

# SIDC Space Weather Briefing

18 July 2021 - 25 July 2021

Yana Maneva

& the SIDC forecaster team



Royal Observatory  
of Belgium

Solar Influences  
Data analysis Centre  
[www.sidc.be](http://www.sidc.be)

# Summary Report

Solar activity from 2021-07-18 12:00 to 2021-07-25 23:59

Active regions	7 active regions, NOAA 2842, NOAA 2844 - NOAA 2849
Flares	# C-class flare: 7 # M-class flare: 0 # X-class flare: 0
Filament eruptions	NONE resulting in Earth-directed CME
Coronal Holes	few positive polarity CH

Proton flux	Nominal levels
Electron flux	Nominal levels

Solar wind and geomagnetic conditions

ICME	NONE
SW Conditions	B : 0.91 - 7.71 nT // Bz: -7.43 nT to 5.8 nT // Speed: 244.7 - 542.8km/s
K-indices	max K-index (Dourbes): 4 max Kp-index (NOAA): 4

All Quiet Alert: Off until July 25th

# Solar Activity

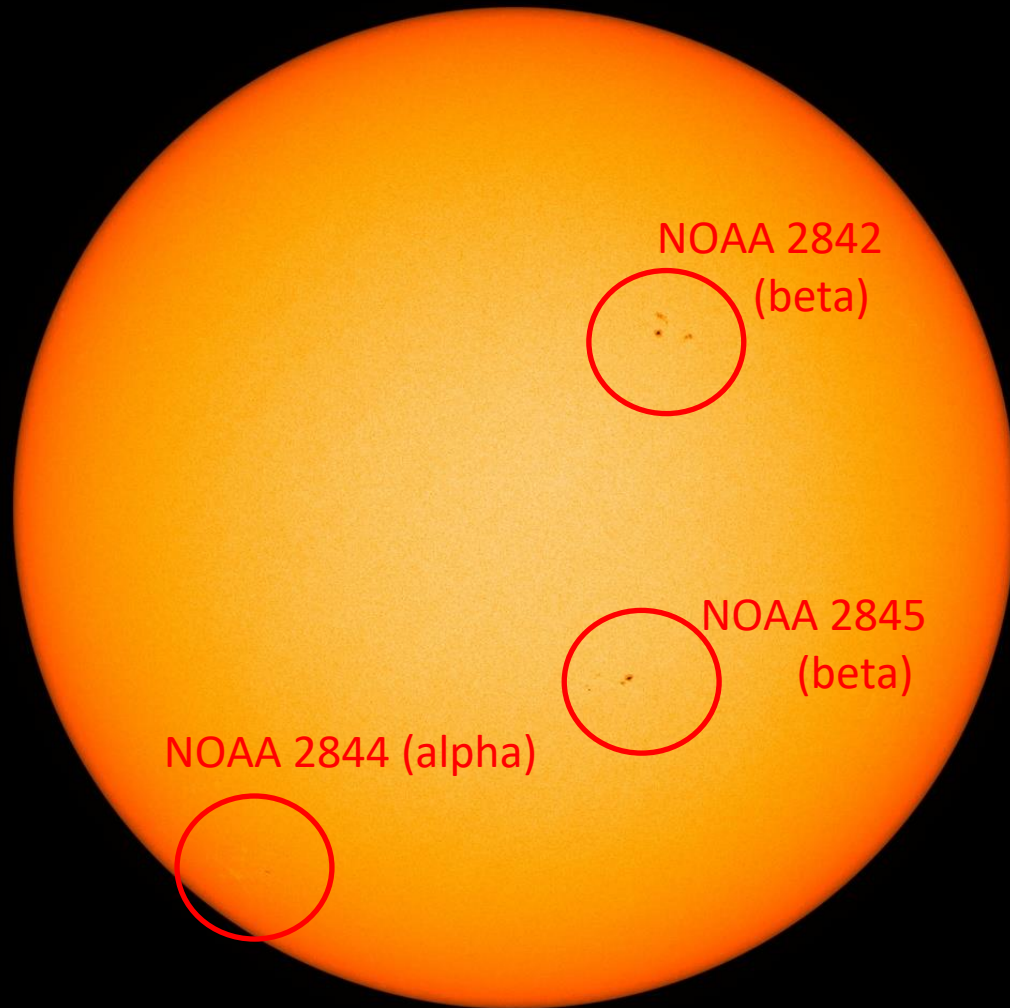


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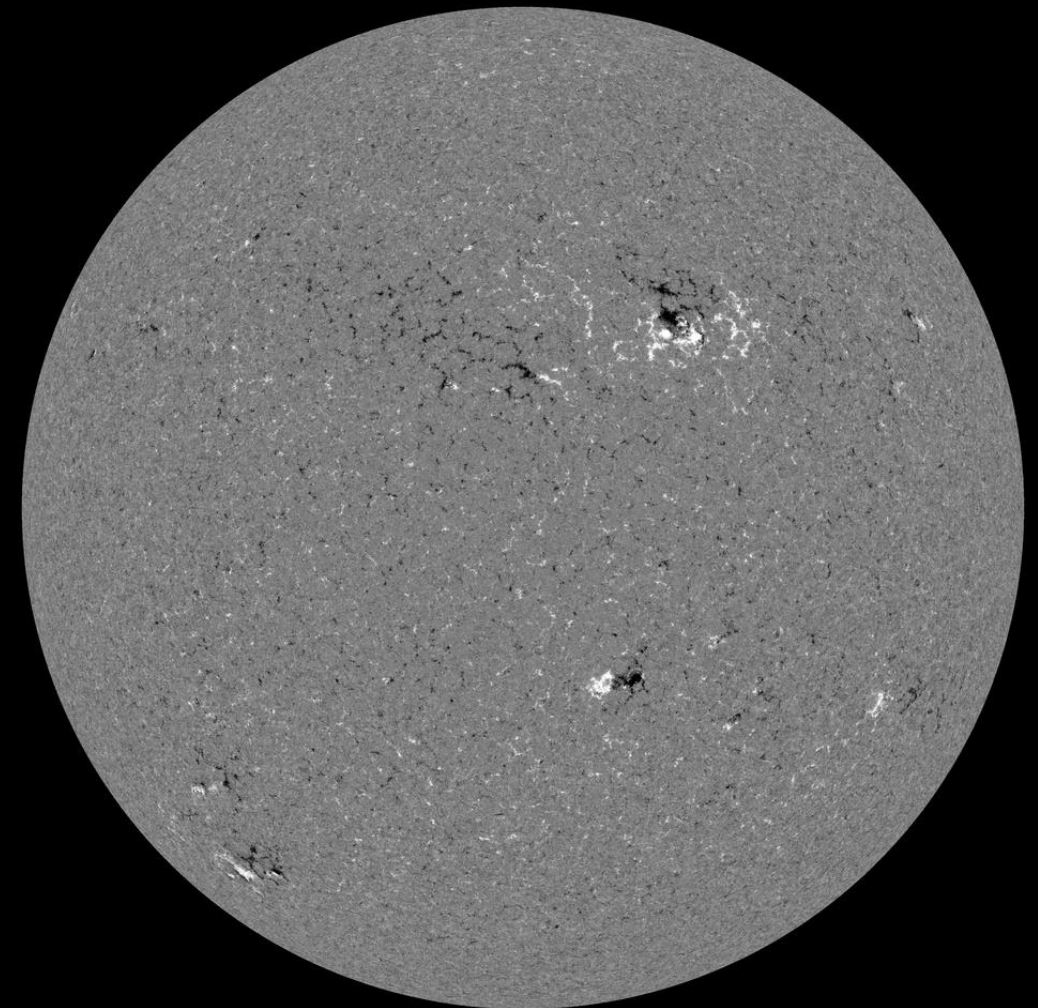
# Solar active regions

SDO/HMI White Light 2021-07-18



SDO/HMI Quick-Look Continuum: 20210718\_114500

SDO/HMI Magnetogram 2021-07-18

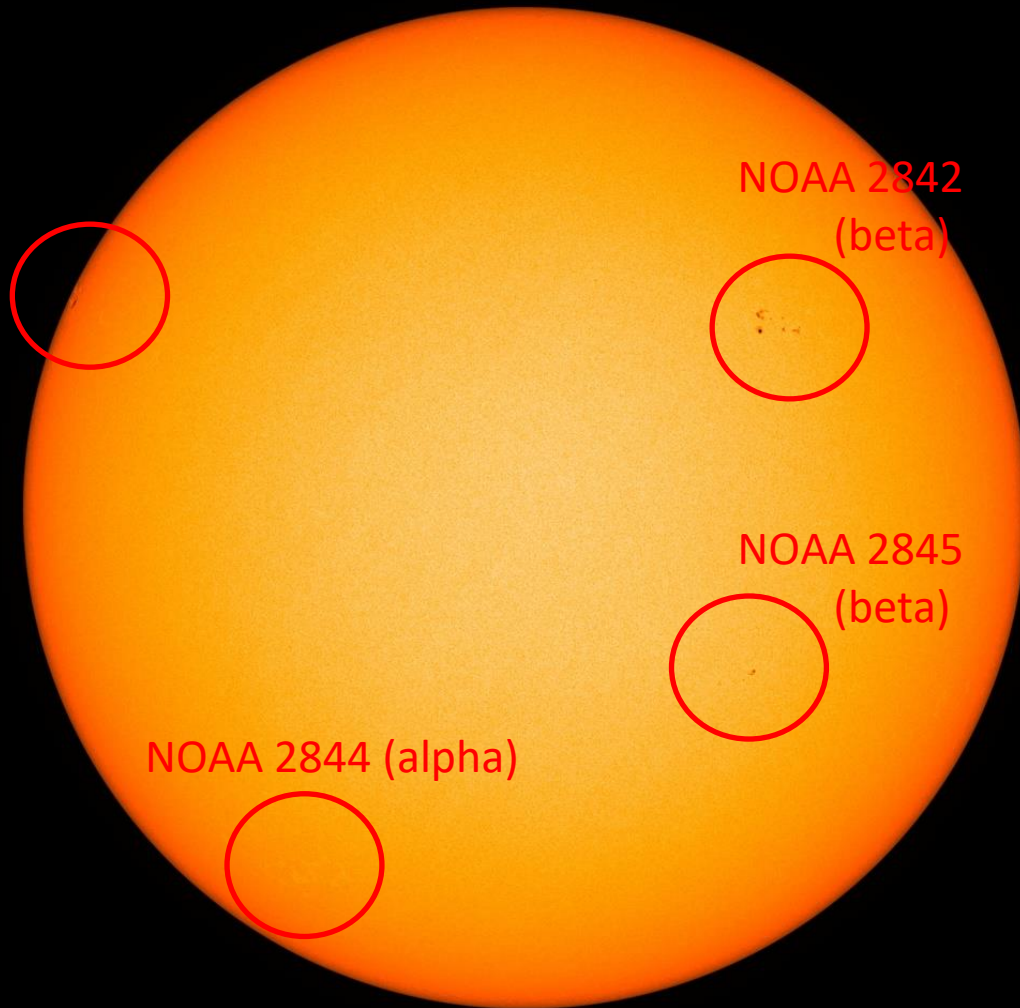


SDO/HMI Quick-Look Magnetogram: 20210718\_114500



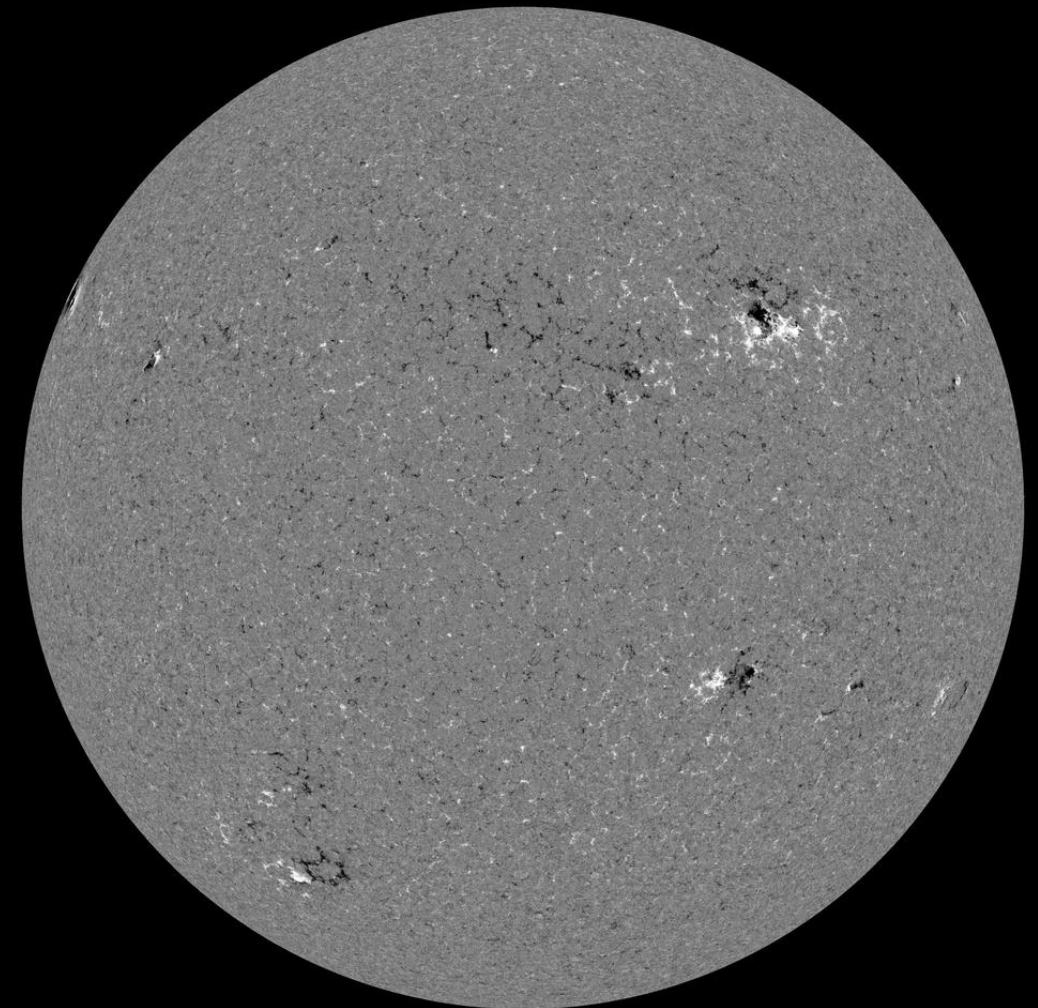
# Solar active regions

SDO/HMI White Light 2021-07-19



SDO/HMI Quick-Look Continuum: 20210719\_114500

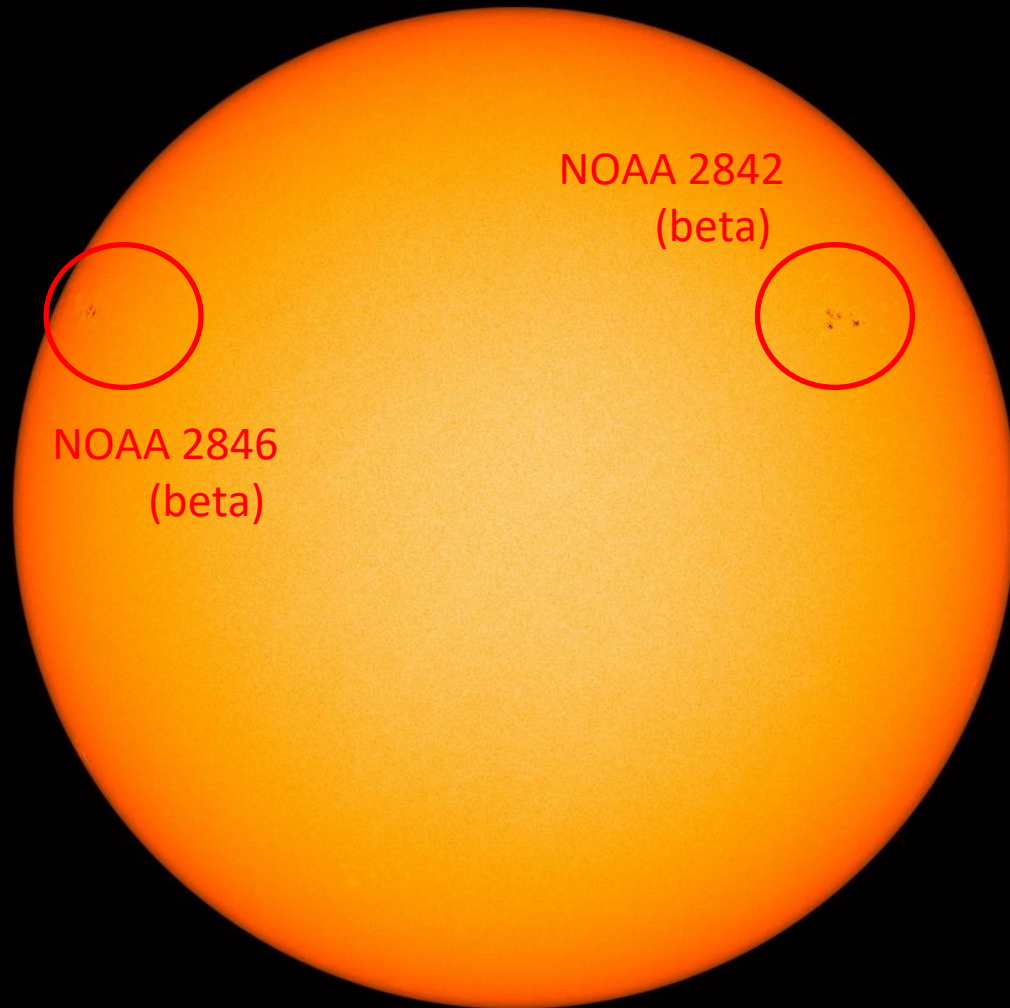
SDO/HMI Magnetogram 2021-07-19



SDO/HMI Quick-Look Magnetogram: 20210719\_114500

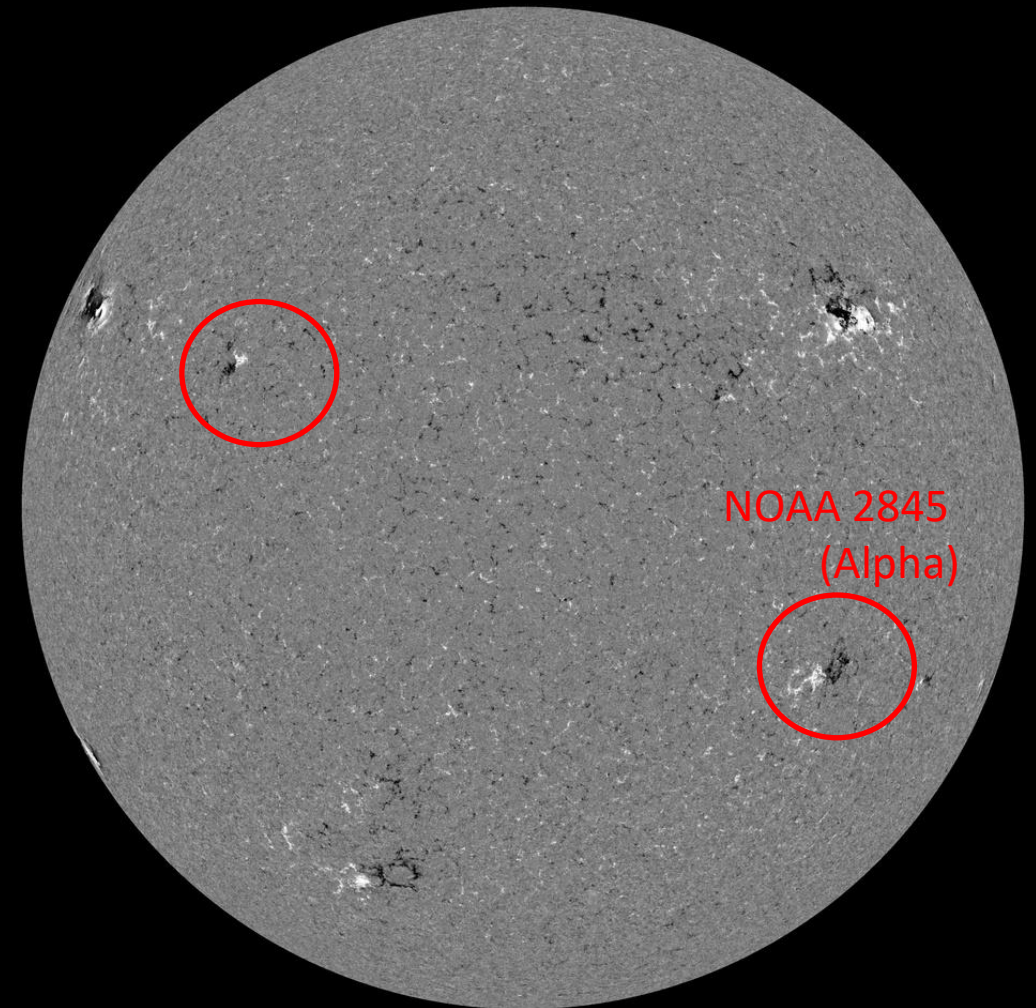
# Solar active regions

SDO/HMI White Light 2021-07-20



SDO/HMI Quick-Look Continuum: 20210720\_114500

SDO/HMI Magnetogram 2021-07-20

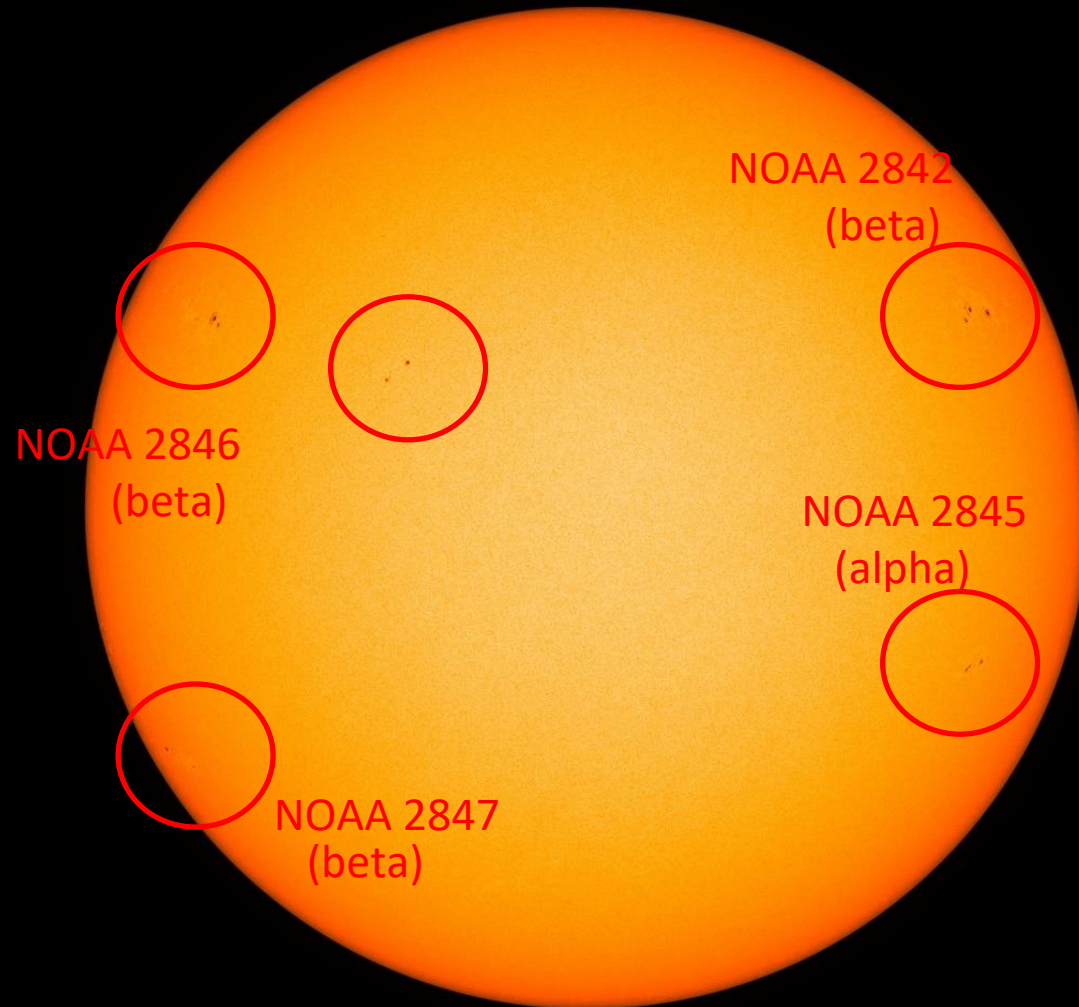


SDO/HMI Quick-Look Magnetogram: 20210720\_114500



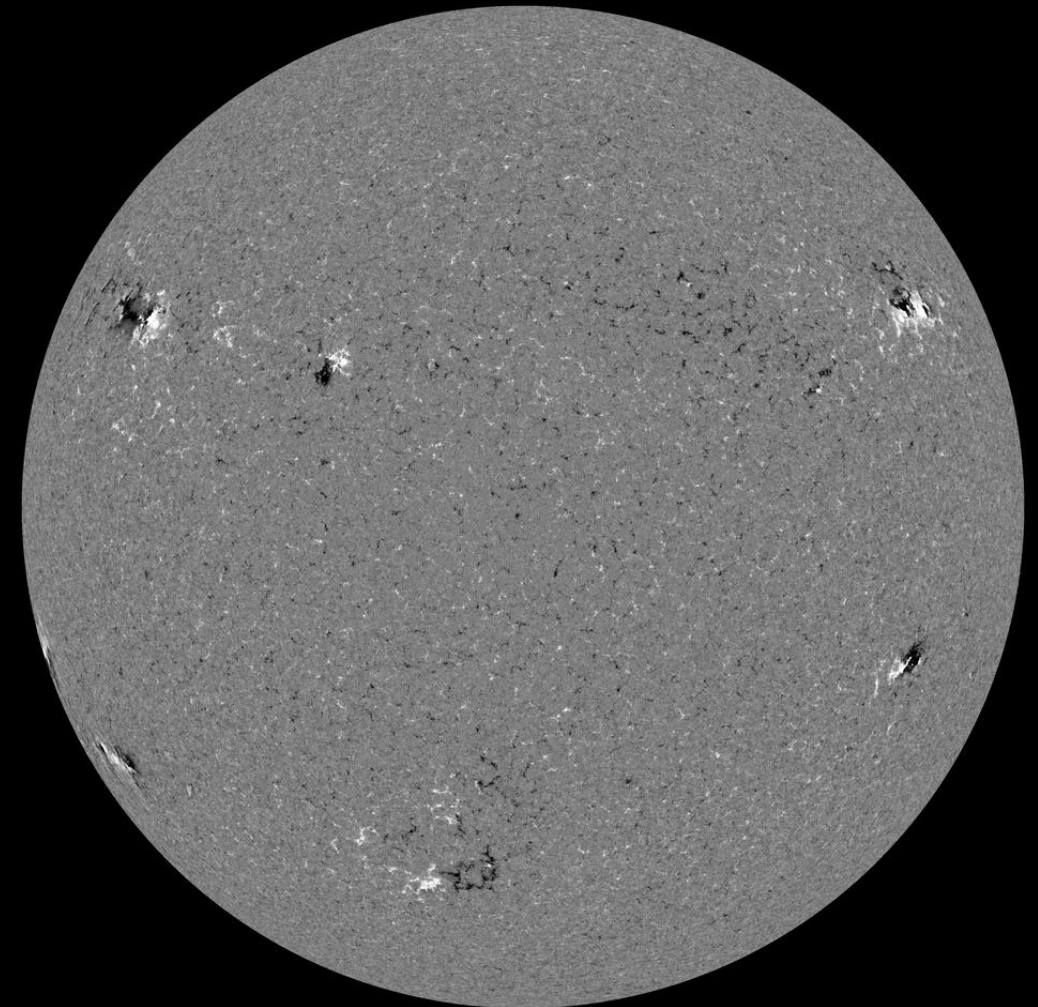
# Solar active regions

SDO/HMI White Light 2021-07-21



SDO/HMI Quick-Look Continuum: 20210721\_114500

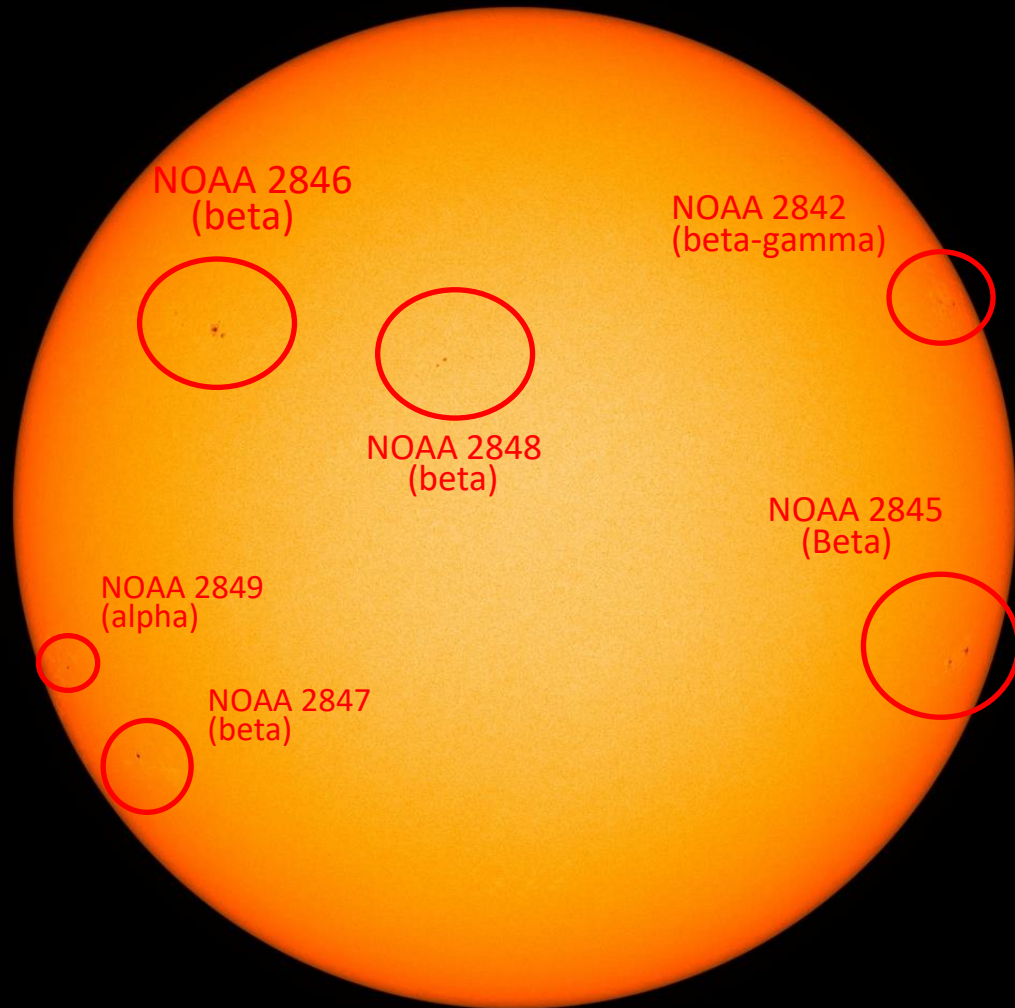
SDO/HMI Magnetogram 2021-07-21



SDO/HMI Quick-Look Magnetogram: 20210721\_114500

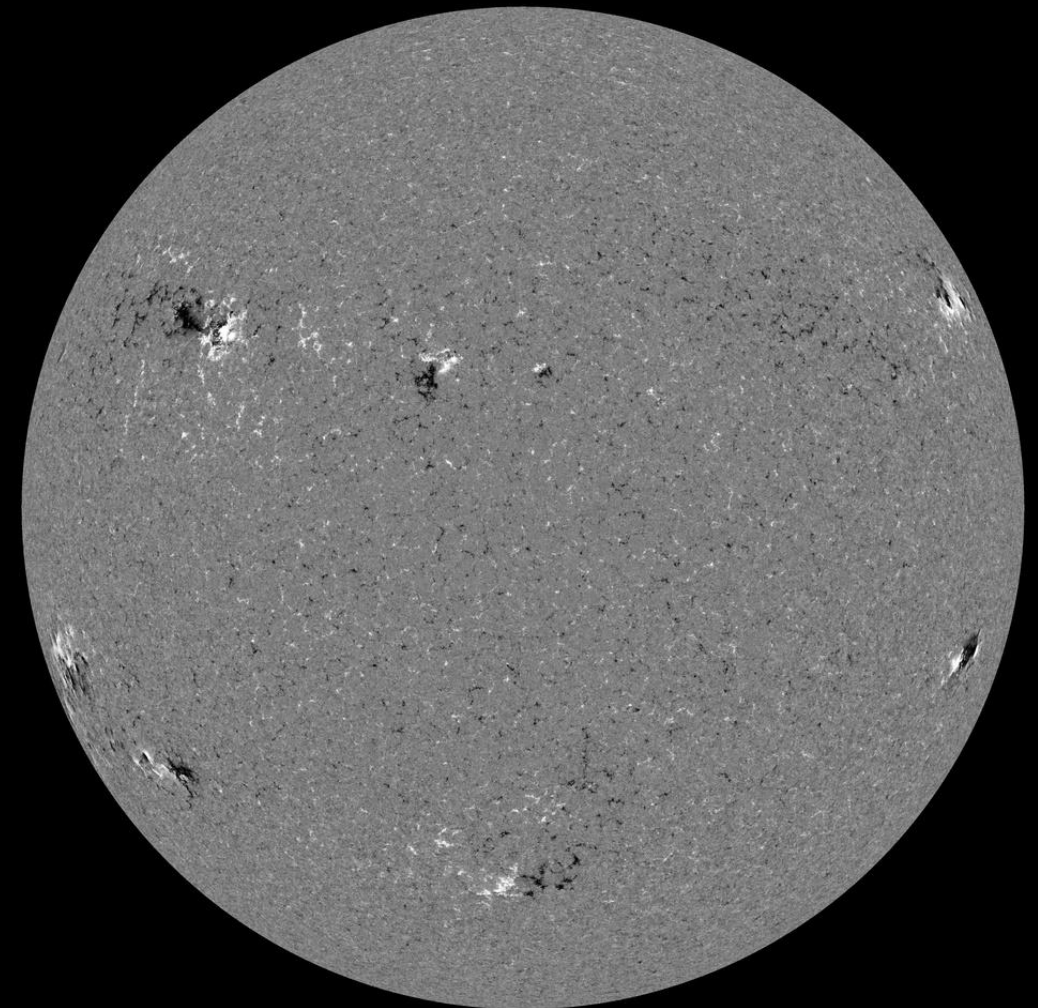
# Solar active regions

SDO/HMI White Light 2021-07-22



SDO/HMI Quick-Look Continuum: 20210722\_114500

SDO/HMI Magnetogram 2021-07-22

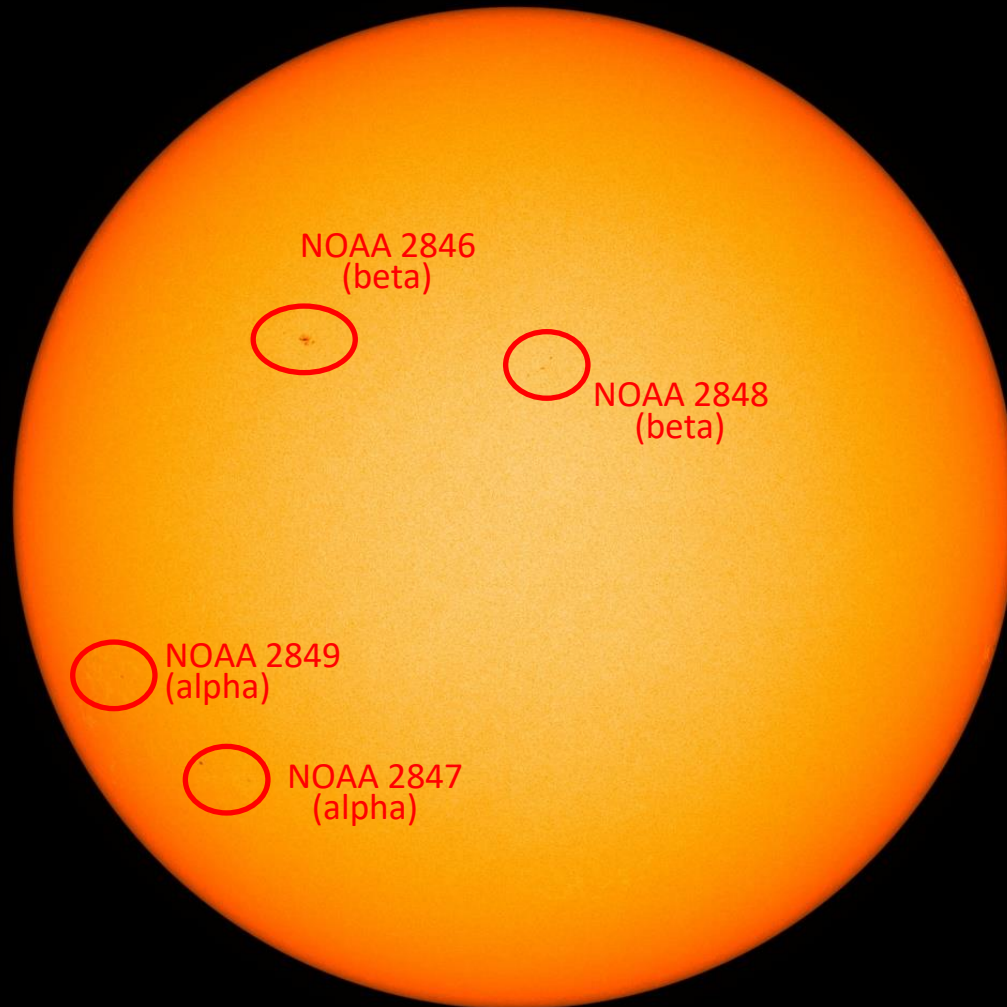


SDO/HMI Quick-Look Magnetogram: 20210722\_114500



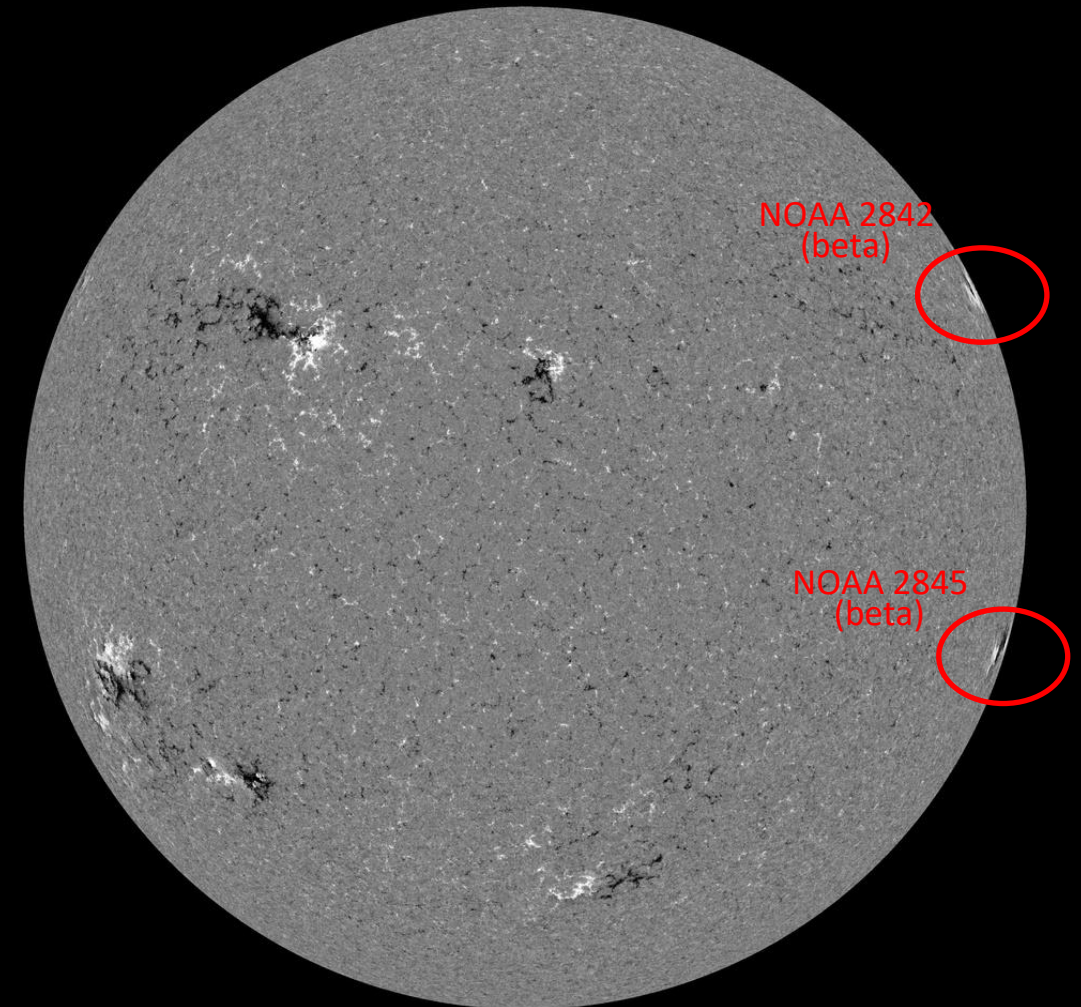
# Solar active regions

SDO/HMI White Light 2021-07-23



SDO/HMI Quick-Look Continuum: 20210723\_114500

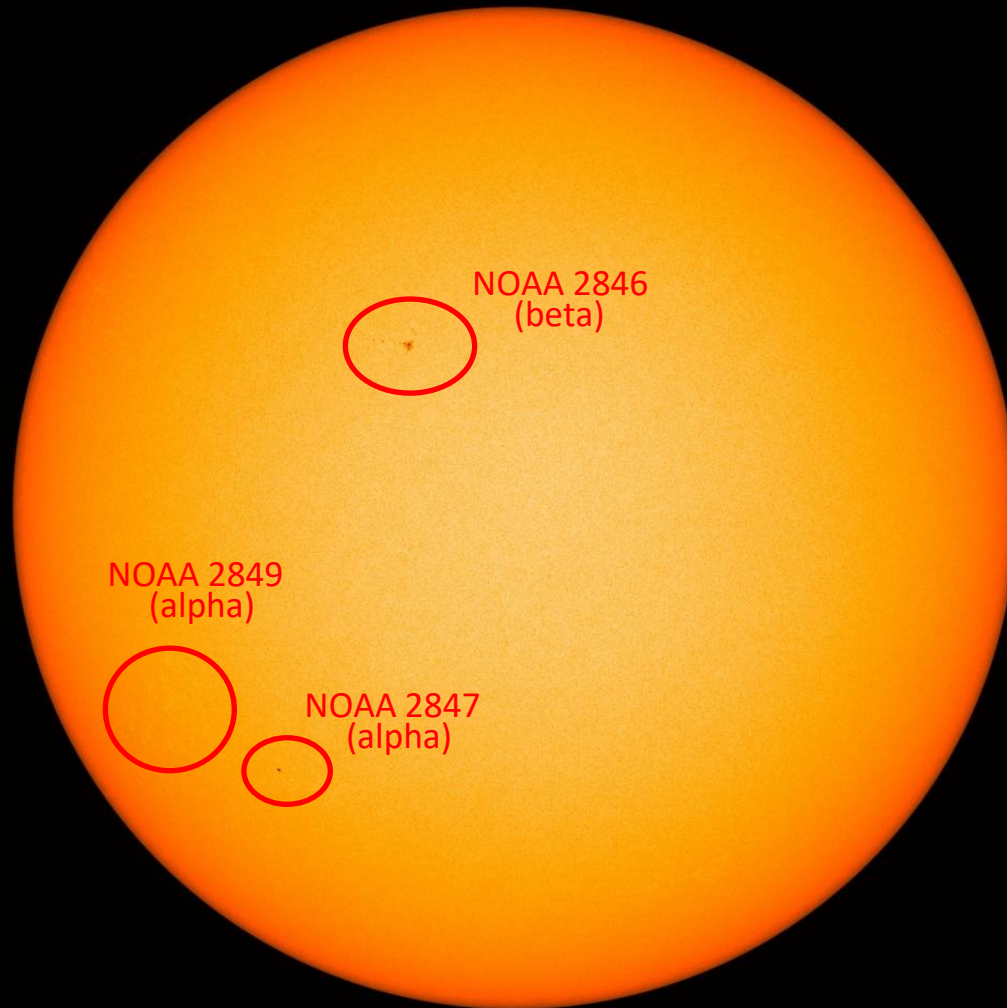
SDO/HMI Magnetogram 2021-07-23



SDO/HMI Quick-Look Magnetogram: 20210723\_114500

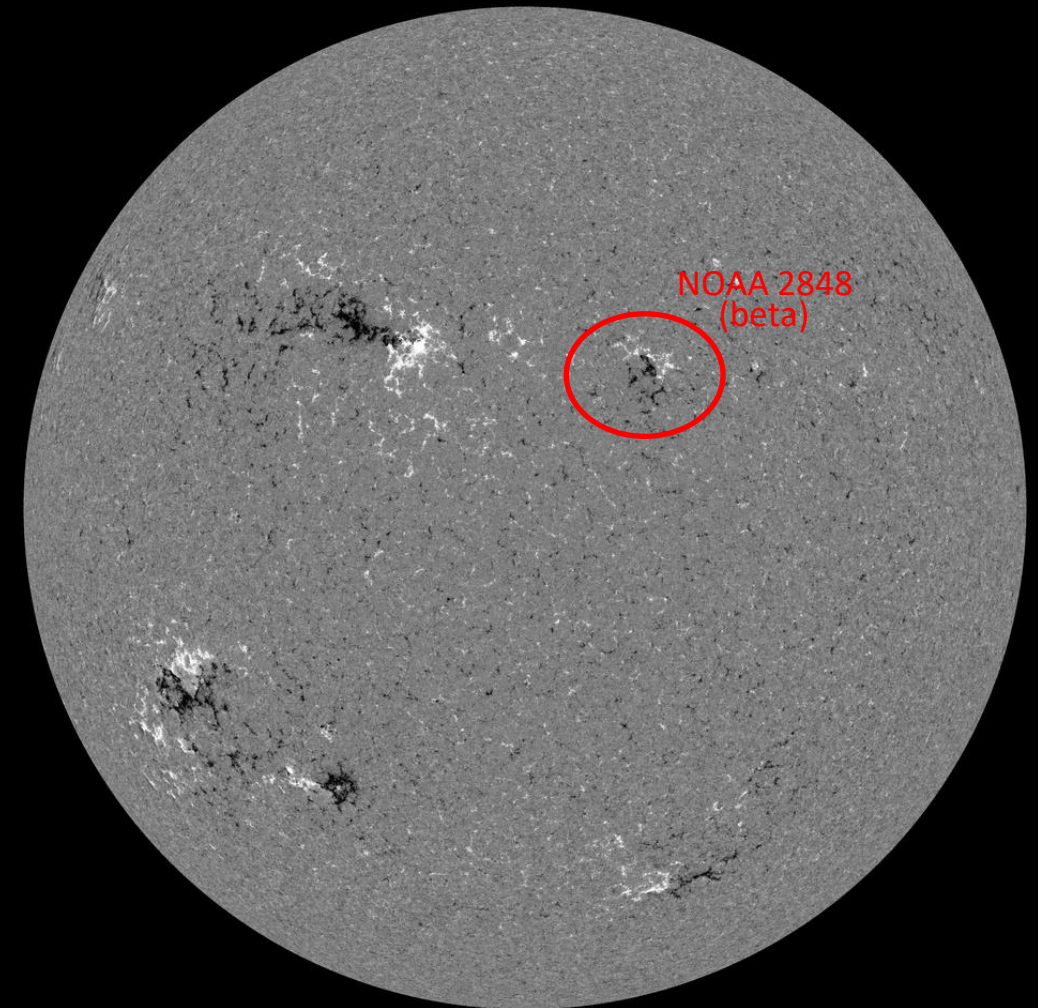
# Solar active regions

SDO/HMI White Light 2021-07-24



SDO/HMI Quick-Look Continuum: 20210724\_114500

SDO/HMI Magnetogram 2021-07-24

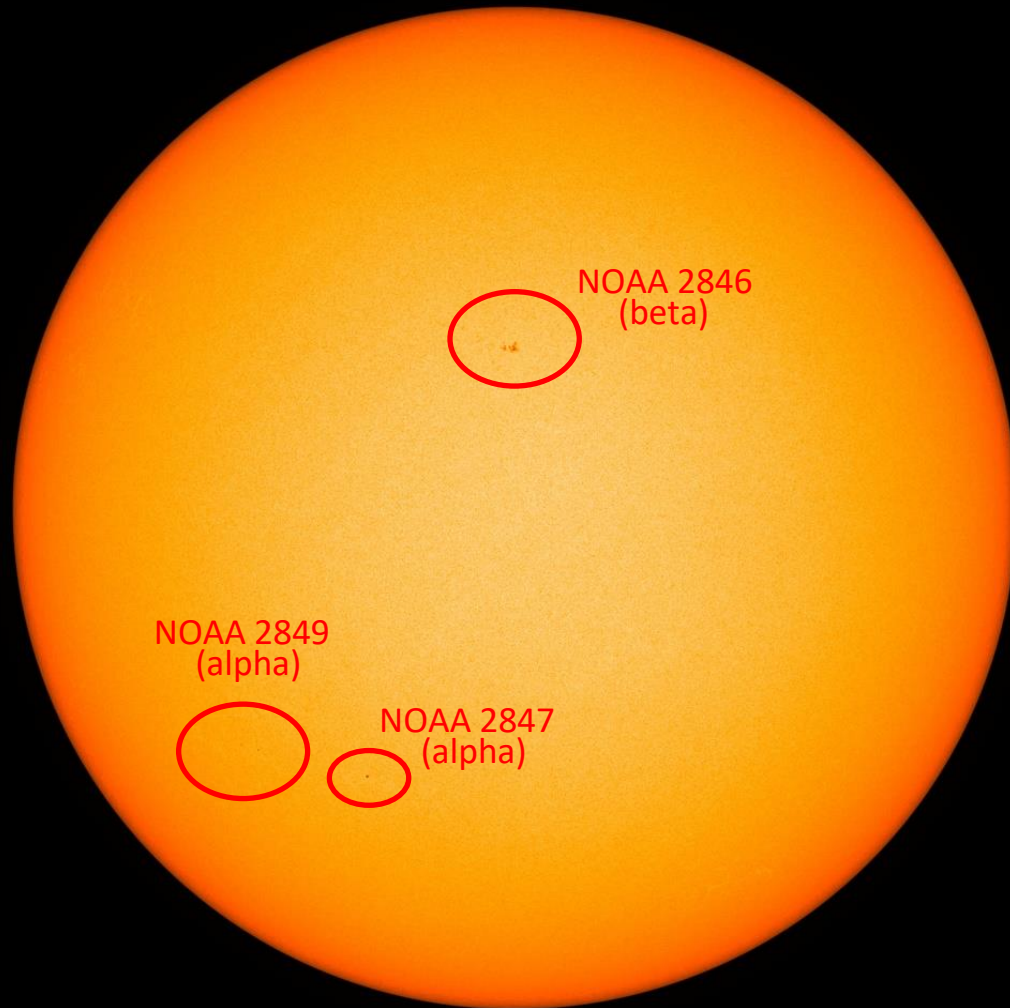


SDO/HMI Quick-Look Magnetogram: 20210724\_114500



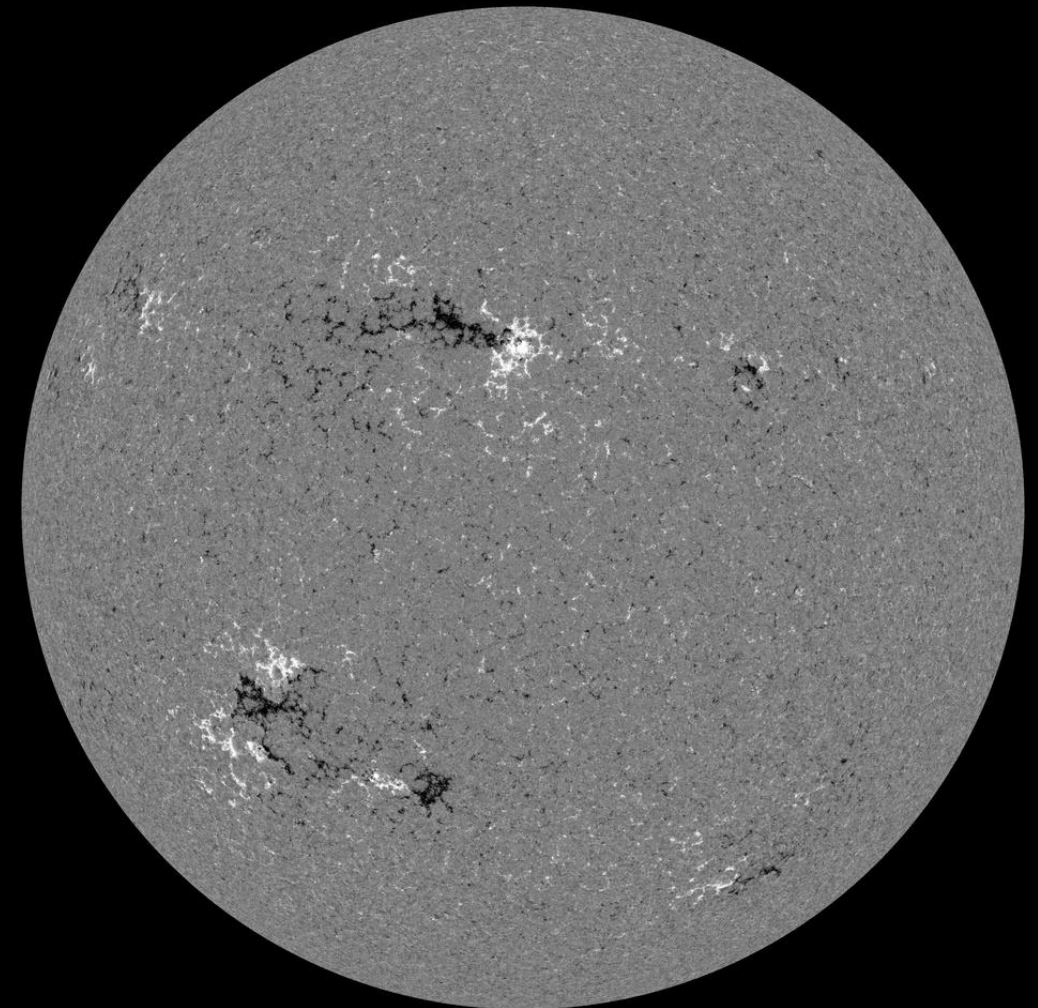
# Solar active regions

SDO/HMI White Light 2021-07-25



SDO/HMI Quick-Look Continuum: 20210725\_114500

SDO/HMI Magnetogram 2021-07-25

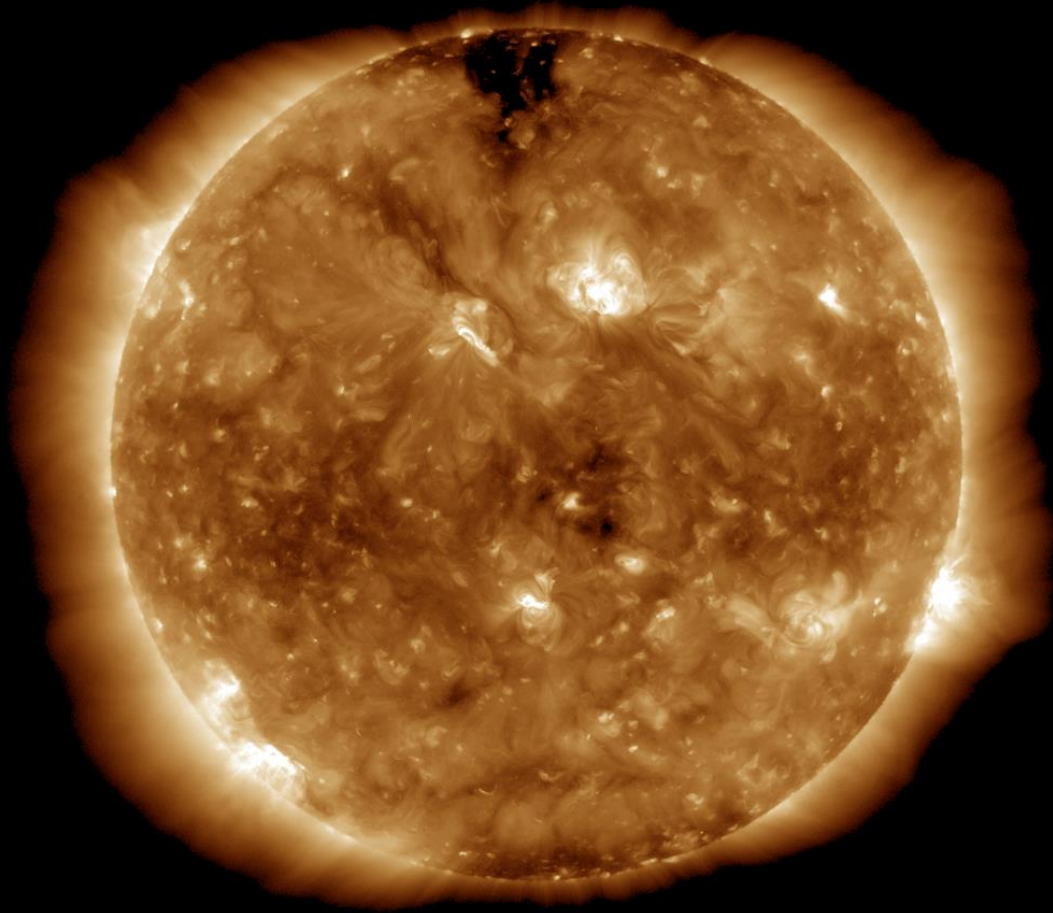


SDO/HMI Quick-Look Magnetogram: 20210725\_114500

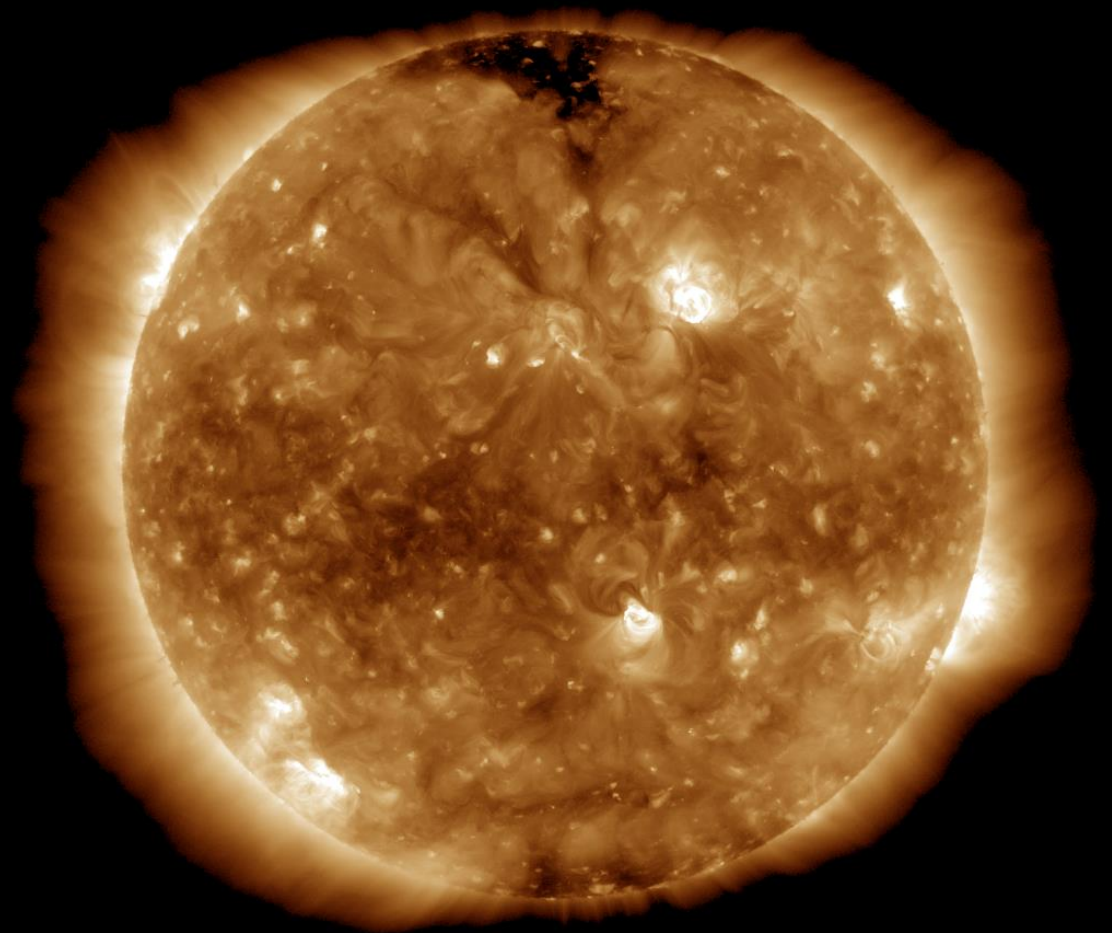


# Coronal holes

SDO/AIA AIA 193Å 2021-07-17T16:03:05.835



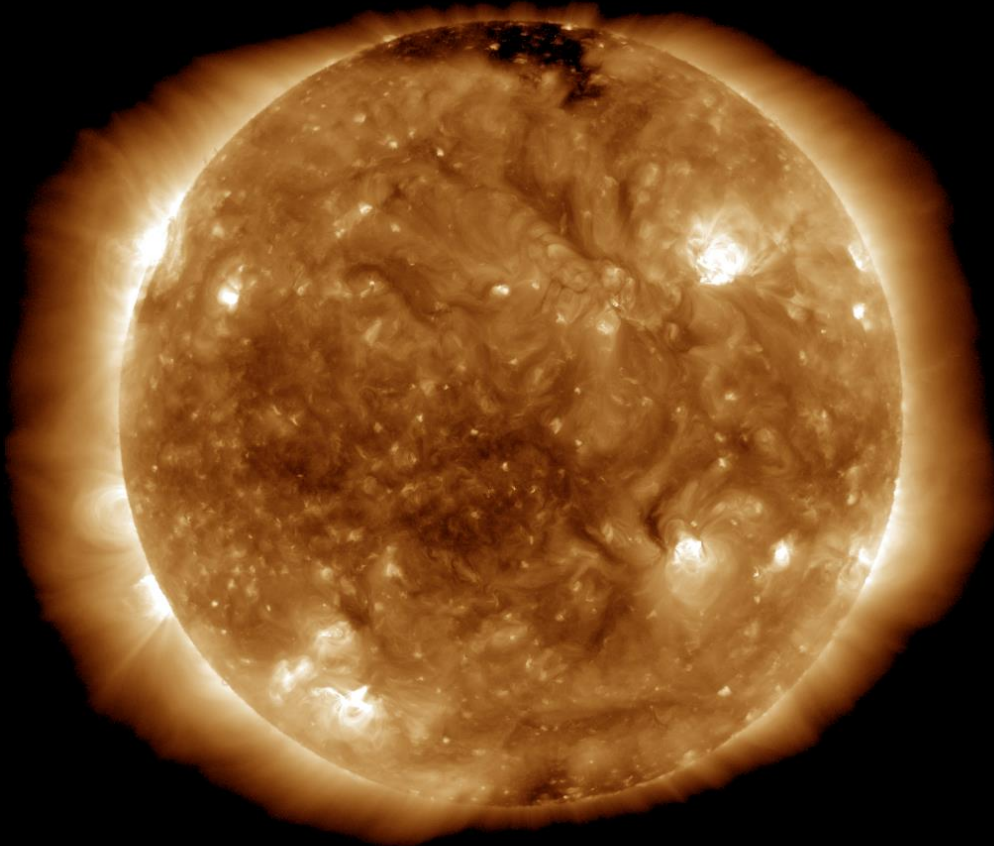
SDO/AIA AIA 193Å 2021-07-18T12:00:05.842



# Coronal holes

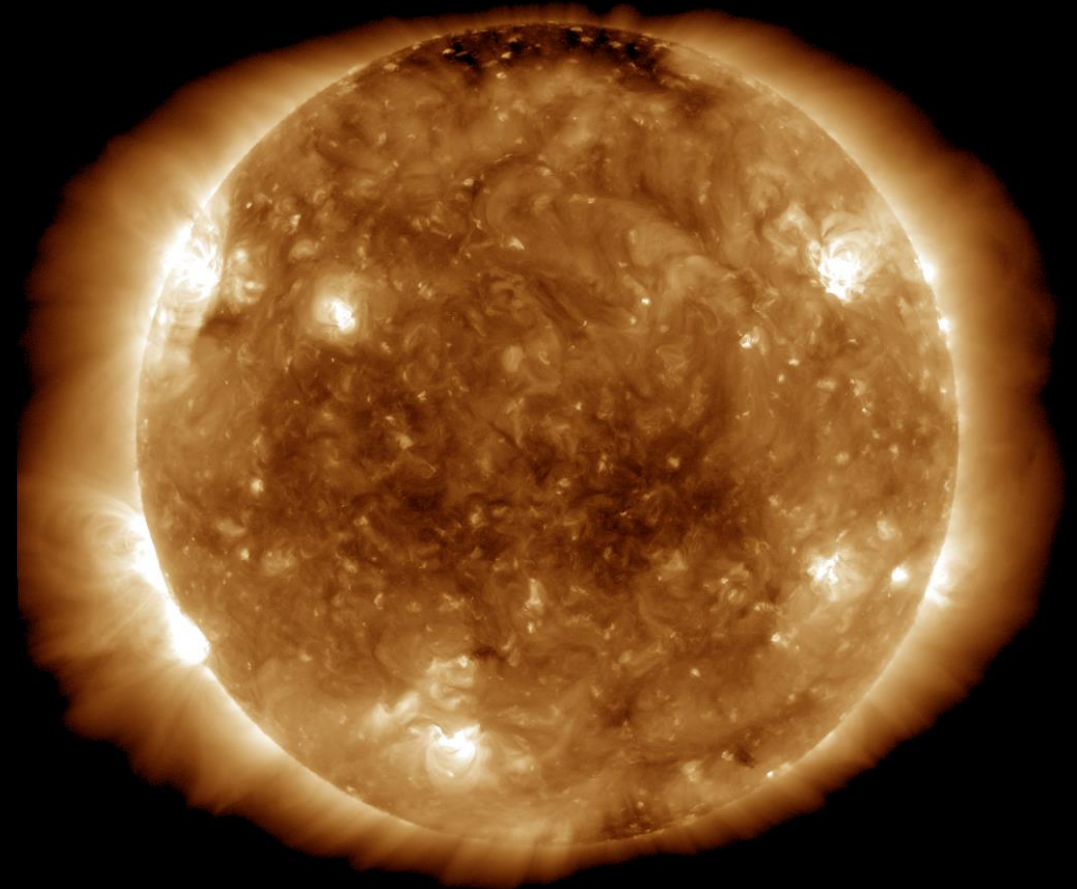
SDO/AIA 19.3 nm 2021-07-19

SDO/AIA AIA 193Å 2021-07-19T16:06:05.843



SDO/AIA 19.3 nm 2021-07-20

SDO/AIA AIA 193Å 2021-07-20T22:03:05.843





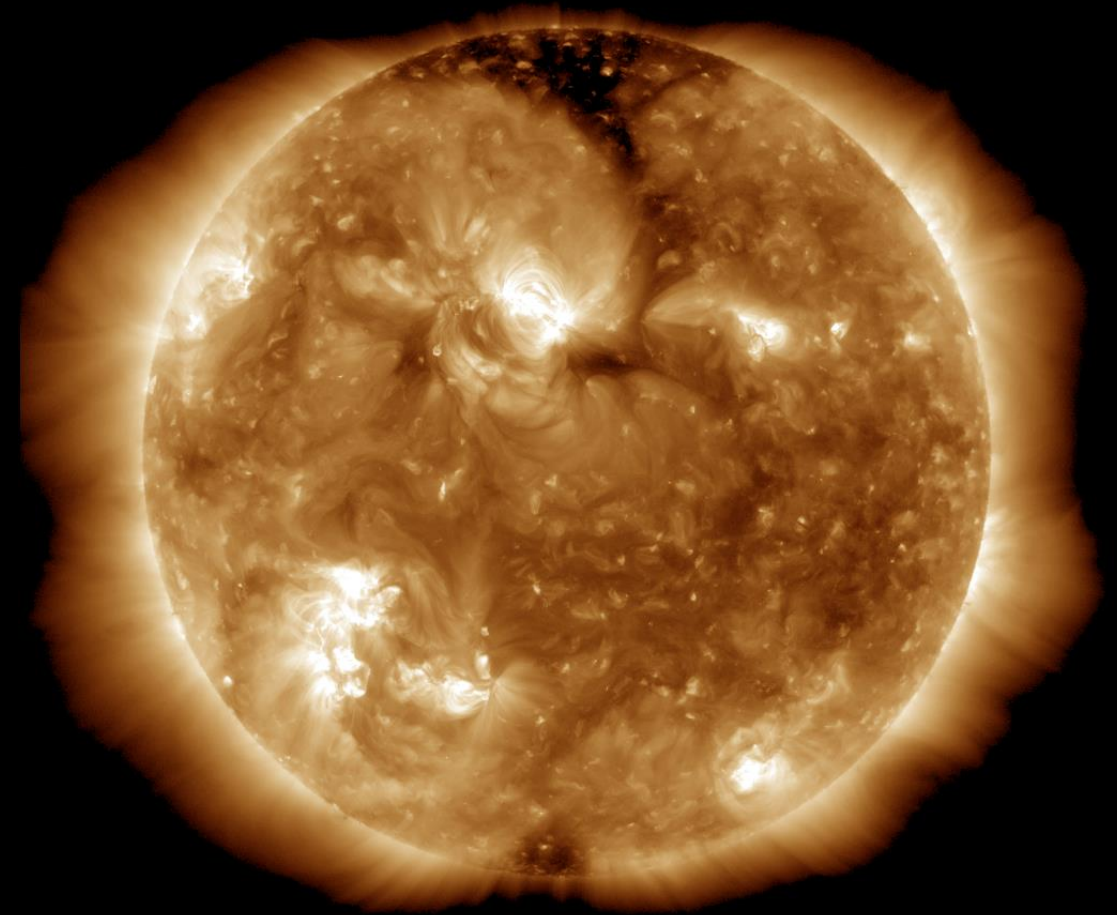
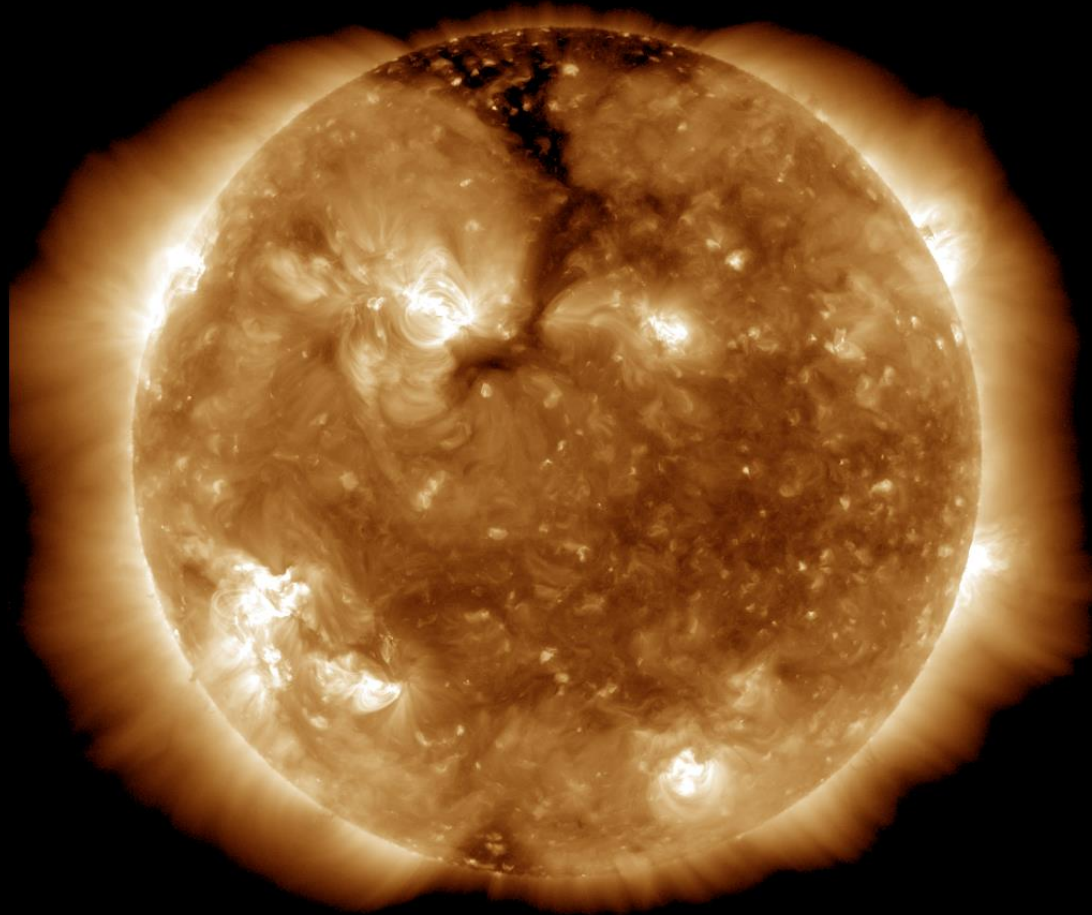
# Coronal holes

SDO/AIA 19.3 nm 2021-07-24

SDO/AIA 19.3 nm 2021-07-25

SDO/AIA AIA 193Å 2021-07-24T12:03:05.843

SDO/AIA AIA 193Å 2021-07-25T12:00:05.843

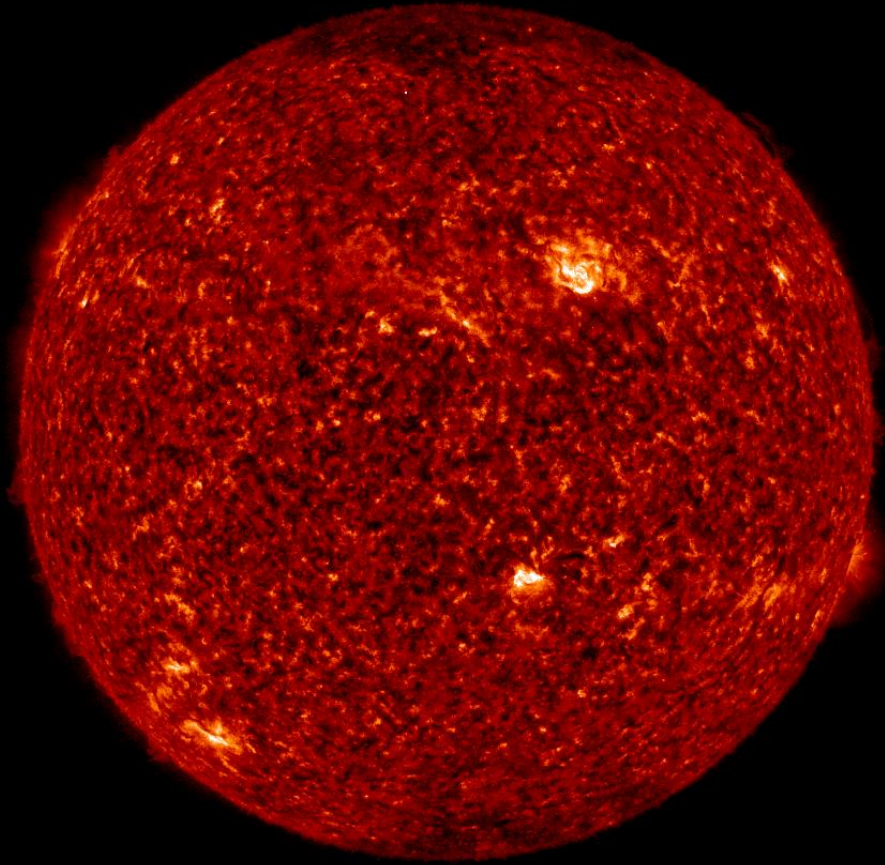




# Filaments

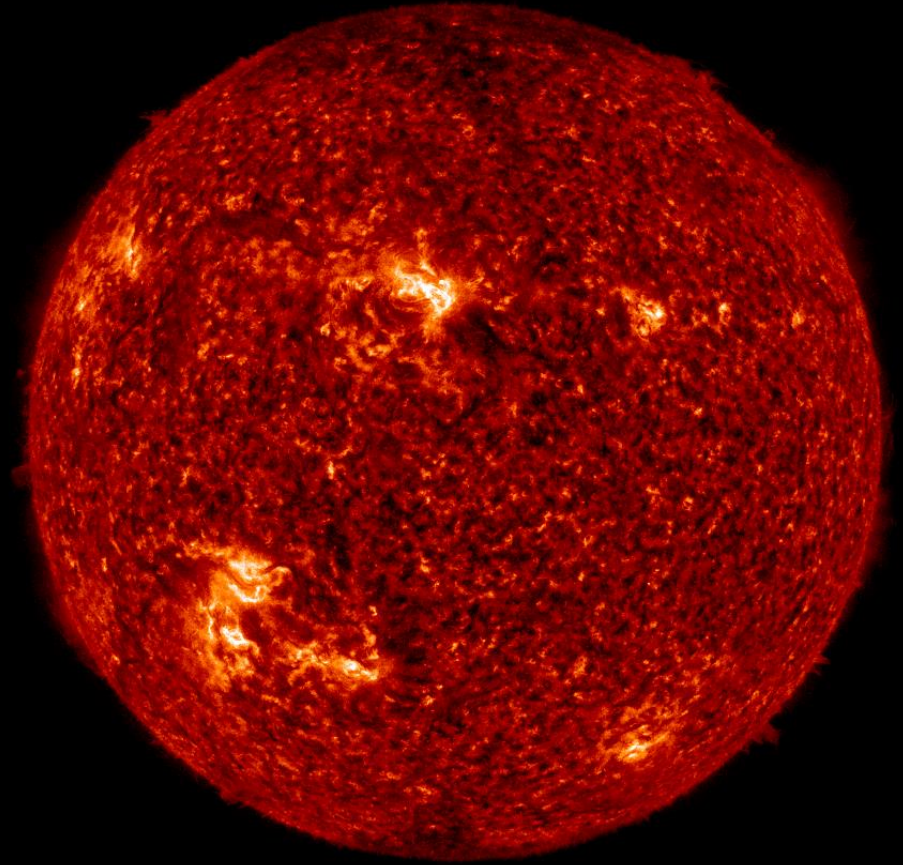
SDO/AIA 30.4 nm 2021-07-18

SDO/AIA AIA 304Å 2021-07-18T12:00:06.580

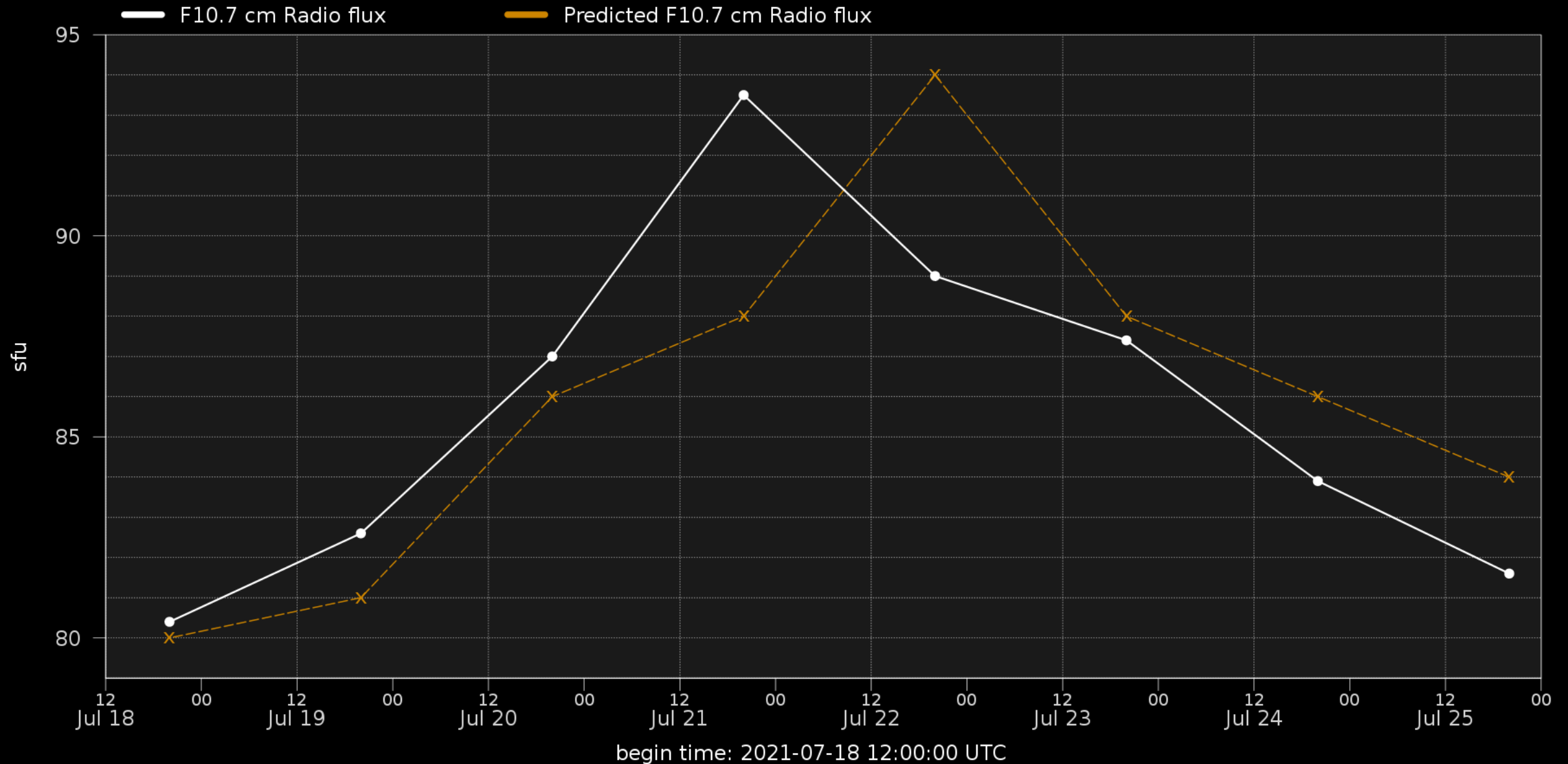


SDO/AIA 30.4 nm 2021-07-25

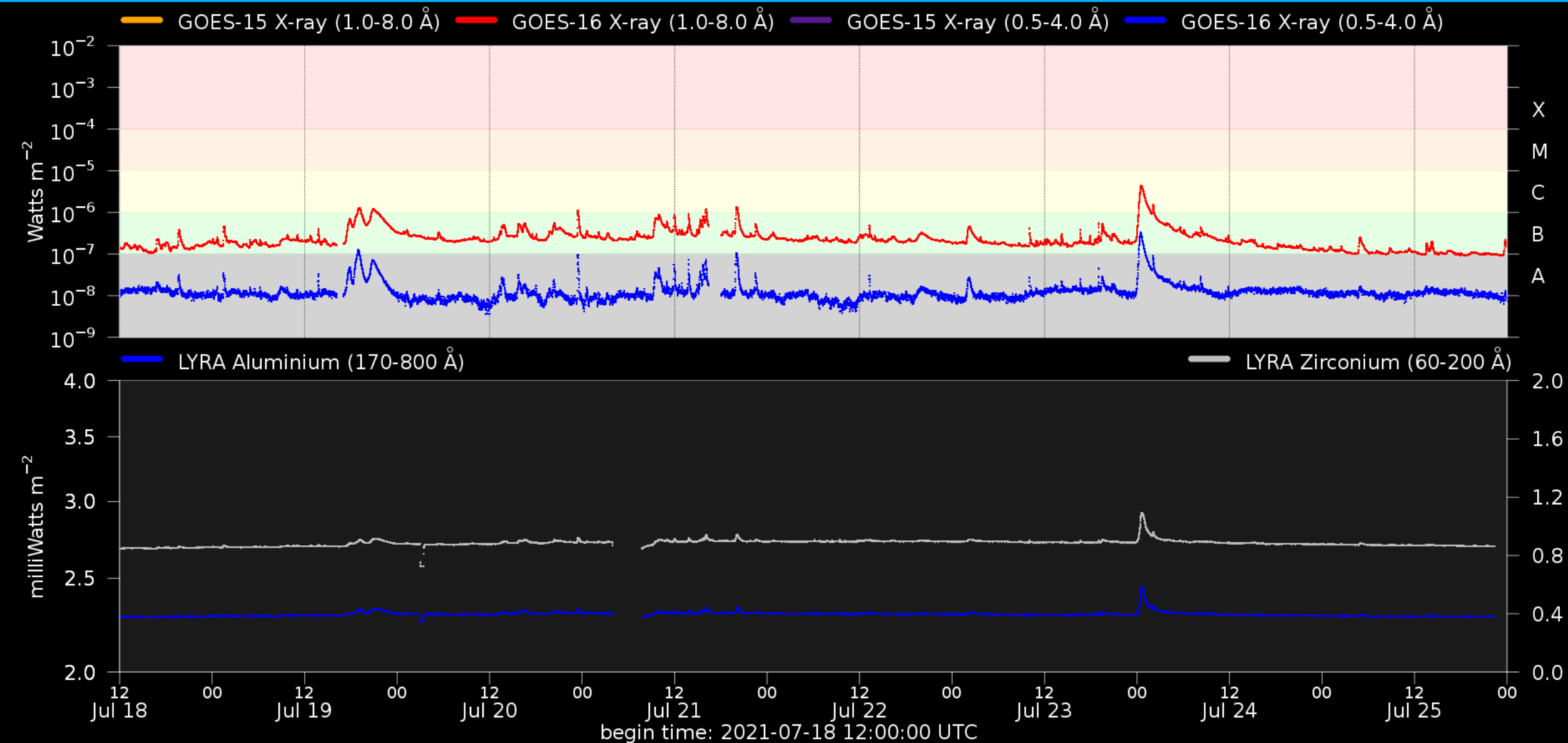
SDO/AIA AIA 304Å 2021-07-25T12:00:06.580



# Solar F10.7cm radio flux

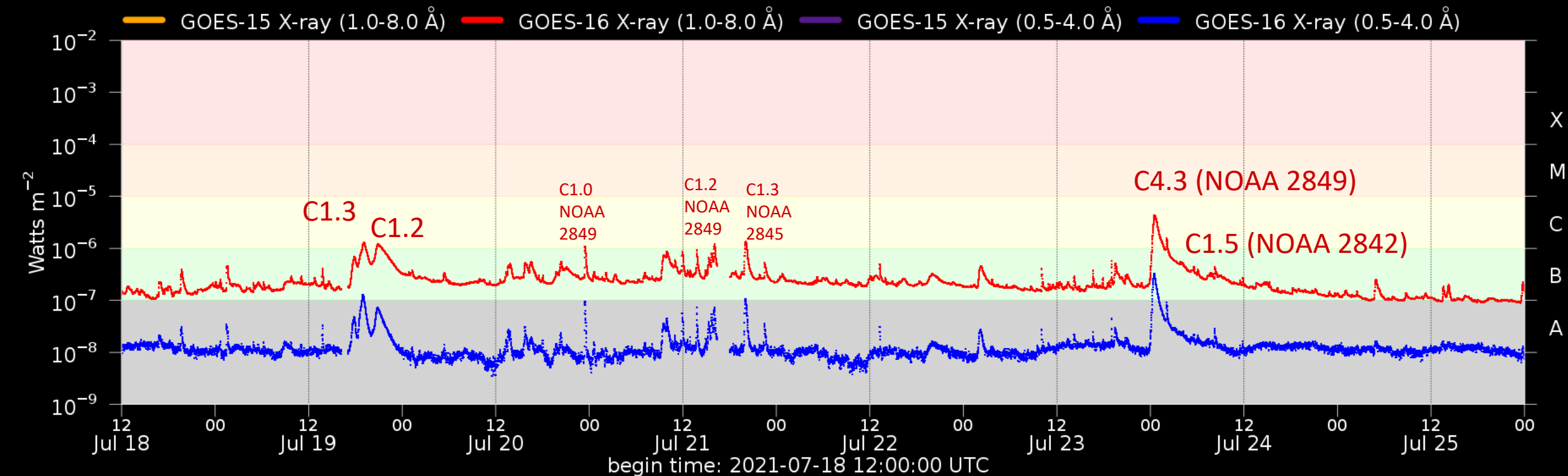


# Solar X-Ray and UV flux





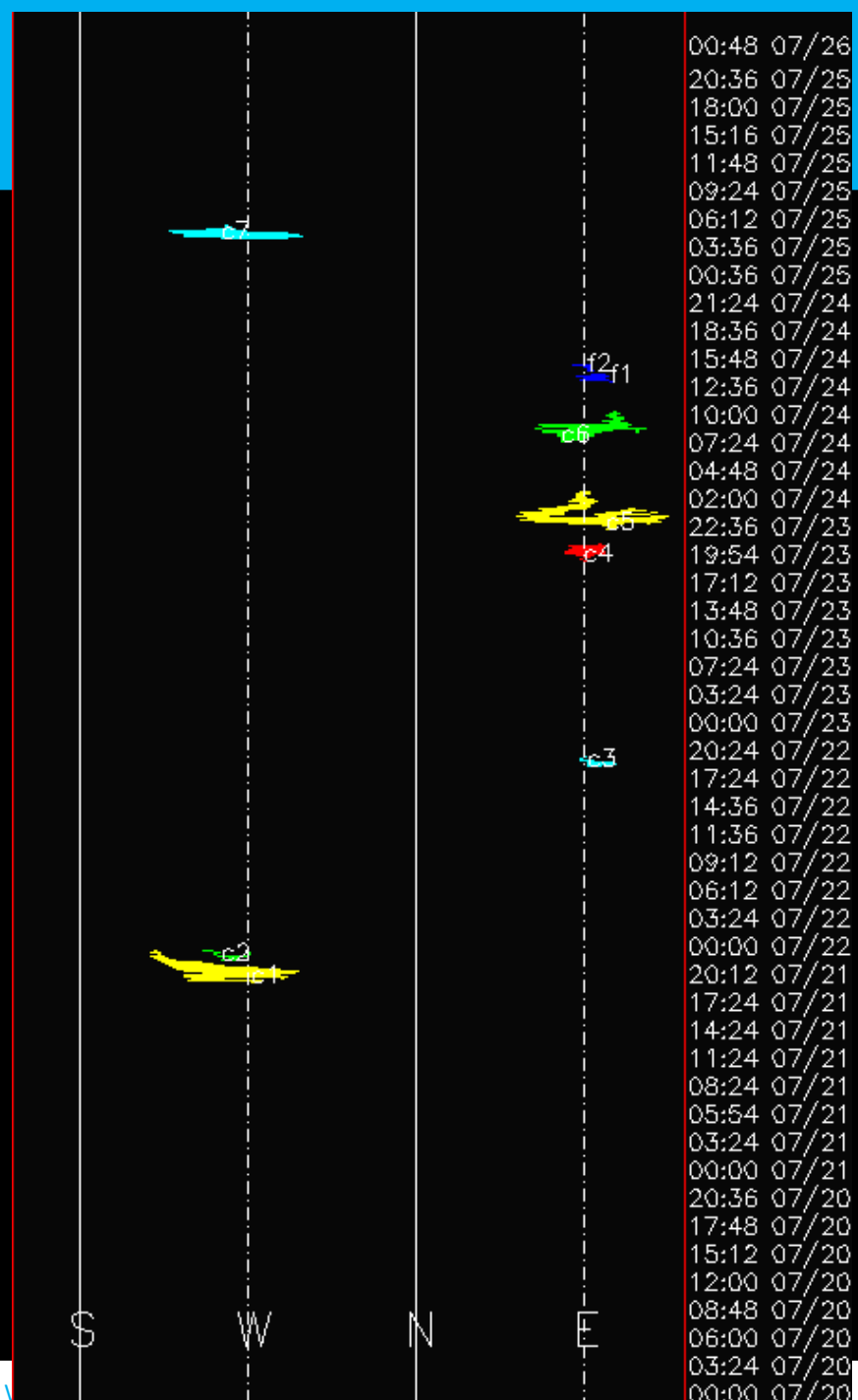
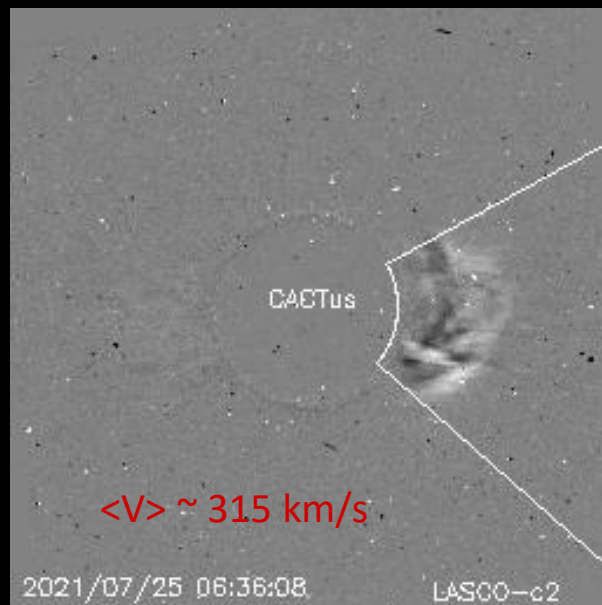
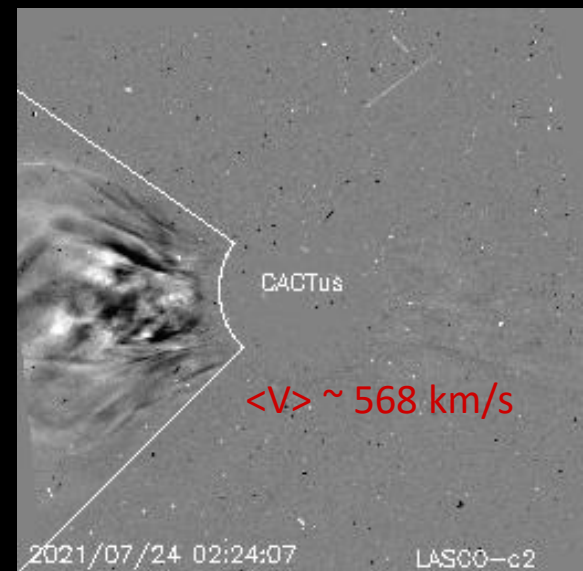
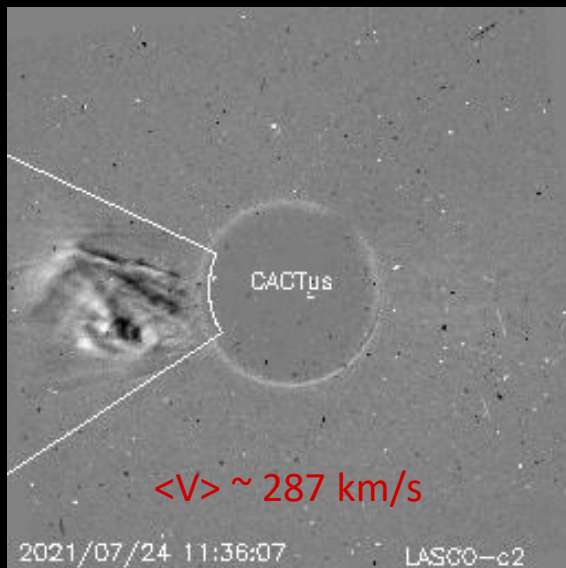
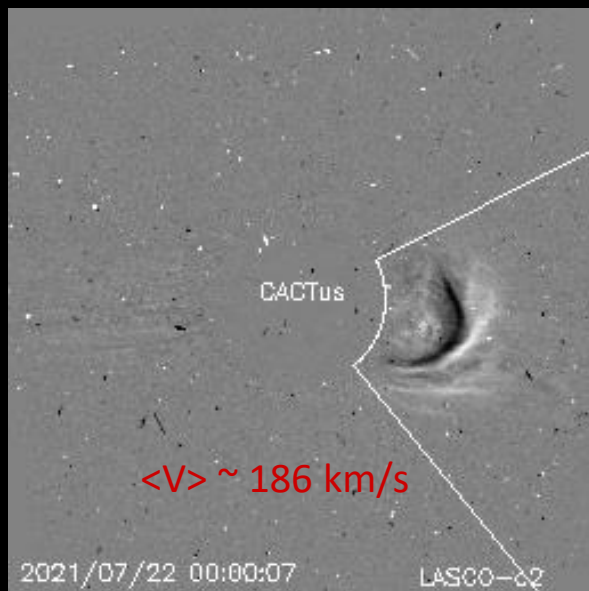
# Flaring activity



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

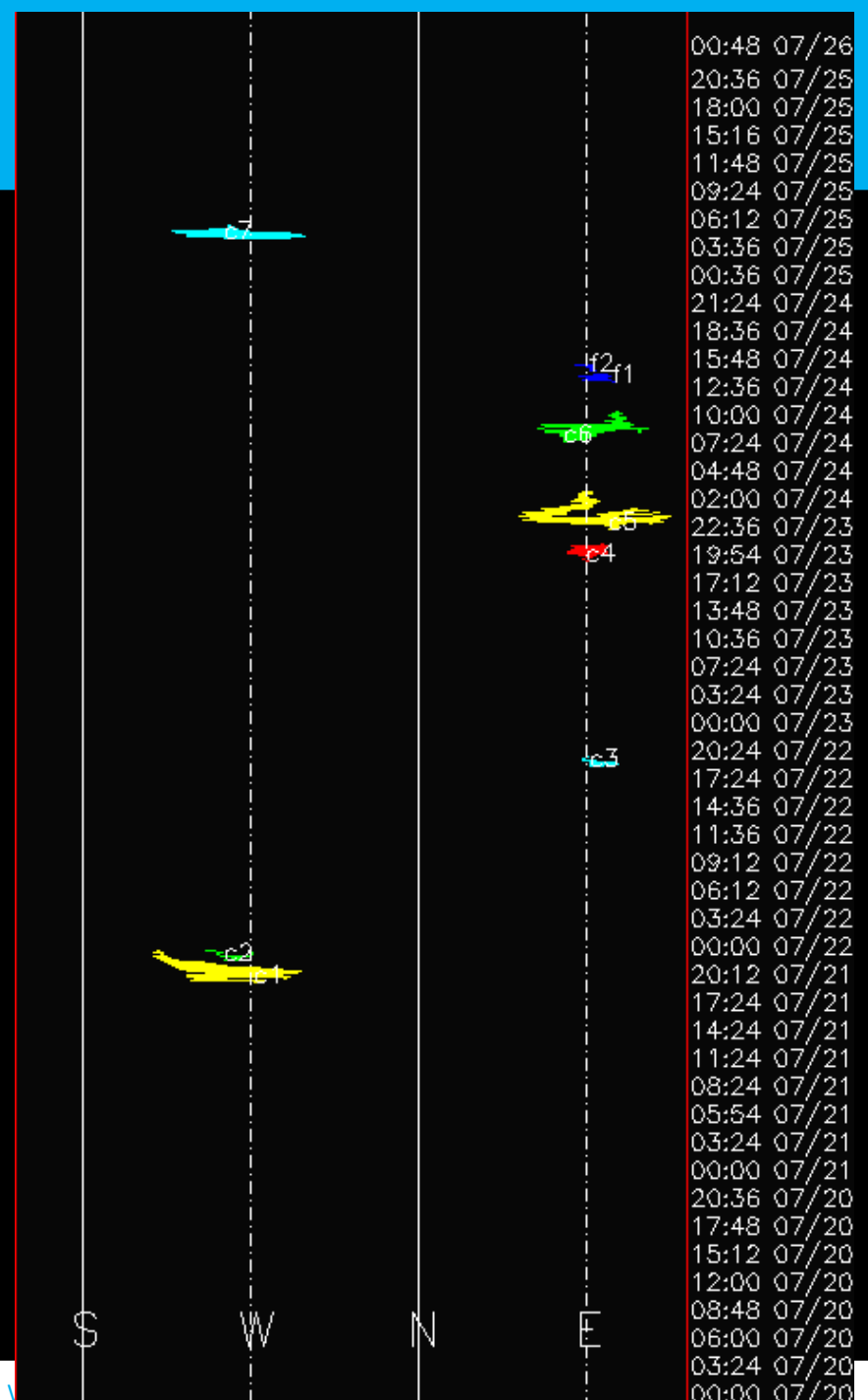
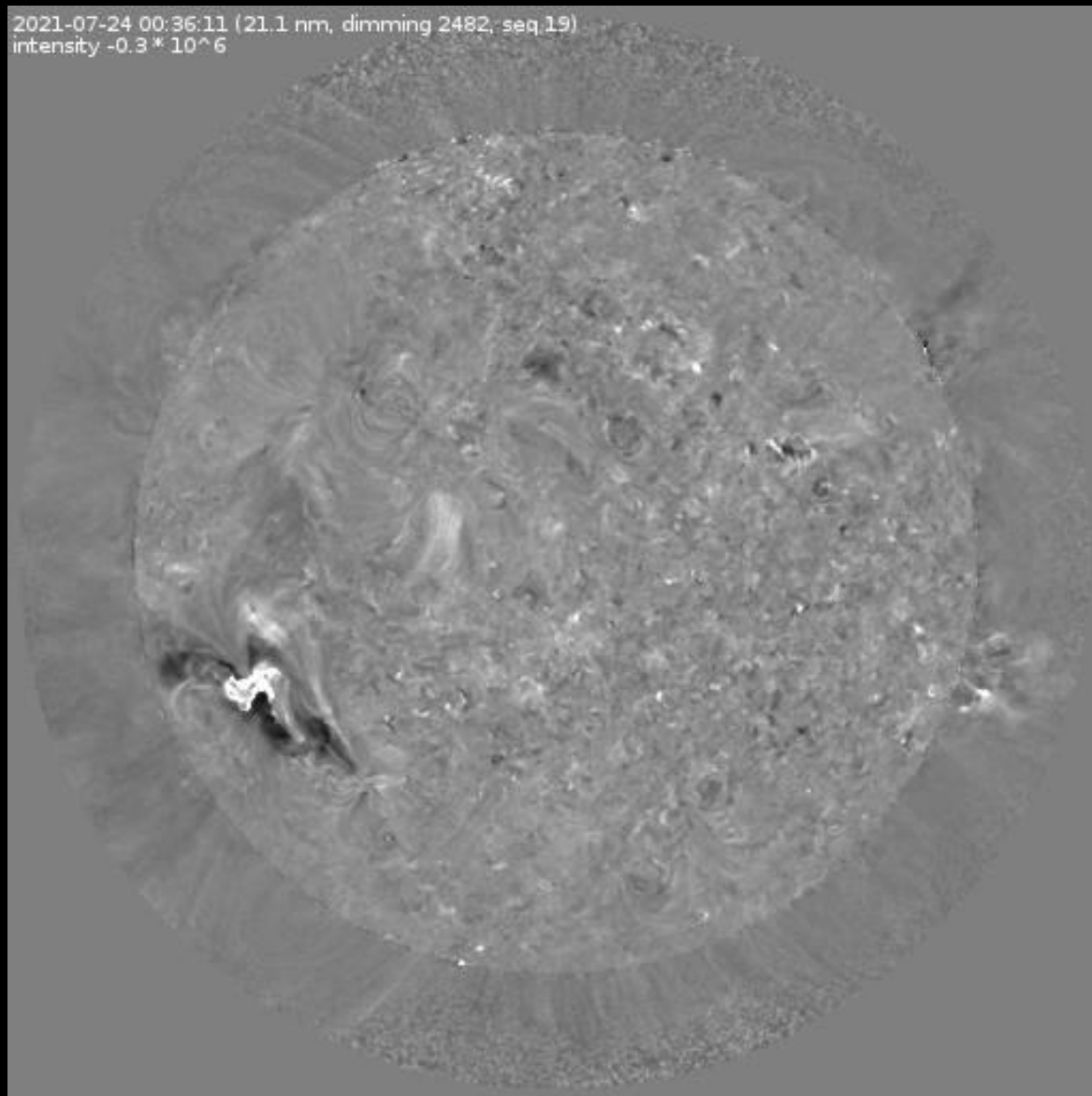
Issue date	2021-07-18	2021-07-19	2021-07-20	2021-07-21	2021-07-22	2021-07-23	2021-07-24	2021-07-25
Probability (%)	50 01 01	25 01 01	50 01 01	70 01 01	80 01 01	30 01 01	50 05 01	45 01 01
Observed (#)	00 00 00	00 00 00	01 00 00	02 00 00	00 00 00	02 00 00	00 00 00	00 00 00

# Coronal Mass Ejections



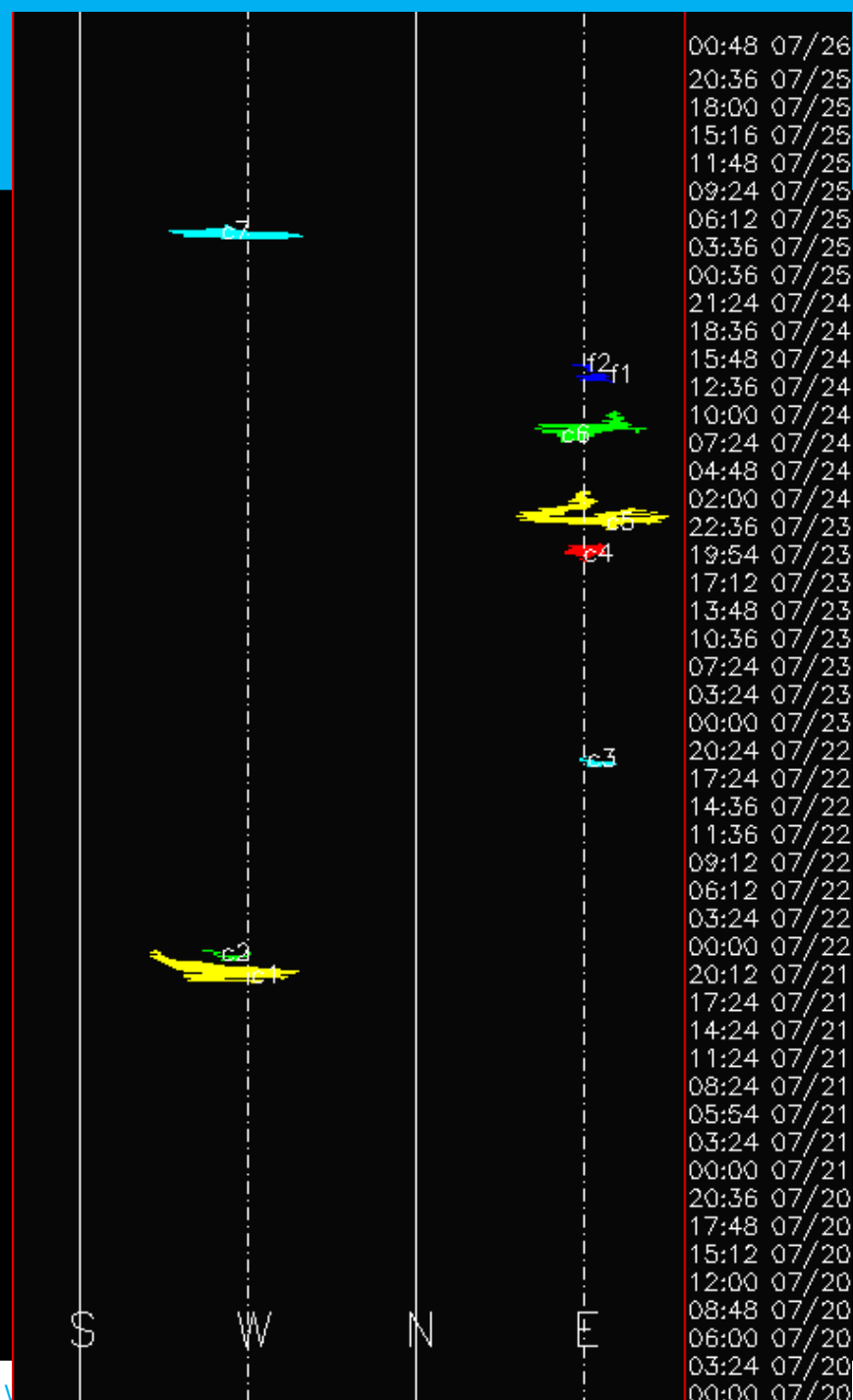
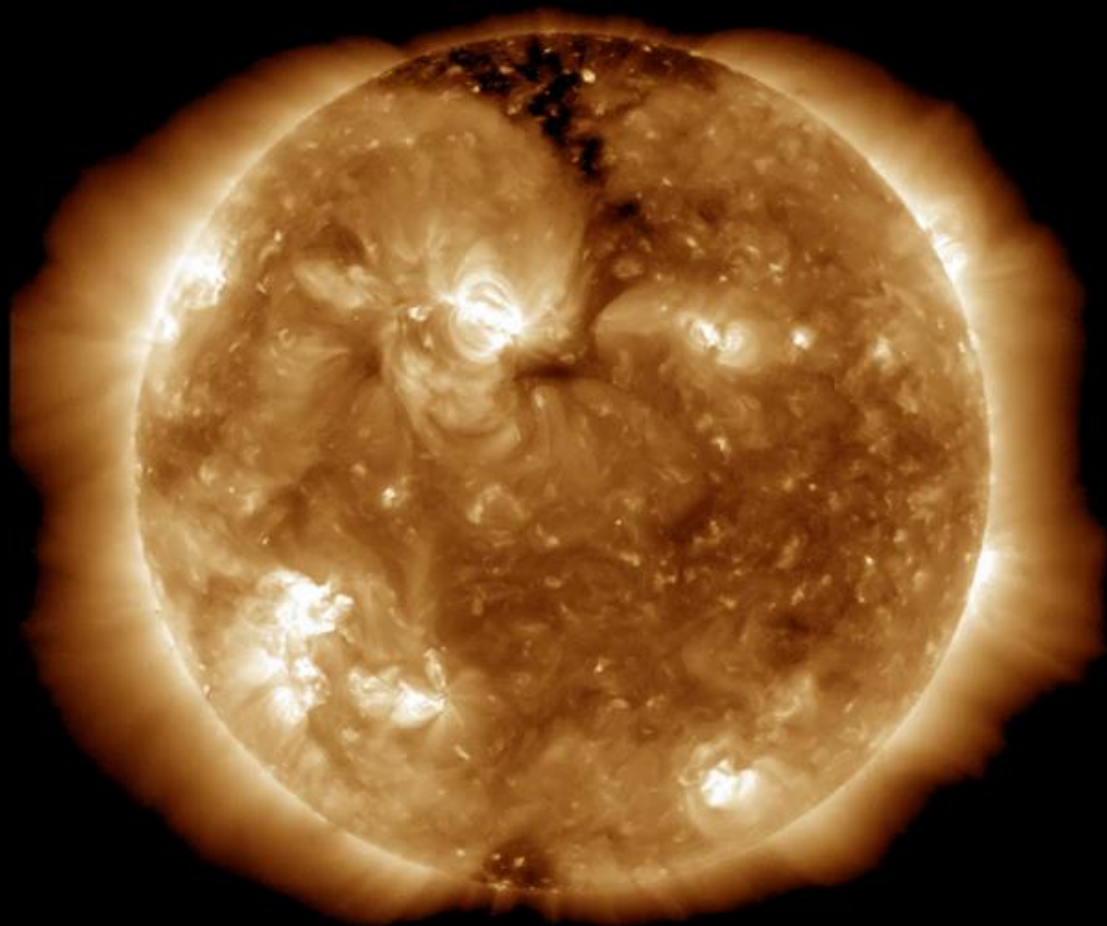


# Coronal Mass Ejections



# Coronal Mass Ejections

SDO/AIA AIA 193Å 2021-07-25T00:00:05.843





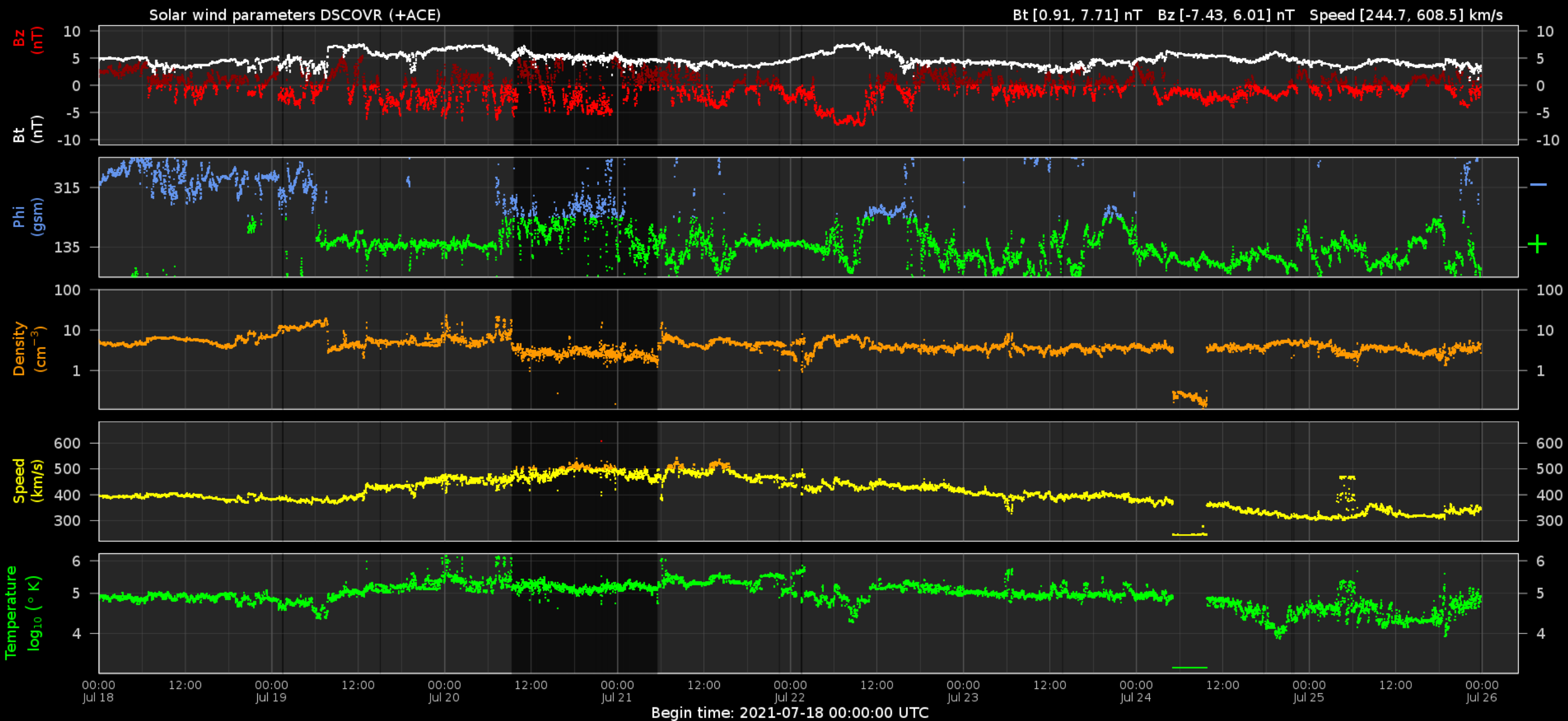
# Solar Wind and Geomagnetic Activity



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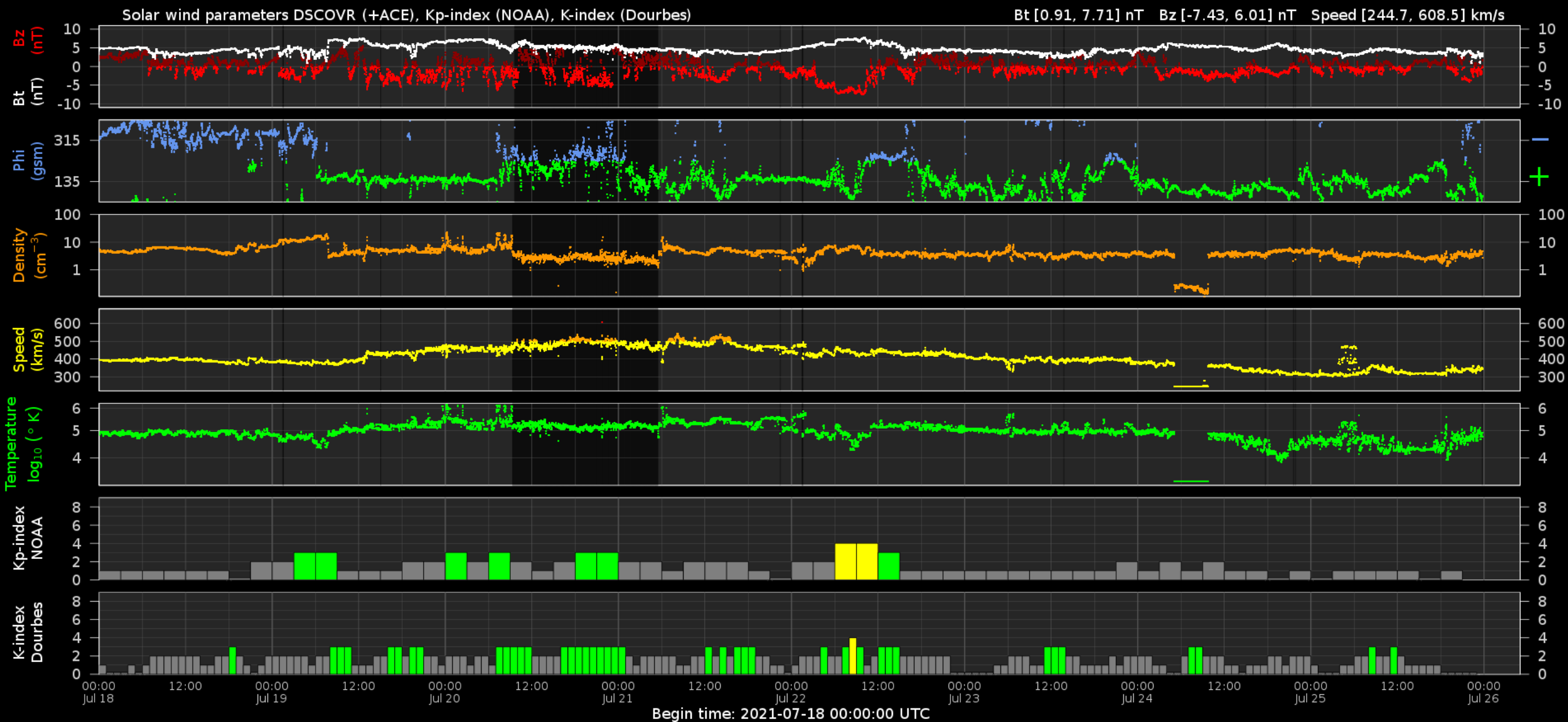
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# Solar wind parameters





# Solar wind parameters & K-indices







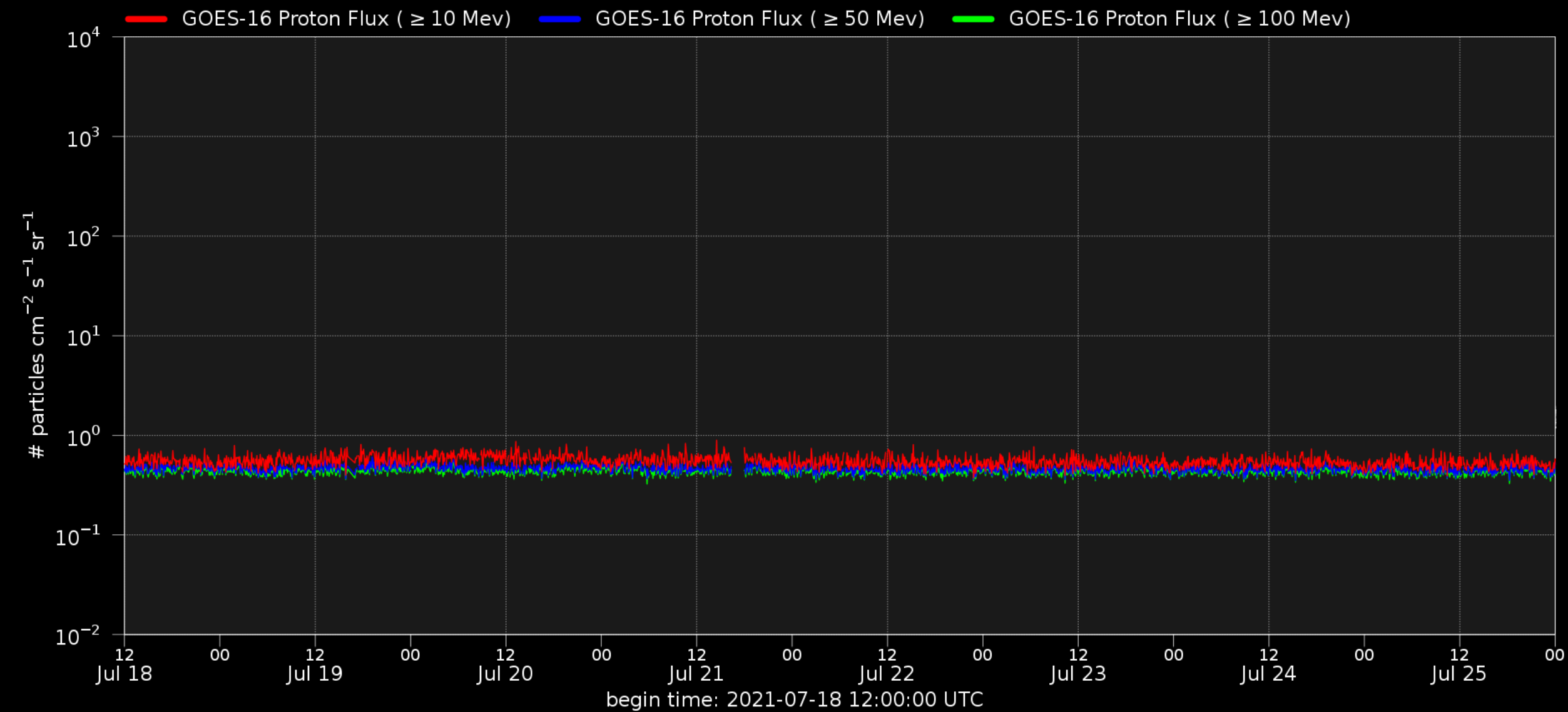
# Energetic Particles



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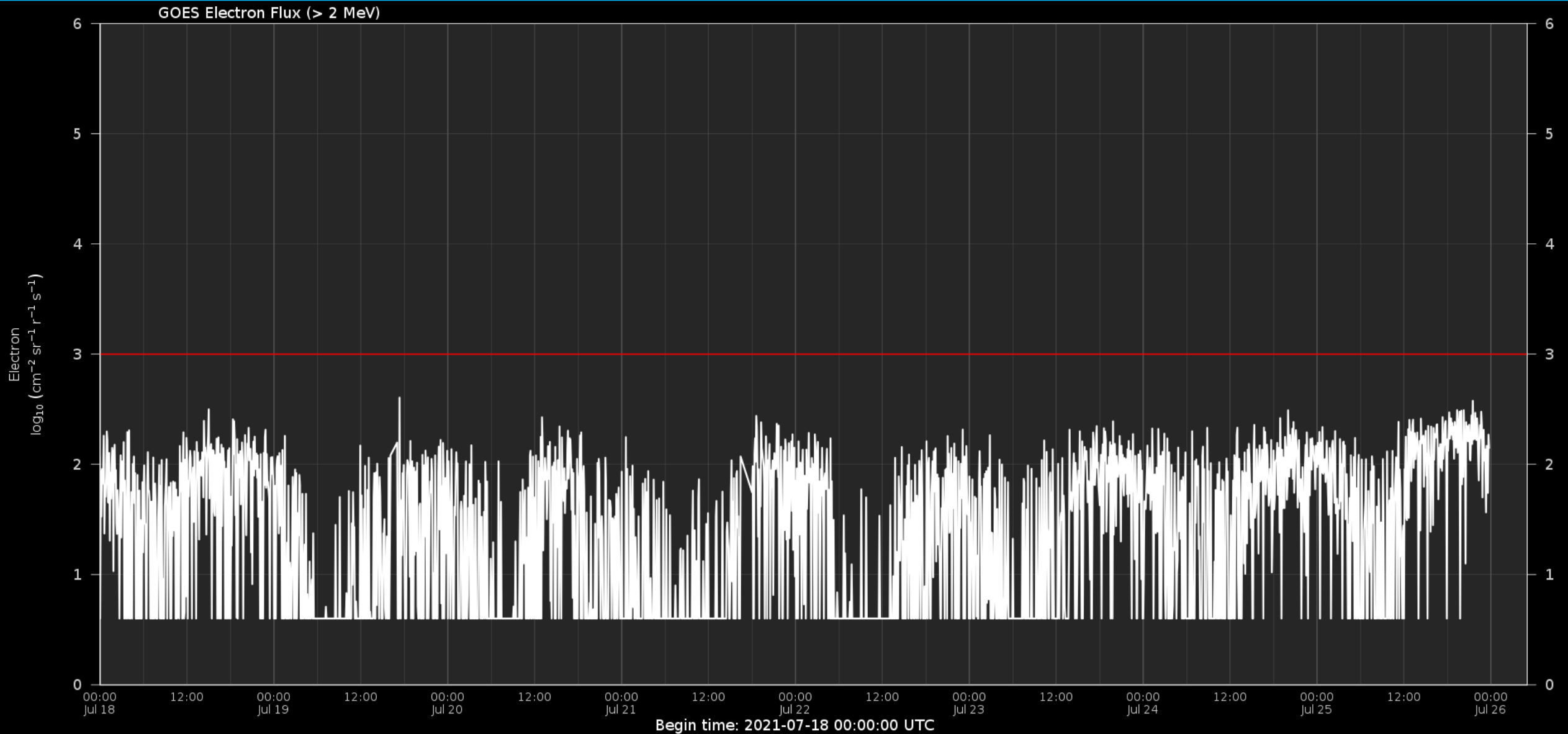
Solar Influences  
Data analysis Centre  
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# Solar proton flux





# Electron flux at GEO



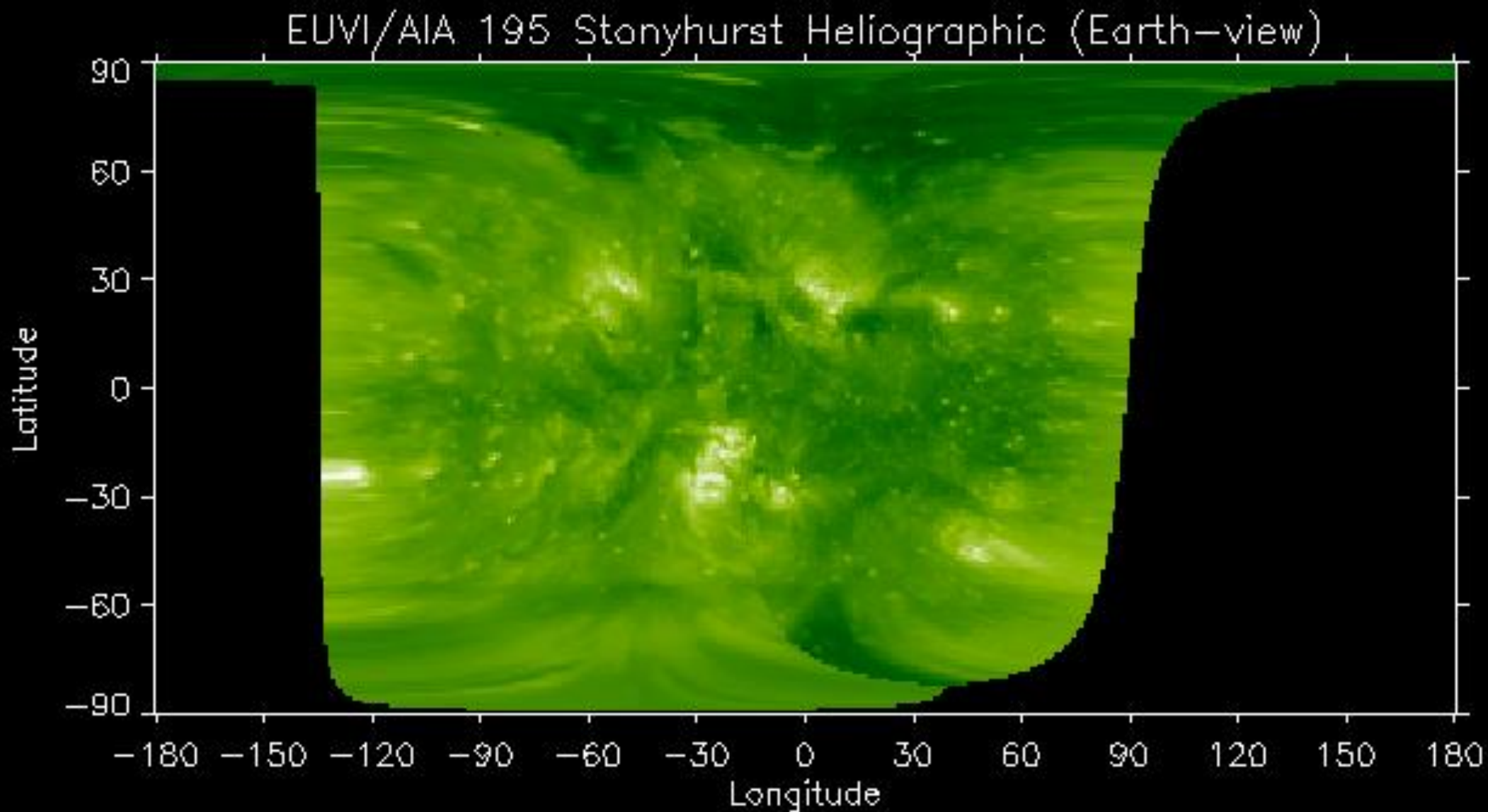
# Outlook



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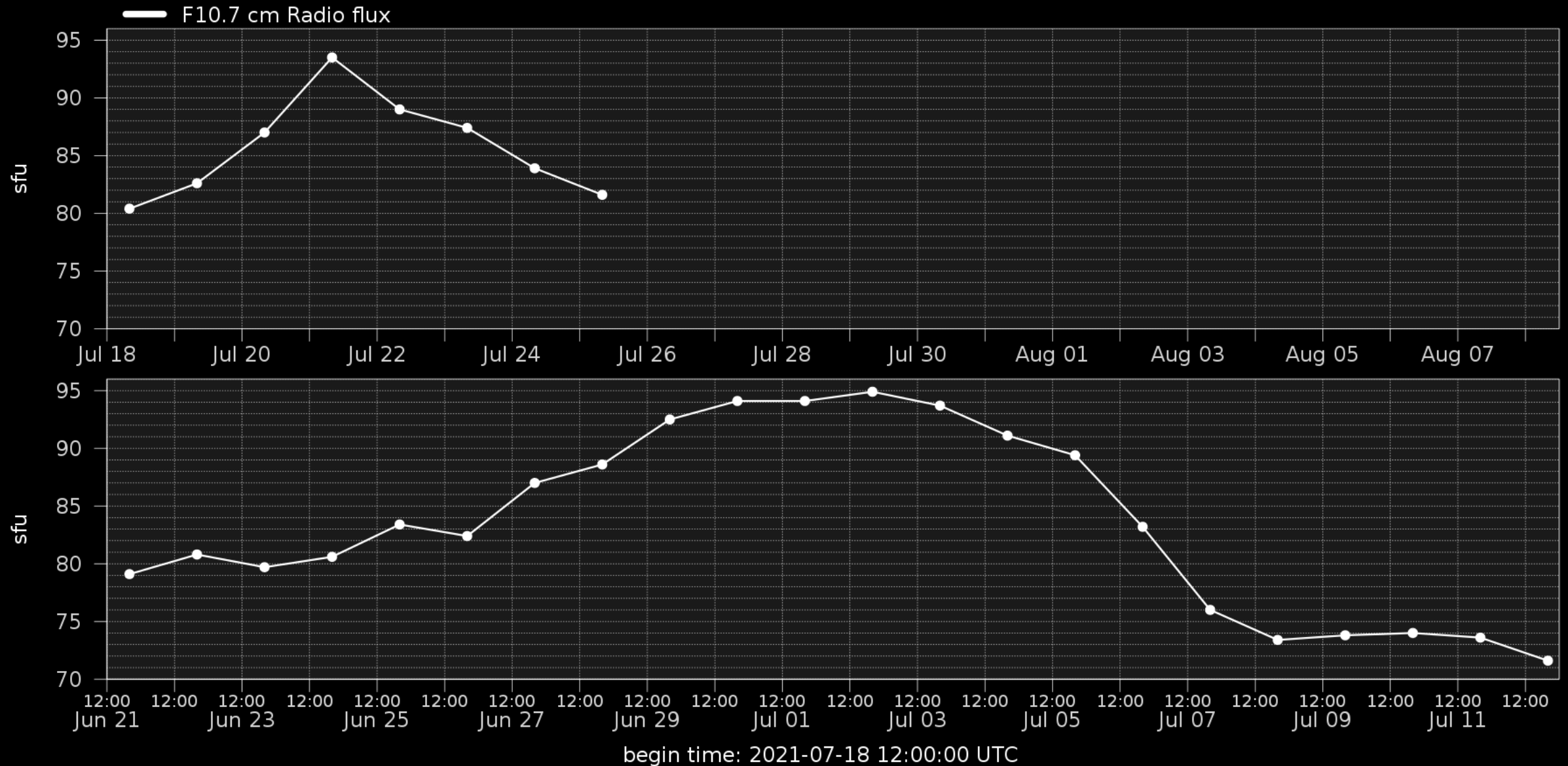
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# Outlook: Solar activity

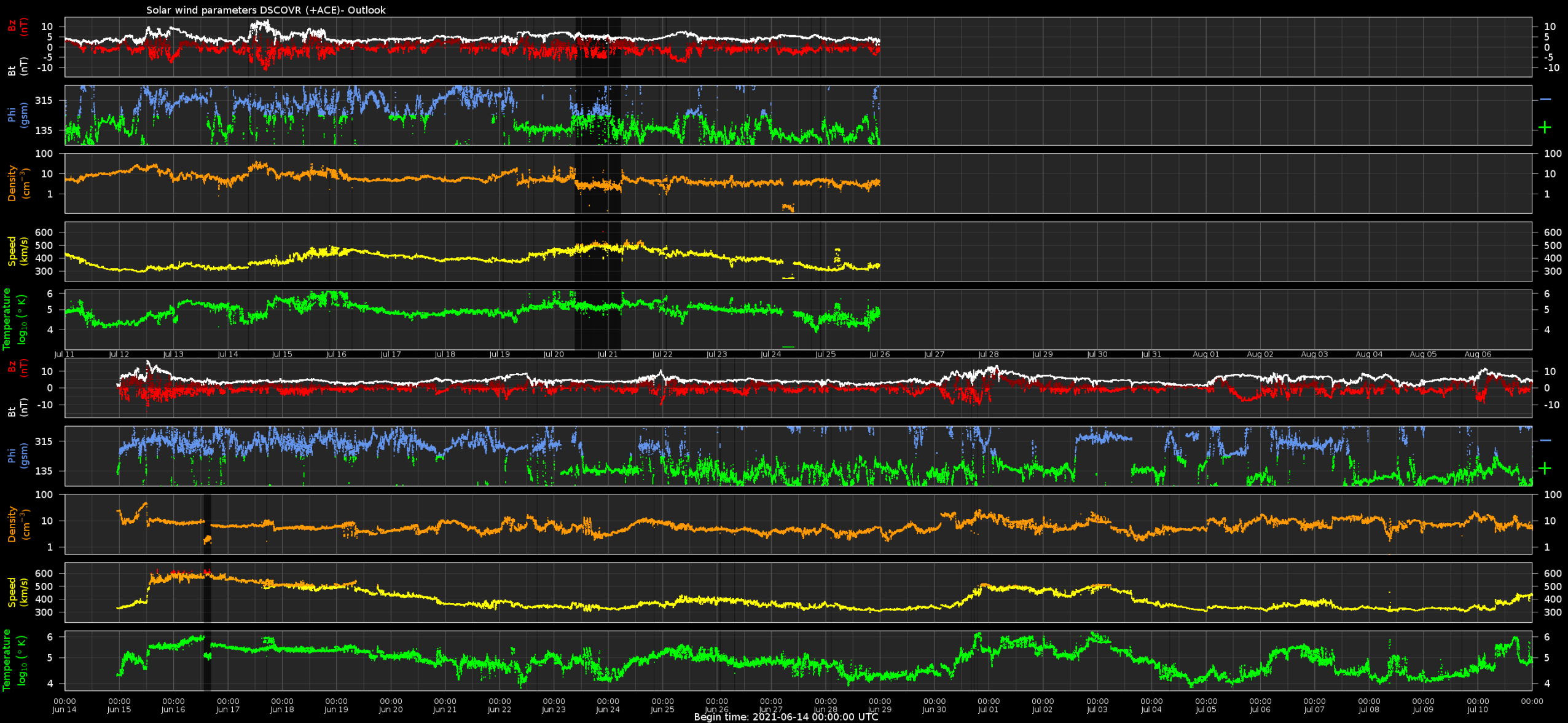




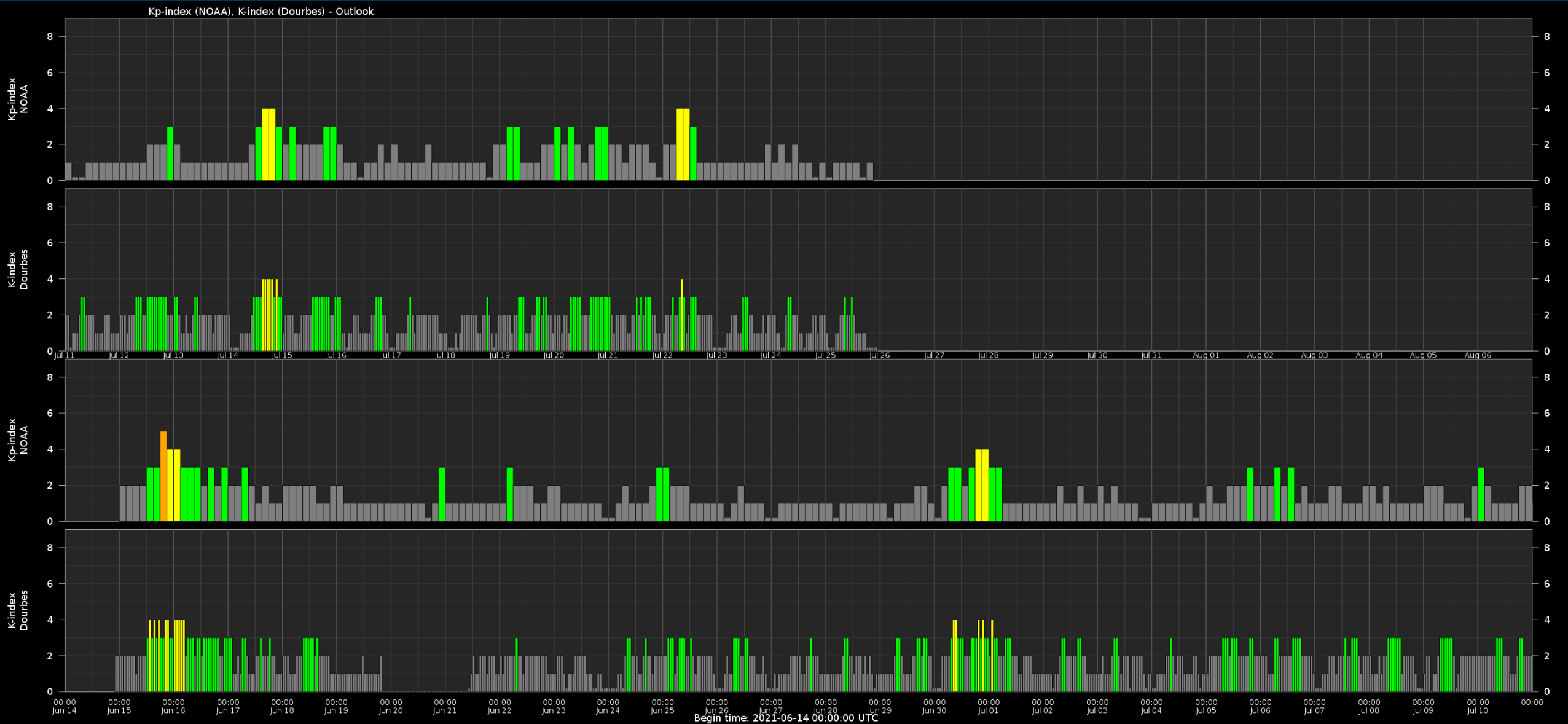
# Outlook: Solar F10.7cm radio flux



# Outlook: Solar wind parameters

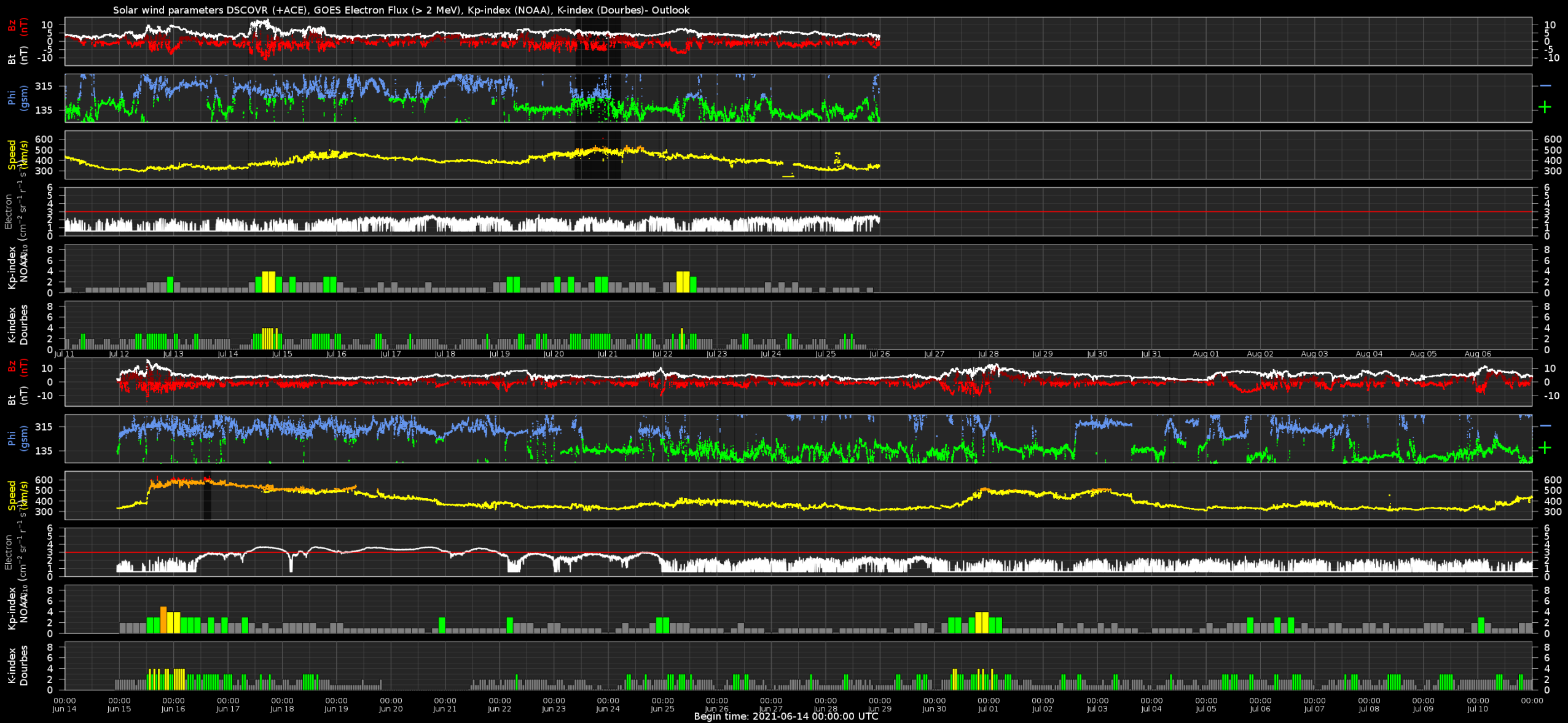


# Outlook: Geomagnetic activity





# Outlook: Electron Flux at GEO Outlook



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