

# SIDC Space Weather briefing

16 – 22 July 2018

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&  
SIDC forecaster team

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



Royal Observatory  
of Belgium

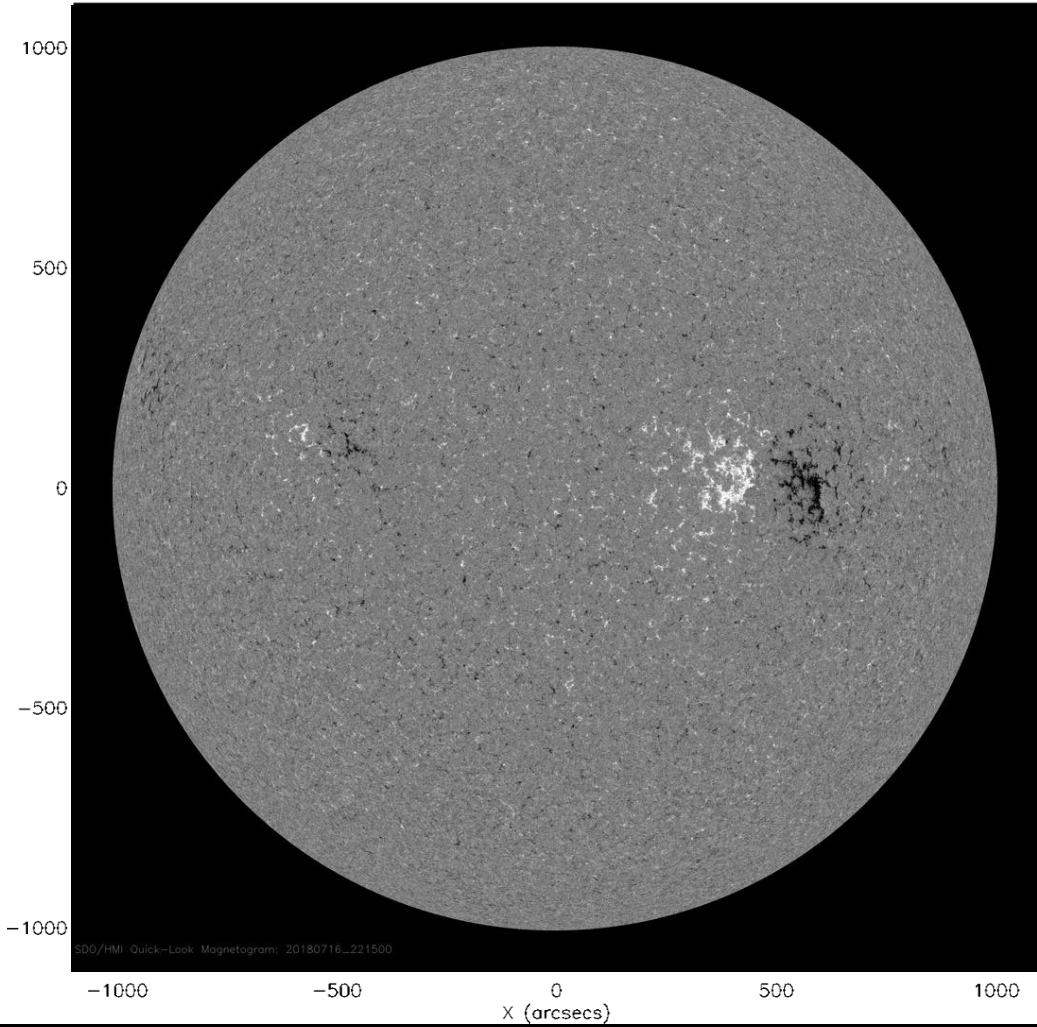
# Summary Report

Active Regions	NOAA AR 2716 (July 22)
<i>Flaring</i>	<i>No flares</i>
<i>Wide CMEs</i>	<i>No</i>
<i>Large Filaments eruptions</i>	<i>No</i>
<i>Proton Events</i>	<i>No</i>

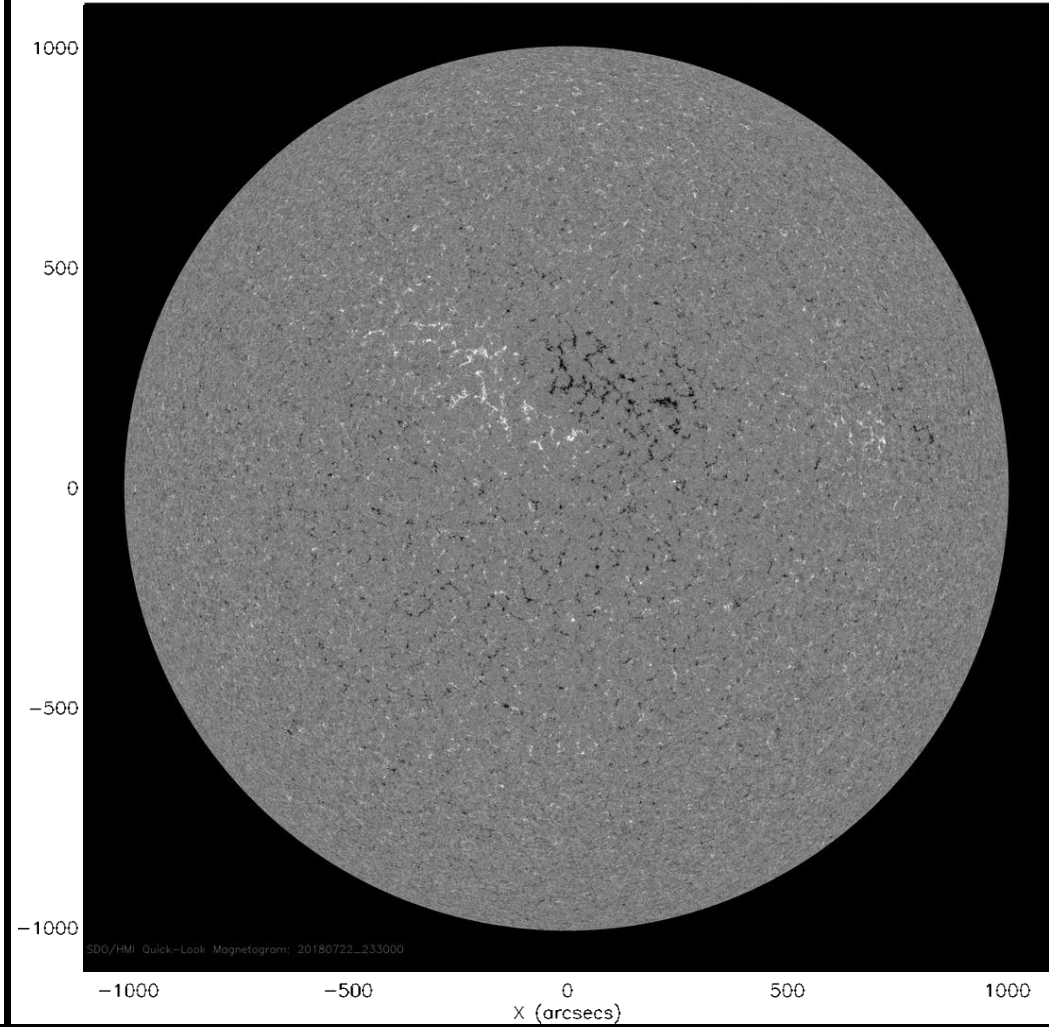
SW conditions	Max solar wind speed: 580 km/s
Coronal Holes	<ul style="list-style-type: none"><li>Equatorial coronal hole reached central meridian on July 21</li></ul>
Shocks	<i>No.</i>
<i>ICME</i>	<i>No?</i>
Kp index	NOAA Kp=4 & Dourbes K=3

# Solar active region evolution

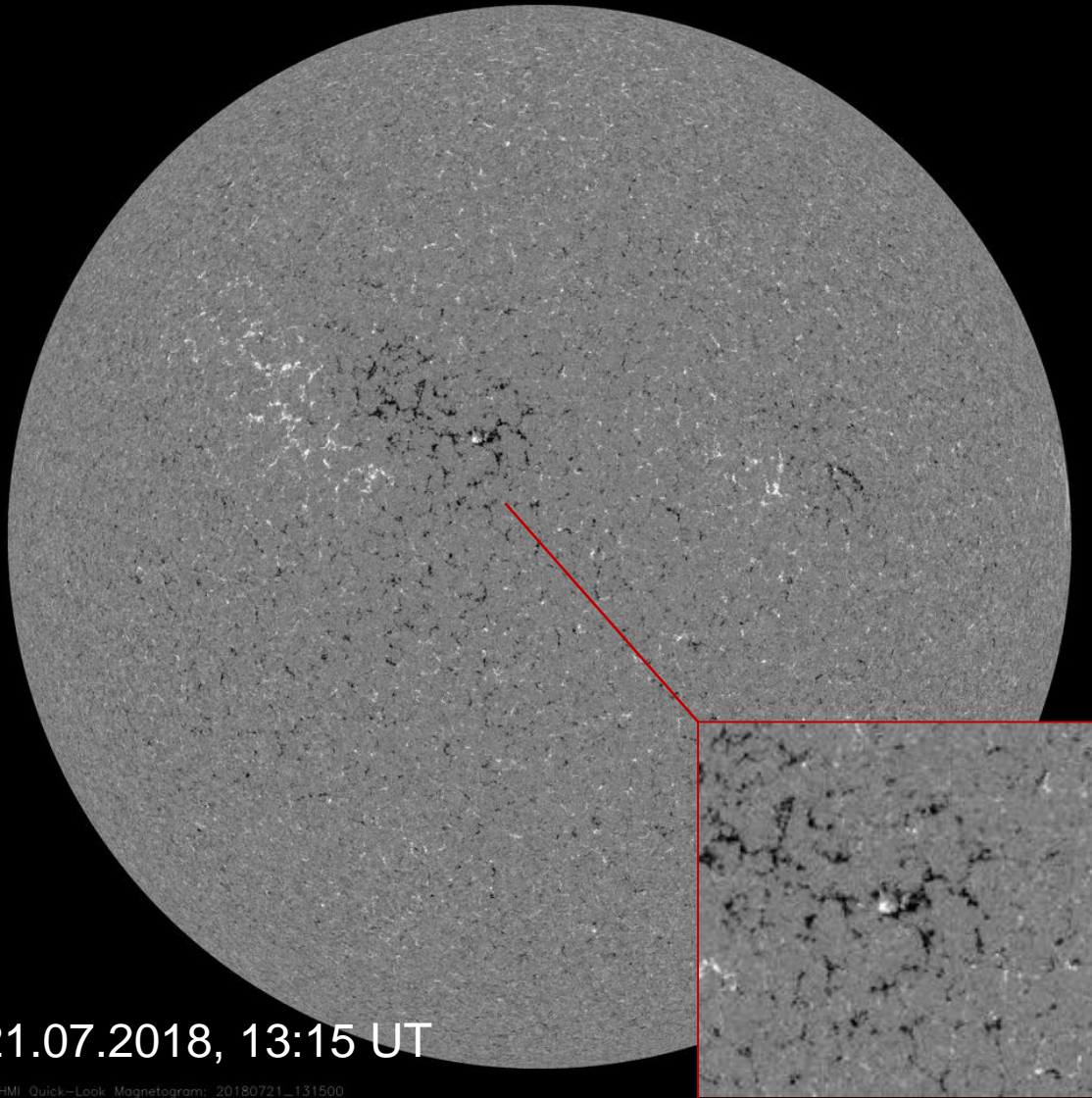
SDO/HMI Magnetogram 16-Jul-2018 22:10:46.100



SDO/HMI Magnetogram 22-Jul-2018 18:10:45.800

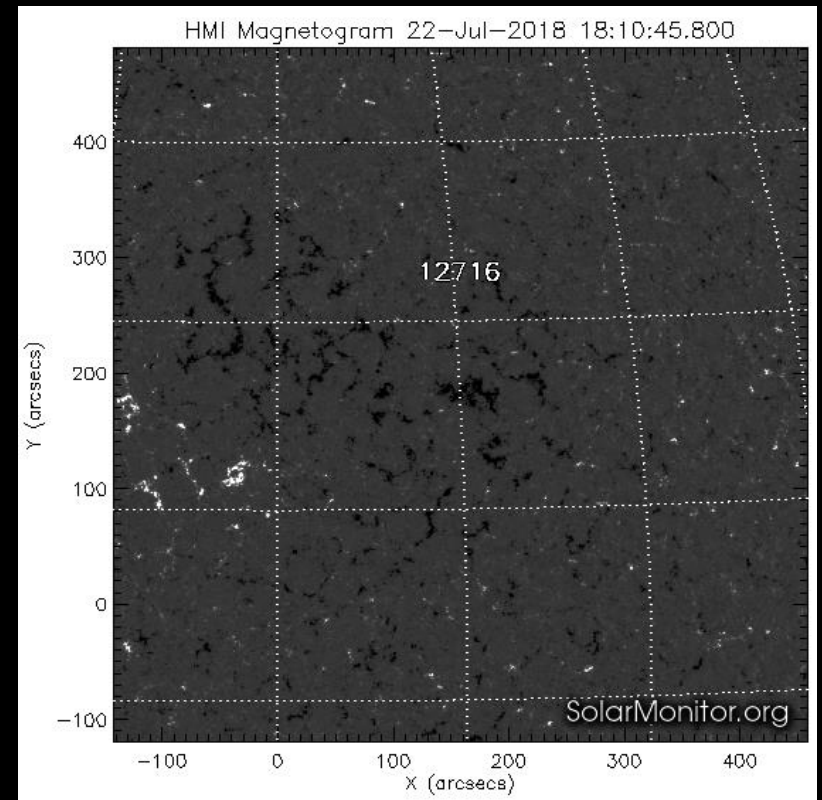


# Solar active region evolution



21.07.2018, 13:15 UT

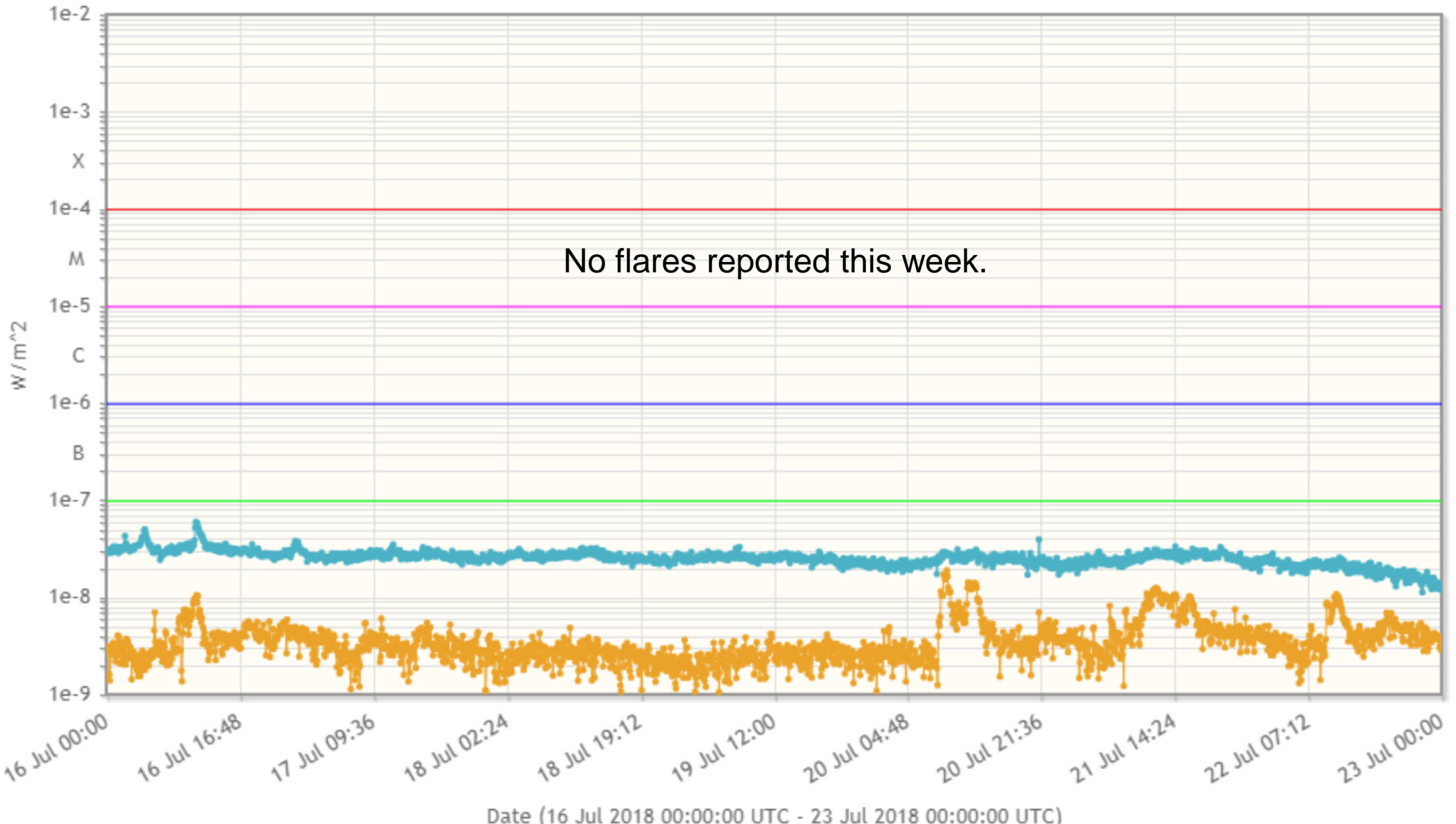
SDO/HMI Quick-Look Magnetogram: 20180721\_131500



# Solar X-ray flux and flaring

Plot (16 Jul 2018 00:00:00 UTC - 23 Jul 2018 00:00:00 UTC)

- X-Ray - GOES X-Ray flux 0.1-0.8 nm (quicklook) - 2011 data points - (averaged - 5 minute data)
- X-Ray - GOES X-Ray flux 0.05-0.4 nm (quicklook) - 2011 data points - (averaged - 5 minute data)



# CMEs detected by Cactus

S

W

N

E

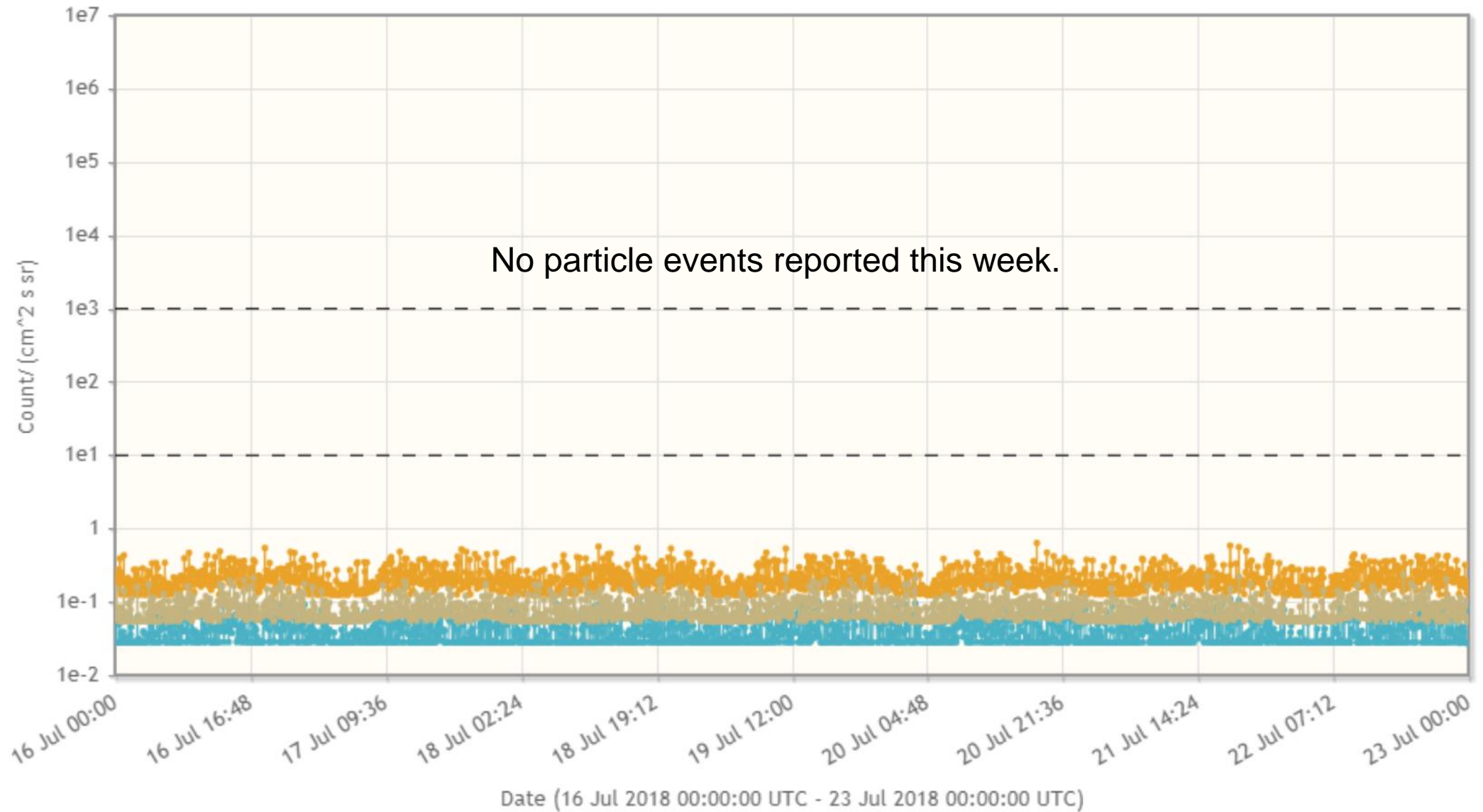
16:00 07/22  
13:36 07/22  
10:12 07/22  
07:12 07/22  
04:24 07/22  
01:25 07/22  
21:36 07/21  
18:24 07/21  
15:24 07/21  
11:48 07/21  
08:36 07/21  
05:36 07/21  
02:24 07/21  
22:36 07/20  
19:24 07/20  
16:24 07/20  
13:30 07/20  
10:24 07/20  
07:12 07/20  
02:48 07/20  
22:36 07/19  
19:12 07/19  
16:00 07/19  
12:24 07/19  
09:36 07/19  
06:48 07/19  
03:36 07/19  
00:12 07/19  
20:24 07/18  
17:36 07/18  
14:24 07/18  
11:12 07/18  
08:00 07/18  
05:36 07/18  
02:36 07/18  
23:24 07/17  
19:36 07/17  
16:48 07/17  
13:36 07/17  
10:12 07/17  
07:00 07/17  
04:12 07/17  
00:48 07/17  
21:36 07/16  
18:36 07/16  
15:48 07/16  
11:48 07/16  
08:48 07/16  
06:12 07/16  
03:30 07/16  
00:00 07/16

*(Not a CME)*

# Energetic particles

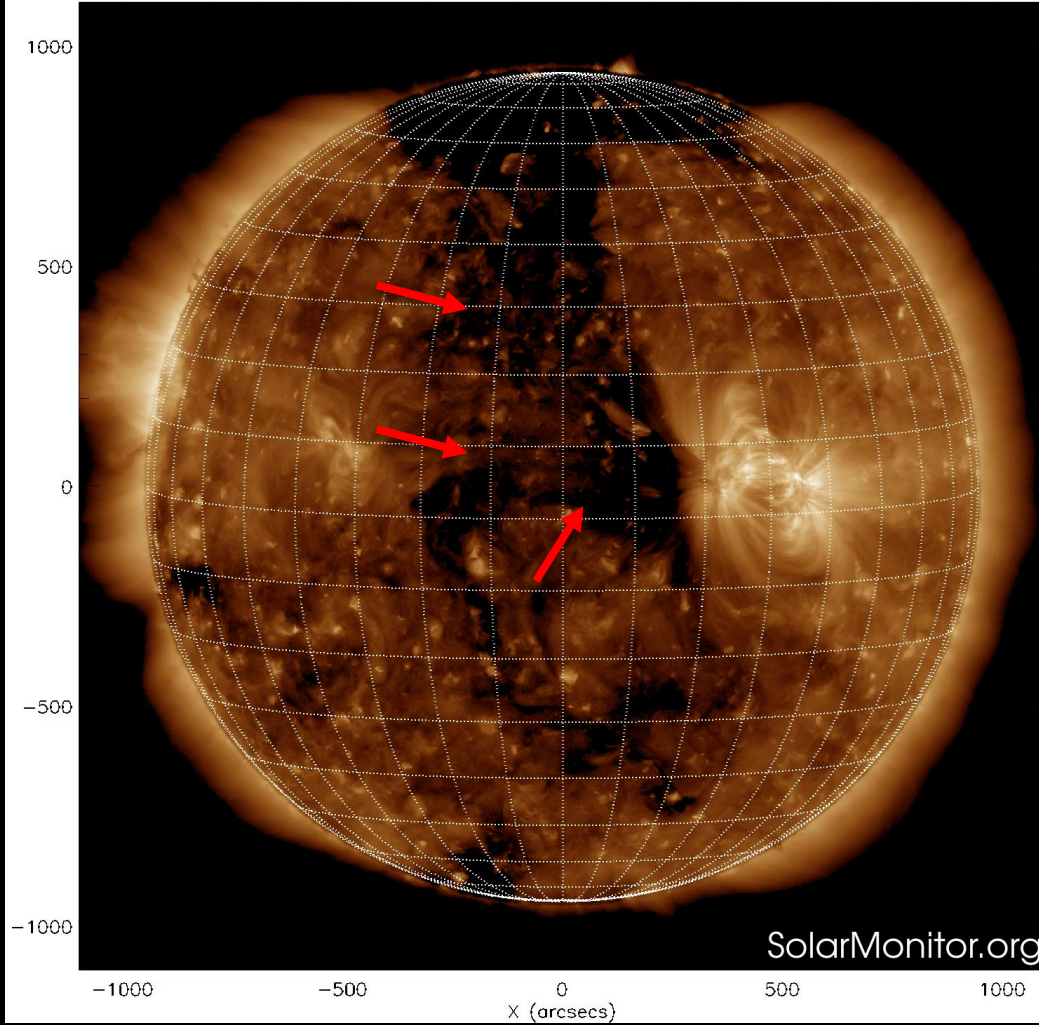
Plot (16 Jul 2018 00:00:00 UTC - 23 Jul 2018 00:00:00 UTC)

- Protons / Electrons - GOES Particles at > 100 Mev (quicklook) - 2000 data points - (raw - 5 minute data)
- Protons / Electrons - GOES Particles at > 10 Mev (quicklook) - 2000 data points - (raw - 5 minute data)
- Protons / Electrons - GOES Particles at > 50 Mev (quicklook) - 2000 data points - (raw - 5 minute data)

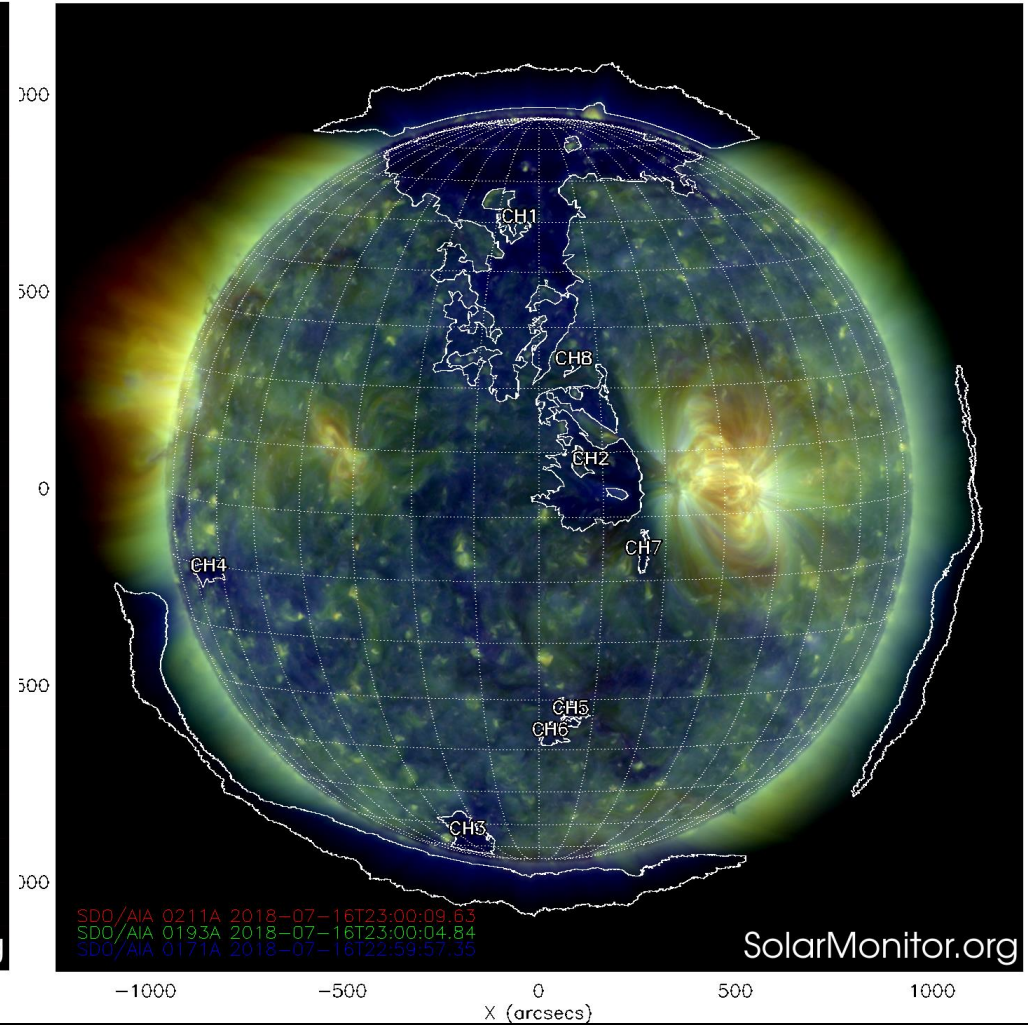


# Solar wind

SDO AIA Fe XII (193 Å) 16-Jul-2018 23:00:04.840

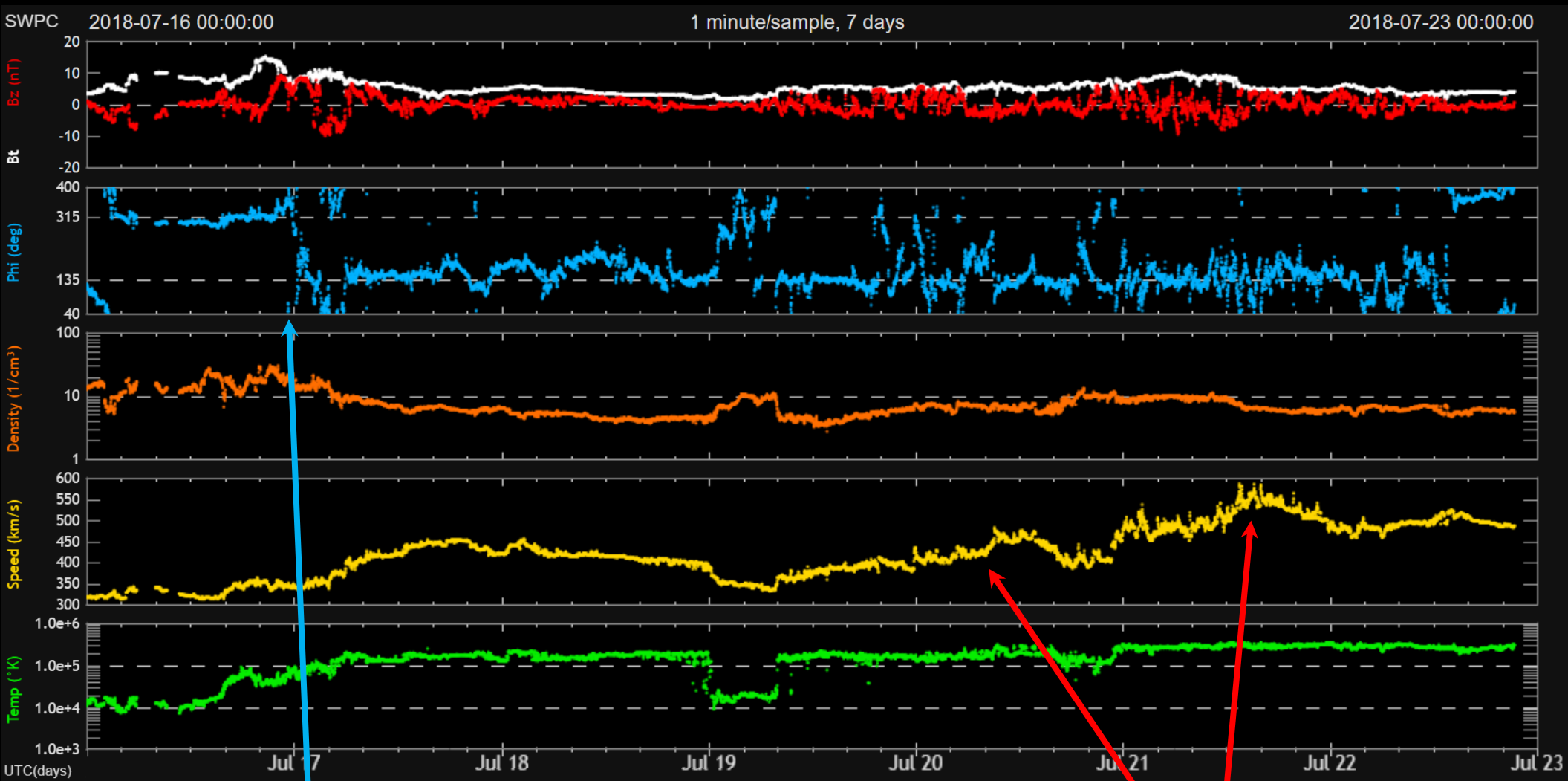


CHIMERA Coronal Holes at 16-Jul-2018 23:00:04.840 UT





# Solar wind



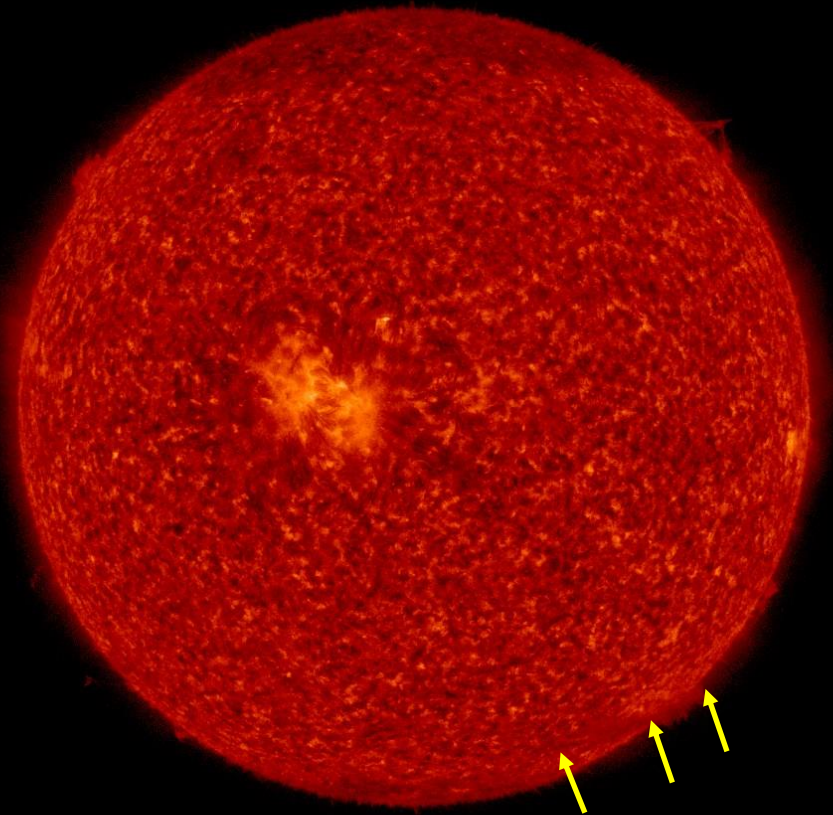
ICME?!



Structure at the sector boundary

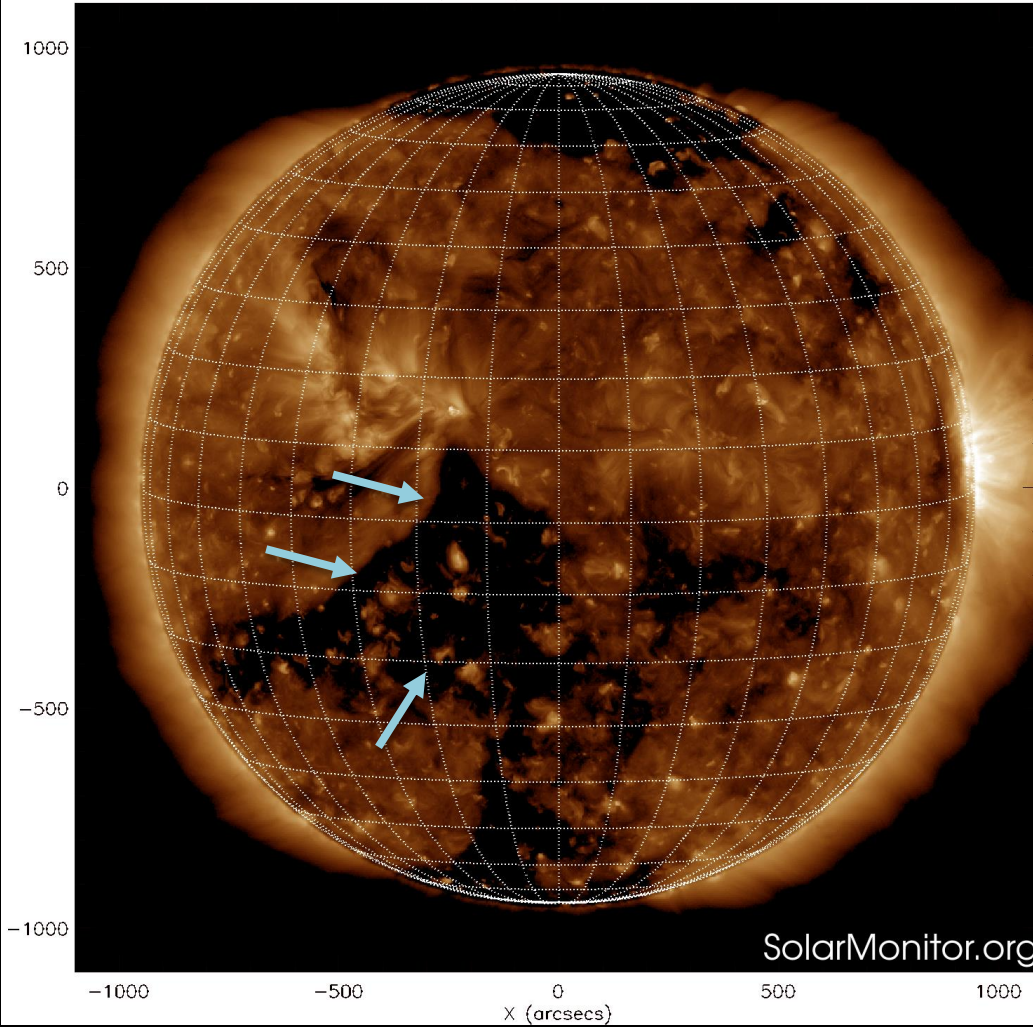
Fast flow

# ICME?!

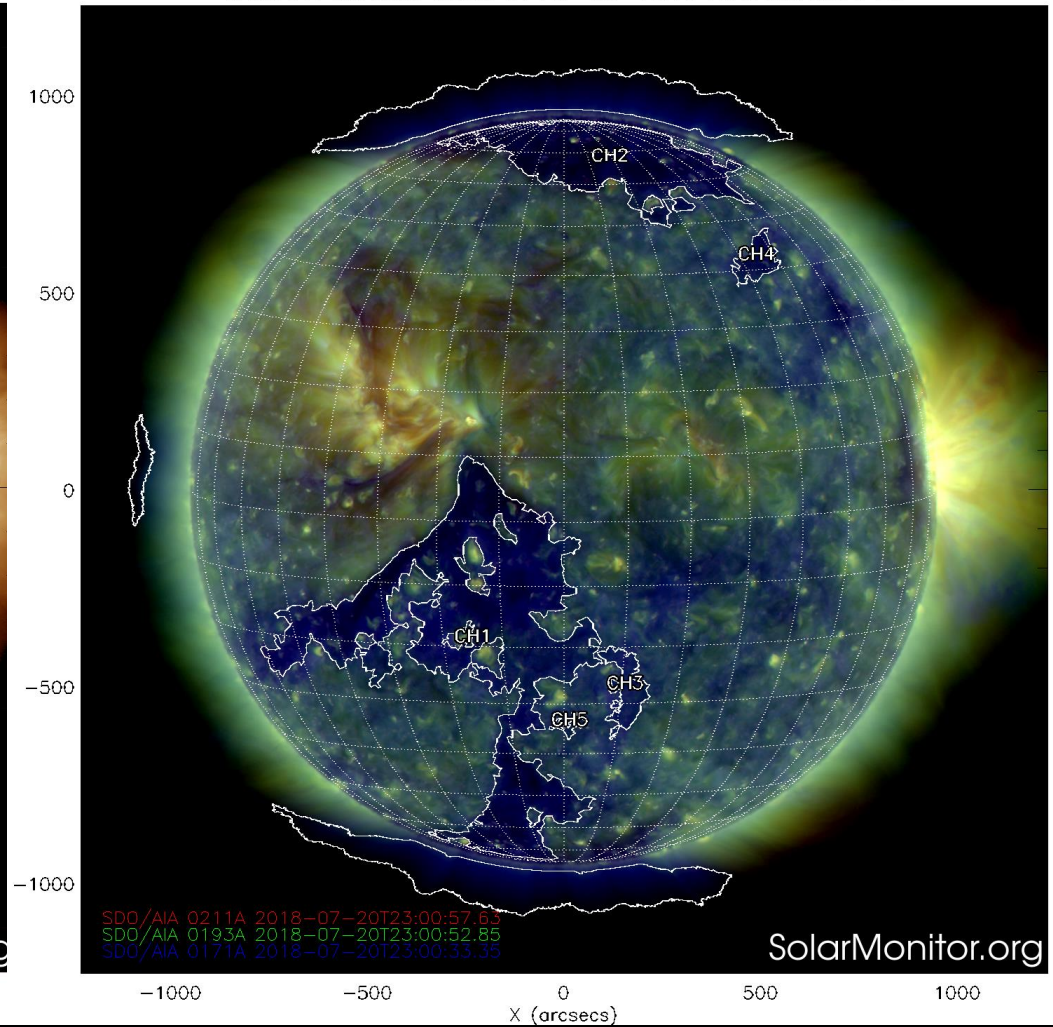


# Solar wind

SDO AIA Fe XII (193 Å) 20-Jul-2018 23:00:52.850

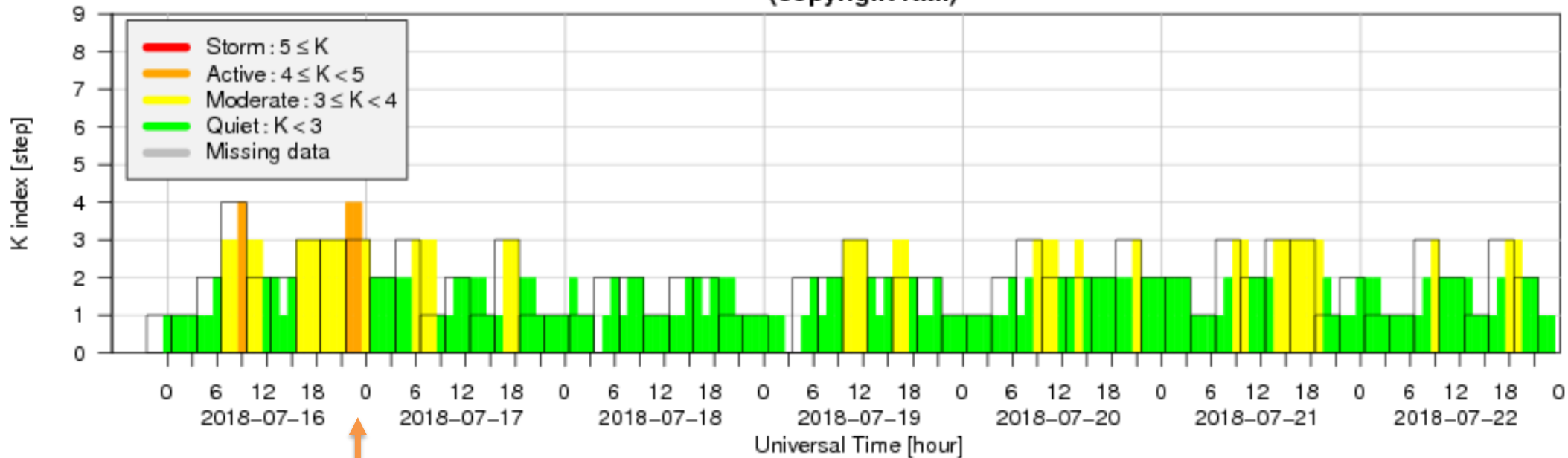


CHIMERA Coronal Holes at 20-Jul-2018 23:00:52.850 UT



# Geomagnetism

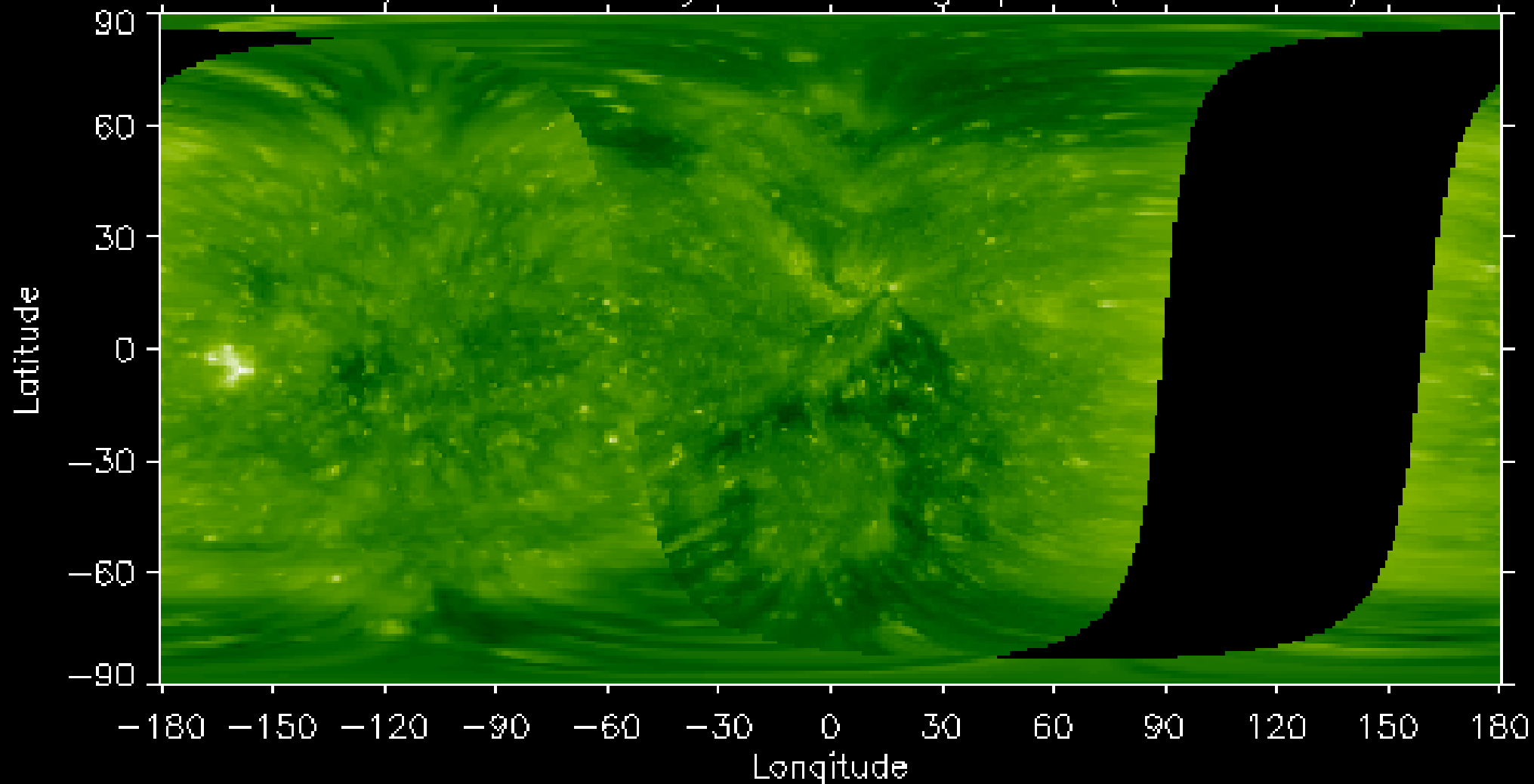
Local K index at Dourbes (50.1°N, 4.6°E)  
from ground-based measurements  
(copyright RMI)



Disturbed conditions.

# Outlook

EUVI/AIA 195 Stonyhurst Heliographic (Earth-view)



Observation date: 2018/07/23 07:15:30