

SIDC Space Weather Briefing

07 July 2024-14 July 2024

Yana Maneva

& the SIDC forecaster team



Royal Observatory
of Belgium

Solar Influences
Data analysis Centre
www.sidc.be

Summary Report

Solar activity from 2024-07-07 12:00 to 2024-07-14 23:59

Active regions	Over 13 AR, NOAA 3738 most prominent
Flares	# C-class flare: 39 # M-class flare: 19 # X-class flare: 1
Coronal Holes	A few CH-, 1 CH+
CMEs	1 partial halo, no Earth-directed

Proton flux	Nominal
Electron flux	Nominal

Solar wind and geomagnetic conditions

ICMEs	None
Solar wind conditions	B : 0.29 - 10.89 nT //Bz: -8.49 nT to 8.0 nT //Speed: 265.2 - 443.0km/s
Geomagnetic conditions	max KBel: 4.0, max Kp(NOAA): 3.33, Active Conditions

All Quiet Alert: Off

Solar Activity

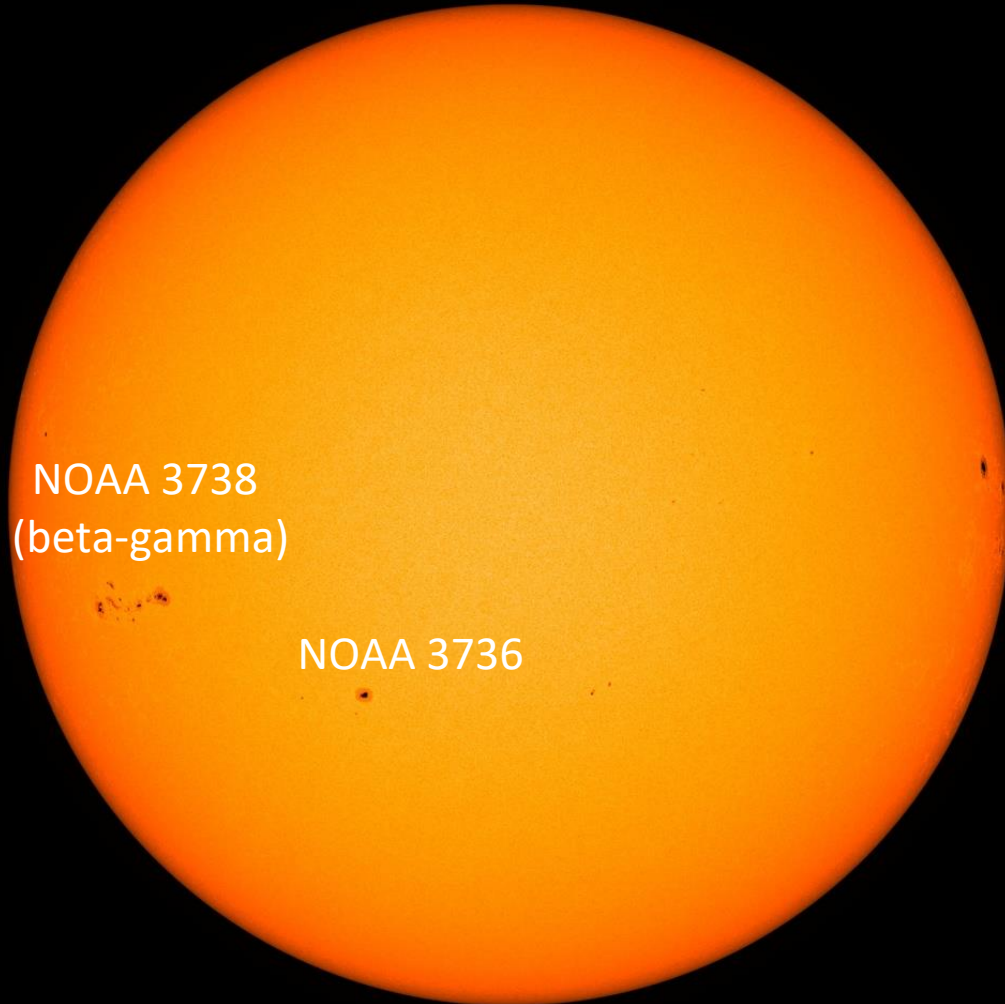


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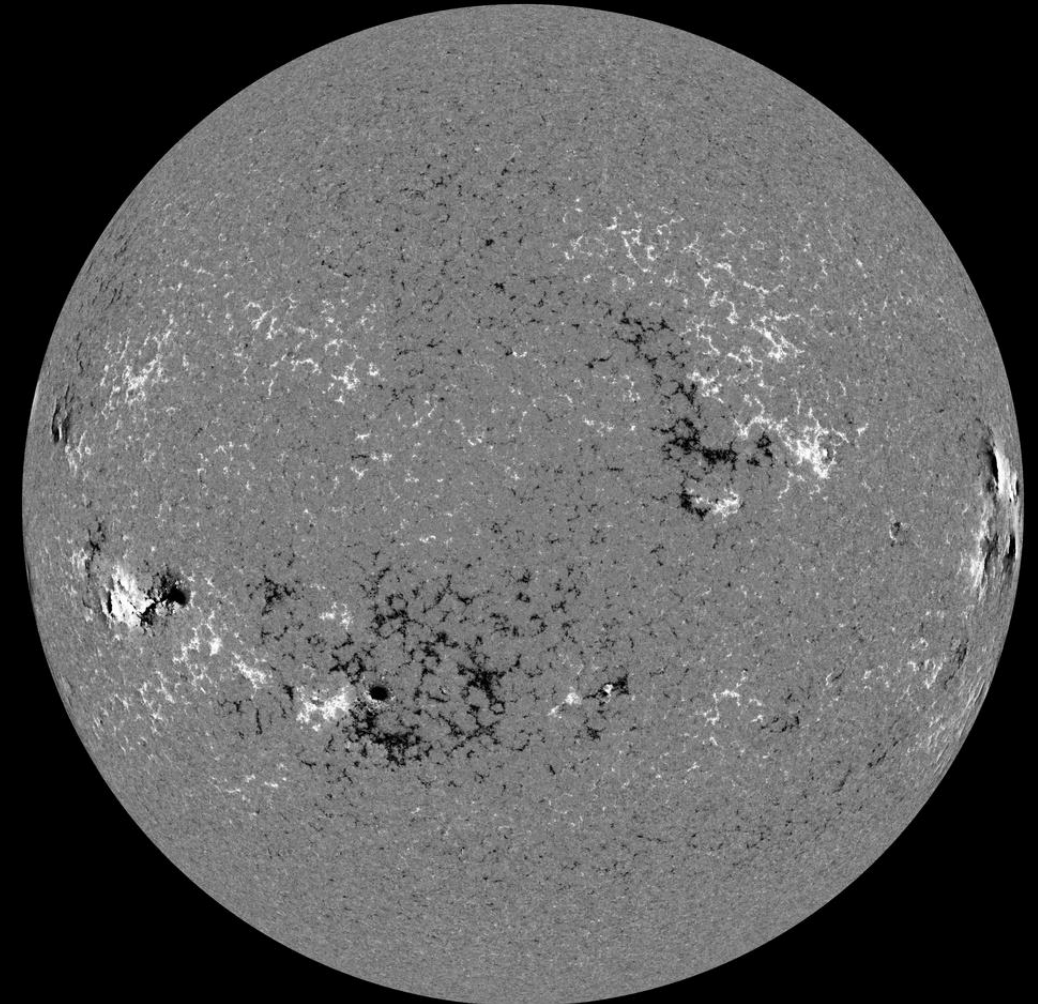
Solar active regions

SDO/HMI White Light 2024-07-07



SDO/HMI Quick-Look Continuum: 20240707_114500

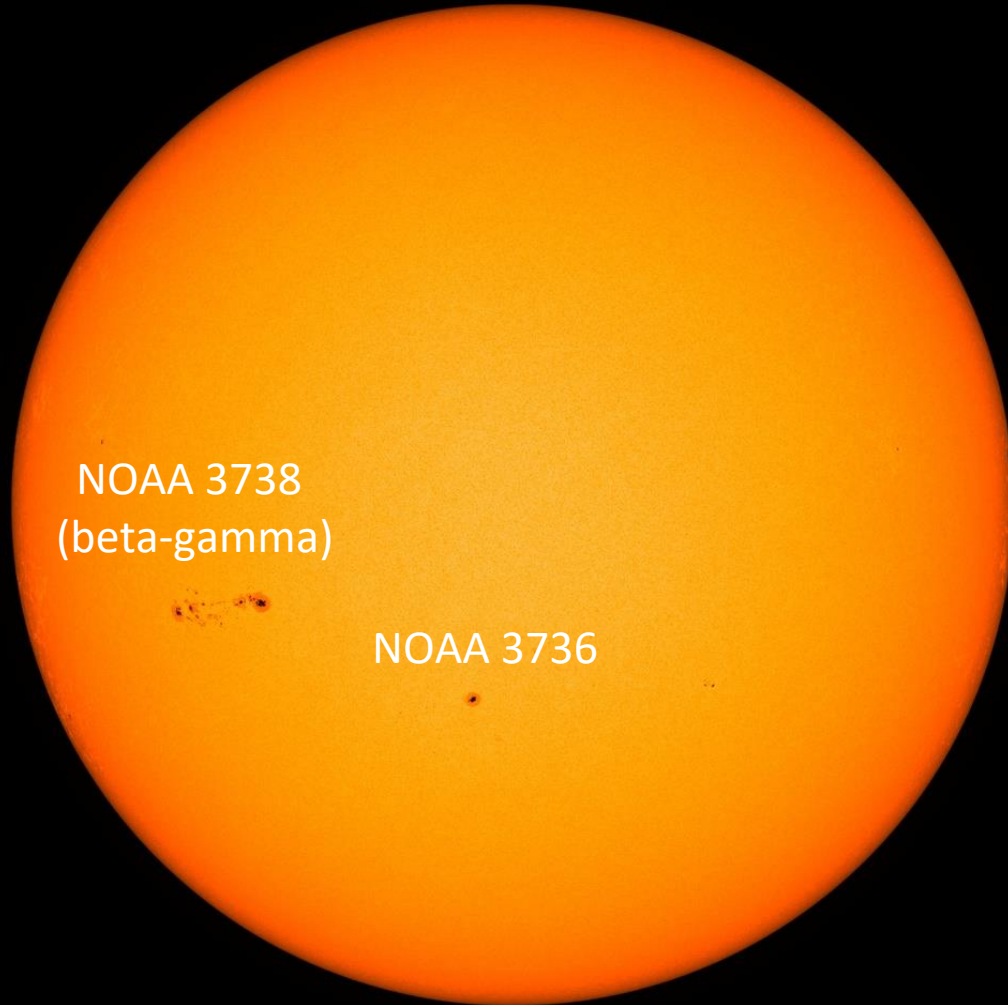
SDO/HMI Magnetogram 2024-07-07



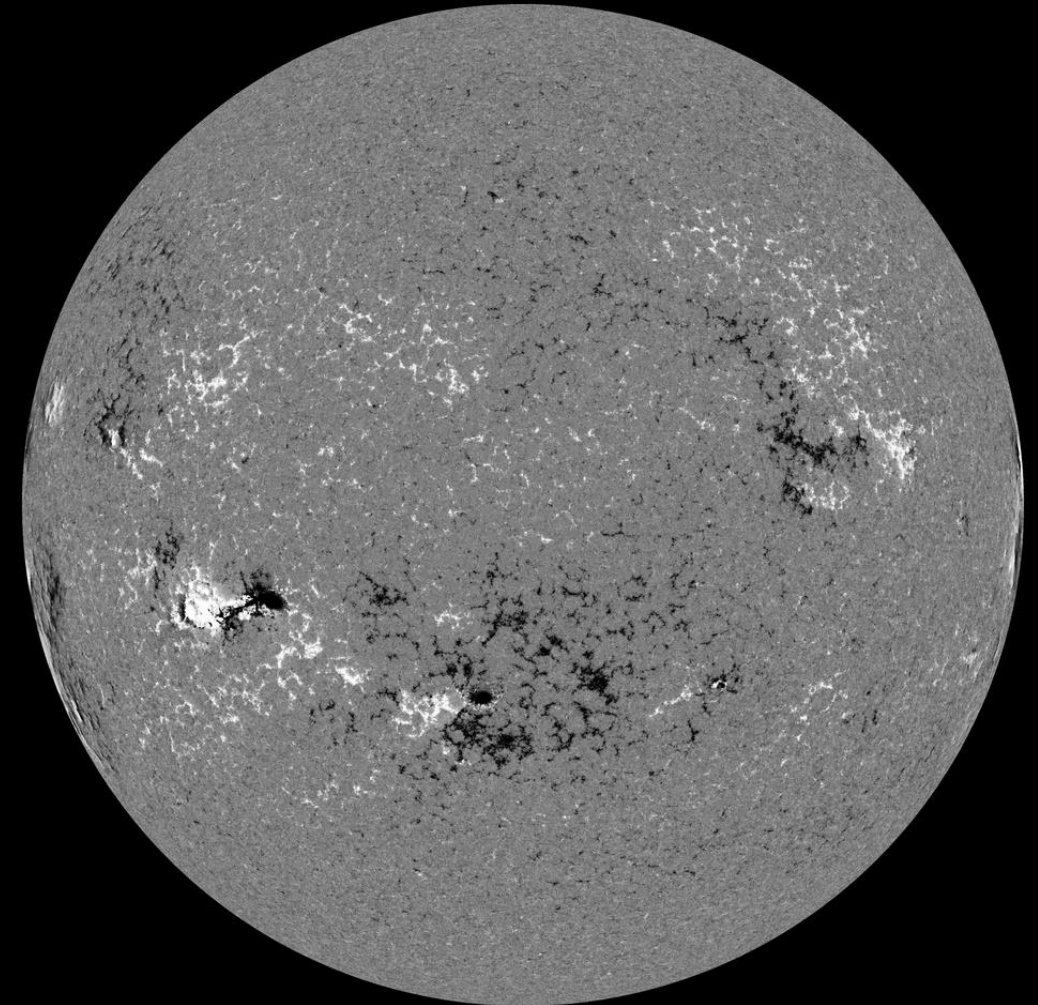
SDO/HMI Quick-Look Magnetogram: 20240707_114500

Solar active regions

SDO/HMI White Light 2024-07-08

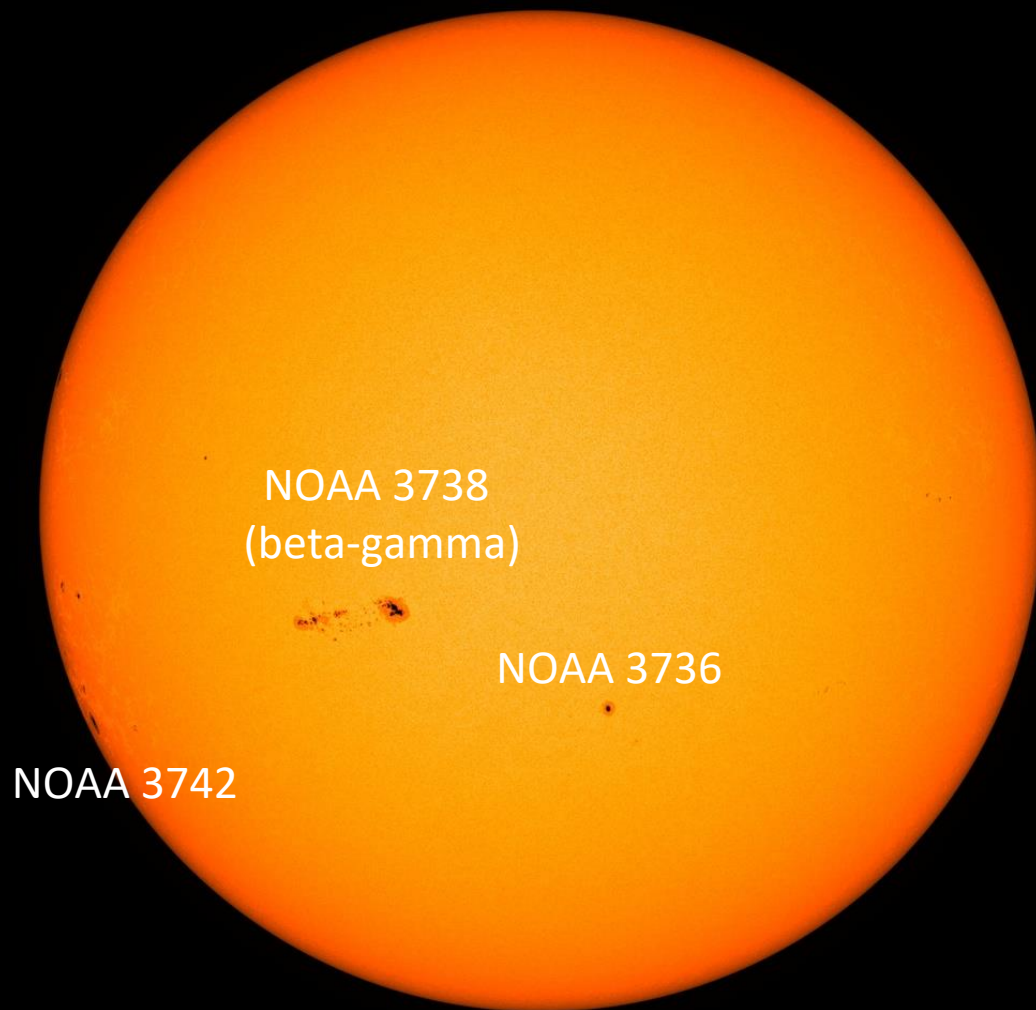


SDO/HMI Magnetogram 2024-07-08



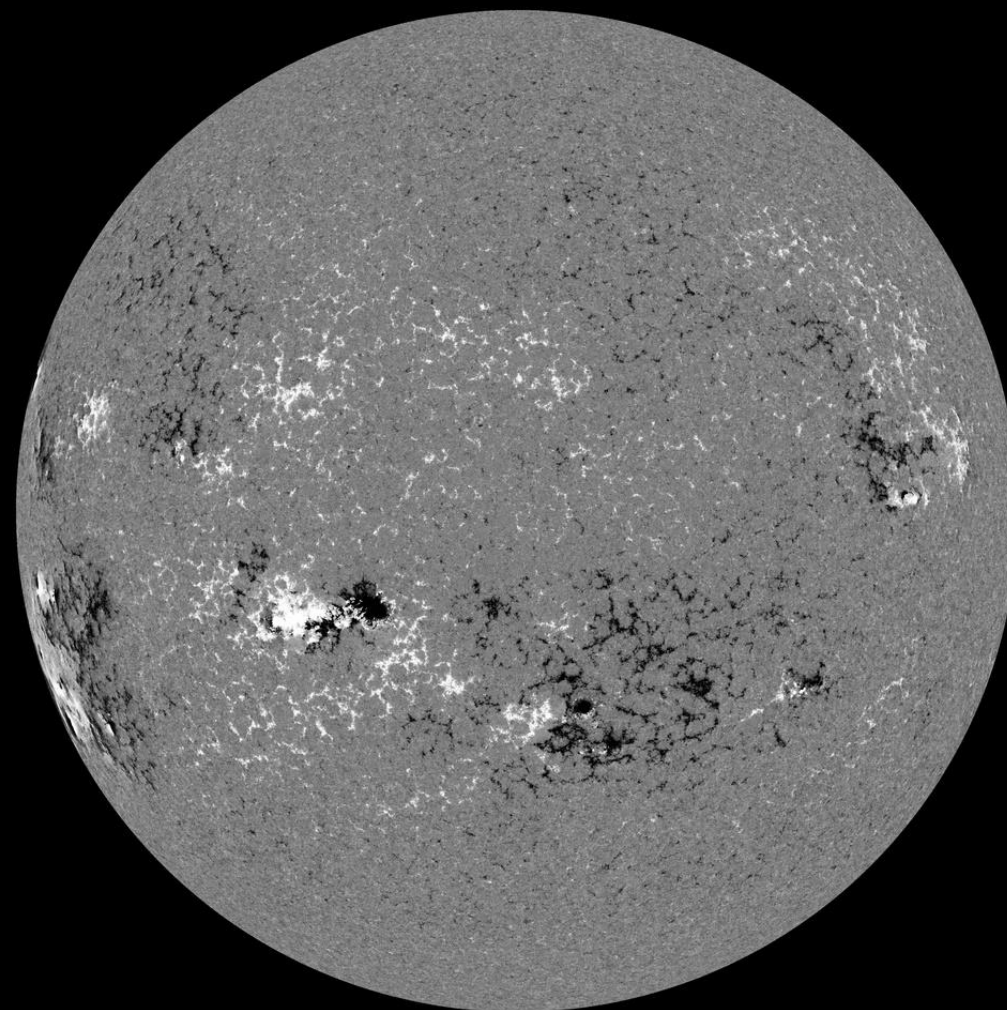
Solar active regions

SDO/HMI White Light 2024-07-09



SDO/HMI Quick-Look Continuum: 20240709_114500

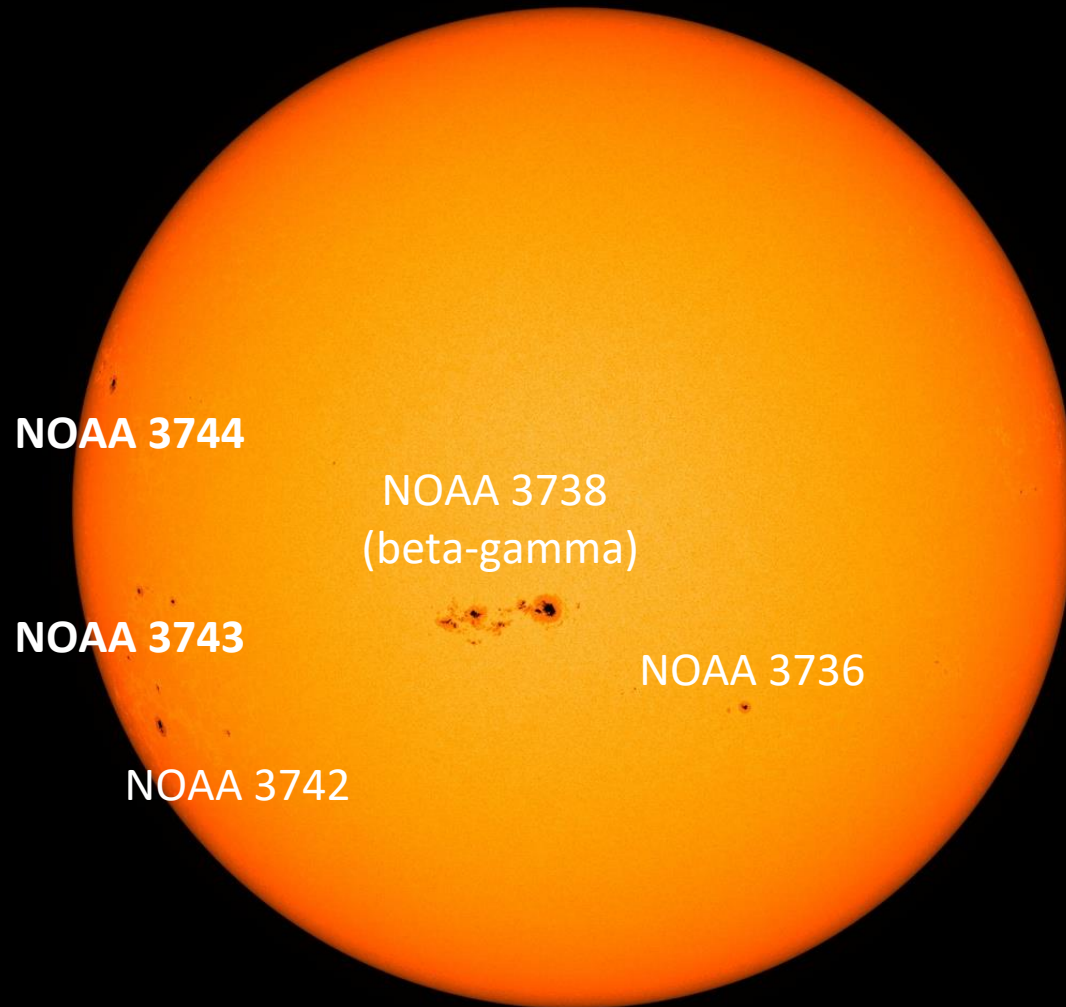
SDO/HMI Magnetogram 2024-07-09



SDO/HMI Quick-Look Magnetogram: 20240709_114500

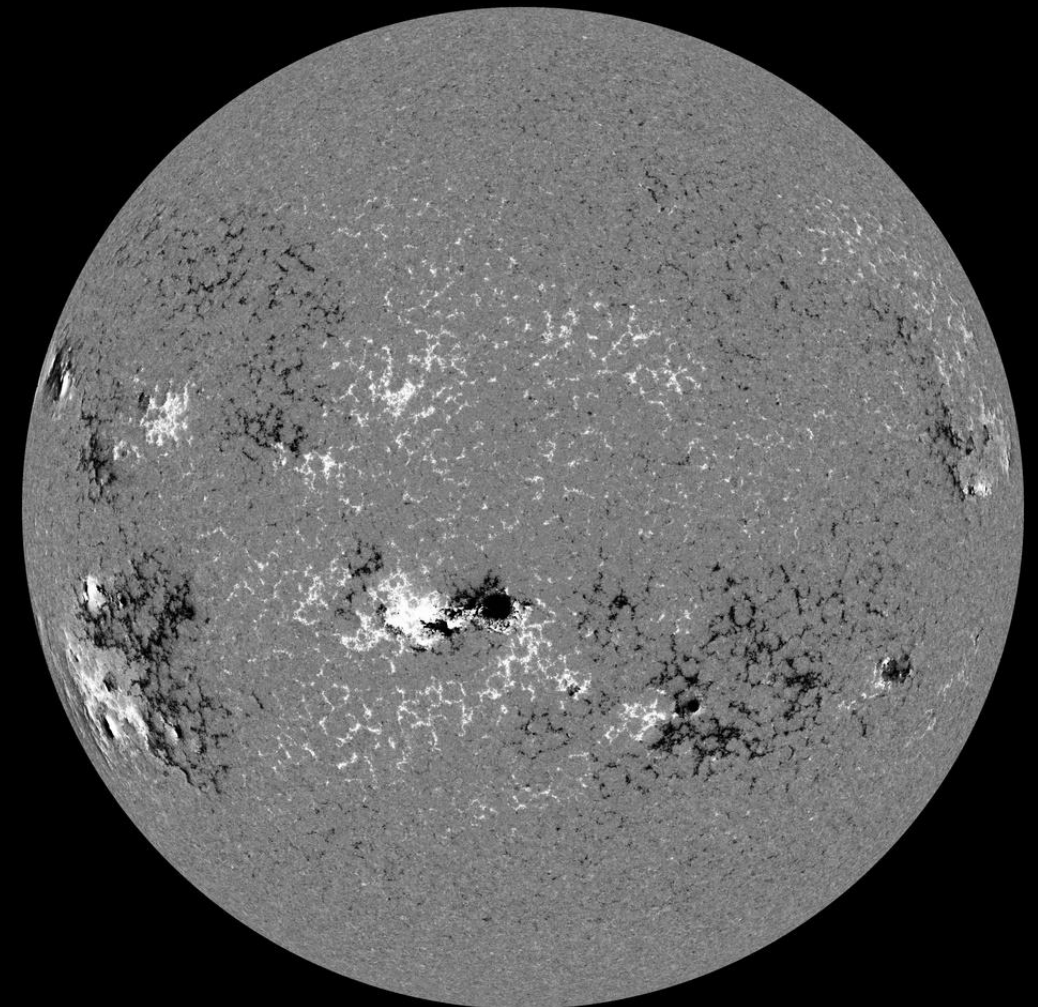
Solar active regions

SDO/HMI White Light 2024-07-10



SDO/HMI Quick-Look Continuum: 20240710_114500

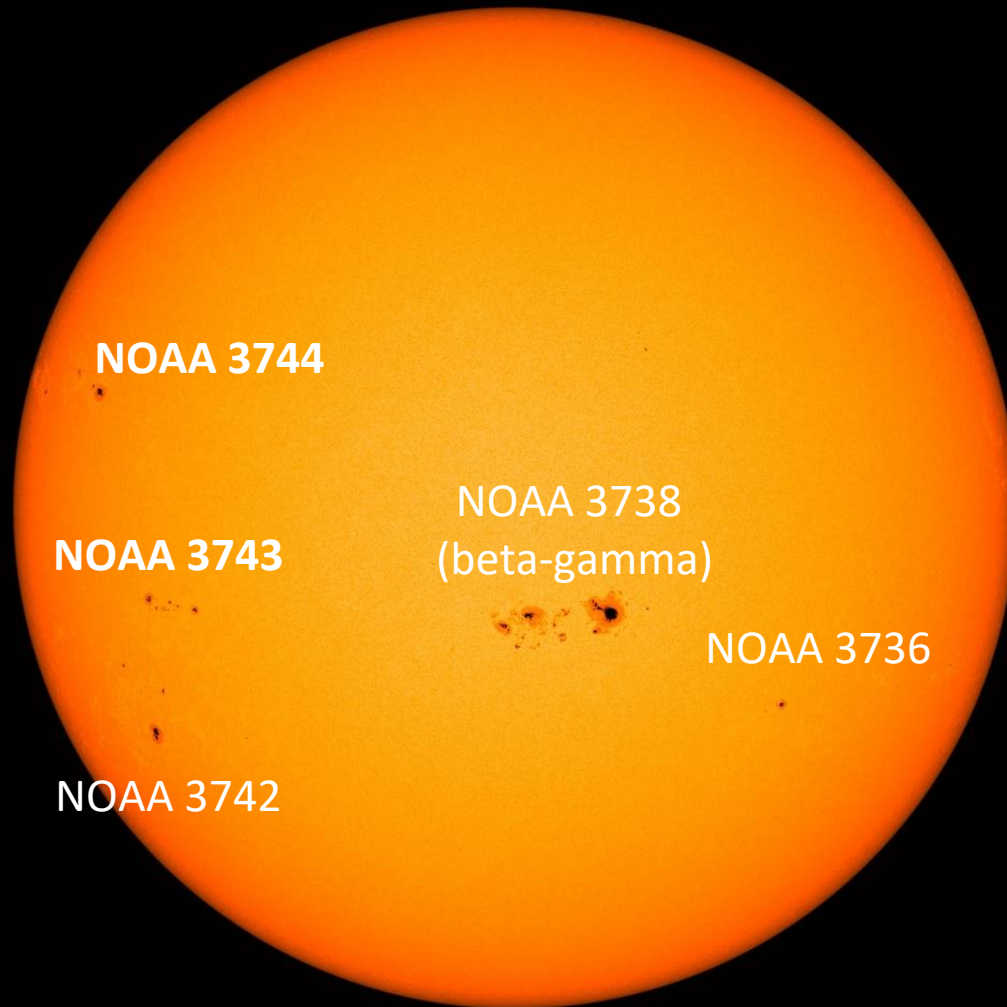
SDO/HMI Magnetogram 2024-07-10



SDO/HMI Quick-Look Magnetogram: 20240710_114500

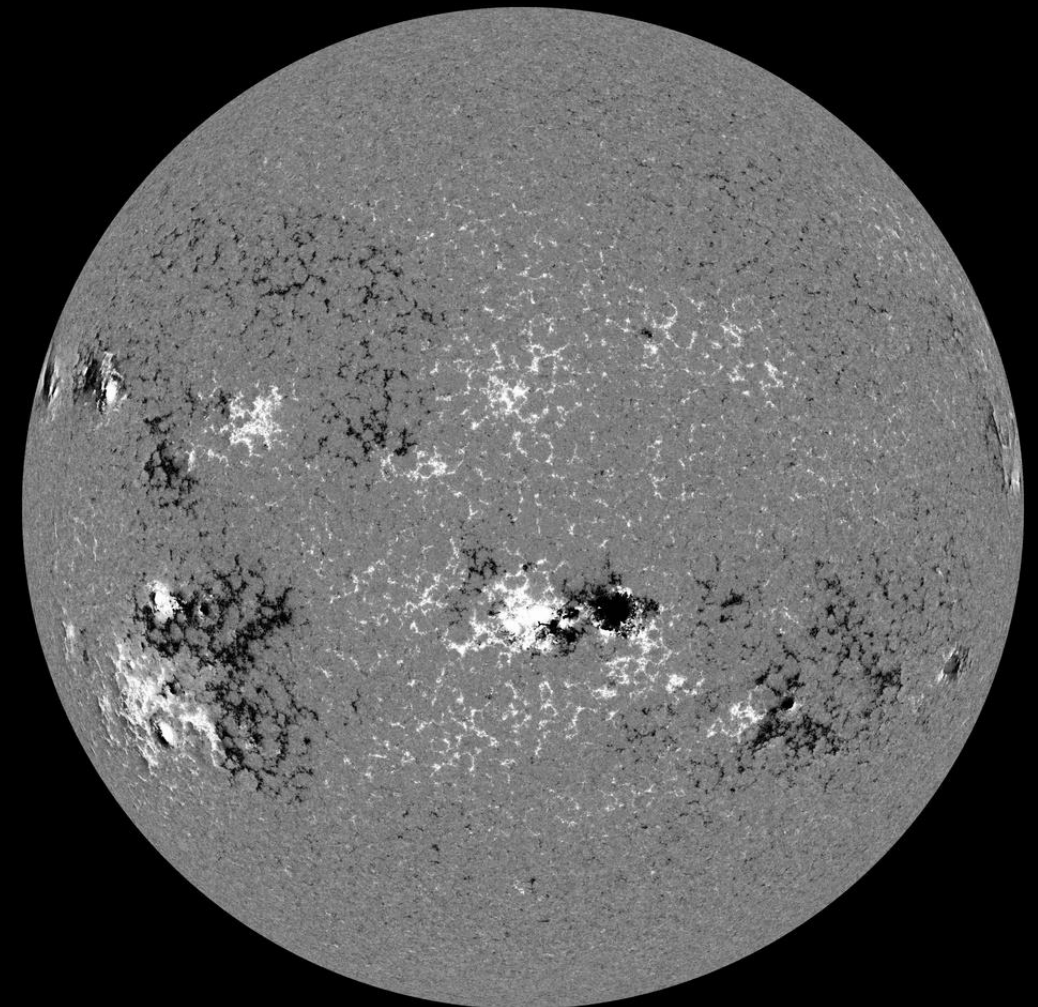
Solar active regions

SDO/HMI White Light 2024-07-11



SDO/HMI Quick-Look Continuum: 20240711_114500

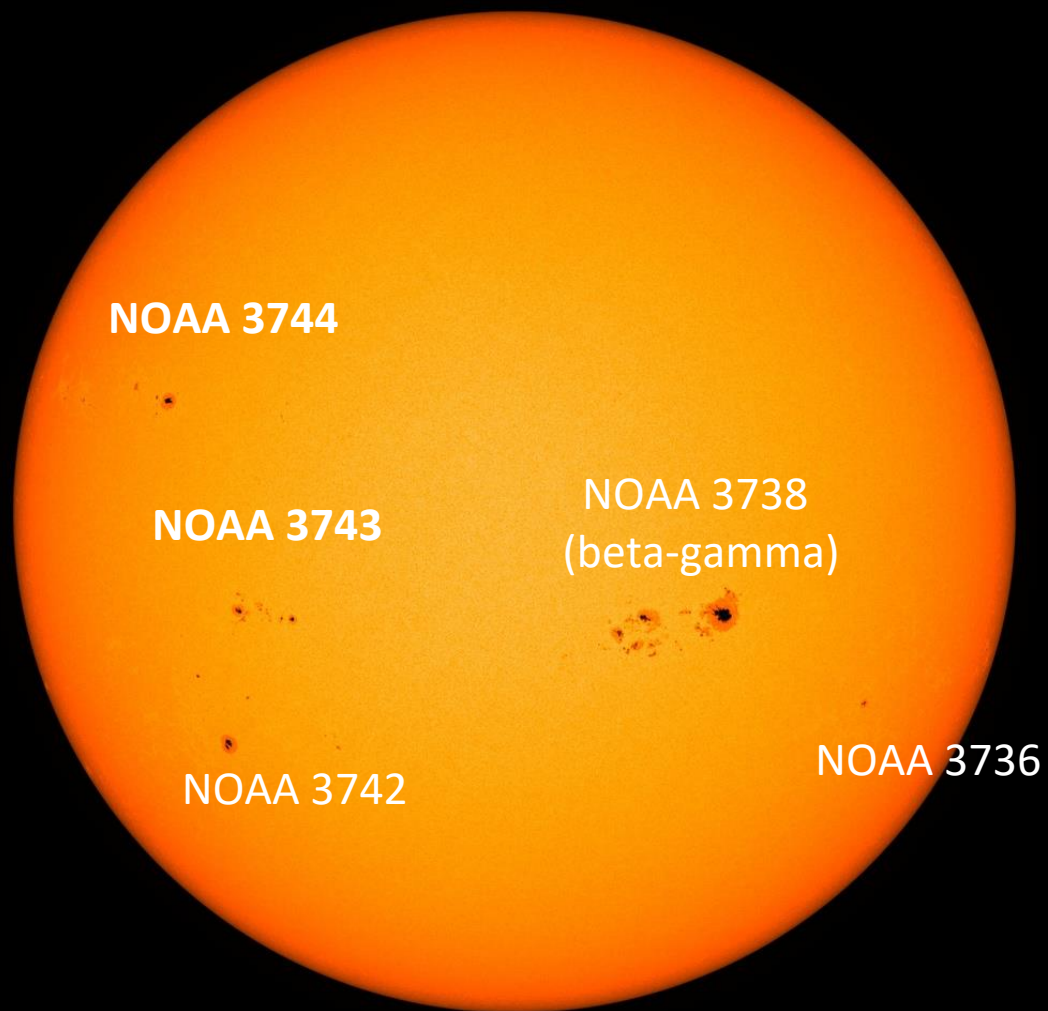
SDO/HMI Magnetogram 2024-07-11



SDO/HMI Quick-Look Magnetogram: 20240711_114500

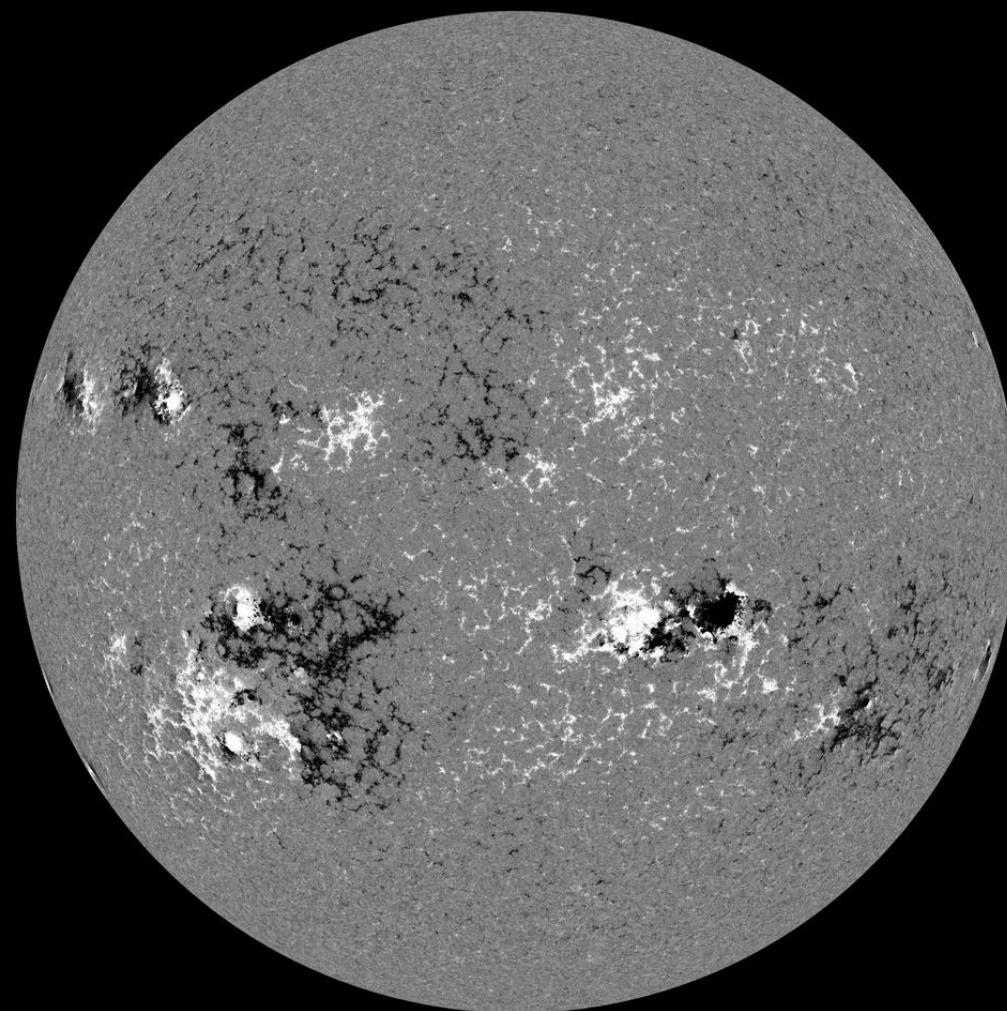
Solar active regions

SDO/HMI White Light 2024-07-12



SDO/HMI Quick-Look Continuum: 20240712_114500

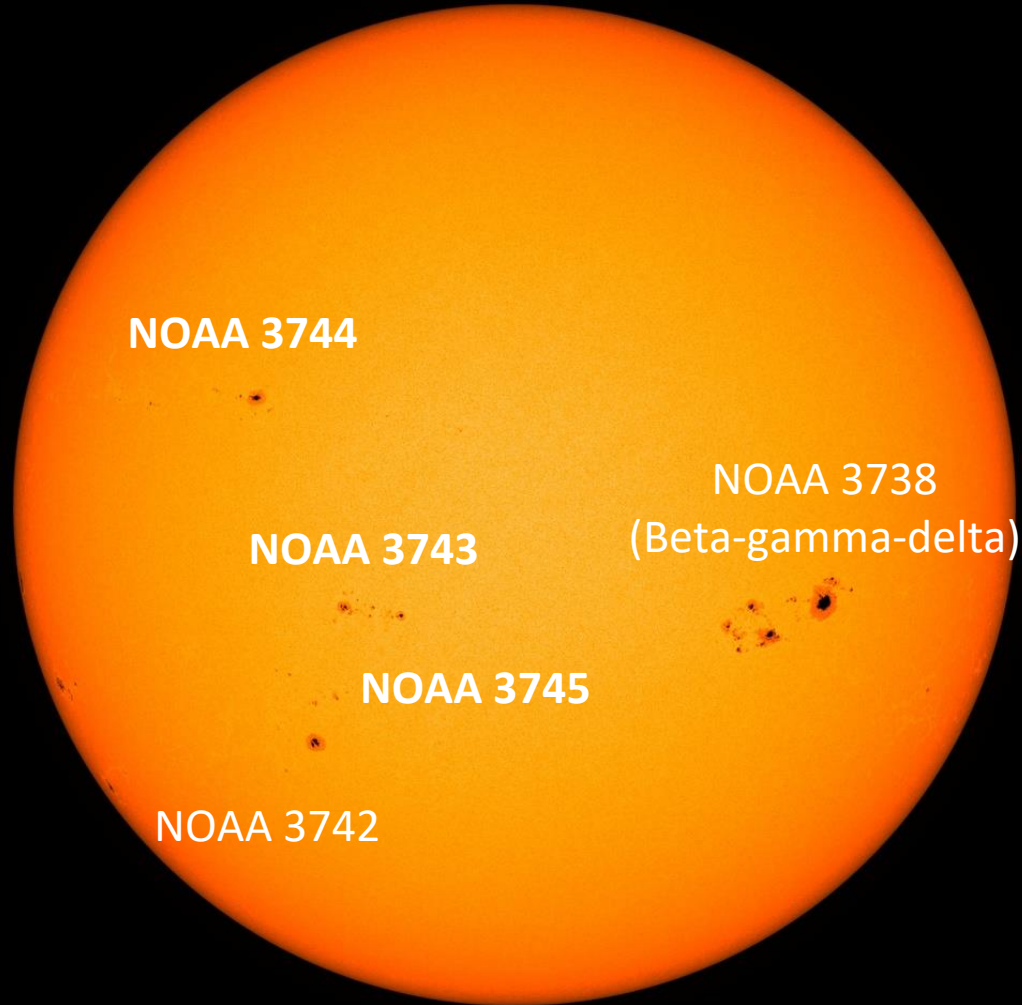
SDO/HMI Magnetogram 2024-07-12



SDO/HMI Quick-Look Magnetogram: 20240712_114500

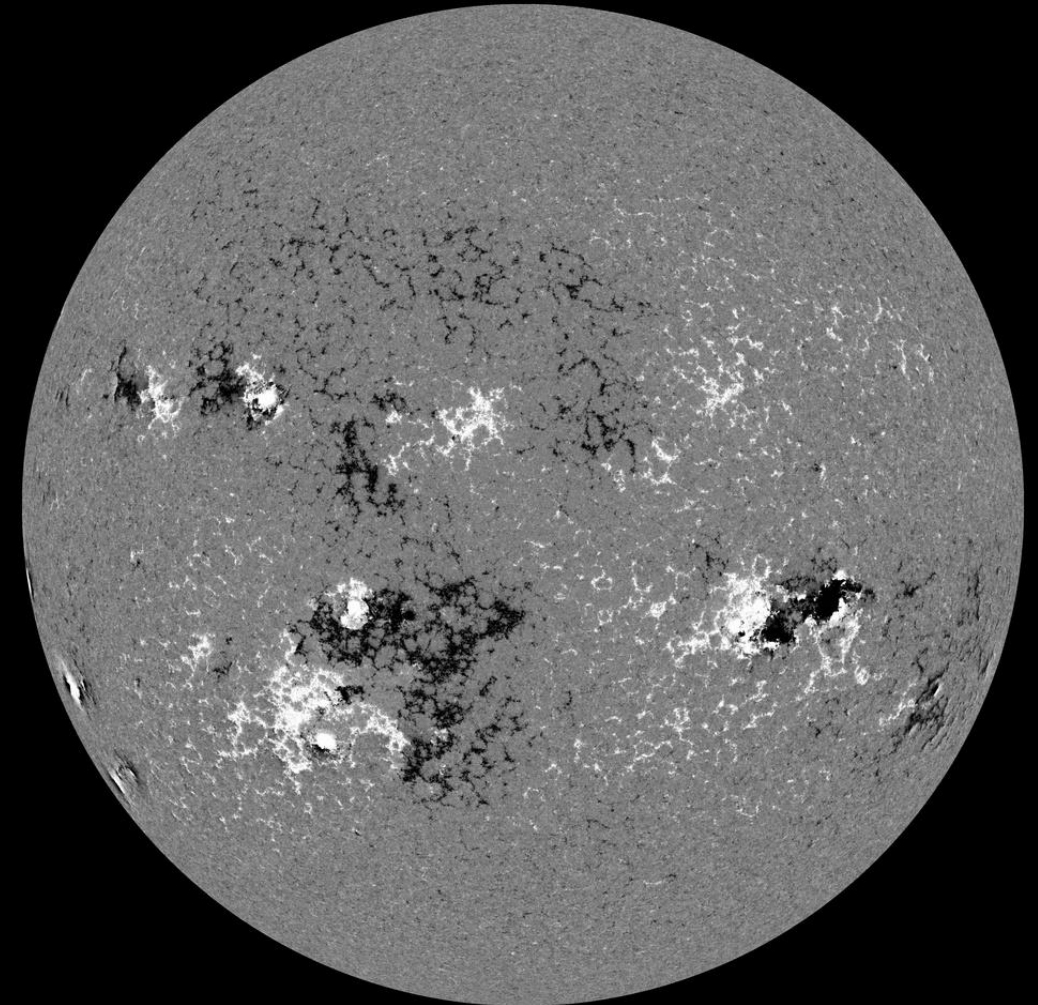
Solar active regions

SDO/HMI White Light 2024-07-13



SDO/HMI Quick-Look Continuum: 20240713_114500

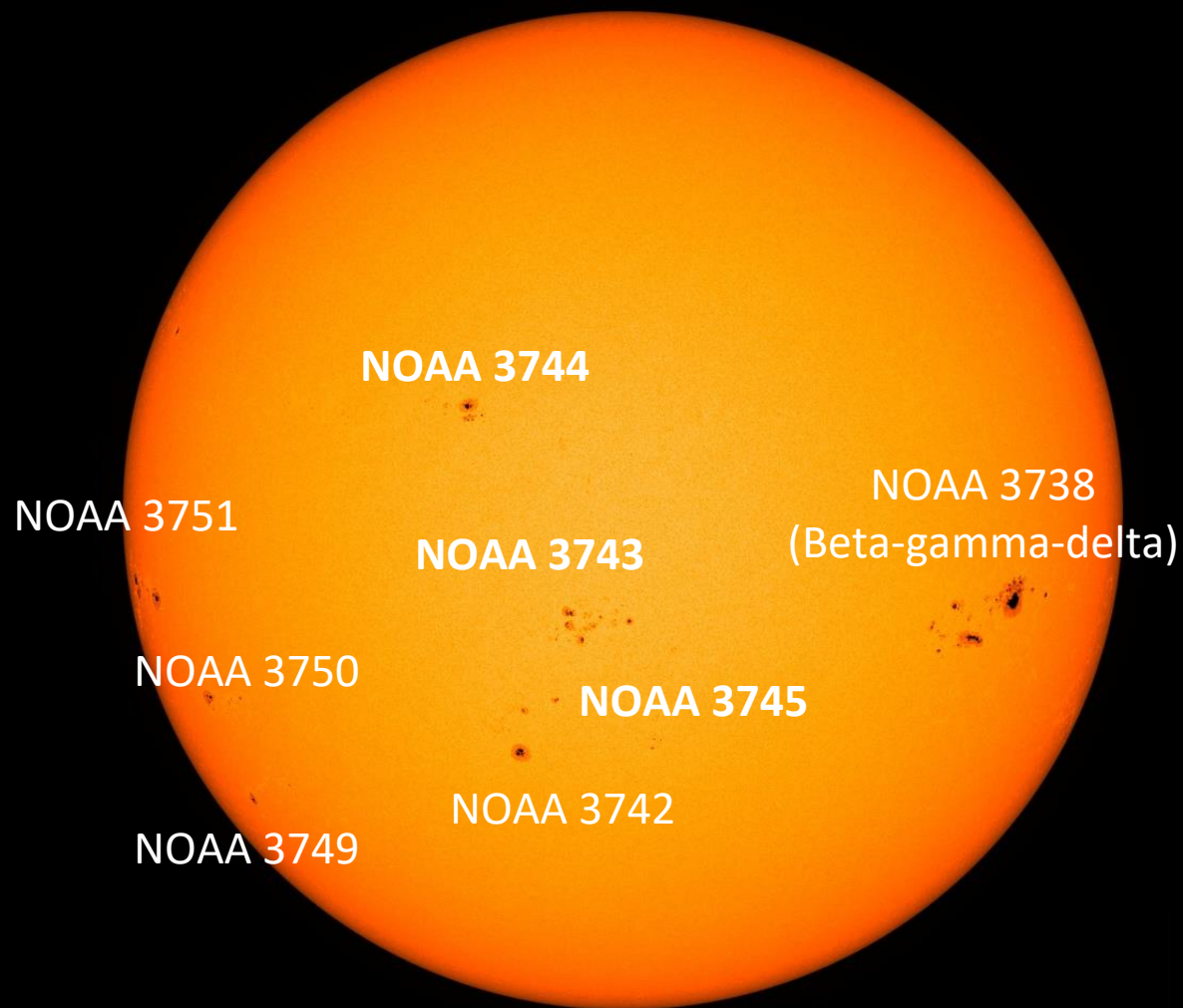
SDO/HMI Magnetogram 2024-07-13



SDO/HMI Quick-Look Magnetogram: 20240713_114500

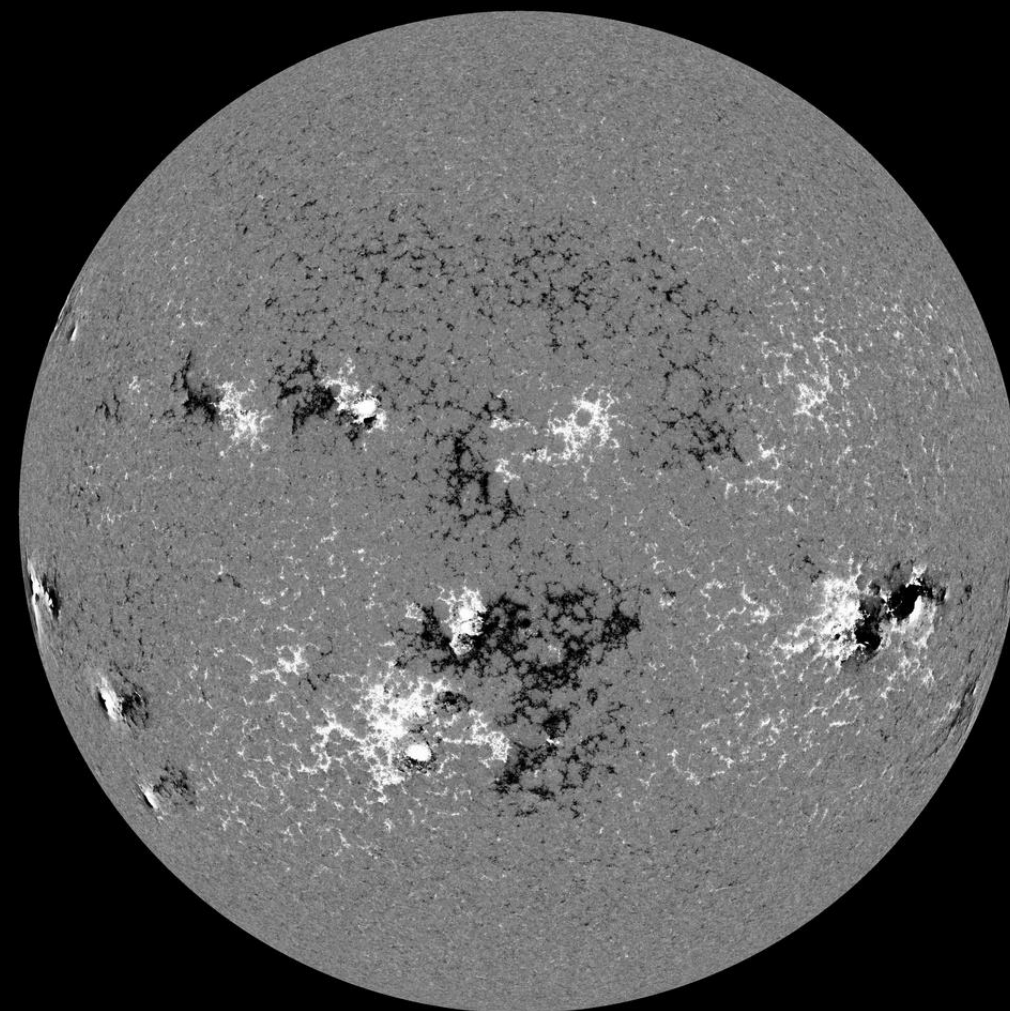
Solar active regions

SDO/HMI White Light 2024-07-14



SDO/HMI Quick-Look Continuum: 20240714_114500

SDO/HMI Magnetogram 2024-07-14

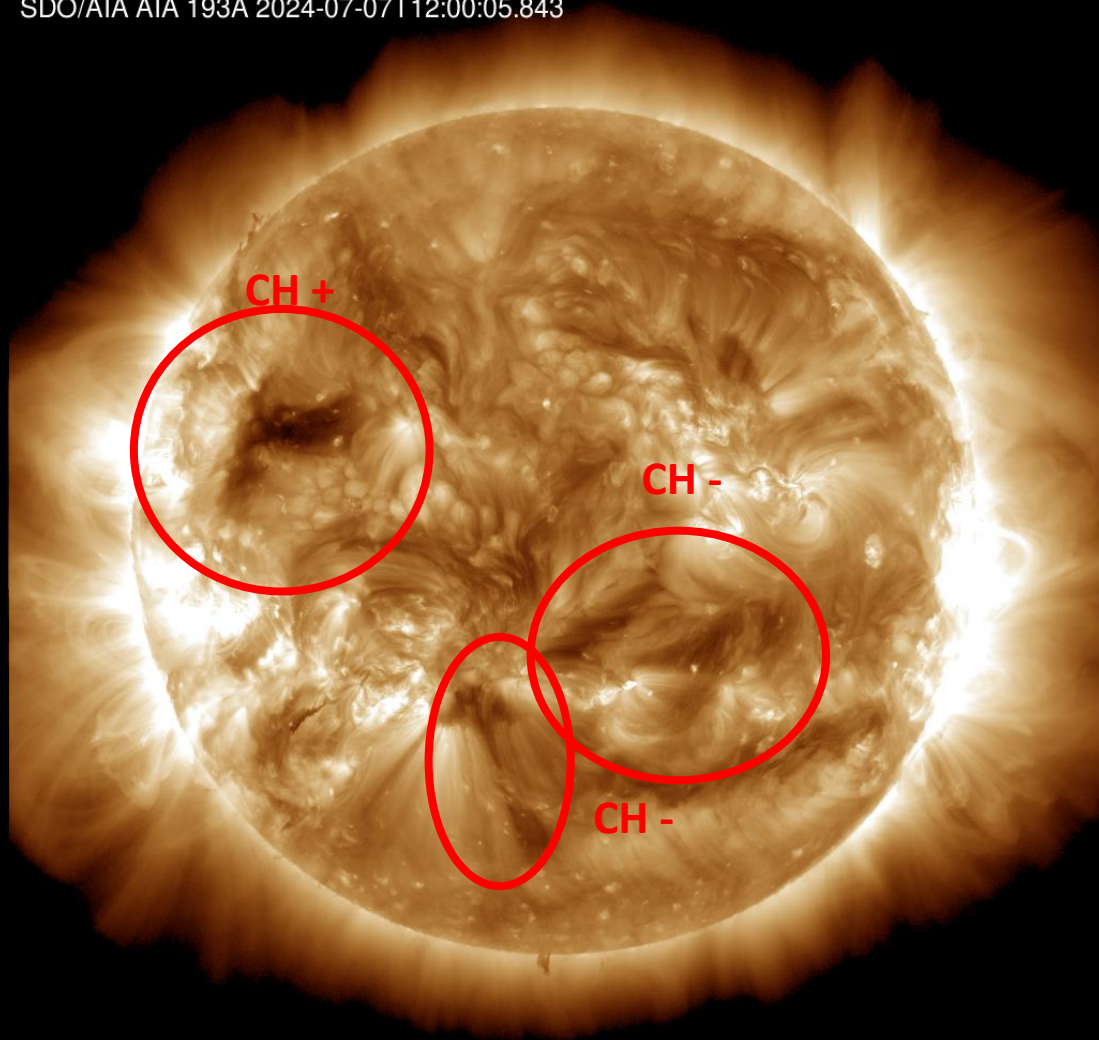


SDO/HMI Quick-Look Magnetogram: 20240714_114500

Coronal holes

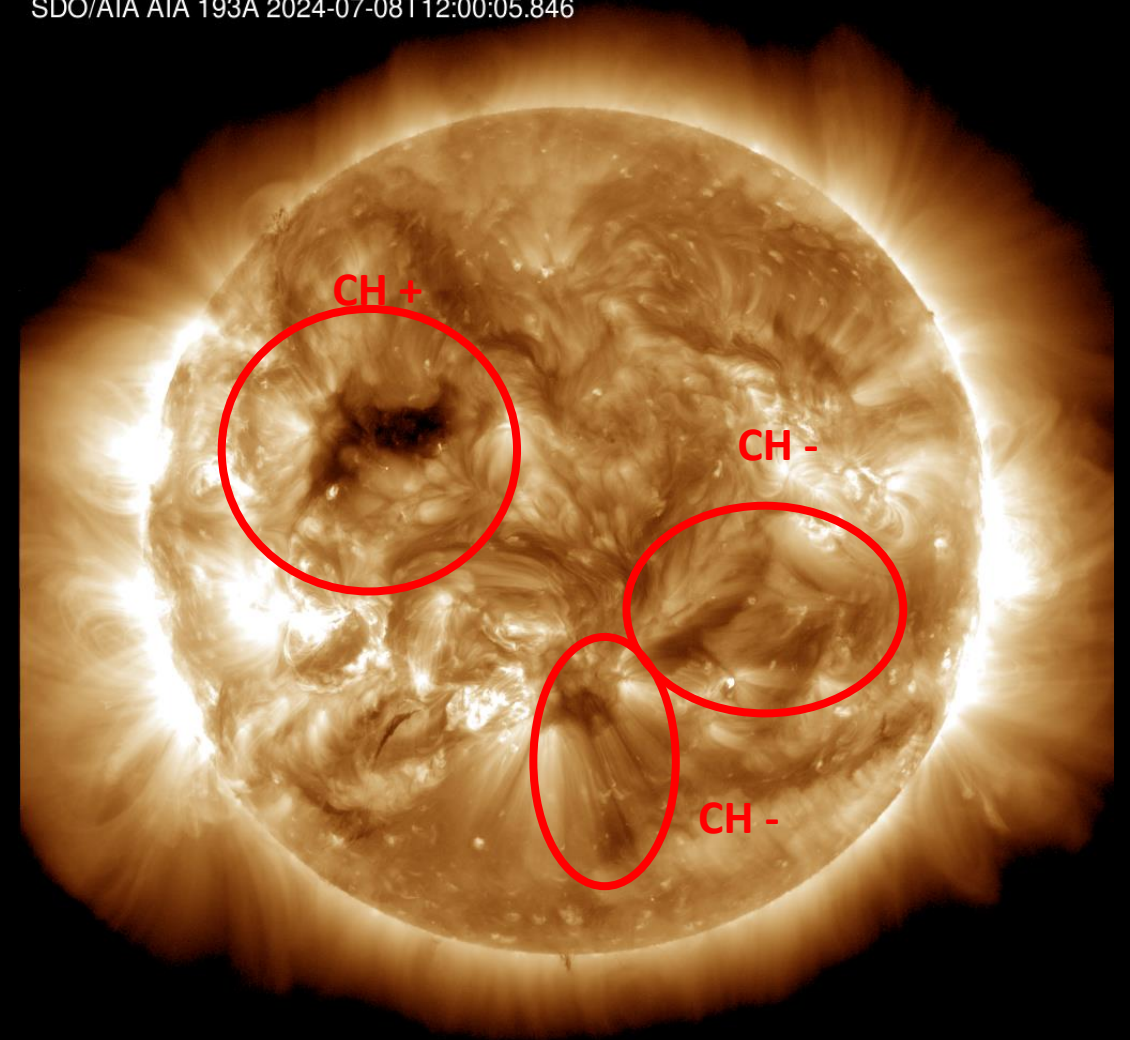
SDO/AIA 19.3 nm 2024-07-07

SDO/AIA AIA 193Å 2024-07-07T12:00:05.843



SDO/AIA 19.3 nm 2024-07-08

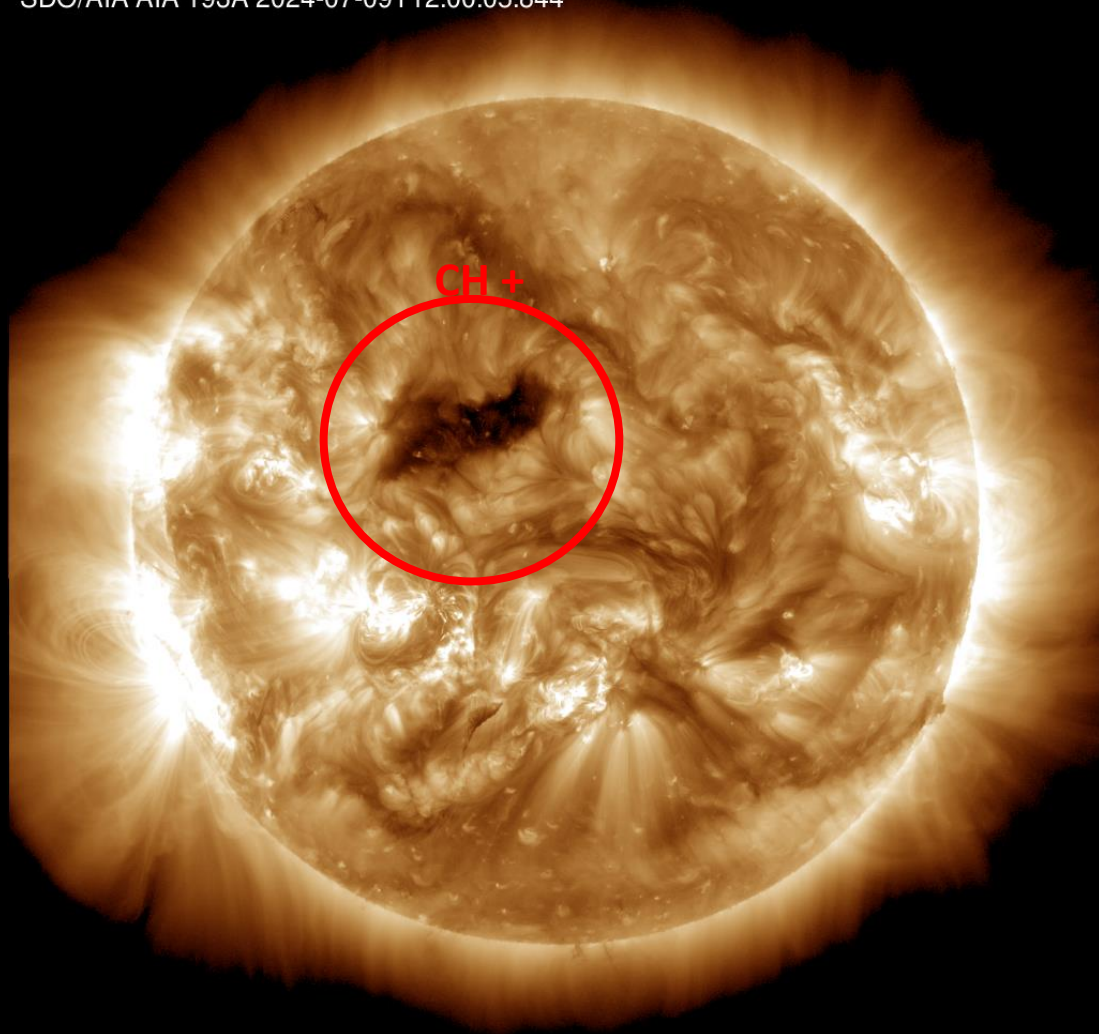
SDO/AIA AIA 193Å 2024-07-08T12:00:05.846



Coronal holes

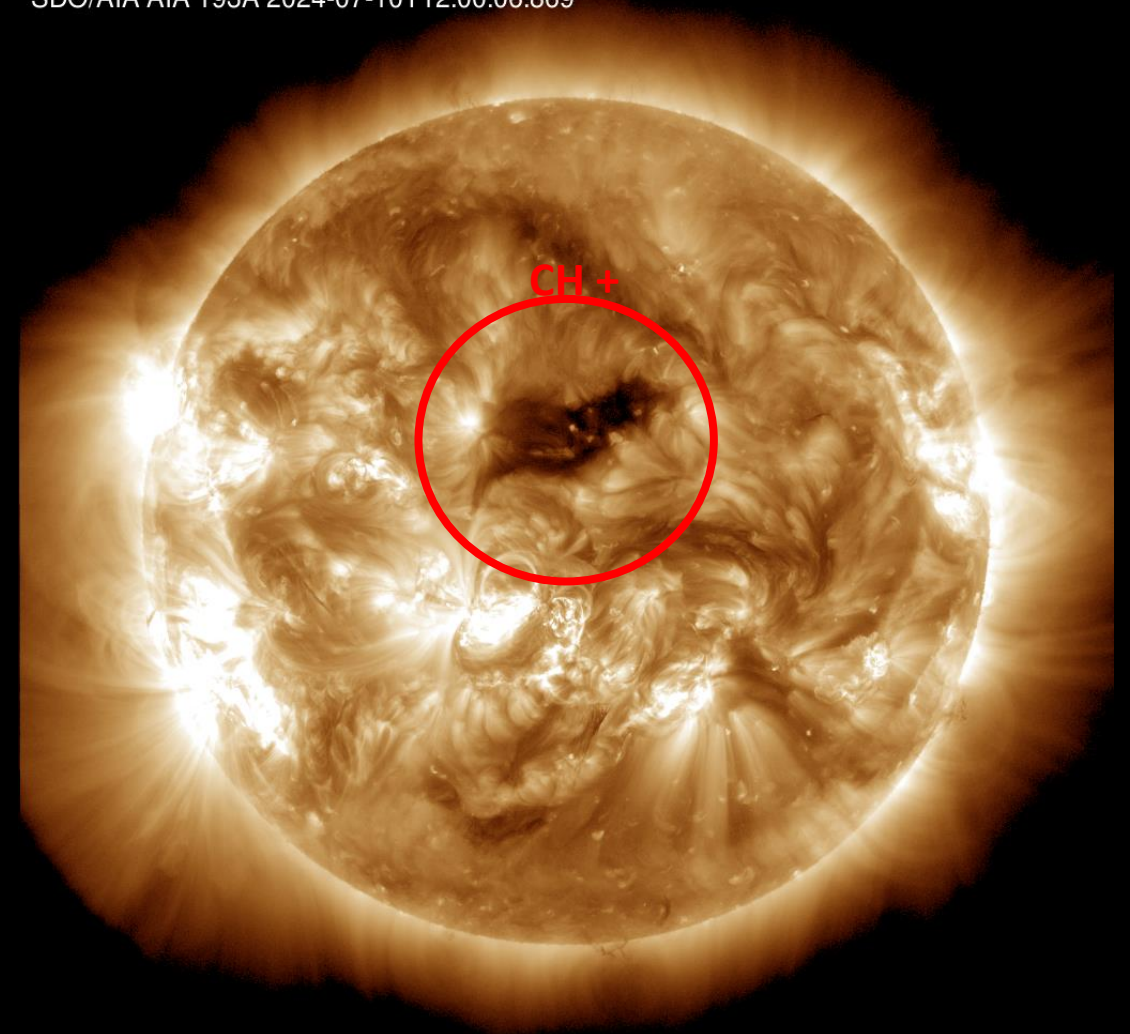
SDO/AIA 19.3 nm 2024-07-09

SDO/AIA AIA 193Å 2024-07-09T12:00:05.844



SDO/AIA 19.3 nm 2024-07-10

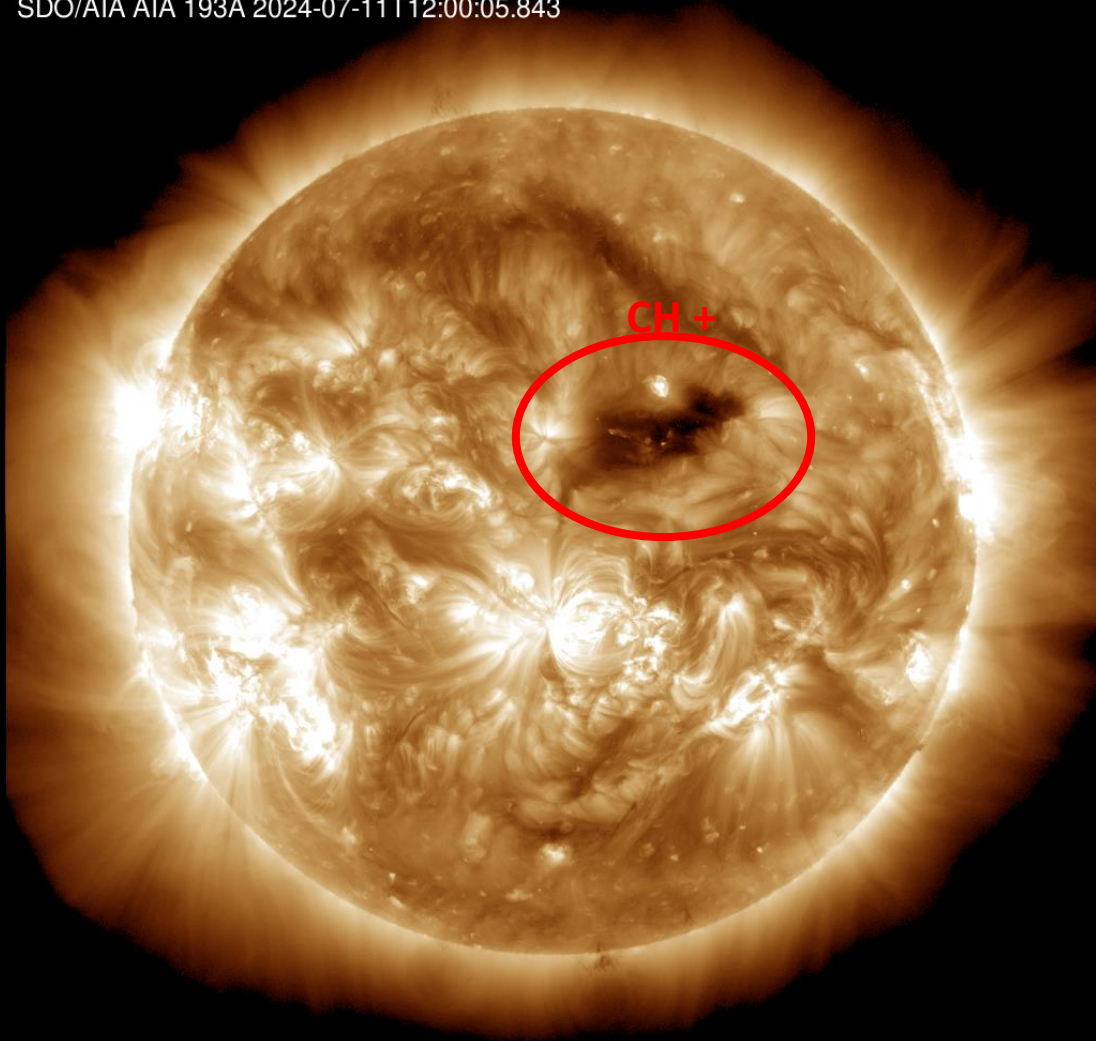
SDO/AIA AIA 193Å 2024-07-10T12:00:06.869



Coronal holes

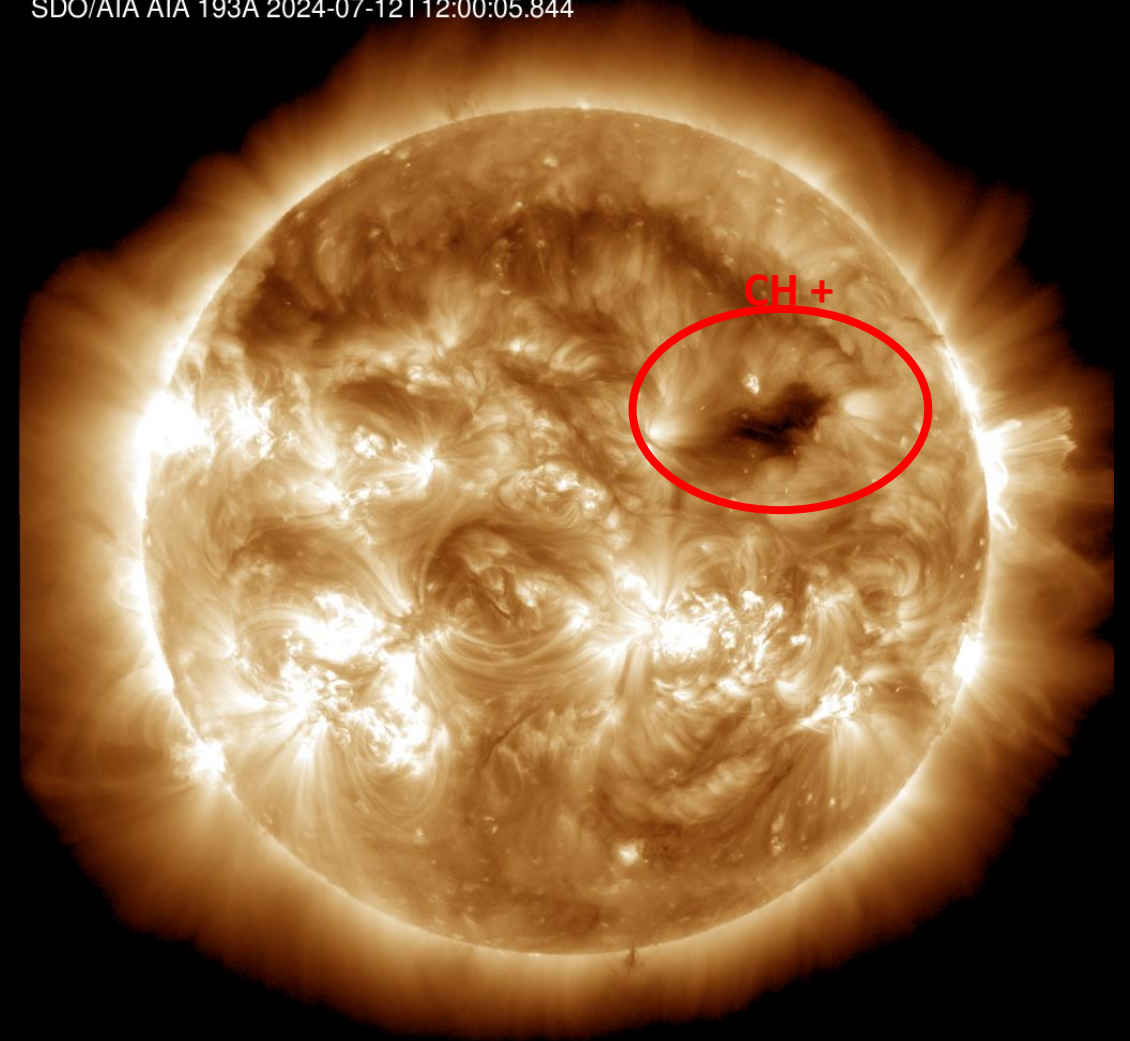
SDO/AIA 19.3 nm 2024-07-11

SDO/AIA AIA 193Å 2024-07-11T12:00:05.843



SDO/AIA 19.3 nm 2024-07-12

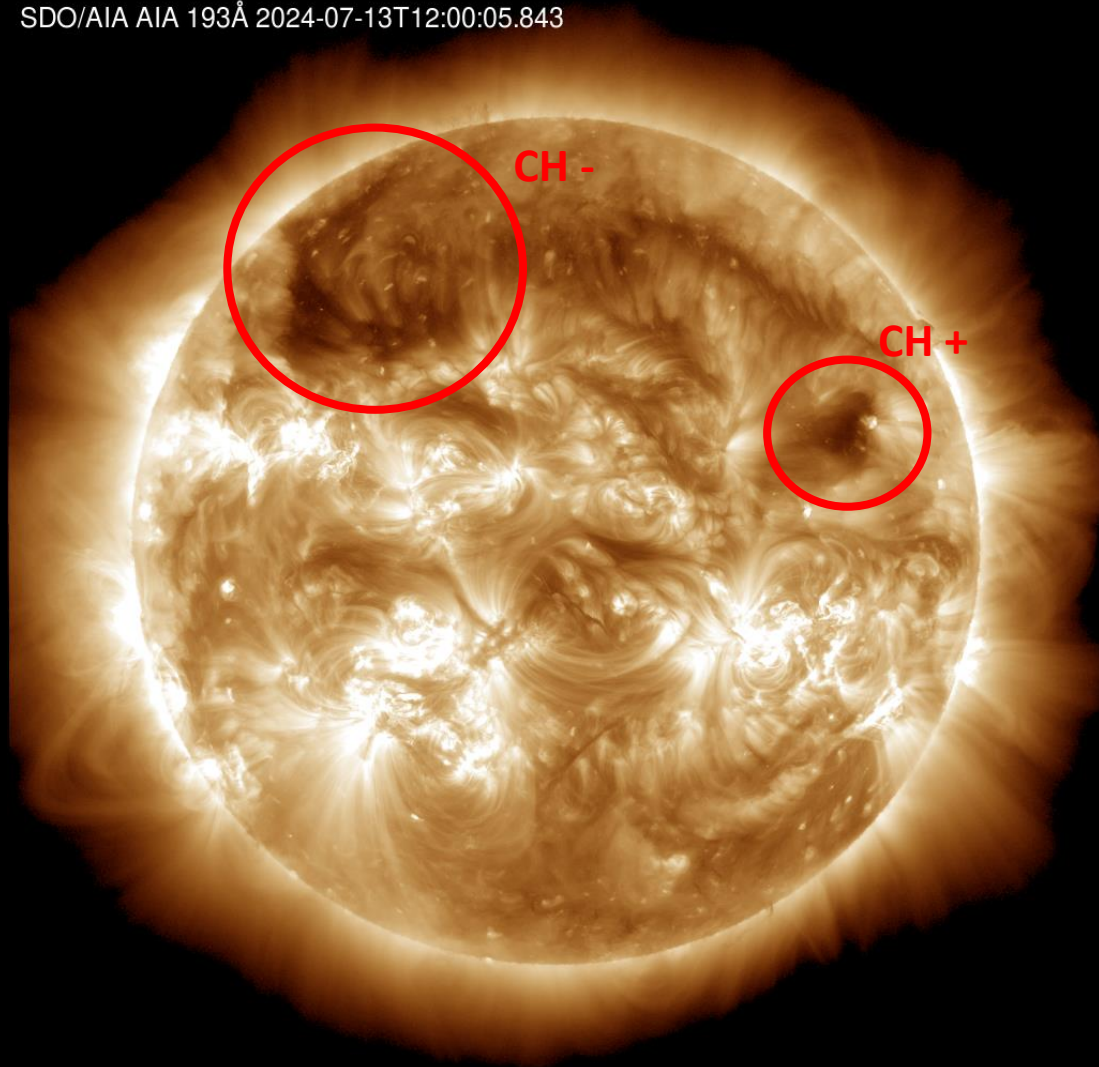
SDO/AIA AIA 193Å 2024-07-12T12:00:05.844



Coronal holes

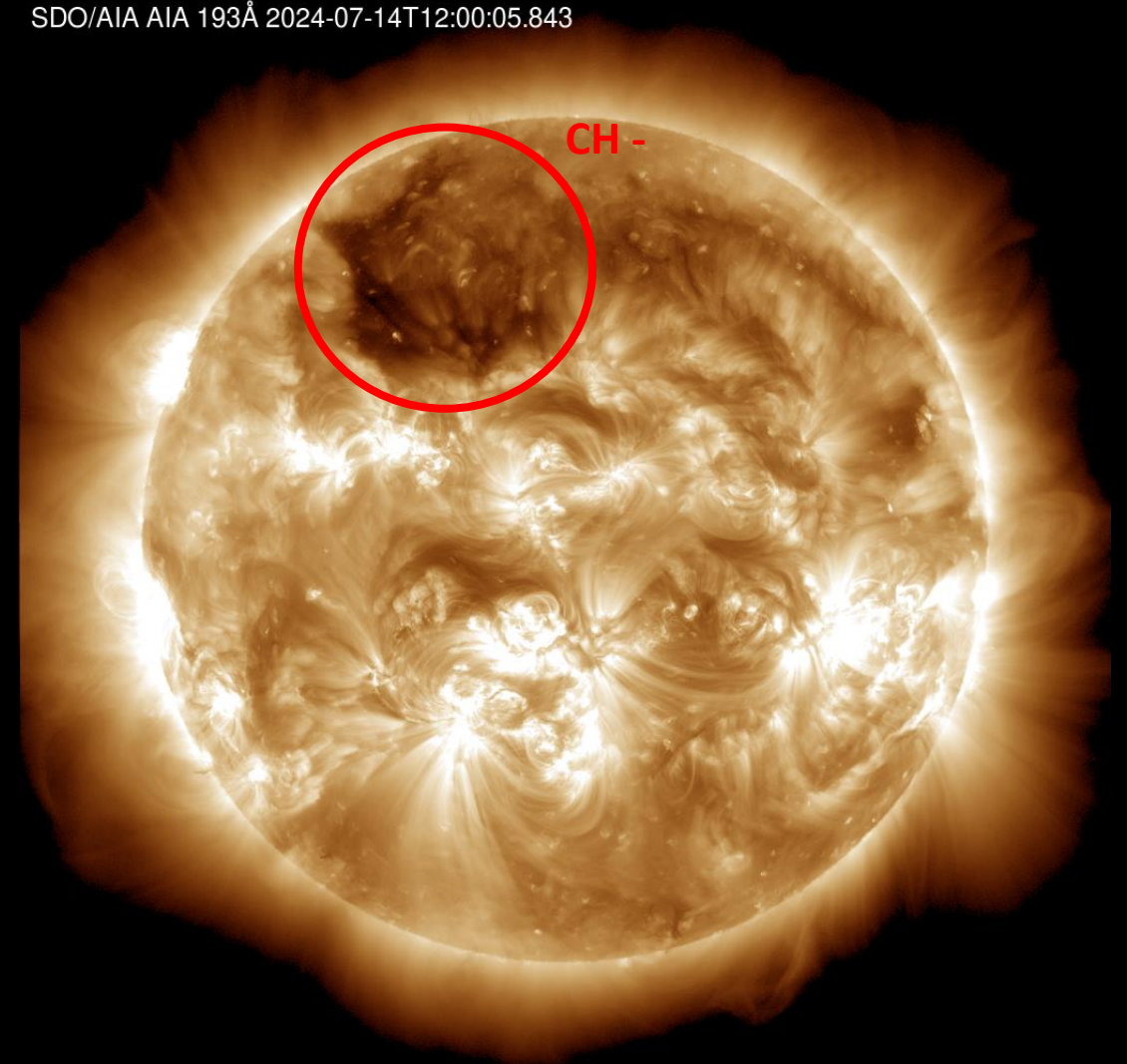
SDO/AIA 19.3 nm 2024-07-13

SDO/AIA AIA 193Å 2024-07-13T12:00:05.843



SDO/AIA 19.3 nm 2024-07-14

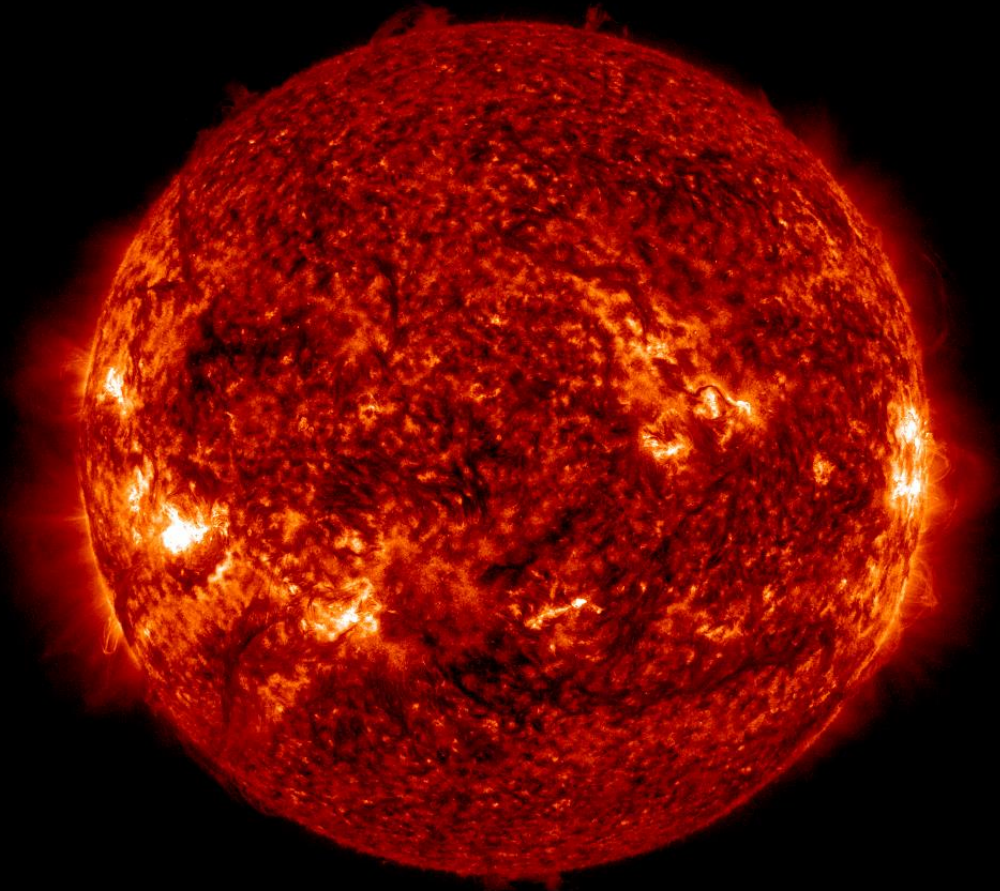
SDO/AIA AIA 193Å 2024-07-14T12:00:05.843



Filaments

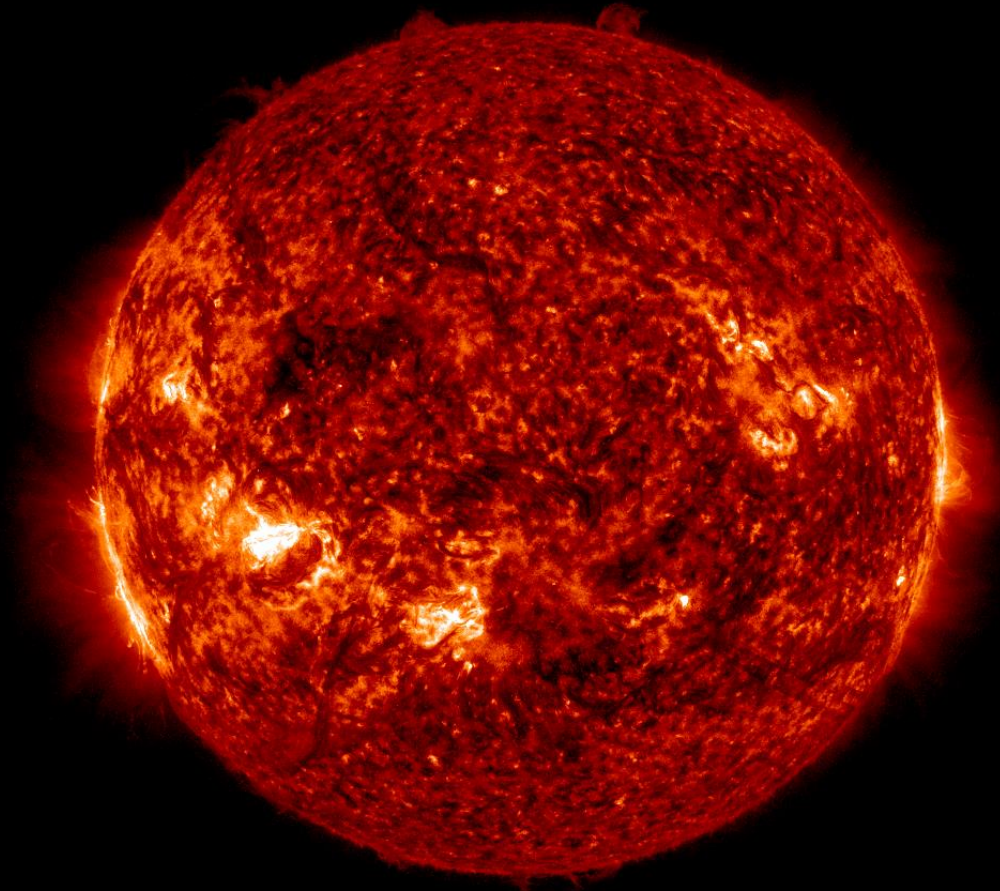
SDO/AIA 30.4 nm 2024-07-07

SDO/AIA AIA 304Å 2024-07-07T12:00:06.580



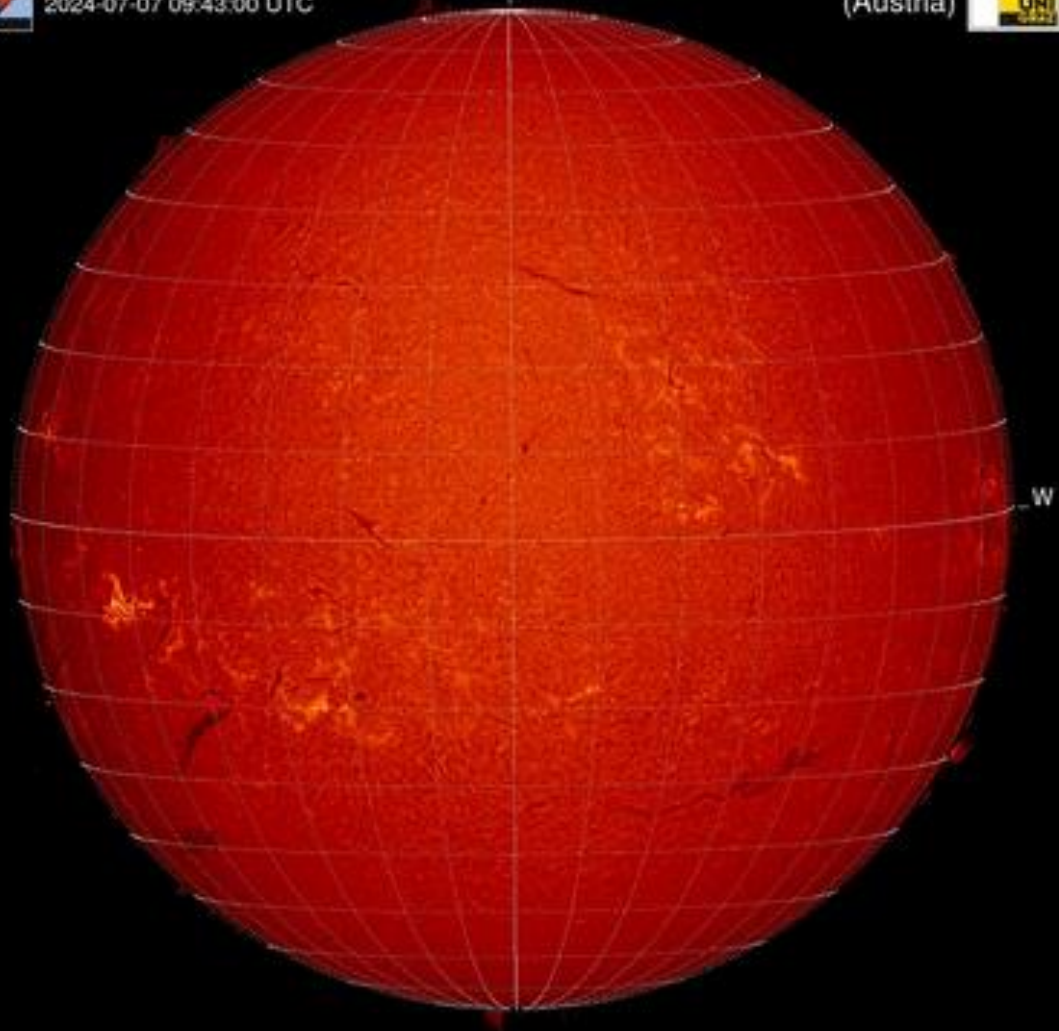
SDO/AIA 30.4 nm 2024-07-08

SDO/AIA AIA 304Å 2024-07-08T12:00:06.580

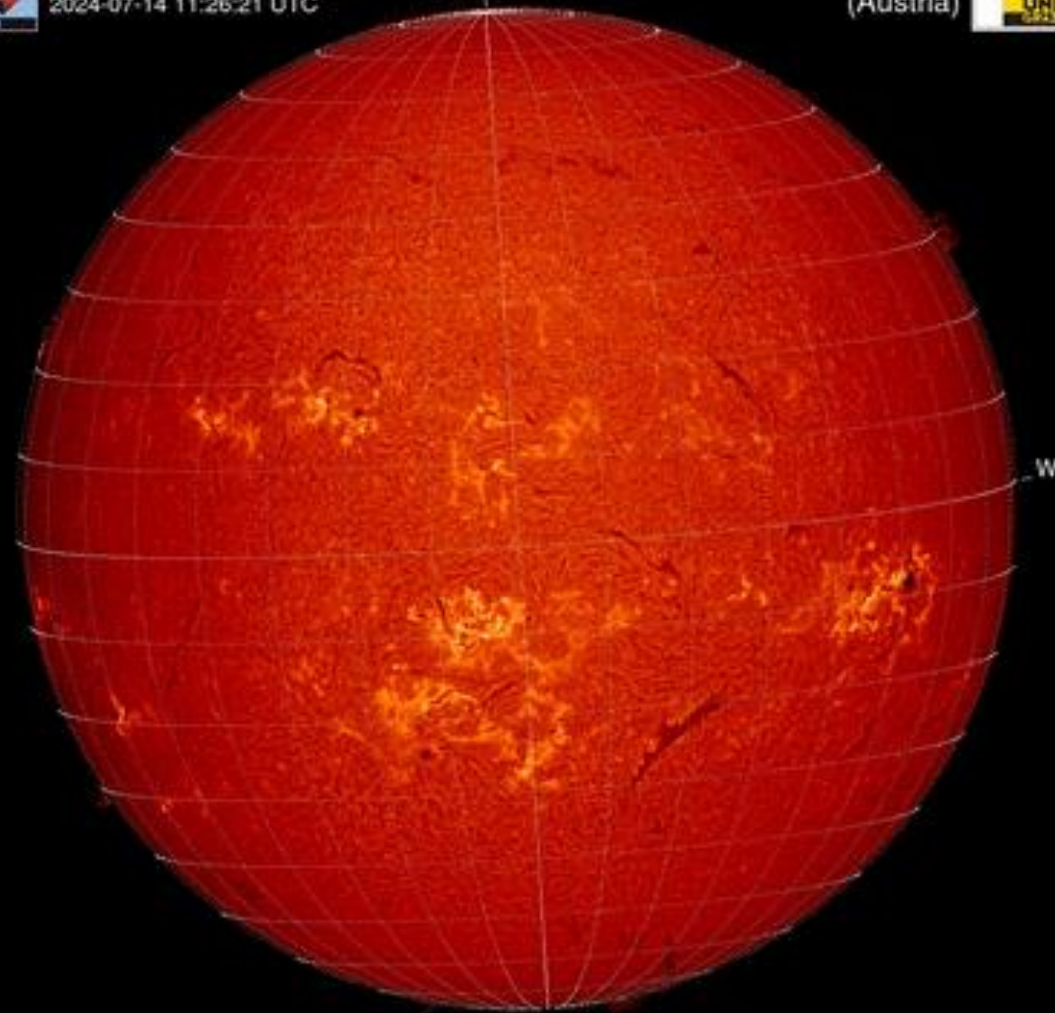


Filaments & Filament eruptions

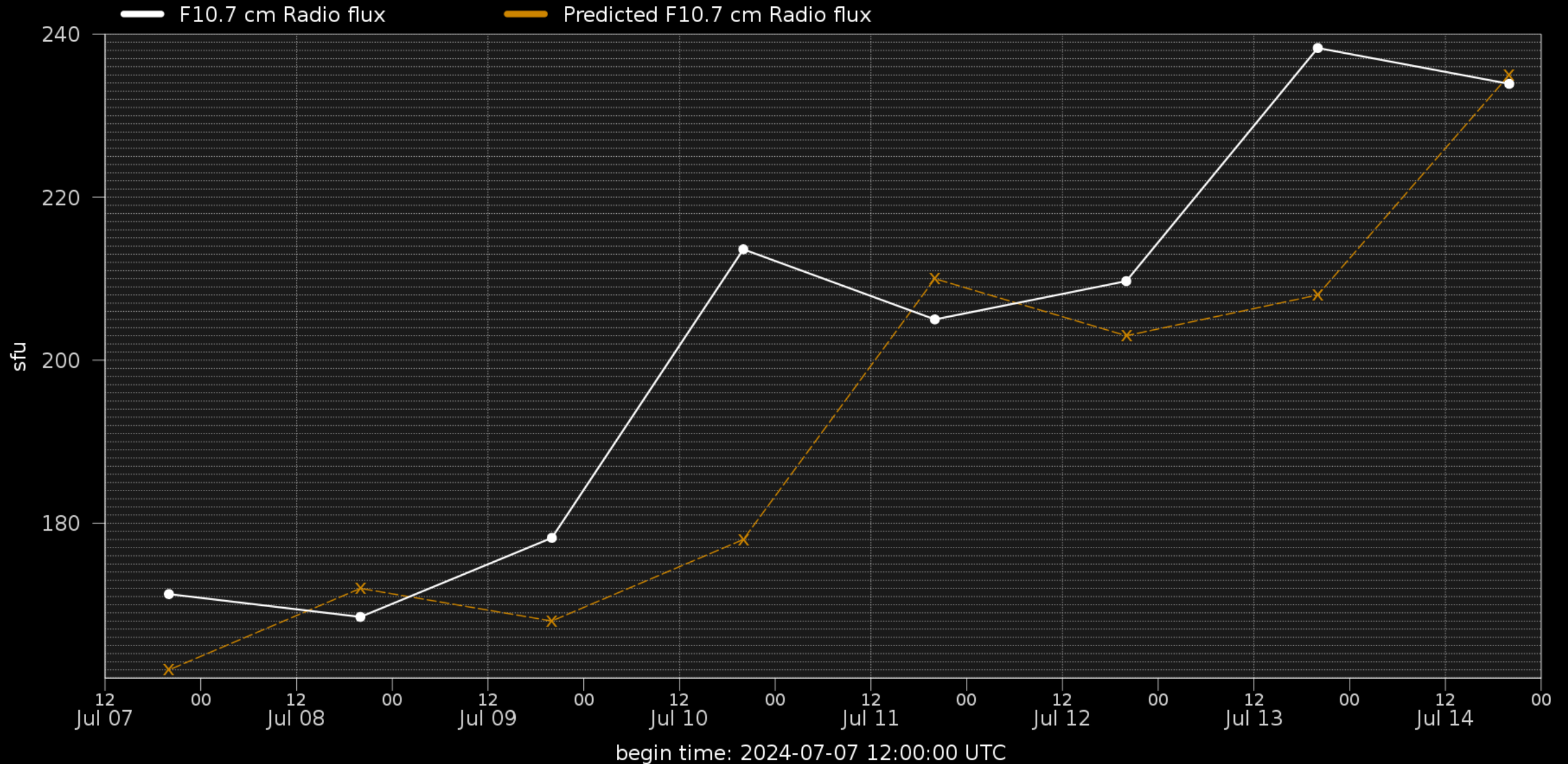
H-alpha 2024-07-07



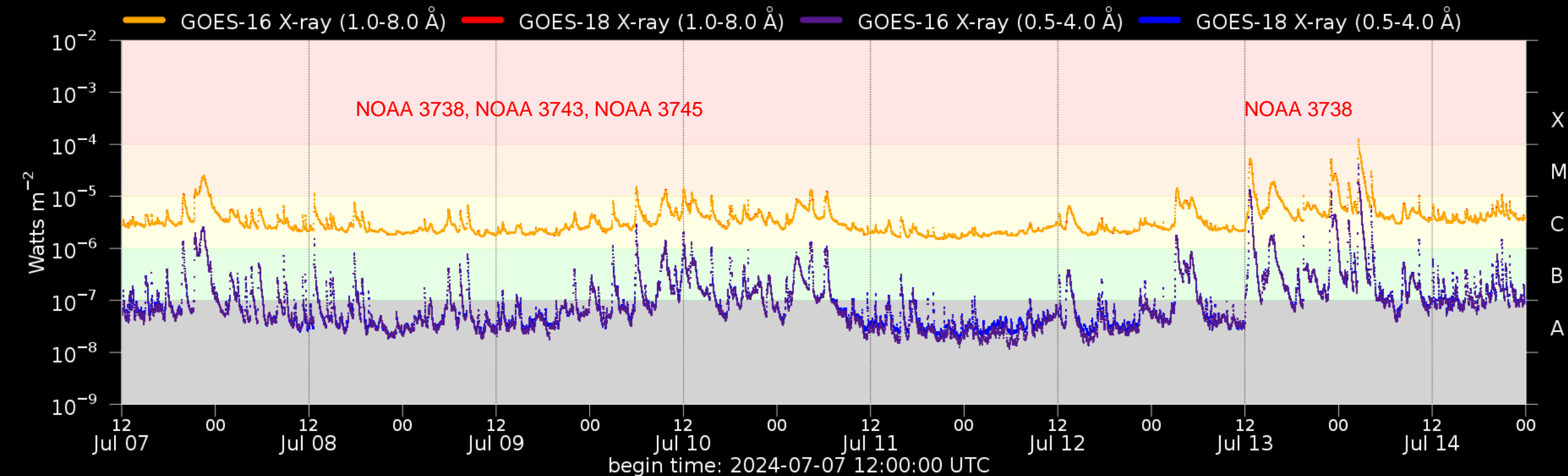
H-alpha 2024-07-14



Solar F10.7cm radio flux



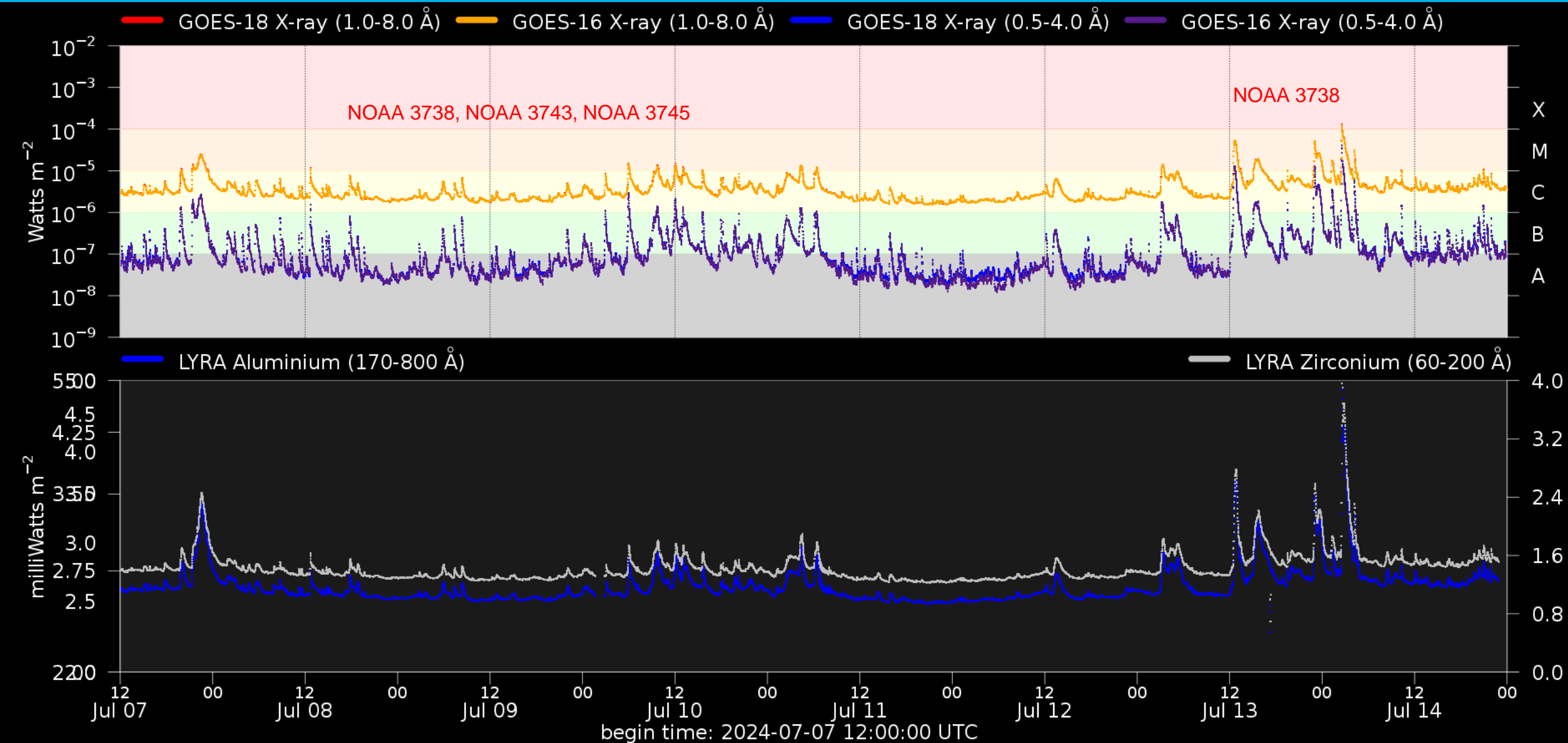
Flaring activity



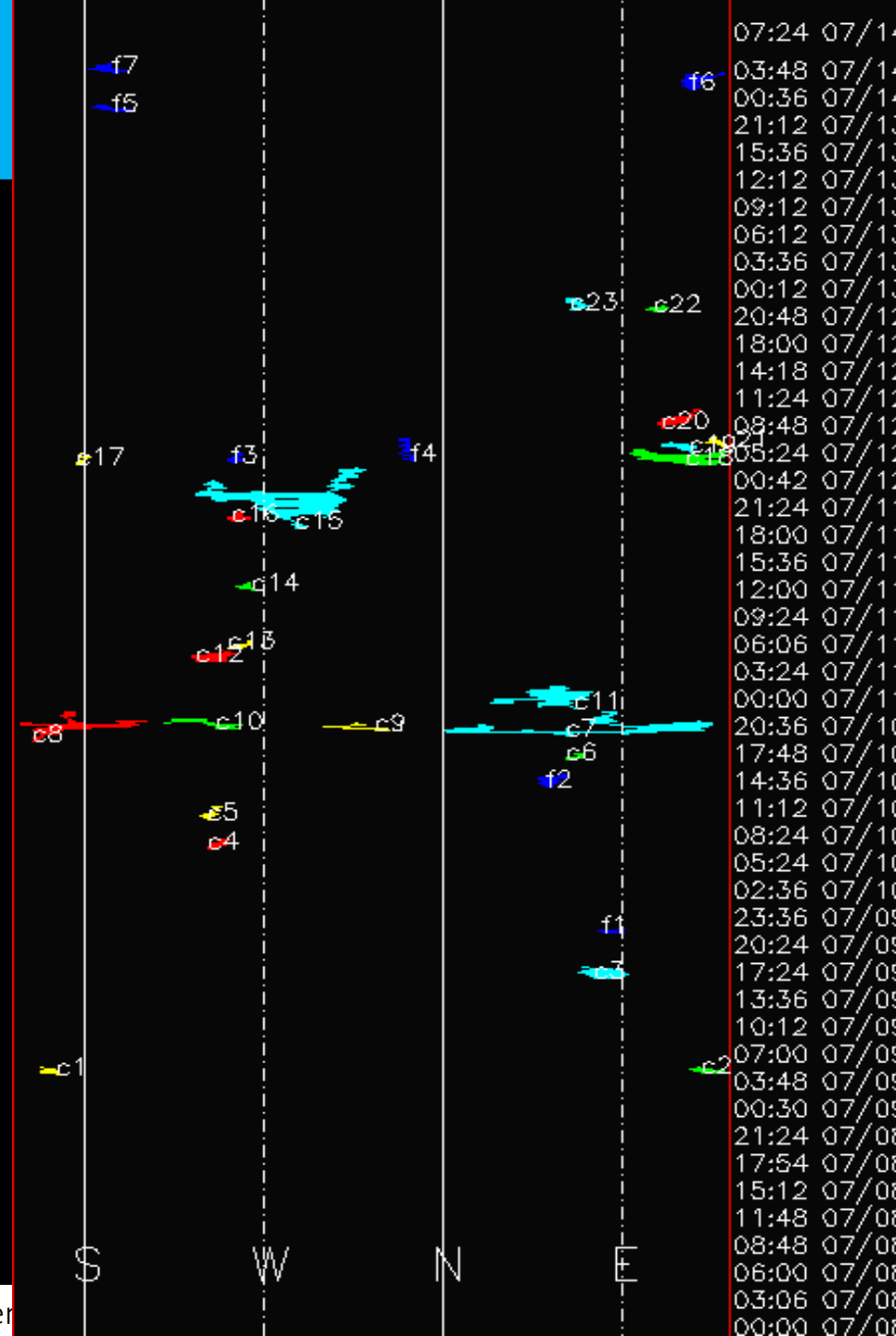
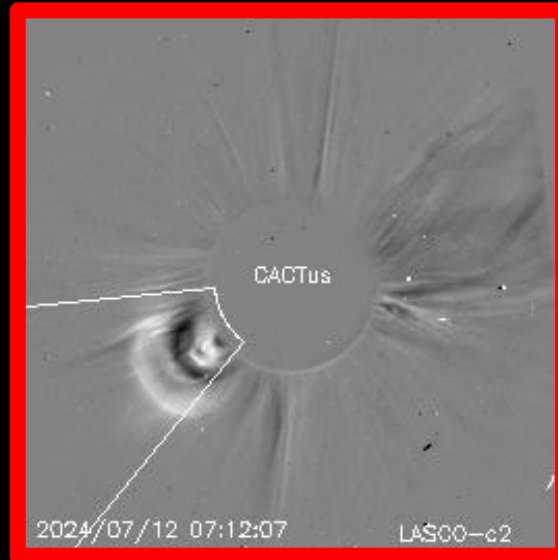
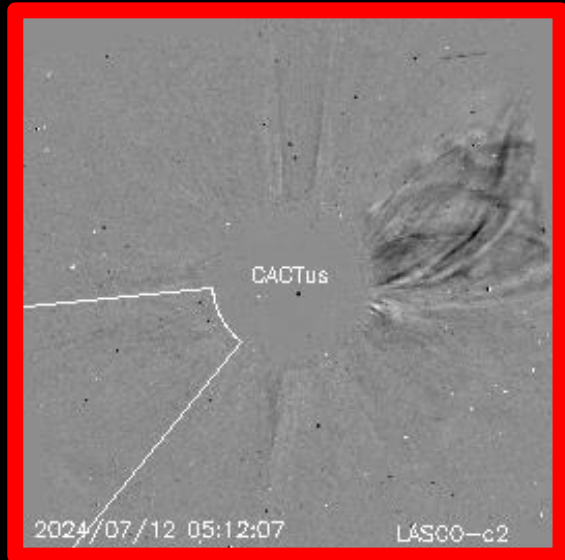
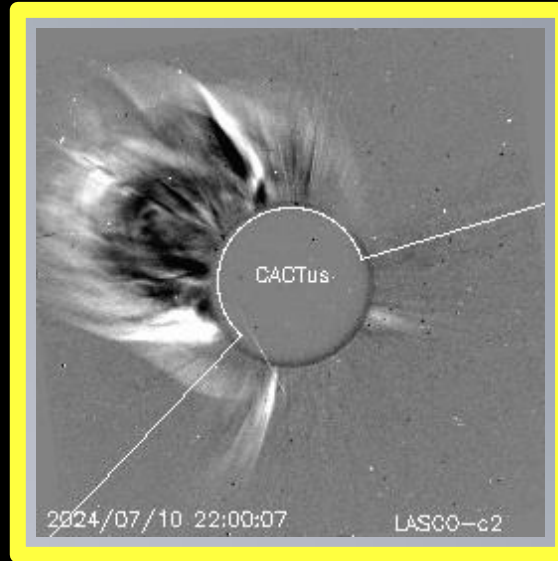
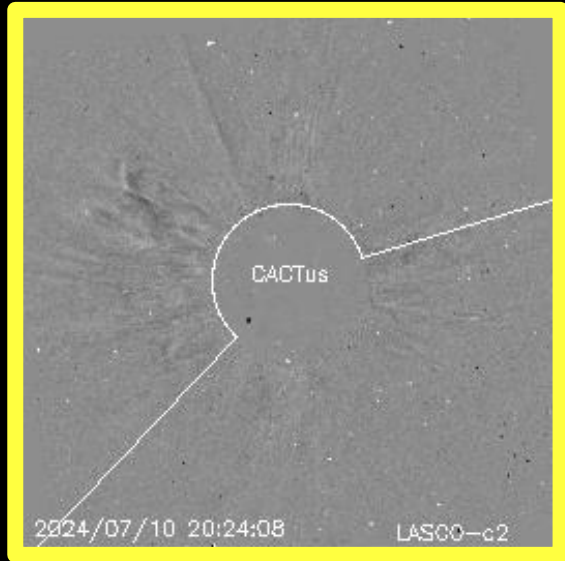
Probabilities (%) and occurrences (#) of C/M/X-flares daily, from noon to noon:

Issue date	2024-07-07	2024-07-08	2024-07-09	2024-07-10	2024-07-11	2024-07-12	2024-07-13	2024-07-14
Probability (%)	99 74 20	99 70 15	95 60 10	99 60 10	98 70 15	99 70 15	95 60 15	99 80 30
Observed (#)	09 02 00	10 01 00	02 02 00	04 05 00	03 00 00	03 01 00	00 07 01	08 01 00

Solar X-Ray and UV flux



Coronal Mass Ejections



Solar Wind and

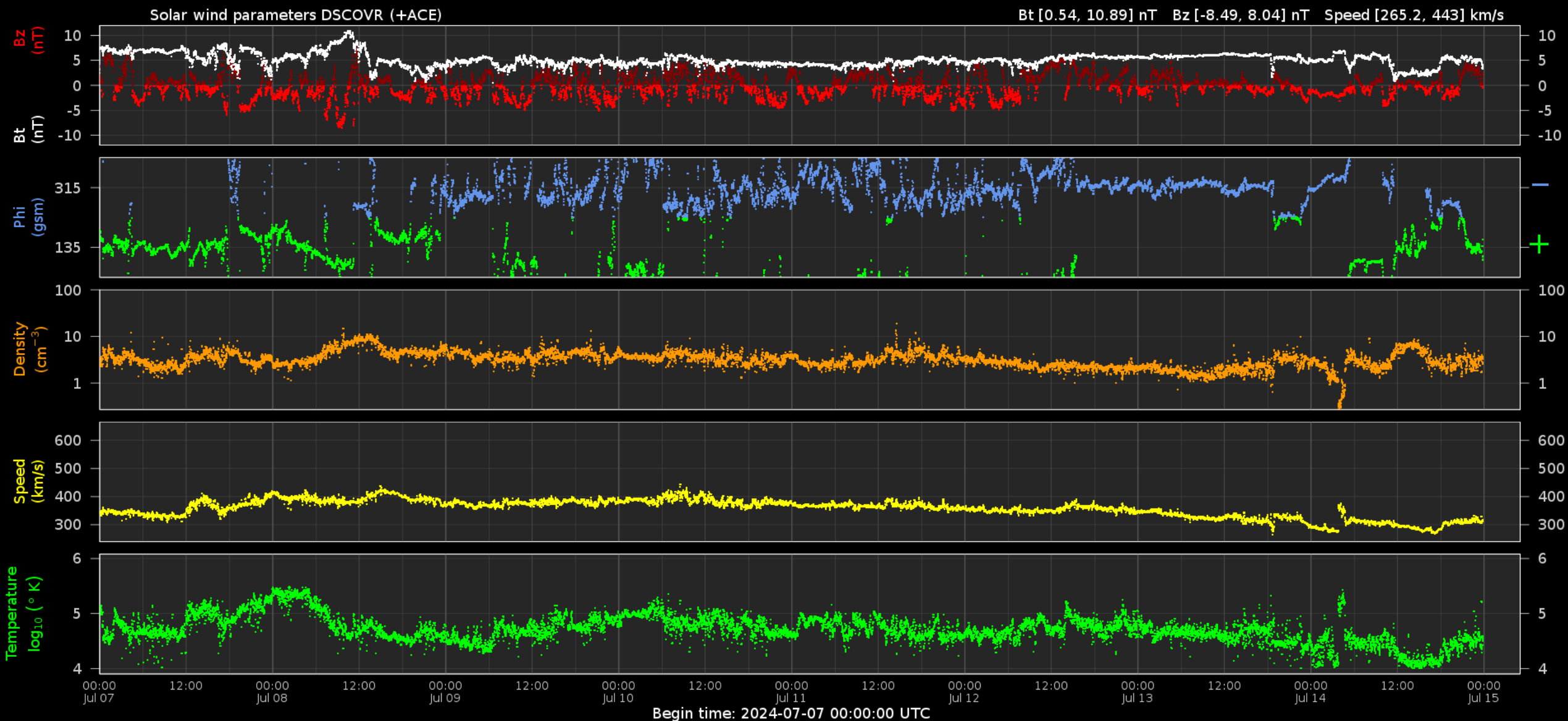
Geomagnetic Activity



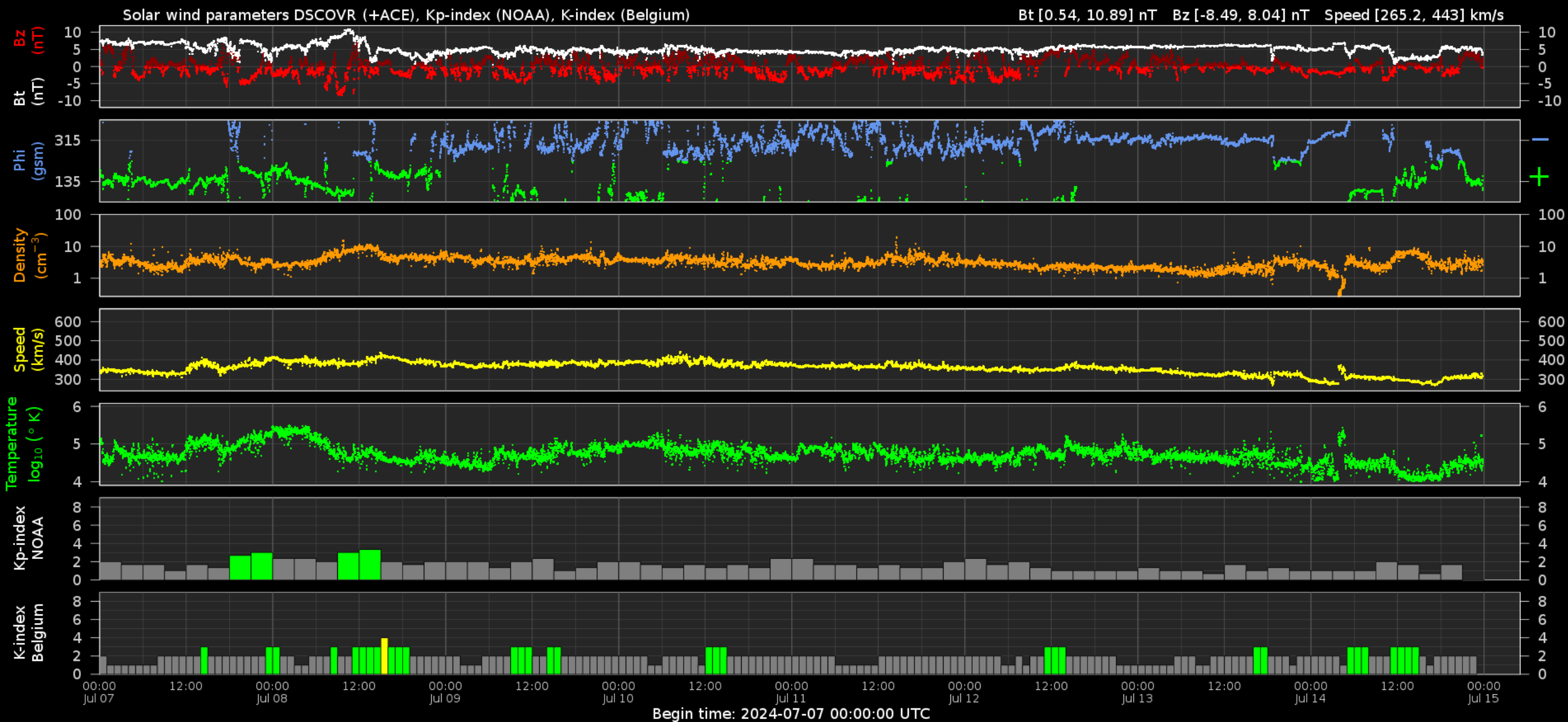
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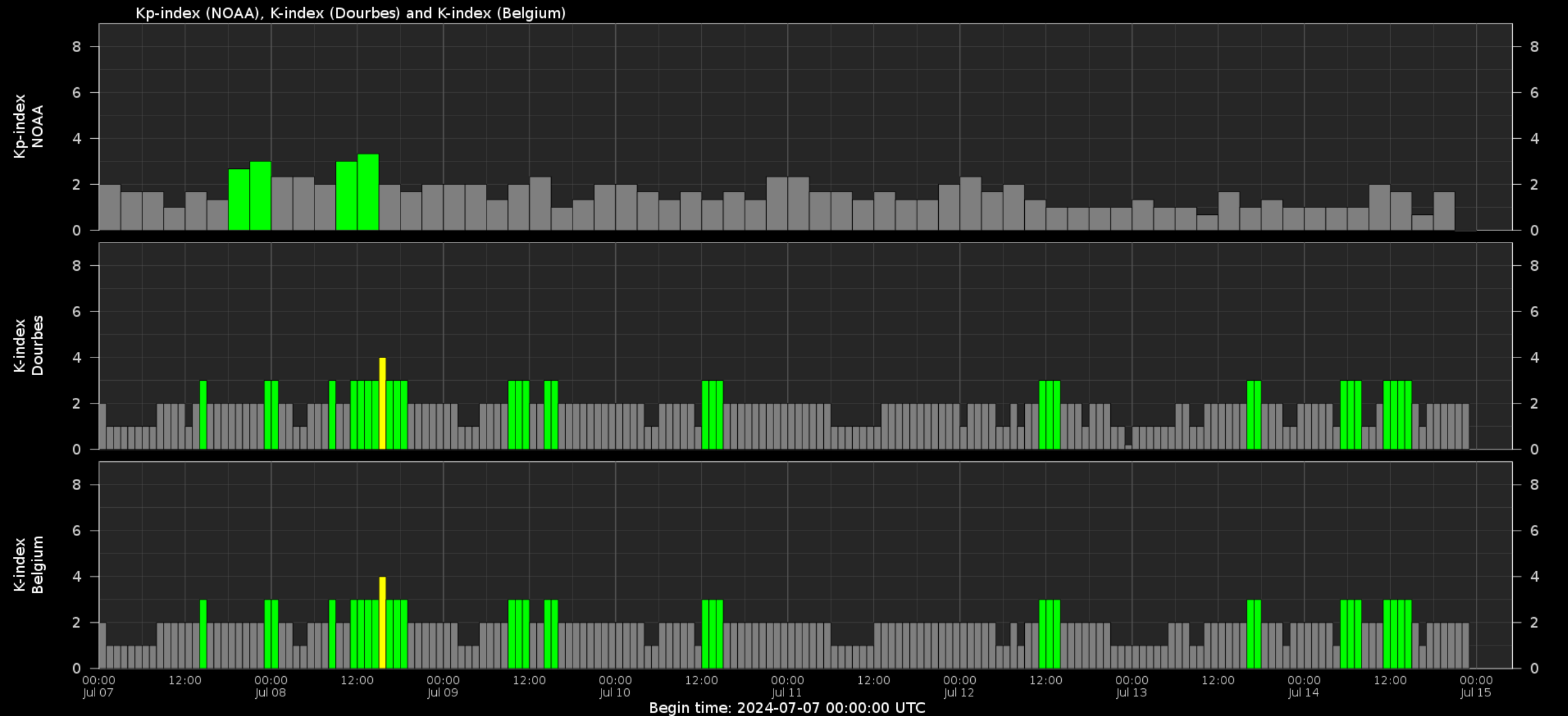
Solar wind parameters



Solar wind parameters & K-indices



Geomagnetic activity (K-indexes)



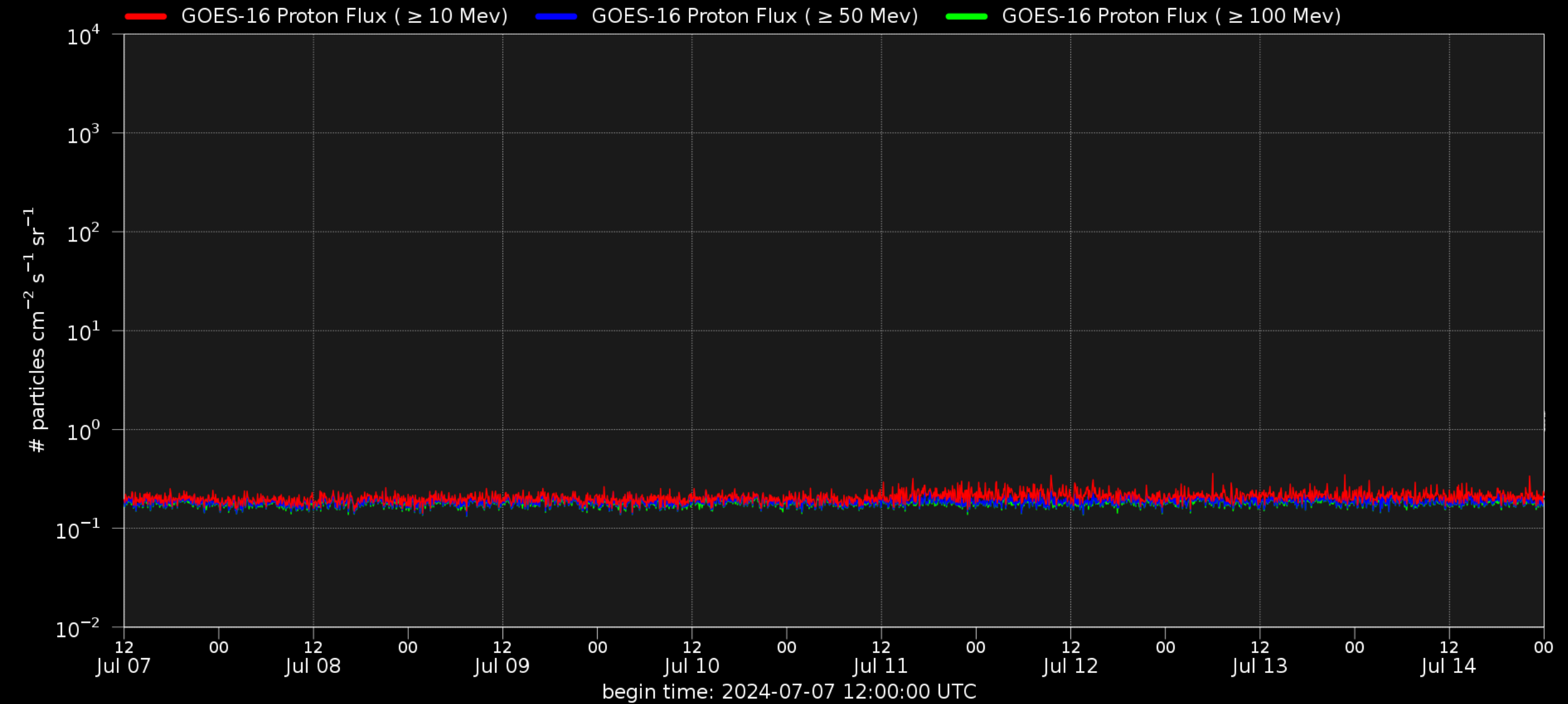
Energetic Particles



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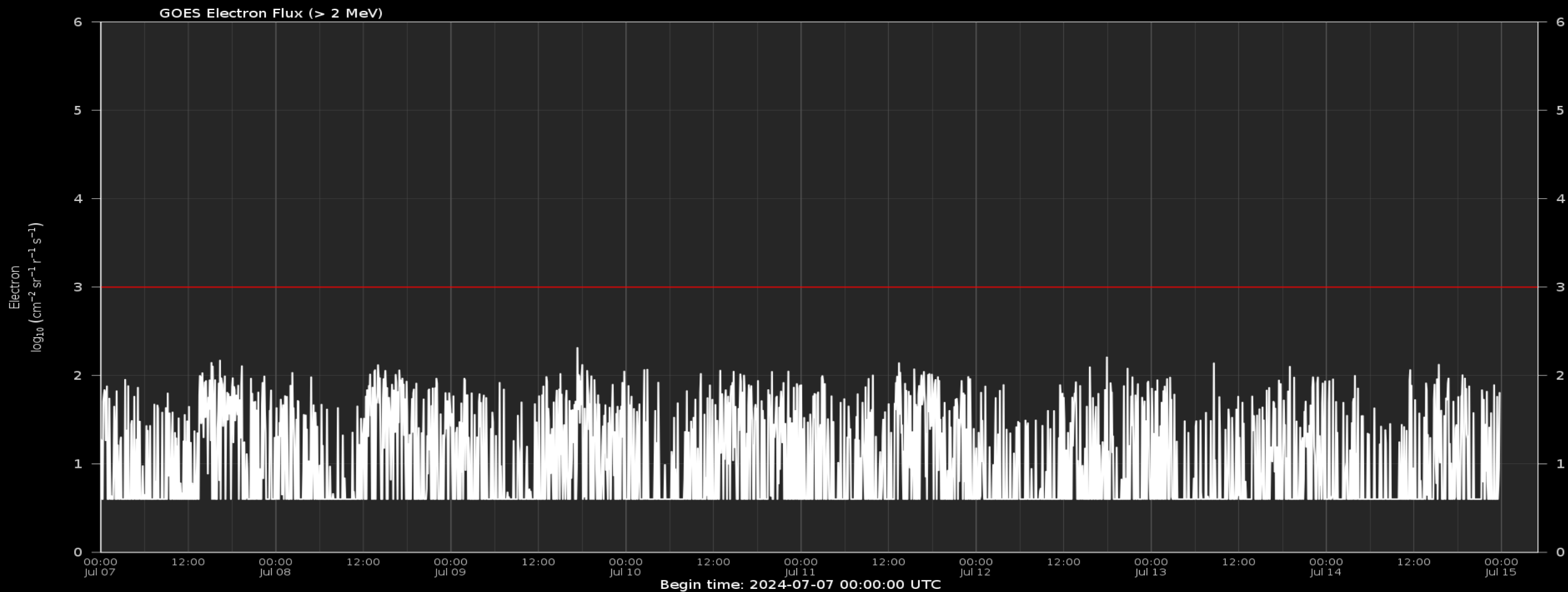
Solar proton flux



Electron flux at GEO

www.stce.be/educational/classification#electrons

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



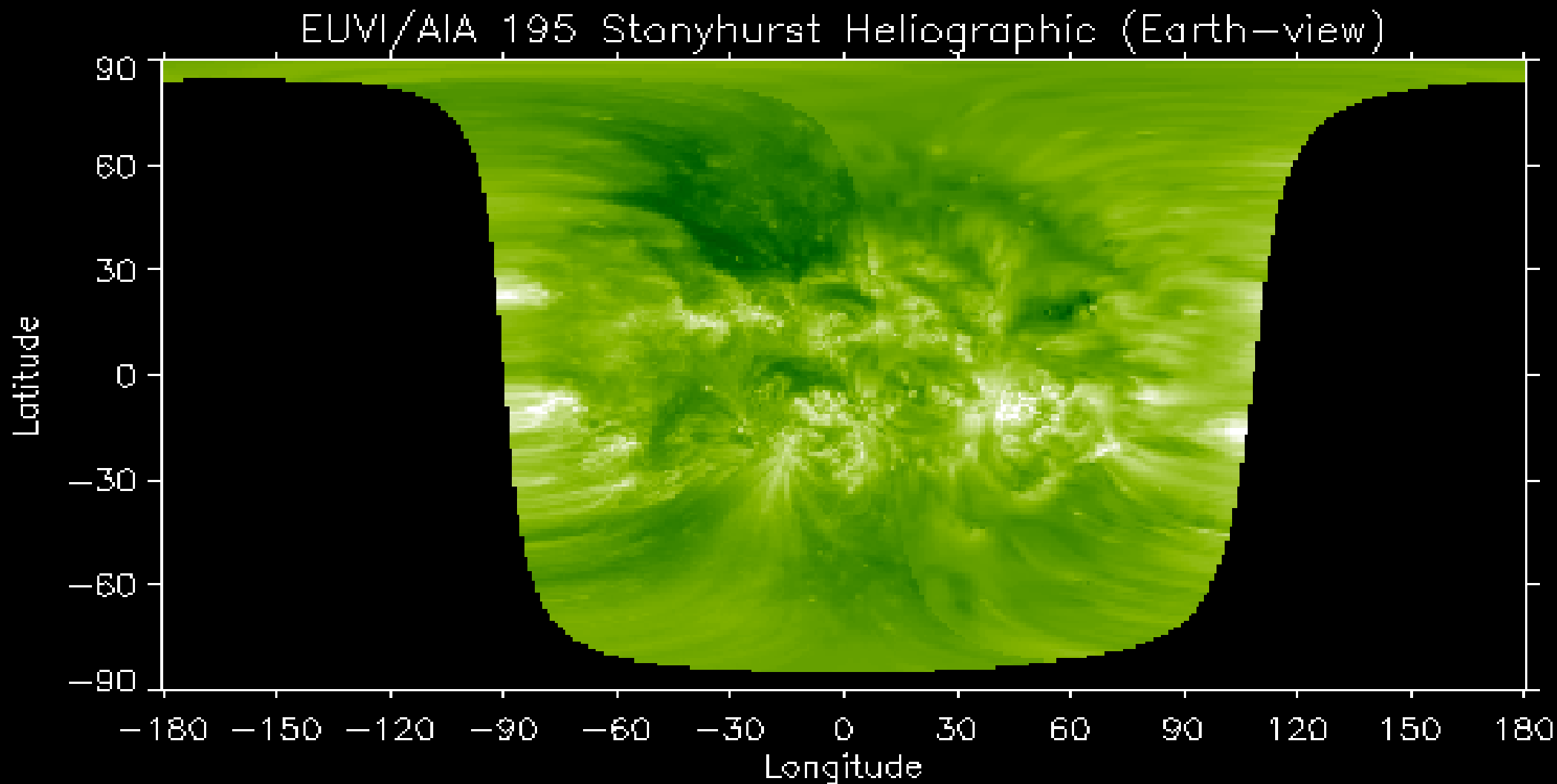
Outlook



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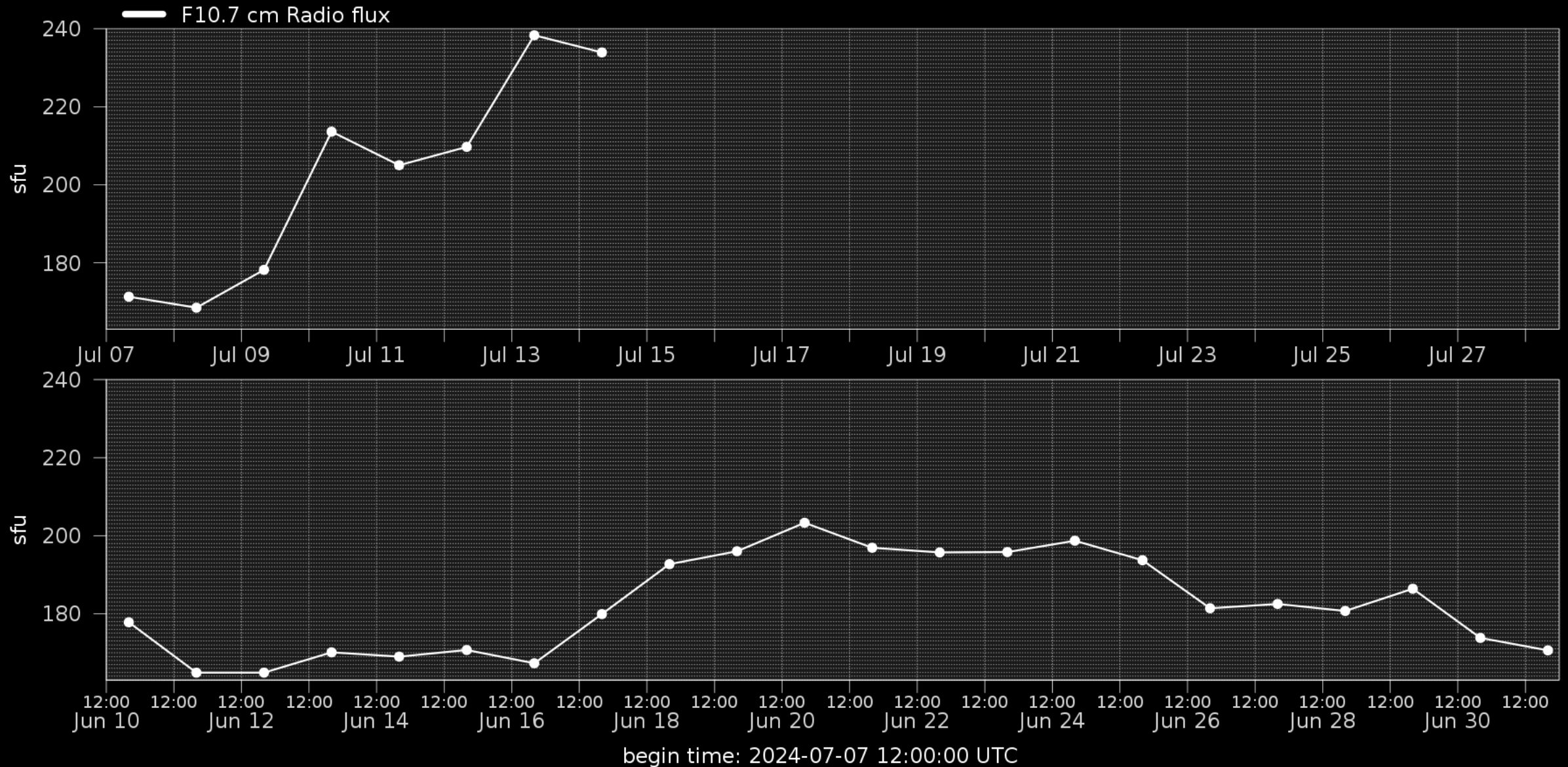
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Outlook: Solar activity

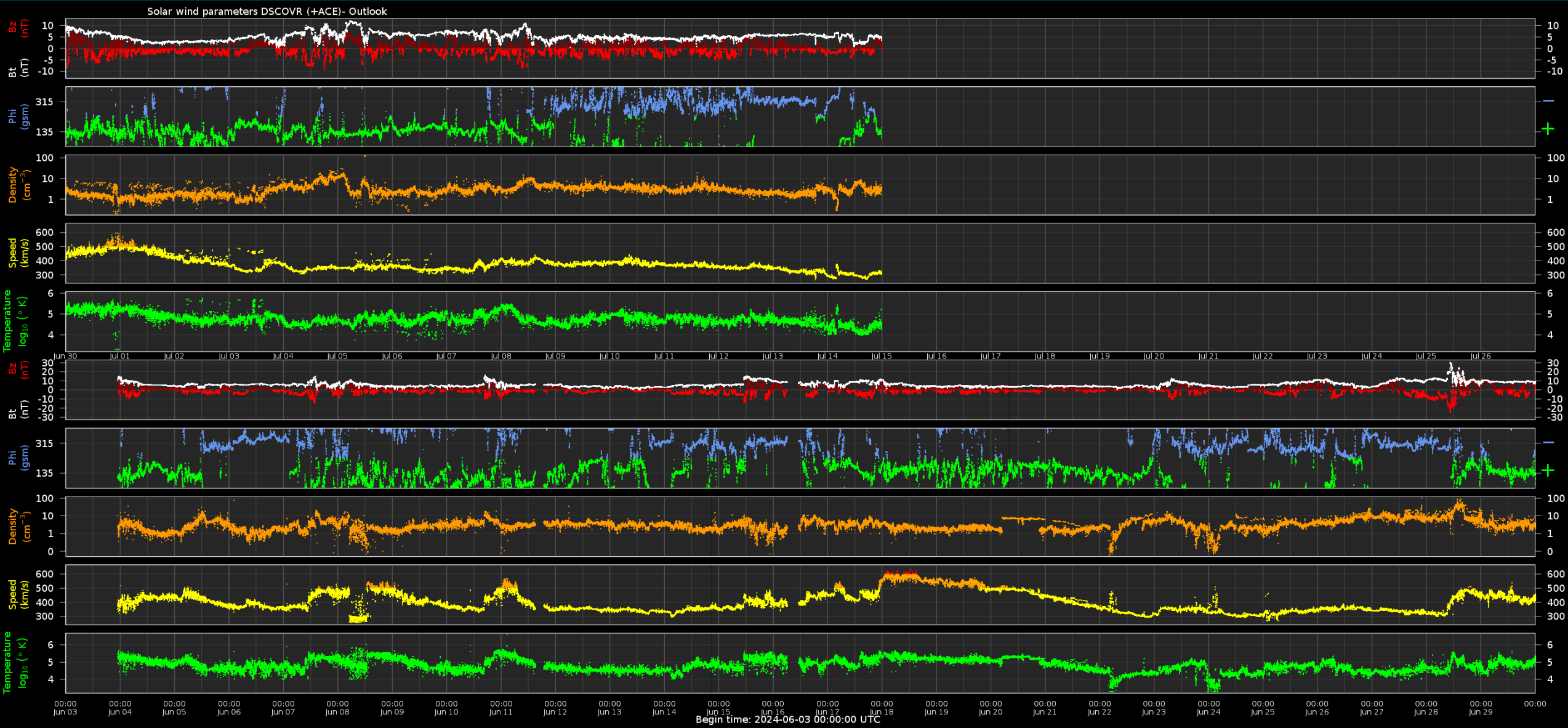


Observation date: 2024/07/14 13:35:00

Outlook: Solar F10.7cm radio flux



Outlook: Solar wind parameters



Outlook: Geomagnetic activity



Outlook: Electron Flux at GEO Outlook



PECASUS



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Pecarus related events

Few scintillation events and a SWF

SIDC Space Weather Briefing

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