

SIDC Space Weather Briefing

23 December 2018 - 30 December 2018

Jan Janssens
& the SIDC forecaster team



Solar Influences
Data analysis Centre
www.sidc.be

Summary Report

Solar activity from 2018-12-23 12:00 UT to 2018-12-30 12:00 UT

Active regions	The Sun was spotless all week
Flaring	# B-class flare: 0 # C-class flare: 0 # M-class flare: 0 # X-class flare: 0
Filaments	No filament eruptions observed
CMEs	No earth-directed CMEs observed
Proton Events	None

Solar wind and geomagnetic conditions from 2018-12-23 12:00 UT to 2018-12-30 12:00 UT

Coronal Holes	Extension from positive polarity northern polar coronal hole
ICME	None
SW Conditions	CIR and HSS from positive polarity coronal hole
K-indices	max K-index (Dourbes): 4 max Kp-index (NOAA): 5

All Quiet Alert: **Ended** on 27 December – **Started** on 30 December 2018

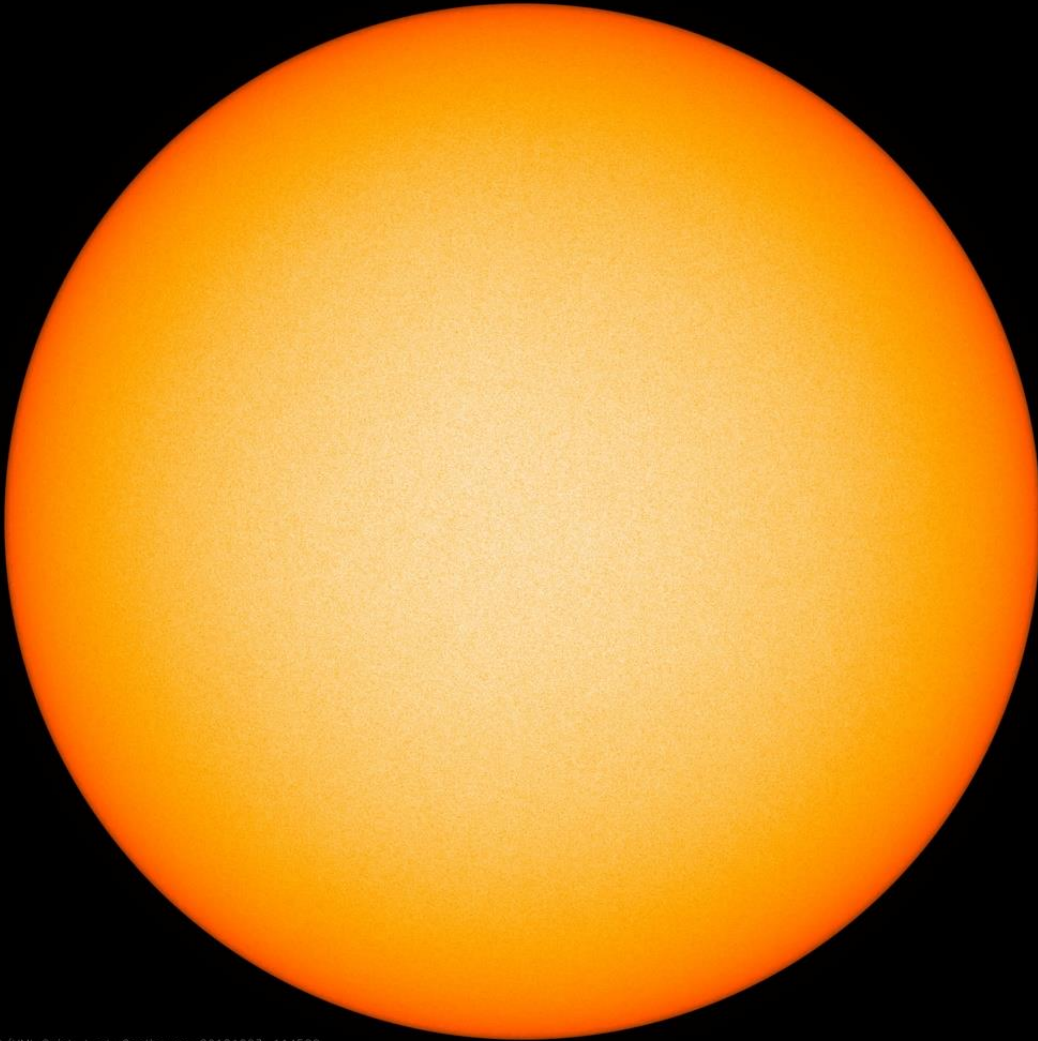
Solar Activity



Solar Influences
Data analysis Centre
www.sidc.be

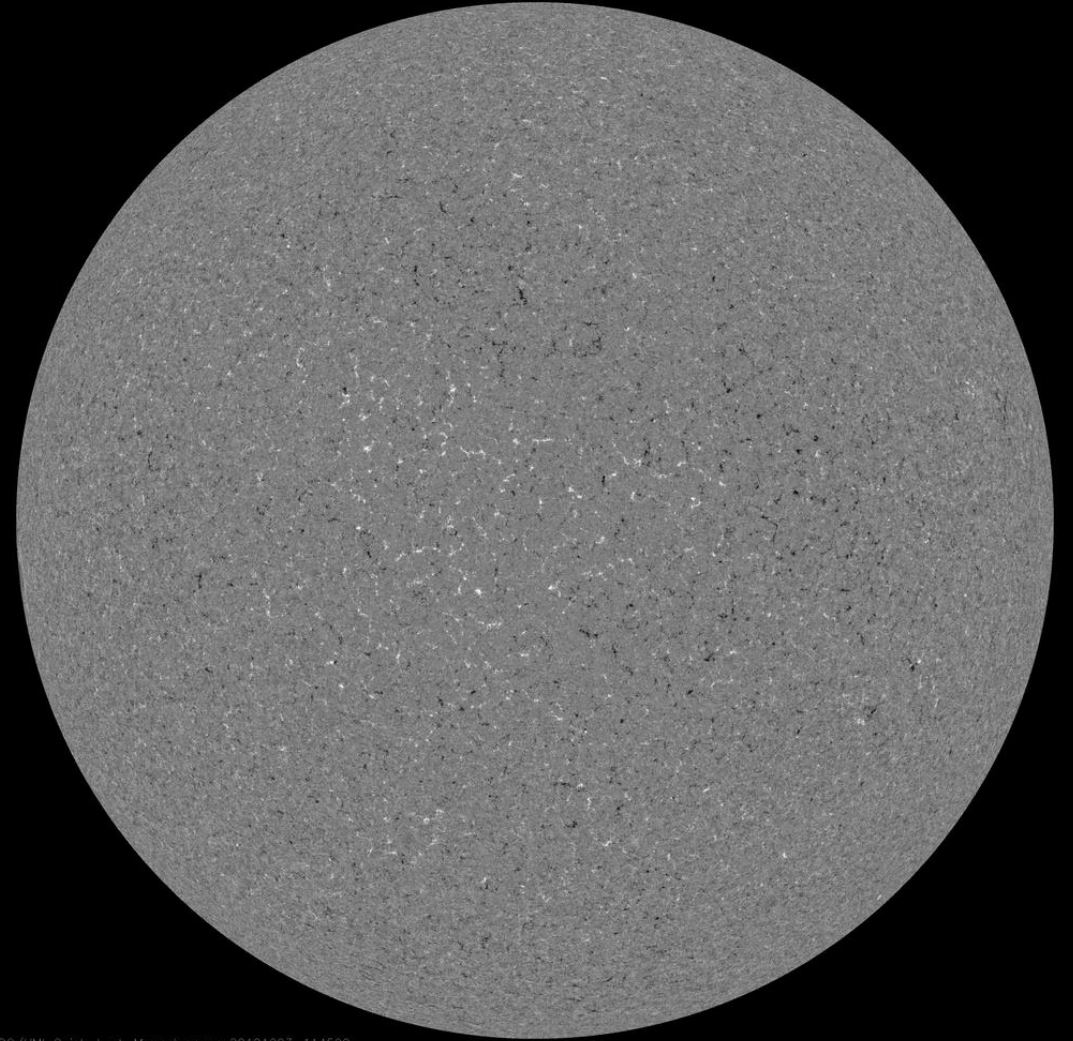
Solar active region - start of the week

SDO/HMI White Light 2018-12-23



SDO/HMI Quick-Look Continuum: 20181223_114500

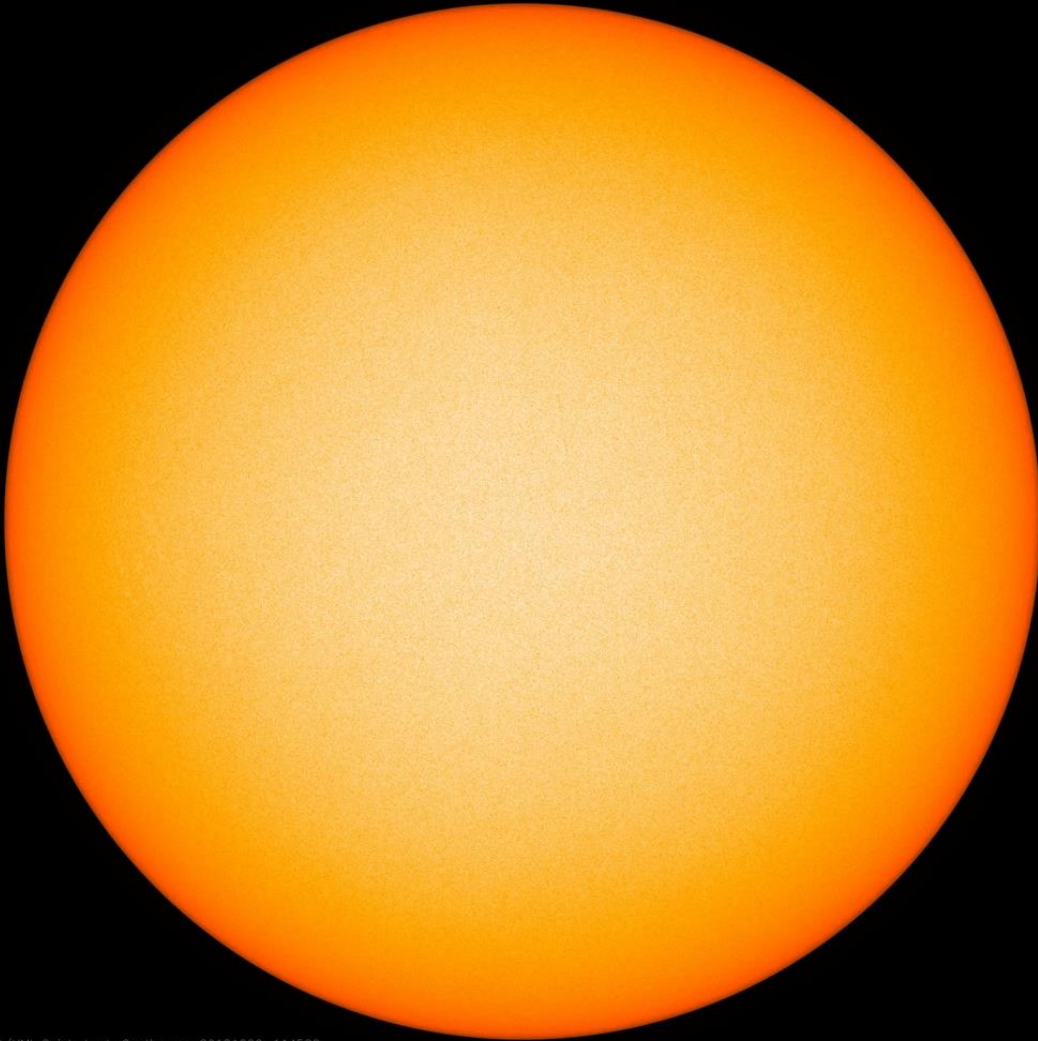
SDO/HMI Magnetogram 2018-12-23



SDO/HMI Quick-Look Magnetogram: 20181223_114500

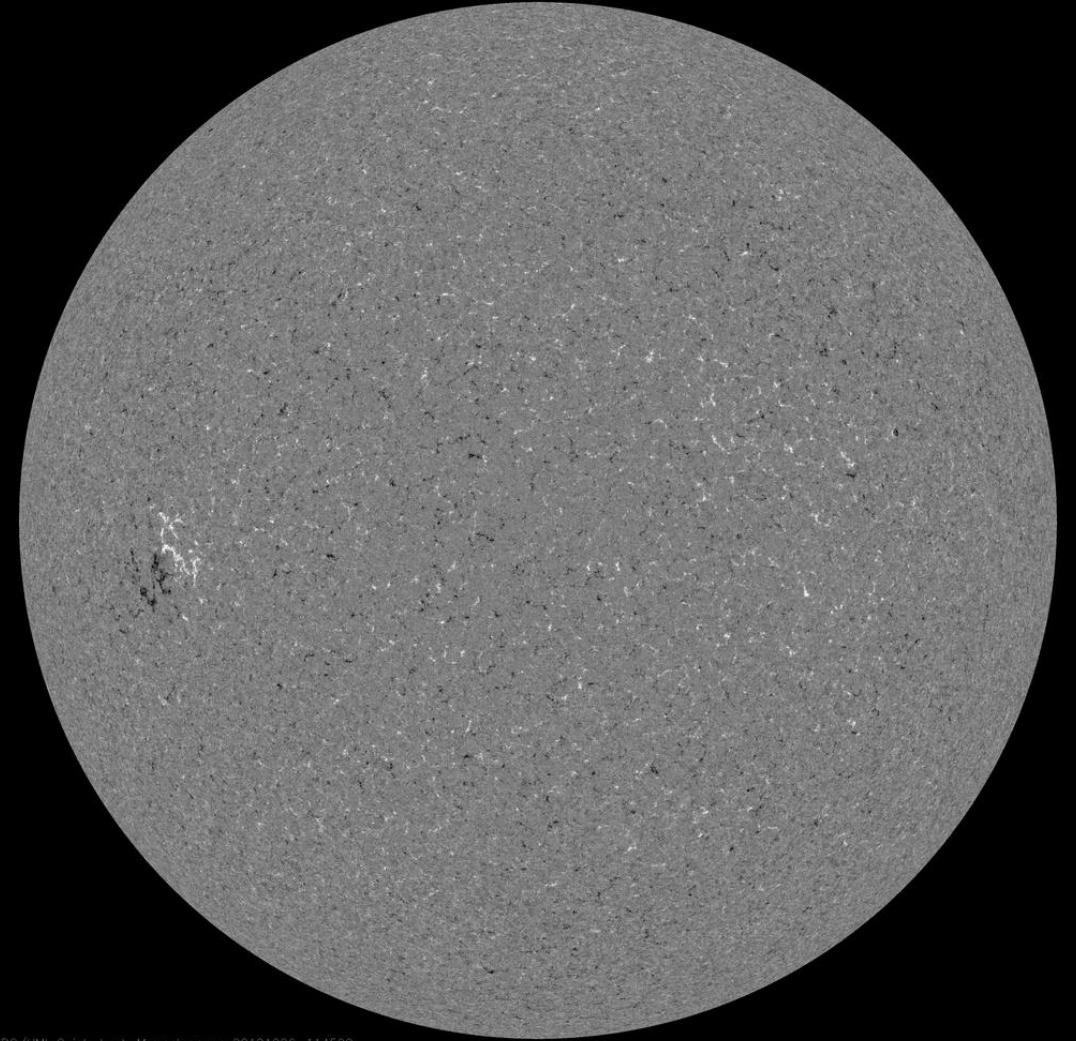
Solar active region - middle of the week

SDO/HMI White Light 2018-12-26



SDO/HMI Quick-Look Continuum: 20181226_114500

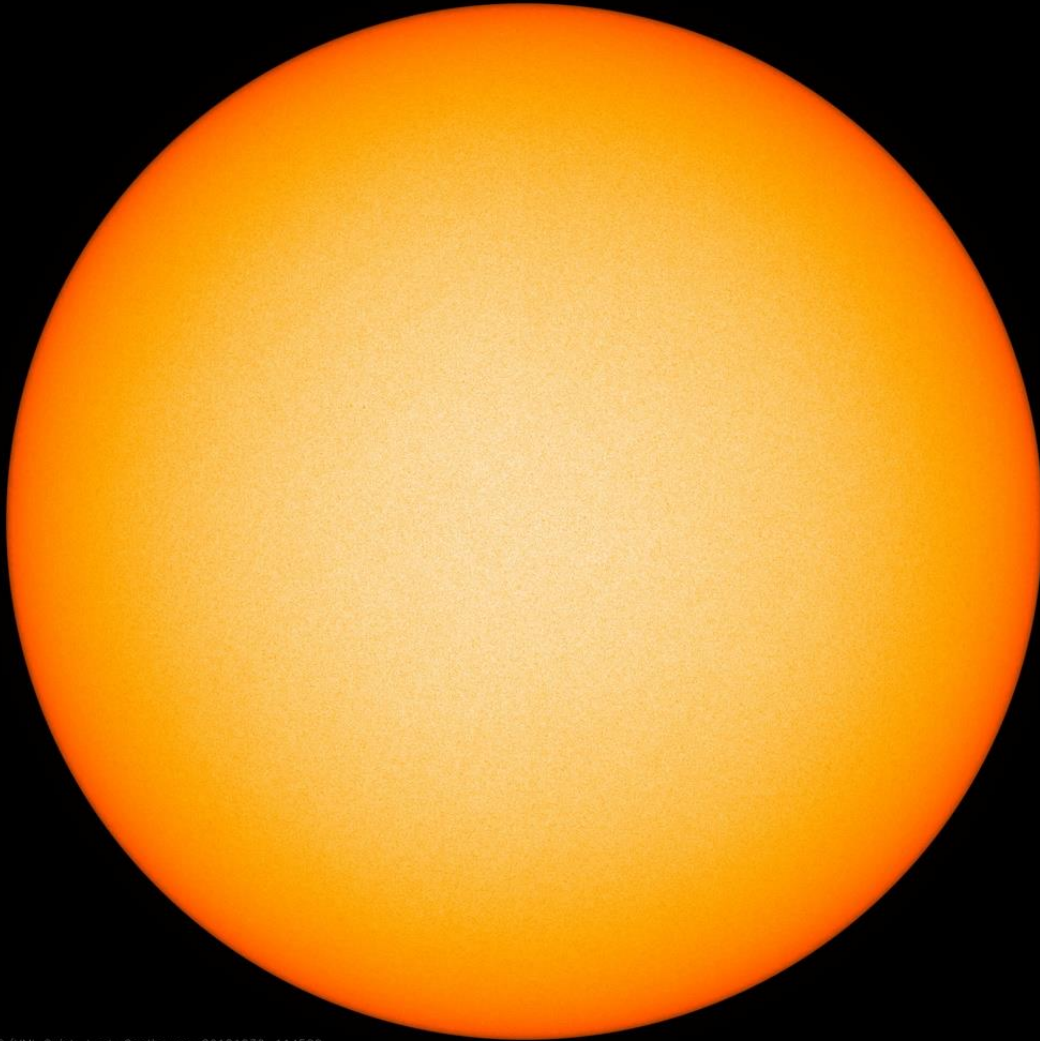
SDO/HMI Magnetogram 2018-12-26



SDO/HMI Quick-Look Magnetogram: 20181226_114500

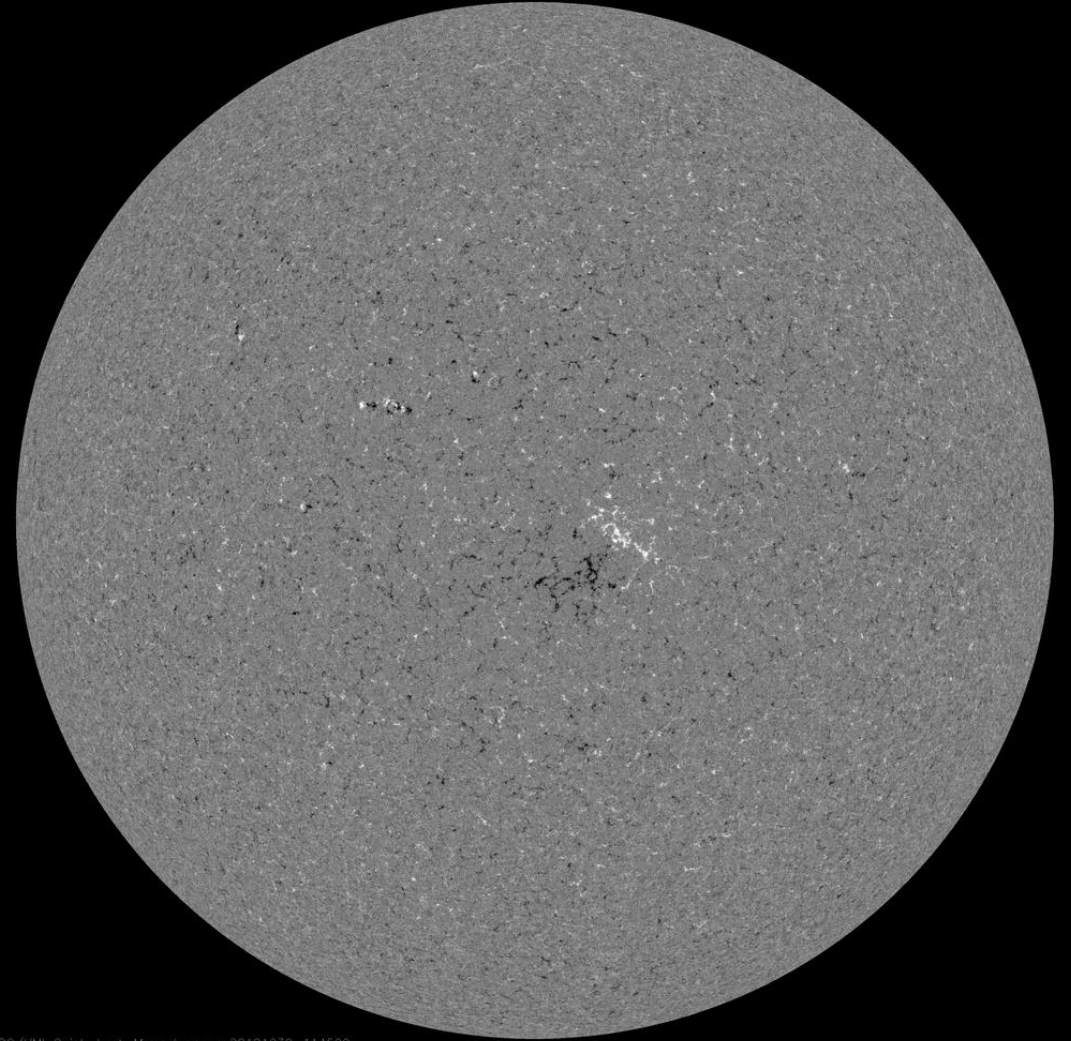
Solar active region - end of the week

SDO/HMI White Light 2018-12-30



SDO/HMI Quick-Look Continuum: 20181230_114500

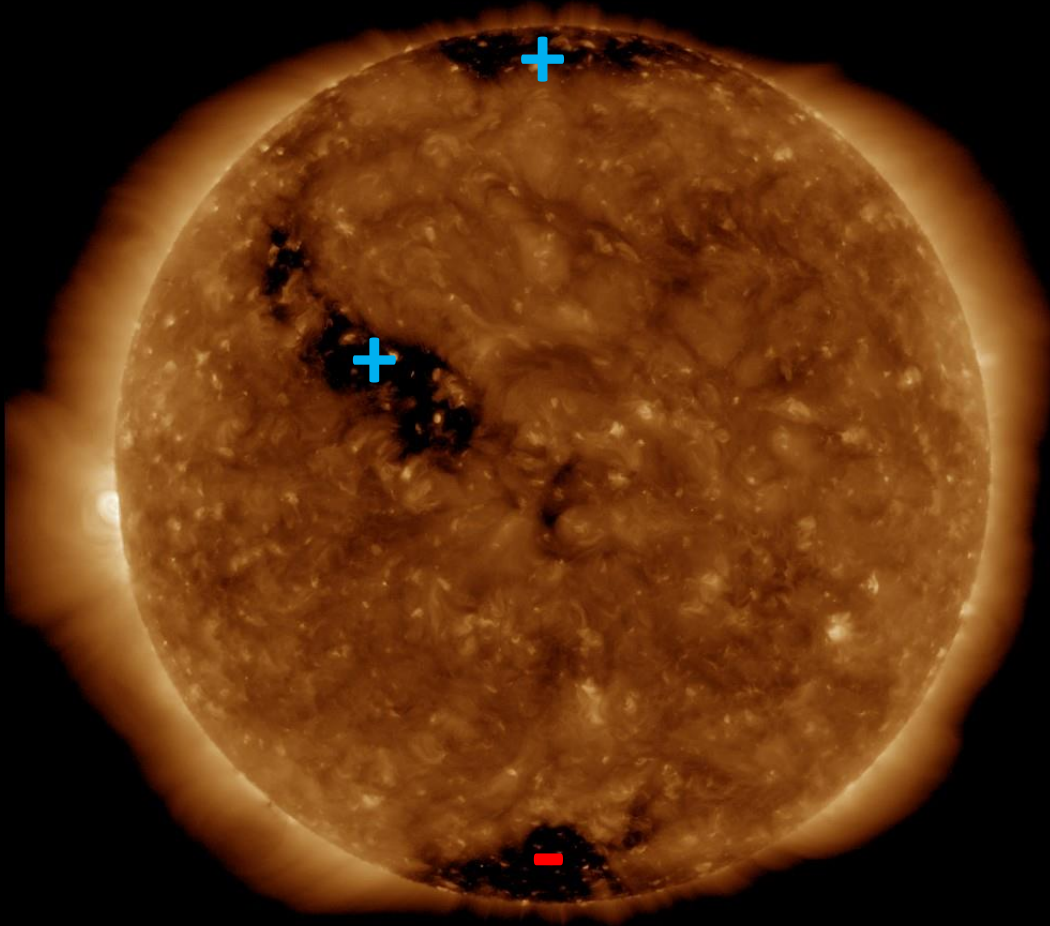
SDO/HMI Magnetogram 2018-12-30



SDO/HMI Quick-Look Magnetogram: 20181230_114500

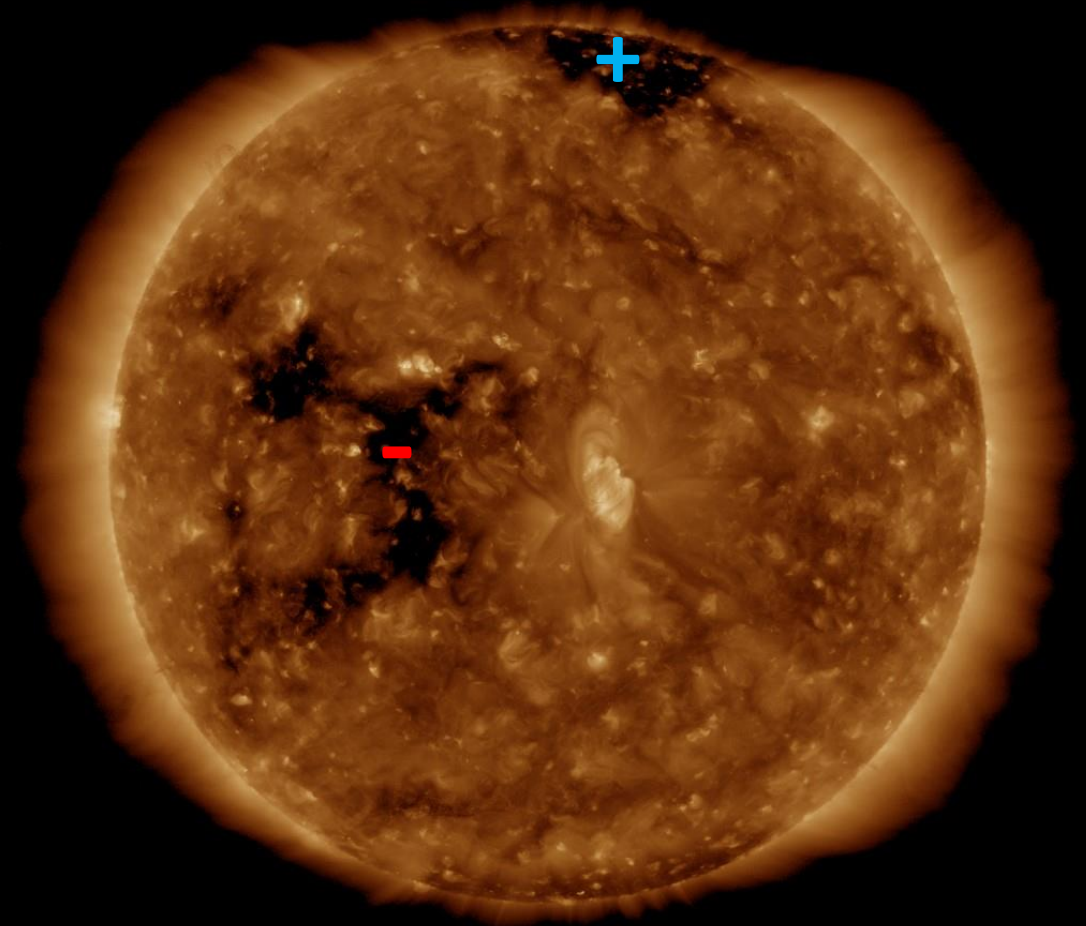
Solar active region & Coronal hole

SDO/AIA 19.3 nm 2018-12-23



SDO/AIA 193 2018-12-23 12:10:41 UT

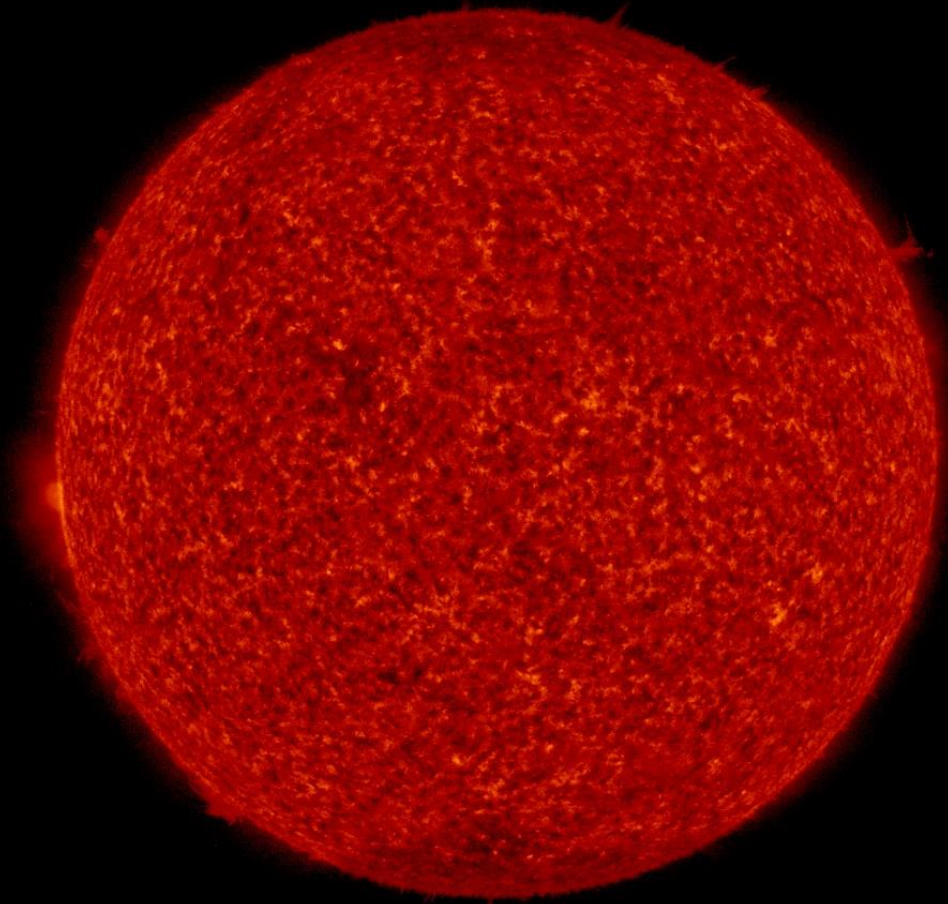
SDO/AIA 19.3 nm 2018-12-30



SDO/AIA 193 2018-12-30 12:10:53 UT

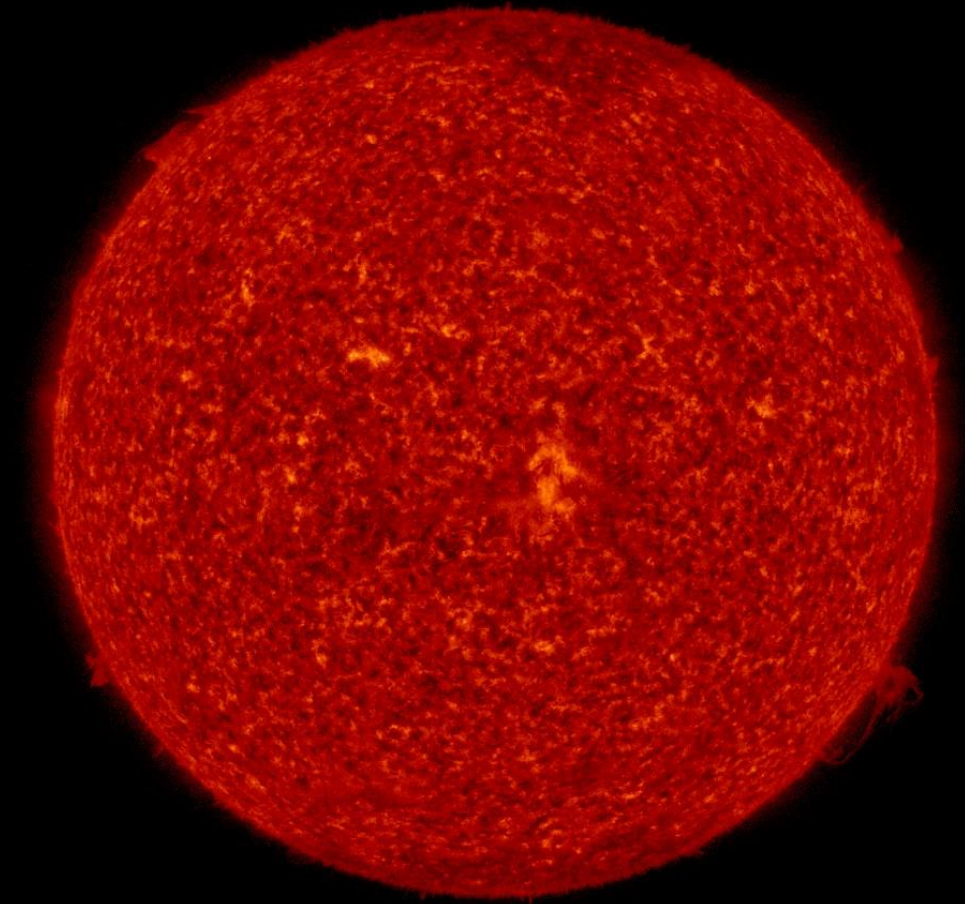
Solar active region & Filament

SDO/AIA 30.4 nm 2018-12-23



SDO/AIA 304 2018-12-23 12:13:54 UT

SDO/AIA 30.4 nm 2018-12-30



SDO/AIA 304 2018-12-30 12:13:54 UT

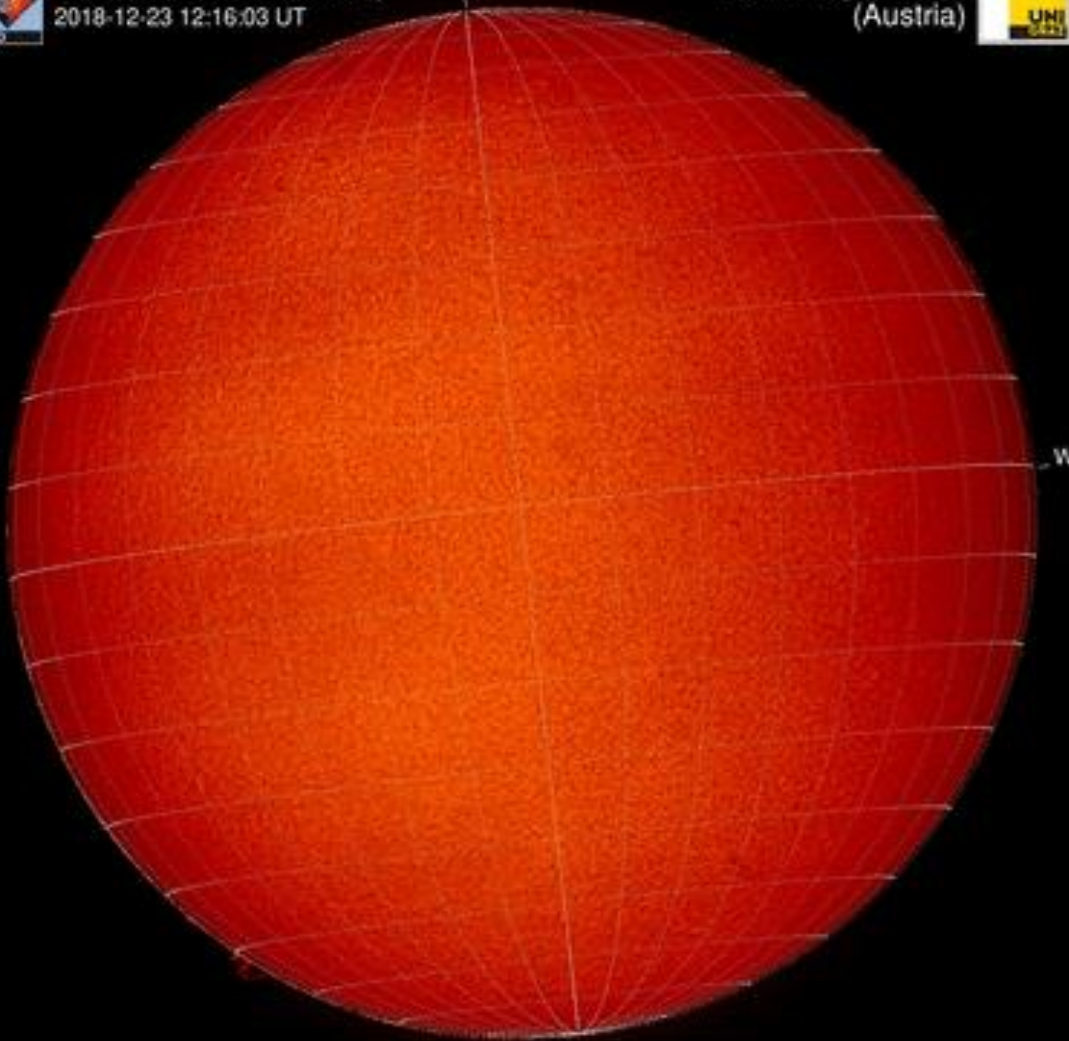
Filament & Filament eruption

H-alpha 2018-12-23



Kanzelhöhe Observatory
2018-12-23 12:16:03 UT

University of Graz
(Austria)

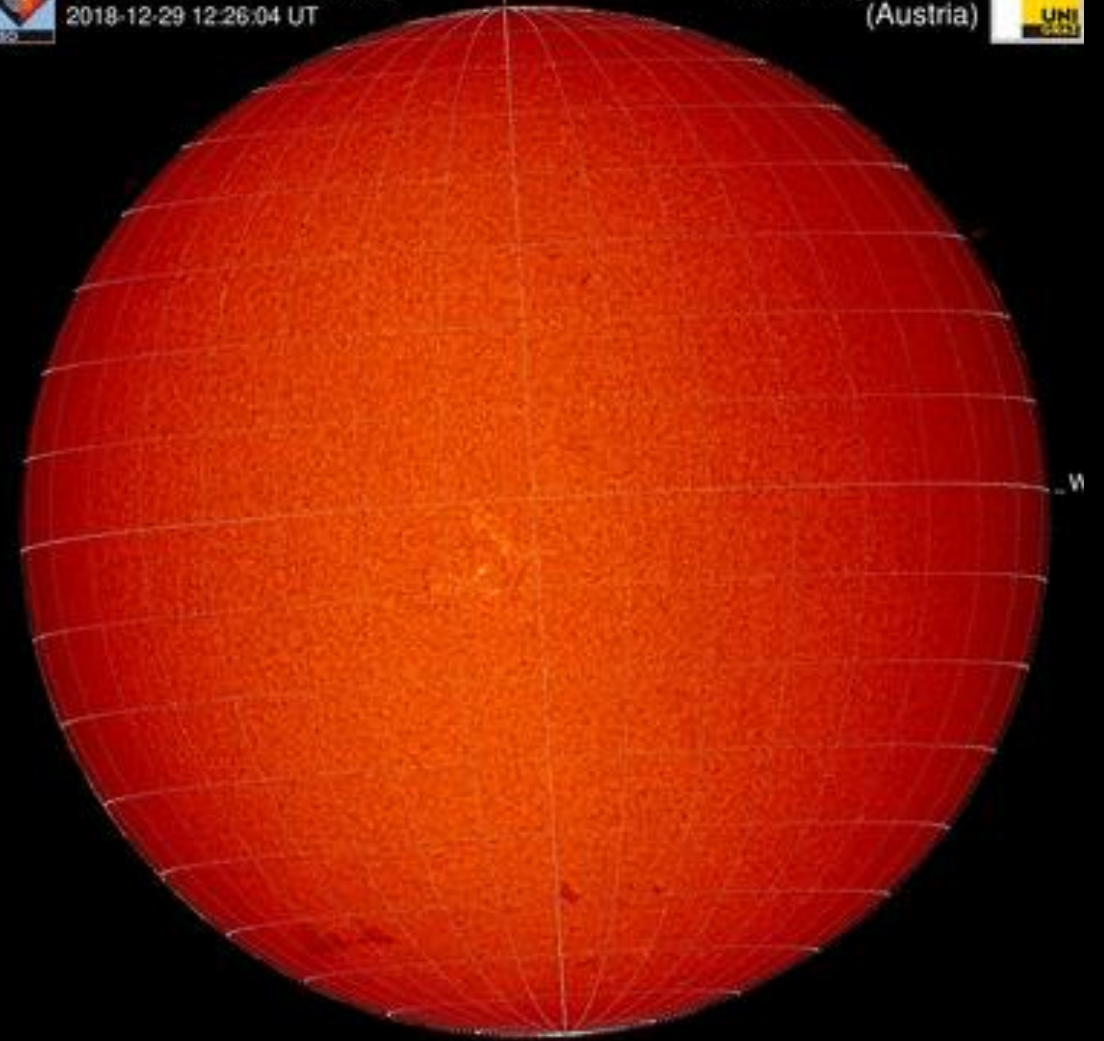


H-alpha 2018-12-30

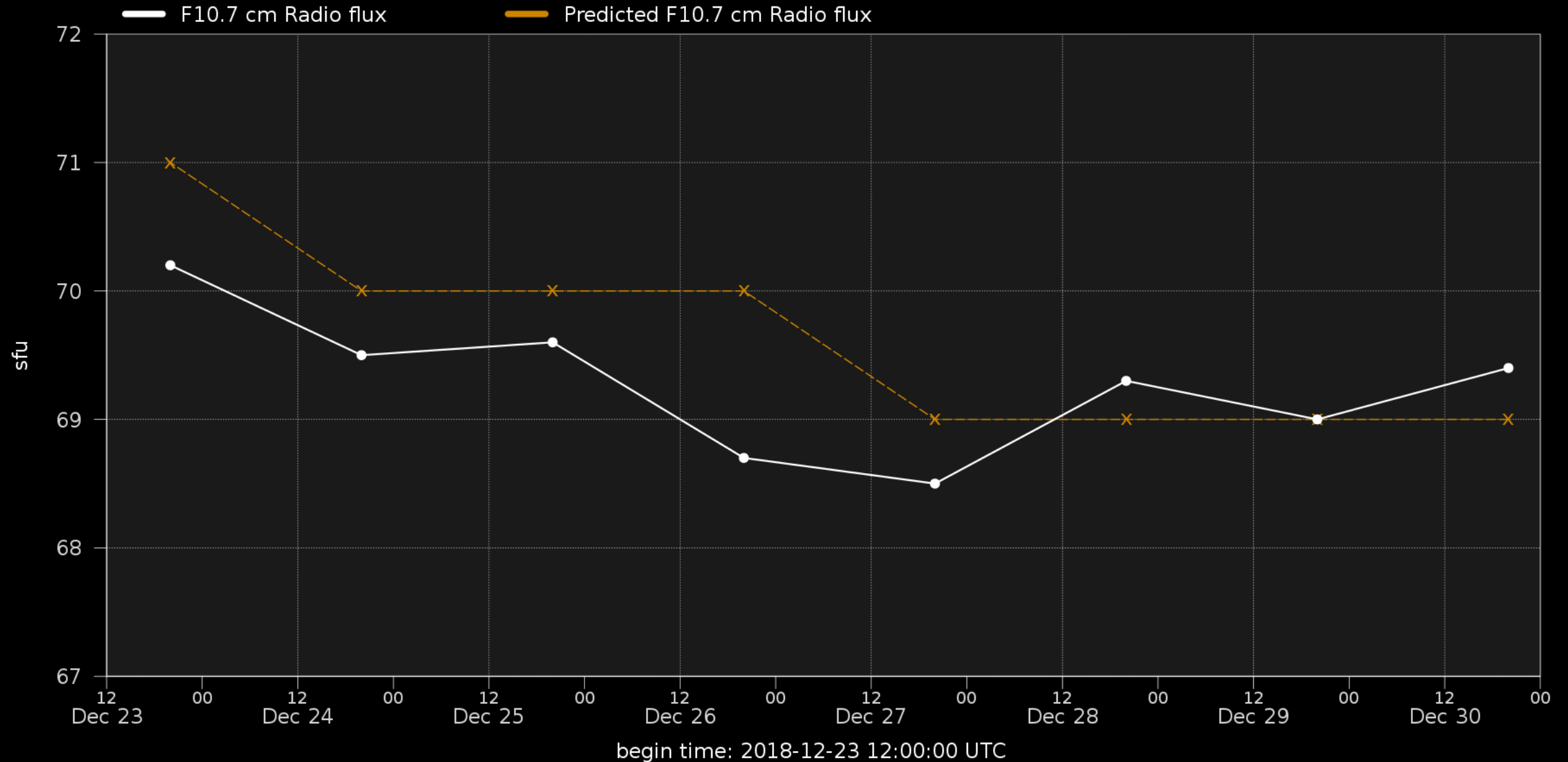


Kanzelhöhe Observatory
2018-12-29 12:26:04 UT

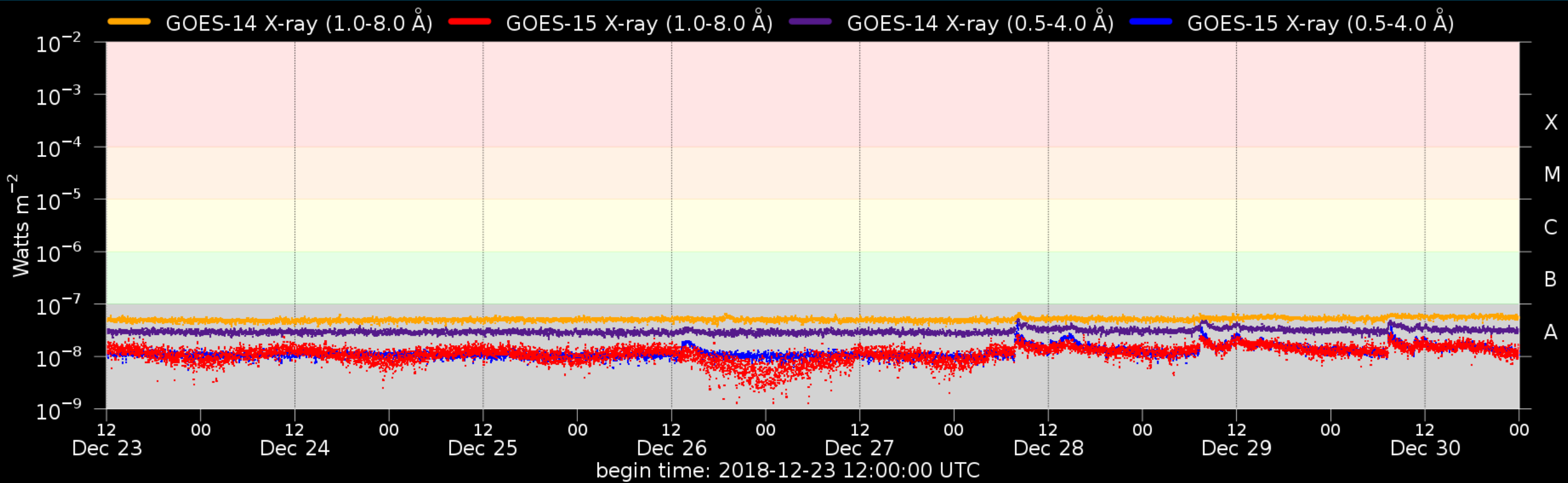
University of Graz
(Austria)



Solar F10.7cm radio flux



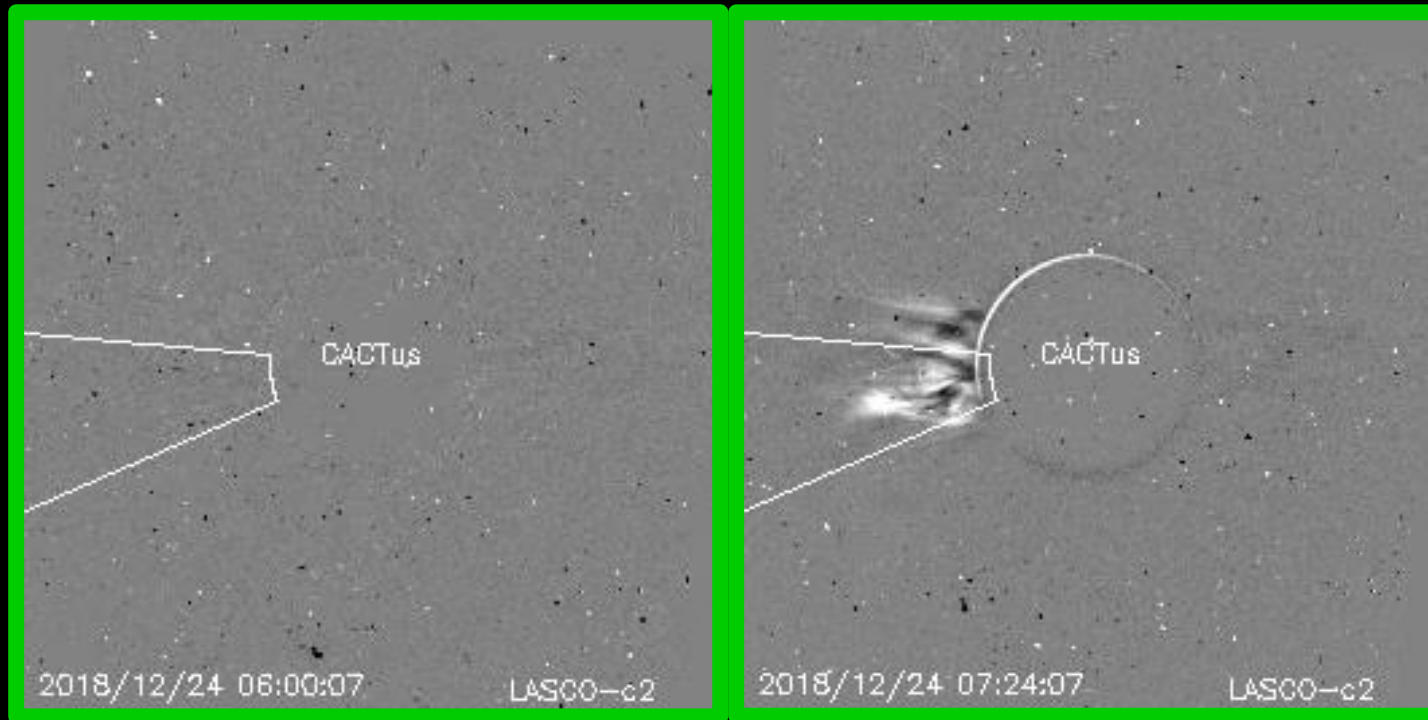
Flaring activity



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

Issue date	2018-12-23	2018-12-24	2018-12-25	2018-12-26	2018-12-27	2018-12-28	2018-12-29	2018-12-30
Probability	--- 05 00 00	--- 01 01 01	--- 01 01 01	--- 01 01 01	--- 01 01 01	--- 01 01 01	--- 01 01 01	--- 01 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	00 00 00 00	00 00 00 00

Coronal Mass Ejection



Source region on farside of the Sun

S

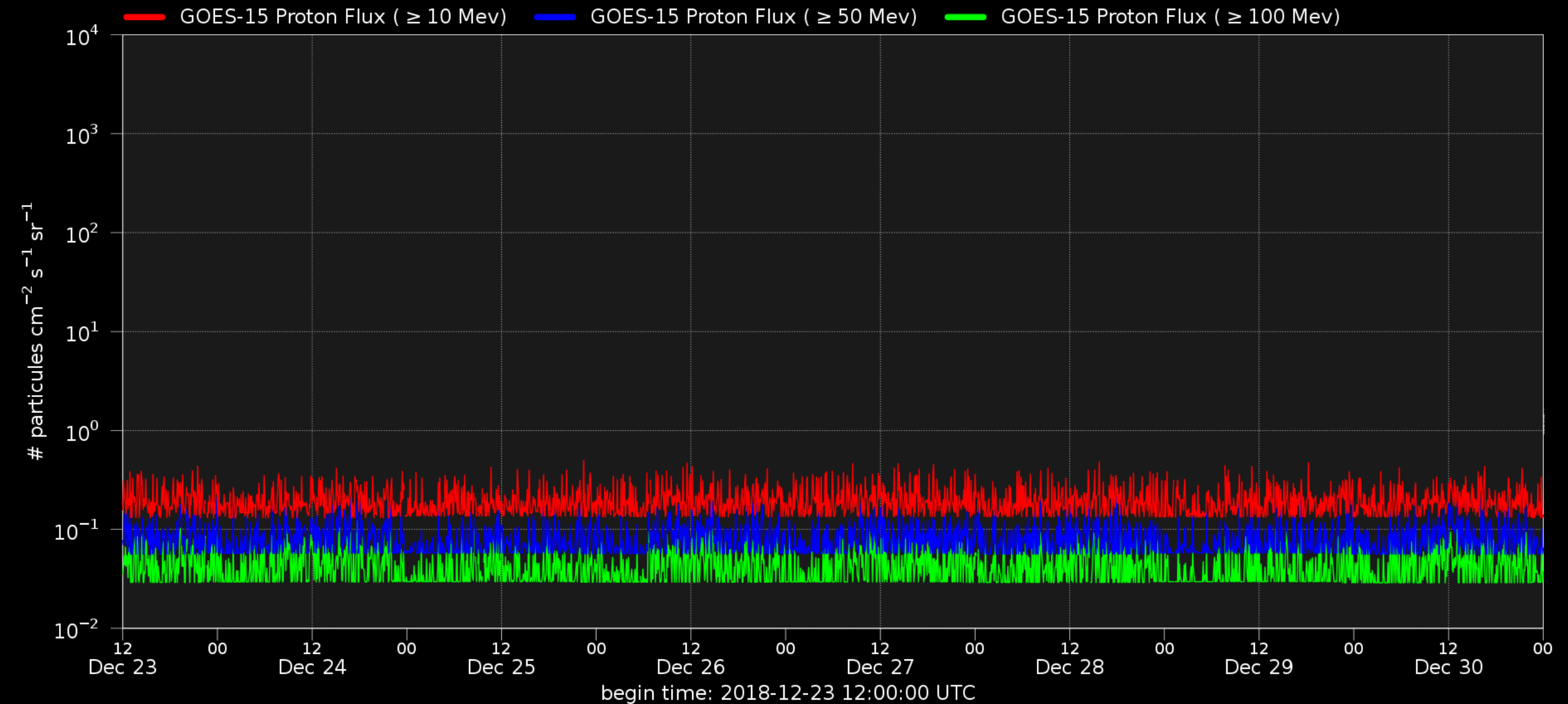
W

N

E

09:12	12/29
19:36	12/28
17:00	12/28
14:00	12/28
11:00	12/28
08:00	12/28
04:38	12/28
00:12	12/28
20:24	12/27
17:48	12/27
14:48	12/27
11:24	12/27
08:36	12/27
05:48	12/27
02:36	12/27
23:24	12/26
20:00	12/26
17:00	12/26
13:42	12/26
10:48	12/26
08:00	12/26
05:06	12/26
02:24	12/26
23:24	12/25
20:12	12/25
17:24	12/25
14:36	12/25
11:00	12/25
08:00	12/25
05:00	12/25
02:00	12/25
22:24	12/24
19:00	12/24
16:12	12/24
13:25	12/24
10:24	12/24
07:12	12/24
04:24	12/24
01:25	12/24
21:48	12/23
18:12	12/23
15:26	12/23
11:48	12/23
08:36	12/23
06:00	12/23
03:24	12/23
00:00	12/23

Solar proton flux



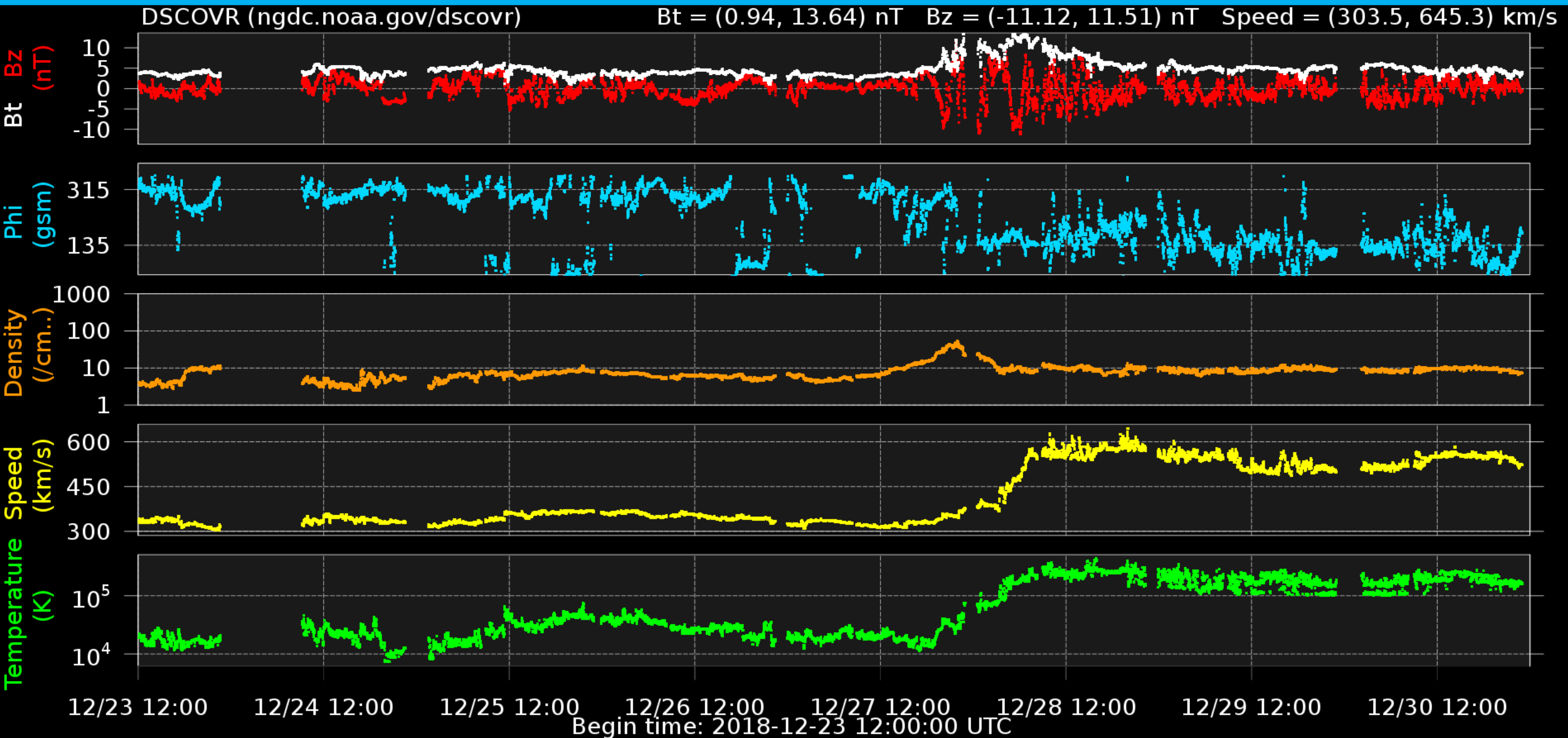
Solar Wind and Geomagnetic Activity



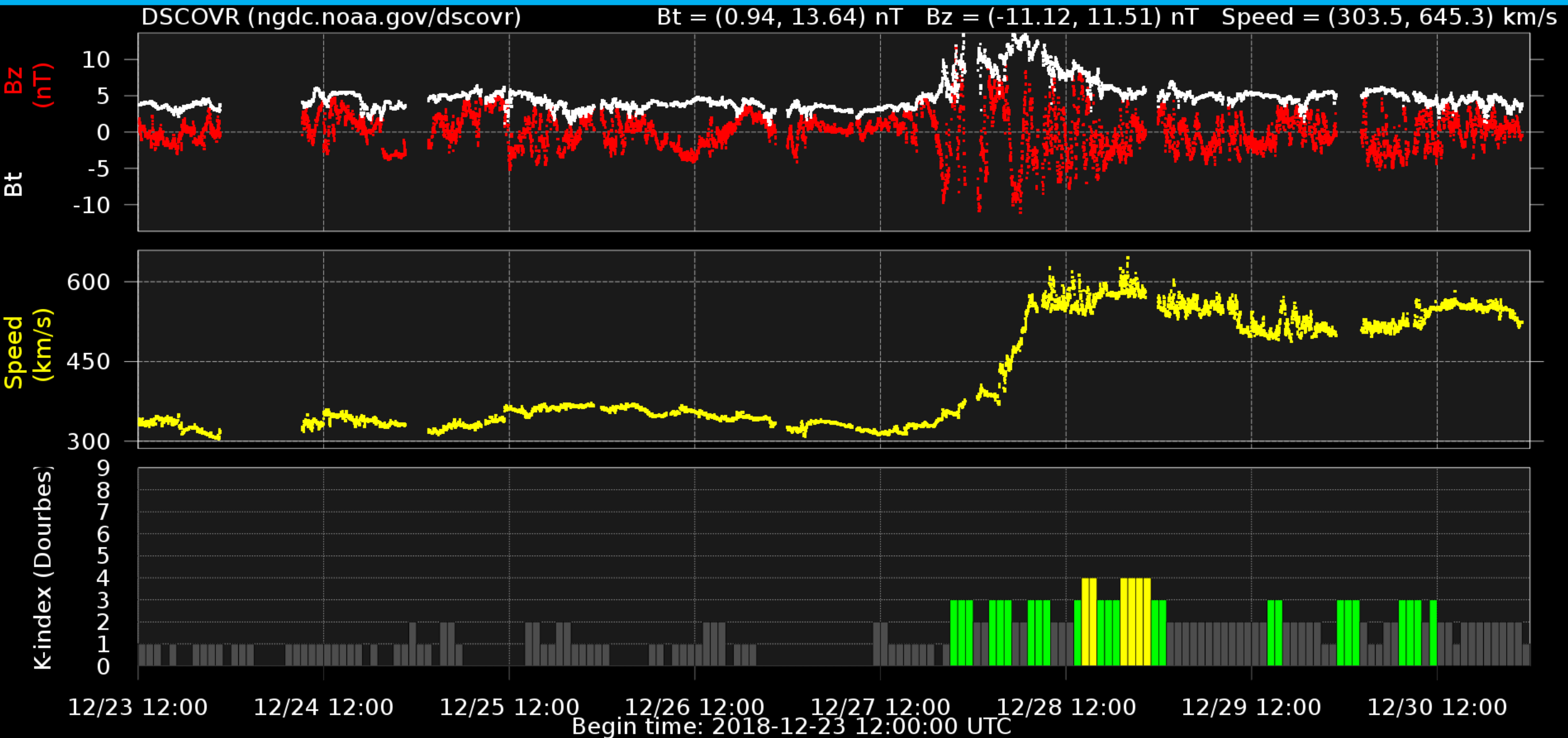
Royal Observatory
of Belgium

Solar Influences
Data analysis Centre
www.sidc.be

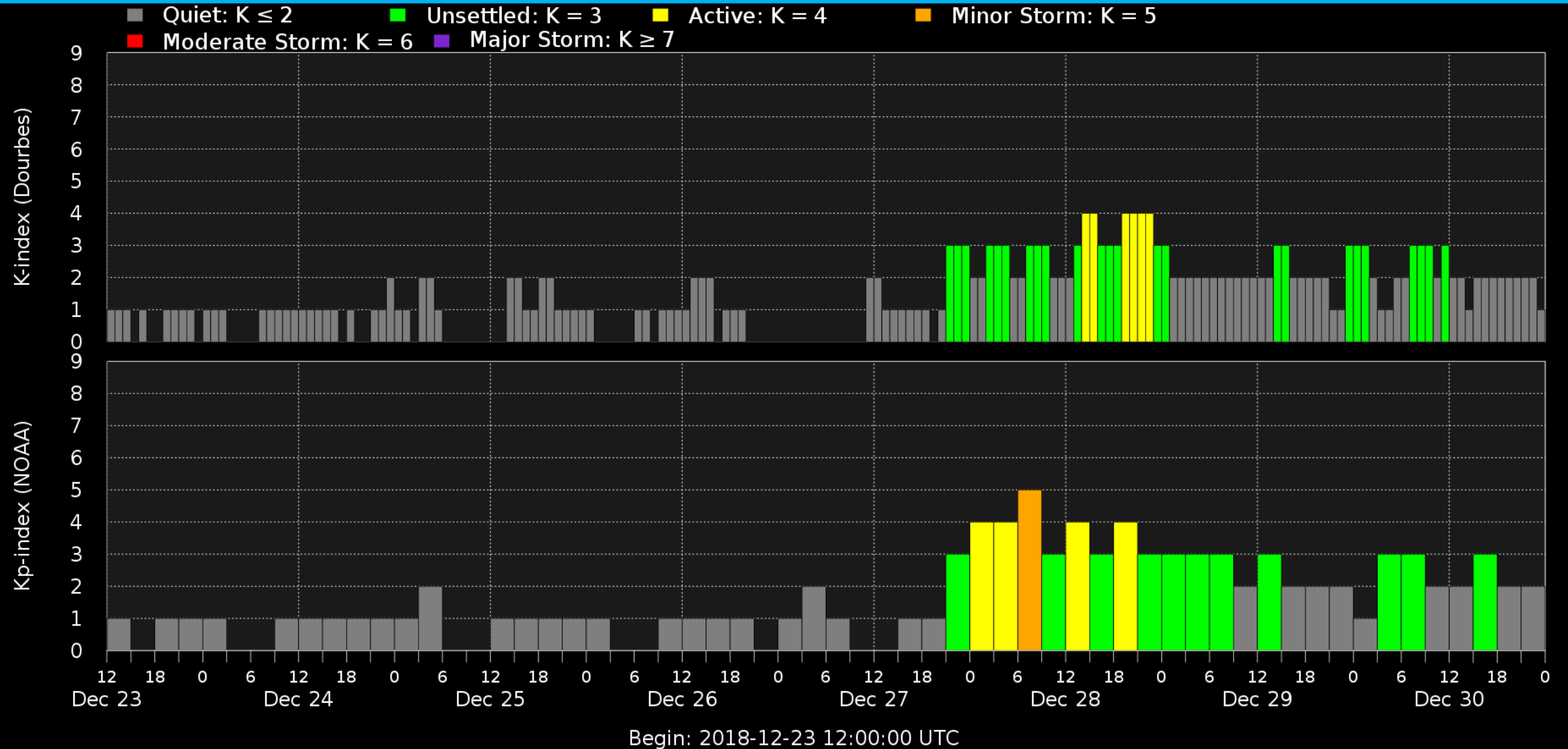
Solar wind parameters (DSCOVR data)



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



Geomagnetic activity (K-indexes)



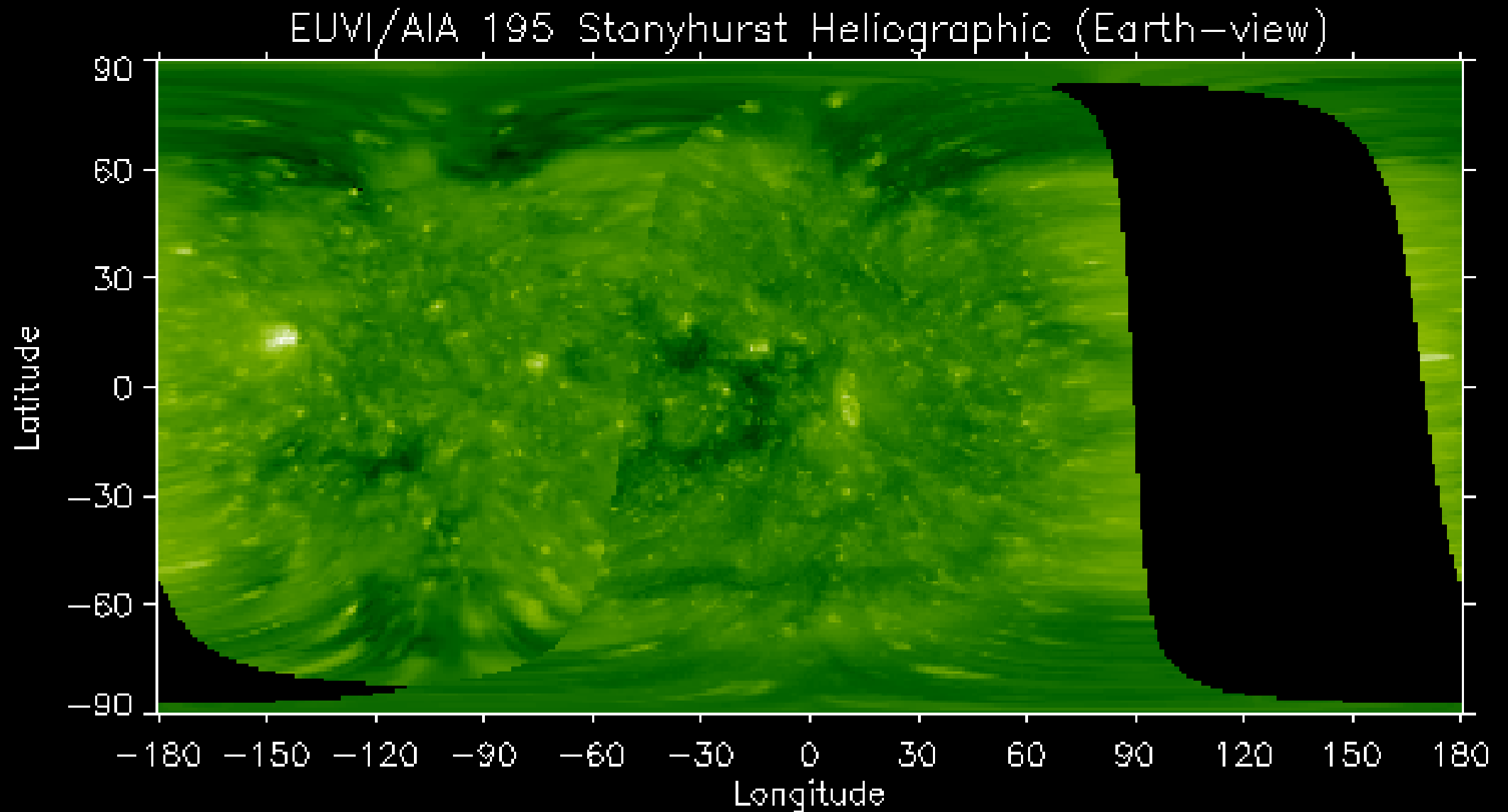
Outlook



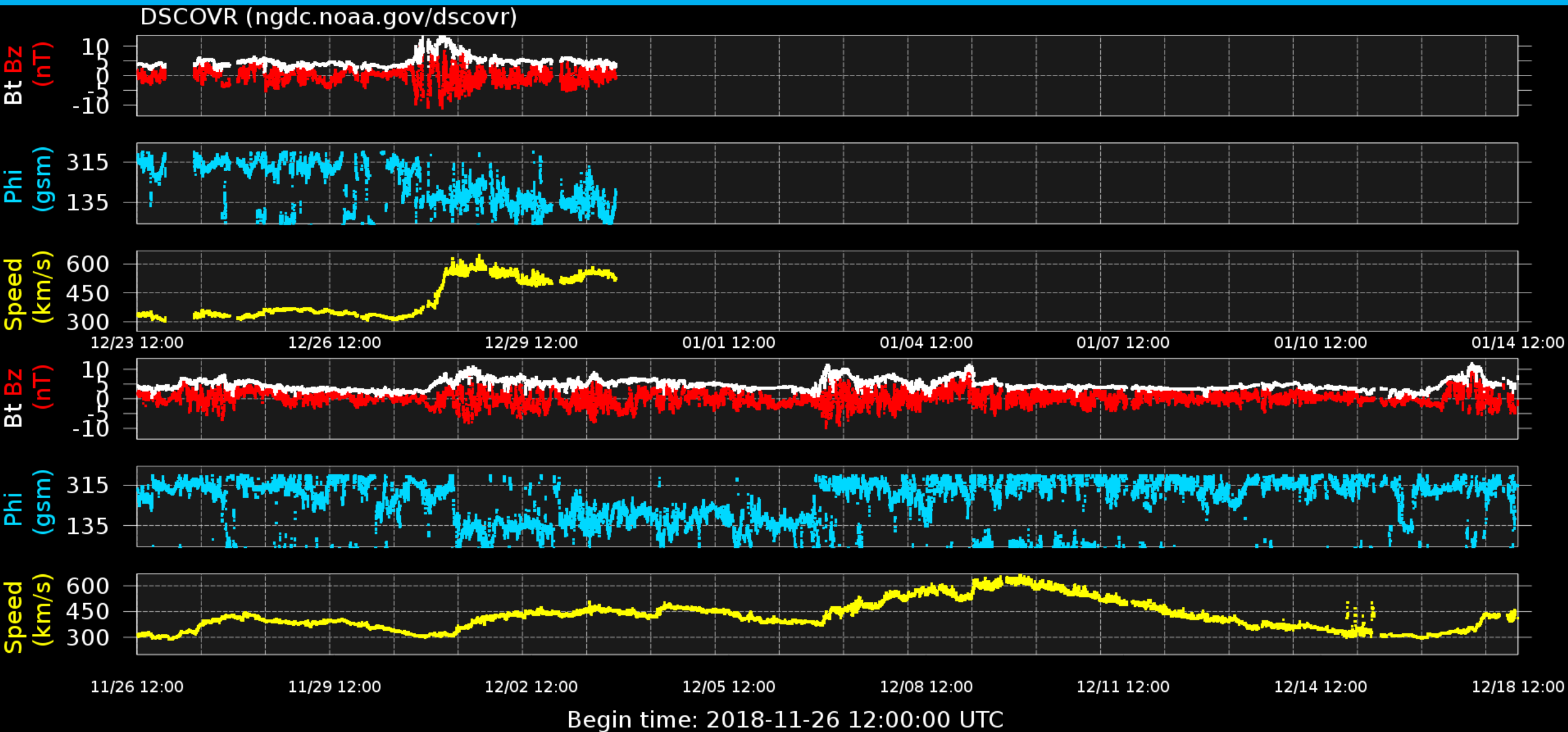
Royal Observatory
of Belgium

Solar Influences
Data analysis Centre
www.sidc.be

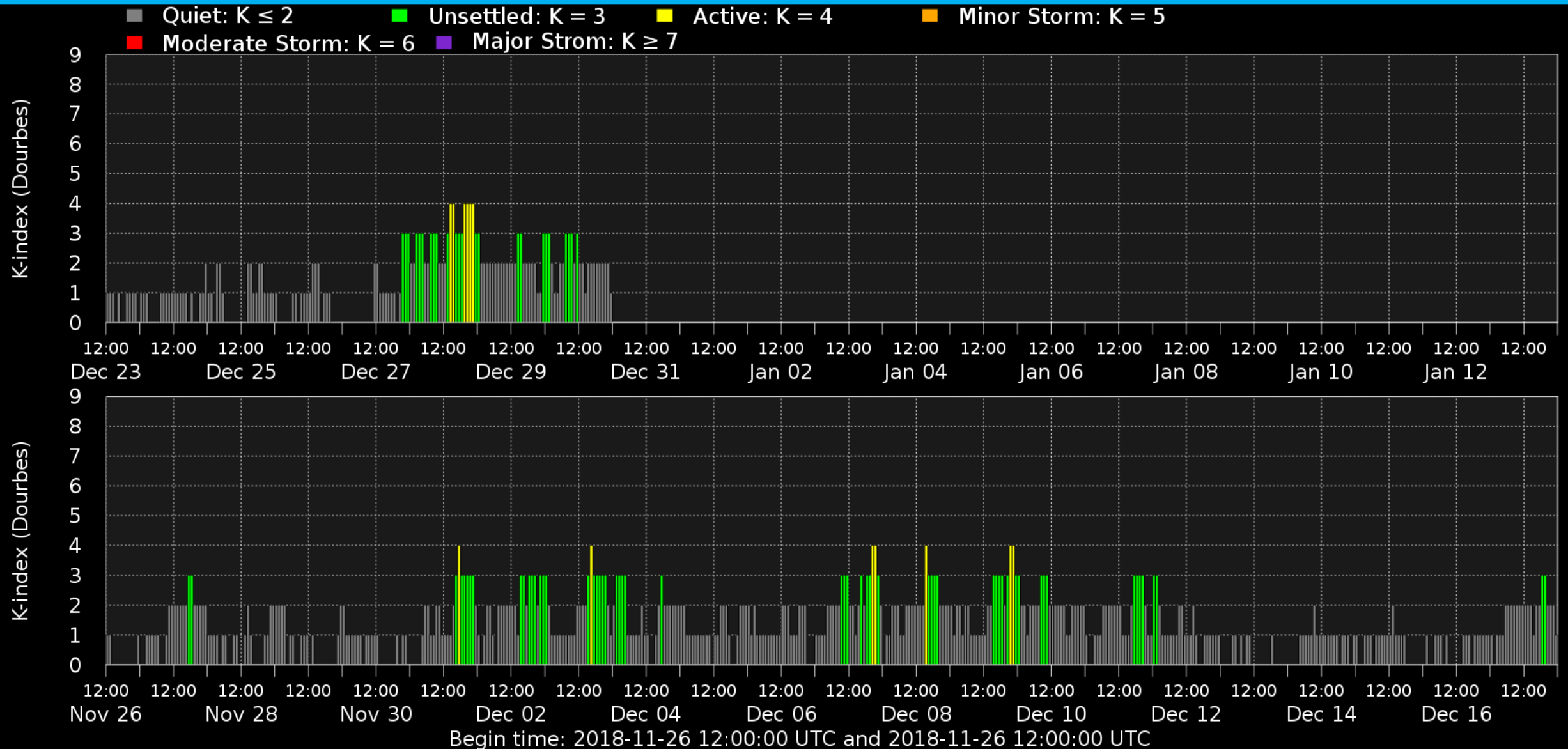
Outlook: Solar activity



Outlook: Solar wind



Outlook: Geomagnetic activity



SIDC Space Weather Briefing

See you at our next briefing!

Or visit us at www.sidc.be



Royal Observatory
of Belgium

Solar Influences
Data analysis Centre
www.sidc.be