

SIDC Space Weather Briefing

15 December 2019 - 22 December 2019
the SIDC forecaster team



Royal Observatory
of Belgium

Solar Influences
Data analysis Centre
www.sidc.be

Summary Report

Solar activity from 2019-12-15 12:00 UT to 2019-12-22 12:00 UT

Active regions	none
Flaring	# B-class flare: 0 # C-class flare: 0 # M-class flare: 0 # X-class flare: 0
Filaments	One minor insignificant eruption
CMEs	none
Proton Events	none

Solar wind and geomagnetic conditions from 2019-12-15 12:00 UT to 2019-12-22 12:00 UT

Coronal Holes	One CH+ effective
ICME	none
SW Conditions	Enhanced due to HSS max 560km/s
K-indices	max K-index (Dourbes): 3.0 max Kp-index (NOAA): 4

All Quiet Alert: All quiet all week

Solar Activity

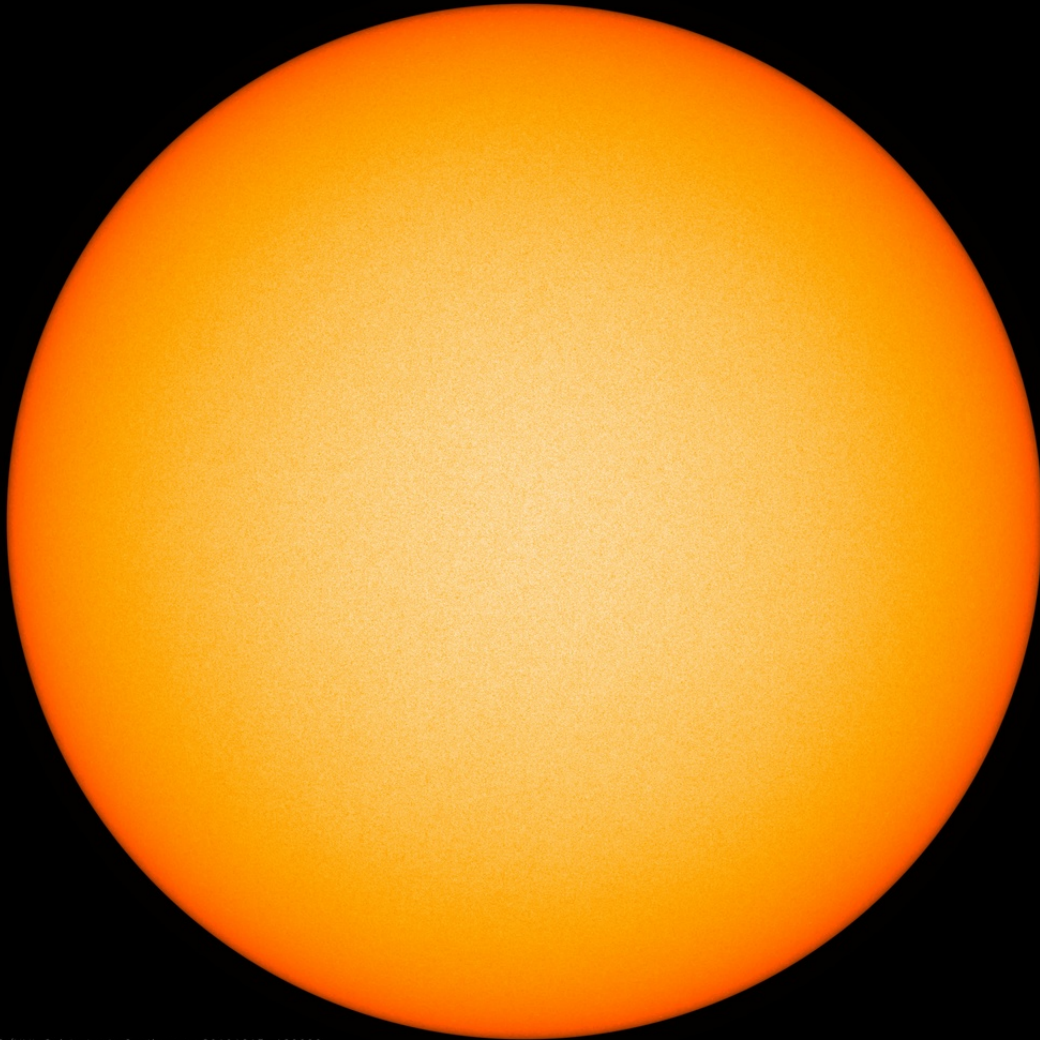


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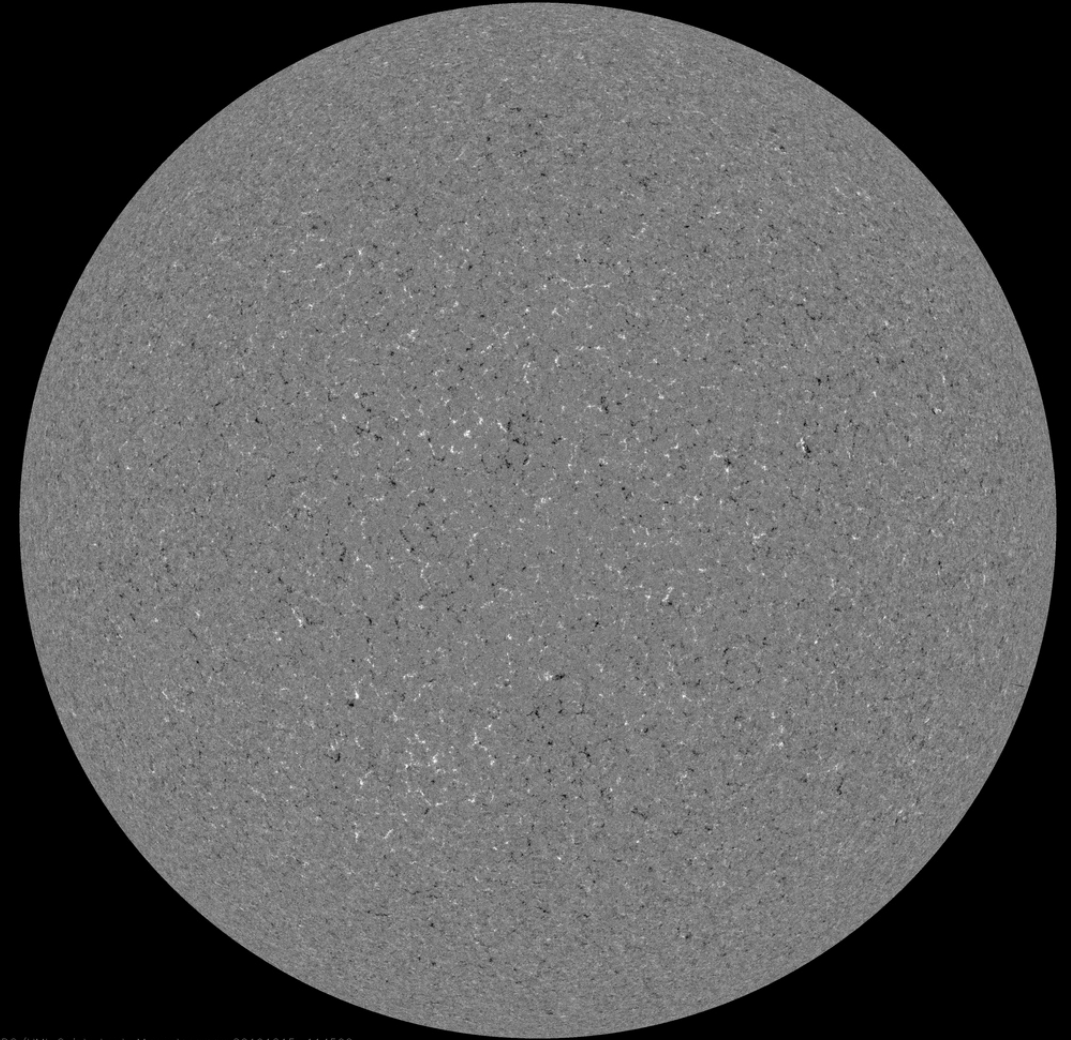
Solar active region - start of the week

SDO/HMI White Light 2019-12-15



SDO/HMI Quick-Look Continuum: 20191215_120000

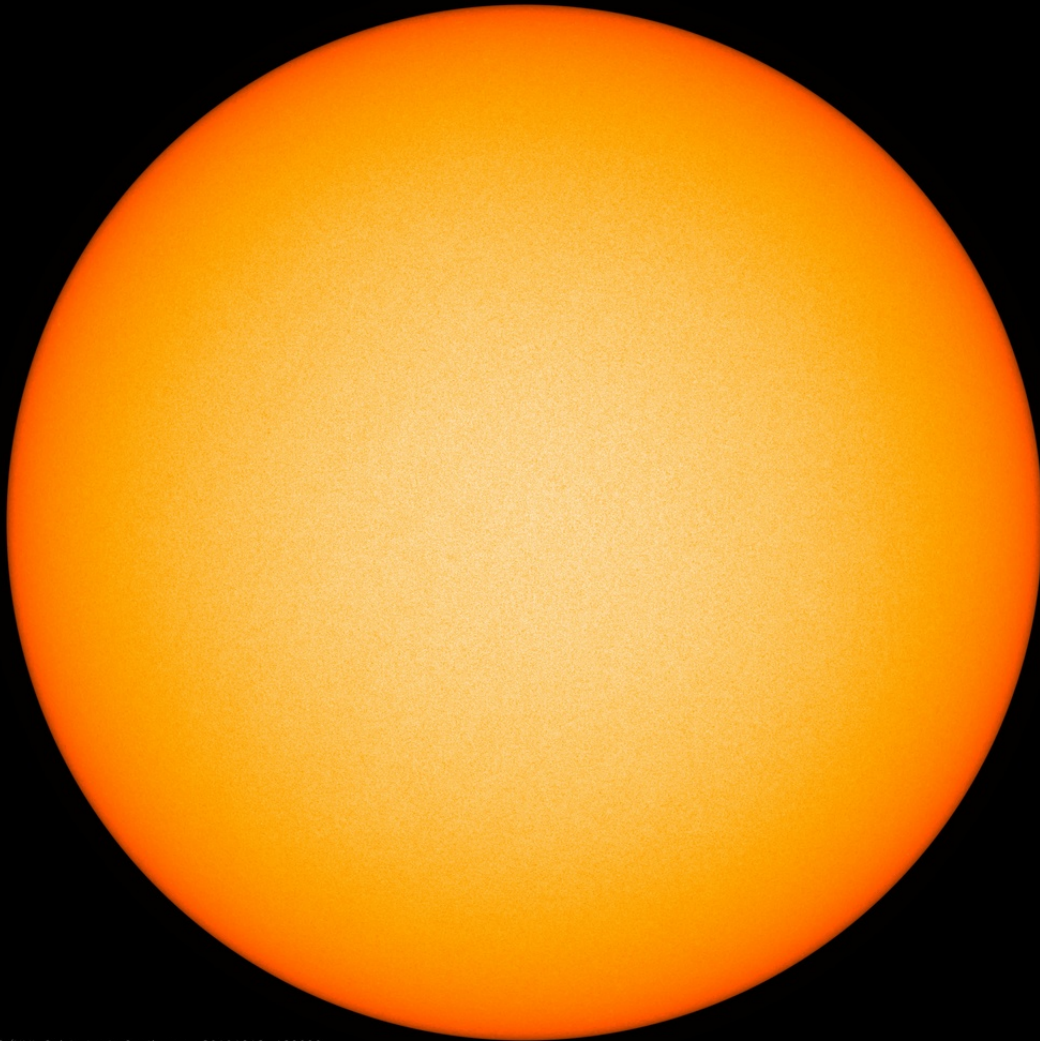
SDO/HMI Magnetogram 2019-12-15



SDO/HMI Quick-Look Magnetogram: 20191215_114500

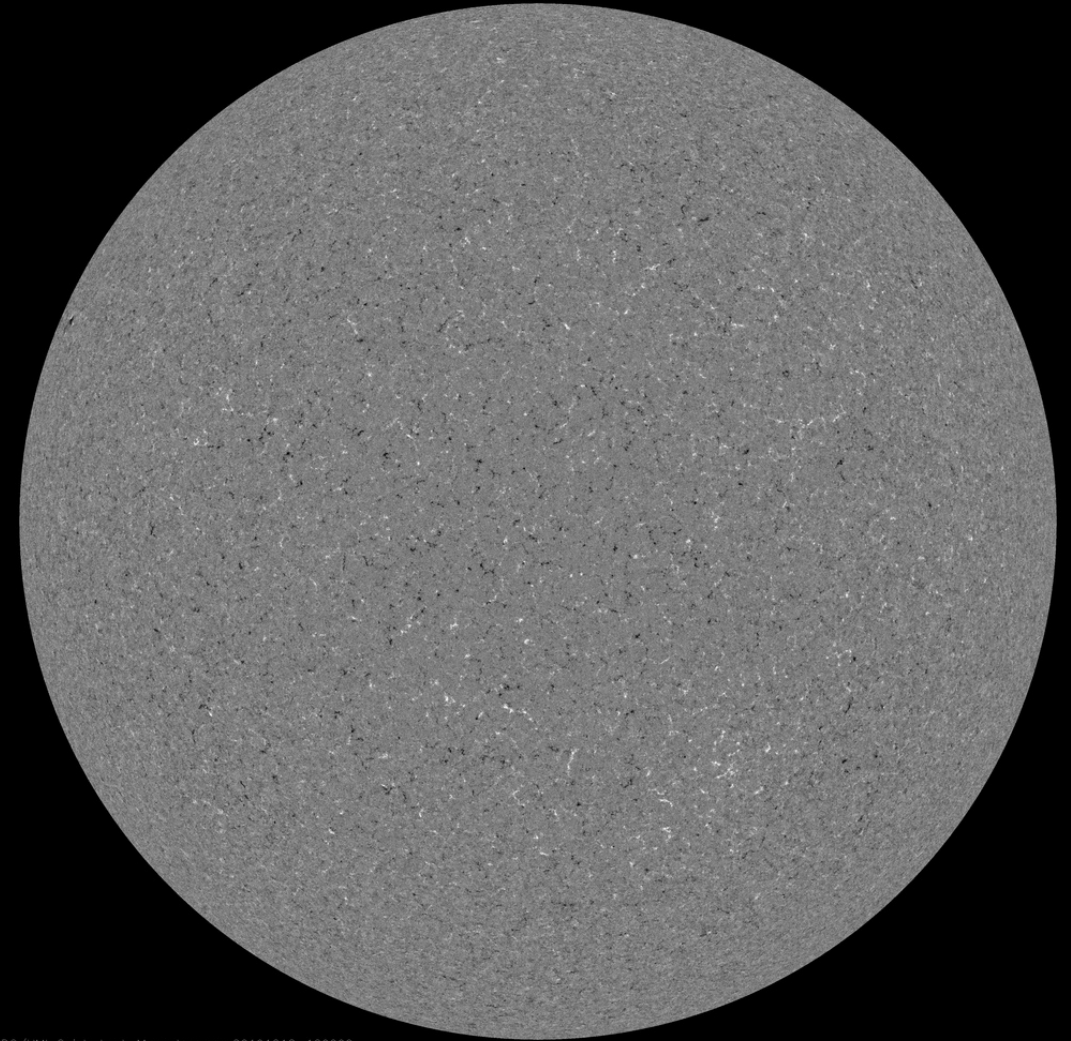
Solar active region - middle of the week

SDO/HMI White Light 2019-12-18



SDO/HMI Quick-Look Continuum: 20191218_120000

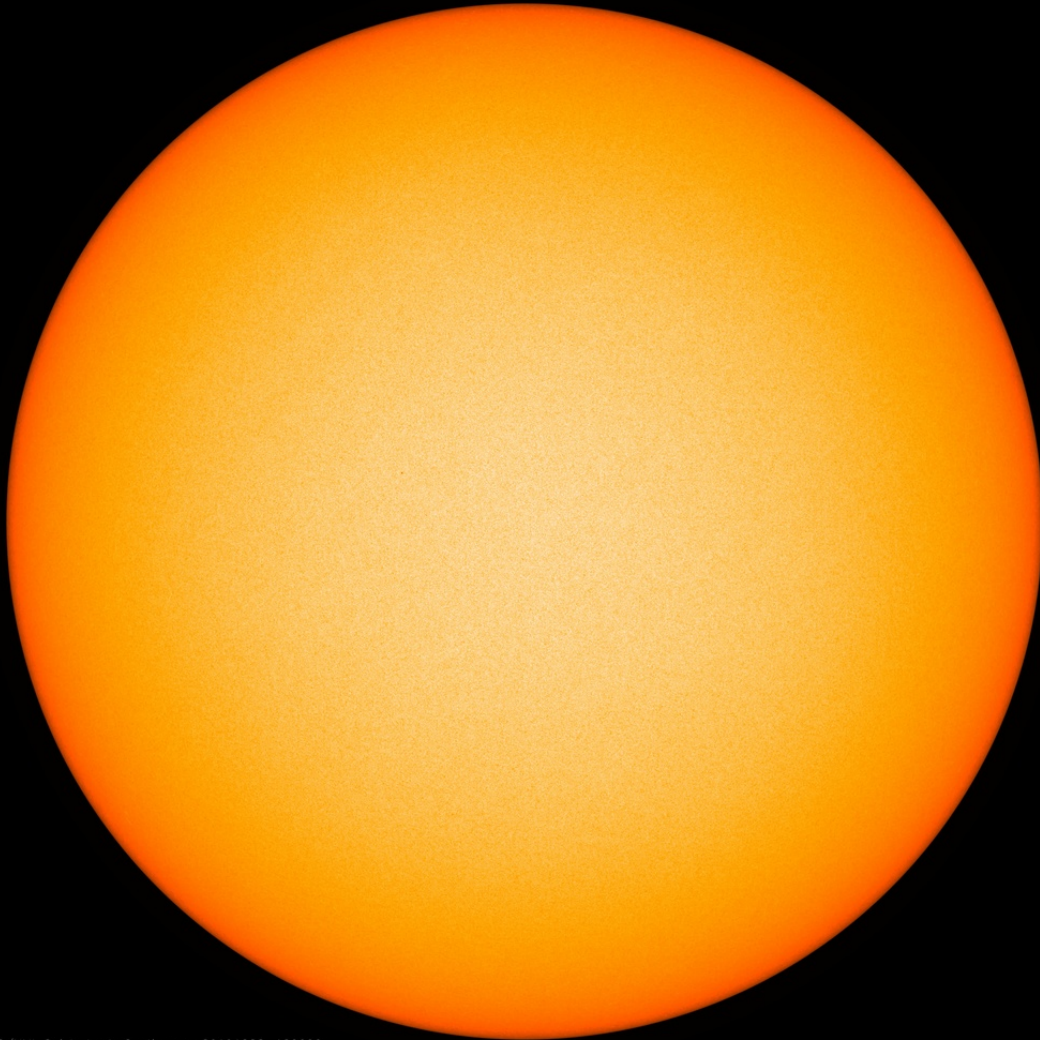
SDO/HMI Magnetogram 2019-12-18



SDO/HMI Quick-Look Magnetogram: 20191218_120000

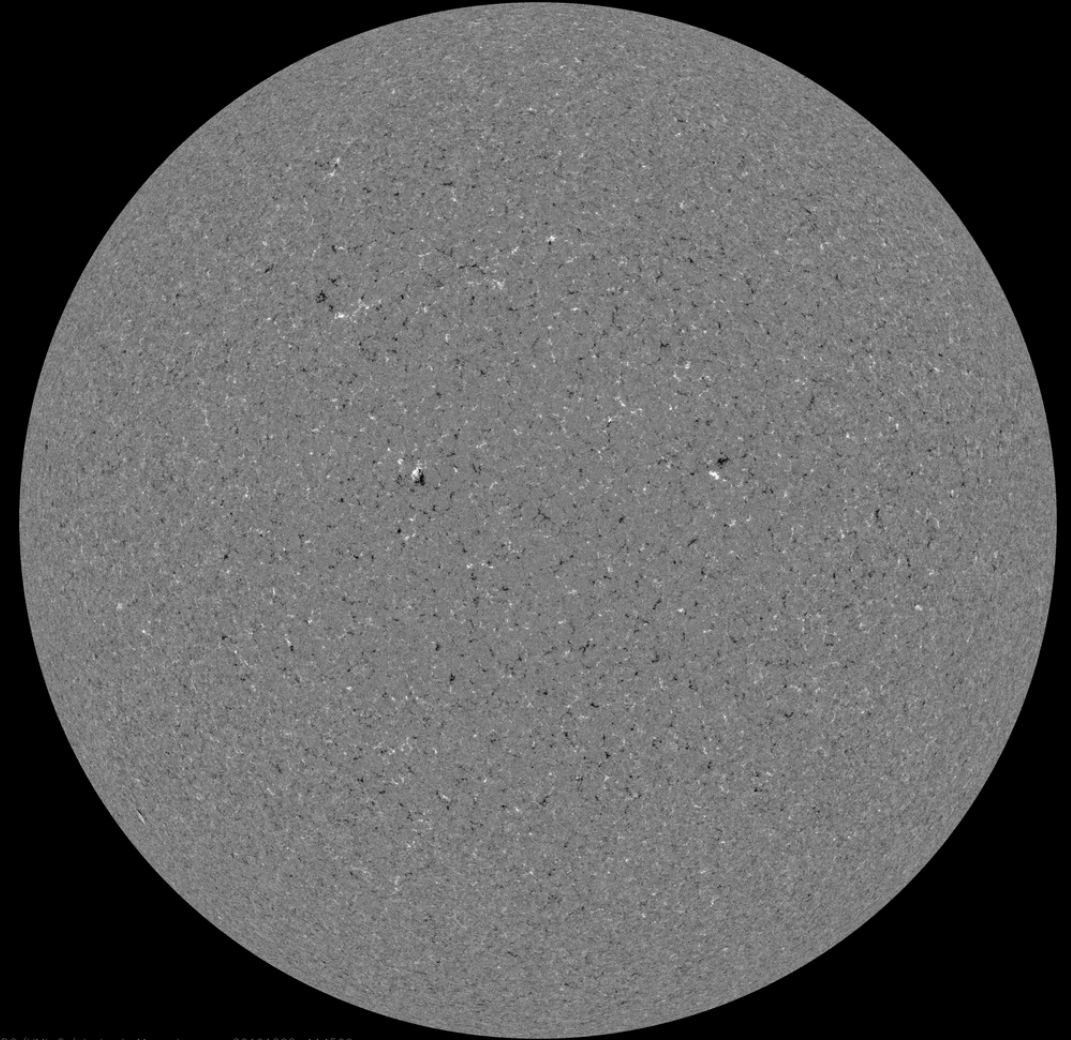
Solar active region - end of the week

SDO/HMI White Light 2019-12-22



SDO/HMI Quick-Look Continuum: 20191222_120000

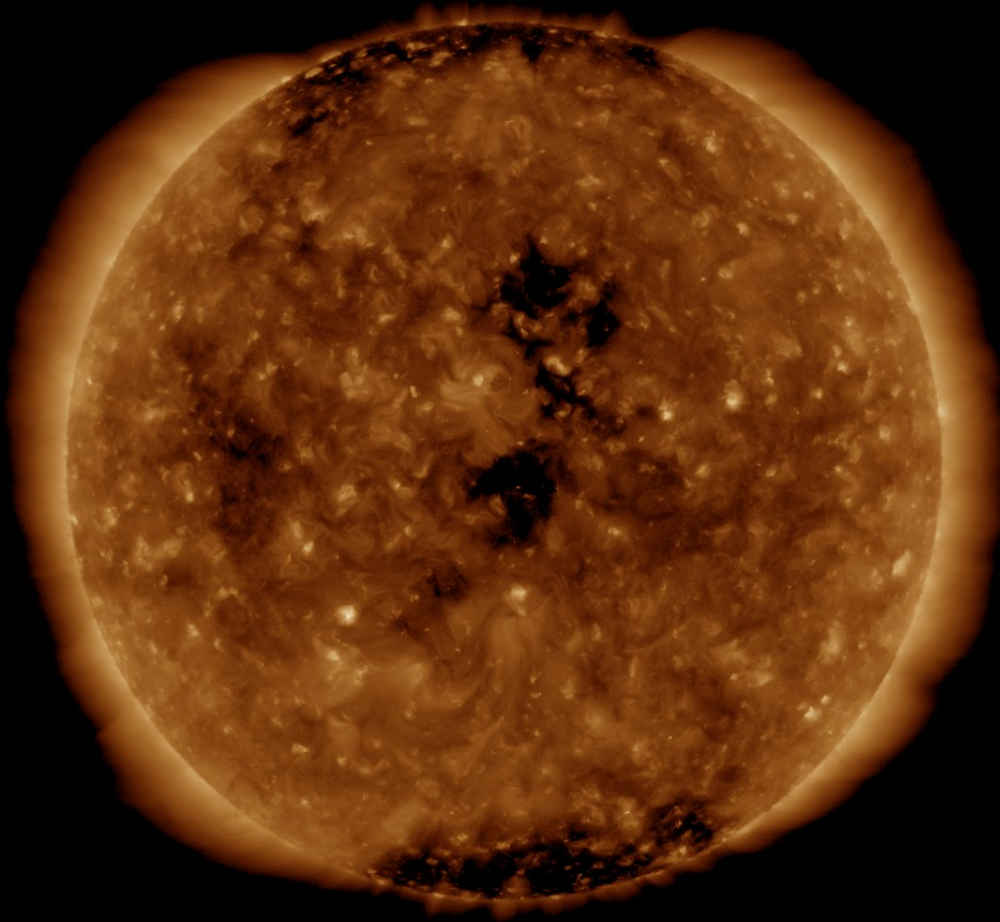
SDO/HMI Magnetogram 2019-12-22



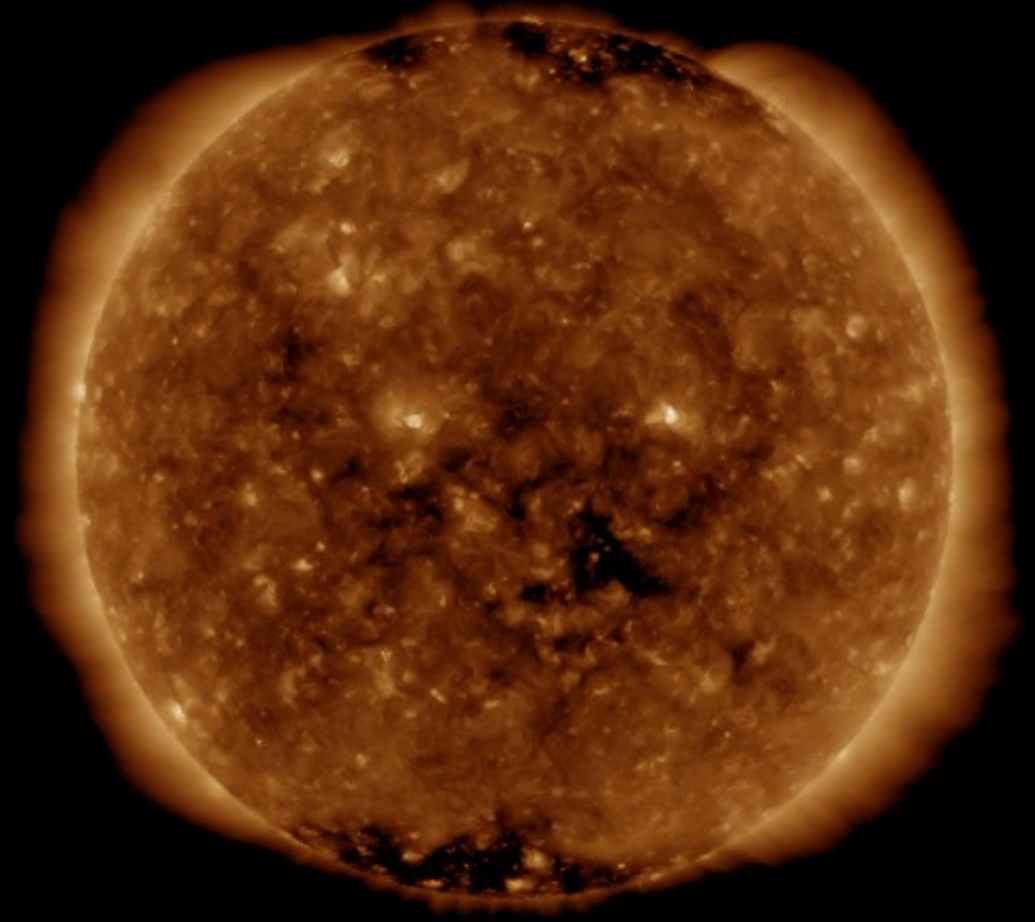
SDO/HMI Quick-Look Magnetogram: 20191222_114500

Solar active region & Coronal hole

SDO/AIA 19.3 nm 2019-12-15



SDO/AIA 19.3 nm 2019-12-22



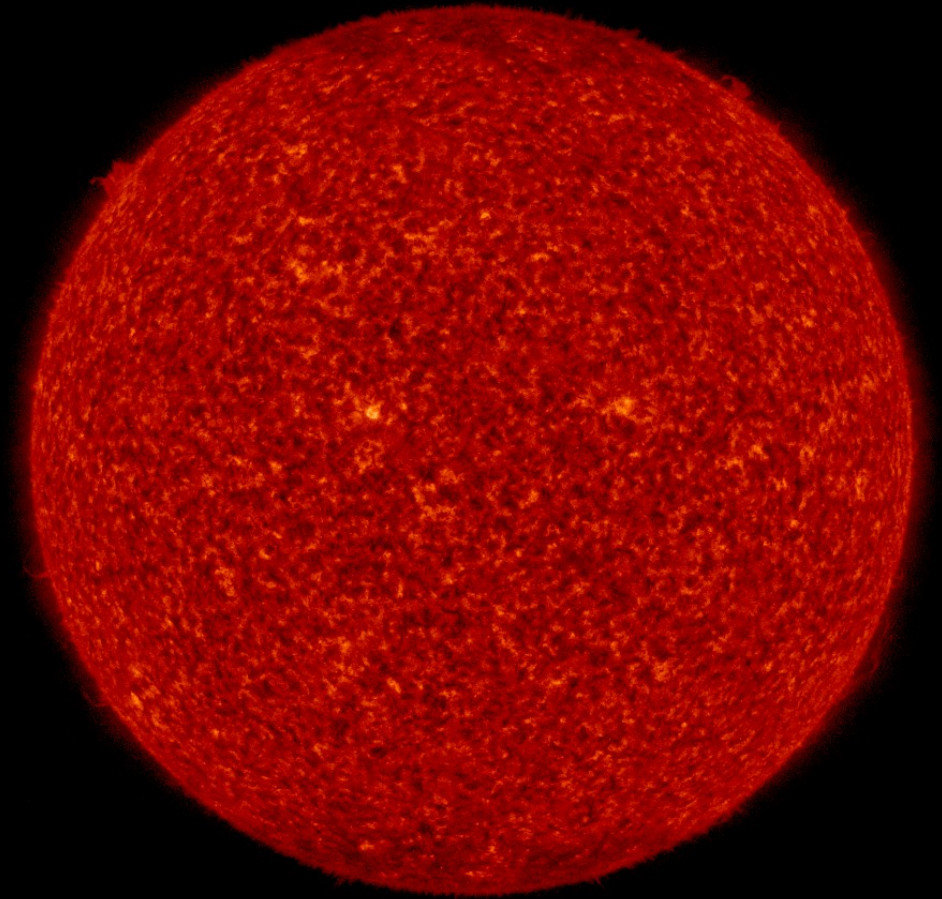
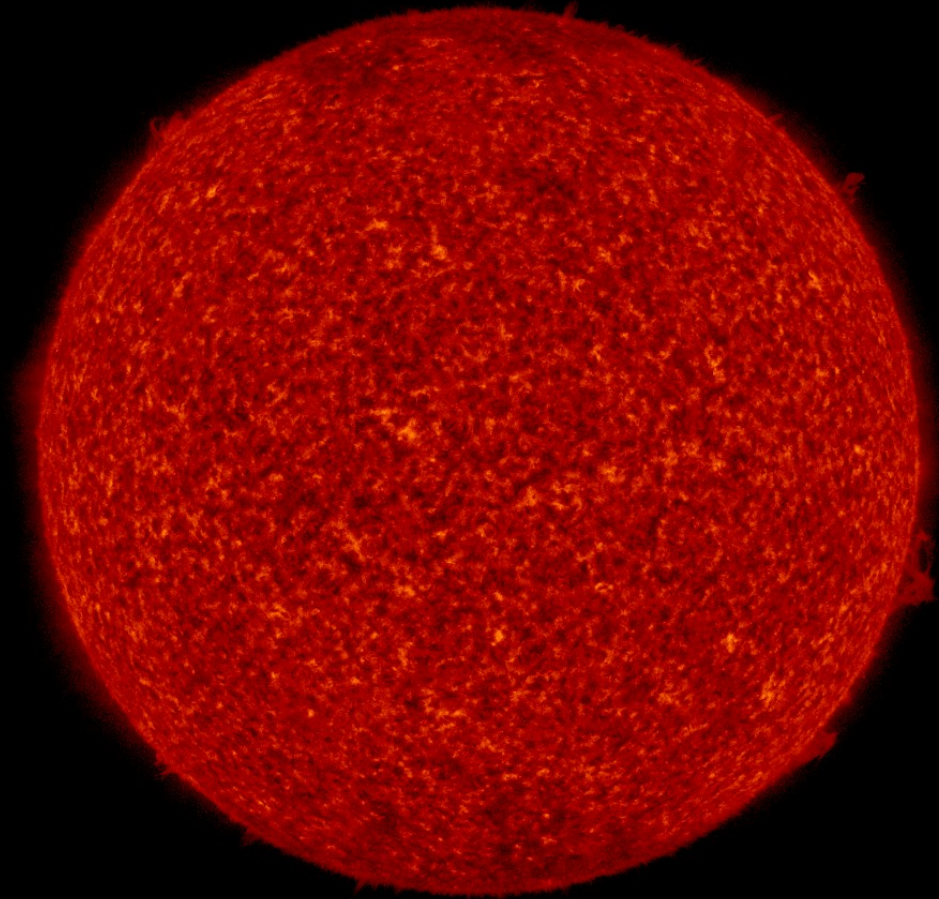
SDO/AIA 193 2019-12-15 12:10:29 UT

SDO/AIA 193 2019-12-22 12:10:29 UT

Solar active region & Filament

SDO/AIA 30.4 nm 2019-12-15

SDO/AIA 30.4 nm 2019-12-22



SDO/AIA 304 2019-12-08 12:13:18 UT

SDO/AIA 304 2019-12-22 12:13:06 UT

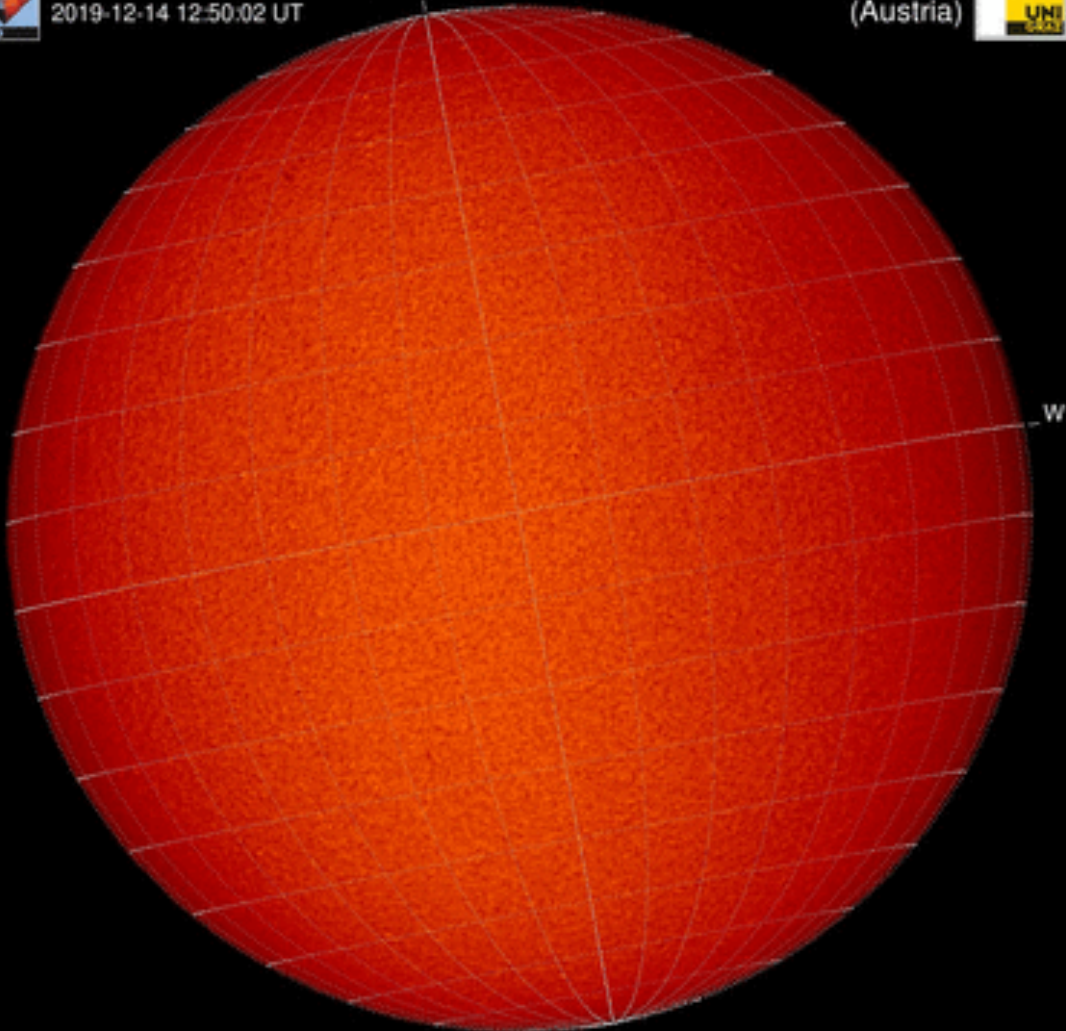
Filament & Filament eruption

H-alpha 2019-12-15



Kanzelhöhe Observatory
2019-12-14 12:50:02 UT

University of Graz
(Austria)

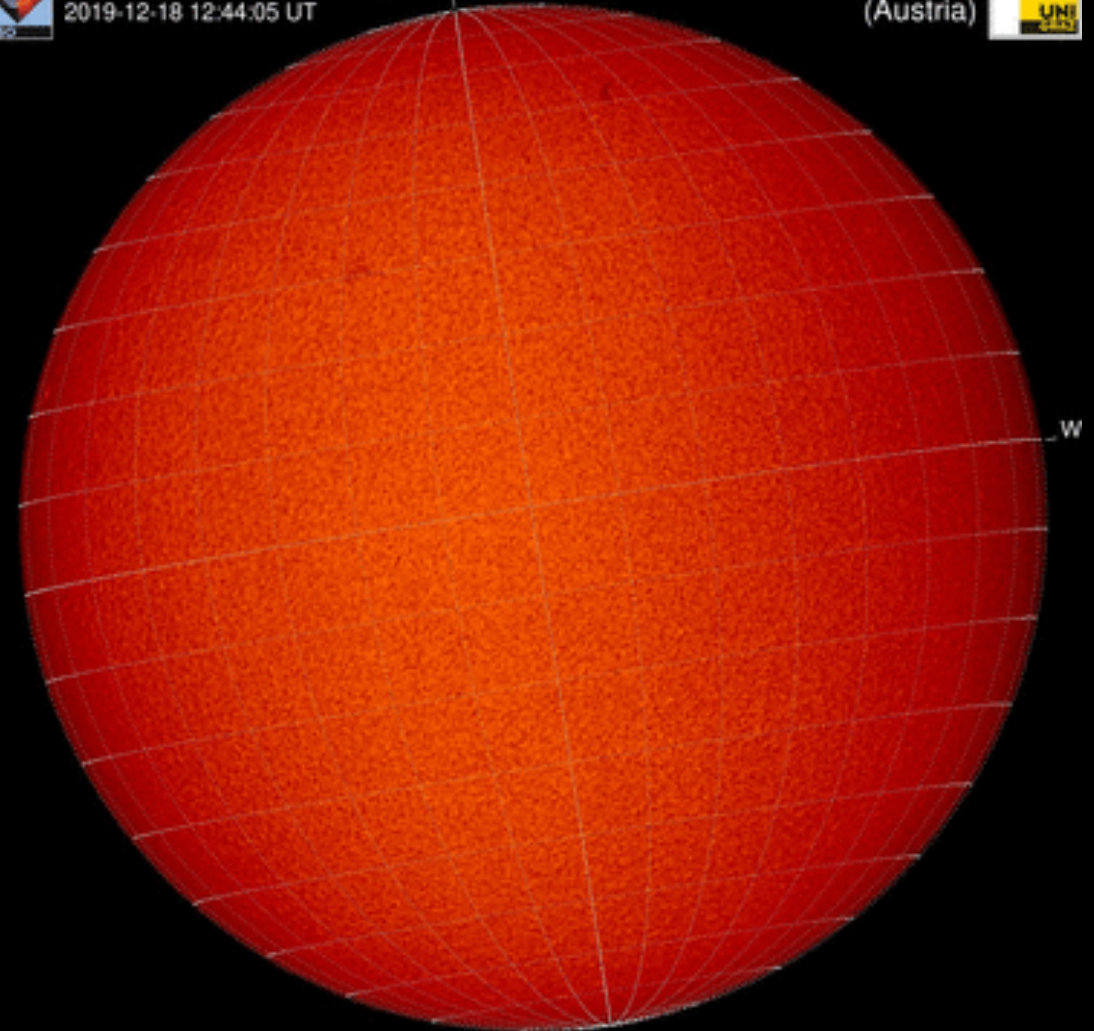


H-alpha 2019-12-22

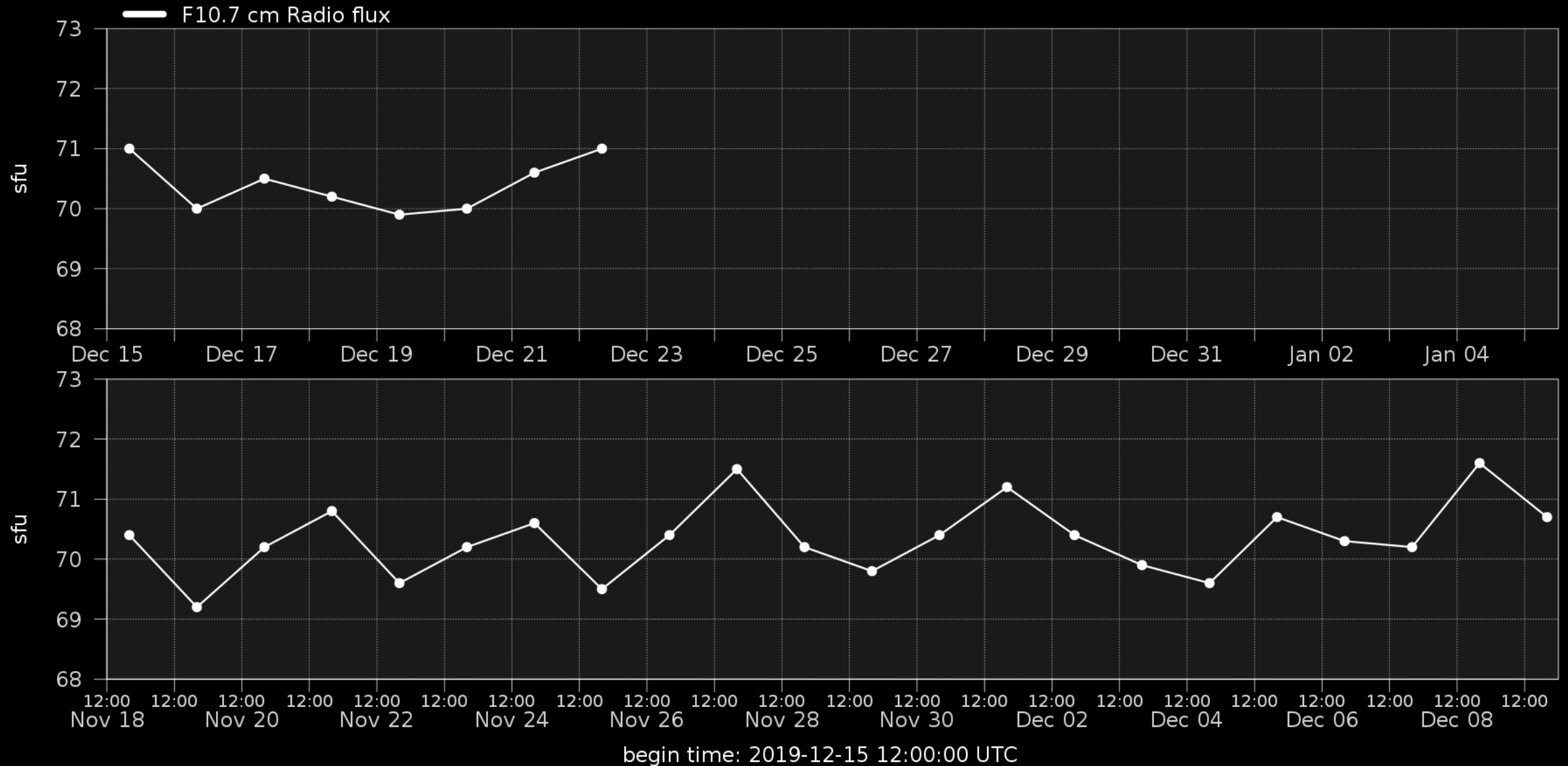


Kanzelhöhe Observatory
2019-12-18 12:44:05 UT

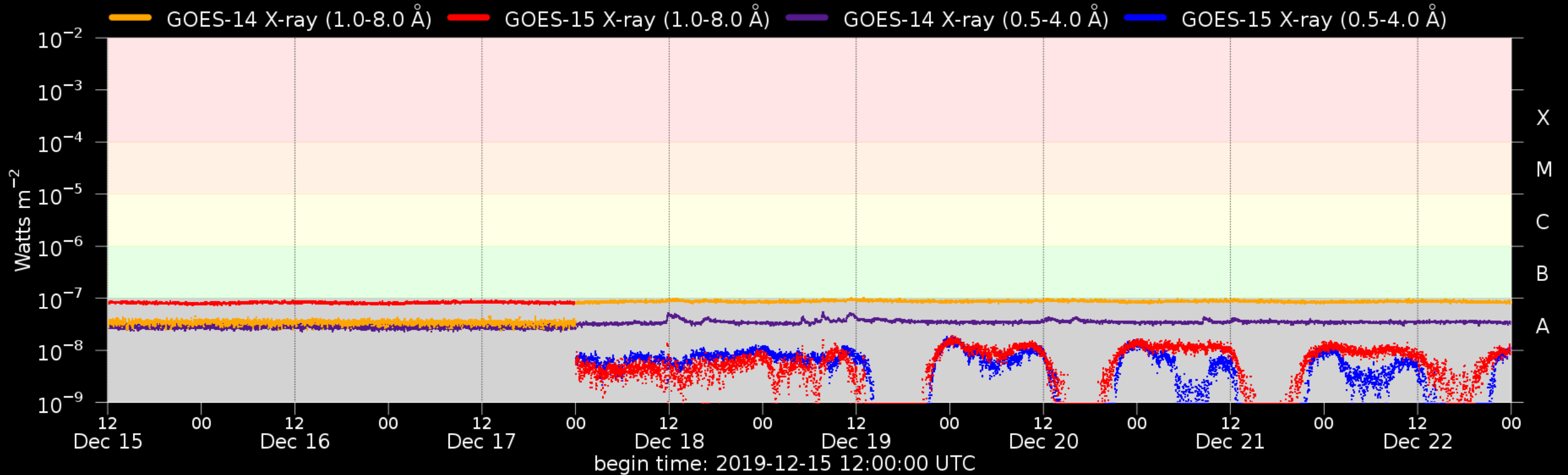
University of Graz
(Austria)



Solar F10.7cm radio flux



Flaring activity



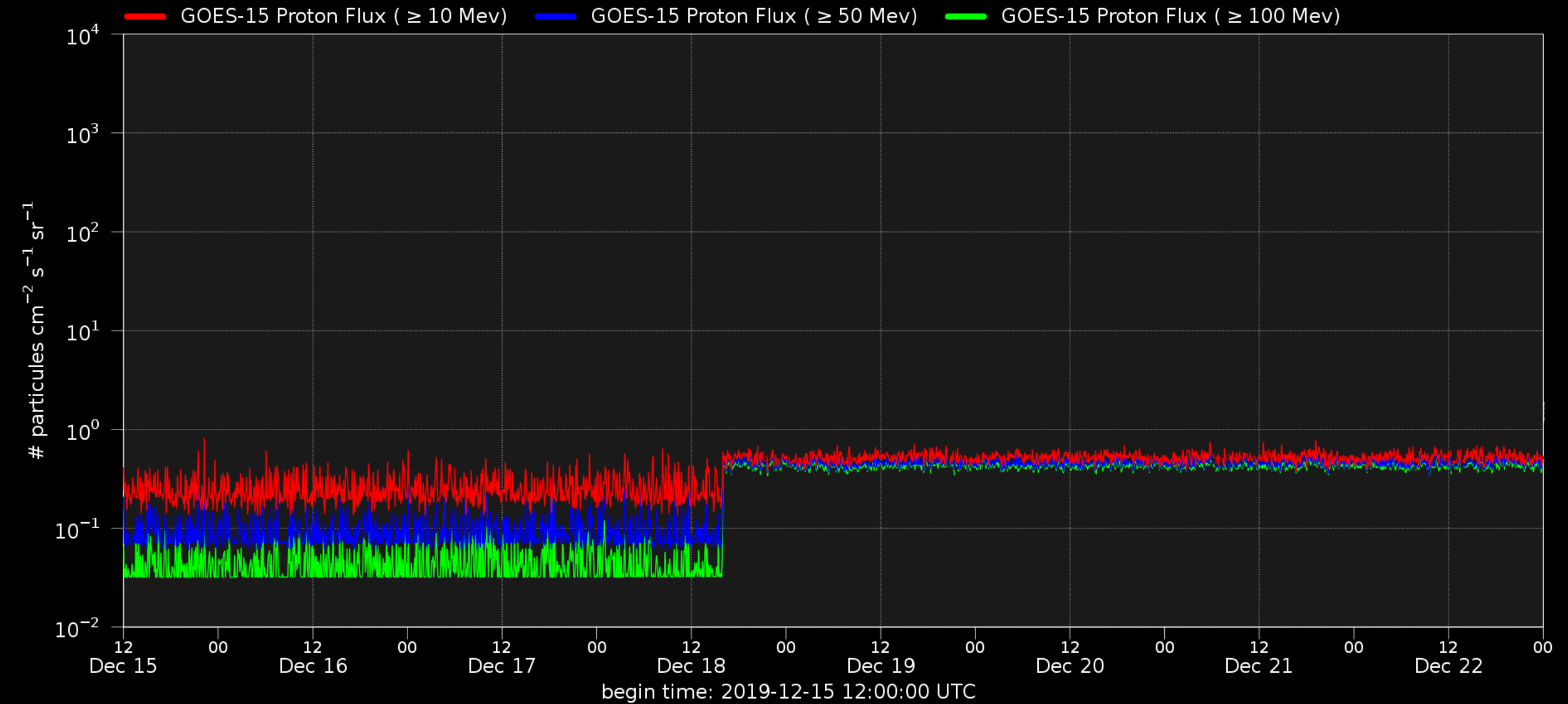
Probabilities (%) and occurrences (#) of B/C/M/X-flares issued at 12:30 and over the next 24h:

Issue date	2019-12-15	2019-12-16	2019-12-17	2019-12-18	2019-12-19	2019-12-20	2019-12-21	2019-12-22
Probability	--- 01 01 01	--- 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

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

Solar proton flux

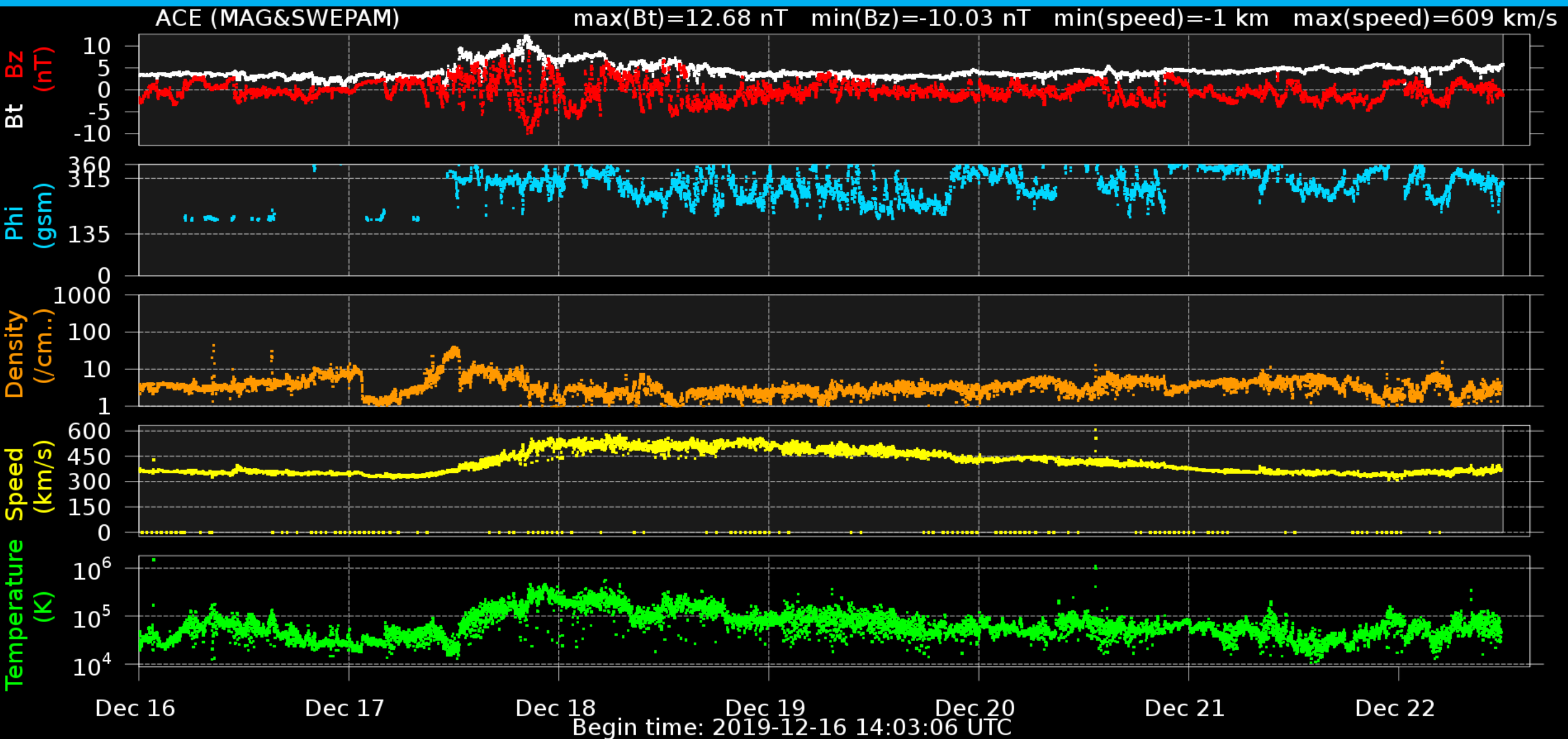


Solar Wind and Geomagnetic Activity

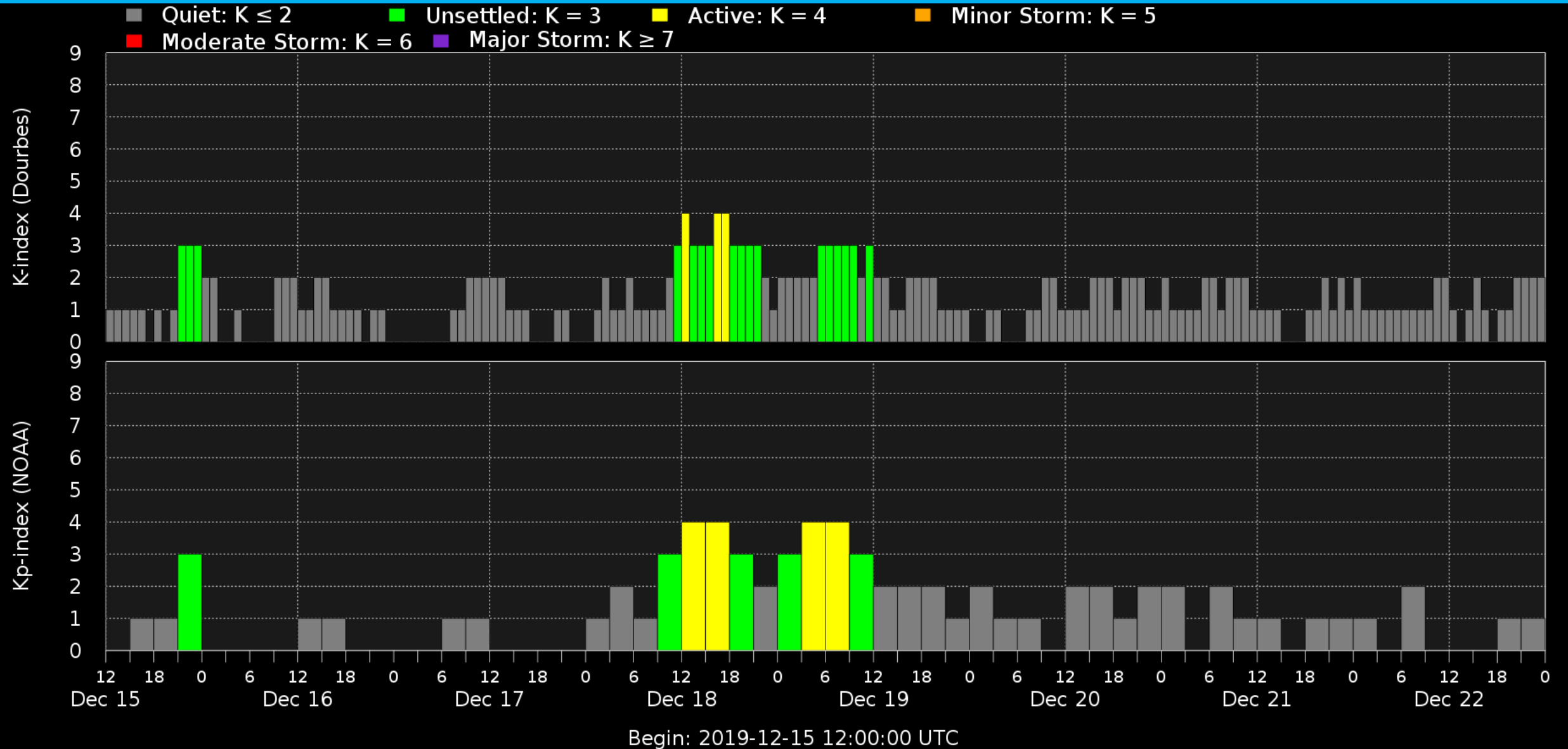


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Solar wind parameters (ACE data)



Geomagnetic activity (K-indexes)



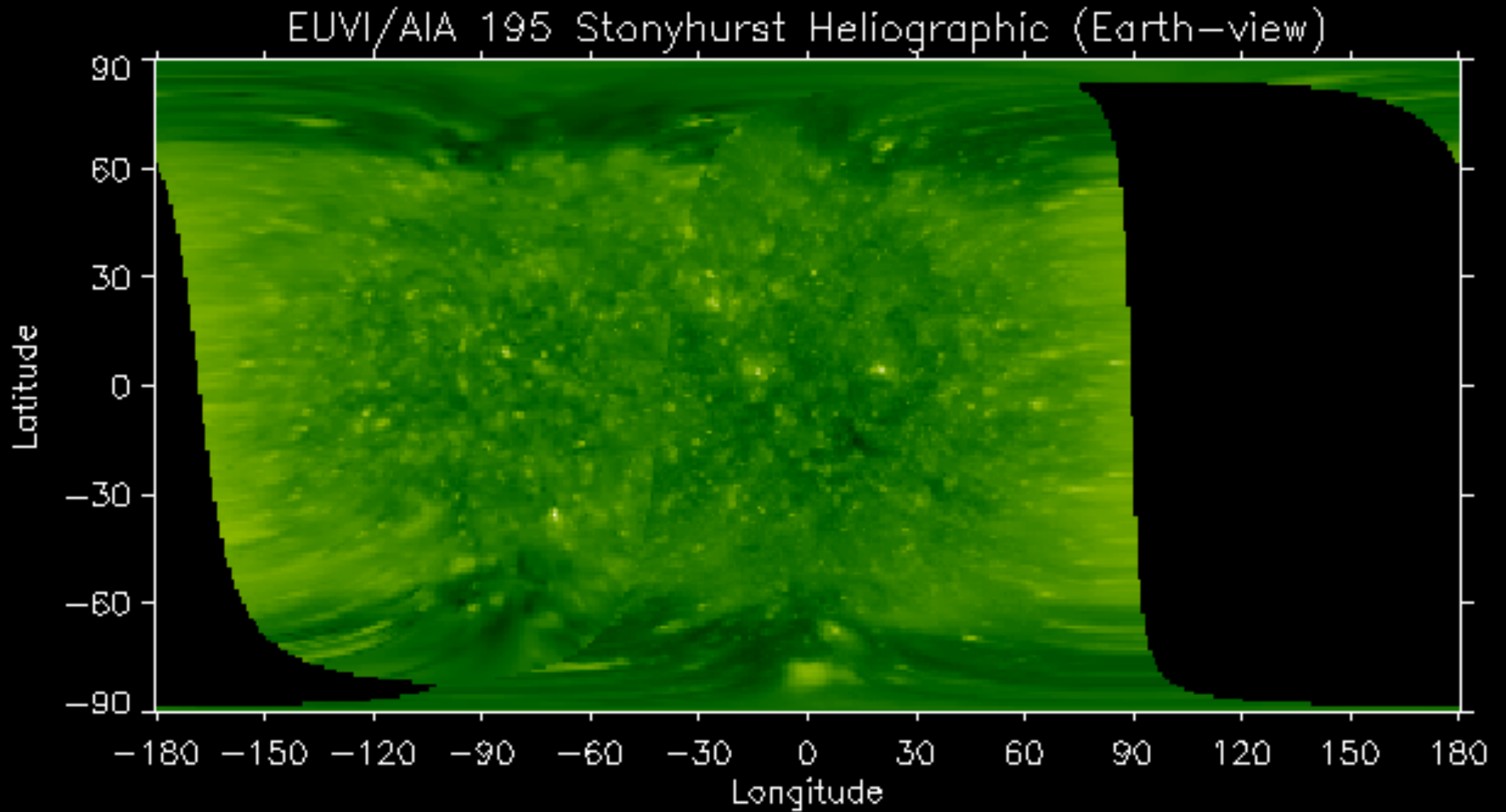
Outlook



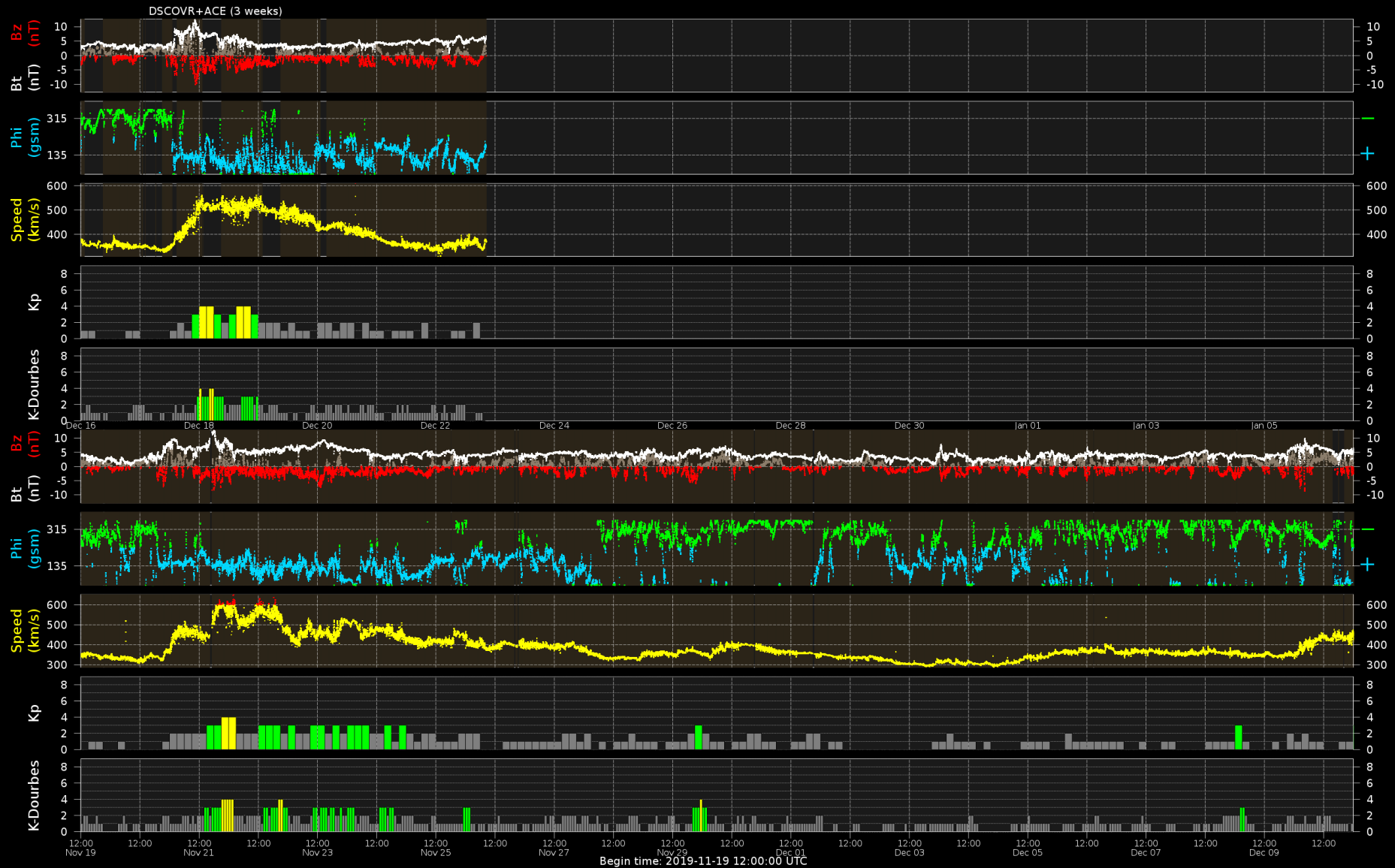
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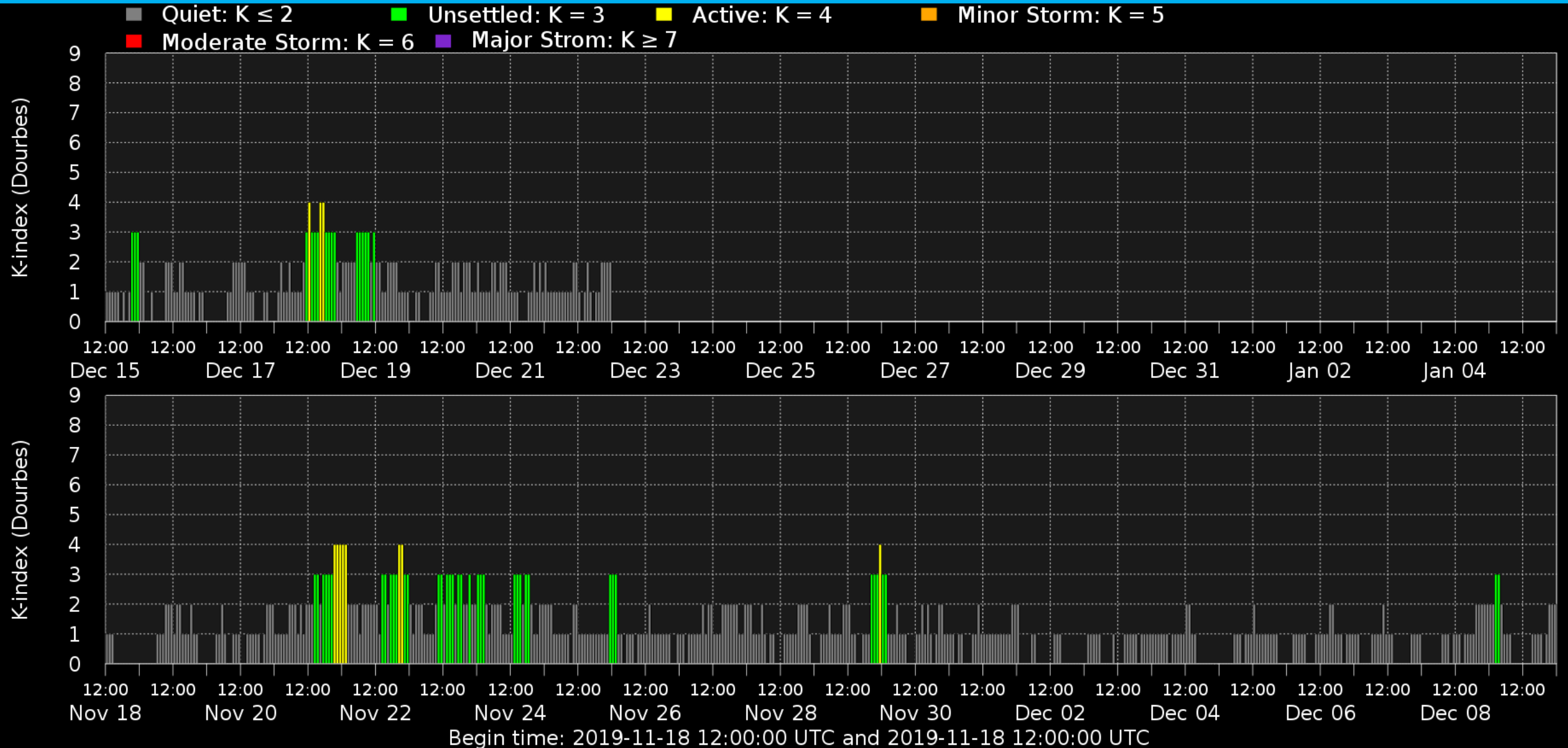
Outlook: Solar activity



Outlook: Solar wind



Outlook: Geomagnetic activity



SIDC Space Weather Briefing

See you at our next briefing!

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