SIDC Space Weather Briefing

15-22 January 2023

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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 2023-01-15 12:00 to 2023-01-22 23:59

Active regions	14 Active Regions: NOAA ARs 3182, 3184, 3186, 3188, 3190, 3191, 3192, 3193, 3194, 3195, 3196, 3197, 3198, 3199
Flares	# C-class flare: 39 # M-class flare: 7 # X-class flare: 0
Coronal Holes	Two CH+ started transit the central meridian on Jan 17, Jan 21
CMEs	Partial Halo (backsided) on 2023-01-18, two CMEs on 2023-01-20, glancing blow possible on Jan 23
Proton flux	Elevated on Jan 20, but below radiation storm levels
Electron flux	Nominal

Solar wind and geomagnetic conditions

ICMEs	On 2023-01-17 (possible source: 2023-01-15T03:48 combined with 2023-01-14T21:36)
Solar wind conditions	|B|: 0.44 - 15.65 nT //Bz: -12.11 nT to 9.4 nT //Speed: 350.1 - 530.3km/s
K-indices	max K-index (KBel): 4 max Kp-index (NOAA): 5

All Quiet Alert: Not Quiet

Solar Activity

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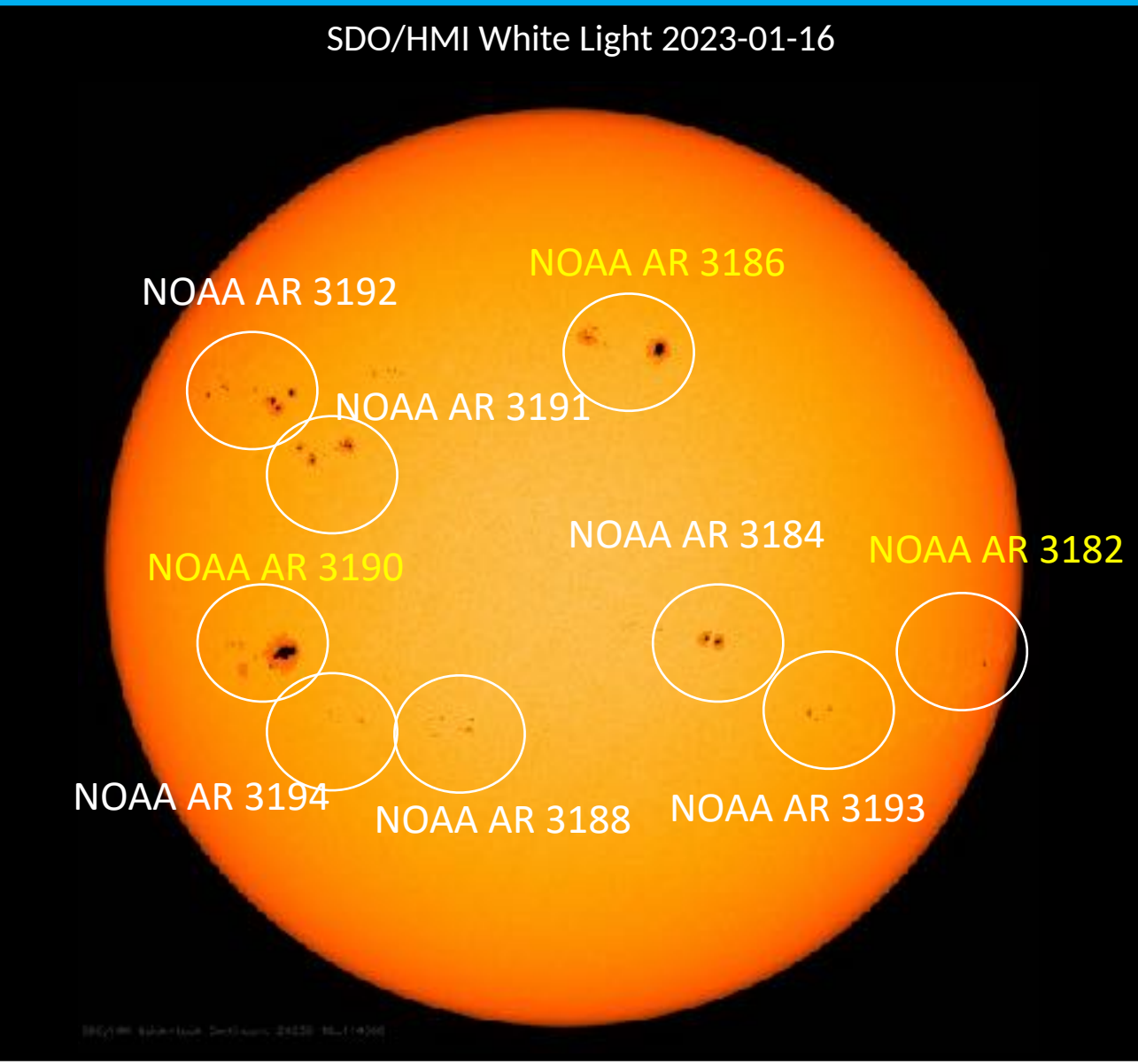
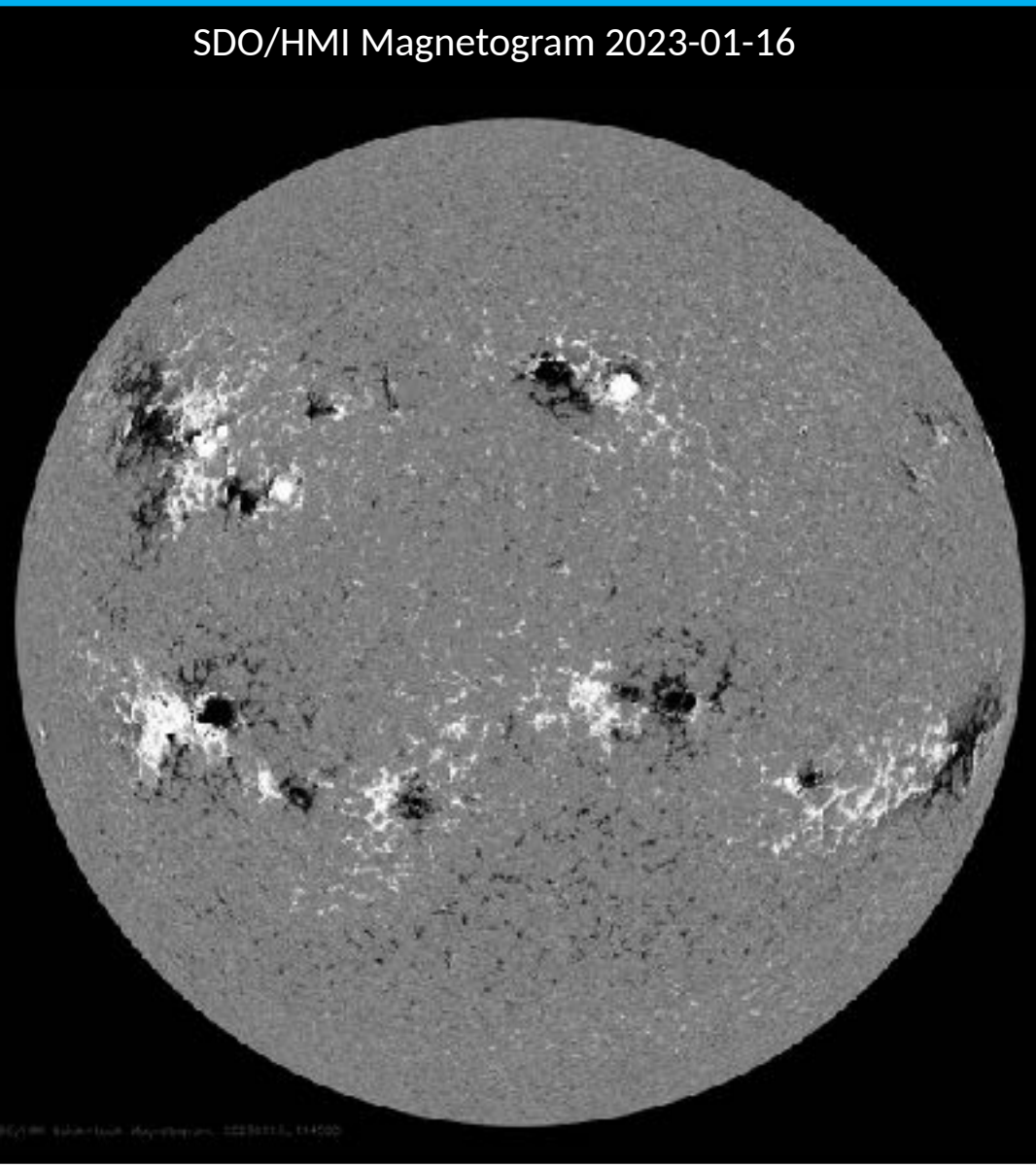
Solar active regions

SDO/HMI White Light 2023-01-16

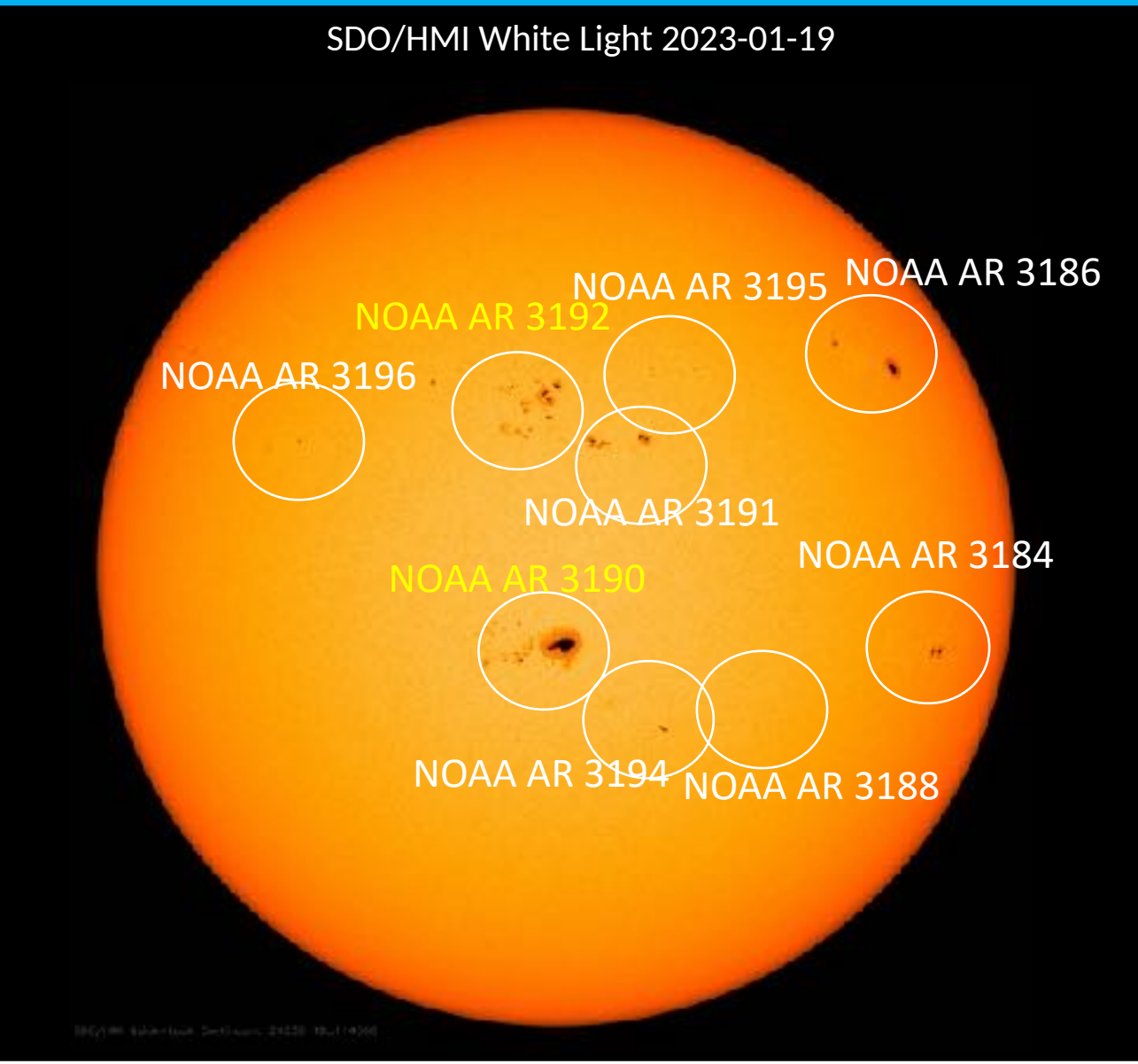


SDO/HMI Magnetogram 2023-01-16

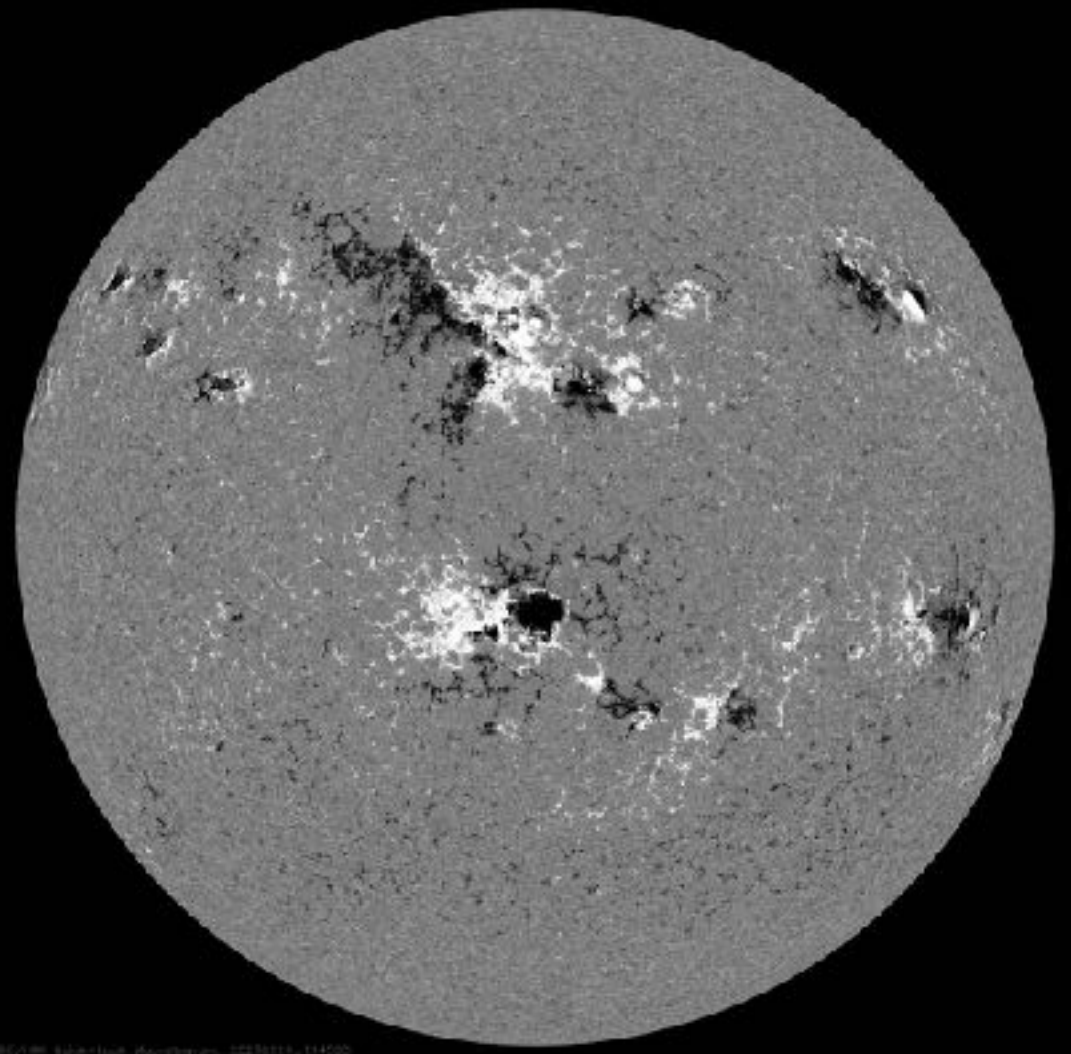


Solar active regions

SDO/HMI White Light 2023-01-19

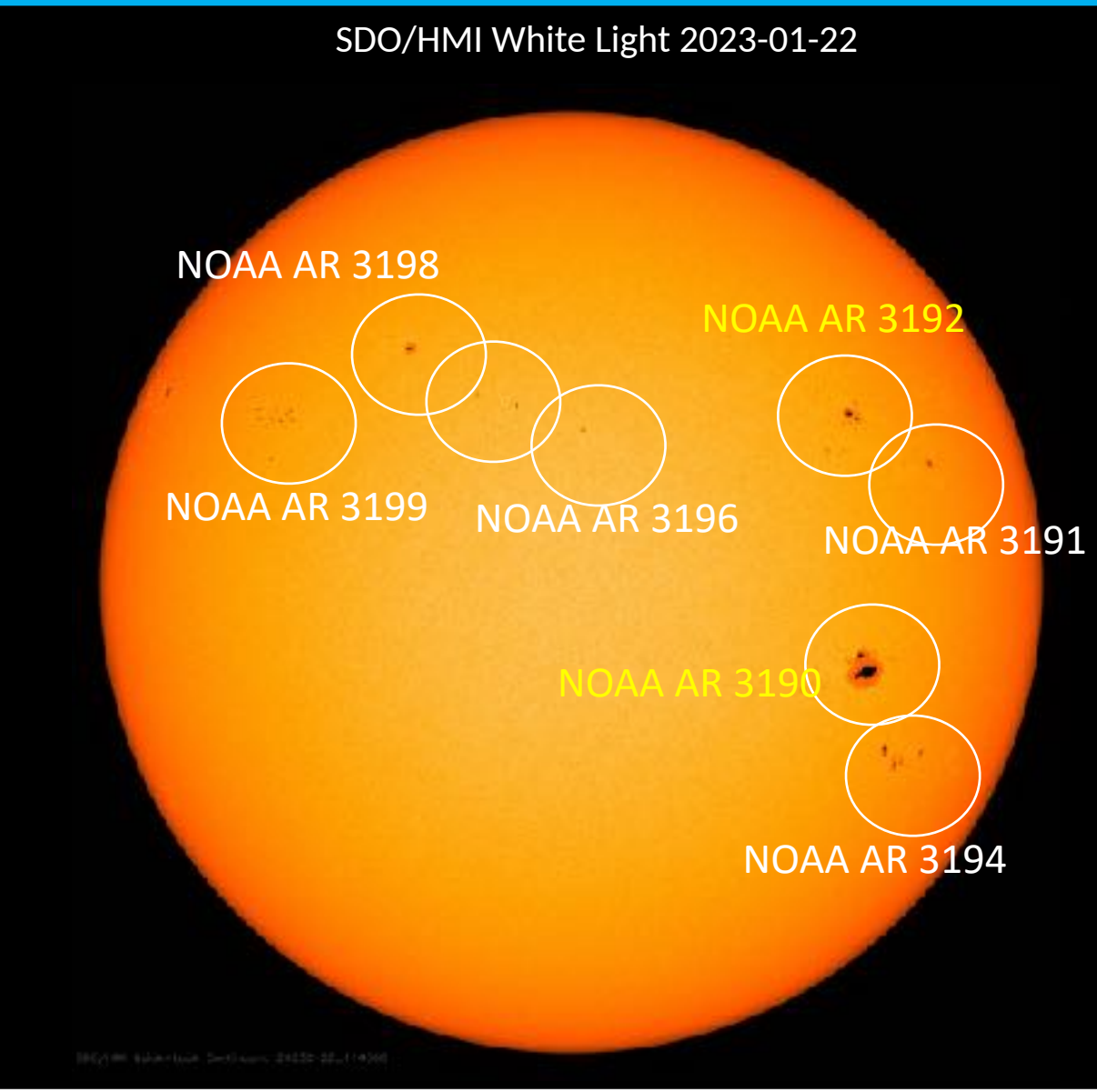


SDO/HMI Magnetogram 2023-01-19

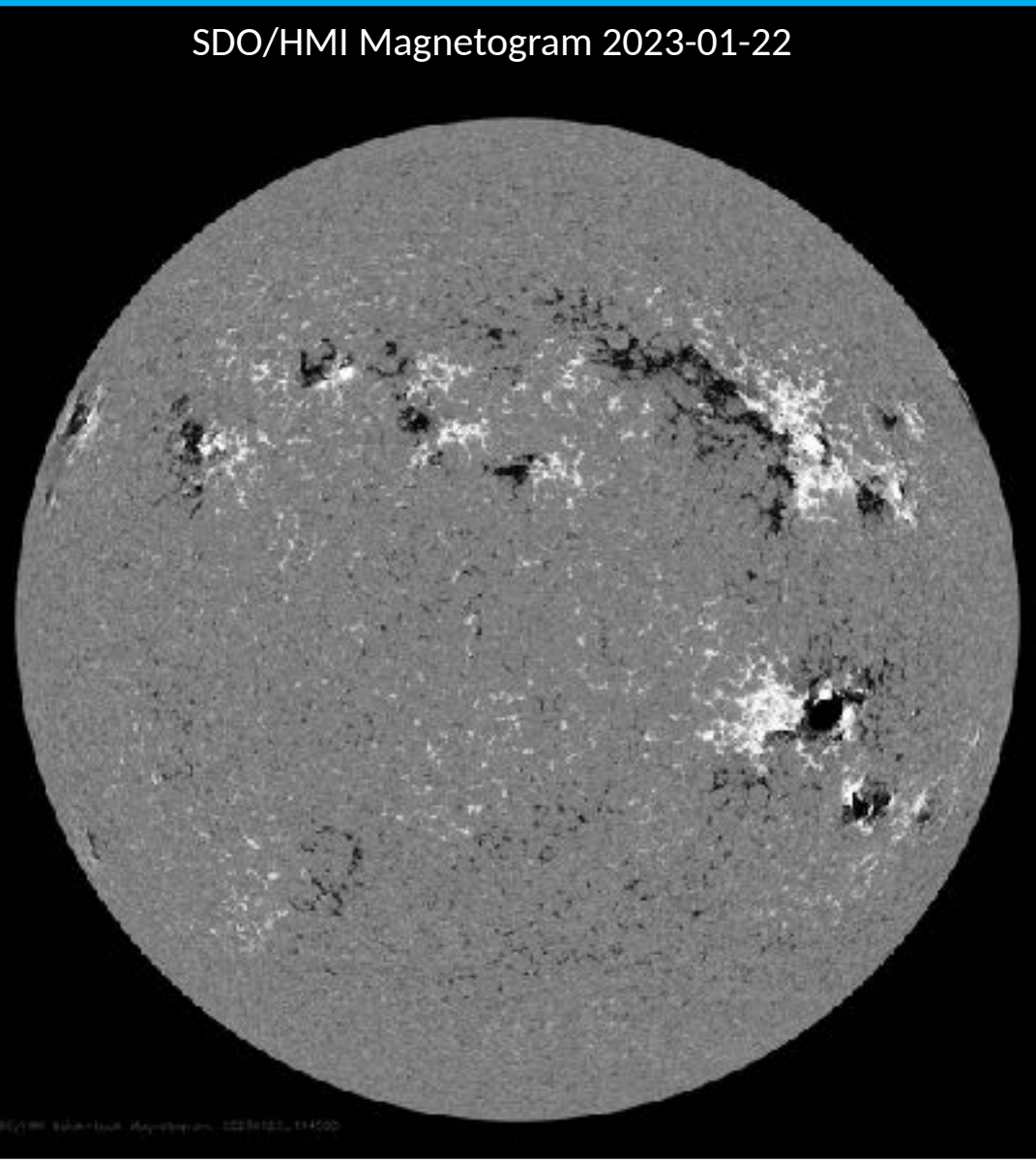


Solar active regions

SDO/HMI White Light 2023-01-22

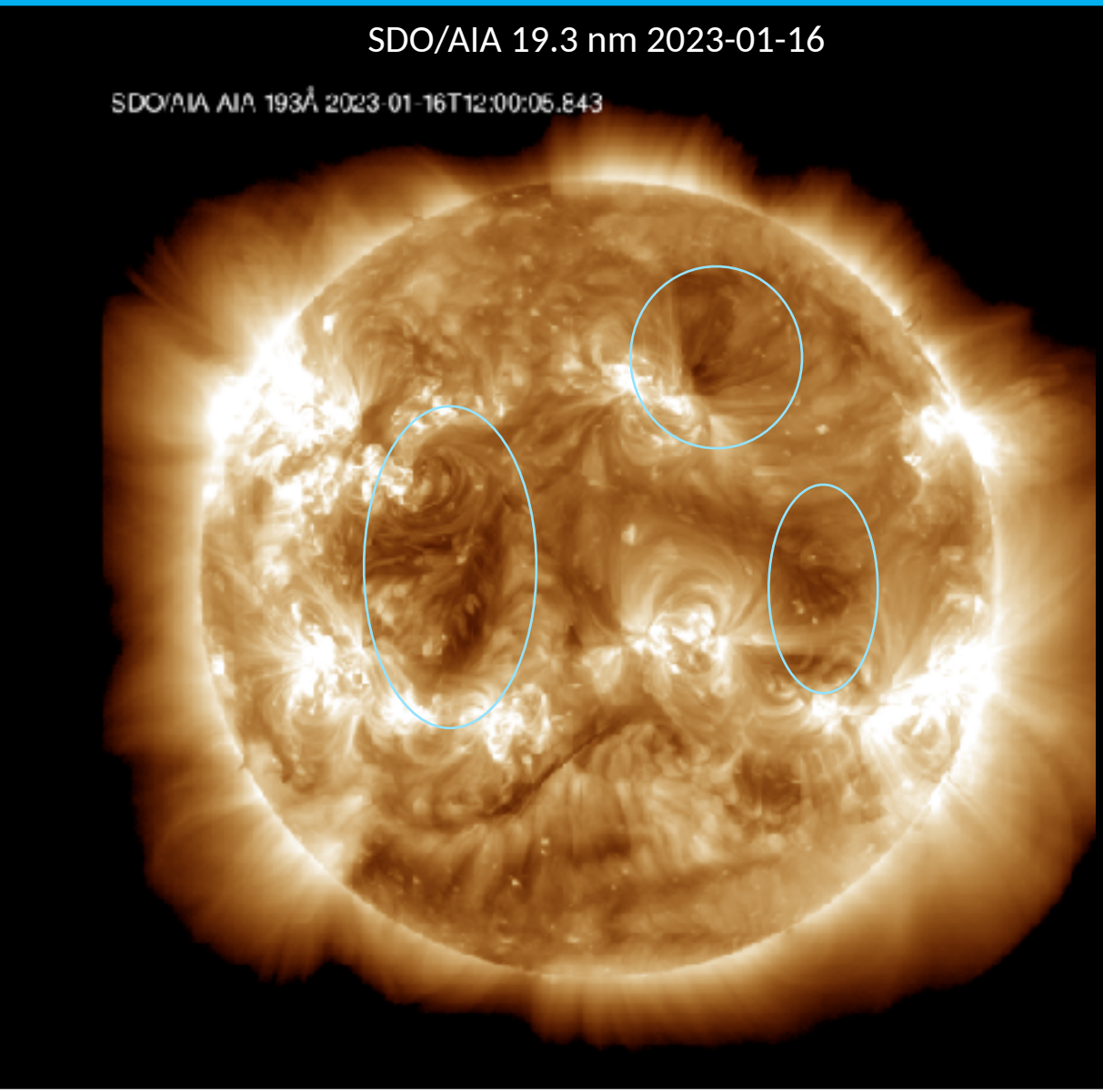


SDO/HMI Magnetogram 2023-01-22

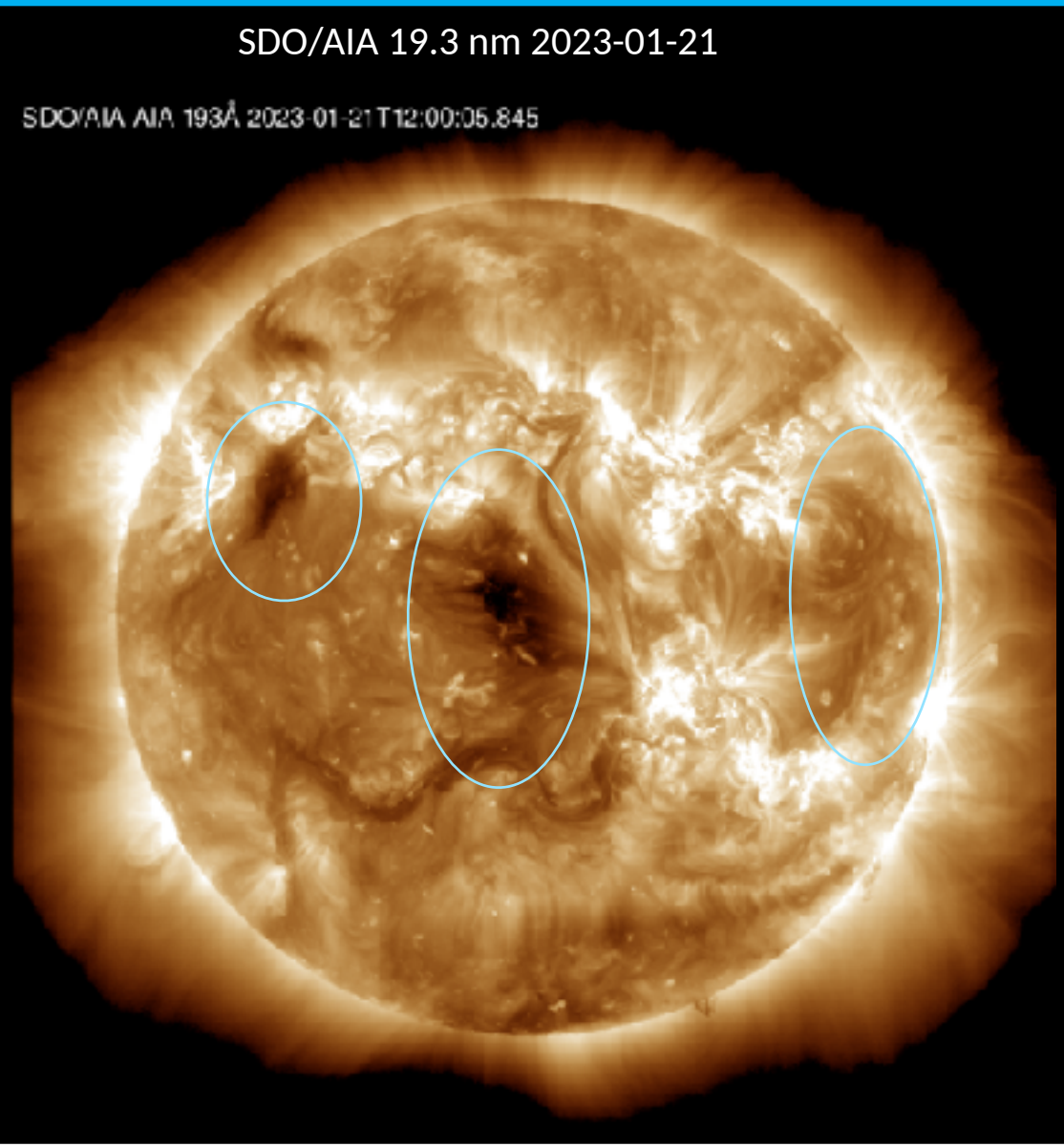


Coronal holes

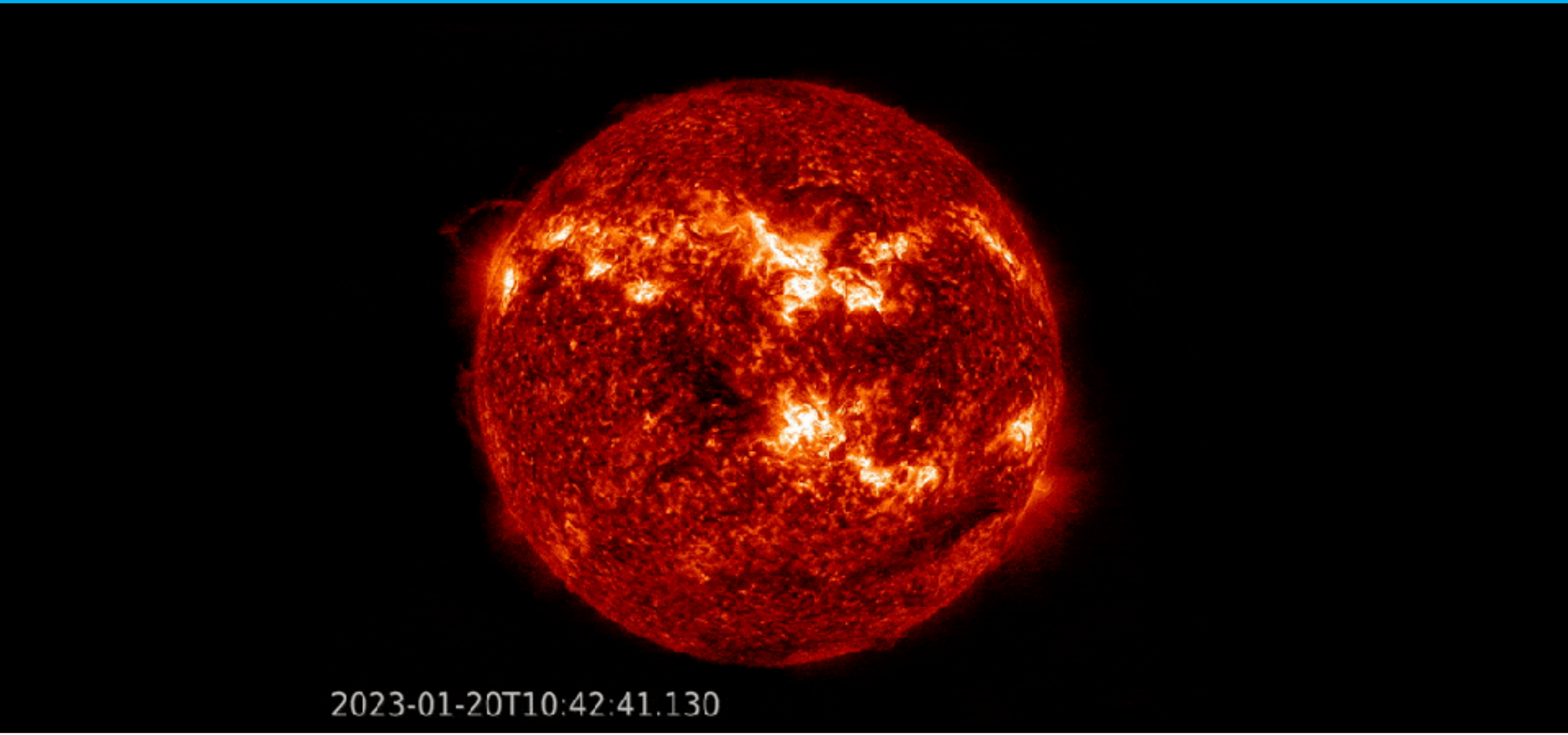
SDO/AIA 19.3 nm 2023-01-16



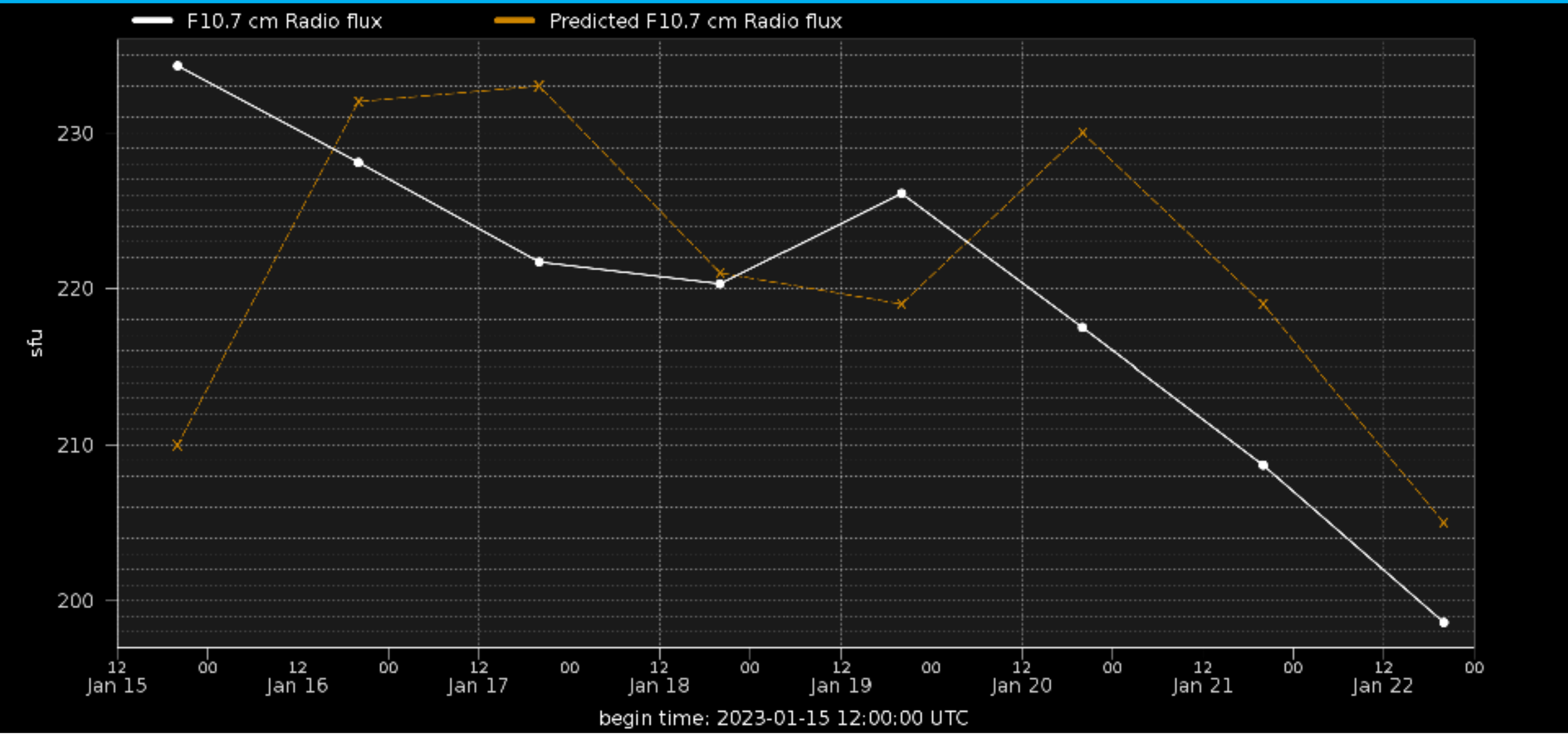
SDO/AIA 19.3 nm 2023-01-21



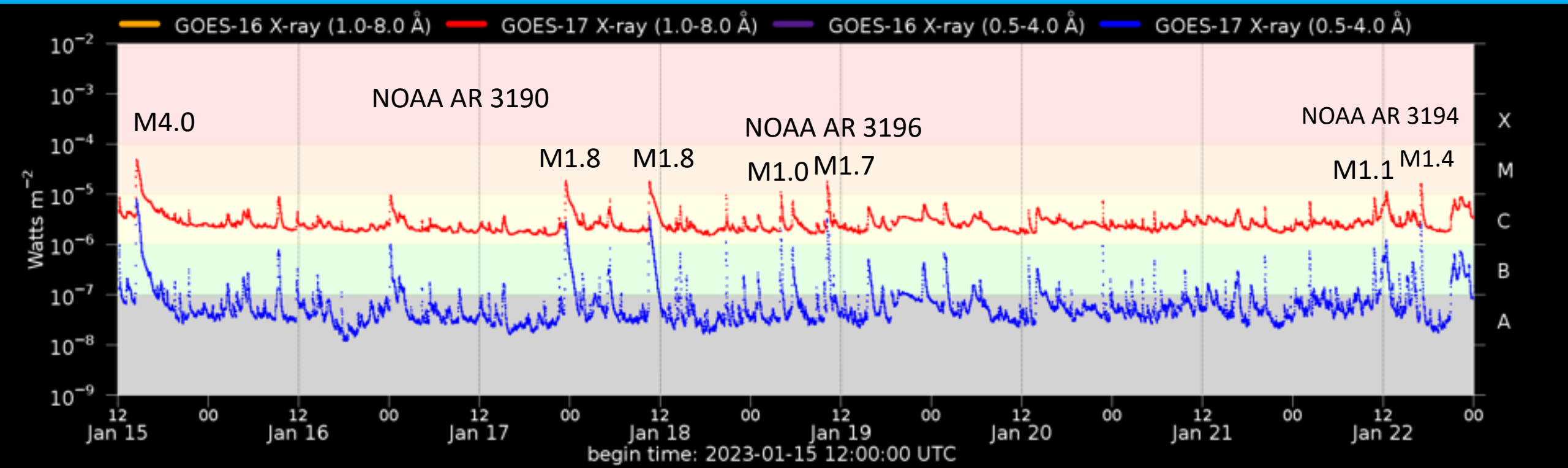
Filaments



Solar F10.7cm radio flux



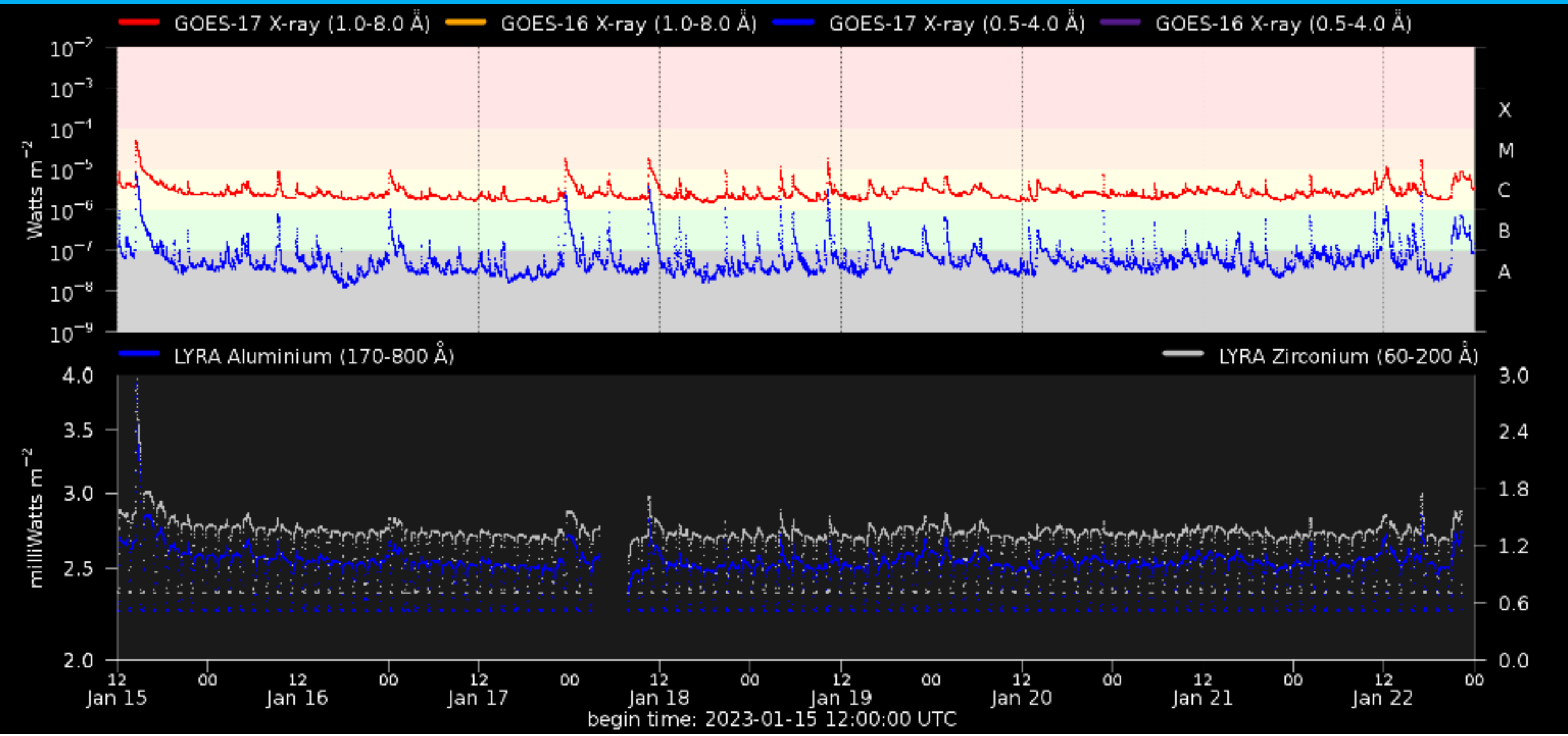
Flaring activity



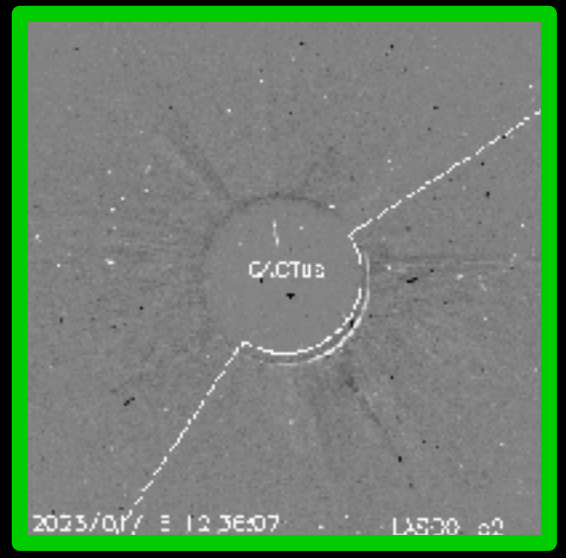
Probabilities (%) and occurrences (#) of C/M/X-flares daily, from noon to noon:

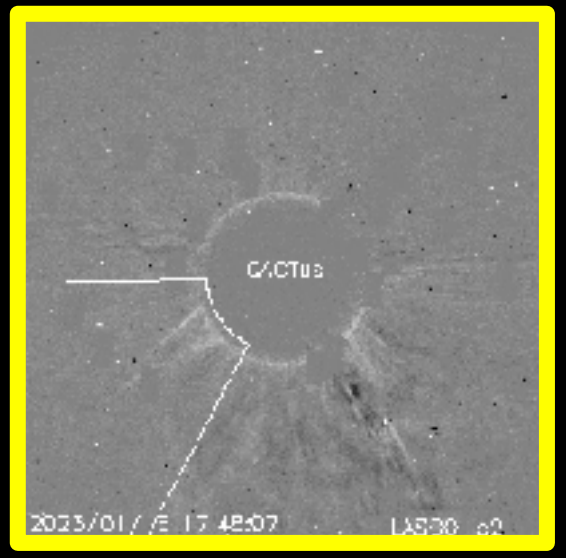
Issue date	2023-01-15	2023-01-16	2023-01-17	2023-01-18	2023-01-19	2023-01-20	2023-01-21	2023-01-22
Probability (%)	99|80|20	95|55|05	98|51|10	96|55|10	95|65|10	95|60|10	95|52|10	92|53|10
Observed (#)	04|01|00	05|00|00	03|02|00	10|02|00	03|00|00	07|00|00	05|00|00	02|02|00

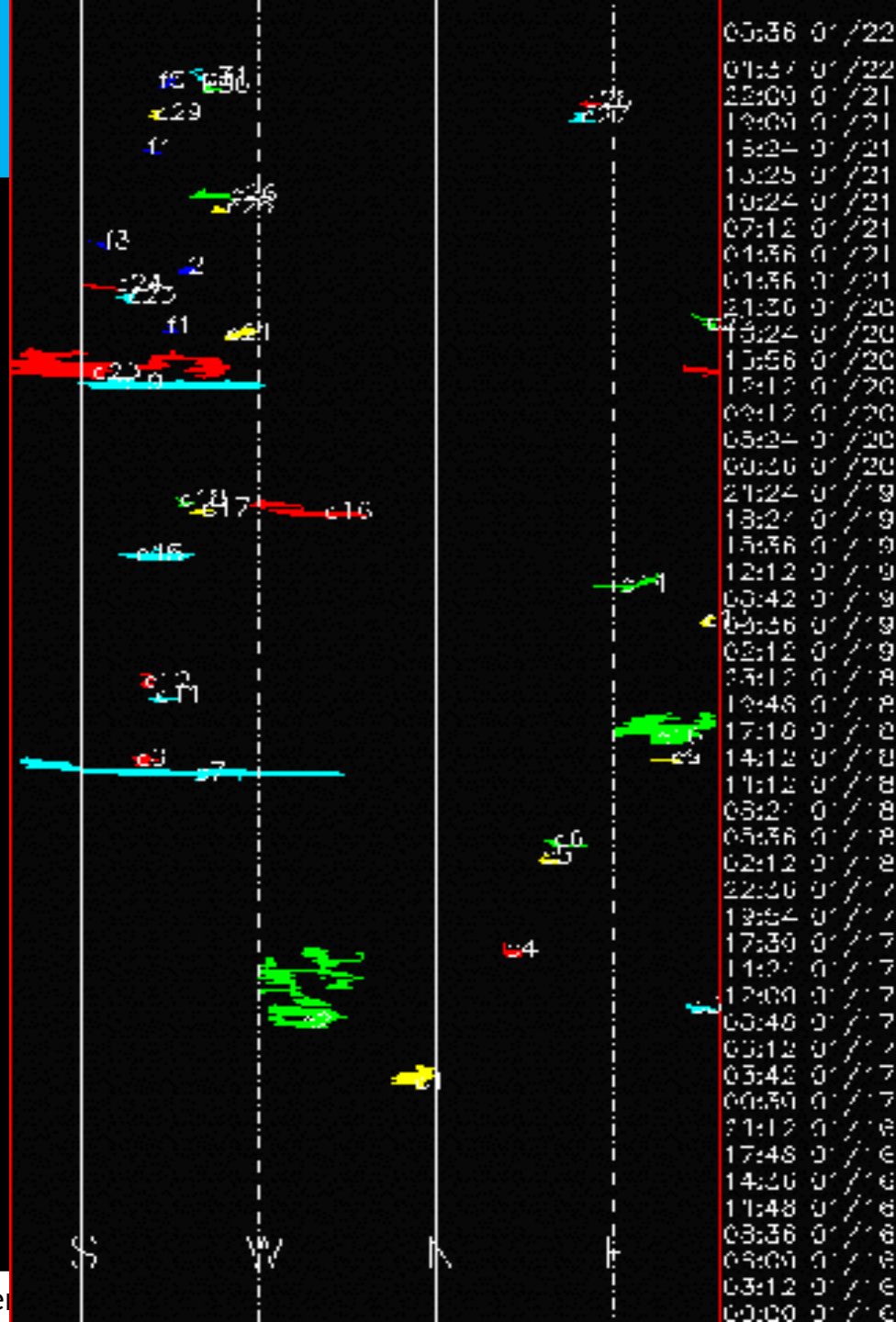
Solar X-Ray and UV flux



Coronal Mass Ejections







Solar Wind and Geomagnetic Activity

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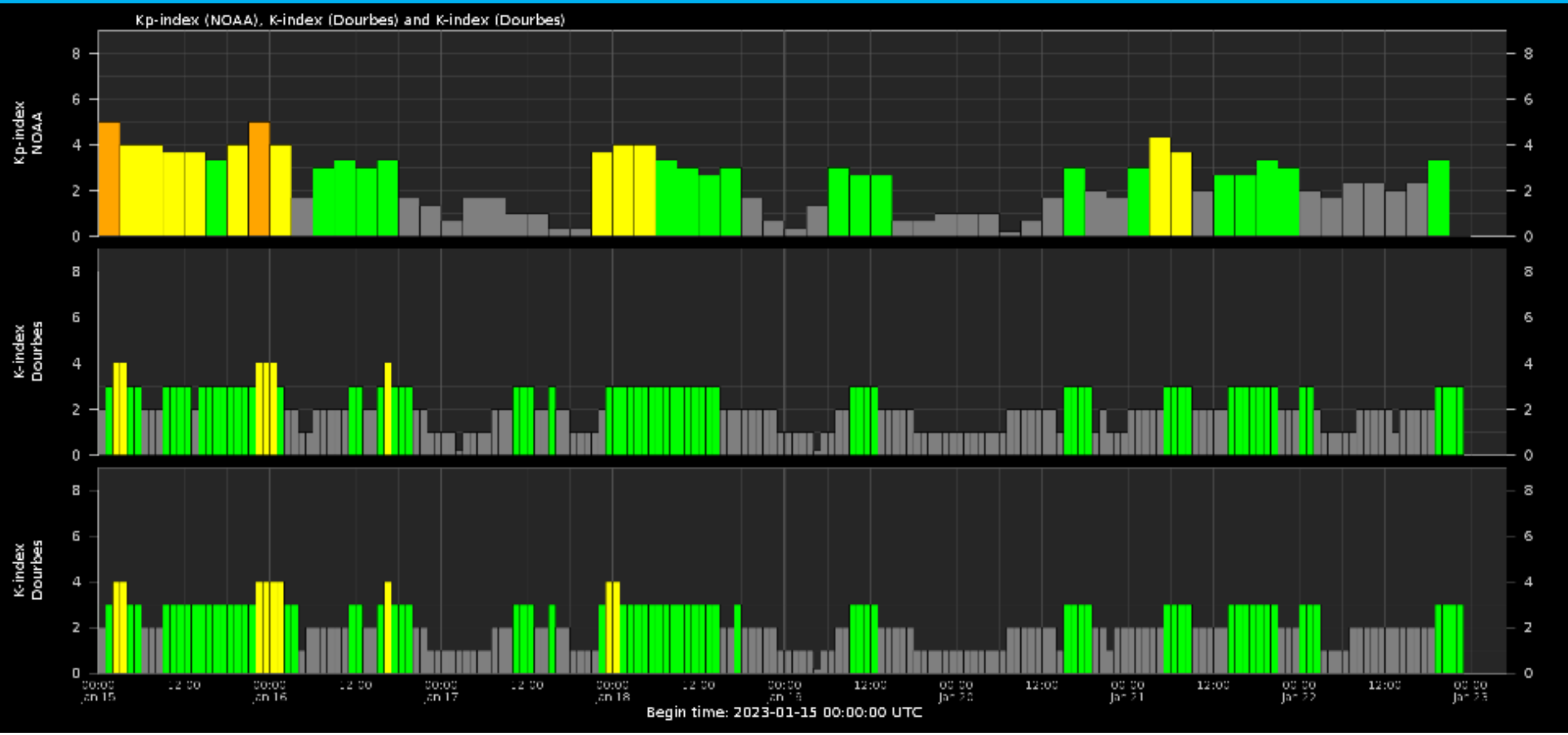
Solar wind parameters

Solar wind parameters & K-indices

Geomagnetic activity (K-indexes)



Energetic Particles

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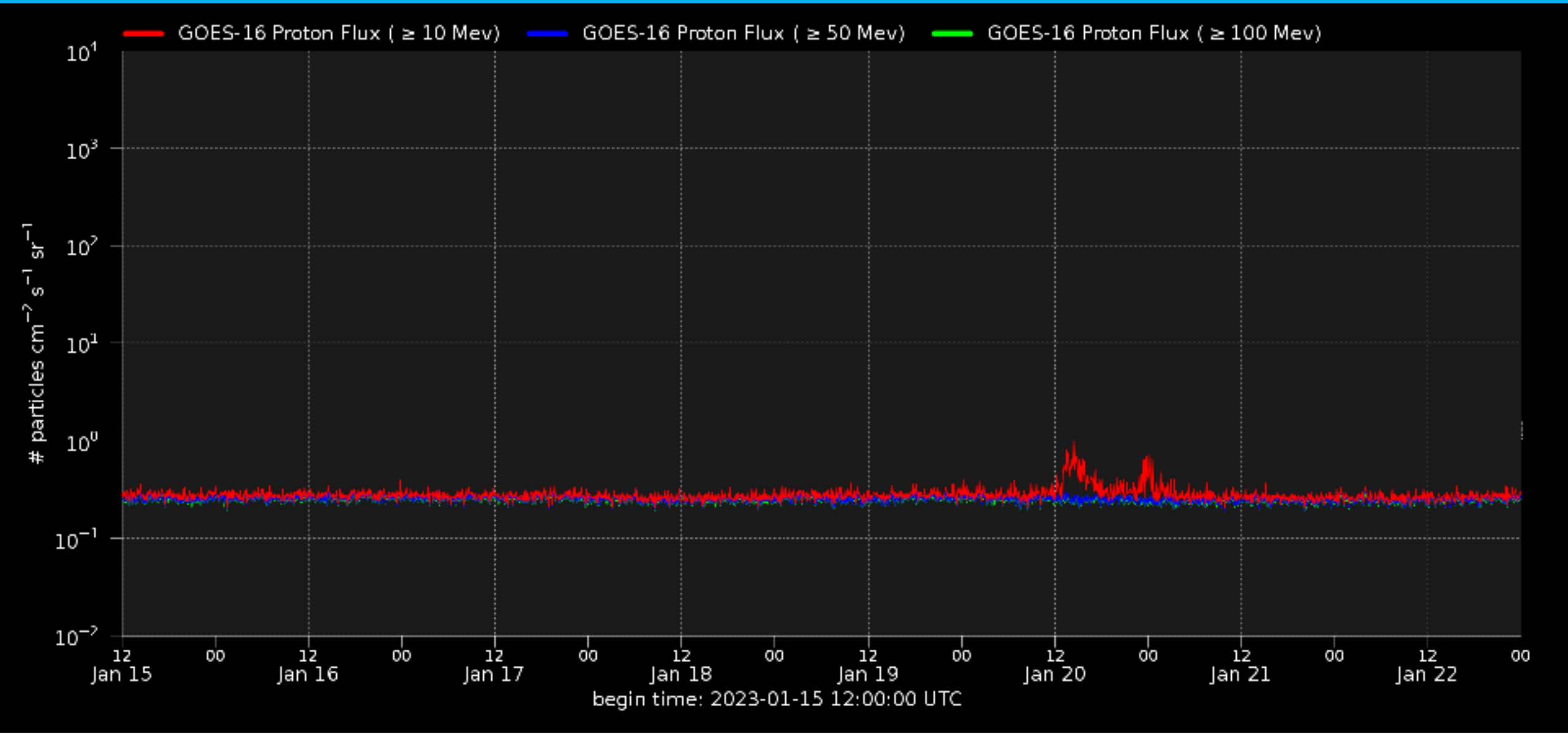
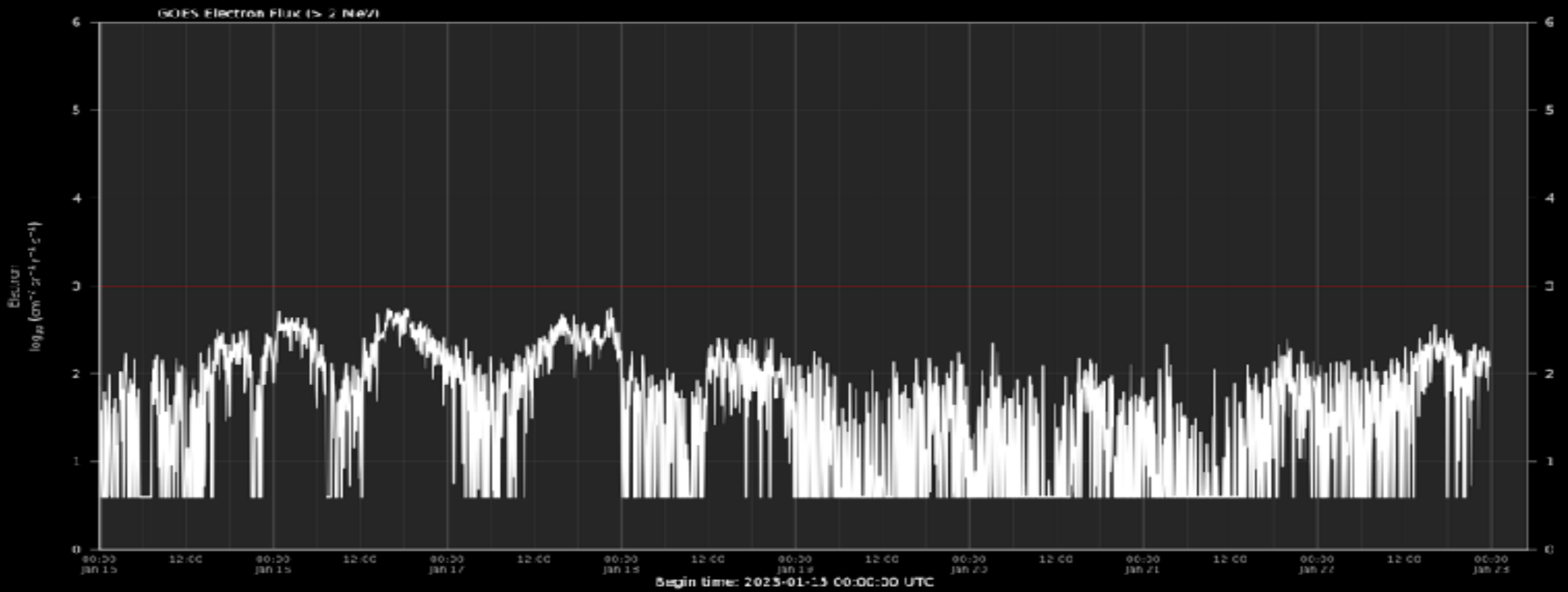
Solar proton flux



Electron flux at GEO

www.stce.be/educational/classification#electrons

www.spaceweather.gc.ca/forecast-prevision/space-spatiale/sffl-en.php



Outlook

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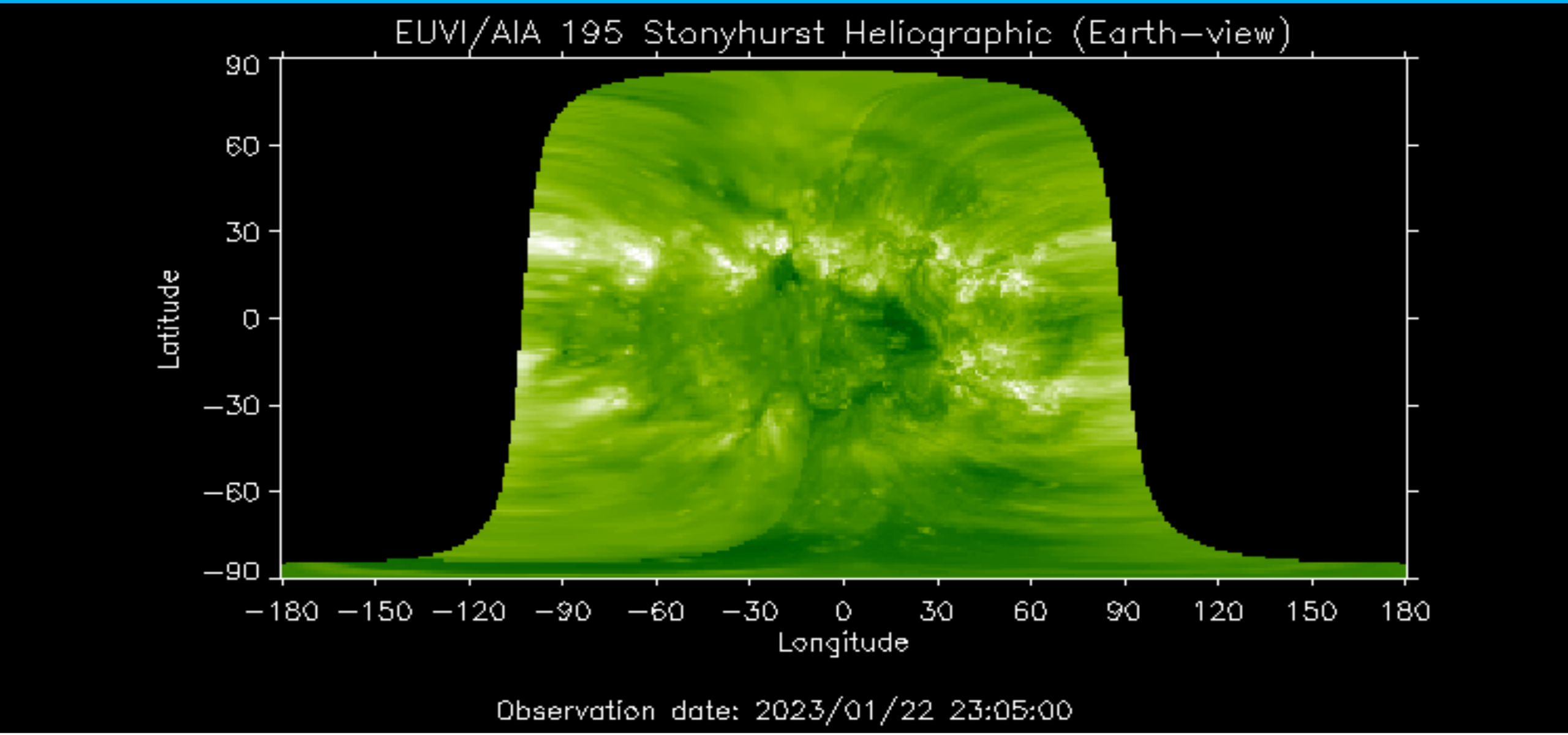
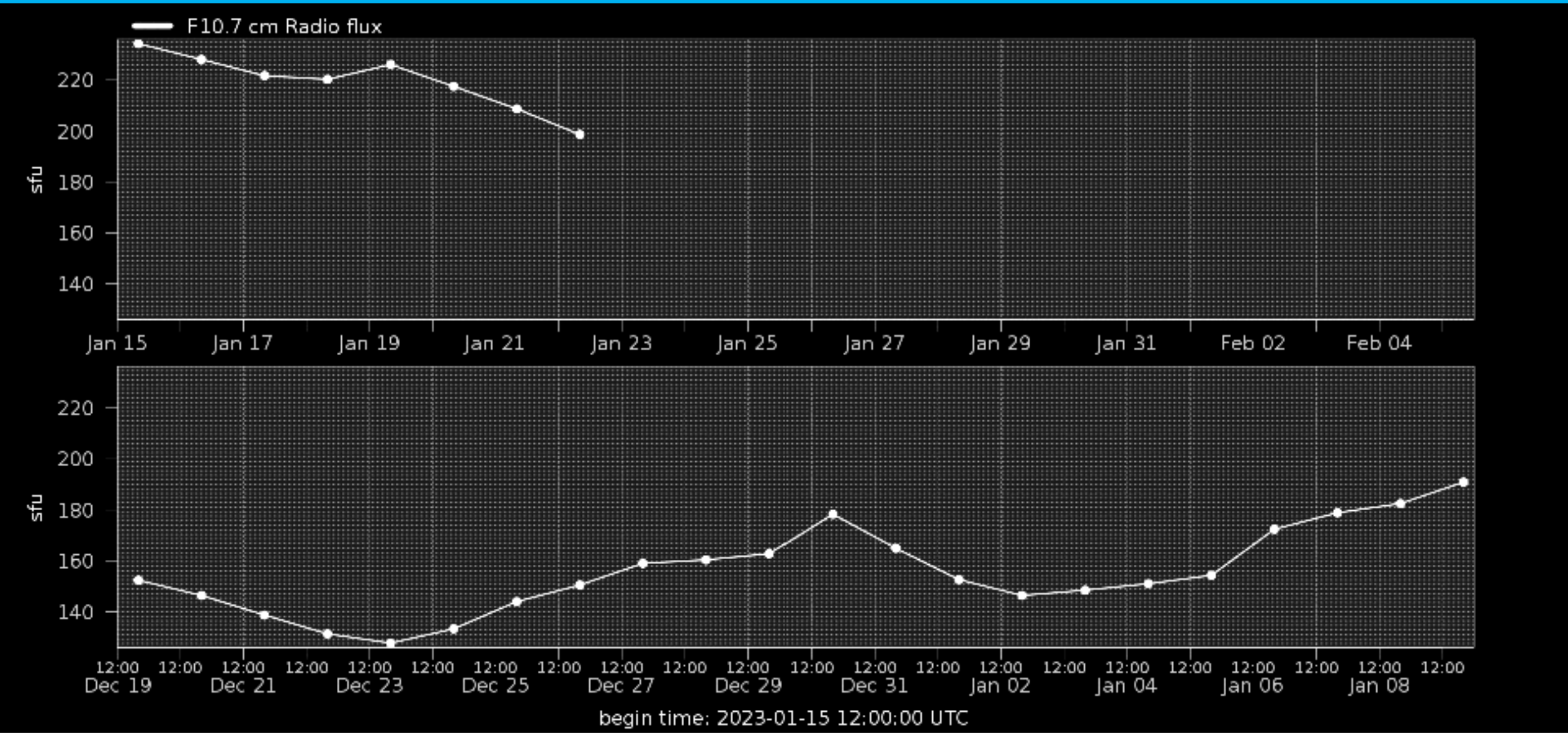
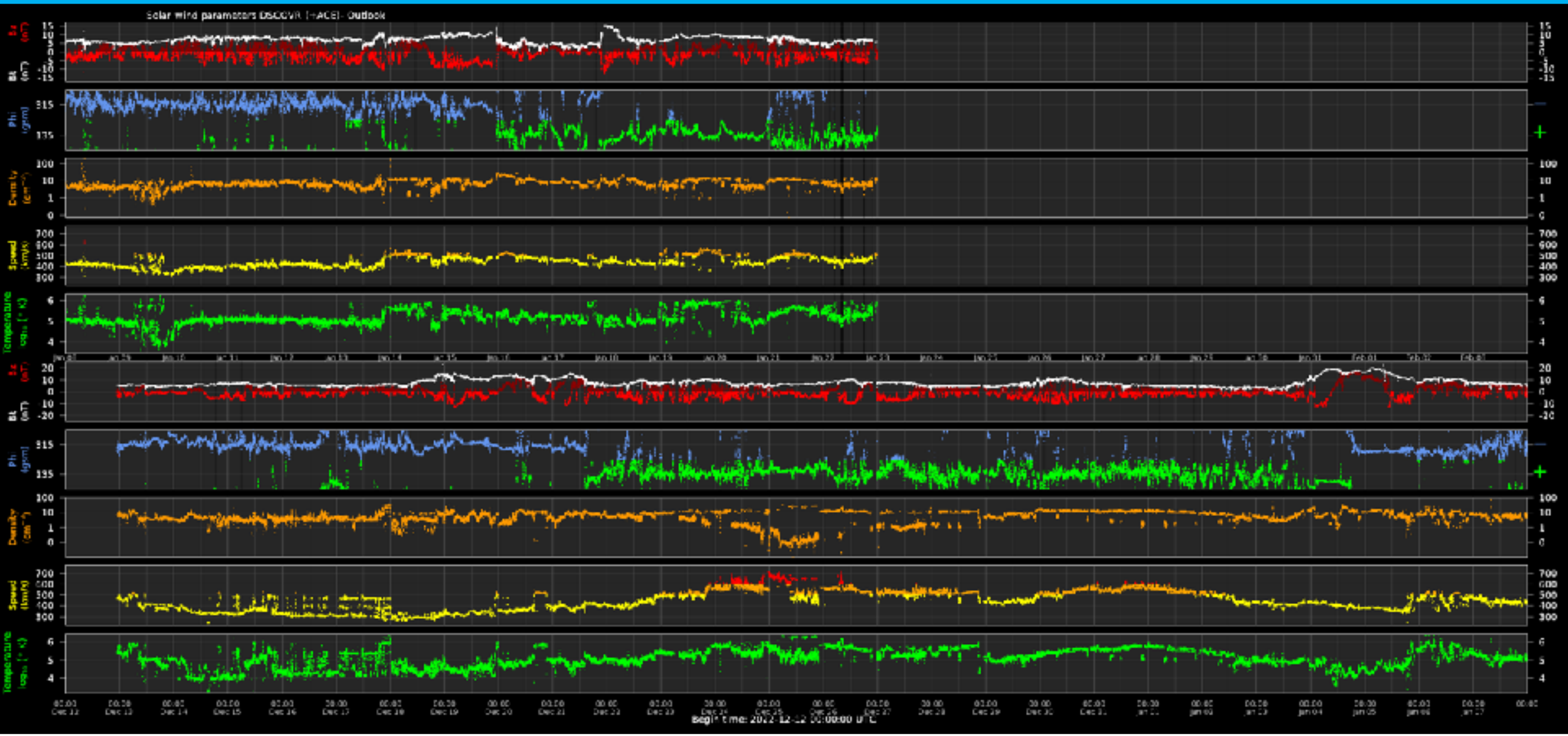
Outlook: Solar activity



Outlook: Solar F10.7cm radio flux



Outlook: Solar wind parameters



Outlook: Electron Flux at GEO Outlook

SIDC Space Weather Briefing

See you at our next briefing!

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