

SIDC Space Weather Briefing

24 January 2021 - 31 January 2021

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& the SIDC forecaster team



Royal Observatory
of Belgium

Solar Influences
Data analysis Centre
www.sidc.be

Summary Report

Solar activity from 2021-01-24 12:00 to 2021-01-31 23:59

Active regions	NOAA ARs 2797, 2798, 2799, 2800
Flares	# C-class flare: 0 # M-class flare: 0 # X-class flare: 0
Filament eruptions	Multiple filaments on disk. No eruptions expected to impact Earth
Coronal Holes	Negative polarity CH and small positive extension to northern CH began to cross central meridian on Jan 28
Proton flux	At background levels
Electron flux	Above 1000 pfu threshold since Jan 27

Solar wind and geomagnetic conditions

ICME	None
SW Conditions	B : 0.56 - 11.09 nT // Bz: -9.9 nT to 9.01 nT // Speed: 298.7 - 626.1km/s
K-indices	max K-index (Dourbes): 5 max Kp-index (NOAA): 5

All Quiet Alert: On between 28 -30 January

Solar Activity

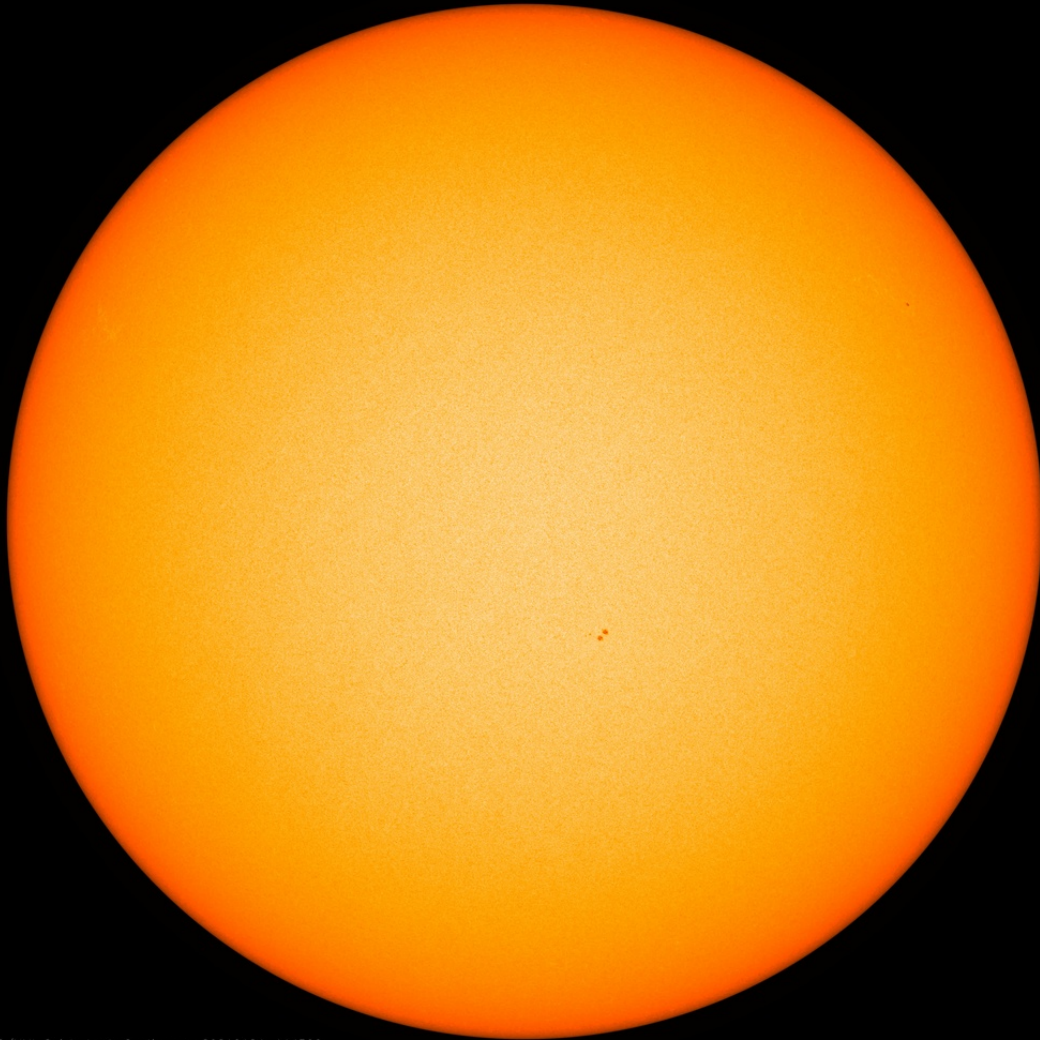


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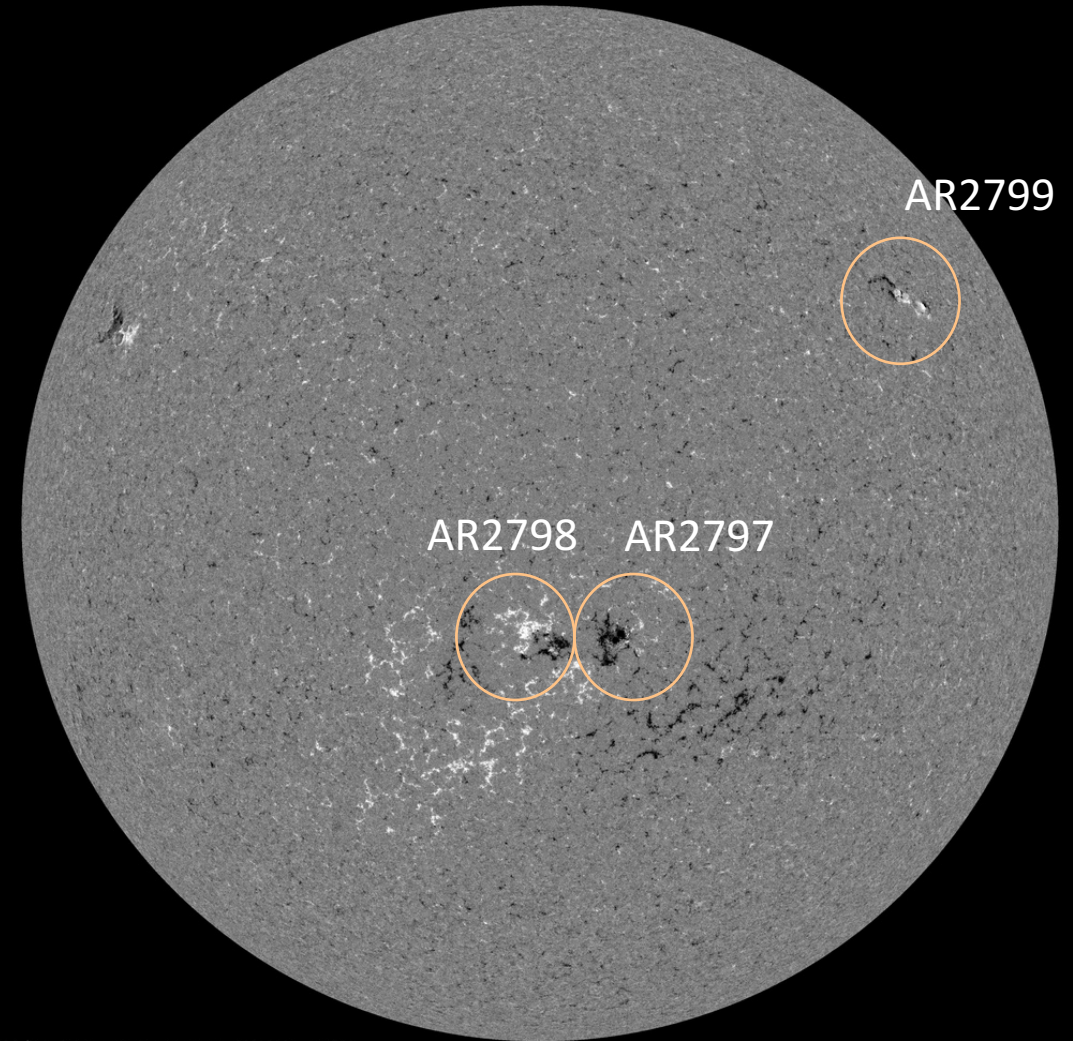
Solar active regions

SDO/HMI White Light 2021-01-24



SDO/HMI Quick-Look Continuum: 20210124_114500

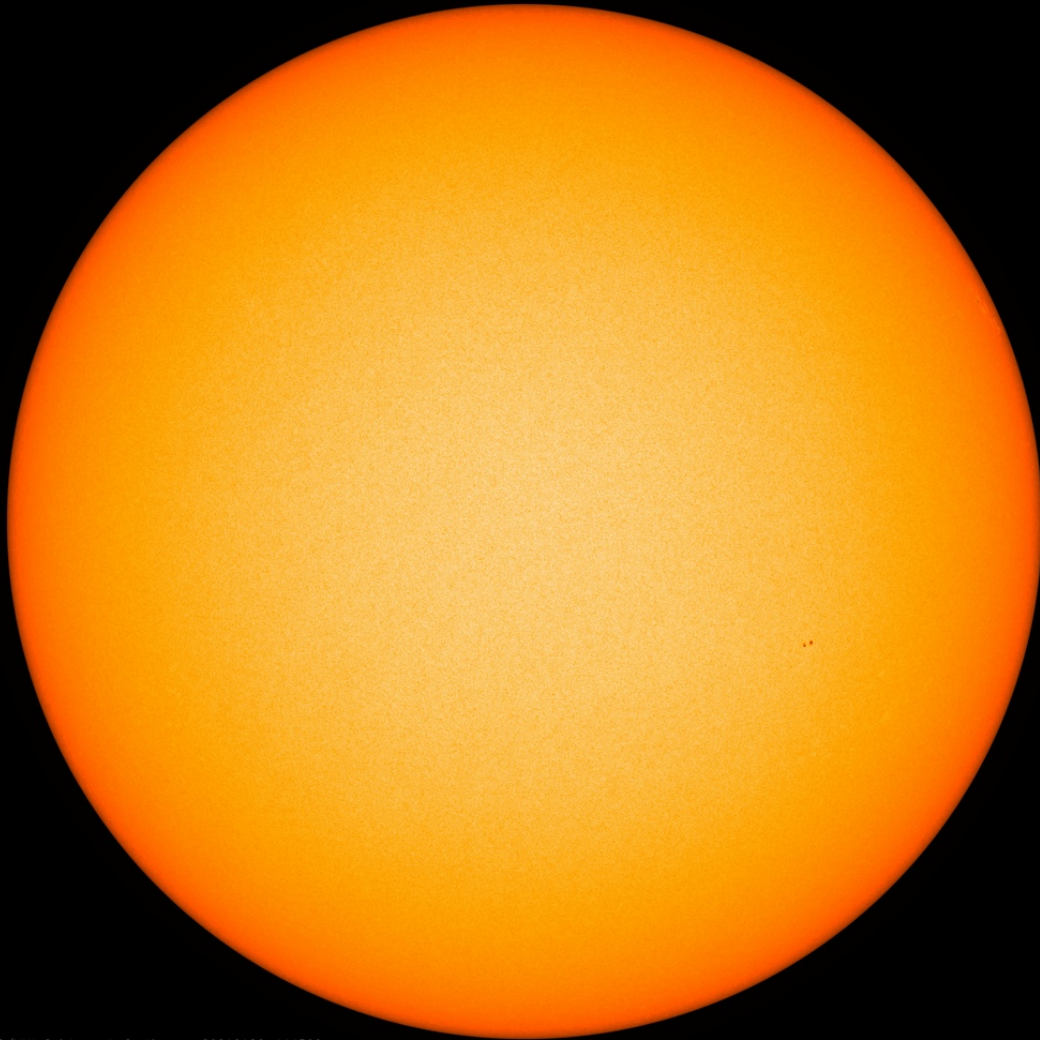
SDO/HMI Magnetogram 2021-01-24



SDO/HMI Quick-Look Magnetogram: 20210124_114500

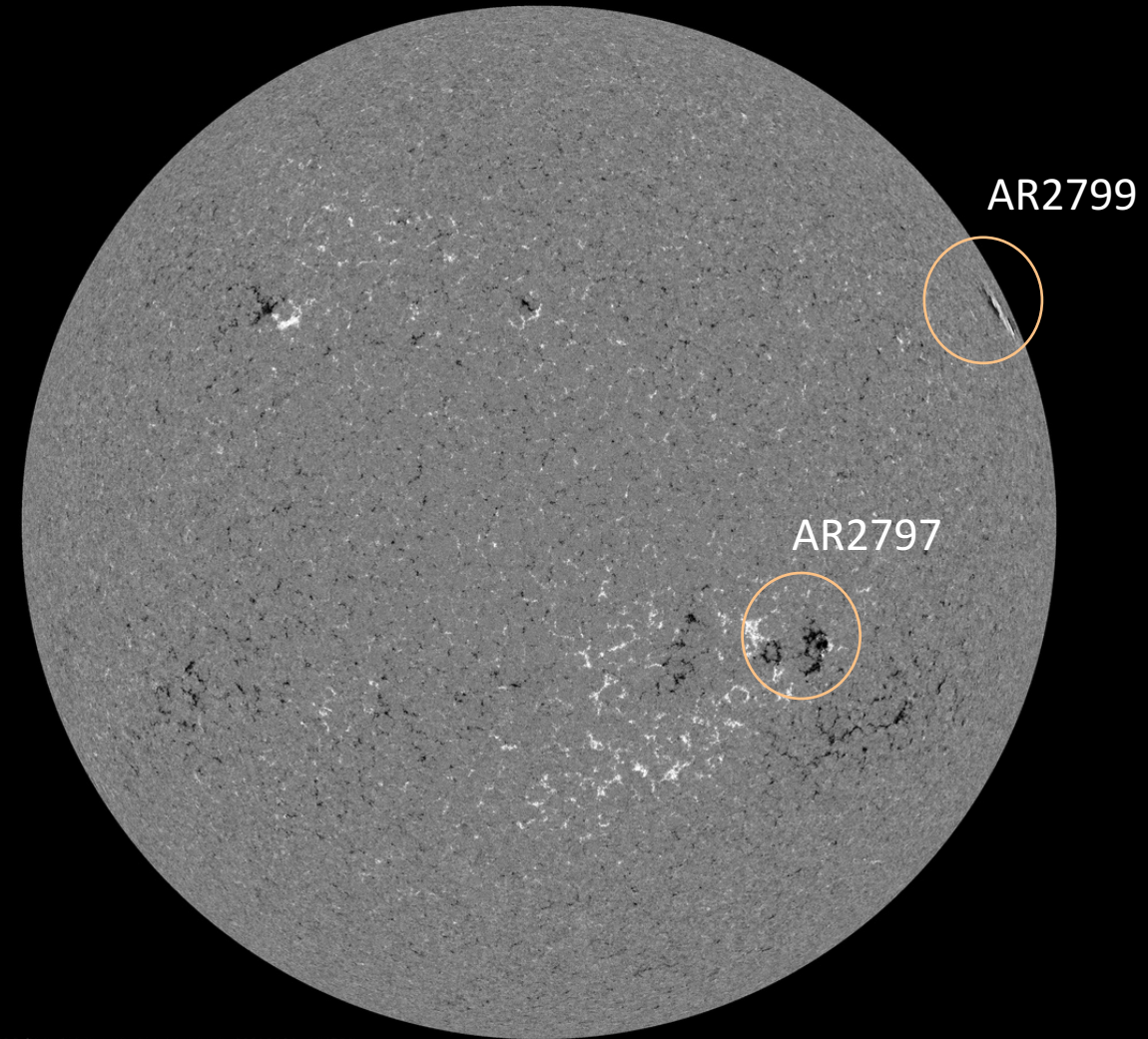
Solar active regions

SDO/HMI White Light 2021-01-26



SDO/HMI Quick-Look Continuum: 20210126_114500

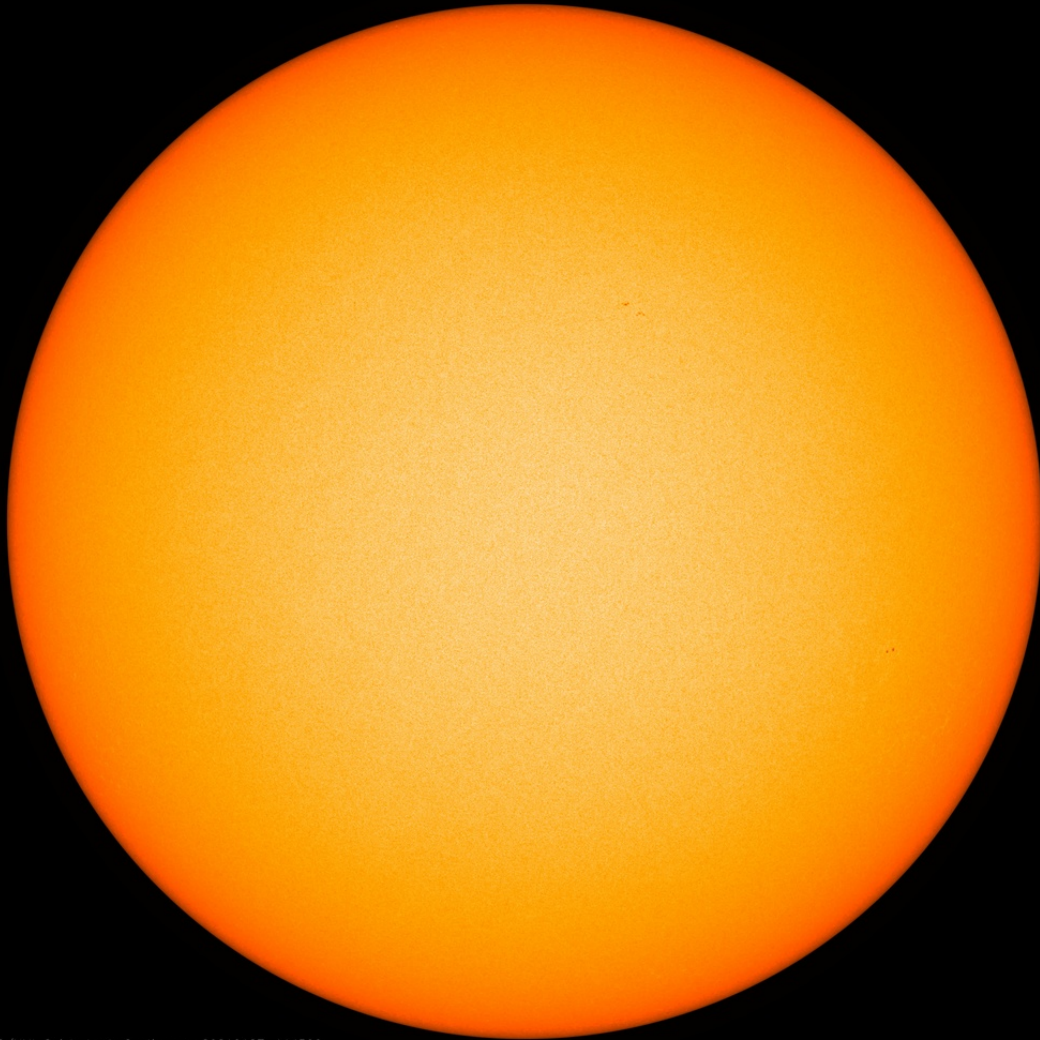
SDO/HMI Magnetogram 2021-01-26



SDO/HMI Quick-Look Magnetogram: 20210126_114500

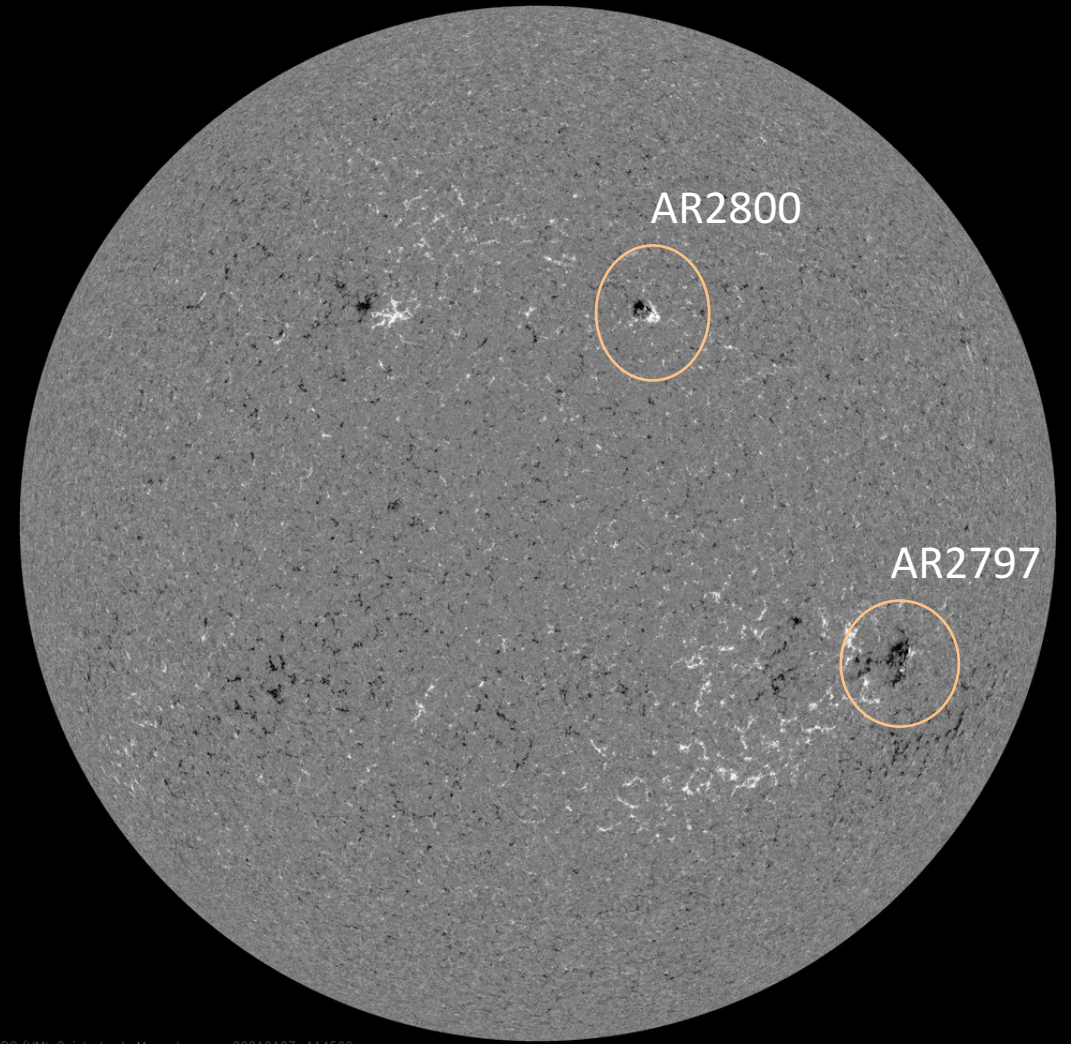
Solar active regions

SDO/HMI White Light 2021-01-27



SDO/HMI Quick-Look Continuum: 20210127_114500

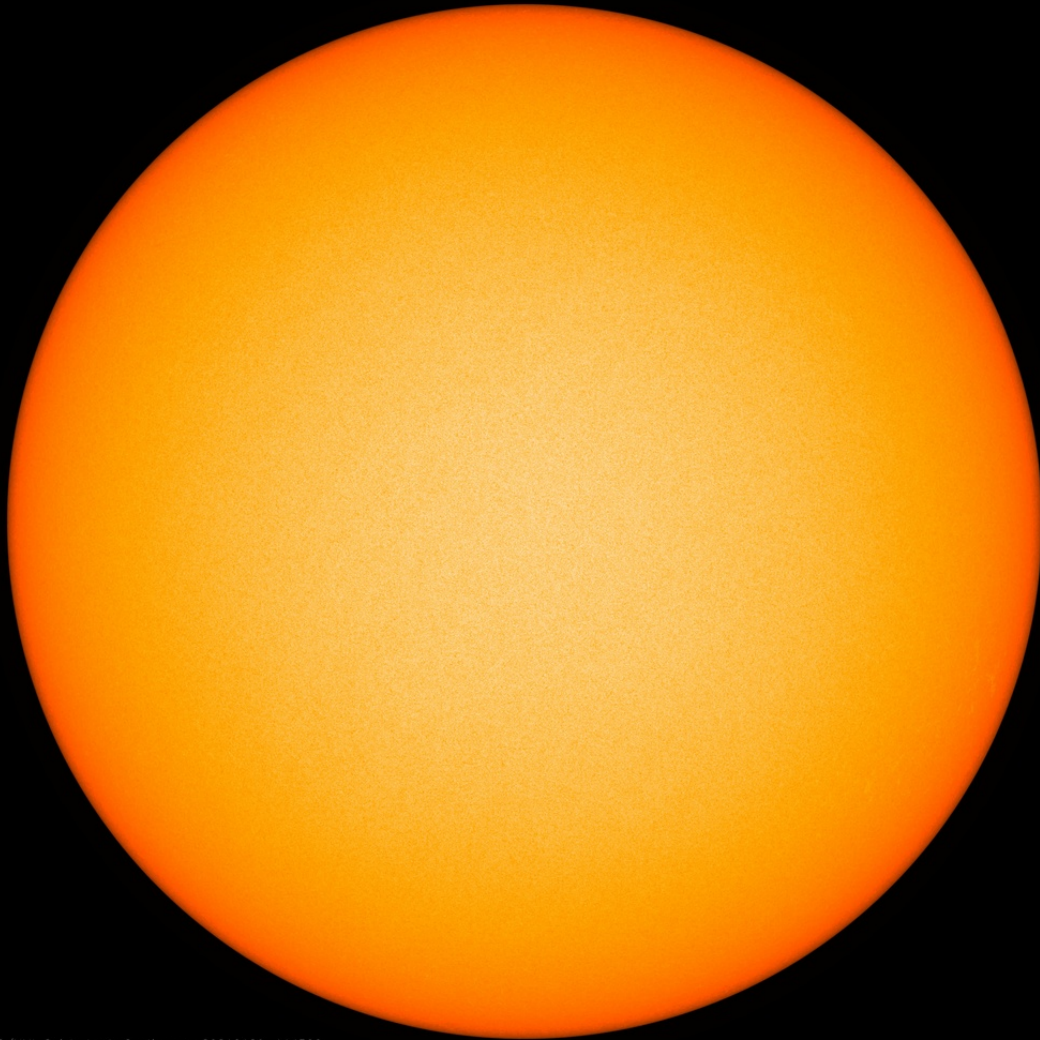
SDO/HMI Magnetogram 2021-01-27



SDO/HMI Quick-Look Magnetogram: 20210127_114500

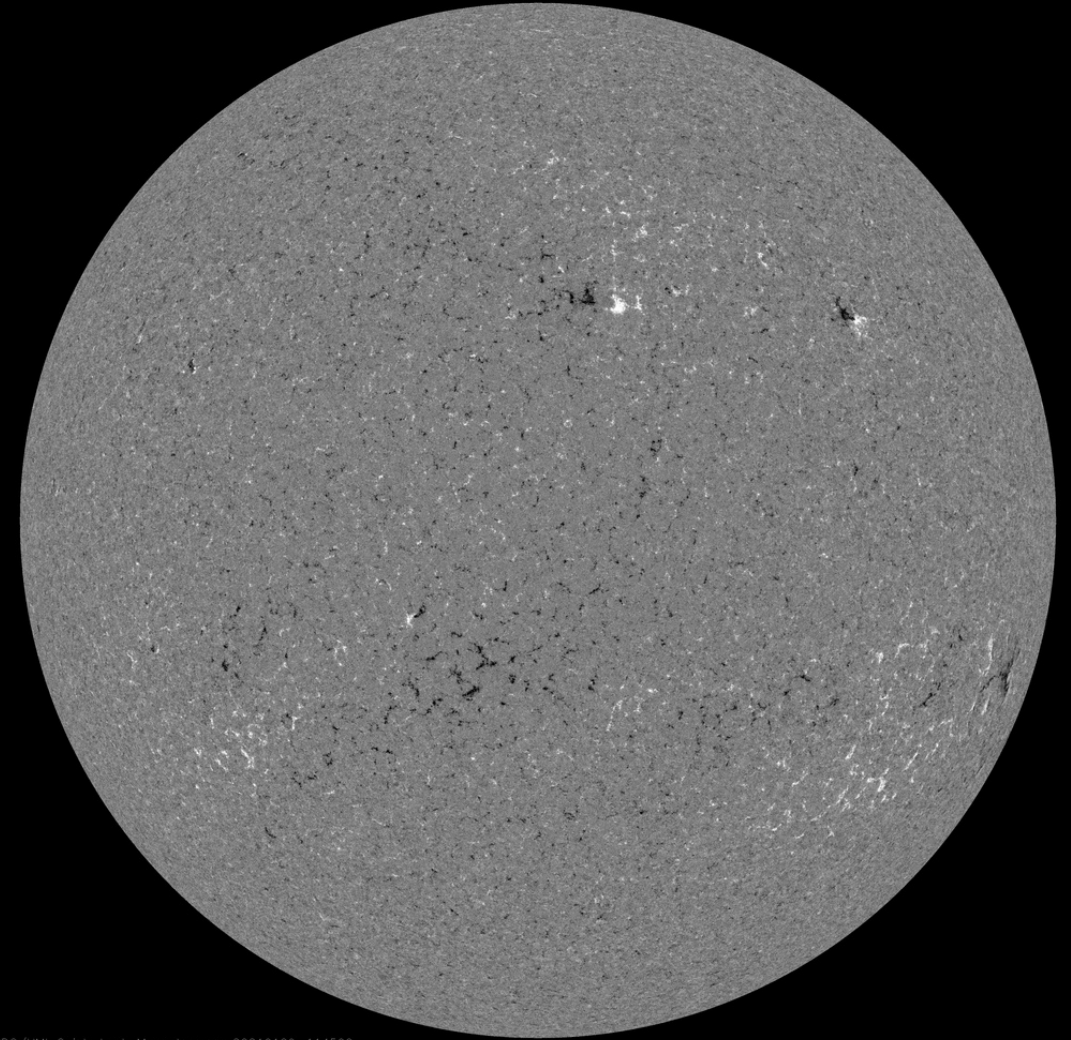
Solar active regions

SDO/HMI White Light 2021-01-29



SDO/HMI Quick-Look Continuum: 20210129_114500

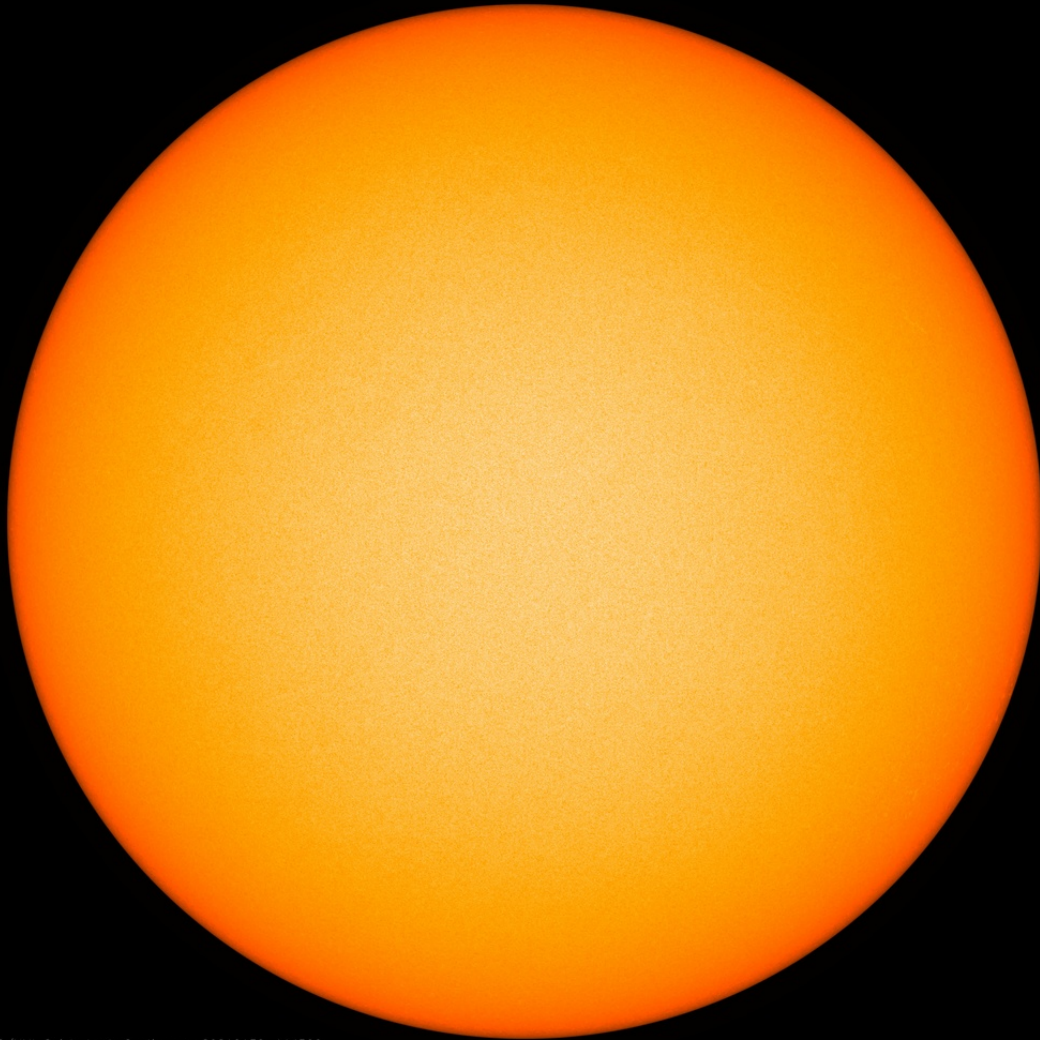
SDO/HMI Magnetogram 2021-01-29



SDO/HMI Quick-Look Magnetogram: 20210129_114500

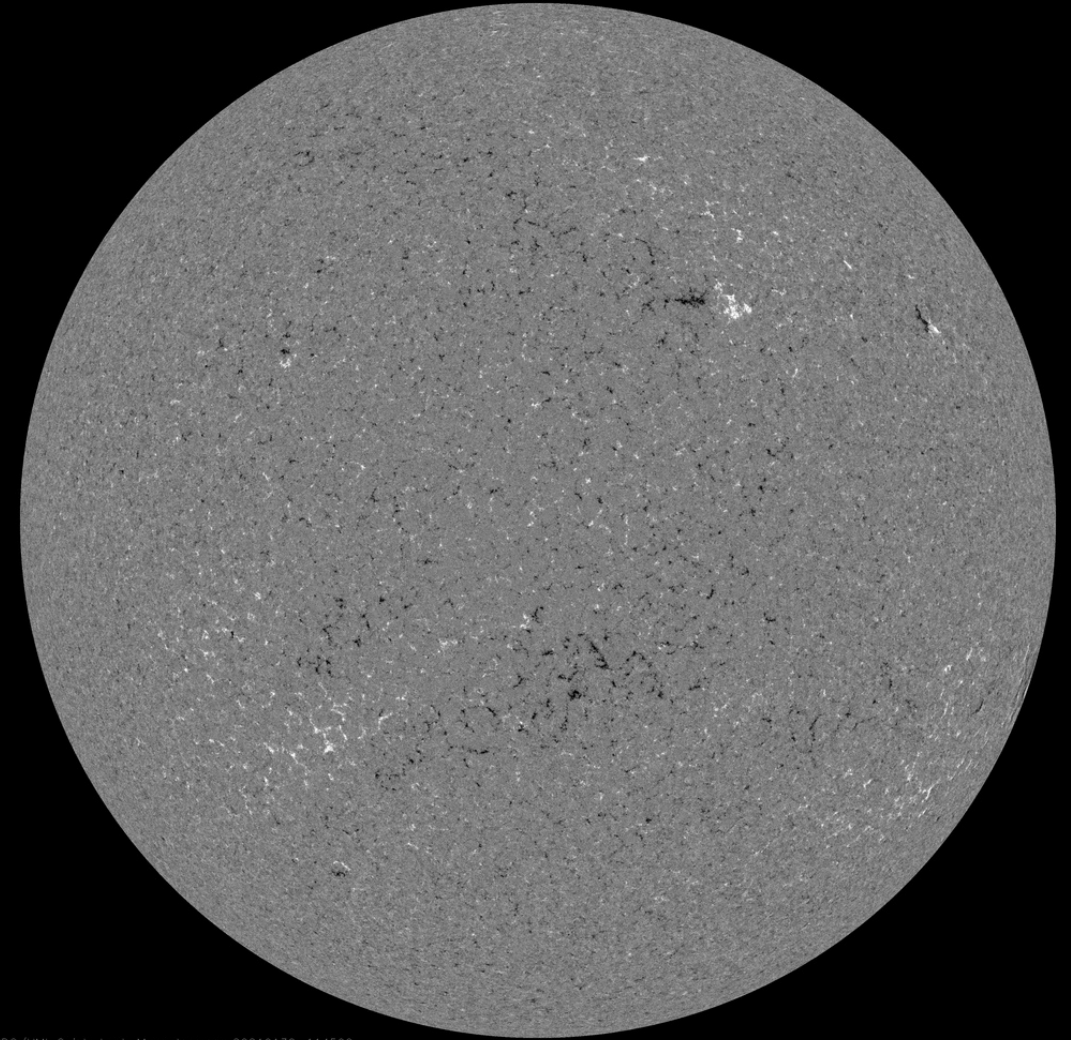
Solar active regions

SDO/HMI White Light 2021-01-30



SDO/HMI Quick-Look Continuum: 20210130_114500

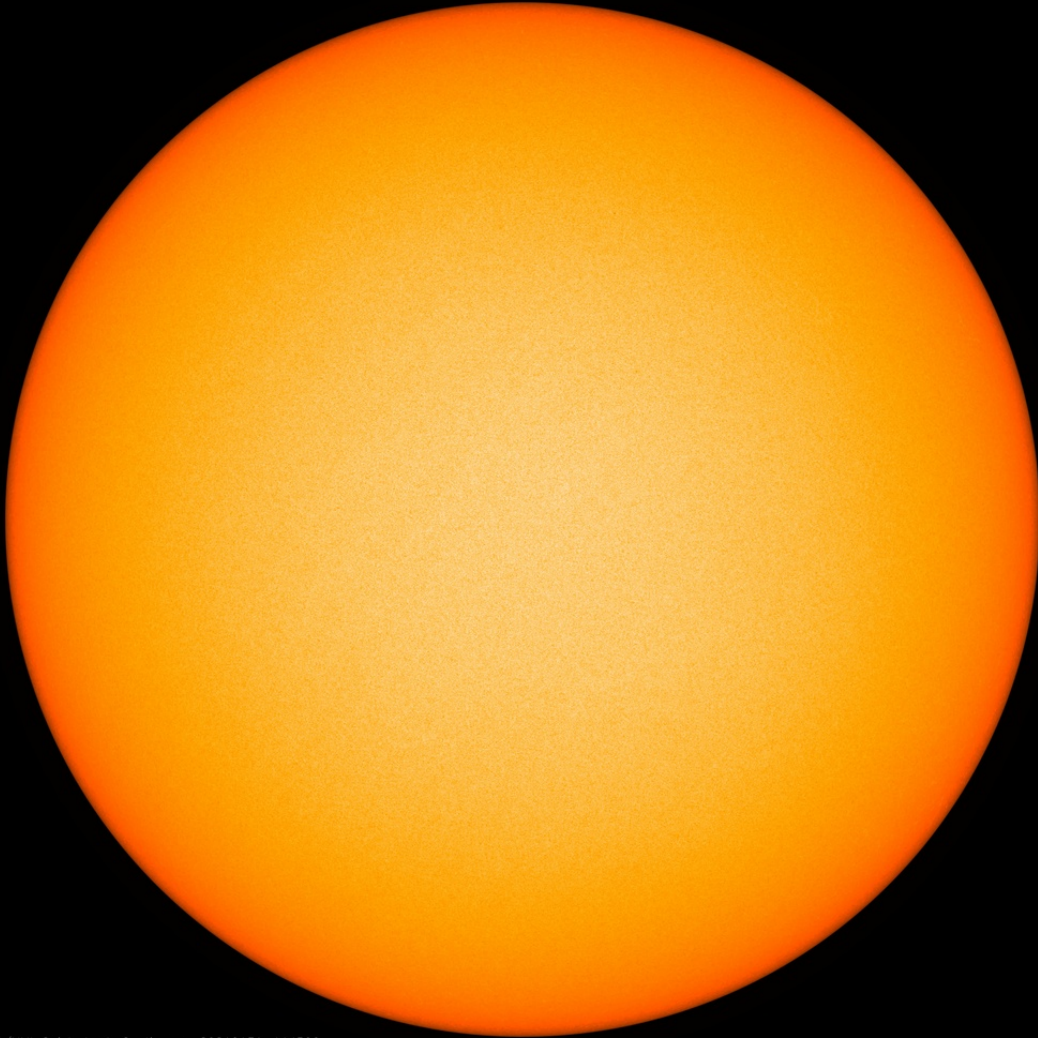
SDO/HMI Magnetogram 2021-01-30



SDO/HMI Quick-Look Magnetogram: 20210130_114500

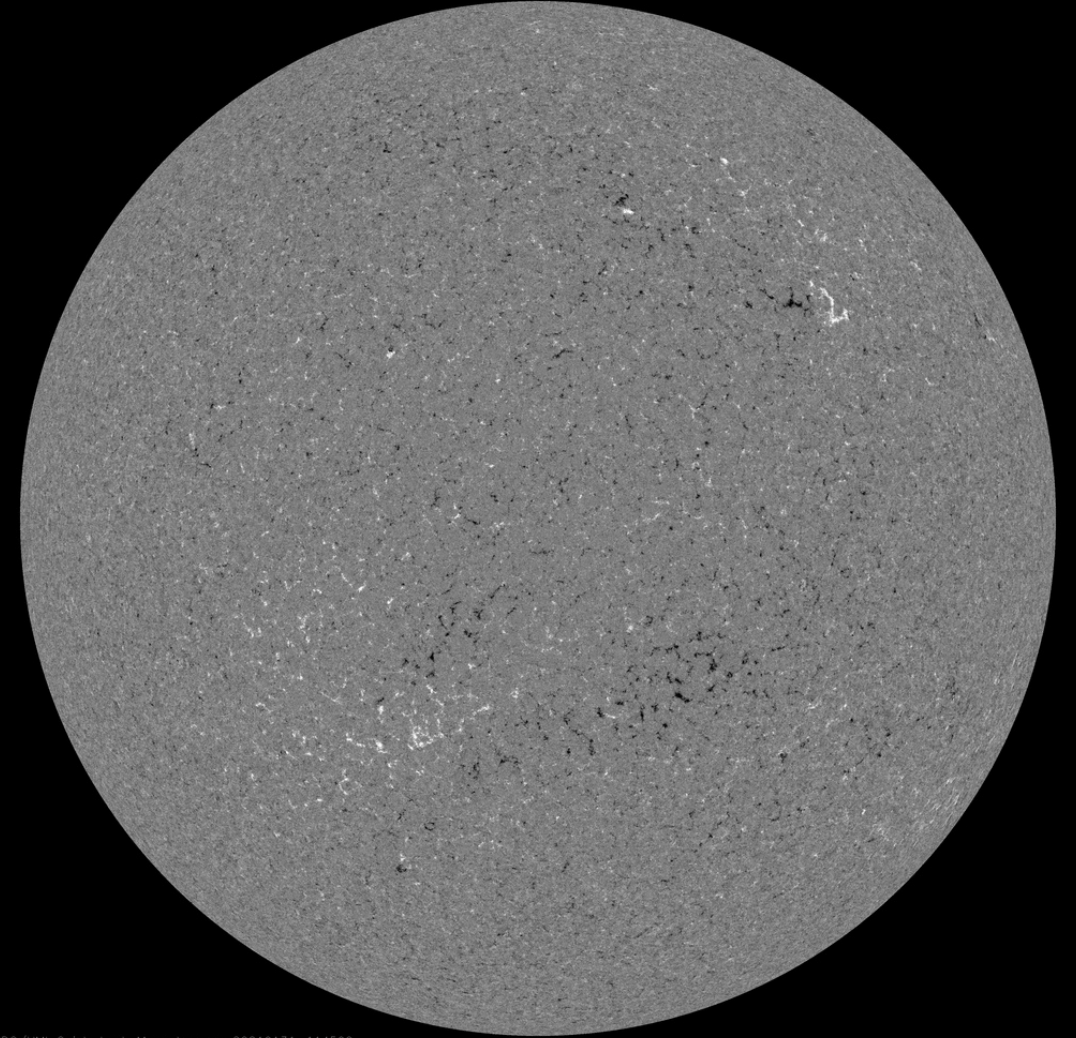
Solar active regions

SDO/HMI White Light 2021-01-31



SDO/HMI Quick-Look Continuum: 20210131_114500

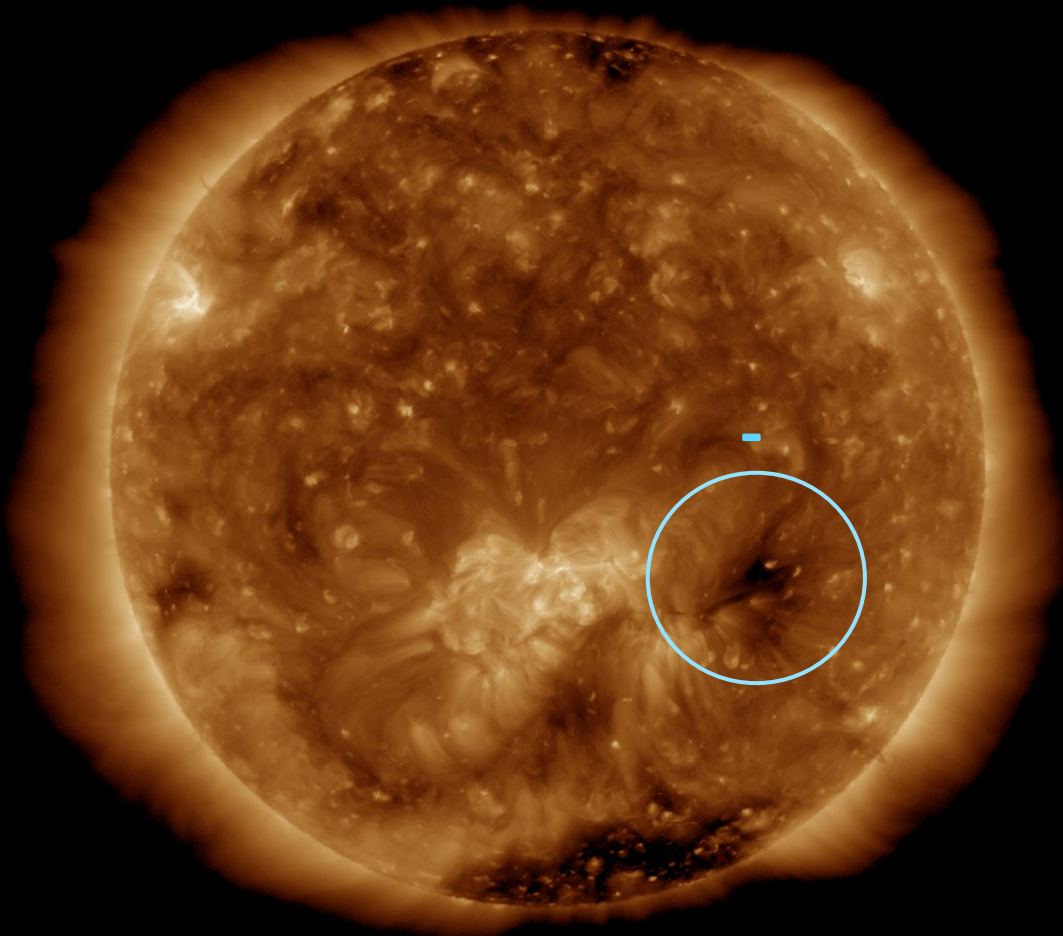
SDO/HMI Magnetogram 2021-01-31



SDO/HMI Quick-Look Magnetogram: 20210131_114500

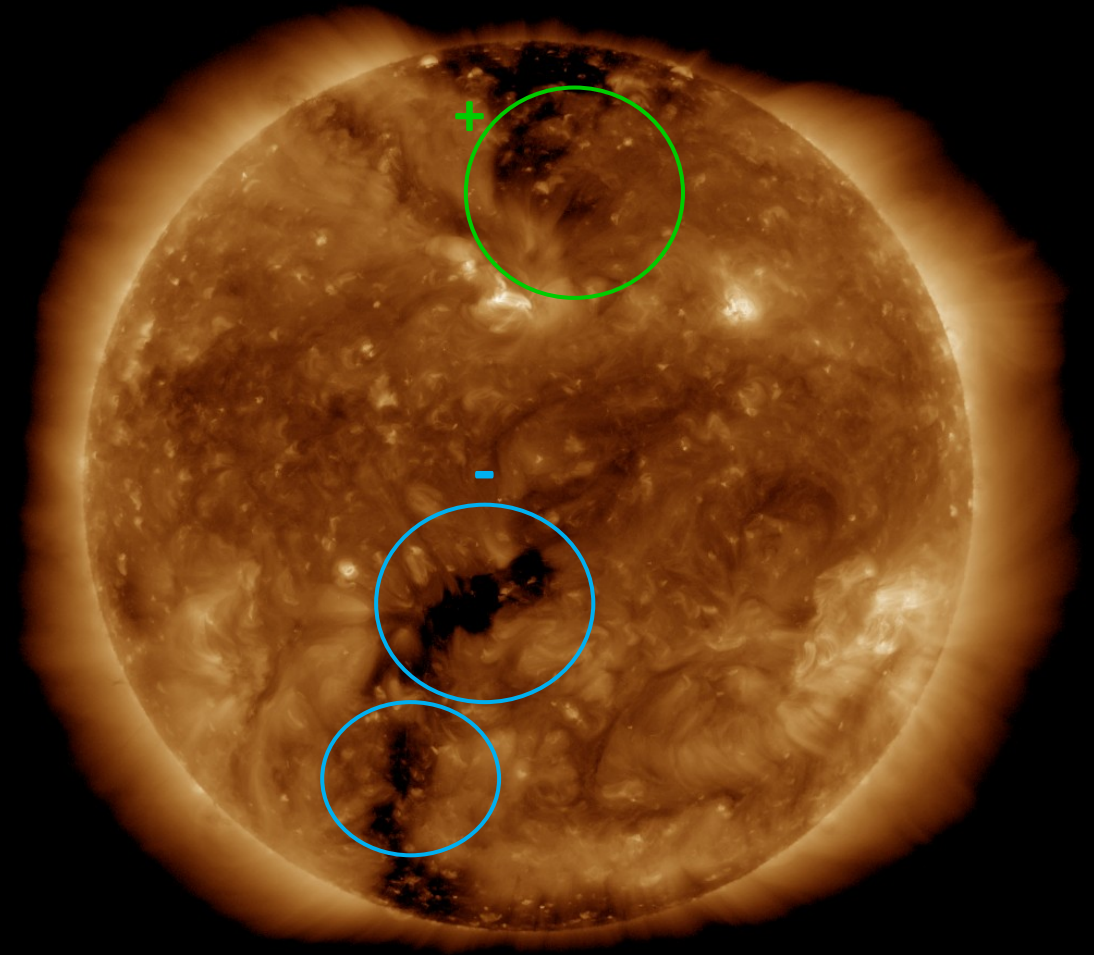
Coronal holes

SDO/AIA 19.3 nm 2021-01-24



SDO/AIA 193 2021-01-24 12:17:53 UT

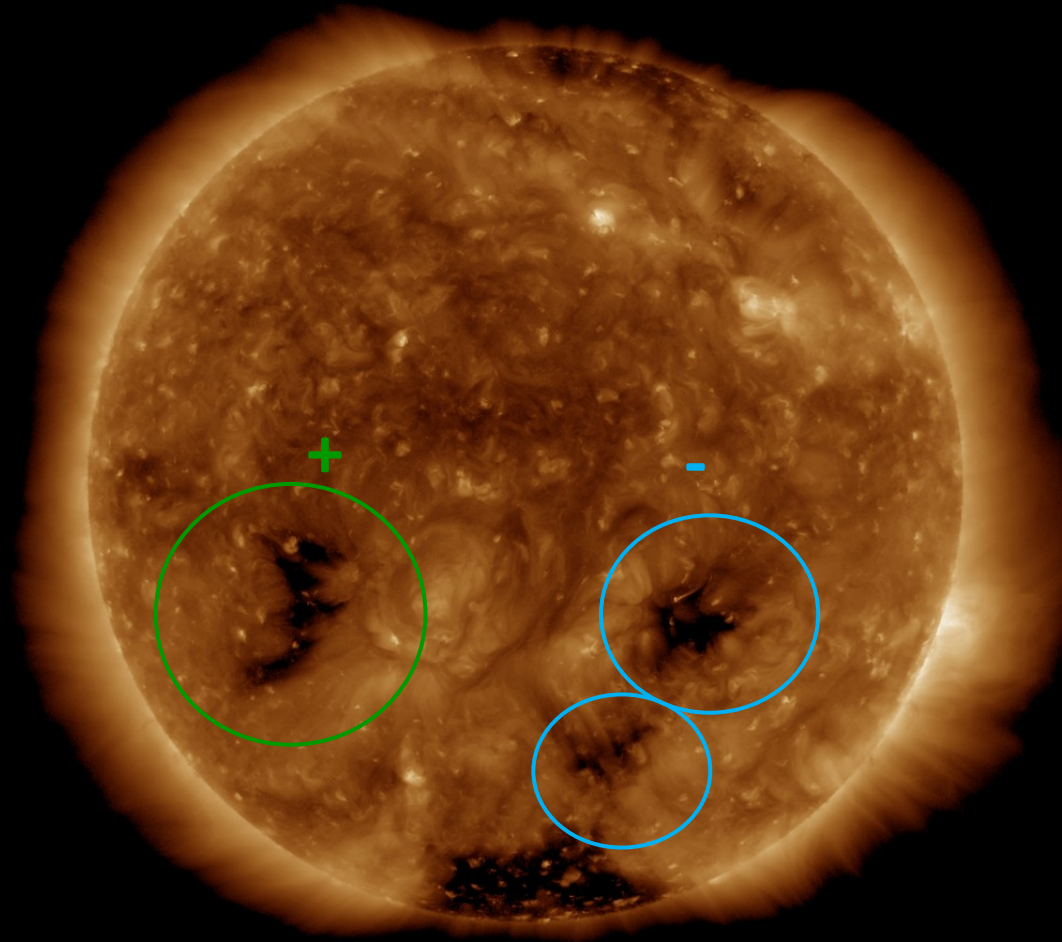
SDO/AIA 19.3 nm 2021-01-28



SDO/AIA 193 2021-01-28 17:17:29 UT

Coronal holes

SDO/AIA 19.3 nm 2021-01-31

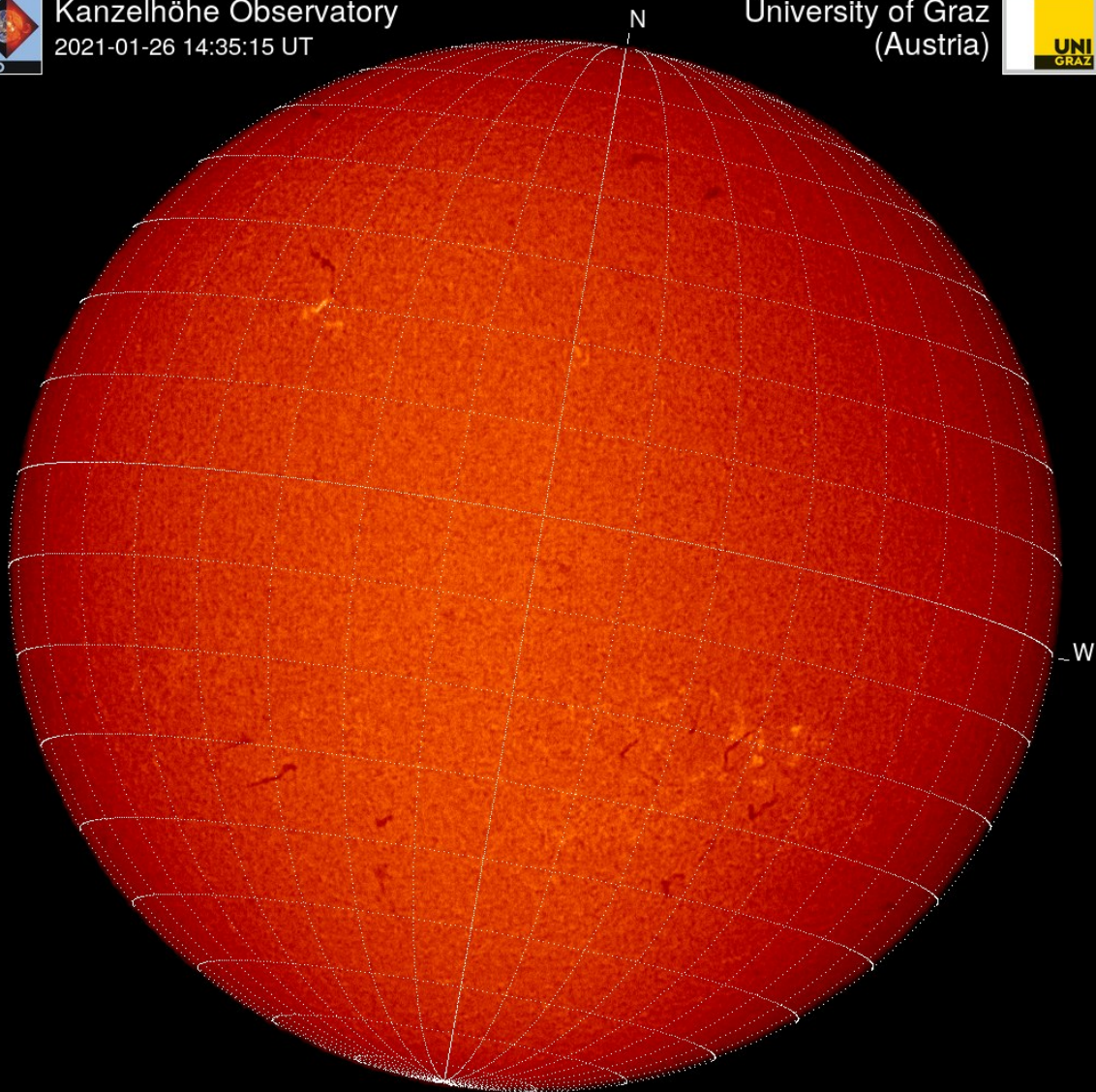


SDO/AIA 193 2021-01-31 12:17:41 UT


Filaments

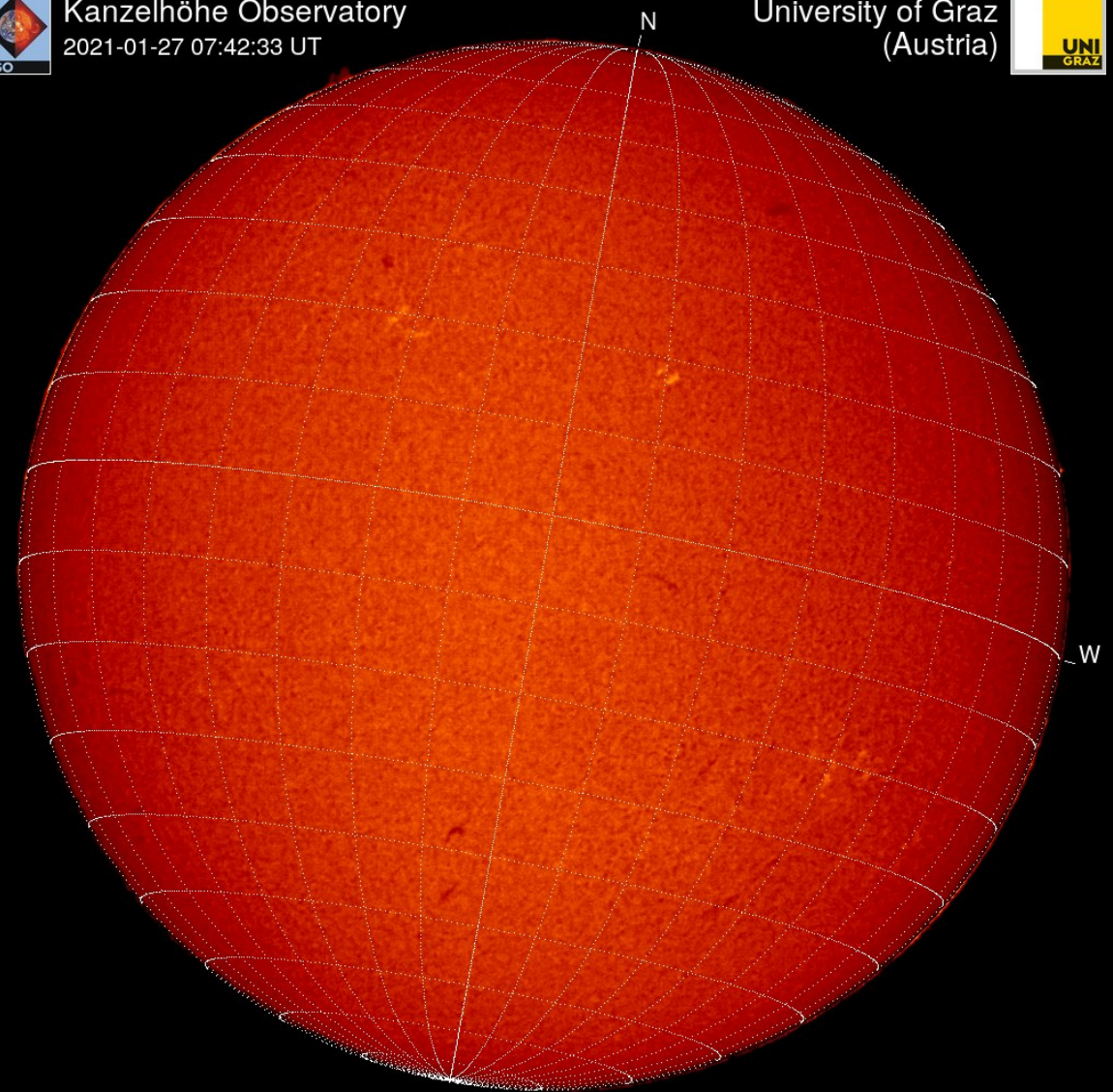
 Kanzelhöhe Observatory
2021-01-26 14:35:15 UT

University of Graz
(Austria) 



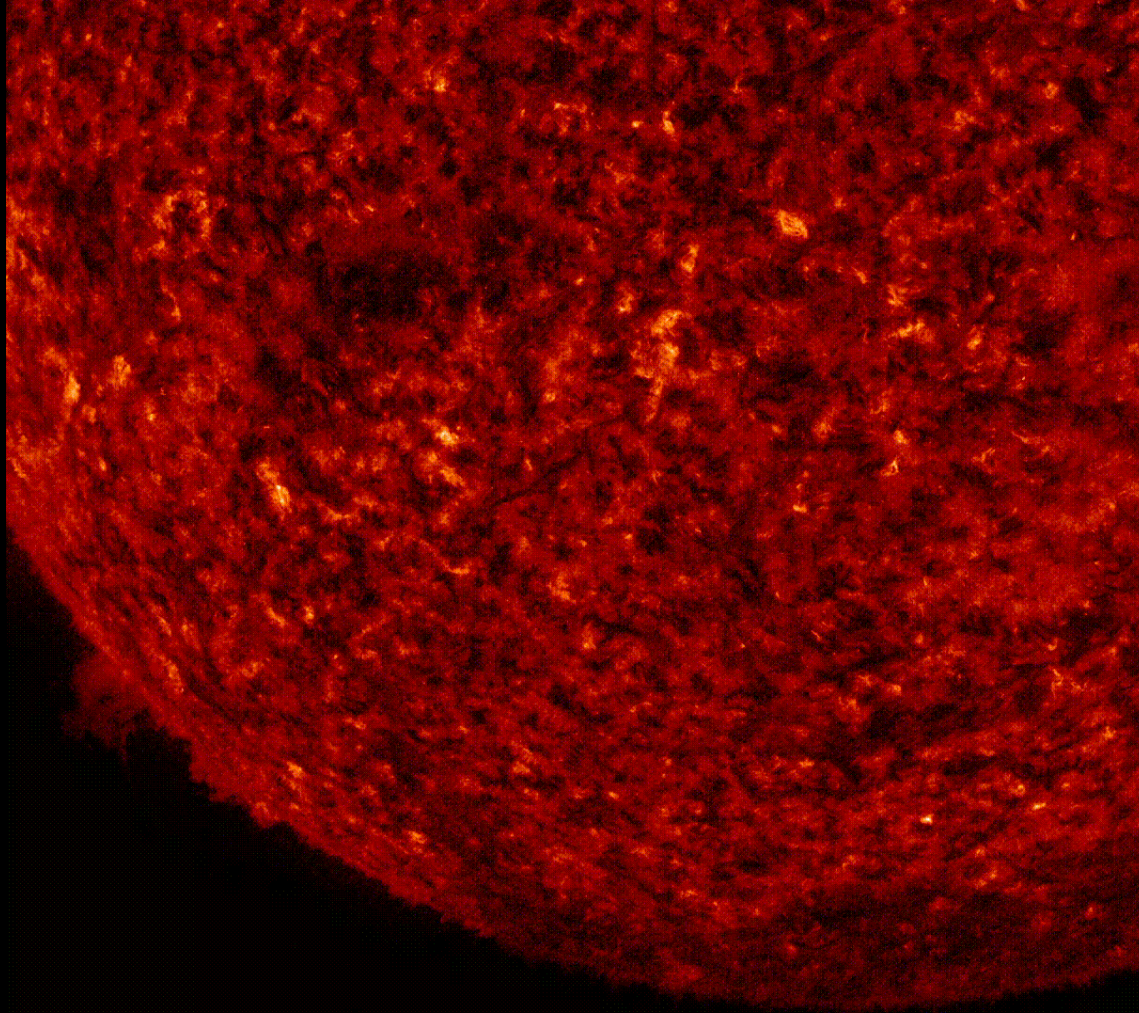
 Kanzelhöhe Observatory
2021-01-27 07:42:33 UT

University of Graz
(Austria) 



Filaments

SDO/AIA 30.4 nm 2021-01-27



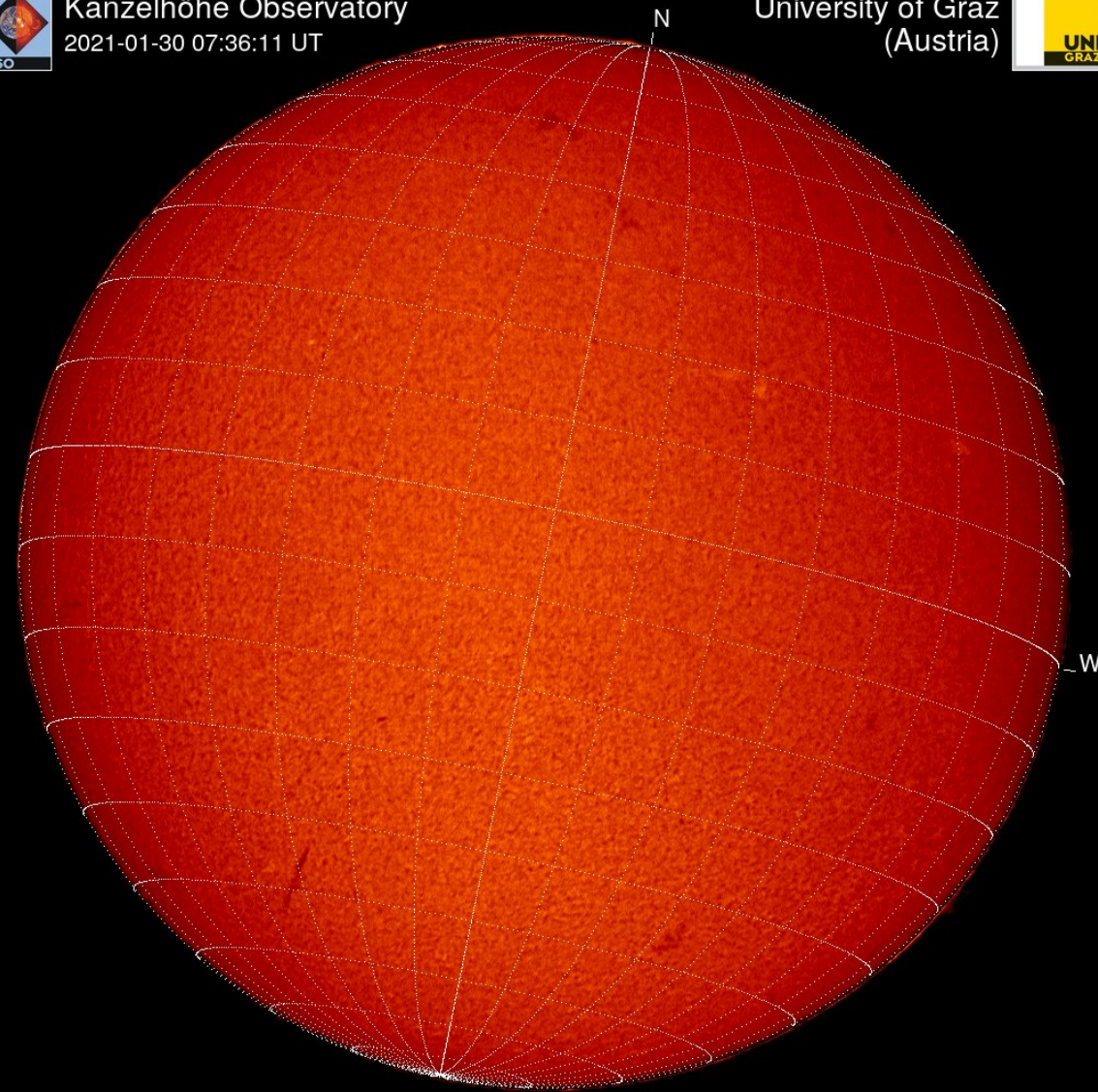
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Filaments

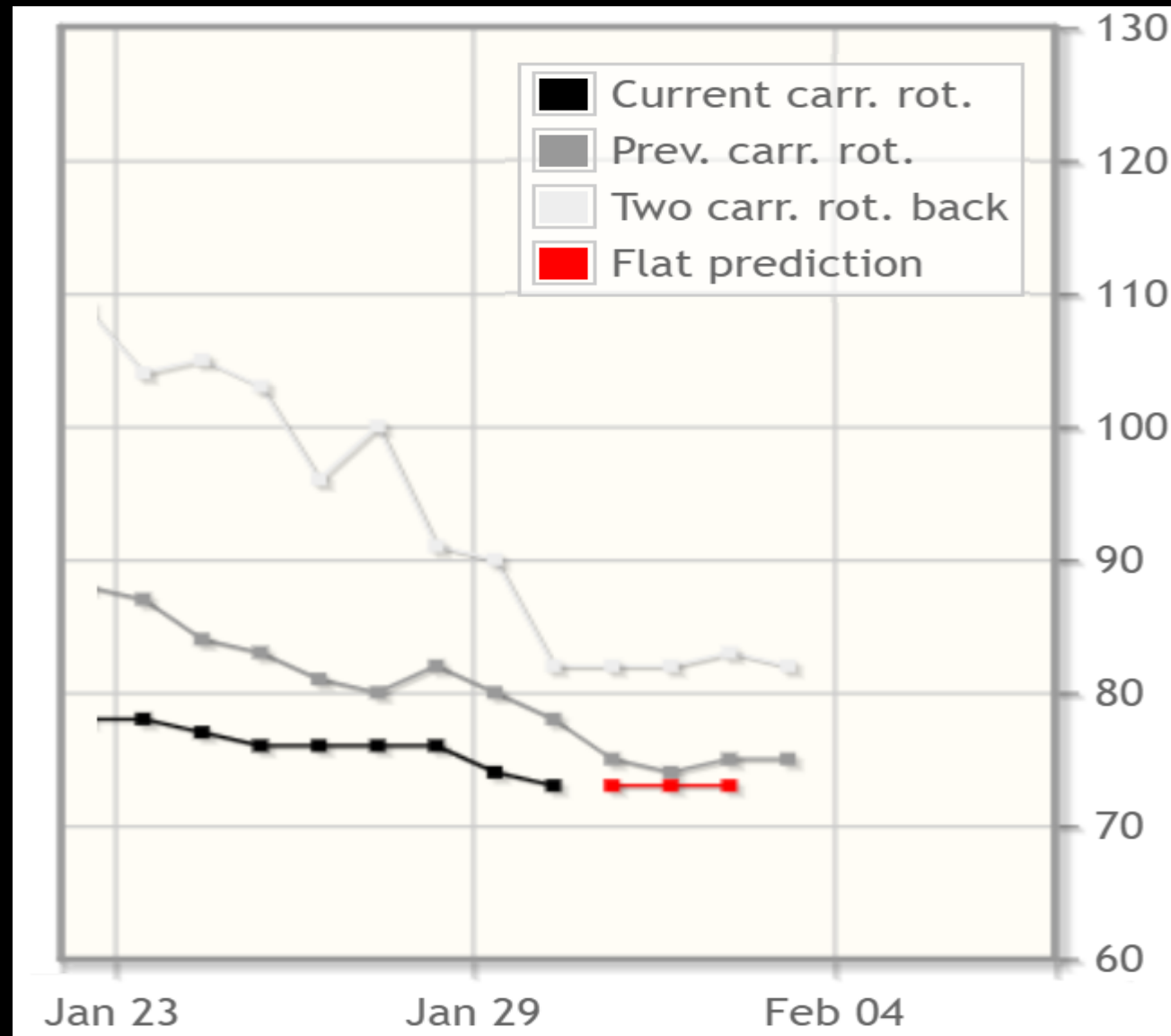


Kanzelhöhe Observatory
2021-01-30 07:36:11 UT

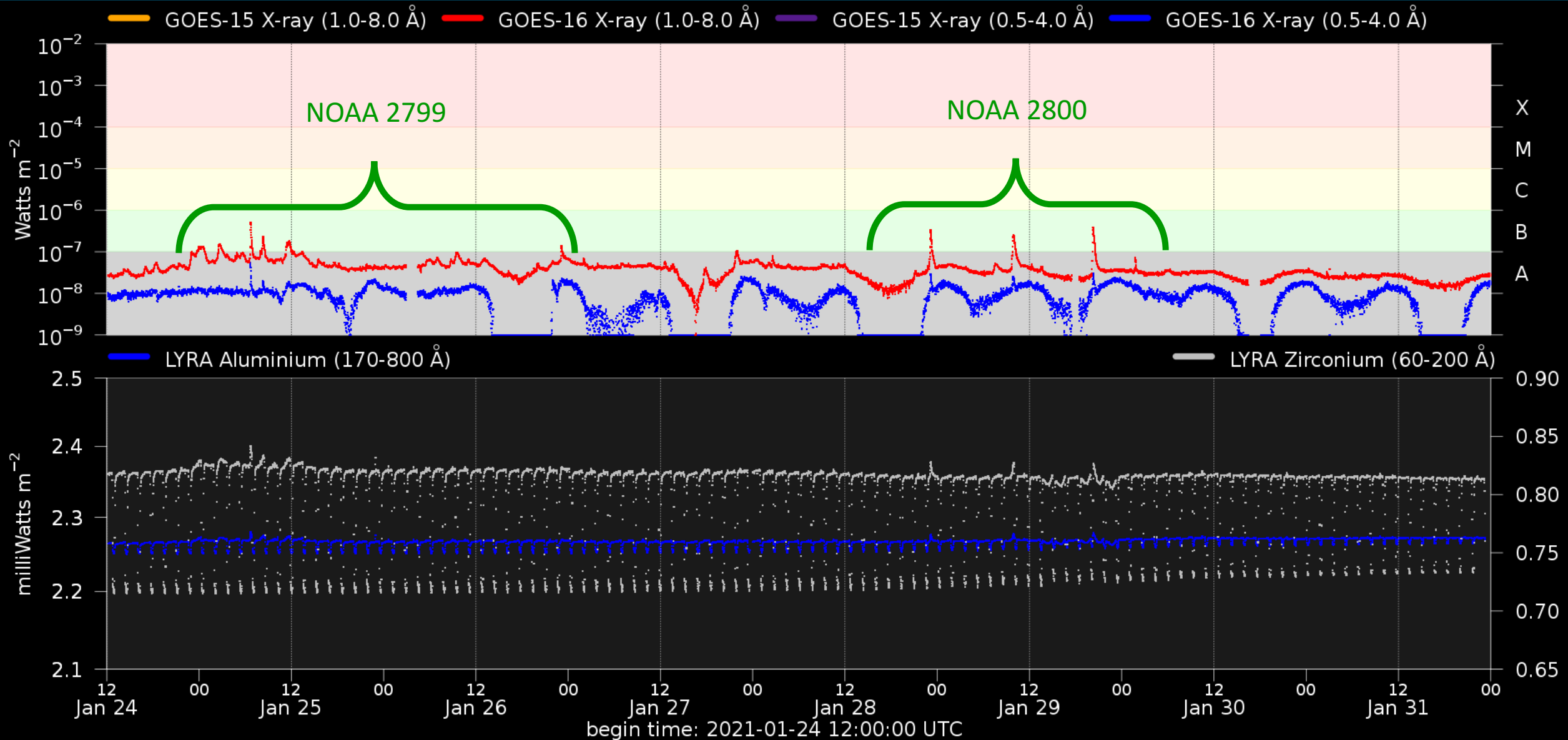
University of Graz
(Austria)



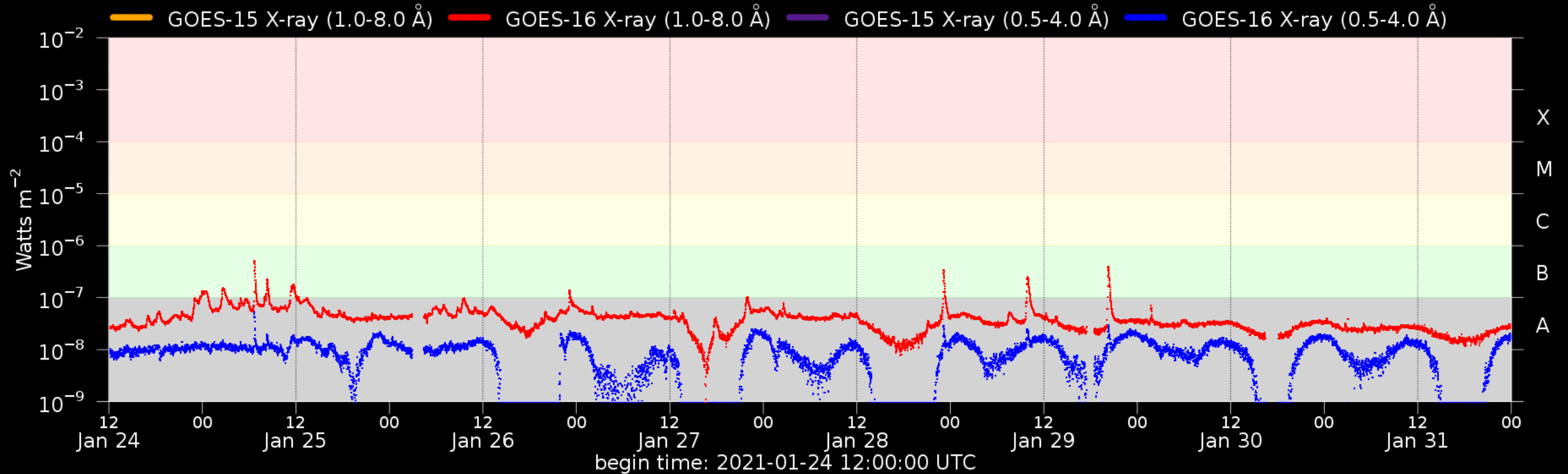
Solar F10.7cm radio flux



Solar X-Ray and UV flux



Flaring activity

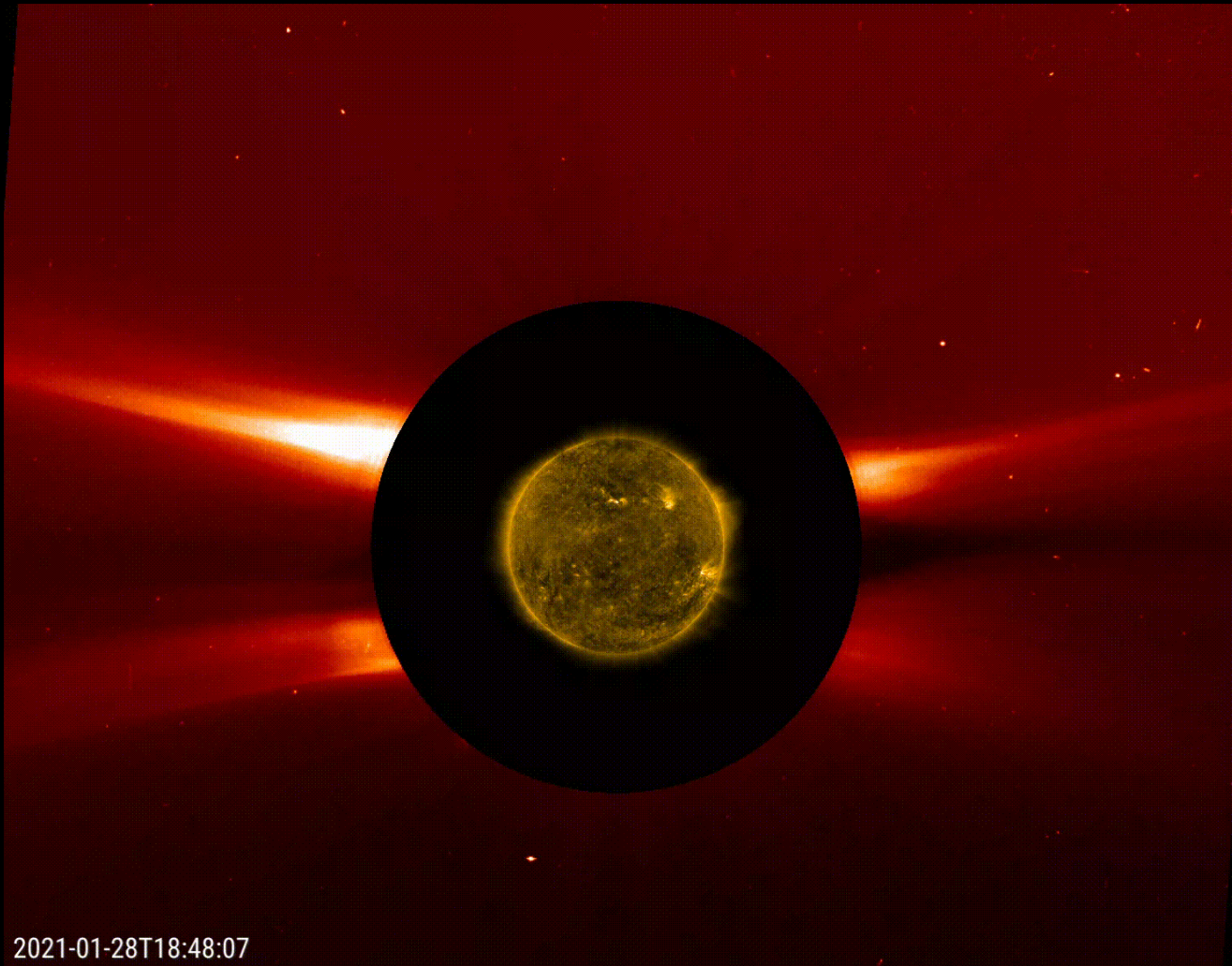


Probabilities (%) and occurrences (#) of C/M/X-flares issued at 12:30 and over the next 24h:

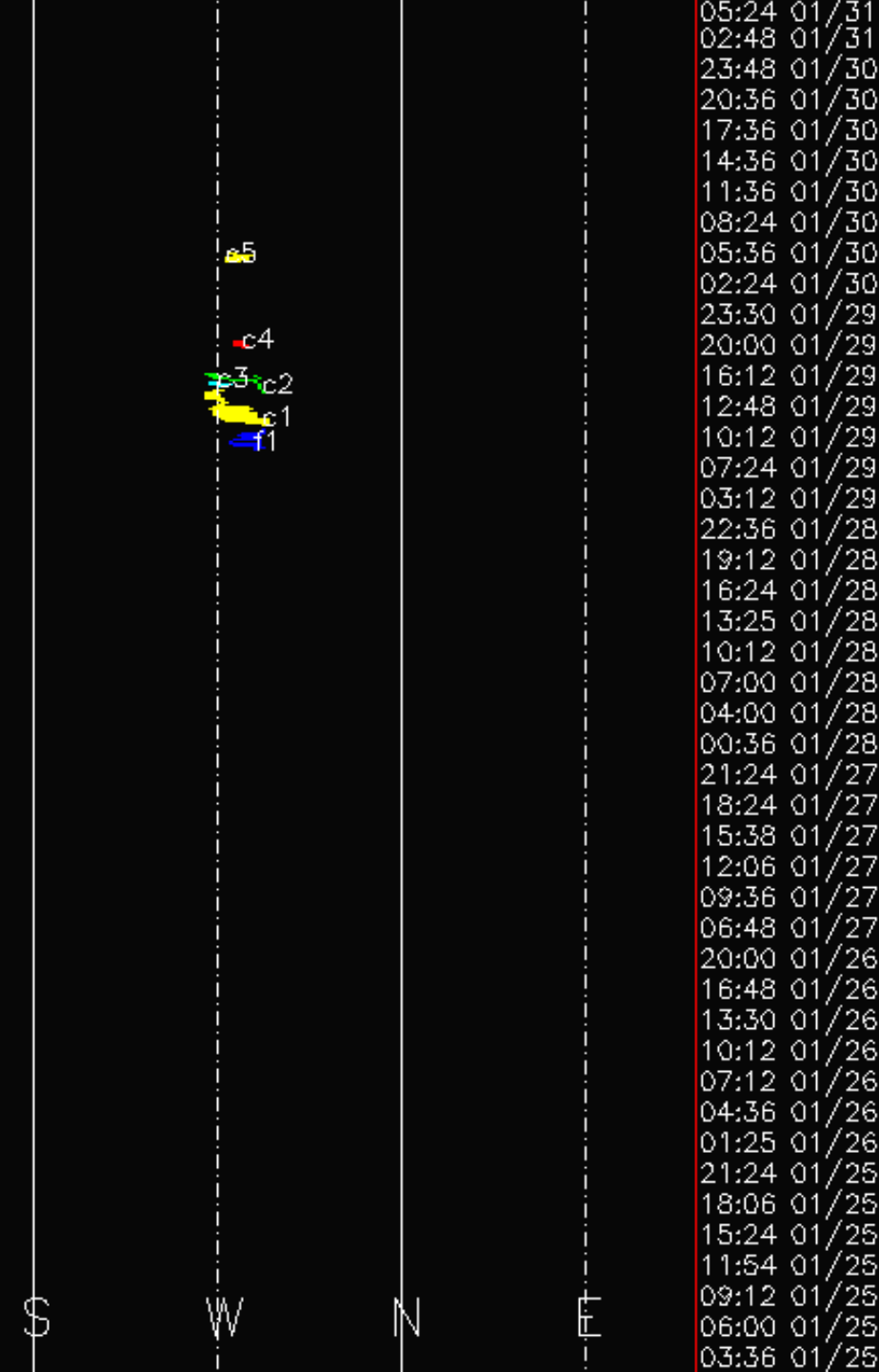
Issue date	2021-01-24	2021-01-25	2021-01-26	2021-01-27	2021-01-28	2021-01-29	2021-01-30	2021-01-31
Probability (%)	06 01 01	15 01 01	10 01 01	05 01 01	10 01 01	01 01 01	01 01 01	01 01 01
Observed (#)	00 00 00	00 00 00	00 00 00	00 00 00	00 00 00	00 00 00	00 00 00	00 00 00

Coronal Mass Ejections

No Earth directed CMEs



2021-01-28T18:48:07



Solar Wind and

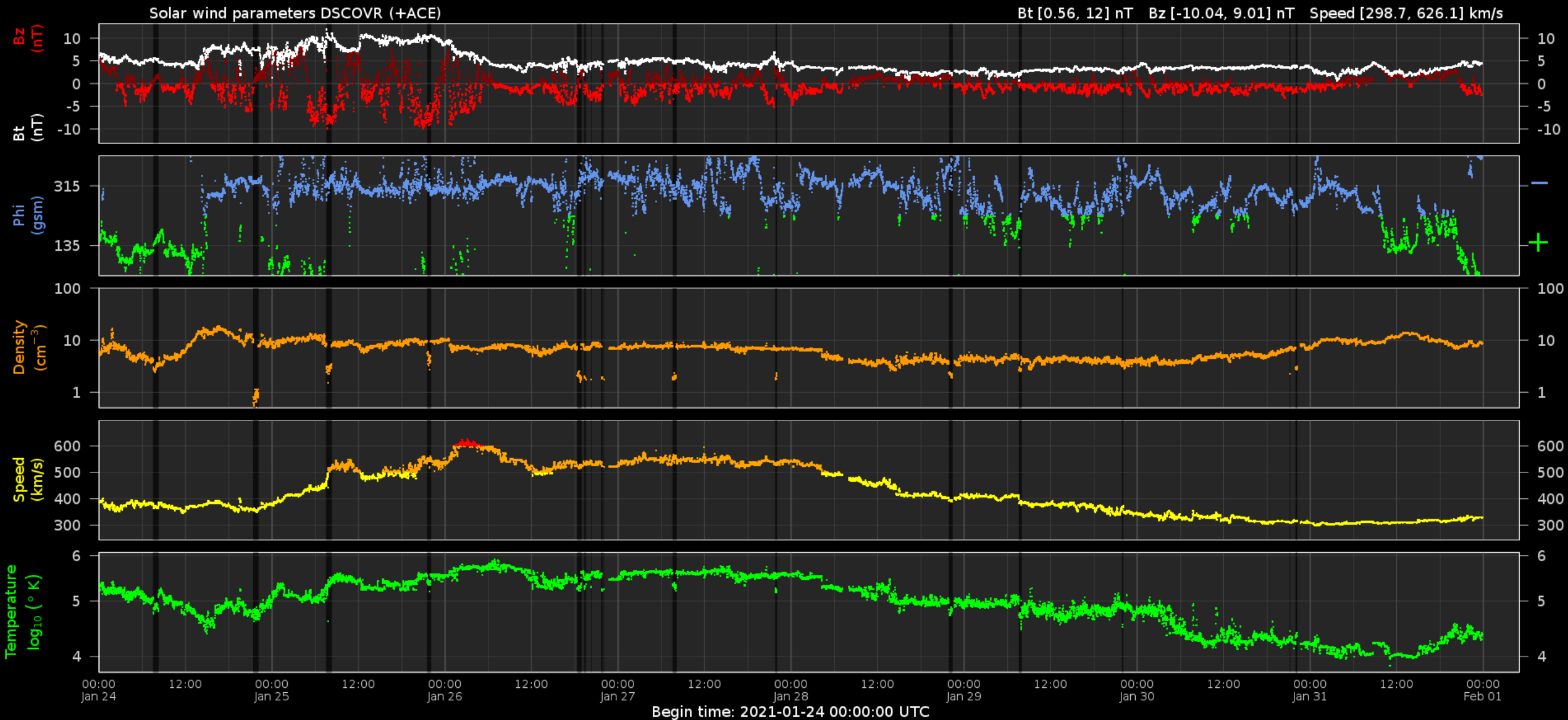
Geomagnetic Activity



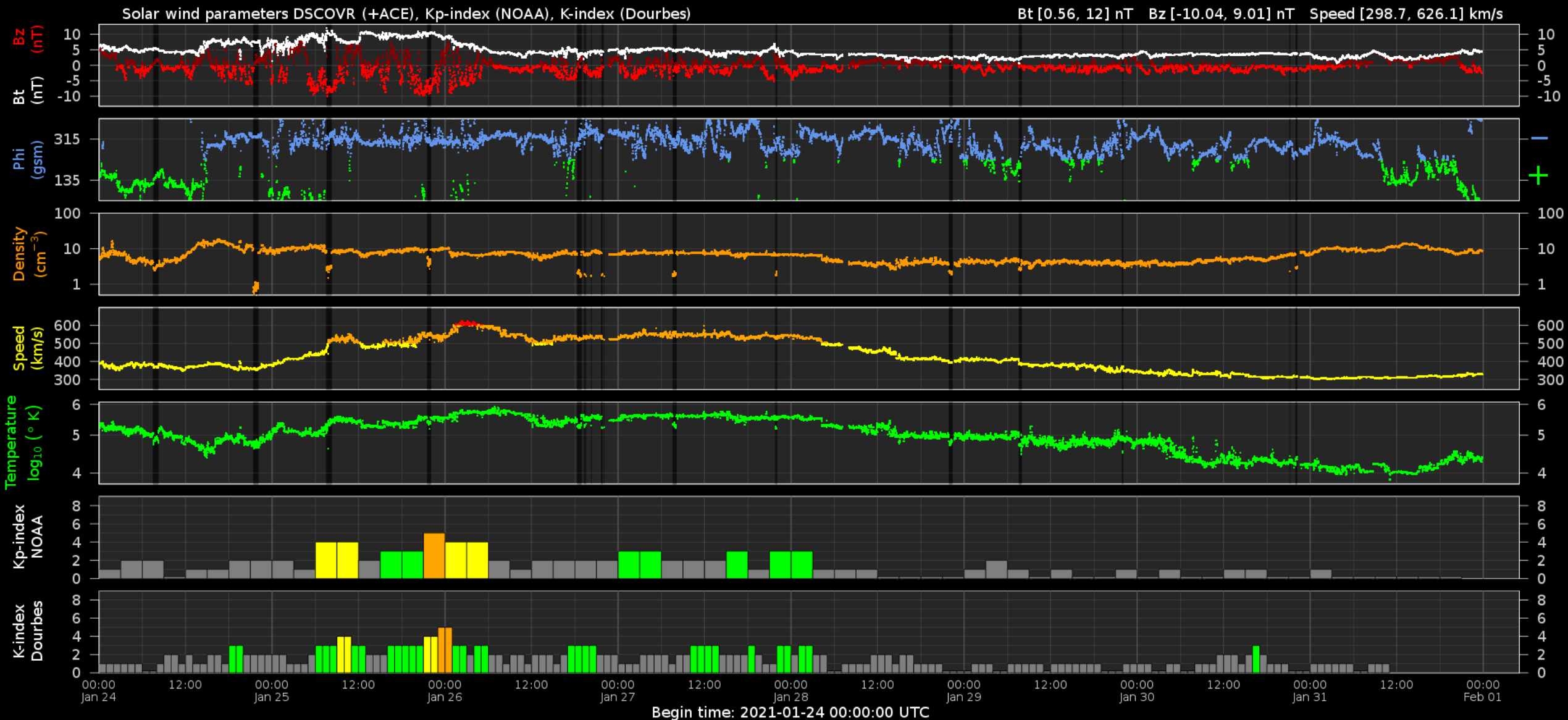
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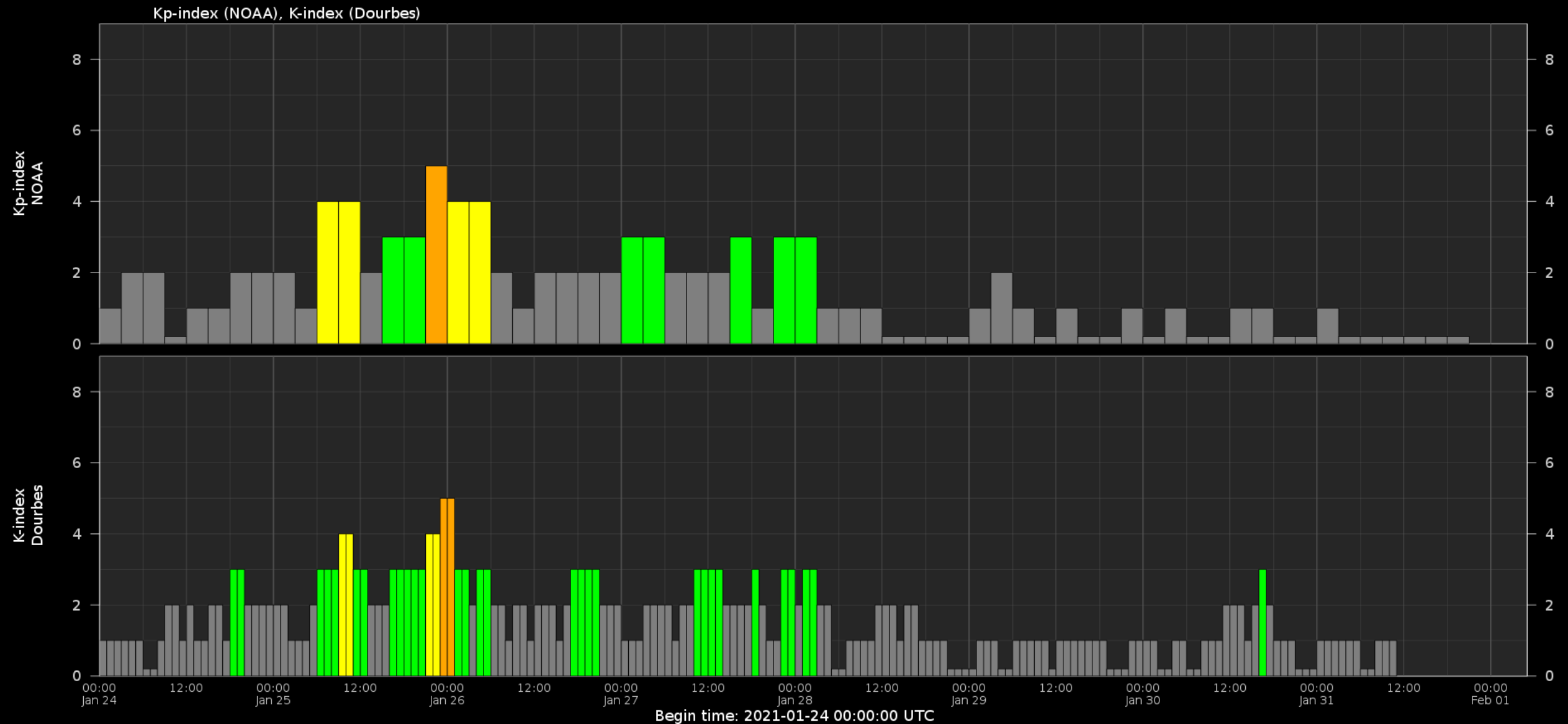
Solar wind parameters



Solar wind parameters & K-indices



Geomagnetic activity (K-indexes)



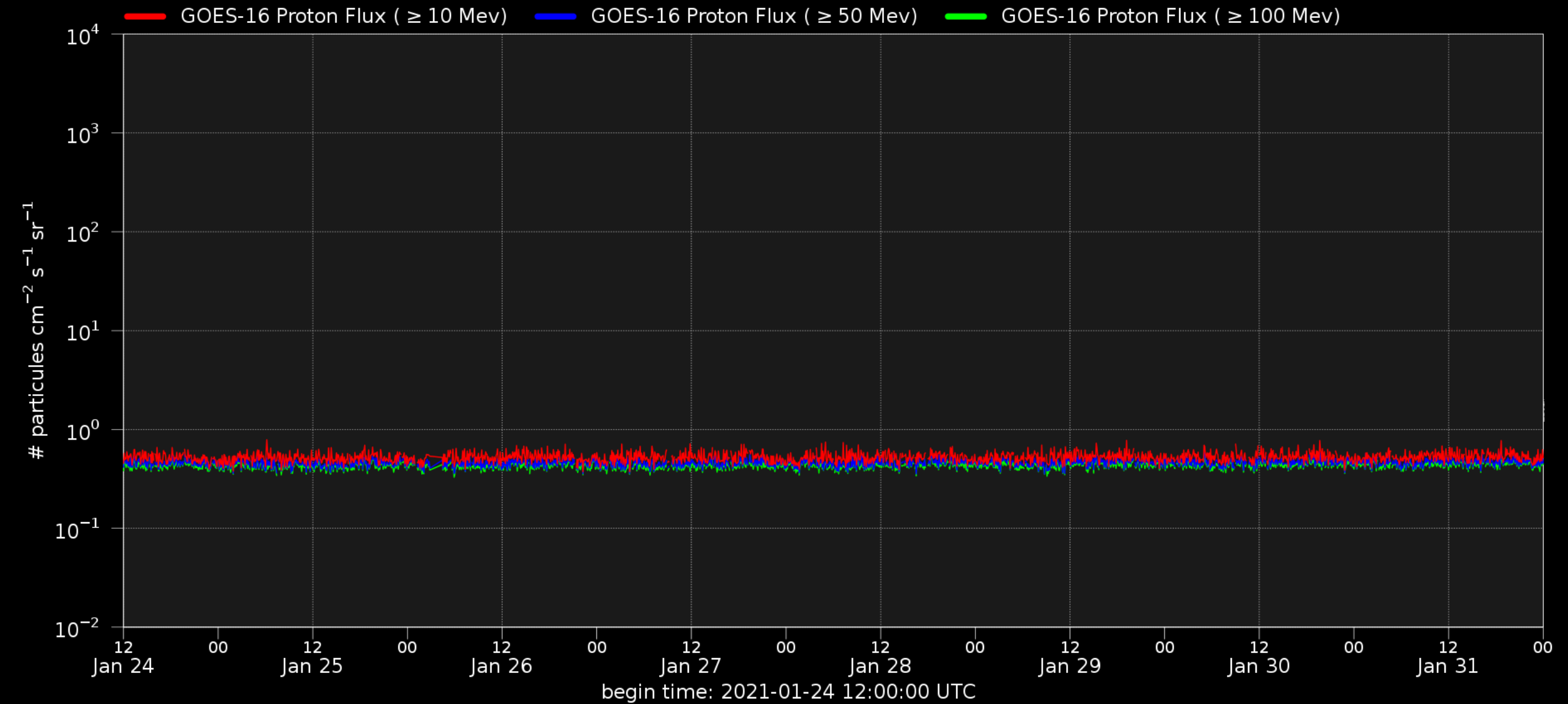
Energetic Particles



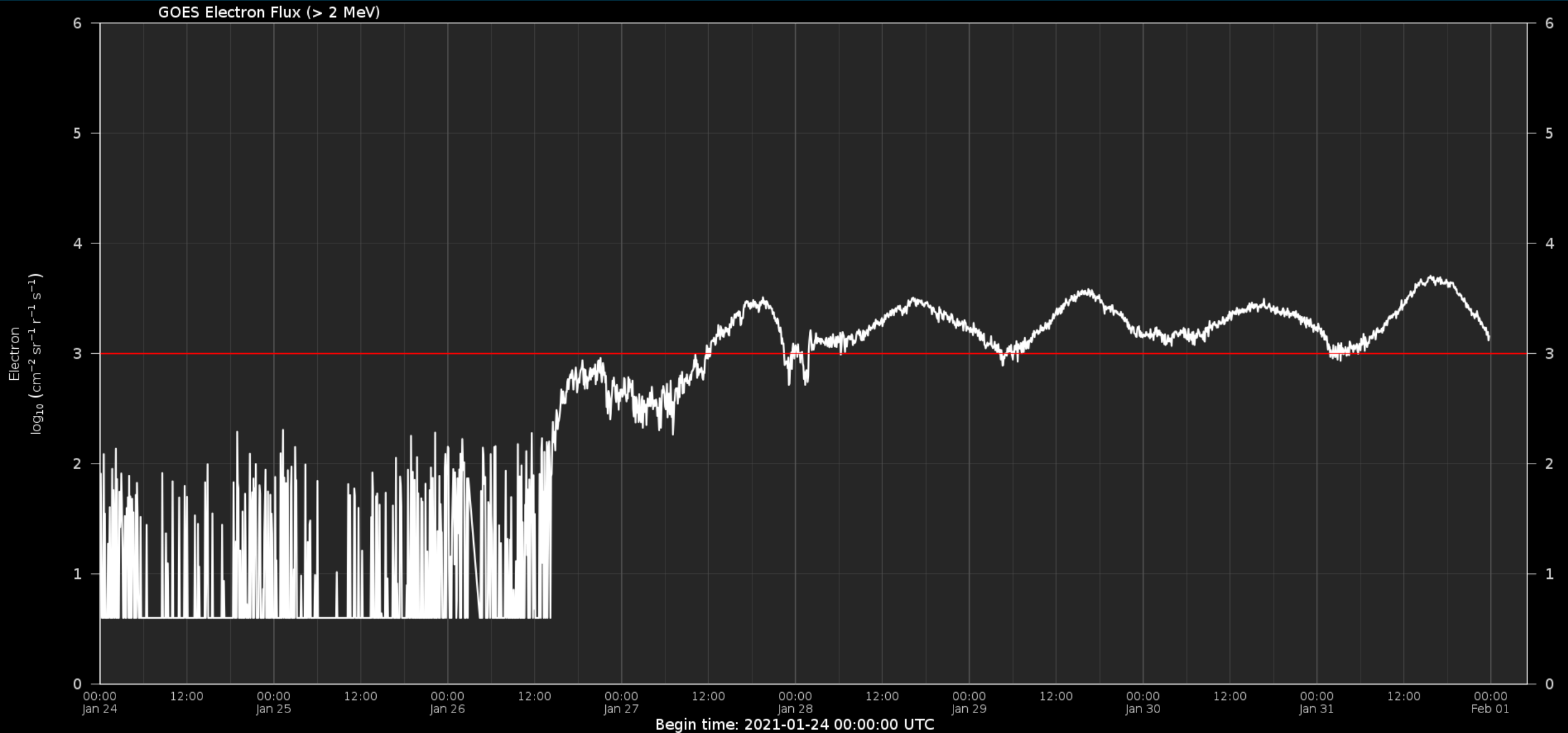
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Solar proton flux



Electron flux at GEO



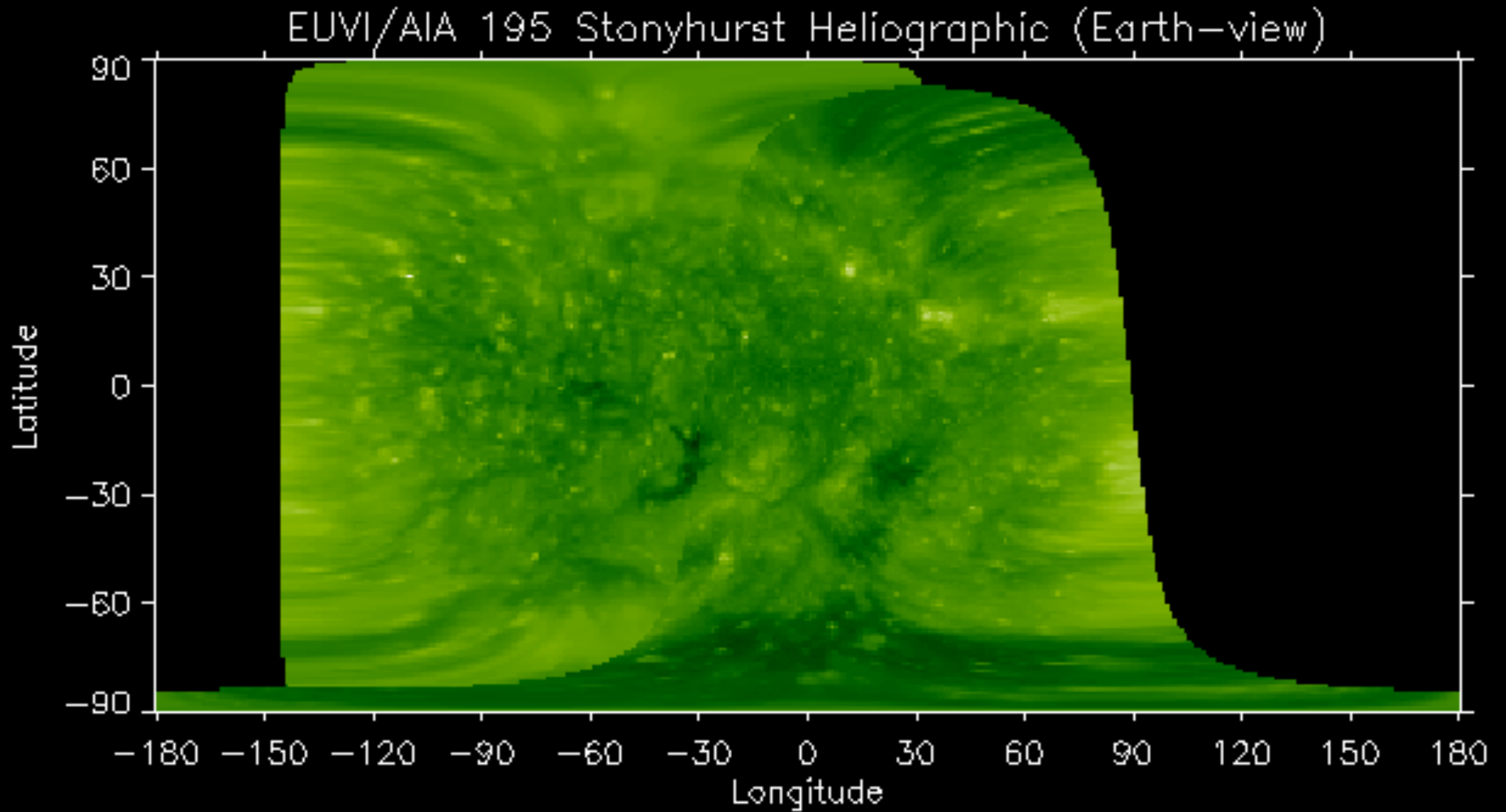
Outlook



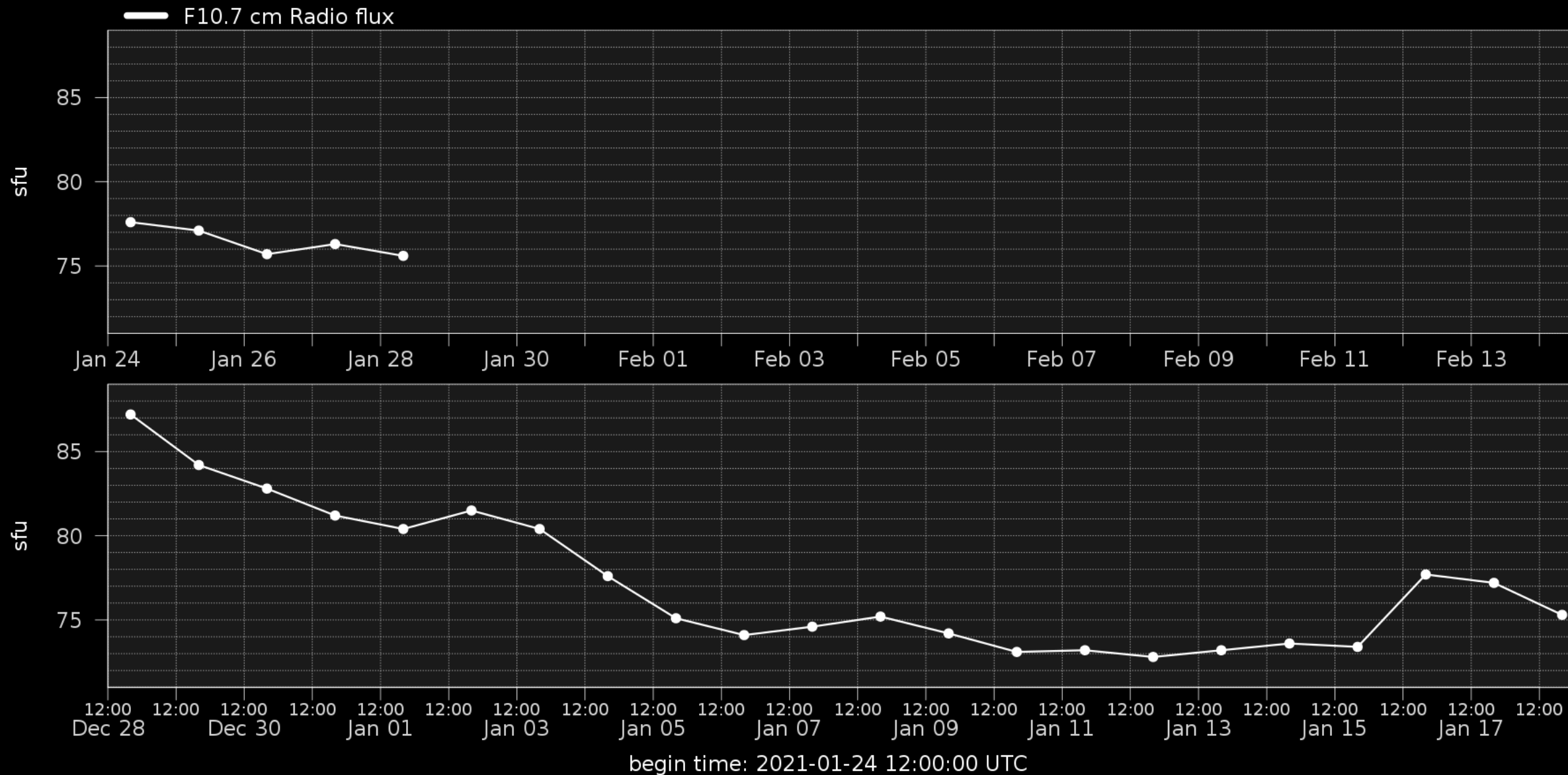
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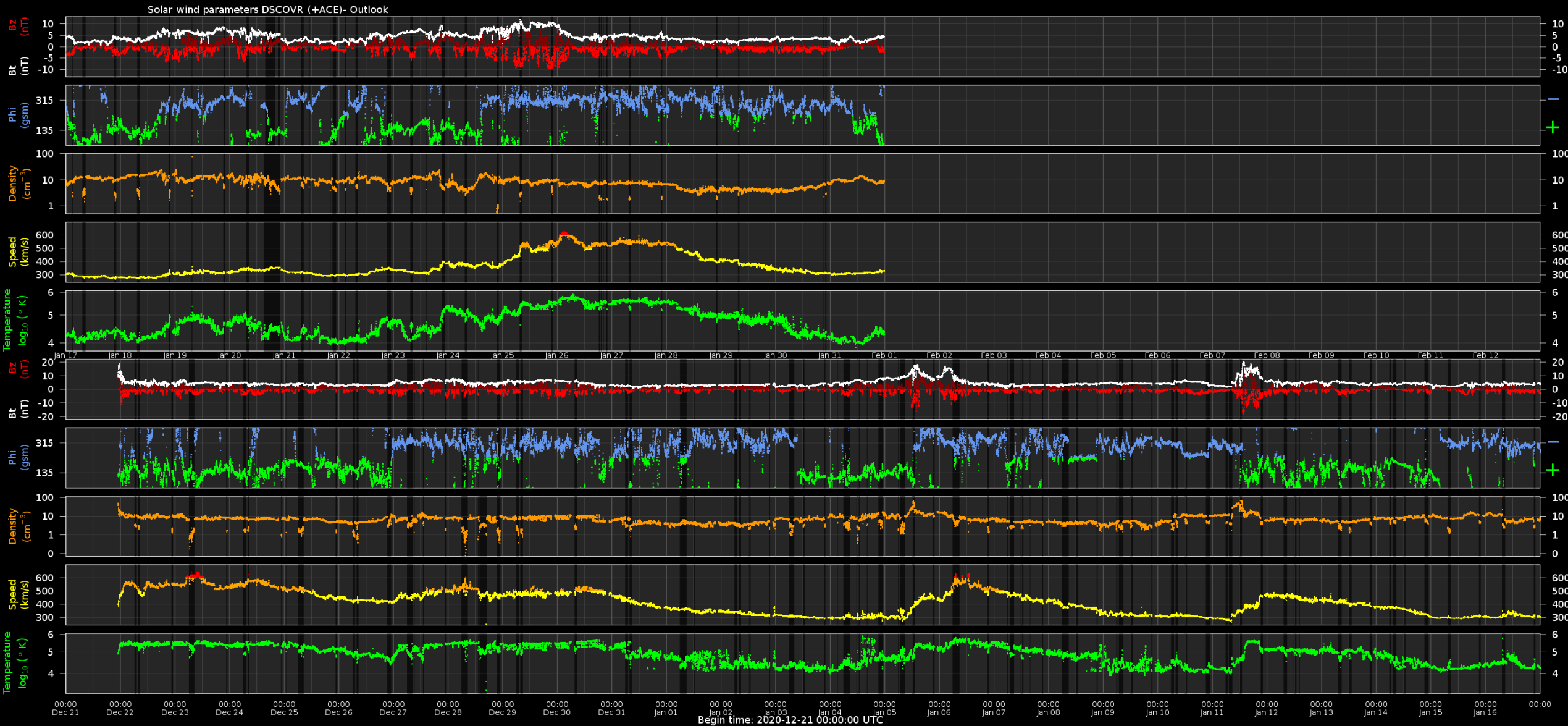
Outlook: Solar activity



Outlook: Solar F10.7cm radio flux

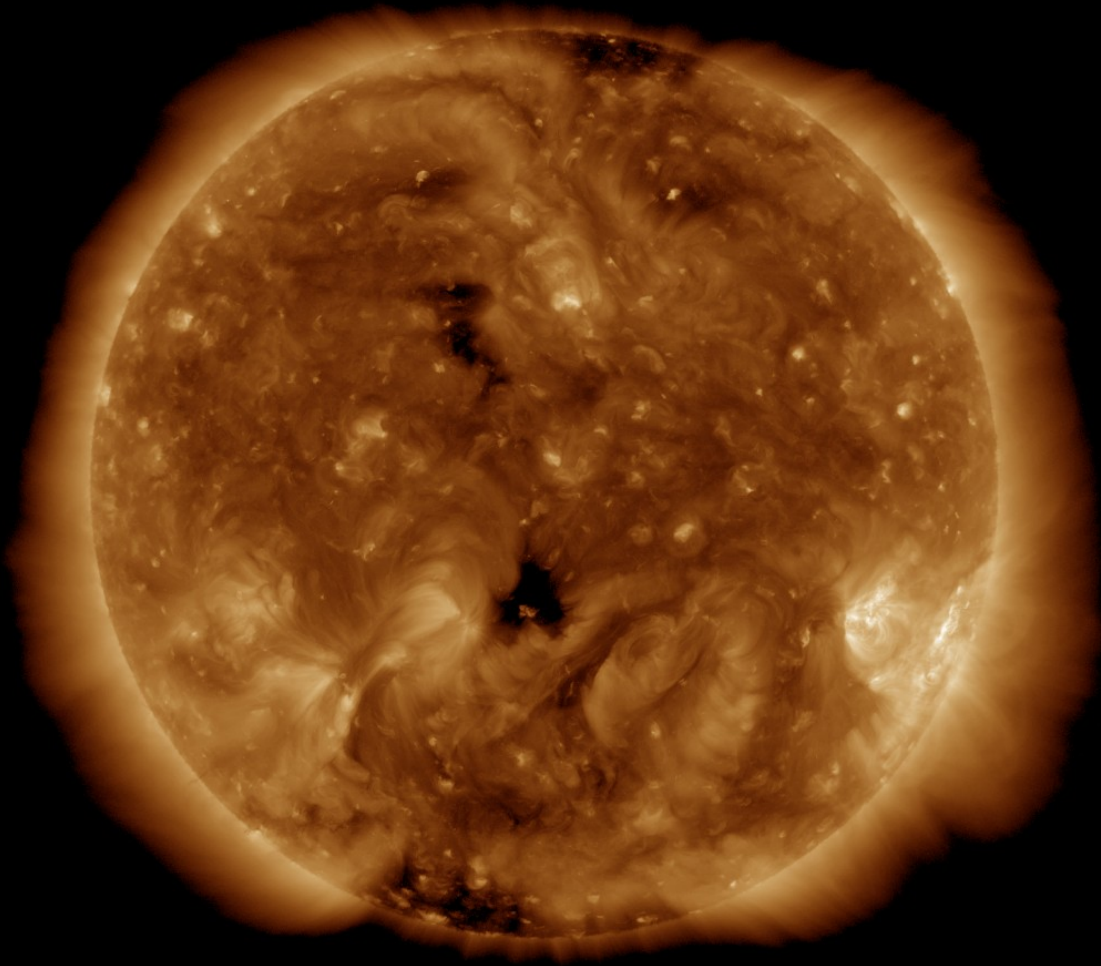


Outlook: Solar wind parameters

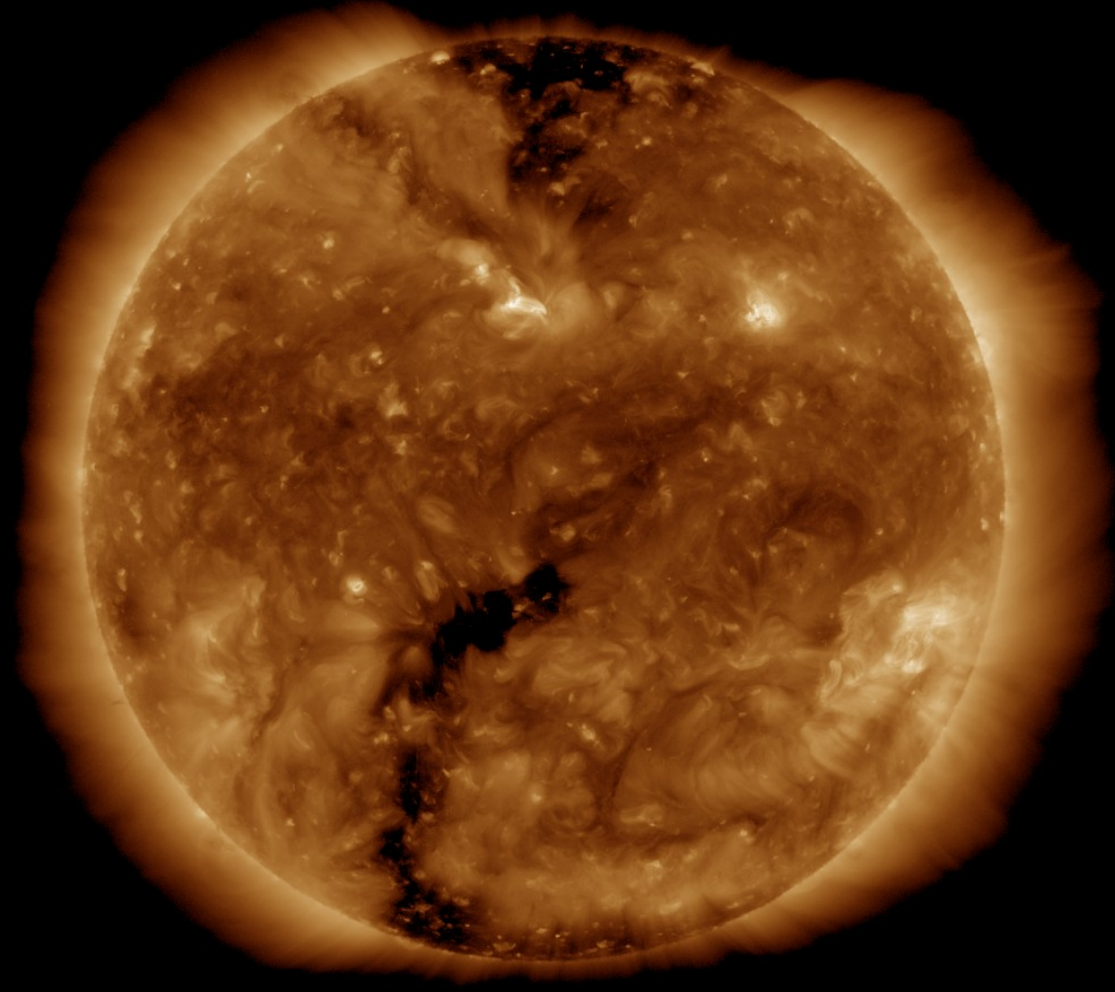


Outlook: Solar wind parameters

SDO/AIA 19.3 nm 2021-01-01



SDO/AIA 19.3 nm 2021-01-28



SDO/AIA 193 2021-01-01 21:15:05 UT

SDO/AIA 193 2021-01-28 17:17:29 UT

Outlook: Geomagnetic activity



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See you at our next briefing!

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