

SIDC Space Weather Briefing

04 July 2021 - 11 July 2021

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& the SIDC forecaster team



Royal Observatory
of Belgium

Solar Influences
Data analysis Centre
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Summary Report

Solar activity from 2021-07-04 12:00 to 2021-07-11 23:59

Active regions	NOAA ARs 2835, 2837, 2839, 2840, 2841, 2842, Catania grp 13.
Flares	# C-class flare: 8 # M-class flare: 0 # X-class flare: 0
Filament eruptions	No eruptions observed
Coronal Holes	Small positive CH crossing central merid. Jul 6, Extended negative CH crossing Jul 09

Proton flux	Nominal levels
Electron flux	Nominal levels

Solar wind and geomagnetic conditions

ICME	No clear ICMEs, structure in the solar wind on Jul 5 possibly related to ICME
SW Conditions	B : 0.35 - 11.62 nT // Bz: -9.03 nT to 8.32 nT // Speed: 300.7 - 455.0km/s
K-indices	max K-index (Dourbes): 3 max Kp-index (NOAA): 3

All Quiet Alert: On between July 8 – July 11

Solar Activity

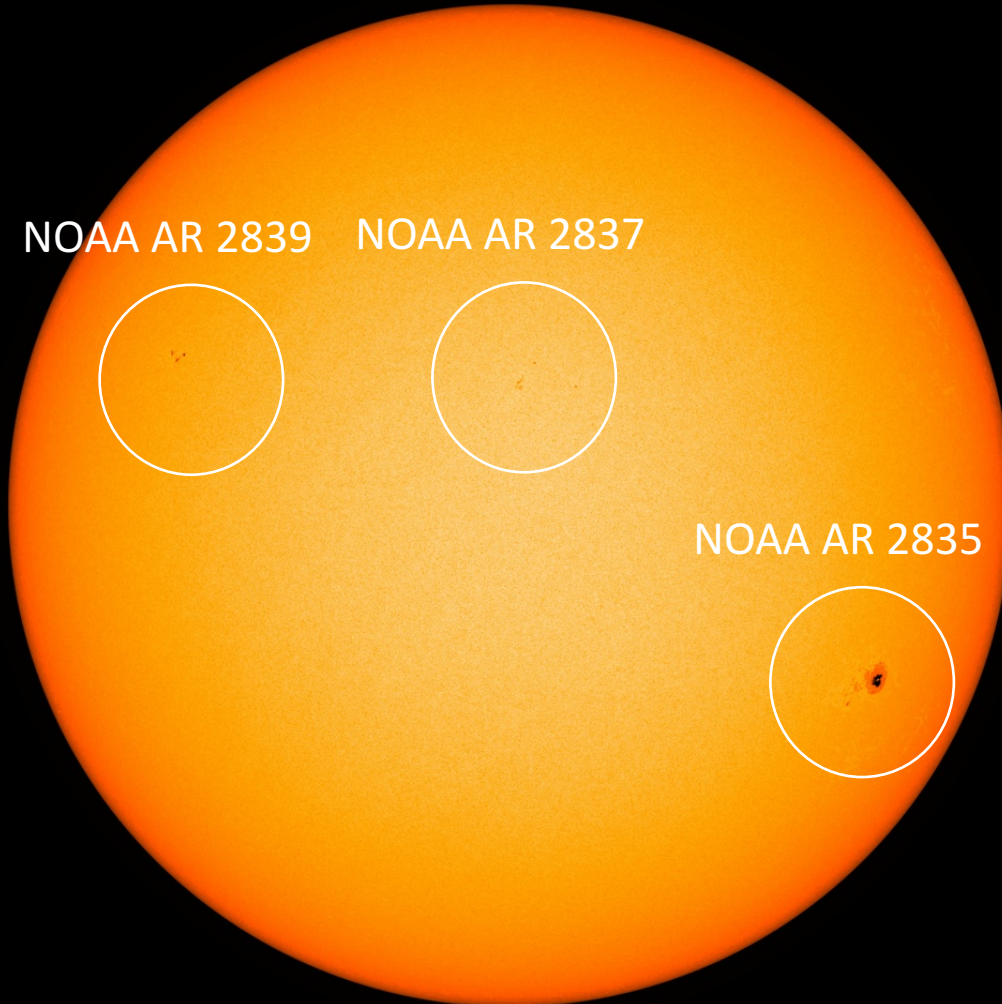


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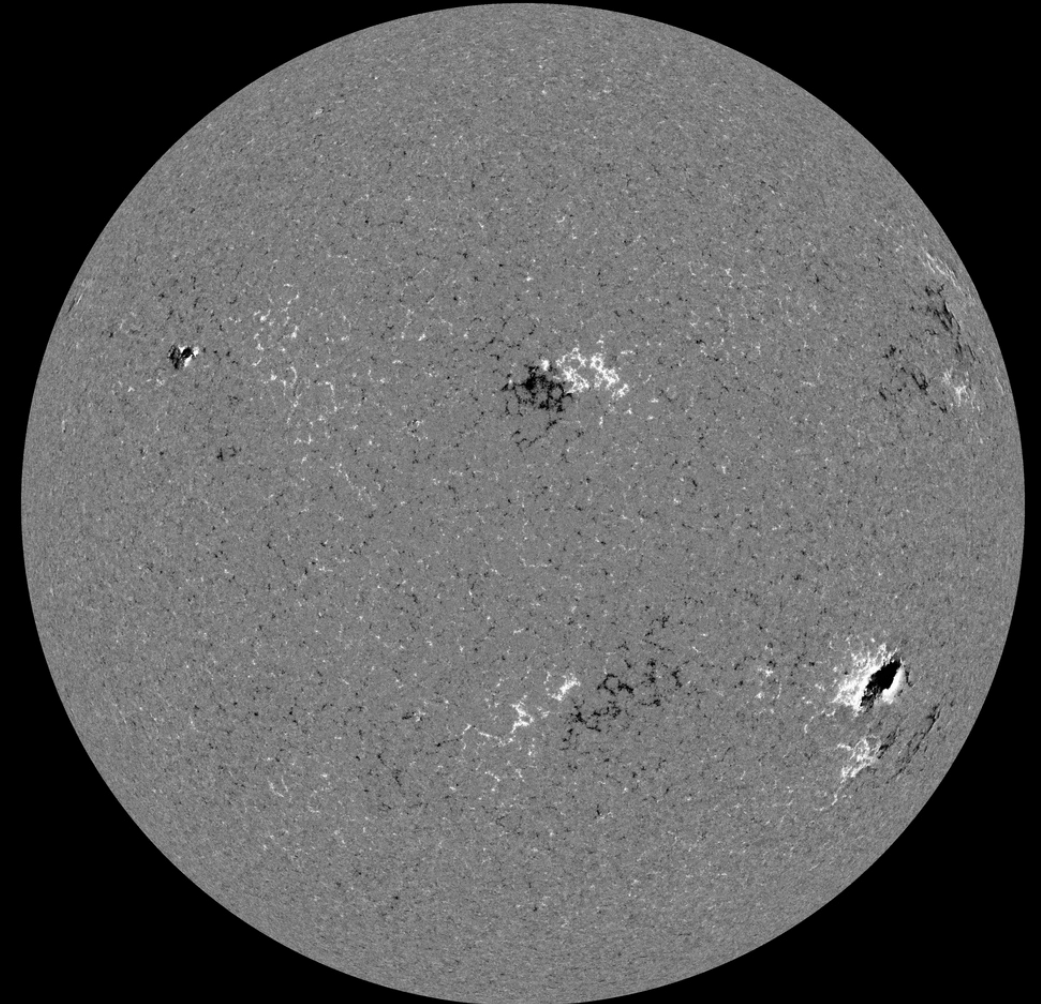
Solar active regions

SDO/HMI White Light 2021-07-04



SDO/HMI Quick-Look Continuum: 20210704_114500

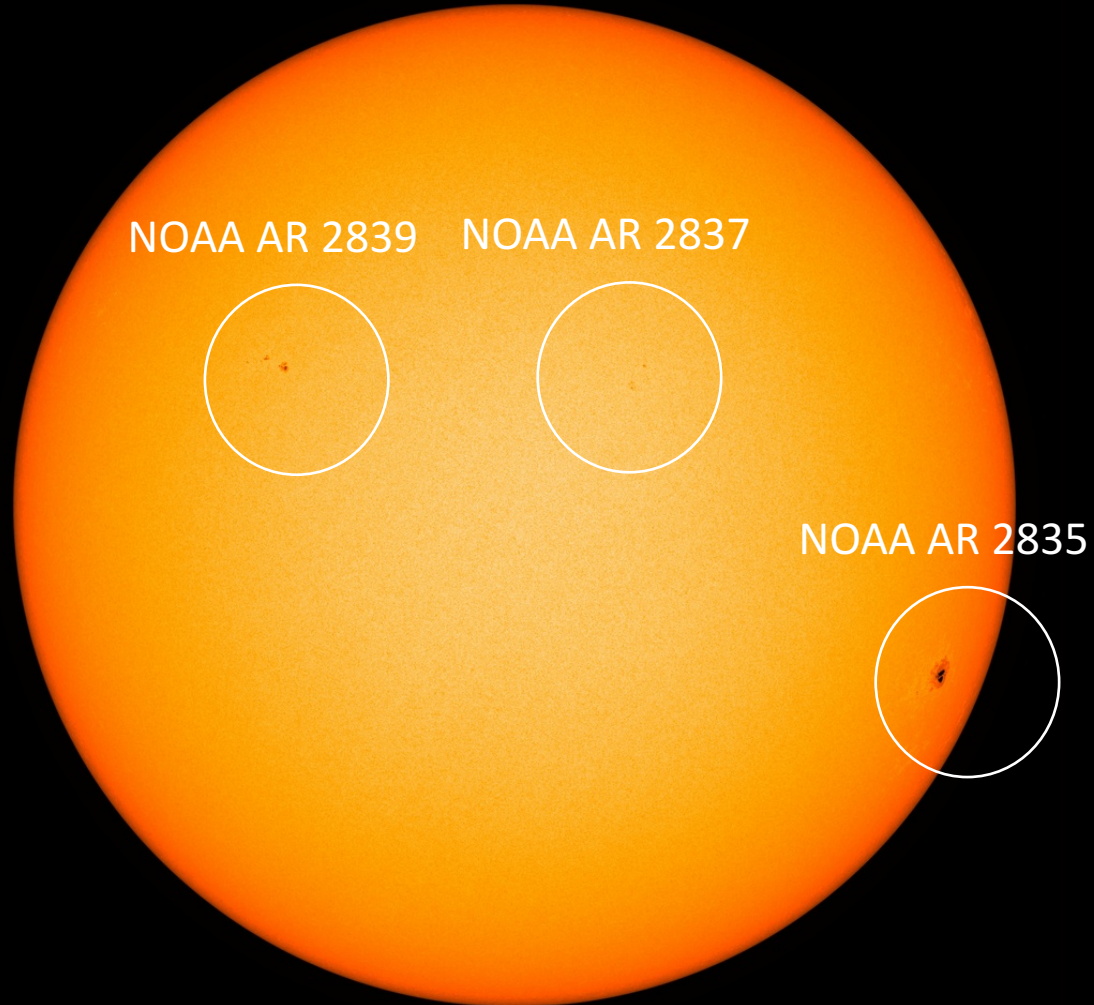
SDO/HMI Magnetogram 2021-07-04



SDO/HMI Quick-Look Magnetogram: 20210704_111500

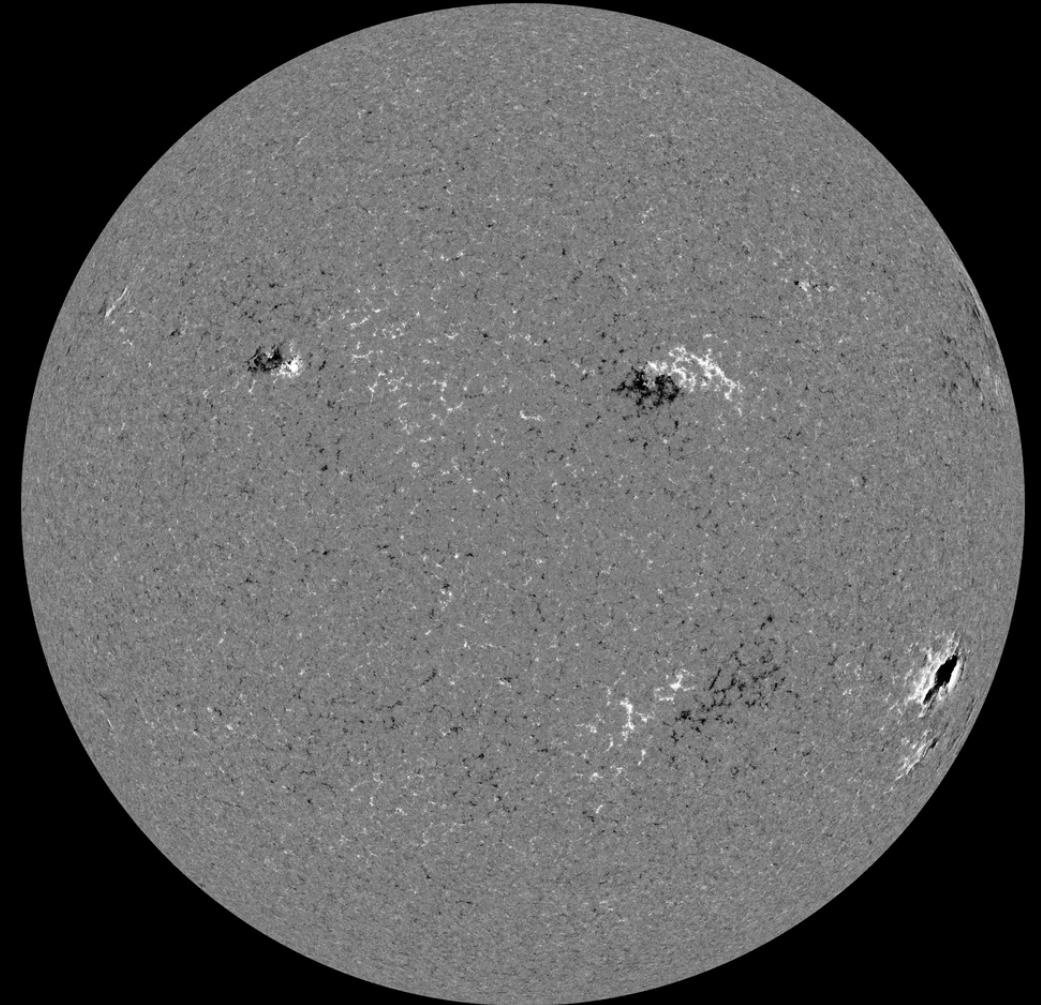
Solar active regions

SDO/HMI White Light 2021-07-05



SDO/HMI Quick-Look Continuum: 20210705_114500

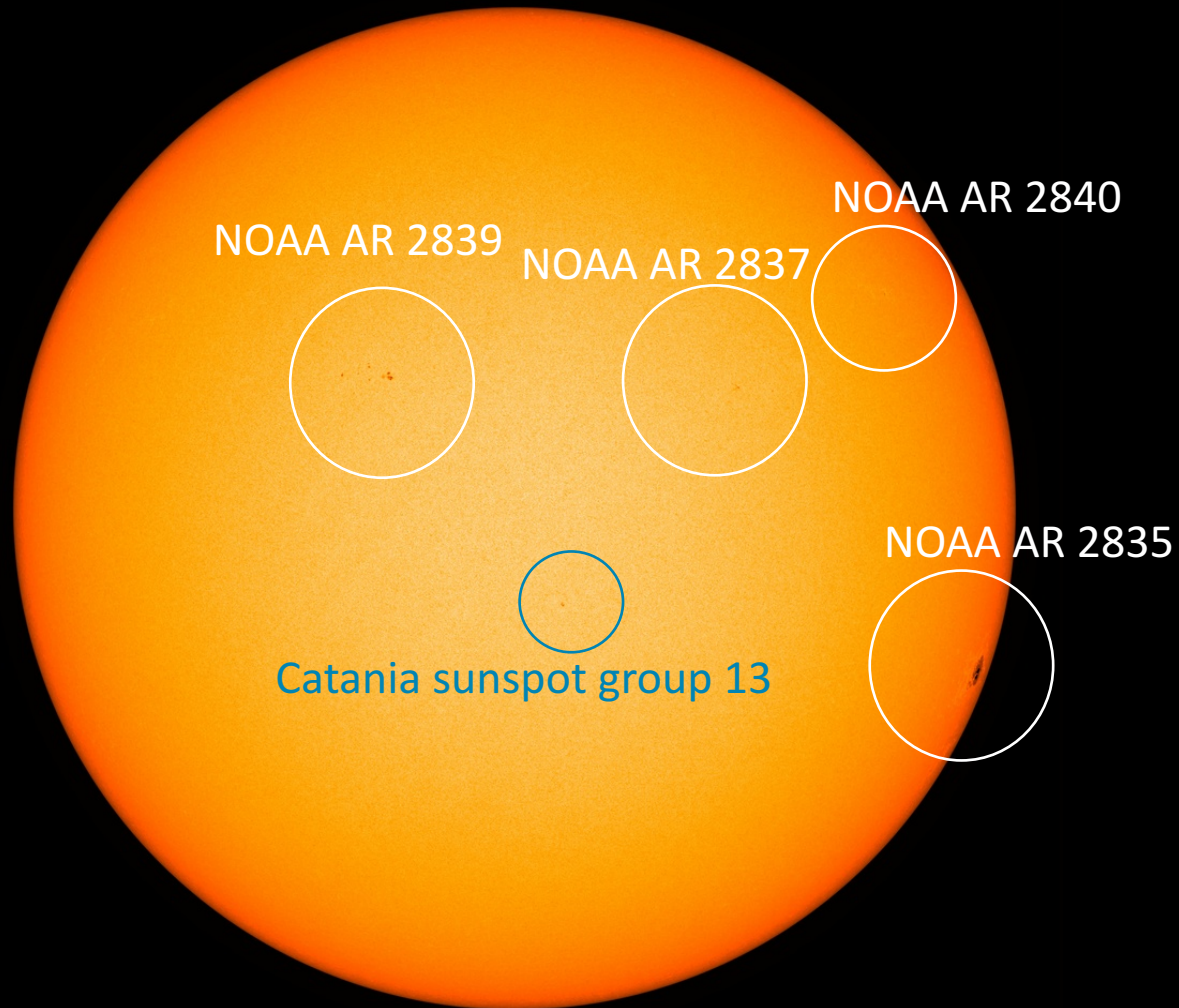
SDO/HMI Magnetogram 2021-07-05



SDO/HMI Quick-Look Magnetogram: 20210705_114500

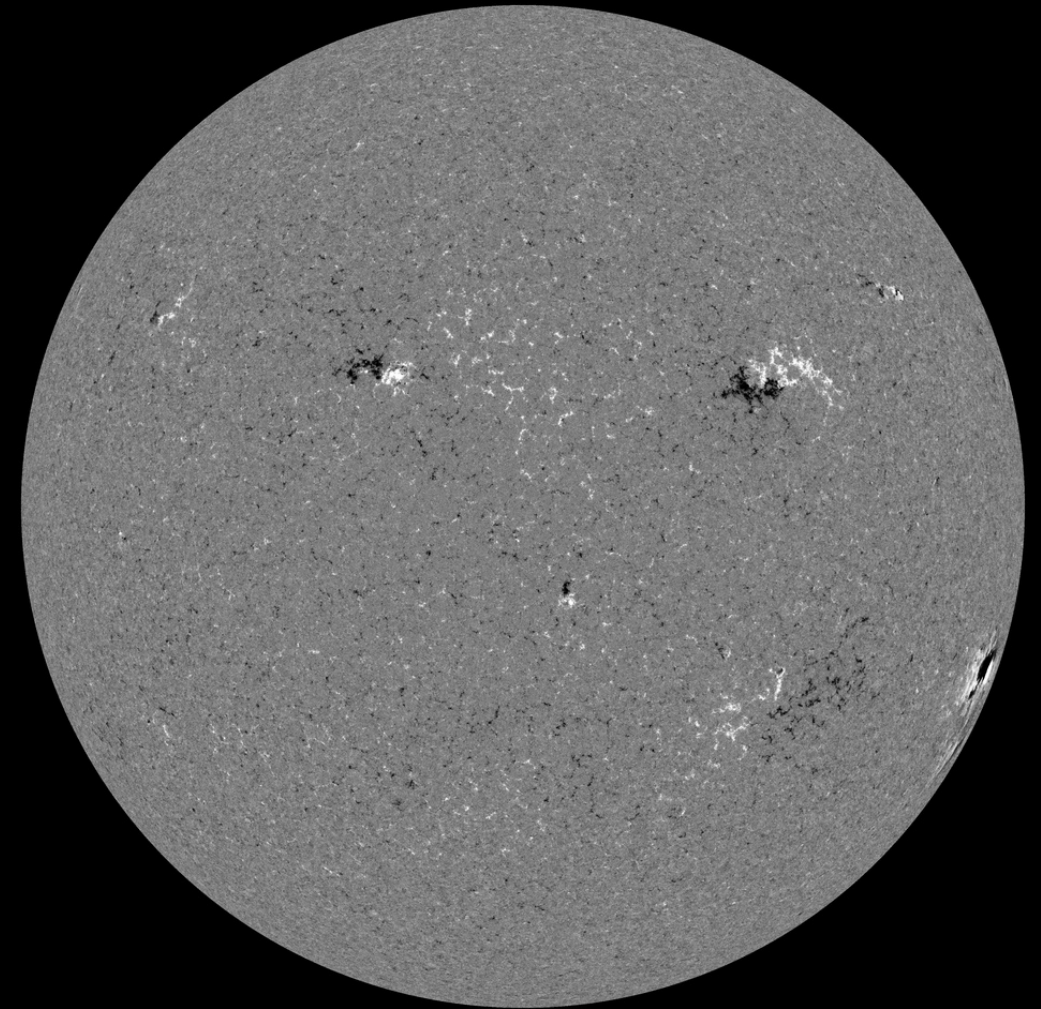
Solar active regions

SDO/HMI White Light 2021-07-06



SDO/HMI Quick-Look Continuum: 20210706_114500

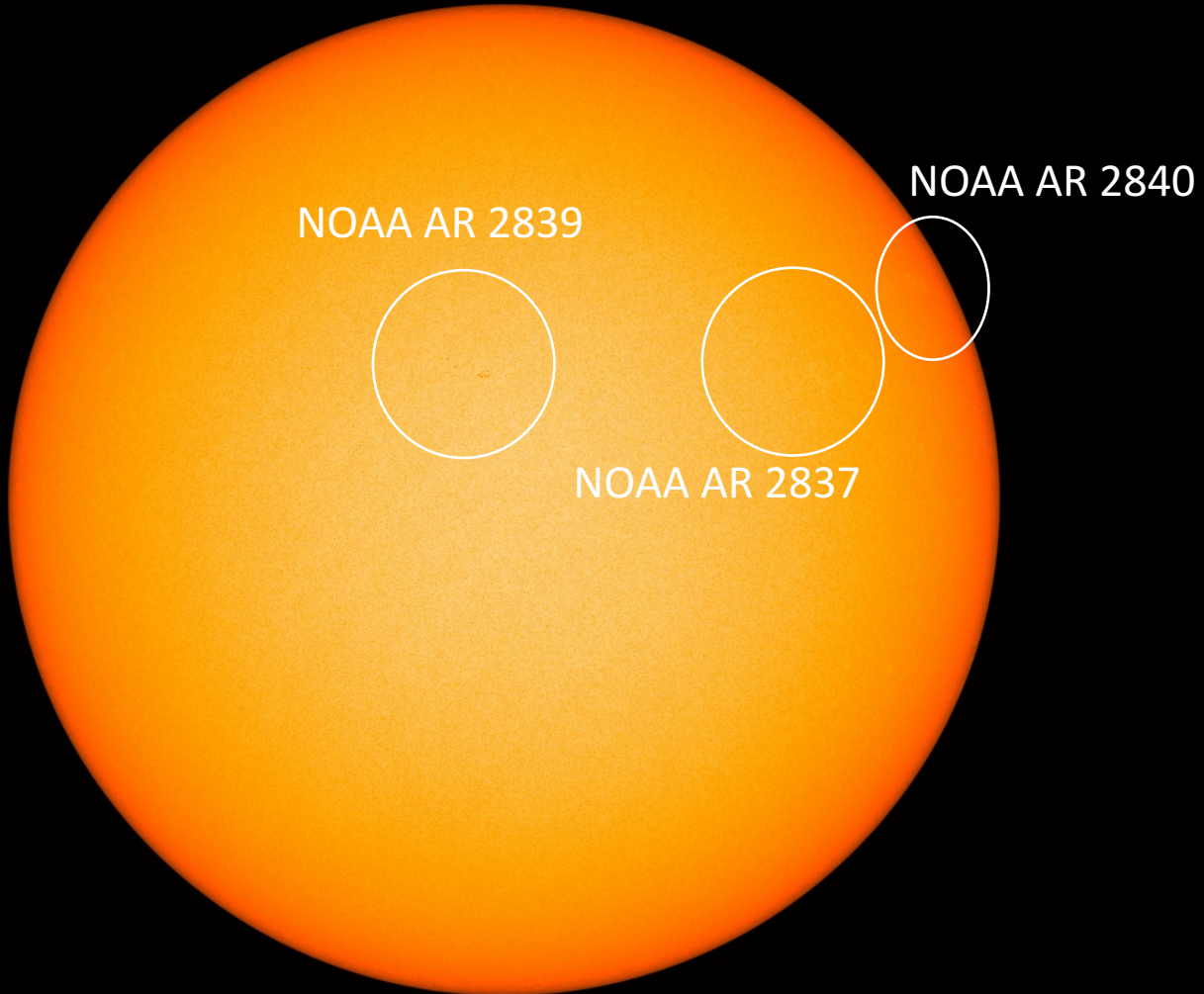
SDO/HMI Magnetogram 2021-07-06



SDO/HMI Quick-Look Magnetogram: 20210706_114500

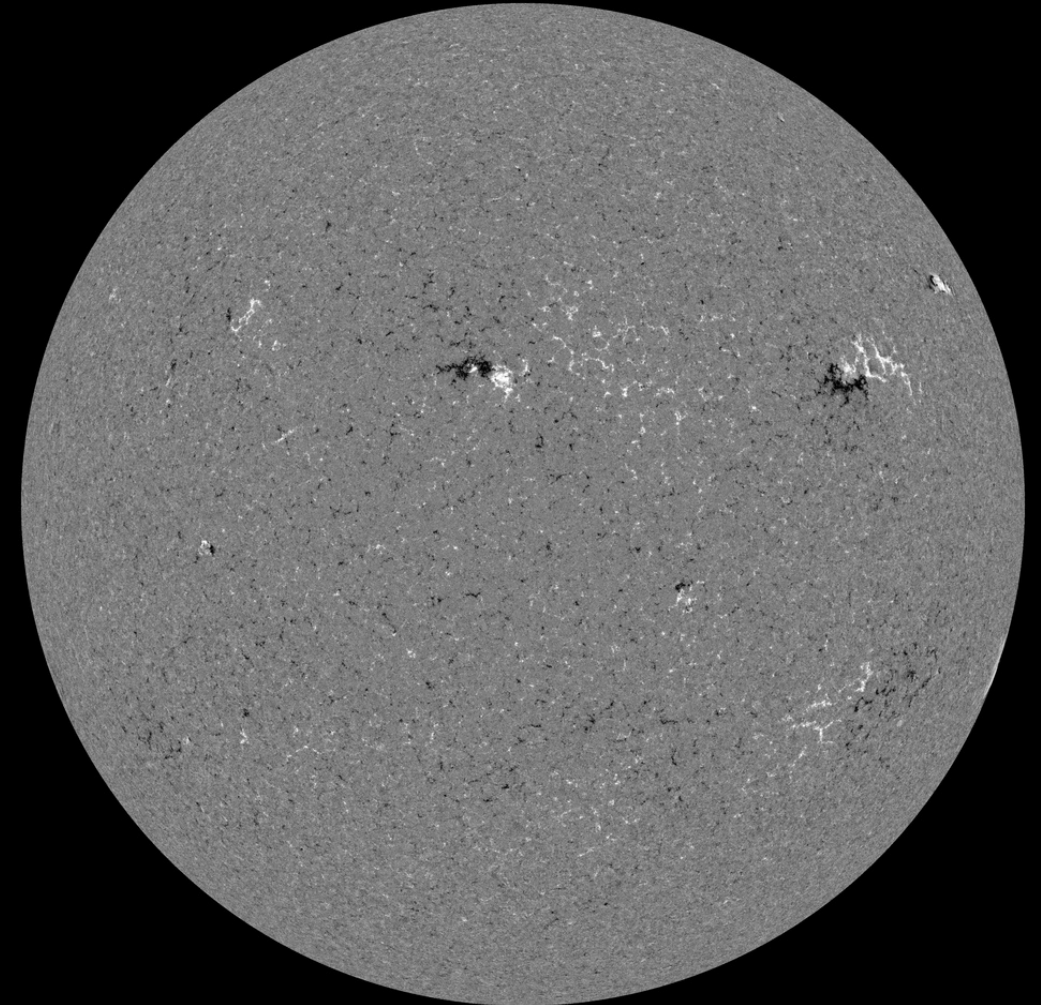
Solar active regions

SDO/HMI White Light 2021-07-07



SDO/HMI Quick-Look Continuum: 20210707_114500

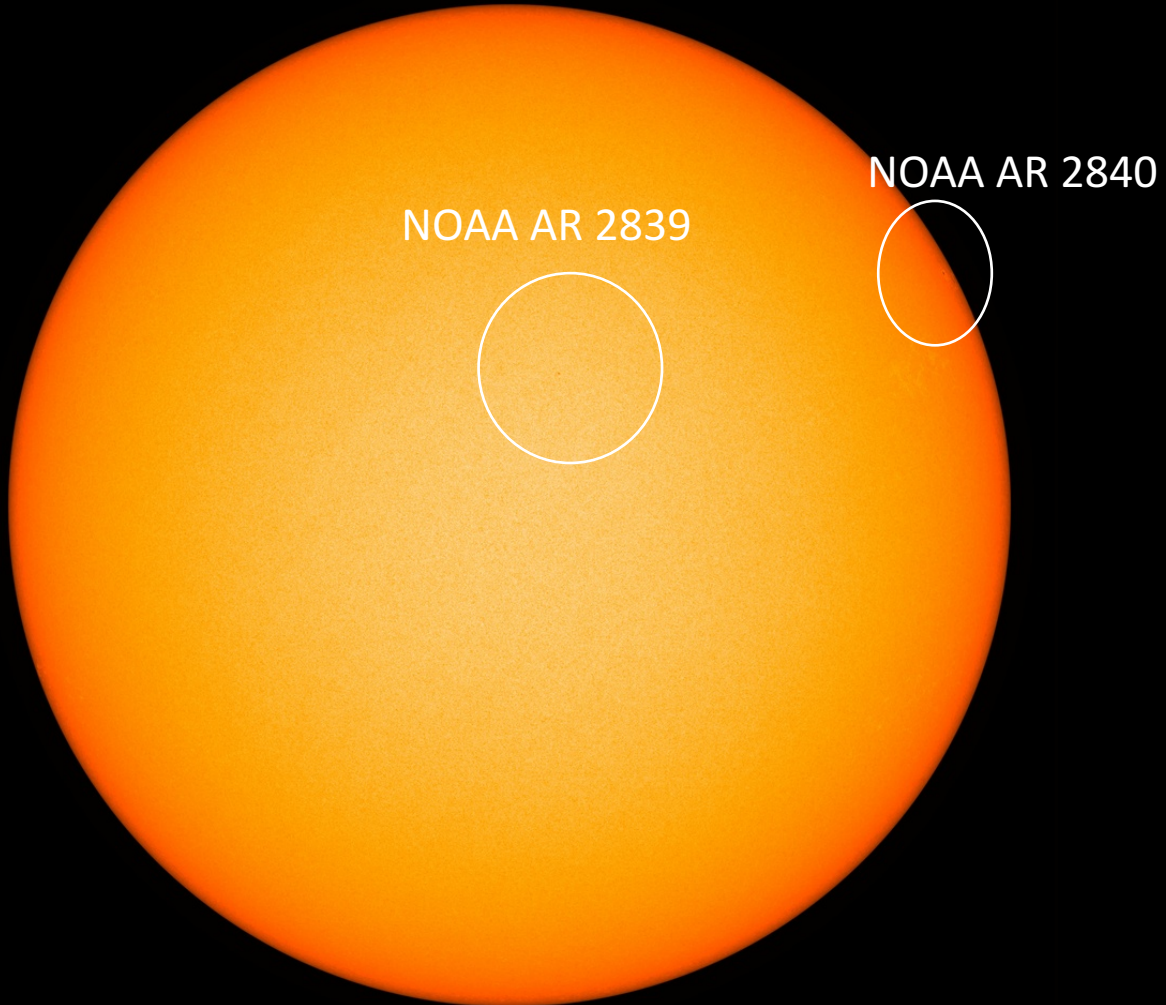
SDO/HMI Magnetogram 2021-07-07



SDO/HMI Quick-Look Magnetogram: 20210707_114500

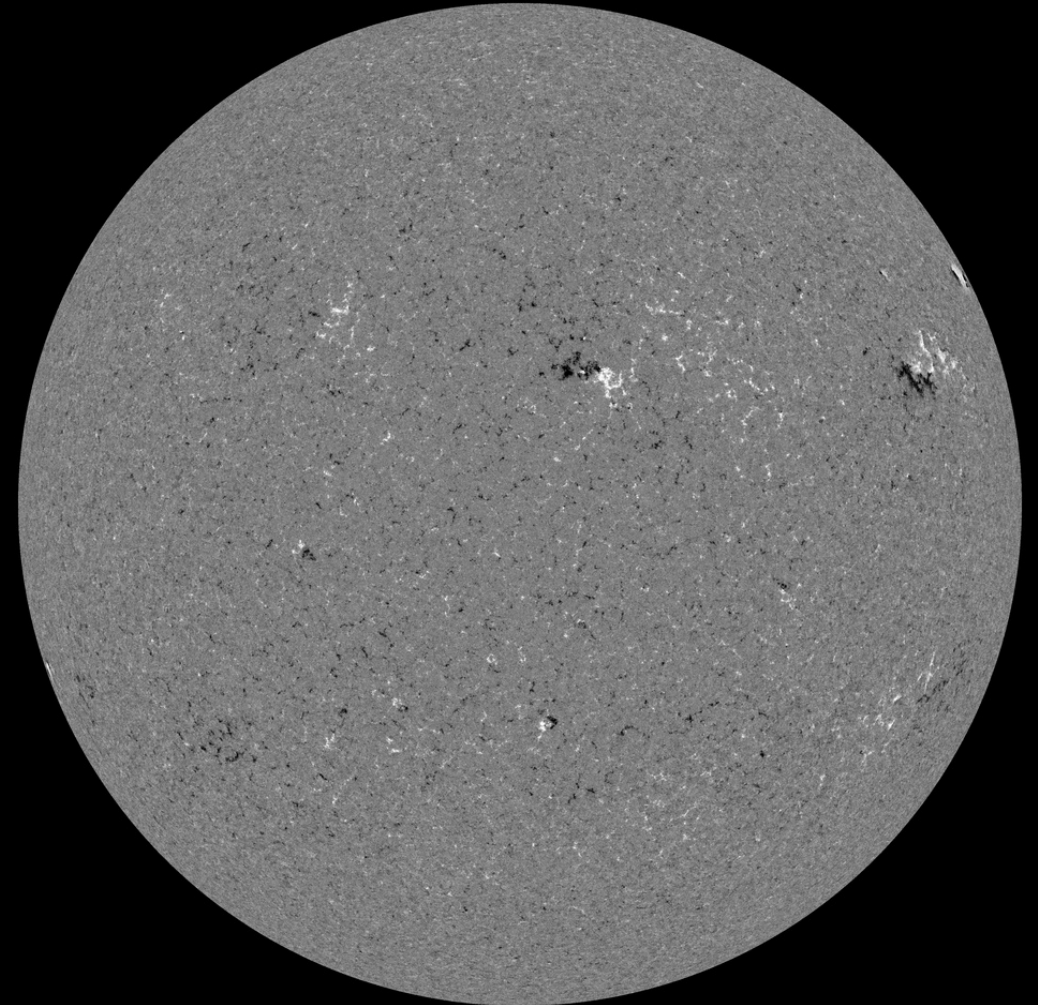
Solar active regions

SDO/HMI White Light 2021-07-08



SDO/HMI Quick-Look Continuum: 20210708_114500

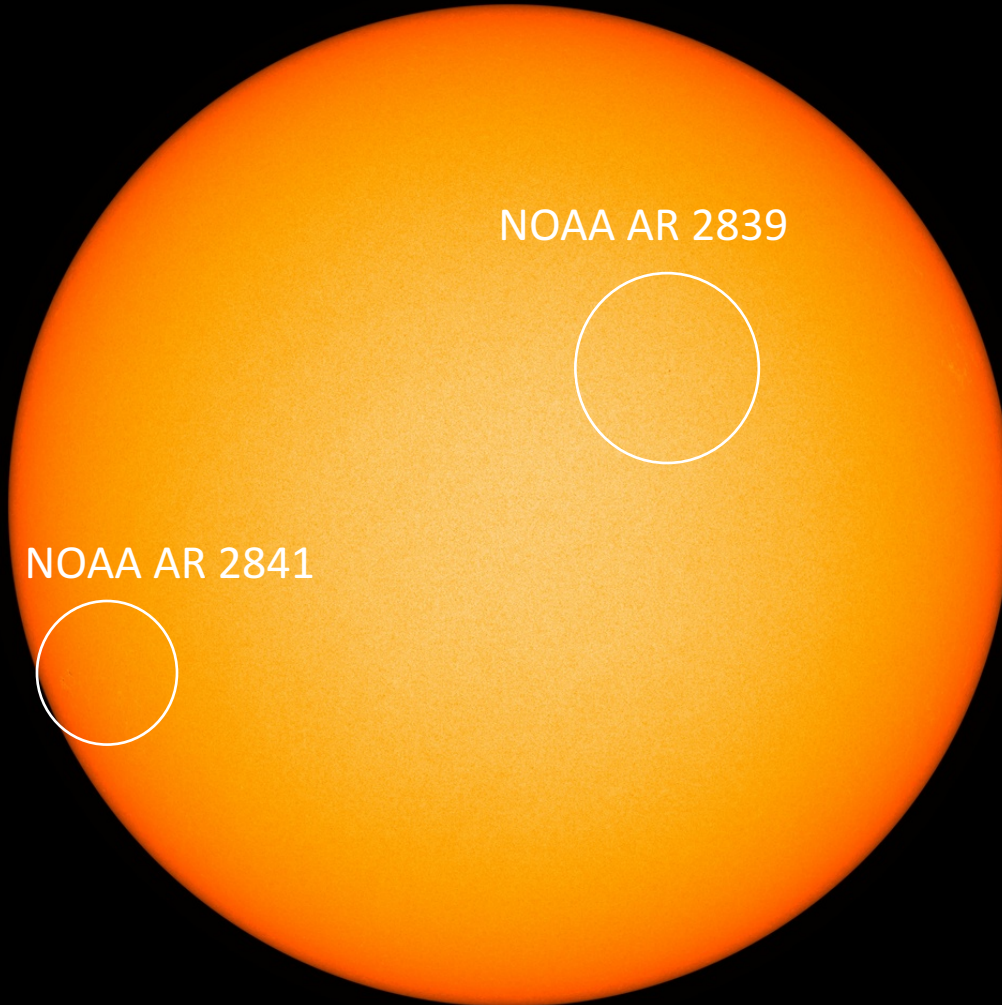
SDO/HMI Magnetogram 2021-07-08



SDO/HMI Quick-Look Magnetogram: 20210708_114500

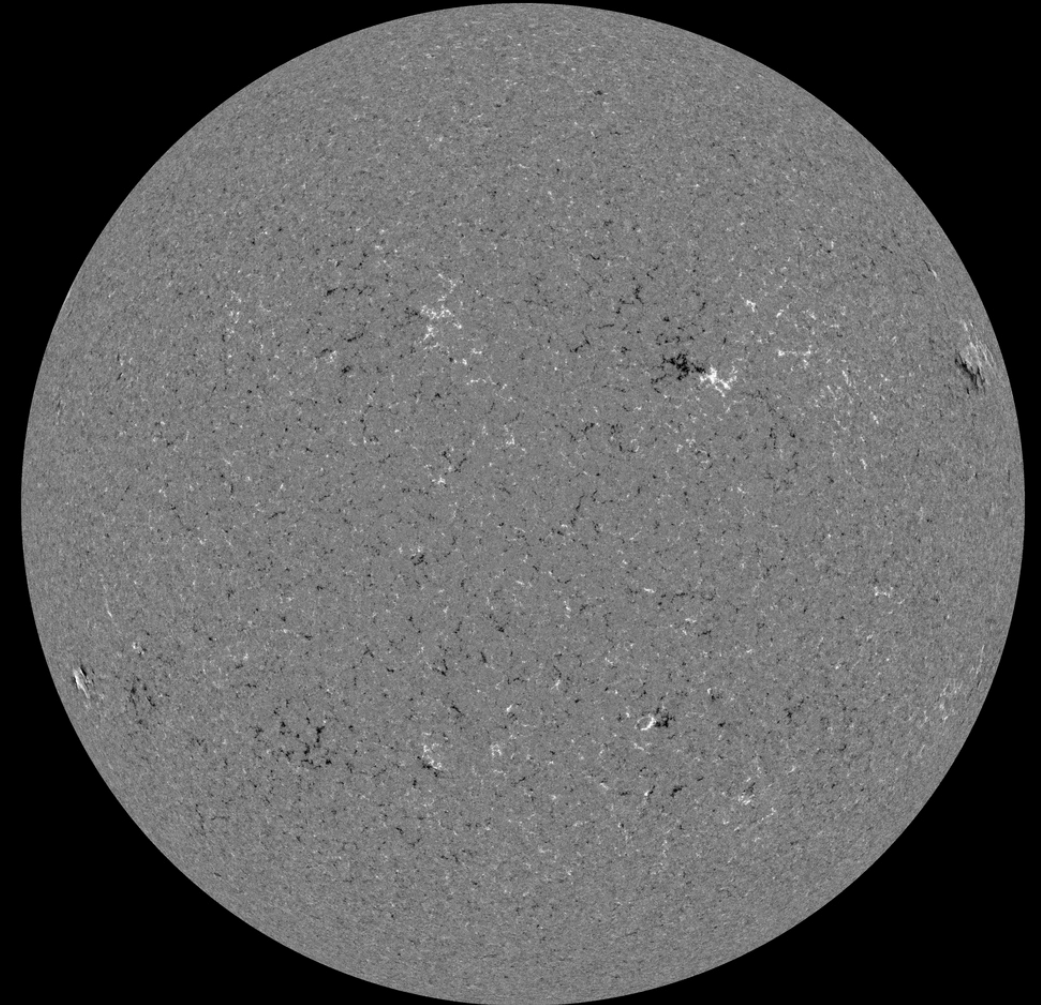
Solar active regions

SDO/HMI White Light 2021-07-09



SDO/HMI Quick-Look Continuum: 20210709_114500

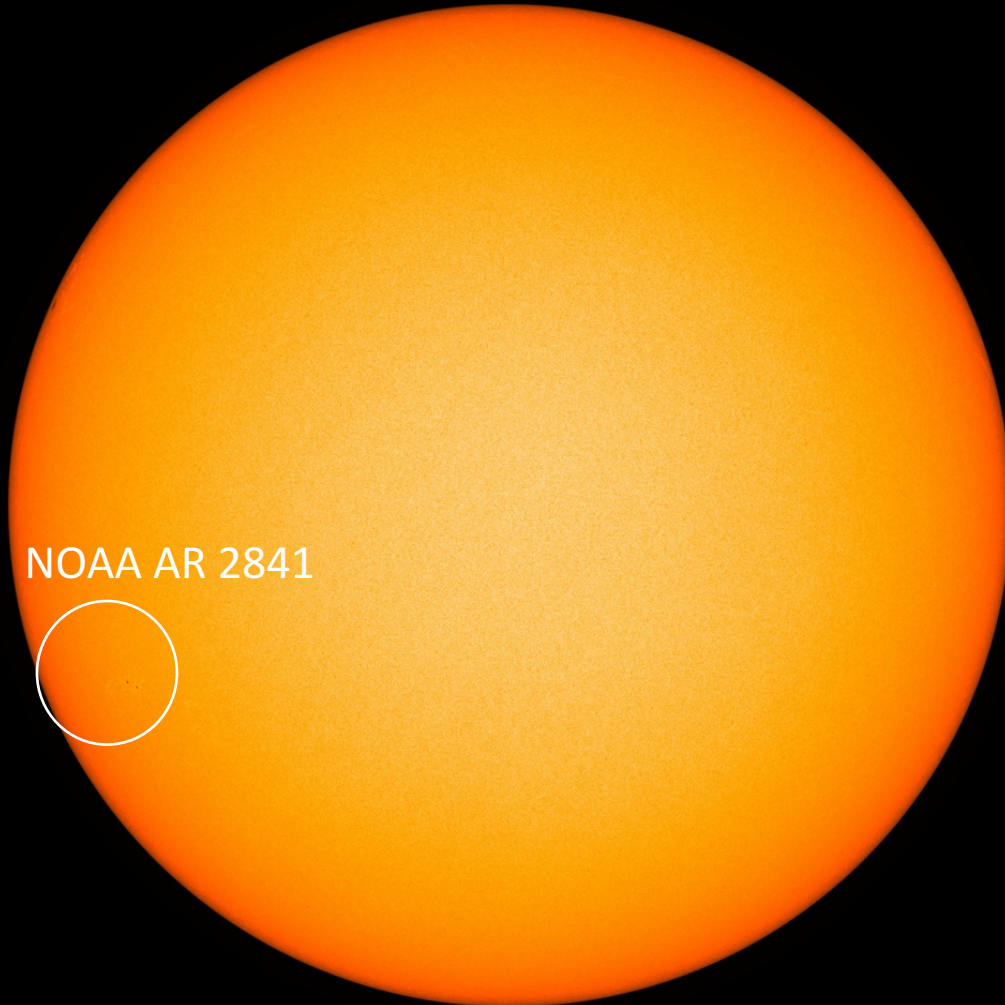
SDO/HMI Magnetogram 2021-07-09



SDO/HMI Quick-Look Magnetogram: 20210709_114500

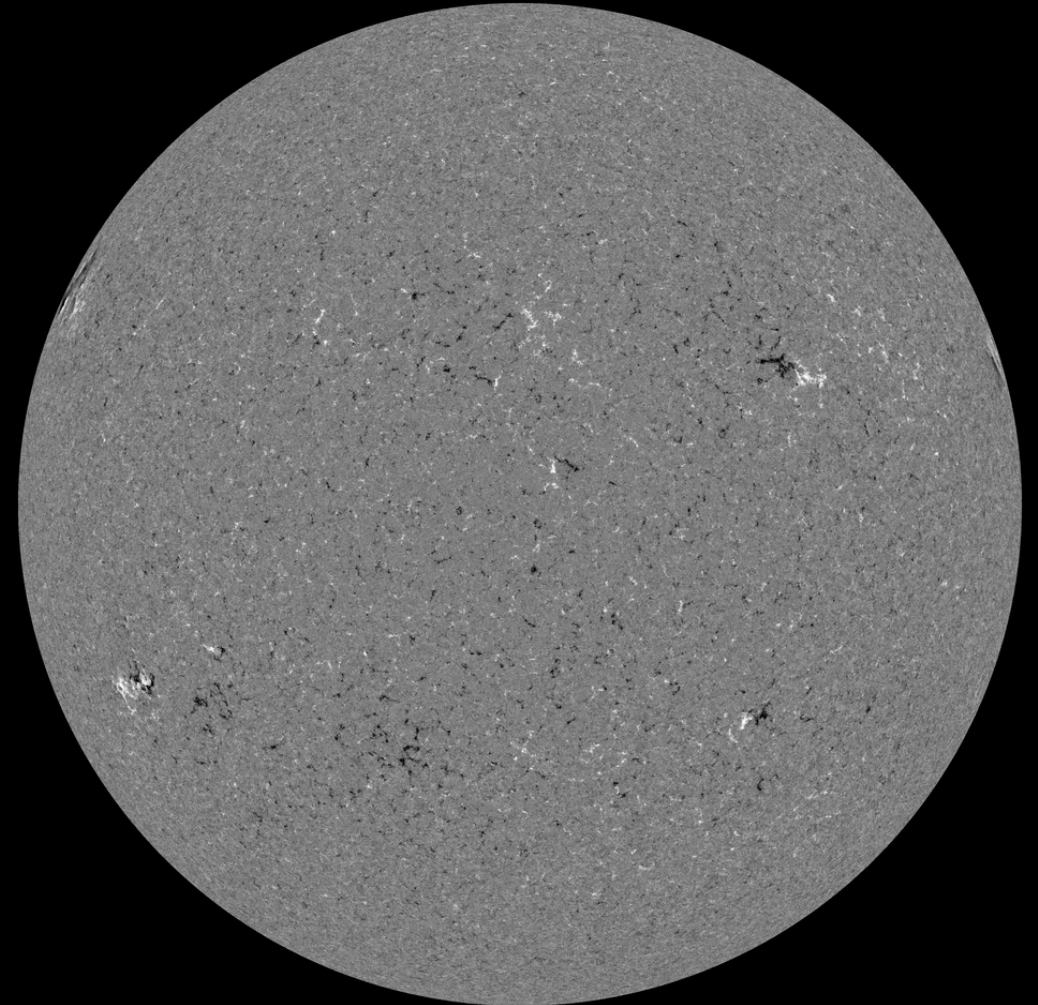
Solar active regions

SDO/HMI White Light 2021-07-10



SDO/HMI Quick-Look Continuum: 20210710_114500

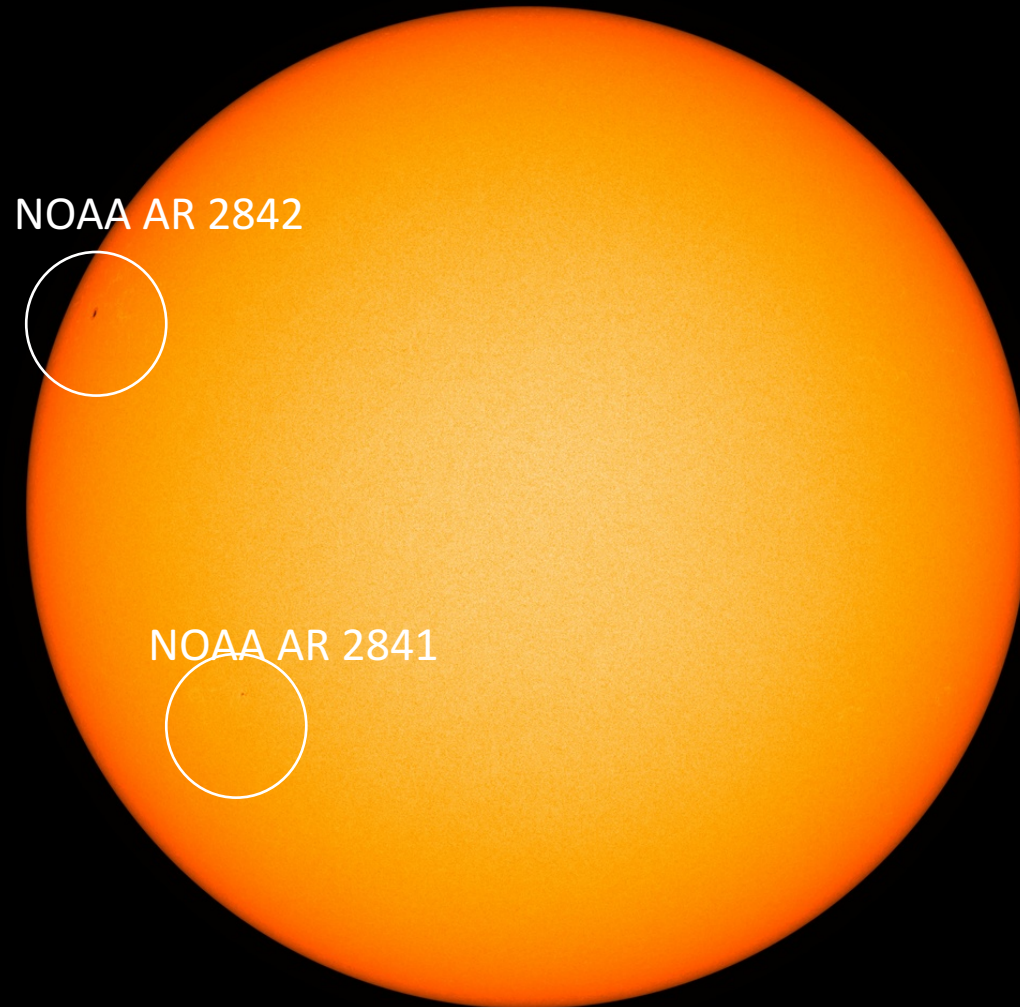
SDO/HMI Magnetogram 2021-07-10



SDO/HMI Quick-Look Magnetogram: 20210710_114500

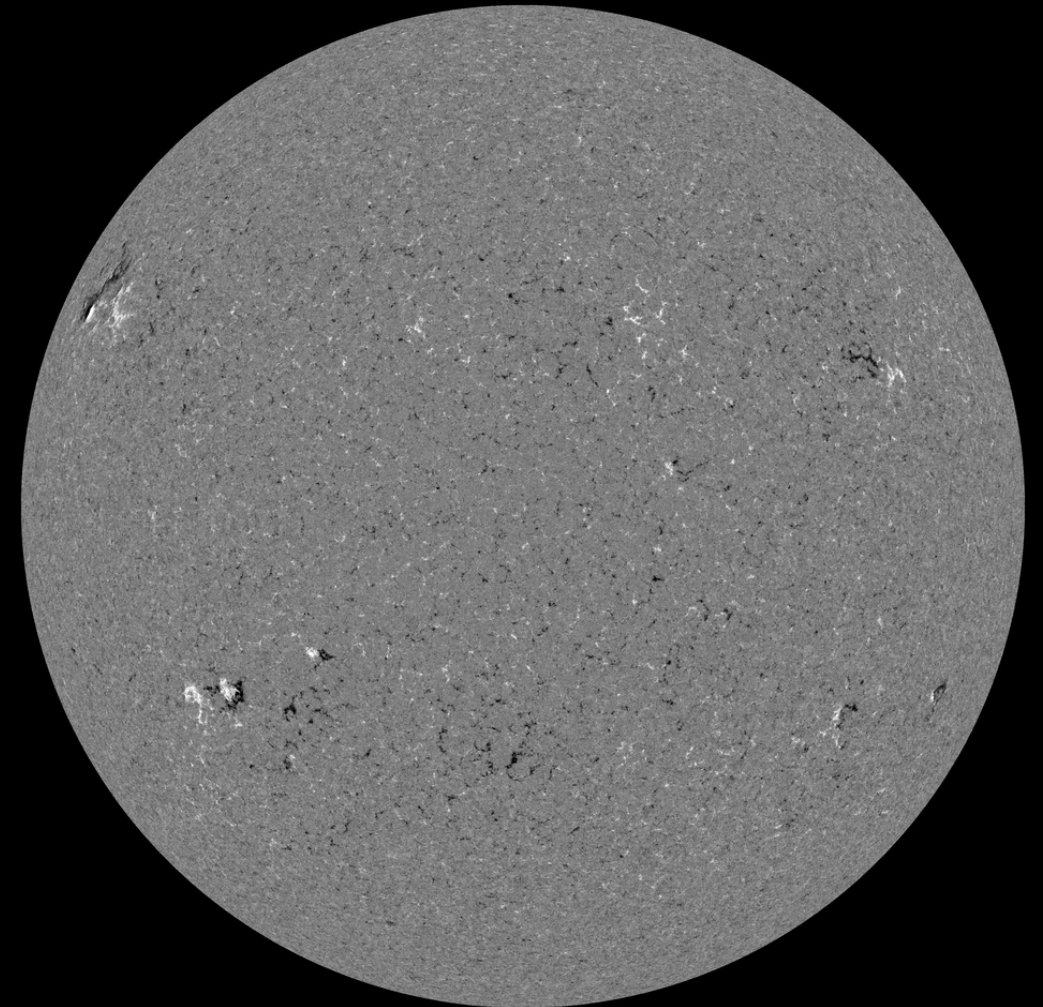
Solar active regions

SDO/HMI White Light 2021-07-11



SDO/HMI Quick-Look Continuum: 20210711_114500

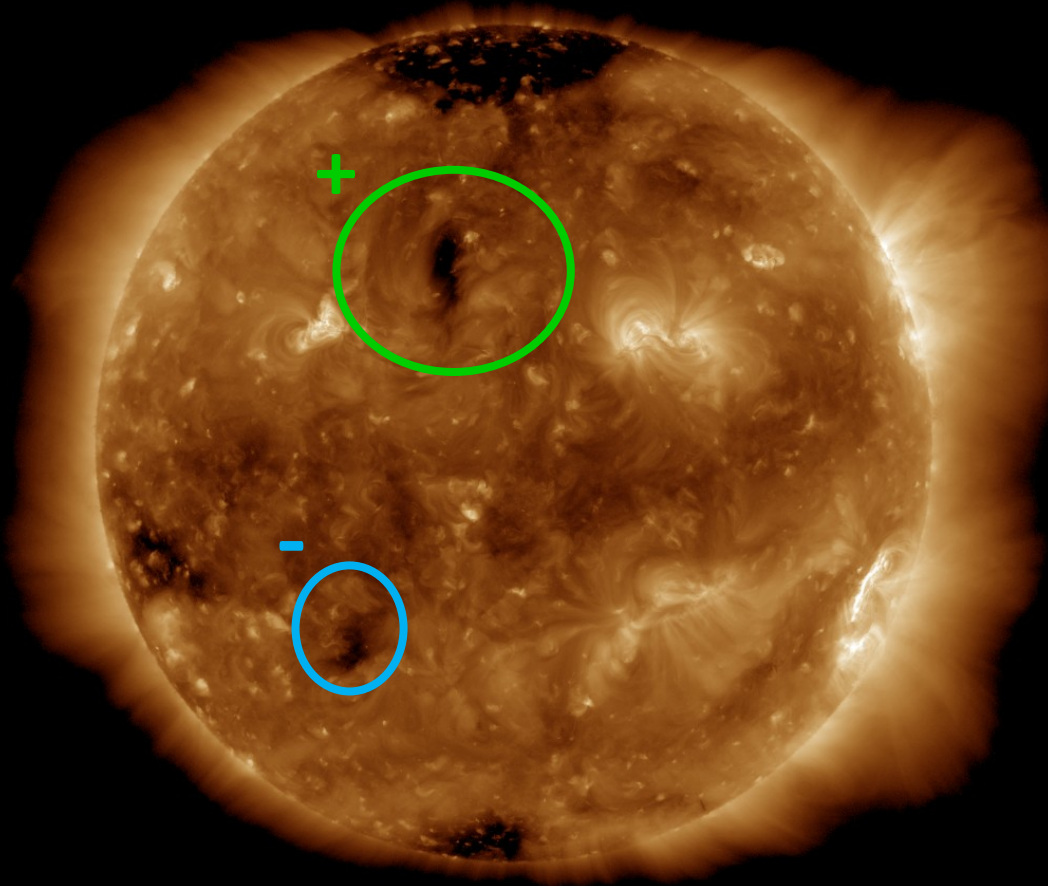
SDO/HMI Magnetogram 2021-07-11



SDO/HMI Quick-Look Magnetogram: 20210711_114500

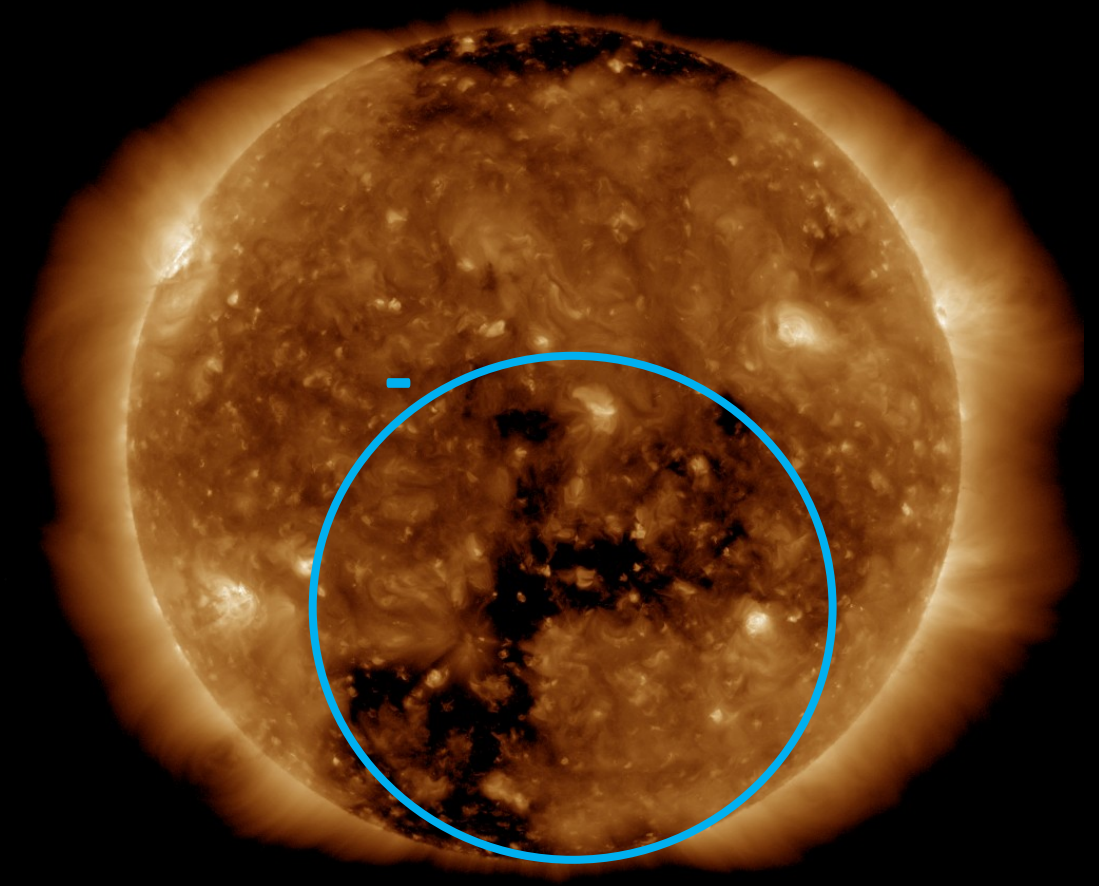
Coronal holes

SDO/AIA 19.3 nm 2021-07-05



SDO/AIA 193 2021-07-05 16:37:53 UT

SDO/AIA 19.3 nm 2021-07-10

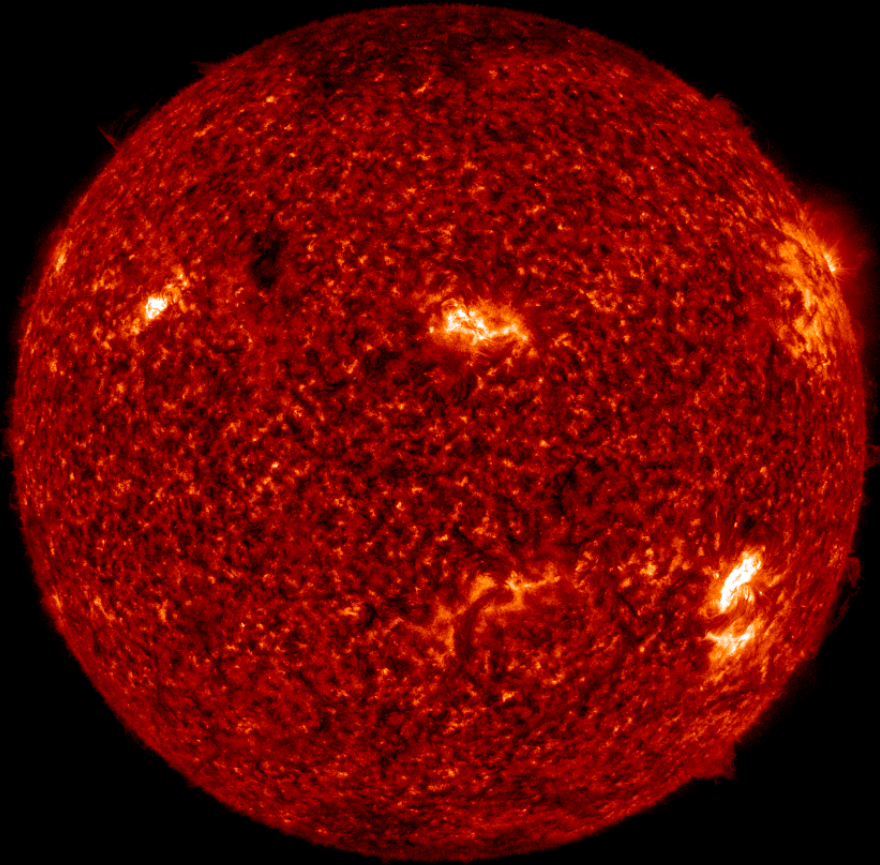


SDO/AIA 193 2021-07-10 17:18:05 UT

Filaments

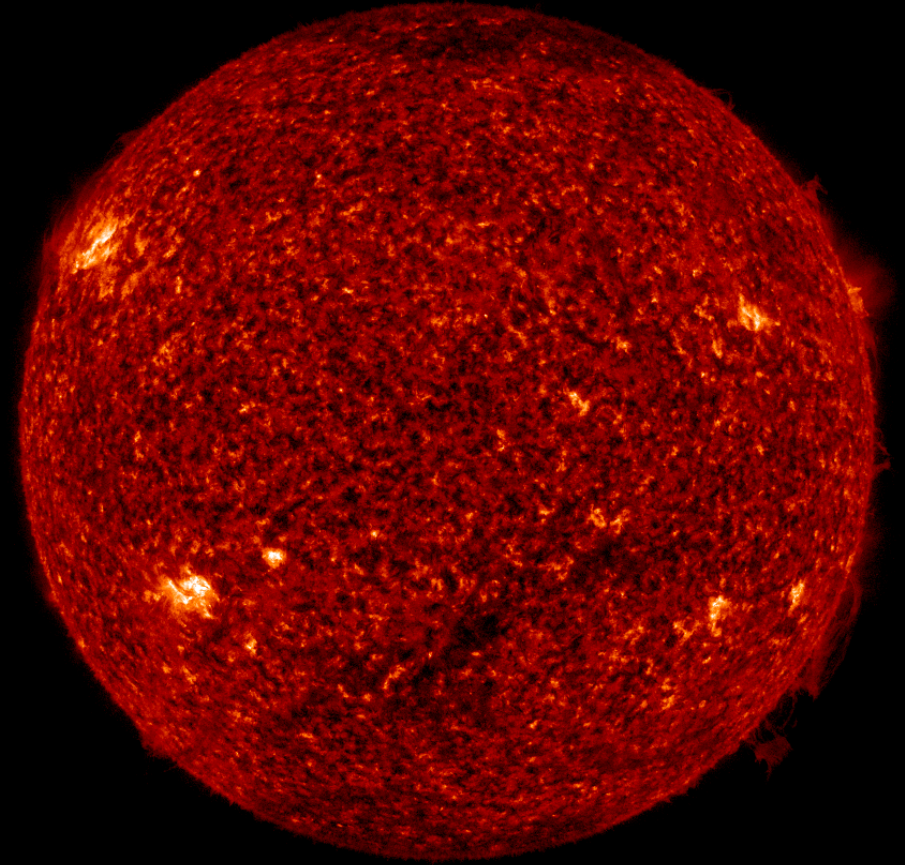
SDO/AIA 30.4 nm 2021-07-04

SDO/AIA AIA 304Å 2021-07-04T12:00:06.581



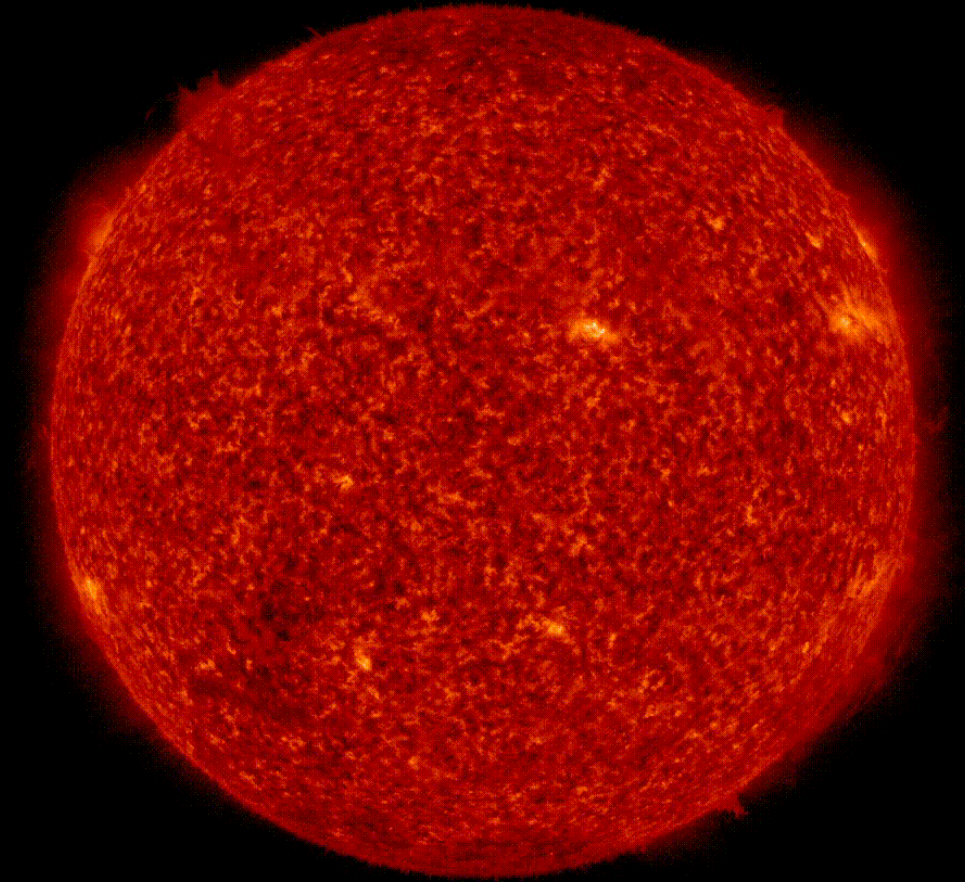
SDO/AIA 30.4 nm 2021-07-11

SDO/AIA AIA 304Å 2021-07-11T12:00:06.580



Filaments

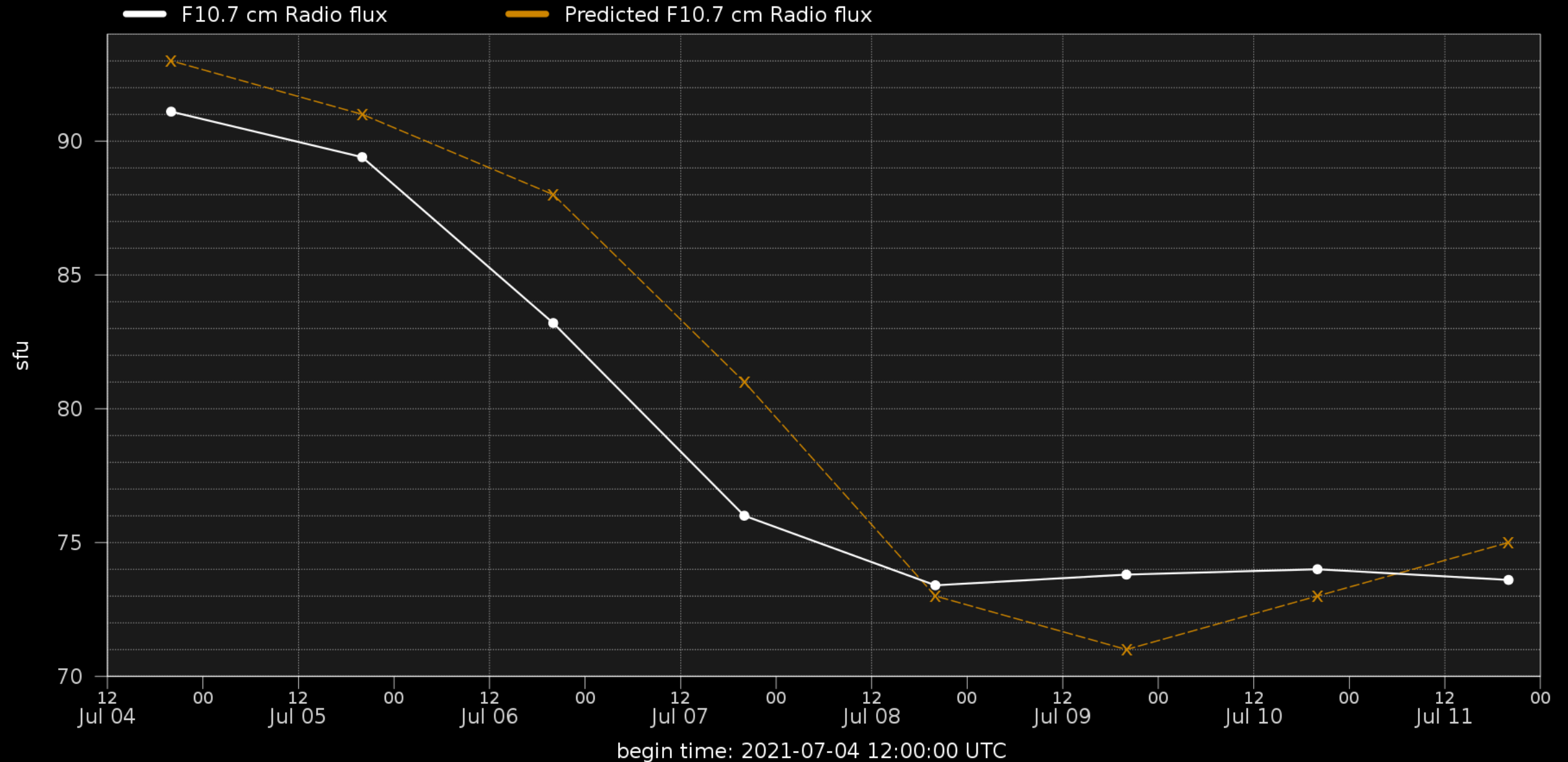
SDO/AIA 30.4 nm 2021-07-09 and 2021-07-10



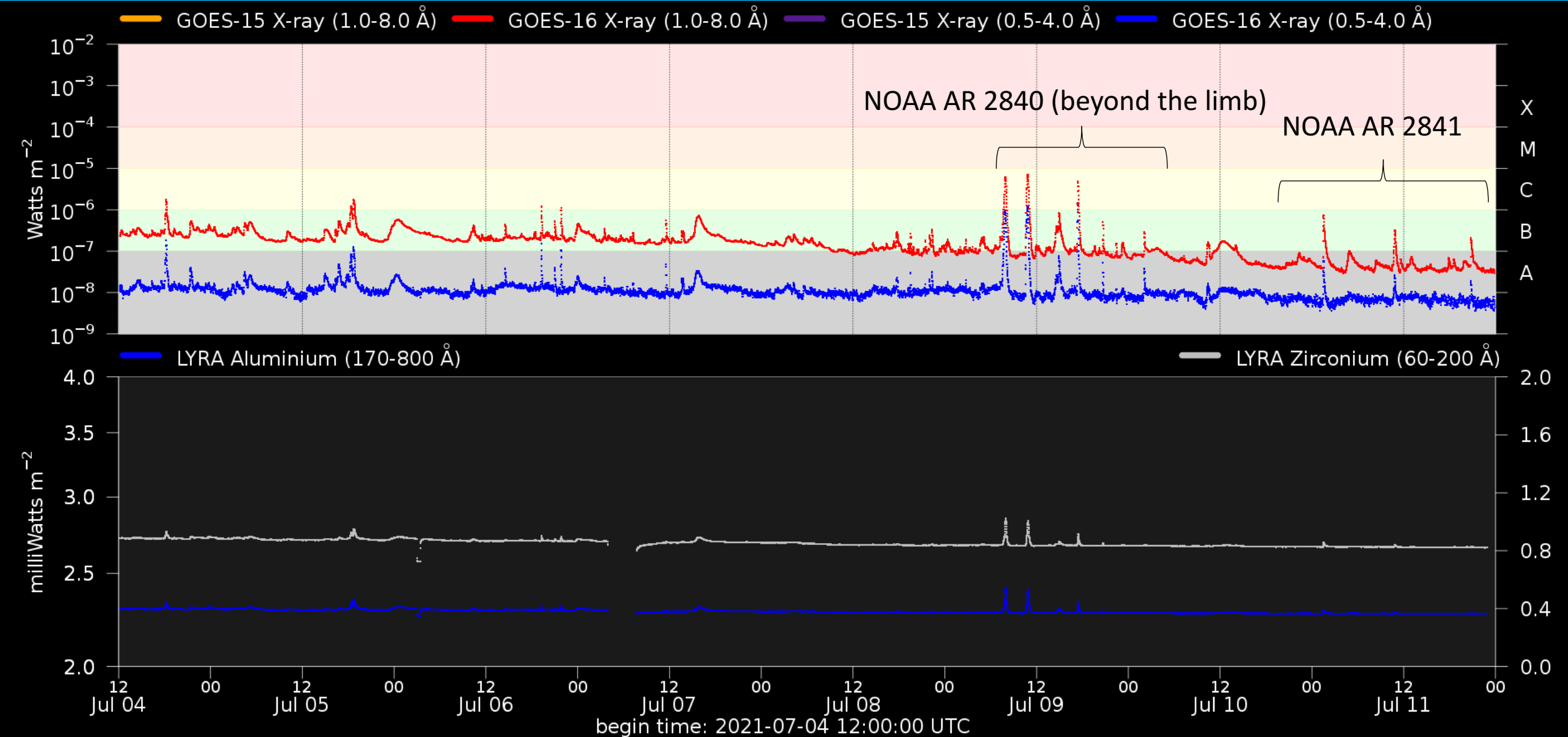
Filaments have been visible on disk,
but no eruptive signatures seen
in coronagraph data.

SDO/AIA 304 2021-07-09 00:08:42 UT

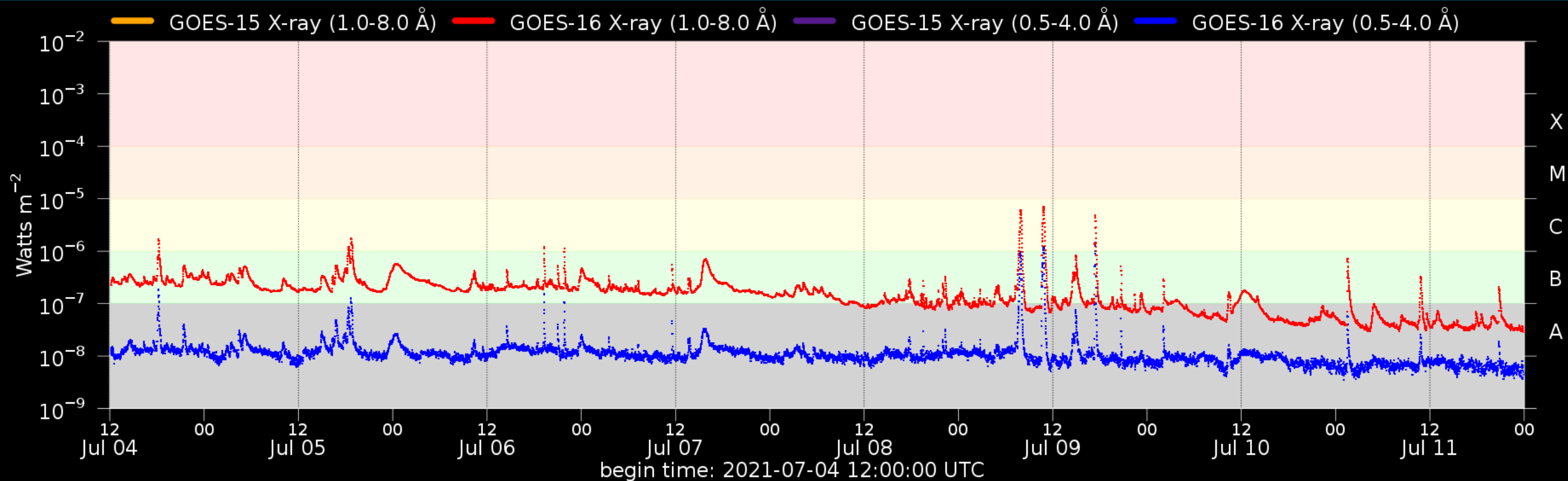
Solar F10.7cm radio flux



Solar X-Ray and UV flux



Flaring activity

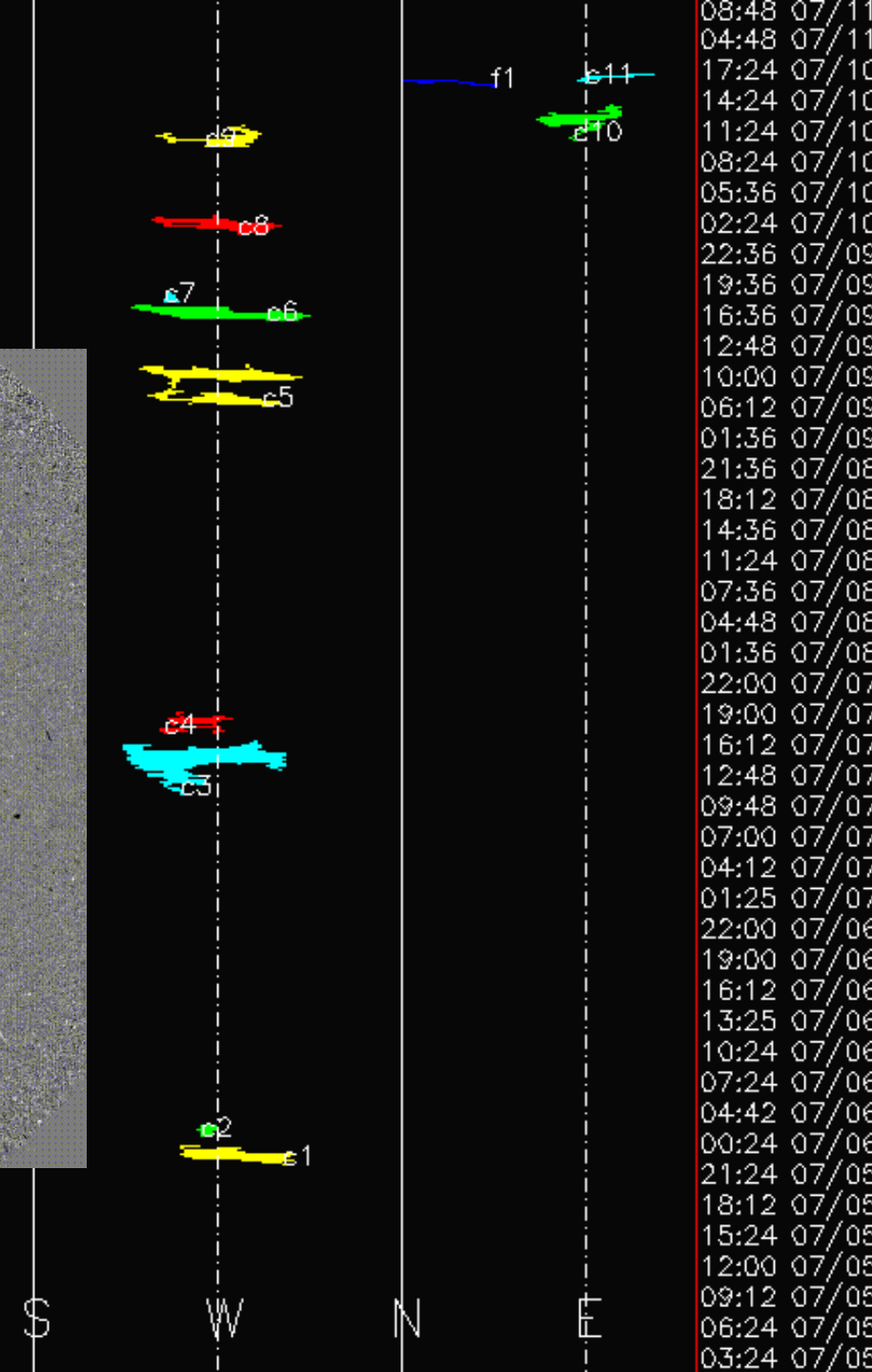
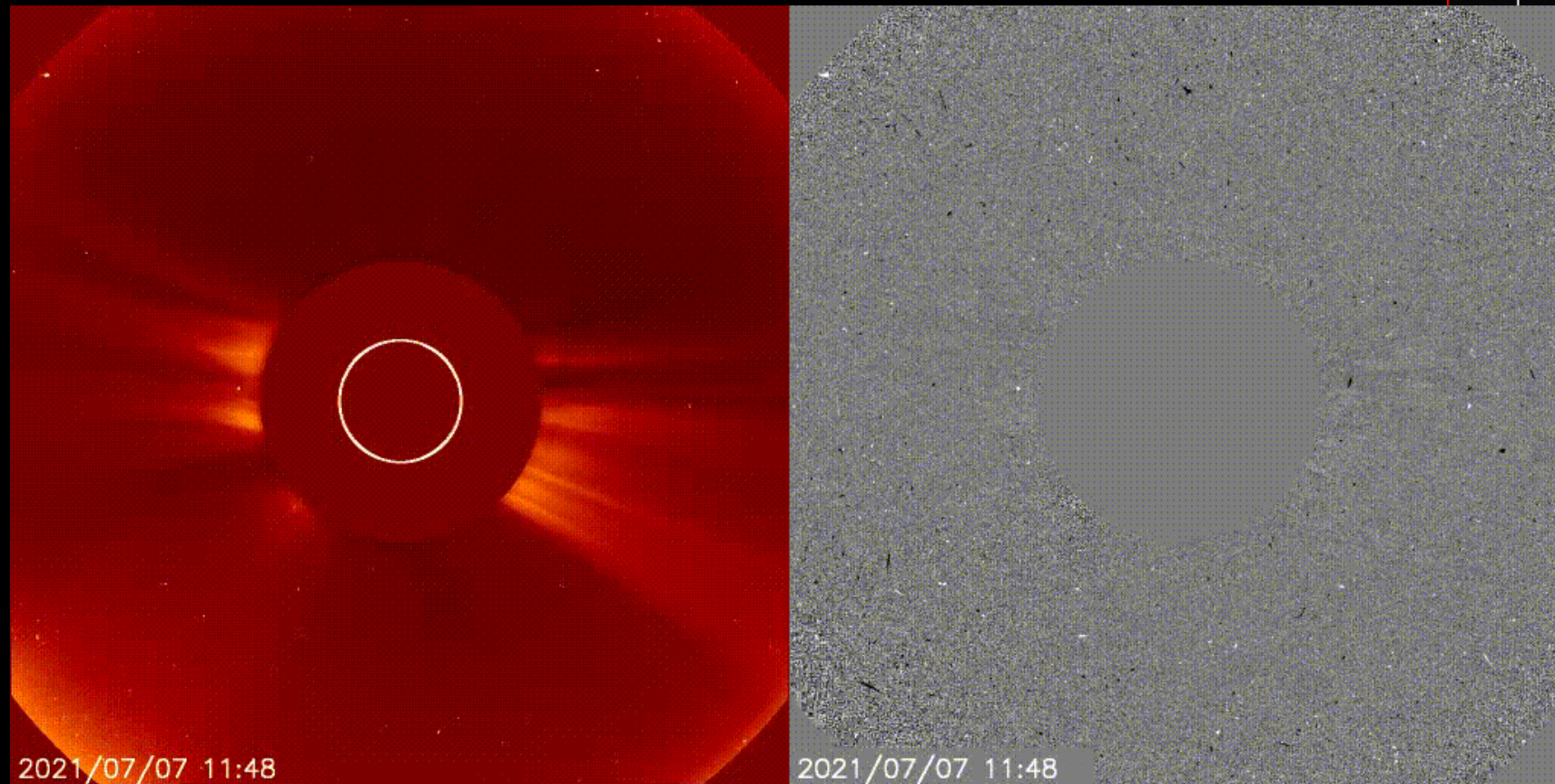


Probabilities (%) and occurrences (#) of C/M/X-flares issued at 12:30 and over the next 24h:

Issue date	2021-07-04	2021-07-05	2021-07-06	2021-07-07	2021-07-08	2021-07-09	2021-07-10	2021-07-11
Probability (%)	95 50 15	65 10 01	50 05 01	40 05 01	15 01 01	20 05 01	20 01 01	15 01 01
Observed (#)	01 00 00	02 00 00	02 00 00	00 00 00	01 00 00	02 00 00	00 00 00	00 00 00

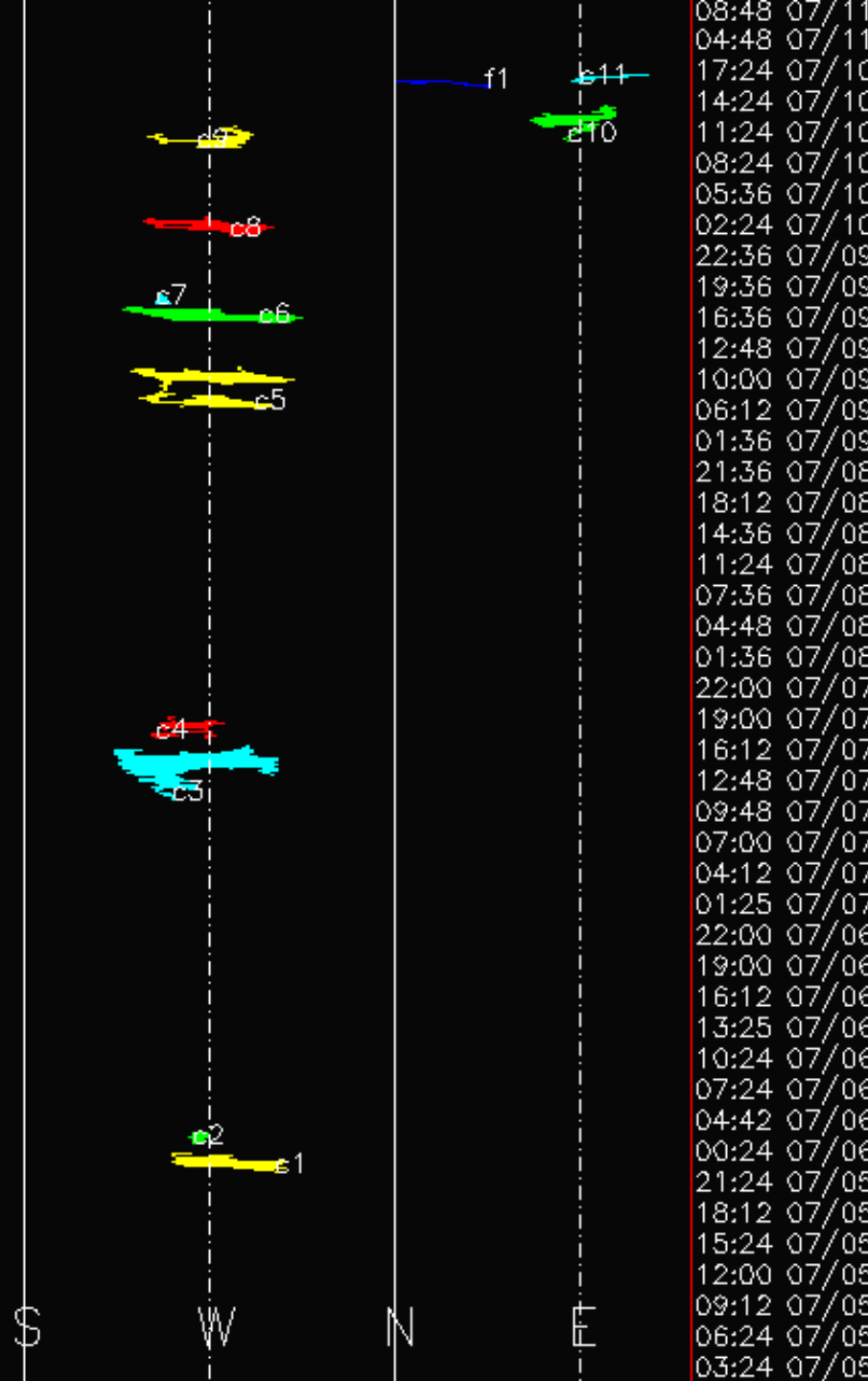
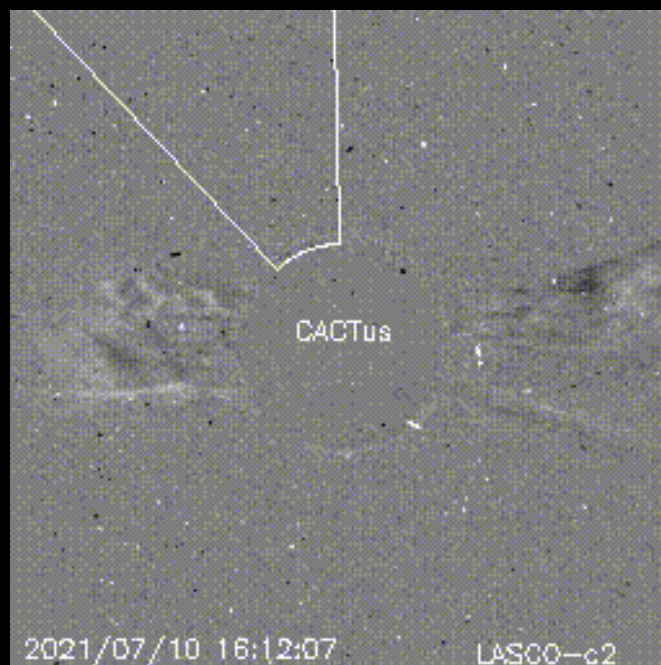
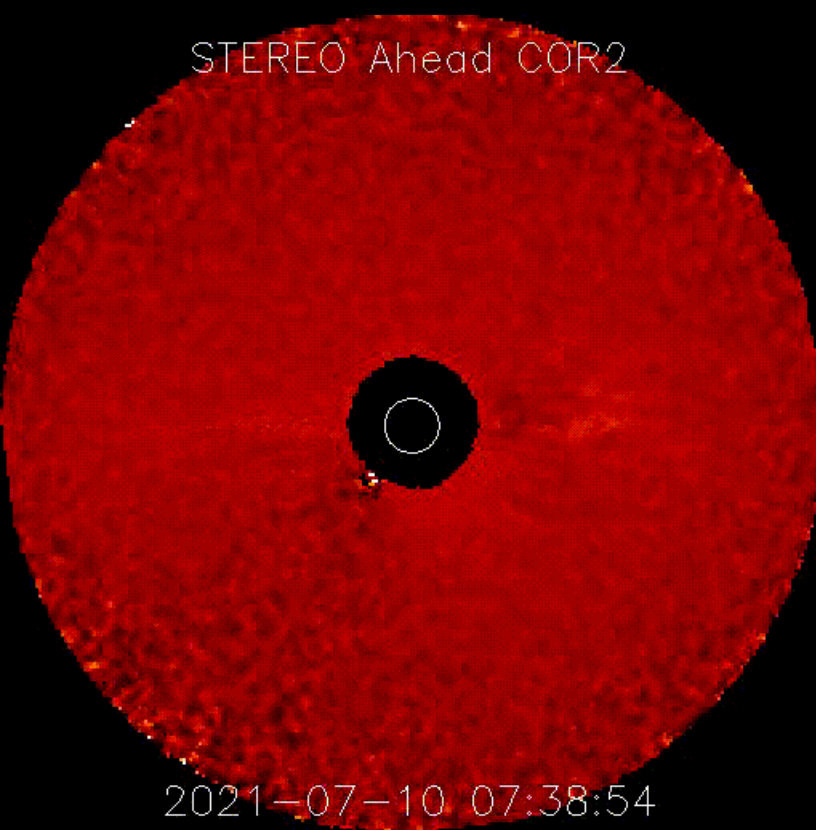
Coronal Mass Ejections

No Earth directed CMEs



Coronal Mass Ejections

Backsided CME on July 10

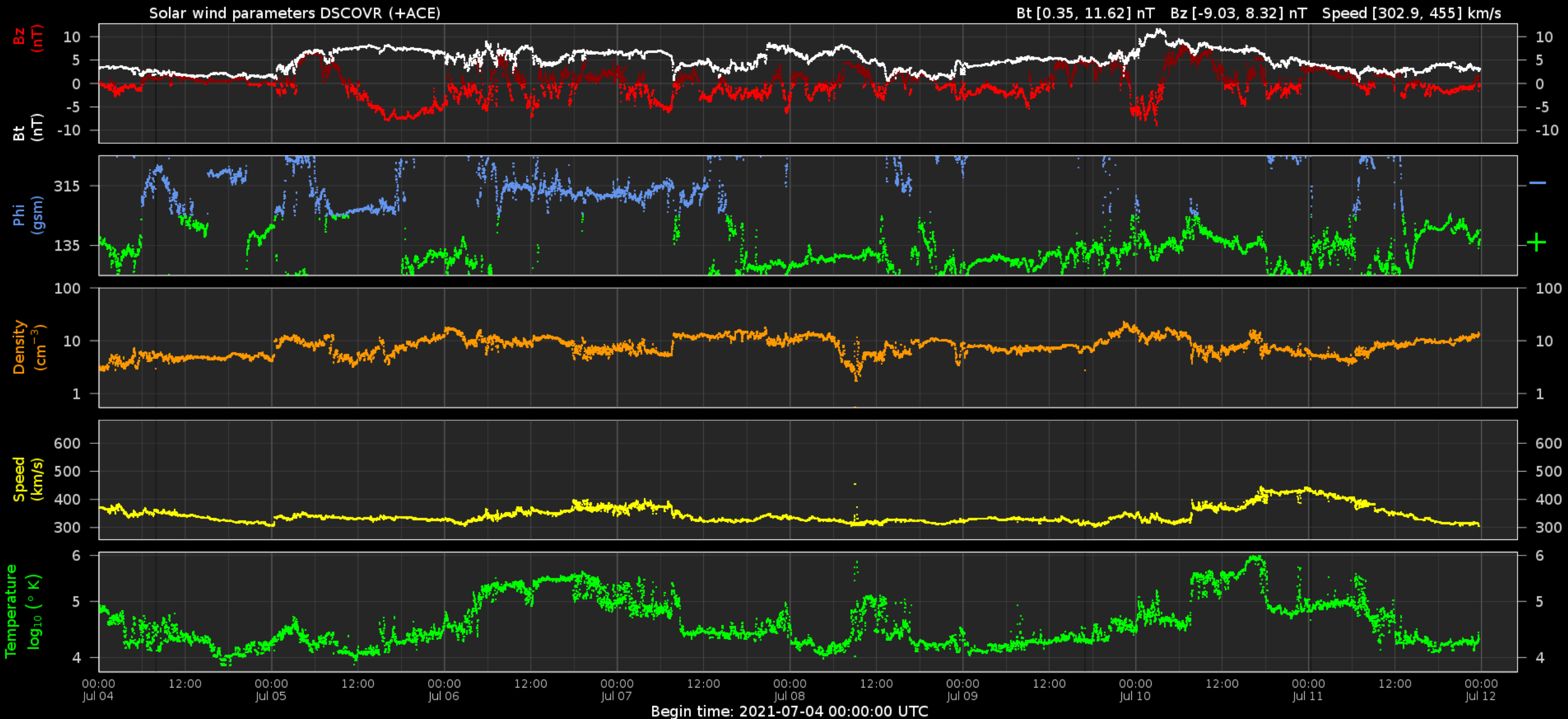


Solar Wind and Geomagnetic Activity

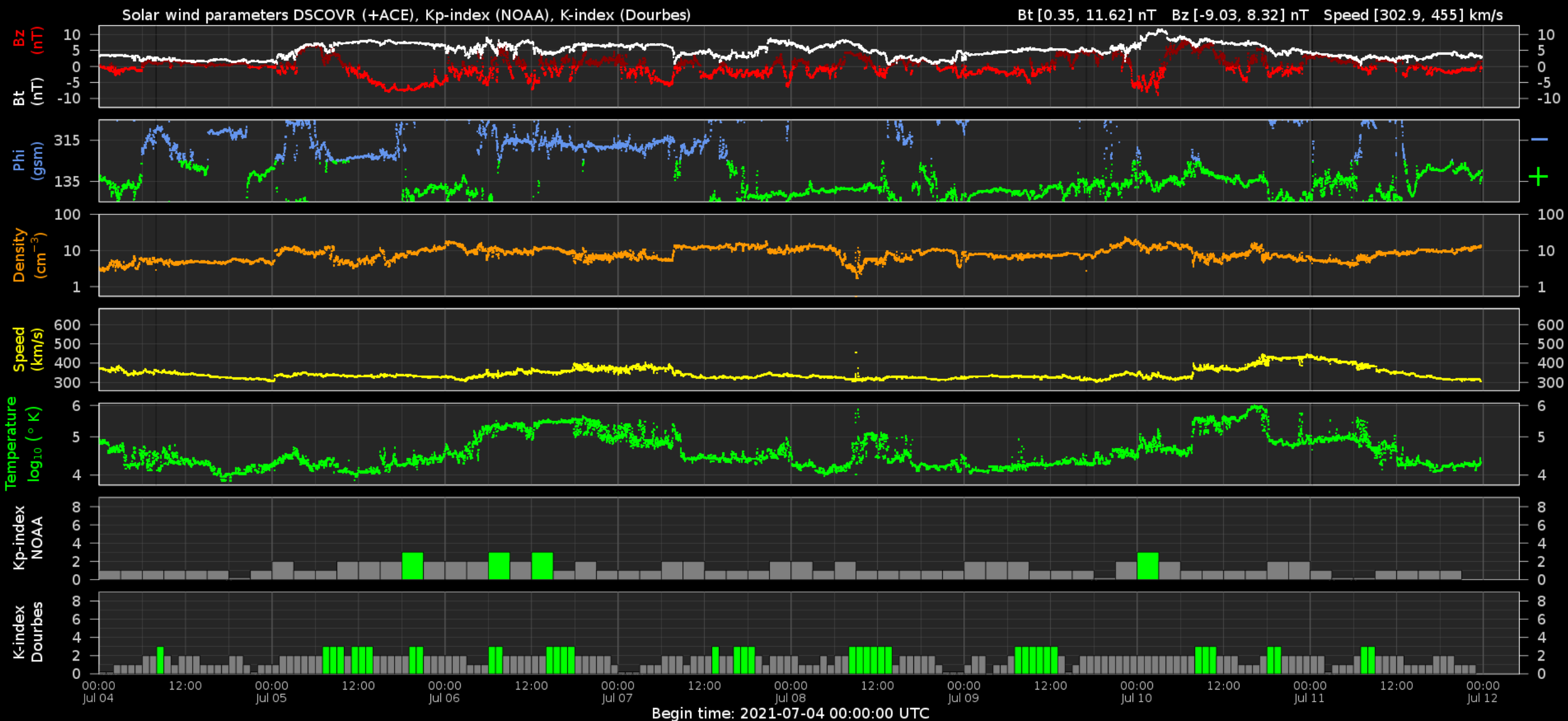


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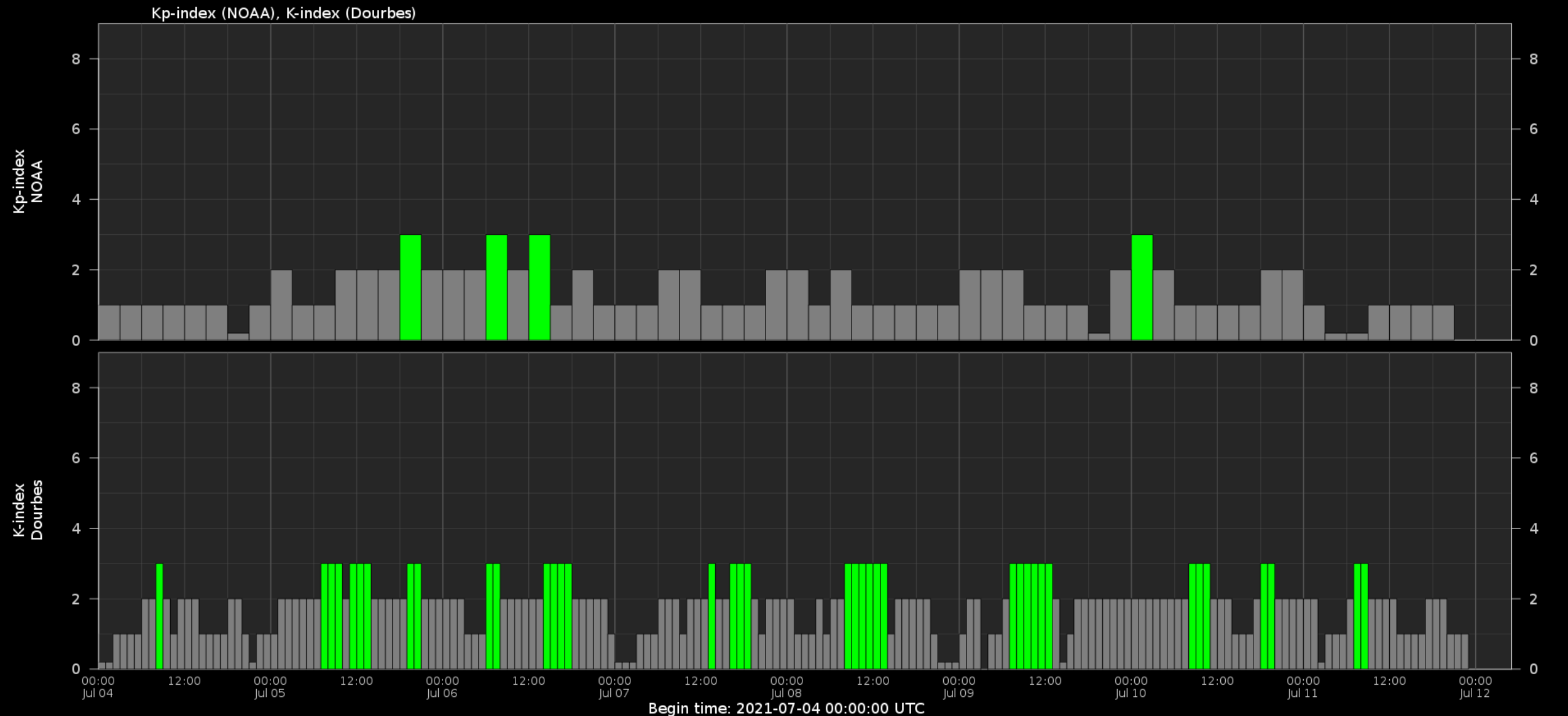
Solar wind parameters



Solar wind parameters & K-indices



Geomagnetic activity (K-indexes)

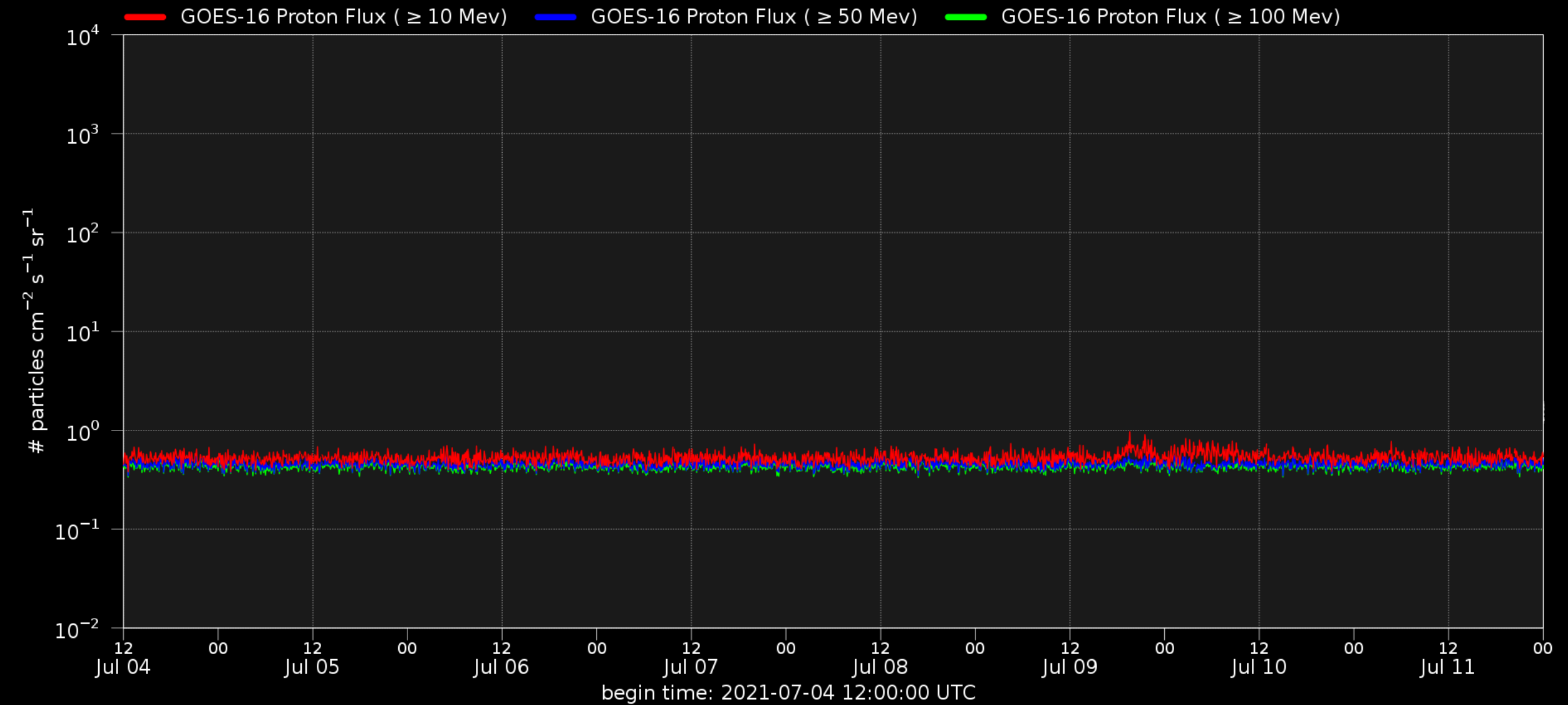


Energetic Particles

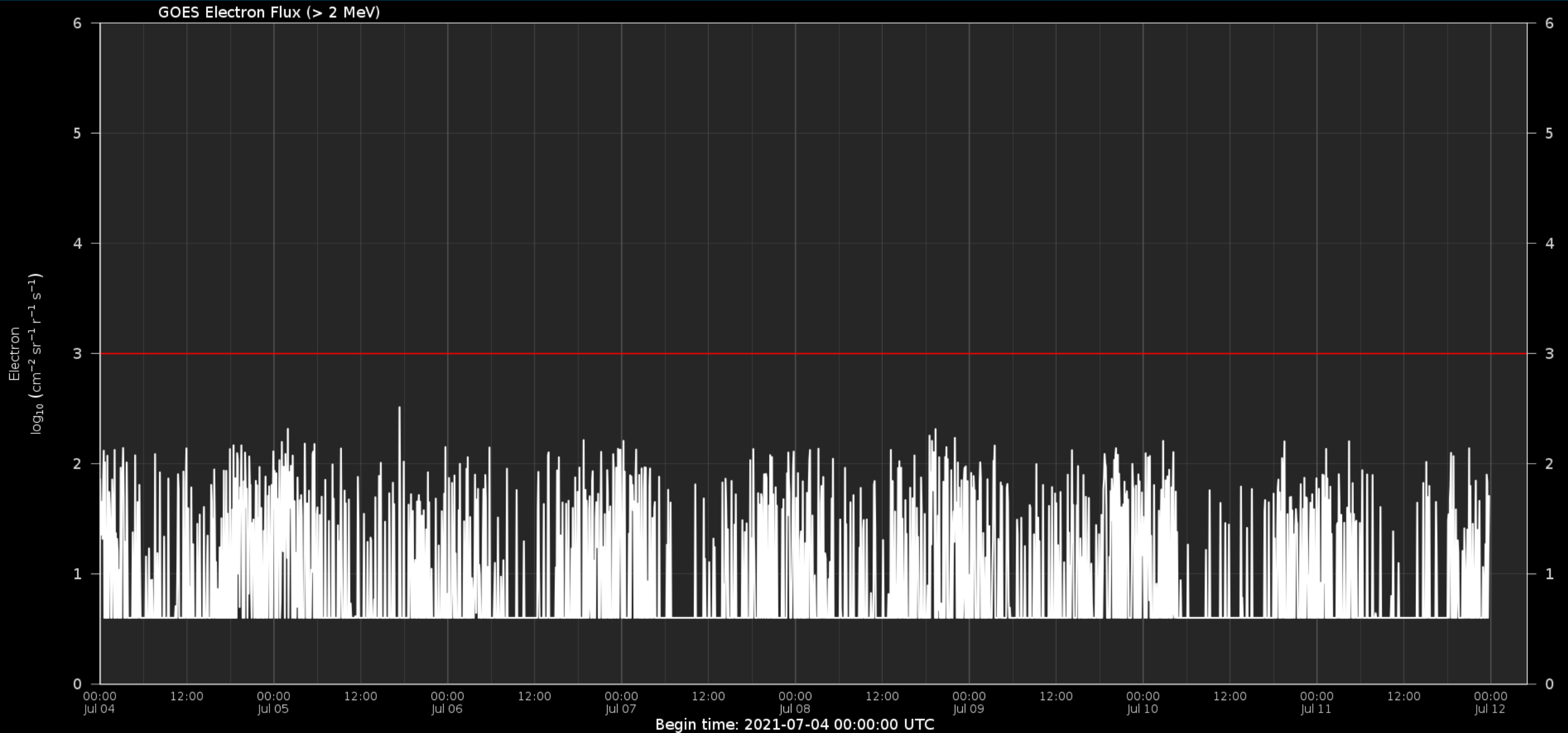


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Solar proton flux



Electron flux at GEO



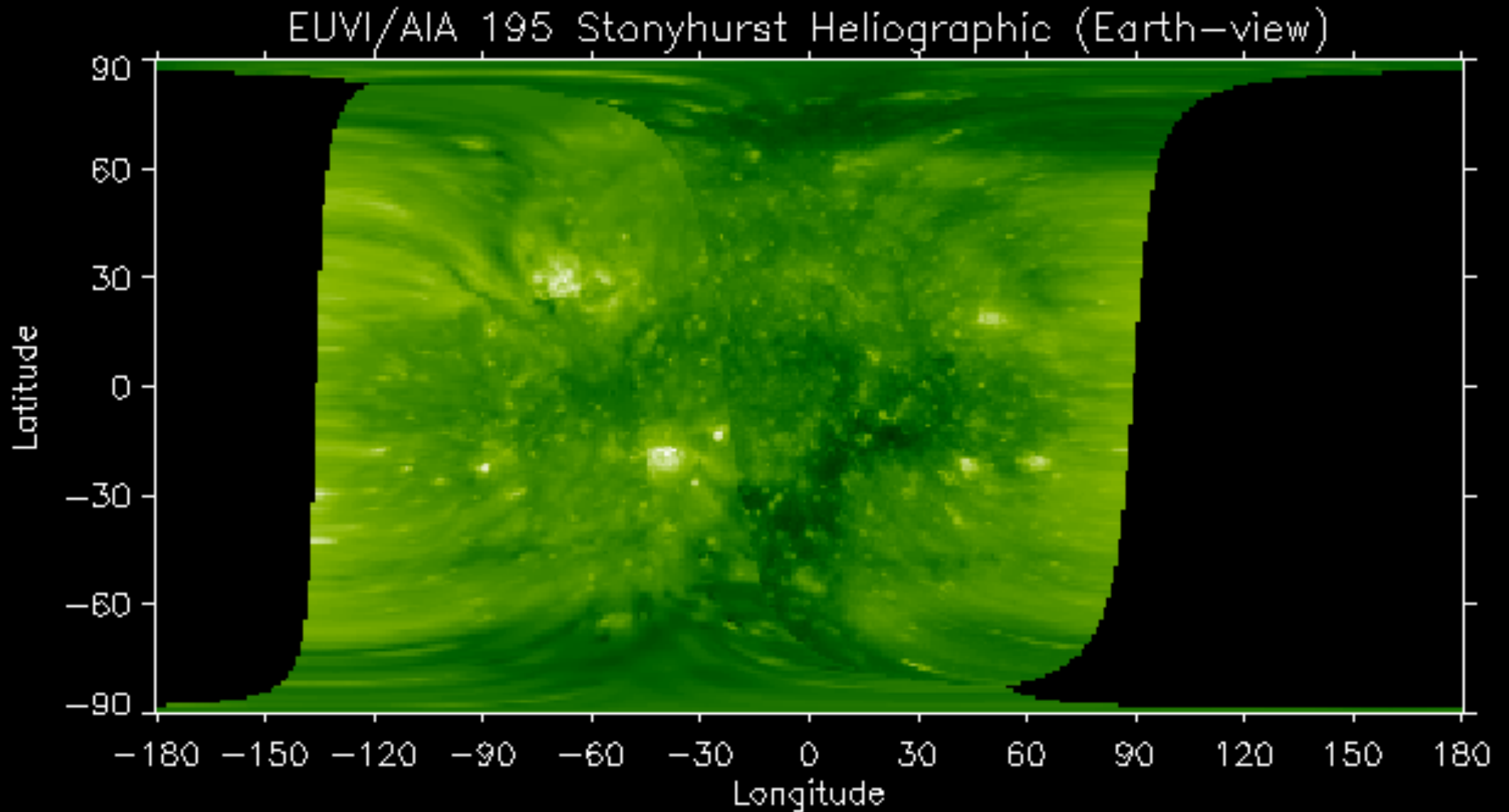
Outlook



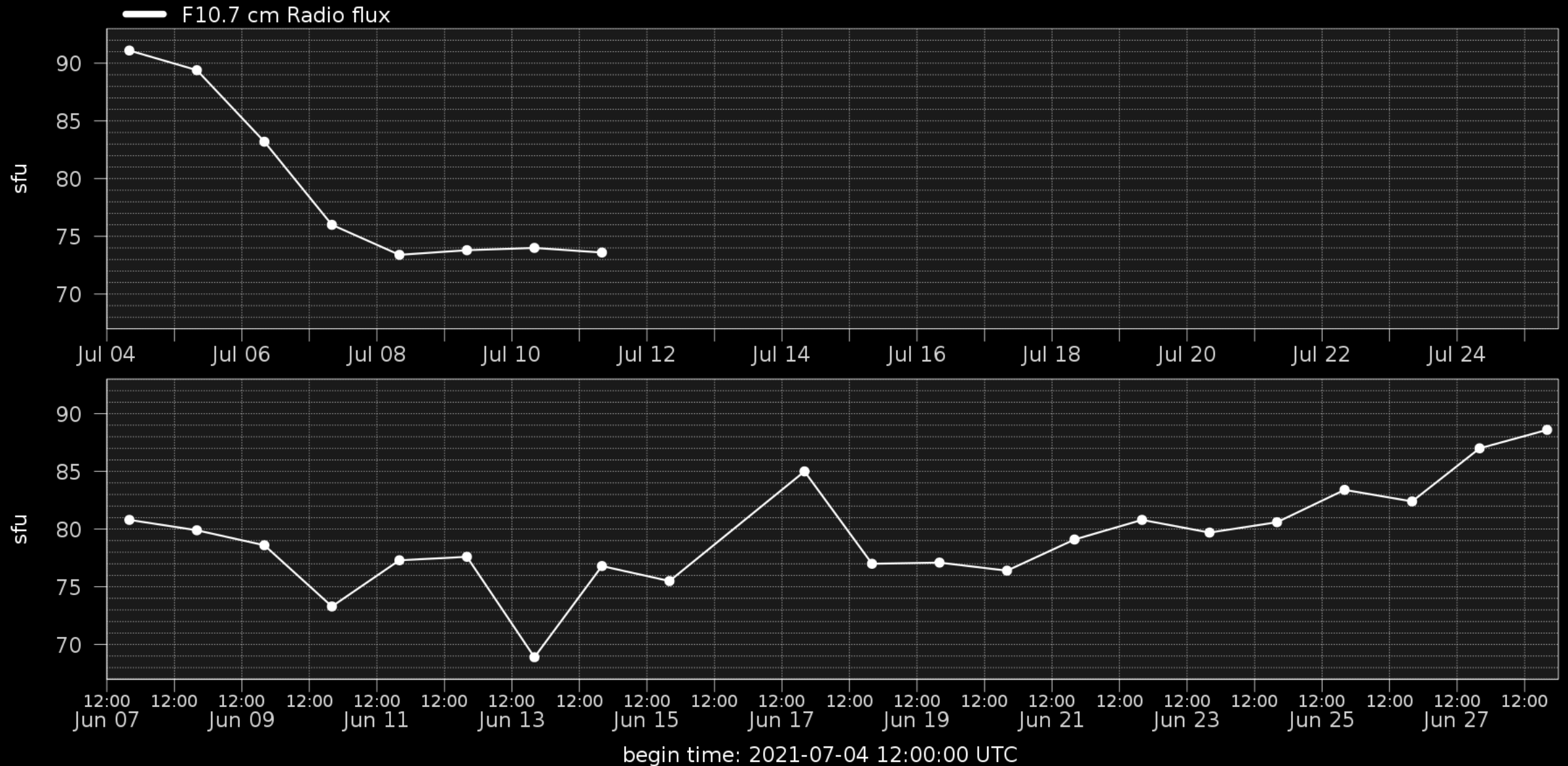
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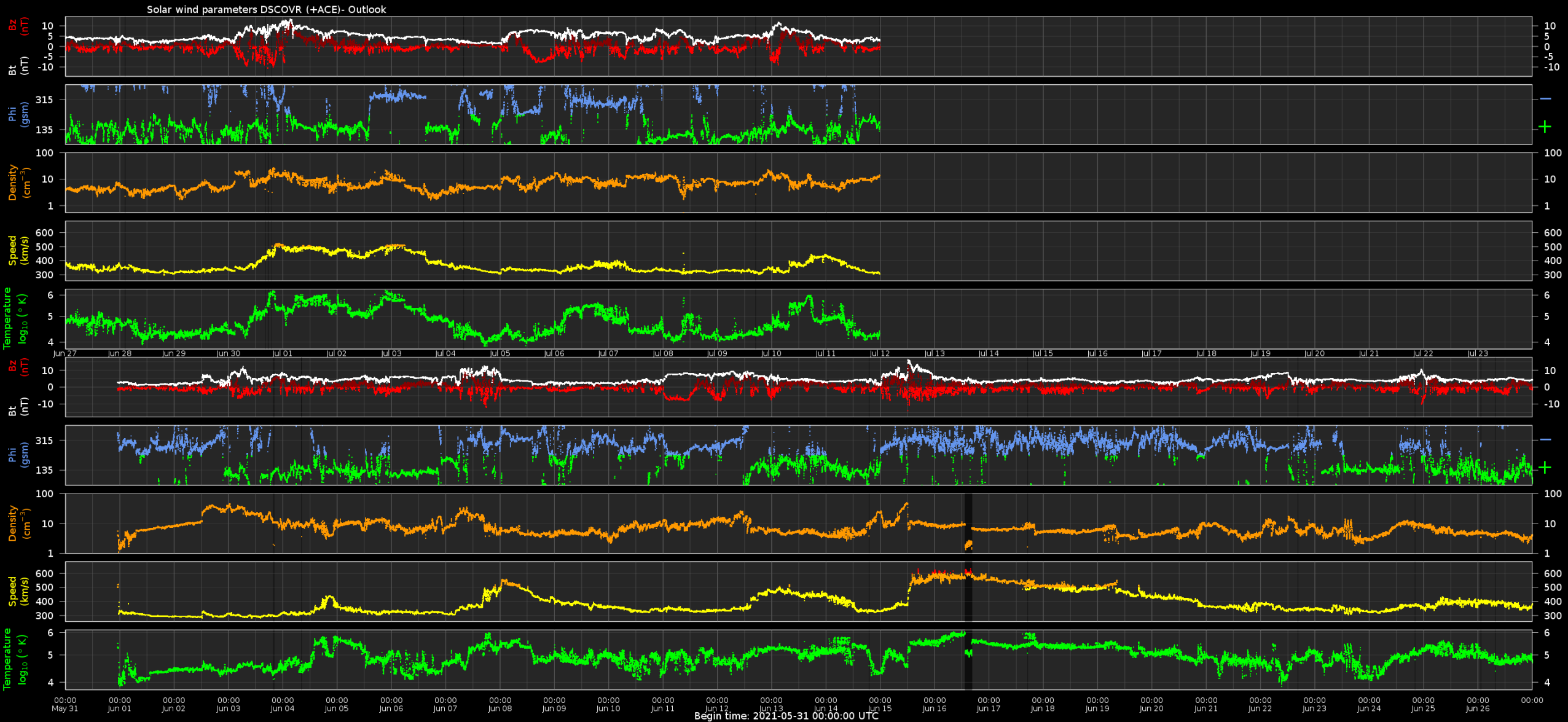
Outlook: Solar activity



Outlook: Solar F10.7cm radio flux

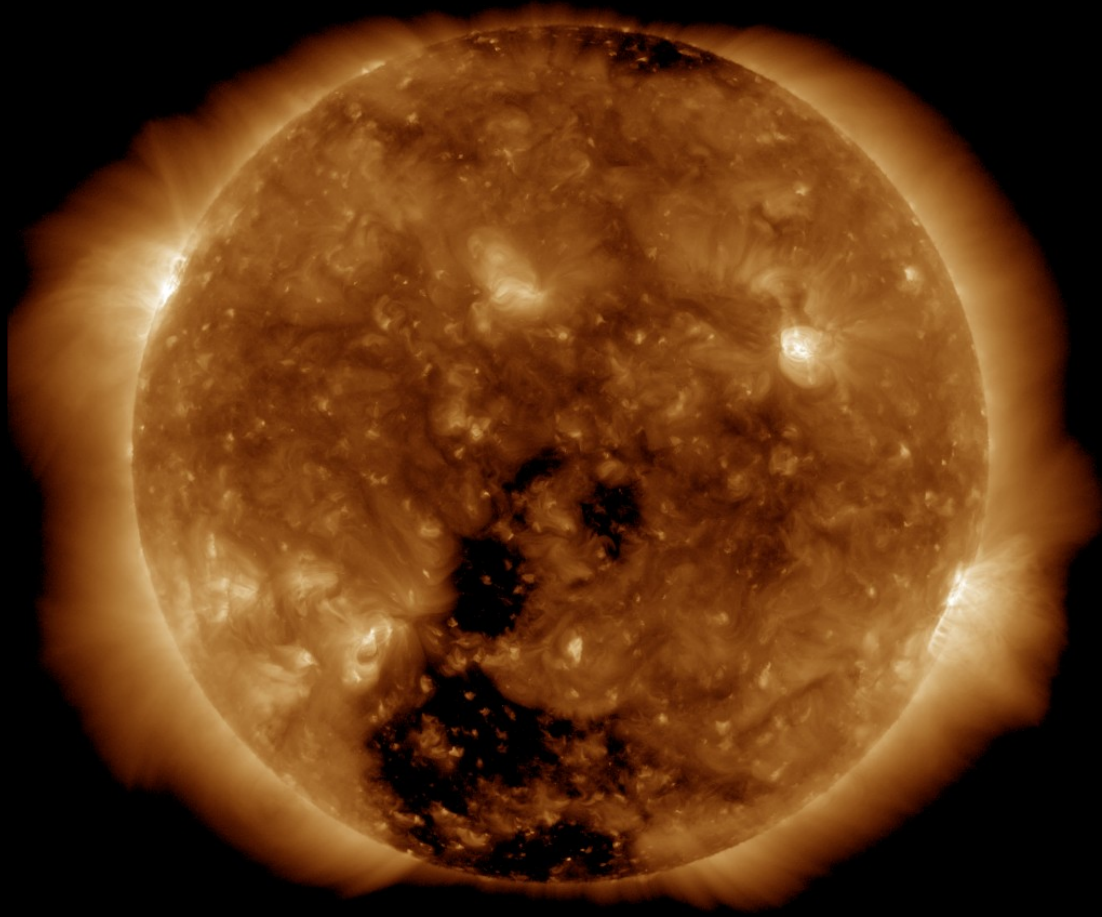


Outlook: Solar wind parameters



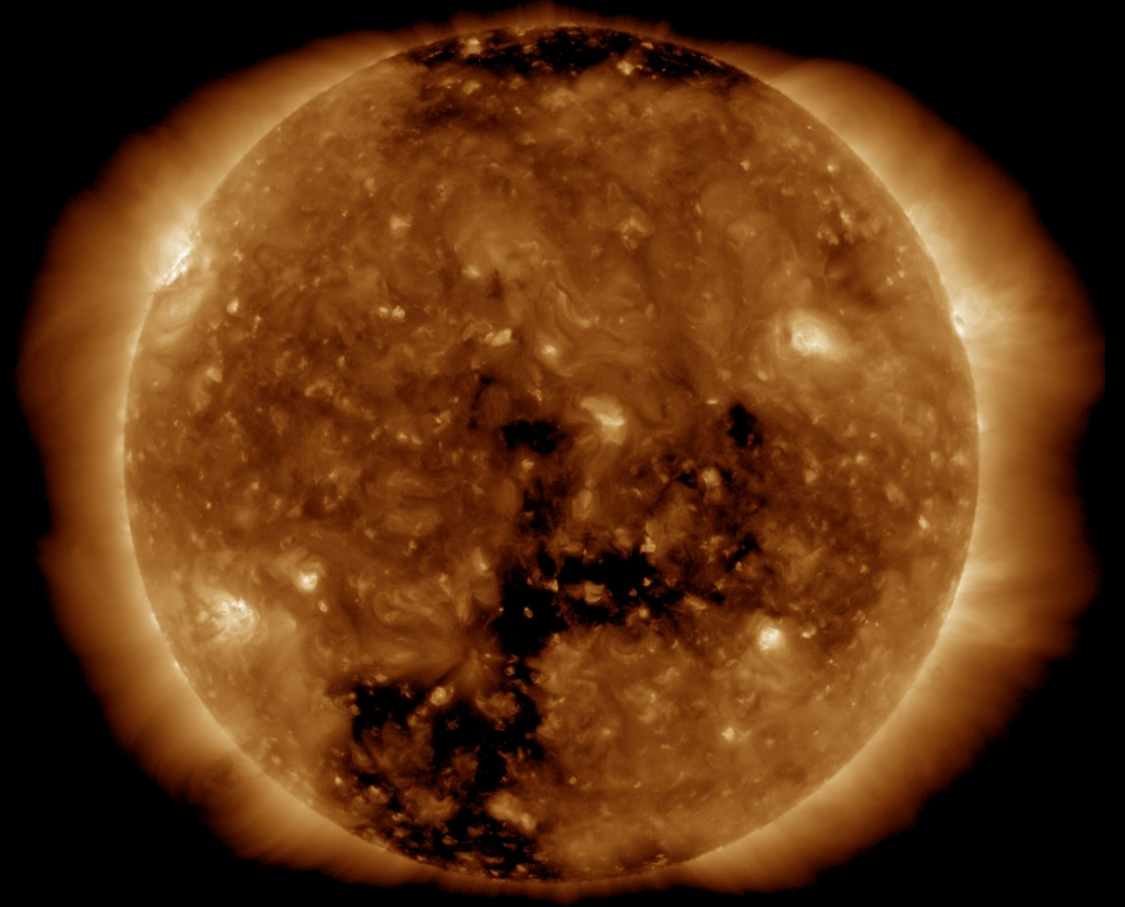
Outlook: Solar wind parameters

Last Rotation:



SDO/AIA 193 2021-06-12 16:40:41 UT

This Rotation:



SDO/AIA 193 2021-07-10 17:18:05 UT

Outlook: Geomagnetic activity



Outlook: Electron Flux at GEO Outlook



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See you at our next briefing!

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