

# SIDC Space Weather Briefing

26 July 2020 - 02 August 2020

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& the SIDC forecaster team



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

# Summary Report

Solar activity from 2020-07-26 12:00 UT to 2020-08-02 12:00 UT

Active regions	3 active regions Catania 37/NOAA-AR 2767, NOAA-AR 2768 and NOAA-AR 2769
Flaring	# B-class flare: 1 # C-class flare: 0 # M-class flare: 0 # X-class flare: 0
Filaments	2-3 filaments
CMEs	3 CMEs, no Earth-directed
Proton Events	None observed

Solar wind and geomagnetic conditions from 2020-07-26 12:00 UT to 2020-08-02 12:00 UT

Coronal Holes	1 positive polarity CH 64, crossed July 30th
ICME	3 ICMEs, no Earth-directed
SW Conditions	CIR and HSS from CH 64, arrived Aug 2nd
K-indices	max K-index (Dourbes): 3.0 max Kp-index (NOAA): 3

All Quiet Alert: Off (Quiet)

# Solar Activity

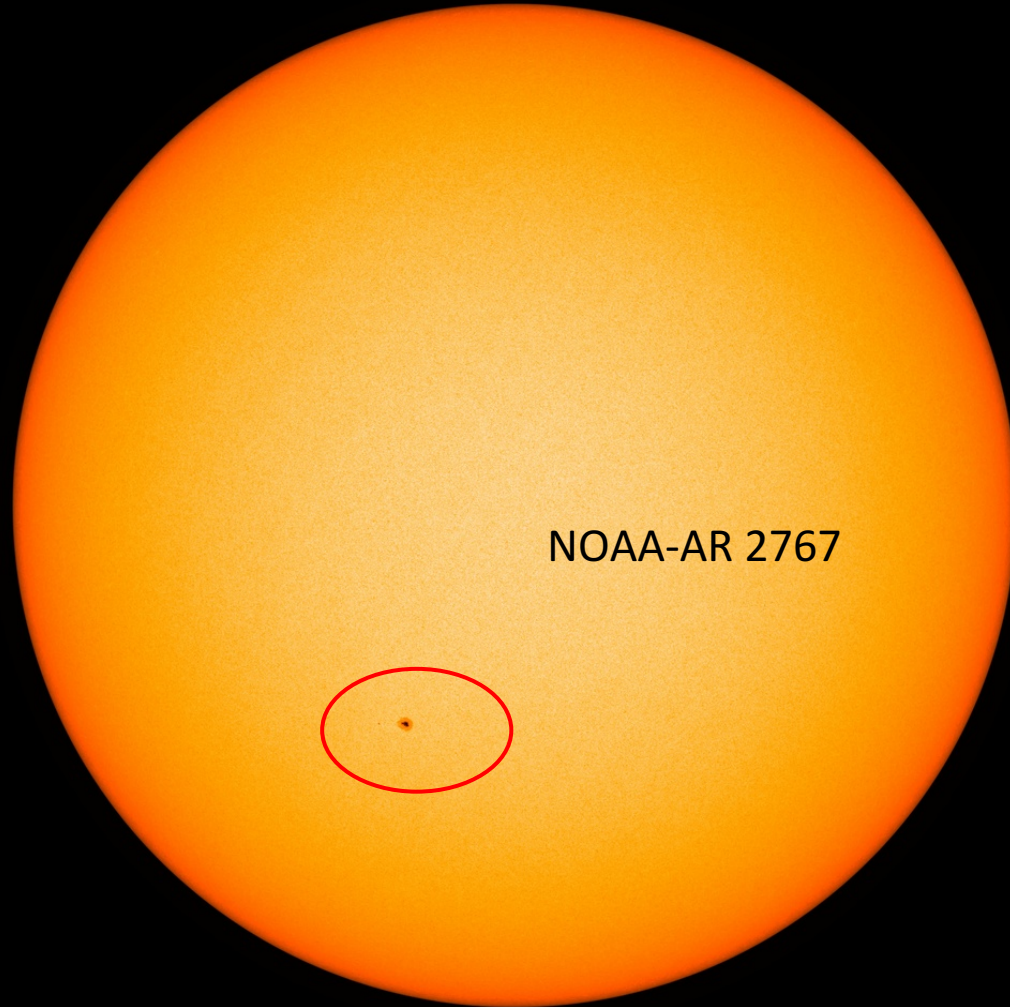


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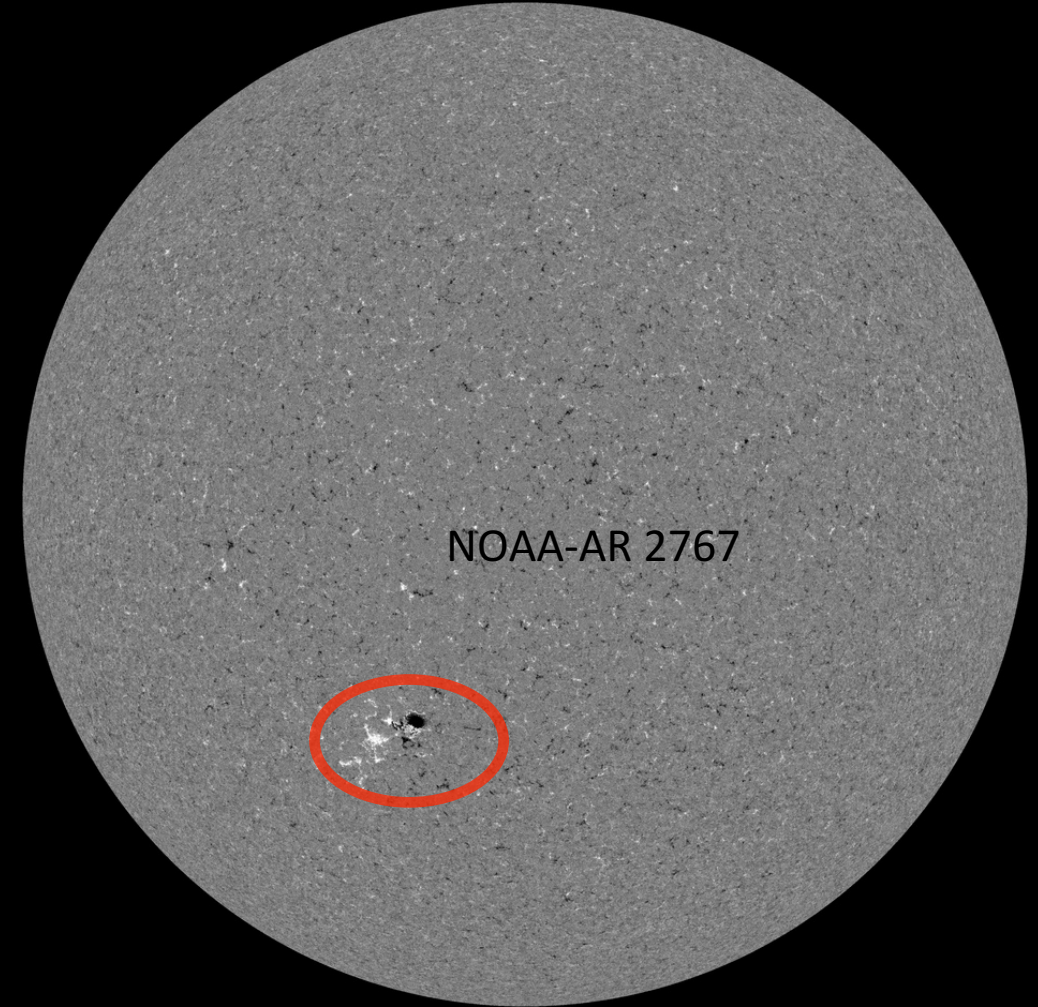
# Solar active region - start of the week

SDO/HMI White Light 2020-07-26



SDO/HMI Quick-Look Continuum: 20200726\_114500

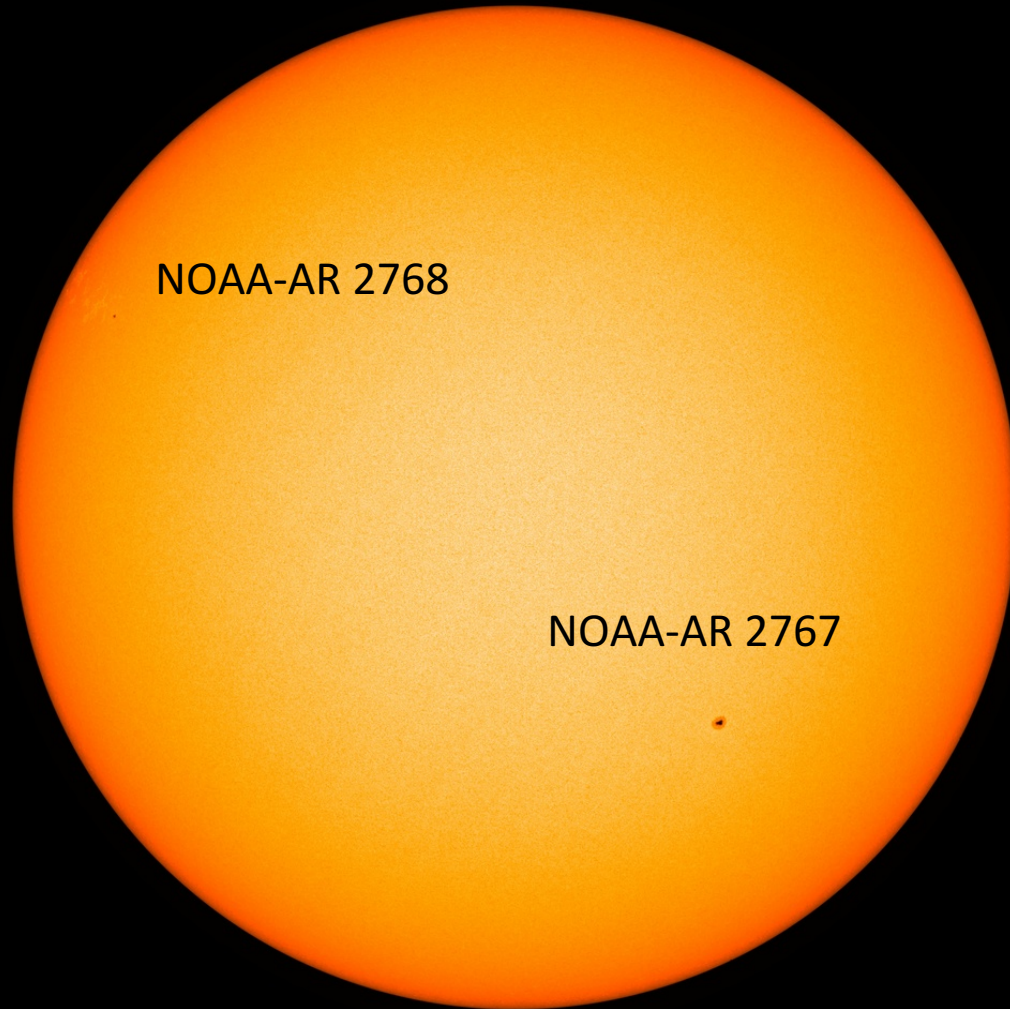
SDO/HMI Magnetogram 2020-07-26



SDO/HMI Quick-Look Magnetogram: 20200726\_114500

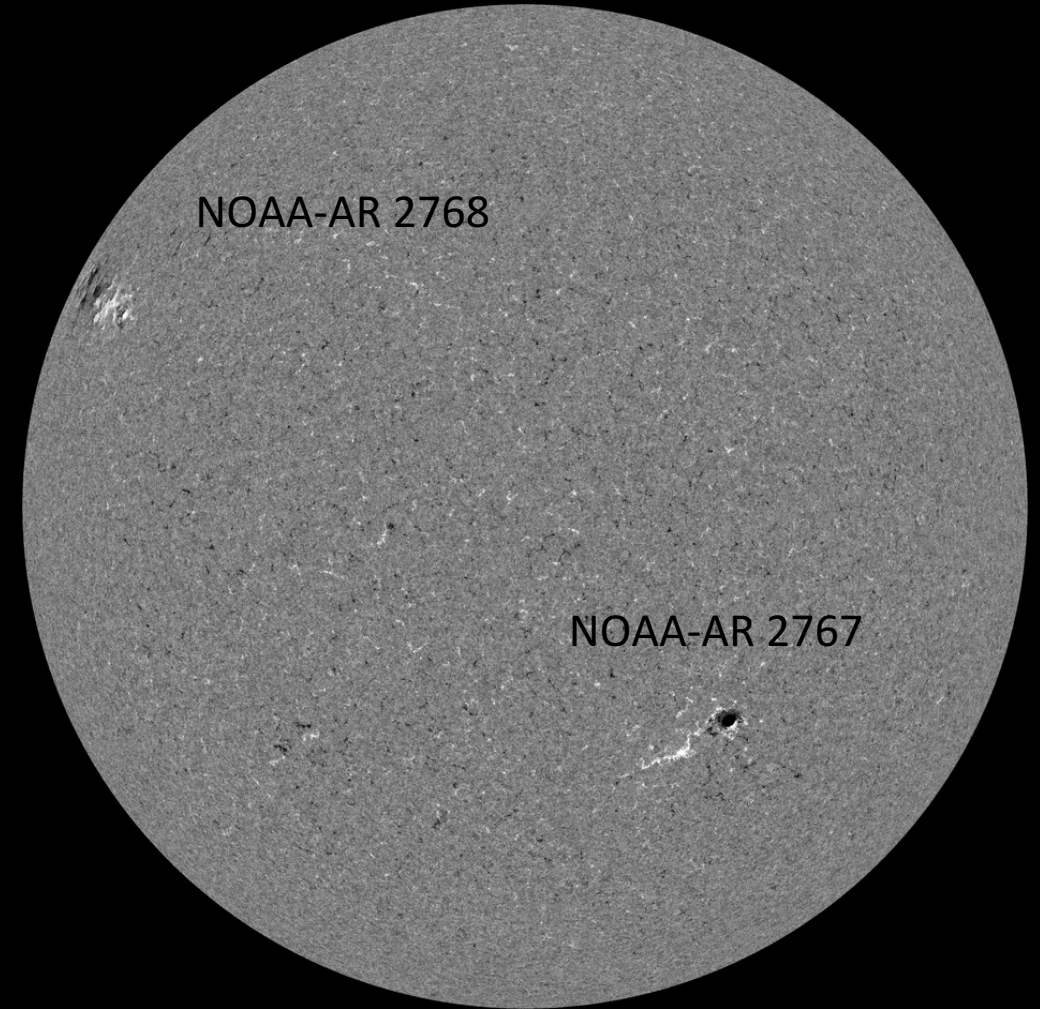
# Solar active region - middle of the week

SDO/HMI White Light 2020-07-29



SDO/HMI Quick-Look Continuum: 20200729\_113000

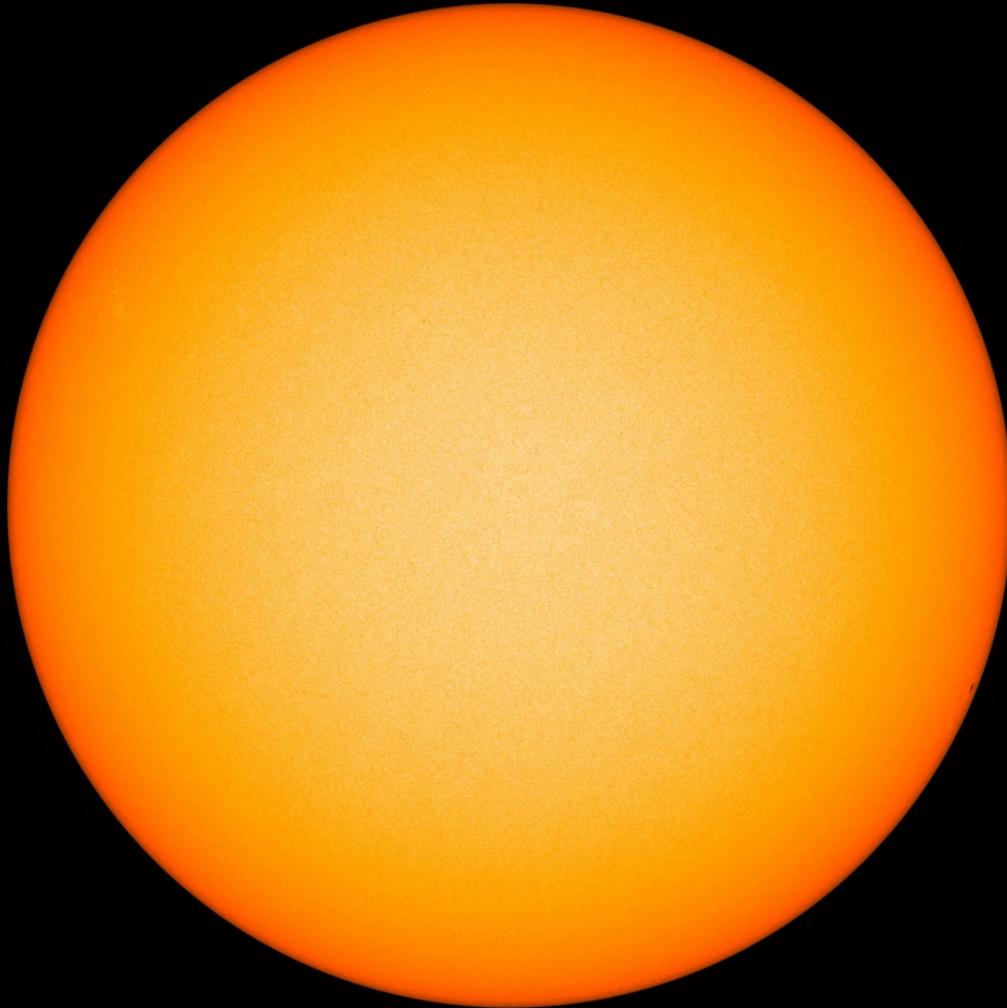
SDO/HMI Magnetogram 2020-07-29



SDO/HMI Quick-Look Magnetogram: 20200729\_113000

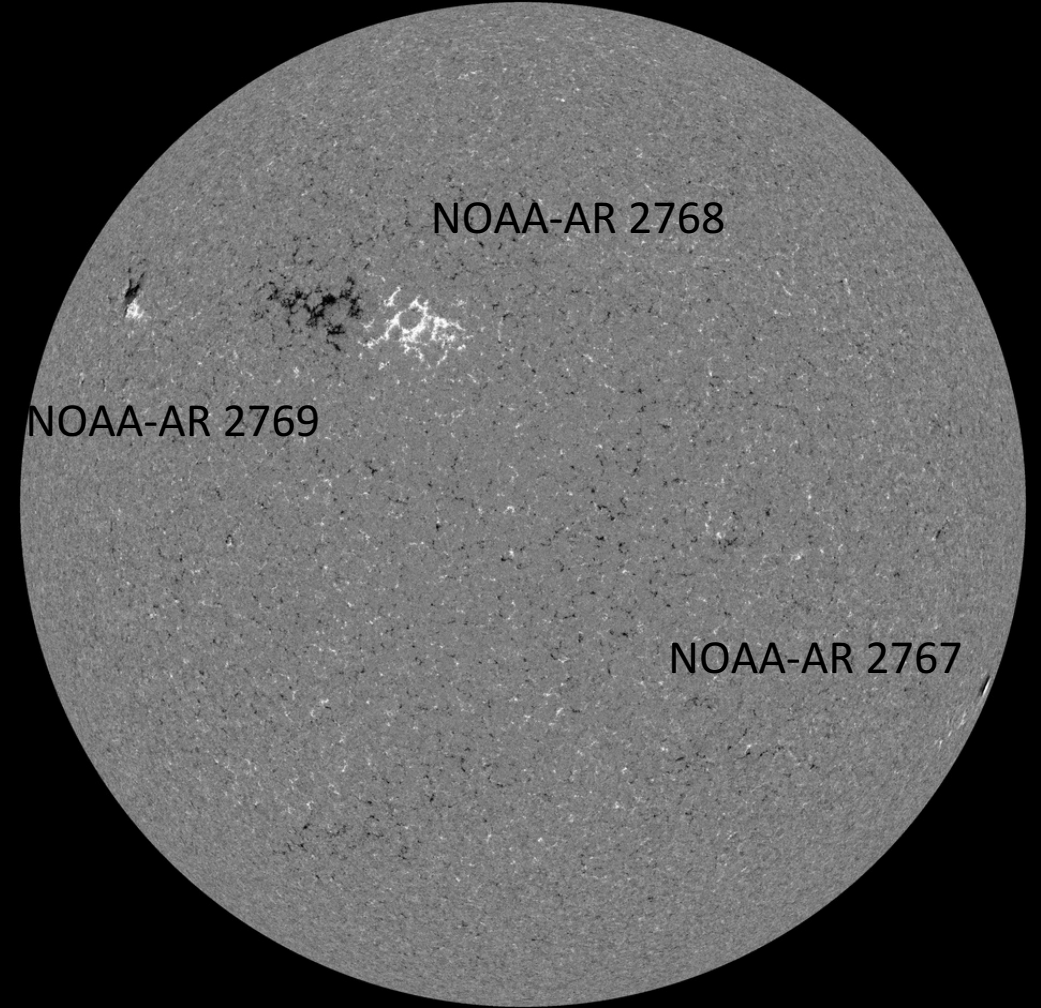
# Solar active region - end of the week

SDO/HMI White Light 2020-08-02



SDO/HMI Quick-Look Continuum: 20200802\_114500

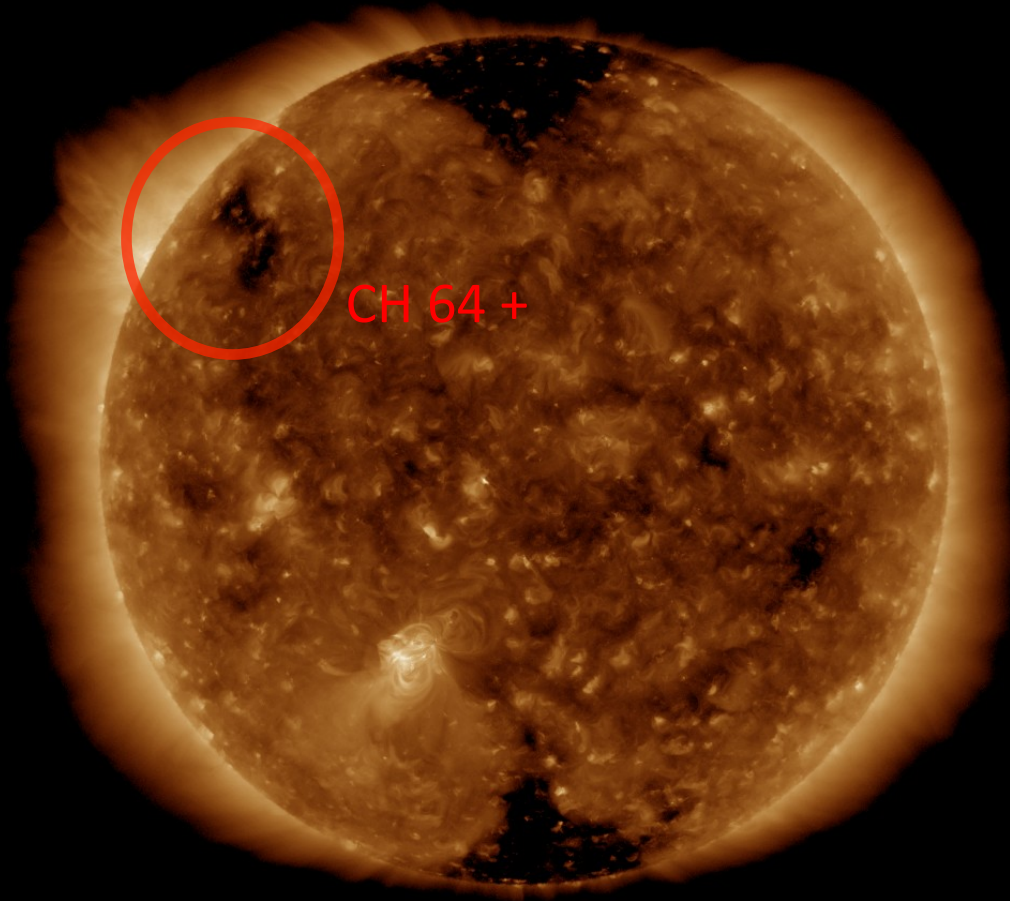
SDO/HMI Magnetogram 2020-08-02



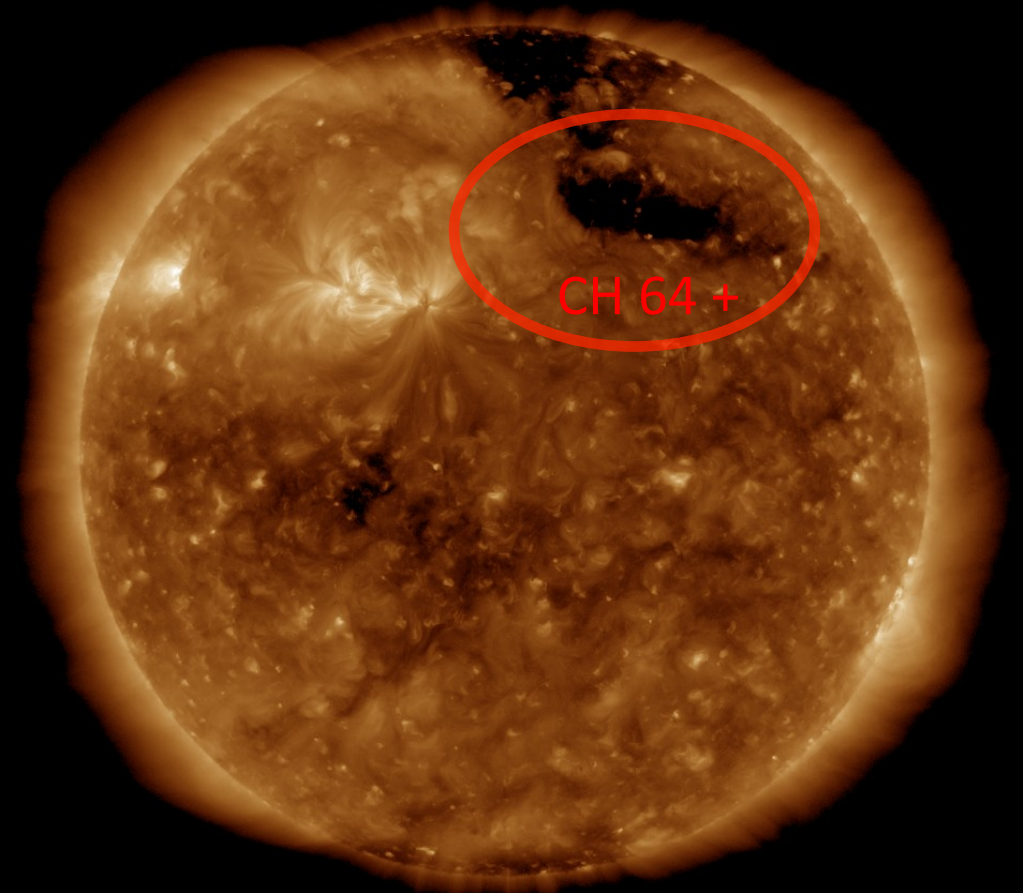
SDO/HMI Quick-Look Magnetogram: 20200802\_114500

# Solar active region & Coronal hole

SDO/AIA 19.3 nm 2020-07-26



SDO/AIA 19.3 nm 2020-08-02

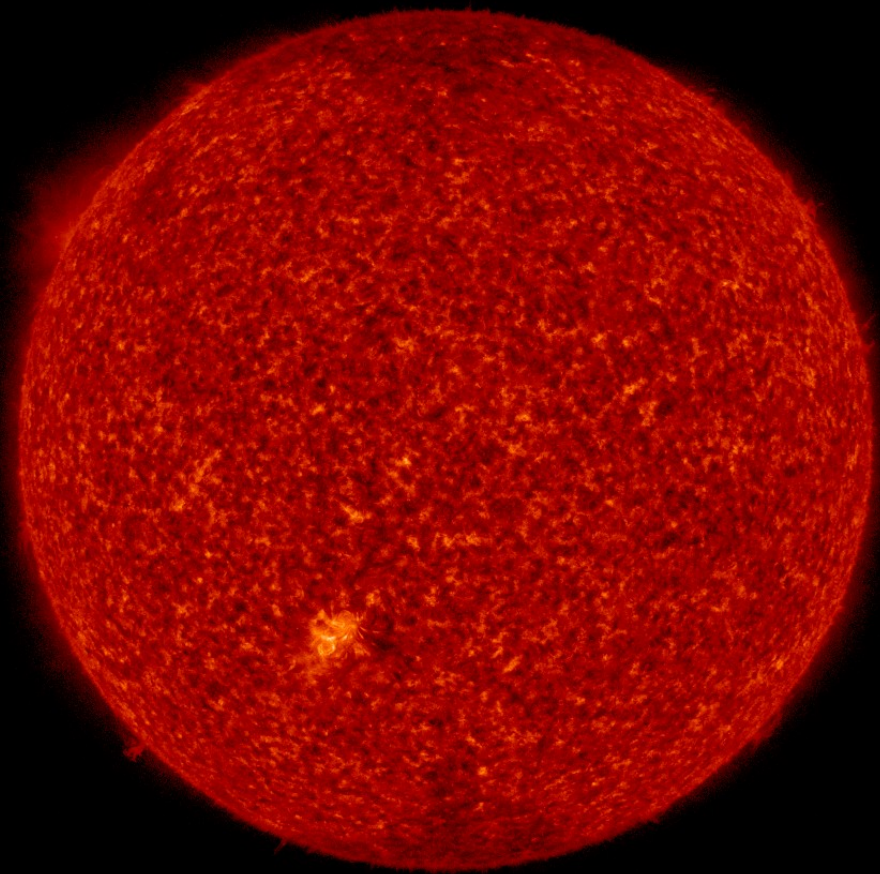


SDO/AIA 193 2020-07-26 12:17:17 UT

SDO/AIA 193 2020-08-02 12:17:05 UT

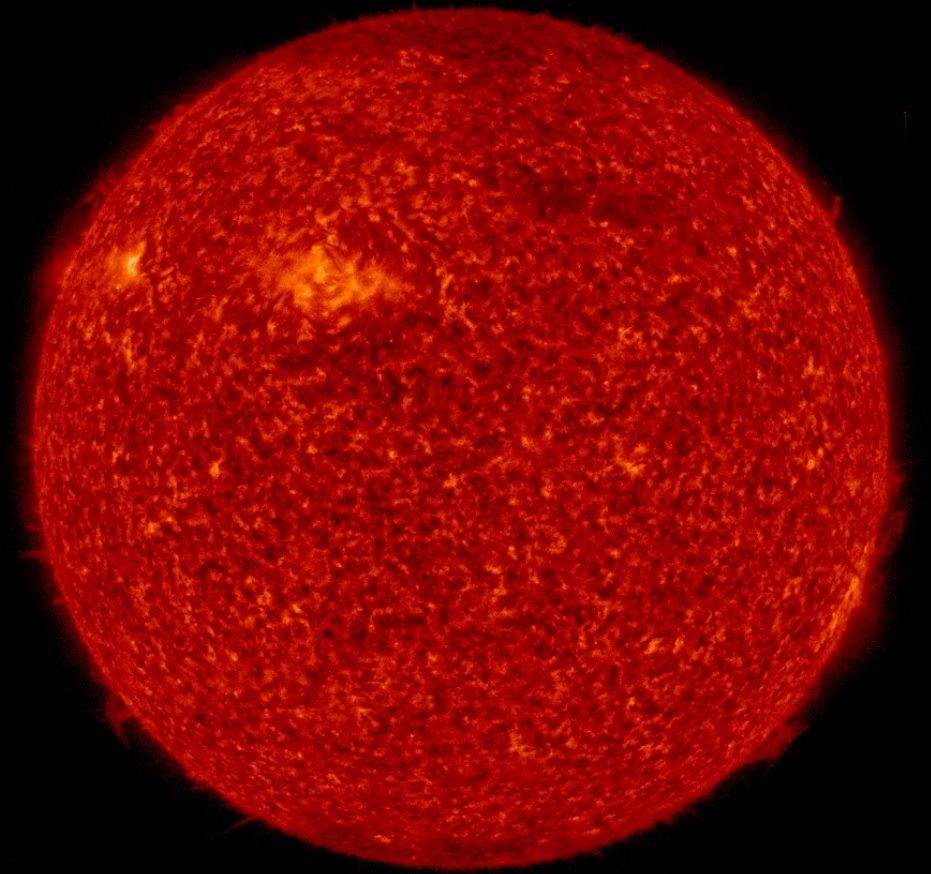
# Solar active region & Filament

SDO/AIA 30.4 nm 2020-07-26



SDO/AIA 304 2020-07-26 12:18:42 UT

SDO/AIA 30.4 nm 2020-08-02



SDO/AIA 304 2020-08-02 12:17:42 UT



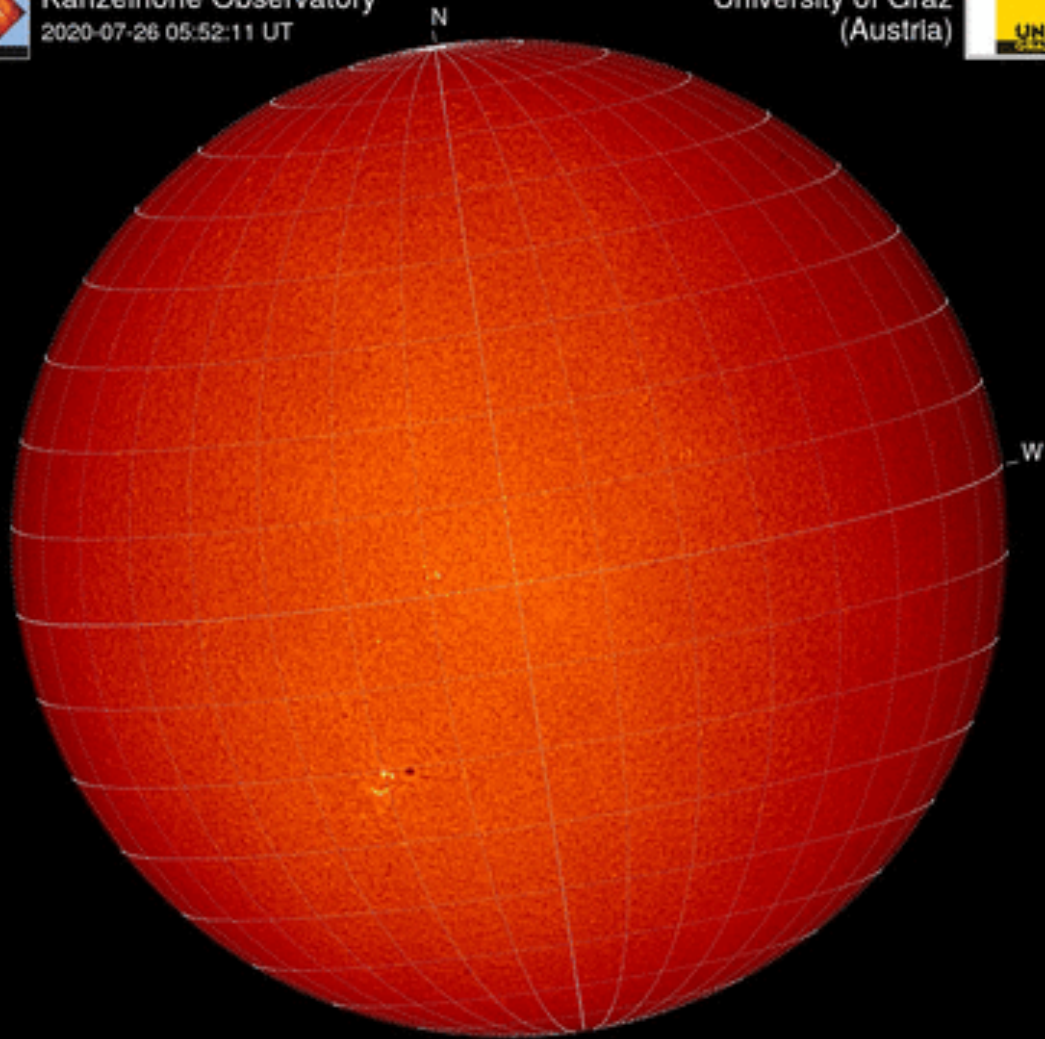
# Filament & Filament eruption

H-alpha 2020-07-26



Kanzelhöhe Observatory  
2020-07-26 05:52:11 UT

University of Graz  
(Austria)

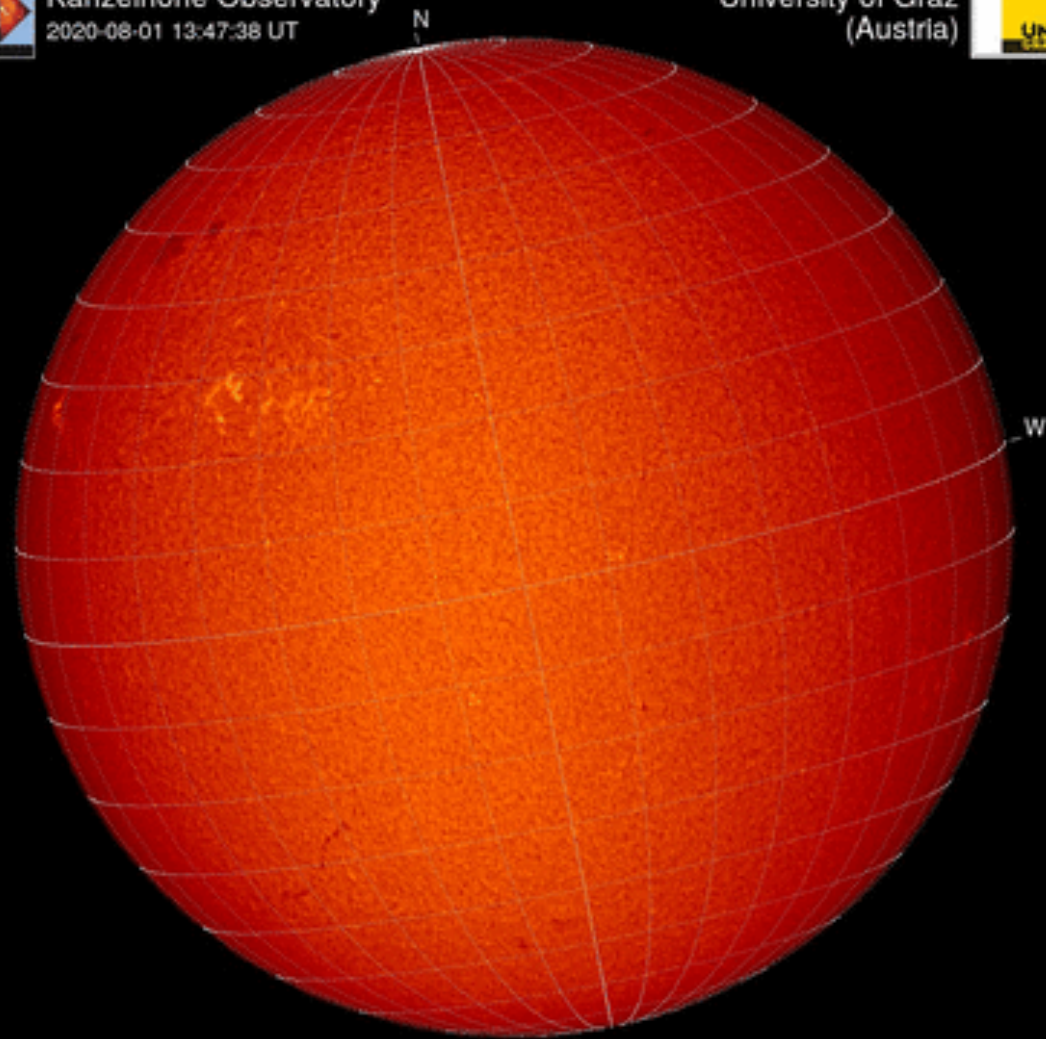


H-alpha 2020-08-02

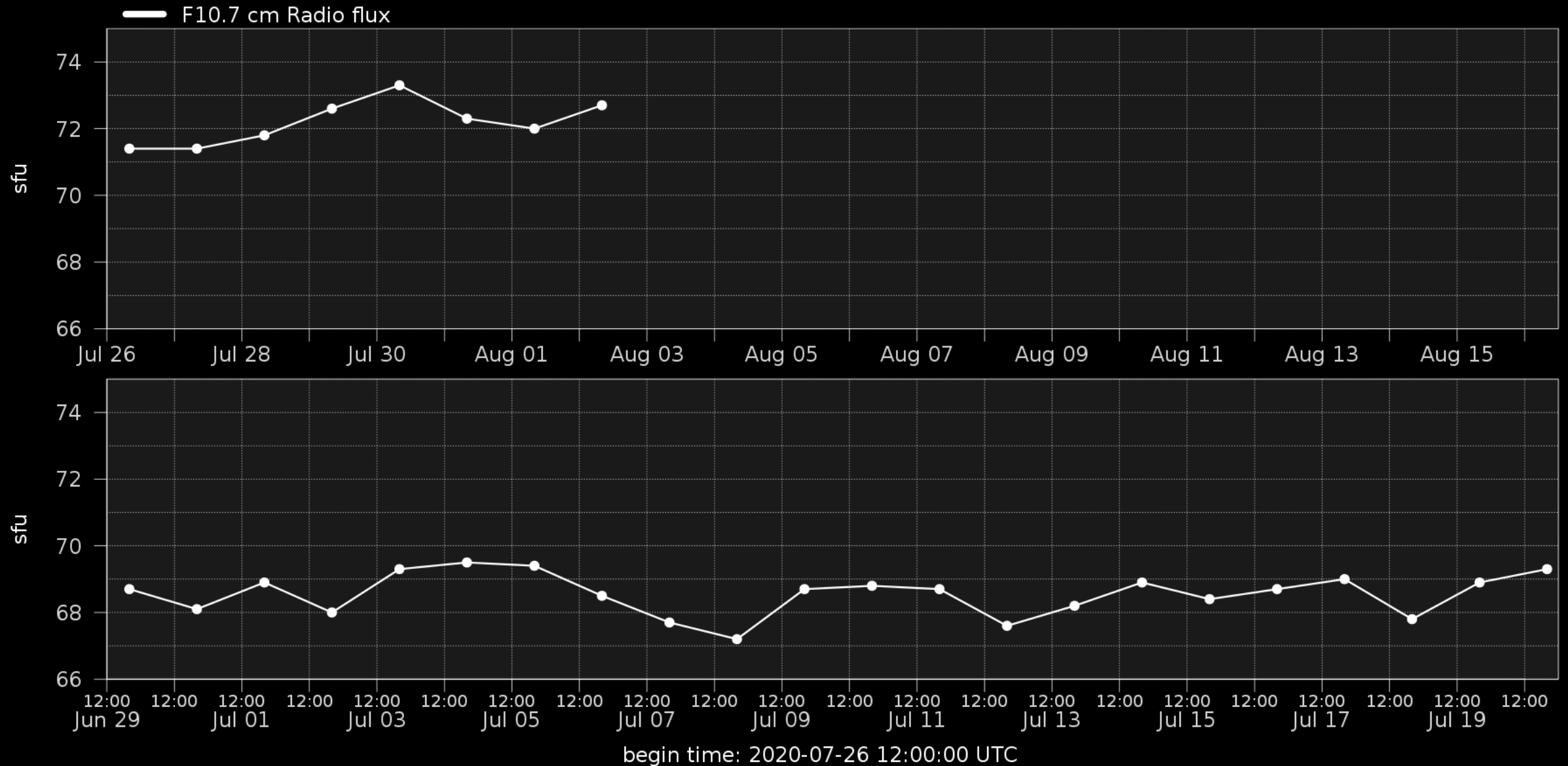


Kanzelhöhe Observatory  
2020-08-01 13:47:38 UT

University of Graz  
(Austria)



# Solar F10.7cm radio flux



# Solar X-Ray flux

## GOES X-Ray Flux (1-minute data)



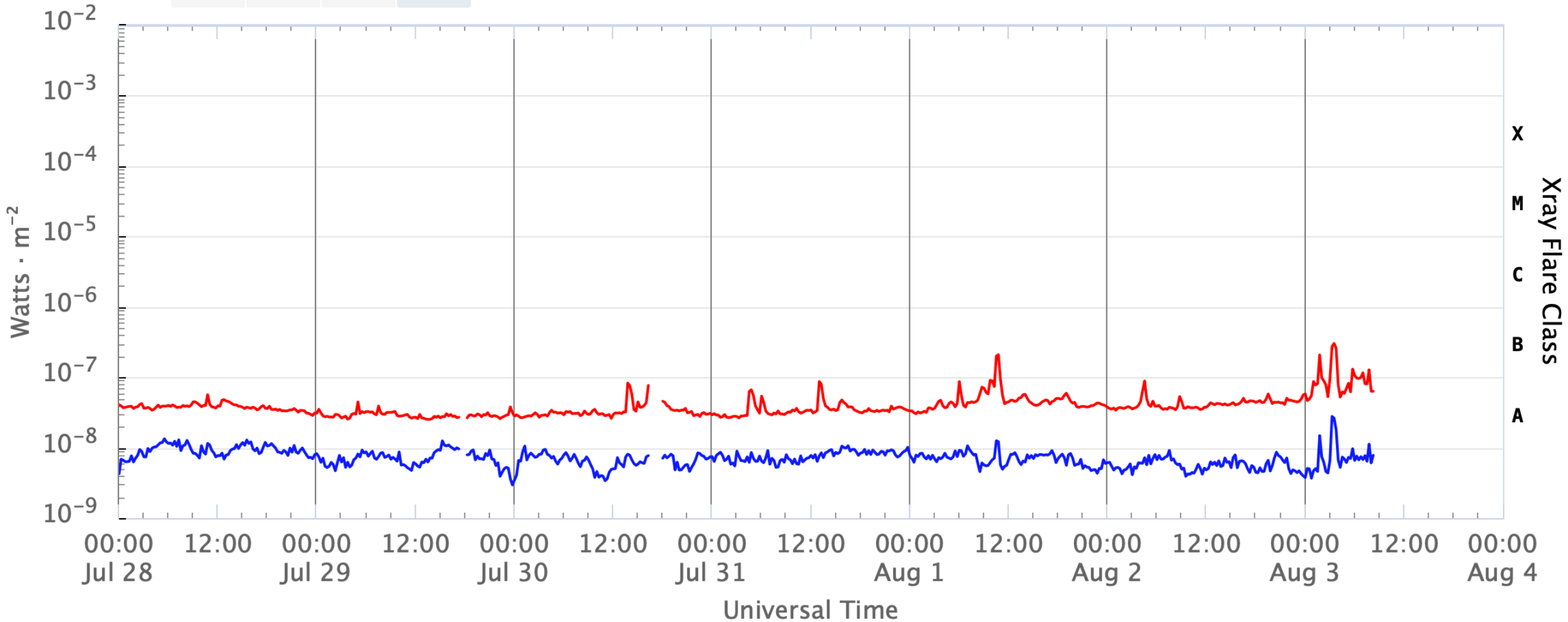
Zoom

6 Hour

1 Day

3 Day

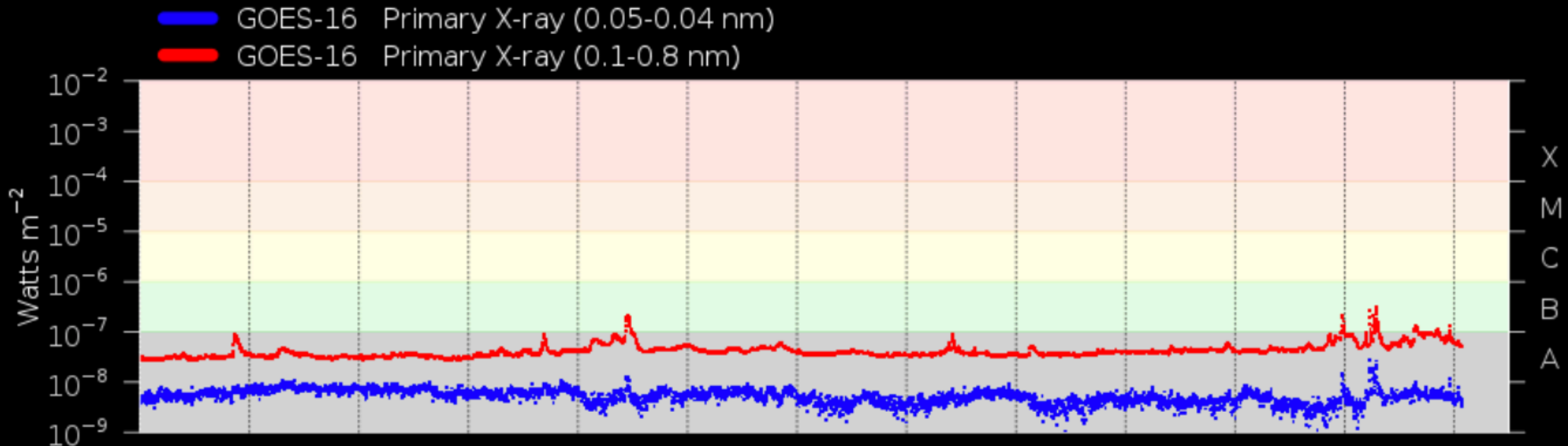
7 Day



— GOES-16 Long — GOES-16 Short — No Data Long — No Data Short

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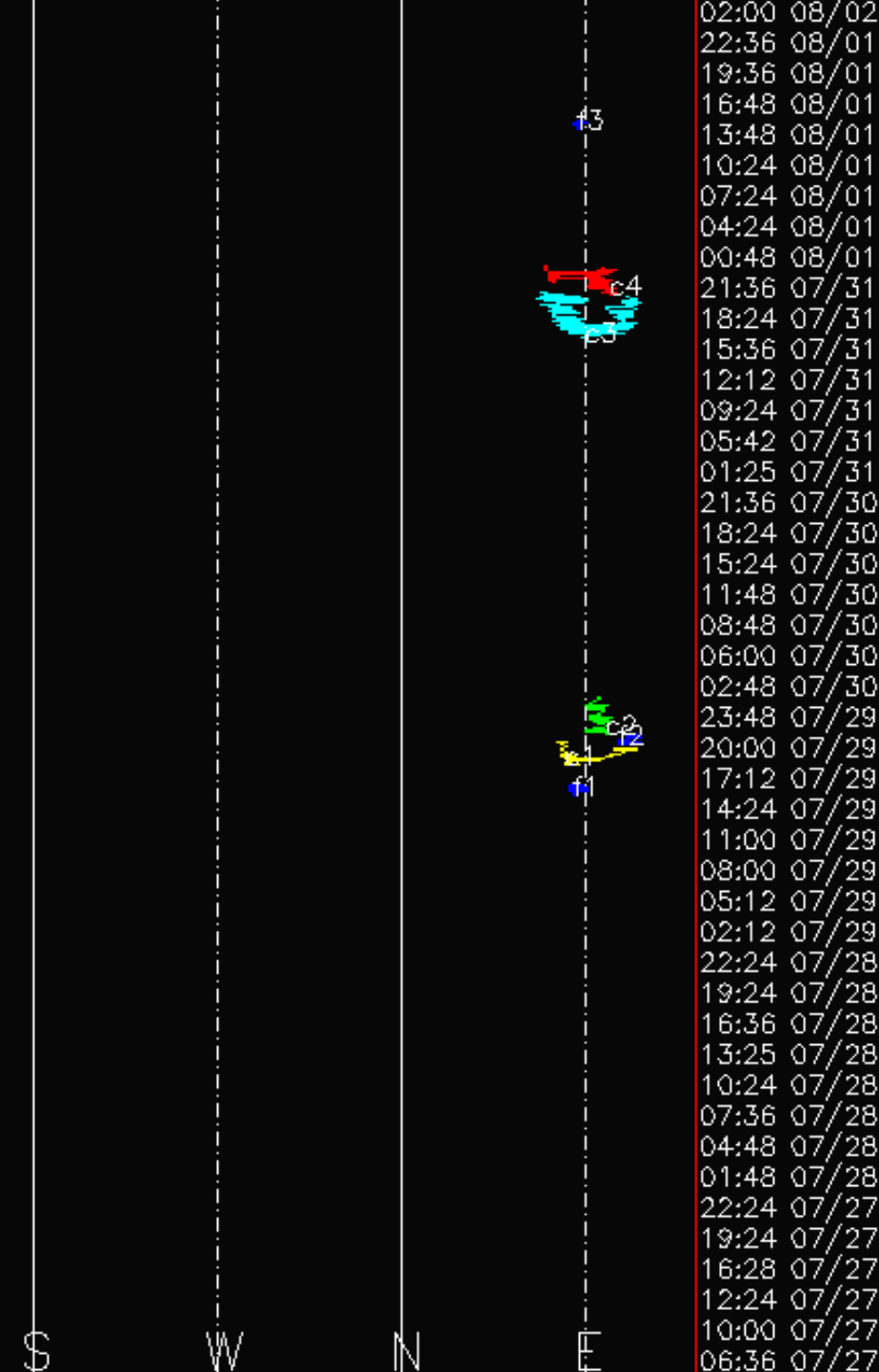
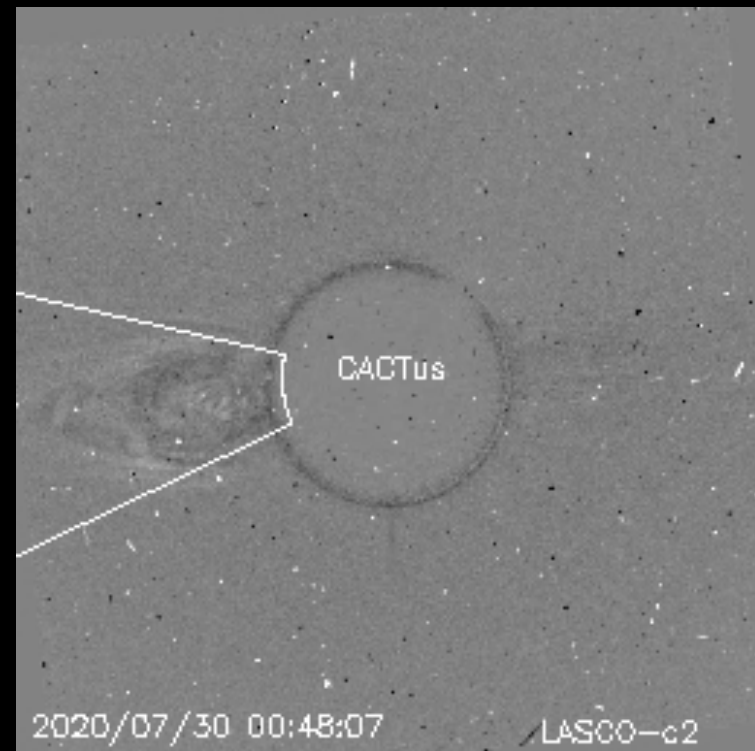
# Flaring activity



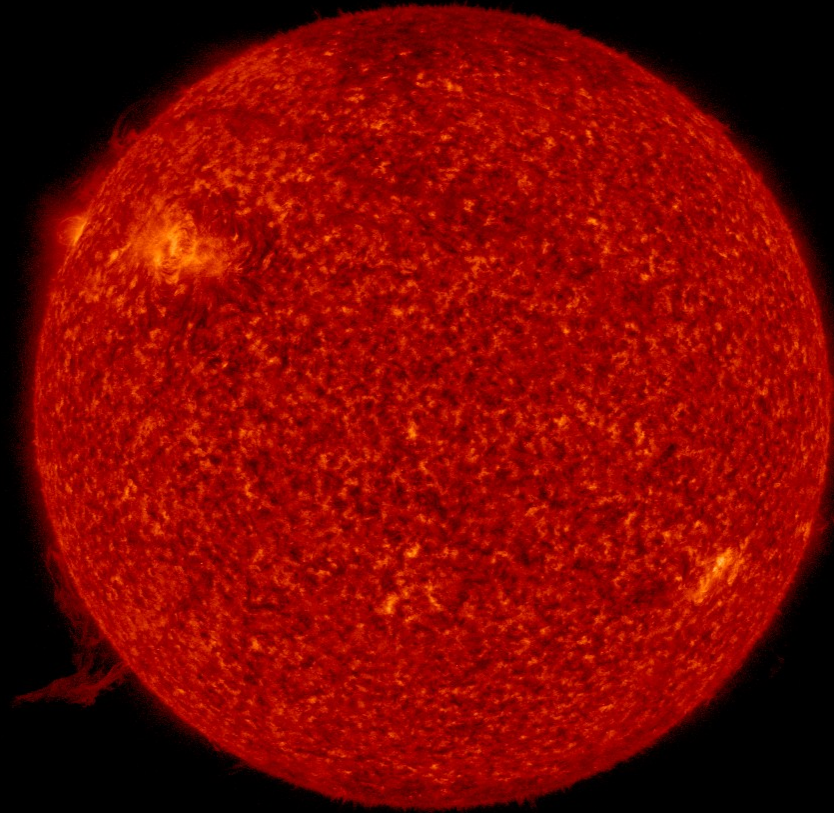
Probabilities (%) and occurrences (#) of B/C/M/X-flares issued at 12:30 and over the next 24h:

Issue date	2020-07-26	2020-07-27	2020-07-28	2020-07-29	2020-07-30	2020-07-31	2020-08-01	2020-08-02
Probability	--- 05 01 01	--- 10 05 01	--- 10 05 01	--- 15 10 01	--- 10 05 01	--- 15 05 01	--- 15 05 01	--- 15 01 01
Observed	00 00 00 00	00 00 00 00	00 00 00 00	00 00 00 00	00 00 00 00	00 00 00 00	01 00 00 00	00 00 00 00

# Coronal Mass Ejections

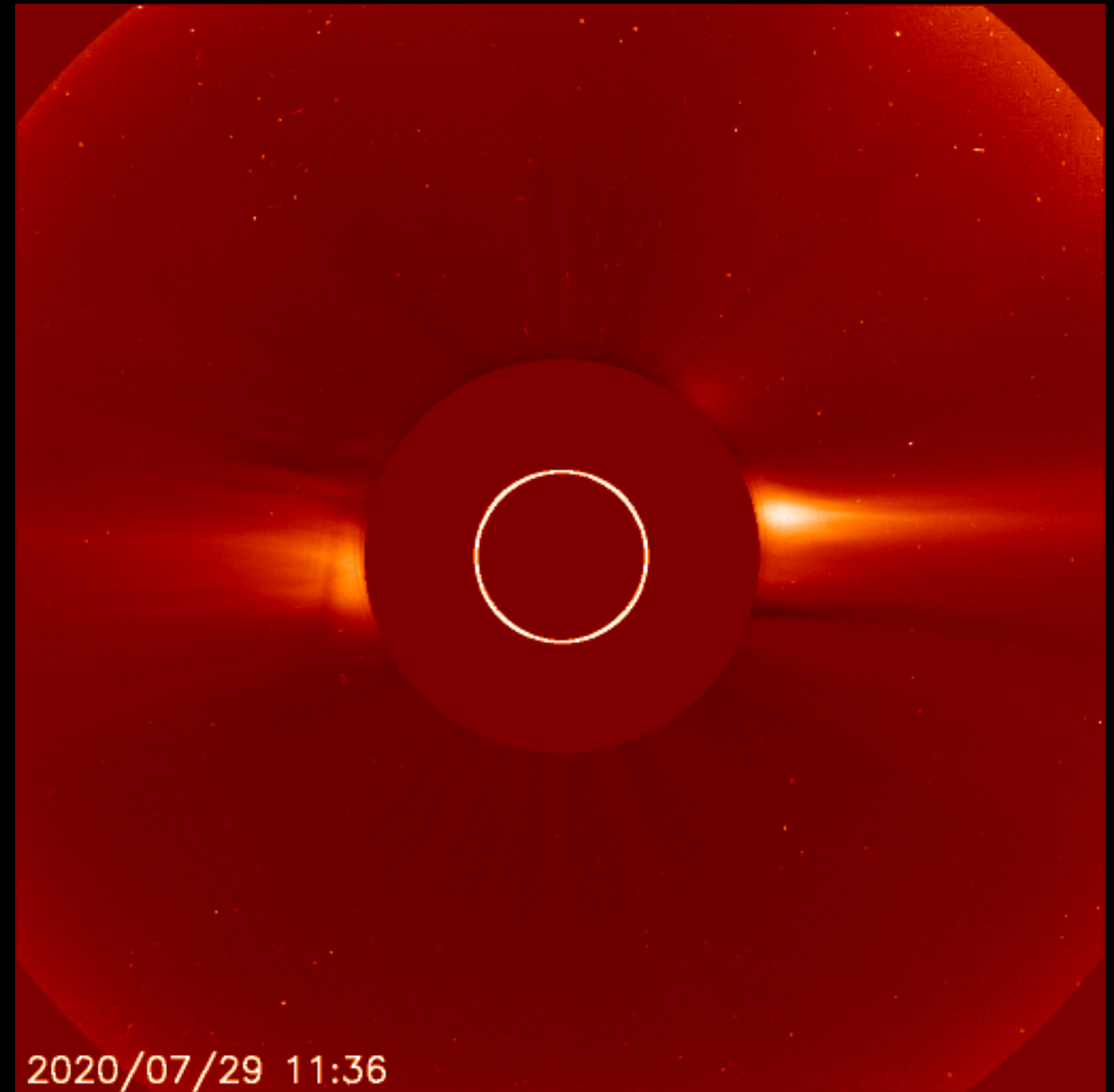
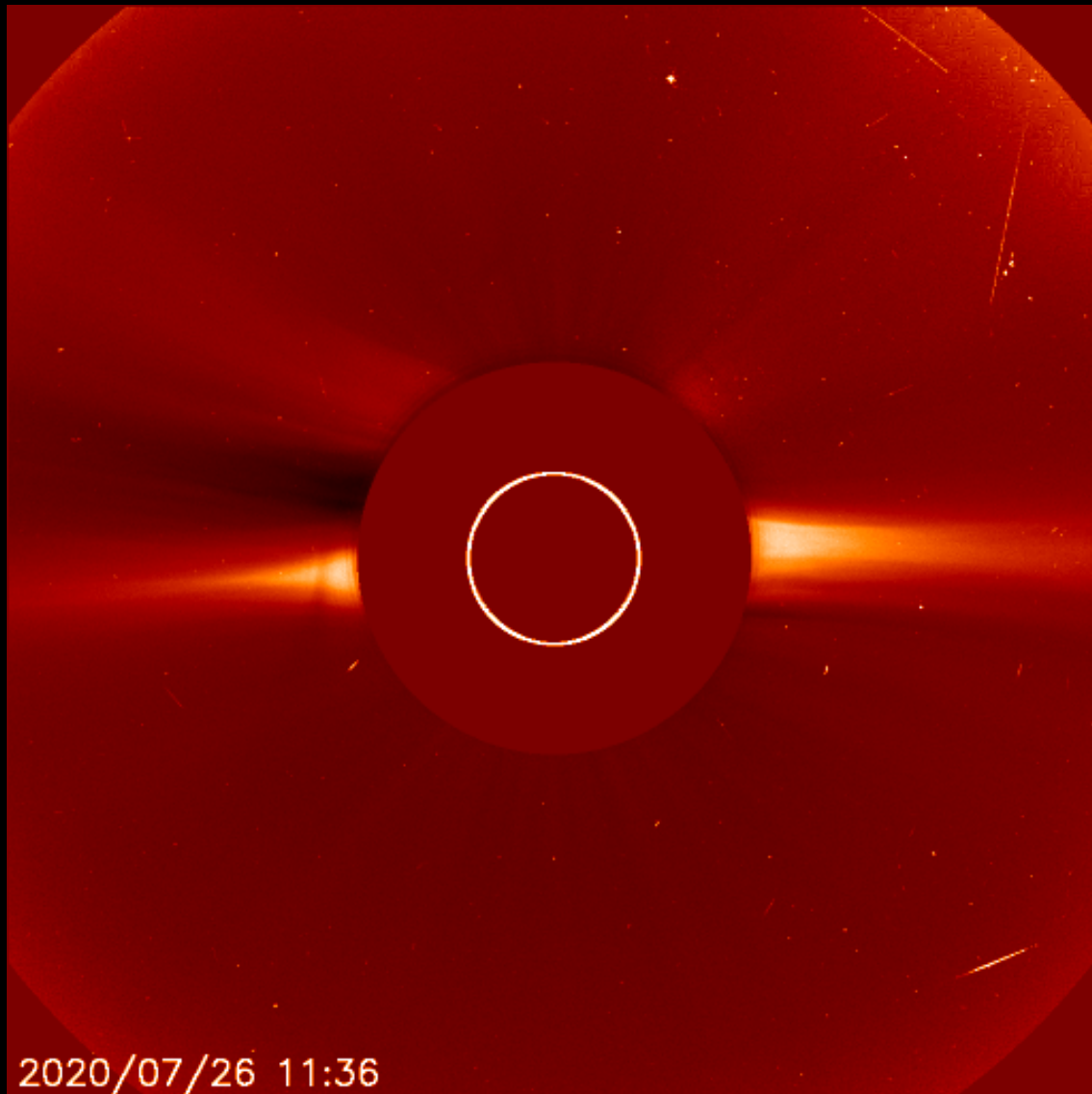


# CME driven by prominence eruption

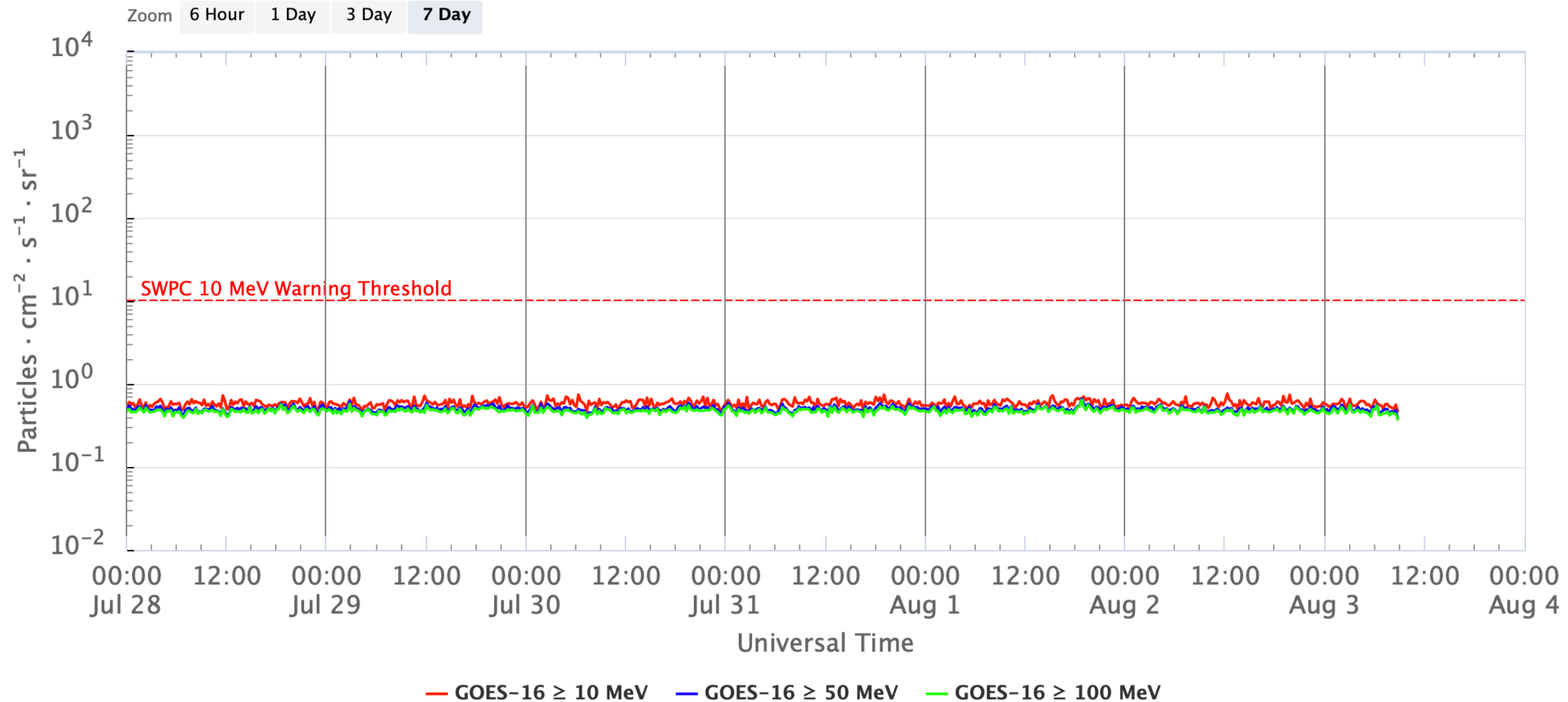


SDO/AIA 304 2020-07-31 12:18:54 UT

# 3 CMEs observed by LASCO C2



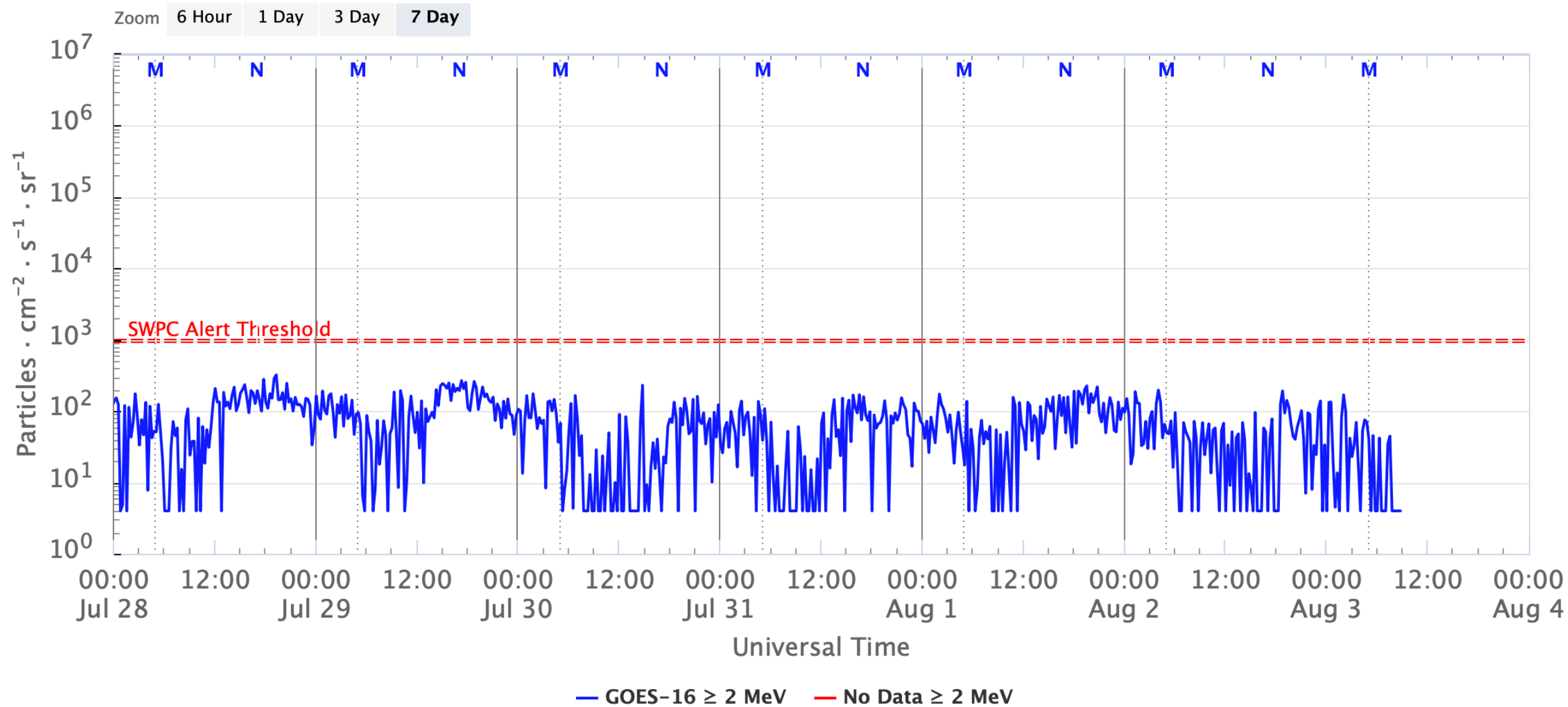
# Solar proton flux





# Solar electron flux

## GOES Electron Flux (5-minute data)

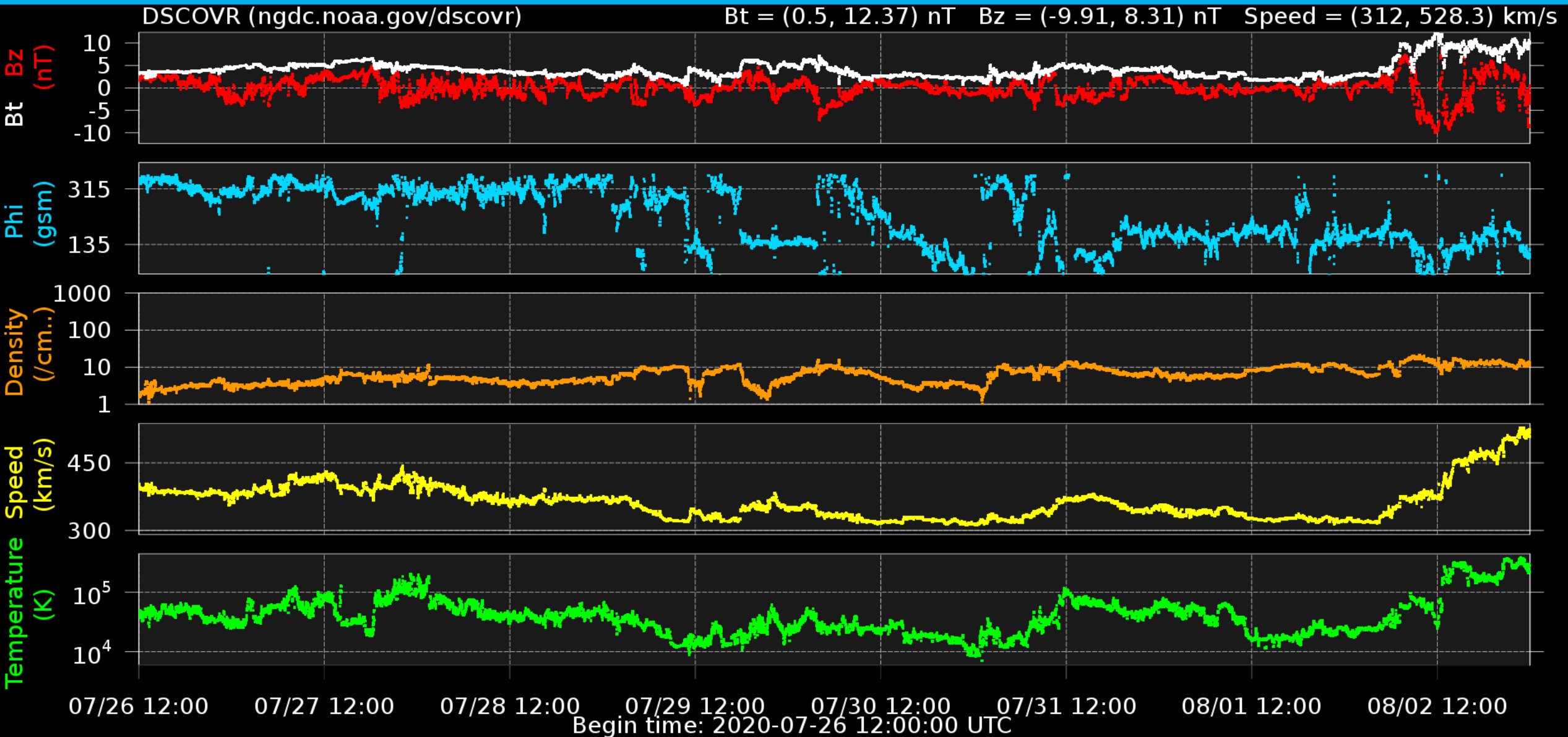


# Solar Wind and Geomagnetic Activity

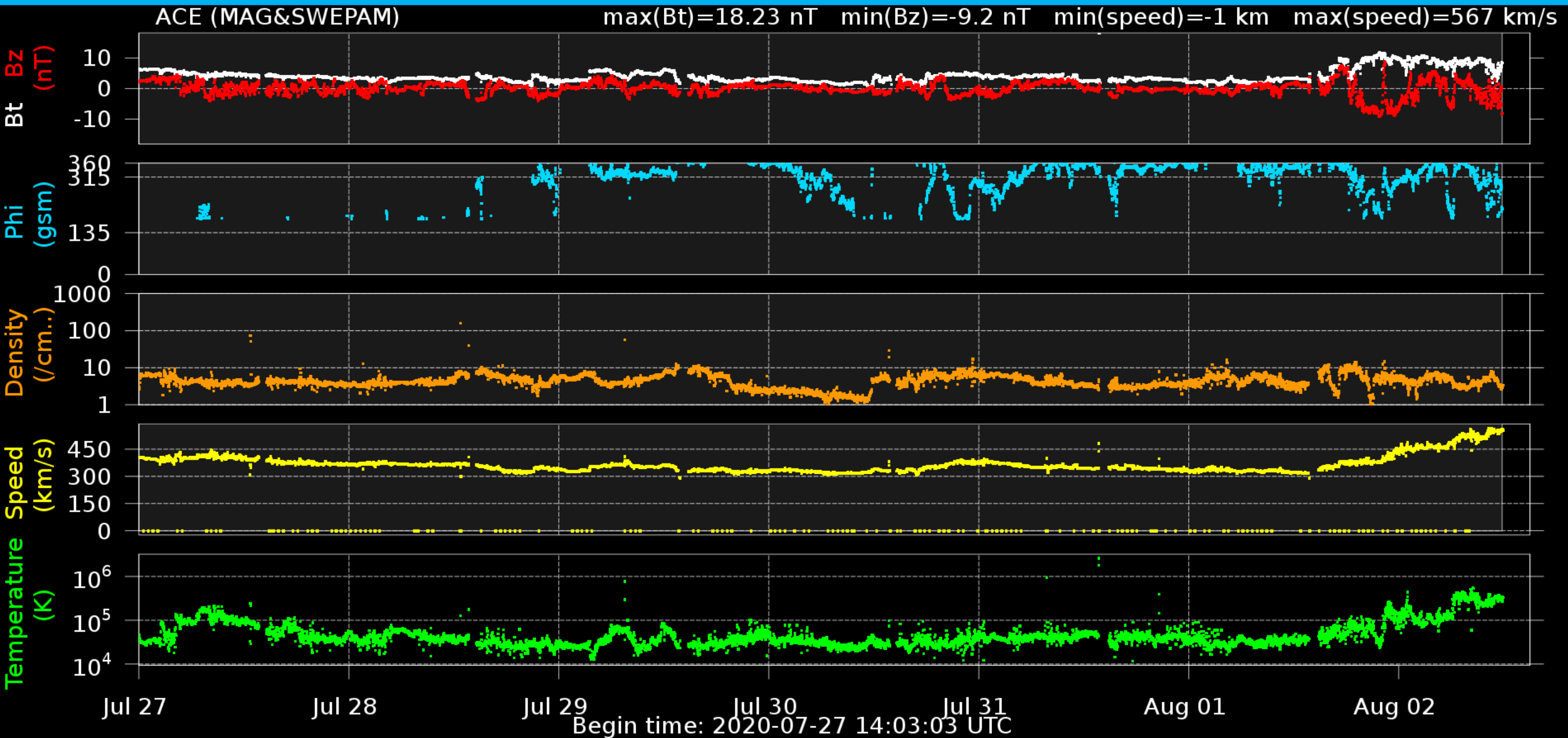


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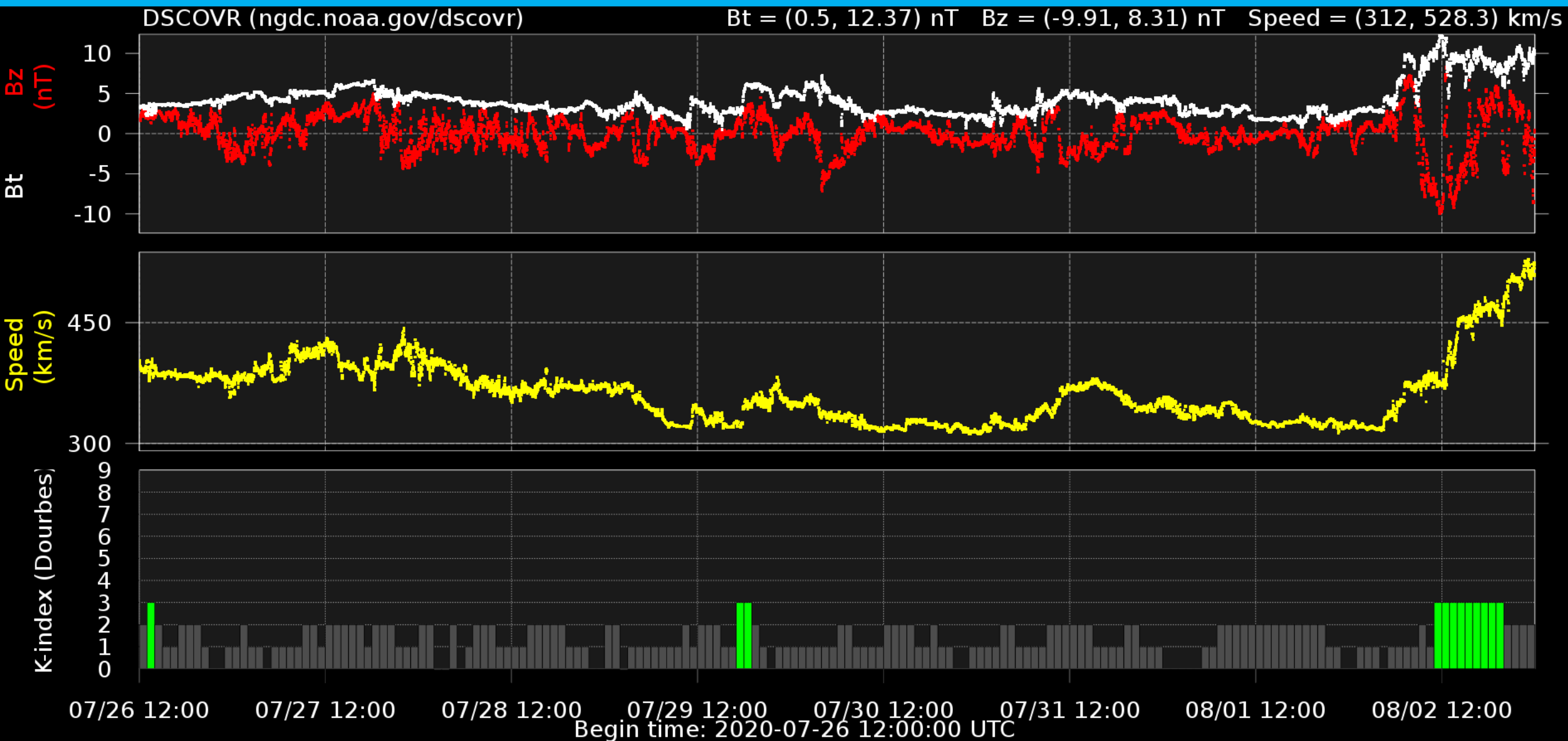
# Solar wind parameters (DSCOVR data)



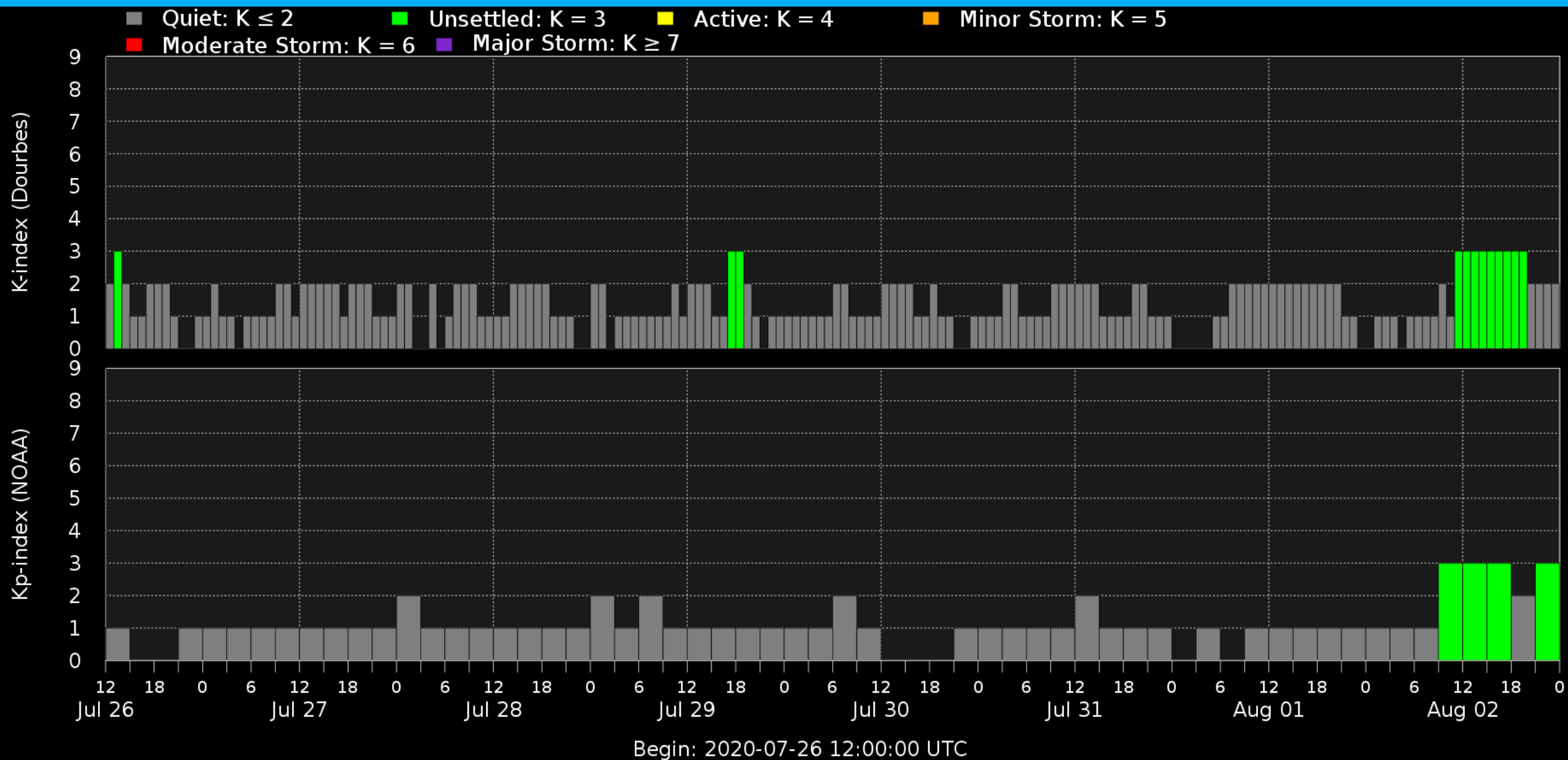
# Solar wind parameters (ACE data)



# Solar wind parameters & K-index (DSCOVR/Dourbes)

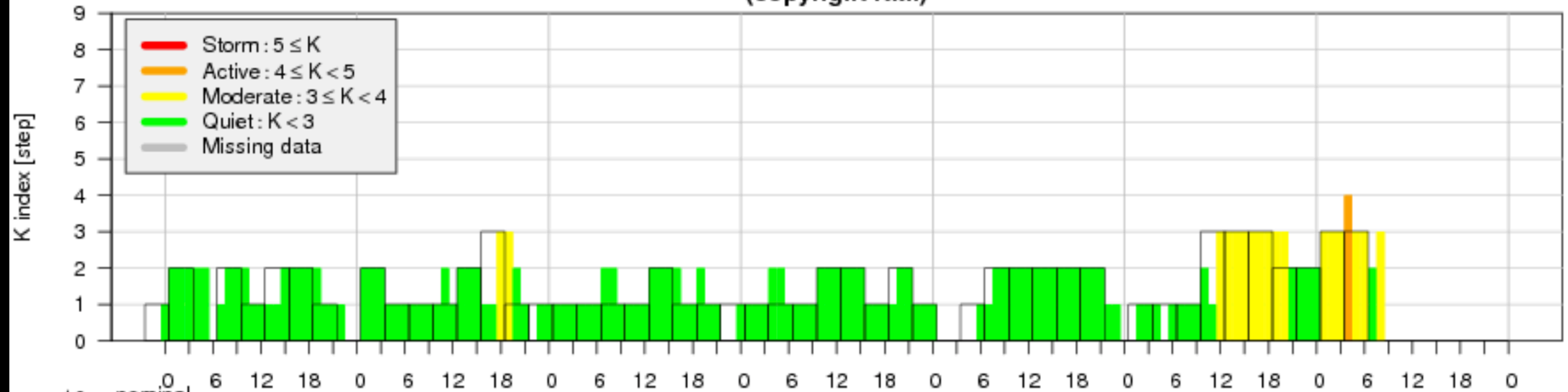


# Geomagnetic activity (K-indexes)



# K-Dourbes index

Local K index at Dourbes (50.1 °N, 4.6 °E)  
from ground-based measurements  
(copyright RMI)



# Outlook

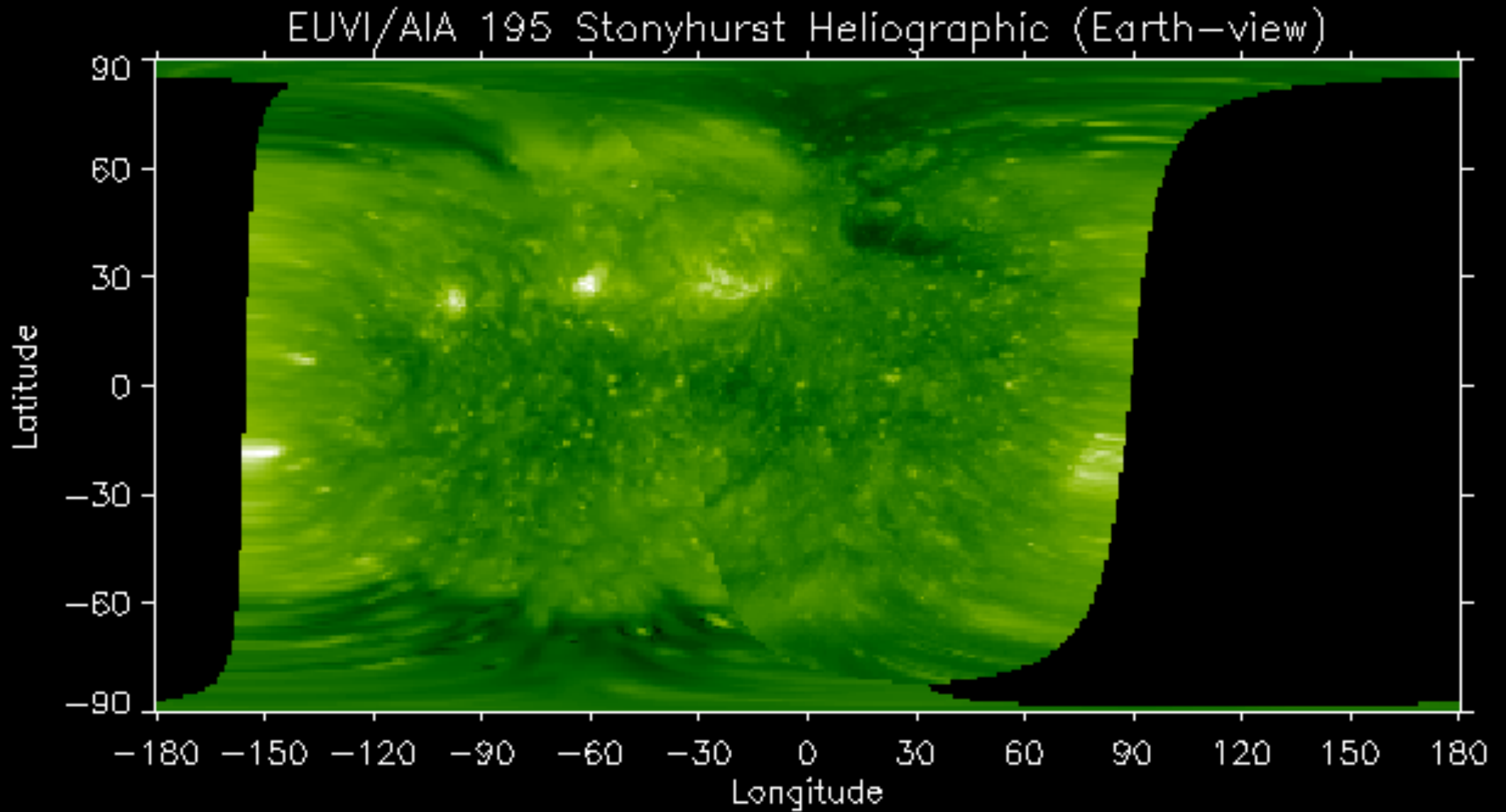


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*of* Belgium

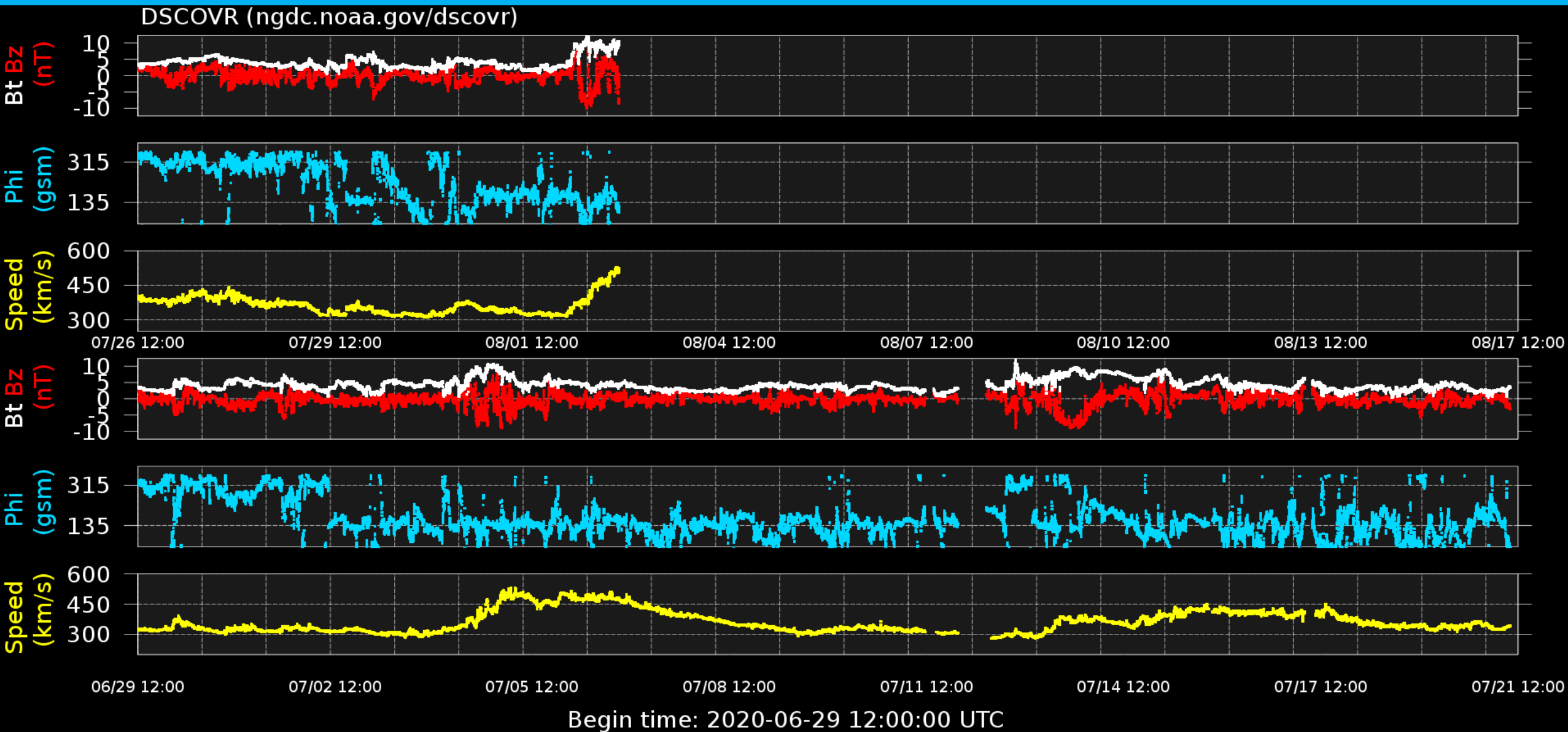
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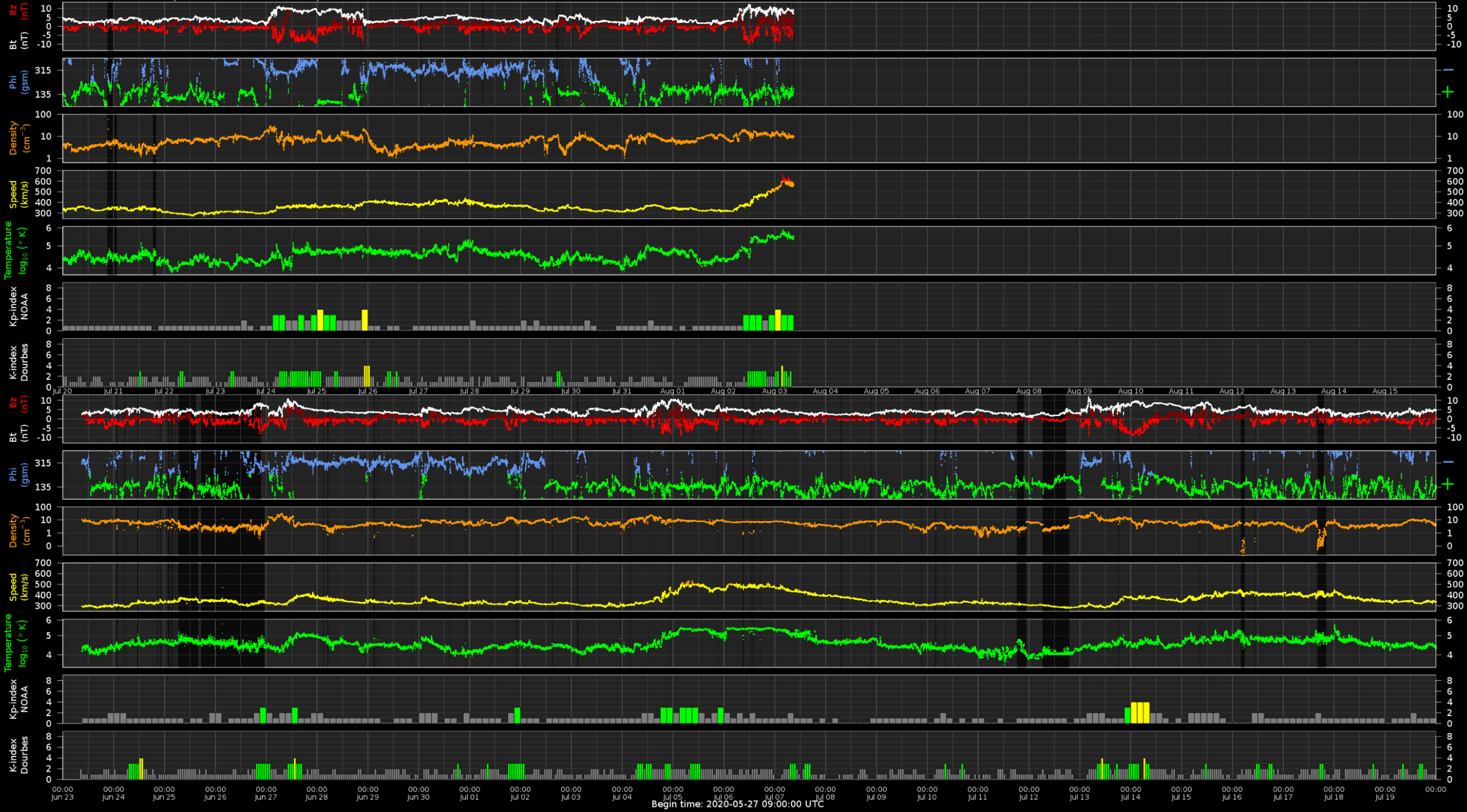
# Outlook: Solar activity



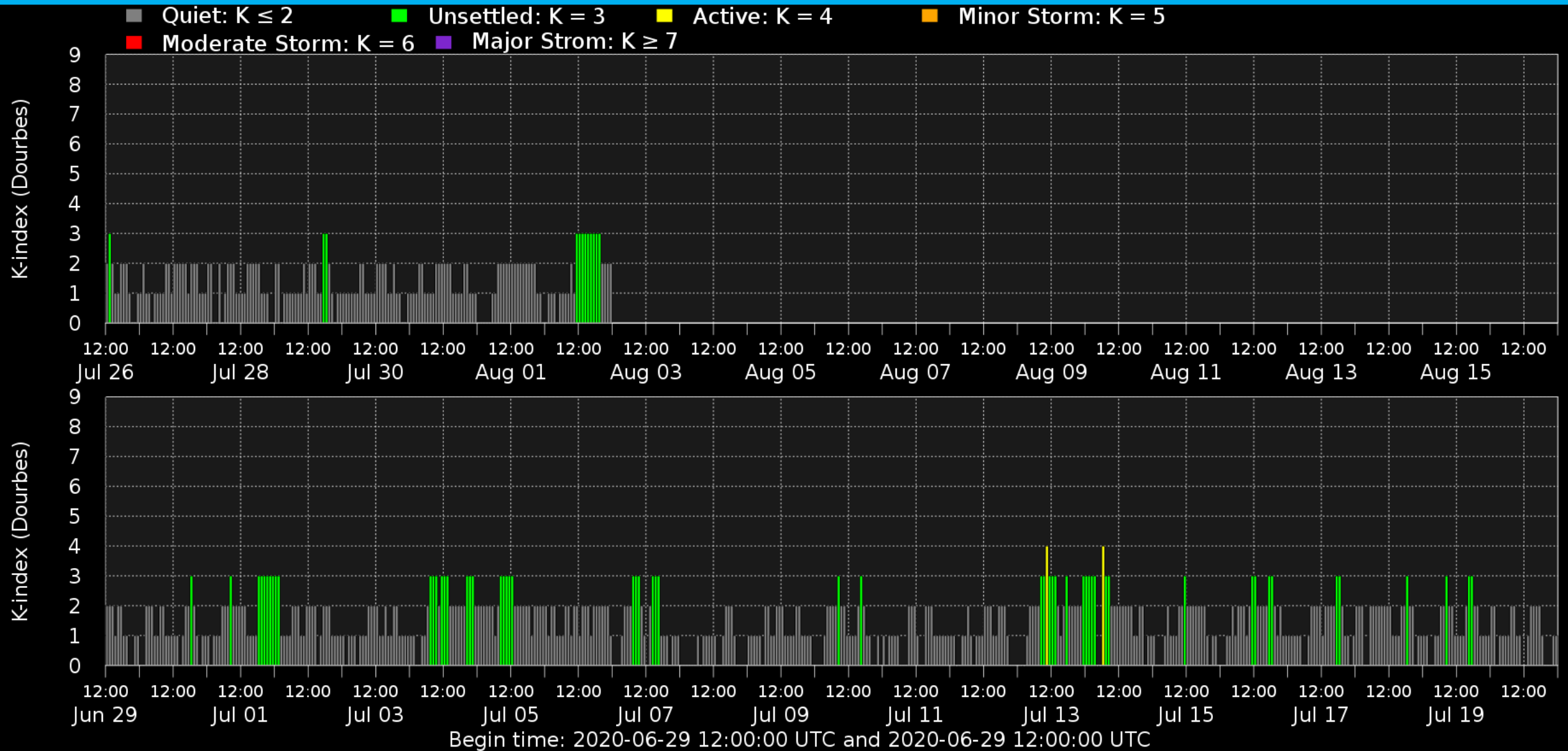
# Outlook: Solar wind



Solar wind parameters DSCOVR (+ACE), Kp-index (NOAA), K-index (Dourbes)- Outlook



# Outlook: Geomagnetic activity



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See you at our next briefing!

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