SIDC Space Weather Briefing

20 April 2025-27 April 2025

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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 2025-04-20 12:00 to 2025-04-27 23:59

Active regions	15 ARs, NOAA 4060-4075, βγ: SIDC 473, 474, 482 (4062, 4064, 4070)
Flares	# C-class flare: 11 # M-class flare: 2 # X-class flare: 0
Coronal Holes	One large positive polarity in the southern hemisphere (some small in the north)
CMEs	None clearly Earth directed

Proton flux	Below threshold
Electron flux	Slight increases above the 1000 pfu threshold

Solar wind and geomagnetic conditions

ICMEs	One shock + glancing blow
Solar wind conditions	|B|: 1.03 - 18.64 nT //Bz: -14.4 nT to 12.97 nT //Speed: 325.8 - 745.3km/s
Geomagnetic conditions	max KBel: 5.0, max Kp(NOAA): 5.33, Minor Storm conditions

All Quiet Alert: off

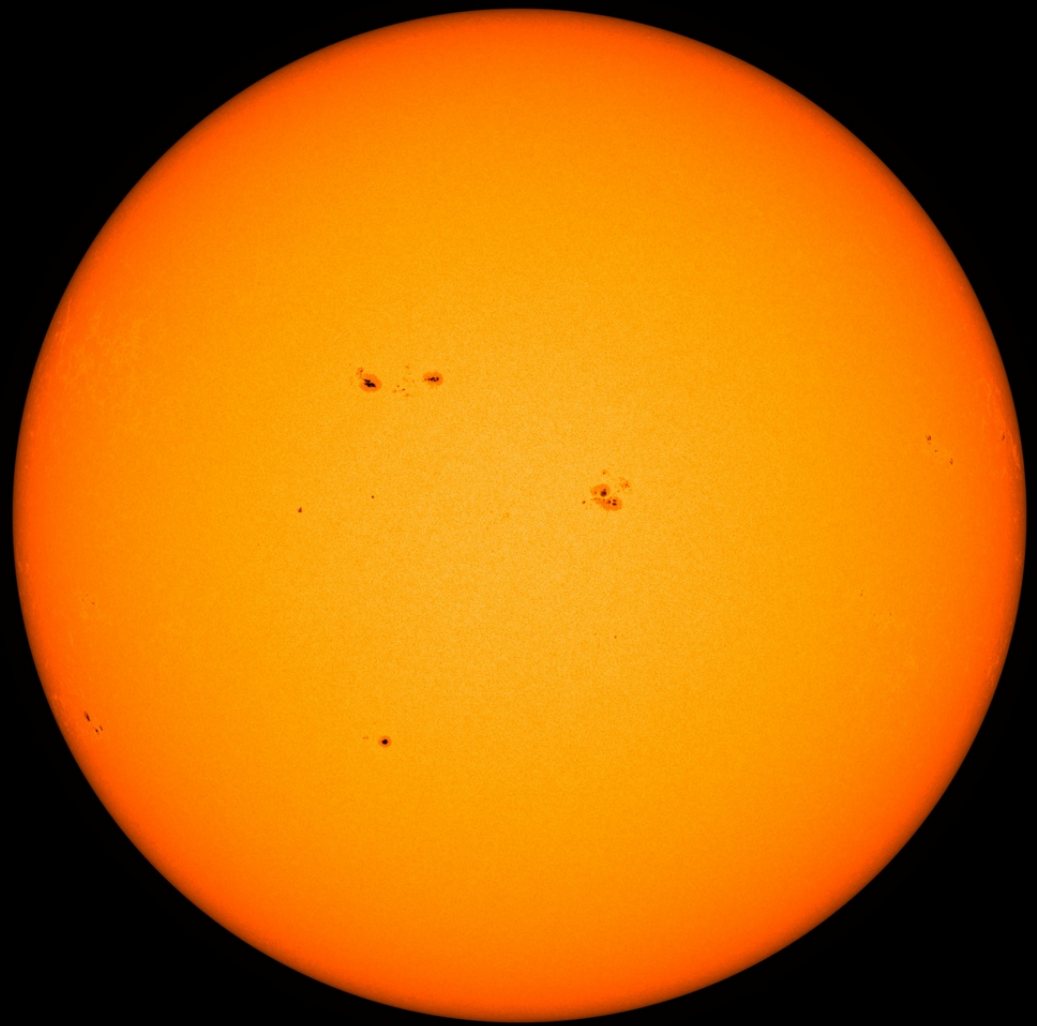
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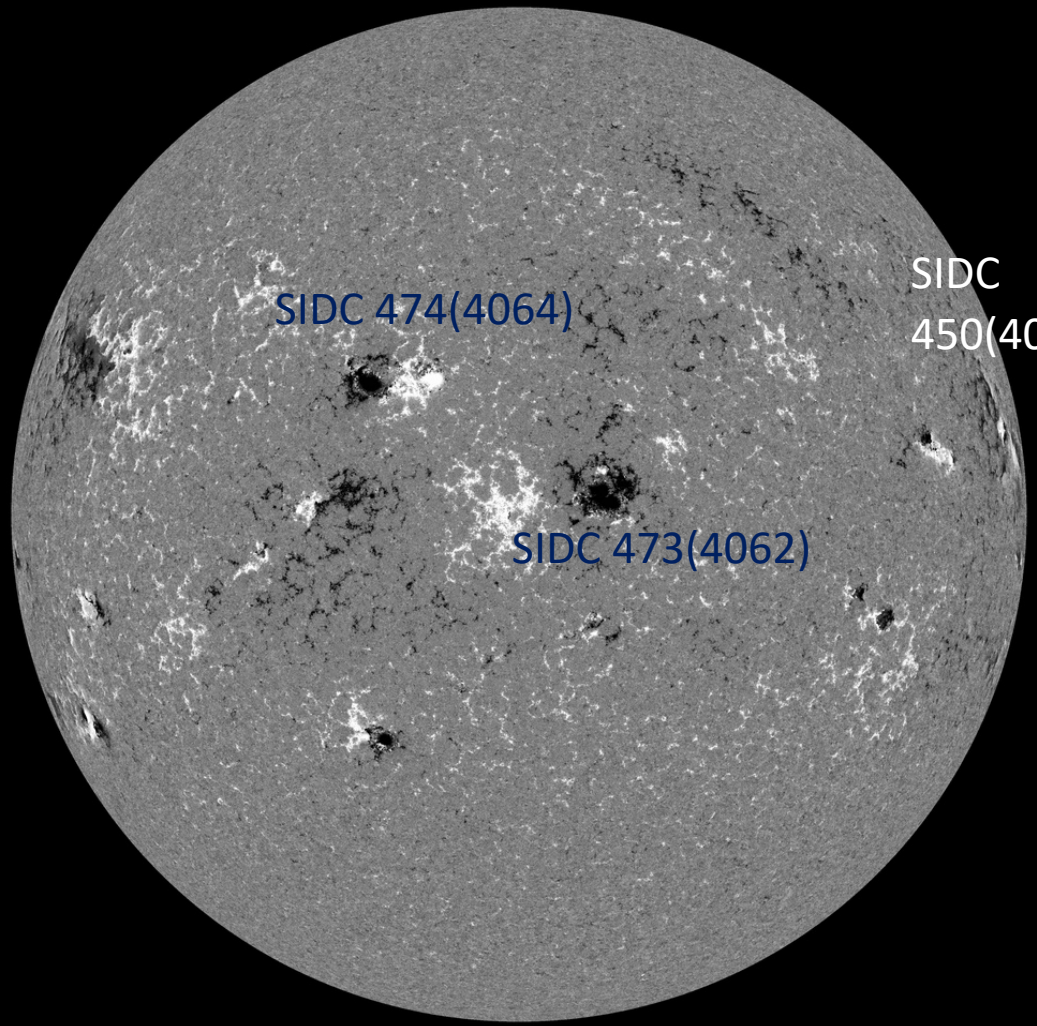
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Solar active regions

SDO/HMI White Light 2025-04-21

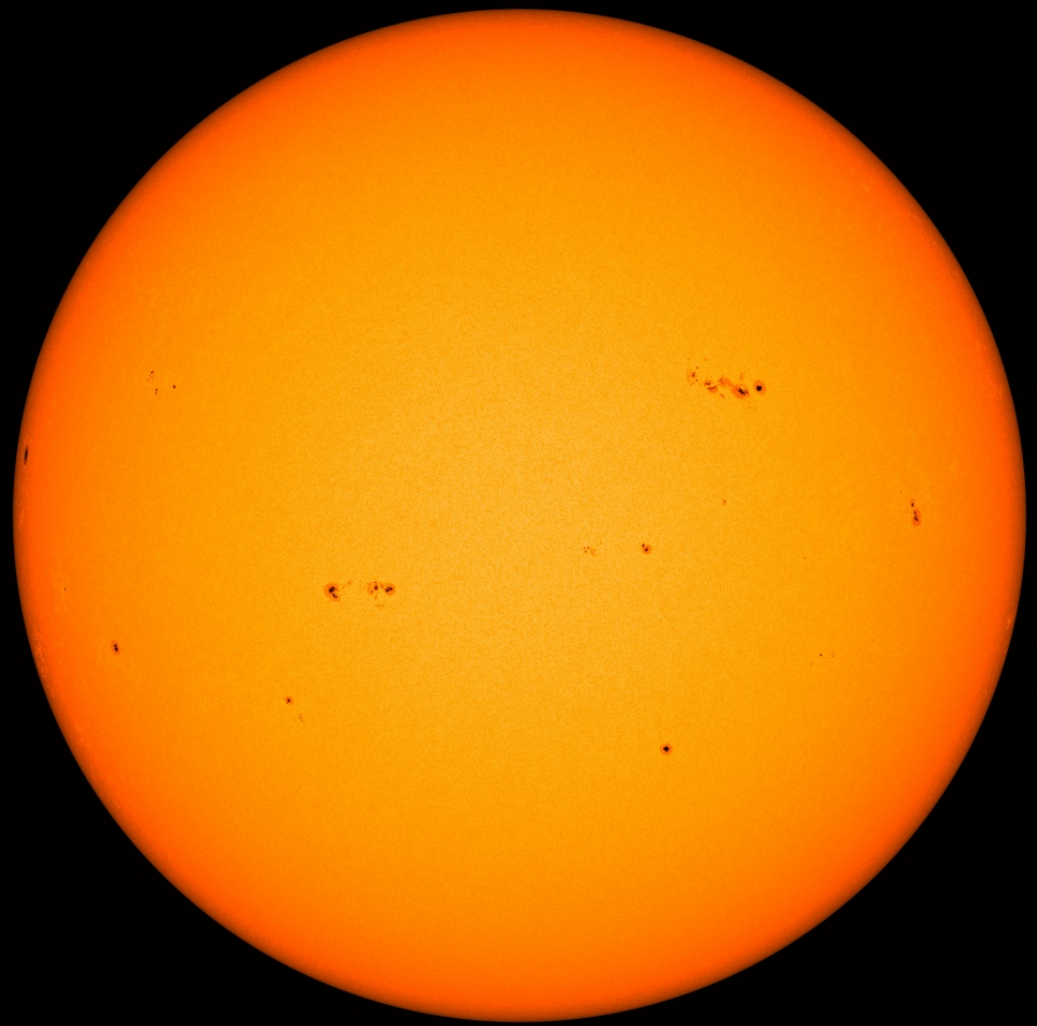


SDO/HMI Magnetogram 2025-04-21

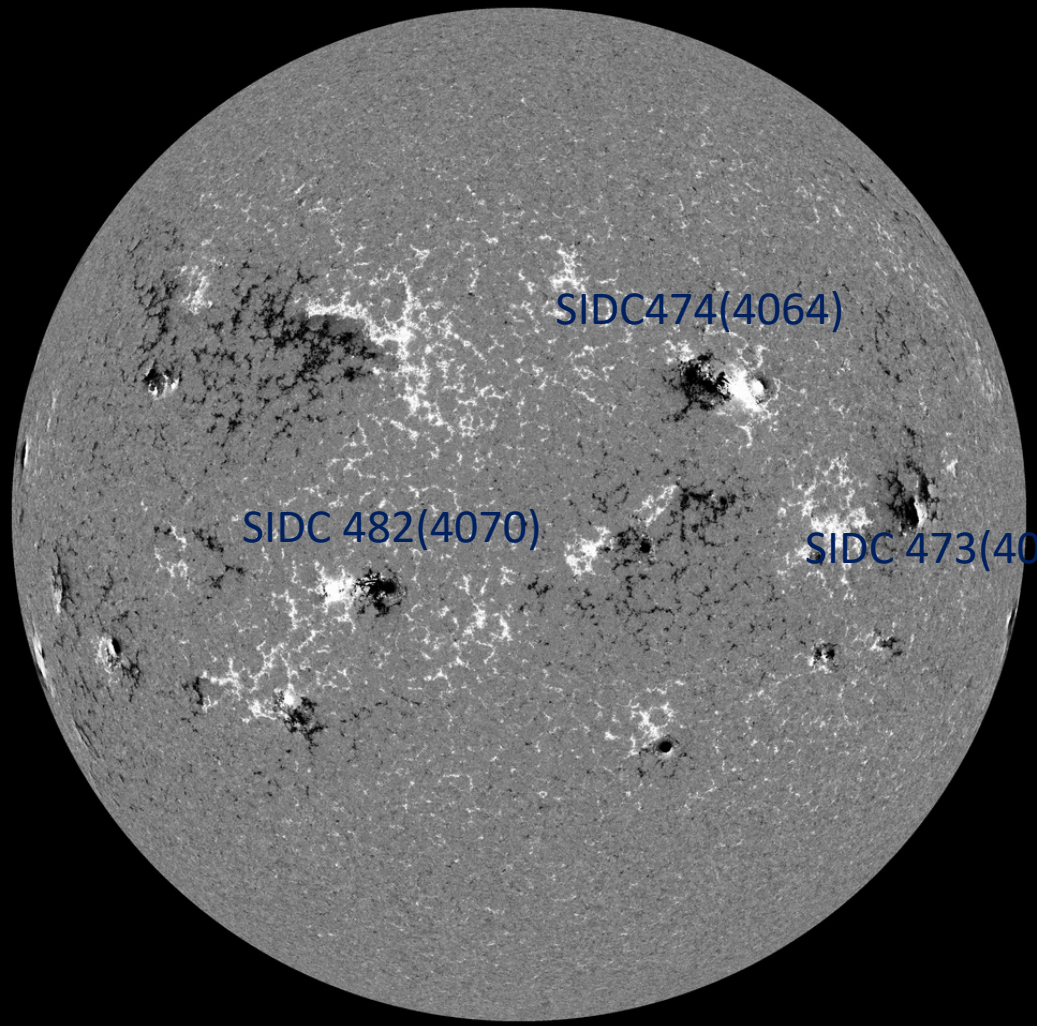


Solar active regions

SDO/HMI White Light 2025-04-24

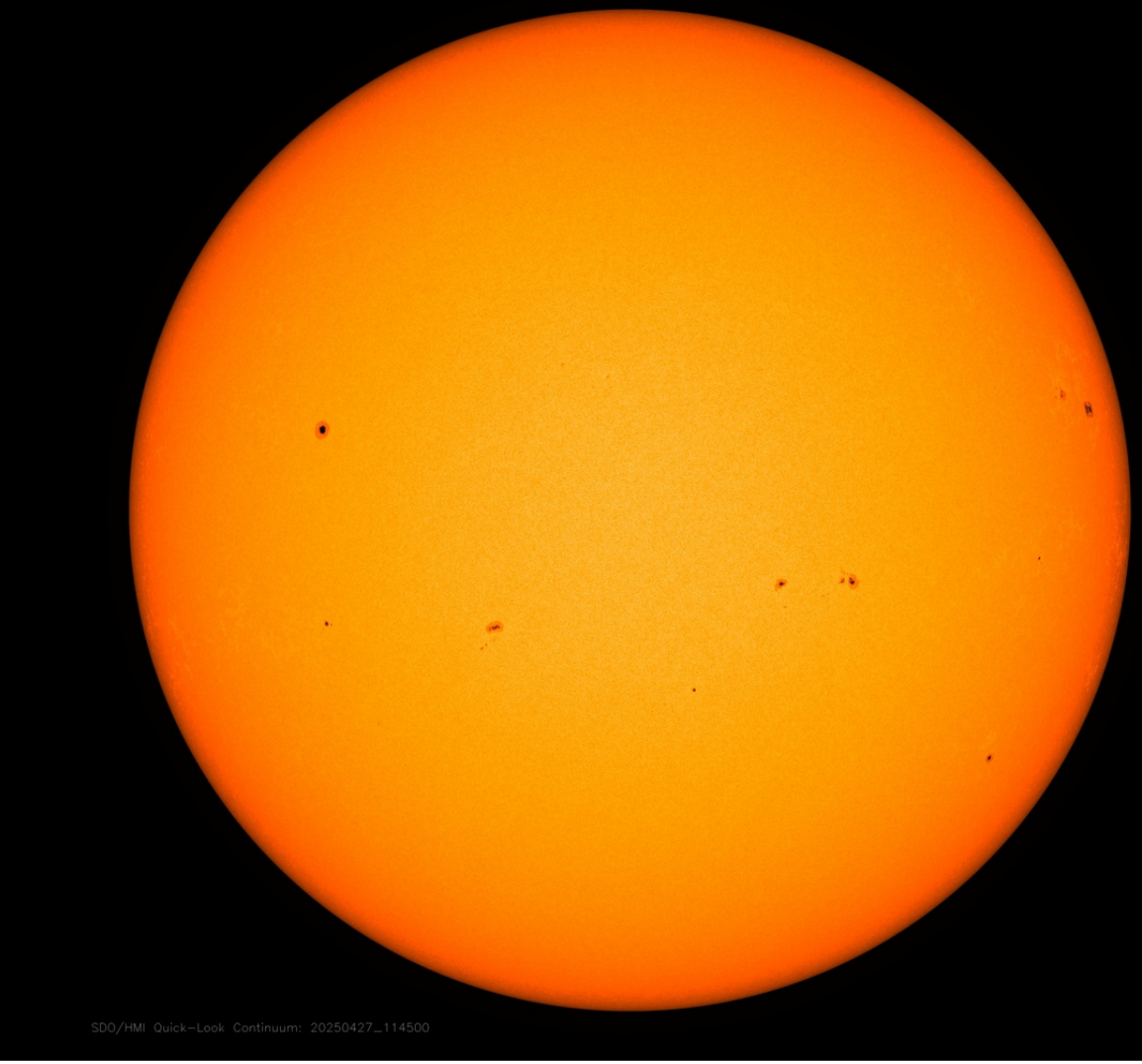


SDO/HMI Magnetogram 2025-04-24

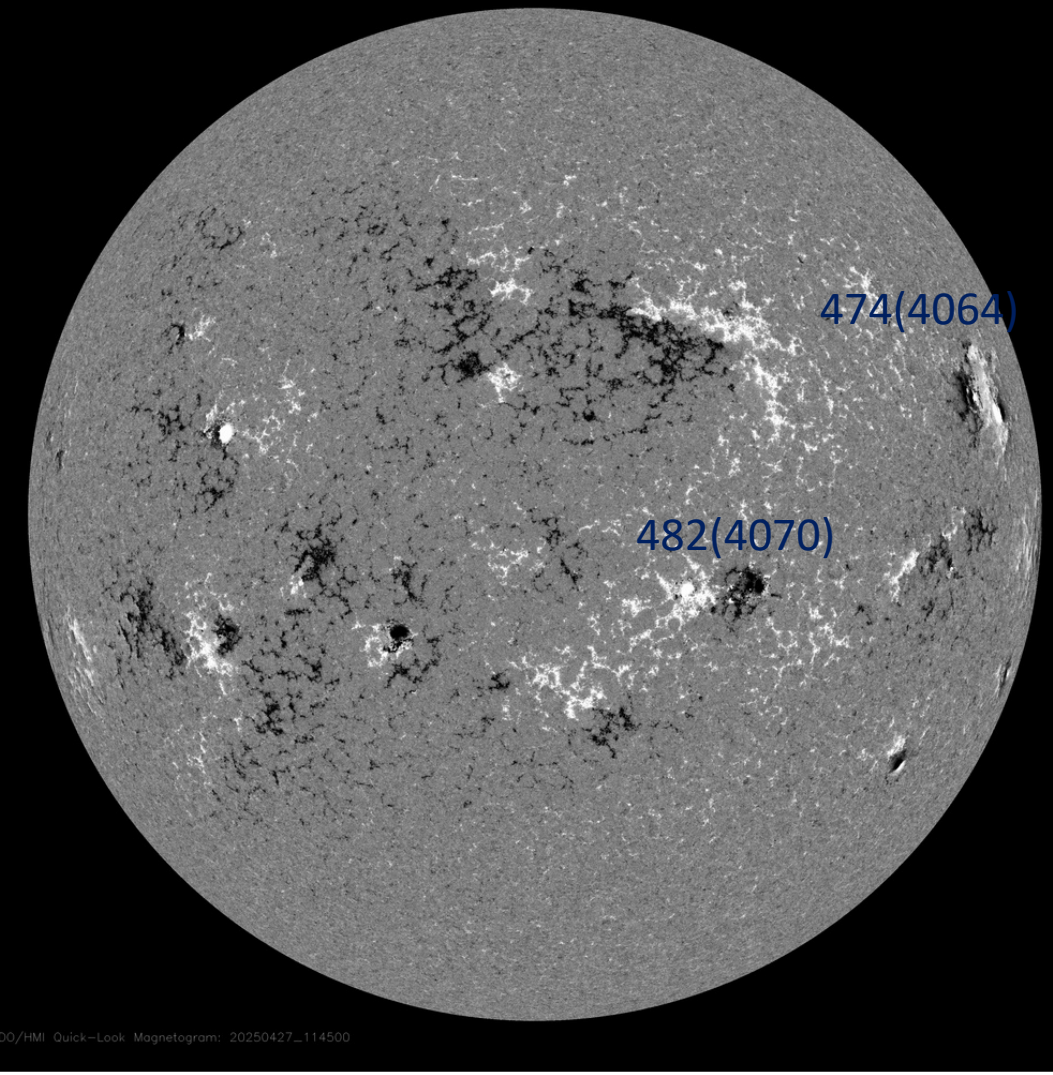


Solar active regions

SDO/HMI White Light 2025-04-27

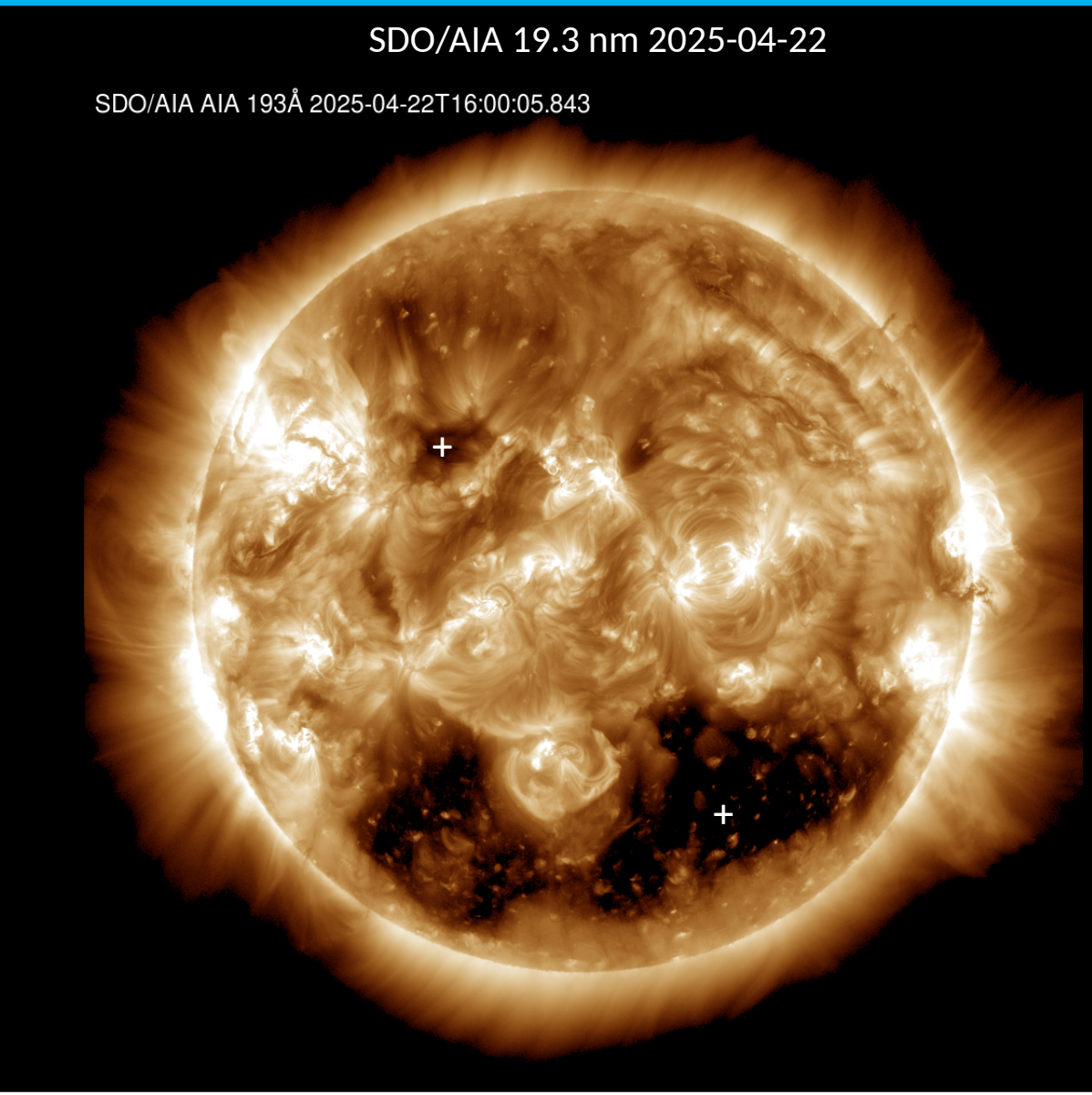


SDO/HMI Magnetogram 2025-04-27

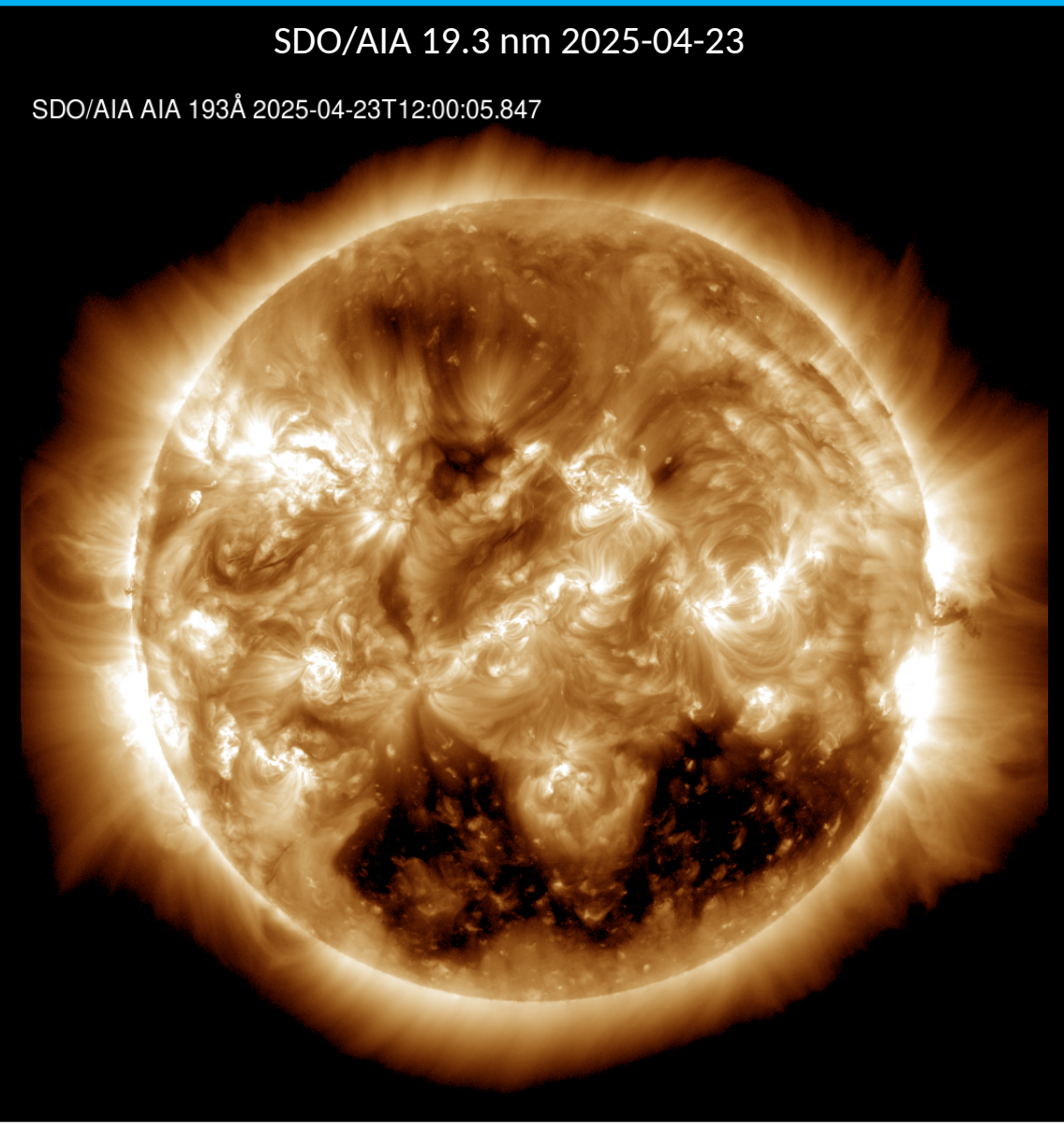


Coronal holes

SDO/AIA 19.3 nm 2025-04-22

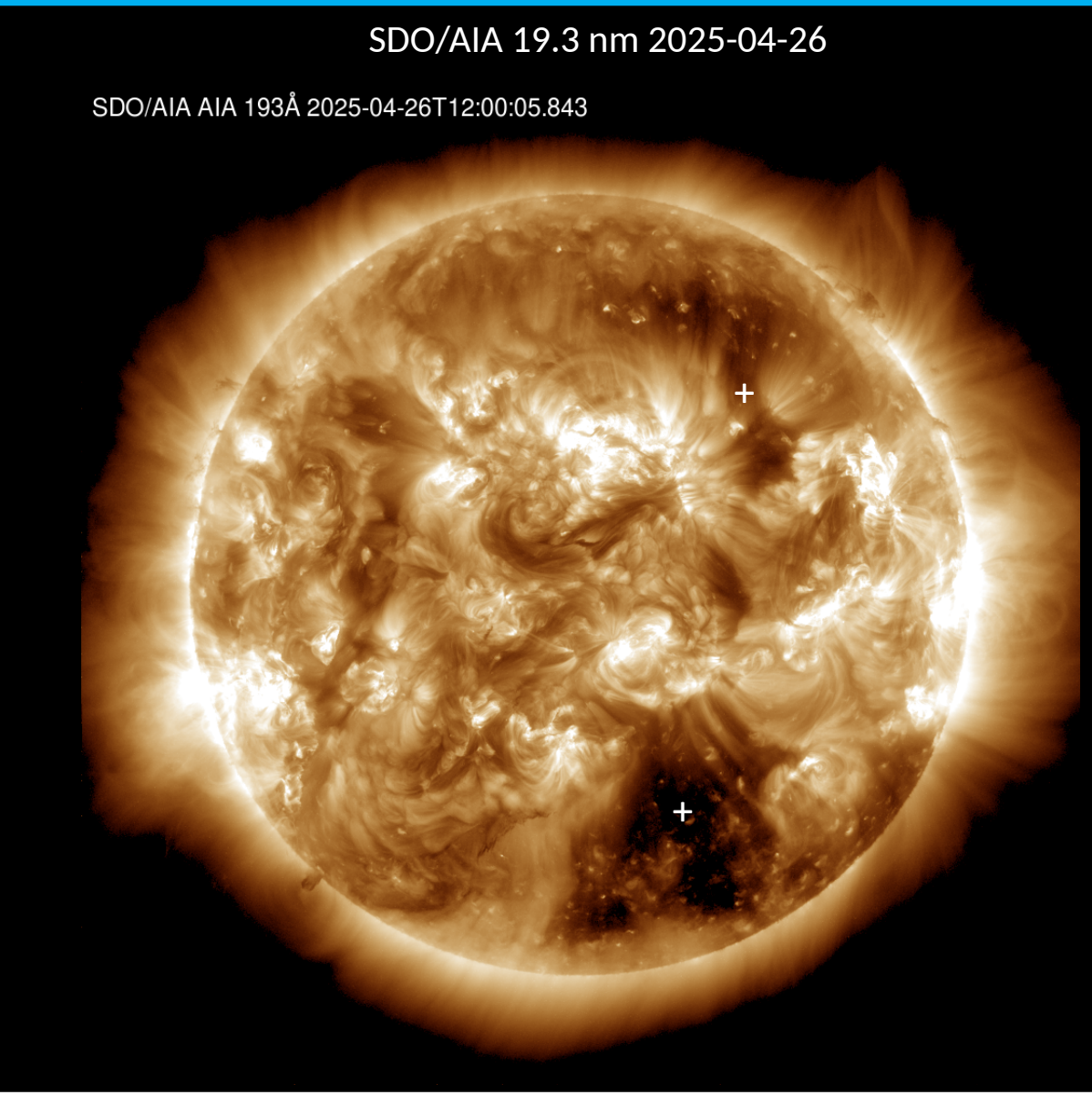


SDO/AIA 19.3 nm 2025-04-23

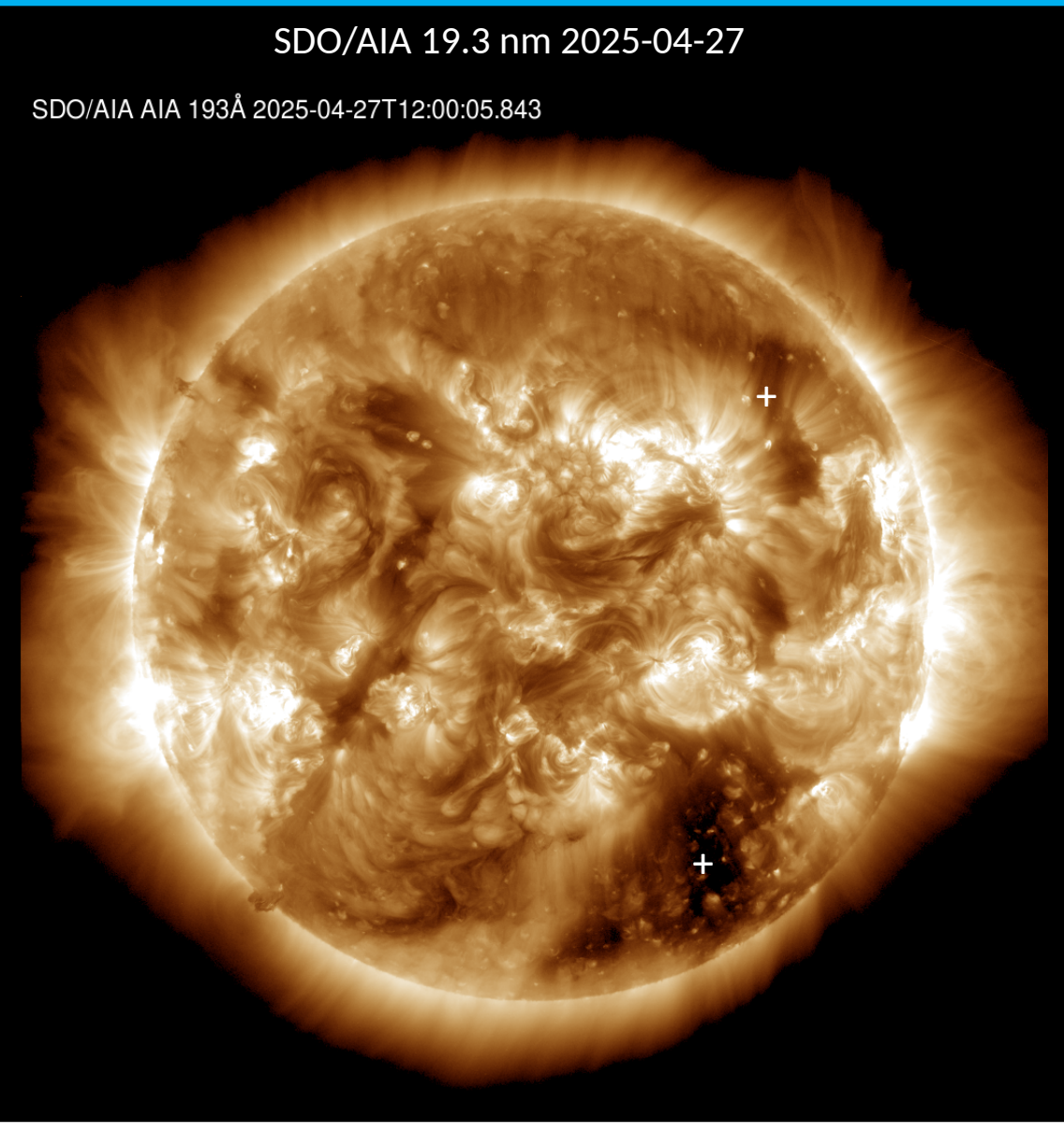


Coronal holes

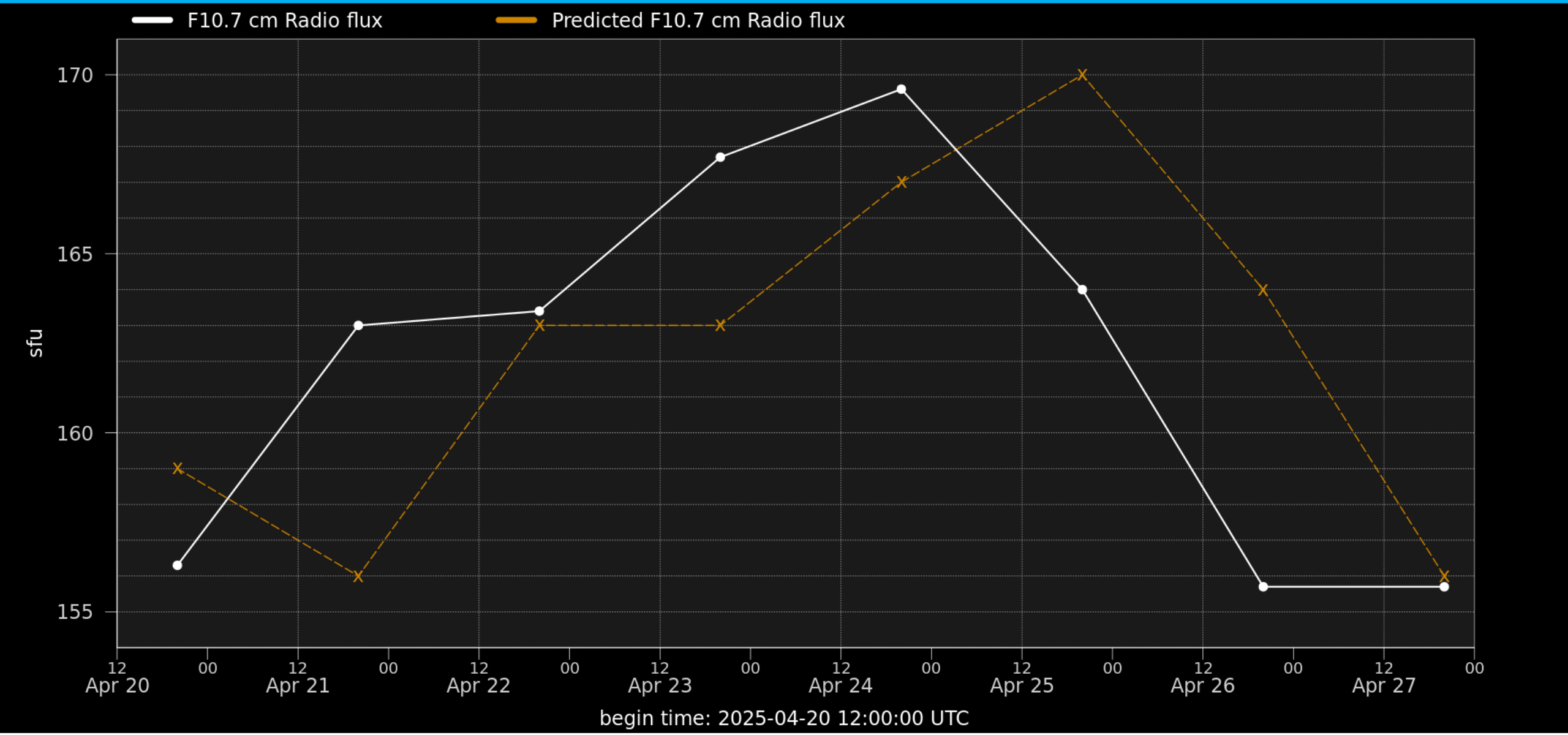
SDO/AIA 19.3 nm 2025-04-26



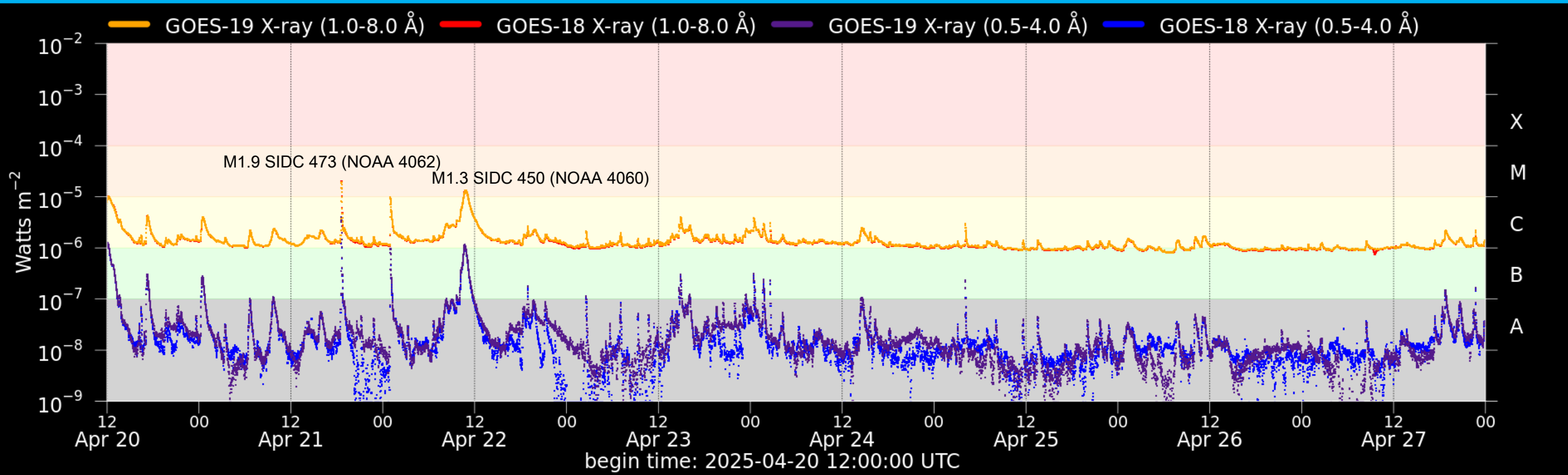
SDO/AIA 19.3 nm 2025-04-27



Solar F10.7cm radio flux



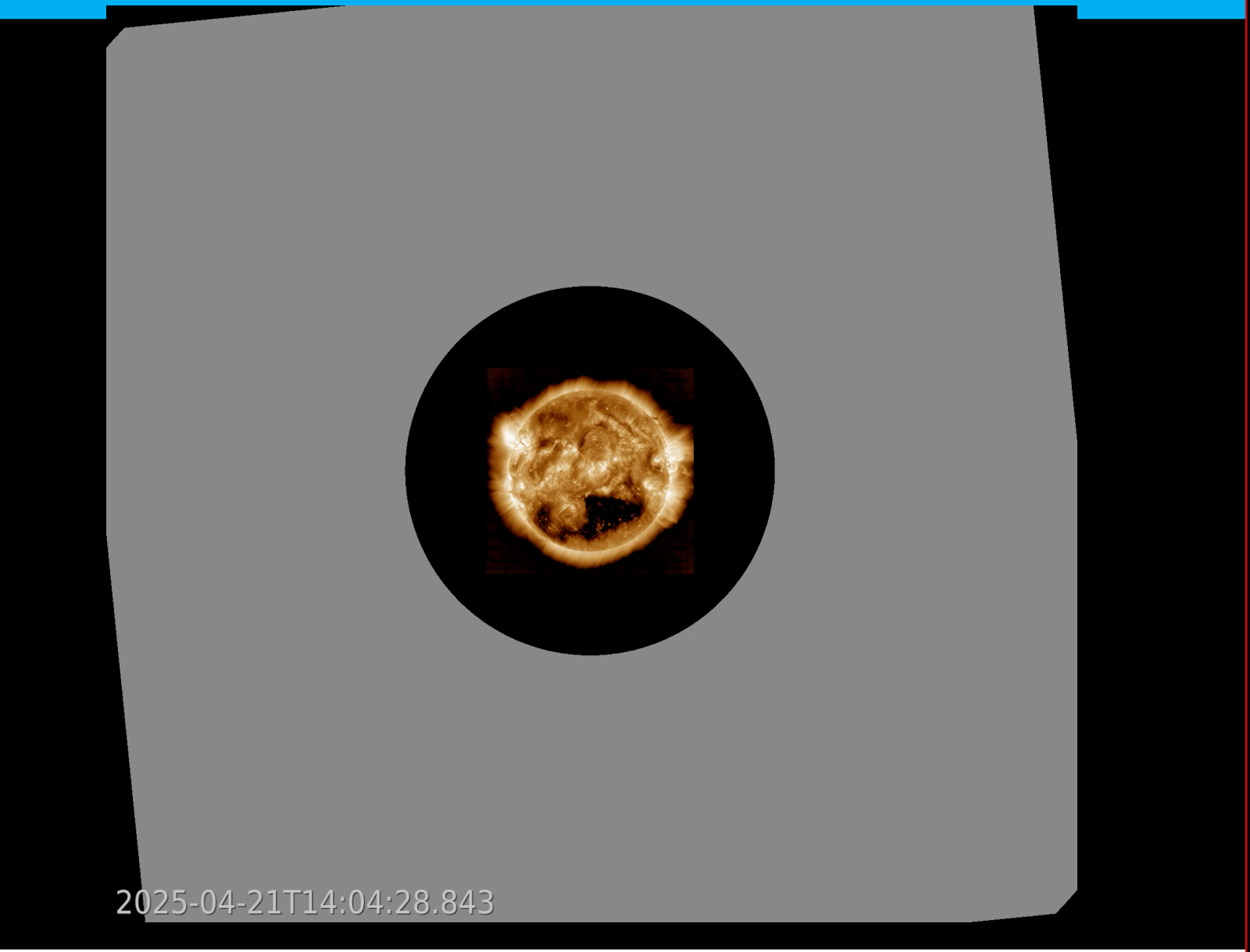
Flaring activity

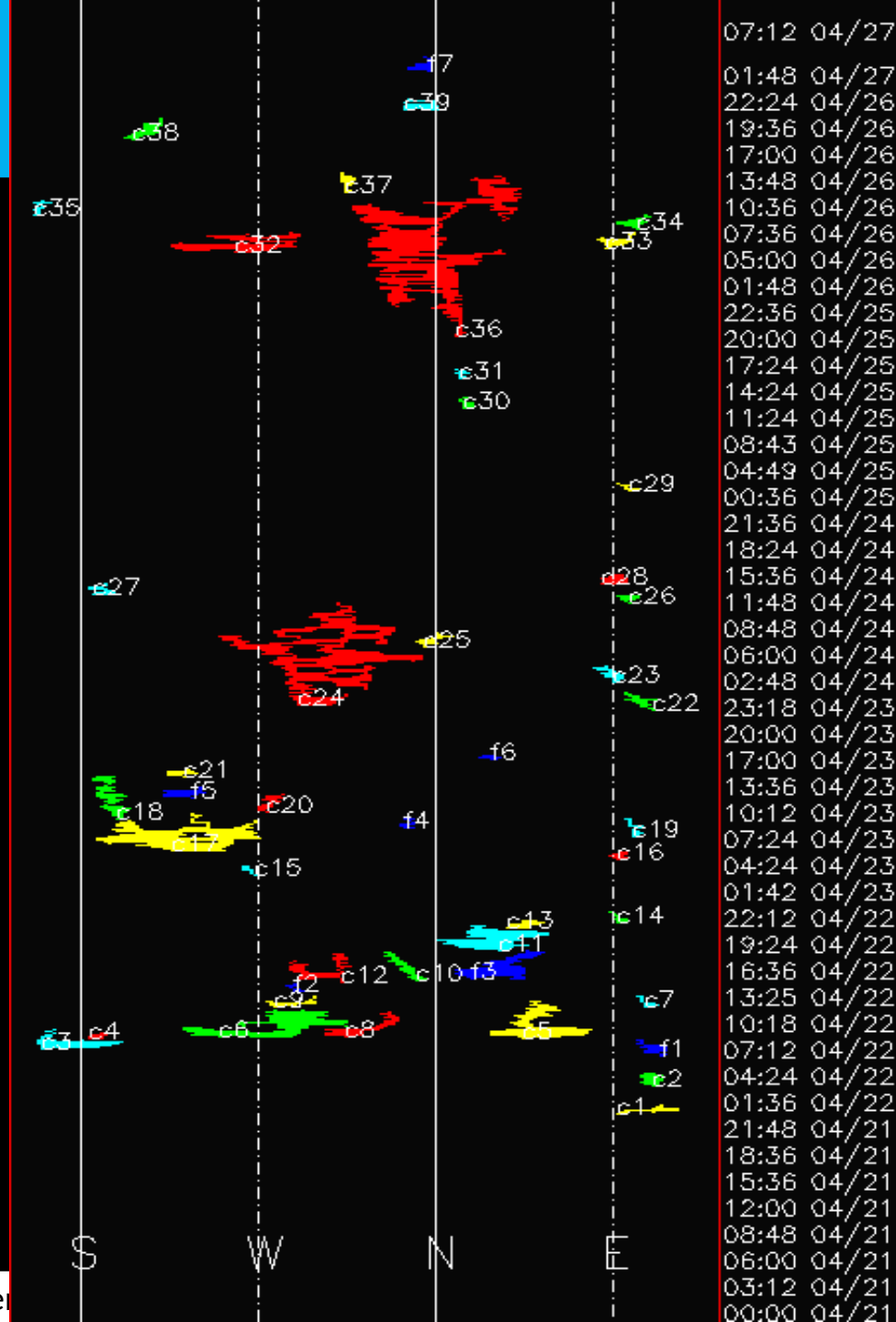


Probabilities (%) and occurrences (#) of C/M/X-flares daily, from noon to noon:

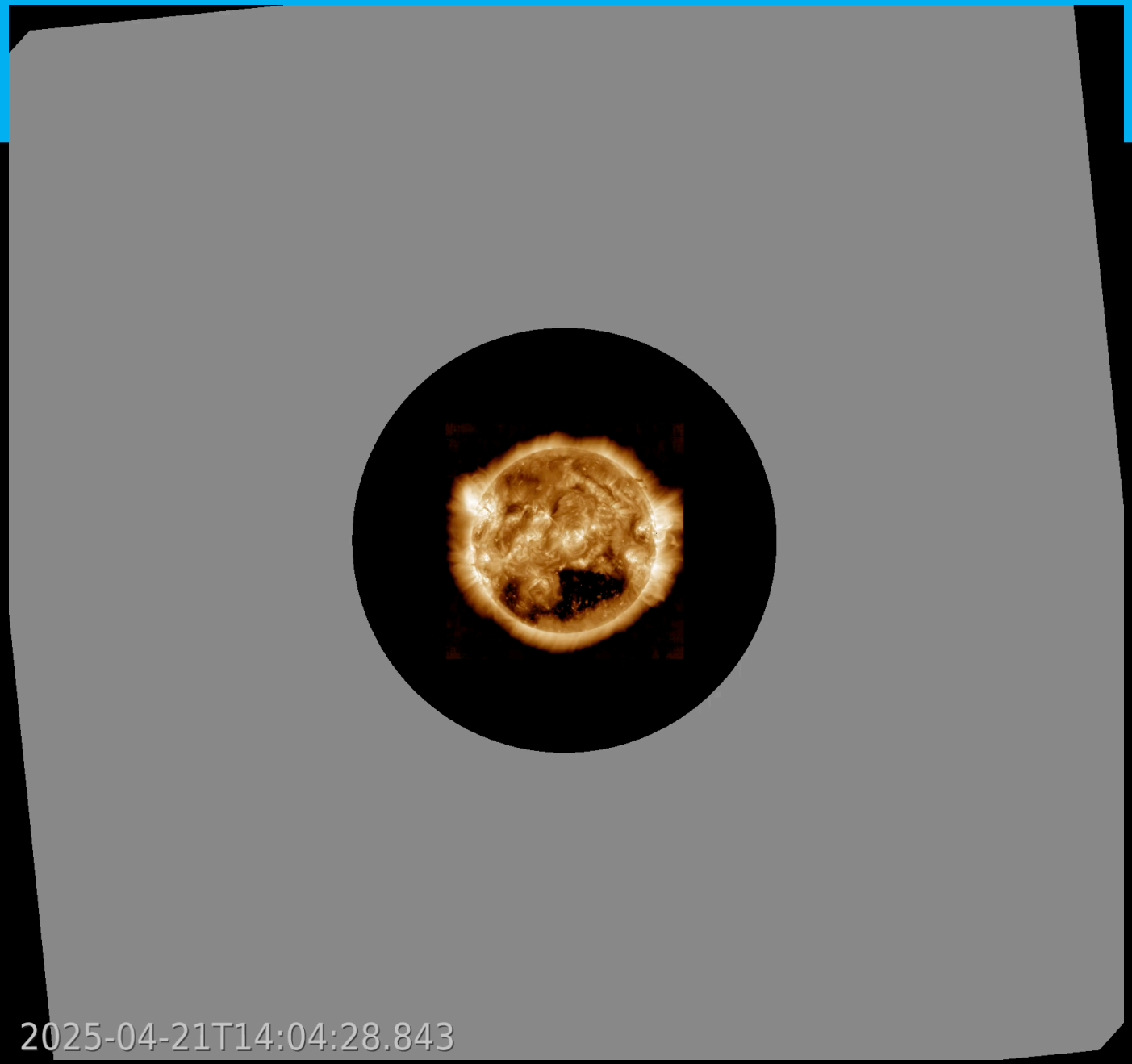
Issue date	2025-04-20	2025-04-21	2025-04-22	2025-04-23	2025-04-24	2025-04-25	2025-04-26	2025-04-27
Probability (%)	99|69|10	96|39|01	99|70|10	99|40|02	99|40|05	99|33|10	99|39|06	90|25|01
Observed (#)	02|01|00	01|01|00	02|00|00	04|00|00	01|00|00	00|00|00	00|00|00	01|00|00

Coronal Mass Ejections

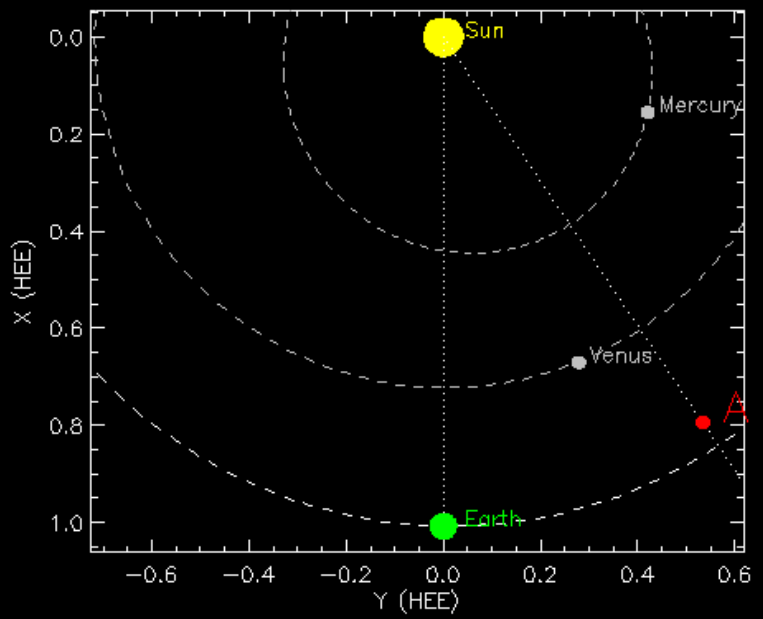


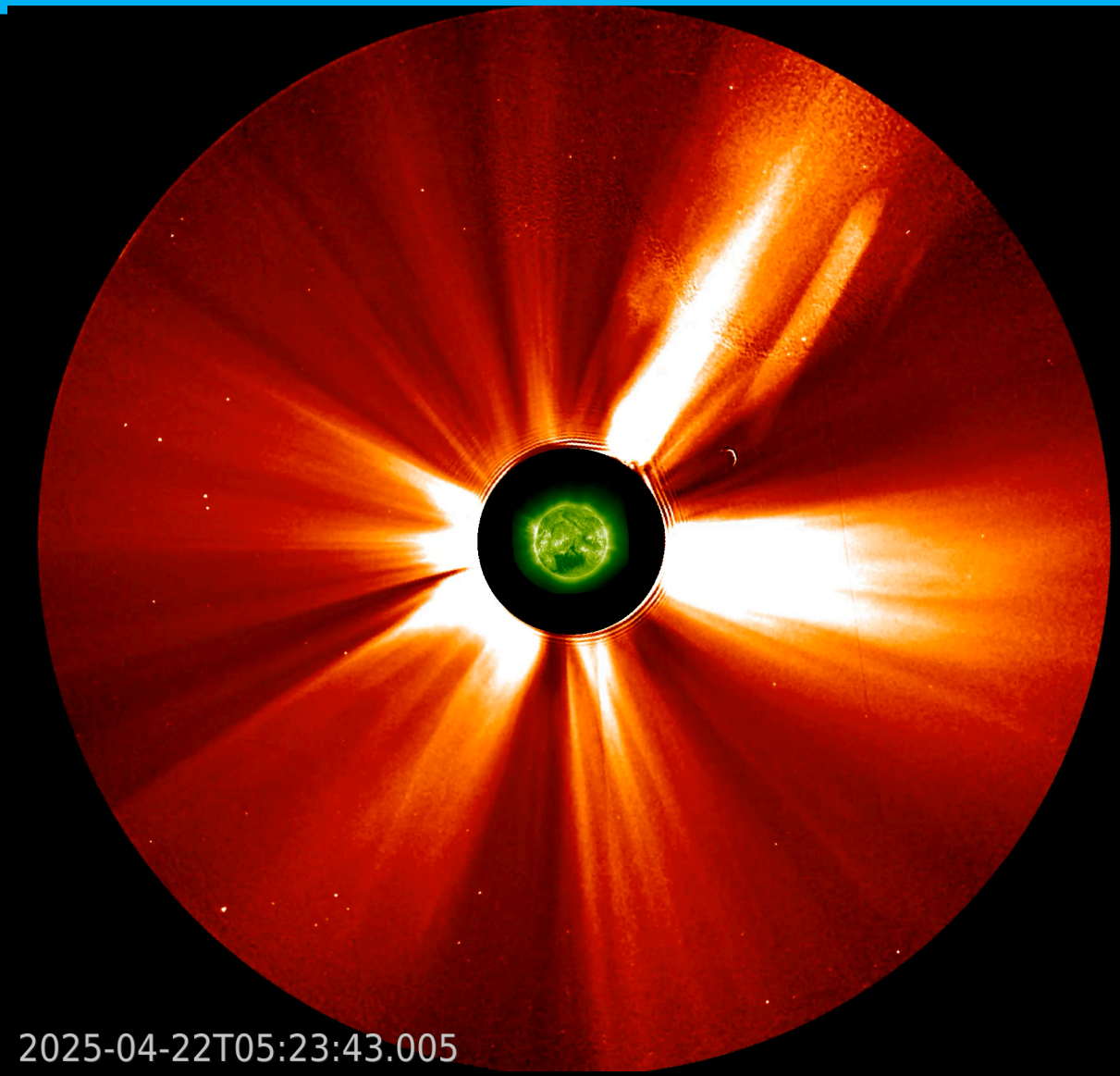


CME 22/4

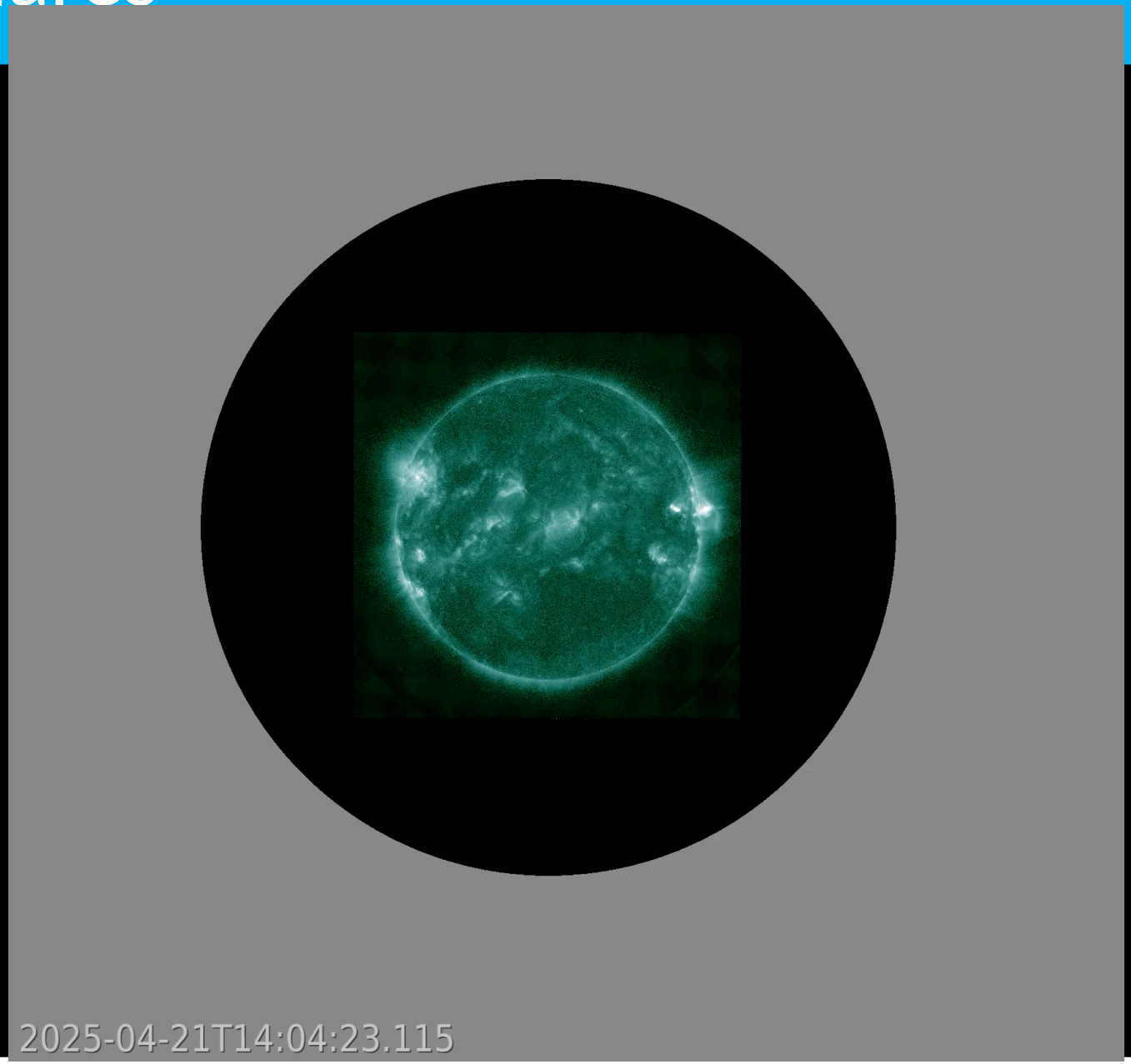


CME 22/4 – STEREO-A view





CME 22/4 – Flares



Solar Wind and

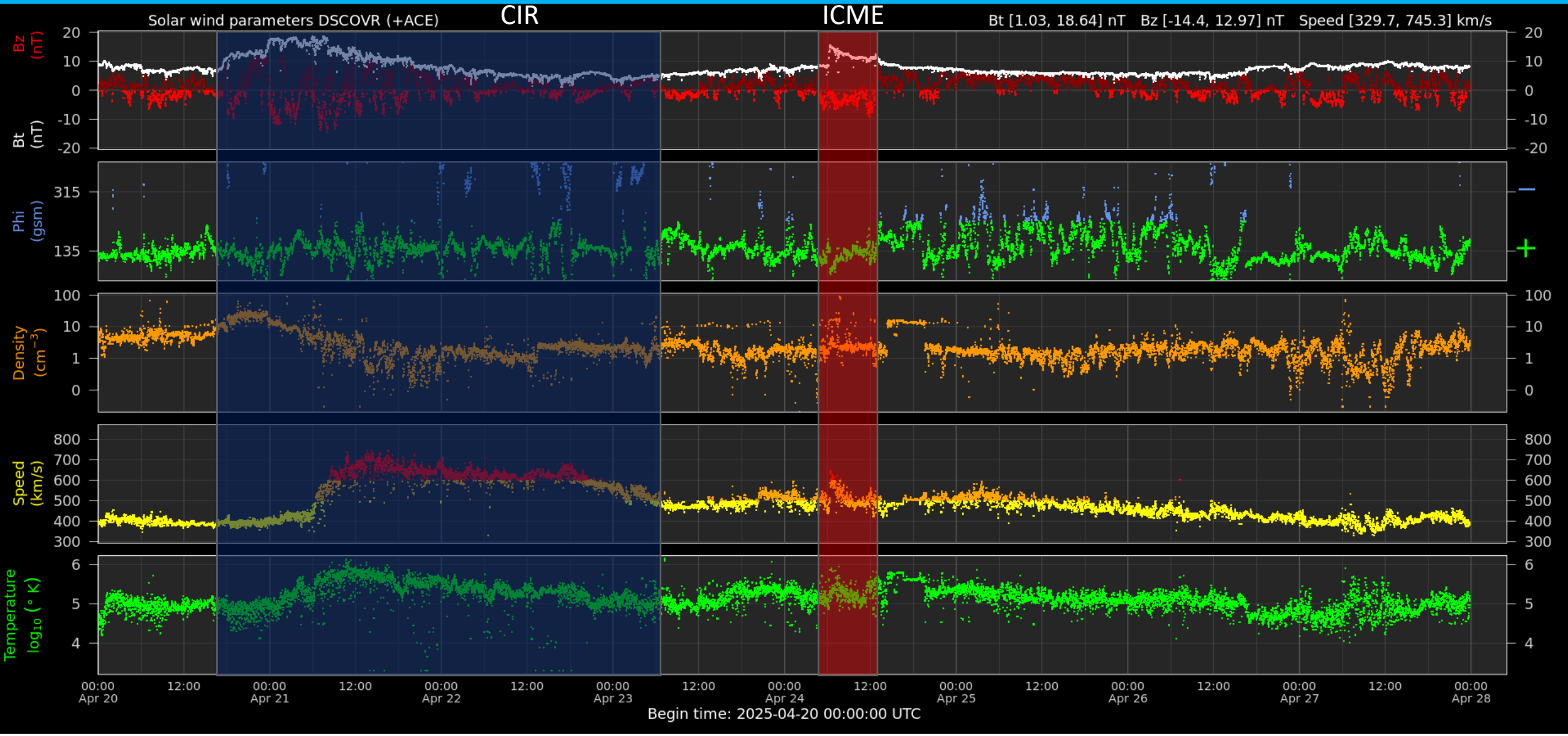
Geomagnetic Activity



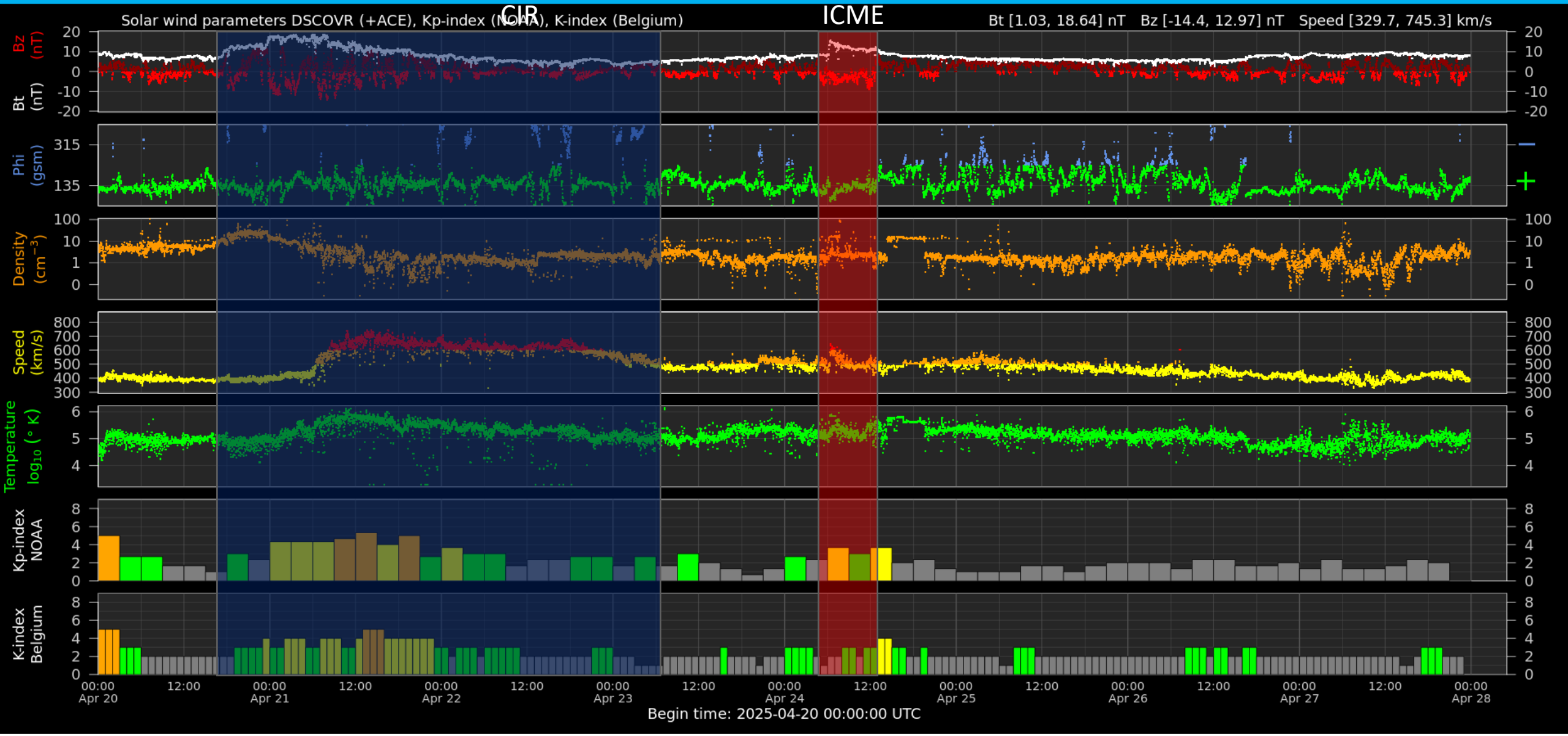
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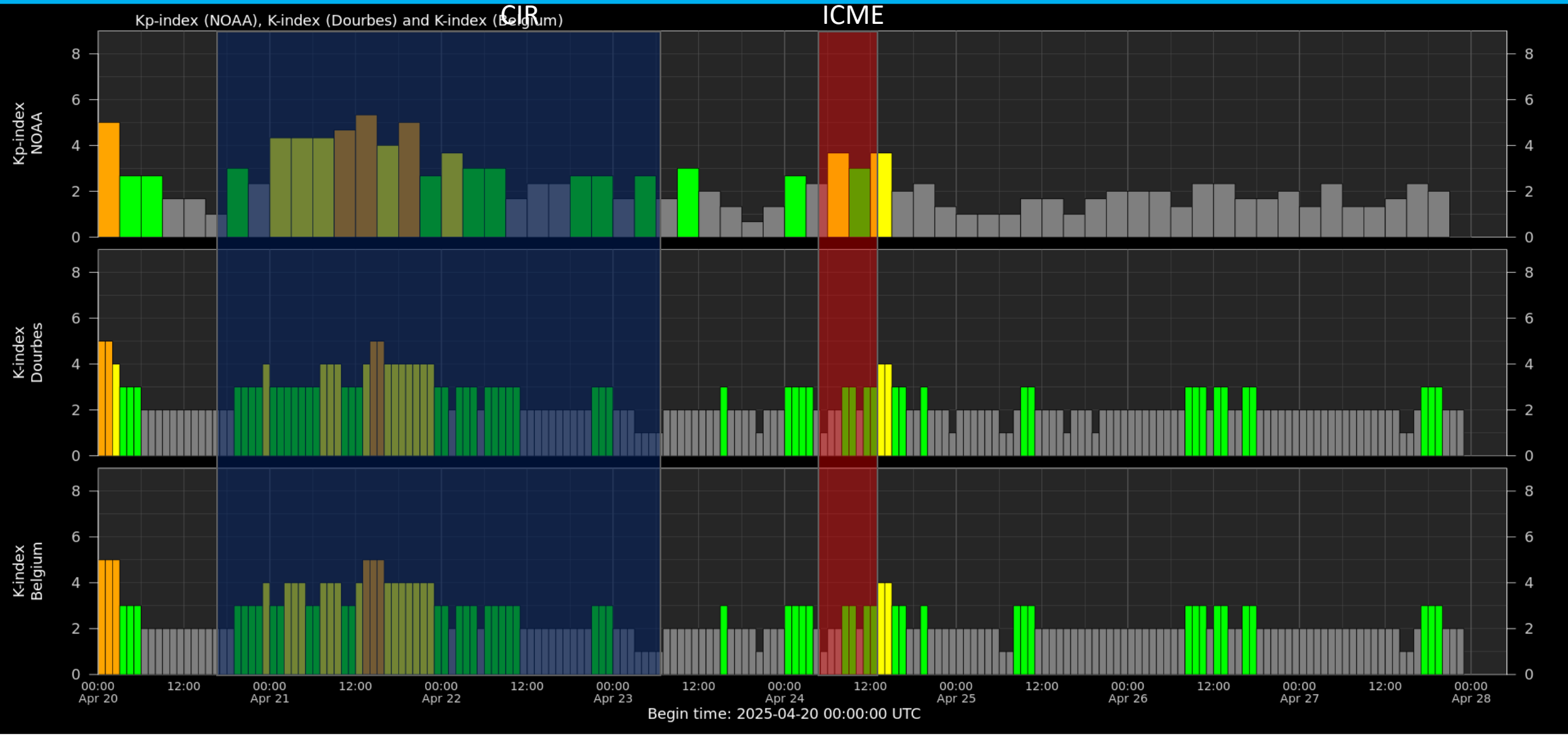
Solar wind parameters



Solar wind parameters & K-indices



Geomagnetic activity (K-indexes)



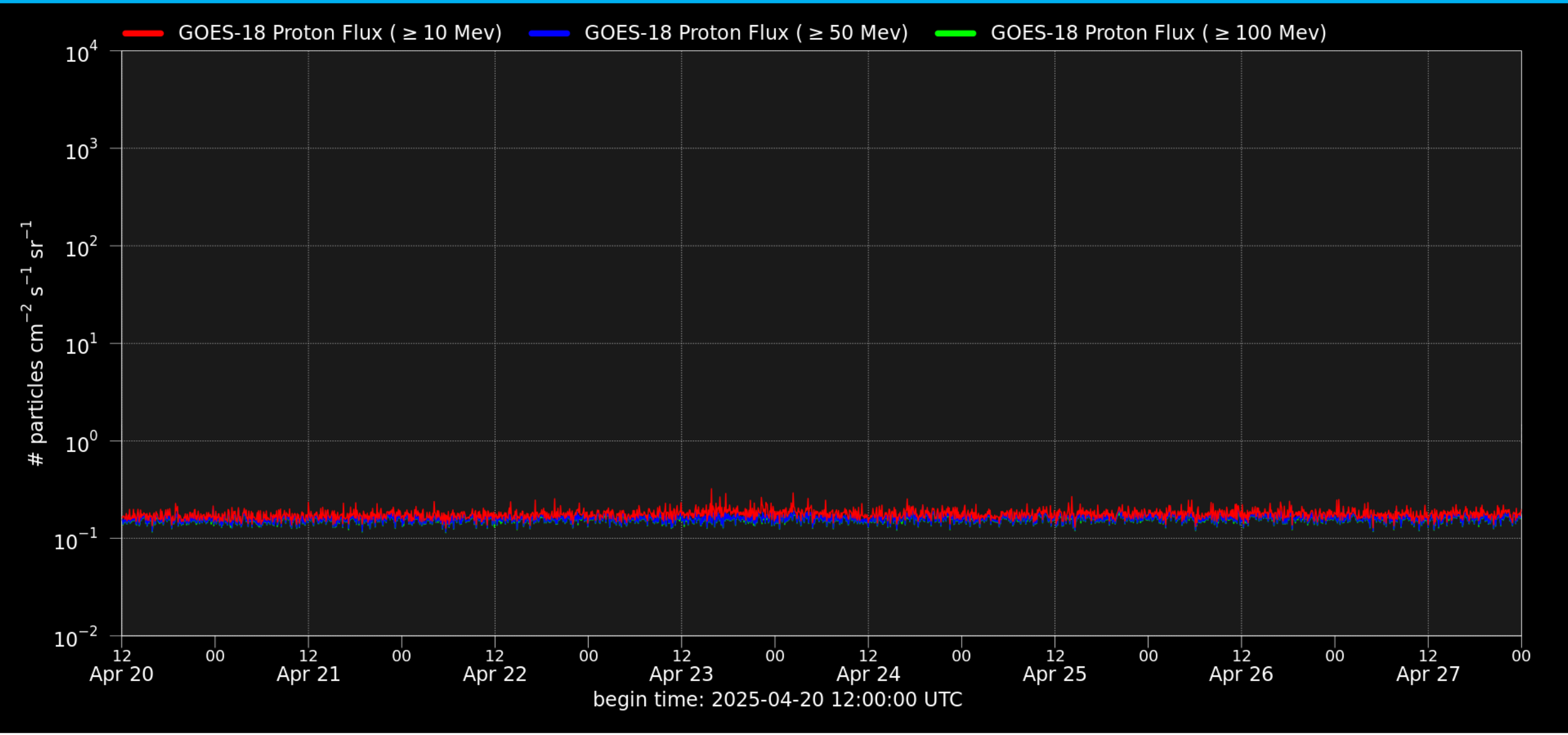
Energetic Particles



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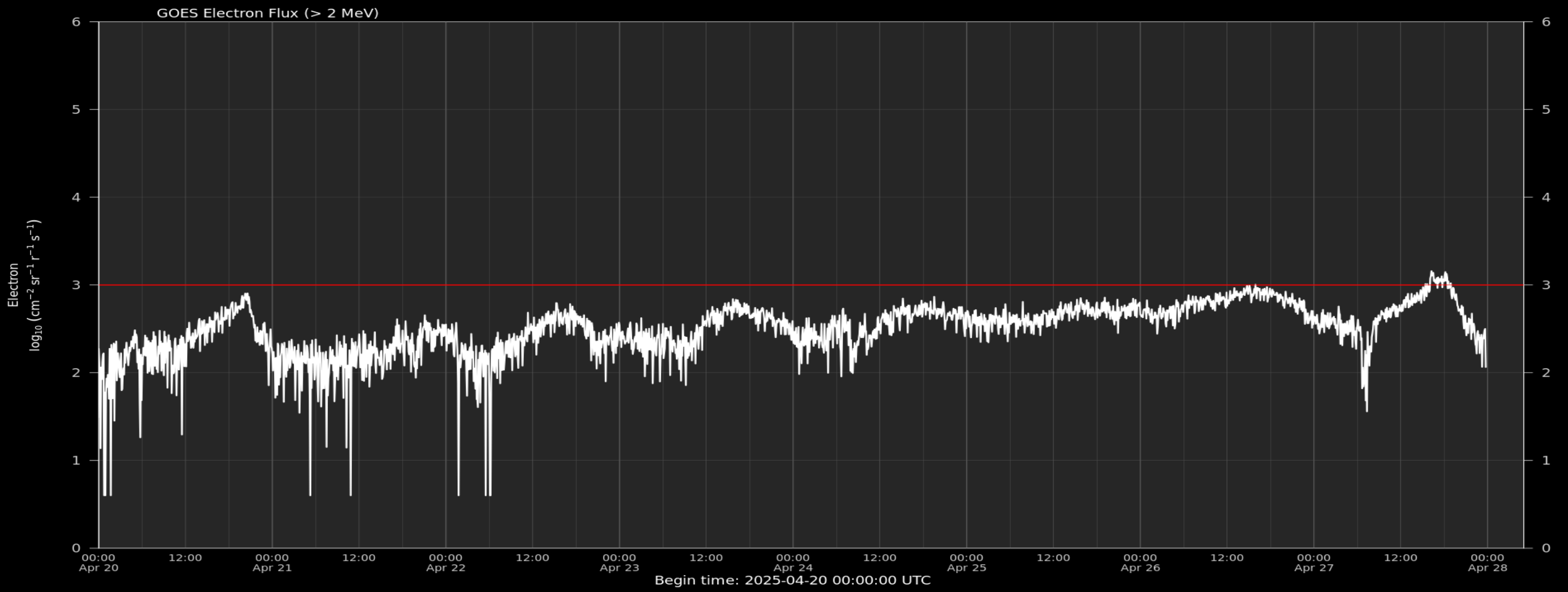
Solar proton flux



Electron flux at GEO

www.stce.be/educational/classification#electrons

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

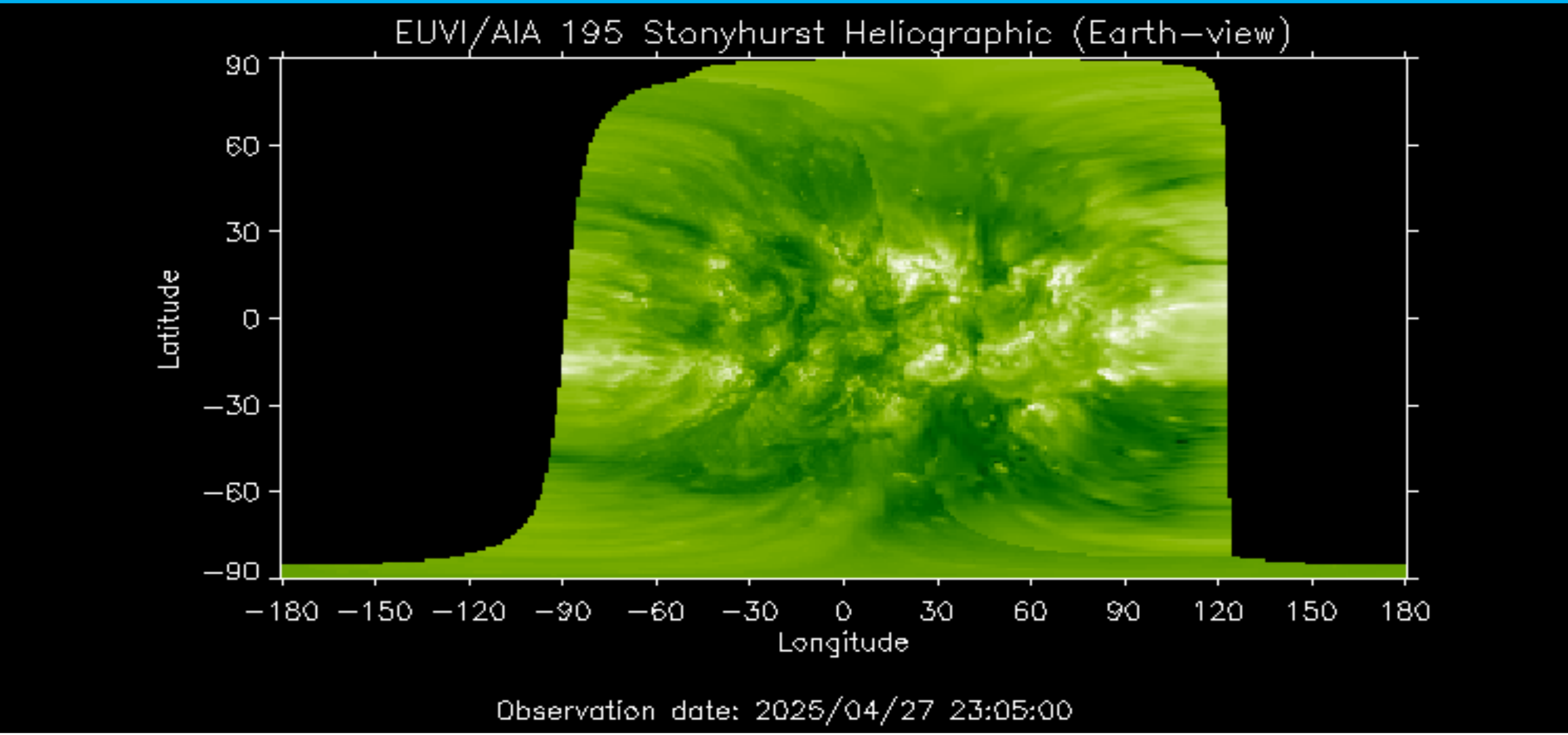


Outlook

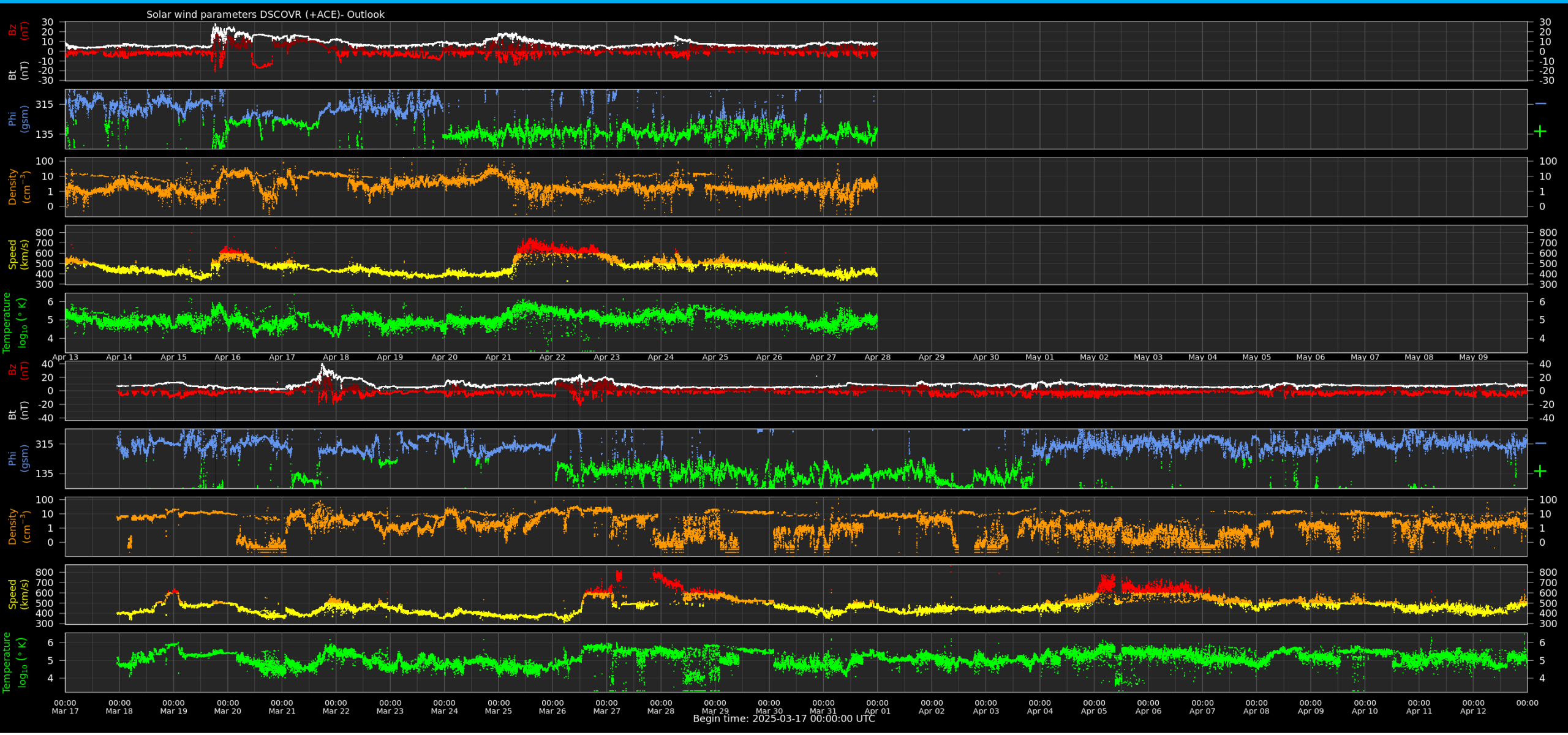
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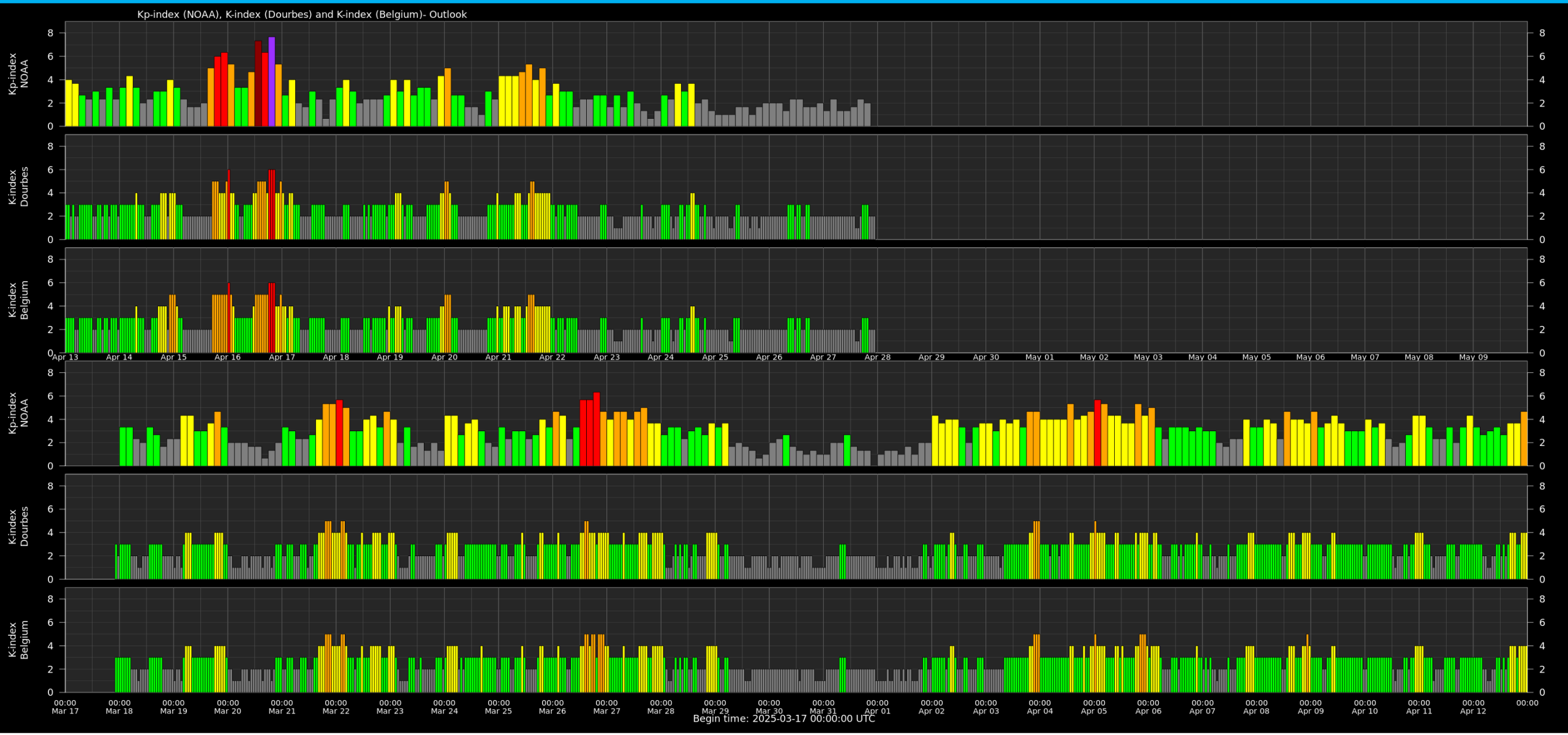
Outlook: Solar activity



Outlook: Solar wind parameters



Outlook: Geomagnetic activity



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Pecasus related events

Only ionospheric scintillation events

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