

# SIDC Space Weather Briefing

19 August 2018 - 26 August 2018

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& 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 2018-08-19 12:00 UT to 2018-08-26 12:00 UT

Active regions	NOAA 2719 and NOAA 2720
Flaring	# B-class flare: 17 # C-class flare: 0 # M-class flare: 0 # X-class flare: 0
Filaments	Filament near central meridian erupted; long filament in northern hemisphere rotated on disk
CMEs	Faint and slow Earth directed CME
Proton Events	None

Solar wind and geomagnetic conditions from 2018-08-19 12:00 UT to 2018-08-26 12:00 UT

Coronal Holes	Southern negative polarity coronal hole at start of week
ICME	ICME with persistent $B_z < 0$
SW Conditions	Enhanced by HSS at start of week and by ICME at end of week
K-indices	max K-index (Dourbes): 6 max Kp-index (NOAA): 7 Dst: -169nT

All Quiet Alert: NOT QUIET

# Solar Activity

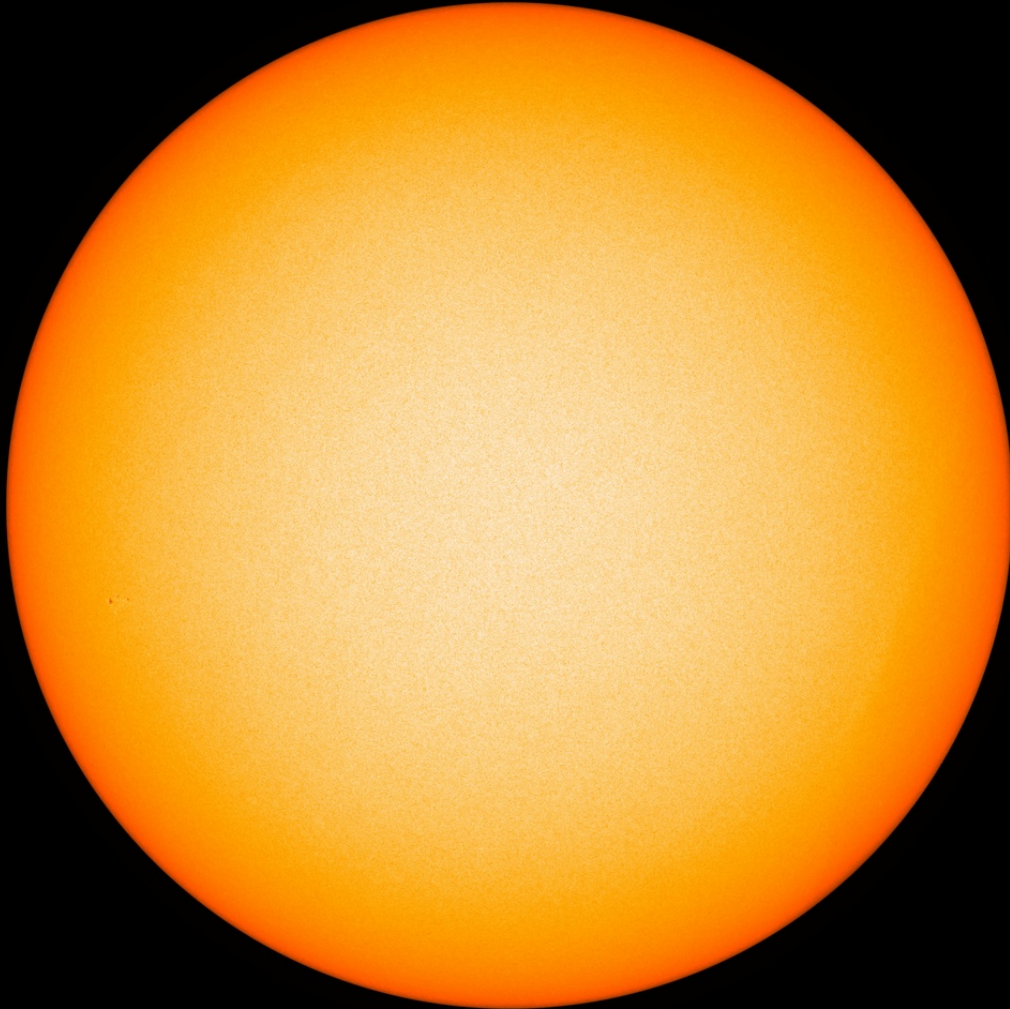


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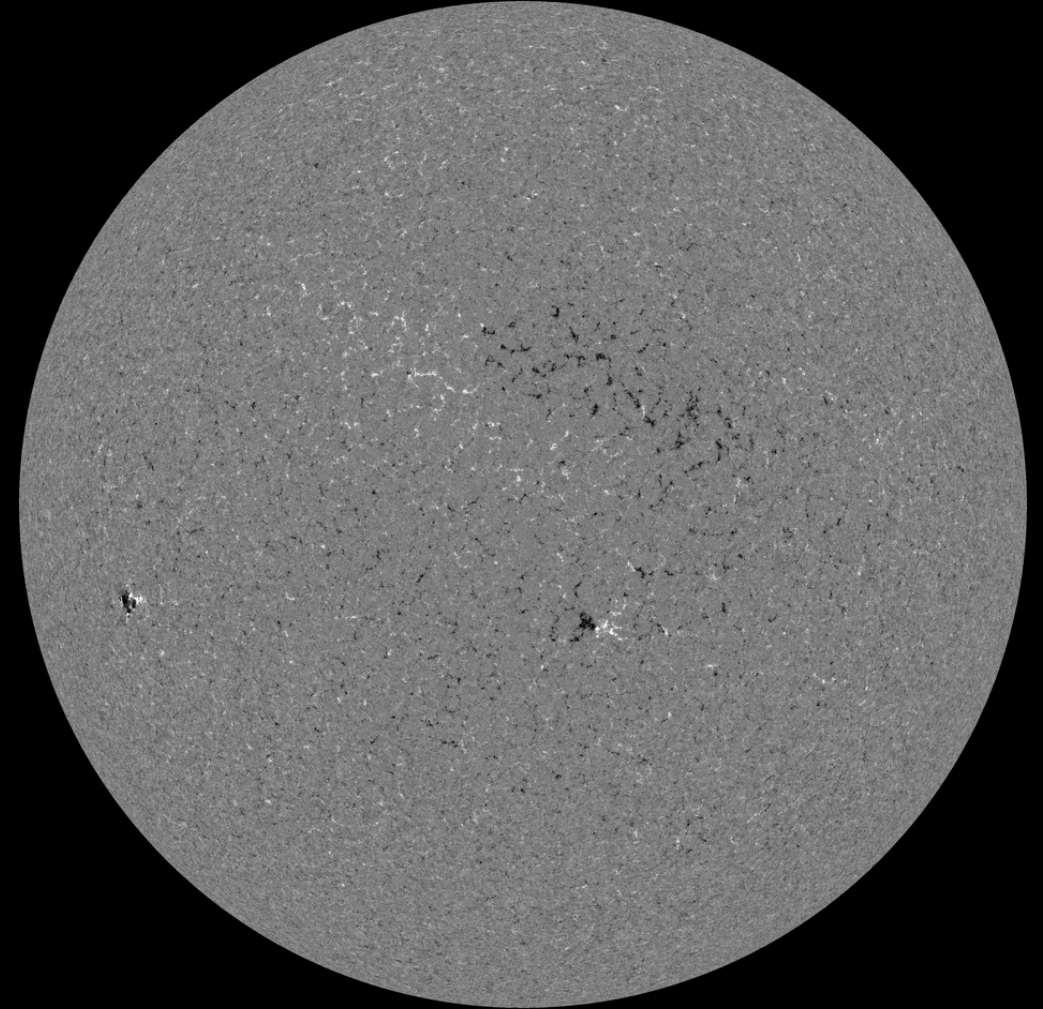
# Solar active region - start of the week

SDO/HMI White Light 2018-08-19



SDO/HMI Quick-Look Continuum: 20180819\_114500

SDO/HMI Magnetogram 2018-08-19

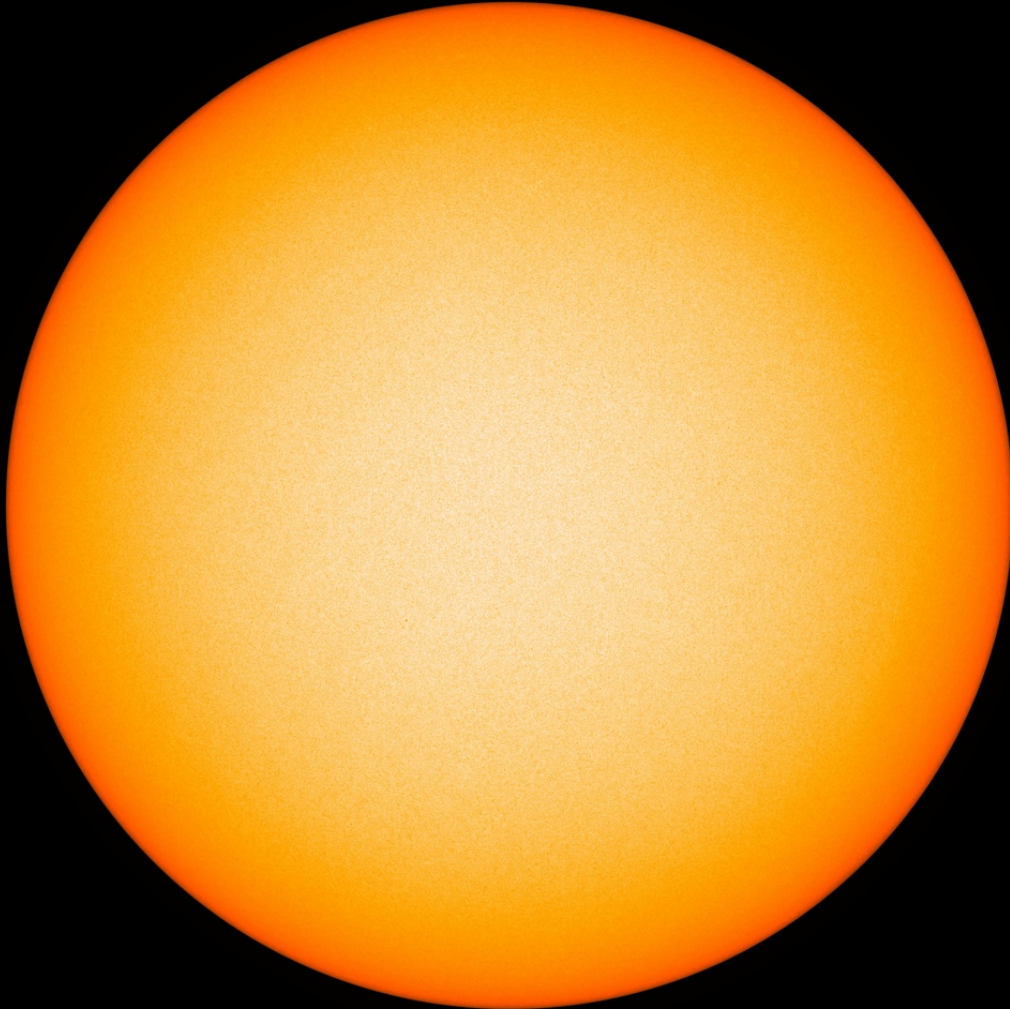


SDO/HMI Quick-Look Magnetogram: 20180819\_114500



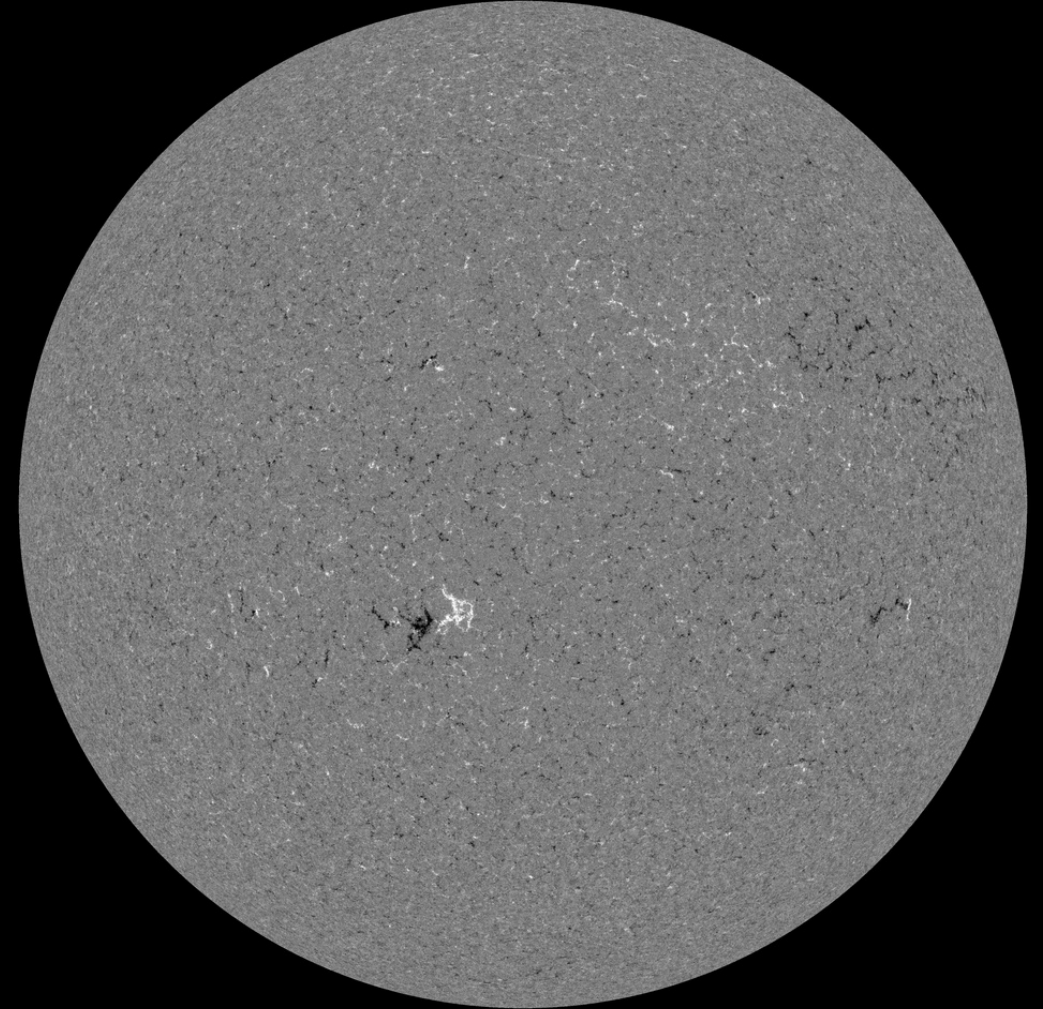
# Solar active region - middle of the week

SDO/HMI White Light 2018-08-22



SDO/HMI Quick-Look Continuum: 20180822\_114500

SDO/HMI Magnetogram 2018-08-22

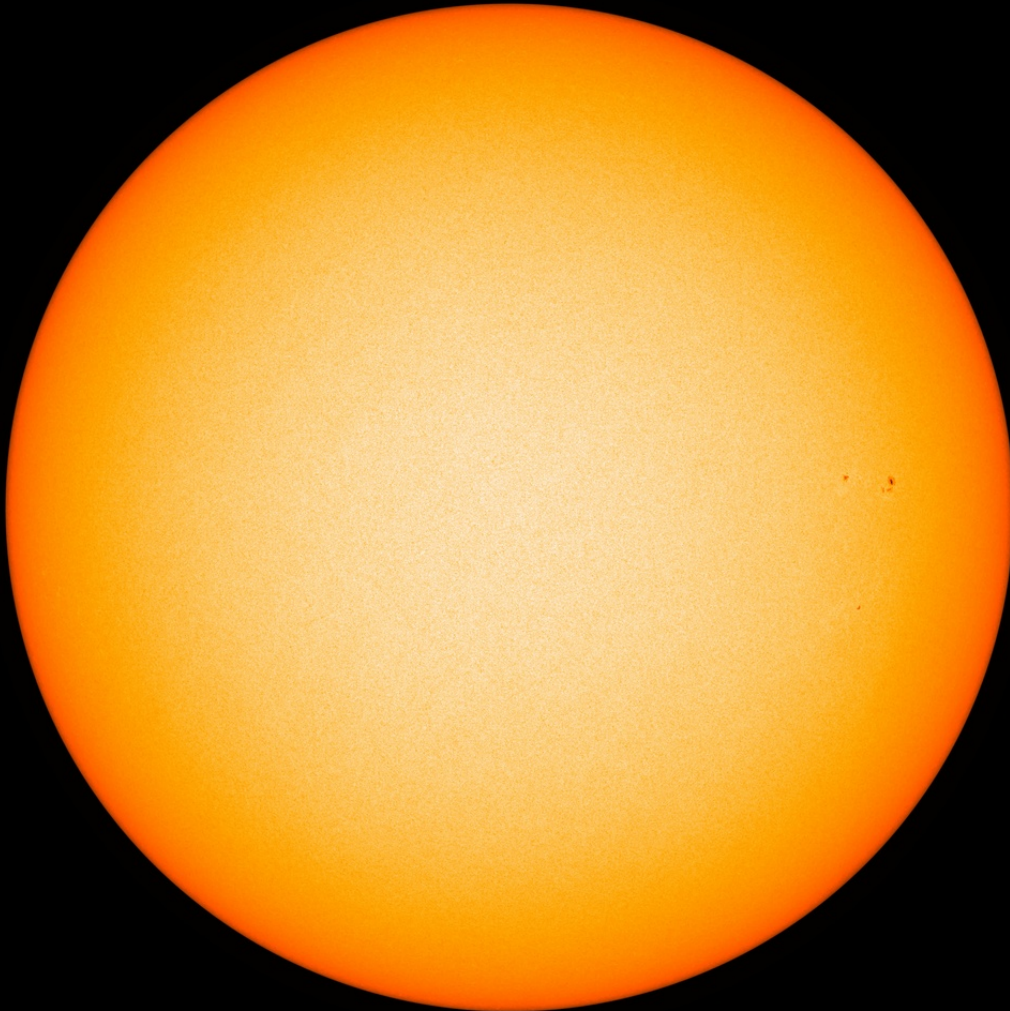


SDO/HMI Quick-Look Magnetogram: 20180822\_114500



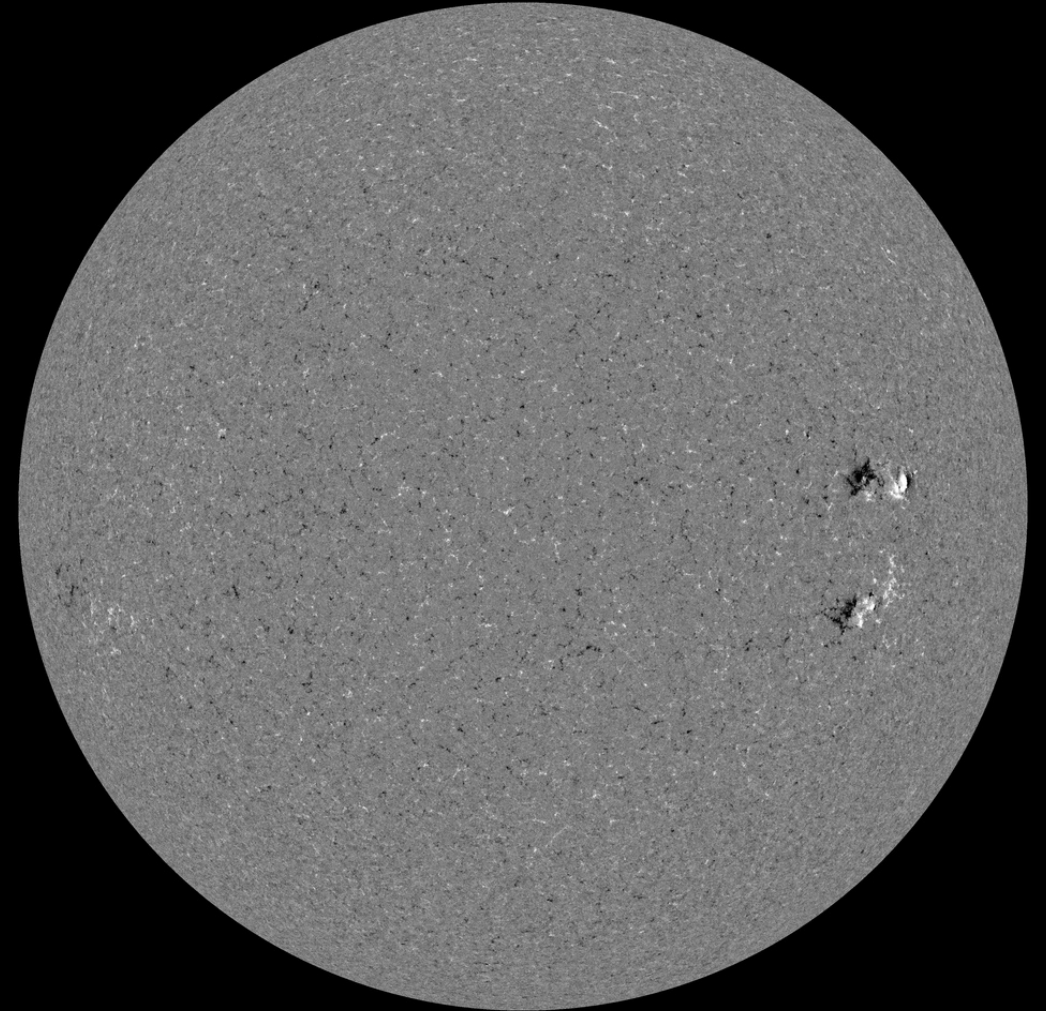
# Solar active region - end of the week

SDO/HMI White Light 2018-08-26



SDO/HMI Quick-Look Continuum: 20180826\_114500

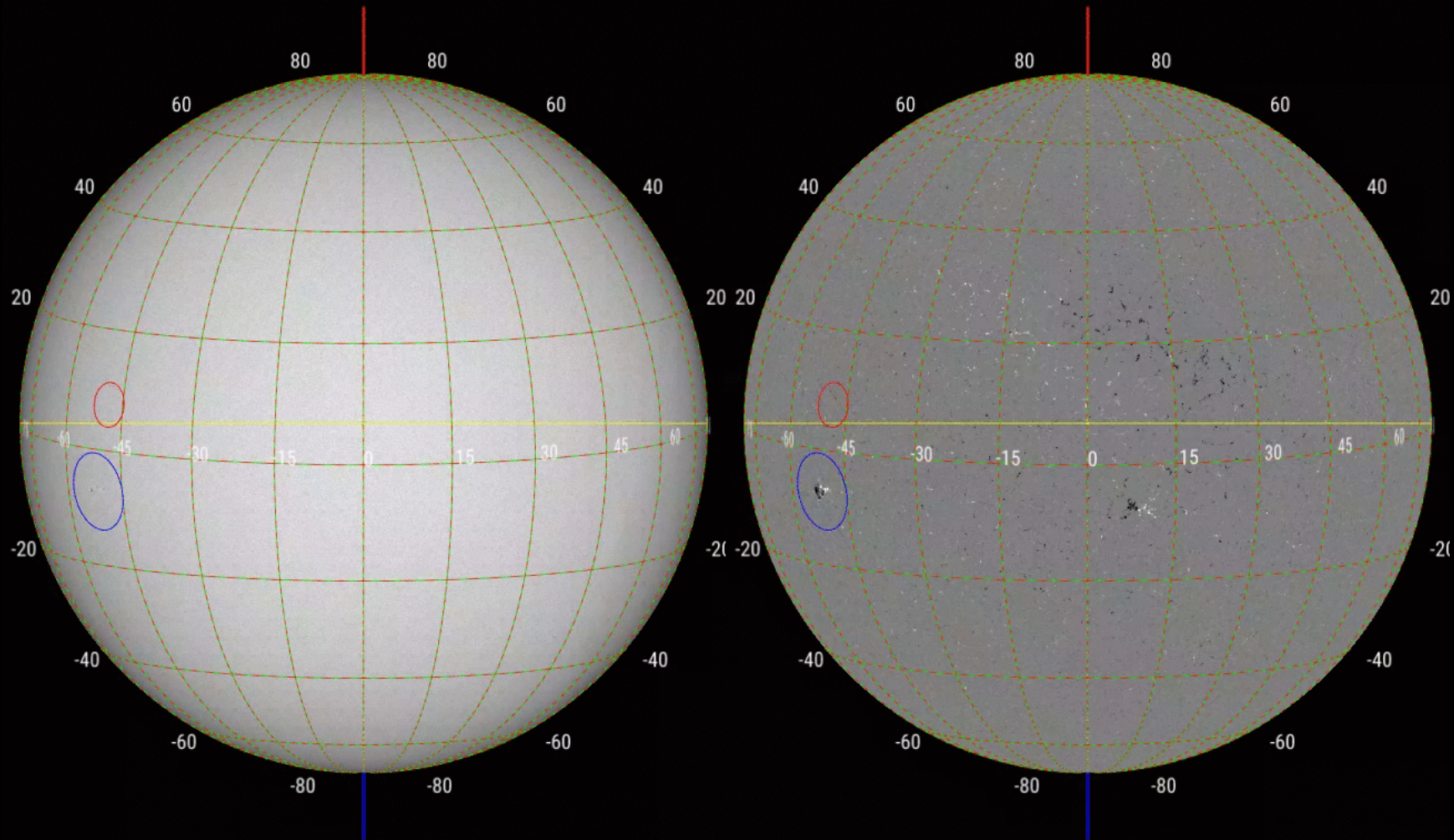
SDO/HMI Magnetogram 2018-08-26



SDO/HMI Quick-Look Magnetogram: 20180826\_114500



# Solar active region - evolution

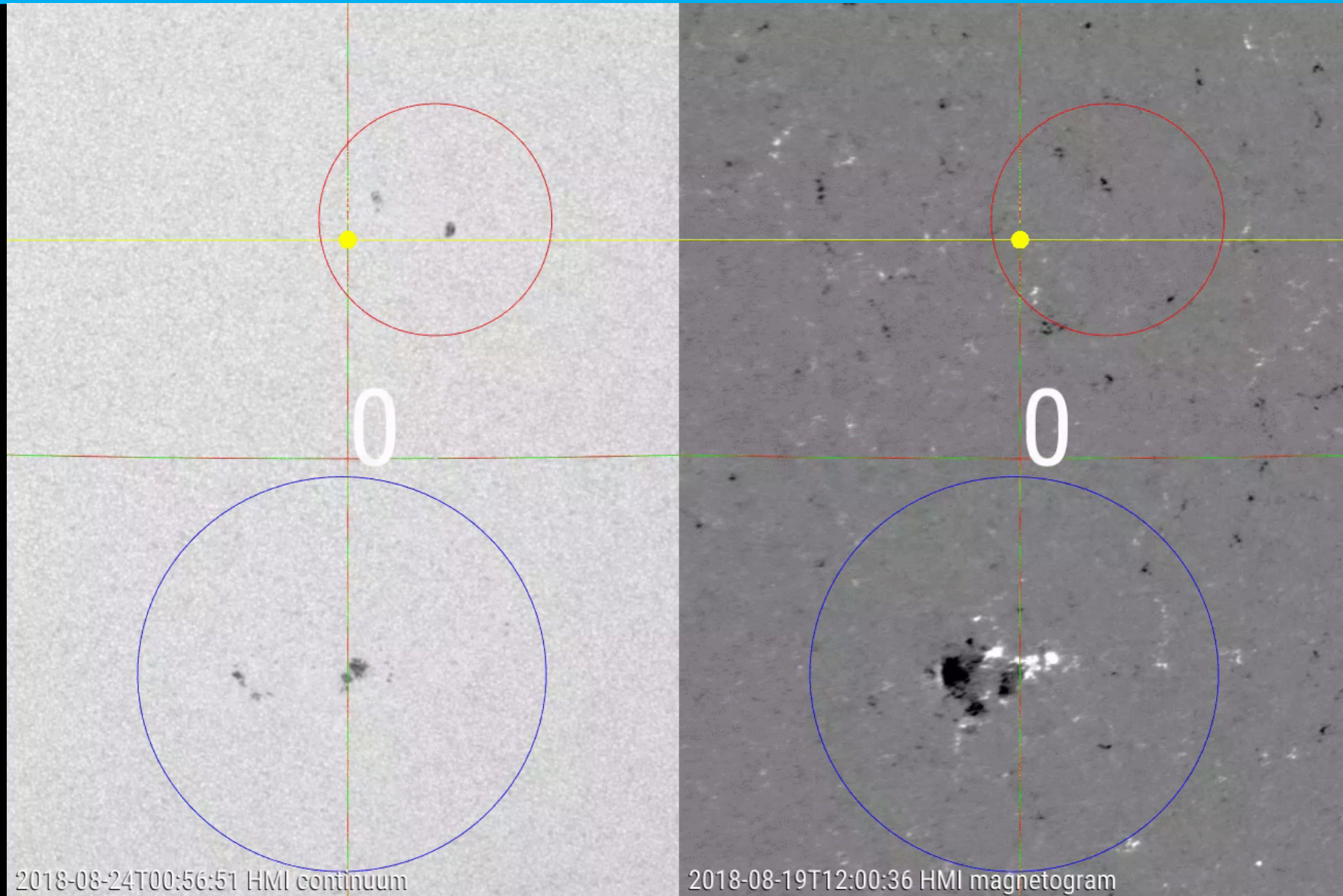


2018-08-19T12:00:36 HMI continuum

2018-08-19T12:00:36 HMI magnetogram



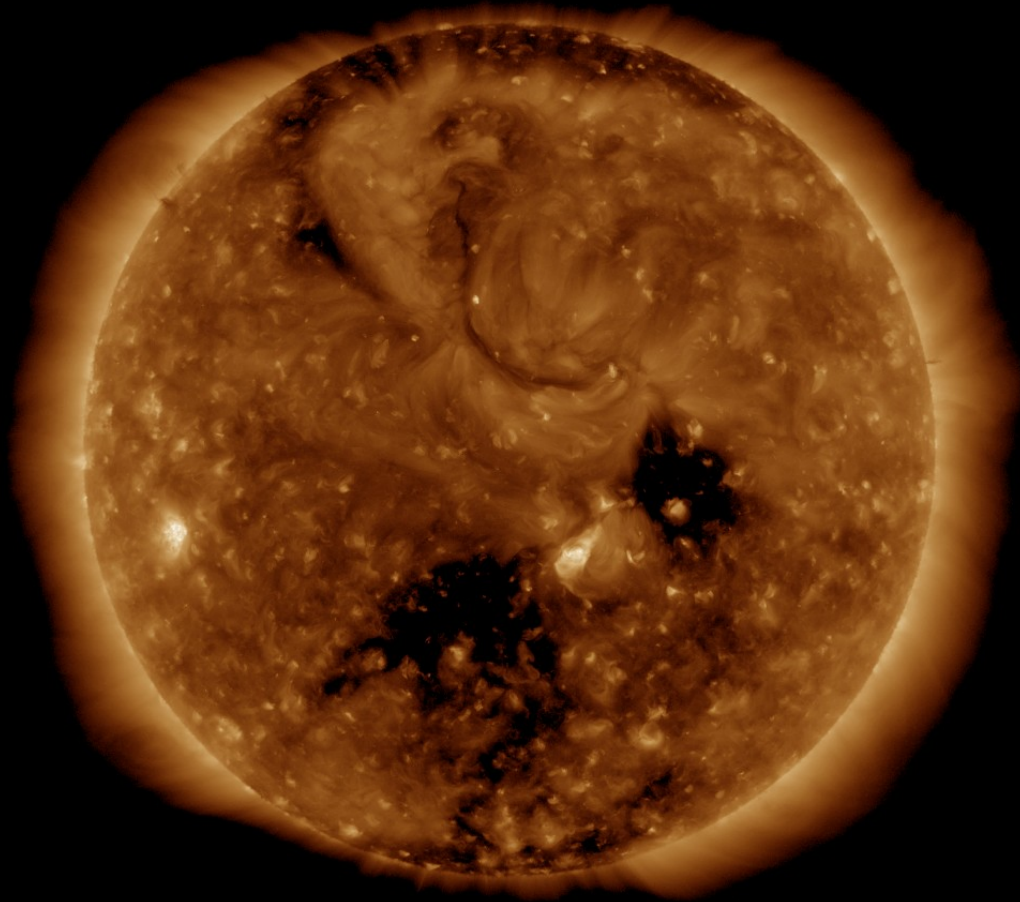
# Solar active region - evolution



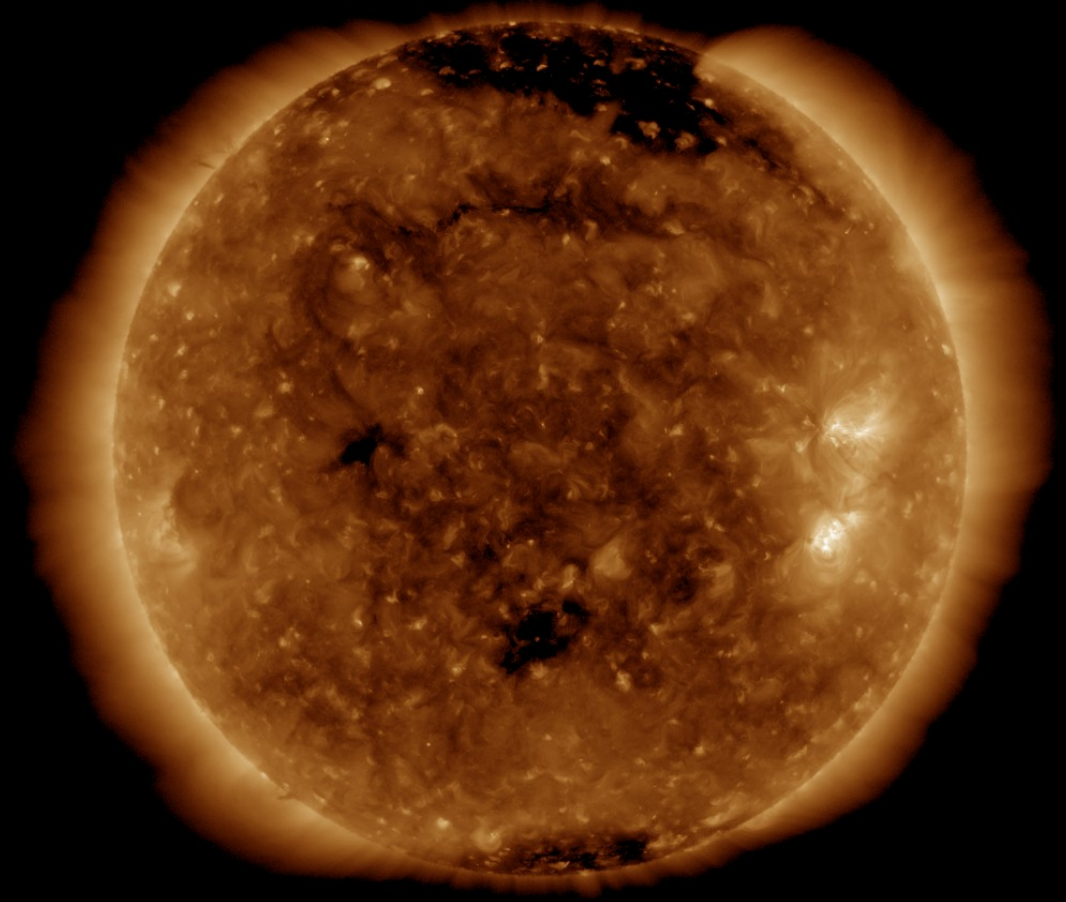


# Solar active region & Coronal hole

SDO/AIA 19.3 nm 2018-08-19



SDO/AIA 19.3 nm 2018-08-26

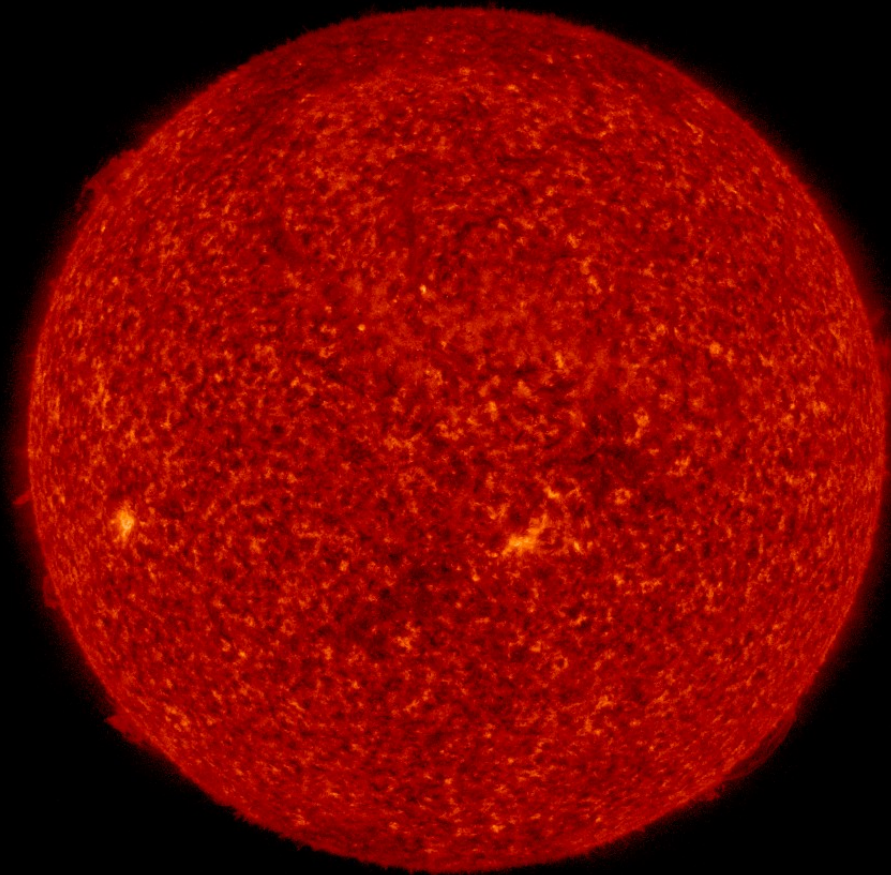


SDO/AIA 193 2018-08-19 12:10:53 UT

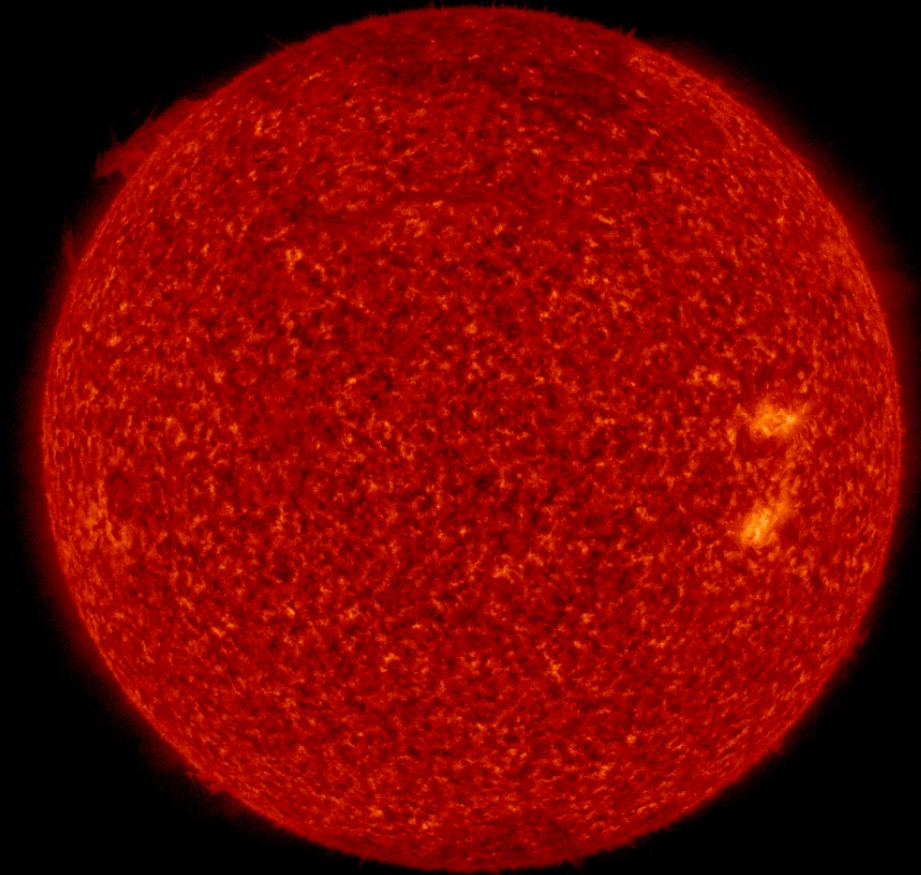
SDO/AIA 193 2018-08-26 12:10:41 UT

# Solar active region & Filament

SDO/AIA 30.4 nm 2018-08-19



SDO/AIA 30.4 nm 2018-08-26



SDO/AIA 304 2018-08-19 12:13:06 UT

SDO/AIA 304 2018-08-26 12:14:06 UT



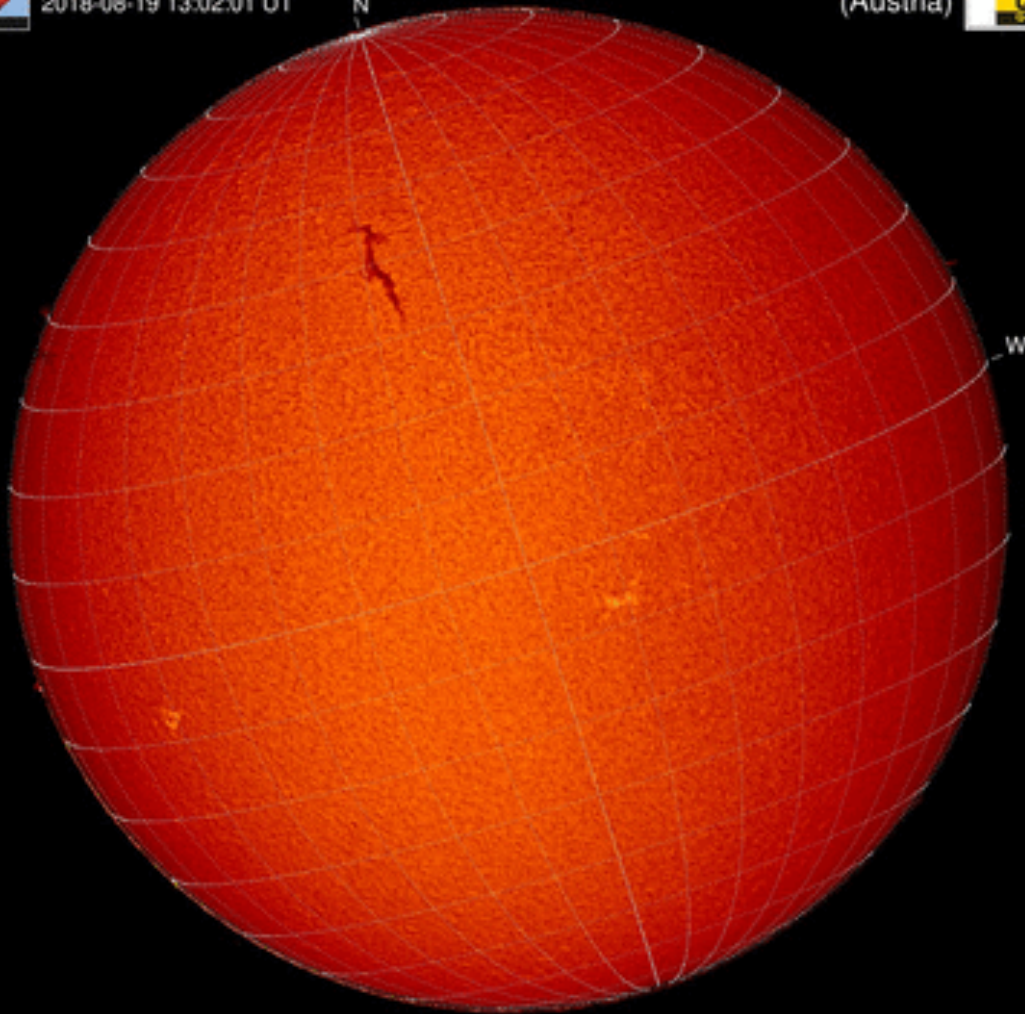
# Filament & Filament eruption

H-alpha 2018-08-19



Kanzelhöhe Observatory  
2018-08-19 13:02:01 UT

University of Graz  
(Austria)

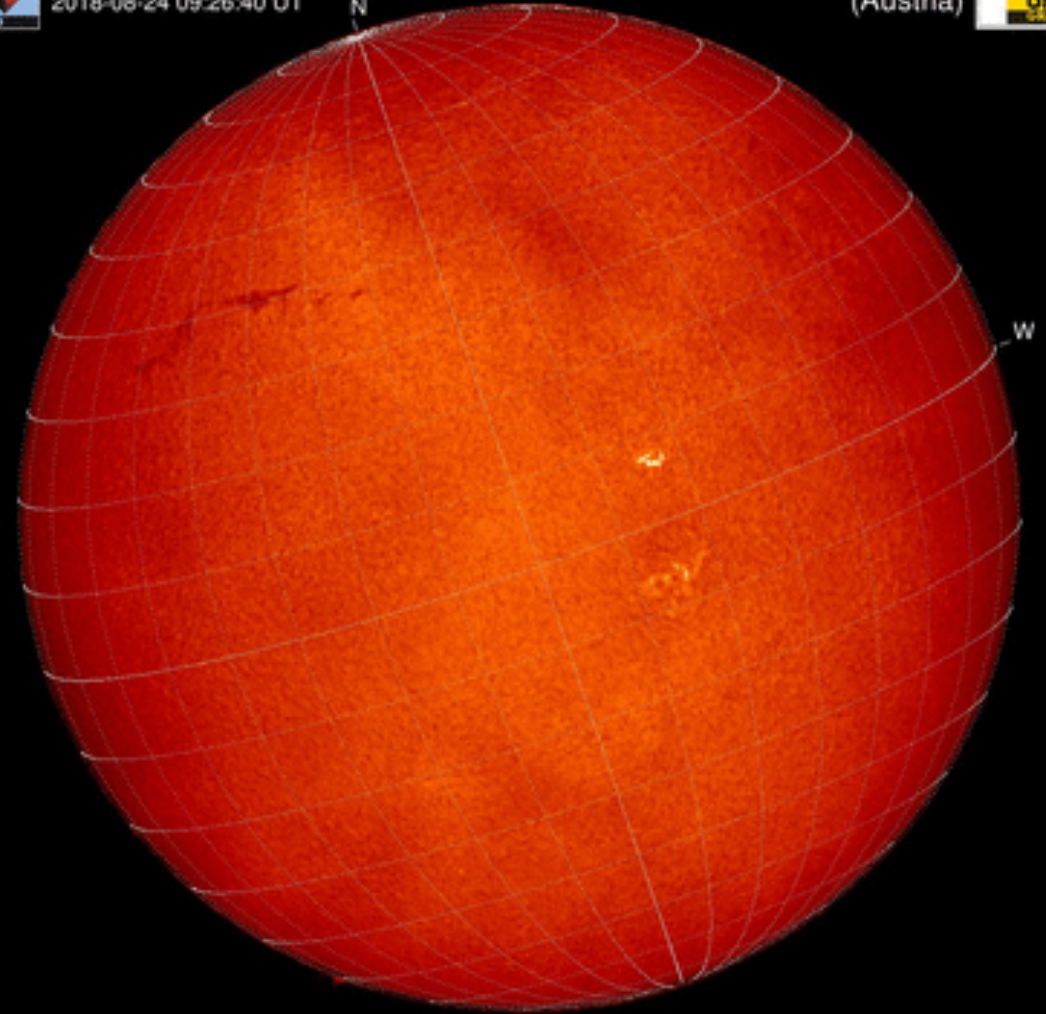


H-alpha 2018-08-26

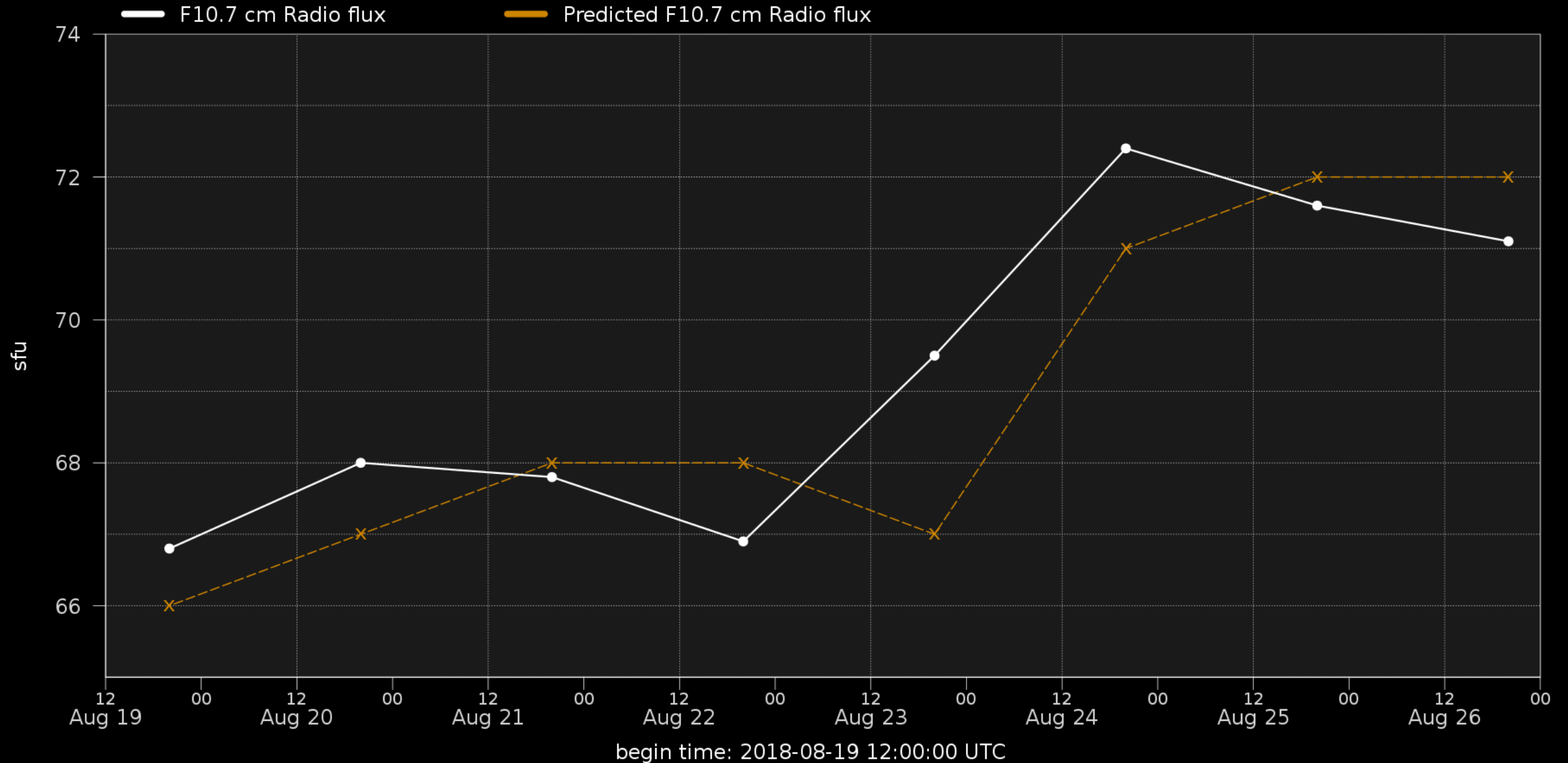


Kanzelhöhe Observatory  
2018-08-24 09:26:40 UT

University of Graz  
(Austria)

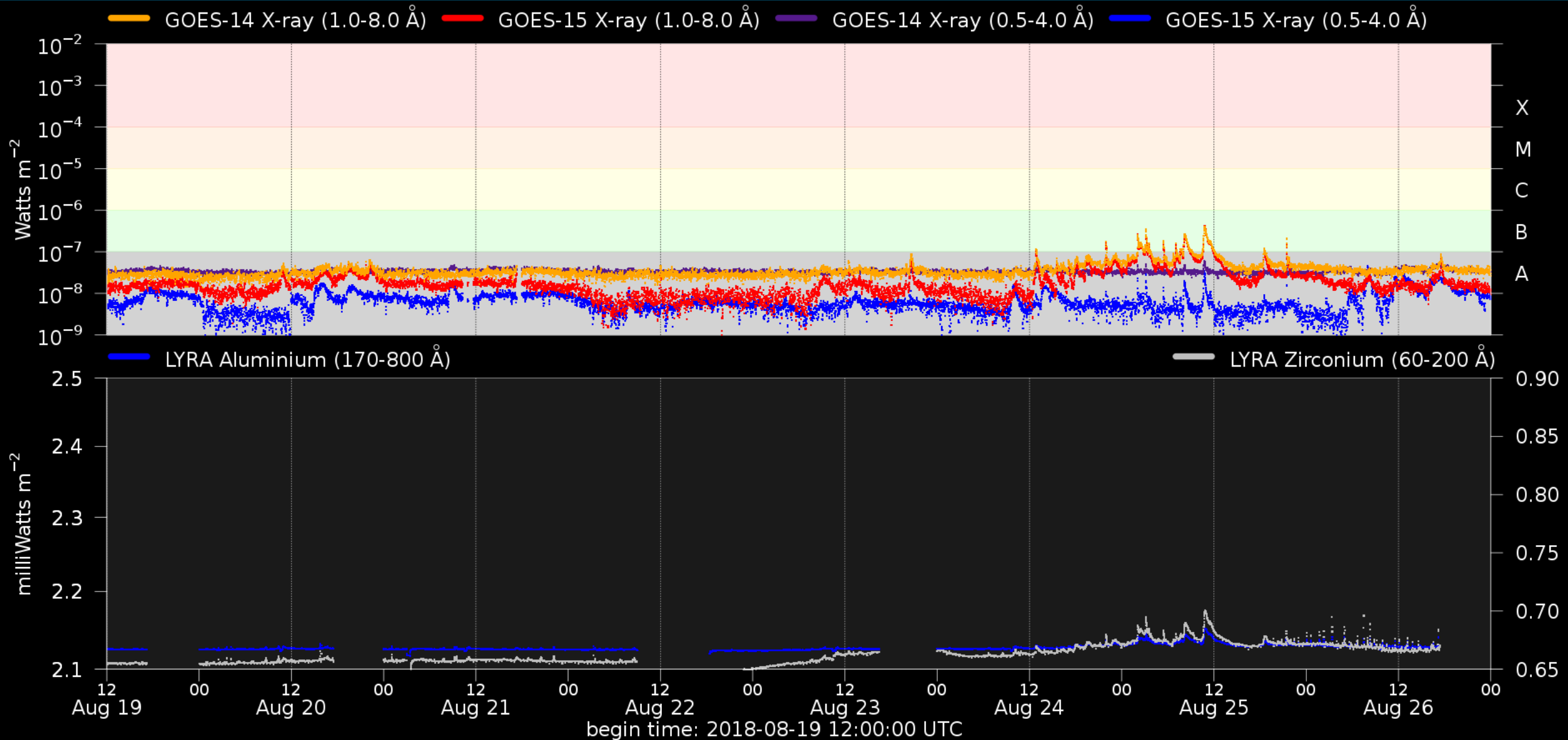


# Solar F10.7cm radio flux

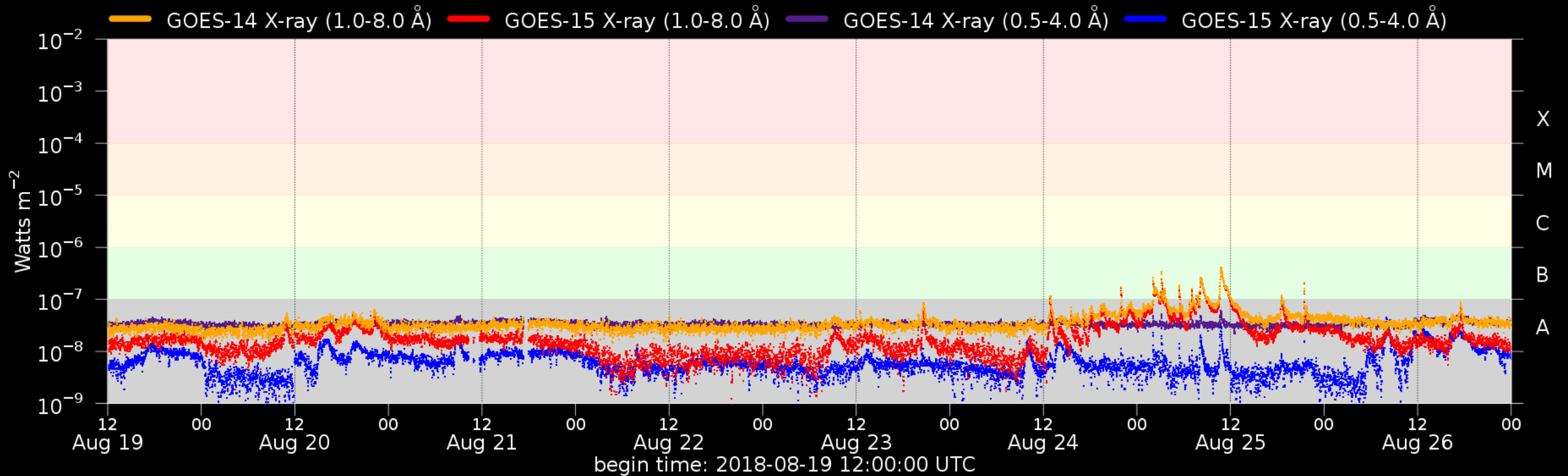




# Solar X-Ray and UV flux



# Flaring activity

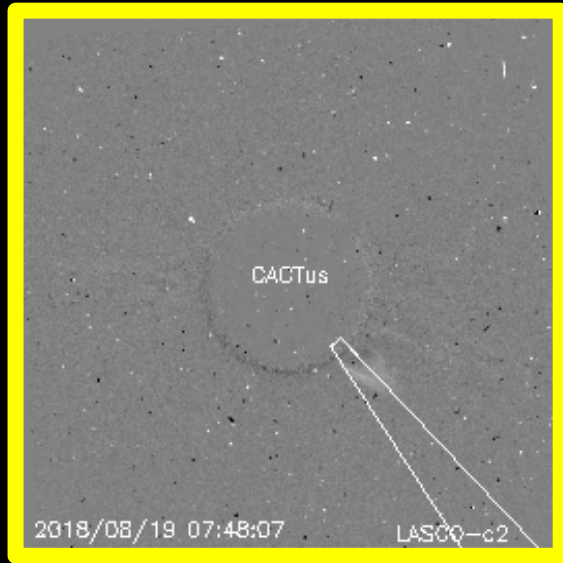


Probabilities (%) and occurrences (#) of B/C/M/X-flares issued at 12:30 and over the next 24h:

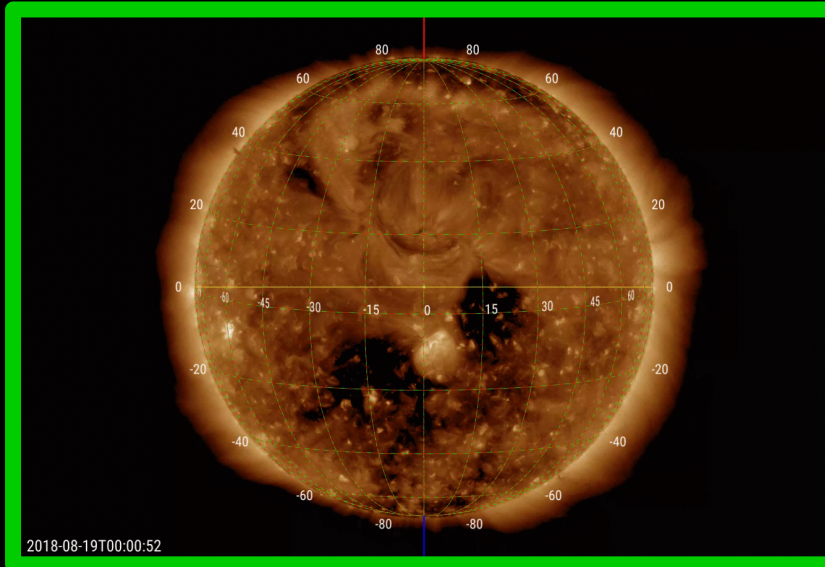
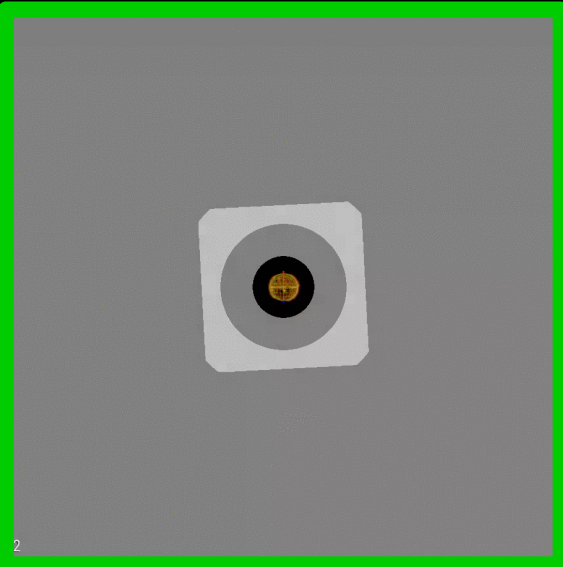
Issue date	2018-08-19	2018-08-20	2018-08-21	2018-08-22	2018-08-23	2018-08-24	2018-08-25	2018-08-26
Probability	--- 40 01 01	--- 10 01 01	--- 05 01 01	--- 05 01 01	--- 05 01 01	--- 15 01 01	--- 20 01 01	--- 15 01 01
Observed	00 00 00 00	00 00 00 00	00 00 00 00	00 00 00 00	00 00 00 00	12 00 00 00	05 00 00 00	00 00 00 00



# Coronal Mass Ejections



- August 19, 7:36UT. Narrow, 1000km/s. Very low possibility of shock expected midnight August 21/22 → did not arrive
- August 20, filament eruption around 19UT. Slow (300-450 km/s). Arrival expected between noon August 24 and noon August 25 → did arrive as long slow passing magnetic cloud.

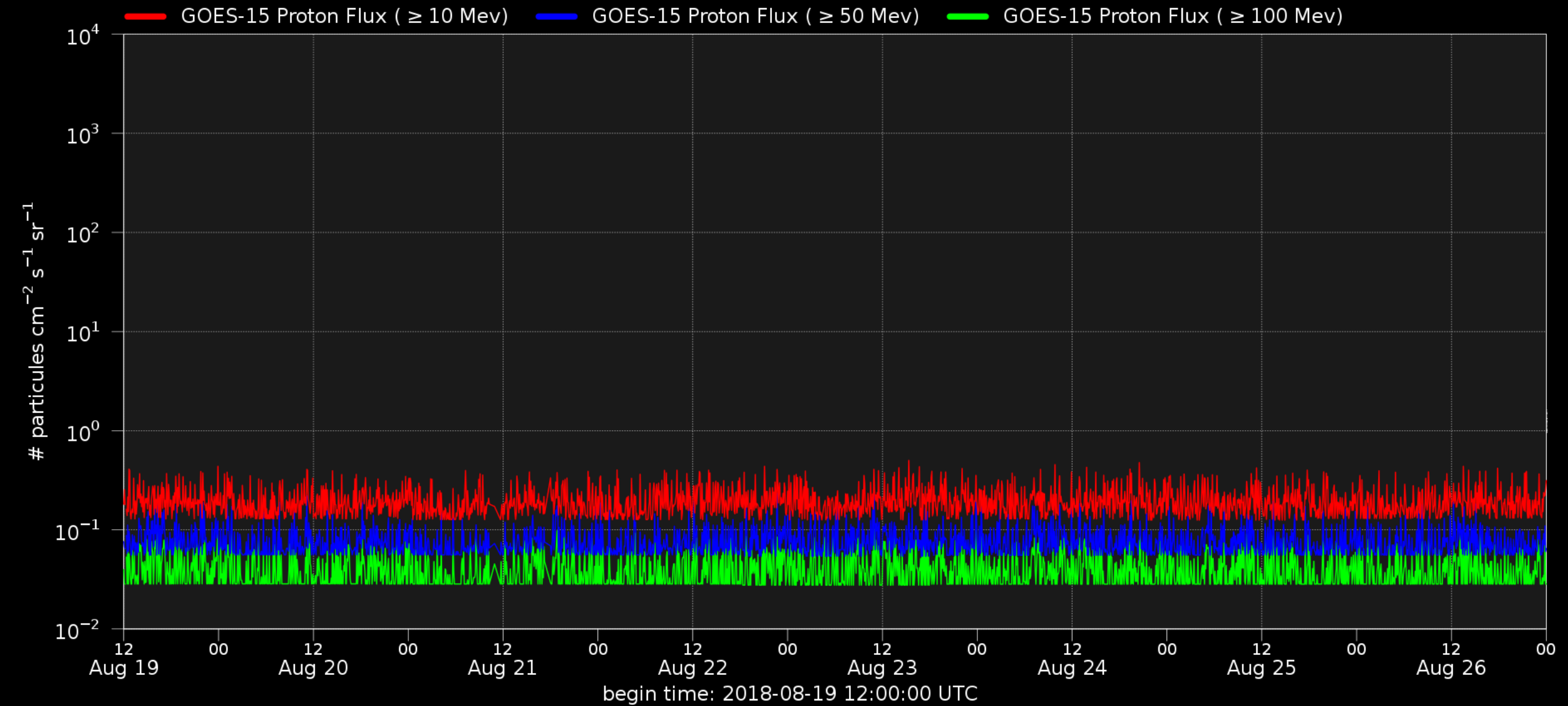


09:12	08/24
05:24	08/24
00:48	08/24
21:36	08/23
18:24	08/23
14:48	08/23
11:24	08/23
08:36	08/23
05:36	08/23
02:36	08/23
23:42	08/22
20:00	08/22
17:24	08/22
14:12	08/22
11:00	08/22
08:00	08/22
05:12	08/22
02:12	08/22
23:24	08/21
19:48	08/21
17:12	08/21
14:24	08/21
11:36	08/21
08:24	08/21
05:36	08/21
02:24	08/21
23:24	08/20
20:12	08/20
17:12	08/20
14:12	08/20
11:24	08/20
08:24	08/20
05:24	08/20
02:36	08/20
23:12	08/19
19:24	08/19
16:24	08/19
12:48	08/19
10:12	08/19
07:12	08/19
04:36	08/19
01:36	08/19
21:48	08/18
19:00	08/18
16:18	08/18
12:48	08/18
10:12	08/18
07:00	08/18
04:00	08/18
00:17	08/18

-c1

S W N

# Solar proton flux



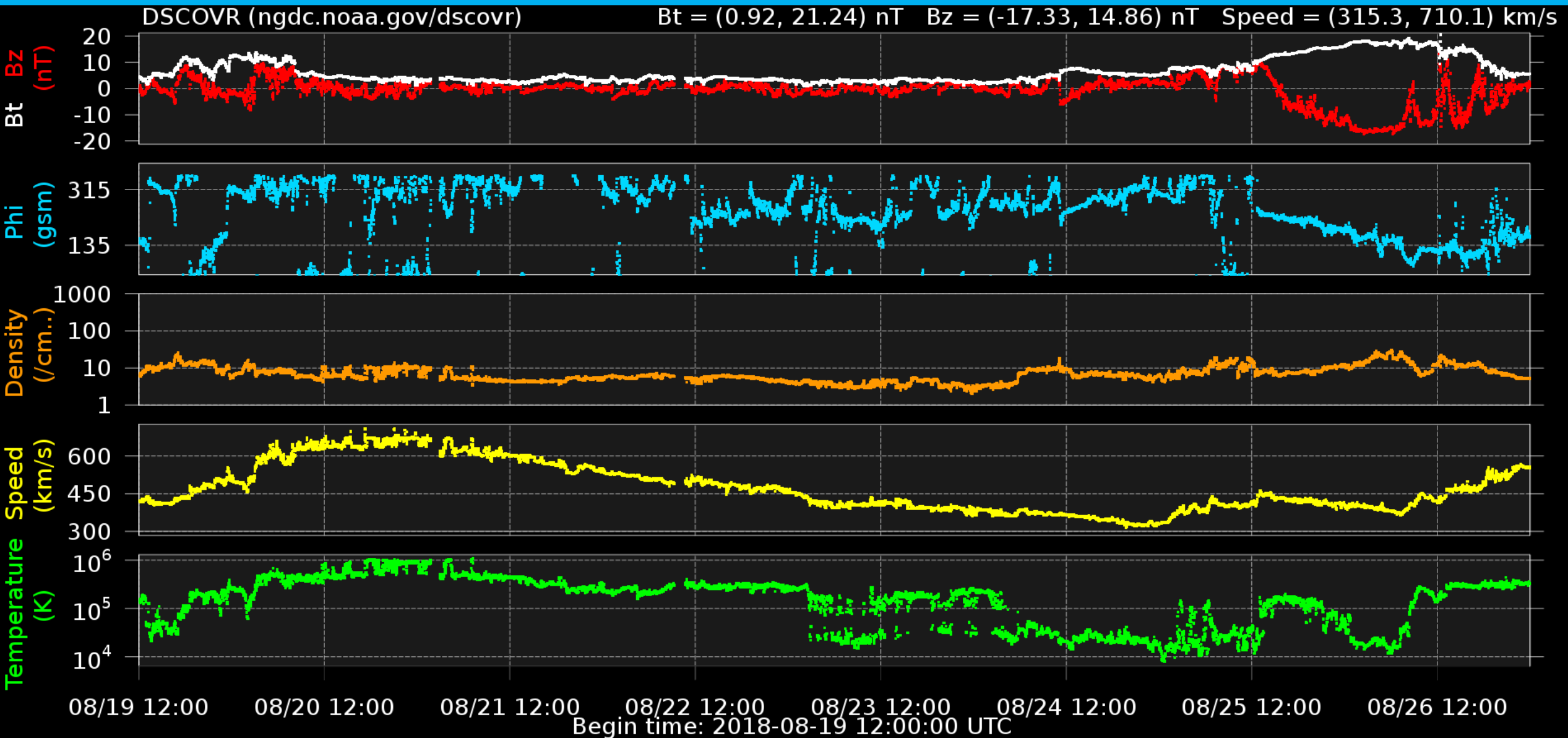


# Solar Wind and Geomagnetic Activity

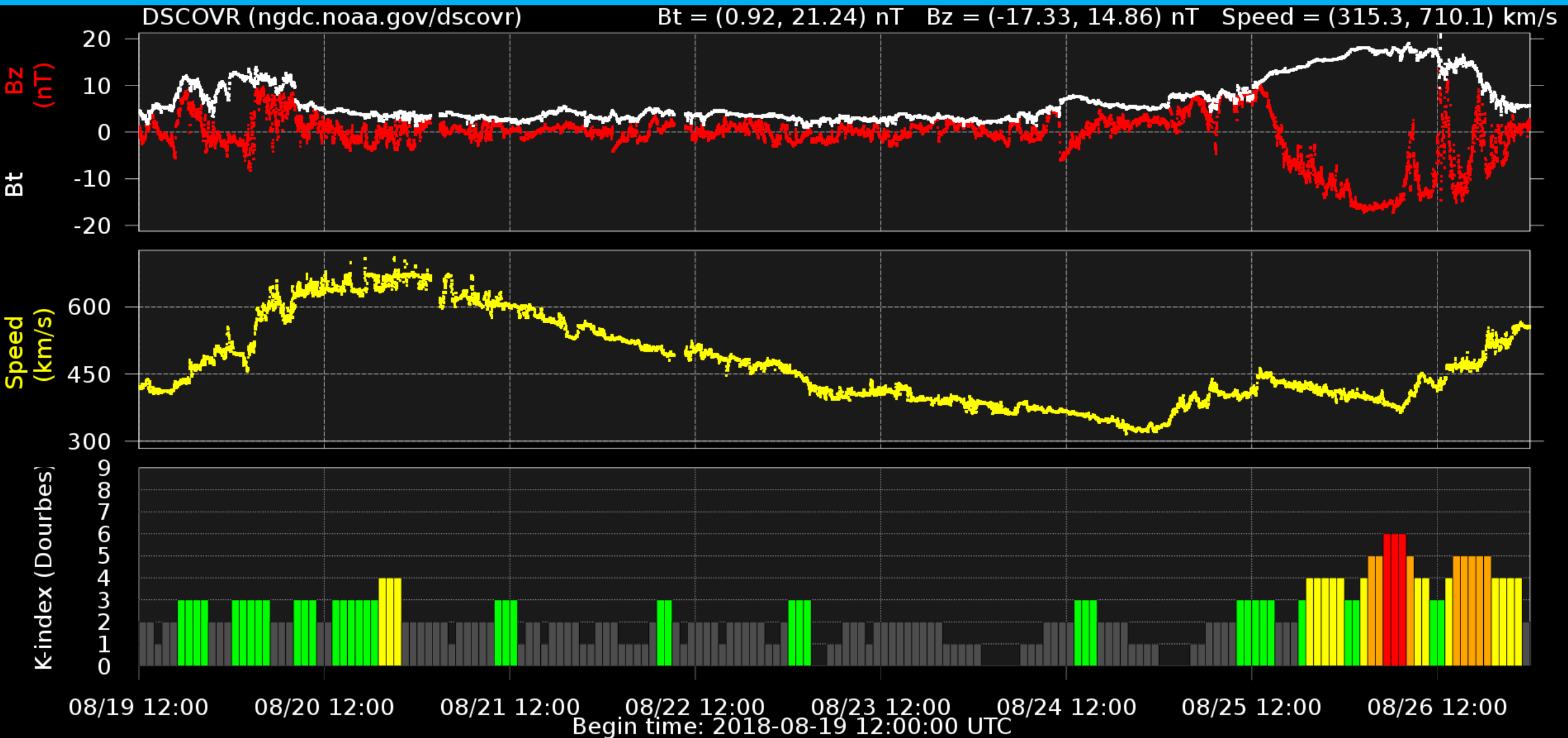


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# Solar wind parameters (DSCOVR data)

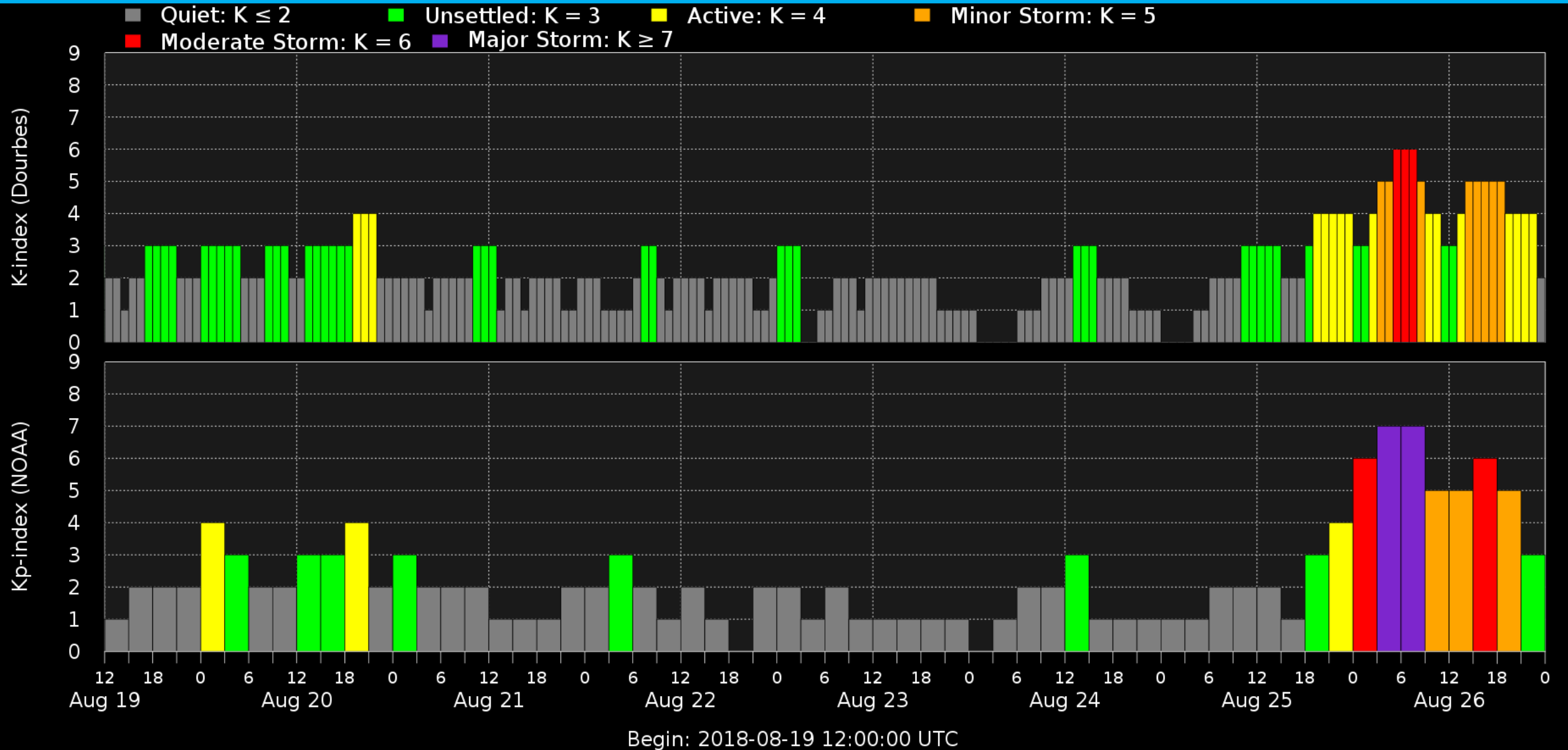


# Solar wind parameters & K-index (DSCOVR/Dourbes)

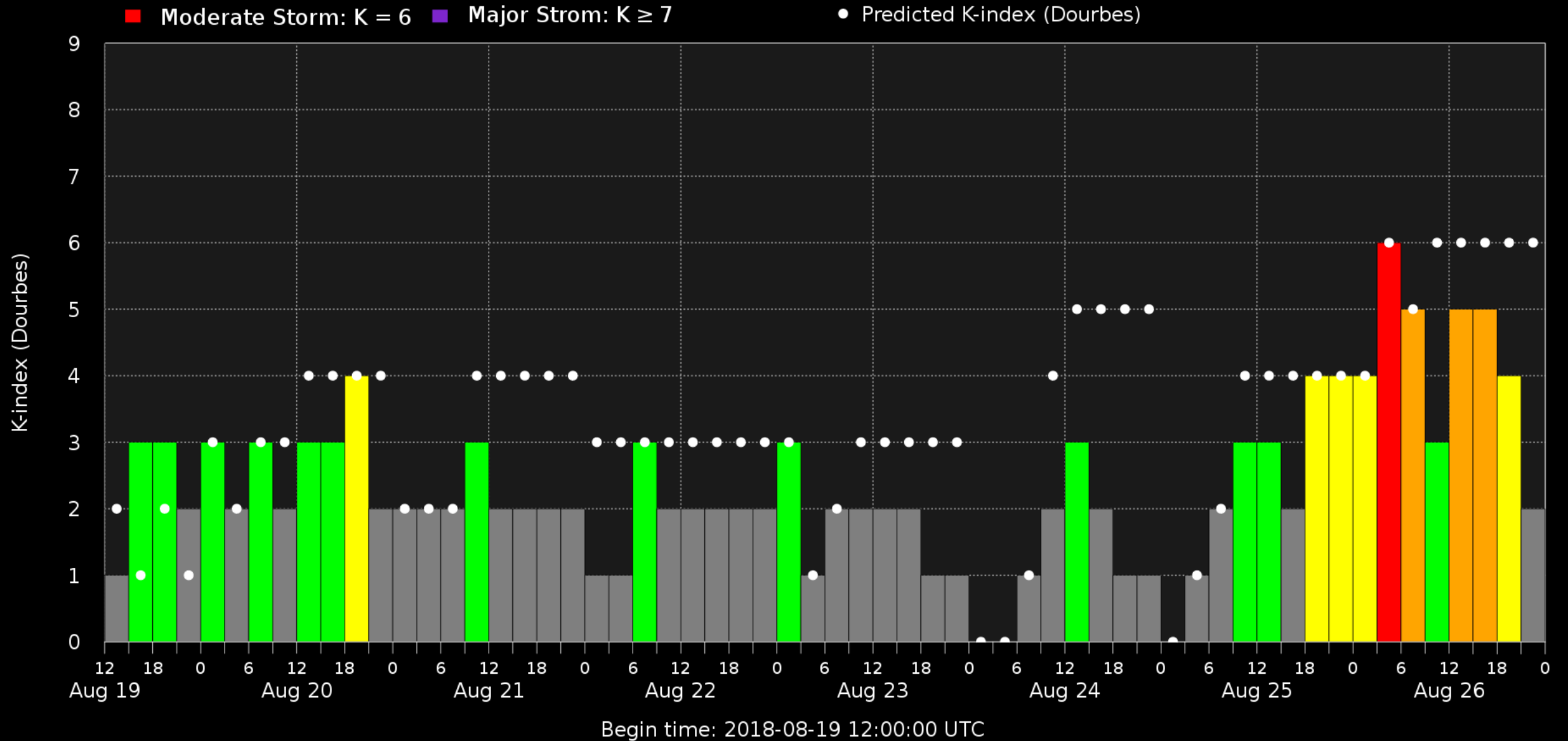




# Geomagnetic activity (K-indexes)



# K-Dourbes index



# Outlook

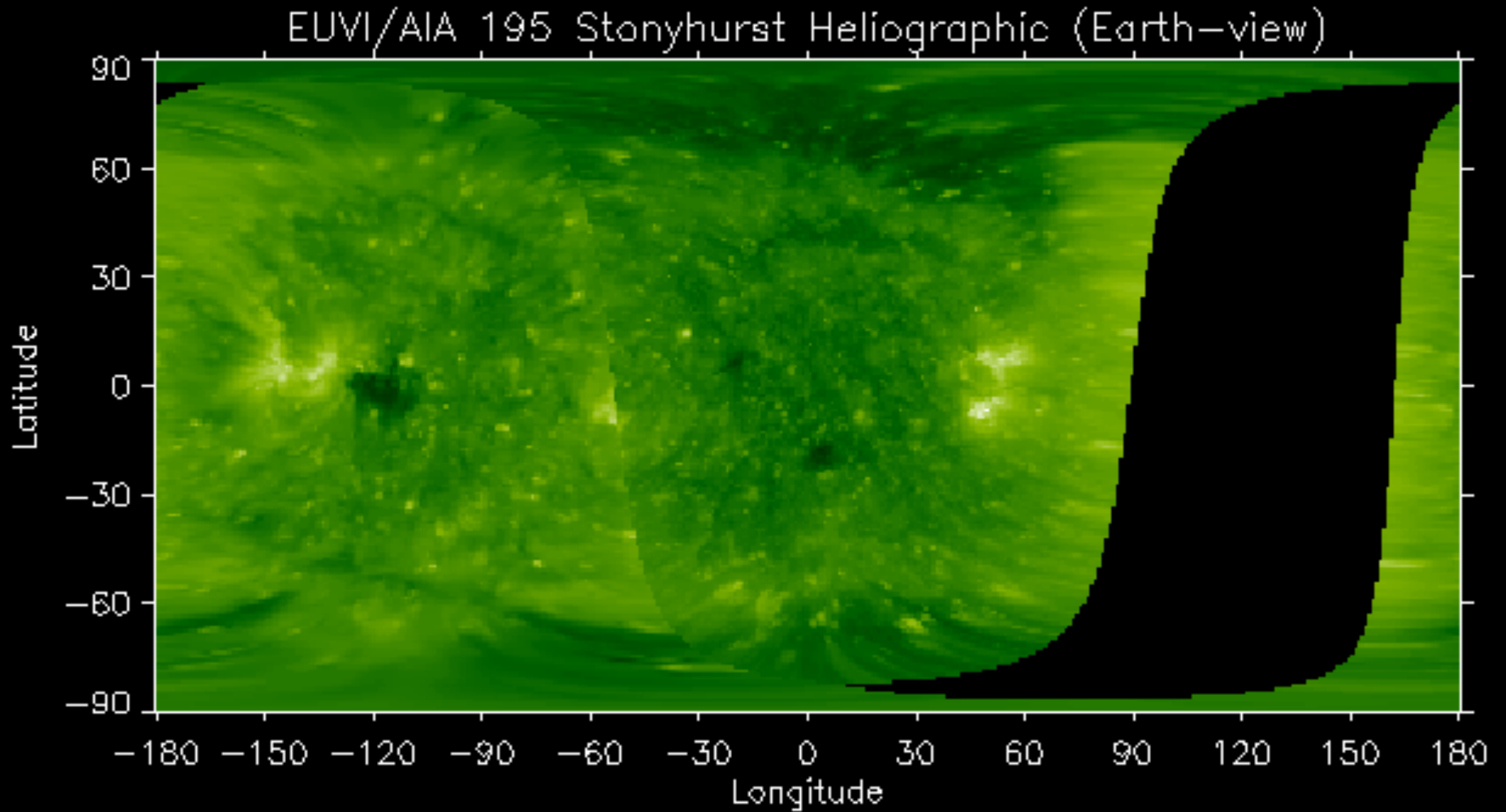


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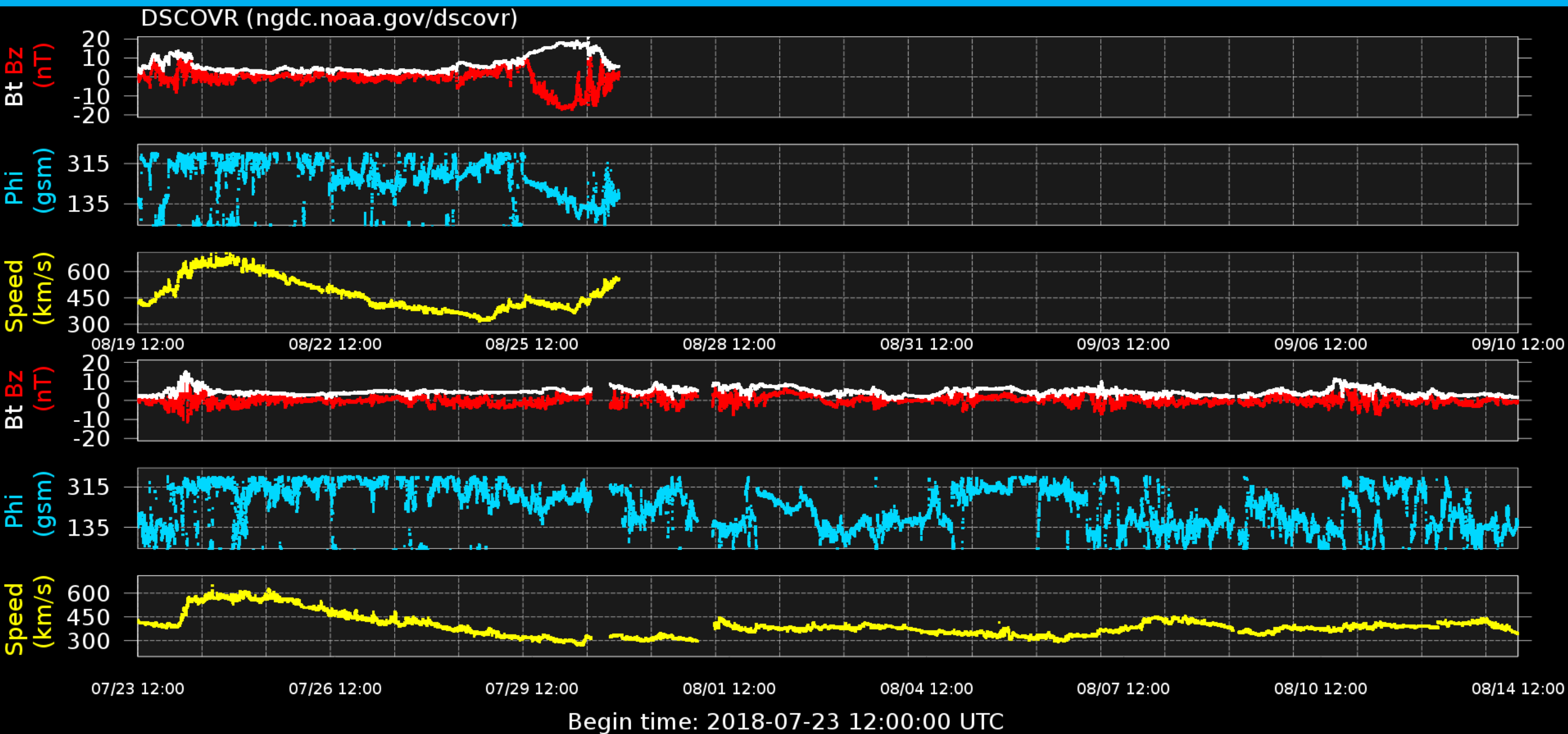
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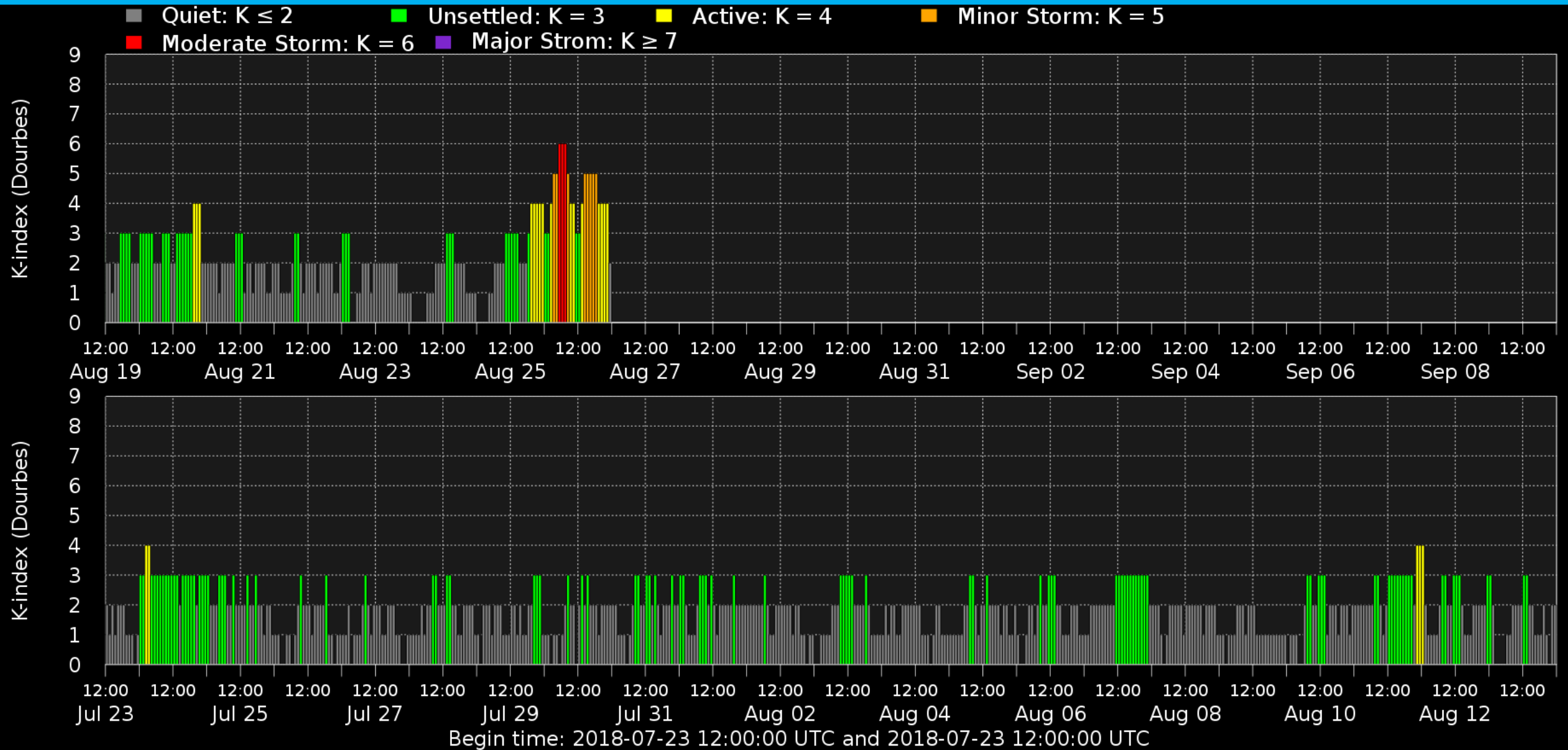
# Outlook: Solar activity



# Outlook: Solar wind



# Outlook: Geomagnetic activity





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