

# SIDC Space Weather briefing

16 – 22 April, 2018

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&

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



**Royal Observatory**  
of Belgium

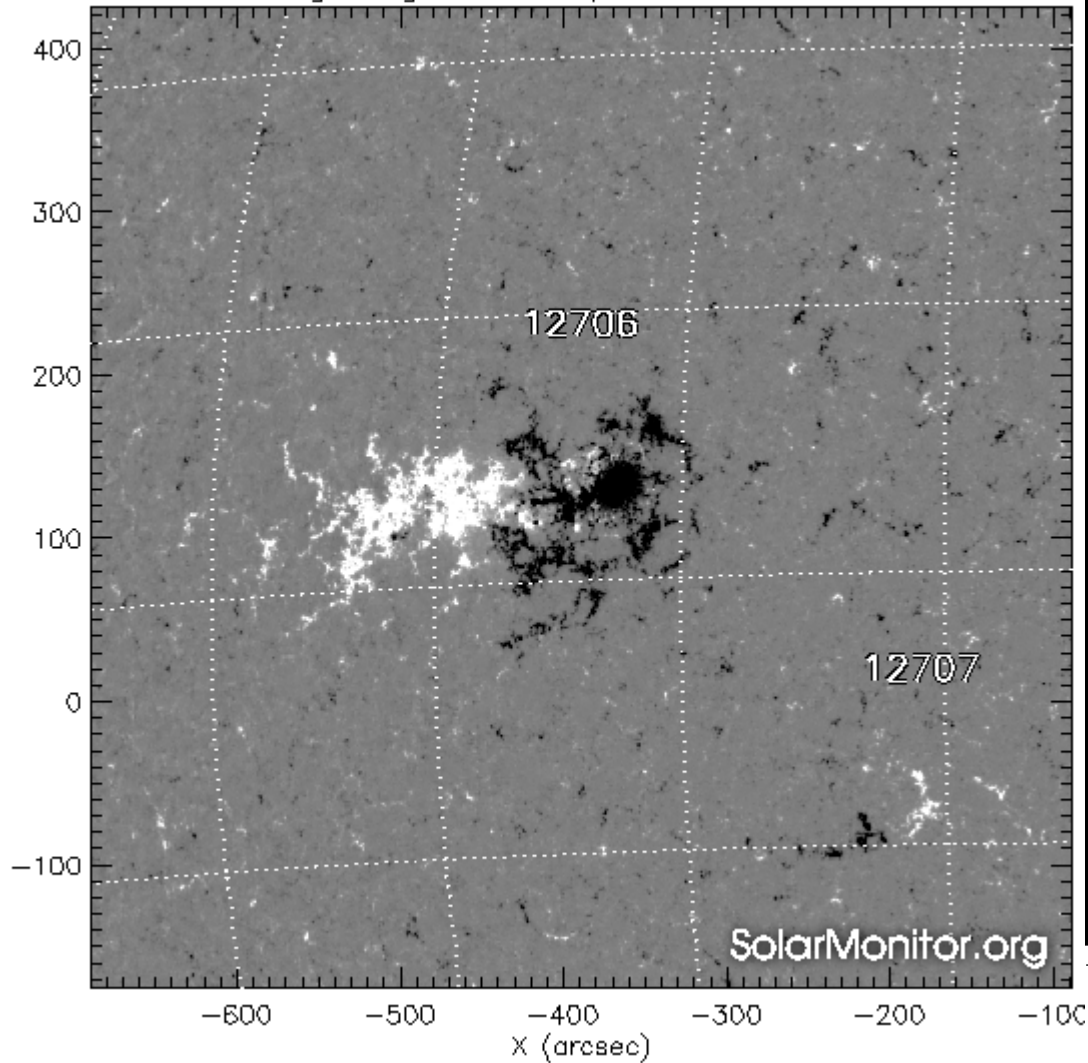
# Summary Report

Active Regions	NOAA ARs 2704, 2705, 2706, 2707.
<i>Flaring</i>	<i>12 B-class flares</i>
<i>Wide CMEs</i>	<i>No</i>
<i>Large Filaments eruptions</i>	<i>No</i>
<i>Proton Events</i>	<i>No</i>

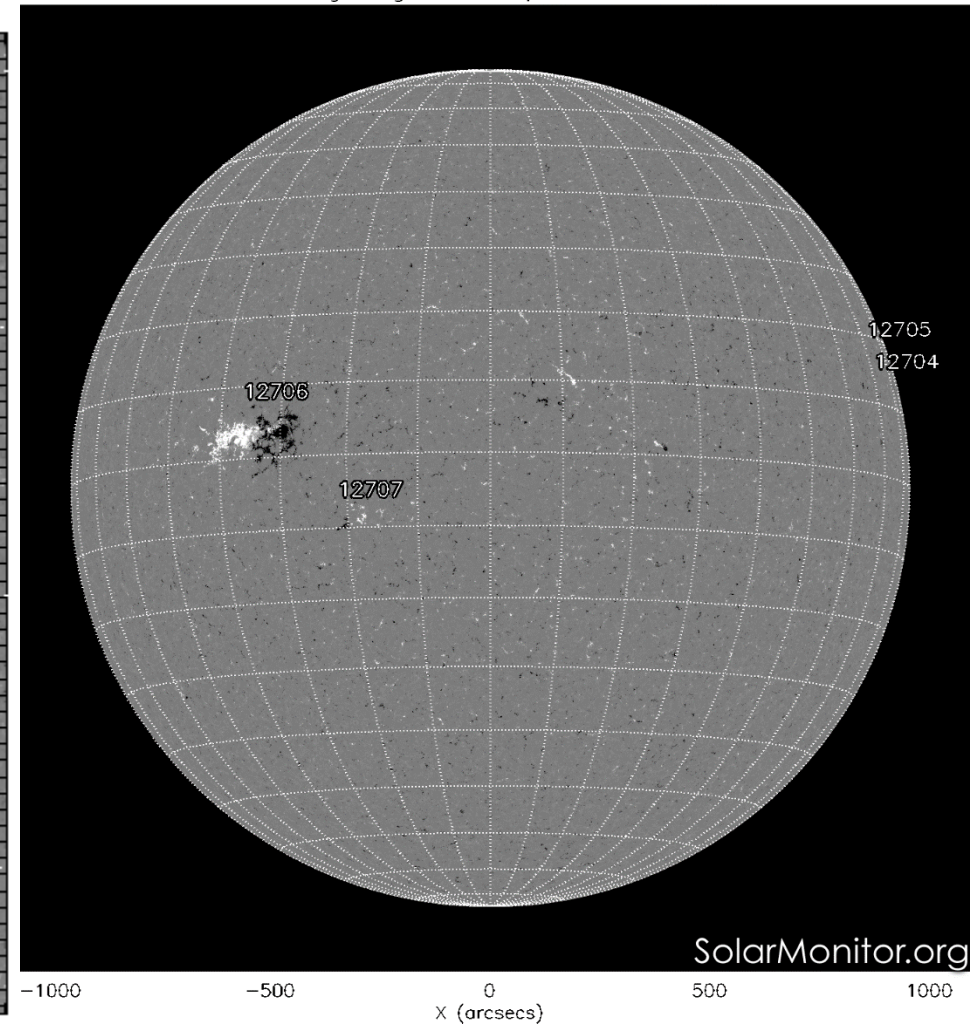
SW conditions	Max solar wind speed: 640 km/s
Coronal Holes	<ul style="list-style-type: none"><li>Equatorial coronal hole reached central meridian on April 15.</li></ul>
Shocks	<i>Yes. 23:19 UT on April 19.</i>
<i>ICME</i>	<i>No.</i>
Kp index	NOAA Kp=6 & Dourbes K=5

# Solar active region evolution

HMI Magnetogram 23-Apr-2018 06:58:40.800

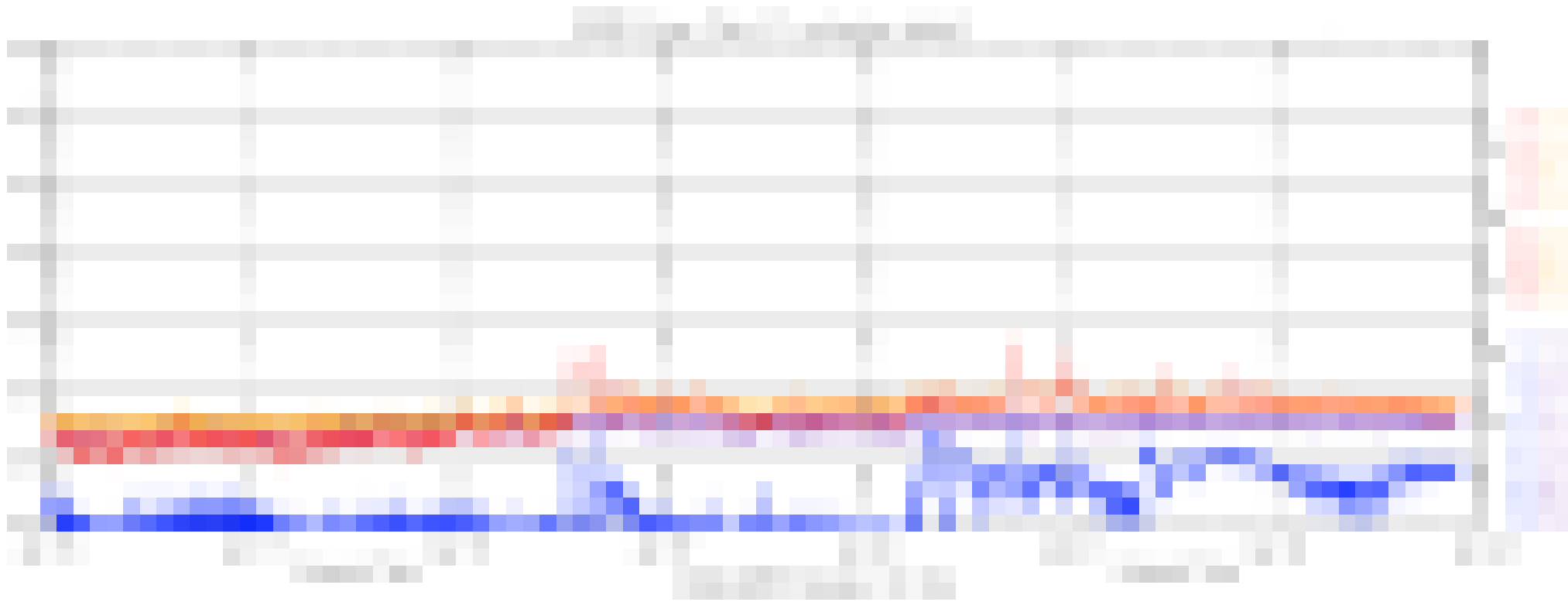


SDO HMI Magnetogram 22-Apr-2018 18:34:40.500



- Only few sunspot group was observed on the visible side of the solar disc this week; Catania sunspot group 78 (NOAA AR 2706).

# Solar X-ray flux and flaring



12 B-class flares (all originating from Catania sunspot group 78, i.e. NOAA AR 2706).

# CMEs detected by Cactus

No wide CMEs reported this week.

18:12	04/22
08:24	04/22
05:36	04/22
02:36	04/22
23:12	04/21
20:00	04/21
17:24	04/21
14:36	04/21
11:36	04/21
08:36	04/21
06:00	04/21
03:12	04/21
23:42	04/20
20:24	04/20
17:36	04/20
14:36	04/20
11:36	04/20
08:36	04/20
05:48	04/20
02:48	04/20
23:24	04/19
20:00	04/19
17:00	04/19
14:00	04/19
11:00	04/19
07:48	04/19
05:00	04/19
02:12	04/19
23:12	04/18
19:48	04/18
17:12	04/18
14:12	04/18
11:12	04/18
08:12	04/18
05:24	04/18
02:12	04/18
22:24	04/17
19:24	04/17
16:12	04/17
13:25	04/17
10:00	04/17
07:00	04/17
04:12	04/17
01:25	04/17
21:36	04/16
18:36	04/16
15:36	04/16
12:12	04/16
09:12	04/16
06:24	04/16
03:36	04/16
00:00	04/16

c3

c2

S

W

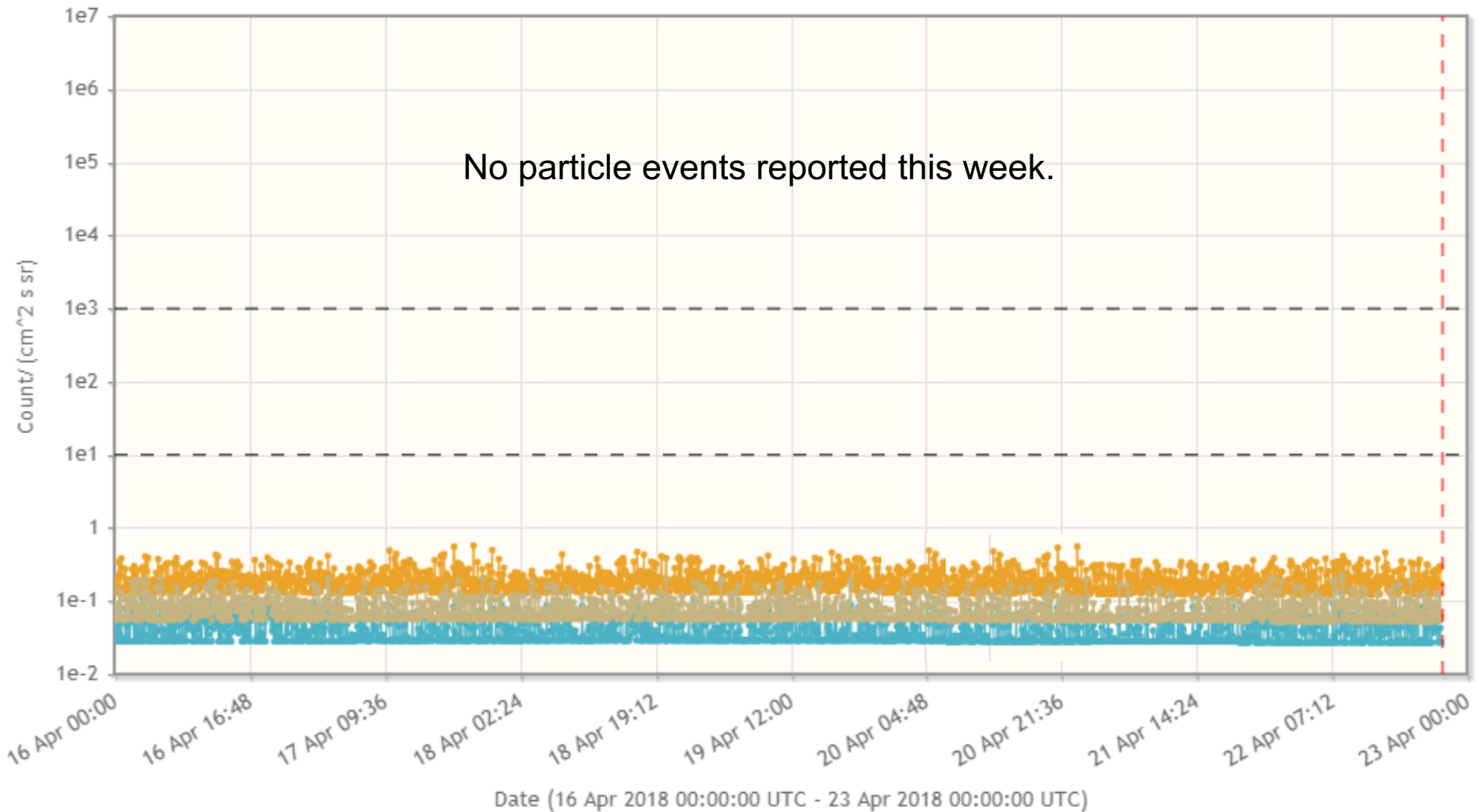
N

E

# Energetic particles

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

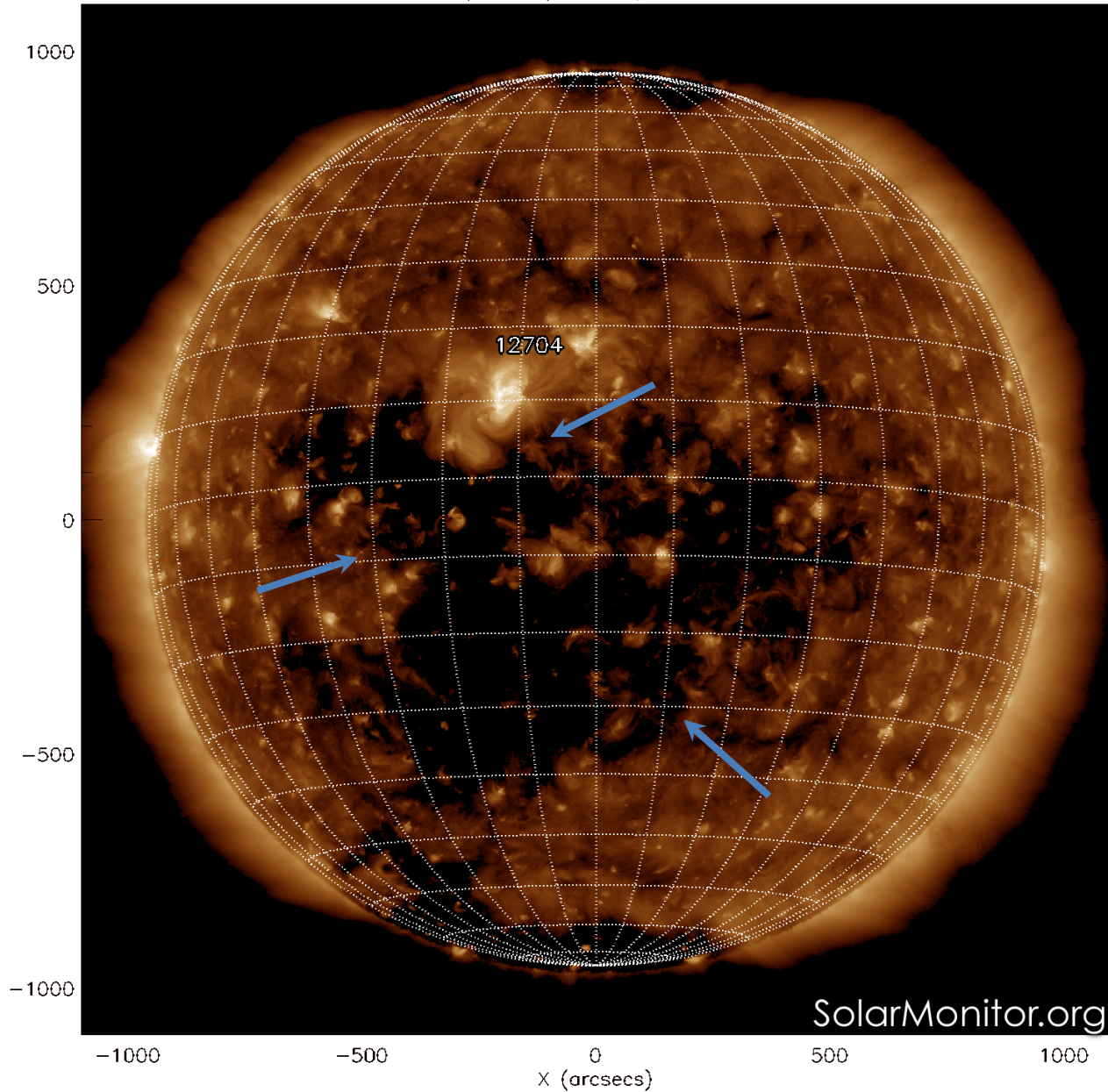
- Protons / Electrons - GOES Particles at > 100 Mev (quicklook) - 1731 data points - (raw - 5 minute data)
- Protons / Electrons - GOES Particles at > 10 Mev (quicklook) - 1731 data points - (raw - 5 minute data)
- Protons / Electrons - GOES Particles at > 50 Mev (quicklook) - 1731 data points - (raw - 5 minute data)





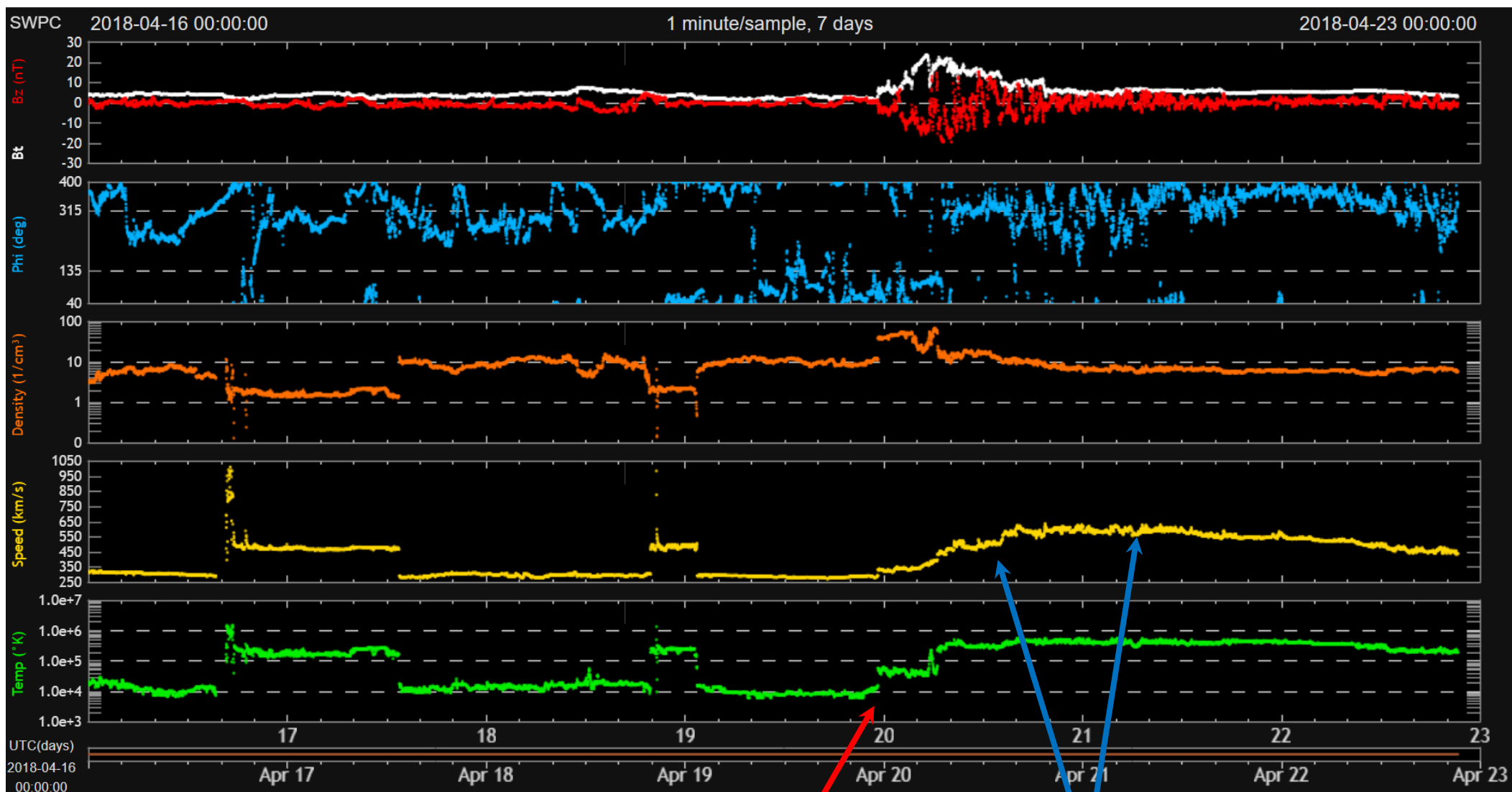
# Coronal holes

SDO AIA Fe XII (193 Å) 15-Apr-2018 23:24:28.840



The equatorial coronal hole with strong extent to the southern solar hemisphere reached central meridian on April 15 (previous week).

# Solar wind

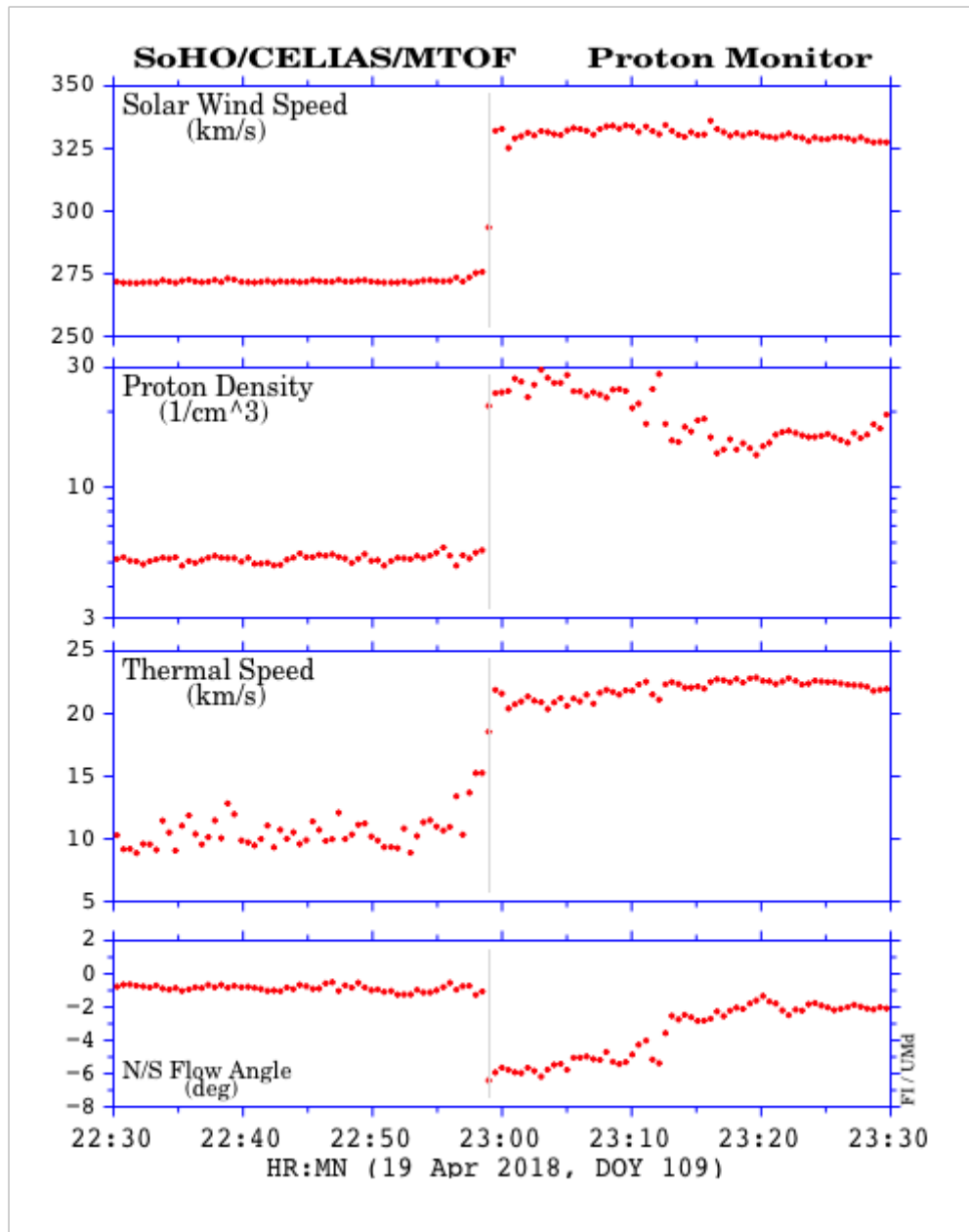


Shock  
wave

Fast flow



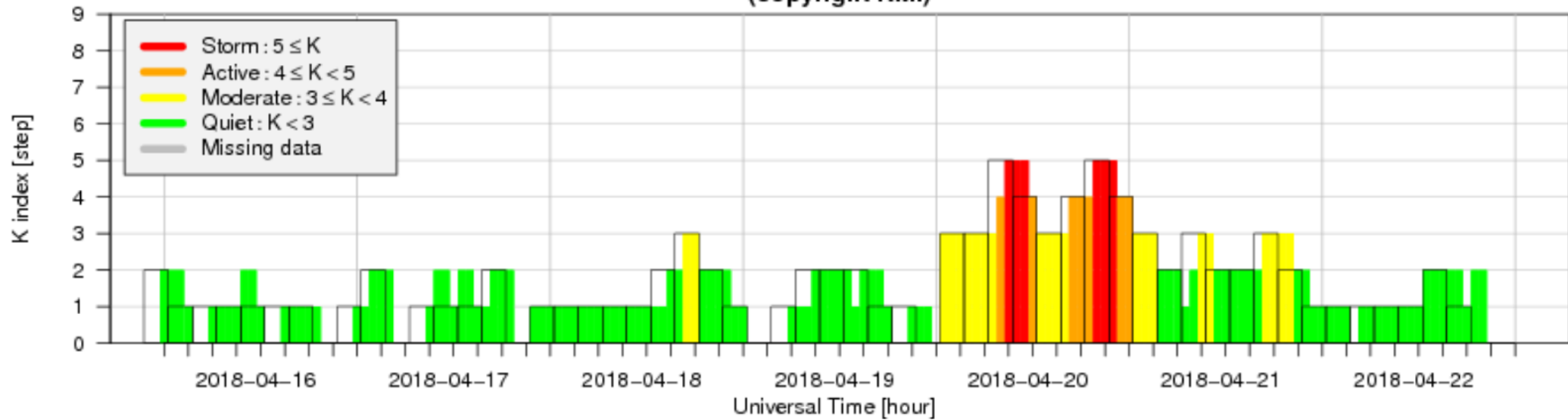
# Solar wind



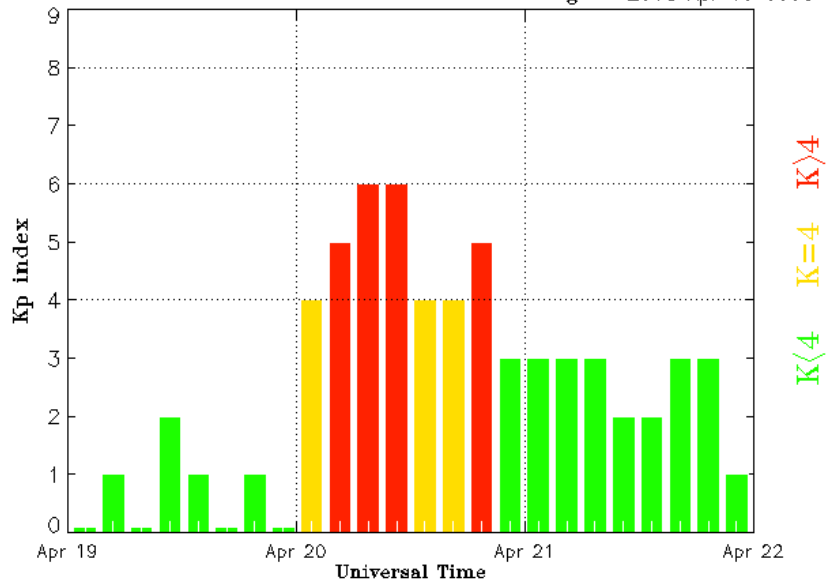
Shock wave detected by SOHO/CELIAS

# Geomagnetism

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

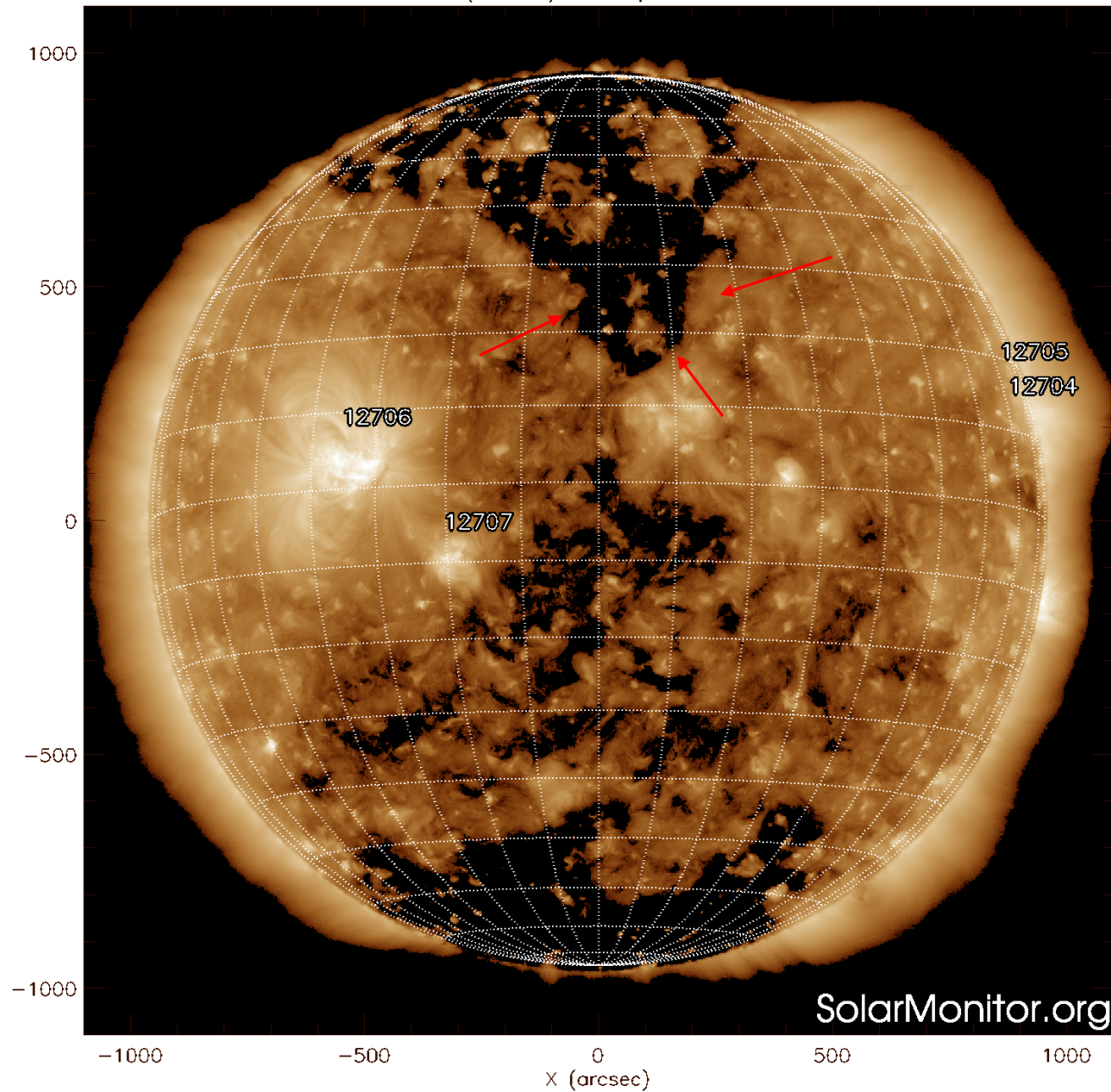


Estimated Planetary K index (3 hour data) Begin: 2018 Apr 19 0000 UTC



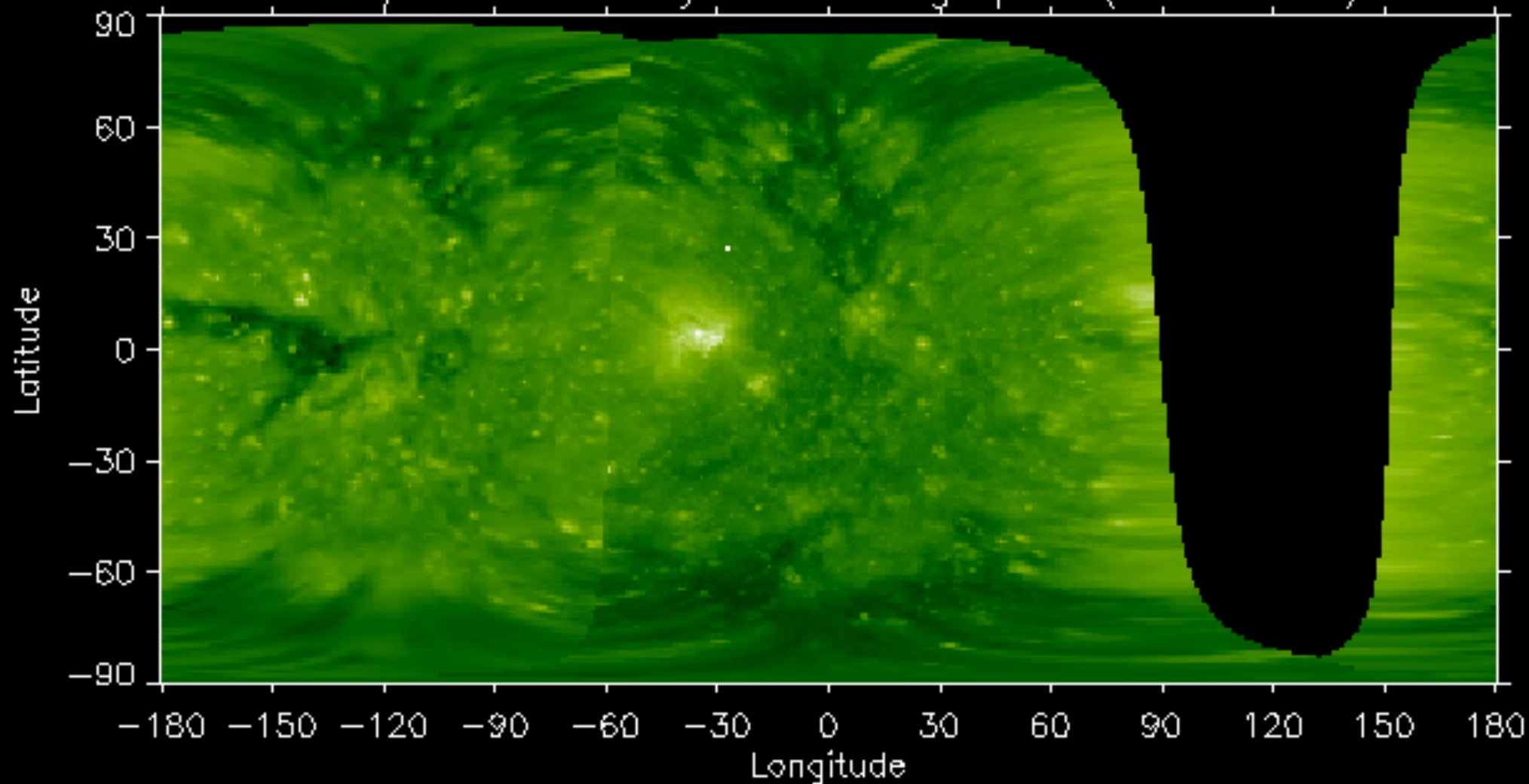
# Coronal holes

SDO AIA Fe XII (193 Å) 22-Apr-2018 19:38:52.840



# Outlook

EUVI/AIA 195 Stonyhurst Heliographic (Earth-view)



Observation date: 2018/04/22 20:45:30