

SIDC Space Weather Briefing

14 July 2024-21 July 2024

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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 2024-07-14 12:00 to 2024-07-21 23:59

Active regions	NOAA AR 3738, 3743, 3744, 3751, 3753, 3758
Flares	# C-class flare: 45 # M-class flare: 18 # X-class flare: 1
Coronal Holes	Northern negative polarity CH crossing on 15 July
CMEs	No (partial) halo CME

Proton flux	Very low levels
Electron flux	Very low levels

Solar wind and geomagnetic conditions

ICMEs	Glancing blows at 15 Jul 18:30 UTC and 19 Jul 03:00 UTC
Solar wind conditions	B : 0.92 - 17.54 nT //Bz: -9.77 nT to 13.18 nT //Speed: 269.2 - 498.2km/s
Geomagnetic conditions	max K _{Bel} : 4.0, max K _p (NOAA): 3.33, Unsettled conditions

All Quiet Alert: Not quiet

Solar Activity

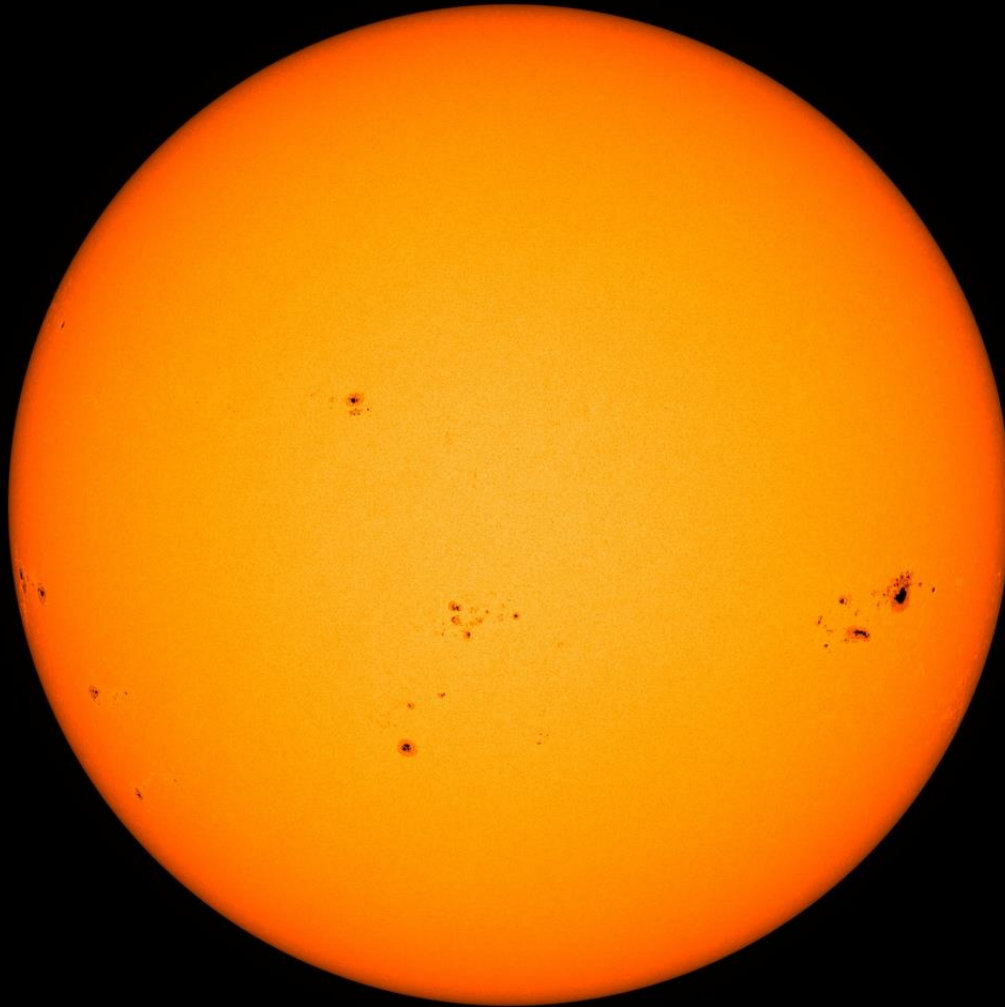


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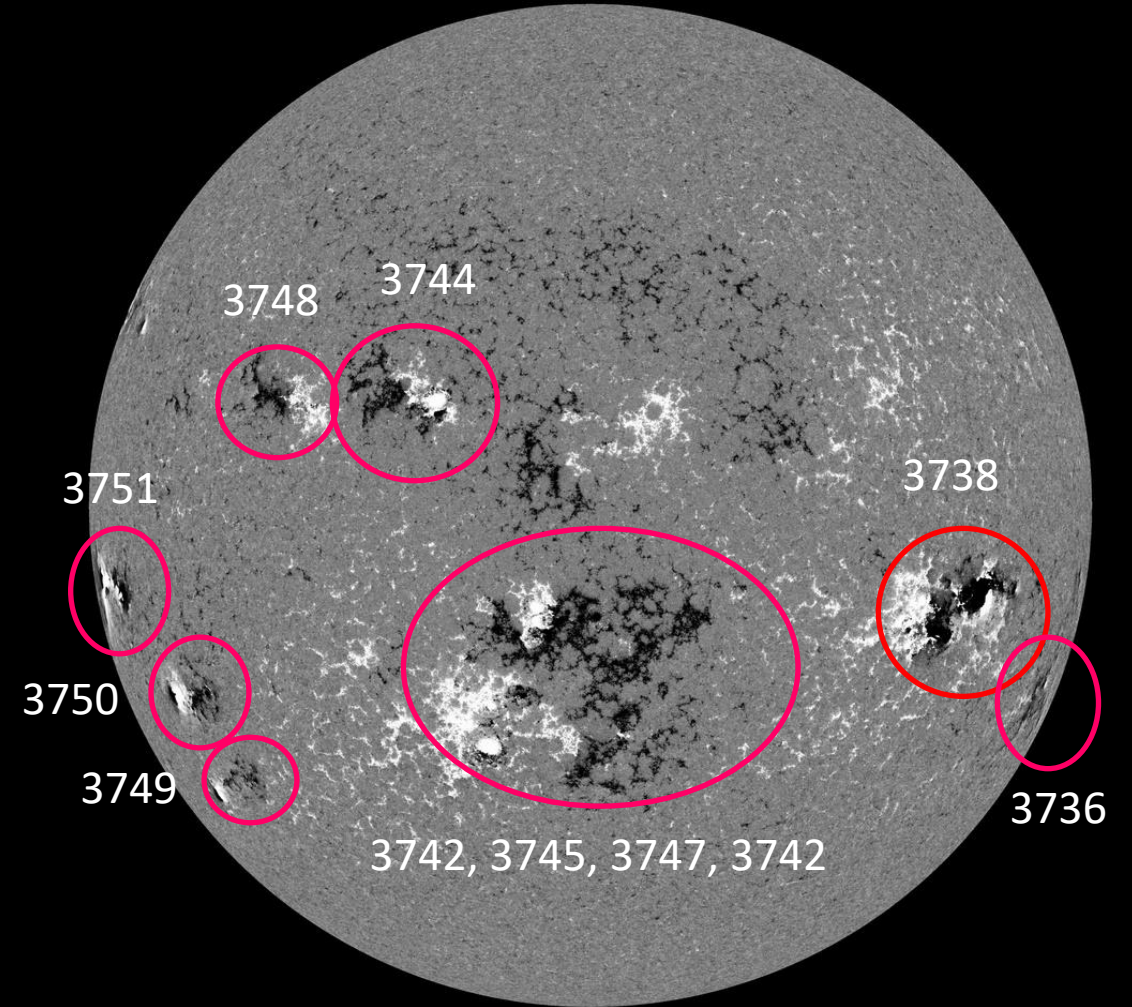
Solar active regions

SDO/HMI White Light 2024-07-14



SDO/HMI Quick-Look Continuum: 20240714_114500

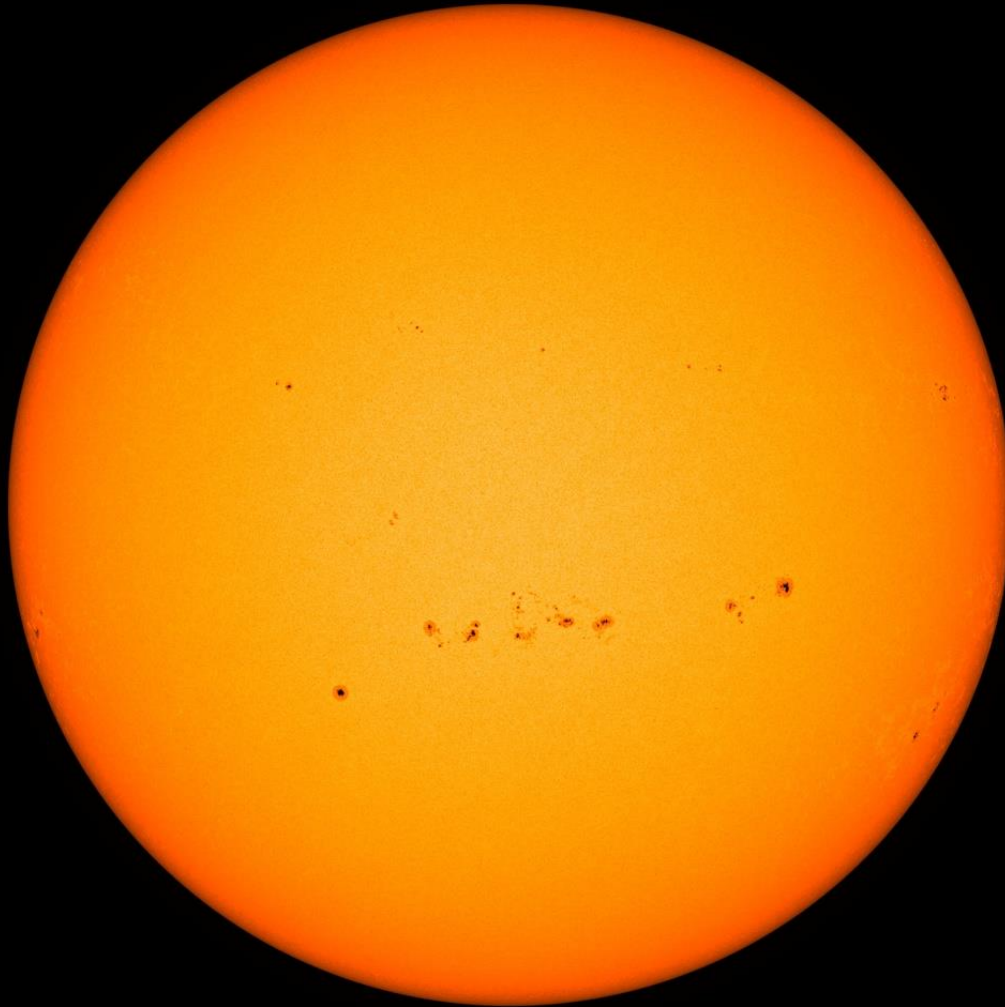
SDO/HMI Magnetogram 2024-07-14



SDO/HMI Quick-Look Magnetogram: 20240714_114500

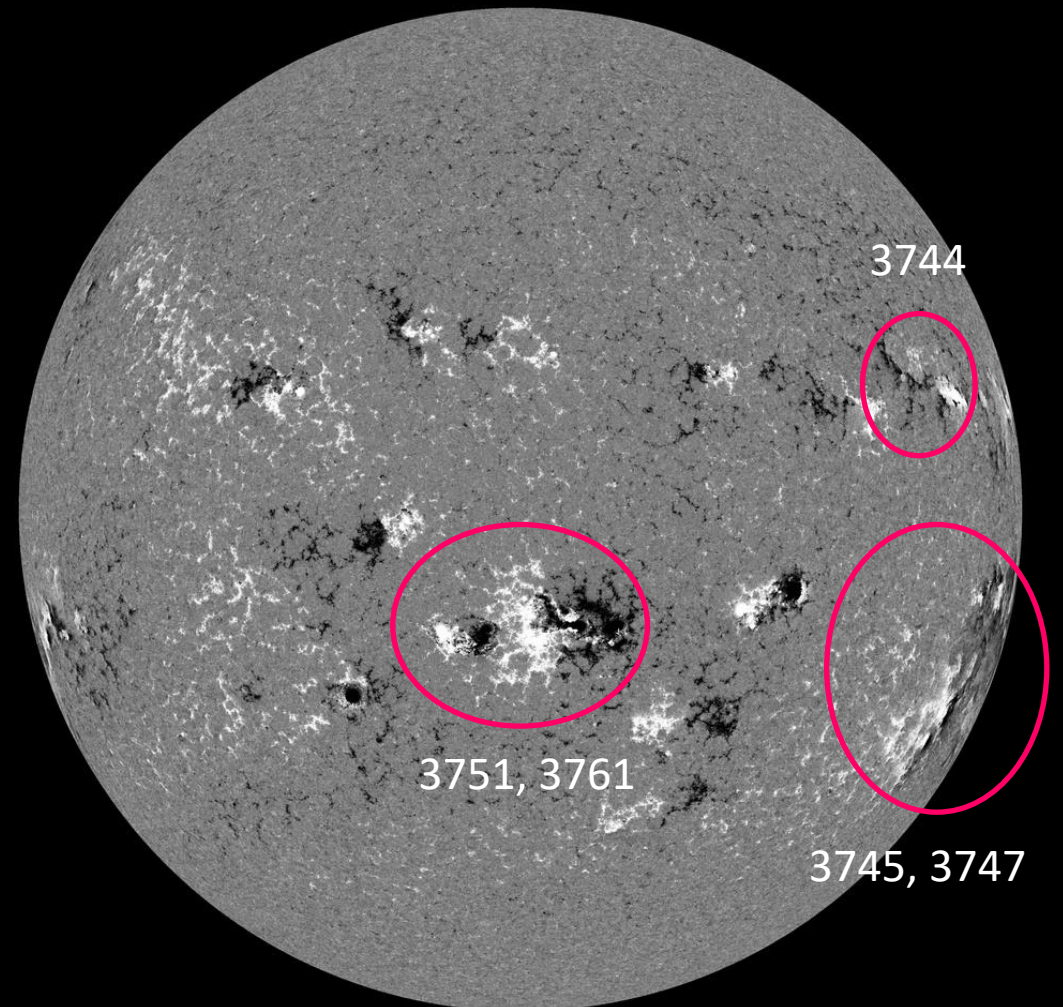
Solar active regions

SDO/HMI White Light 2024-07-20



SDO/HMI Quick-Look Continuum: 20240720_114500

SDO/HMI Magnetogram 2024-07-20

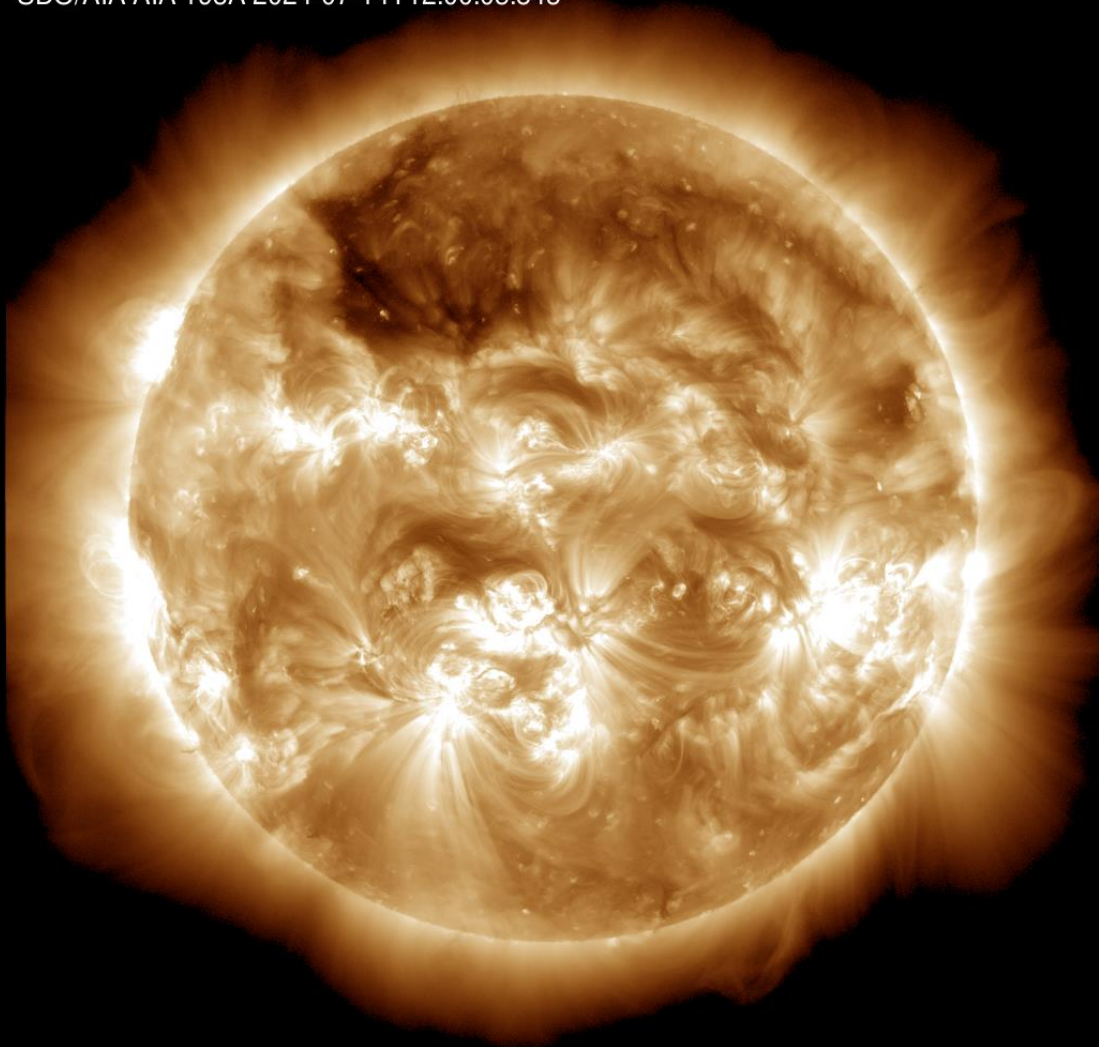


SDO/HMI Quick-Look Magnetogram: 20240720_114500

Coronal holes

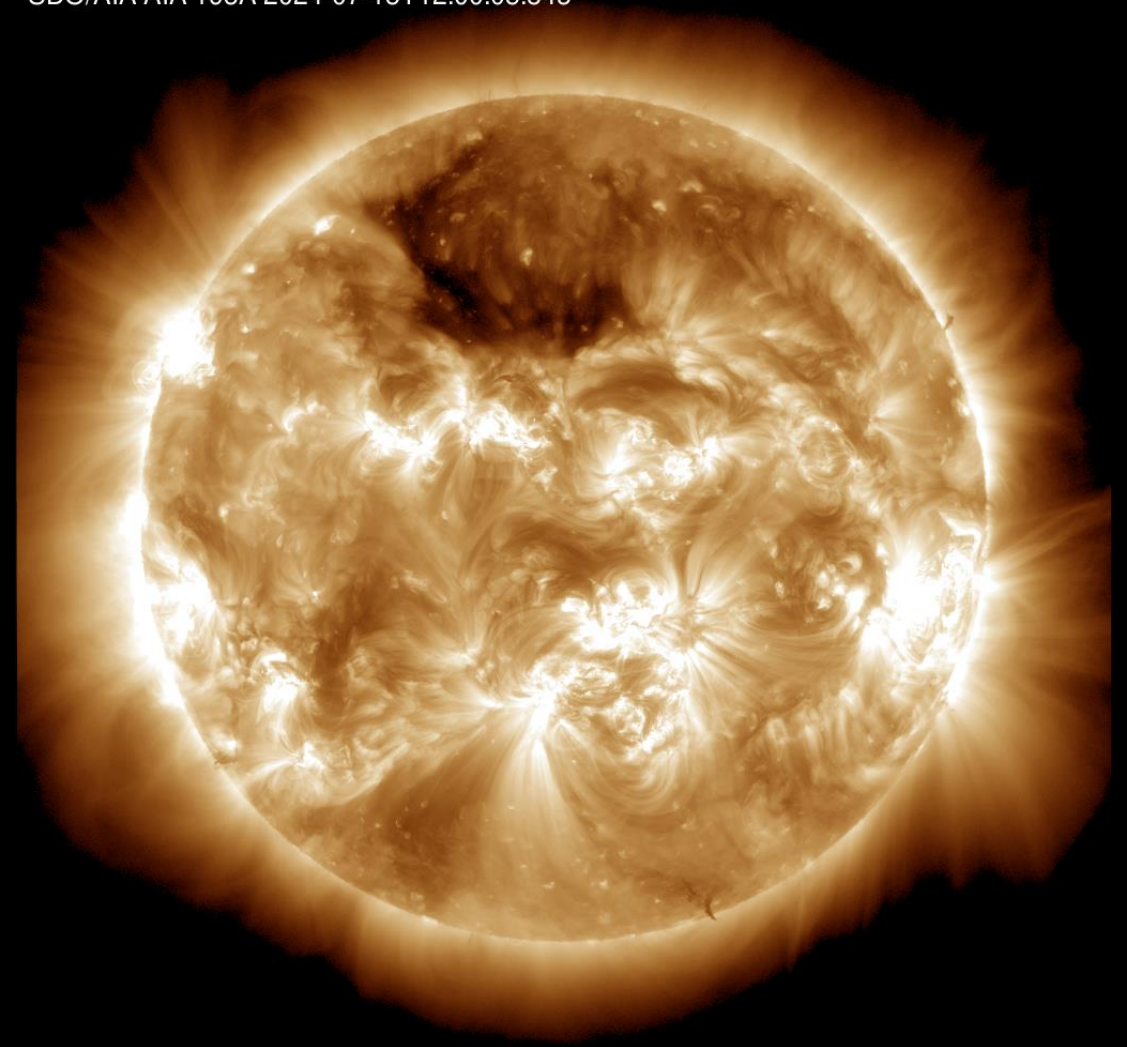
SDO/AIA 19.3 nm 2024-07-14

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



SDO/AIA 19.3 nm 2024-07-15

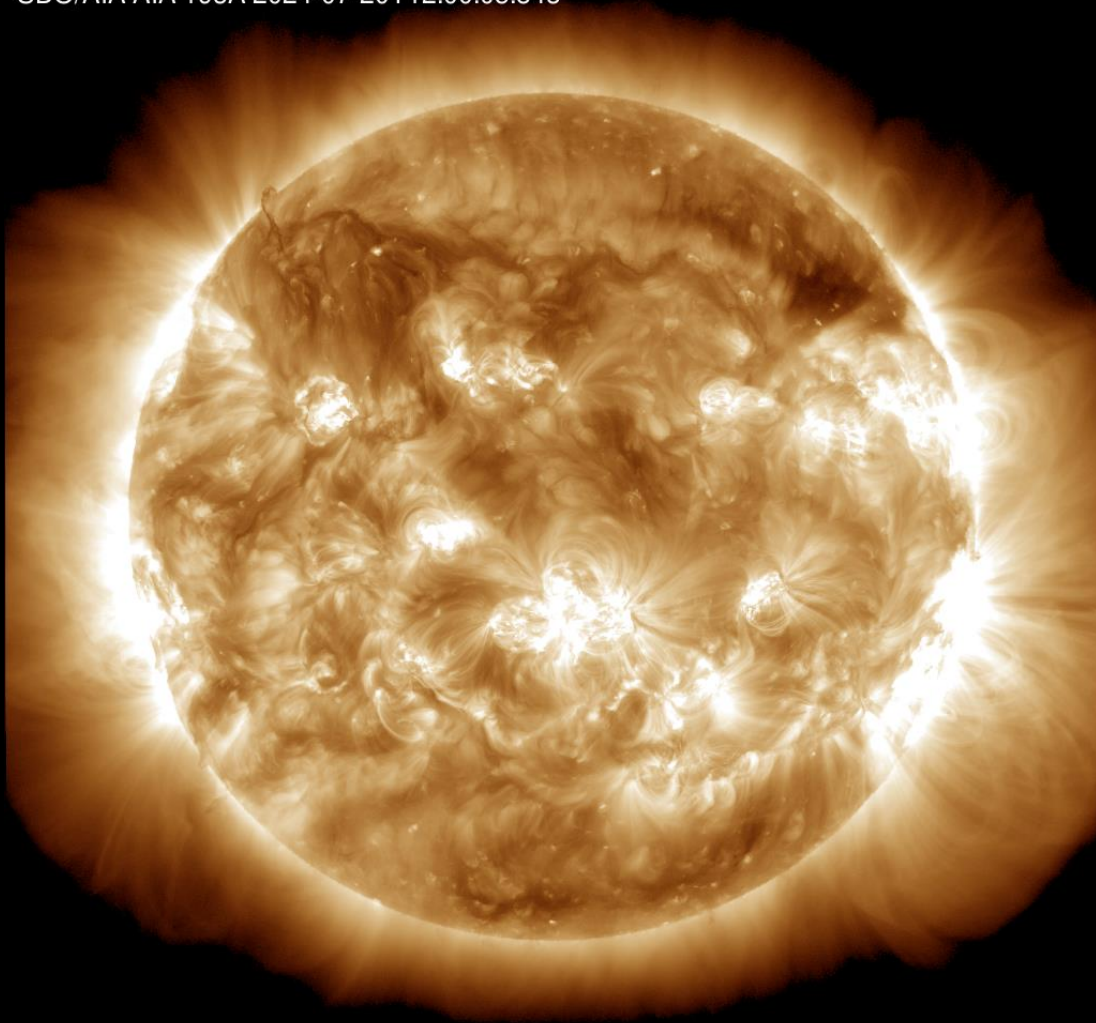
SDO/AIA AIA 193Å 2024-07-15T12:00:05.843



Coronal holes

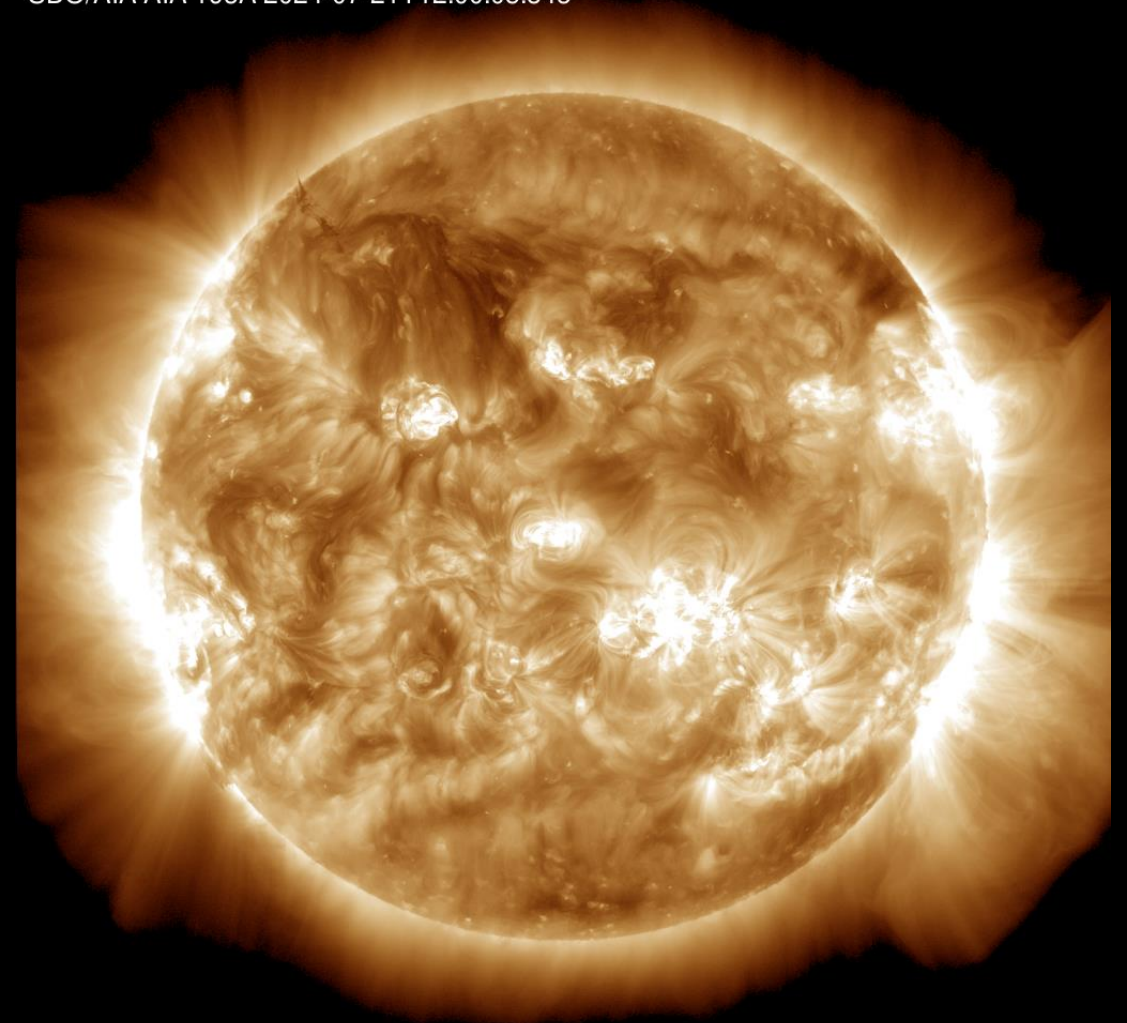
SDO/AIA 19.3 nm 2024-07-20

SDO/AIA AIA 193Å 2024-07-20T12:00:05.843



SDO/AIA 19.3 nm 2024-07-21

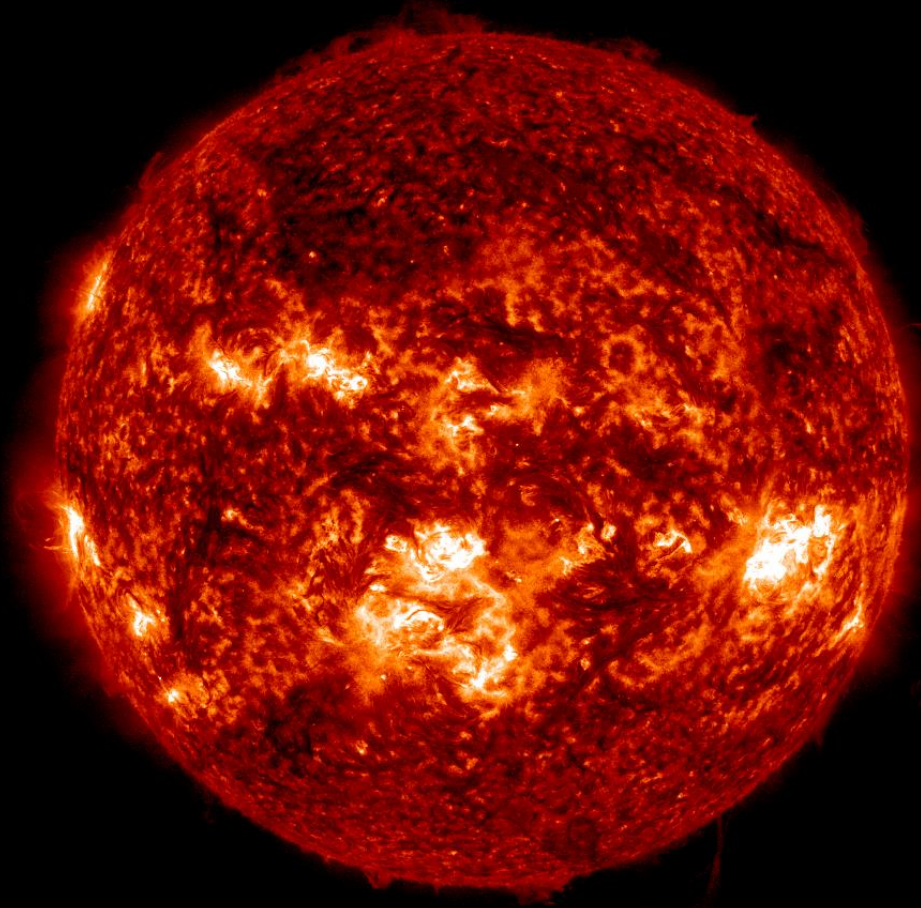
SDO/AIA AIA 193Å 2024-07-21T12:00:05.843



Filaments

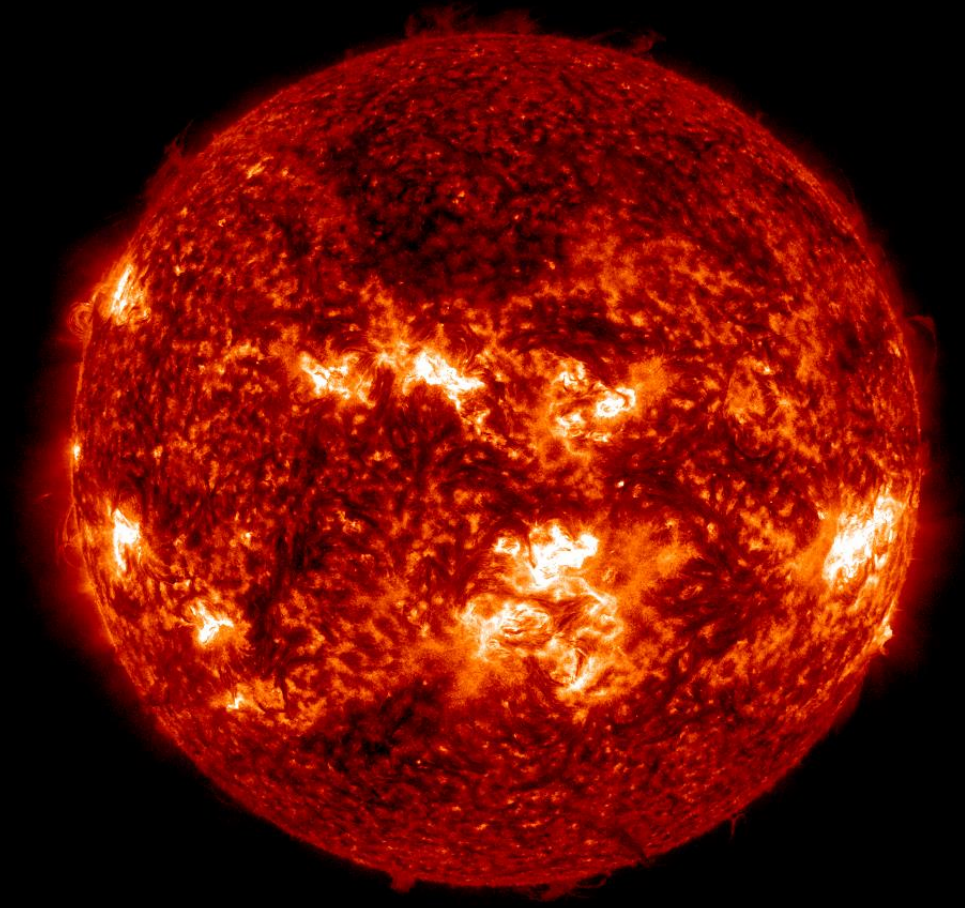
SDO/AIA 30.4 nm 2024-07-14

SDO/AIA AIA 304Å 2024-07-14T12:00:06.580



SDO/AIA 30.4 nm 2024-07-15

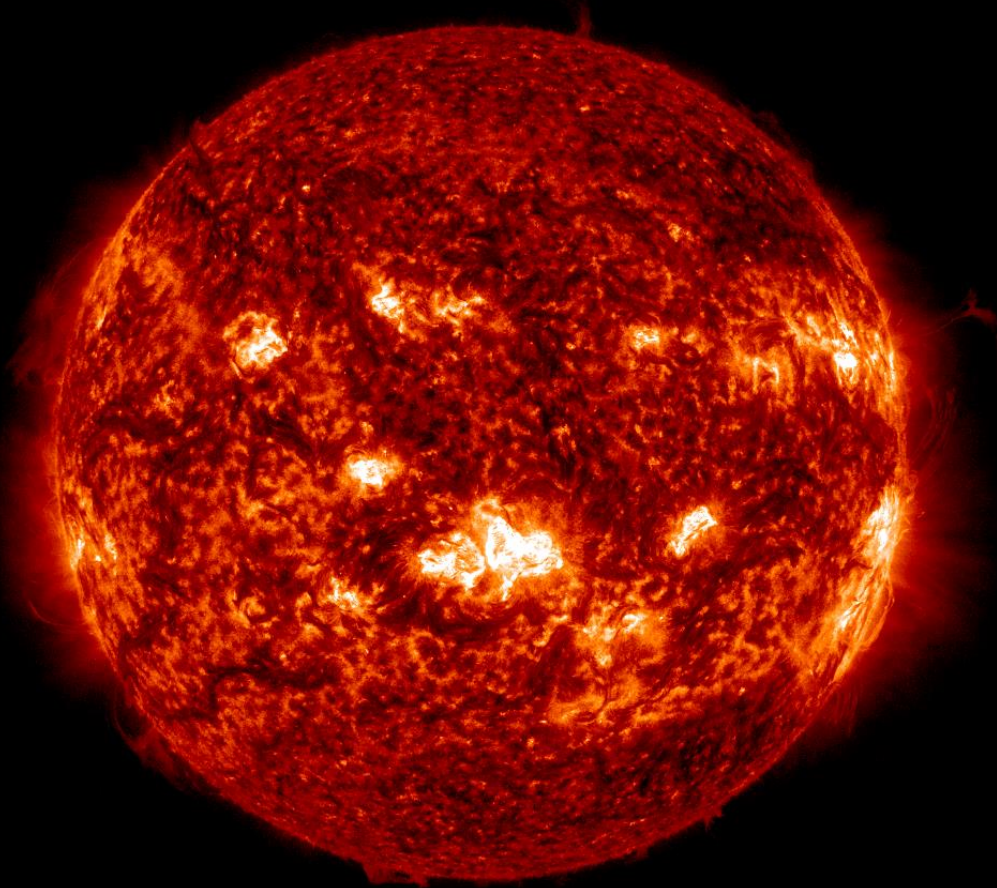
SDO/AIA AIA 304Å 2024-07-15T12:00:06.580



Filaments

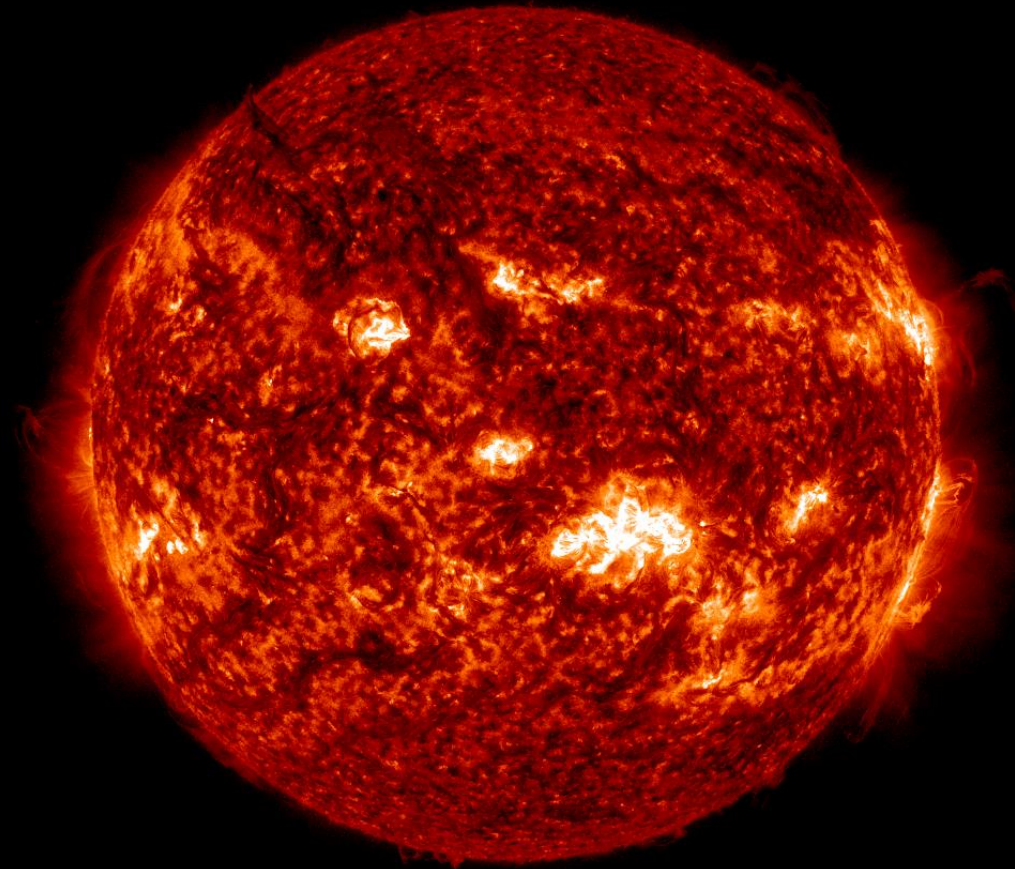
SDO/AIA 30.4 nm 2024-07-20

SDO/AIA AIA 304Å 2024-07-20T12:00:06.580



SDO/AIA 30.4 nm 2024-07-21

SDO/AIA AIA 304Å 2024-07-21T12:00:06.580



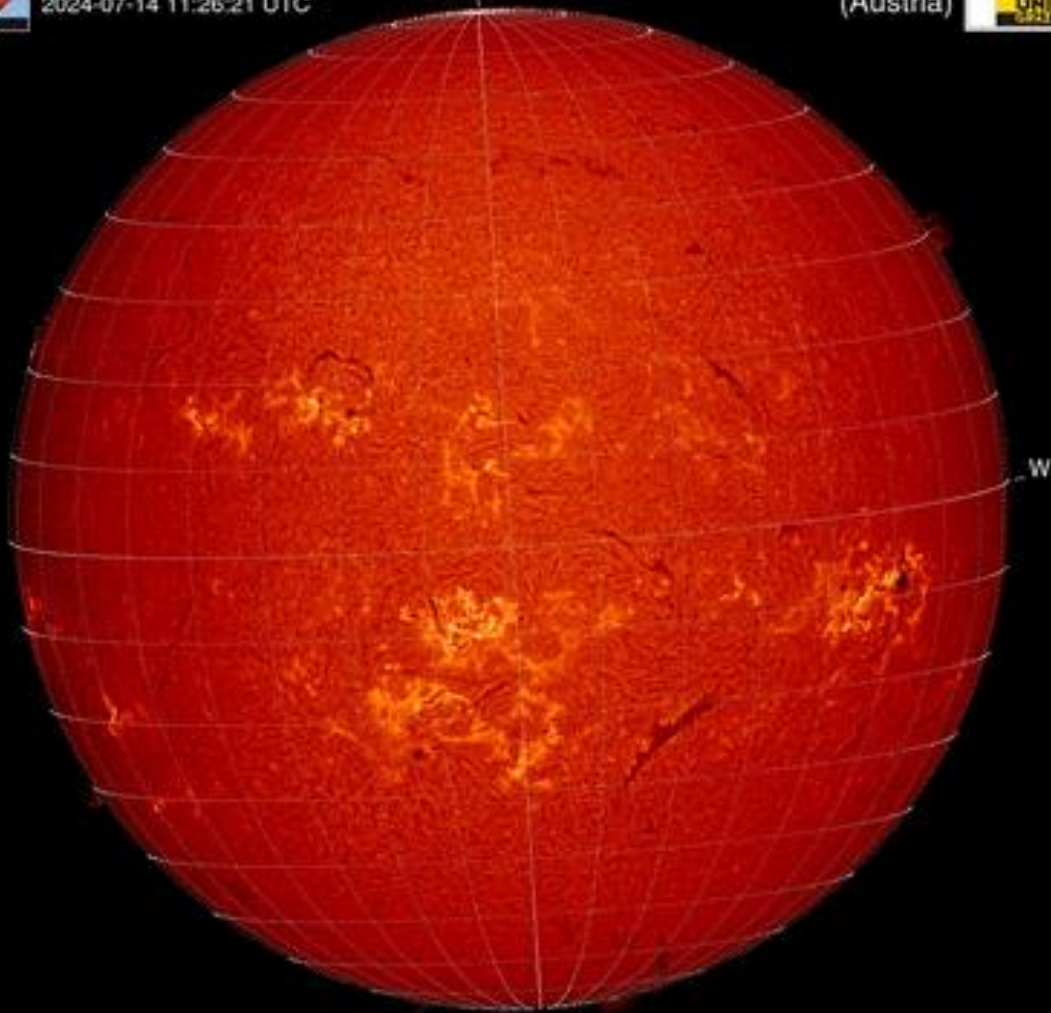
Filaments & Filament eruptions

H-alpha 2024-07-14



Kanzelhöhe Observatory
2024-07-14 11:26:21 UTC

University of Graz
(Austria)

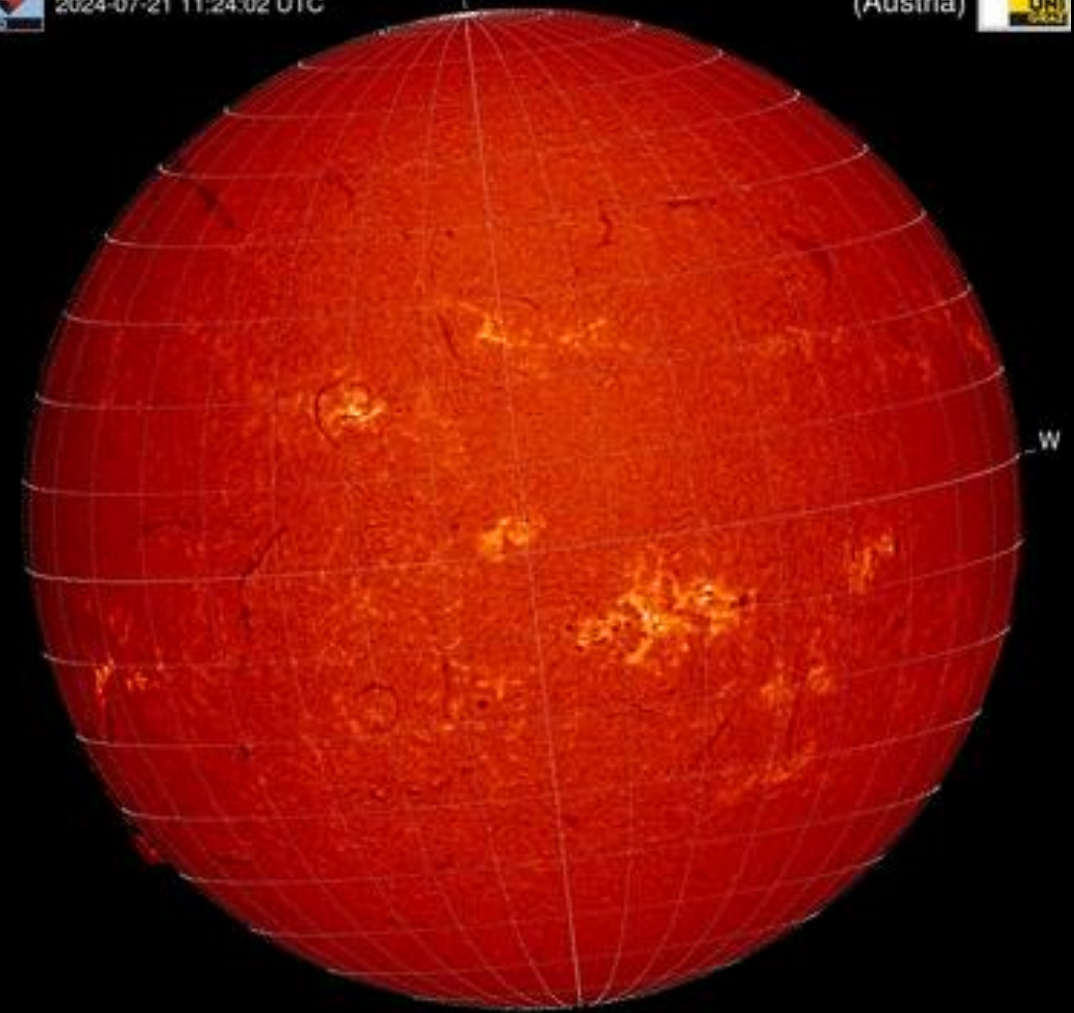


H-alpha 2024-07-21

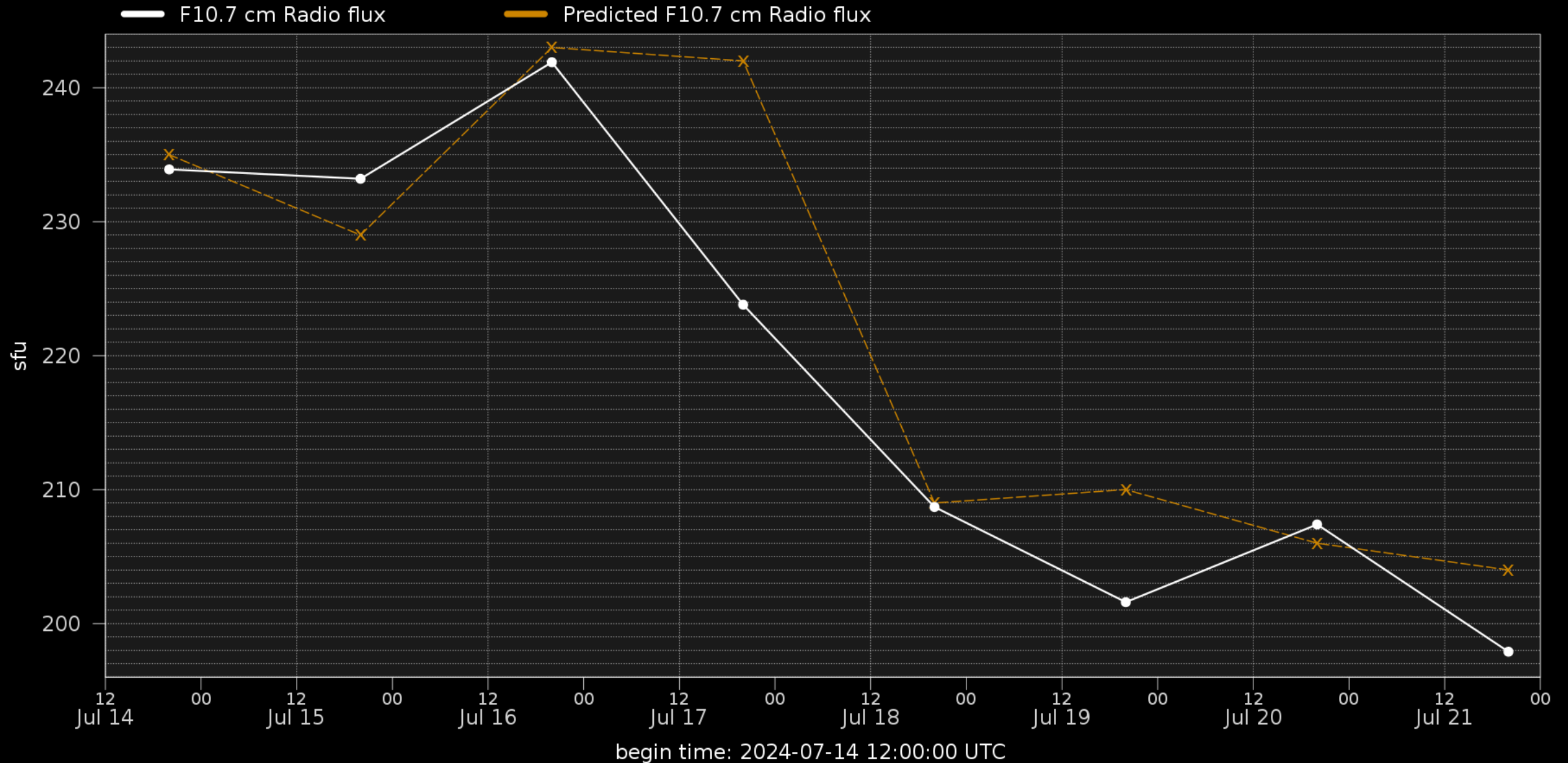


Kanzelhöhe Observatory
2024-07-21 11:24:02 UTC

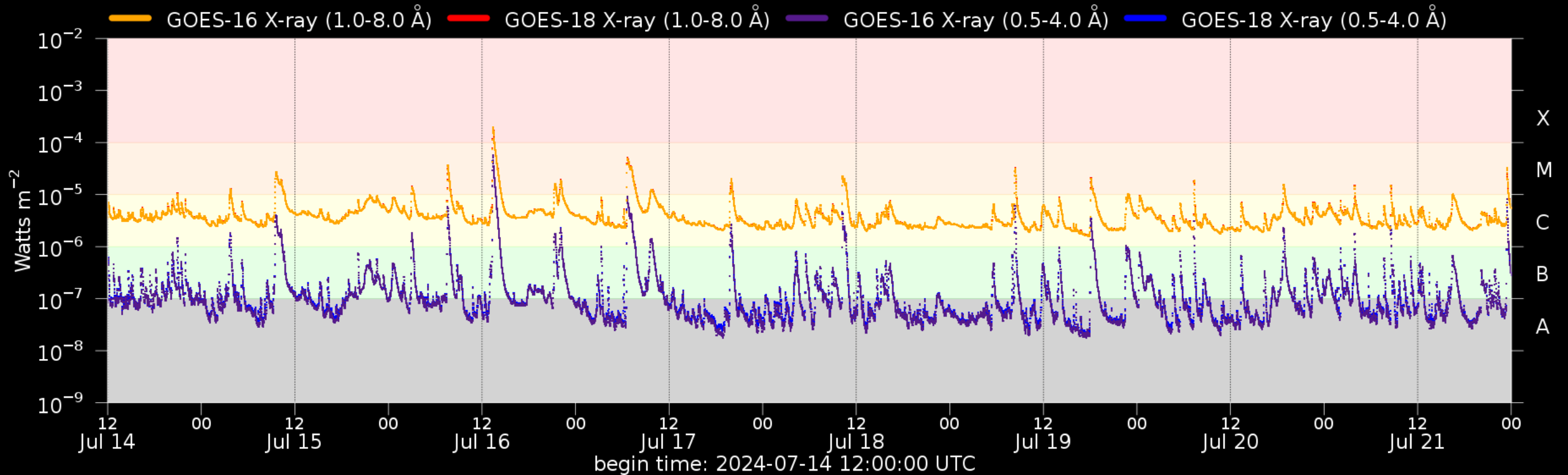
University of Graz
(Austria)



Solar F10.7cm radio flux



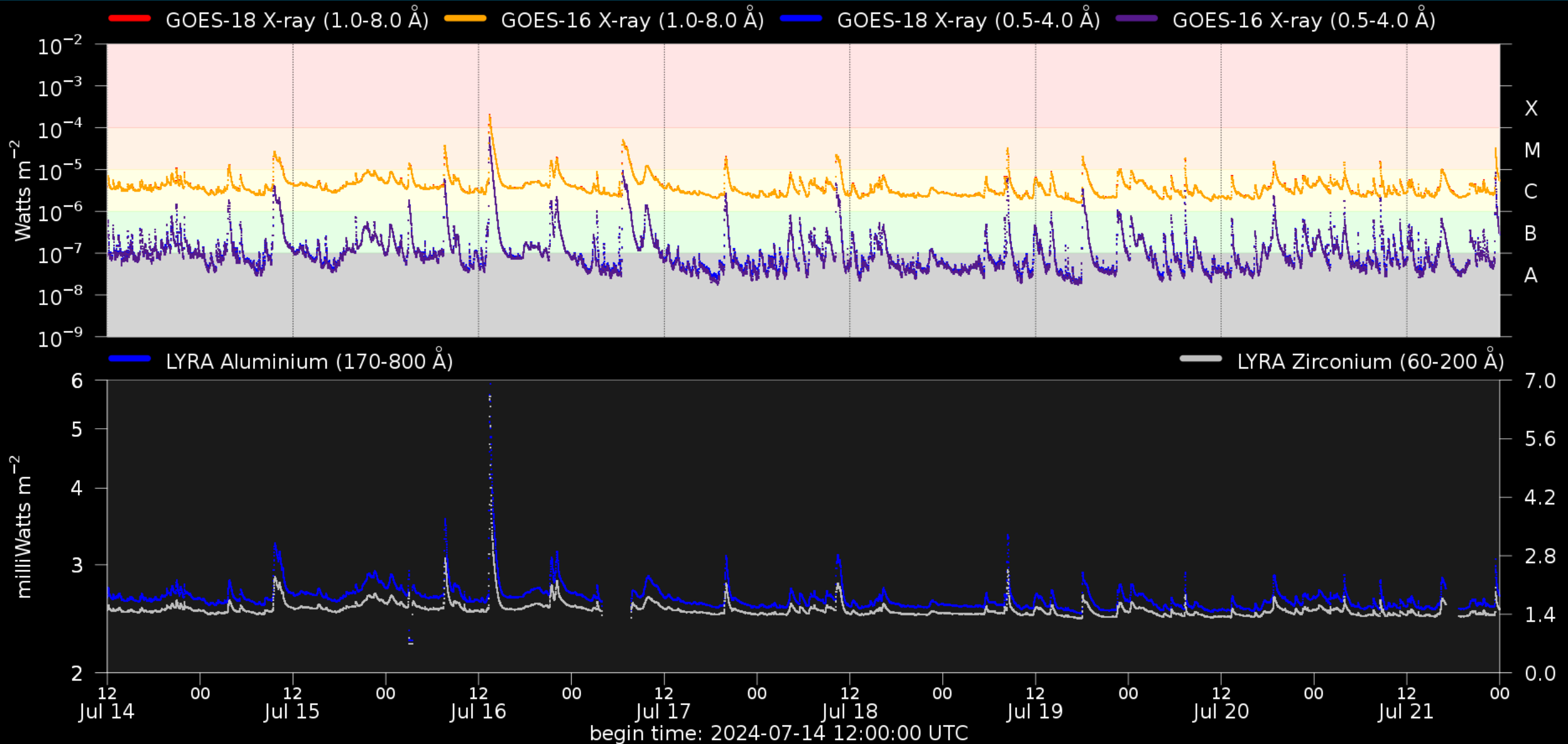
Flaring activity



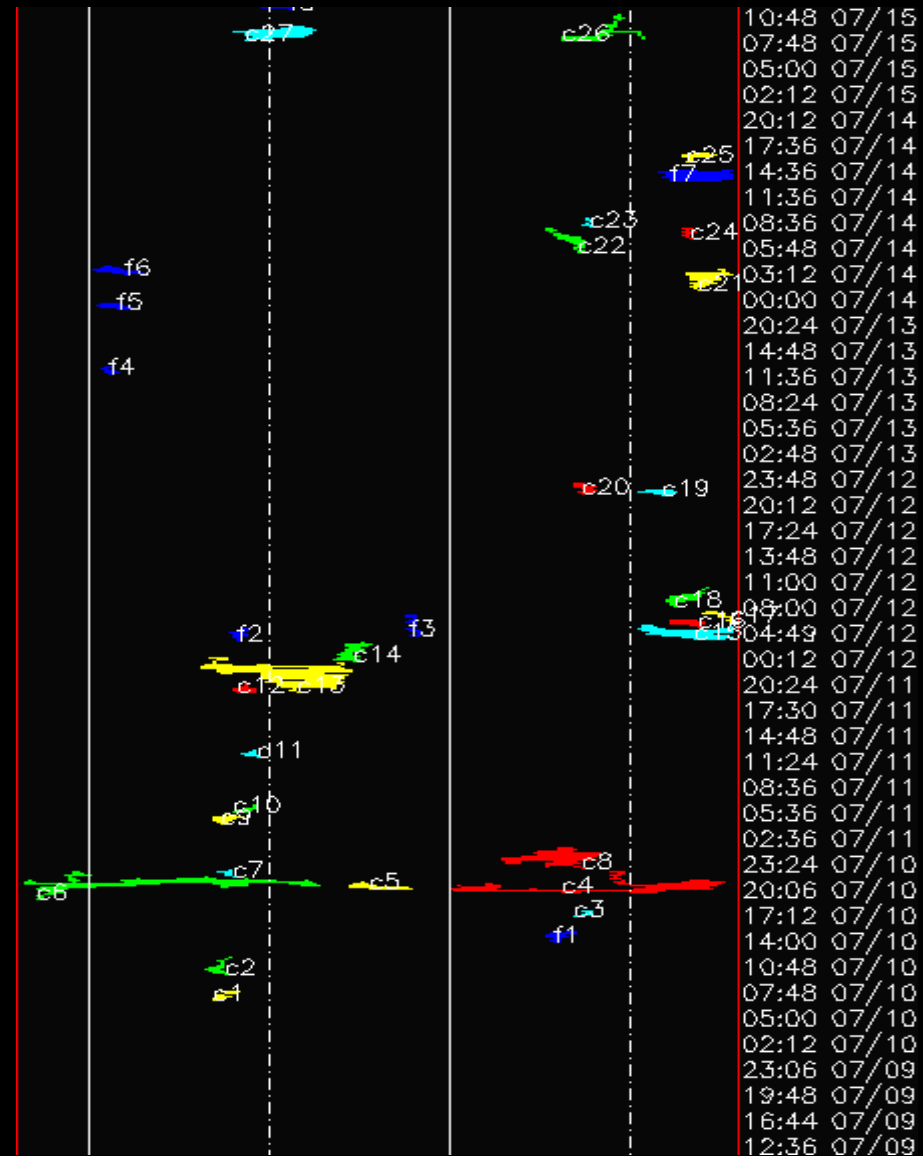
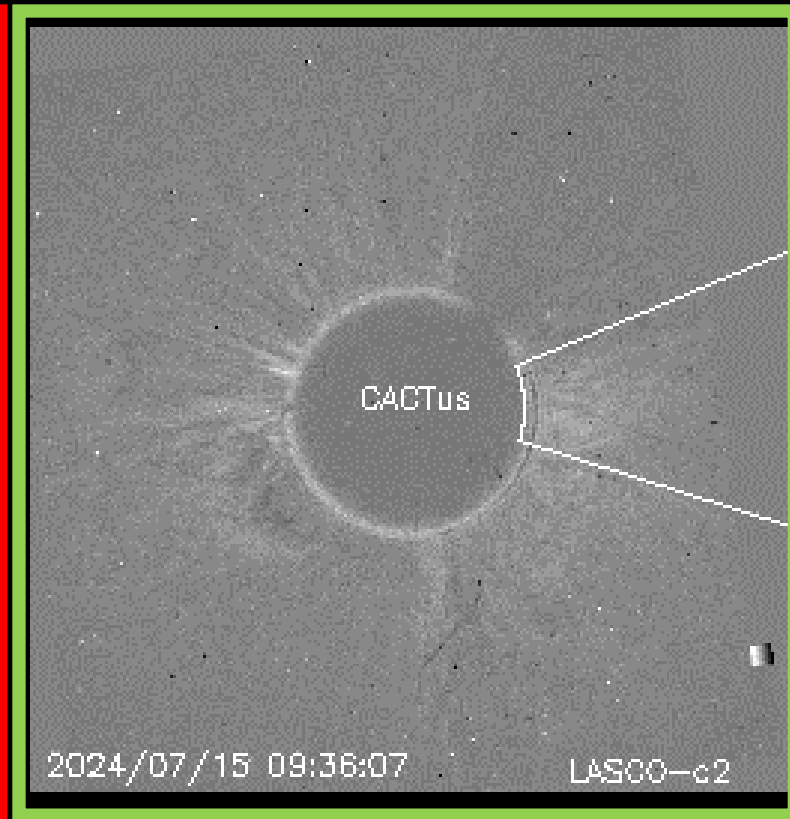
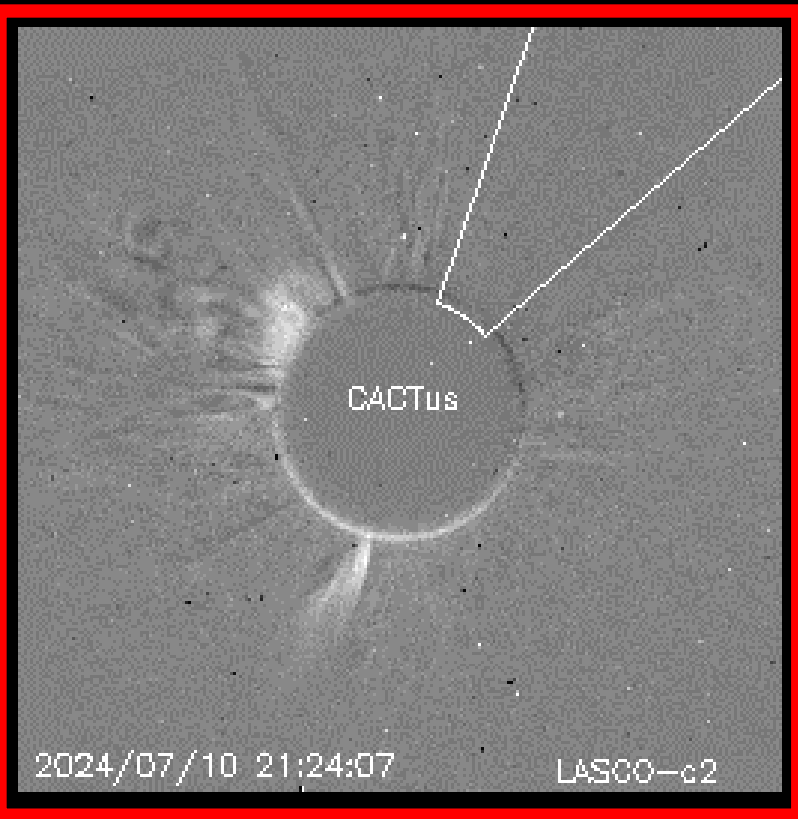
Probabilities (%) and occurrences (#) of C/M/X-flares daily, from noon to noon:

Issue date	2024-07-14	2024-07-15	2024-07-16	2024-07-17	2024-07-18	2024-07-19	2024-07-20	2024-07-21
Probability (%)	99 80 30	99 85 15	99 85 10	99 90 20	99 75 25	99 65 10	99 75 35	99 70 15
Observed (#)	09 02 00	03 02 00	02 03 01	04 02 00	05 01 00	06 03 00	10 03 00	06 02 00

Solar X-Ray and UV flux



Coronal Mass Ejections



Solar Wind and

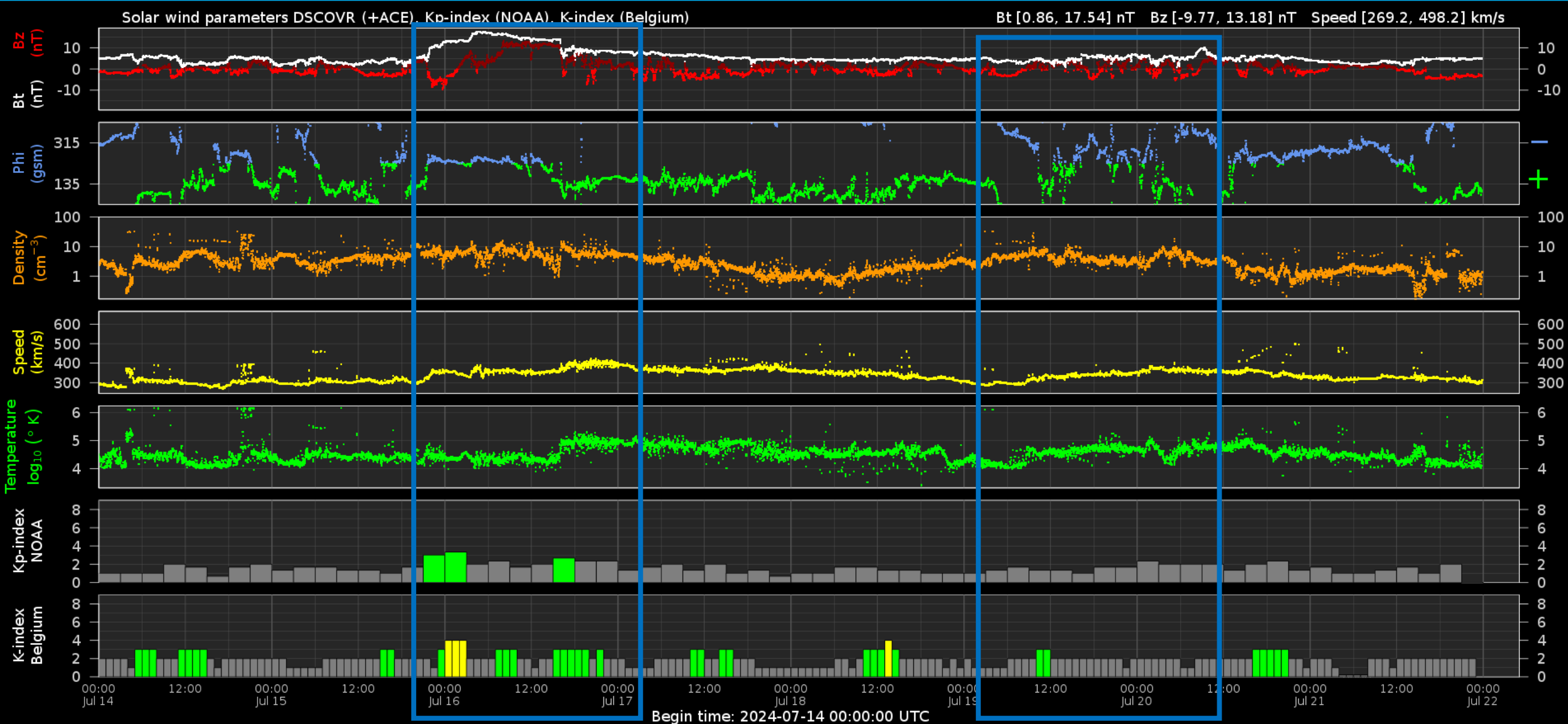
Geomagnetic Activity



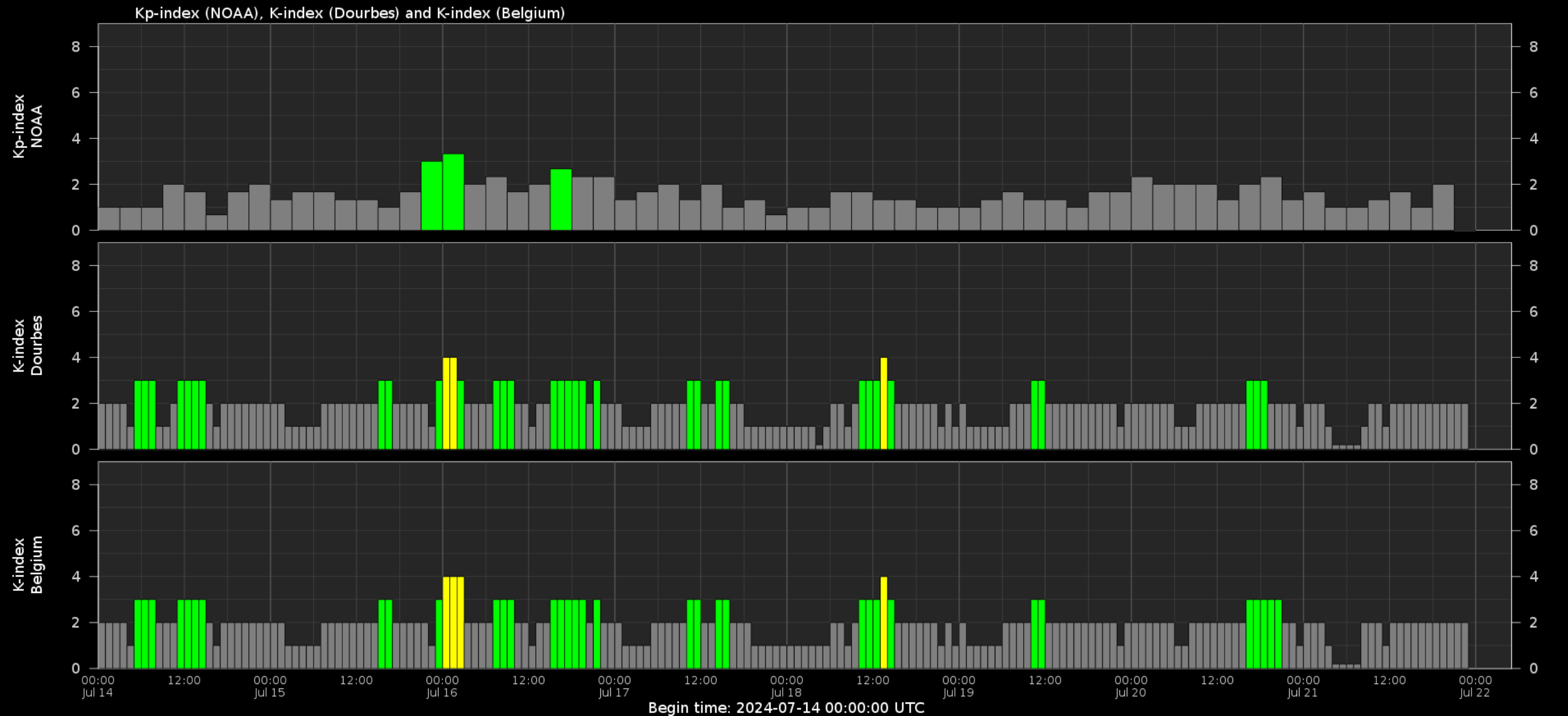
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Solar wind parameters & K-indices



Geomagnetic activity (K-indexes)



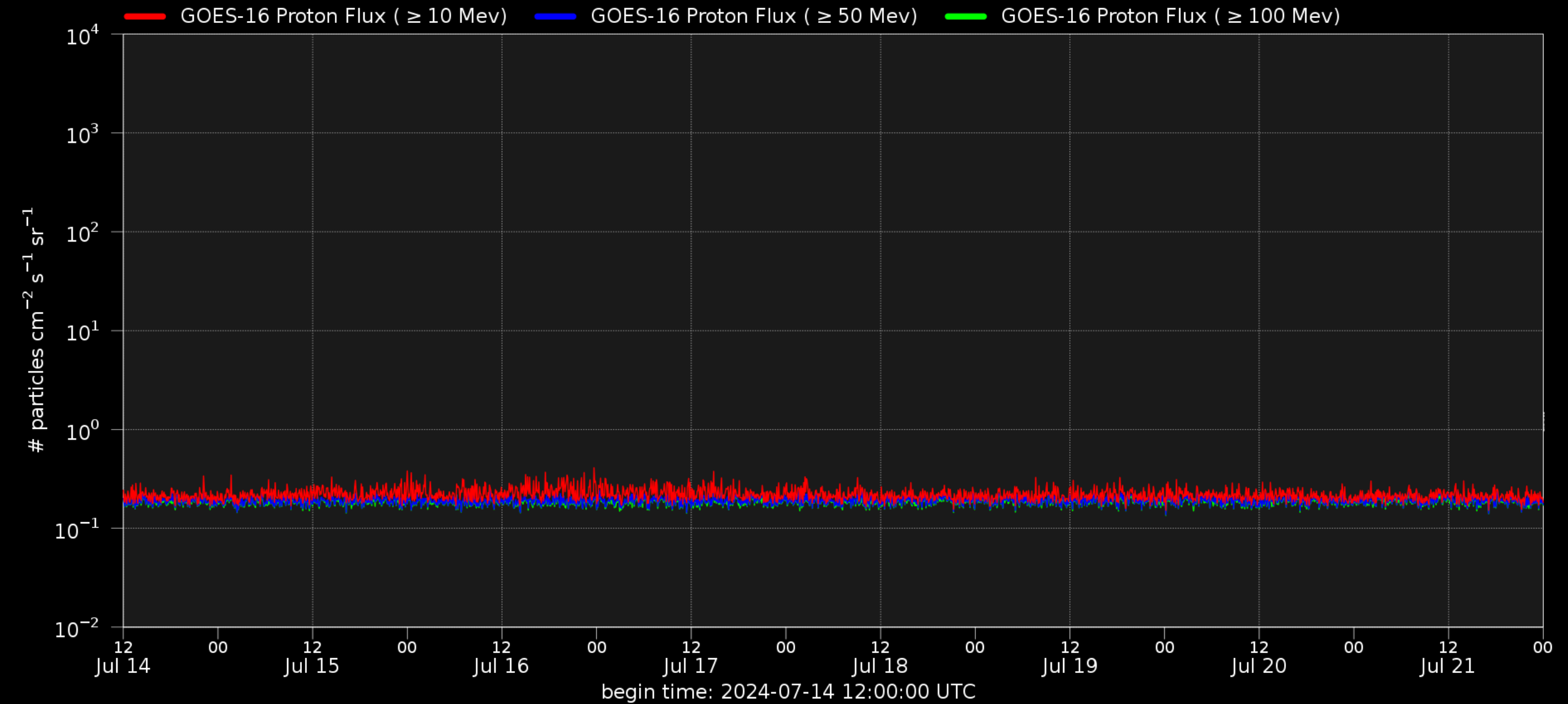
Energetic Particles



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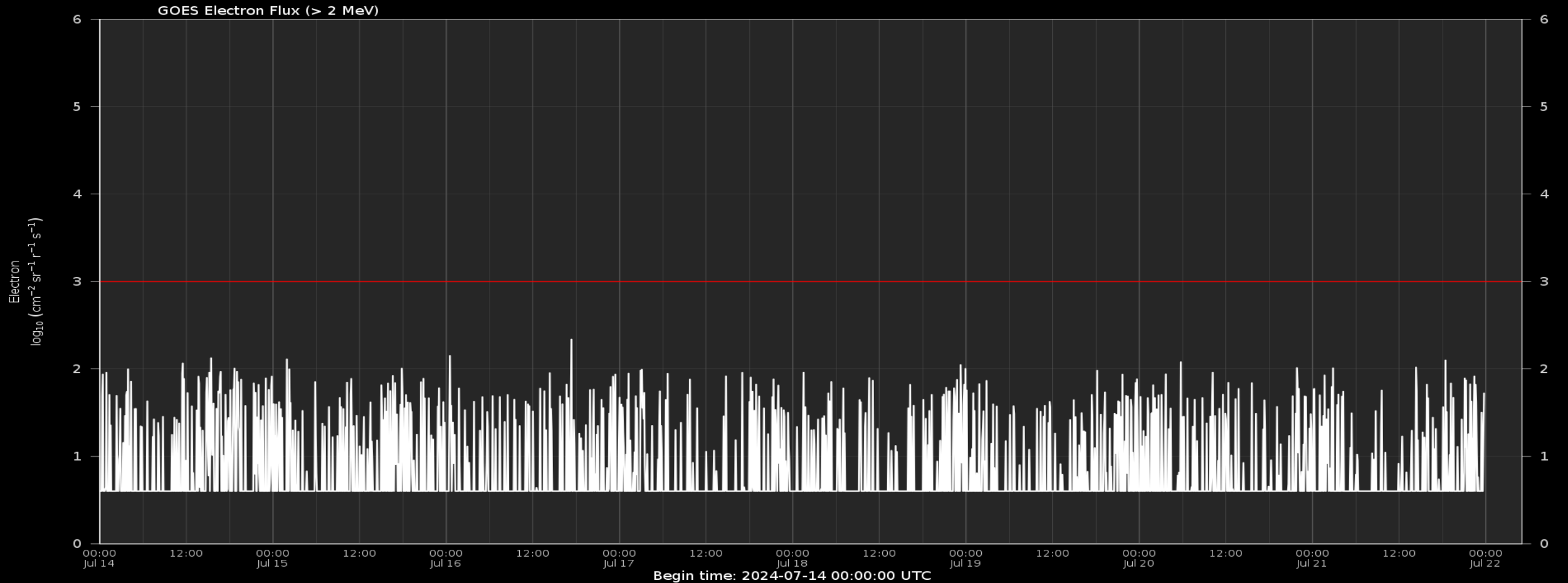
Solar proton flux



Electron flux at GEO

www.stce.be/educational/classification#electrons

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



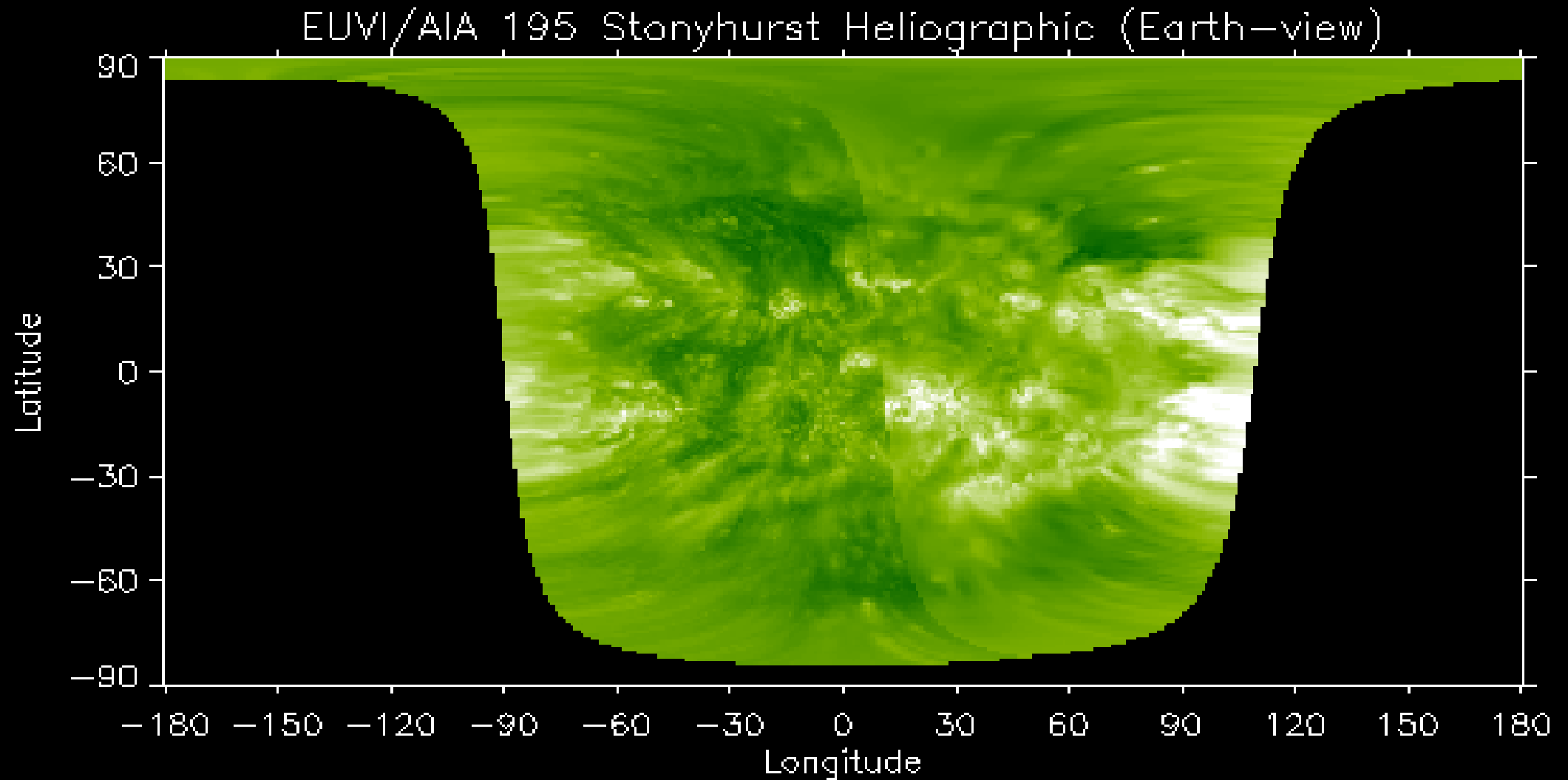
Outlook



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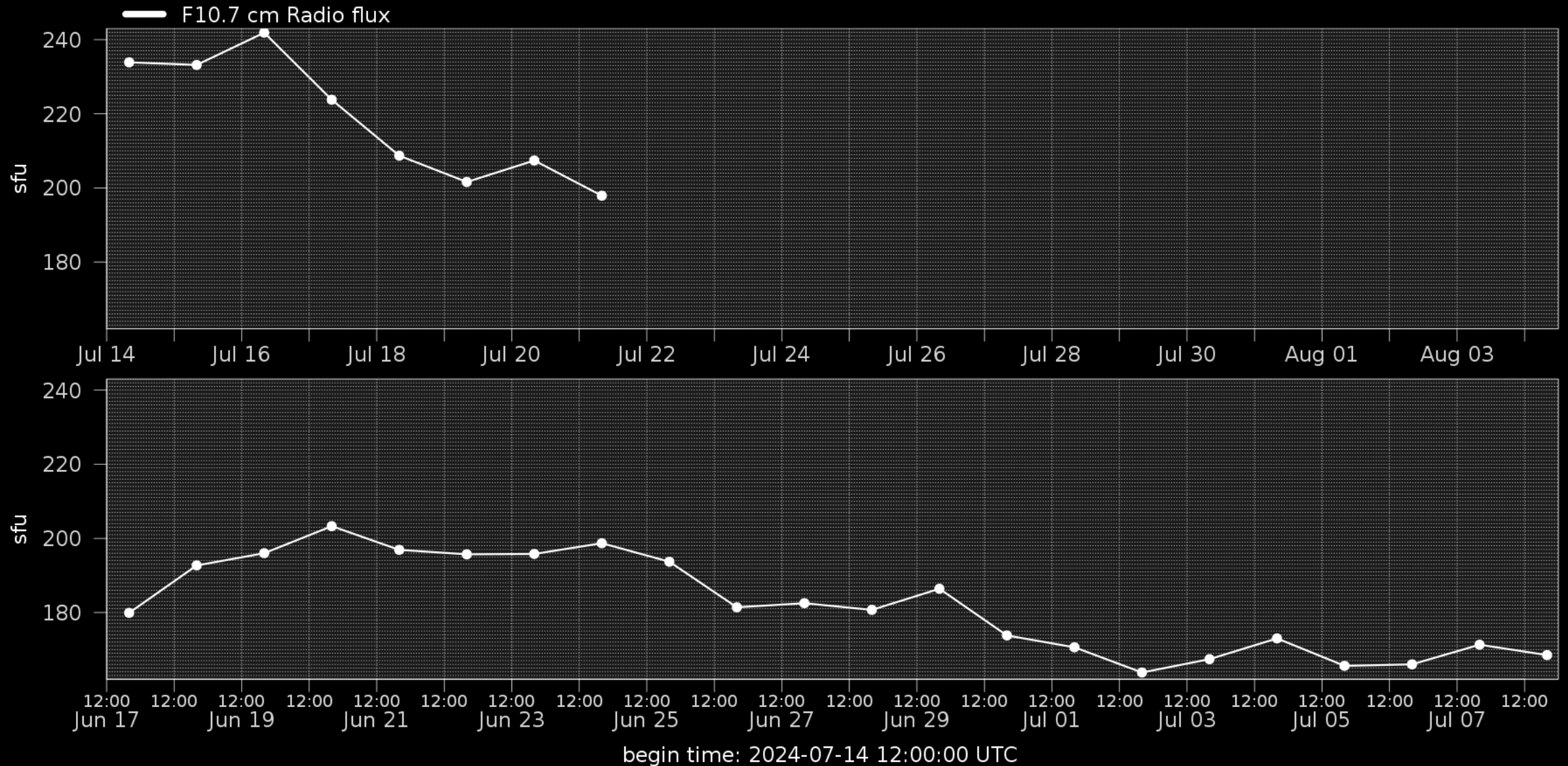
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Outlook: Solar activity



Observation date: 2024/07/21 23:05:00

Outlook: Solar F10.7cm radio flux



Outlook: Electron Flux at GEO Outlook



PECASUS



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Pegasus related events

PRESTO alert and Short Wave Fadeout advisory issued for the X1.9 flare of 16 Jul
13:26 UTC

SIDC Space Weather Briefing

See you at our next briefing!

Or visit us at www.sidc.be



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