

SIDC Space Weather Briefing

20 February 2022 - 27 February 2022

Cis Verbeeck

& the SIDC forecaster team



Solar Influences
Data analysis Centre
www.sidc.be

Summary Report

Solar activity from 2022-02-20 12:00 to 2022-02-27 23:59

Active regions	NOAA 2948, 2952, 2953, 2954, 2955, 2956, 2957
Flares	# C-class flare: 3 # M-class flare: 0 # X-class flare: 0
Coronal Holes	extension of (-) southern polar coronal hole; equatorial (+) coronal hole
CMEs	No Earth-directed CMEs

Proton flux	Nominal
Electron flux	Exceeded the 1000 pfu threshold several times

Solar wind and geomagnetic conditions

ICMEs	None
SW Conditions	B : 0.4 - 13.73 nT // Bz: -13.45 nT to 10.18 nT // Speed: 348.0 - 590.7km/s
K-indices	max K-index (K_Bel): 4 max Kp-index (NOAA): 5

All Quiet Alert: Never on

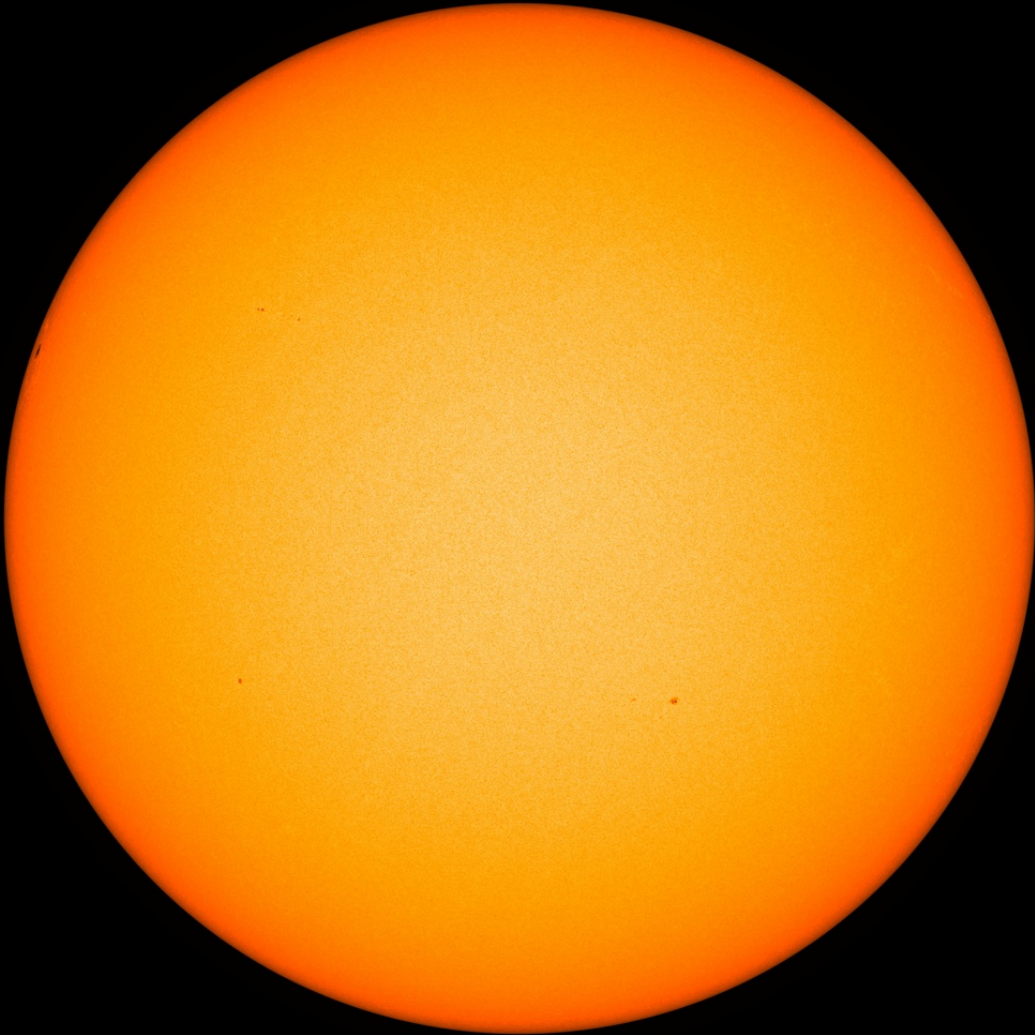
Solar Activity



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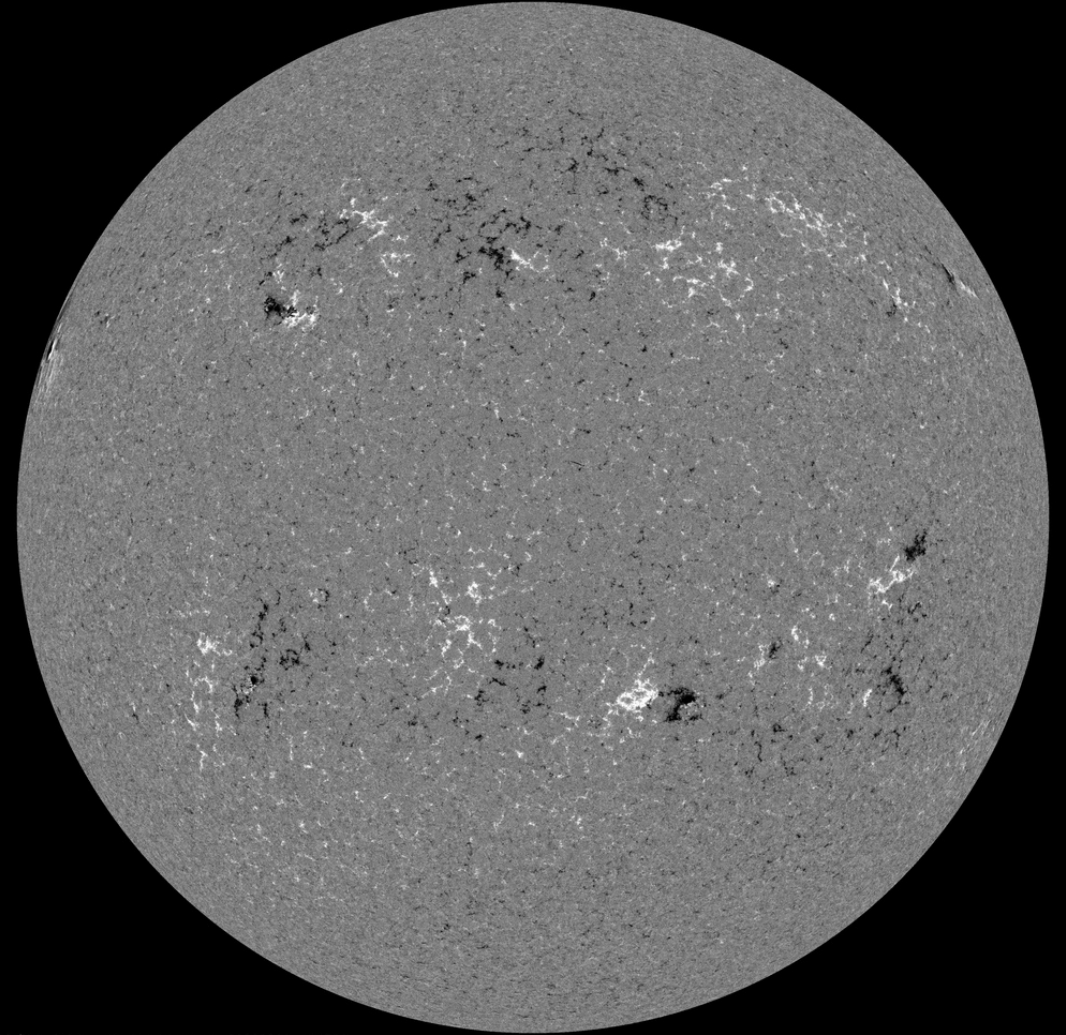
Solar active regions

SDO/HMI White Light 2022-02-20



SDO/HMI Quick-Look Continuum: 20220220_114500

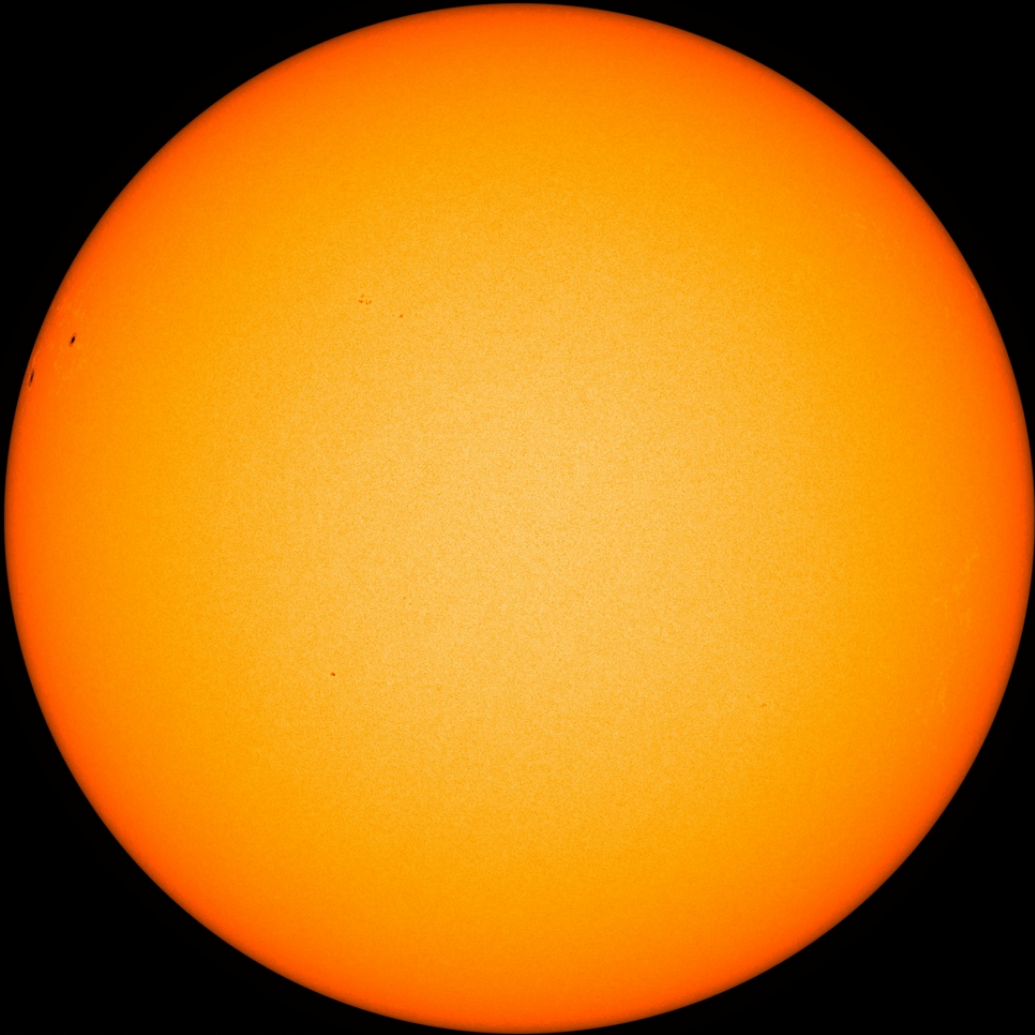
SDO/HMI Magnetogram 2022-02-20



SDO/HMI Quick-Look Magnetogram: 20220220_114500

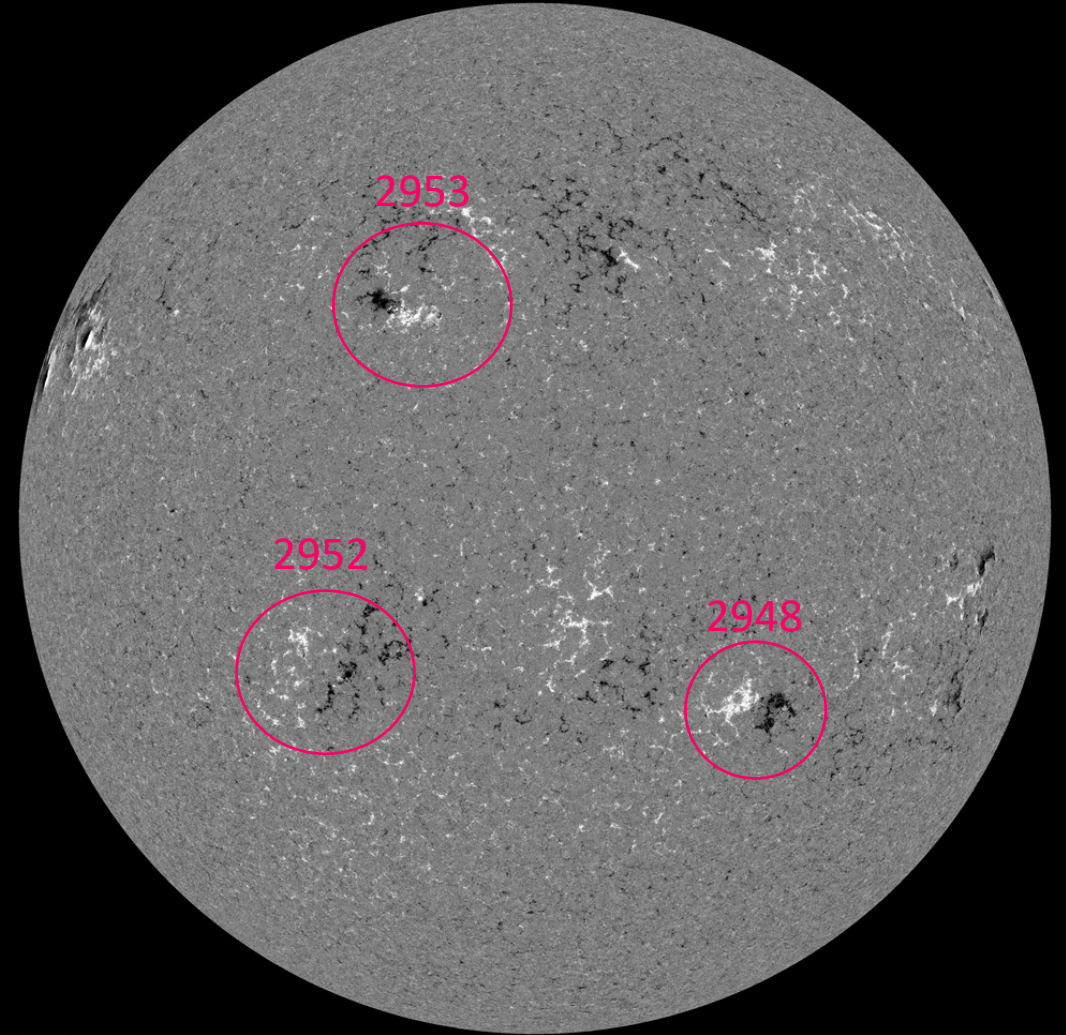
Solar active regions

SDO/HMI White Light 2022-02-21



SDO/HMI Quick-Look Continuum: 20220221_114500

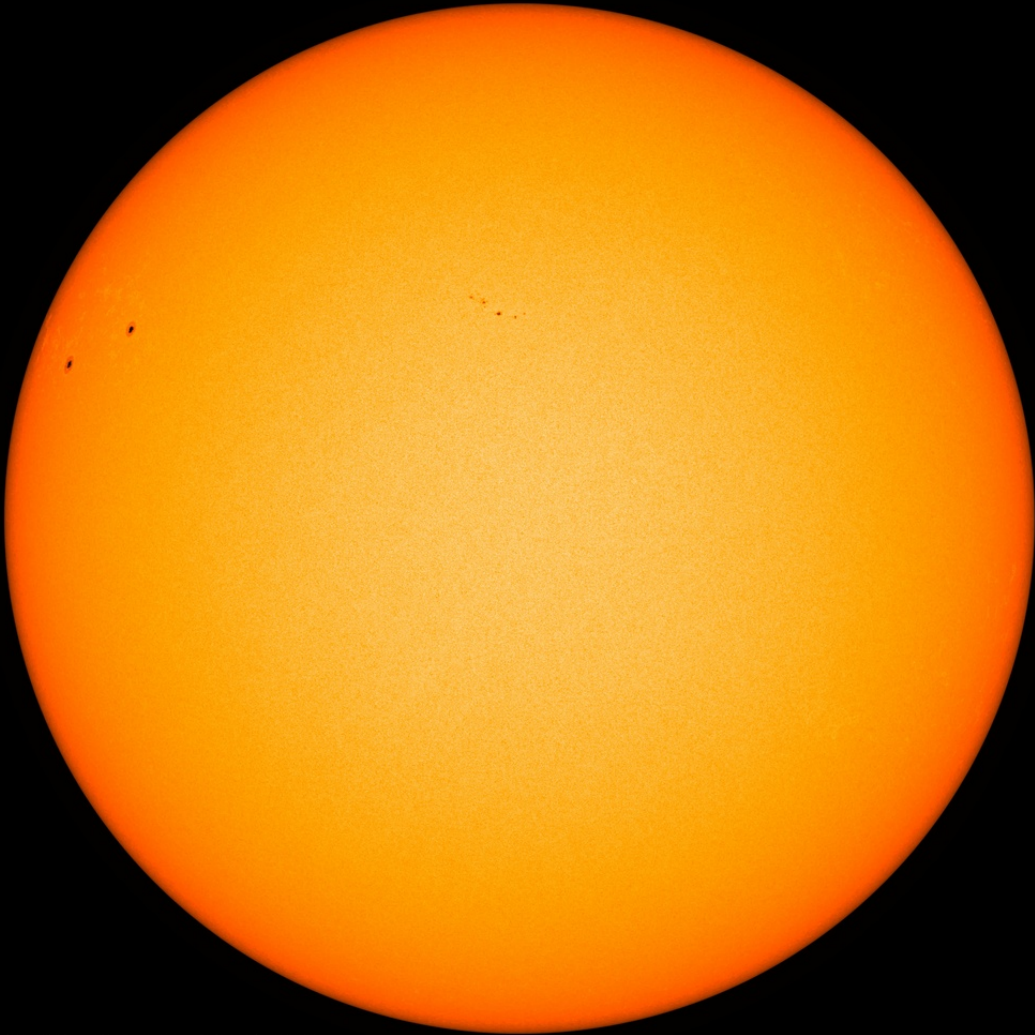
SDO/HMI Magnetogram 2022-02-21



SDO/HMI Quick-Look Magnetogram: 20220221_114500

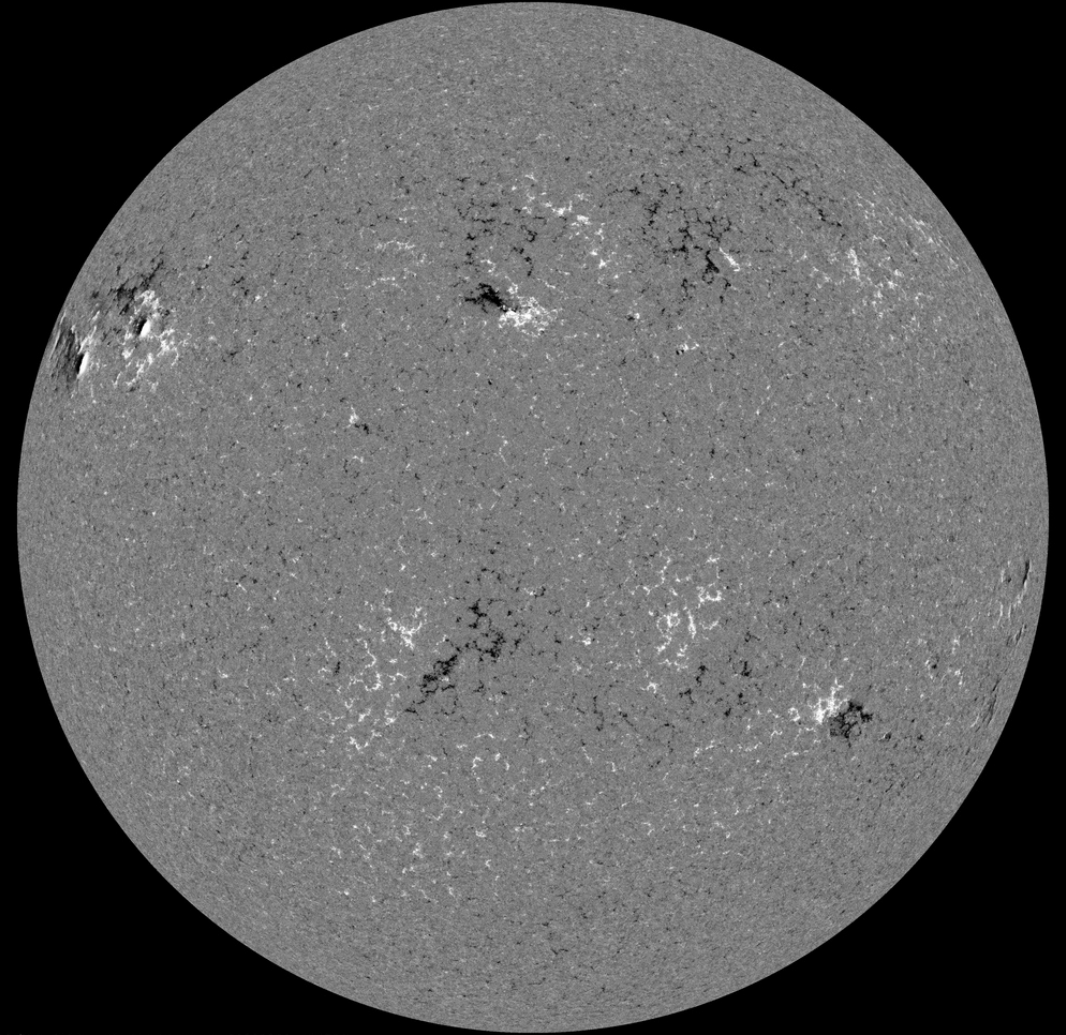
Solar active regions

SDO/HMI White Light 2022-02-22



SDO/HMI Quick-Look Continuum: 20220222_114500

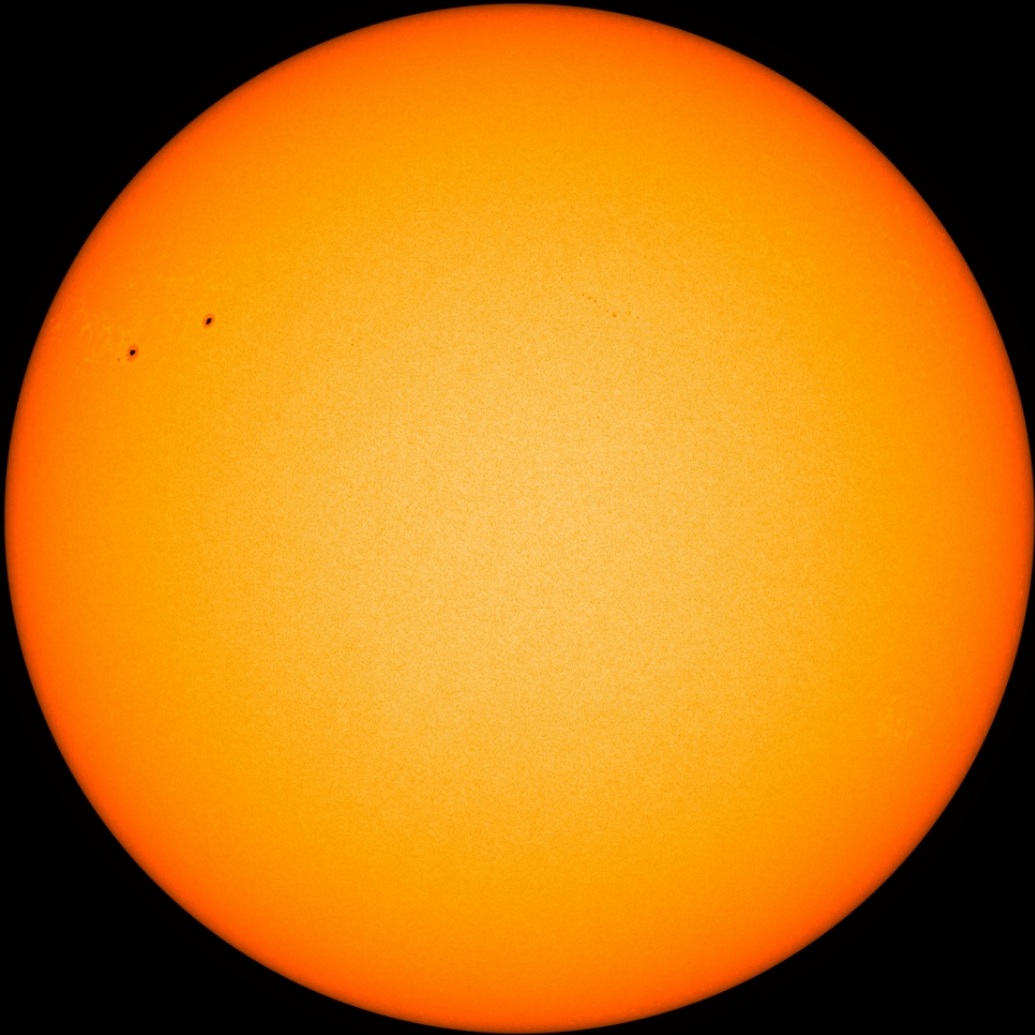
SDO/HMI Magnetogram 2022-02-22



SDO/HMI Quick-Look Magnetogram: 20220222_114500

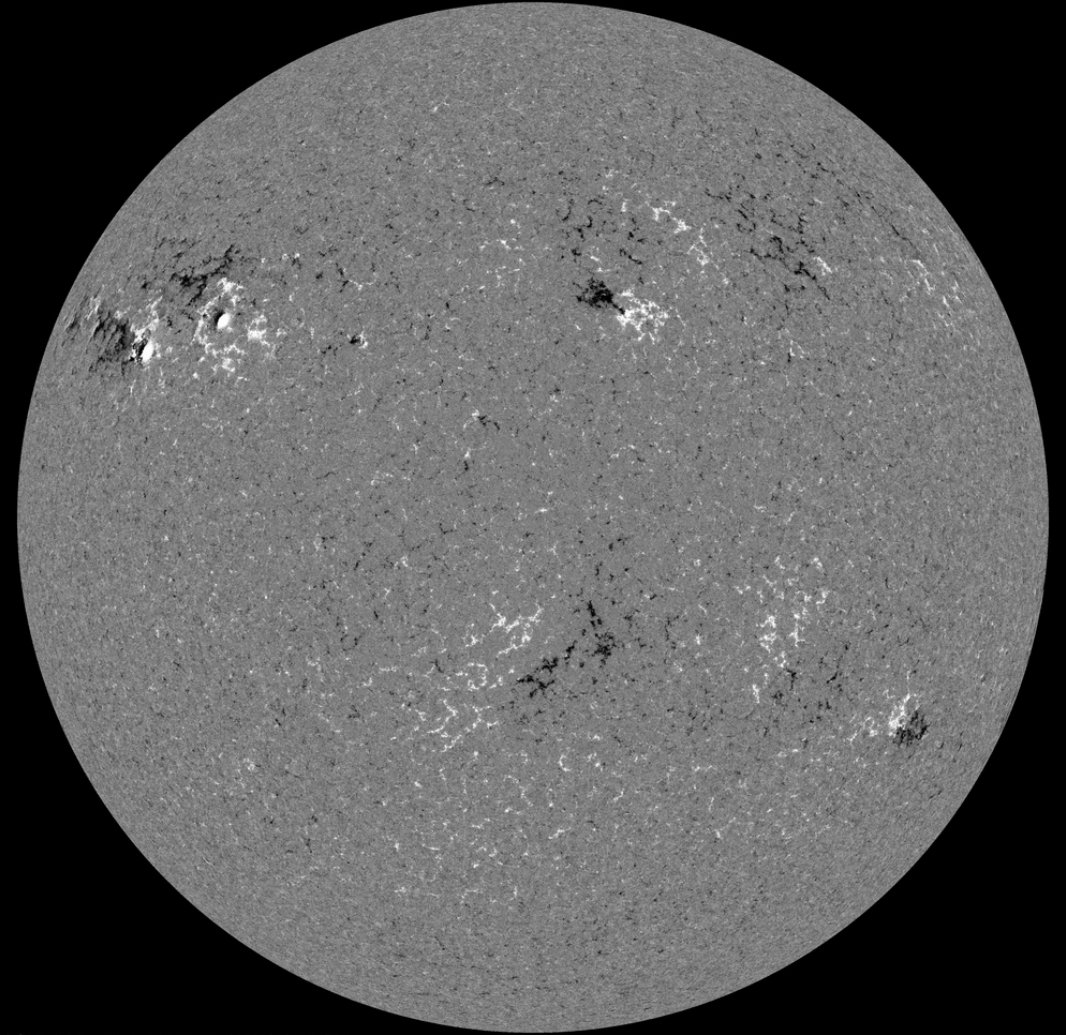
Solar active regions

SDO/HMI White Light 2022-02-23



SDO/HMI Quick-Look Continuum: 20220223_114500

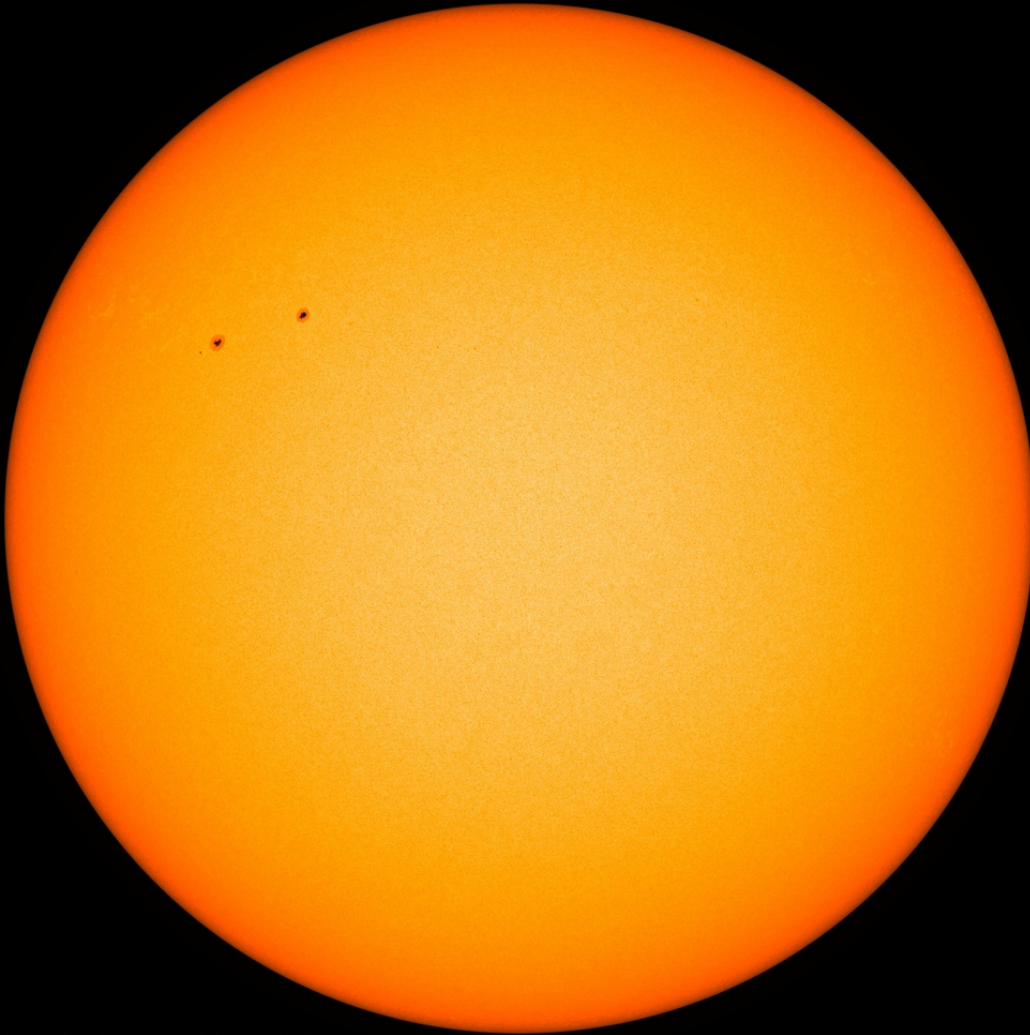
SDO/HMI Magnetogram 2022-02-23



SDO/HMI Quick-Look Magnetogram: 20220223_114500

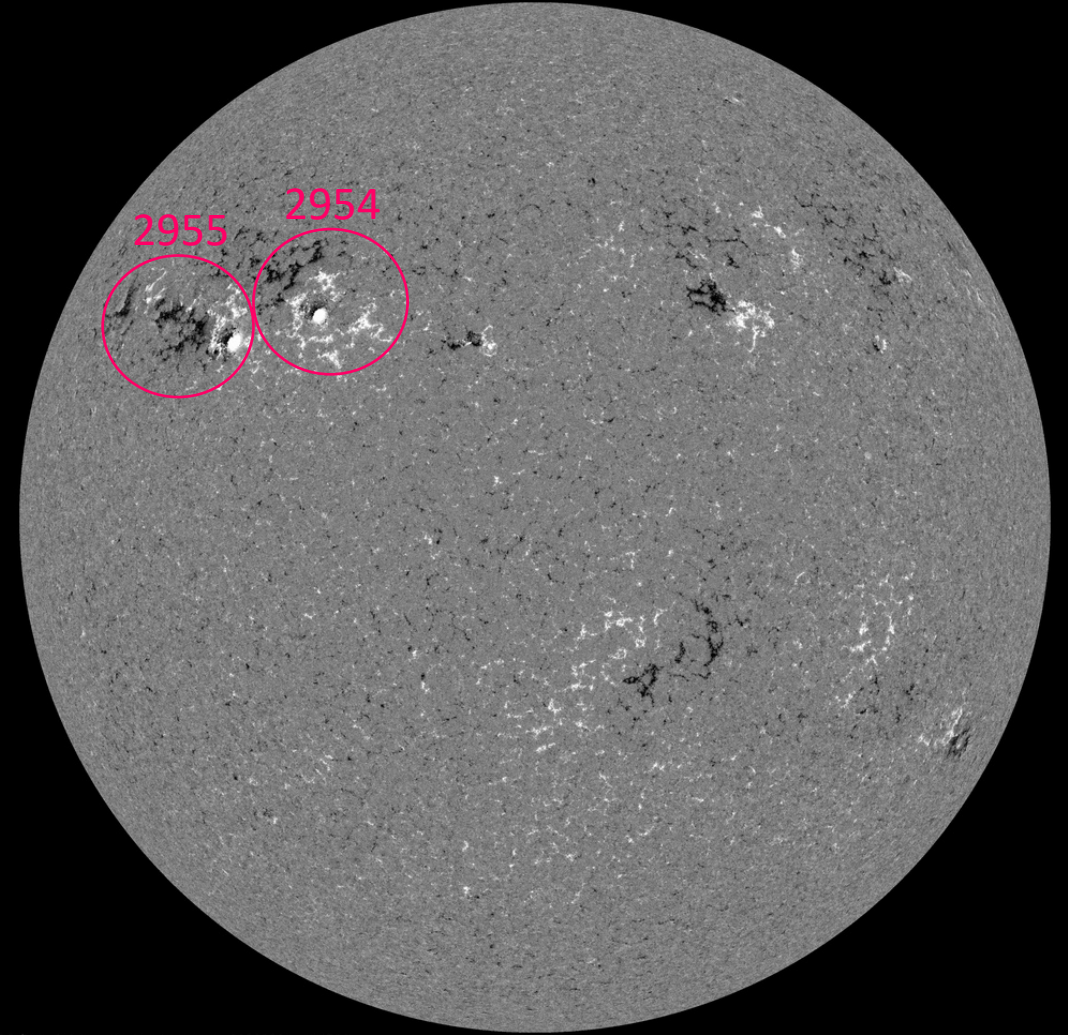
Solar active regions

SDO/HMI White Light 2022-02-24



SDO/HMI Quick-Look Continuum: 20220224_114500

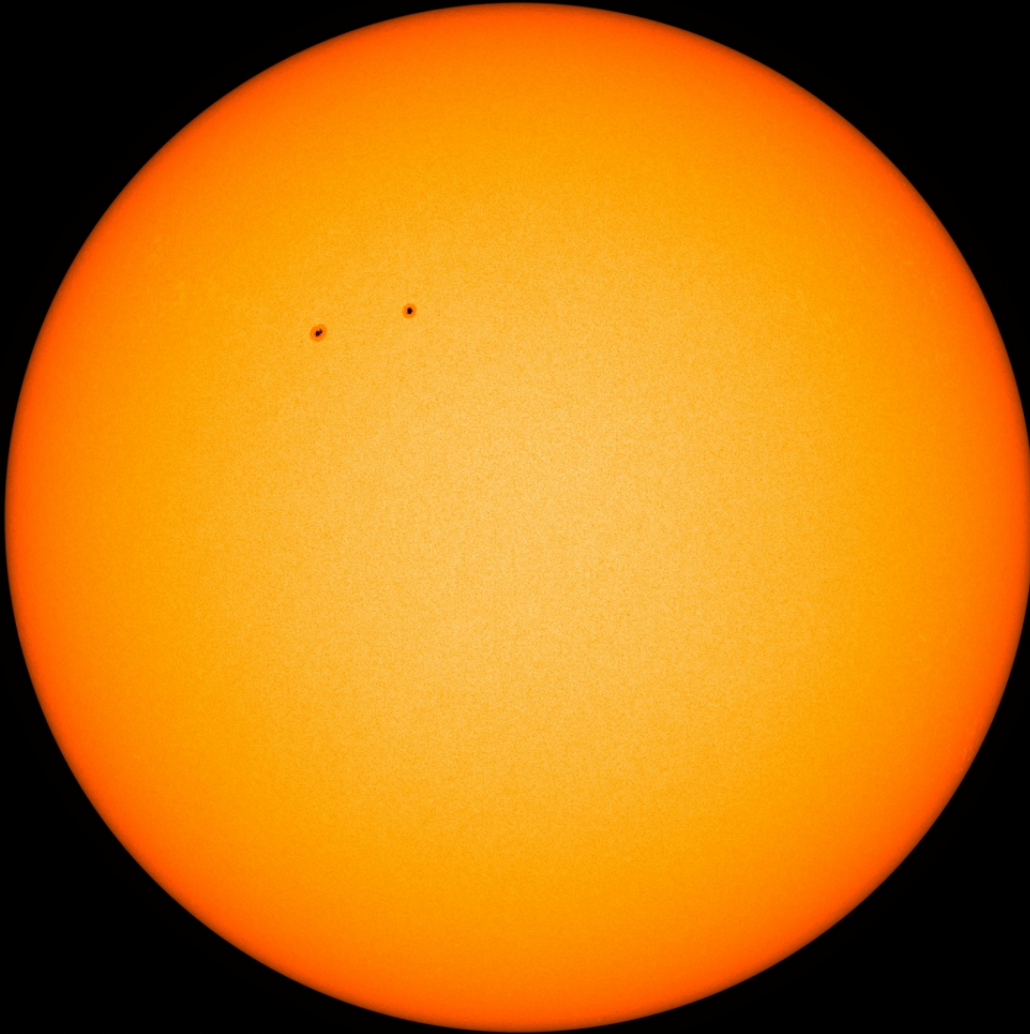
SDO/HMI Magnetogram 2022-02-24



SDO/HMI Quick-Look Magnetogram: 20220224_114500

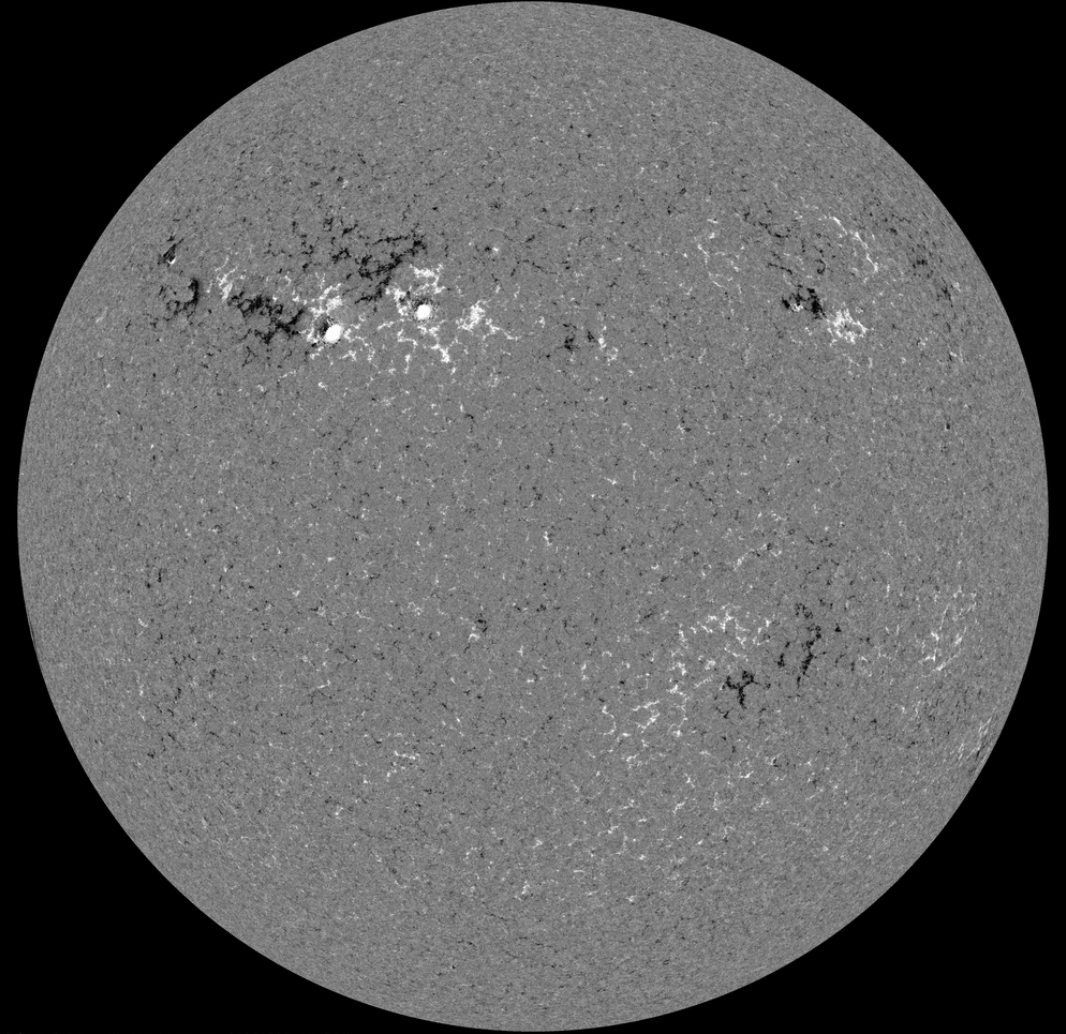
Solar active regions

SDO/HMI White Light 2022-02-25



SDO/HMI Quick-Look Continuum: 20220225_114500

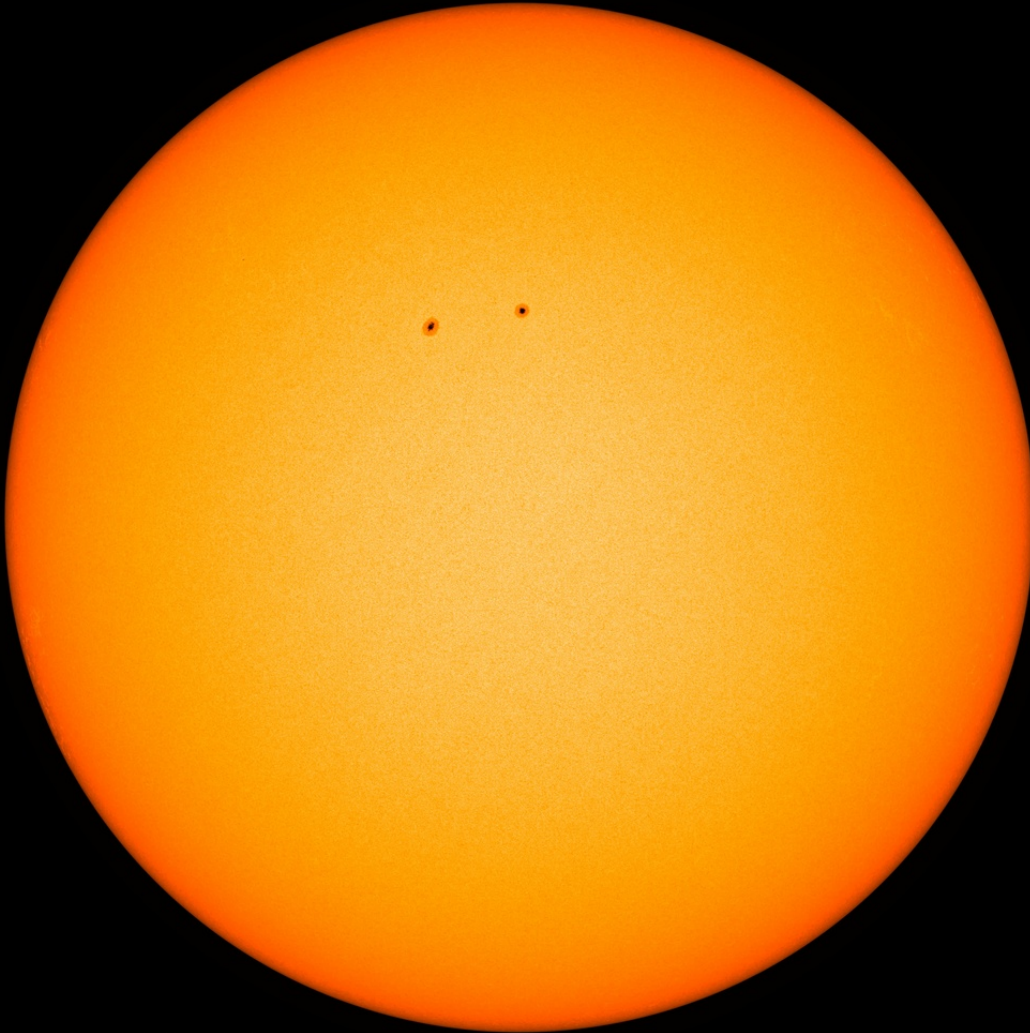
SDO/HMI Magnetogram 2022-02-25



SDO/HMI Quick-Look Magnetogram: 20220225_114500

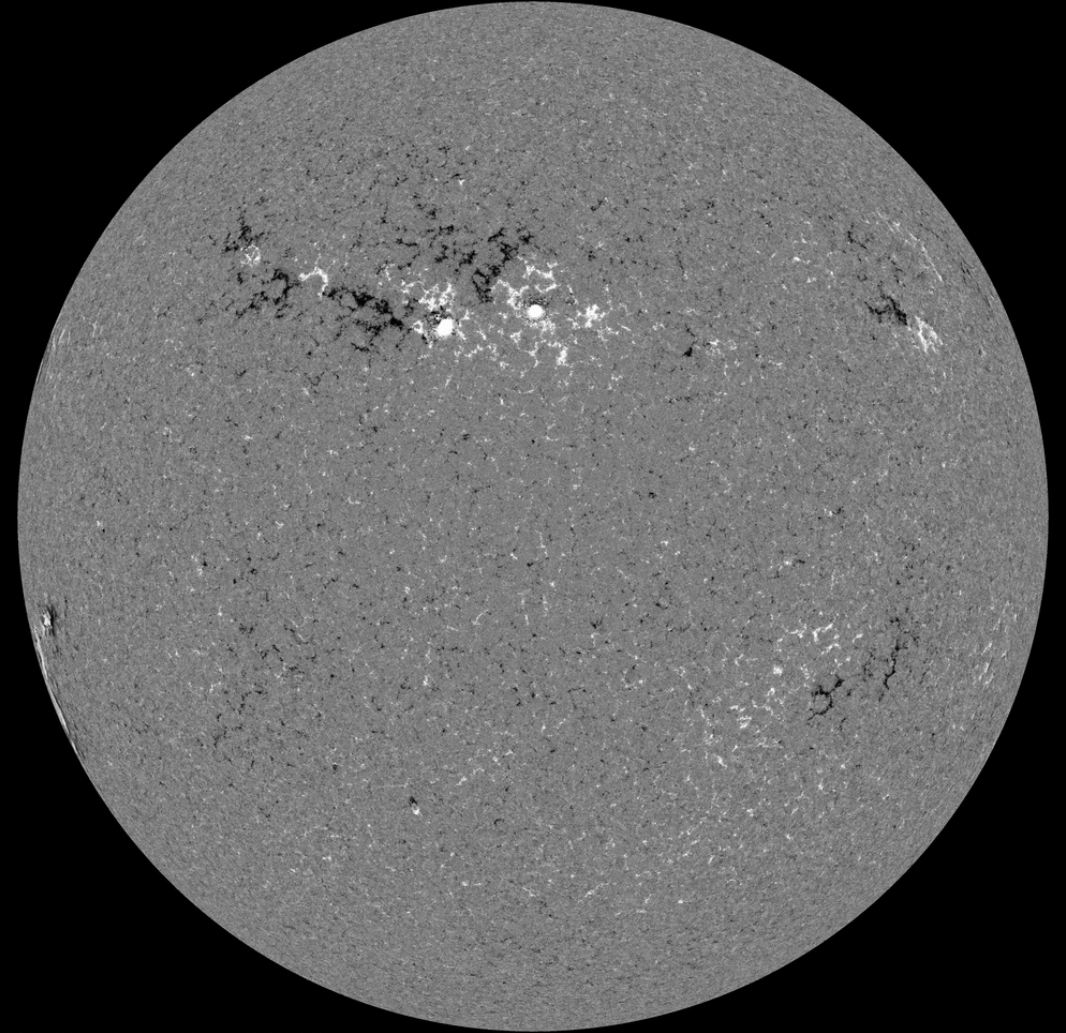
Solar active regions

SDO/HMI White Light 2022-02-26



SDO/HMI Quick-Look Continuum: 20220226_120000

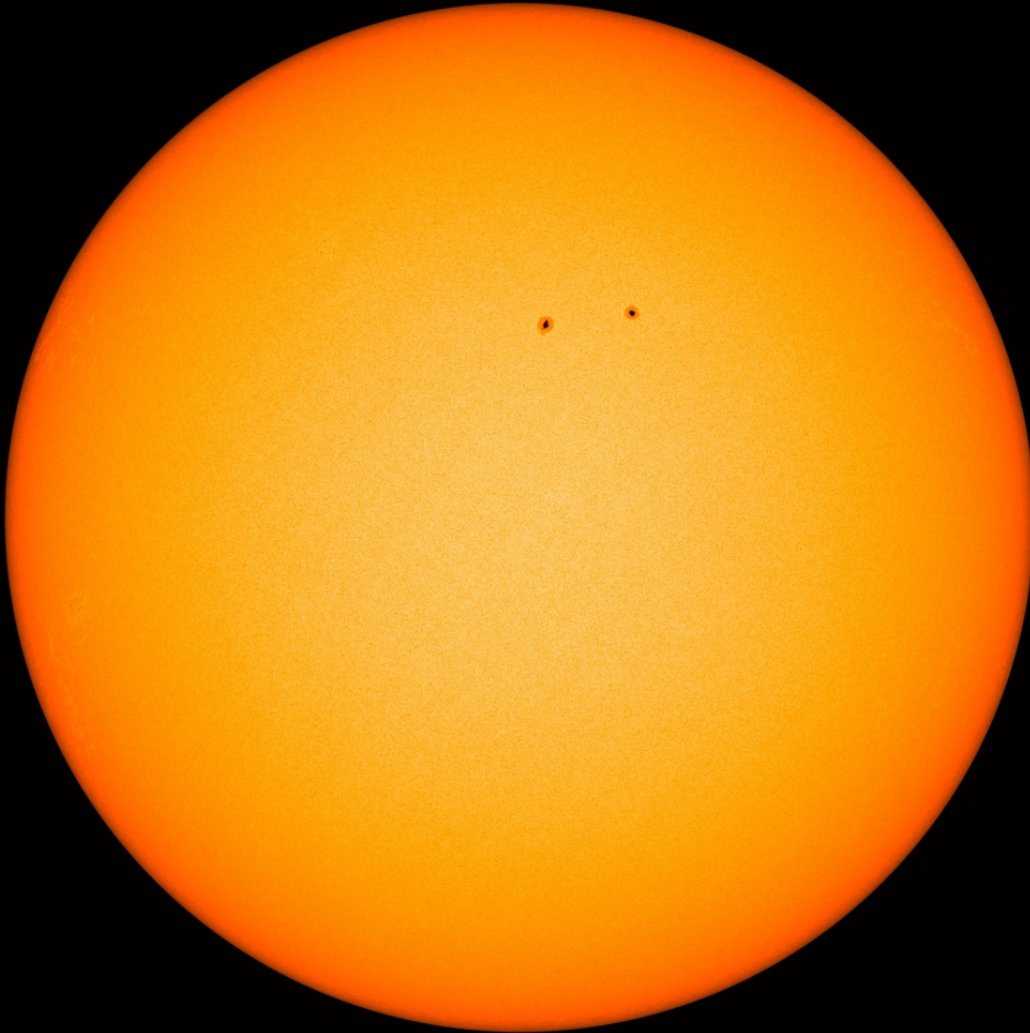
SDO/HMI Magnetogram 2022-02-26



SDO/HMI Quick-Look Magnetogram: 20220226_120000

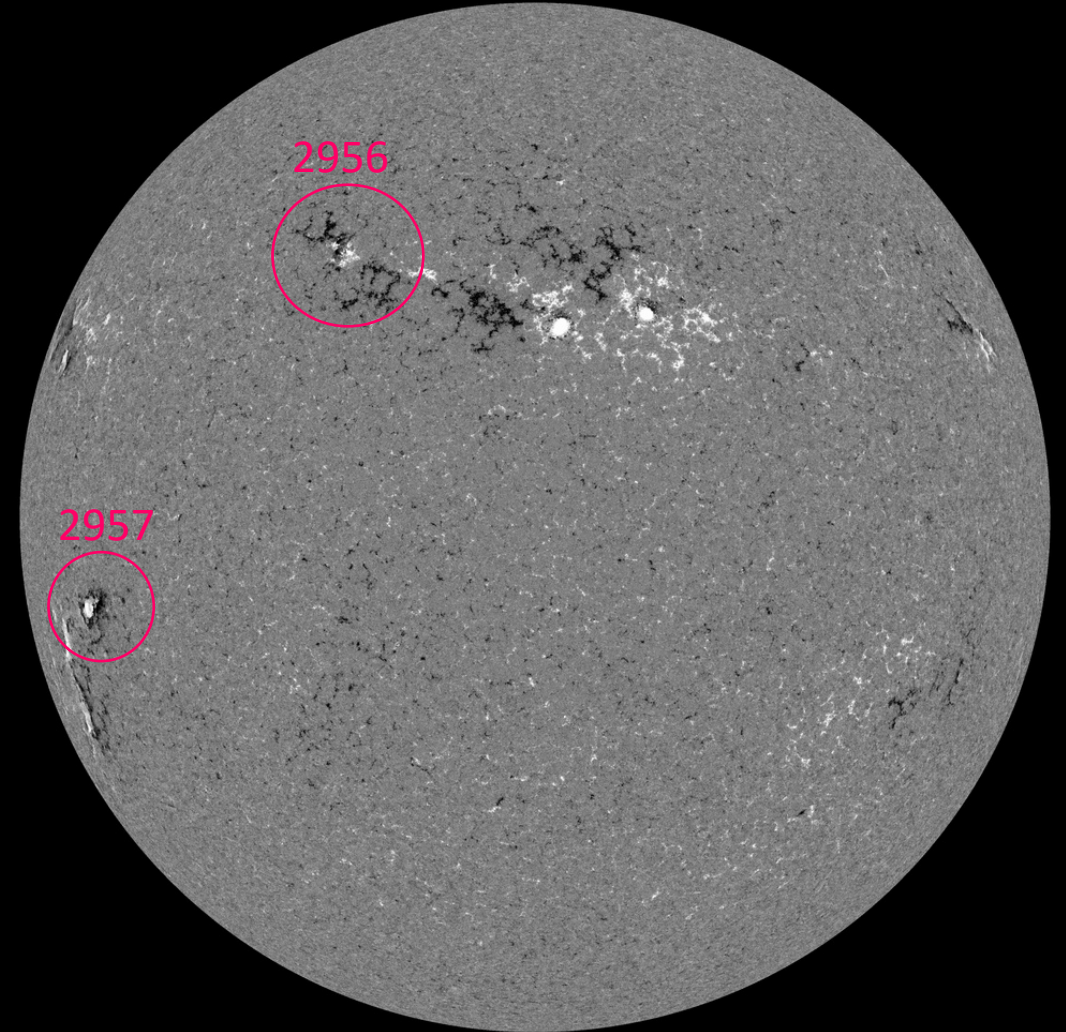
Solar active regions

SDO/HMI White Light 2022-02-27



SDO/HMI Quick-Look Continuum: 20220227_114500

SDO/HMI Magnetogram 2022-02-27

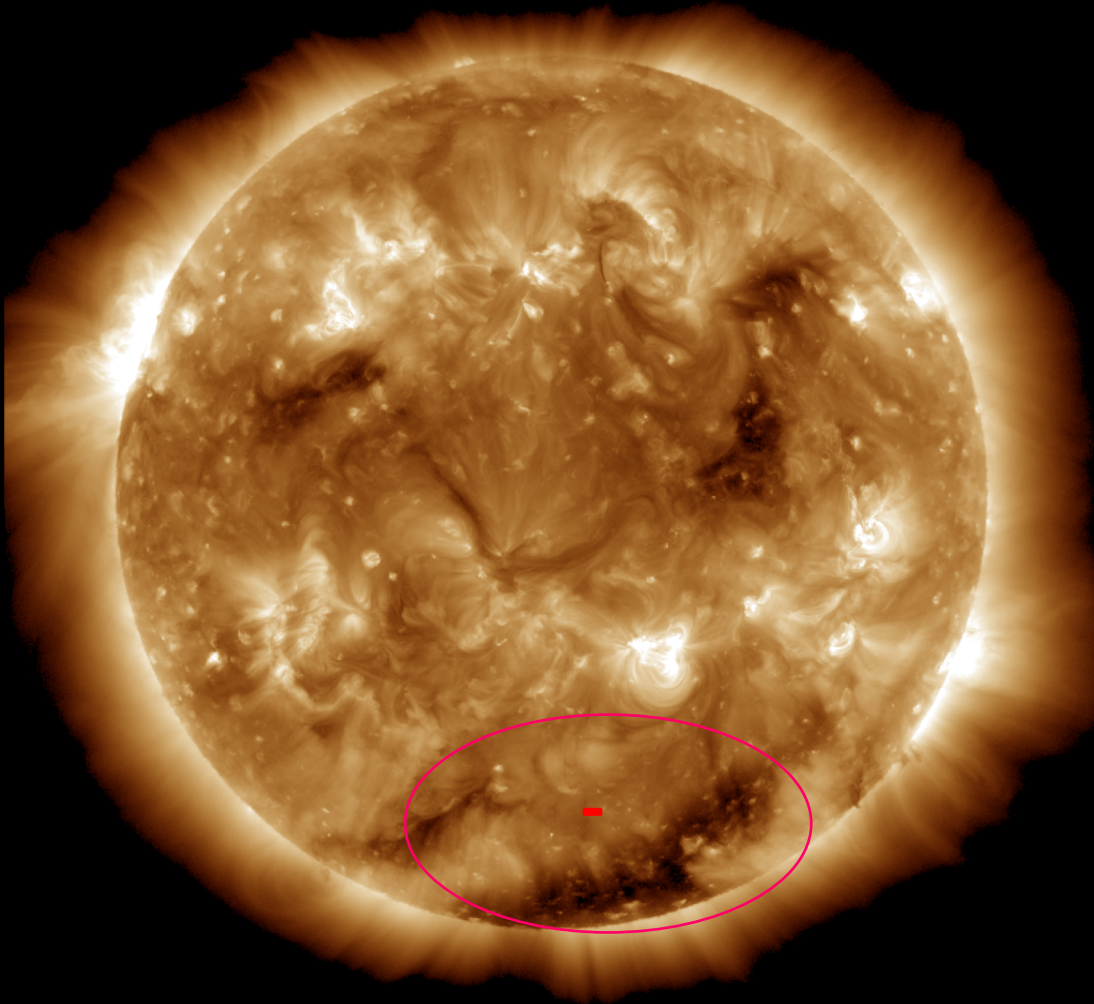


SDO/HMI Quick-Look Magnetogram: 20220227_114500

Coronal holes

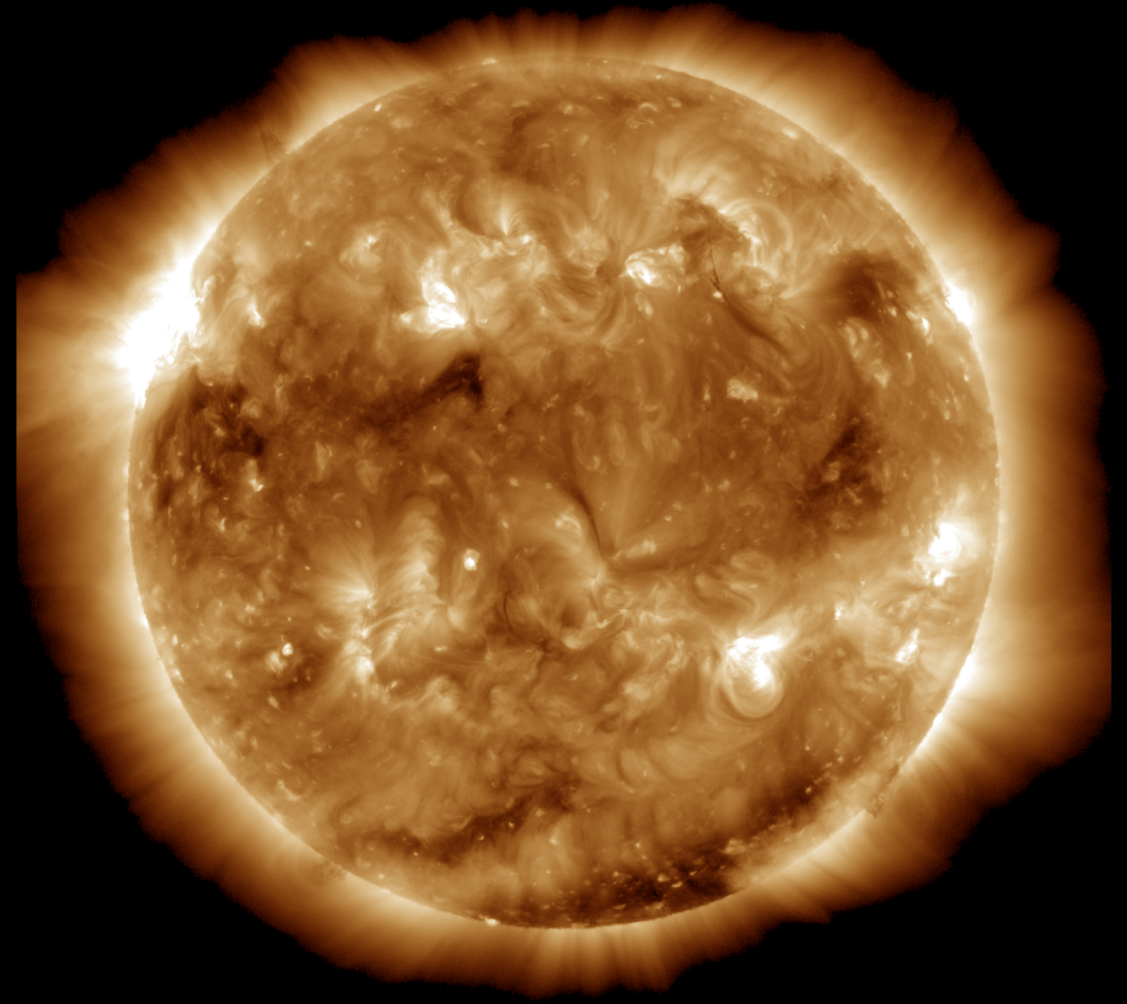
SDO/AIA 19.3 nm 2022-02-20

SDO/AIA AIA 193Å 2022-02-20T12:00:05.843



SDO/AIA 19.3 nm 2022-02-21

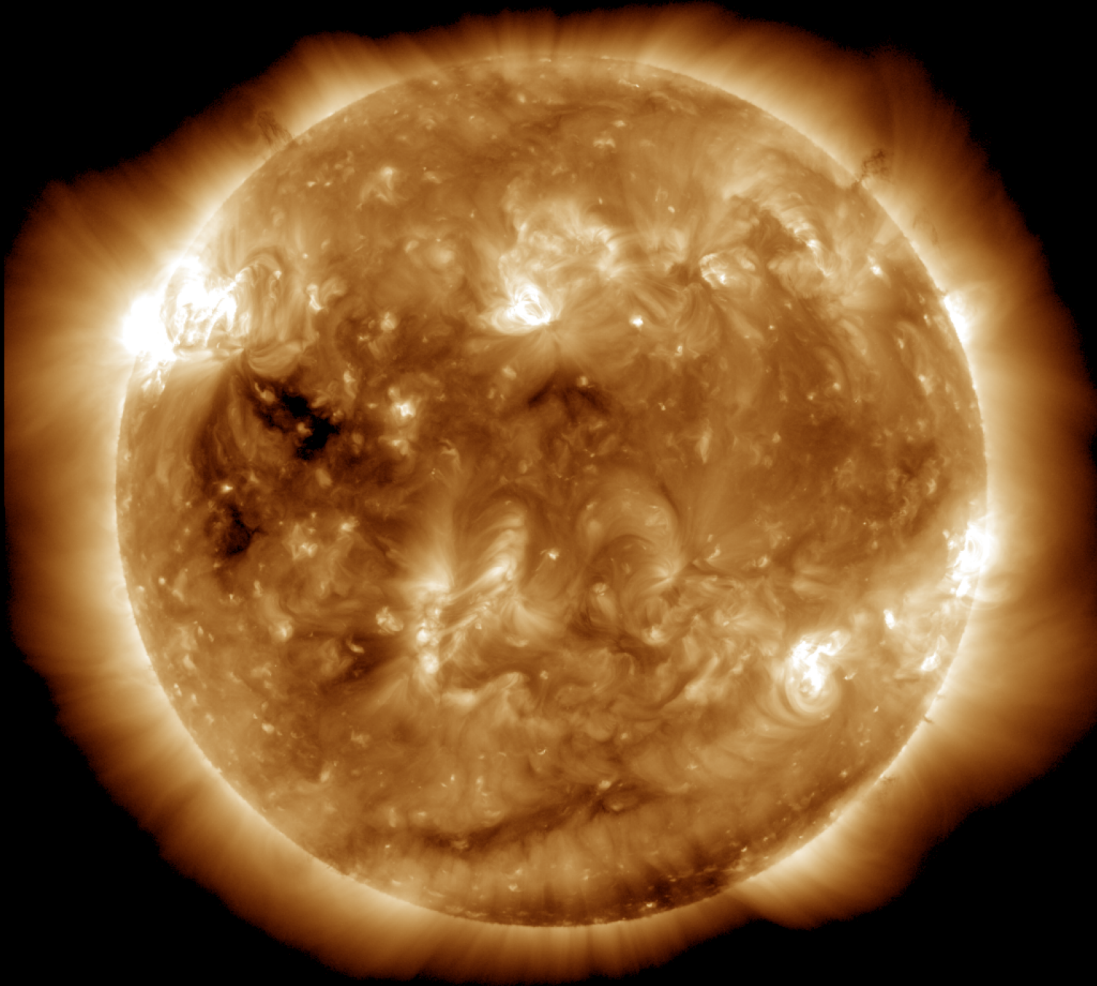
SDO/AIA AIA 193Å 2022-02-21T12:00:05.843



Coronal holes

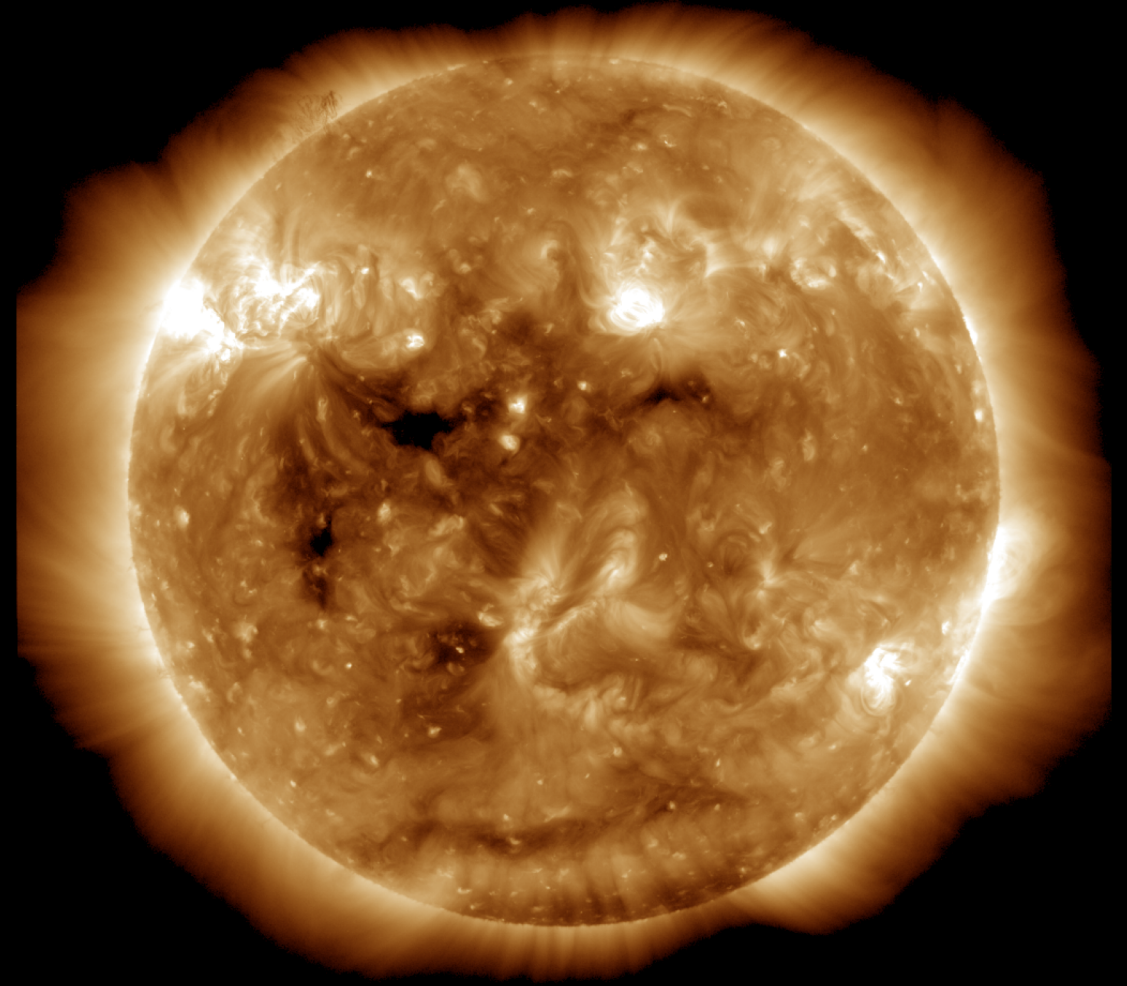
SDO/AIA 19.3 nm 2022-02-22

SDO/AIA AIA 193Å 2022-02-22T12:00:05.847



SDO/AIA 19.3 nm 2022-02-23

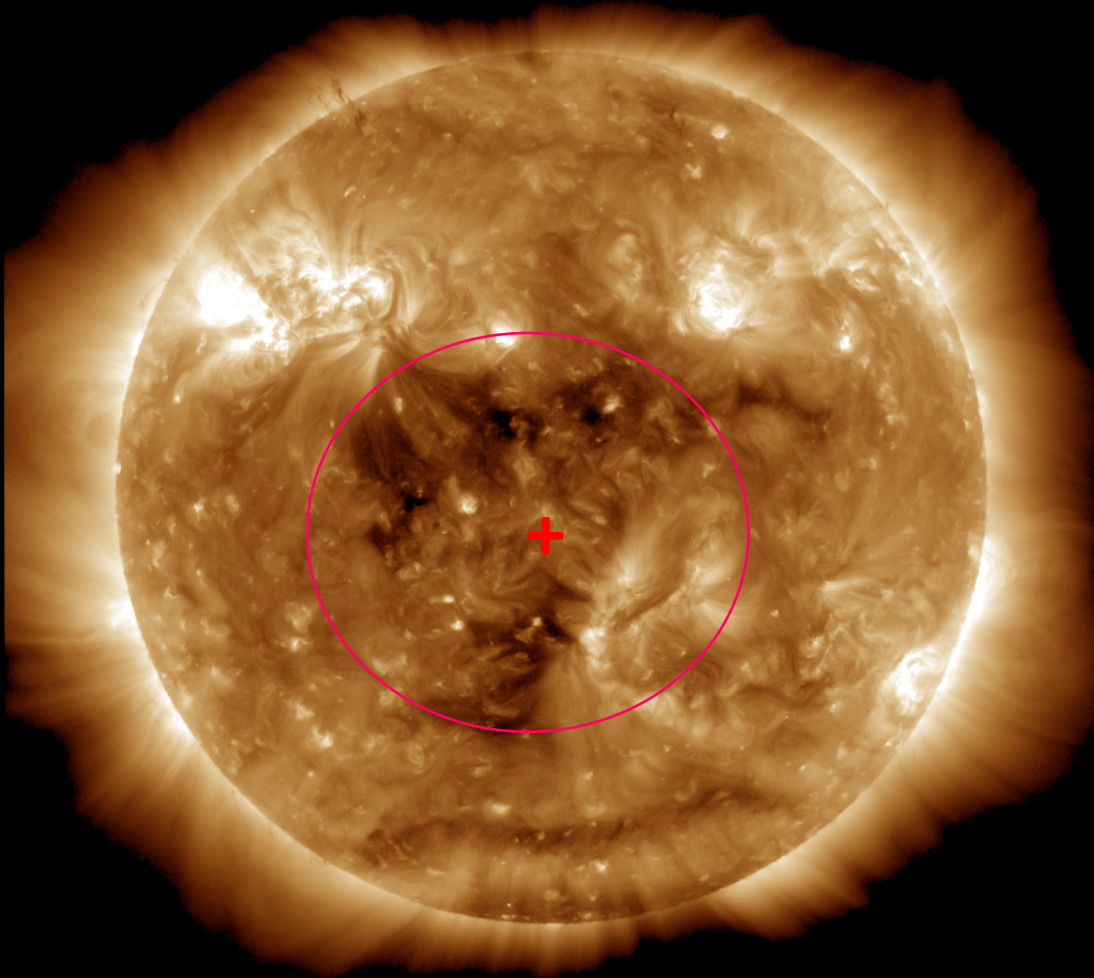
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Coronal holes

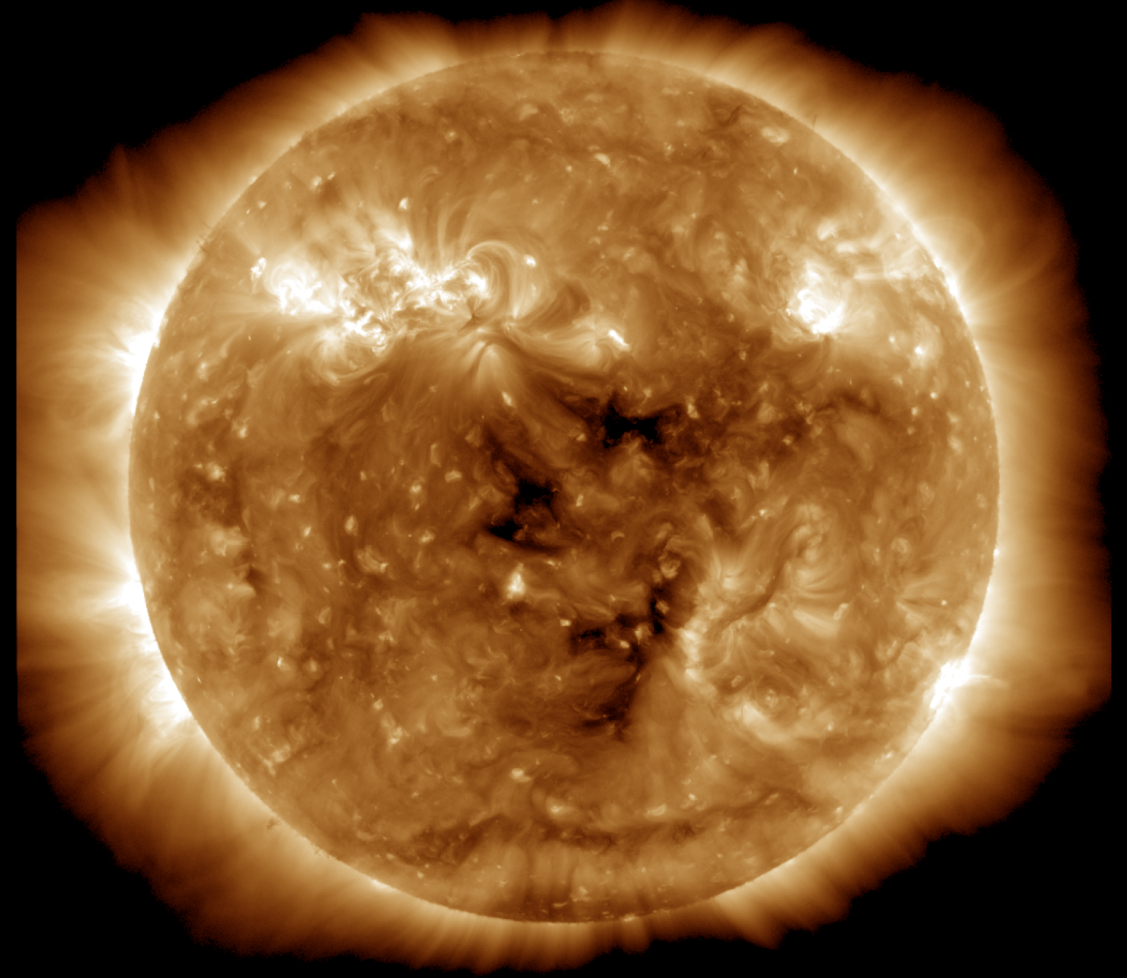
SDO/AIA 19.3 nm 2022-02-24

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SDO/AIA 19.3 nm 2022-02-25

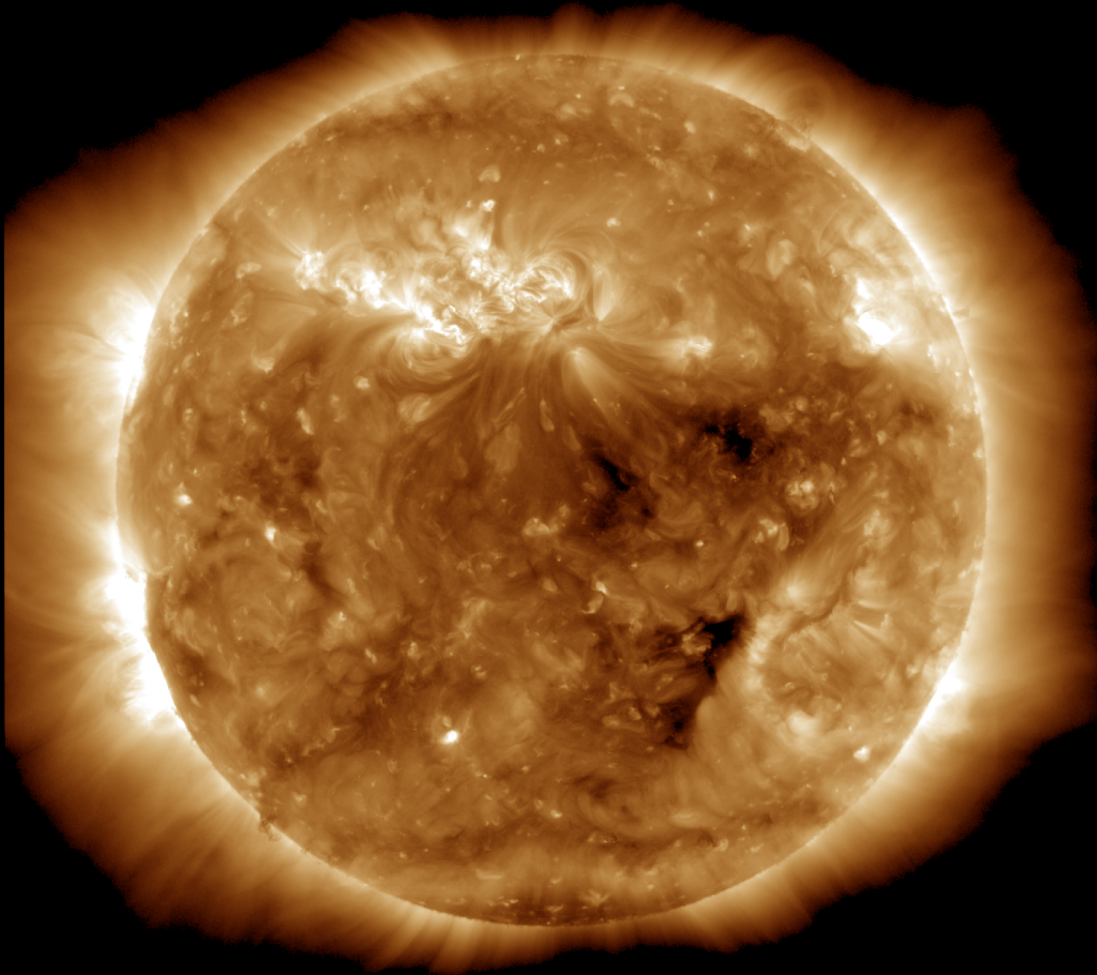
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Coronal holes

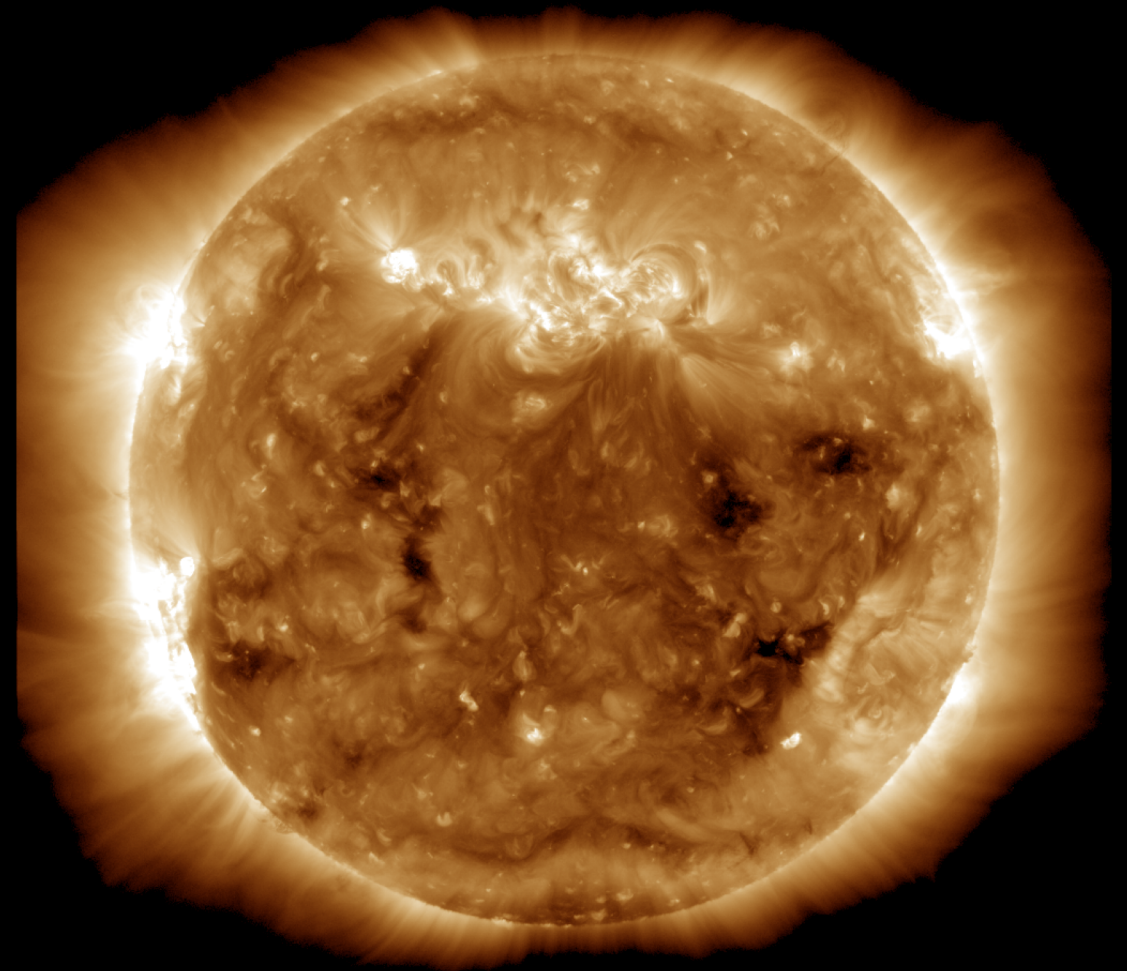
SDO/AIA 19.3 nm 2022-02-26

SDO/AIA AIA 193Å 2022-02-26T12:00:05.843



SDO/AIA 19.3 nm 2022-02-27

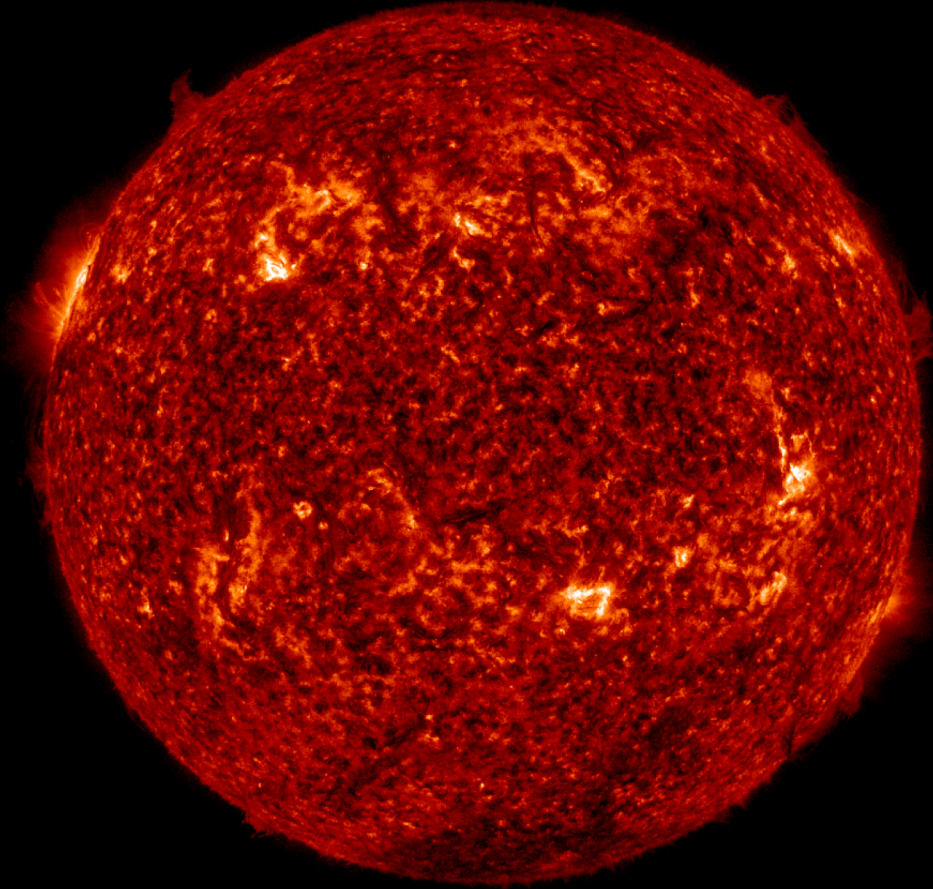
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Filaments

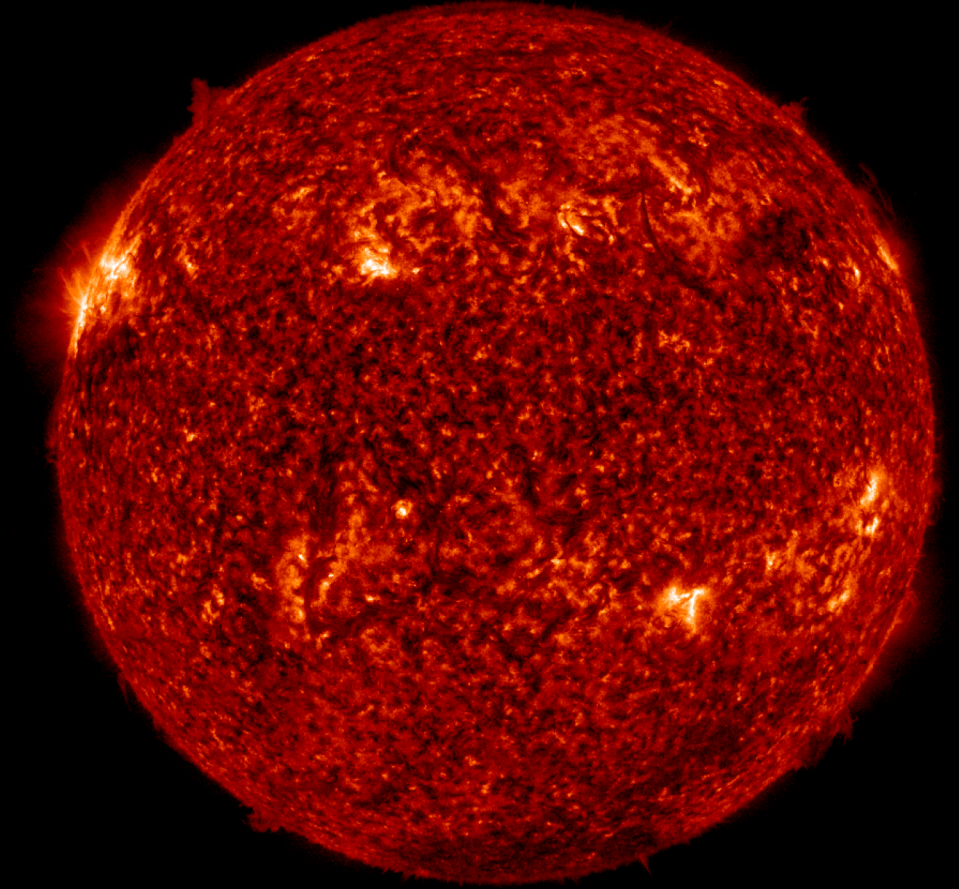
SDO/AIA 30.4 nm 2022-02-20

SDO/AIA AIA 304Å 2022-02-20T12:00:06.580



SDO/AIA 30.4 nm 2022-02-21

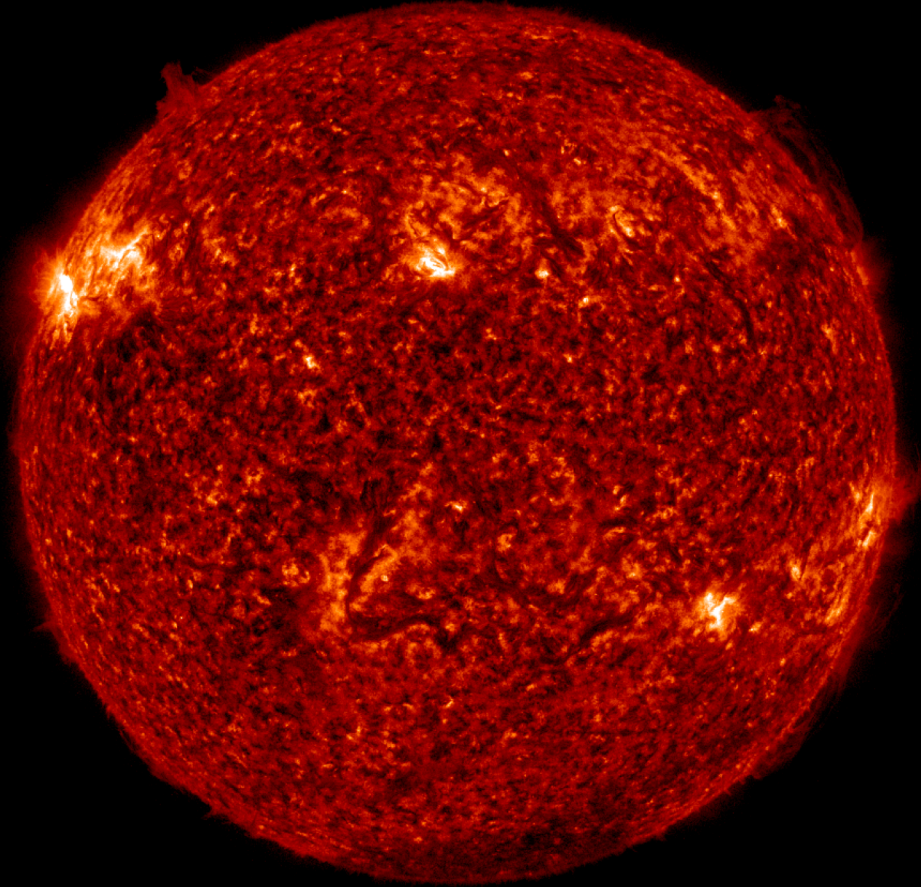
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Filaments

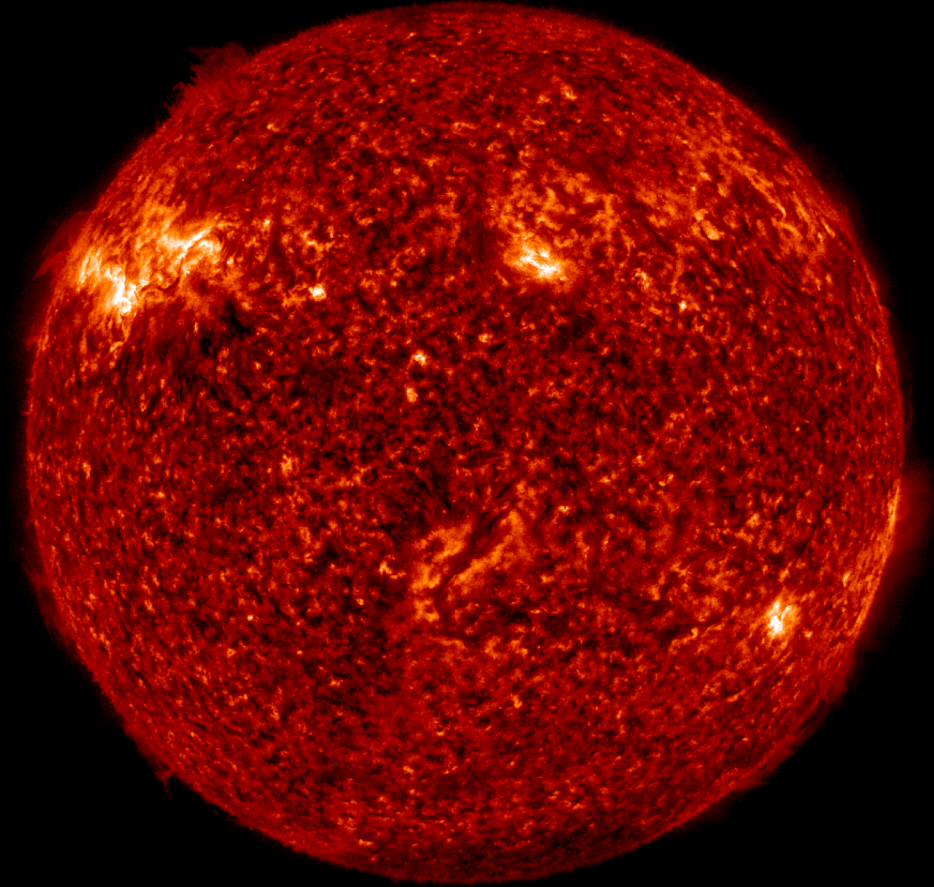
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SDO/AIA AIA 304Å 2022-02-22T12:00:06.597



SDO/AIA 30.4 nm 2022-02-23

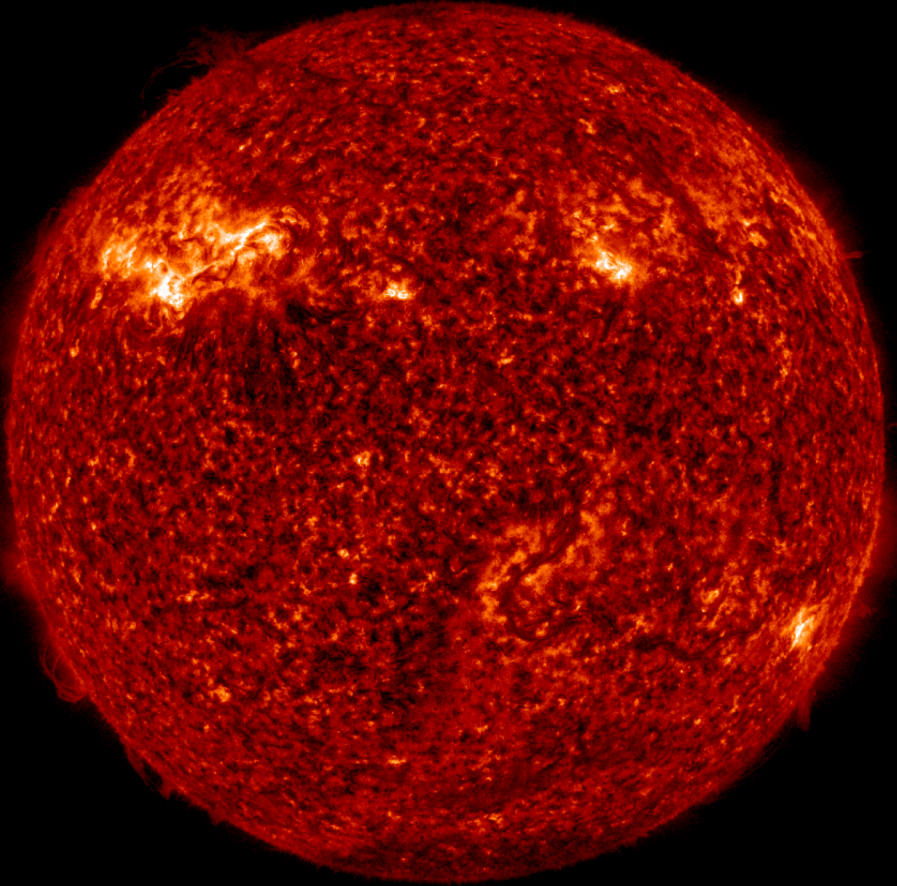
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Filaments

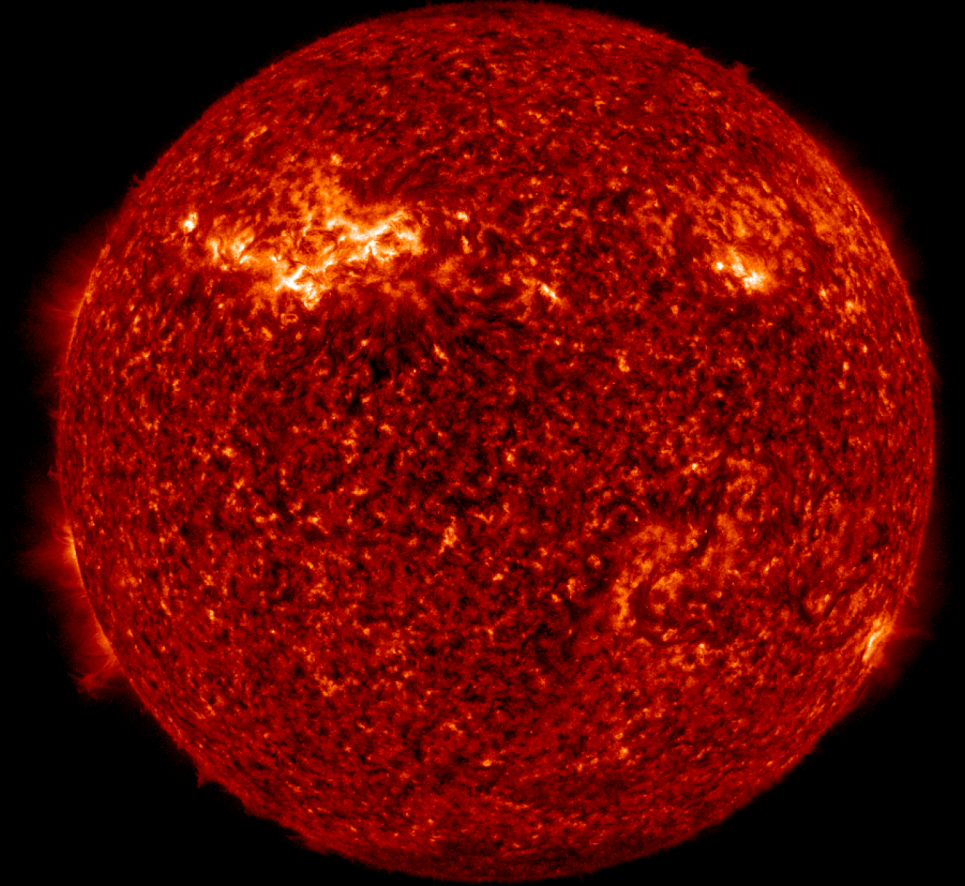
SDO/AIA 30.4 nm 2022-02-24

SDO/AIA AIA 304Å 2022-02-24T12:00:06.580



SDO/AIA 30.4 nm 2022-02-25

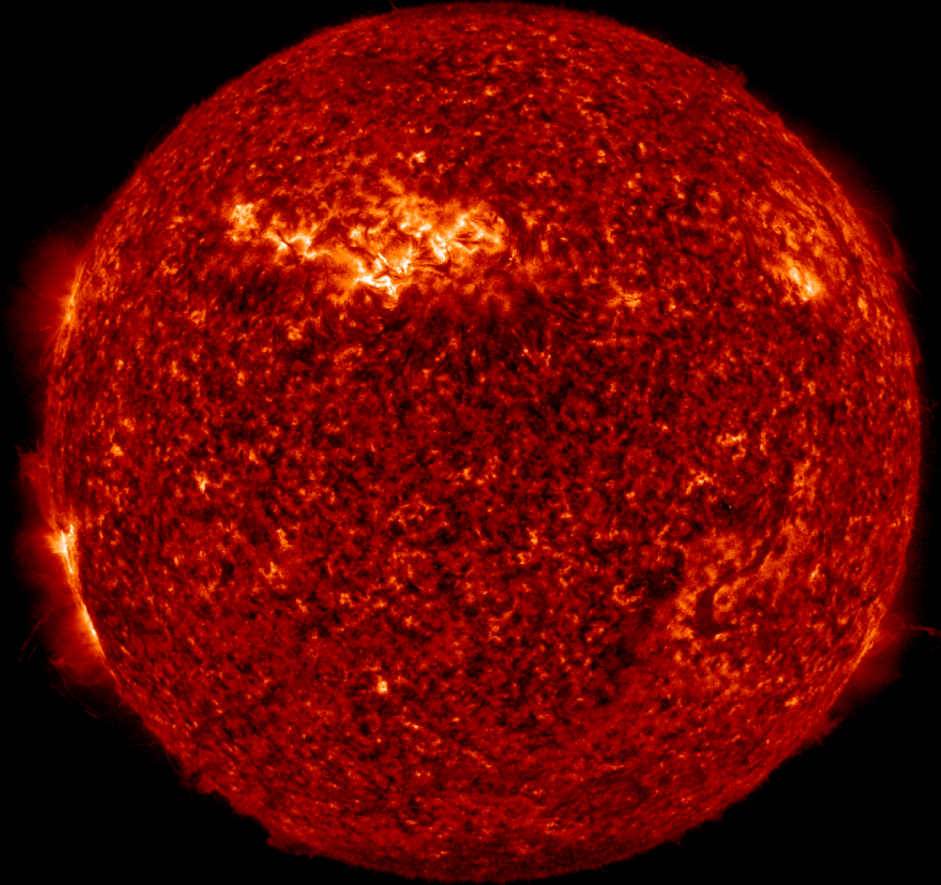
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Filaments

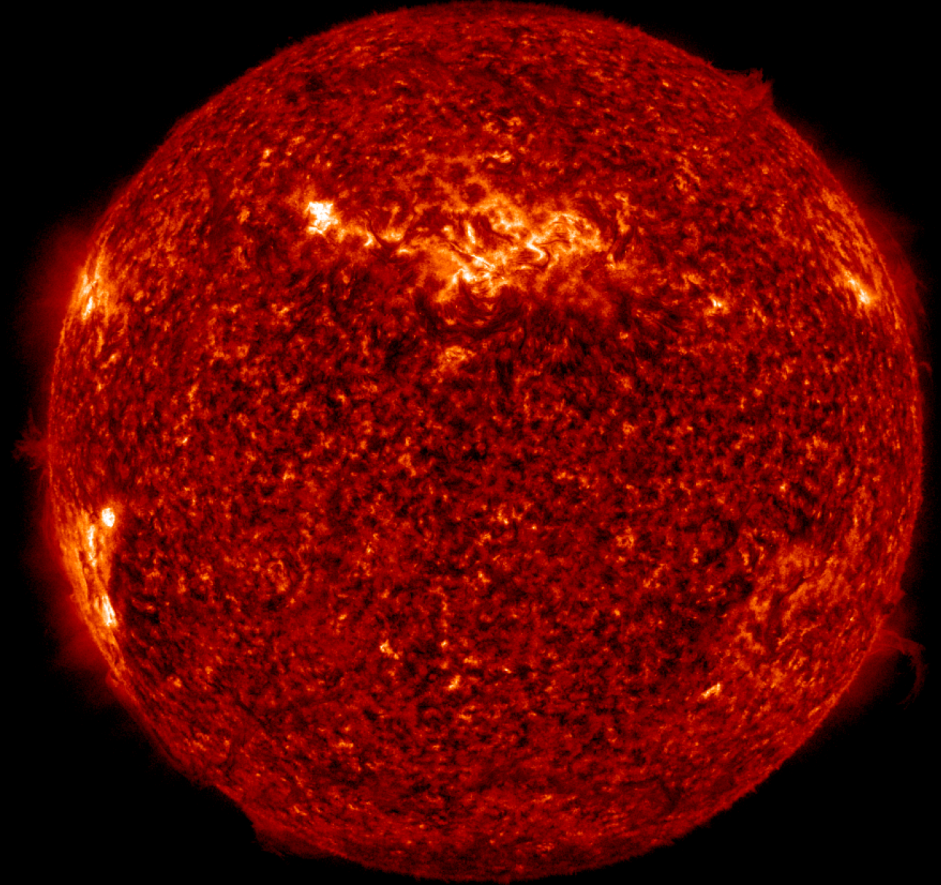
SDO/AIA 30.4 nm 2022-02-26

SDO/AIA AIA 304Å 2022-02-26T12:00:06.580

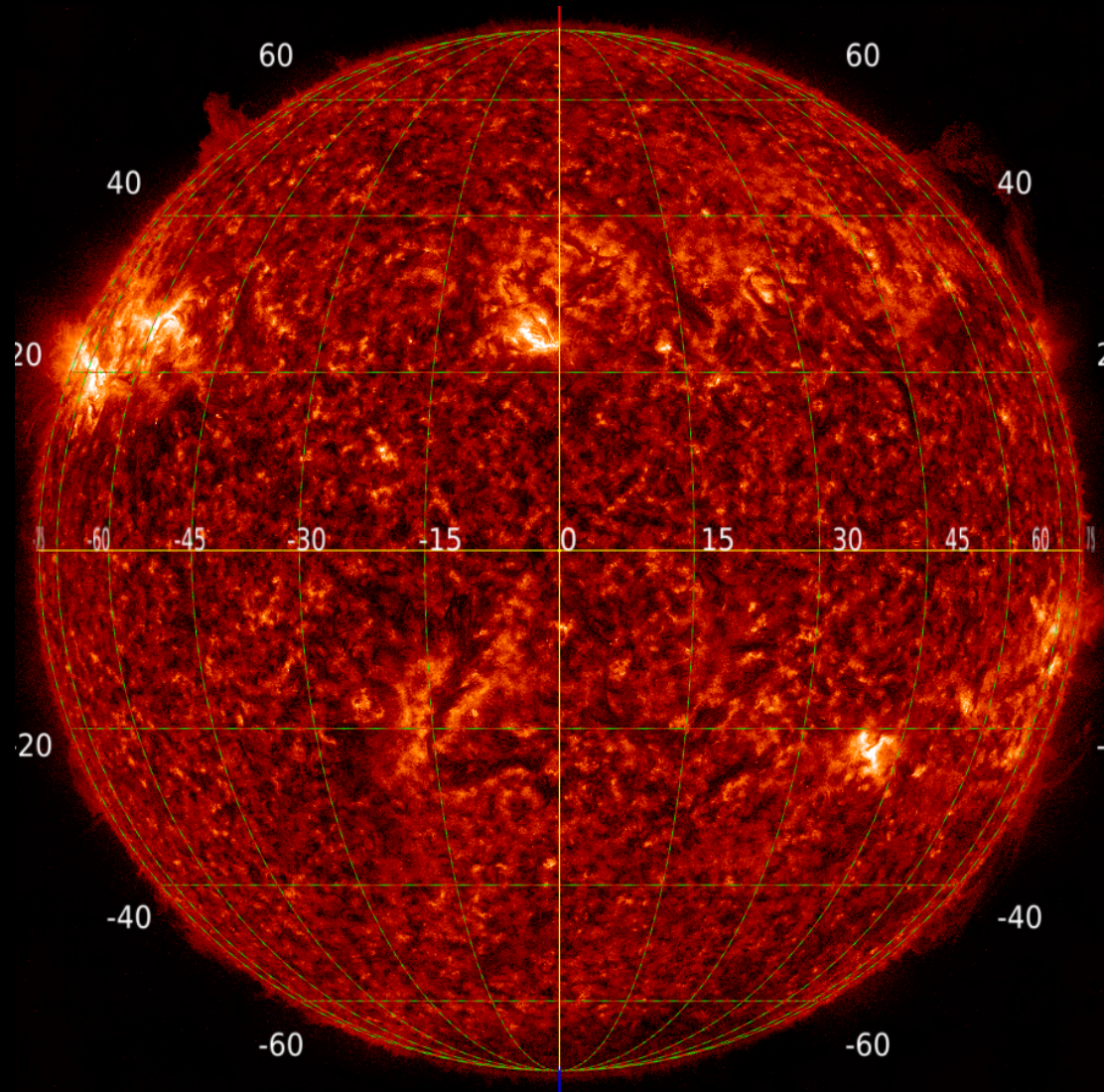


SDO/AIA 30.4 nm 2022-02-27

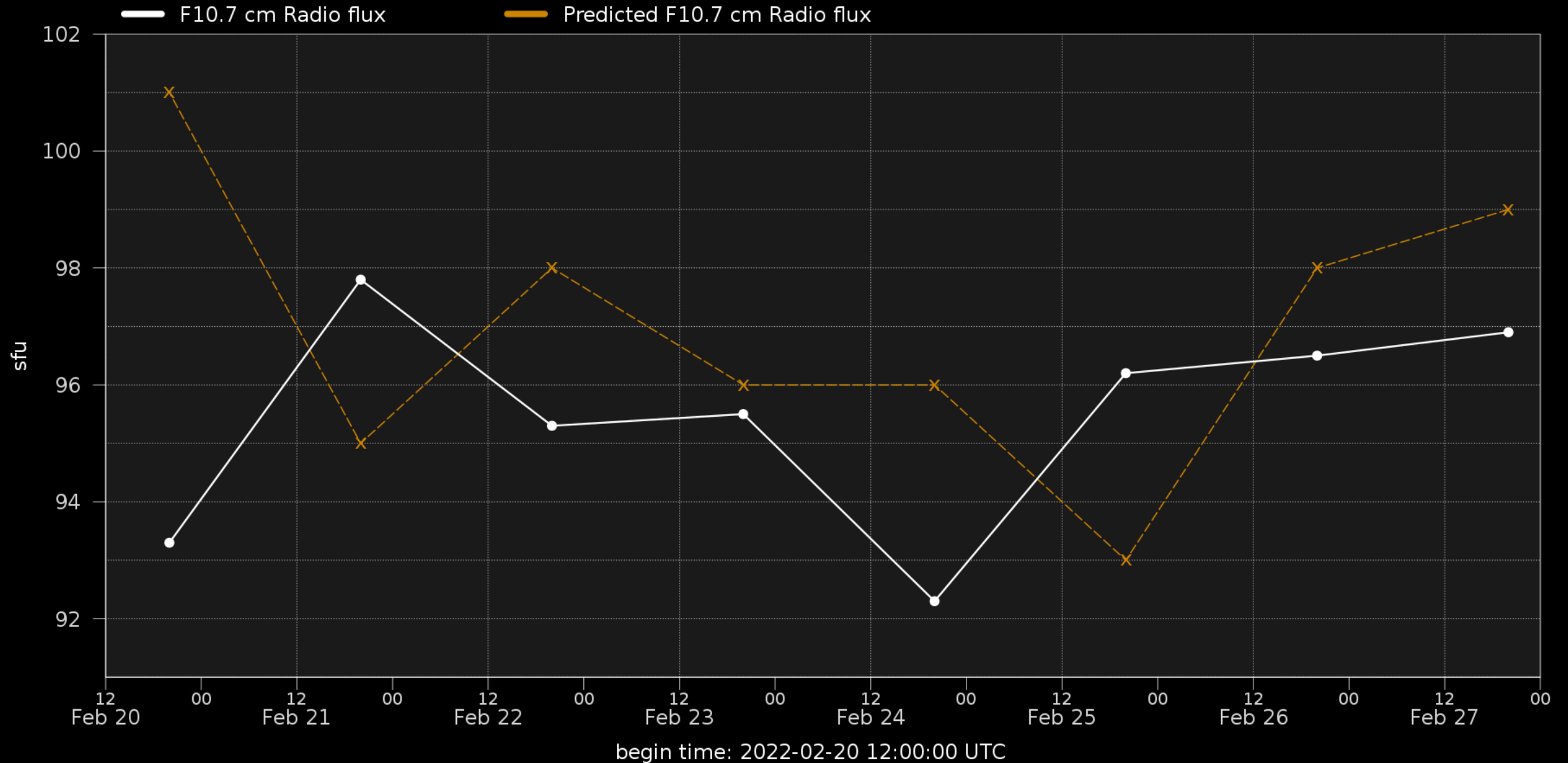
SDO/AIA AIA 304Å 2022-02-27T12:00:06.580



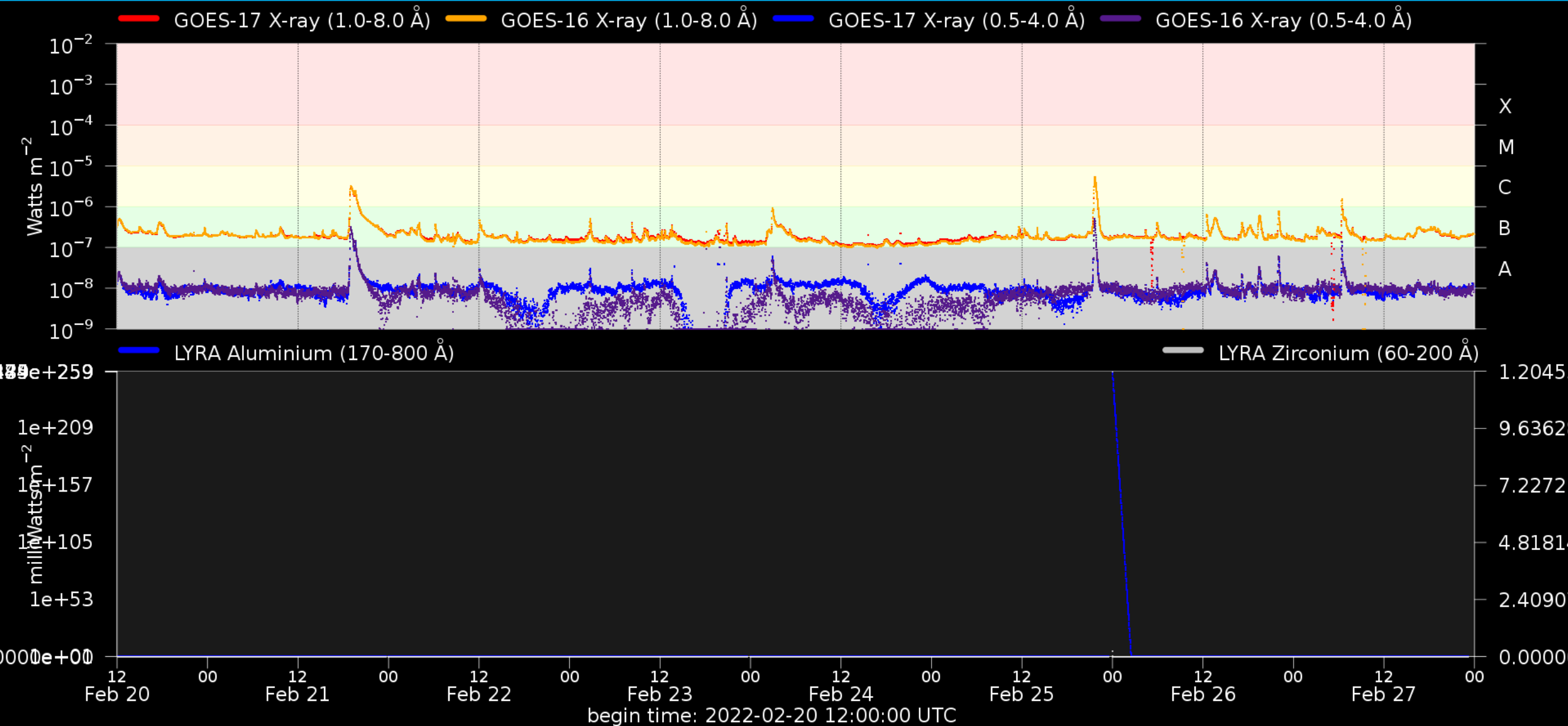
Filaments & Filament eruptions



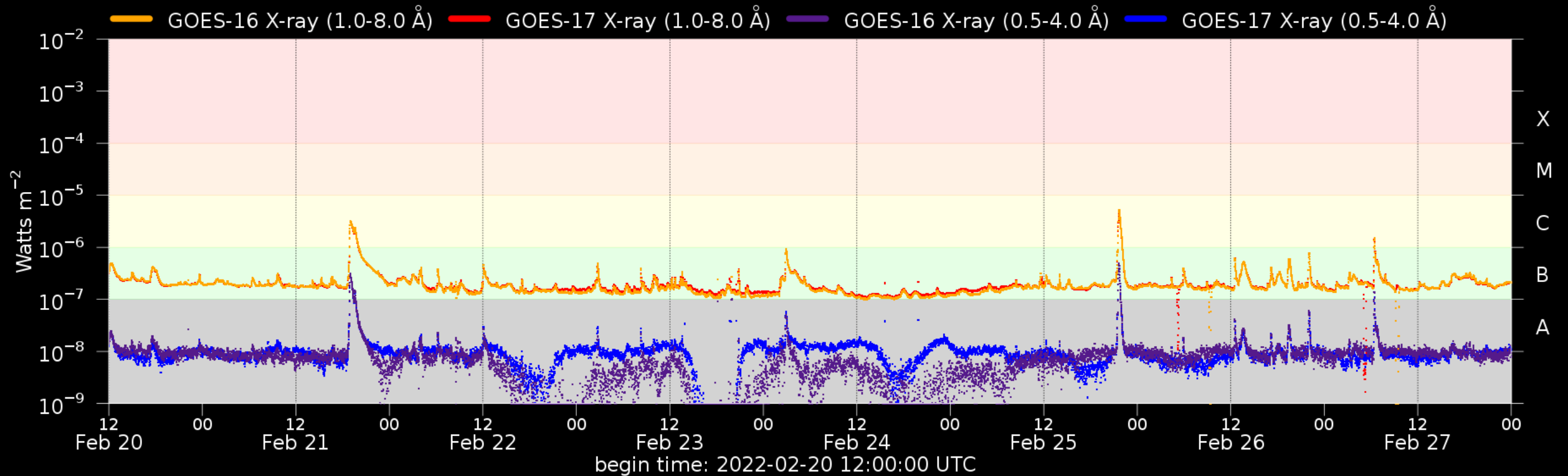
Solar F10.7cm radio flux



Solar X-Ray and UV flux



Flaring activity



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

Issue date	2022-02-20	2022-02-21	2022-02-22	2022-02-23	2022-02-24	2022-02-25	2022-02-26	2022-02-27
Probability (%)	55 10 01	50 05 01	60 05 01	55 05 01	50 05 01	40 01 01	70 20 01	70 10 01
Observed (#)	00 00 00	00 00 00	00 00 00	00 00 00	00 00 00	01 00 00	01 00 00	00 00 00

Coronal Mass Ejections

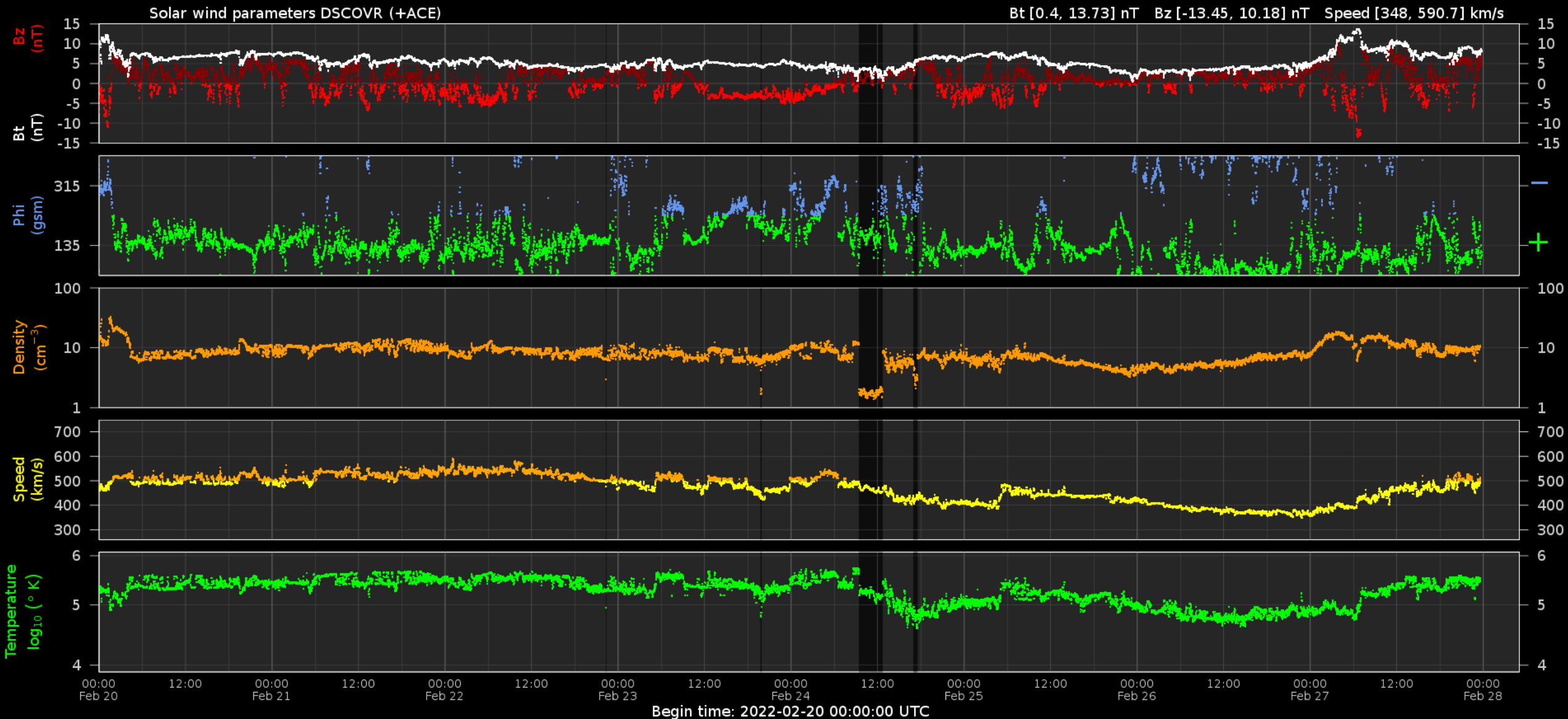


Solar Wind and Geomagnetic Activity

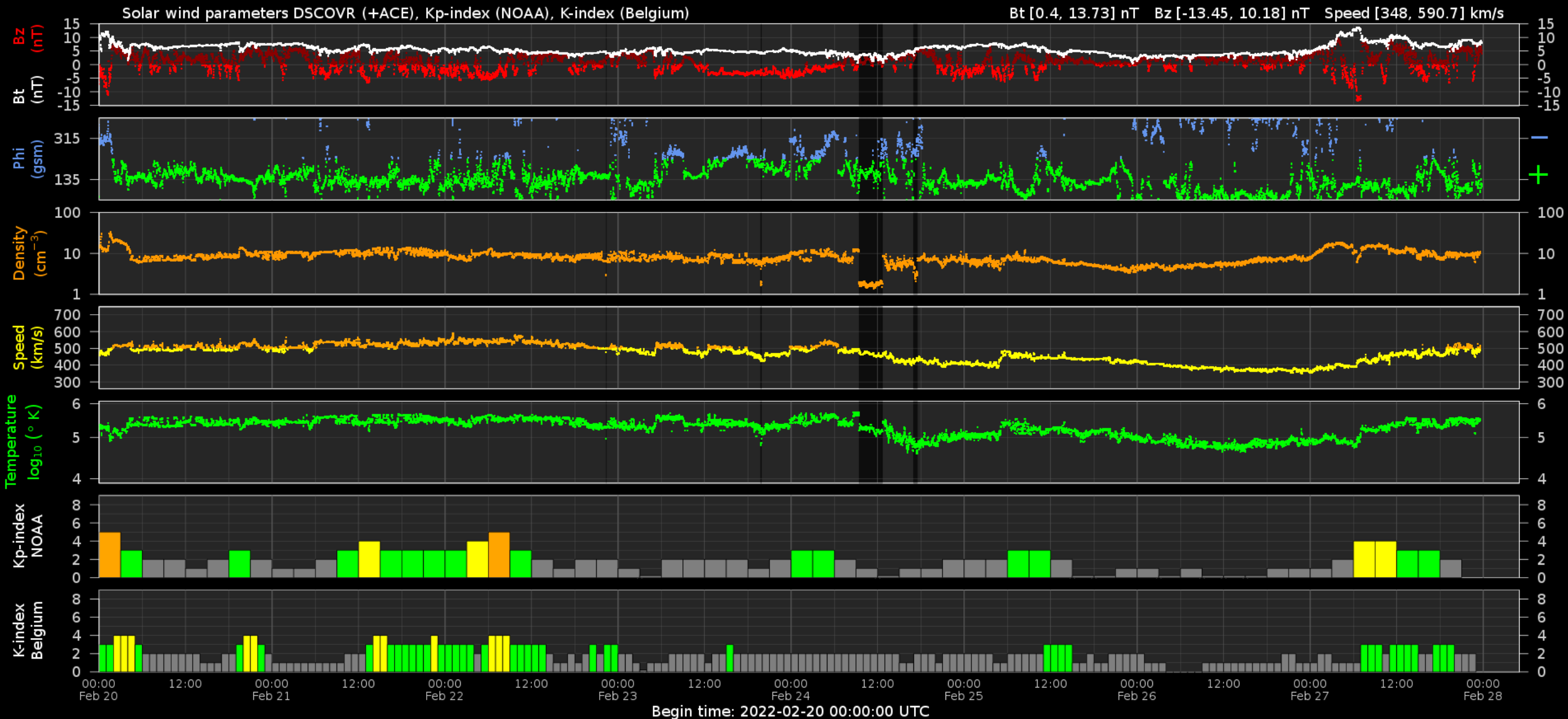


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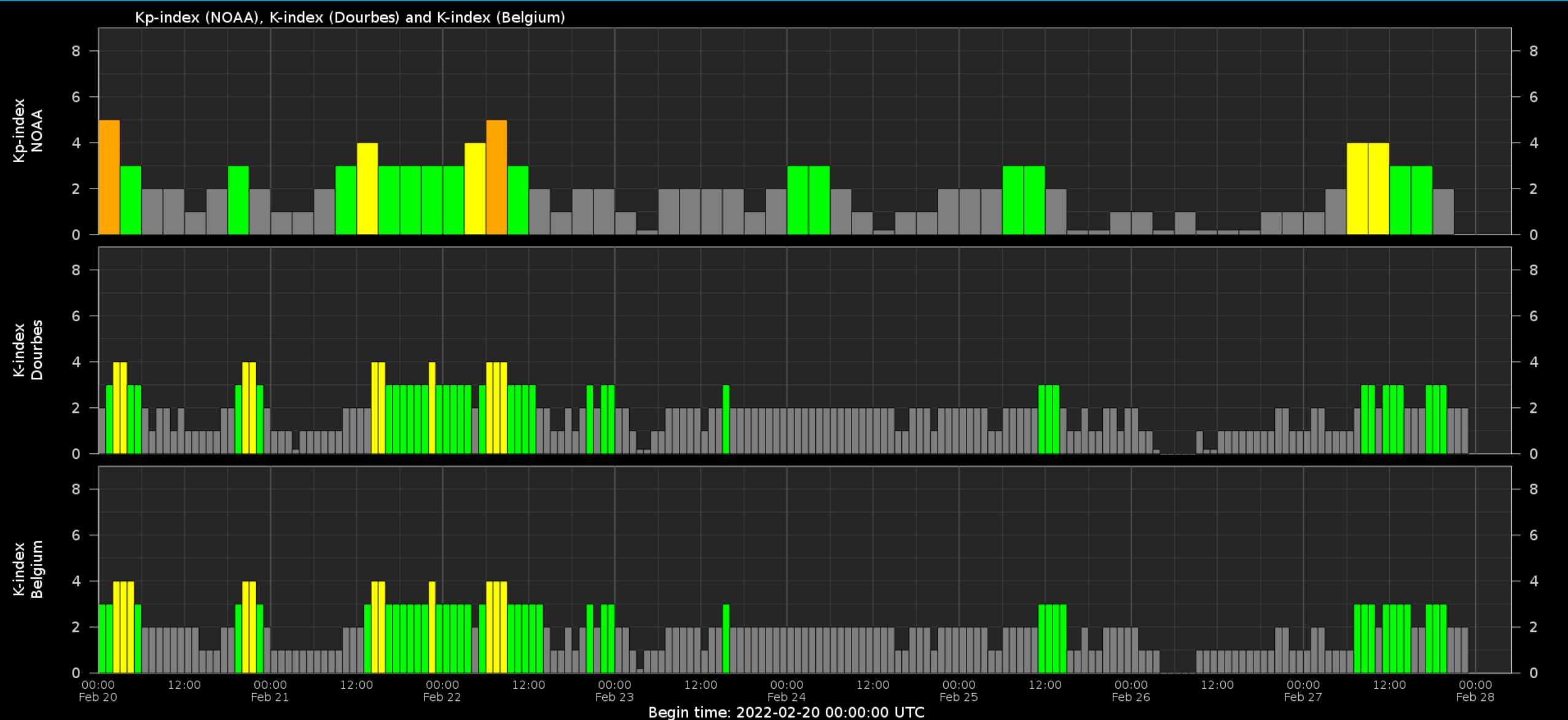
Solar wind parameters



Solar wind parameters & K-indices



Geomagnetic activity (K-indexes)

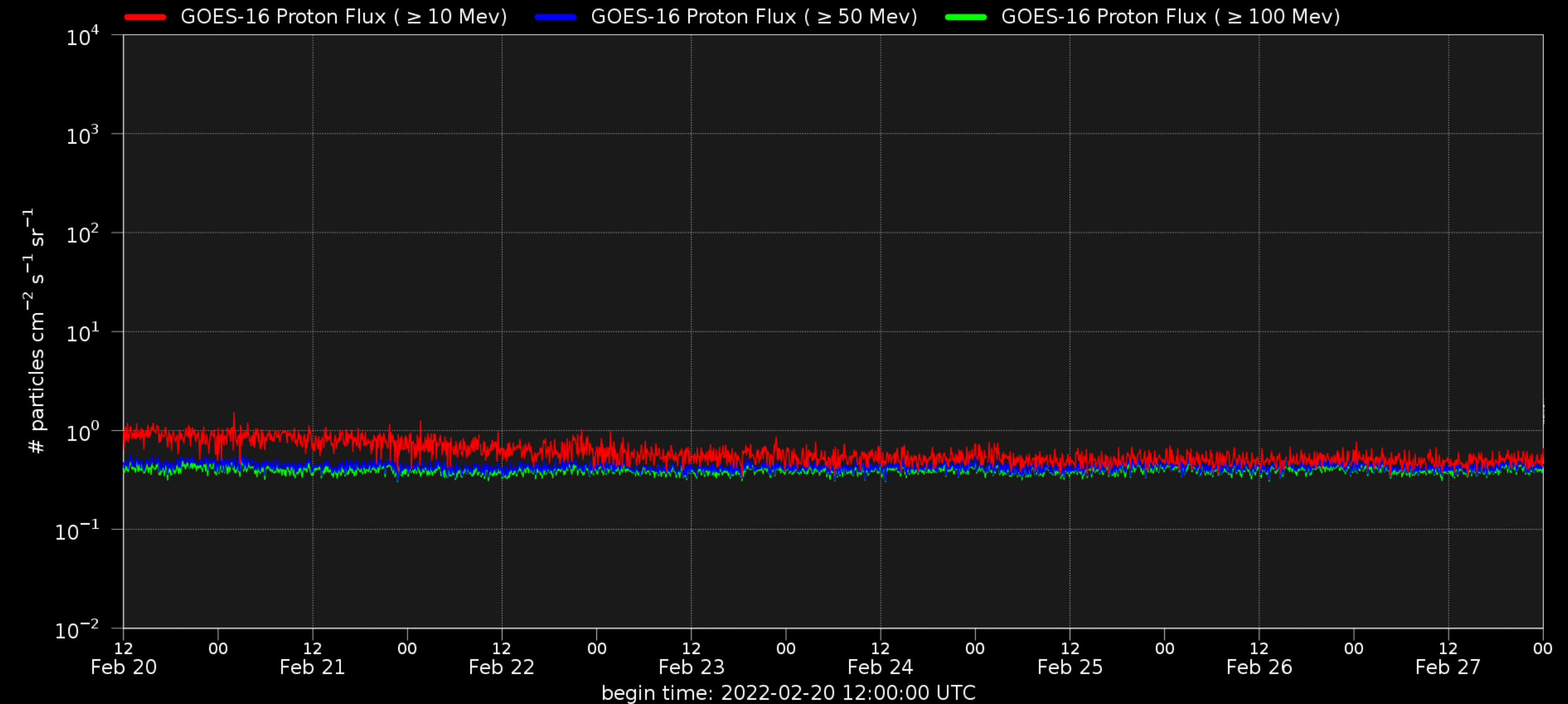


Energetic Particles

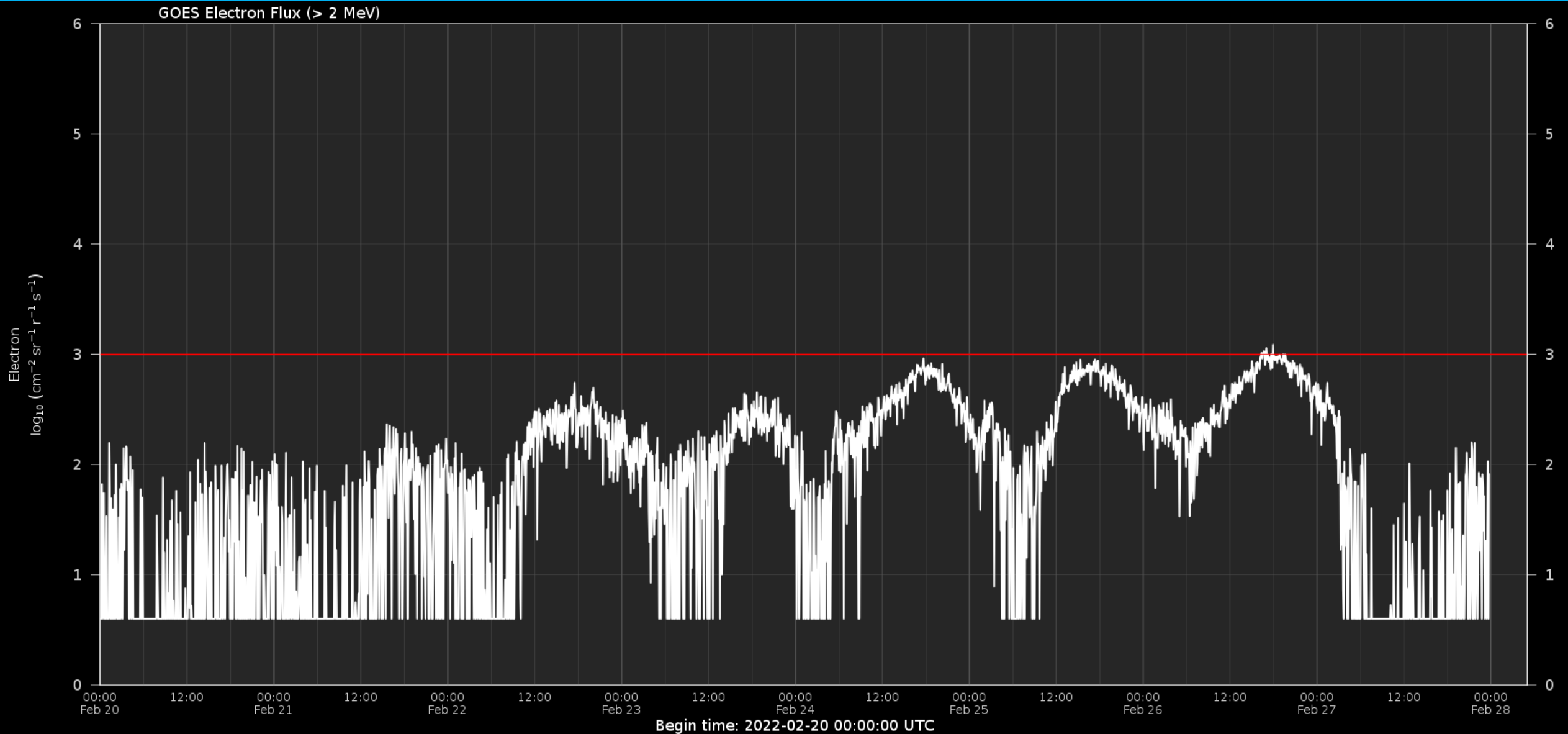


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Solar proton flux



Electron flux at GEO

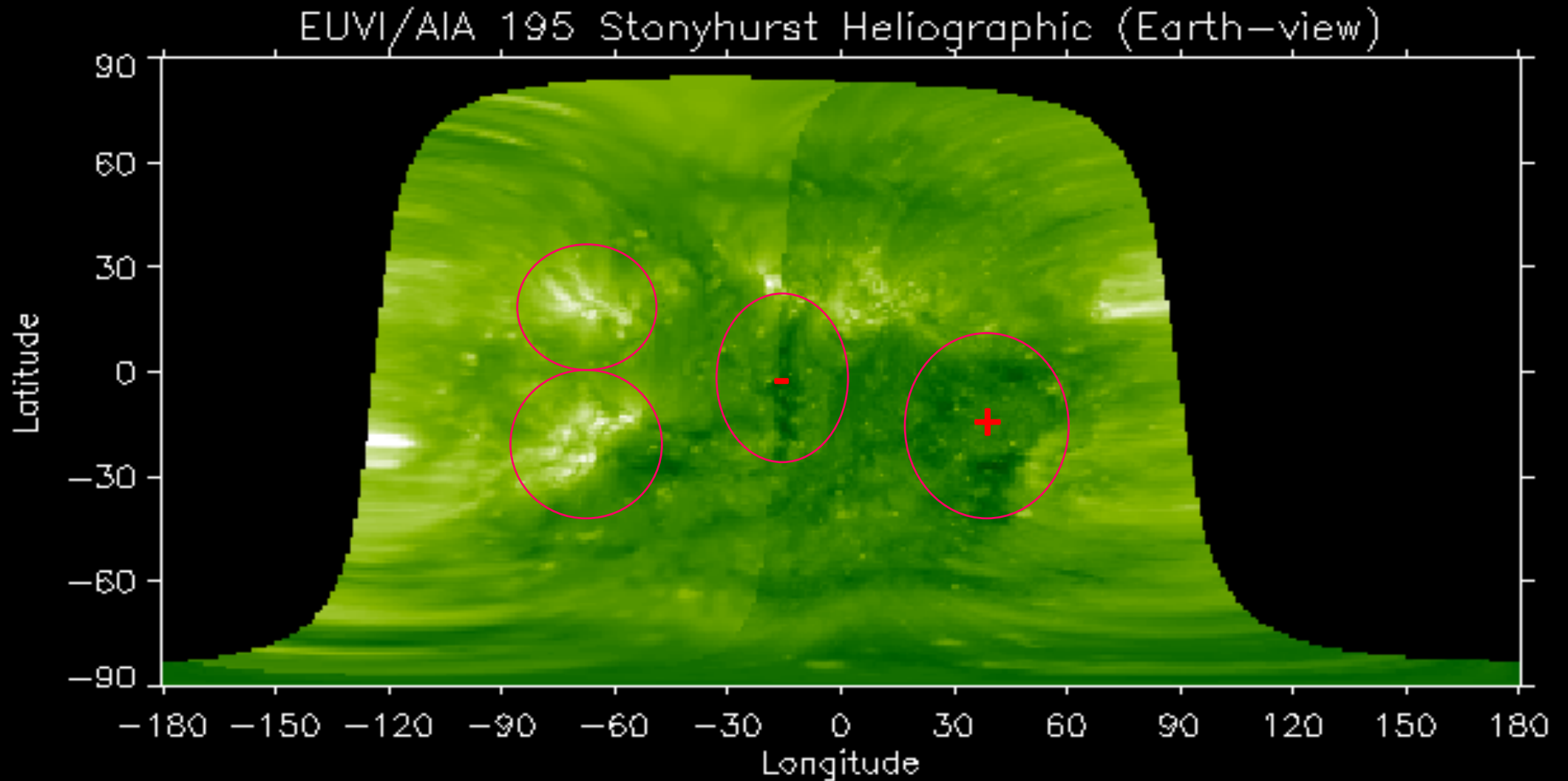


Outlook



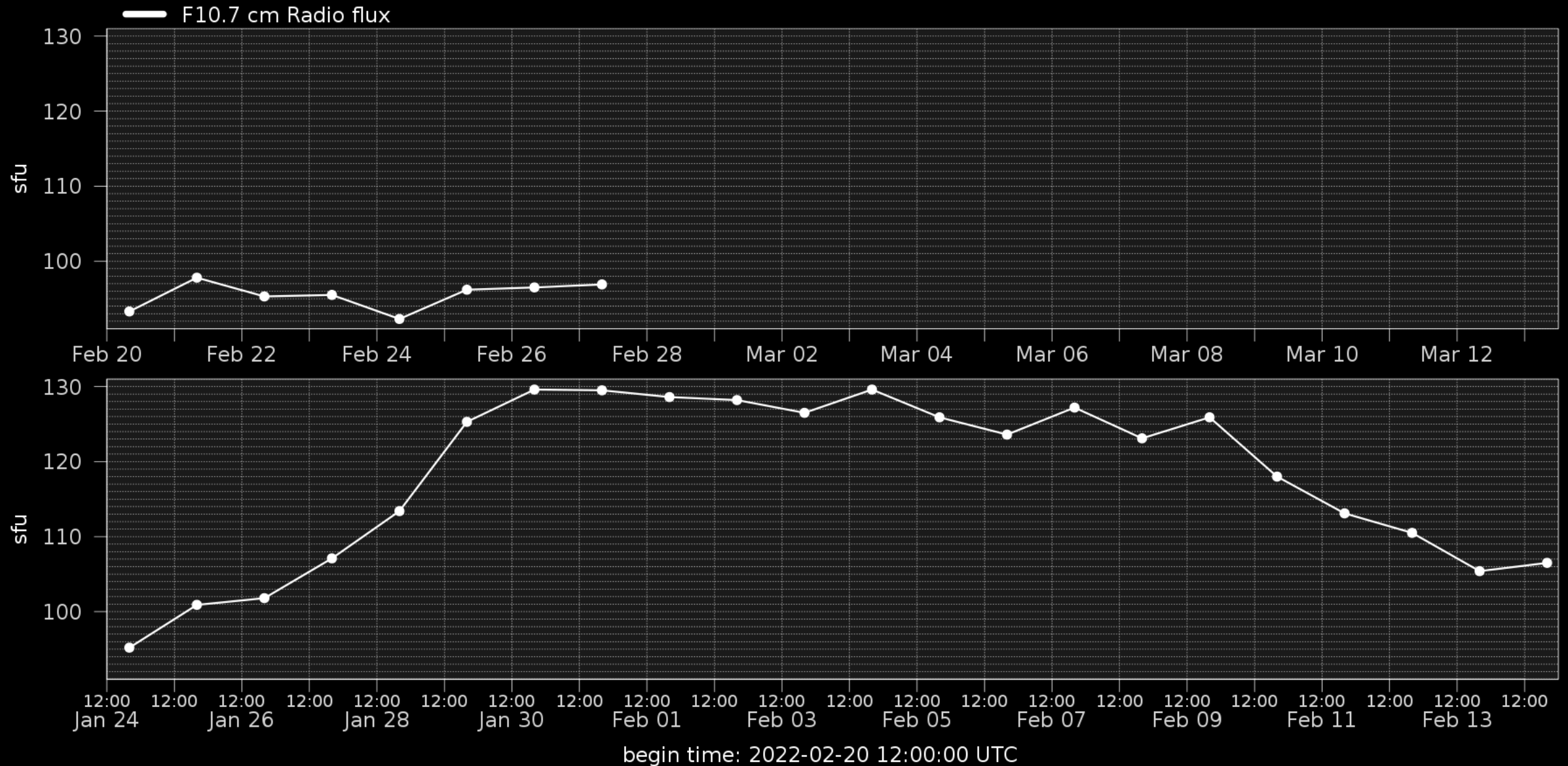
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Outlook: Solar activity

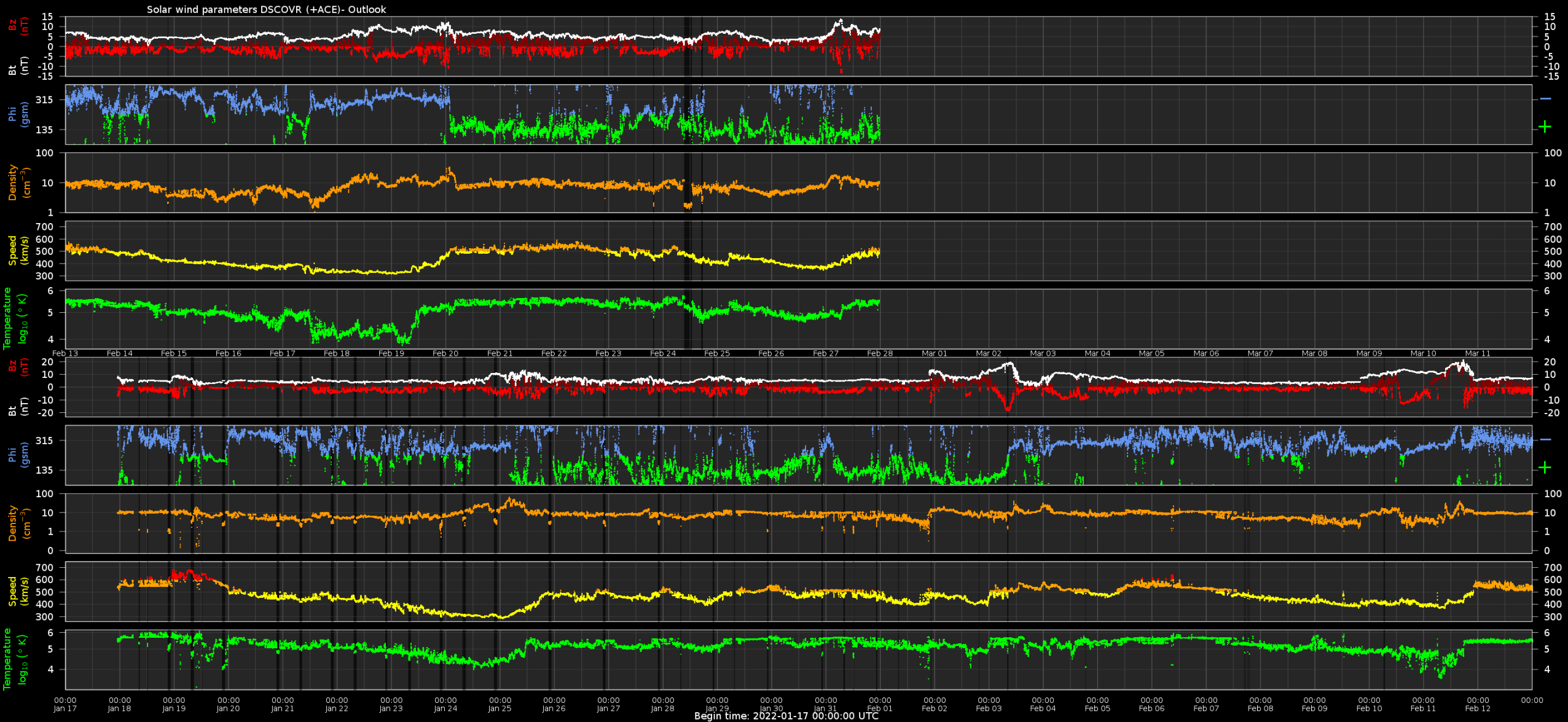


Observation date: 2022/02/27 23:15:30

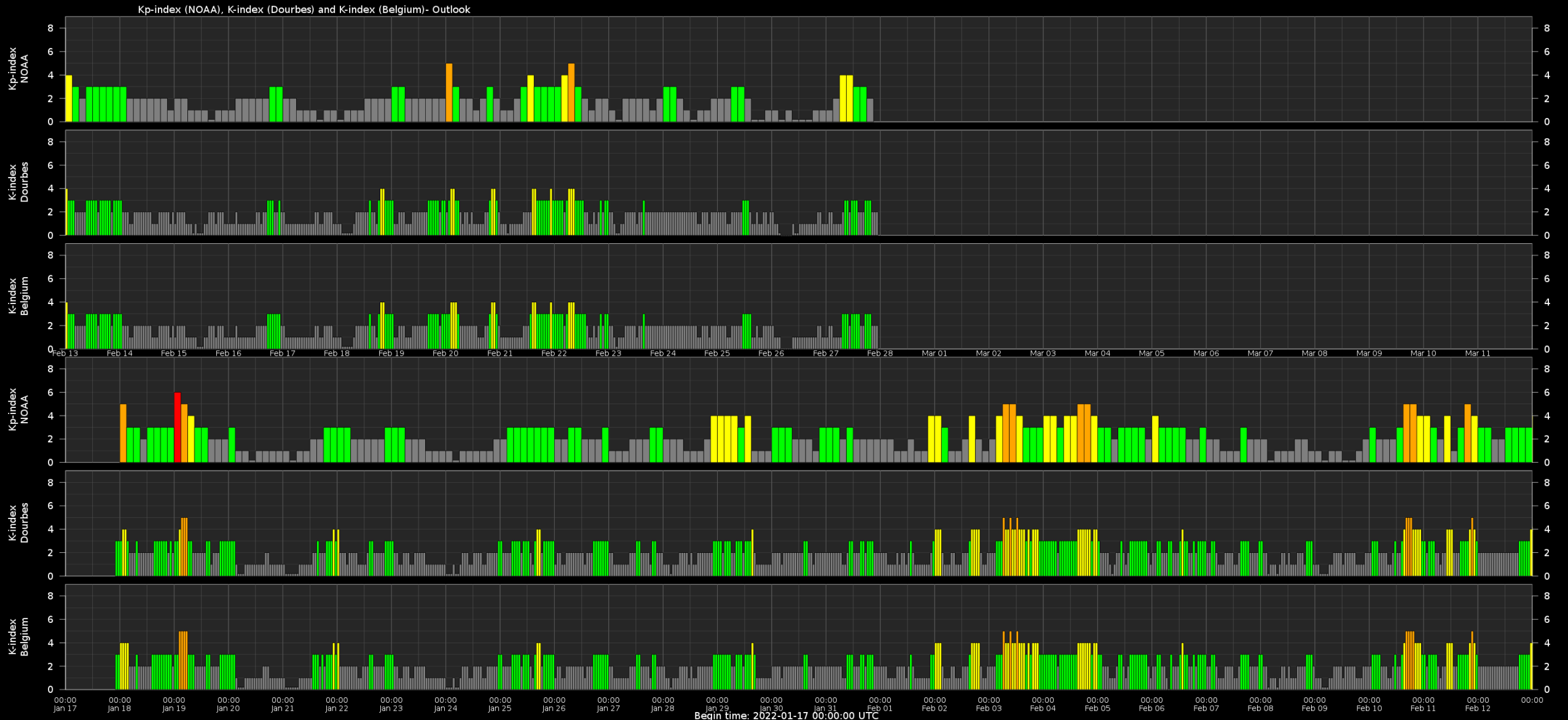
Outlook: Solar F10.7cm radio flux



Outlook: Solar wind parameters



Outlook: Geomagnetic activity



Outlook: Electron Flux at GEO Outlook



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See you at our next briefing!

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