

SIDC Space Weather Briefing

29 December 2019 - 05 January 2020

Cis Verbeeck
& the SIDC forecaster team



Royal Observatory
of Belgium

Solar Influences
Data analysis Centre
www.sidc.be

Summary Report

Solar activity from 2019-12-29 12:00 UT to 2020-01-05 12:00 UT

Active regions	Beta region NOAA 2755
Flaring	# B-class flare: 0 # C-class flare: 0 # M-class flare: 0 # X-class flare: 0
Filaments	None
CMEs	No Earth-directed CMEs
Proton Events	None

Solar wind and geomagnetic conditions from 2019-12-29 12:00 UT to 2020-01-05 12:00 UT

Coronal Holes	Extensions of negative polarity south polar coronal holes at CM on Jan 2 and on Jan 5
ICME	None
SW Conditions	Nominal to slightly enhanced
K-indices	max K-index (Dourbes): 3 max Kp-index (NOAA): 3

All Quiet Alert: Text and Color to be included

Solar Activity

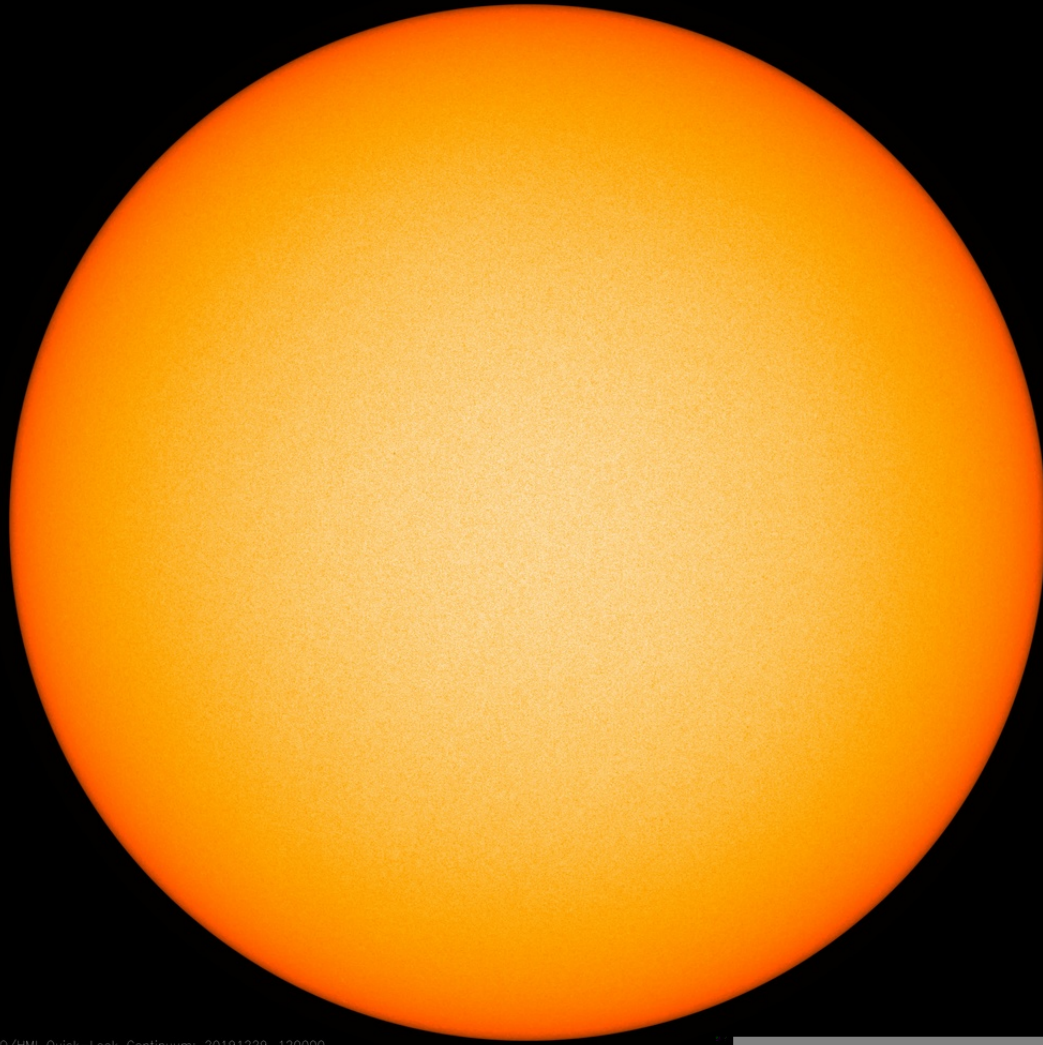


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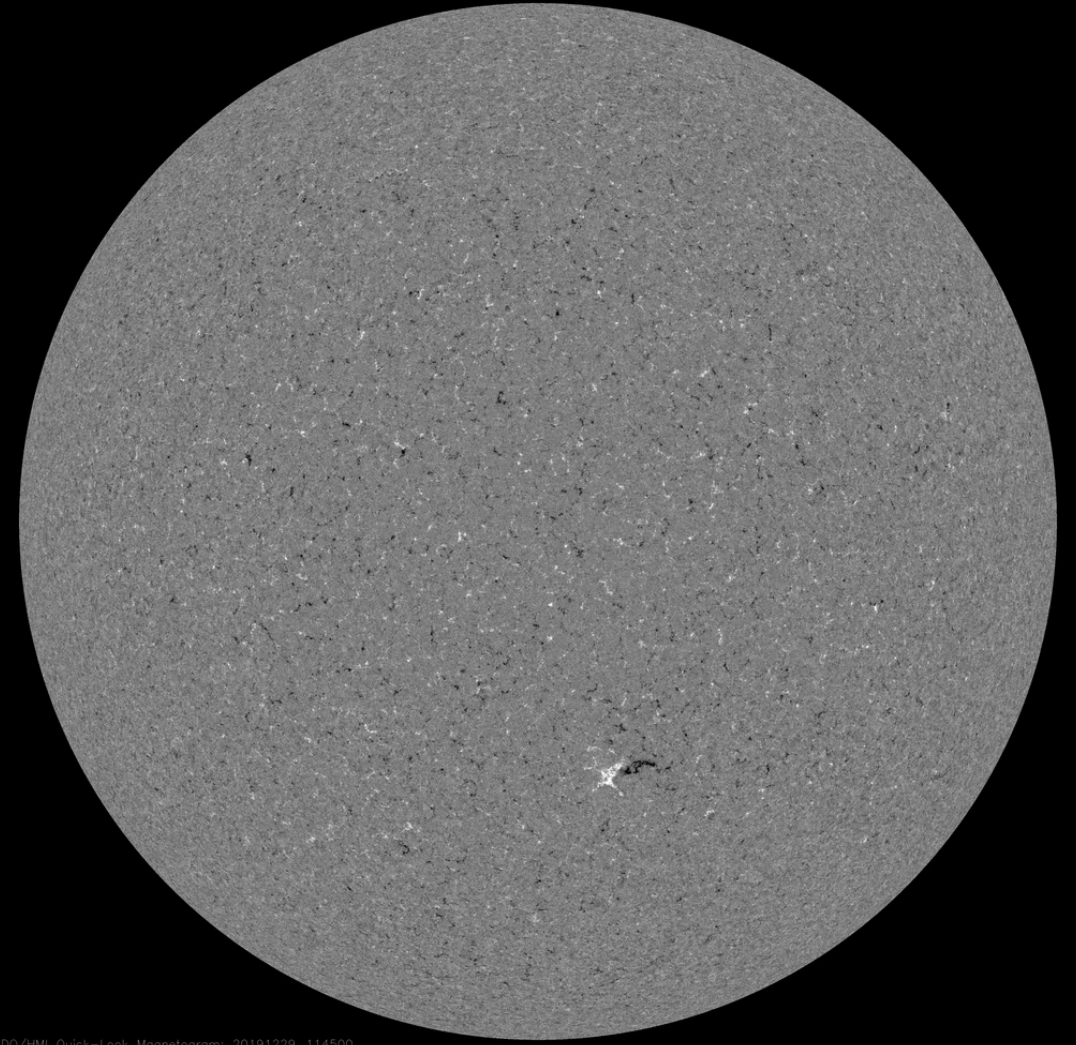
Solar active region - start of the week

SDO/HMI White Light 2019-12-29



SDO/HMI Quick-Look Continuum: 20191229_120000

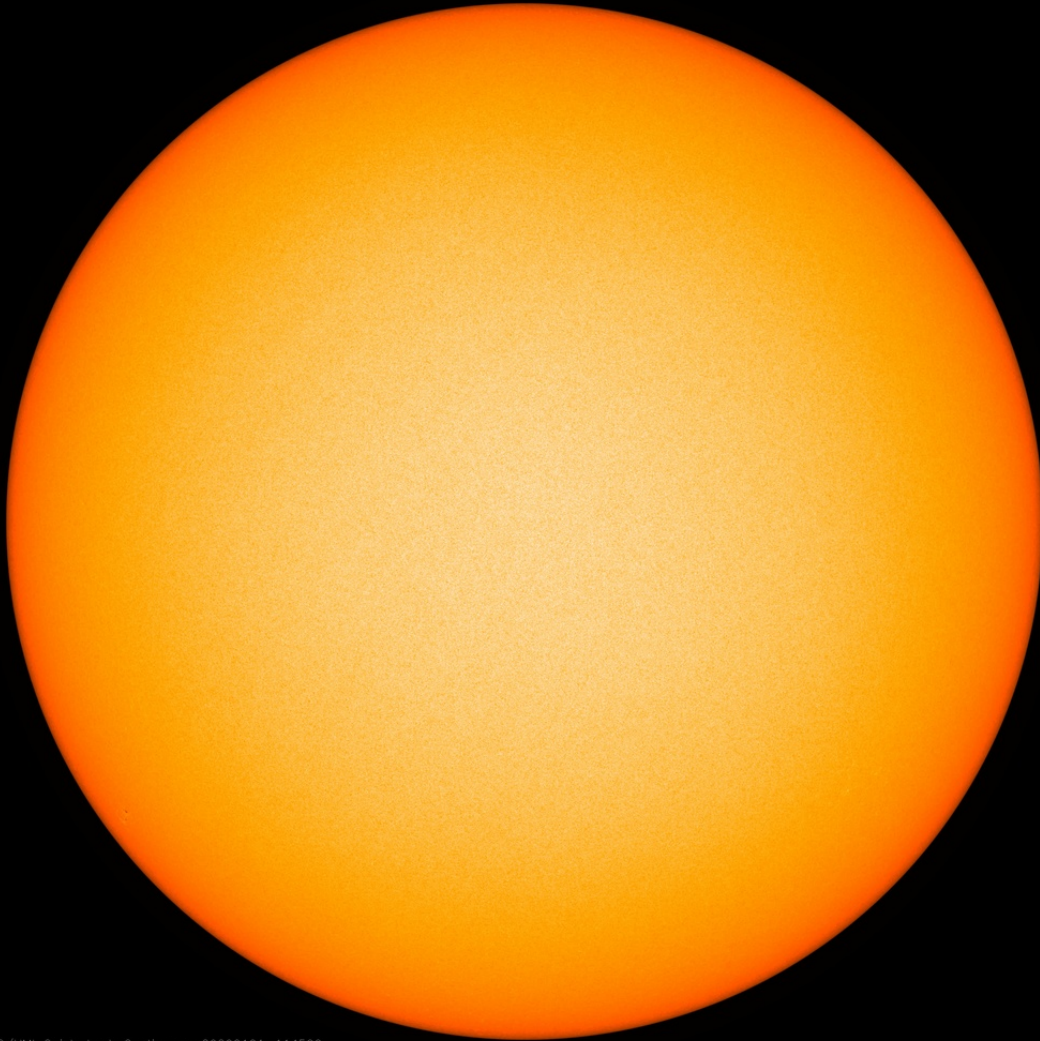
SDO/HMI Magnetogram 2019-12-29



SDO/HMI Quick-Look Magnetogram: 20191229_114500

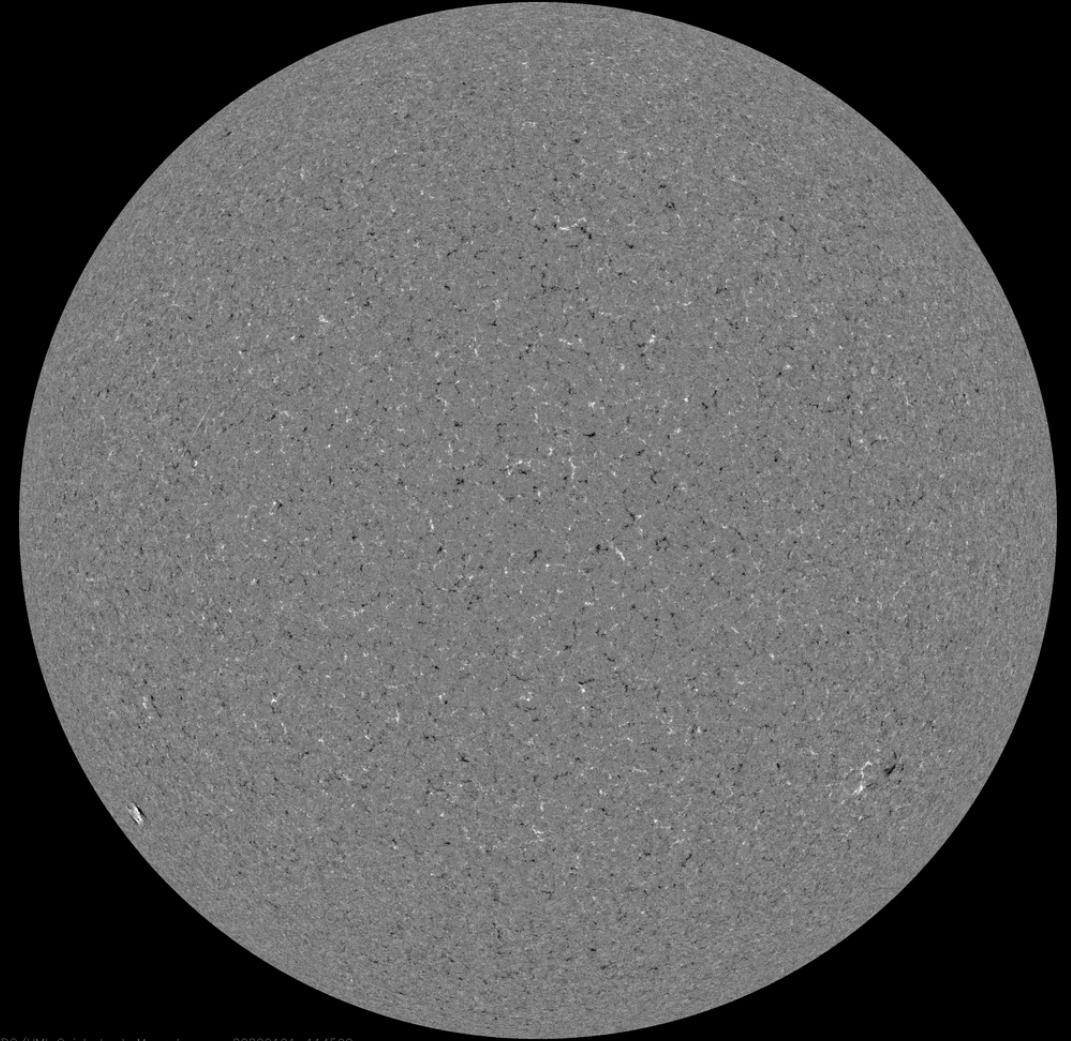
Solar active region - middle of the week

SDO/HMI White Light 2020-01-01



SDO/HMI Quick-Look Continuum: 20200101_114500

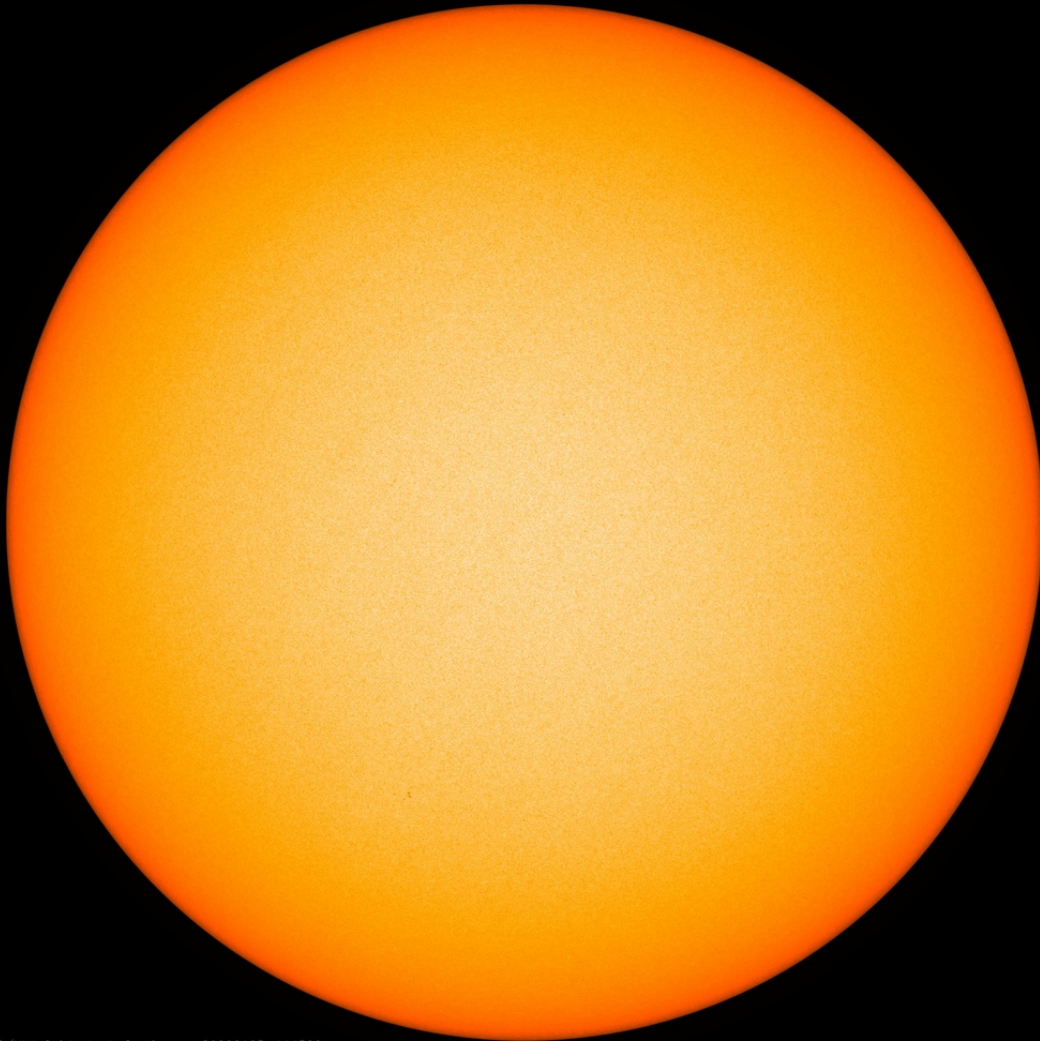
SDO/HMI Magnetogram 2020-01-01



SDO/HMI Quick-Look Magnetogram: 20200101_114500

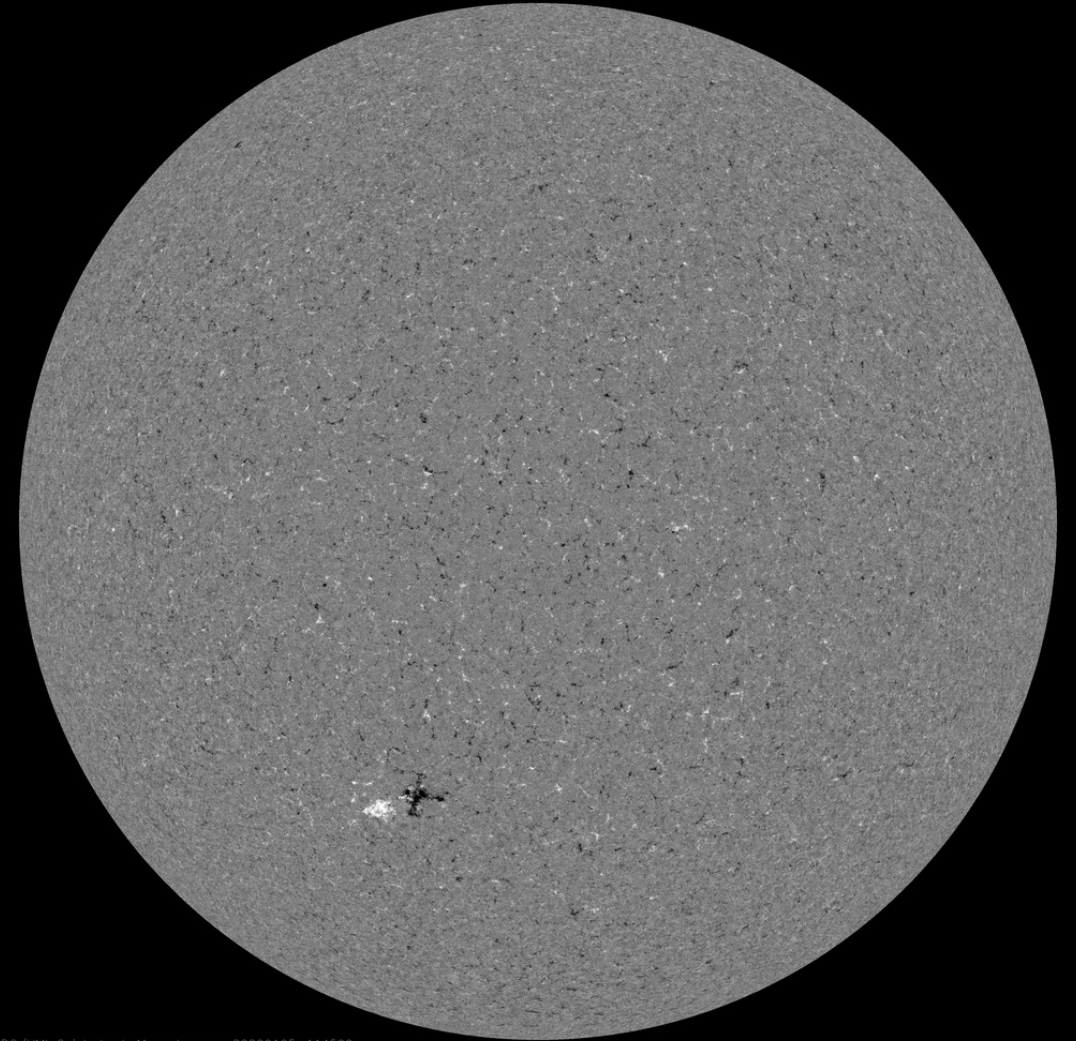
Solar active region - end of the week

SDO/HMI White Light 2020-01-05



SDO/HMI Quick-Look Continuum: 20200105_114500

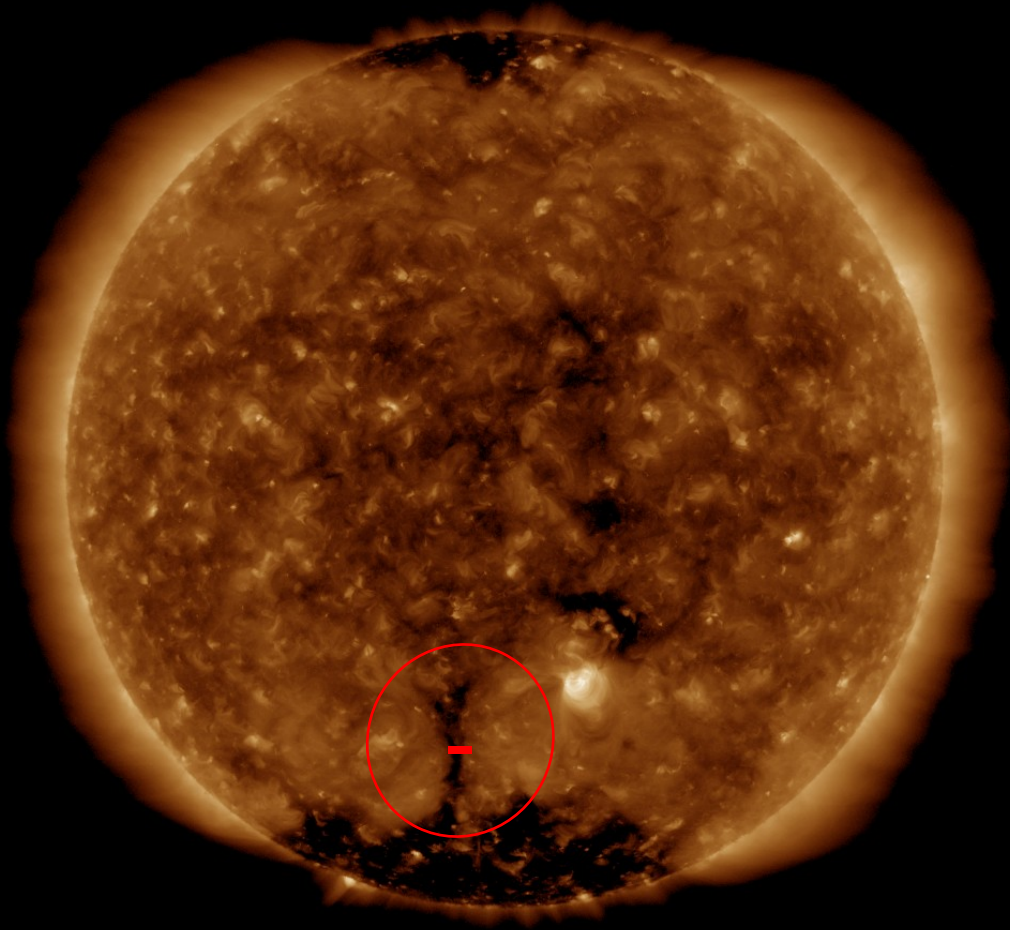
SDO/HMI Magnetogram 2020-01-05



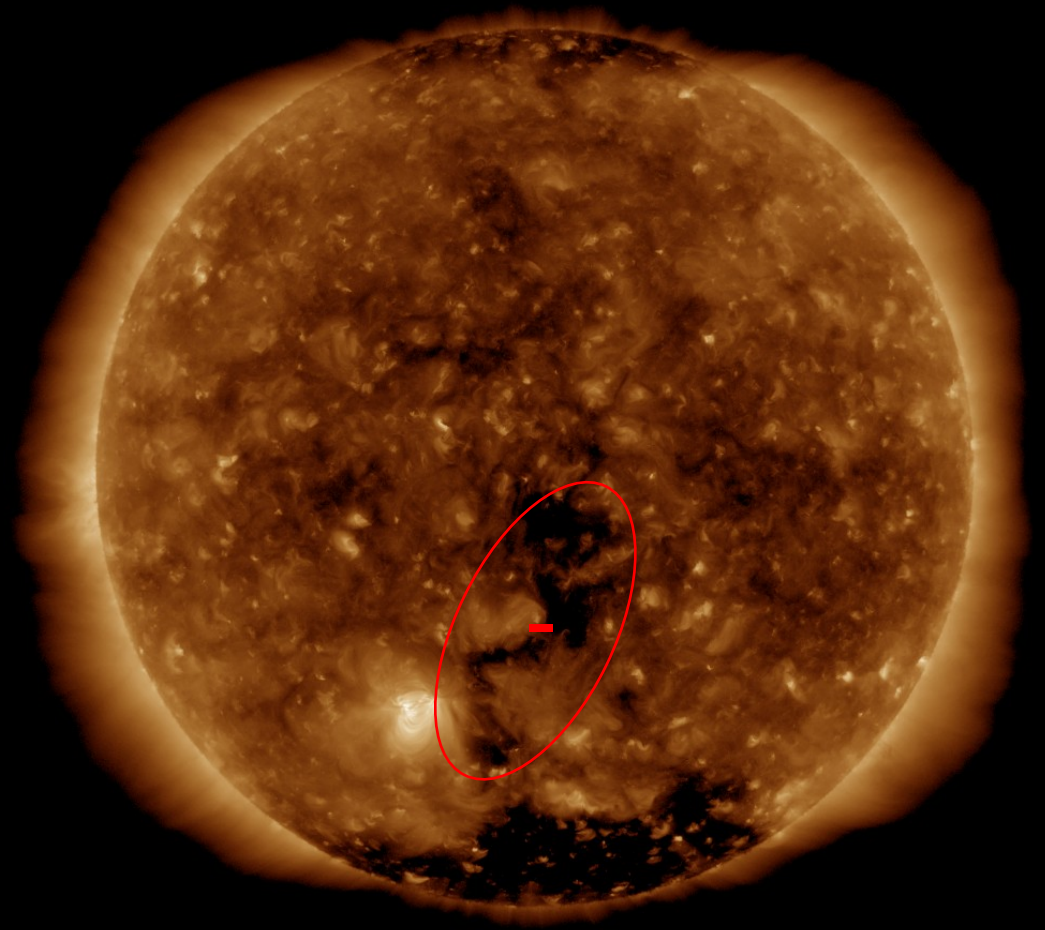
SDO/HMI Quick-Look Magnetogram: 20200105_114500

Solar active region & Coronal hole

SDO/AIA 19.3 nm 2019-12-29



SDO/AIA 19.3 nm 2020-01-05



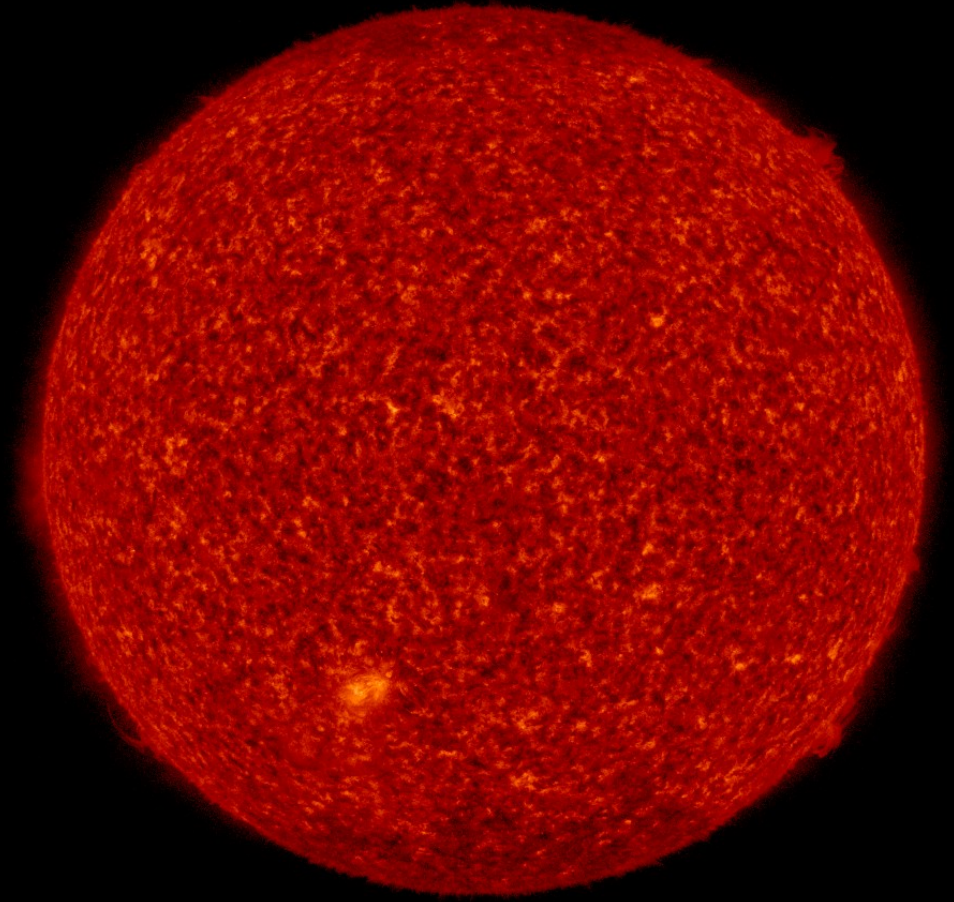
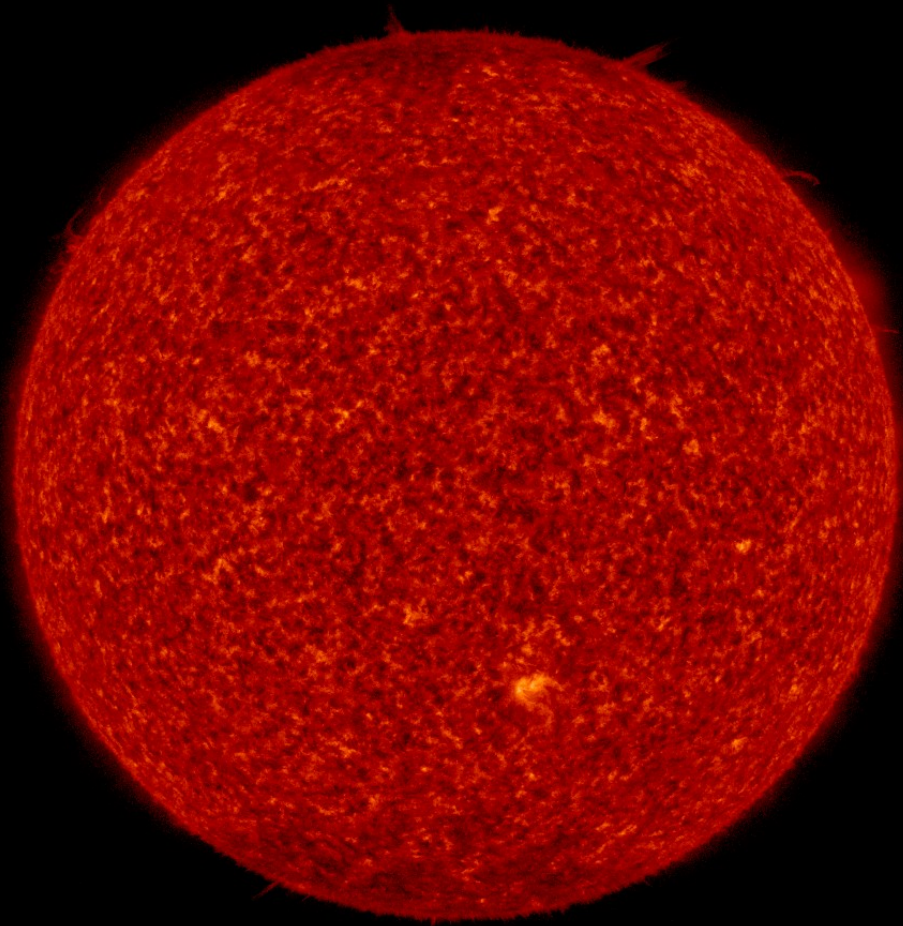
SDO/AIA 193 2019-12-29 12:09:53 UT

SDO/AIA 193 2020-01-05 12:10:29 UT

Solar active region & Filament

SDO/AIA 30.4 nm 2019-12-29

SDO/AIA 30.4 nm 2020-01-05



SDO/AIA 304 2019-12-29 12:14:06 UT

SDO/AIA 304 2020-01-05 12:13:30 UT

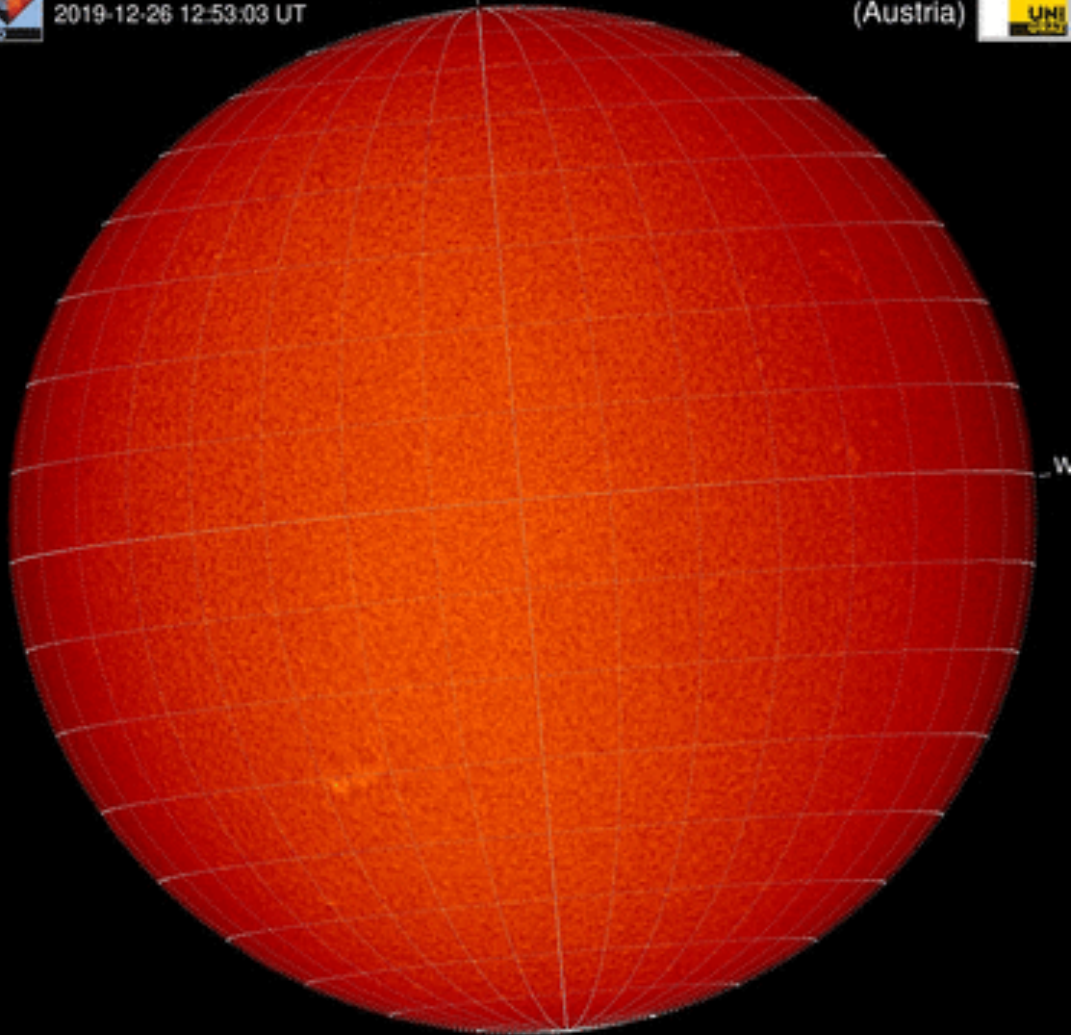
Filament & Filament eruption

H-alpha 2019-12-29



Kanzelhöhe Observatory
2019-12-26 12:53:03 UT

University of Graz
(Austria)

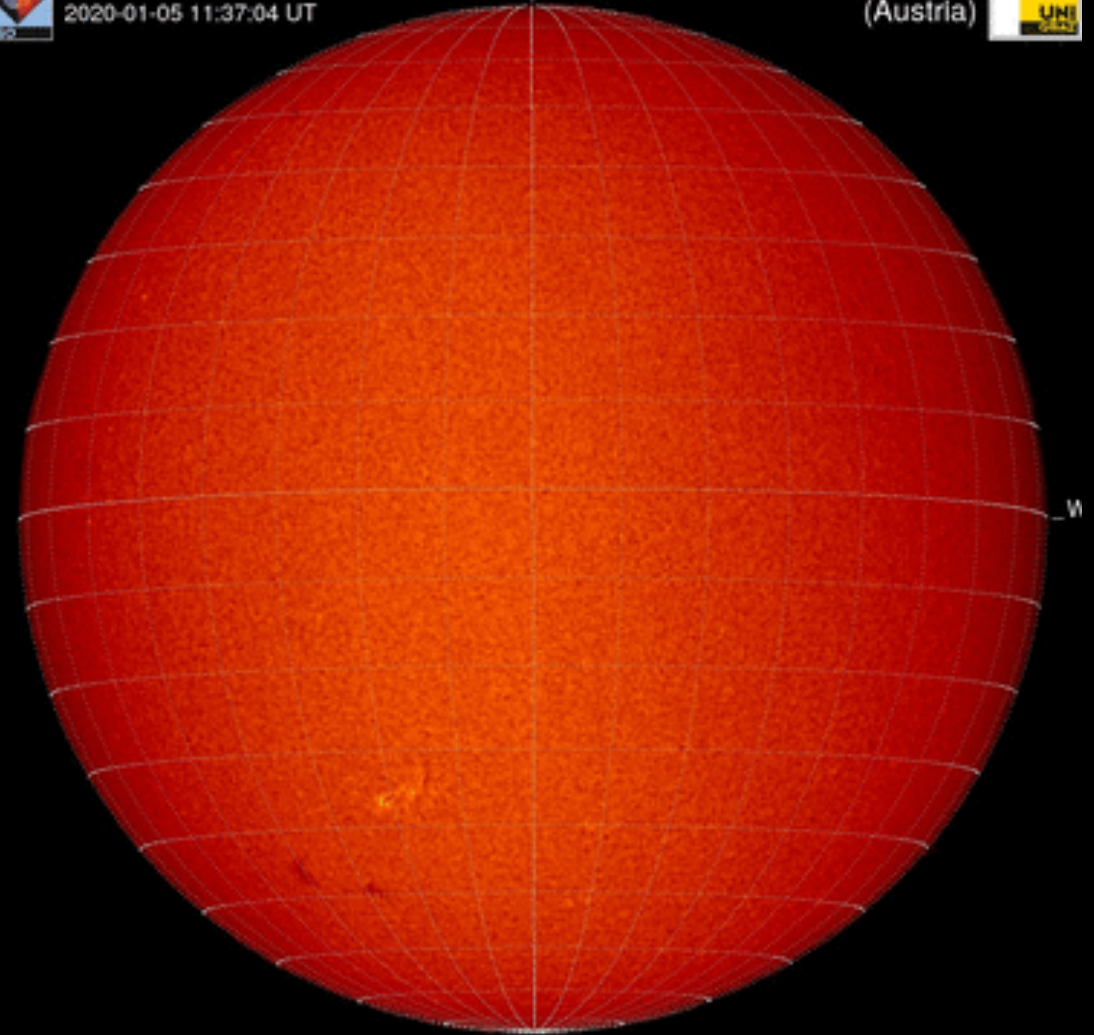


H-alpha 2020-01-05

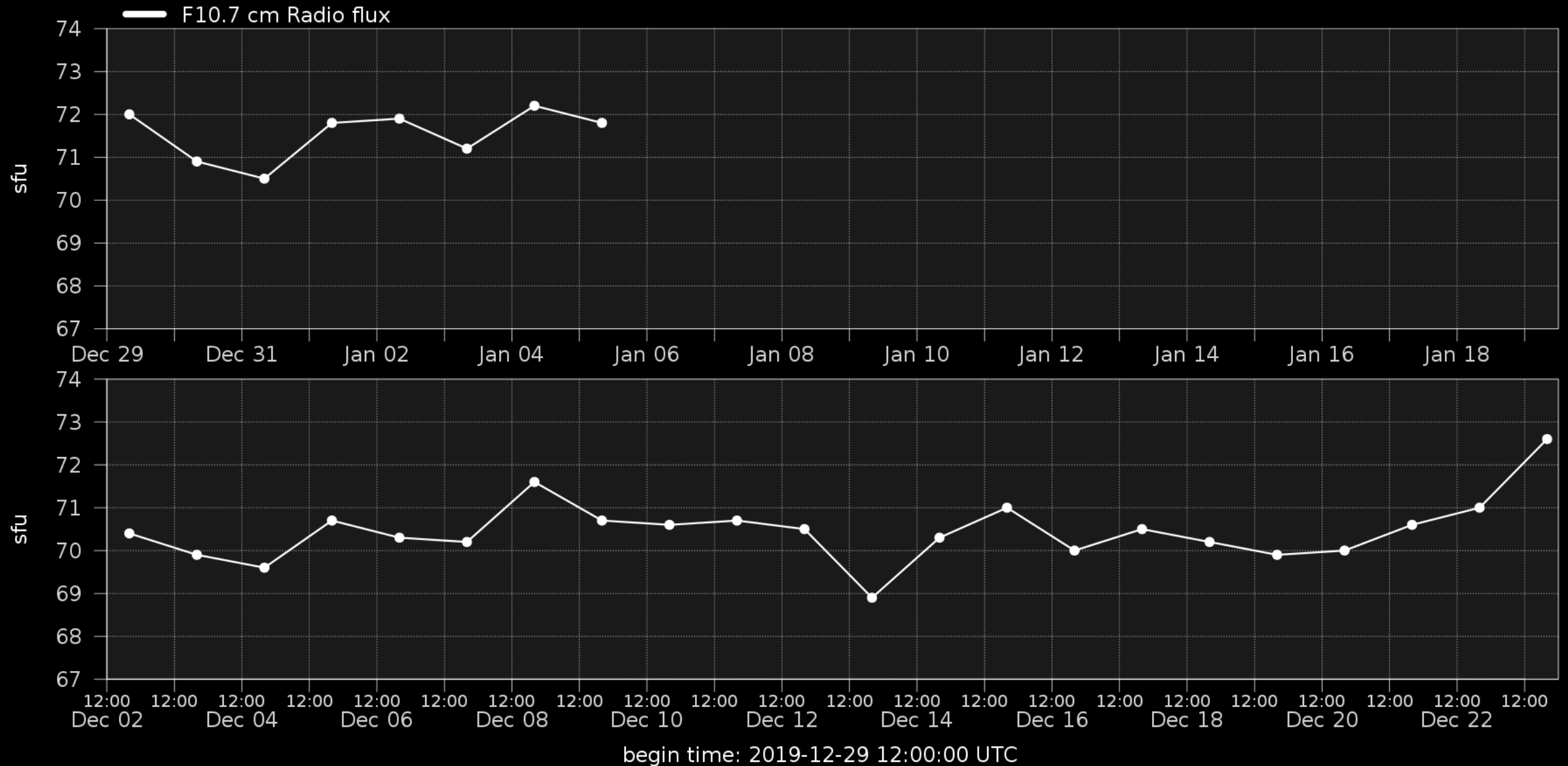


Kanzelhöhe Observatory
2020-01-05 11:37:04 UT

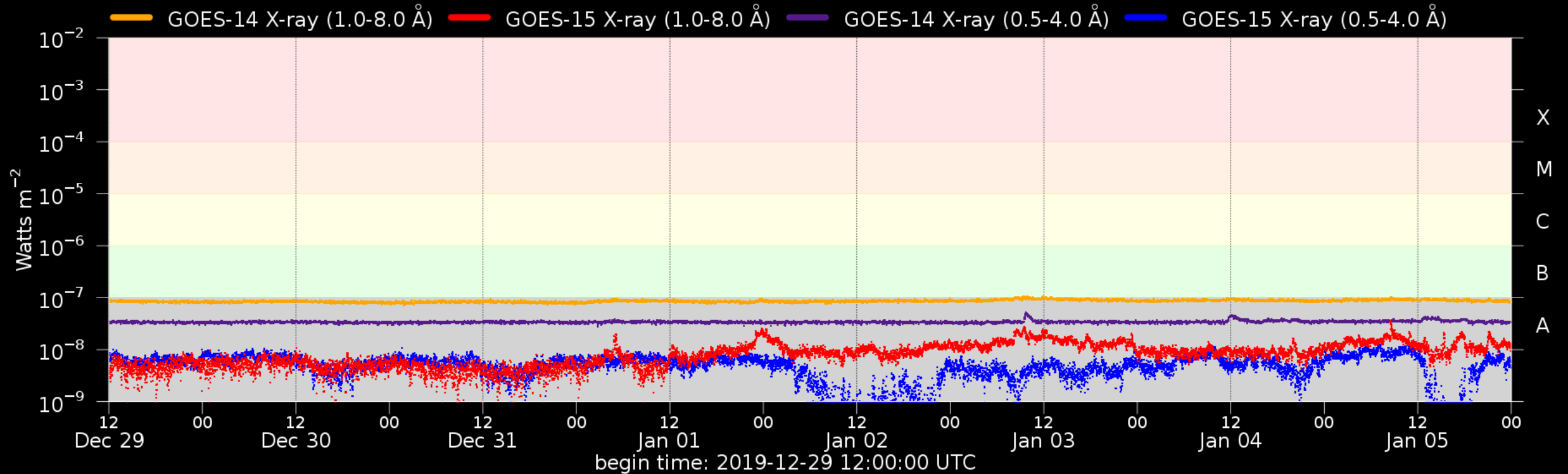
University of Graz
(Austria)



Solar F10.7cm radio flux



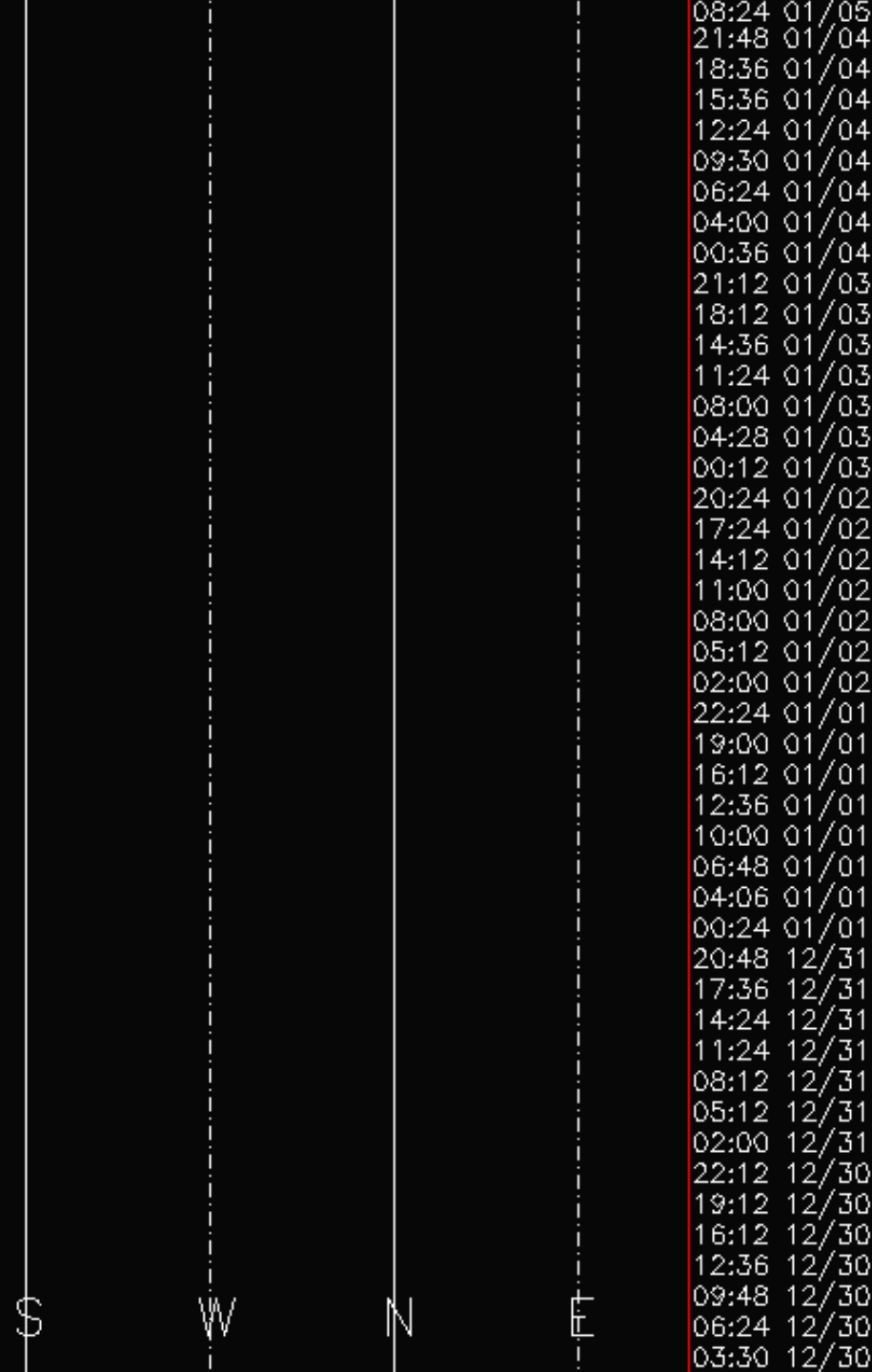
Flaring activity



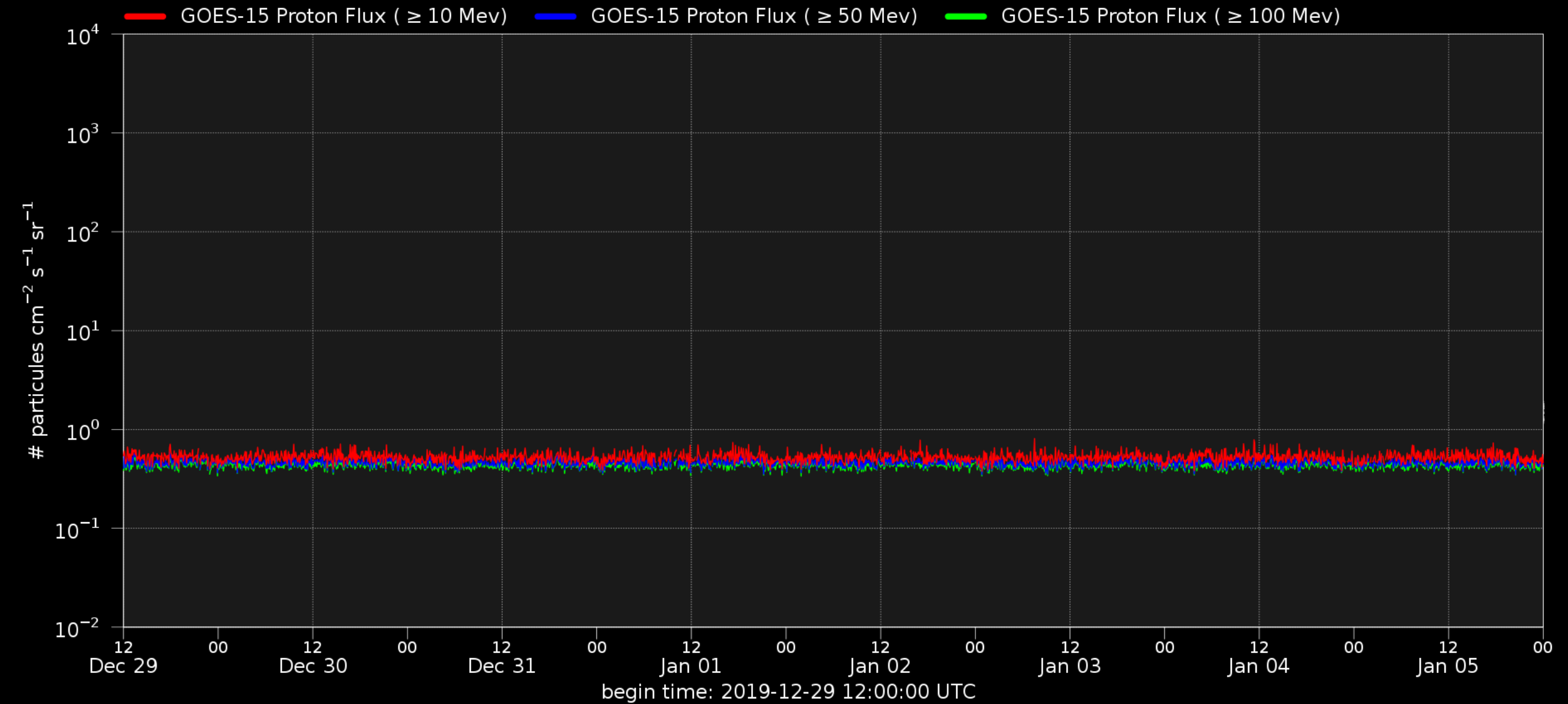
Probabilities (%) and occurrences (#) of B/C/M/X-flares issued at 12:30 and over the next 24h:

Issue date	2019-12-29	2019-12-30	2019-12-31	2020-01-01	2020-01-02	2020-01-03	2020-01-04	2020-01-05
Probability	--- 01 01 01	--- 01 01 01	--- 01 01 01	--- 01 01 01	--- 05 01 01	--- 05 01 01	--- 05 01 01	--- 05 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



Solar proton flux



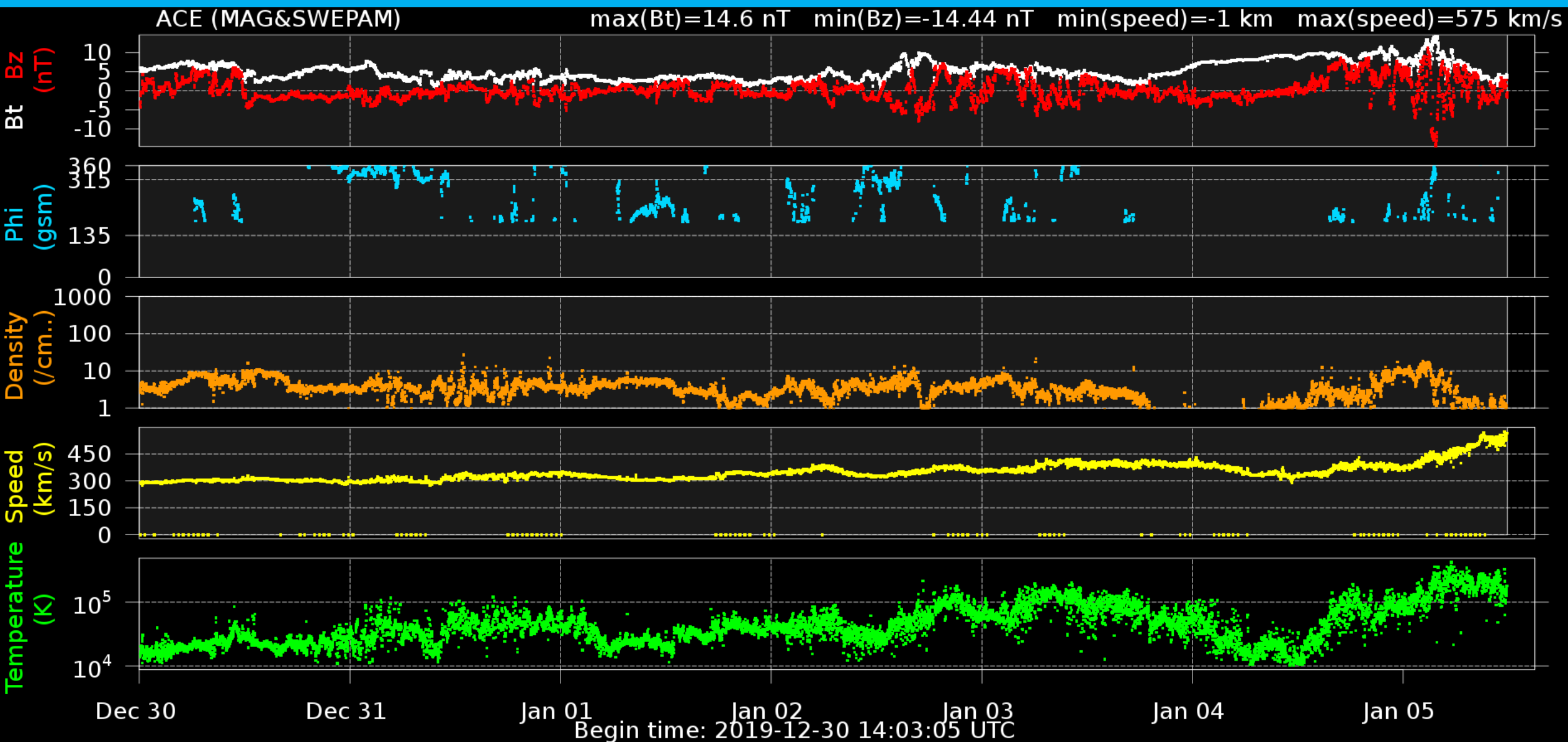
Solar Wind and Geomagnetic Activity



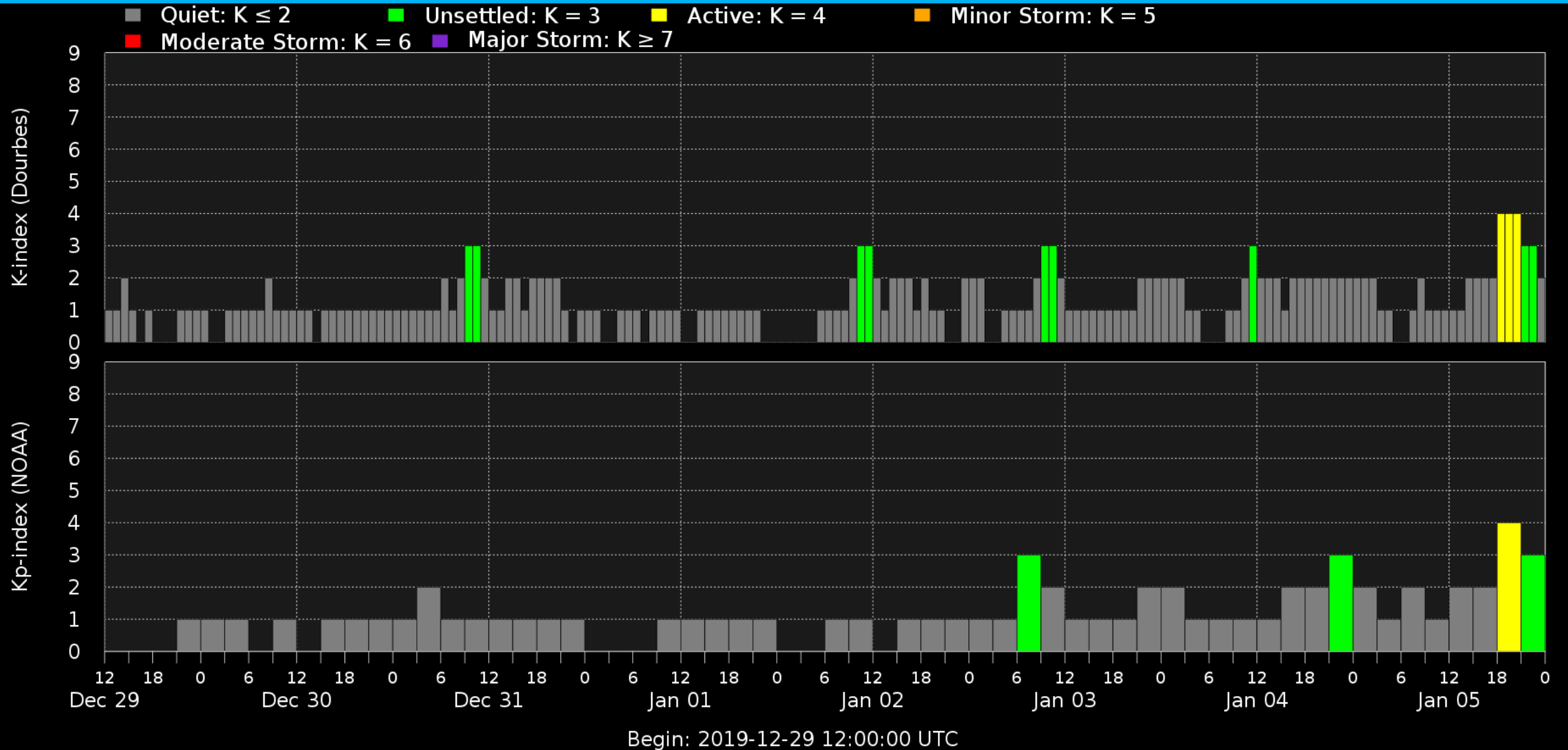
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Solar wind parameters (ACE data)



Geomagnetic activity (K-indexes)



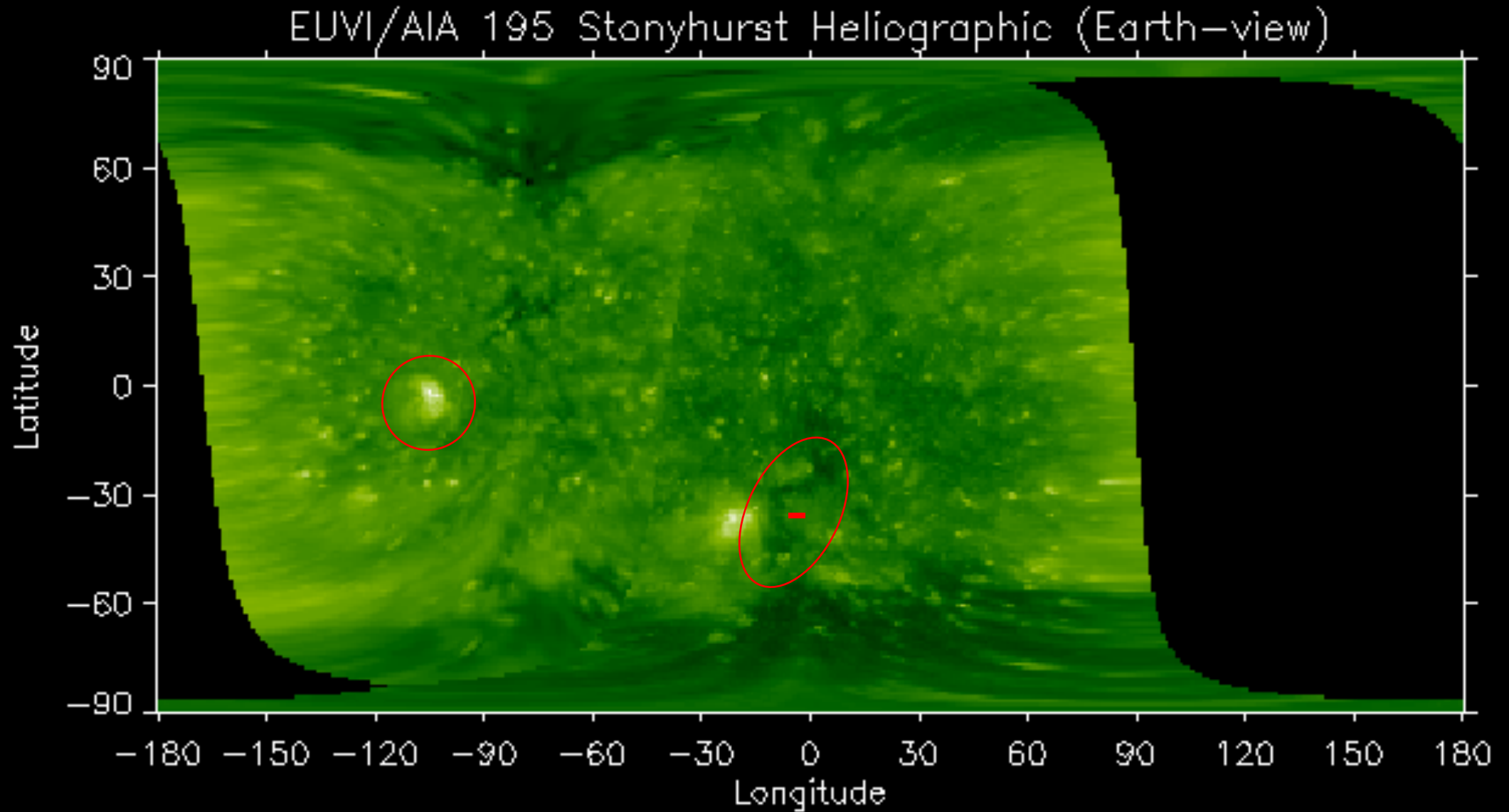
Outlook



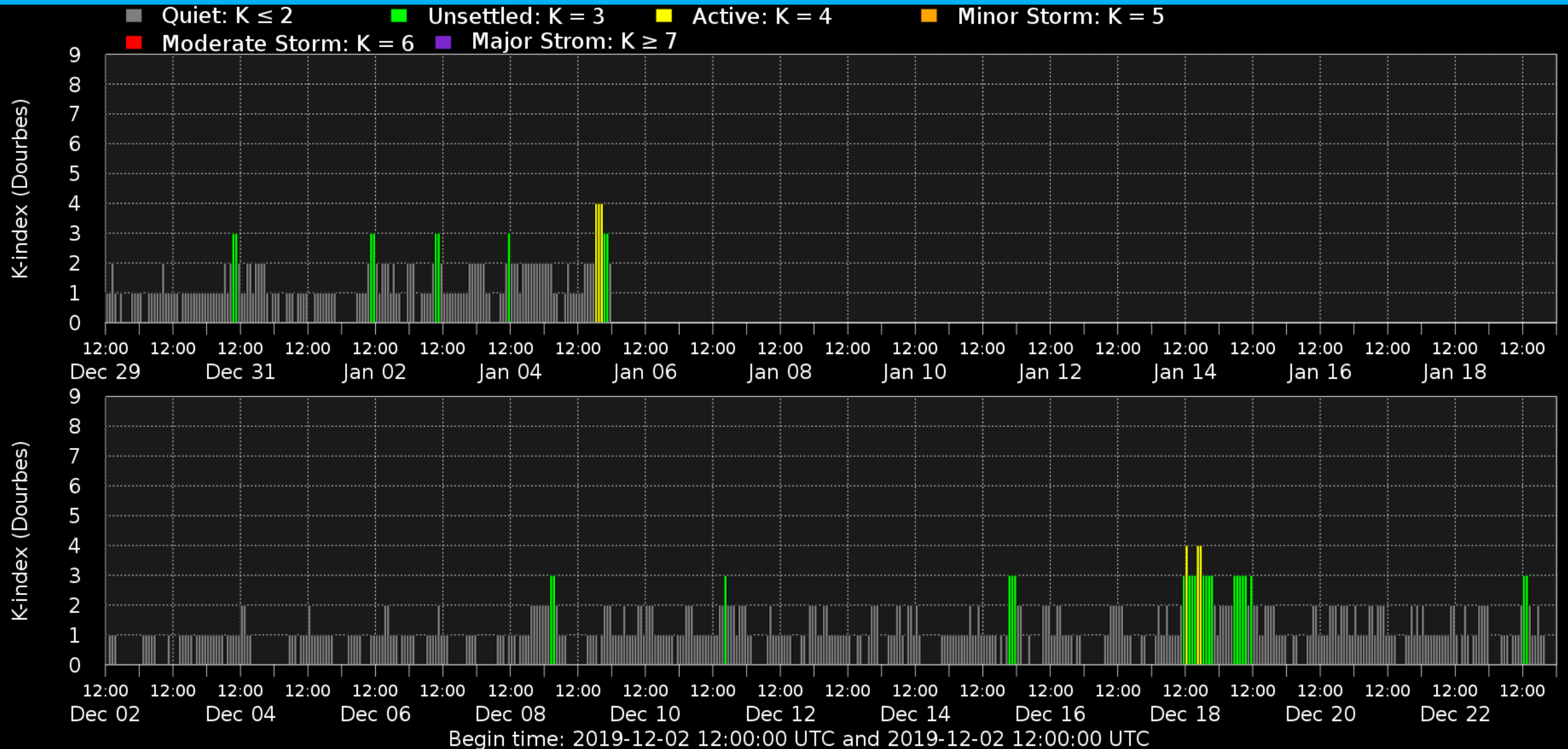
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Outlook: Solar activity



Outlook: Geomagnetic activity



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