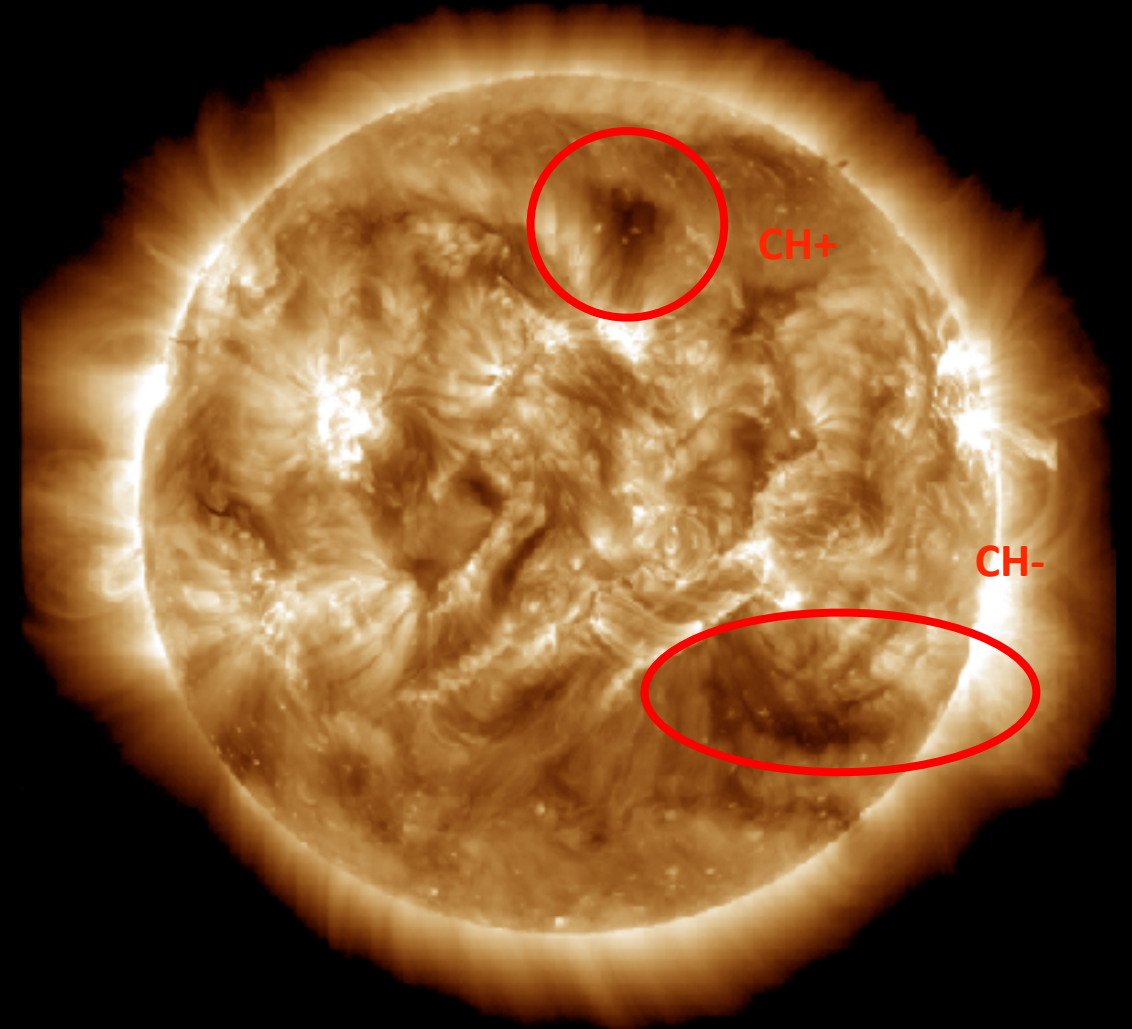
SDO/AIA 19.3 nm 2025-04-12

SDO/AIA AIA 193Å 2025-04-12T12:00:05.835



SDO/AIA 19.3 nm 2025-04-13

SDO/AIA AIA 193Å 2025-04-13T12:00:05.843



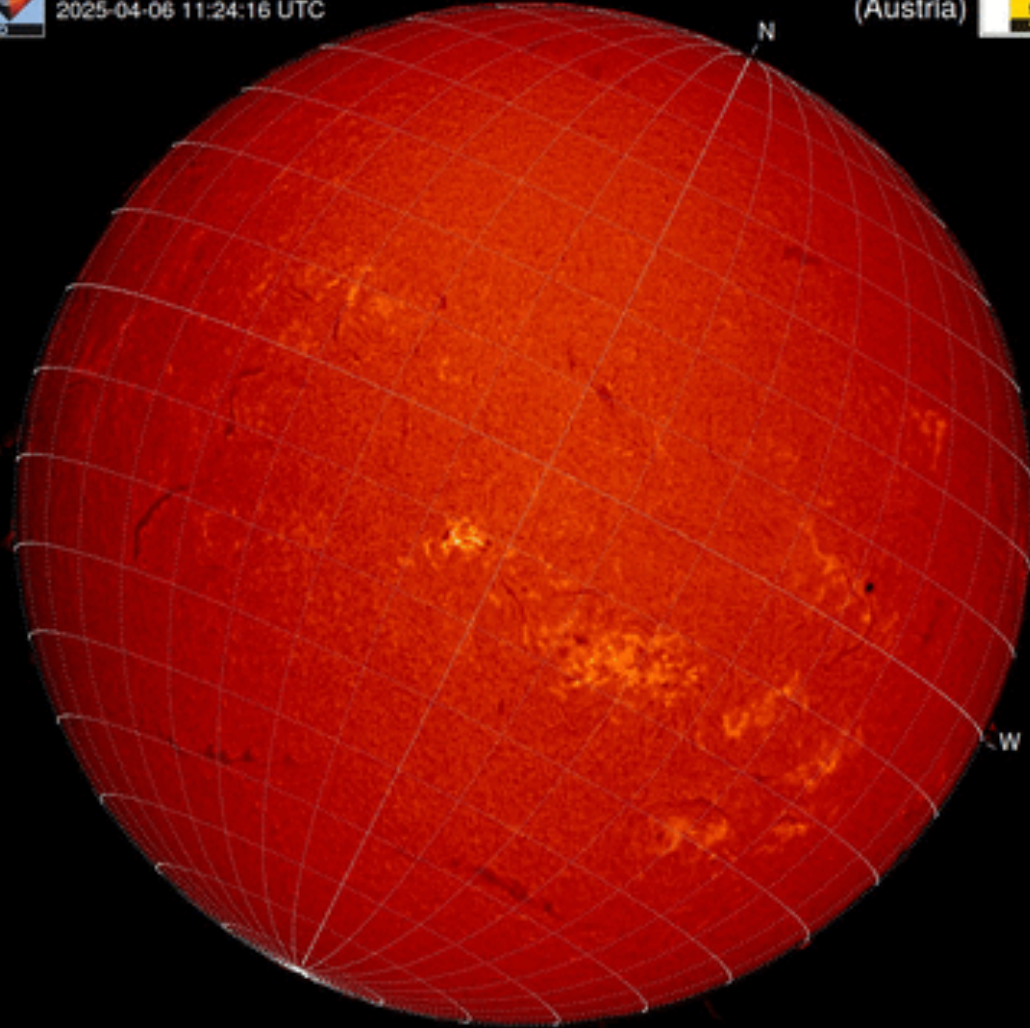
Filaments & Filament eruptions

H-alpha 2025-04-06



Kanzelhöhe Observatory
2025-04-06 11:24:16 UTC

University of Graz
(Austria)

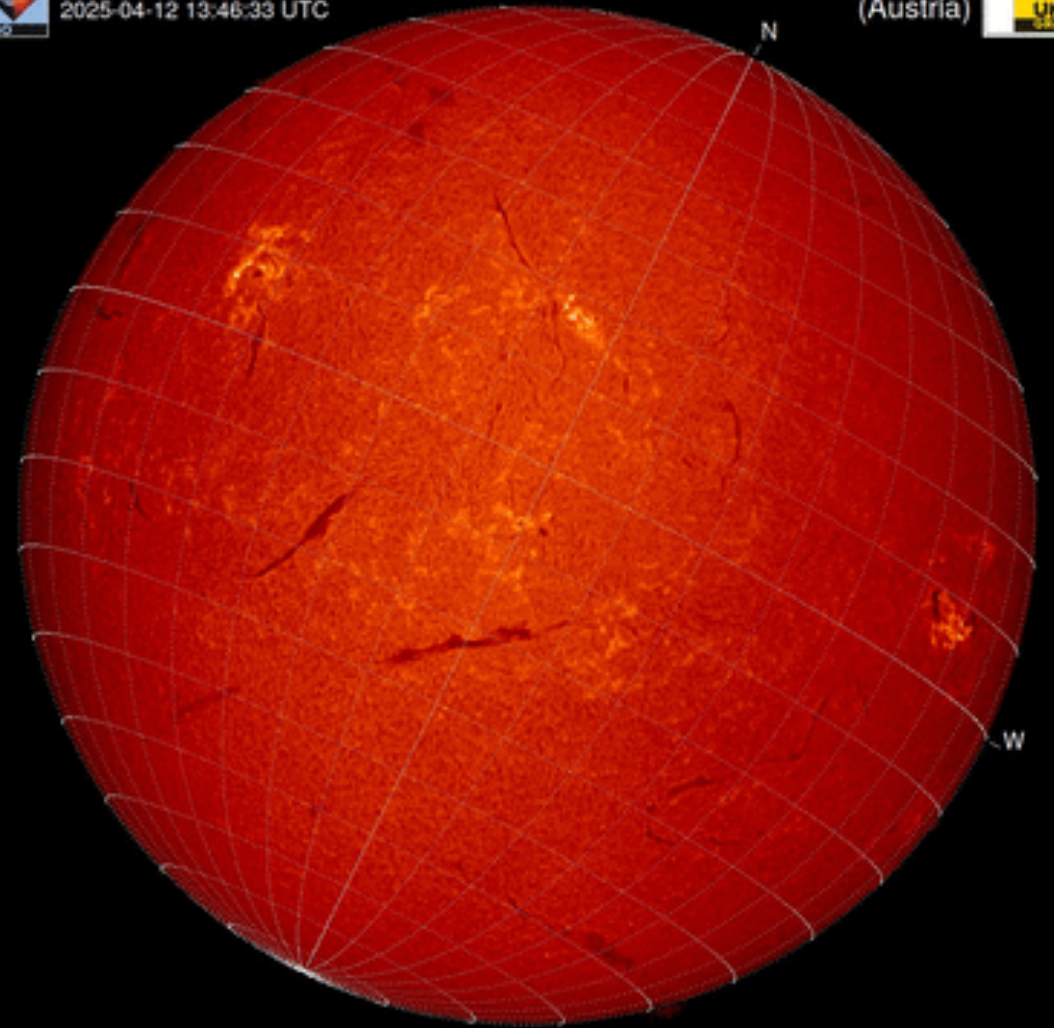


H-alpha 2025-04-12



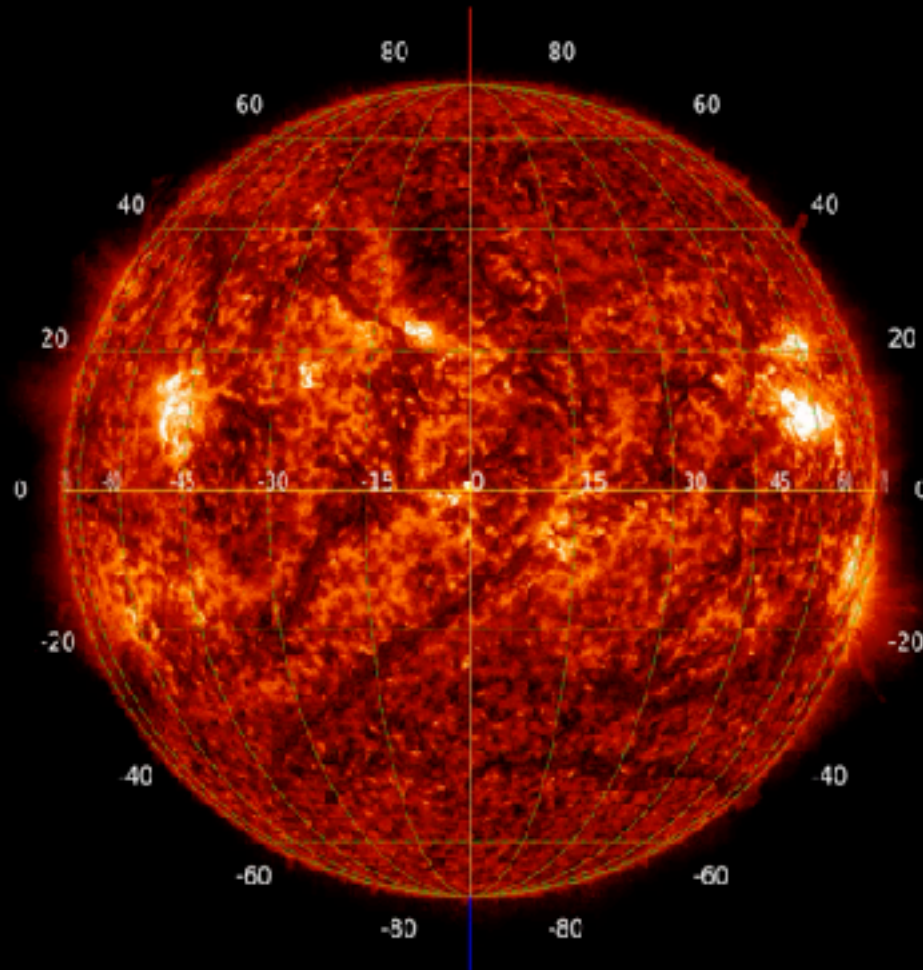
Kanzelhöhe Observatory
2025-04-12 13:46:33 UTC

University of Graz
(Austria)



Filaments

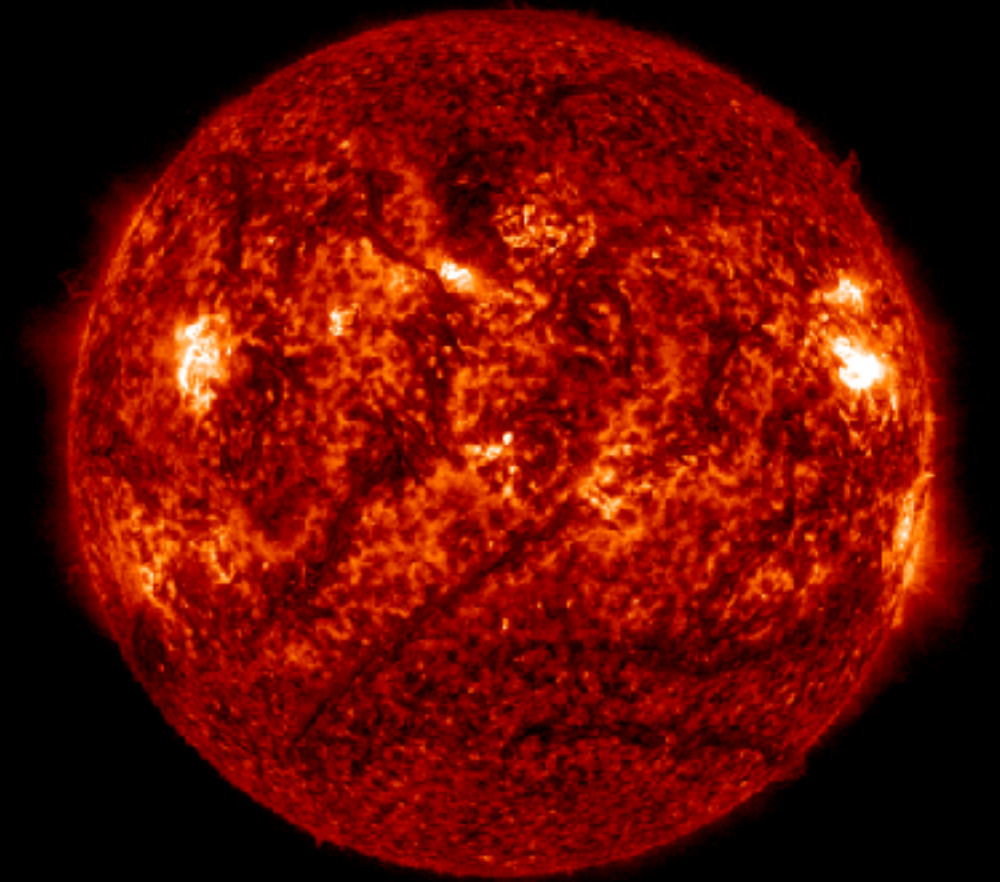
SDO/AIA 30.4 nm 2025-04, April 12-13



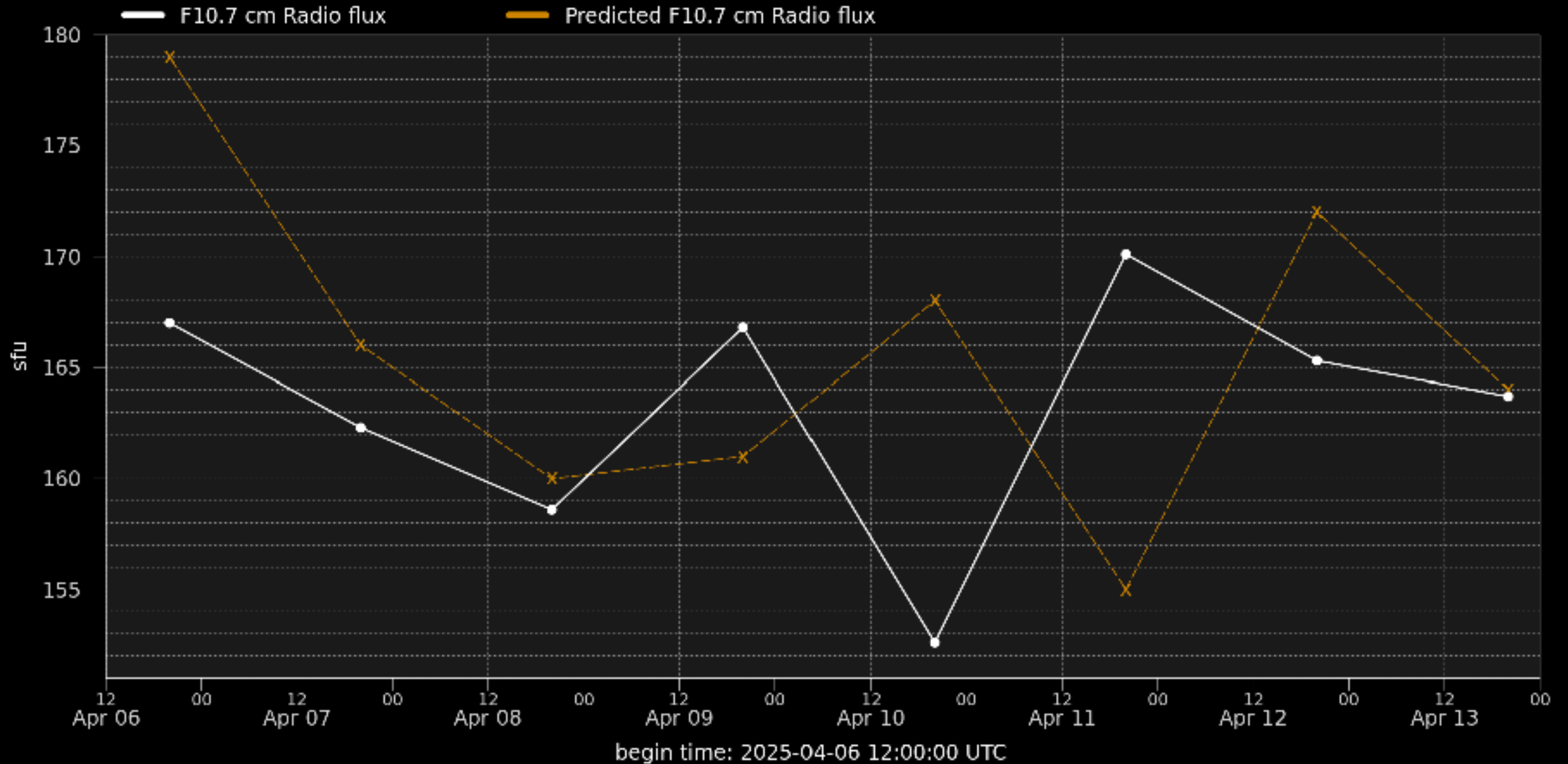
2025-04-12T09:48:18.515

SDO/AIA 30.4 nm 2025-04-12

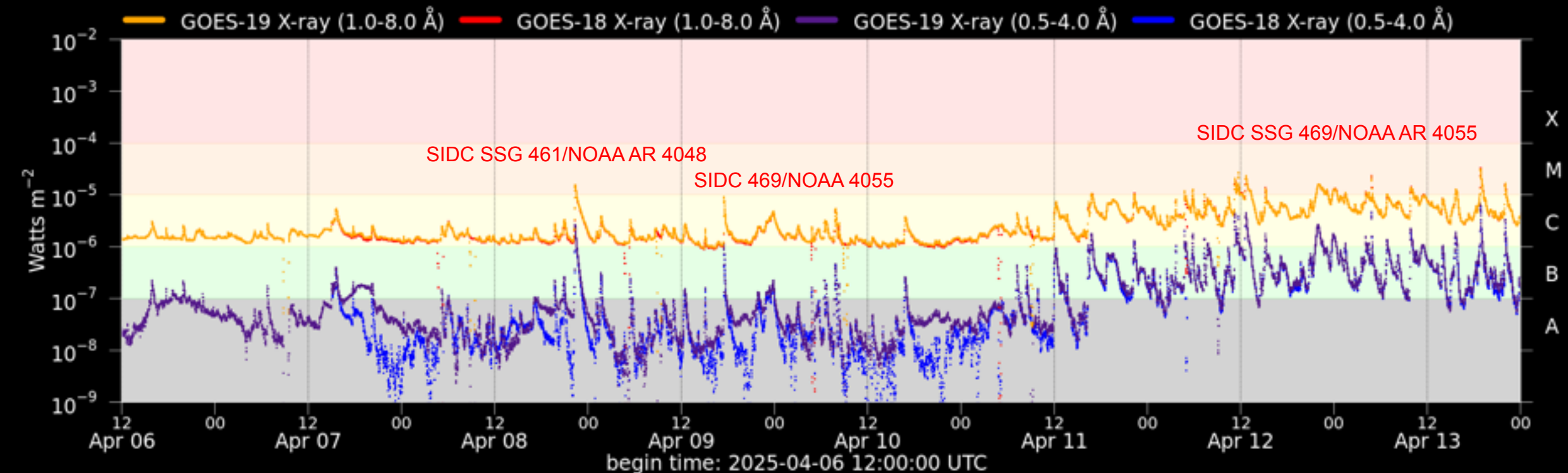
SDO/AIA AIA 304Å 2025-04-12T12:00:06.591



Solar F10.7cm radio flux



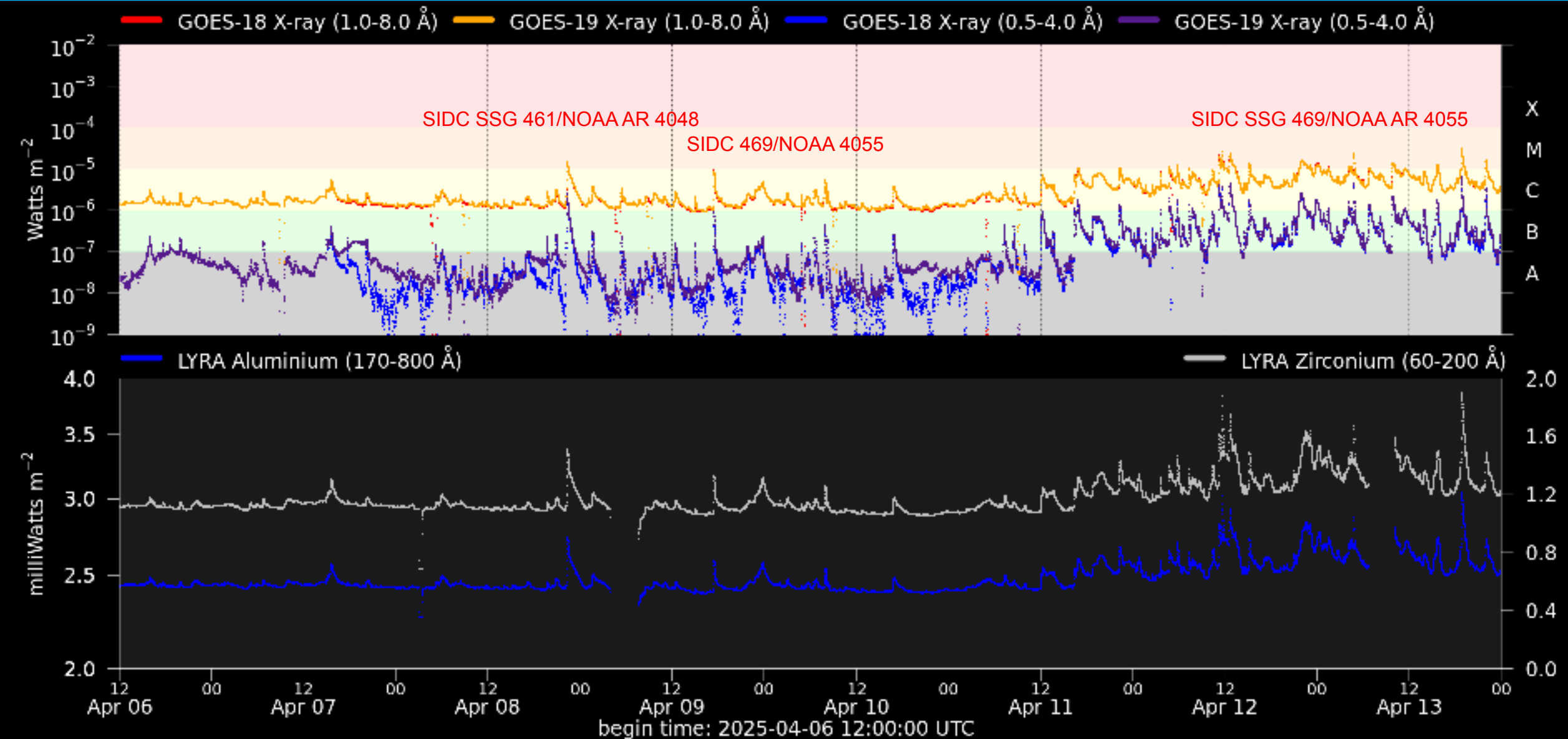
Flaring activity



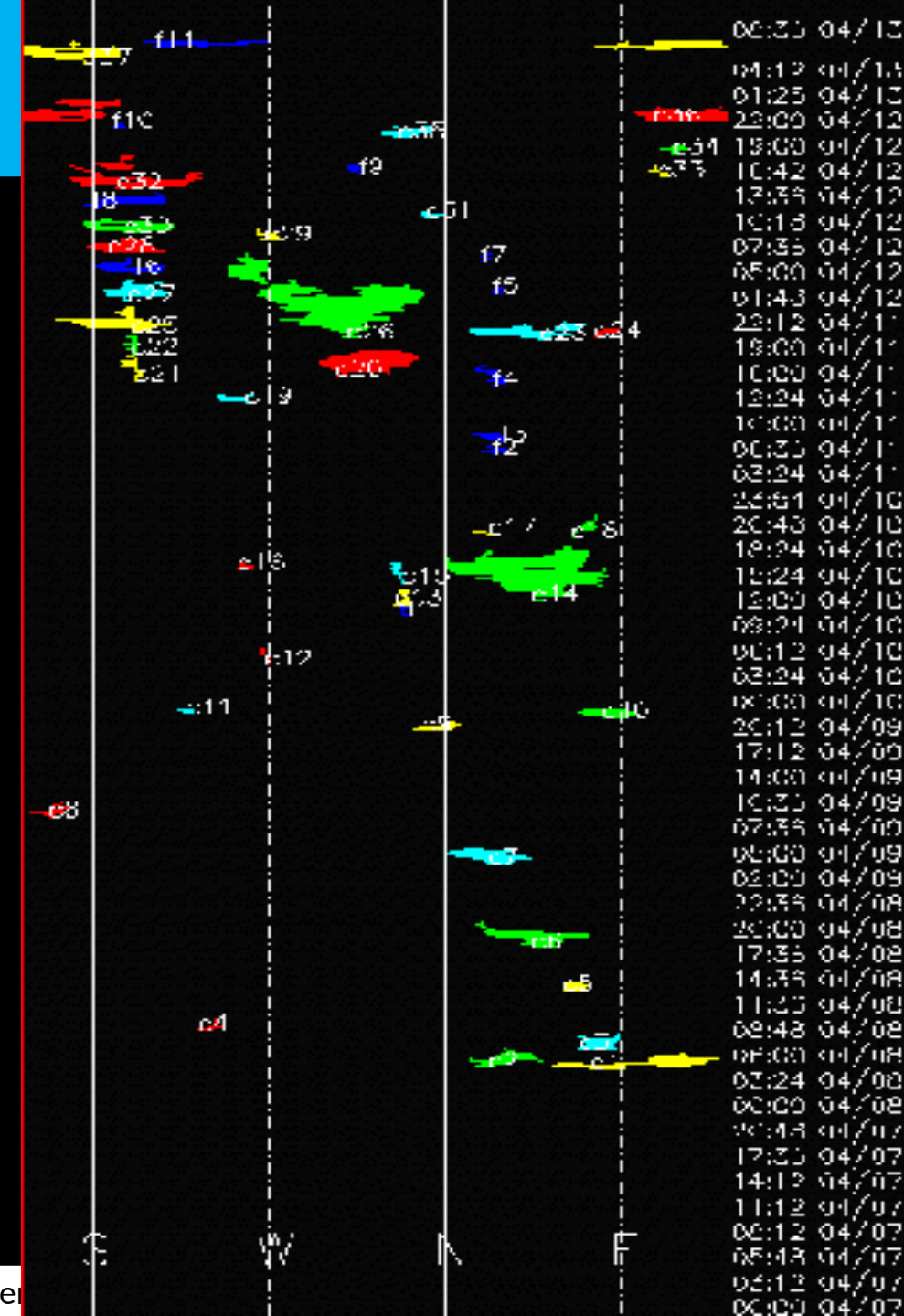
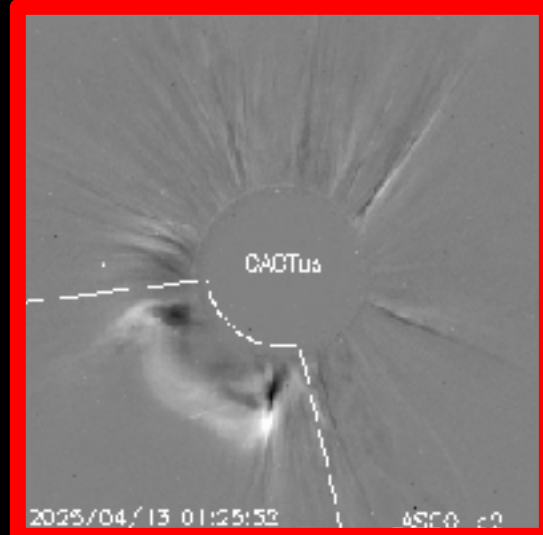
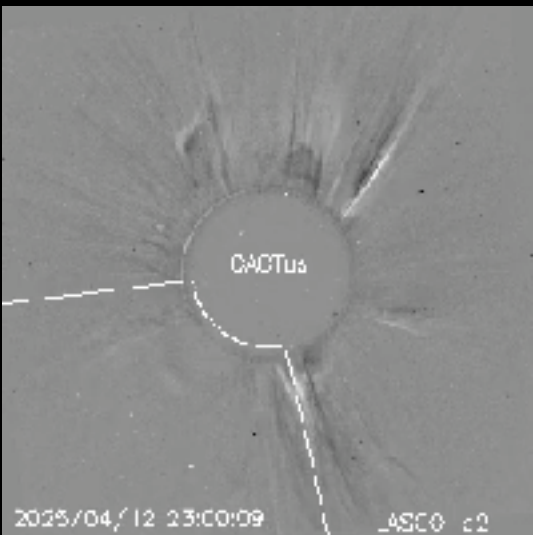
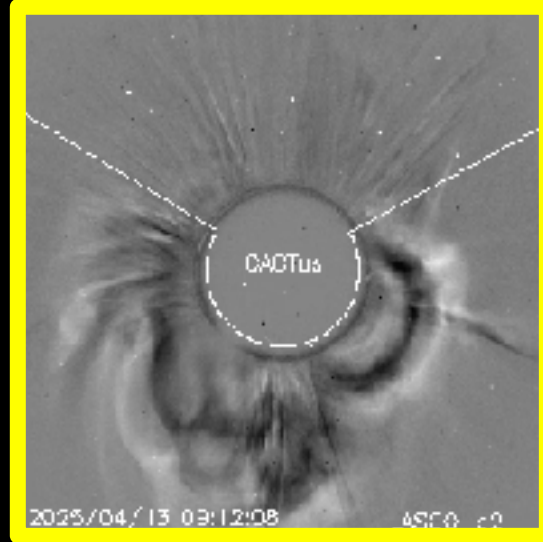
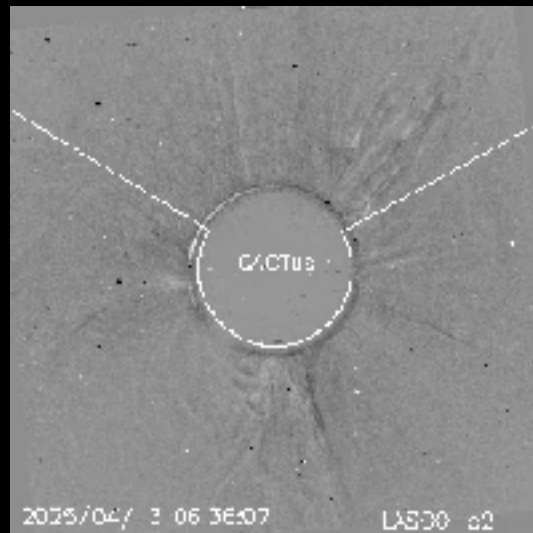
Probabilities (%) and occurrences (#) of C/M/X-flares daily, from noon to noon:

Issue date	2025-04-06	2025-04-07	2025-04-08	2025-04-09	2025-04-10	2025-04-11	2025-04-12	2025-04-13
Probability (%)	99 75 20	99 55 05	99 70 10	99 80 10	99 50 01	99 60 10	99 85 20	99 85 20
Observed (#)	04 00 00	04 00 00	04 01 00	06 00 00	05 00 00	08 07 00	02 05 00	01 03 00

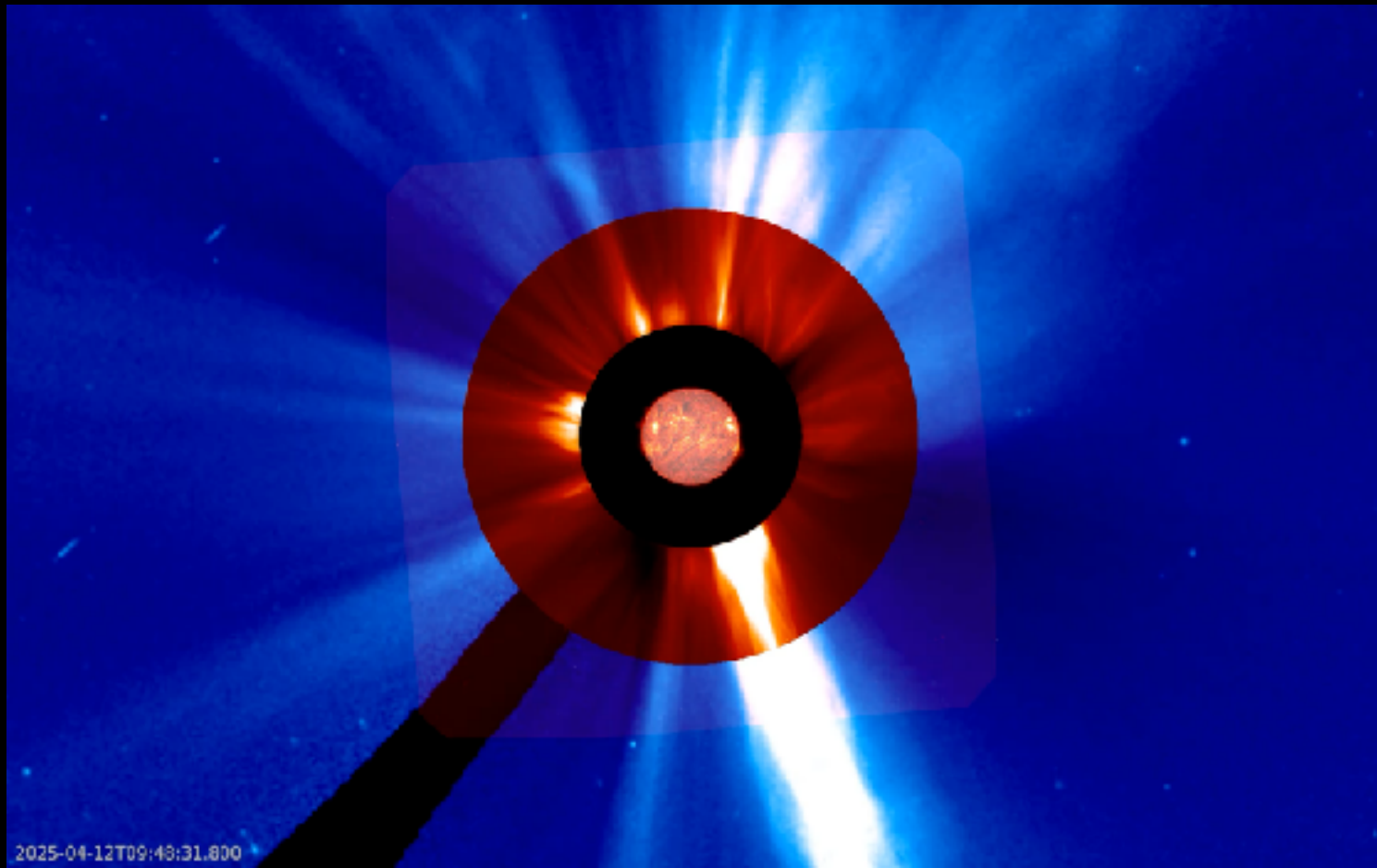
Solar X-Ray and UV flux



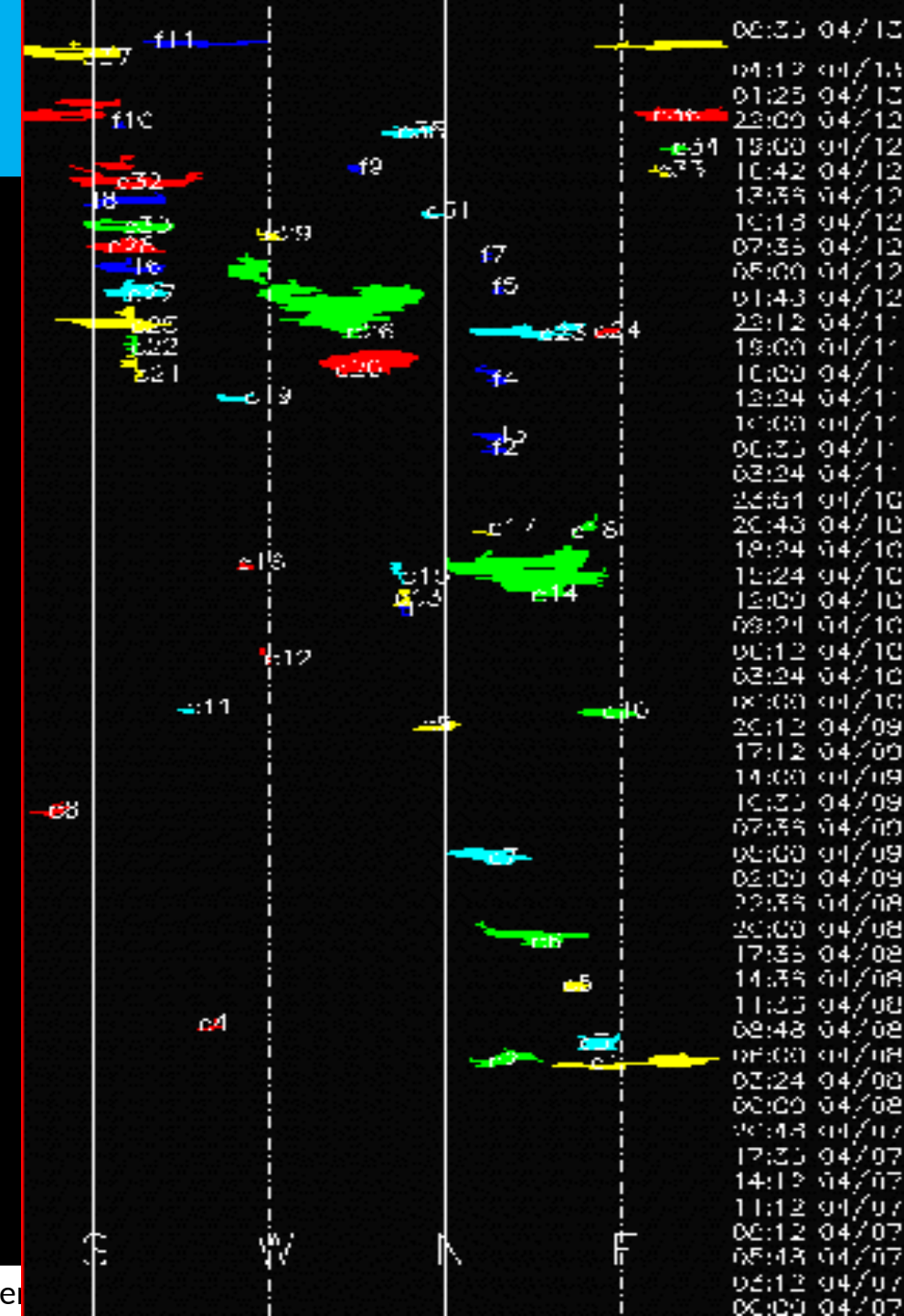
Coronal Mass Ejections



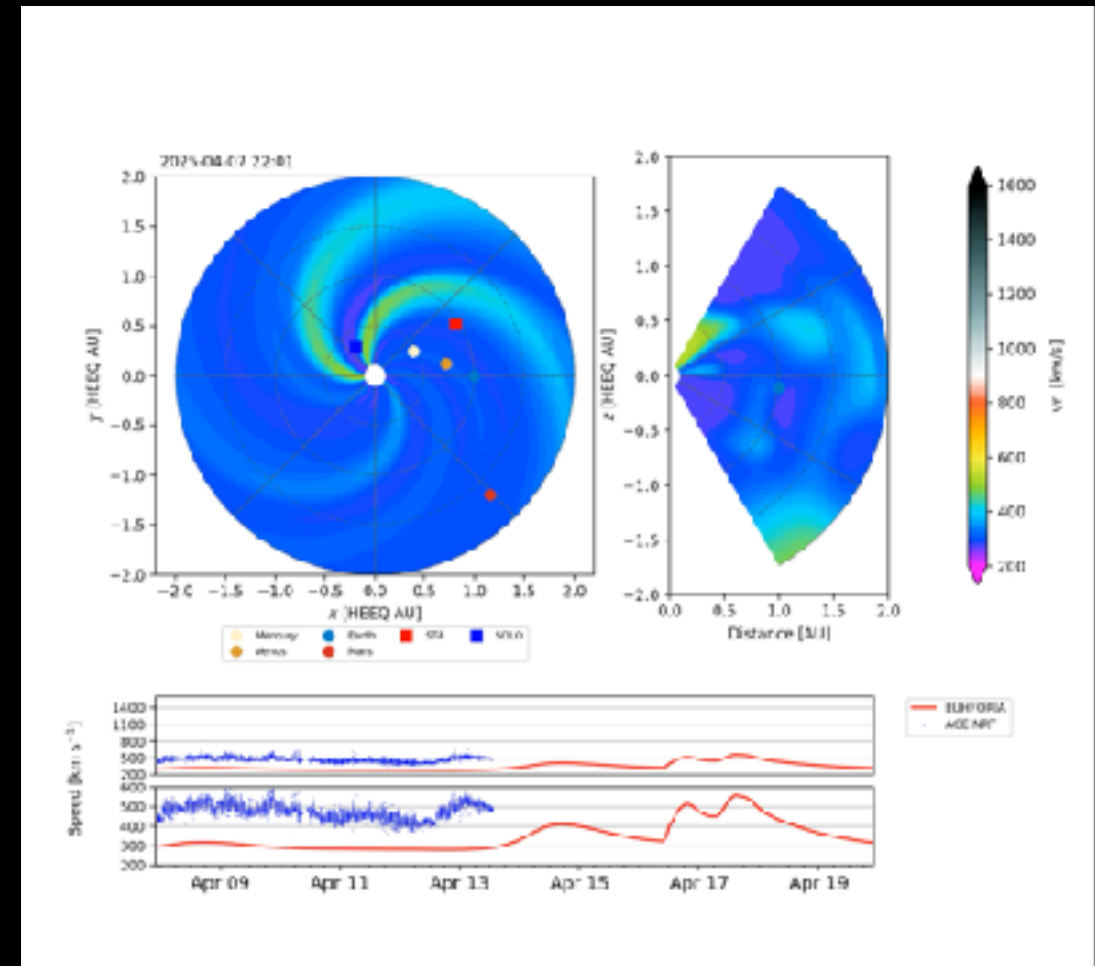
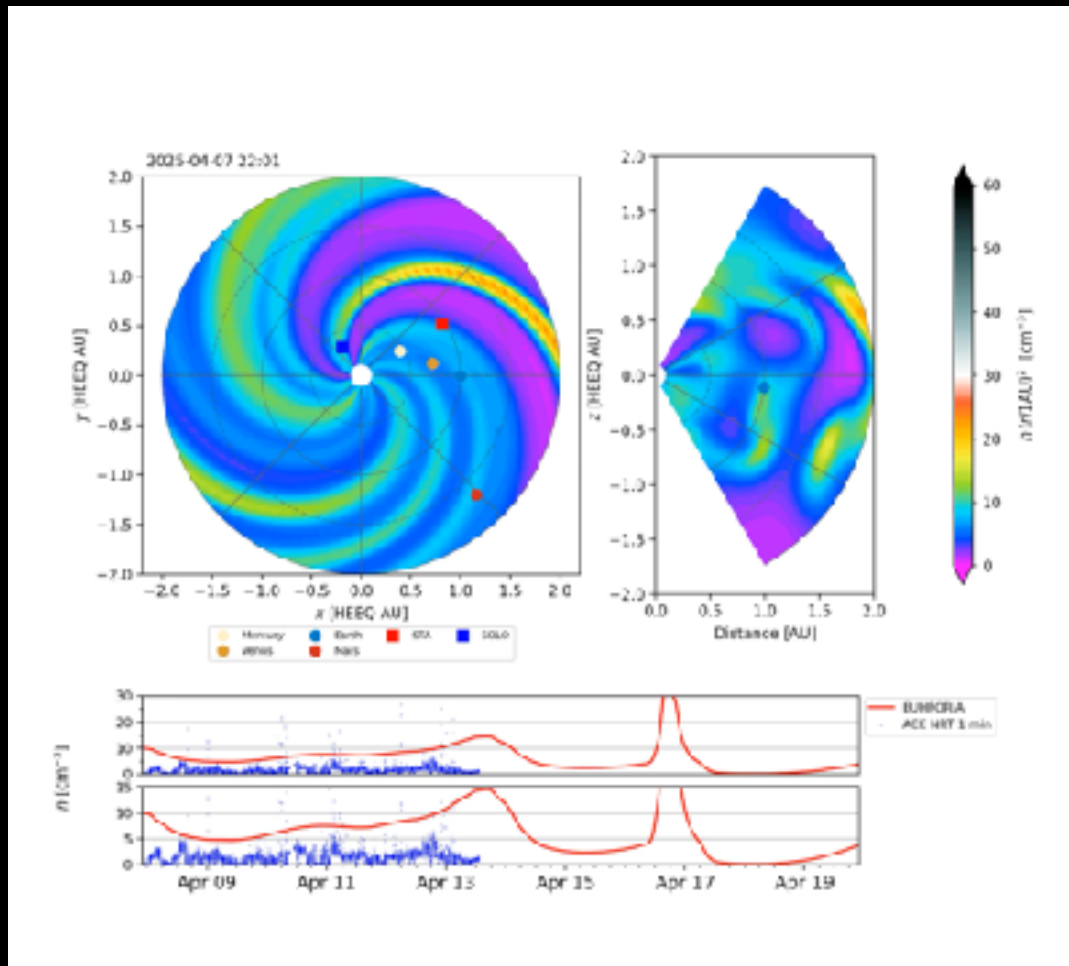
Coronal Mass Ejections



Expected combined shock arrival on April 16, might arrive slightly earlier due to previous eruption clearing the path.



Coronal Mass Ejections



Expected combined shock arrival on April 16, might arrive slightly earlier due to previous eruption clearing the path. Two separate velocity fronts arriving on April 16 and April 17th with speeds around 500 km/s and 550 km/s.

Solar Wind and

Geomagnetic Activity

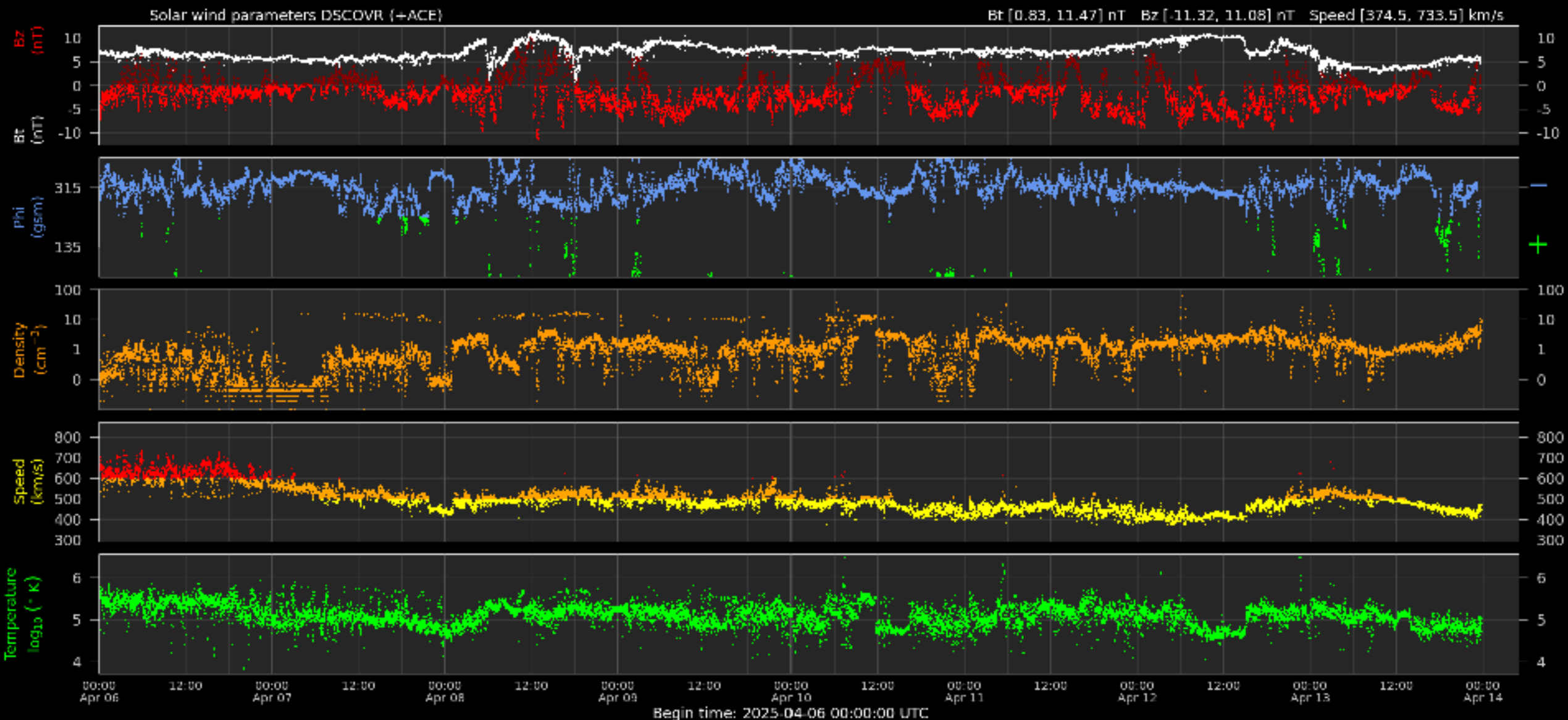


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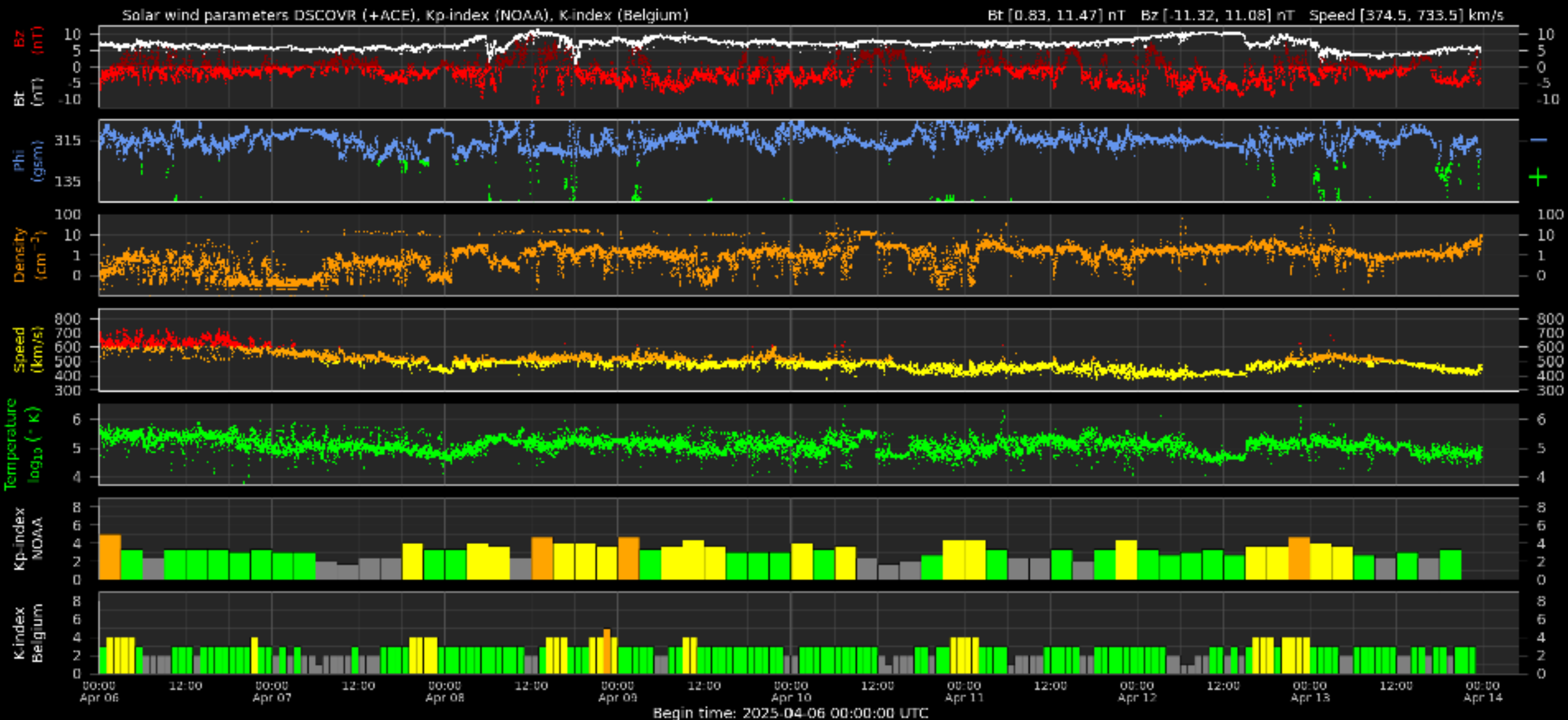
Solar wind parameters

Several HSS



Solar wind parameters & K-indices

Several HSS



Geomagnetic activity (K-indexes)



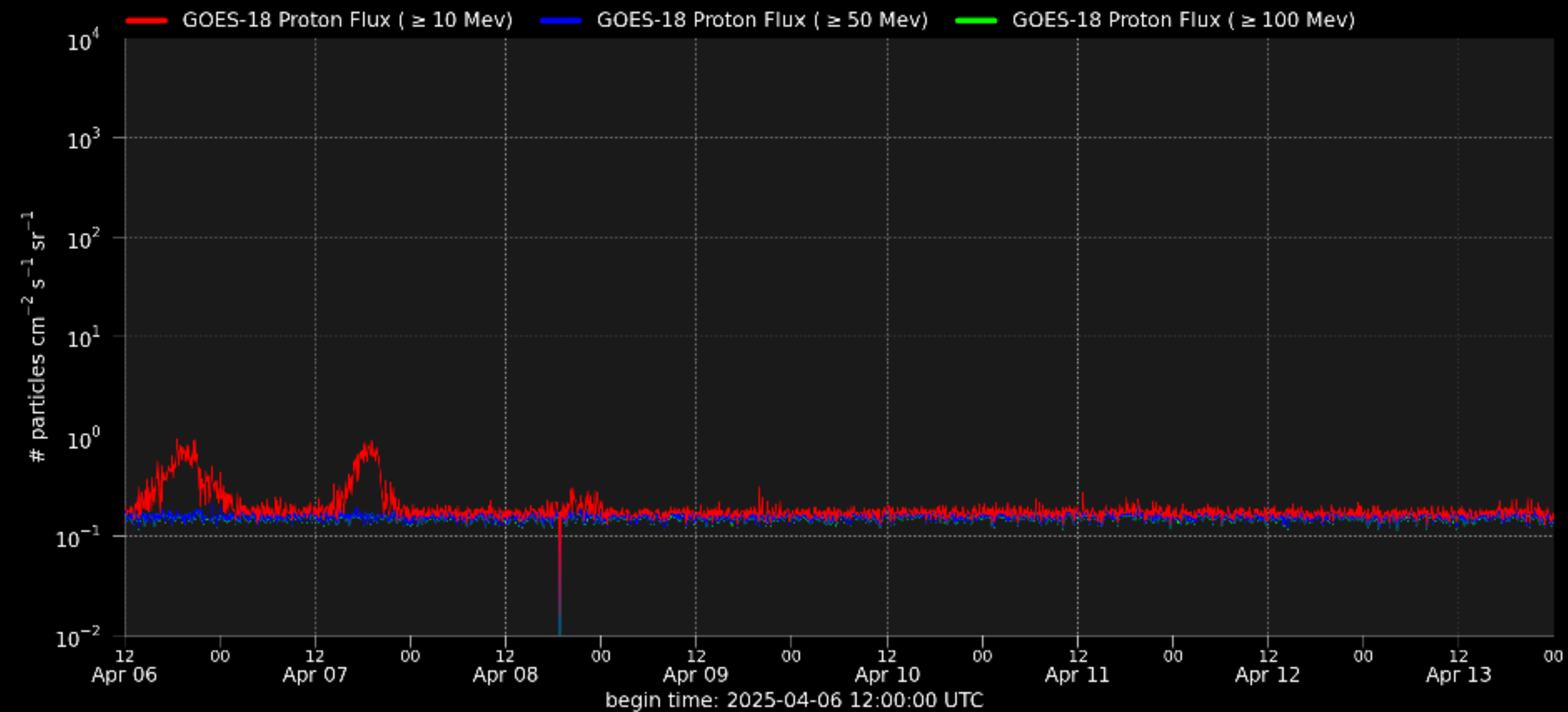
Energetic Particles



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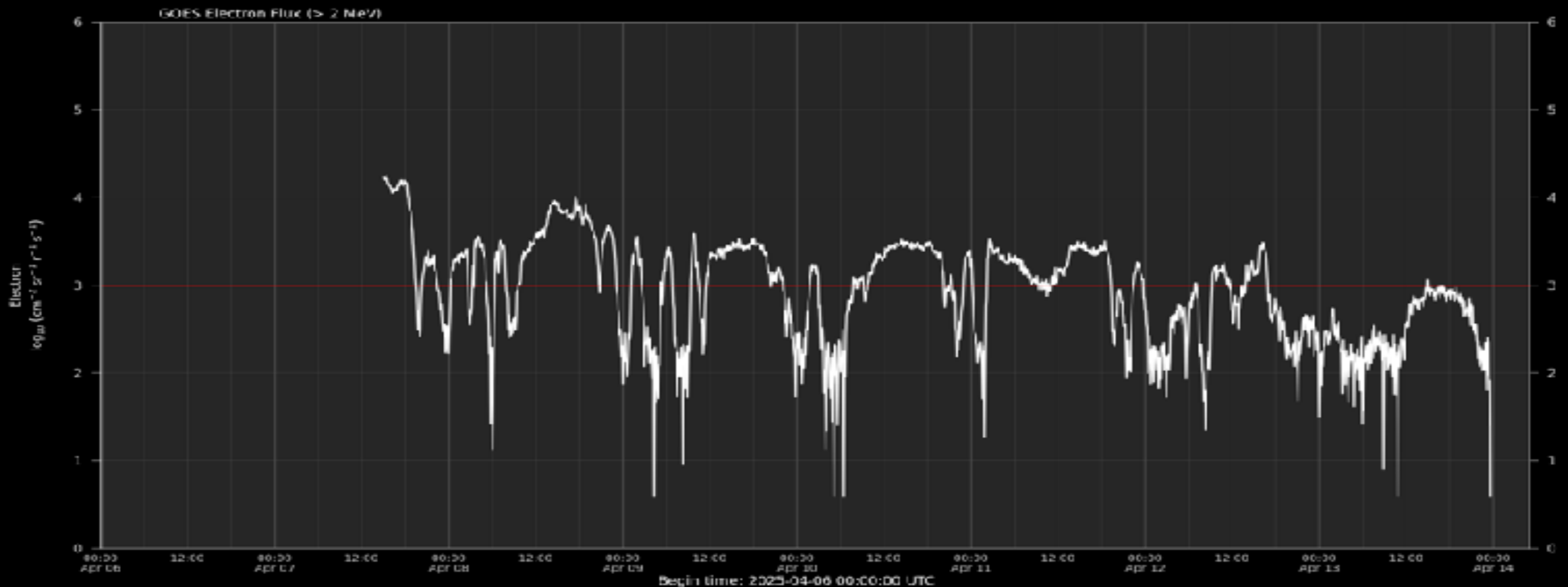
Solar proton flux



Electron flux at GEO

www.stce.be/educational/classification#electrons

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



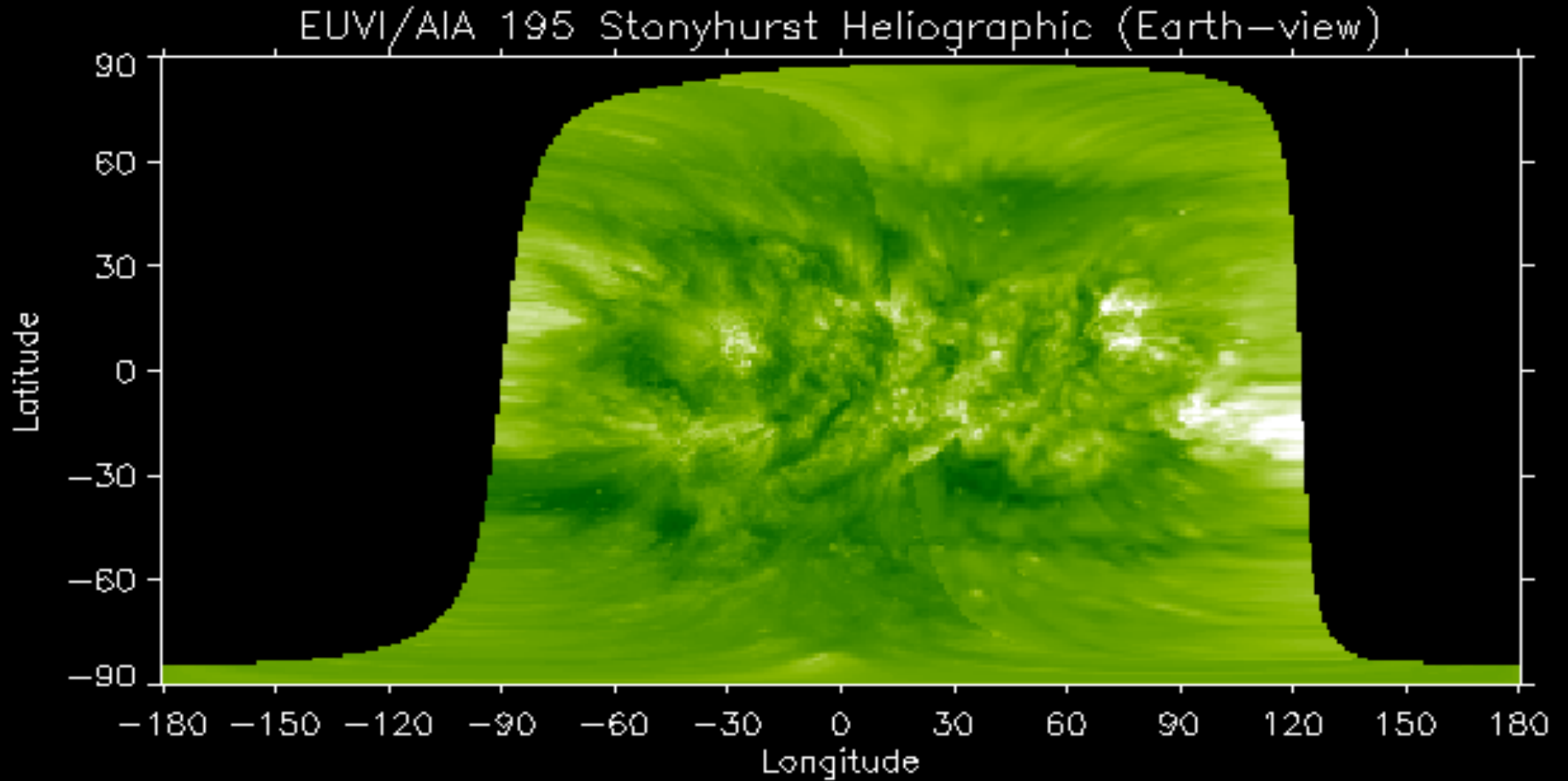
Outlook



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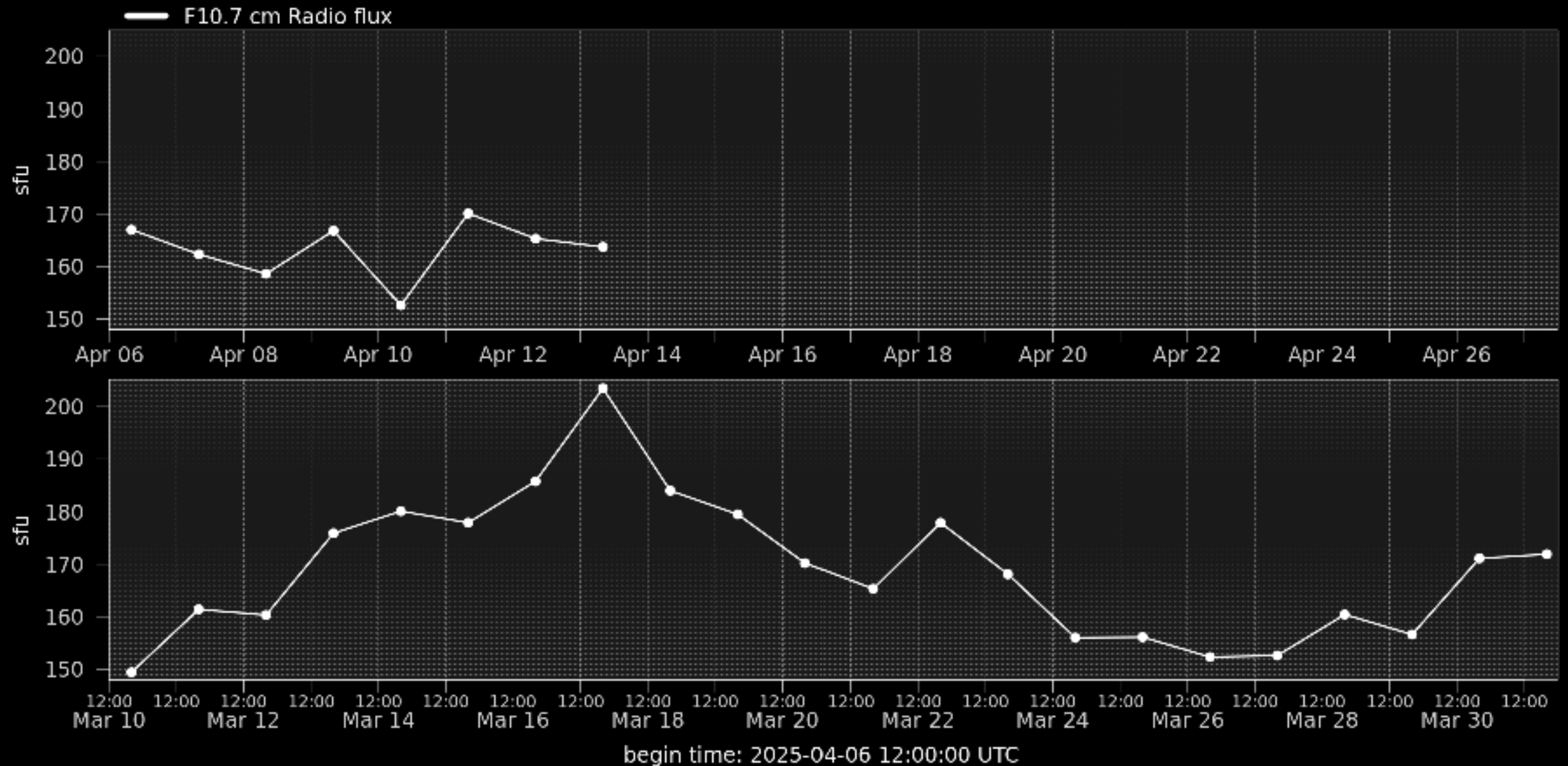
Solar Influences
Data analysis Centre
www.sidc.be

Outlook: Solar activity

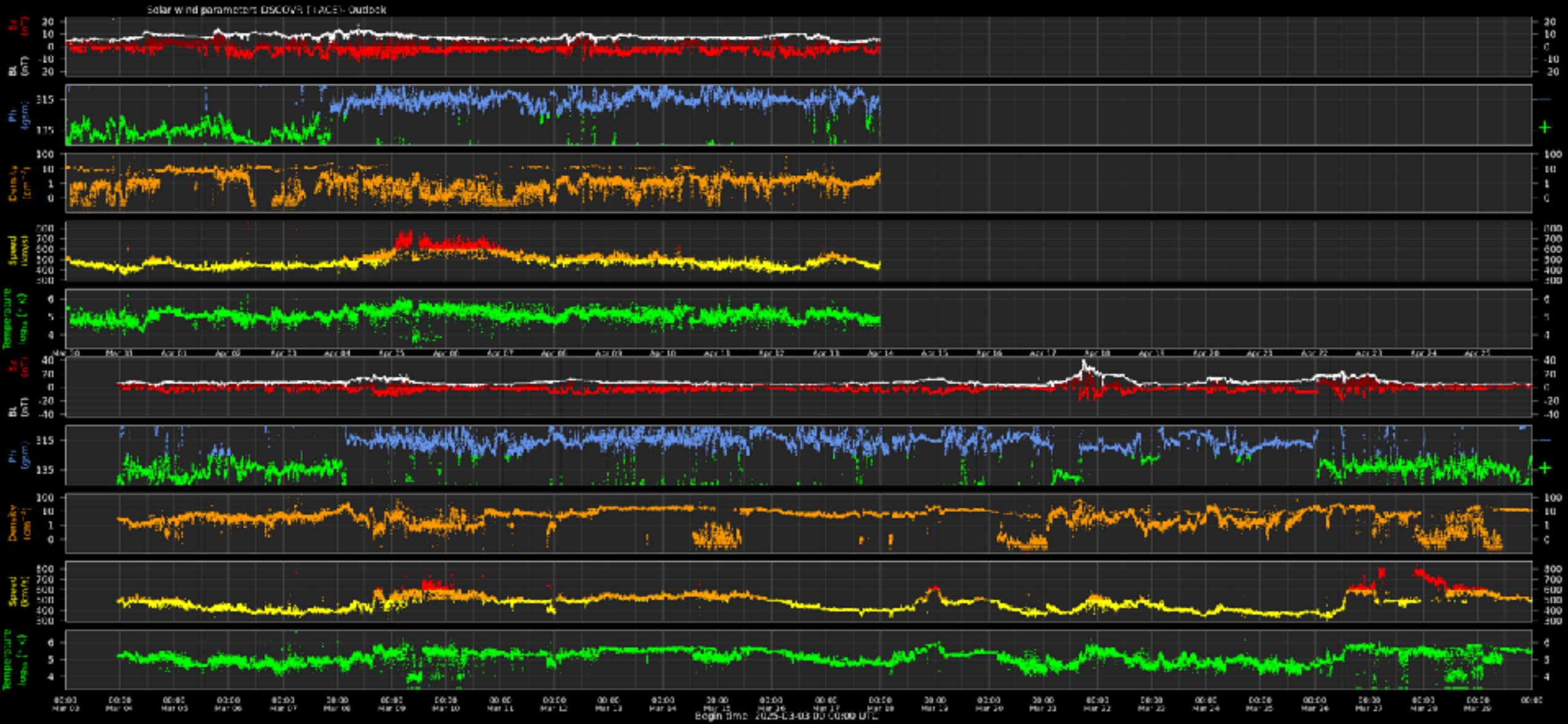


Observation date: 2025/04/13 20:55:00

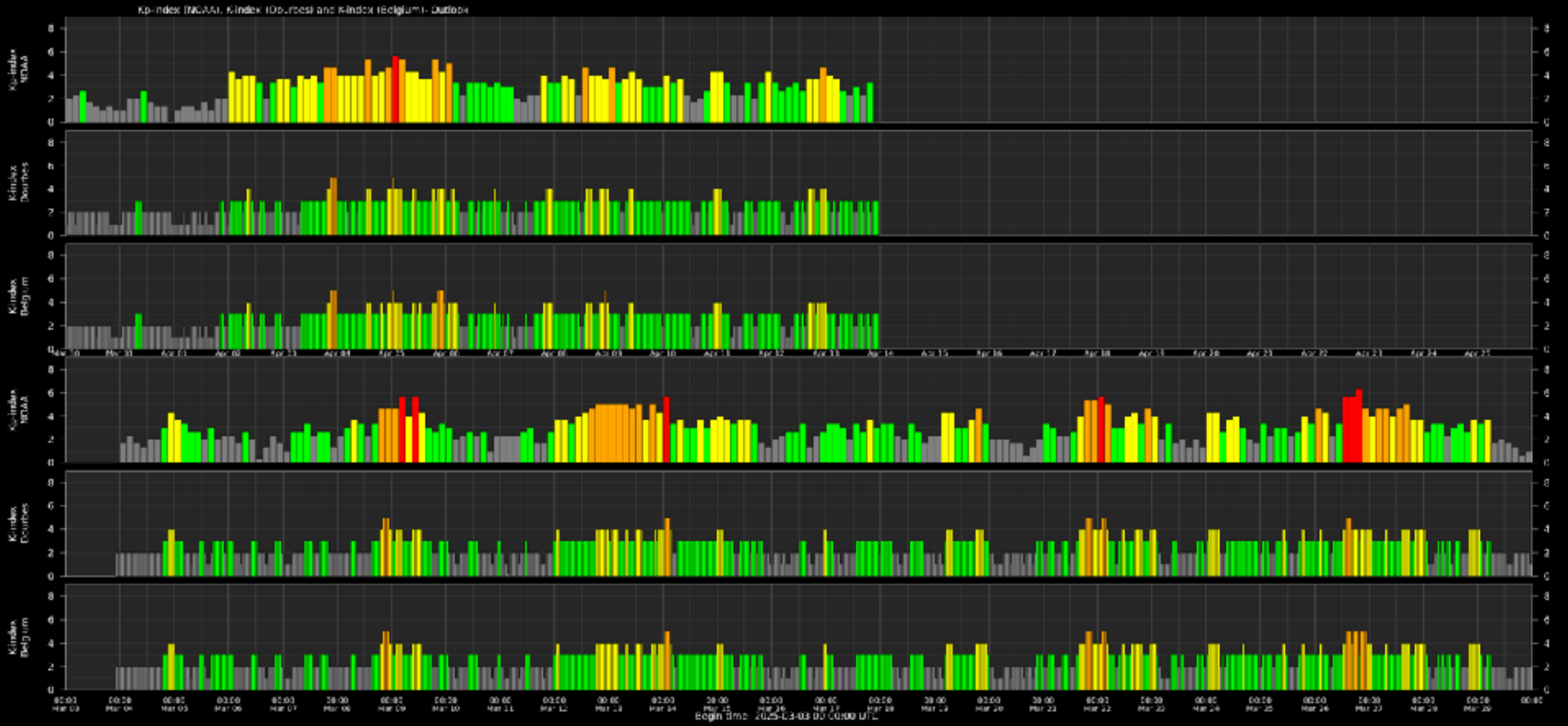
Outlook: Solar F10.7cm radio flux



Outlook: Solar wind parameters



Outlook: Geomagnetic activity



Outlook: Electron Flux at GEO Outlook



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Pecarus related events

PSD, scintillations

SIDC Space Weather Briefing

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