

SIDC Space Weather Briefing

13 April 2025-20 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 2025-04-13 12:00 to 2025-04-20 23:59

Active regions	11 / 4055: $\beta\gamma\delta$, 4060: $\beta\gamma$ & $\beta\delta$, 4062: $\beta\gamma$, 4064: $\beta\gamma$
Flares	# C-class flare: 26 # M-class flare: 9 # X-class flare: 0
Coronal Holes	2 positive, 1 negative
CMEs	No Earth-directed

Proton flux	Normal
Electron flux	Above the 1000 efu threshold / decreased later in the week

Solar wind and geomagnetic conditions

ICMEs	Two on April 15 (CME lift off 23:00 UTC on 12/04, partial halo 08:30 UTC on 13/04)
Solar wind conditions	B : 1.98 - 27.79 nT //Bz: -20.88 nT to 20.61 nT //Speed: 293.2 - 926.7km/s
Geomagnetic conditions	max K _{Bel} : 6.0, max K _p (NOAA): 7.67, Severe Storm conditions

Solar Activity

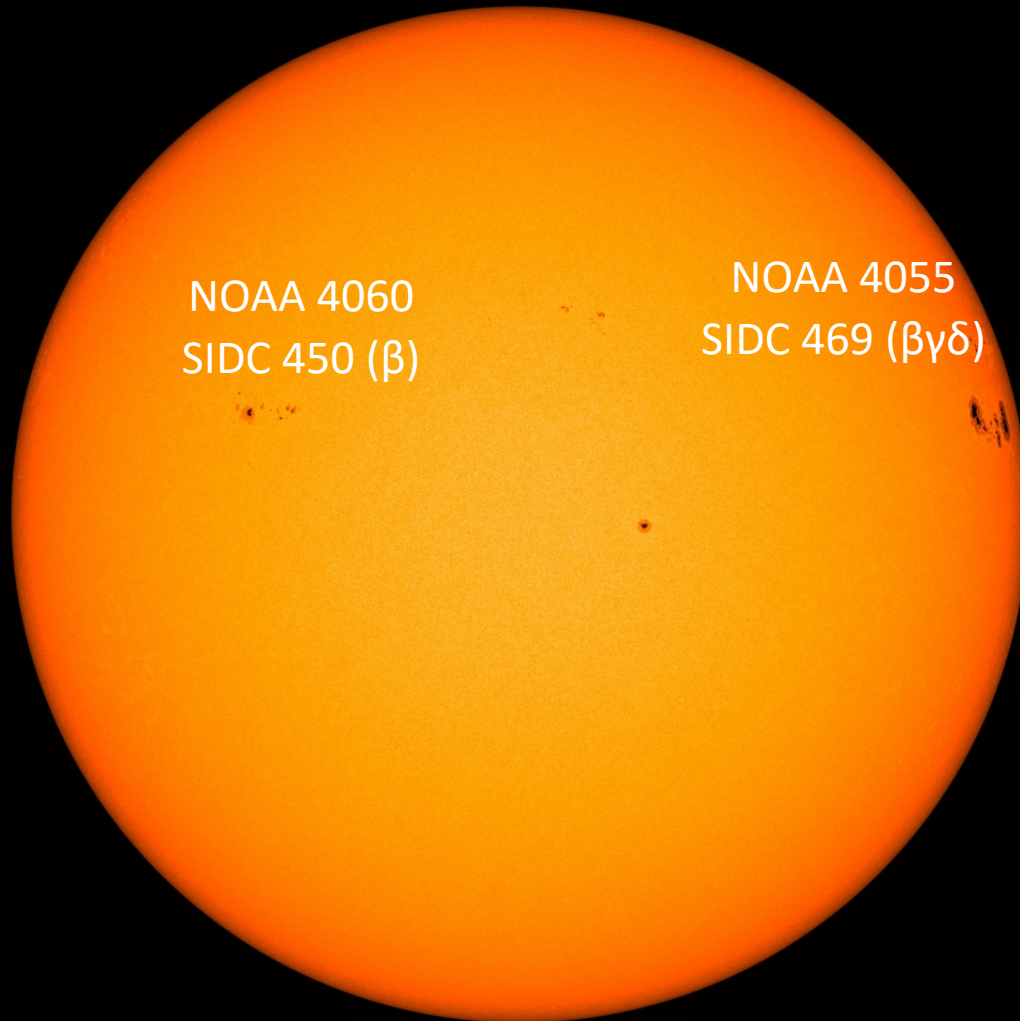


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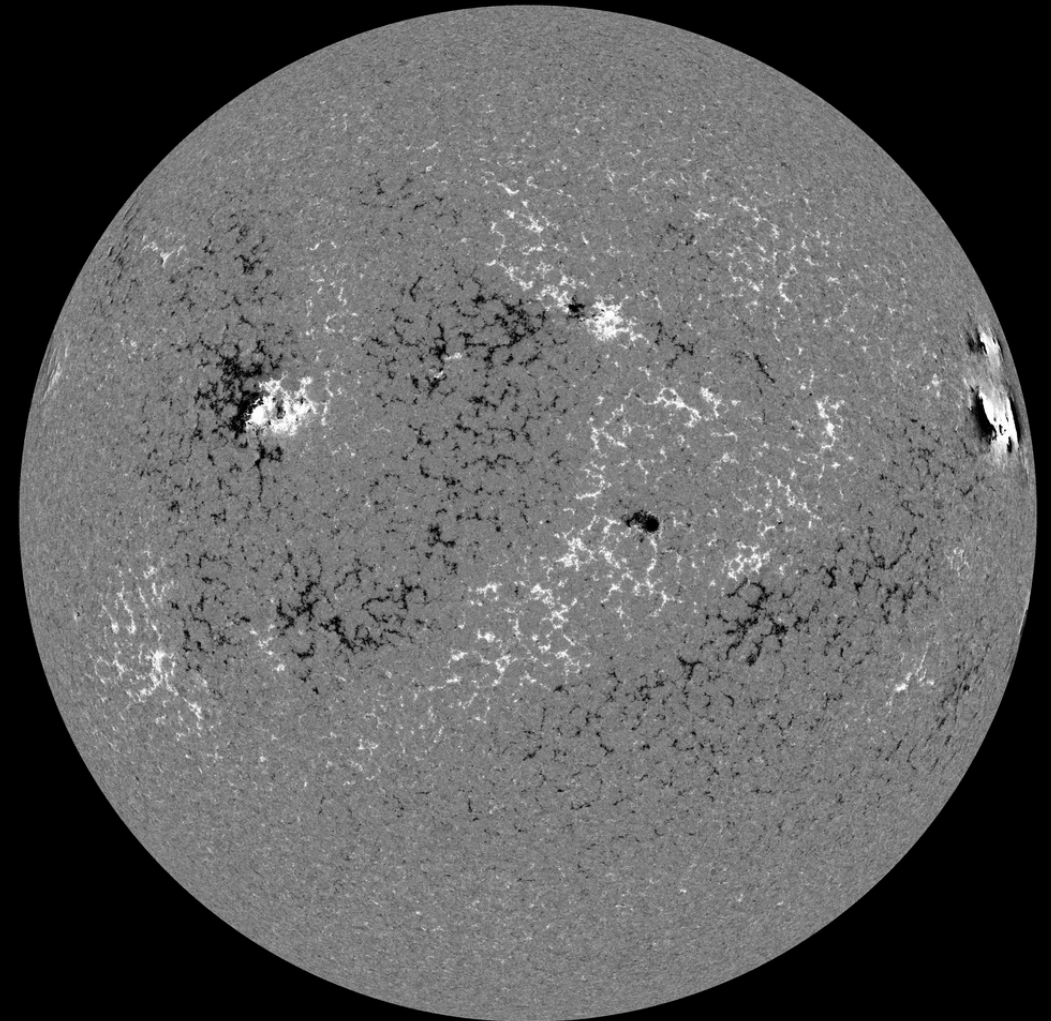
Solar active regions

SDO/HMI White Light 2025-04-13



SDO/HMI Quick-Look Continuum: 20250413_114500

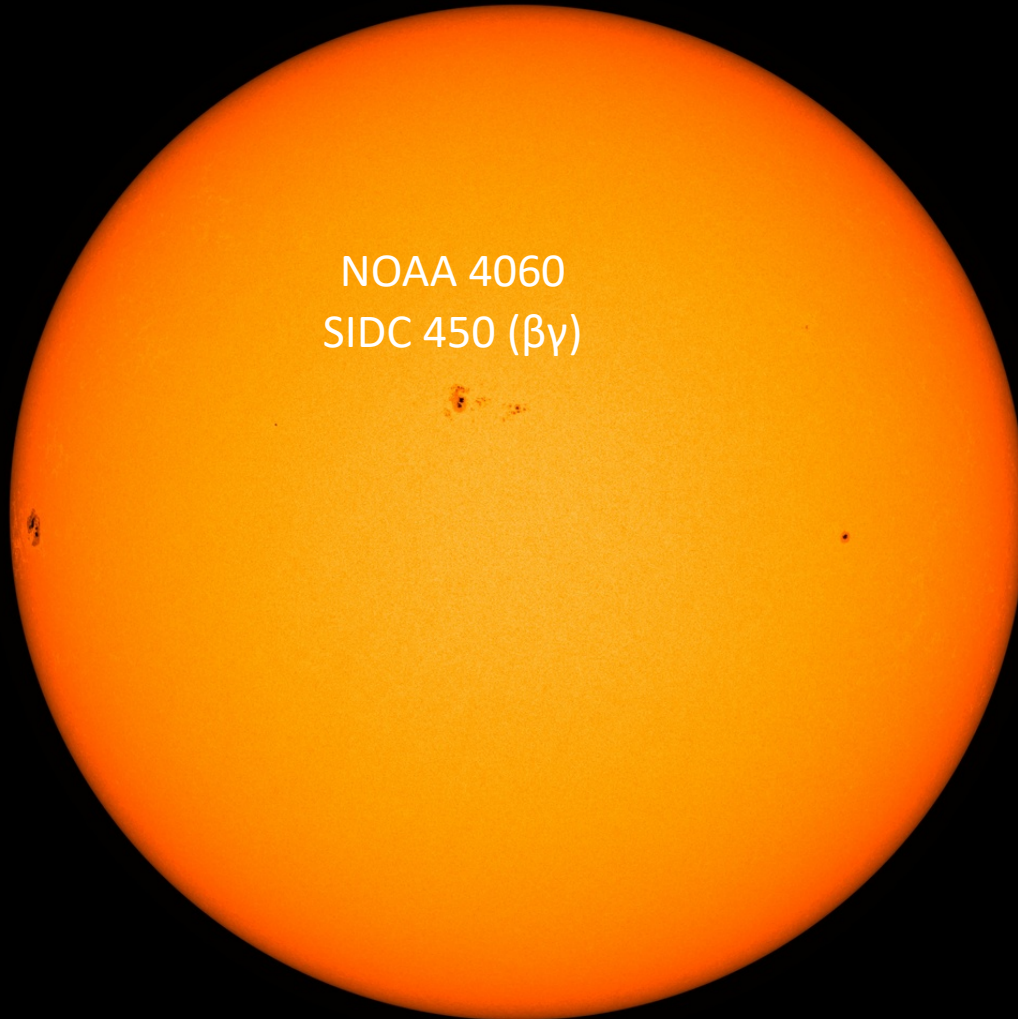
SDO/HMI Magnetogram 2025-04-13



SDO/HMI Quick-Look Magnetogram: 20250413_114500

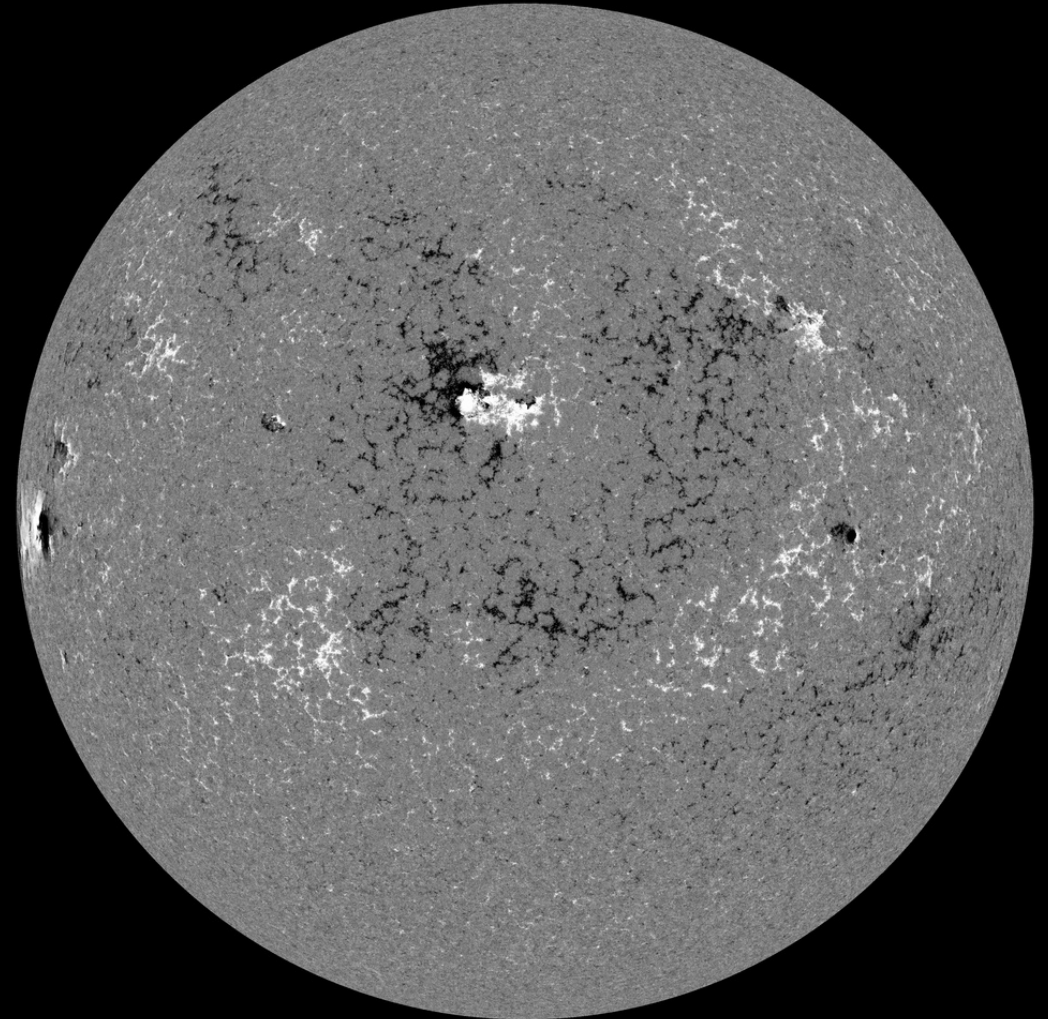
Solar active regions

SDO/HMI White Light 2025-04-15



SDO/HMI Quick-Look Continuum: 20250415_113000

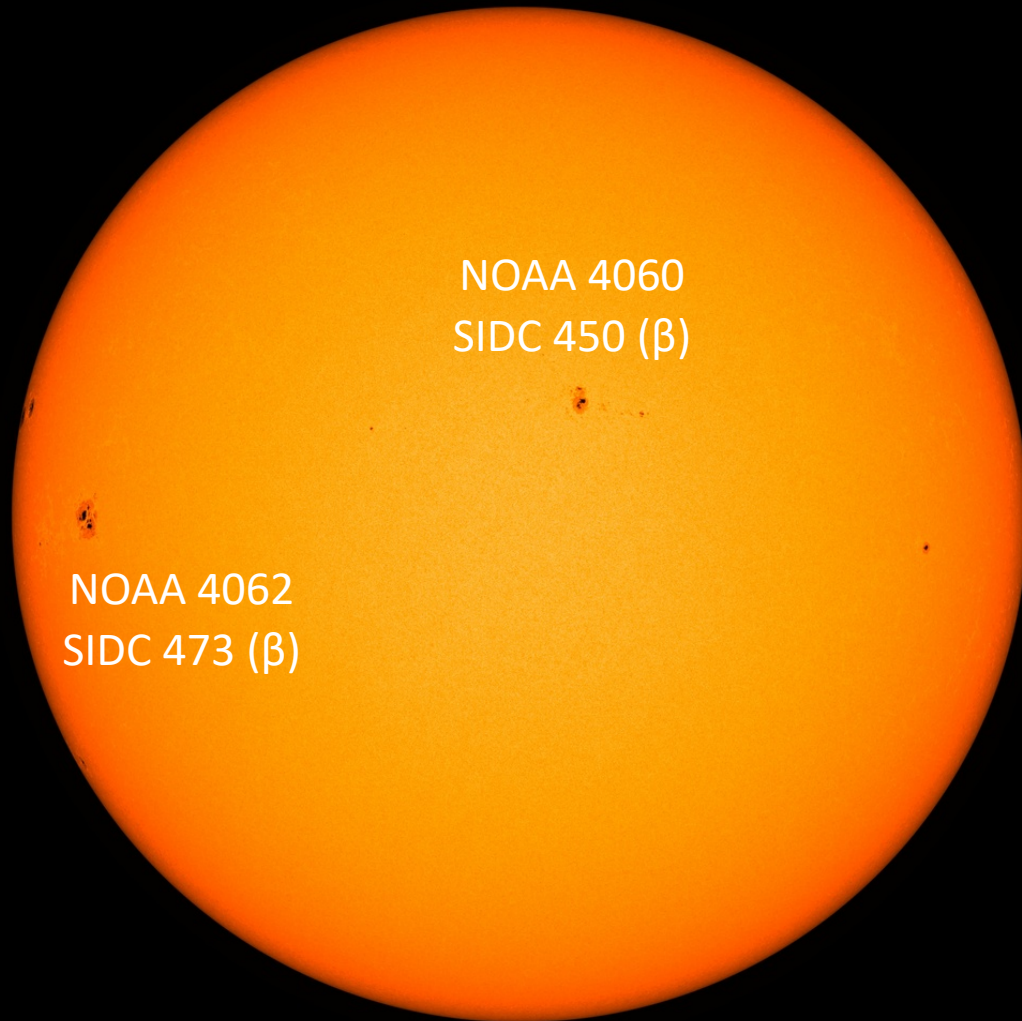
SDO/HMI Magnetogram 2025-04-15



SDO/HMI Quick-Look Magnetogram: 20250415_113000

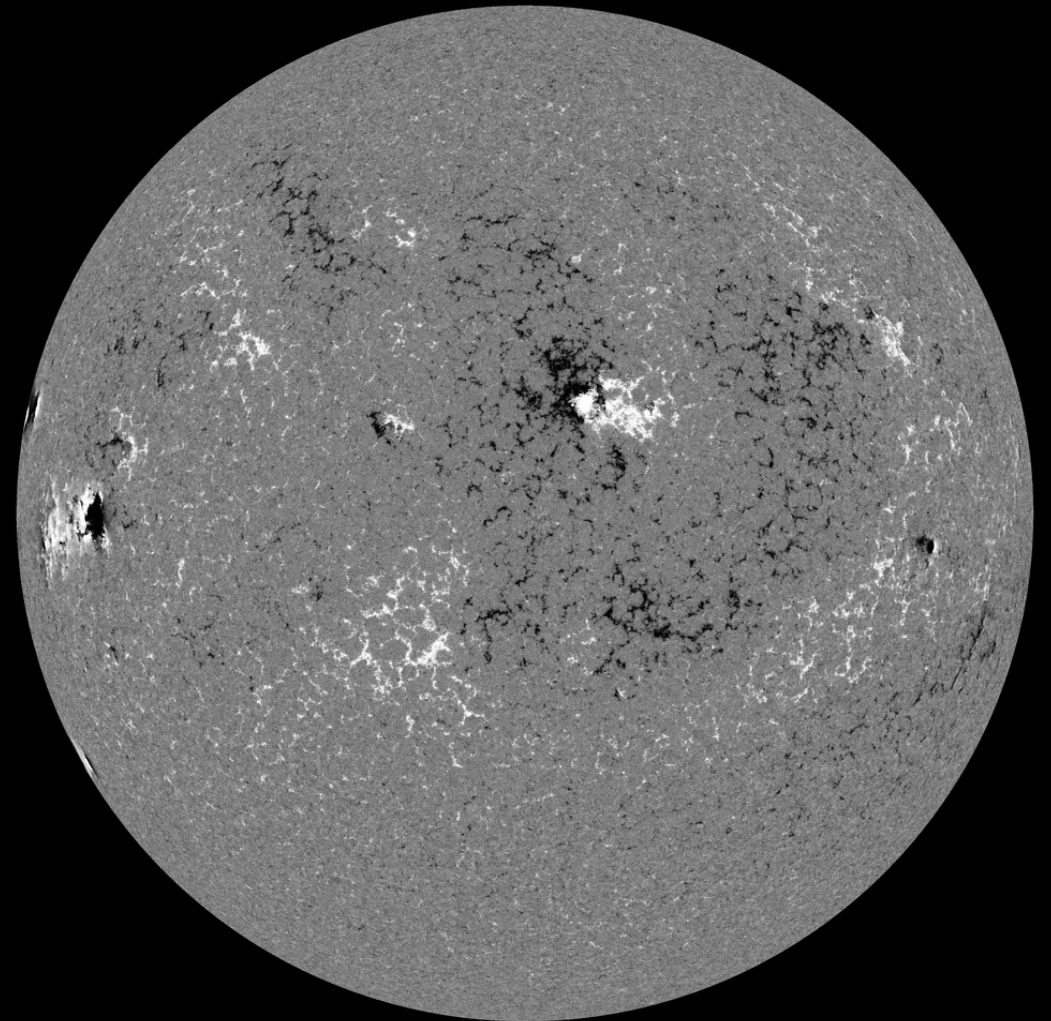
Solar active regions

SDO/HMI White Light 2025-04-16



SDO/HMI Quick-Look Continuum: 20250416_114500

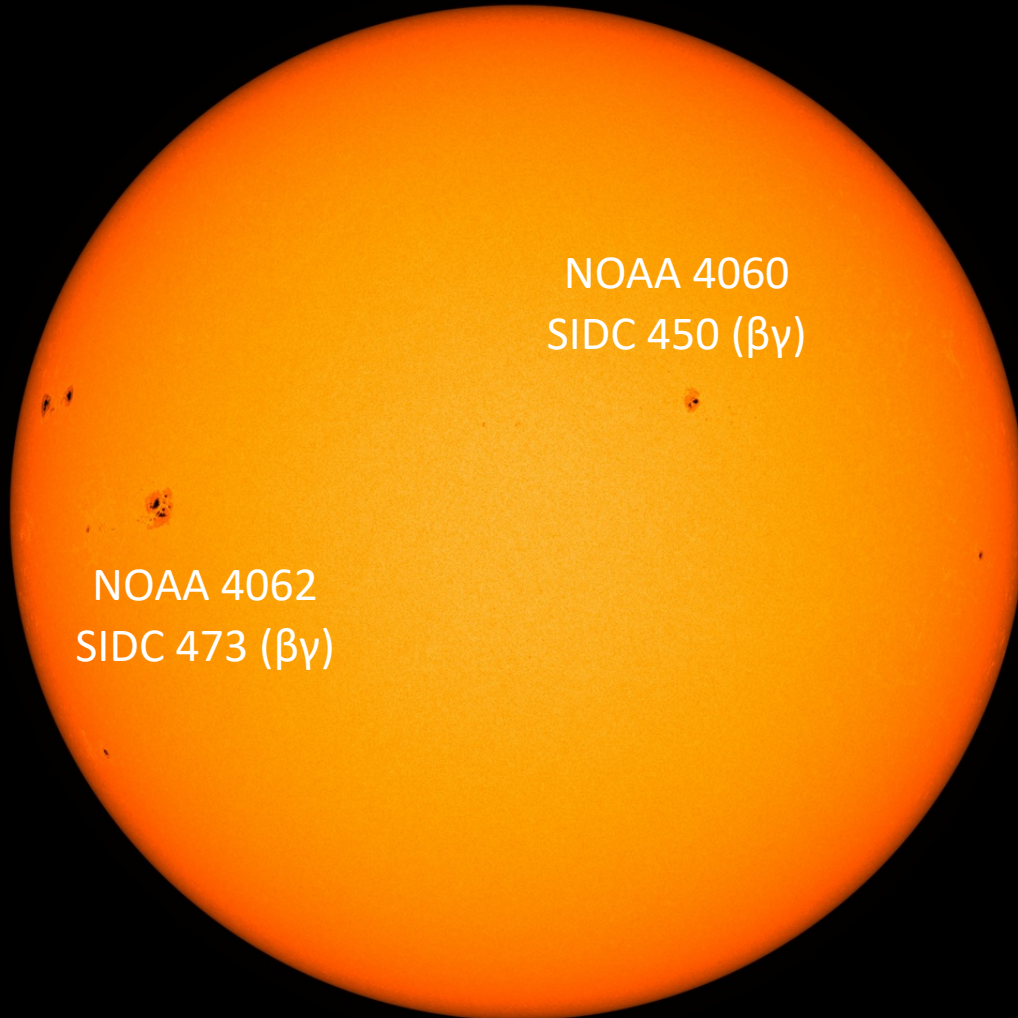
SDO/HMI Magnetogram 2025-04-16



SDO/HMI Quick-Look Magnetogram: 20250416_114500

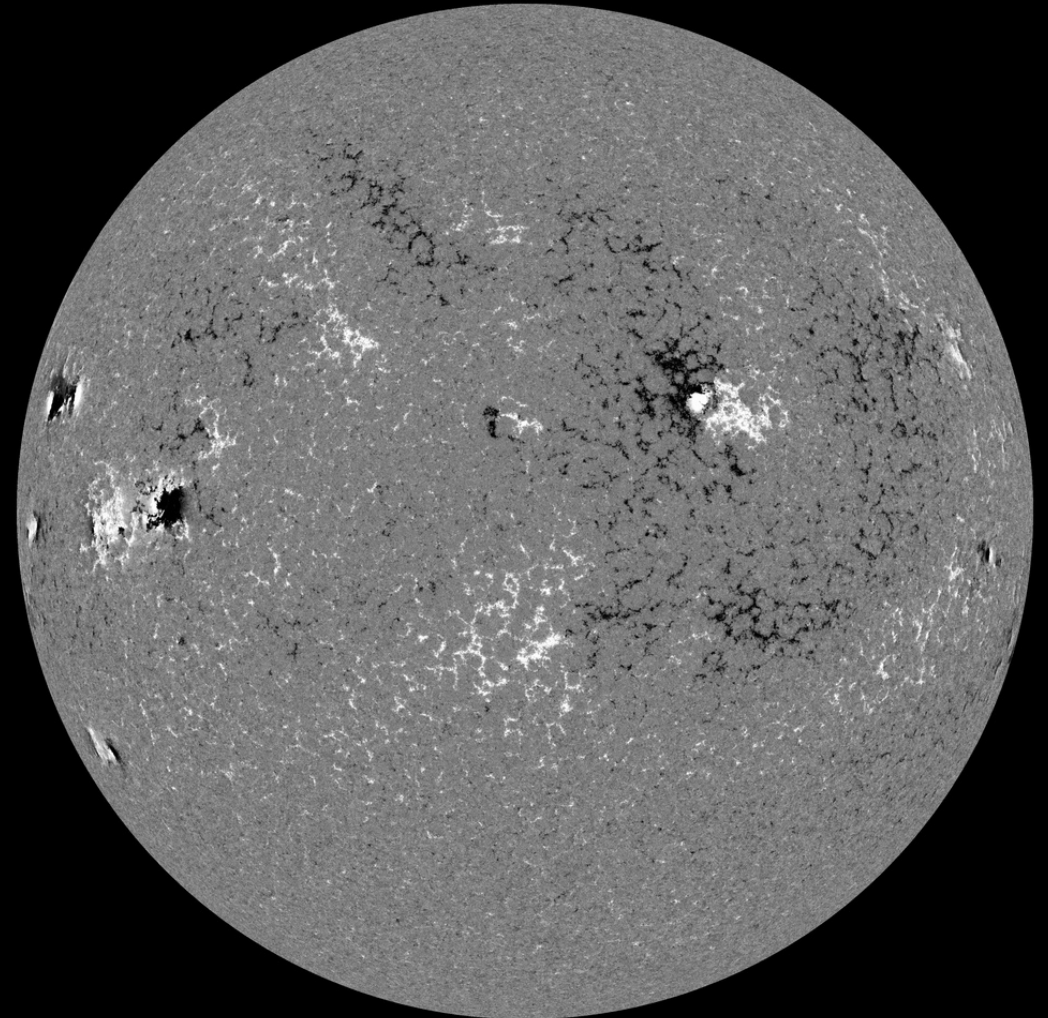
Solar active regions

SDO/HMI White Light 2025-04-17



SDO/HMI Quick-Look Continuum: 20250417_114500

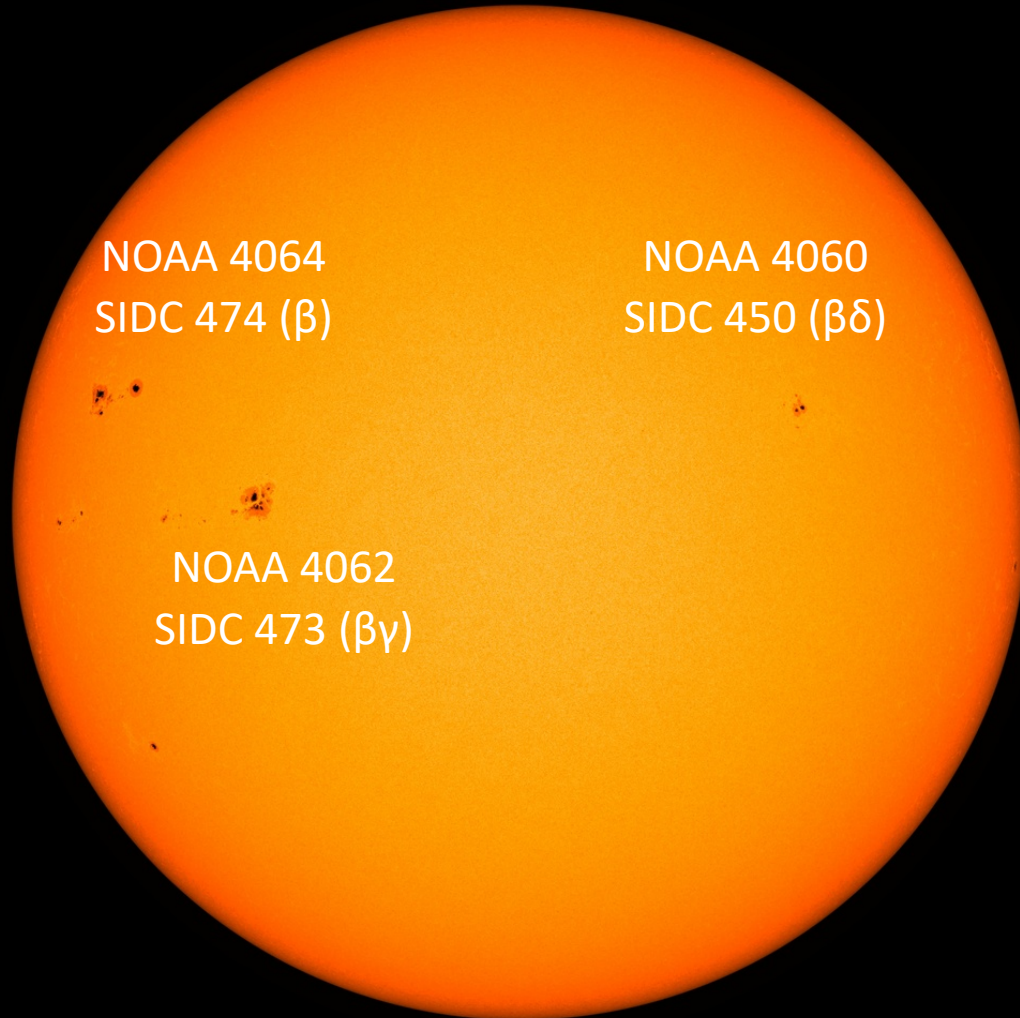
SDO/HMI Magnetogram 2025-04-17



SDO/HMI Quick-Look Magnetogram: 20250417_114500

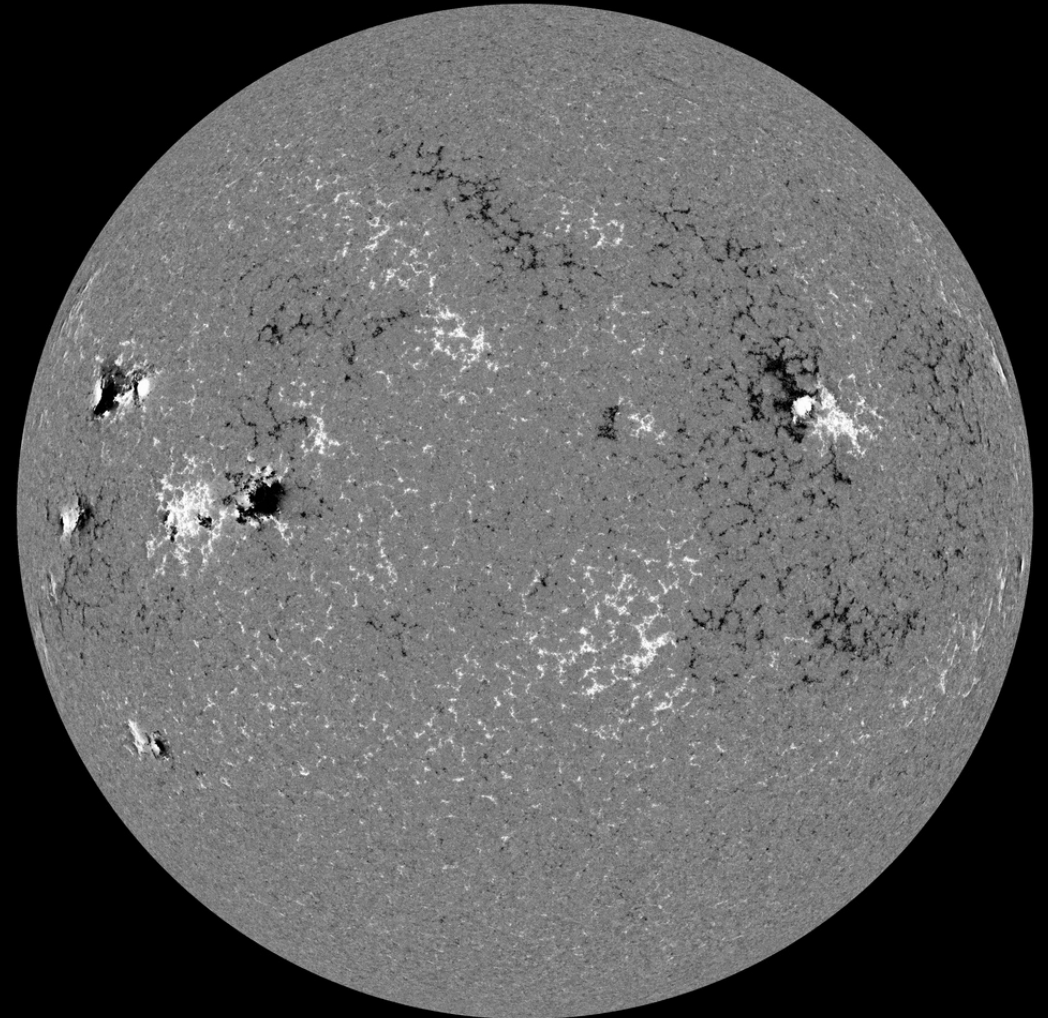
Solar active regions

SDO/HMI White Light 2025-04-18



SDO/HMI Quick-Look Continuum: 20250418_114500

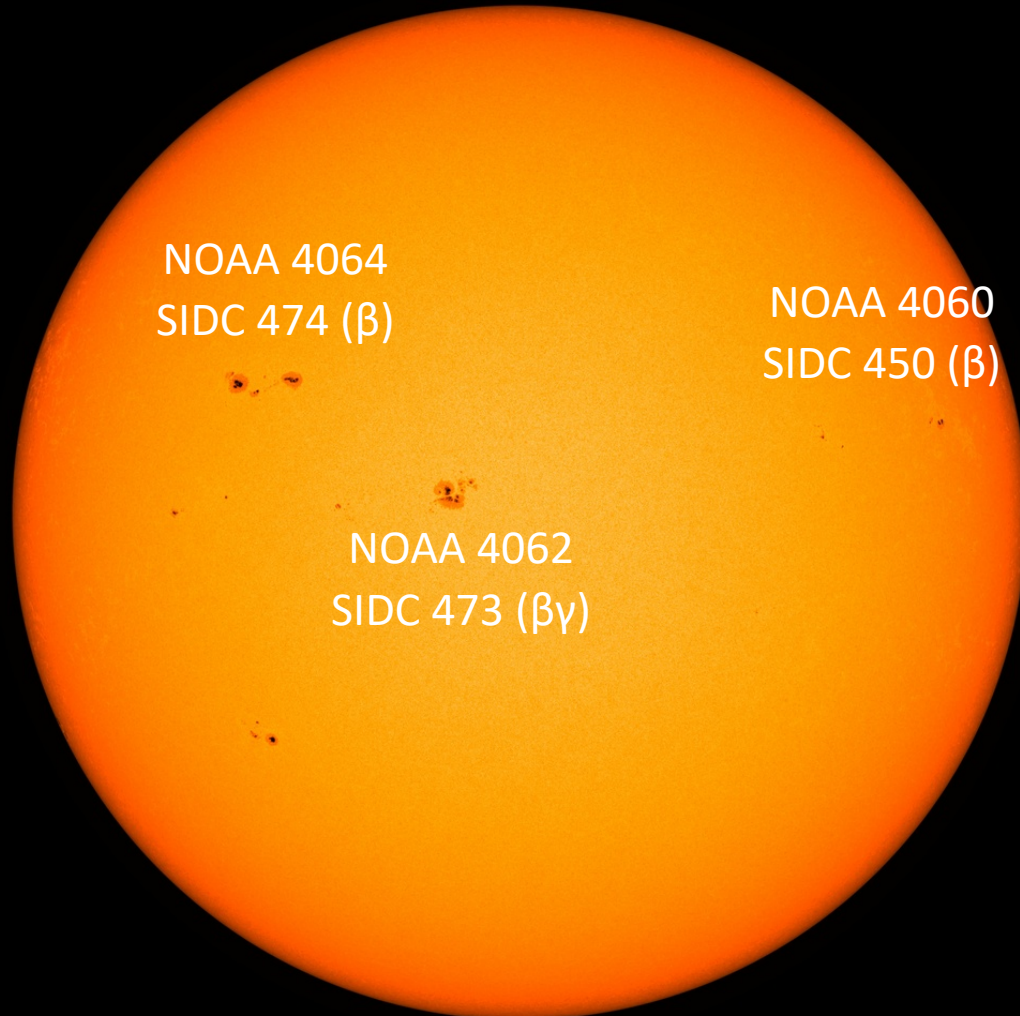
SDO/HMI Magnetogram 2025-04-18



SDO/HMI Quick-Look Magnetogram: 20250418_114500

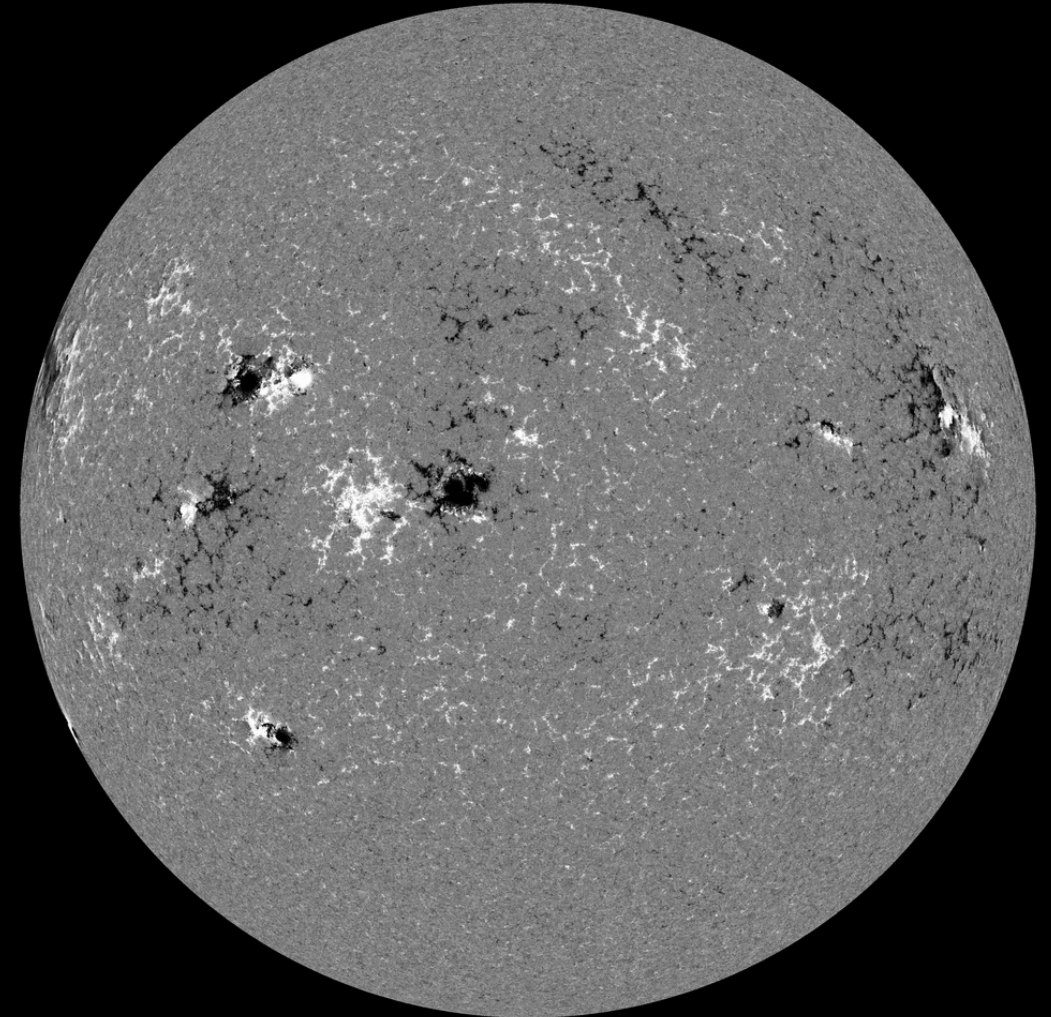
Solar active regions

SDO/HMI White Light 2025-04-20



SDO/HMI Quick-Look Continuum: 20250420_044500

SDO/HMI Magnetogram 2025-04-20

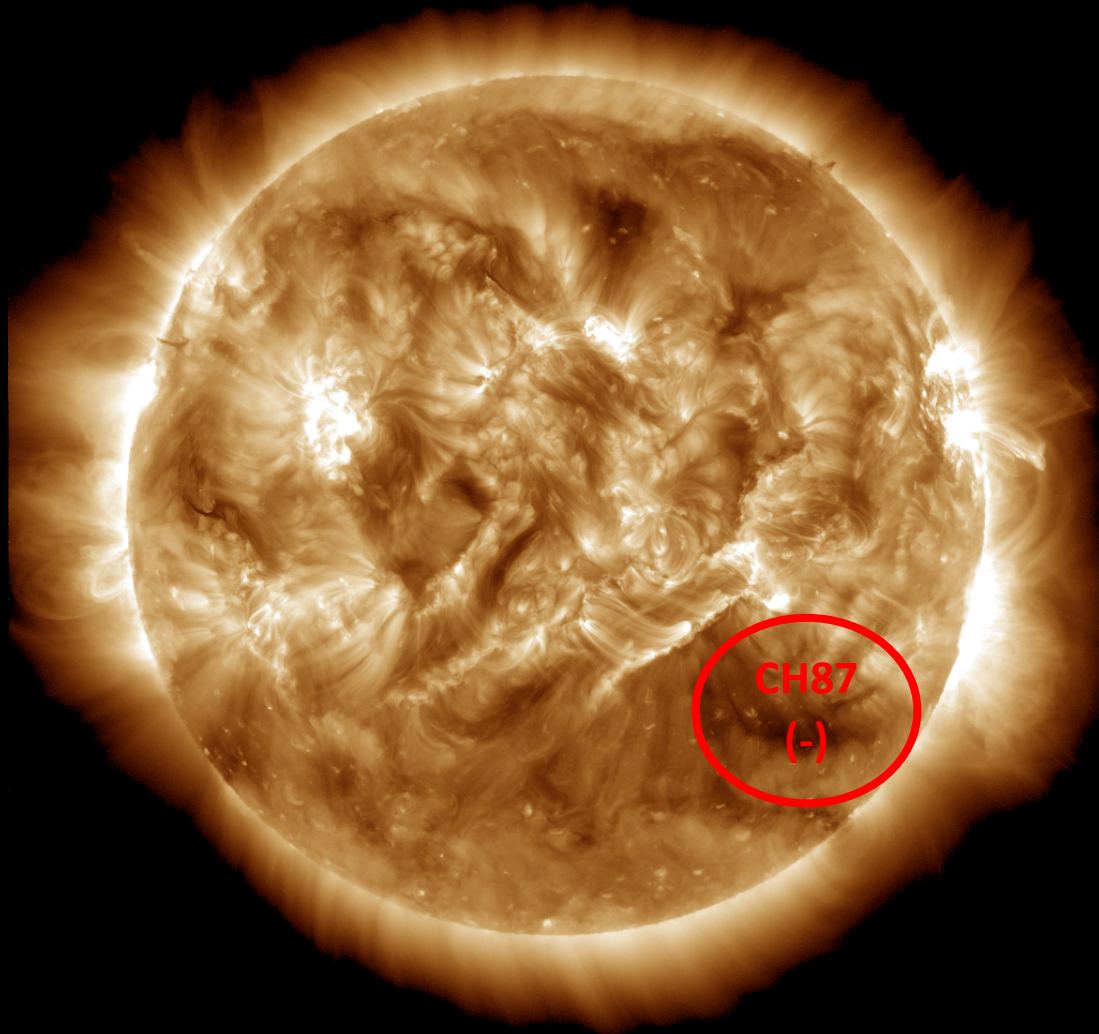


SDO/HMI Quick-Look Magnetogram: 20250420_044500

Coronal holes

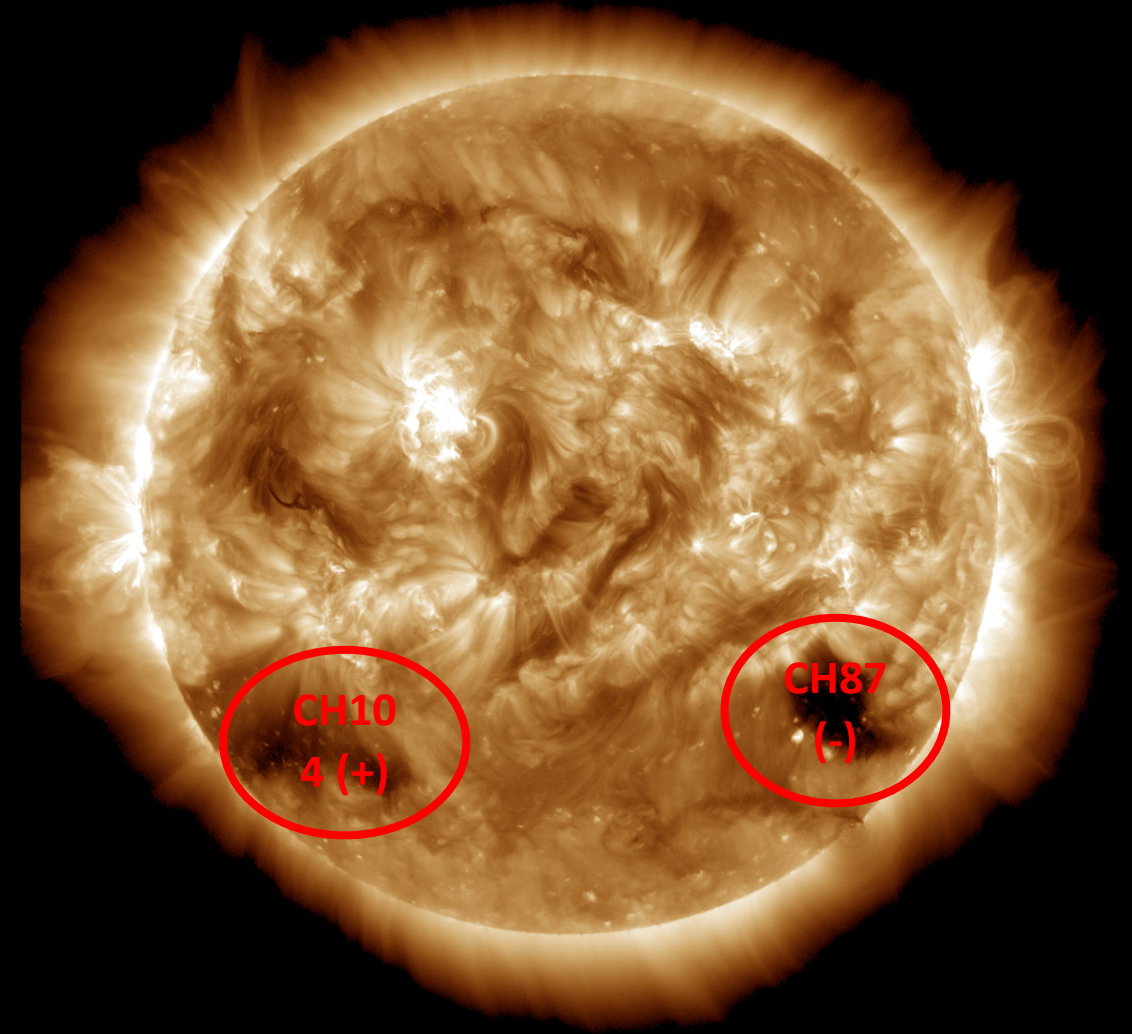
SDO/AIA 19.3 nm 2025-04-13

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



SDO/AIA 19.3 nm 2025-04-14

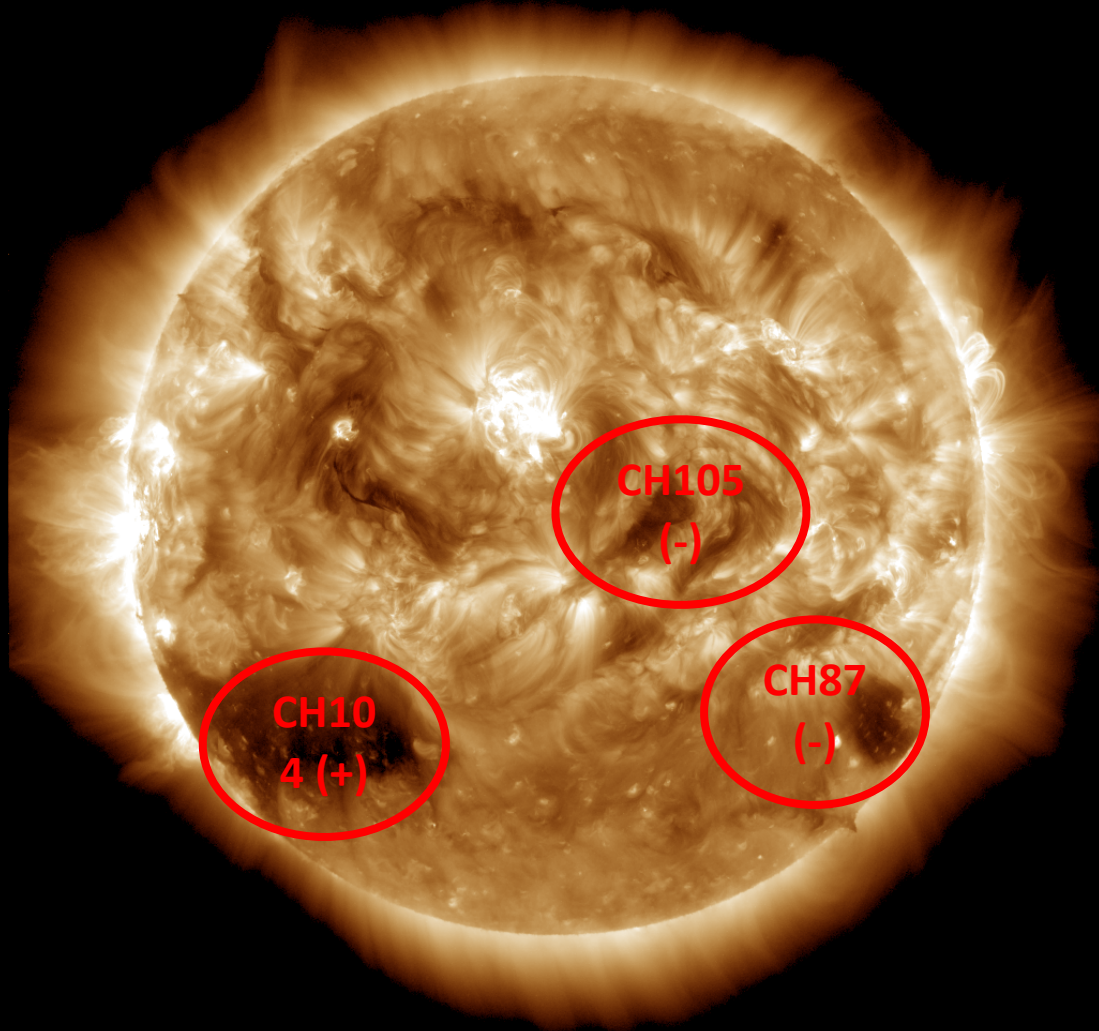
SDO/AIA AIA 193Å 2025-04-14T12:00:05.835



Coronal holes

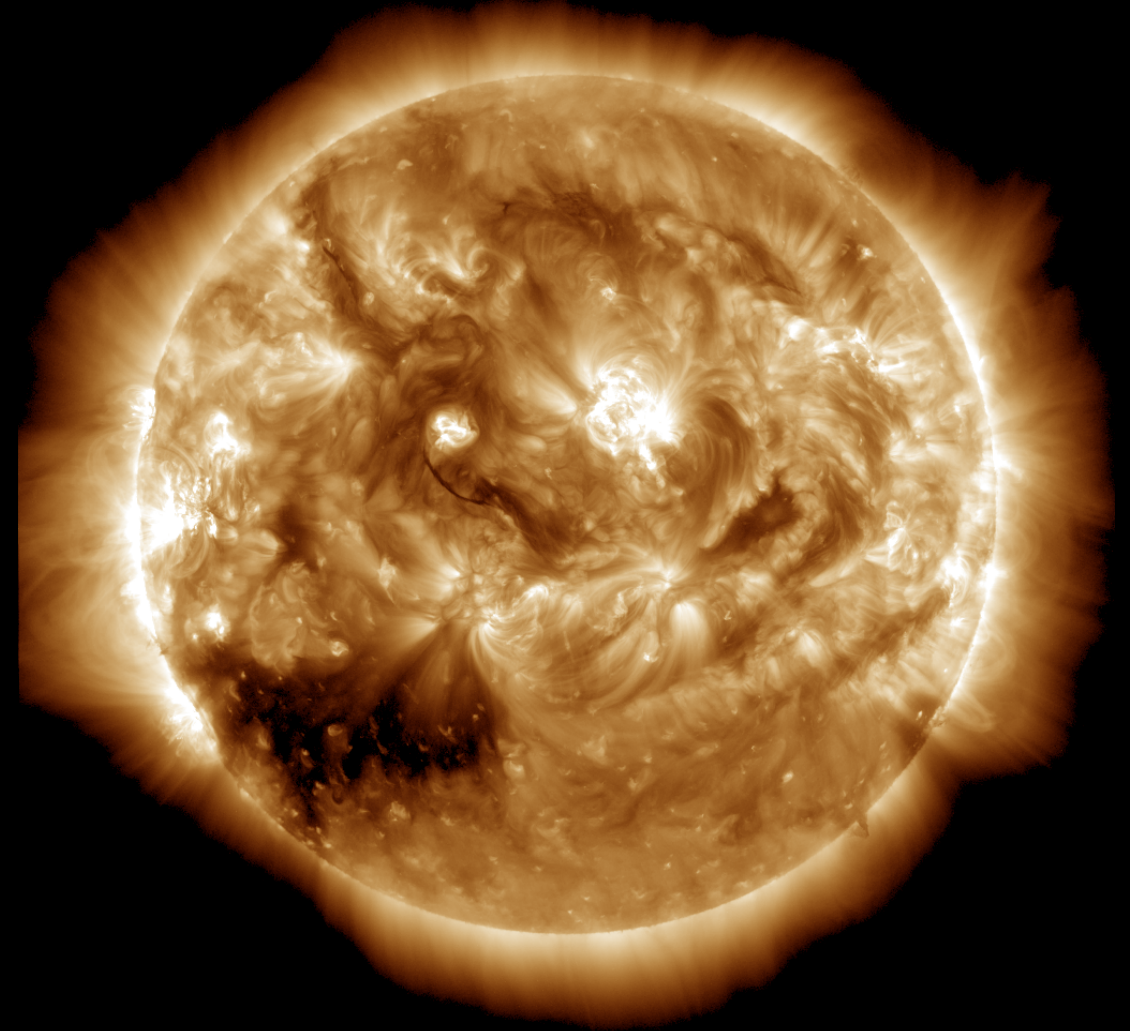
SDO/AIA 19.3 nm 2025-04-15

SDO/AIA AIA 193Å 2025-04-15T12:00:05.843



SDO/AIA 19.3 nm 2025-04-16

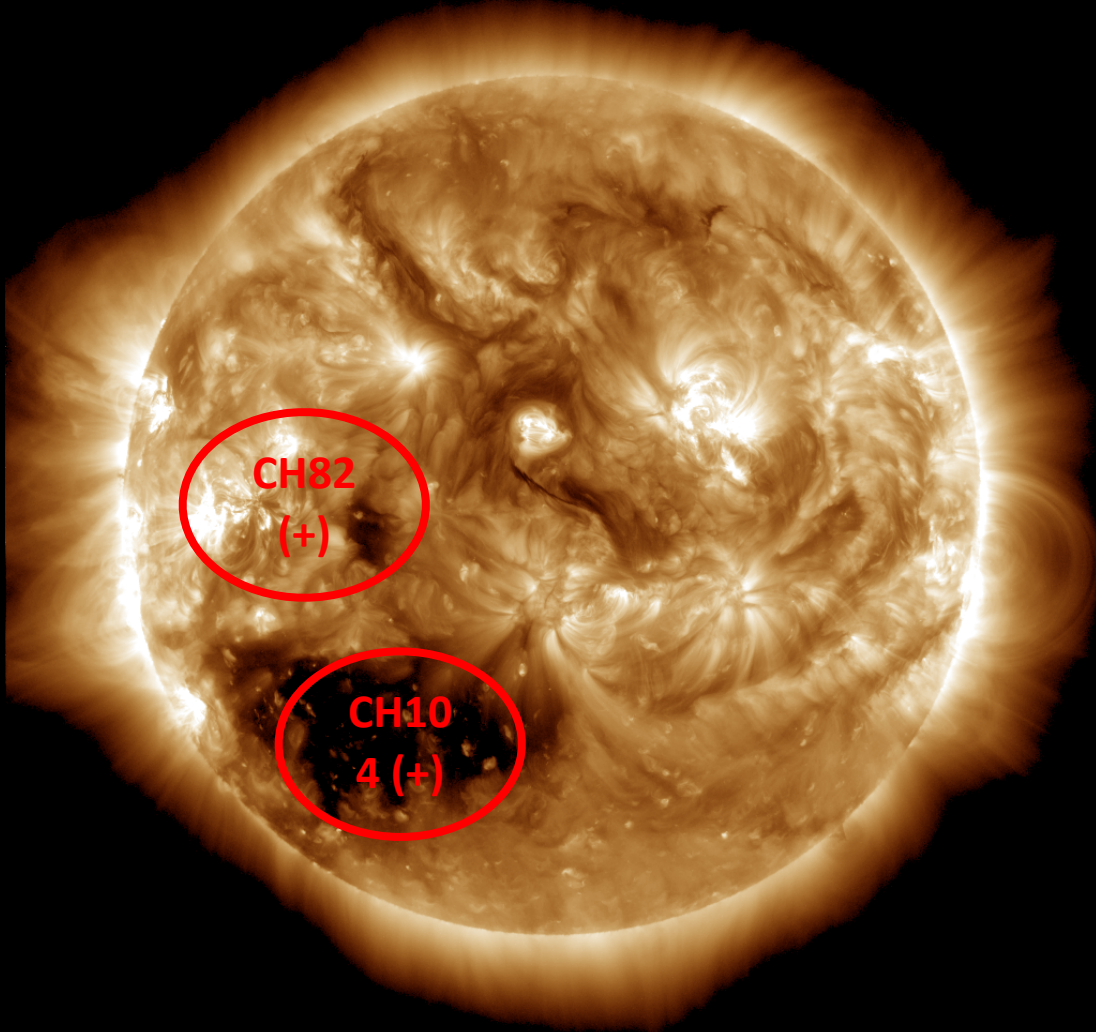
SDO/AIA AIA 193Å 2025-04-16T12:00:05.843



Coronal holes

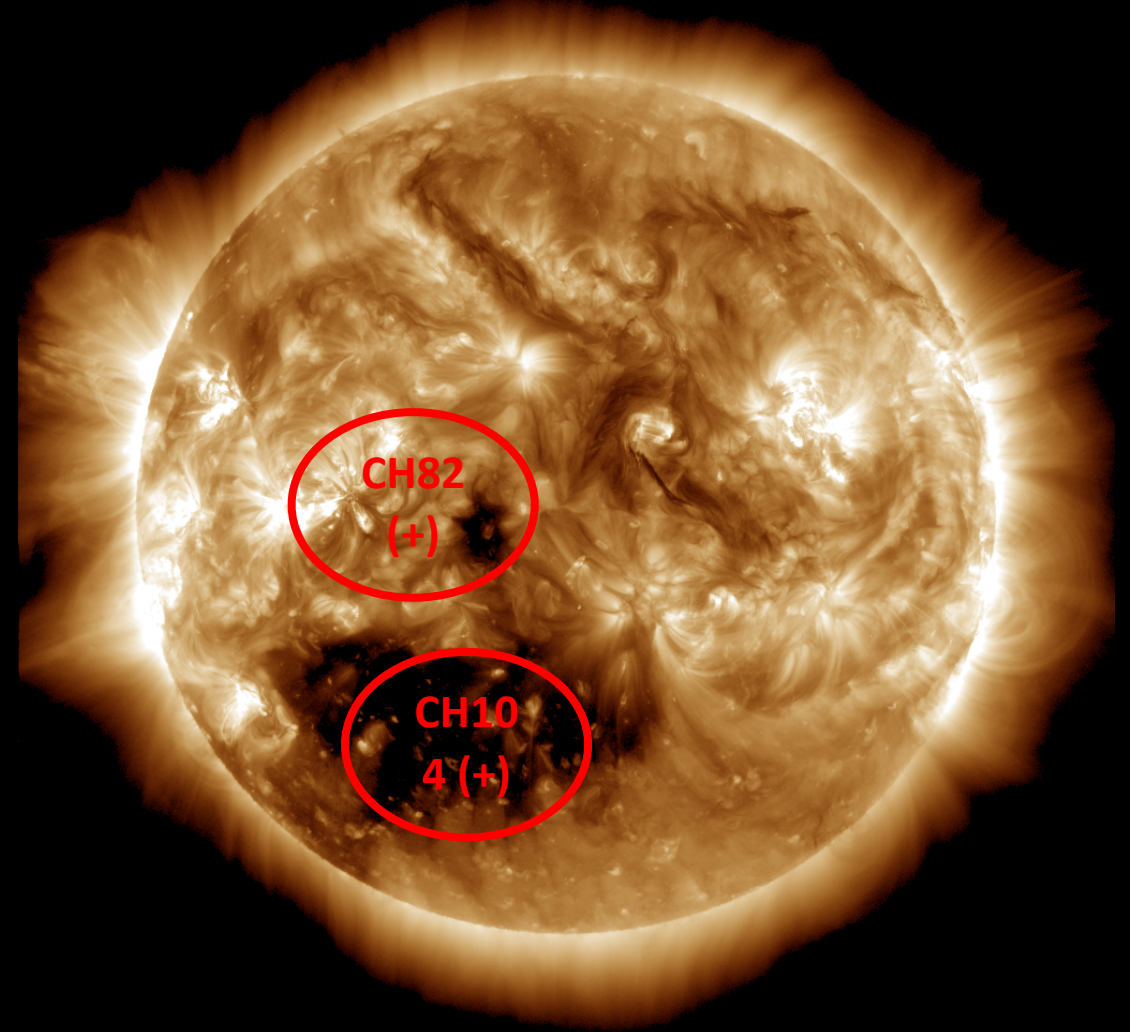
SDO/AIA 19.3 nm 2025-04-17

SDO/AIA AIA 193Å 2025-04-17T12:00:05.843



SDO/AIA 19.3 nm 2025-04-18

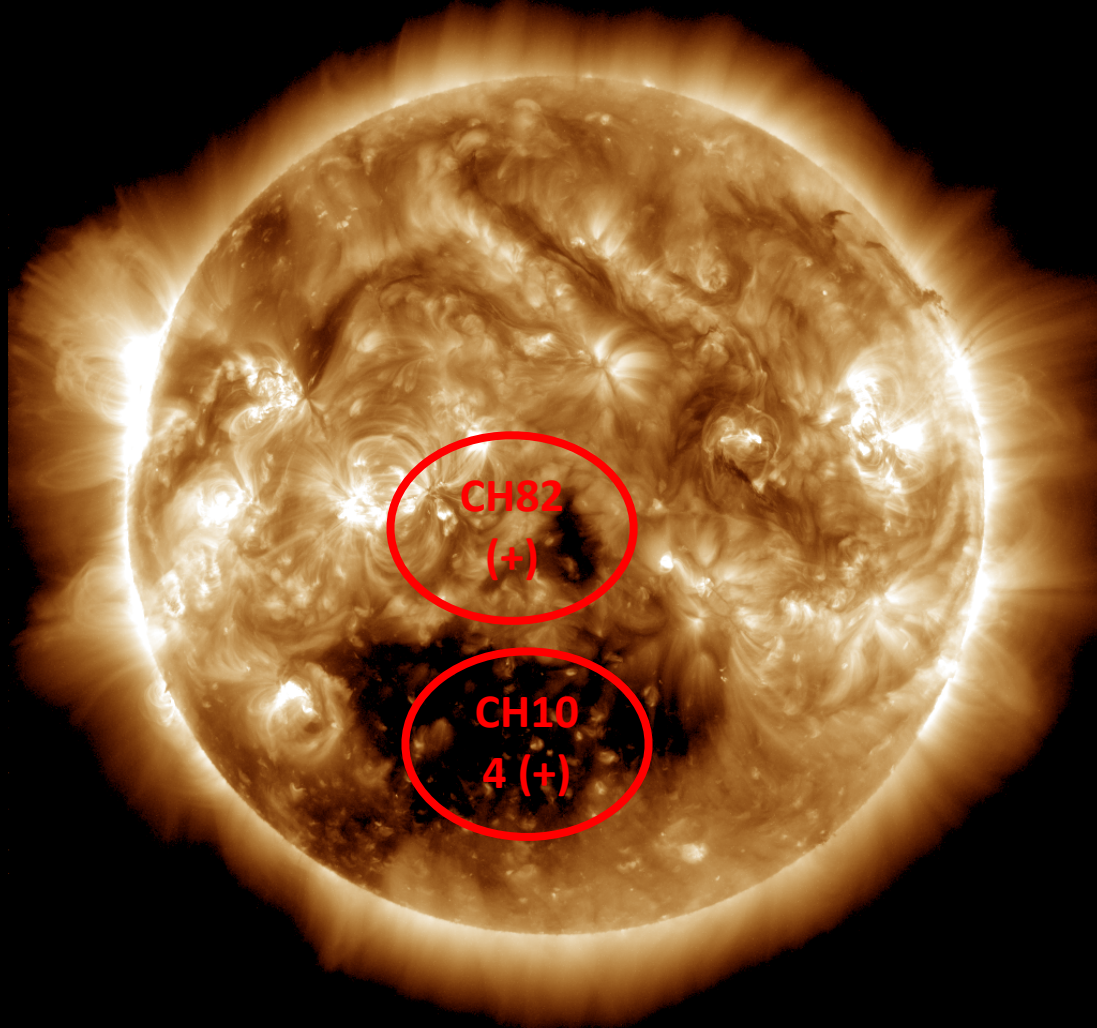
SDO/AIA AIA 193Å 2025-04-18T12:00:53.843



Coronal holes

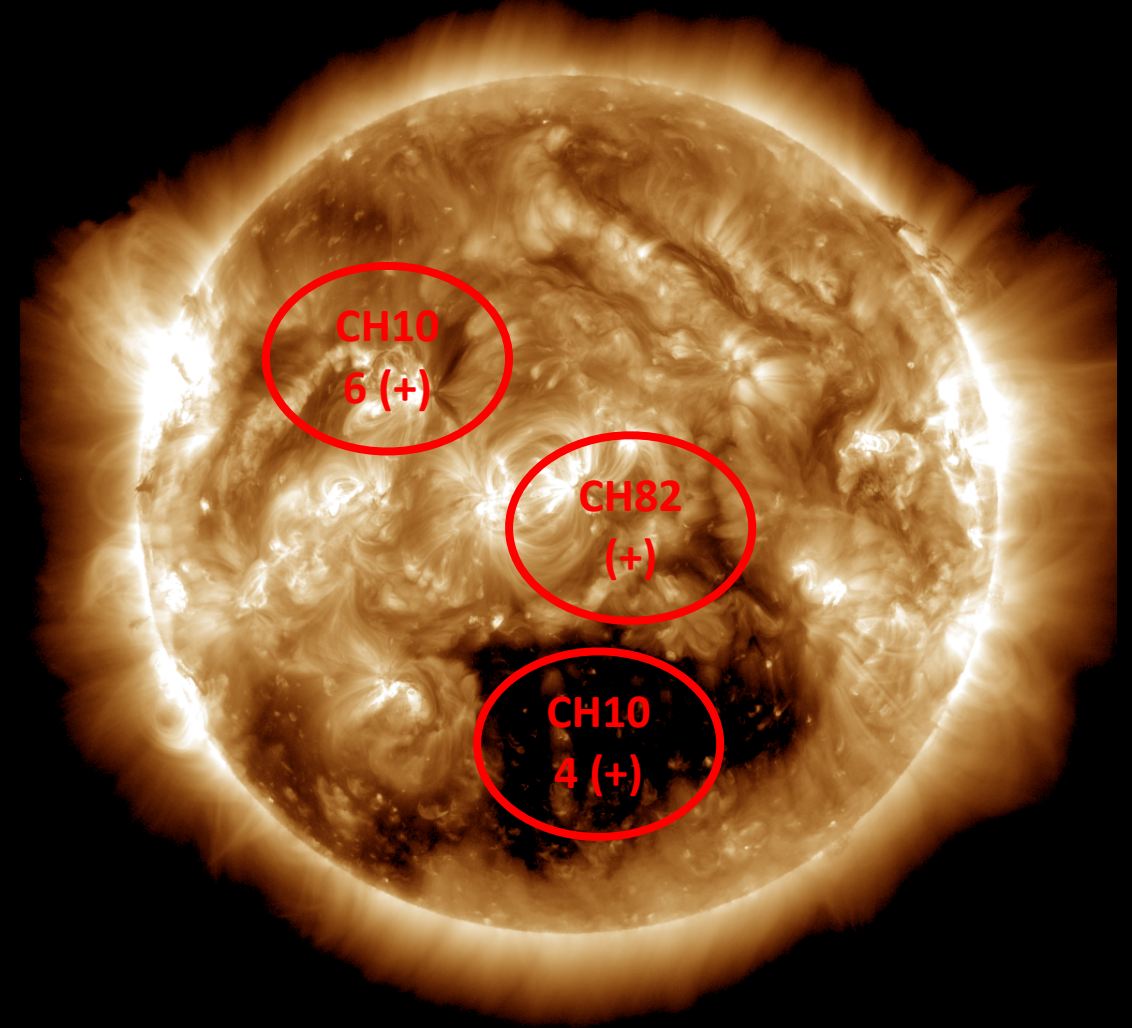
SDO/AIA 19.3 nm 2025-04-19

SDO/AIA AIA 193Å 2025-04-19T12:00:05.843



SDO/AIA 19.3 nm 2025-04-20

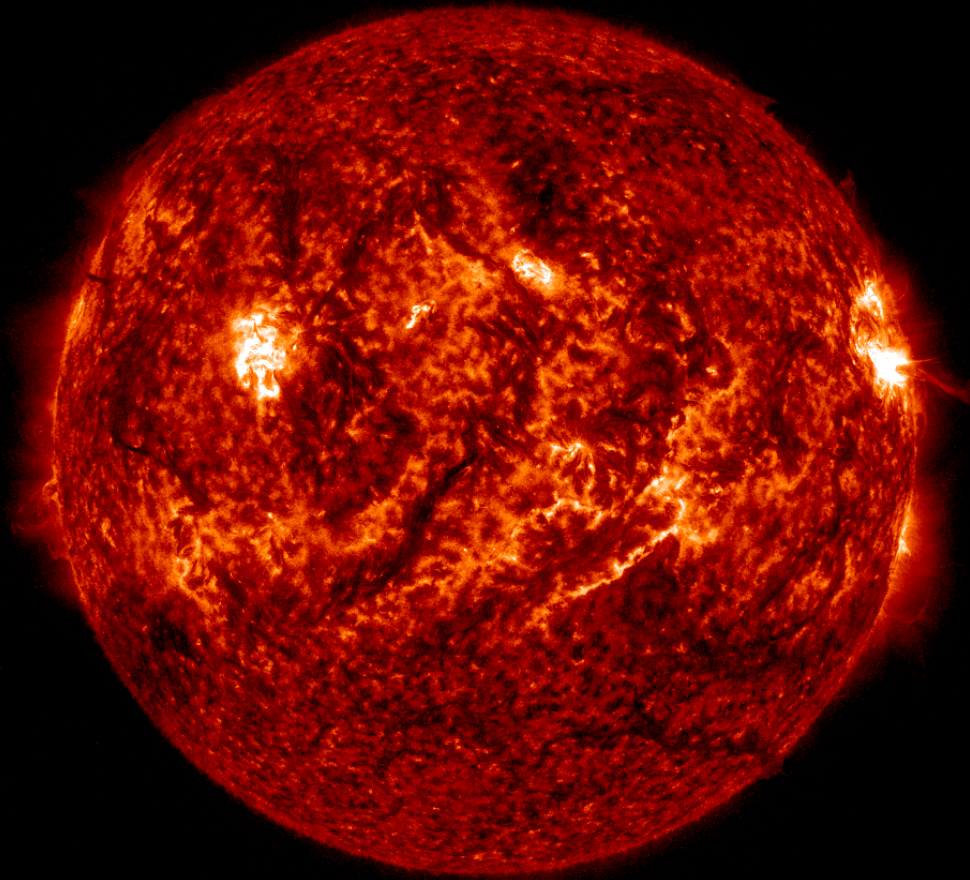
SDO/AIA AIA 193Å 2025-04-20T20:00:05.847



Filaments

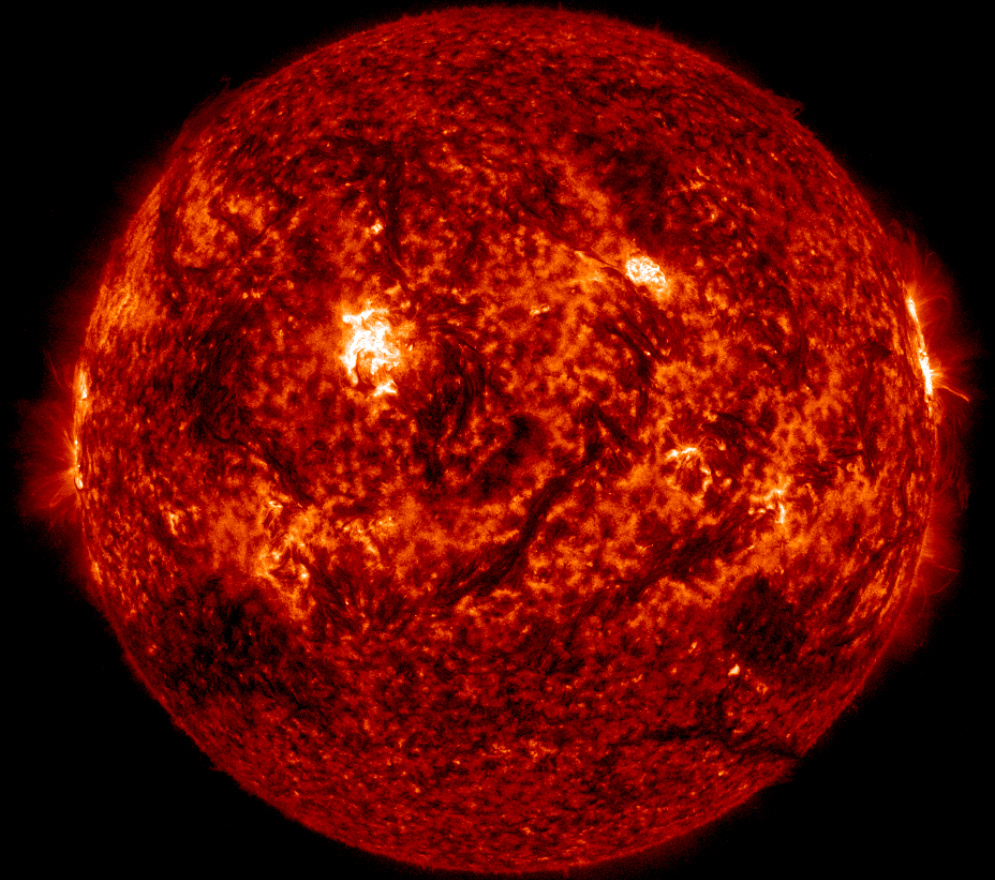
SDO/AIA 30.4 nm 2025-04-13

SDO/AIA AIA 304Å 2025-04-13T12:00:06.589



SDO/AIA 30.4 nm 2025-04-14

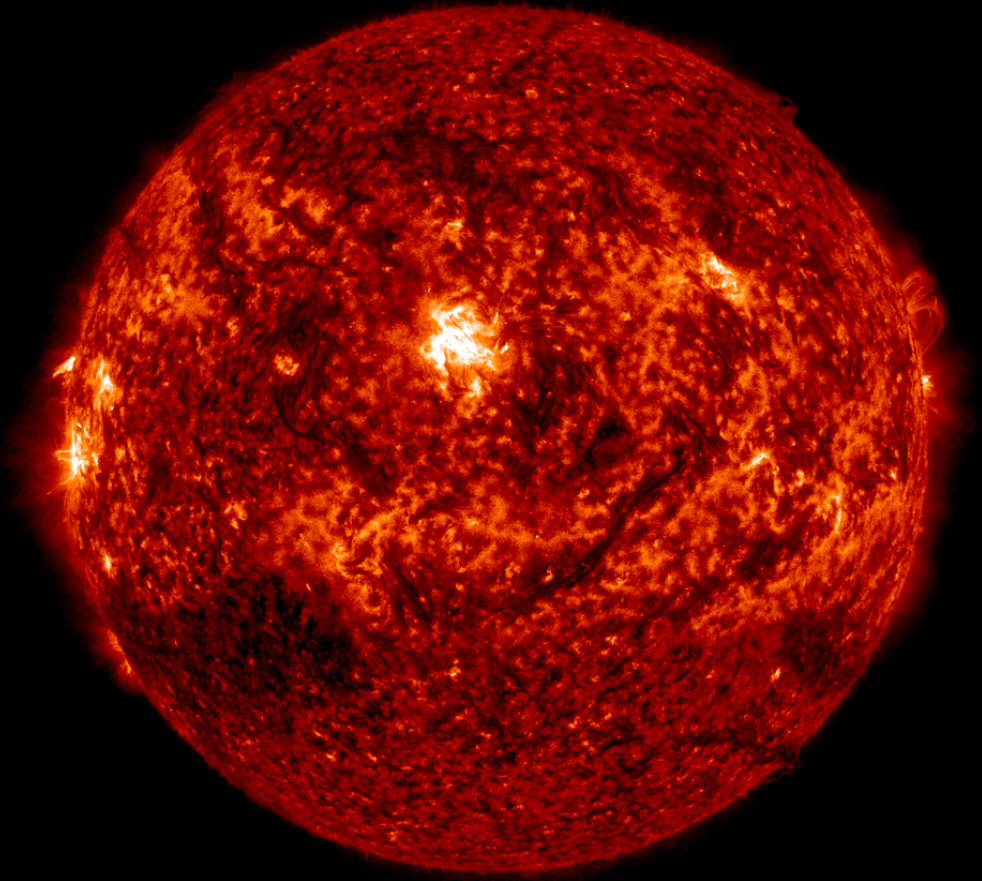
SDO/AIA AIA 304Å 2025-04-14T12:00:06.580



Filaments

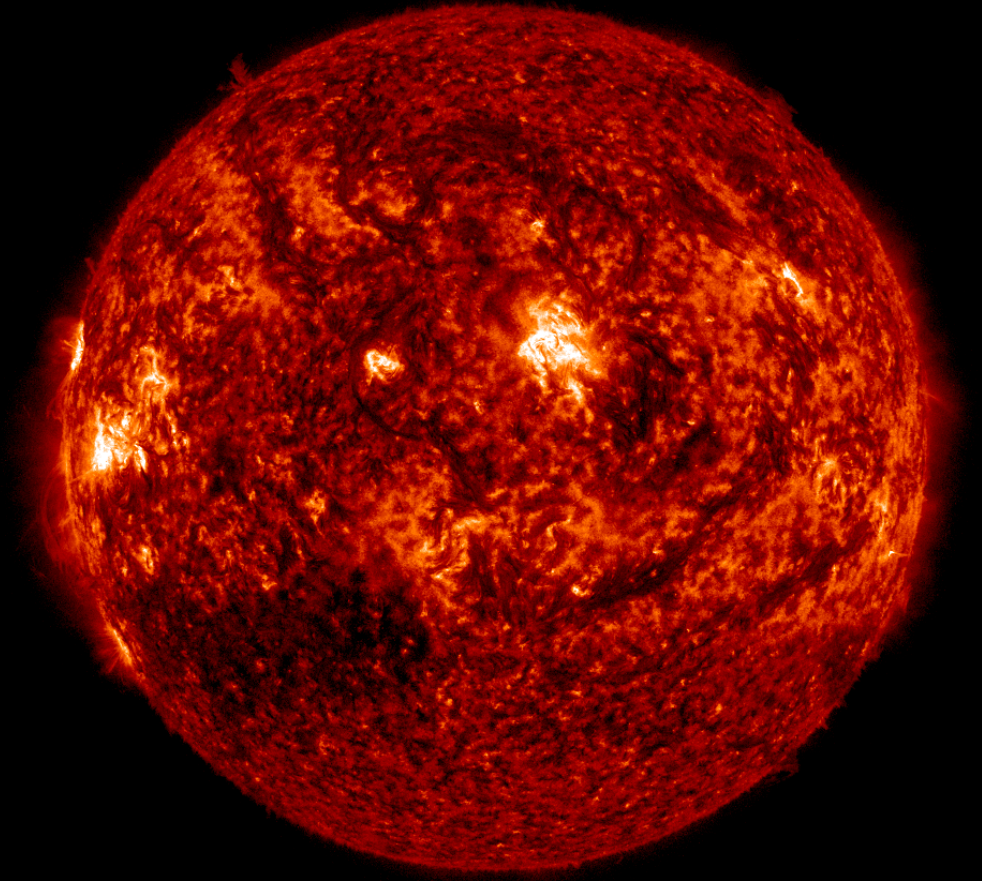
SDO/AIA 30.4 nm 2025-04-15

SDO/AIA AIA 304Å 2025-04-15T12:00:06.580



SDO/AIA 30.4 nm 2025-04-16

SDO/AIA AIA 304Å 2025-04-16T12:00:06.597



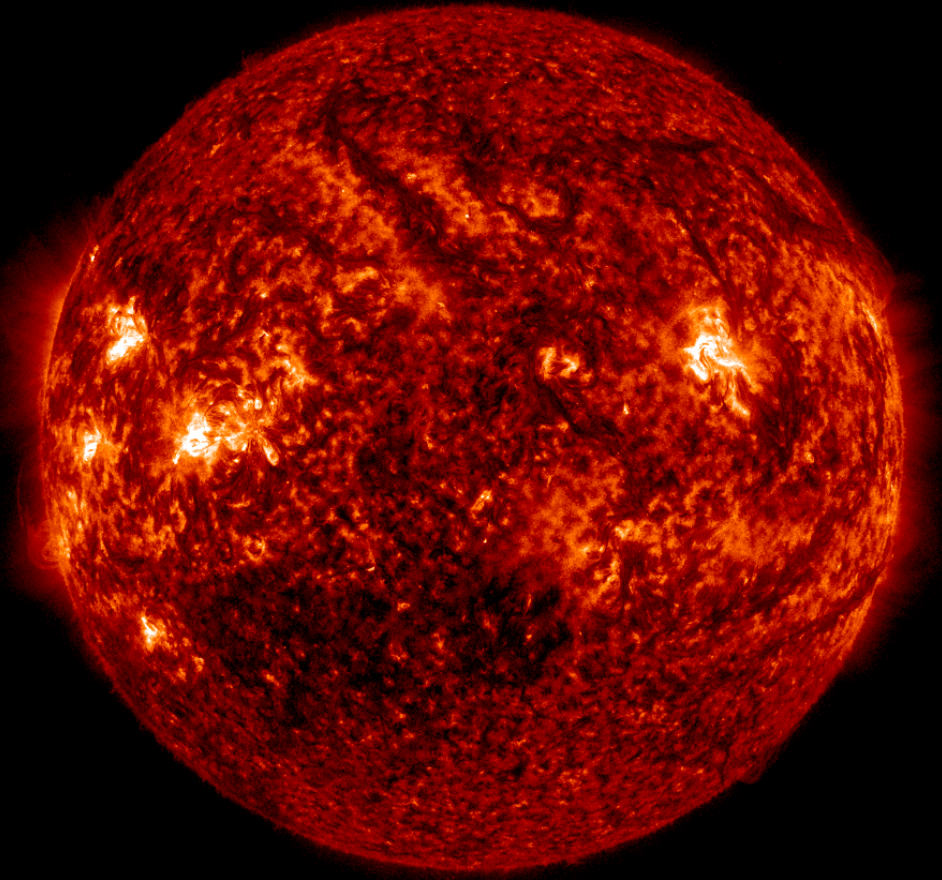
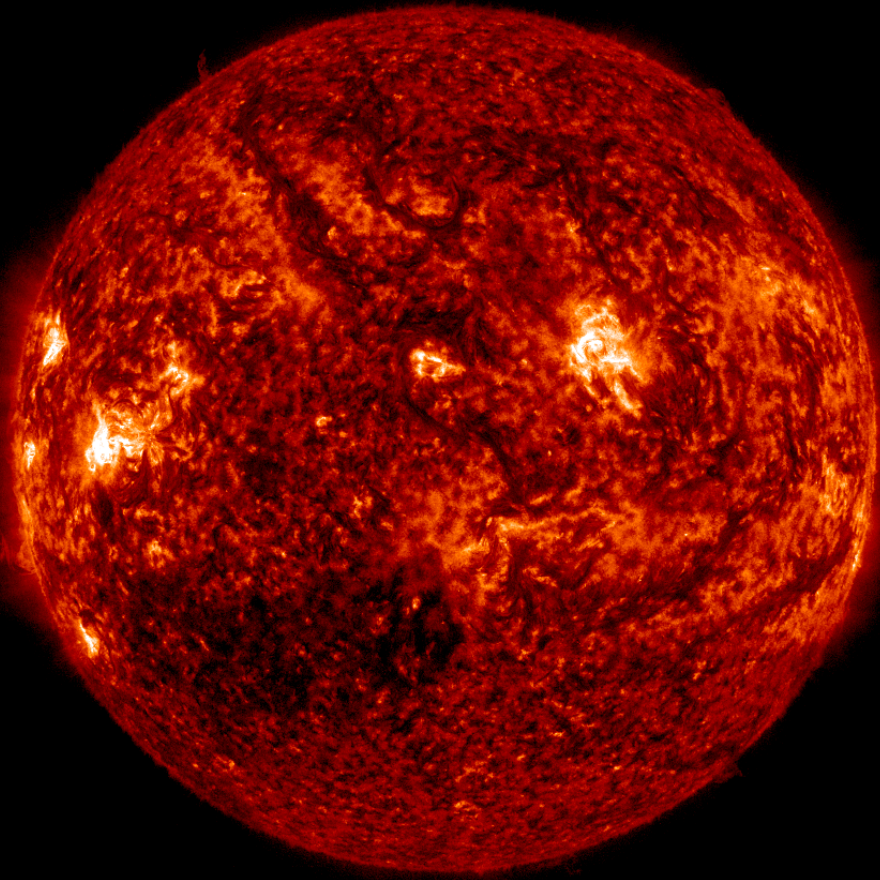
Filaments

SDO/AIA 30.4 nm 2025-04-17

SDO/AIA AIA 304Å 2025-04-17T12:00:06.580

SDO/AIA 30.4 nm 2025-04-18

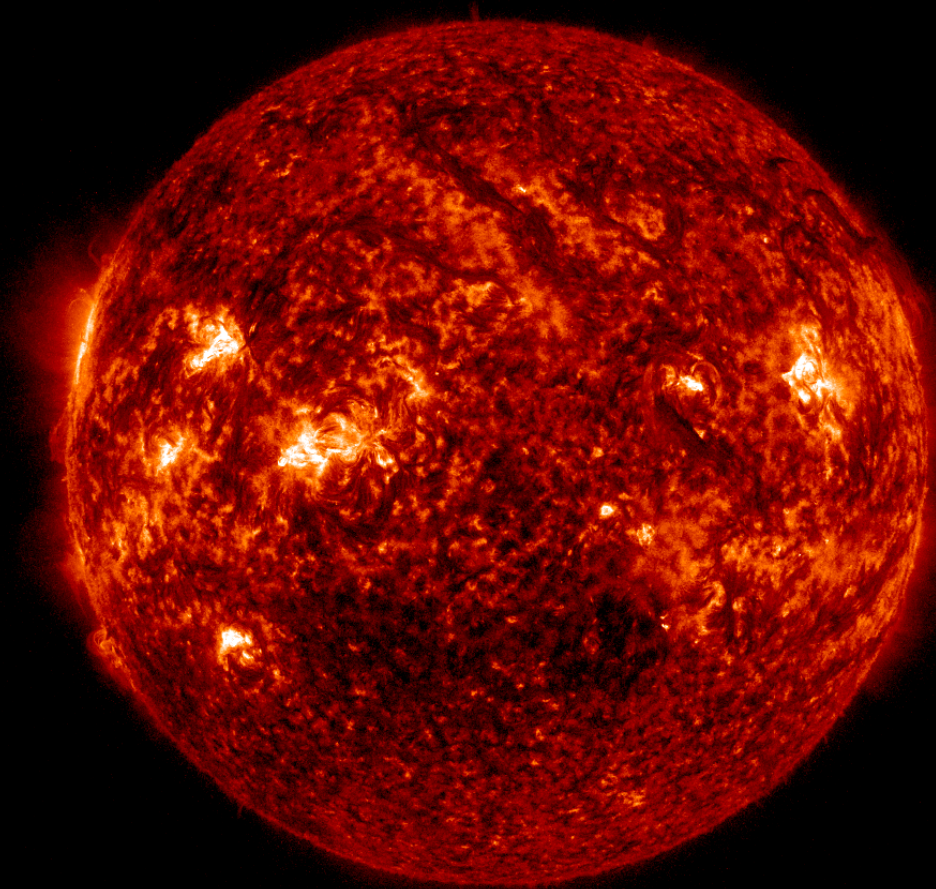
SDO/AIA AIA 304Å 2025-04-18T12:00:18.580



Filaments

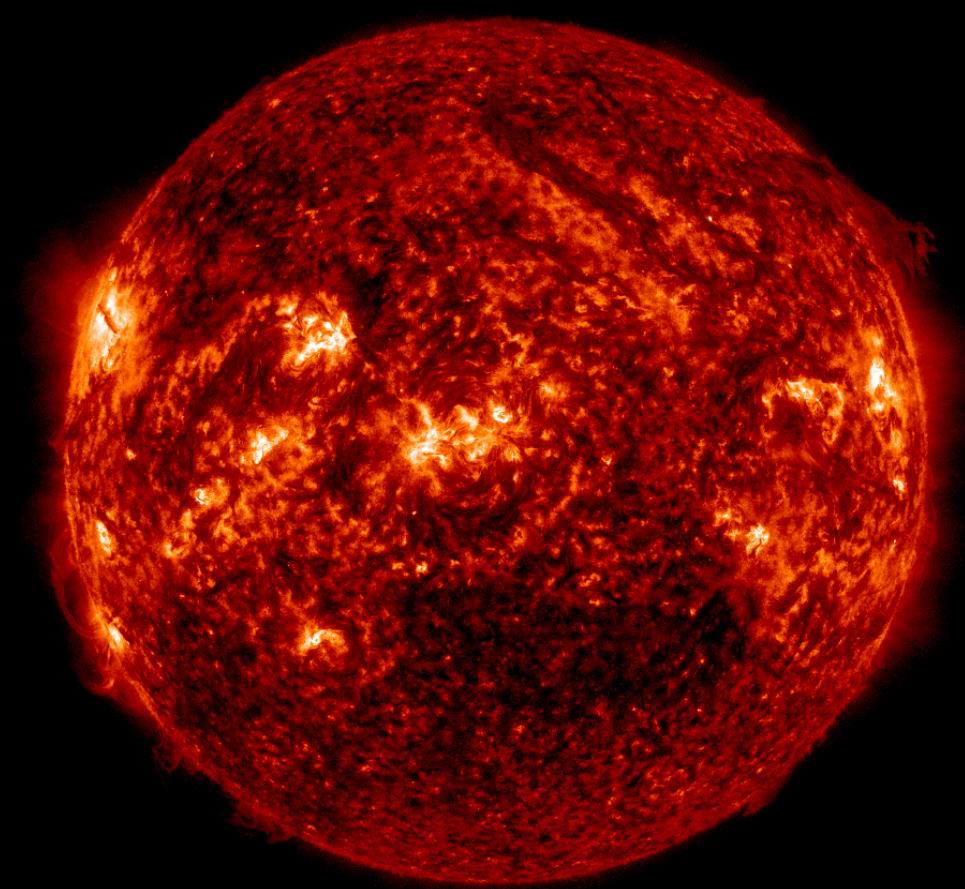
SDO/AIA 30.4 nm 2025-04-19

SDO/AIA AIA 304Å 2025-04-19T12:00:06.581



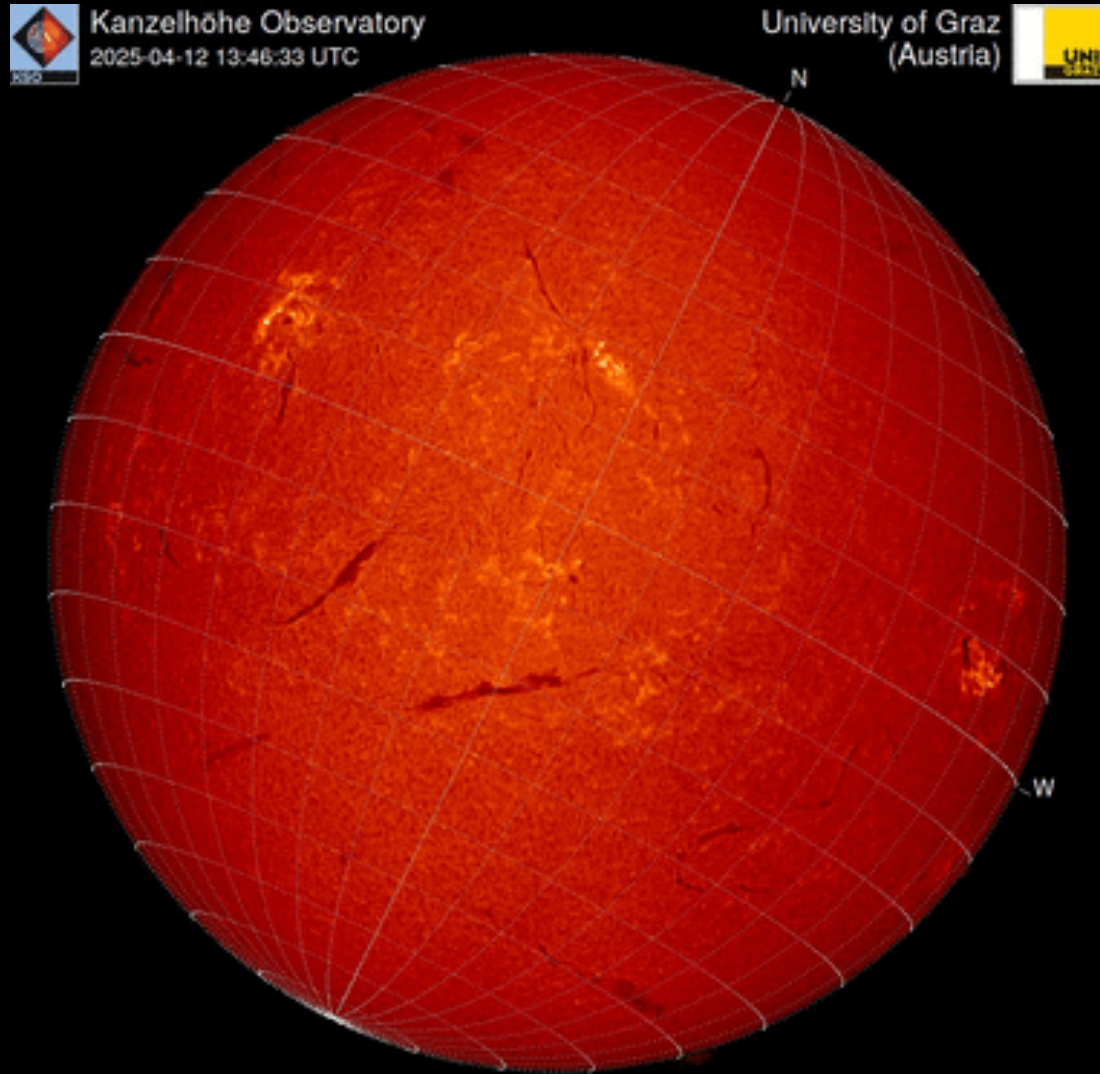
SDO/AIA 30.4 nm 2025-04-20

SDO/AIA AIA 304Å 2025-04-20T19:00:06.597

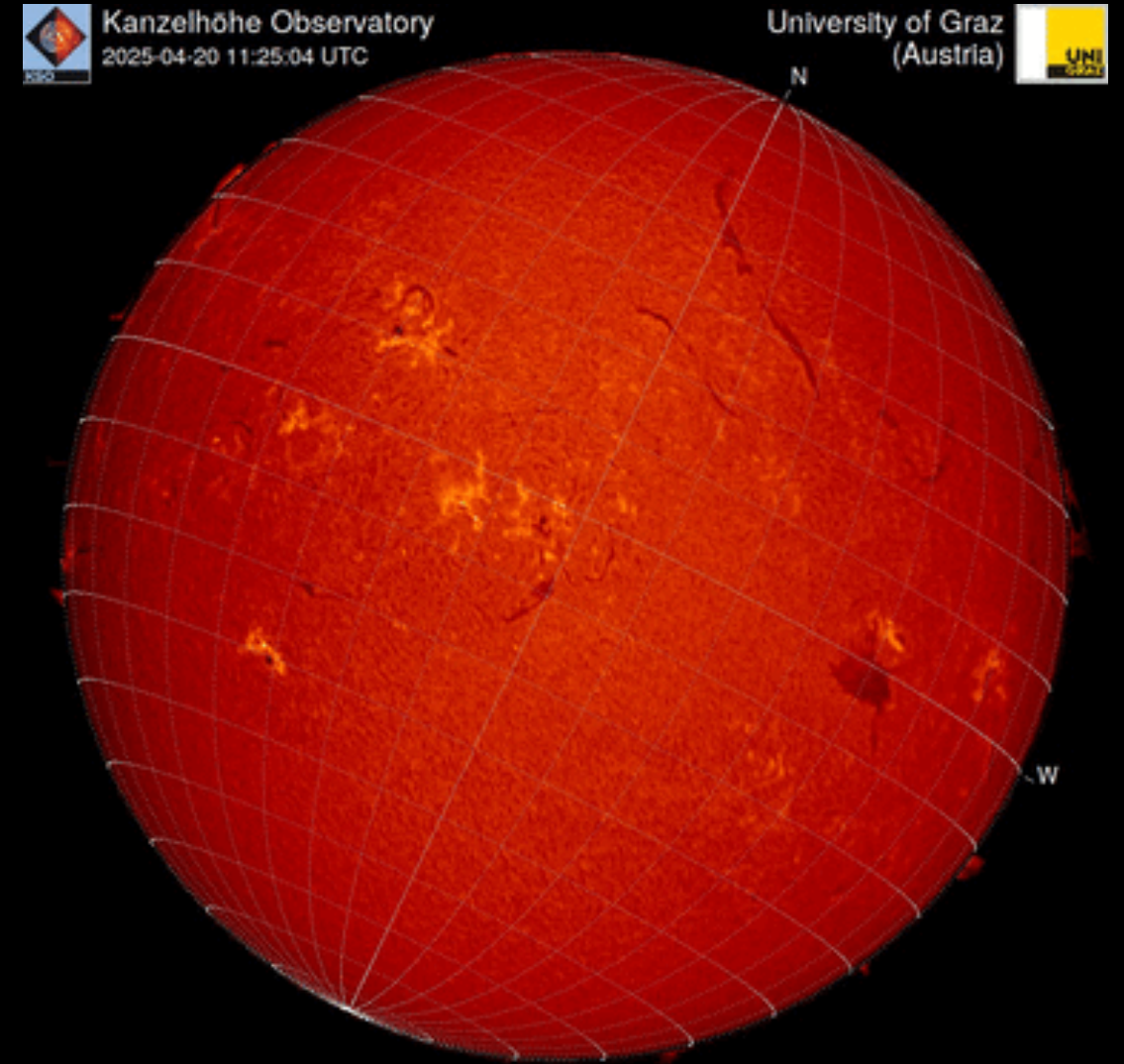


Filaments & Filament eruptions

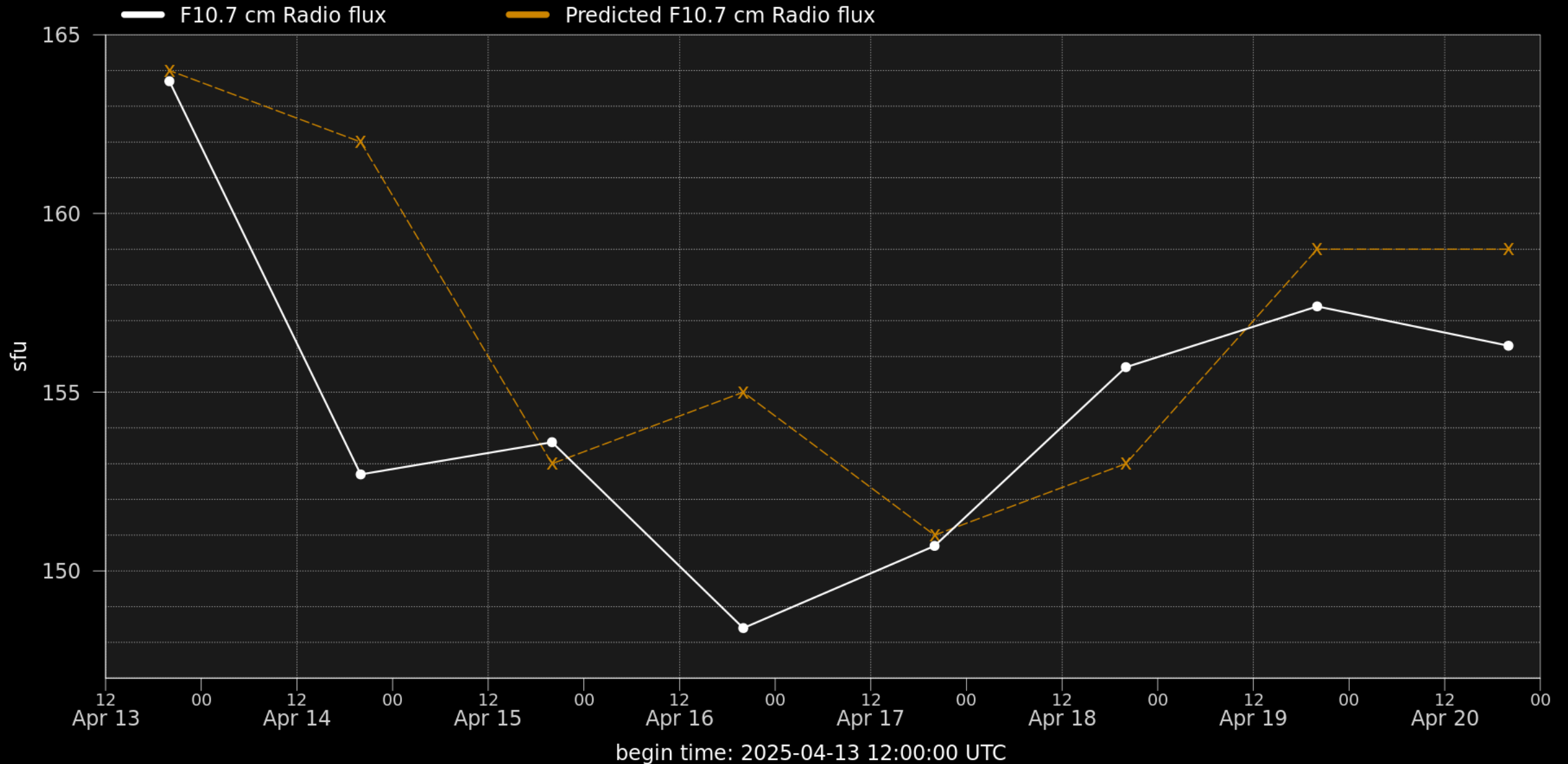
H-alpha 2025-04-13



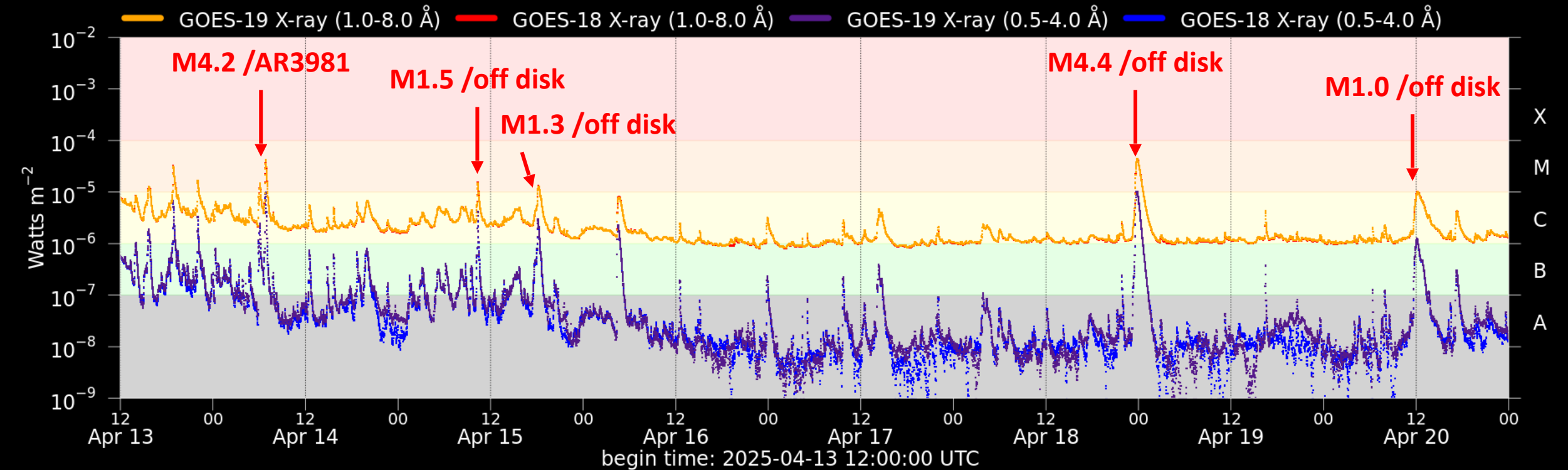
H-alpha 2025-04-20



Solar F10.7cm radio flux



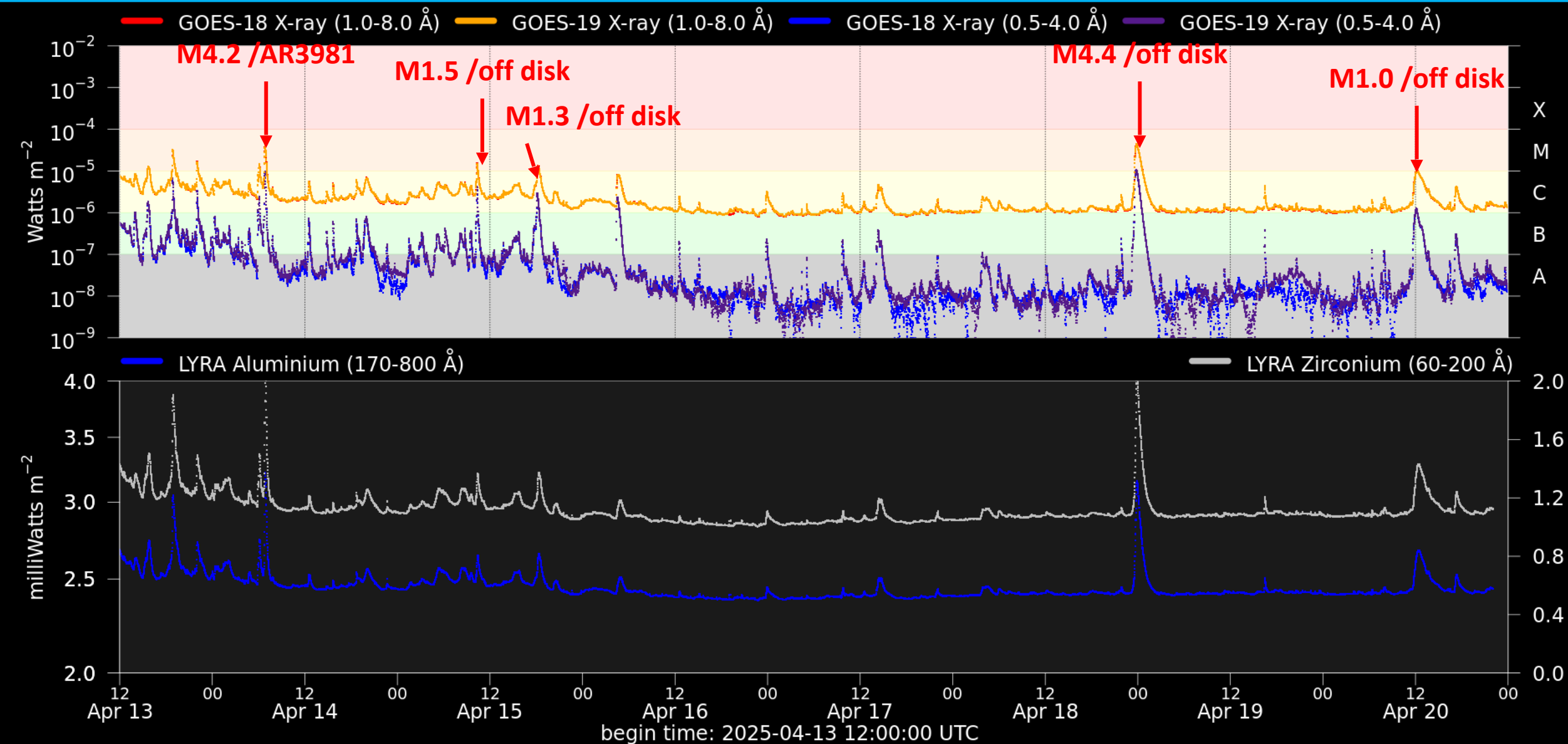
Flaring activity



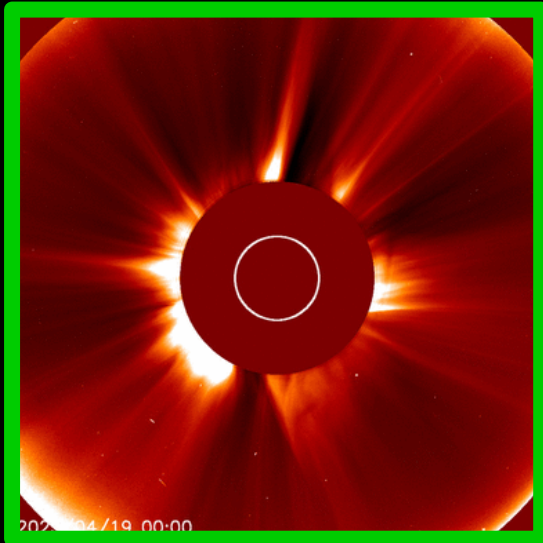
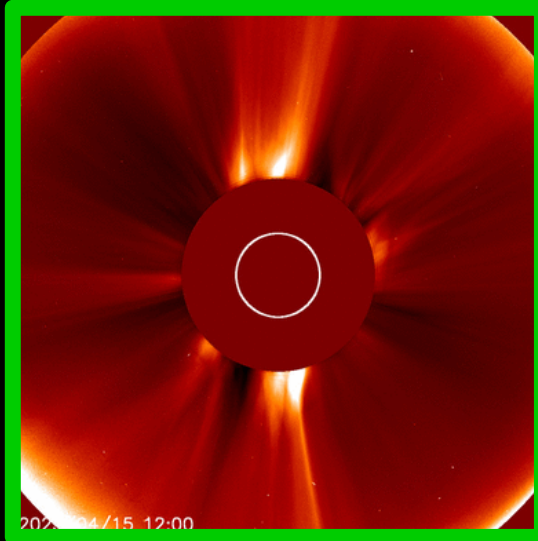
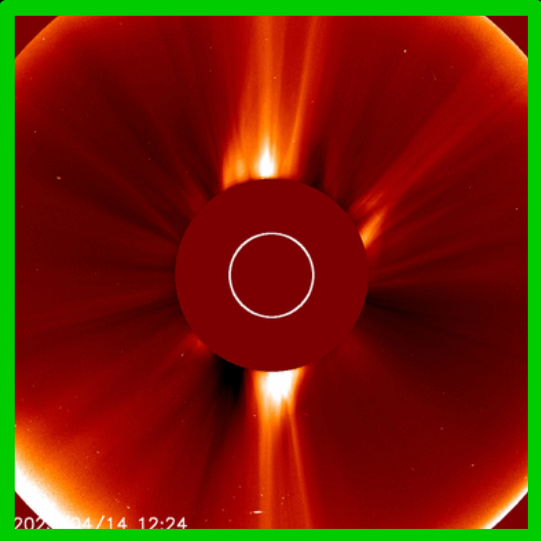
Probabilities (%) and occurrences (#) of C/M/X-flares daily, from noon to noon:

Issue date	2025-04-13	2025-04-14	2025-04-15	2025-04-16	2025-04-17	2025-04-18	2025-04-19	2025-04-20
Probability (%)	99 85 20	99 86 18	98 55 10	94 39 01	99 56 05	99 69 05	99 68 10	99 69 10
Observed (#)	04 05 00	07 01 00	02 01 00	05 00 00	02 00 00	02 01 00	03 00 00	01 01 00

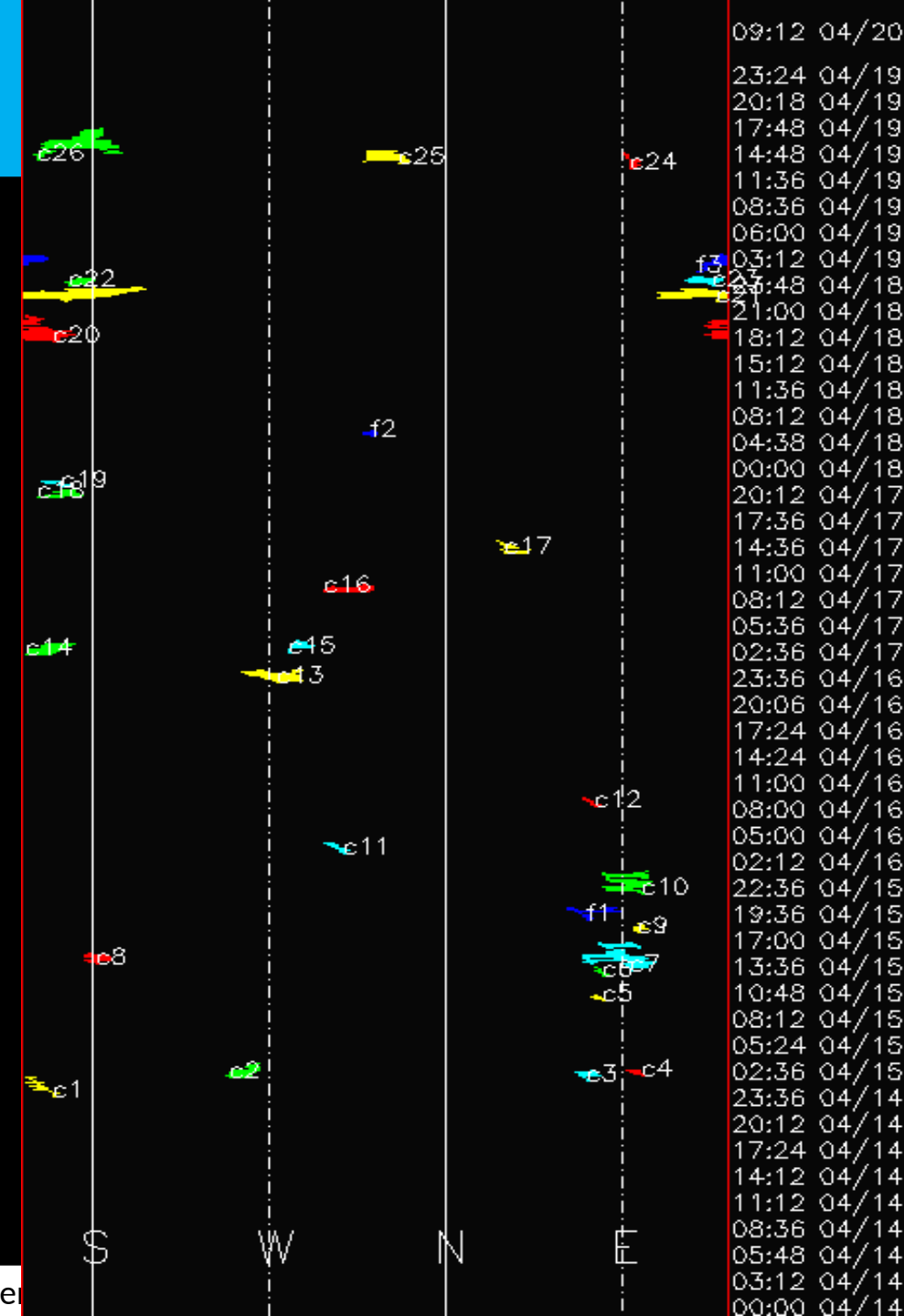
Solar X-Ray and UV flux



Coronal Mass Ejections



No Earth-directed CMEs



Solar Wind and

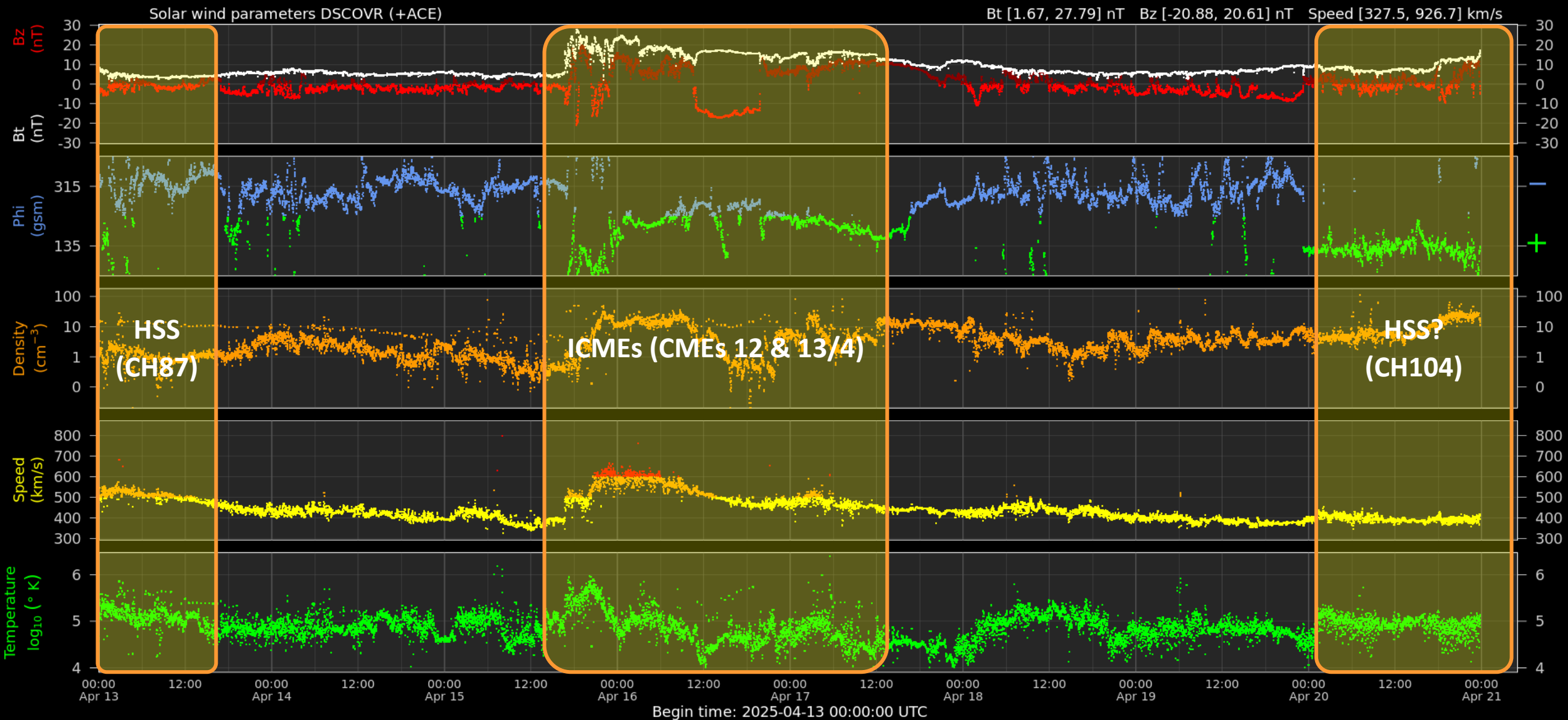
Geomagnetic Activity



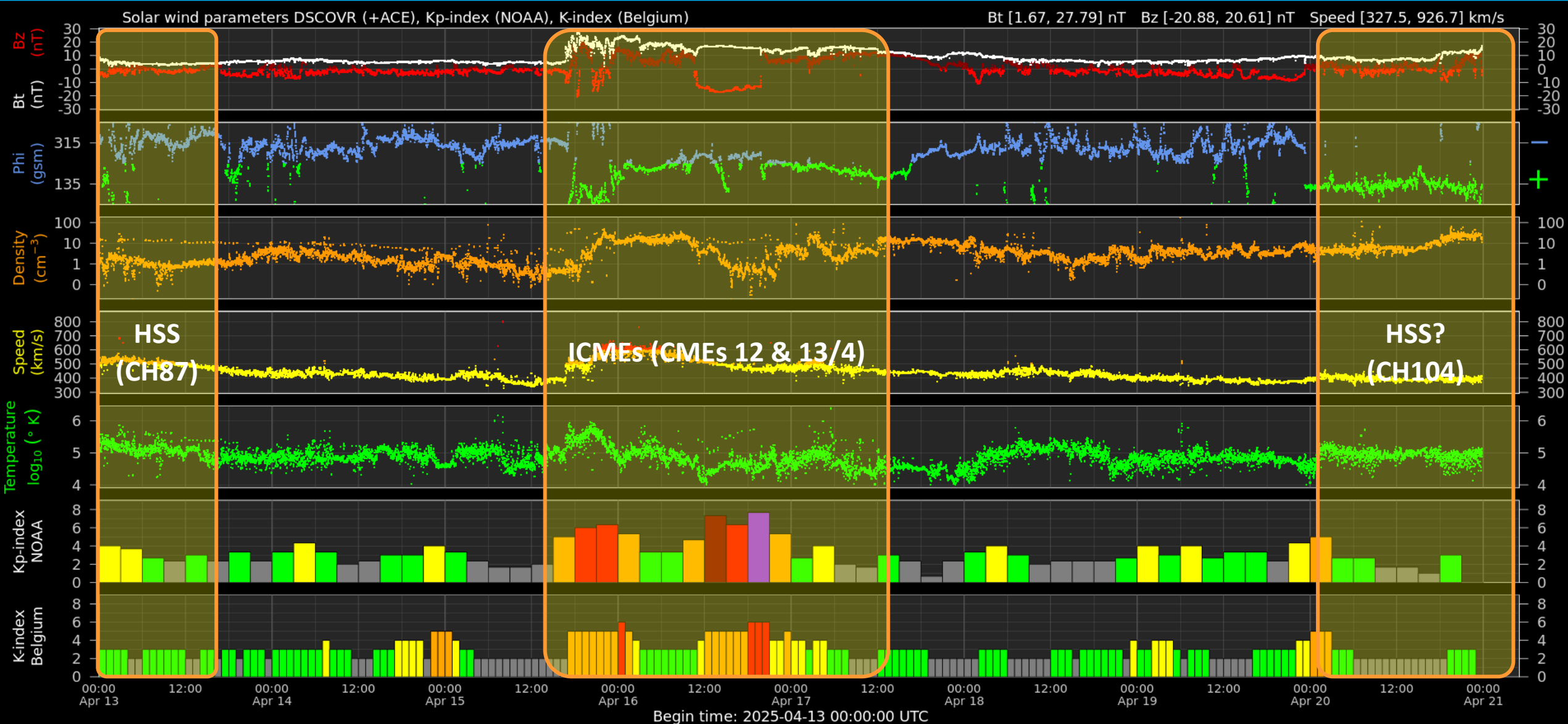
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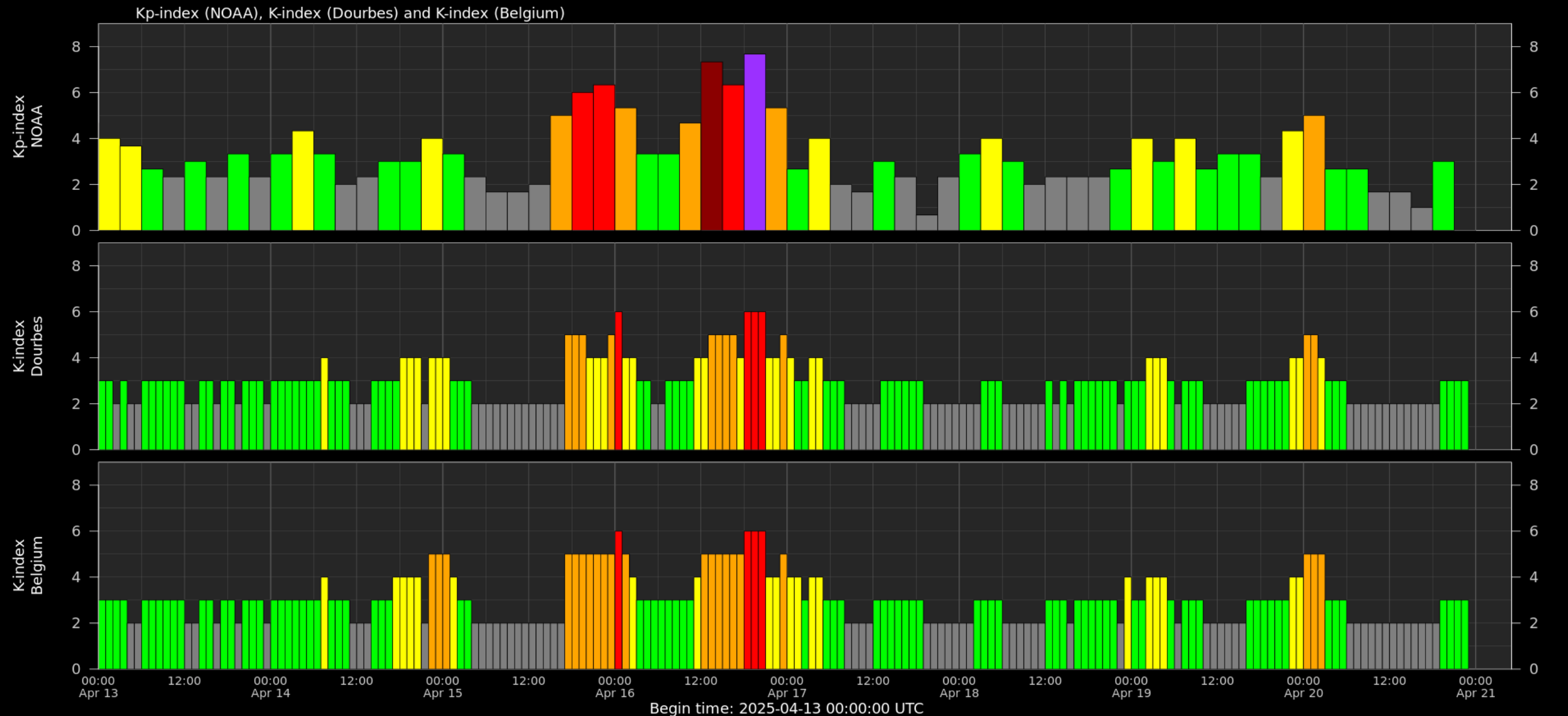
Solar wind parameters



Solar wind parameters & K-indices



Geomagnetic activity (K-indexes)



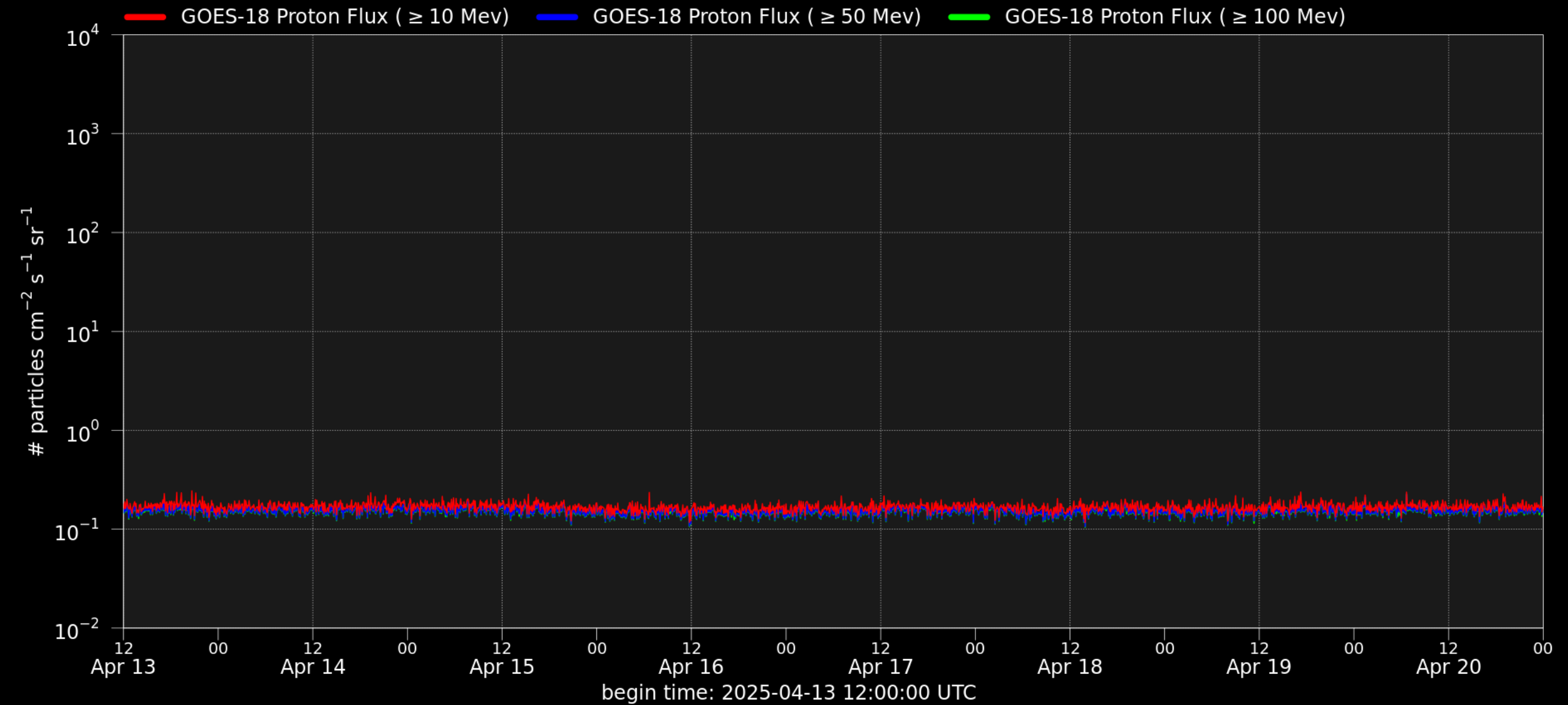
Energetic Particles



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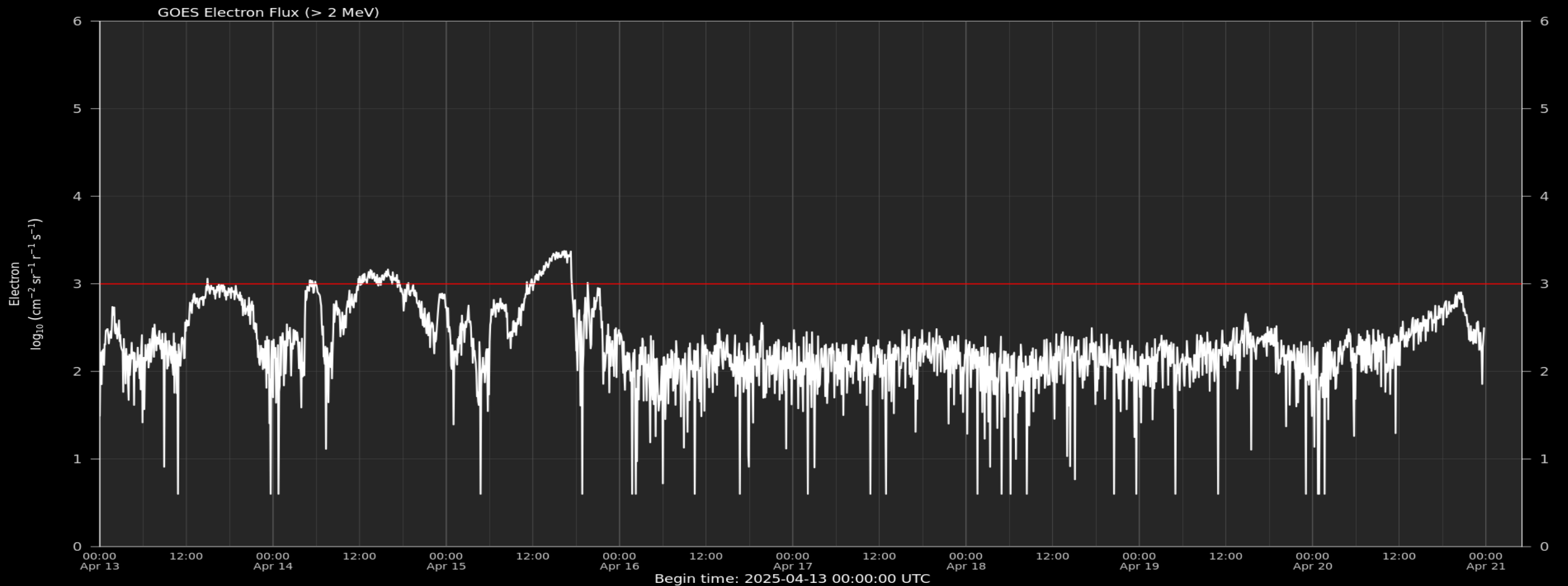
Solar proton flux



Electron flux at GEO

www.stce.be/educational/classification#electrons

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



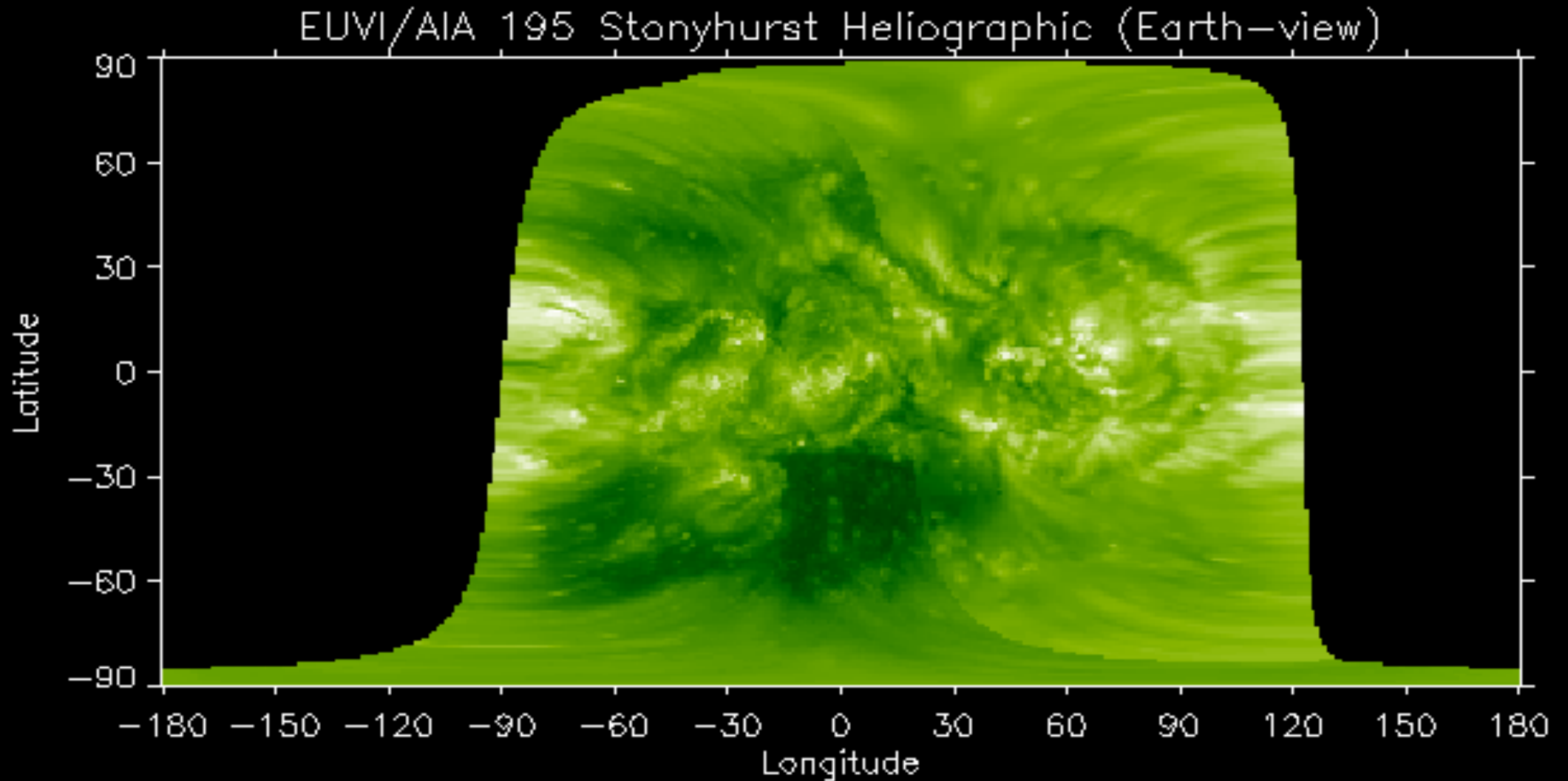
Outlook



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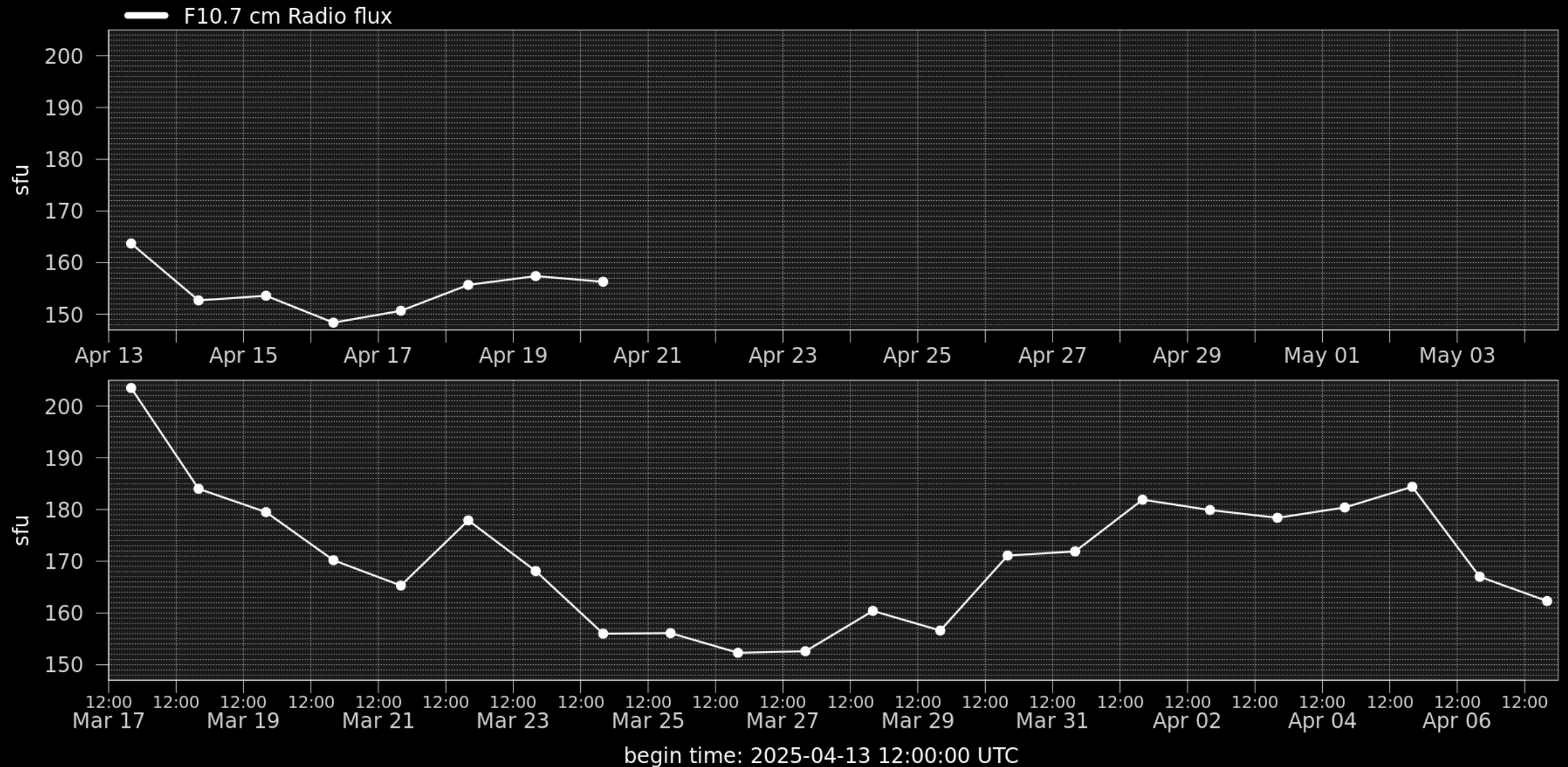
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Outlook: Solar activity



Observation date: 2025/04/20 19:35:00

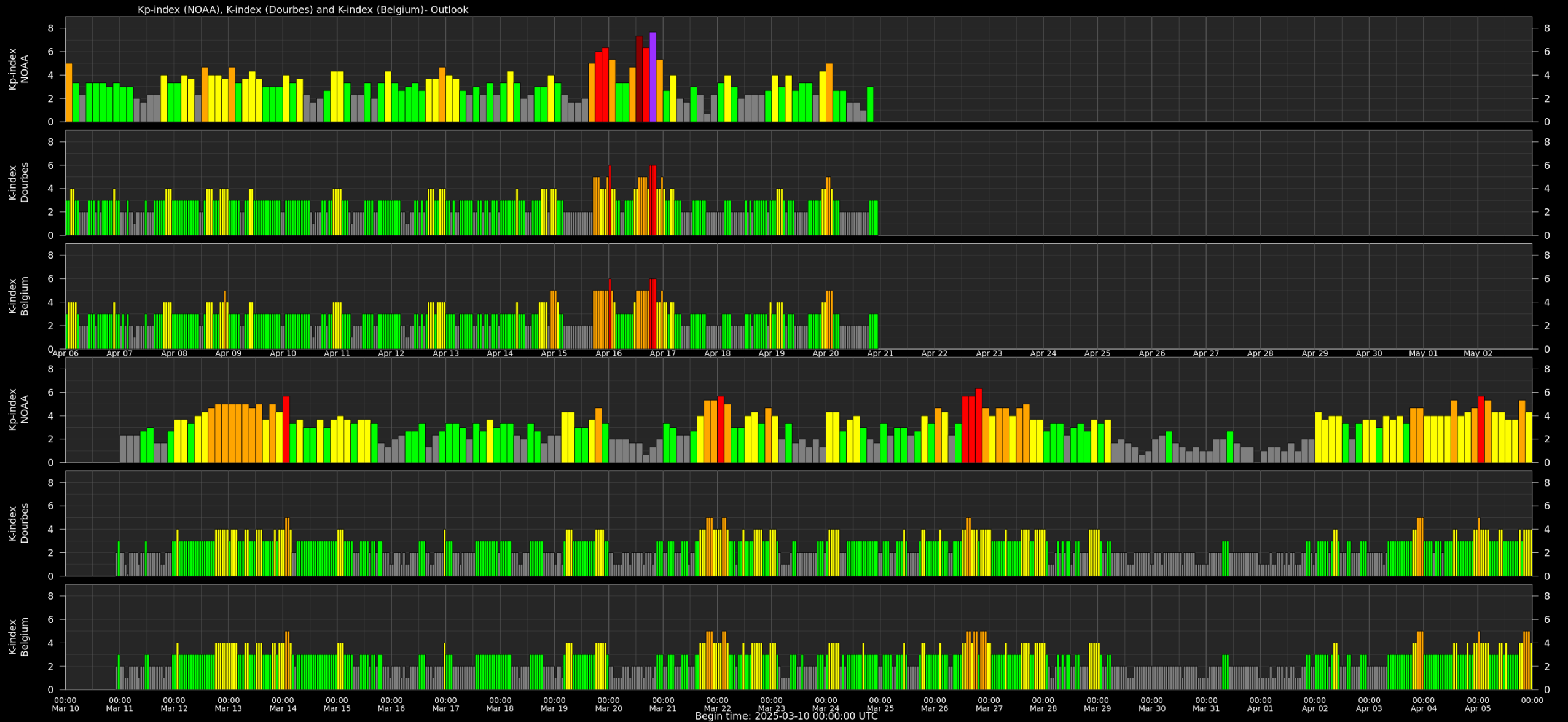
Outlook: Solar F10.7cm radio flux



Outlook: Solar wind parameters



Outlook: Geomagnetic activity



Outlook: Electron Flux at GEO Outlook



PECASUS



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Pecarus related events

GNSS advisories (Amplitude & Phase Scintillations)

HF advisories (Post-storm Depression & Auroral Absorption)

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See you at our next briefing!

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