

SIDC Space Weather Briefing

11 February 2024-18 February 2024

Daria Shukhobodskaia

& the SIDC forecaster team



Royal Observatory
of Belgium

Solar Influences
Data analysis Centre
www.sidc.be

Summary Report

Solar activity from 2024-02-11 12:00 to 2024-02-18 23:59

Active regions	14 Active Regions: NOAA AR 3571, 3576, 3579-3590
Flares	# C-class flare: 75 # M-class flare: 10 # X-class flare: 1
Coronal Holes	CH+ and CH-
CMEs	Several halo back-sided CMEs and 1 CMEs with a possible glancing blow

Proton flux	Proton event following the back-sided halo CME
Electron flux	Below event threshold

Solar wind and geomagnetic conditions

ICMEs	01:38 UTC on Feb 13th
Solar wind conditions	B : 0.91 - 9.38 nT //Bz: -6.5 nT to 8.92 nT //Speed: 275.6 - 704.9km/s
Geomagnetic conditions	max K _{Bel} : 4, max K _p (NOAA): 4, Active conditions

All Quiet Alert: Not all quiet

Solar Activity

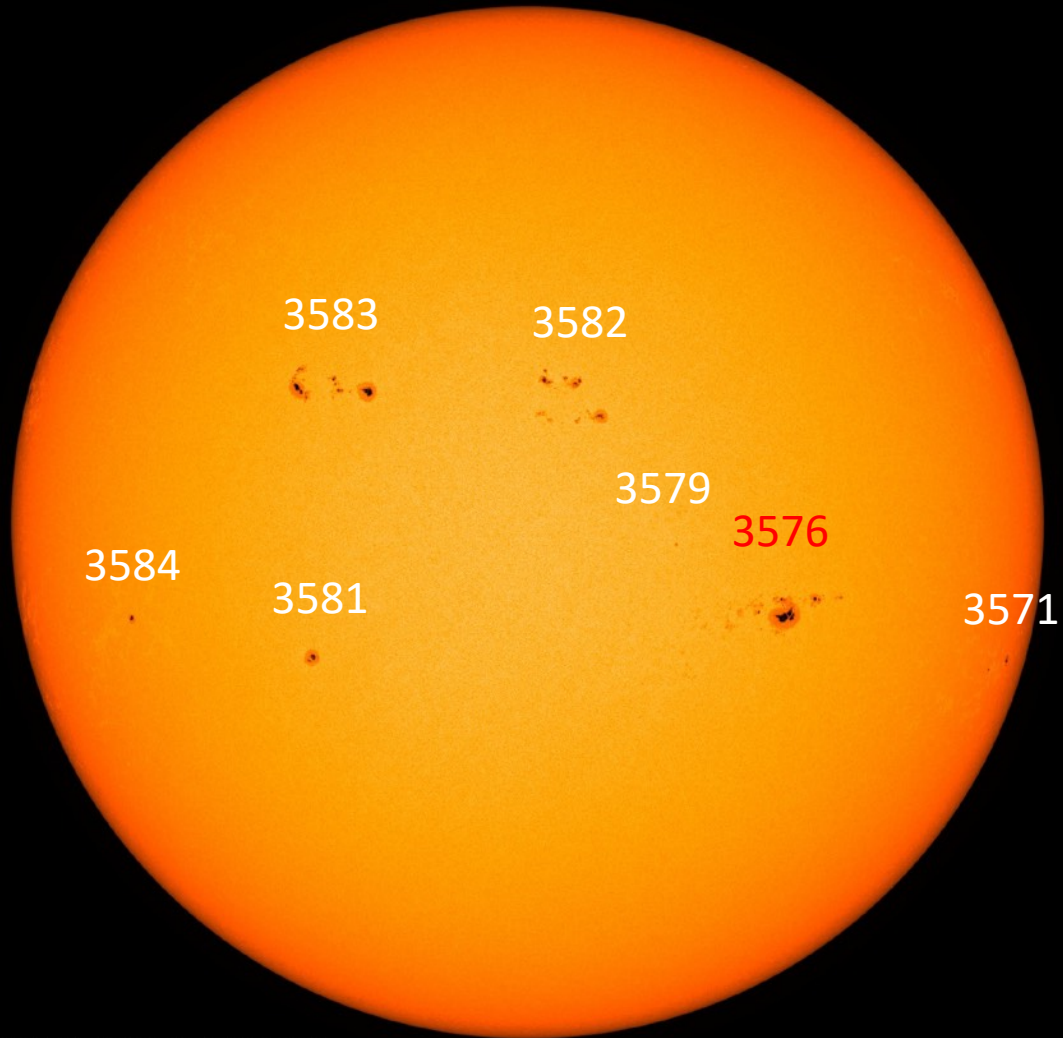


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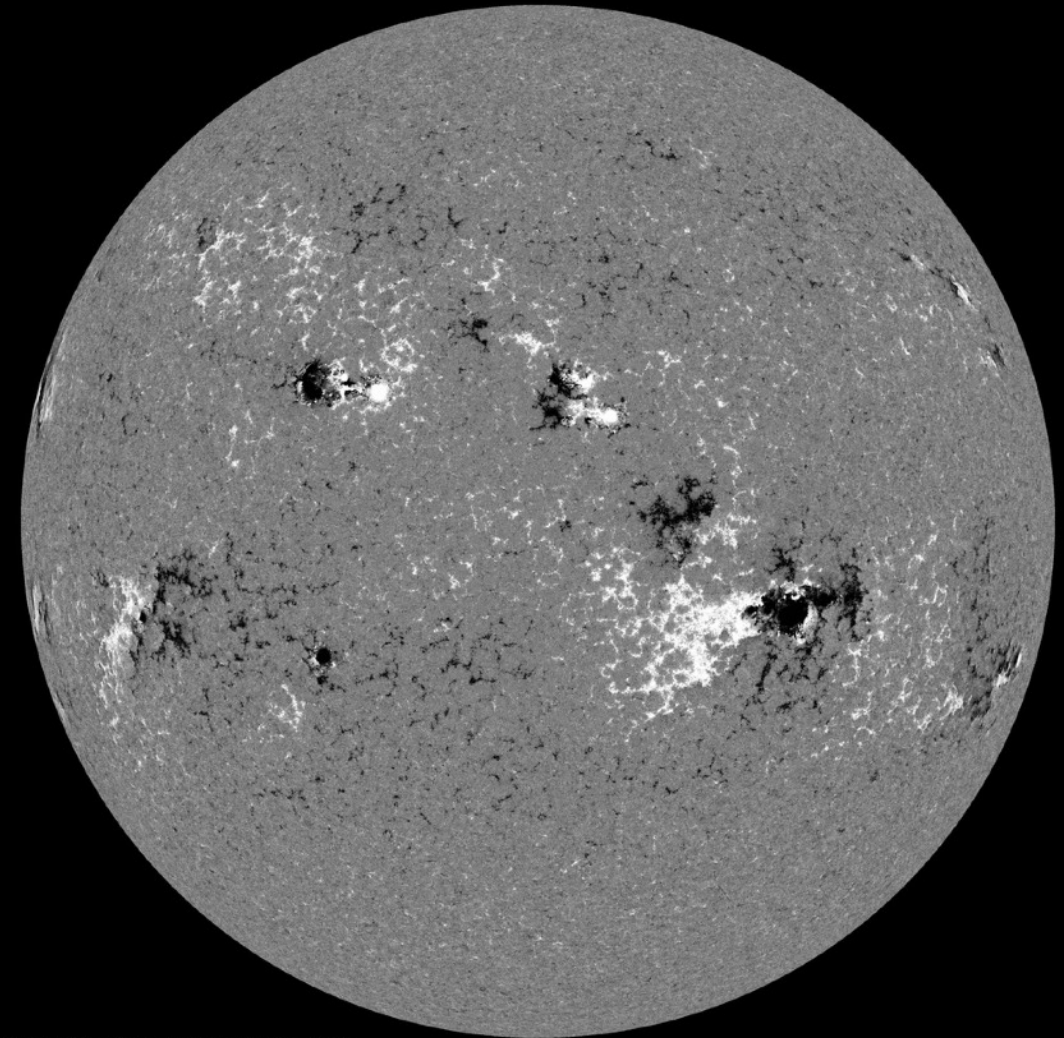
Solar active regions

SDO/HMI White Light 2024-02-12



SDO/HMI Quick-Look Continuum: 20240212_114500

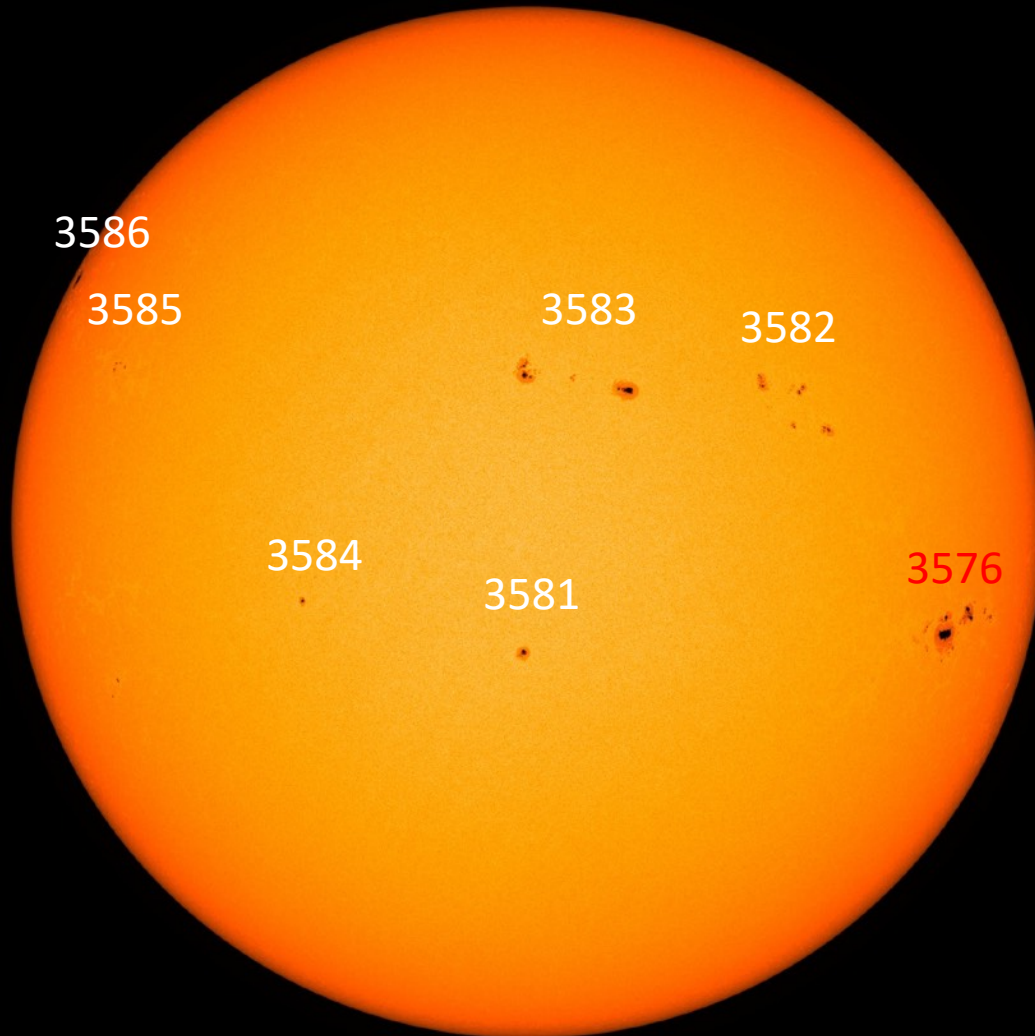
SDO/HMI Magnetogram 2024-02-12



SDO/HMI Quick-Look Magnetogram: 20240212_114500

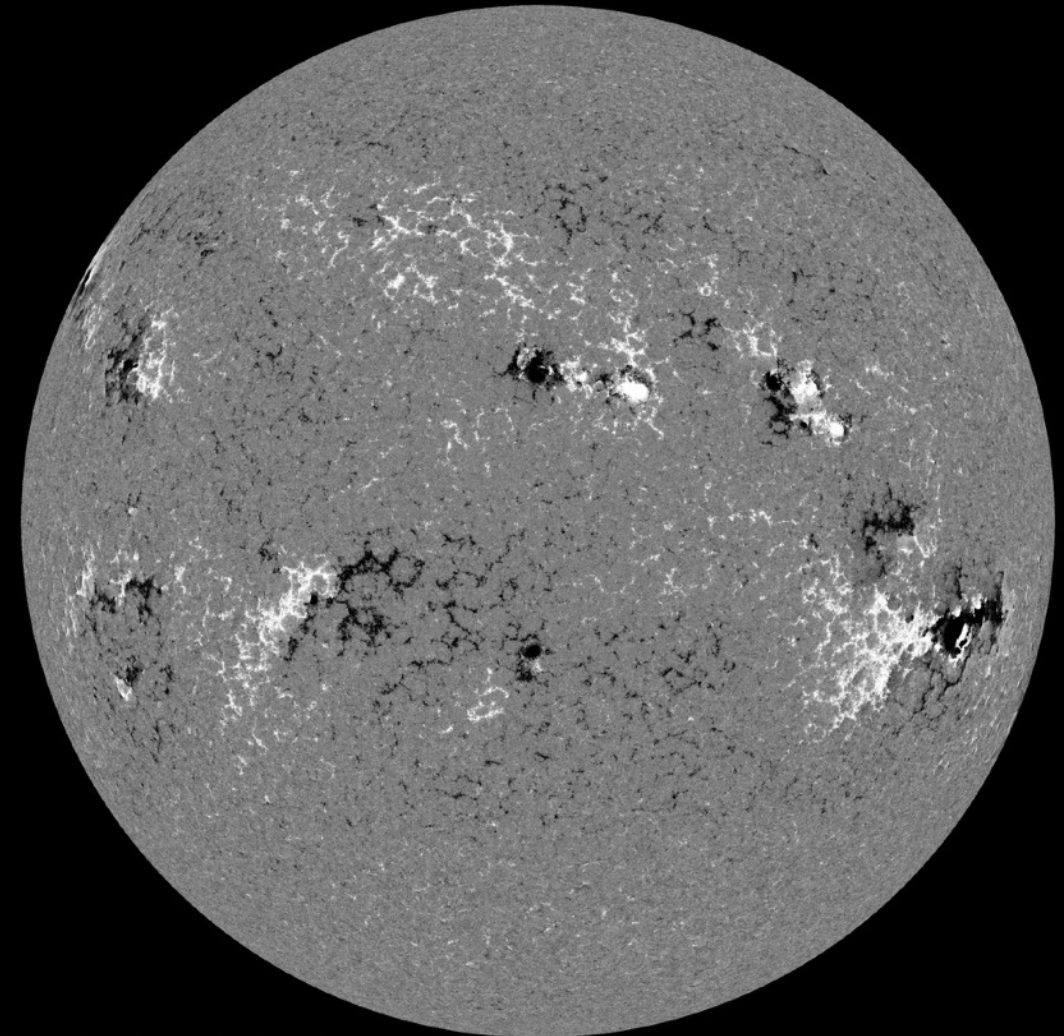
Solar active regions

SDO/HMI White Light 2024-02-14



SDO/HMI Quick-Look Continuum: 20240214_114500

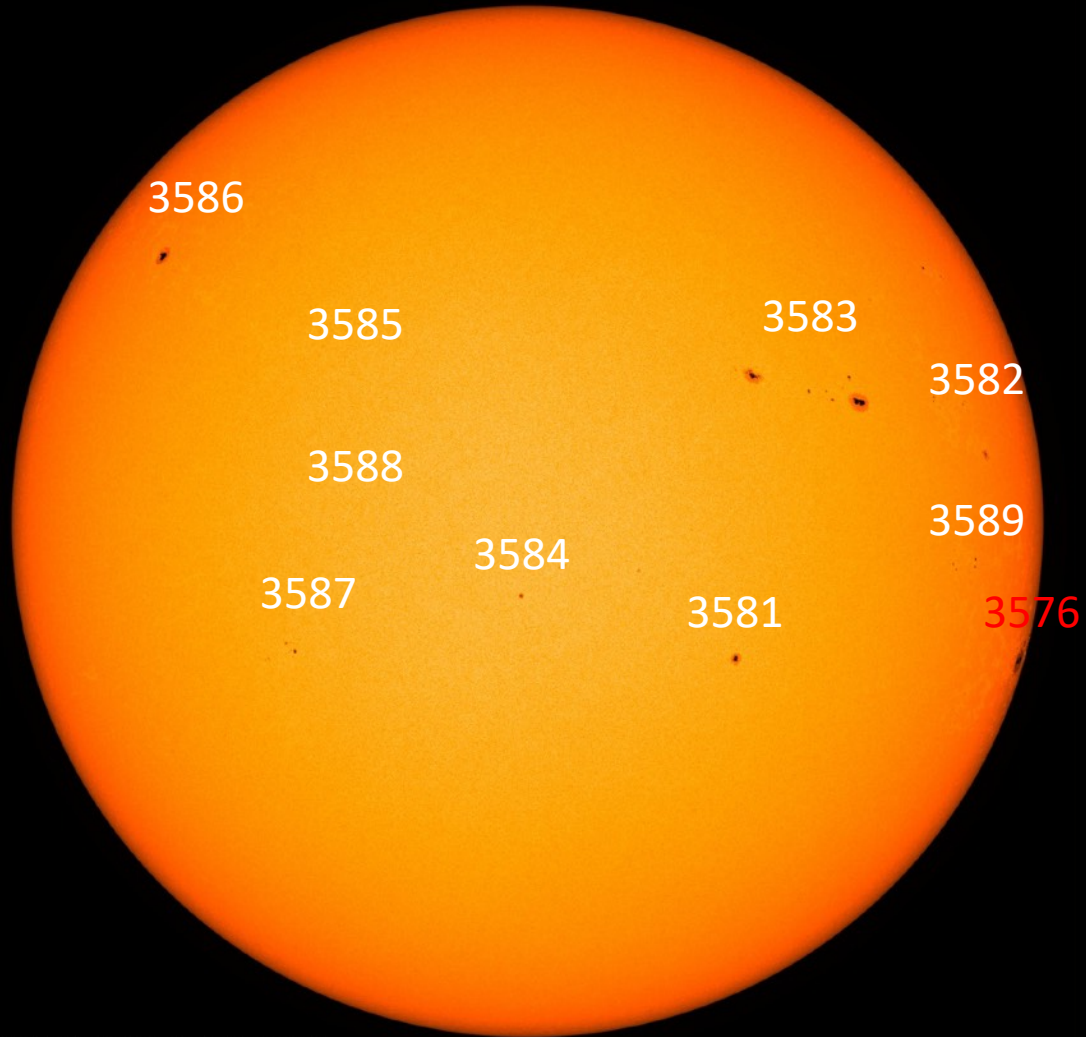
SDO/HMI Magnetogram 2024-02-14



SDO/HMI Quick-Look Magnetogram: 20240214_114500

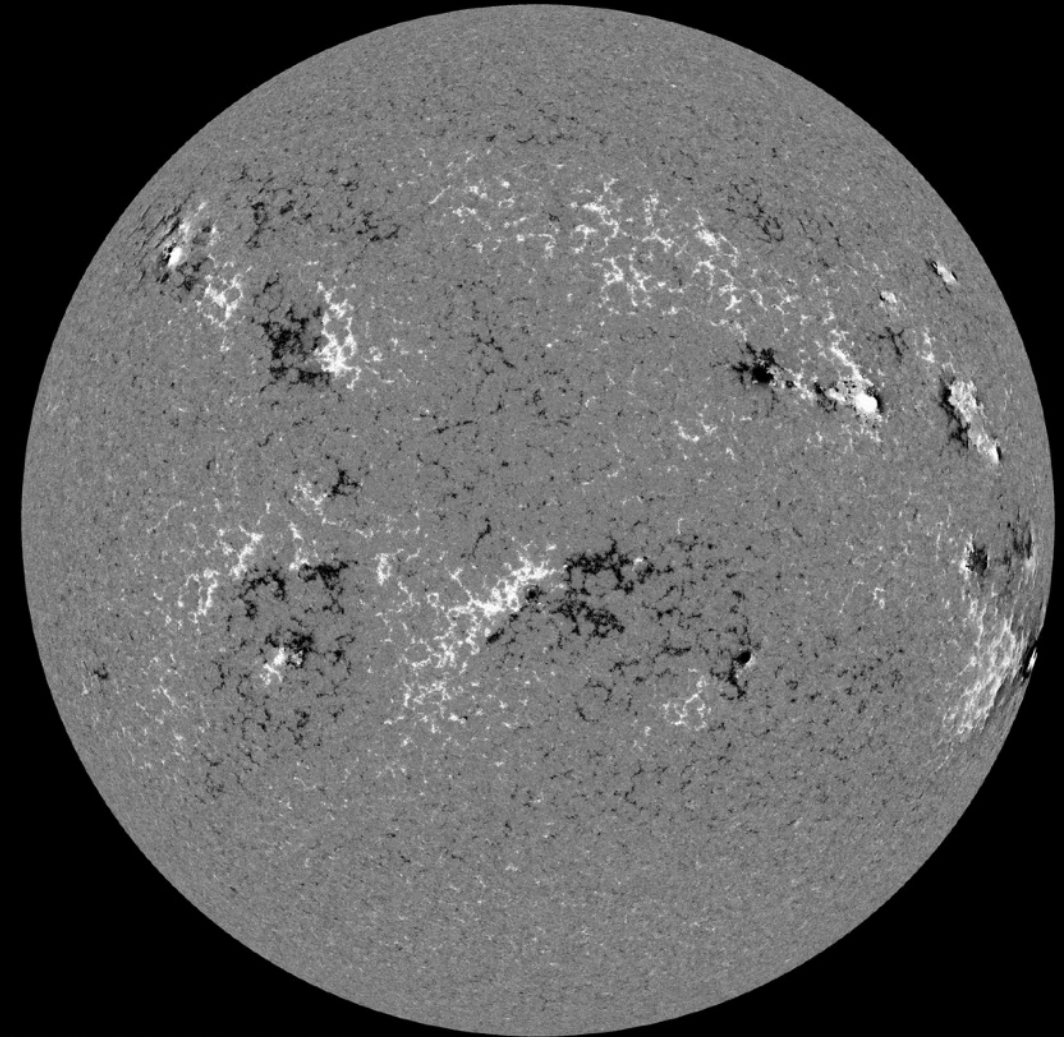
Solar active regions

SDO/HMI White Light 2024-02-16



SDO/HMI Quick-Look Continuum: 20240216_114500

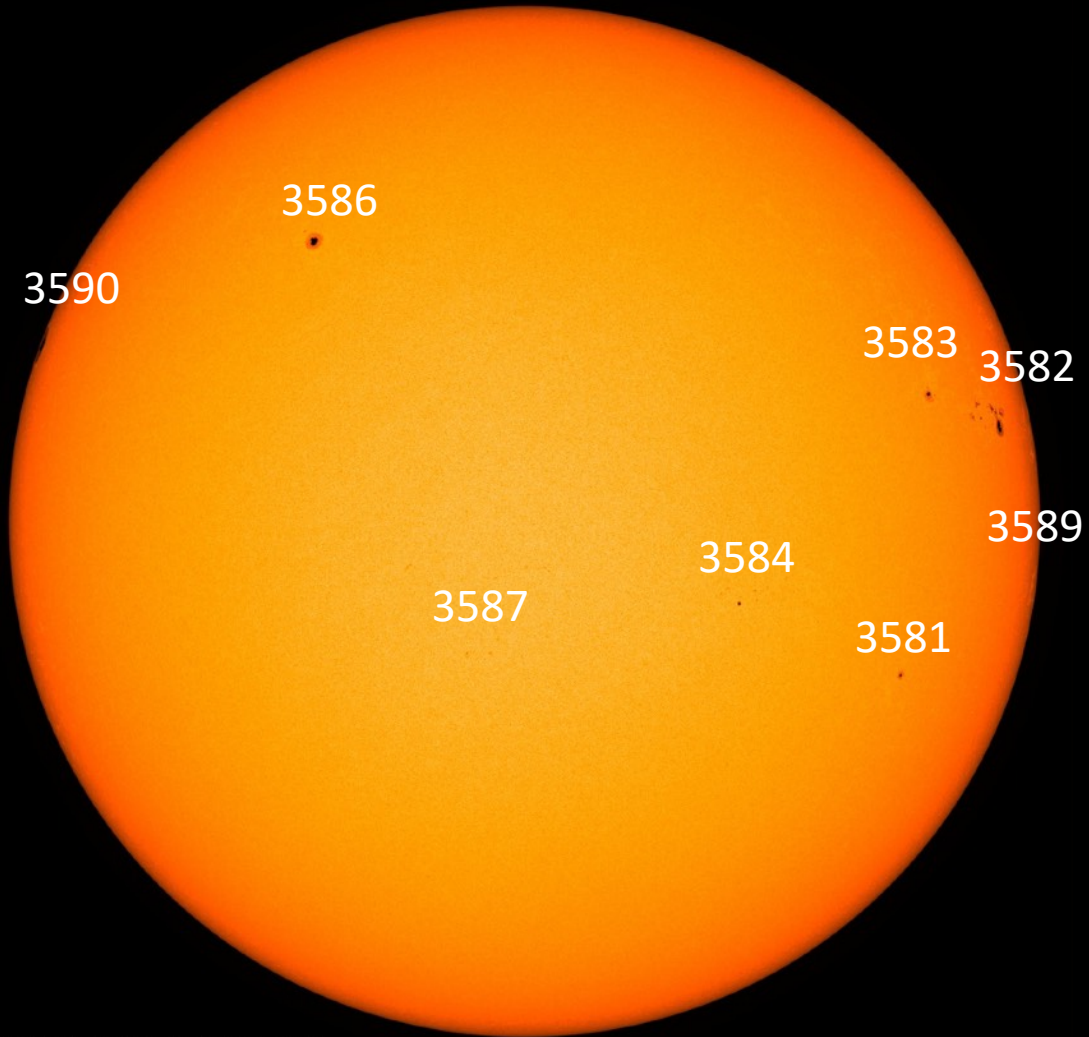
SDO/HMI Magnetogram 2024-02-16



SDO/HMI Quick-Look Magnetogram: 20240216_114500

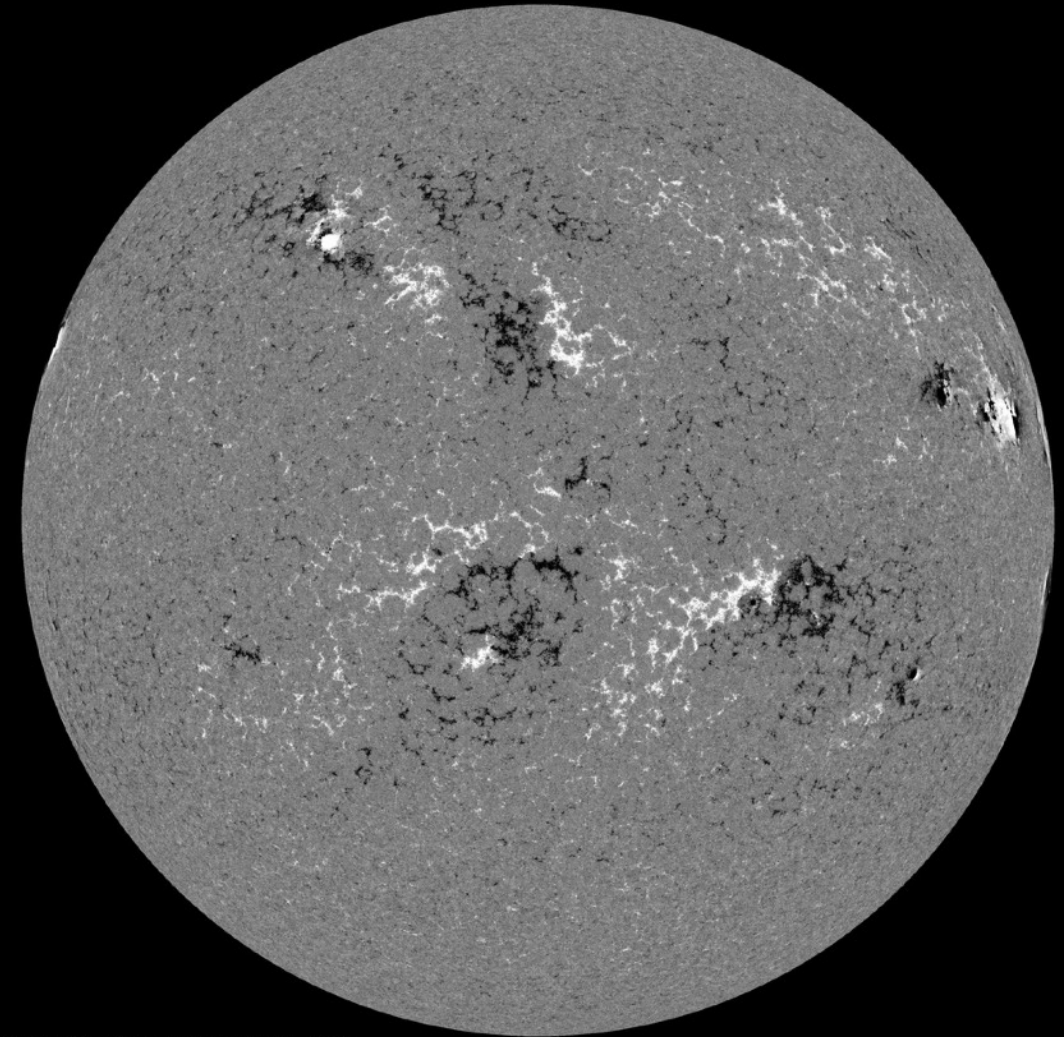
Solar active regions

SDO/HMI White Light 2024-02-18



SDO/HMI Quick-Look Continuum: 20240218_114500

SDO/HMI Magnetogram 2024-02-18

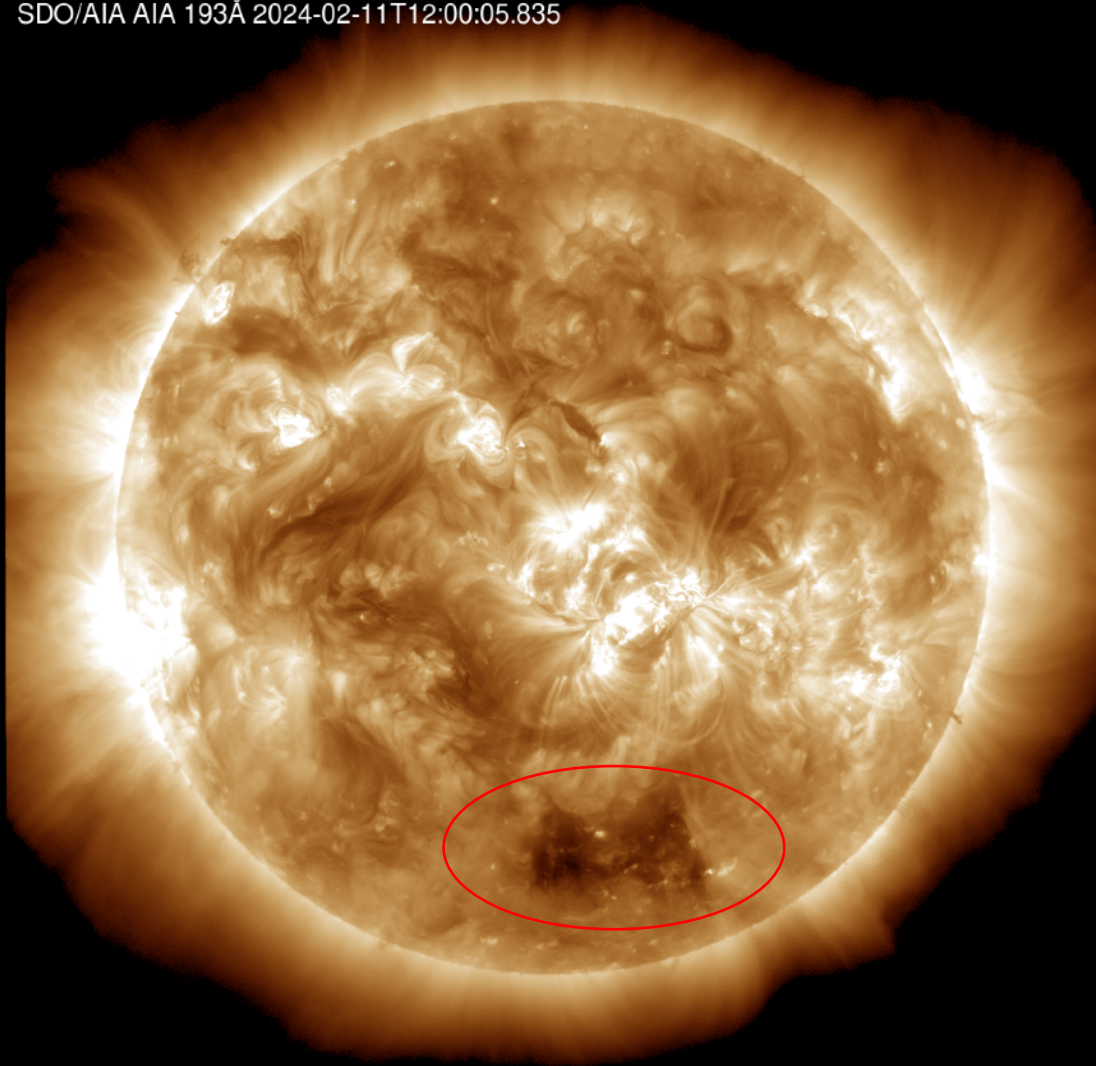


SDO/HMI Quick-Look Magnetogram: 20240218_114500

Coronal holes

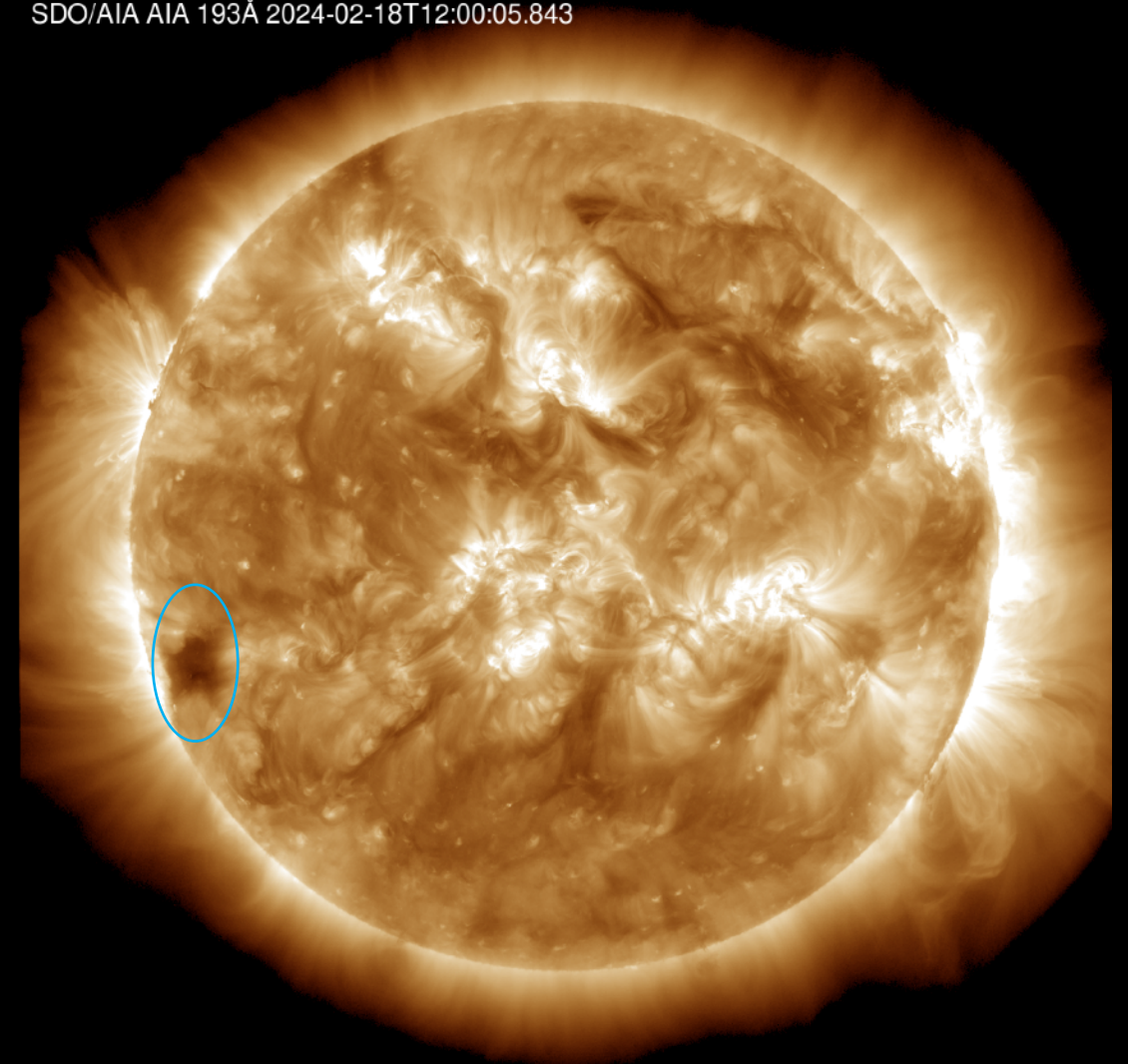
SDO/AIA 19.3 nm 2024-02-11

SDO/AIA AIA 193Å 2024-02-11T12:00:05.835



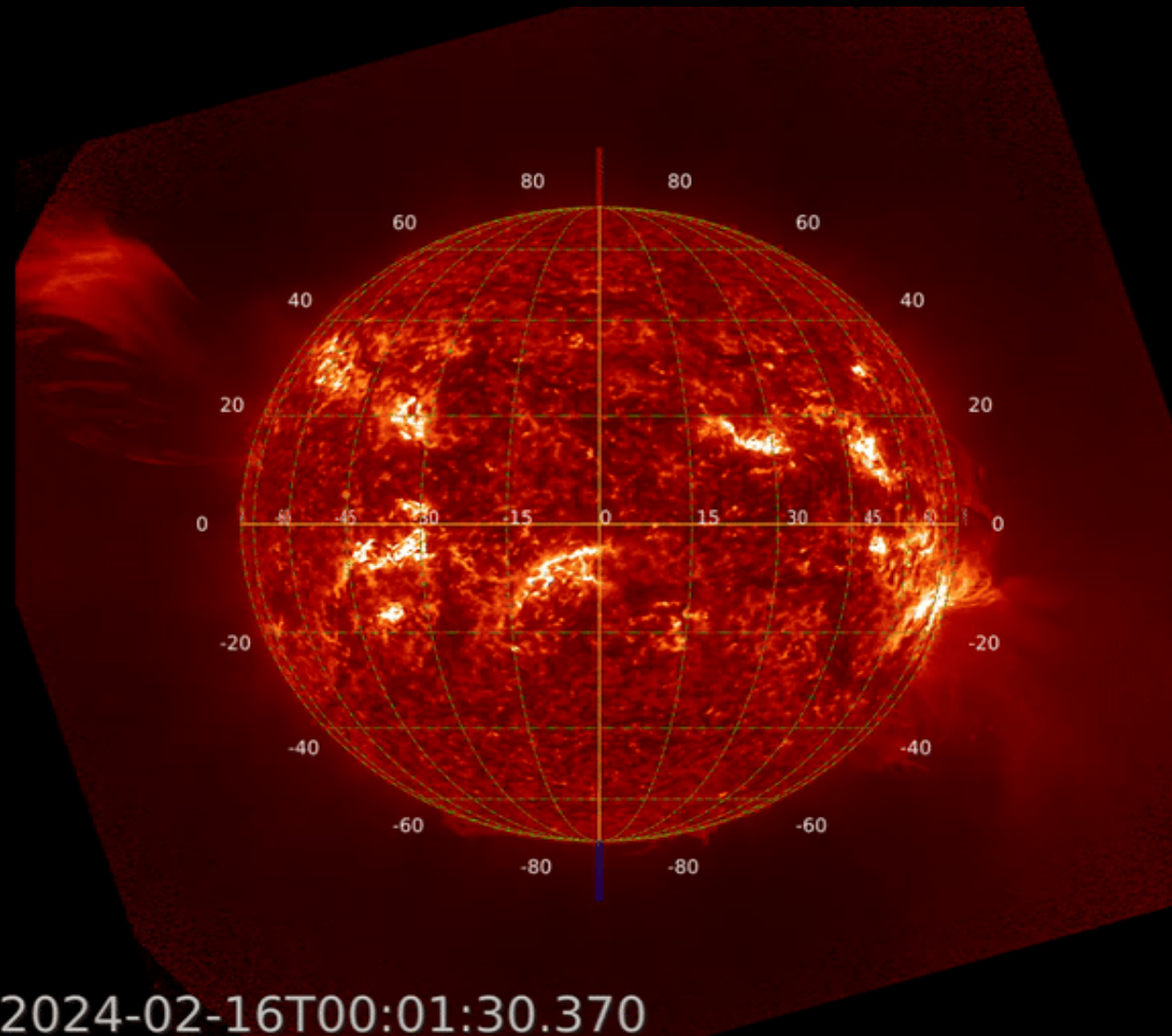
SDO/AIA 19.3 nm 2024-02-18

SDO/AIA AIA 193Å 2024-02-18T12:00:05.843



Filaments

GOES/SUVI 30.4 nm 2024-02-16



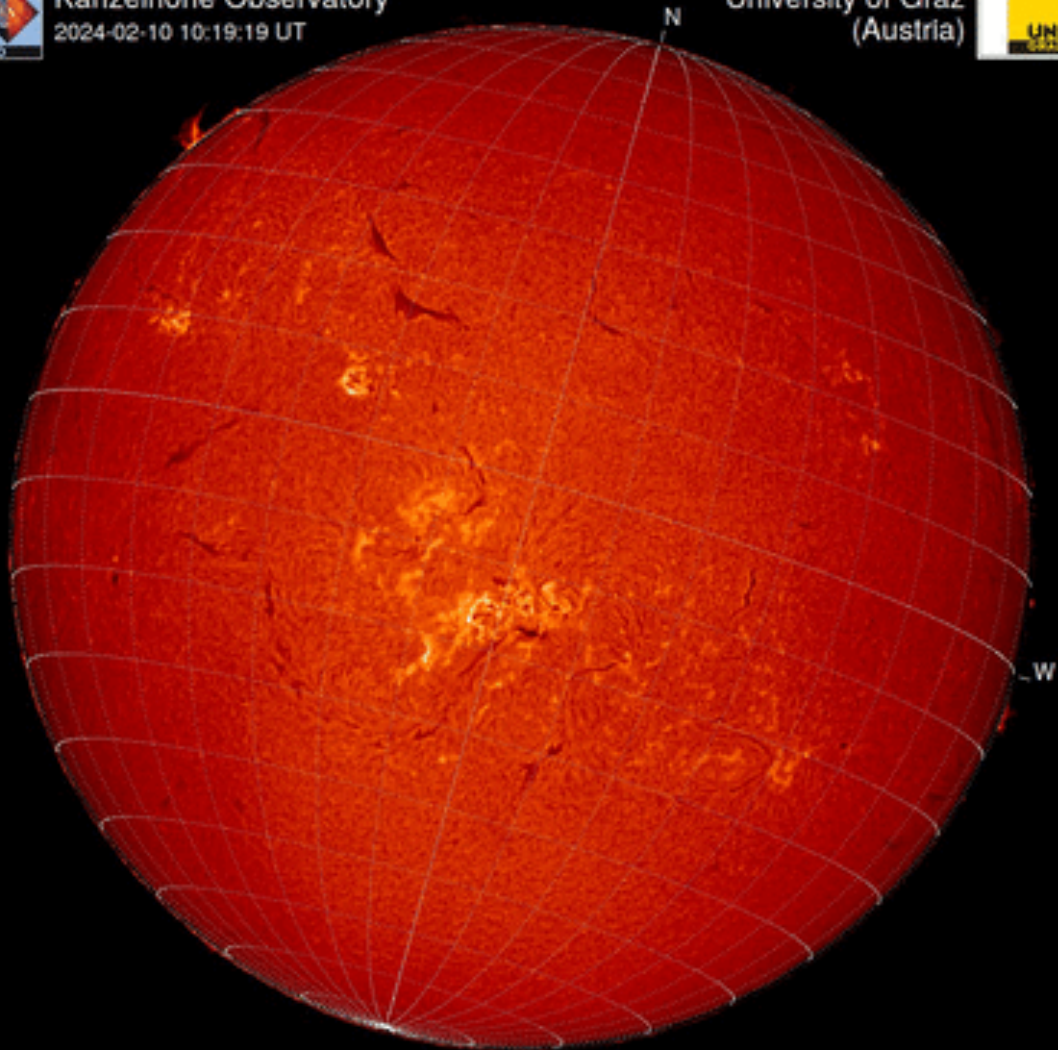
Filaments & Filament eruptions

H-alpha 2024-02-11



Kanzelhöhe Observatory
2024-02-10 10:19:19 UT

University of Graz
(Austria)

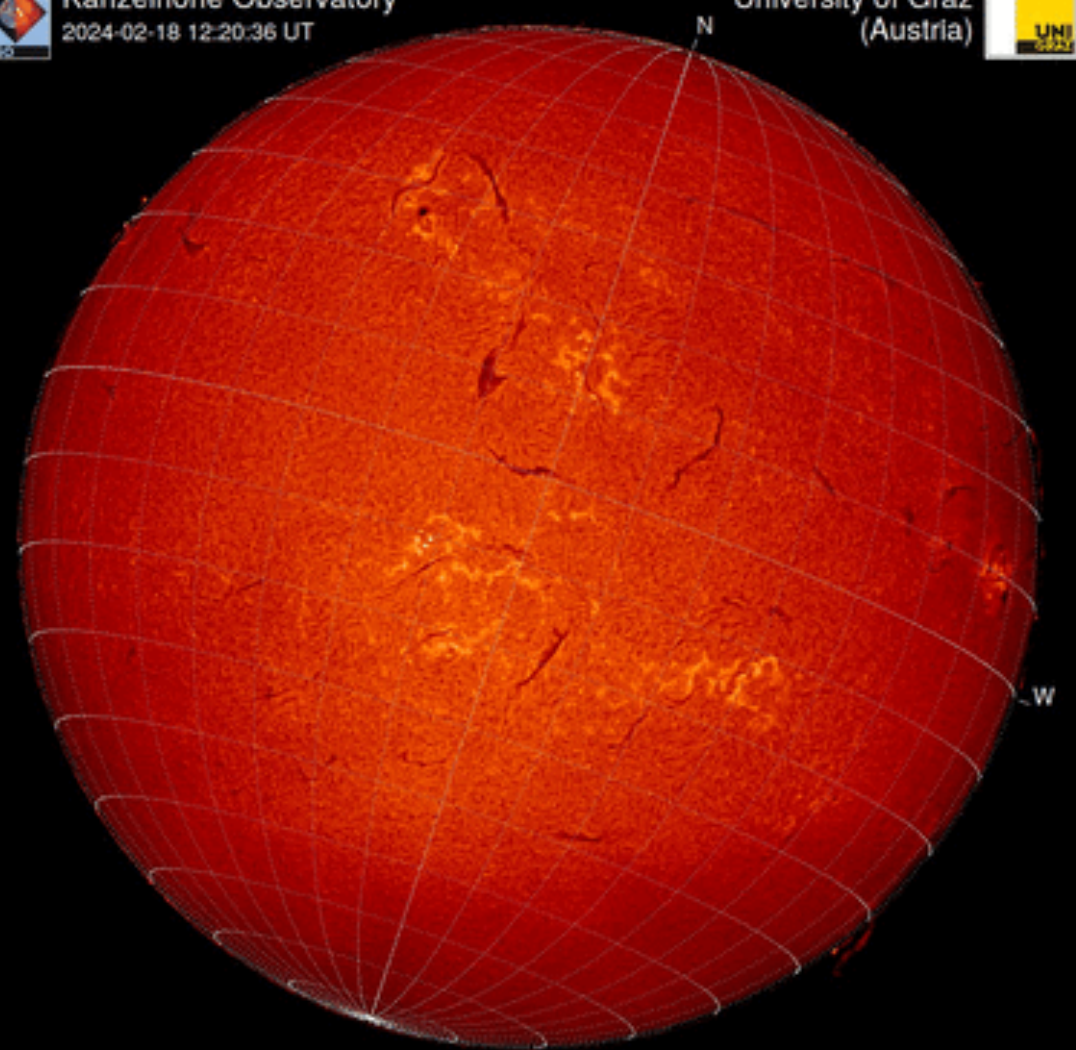


H-alpha 2024-02-18

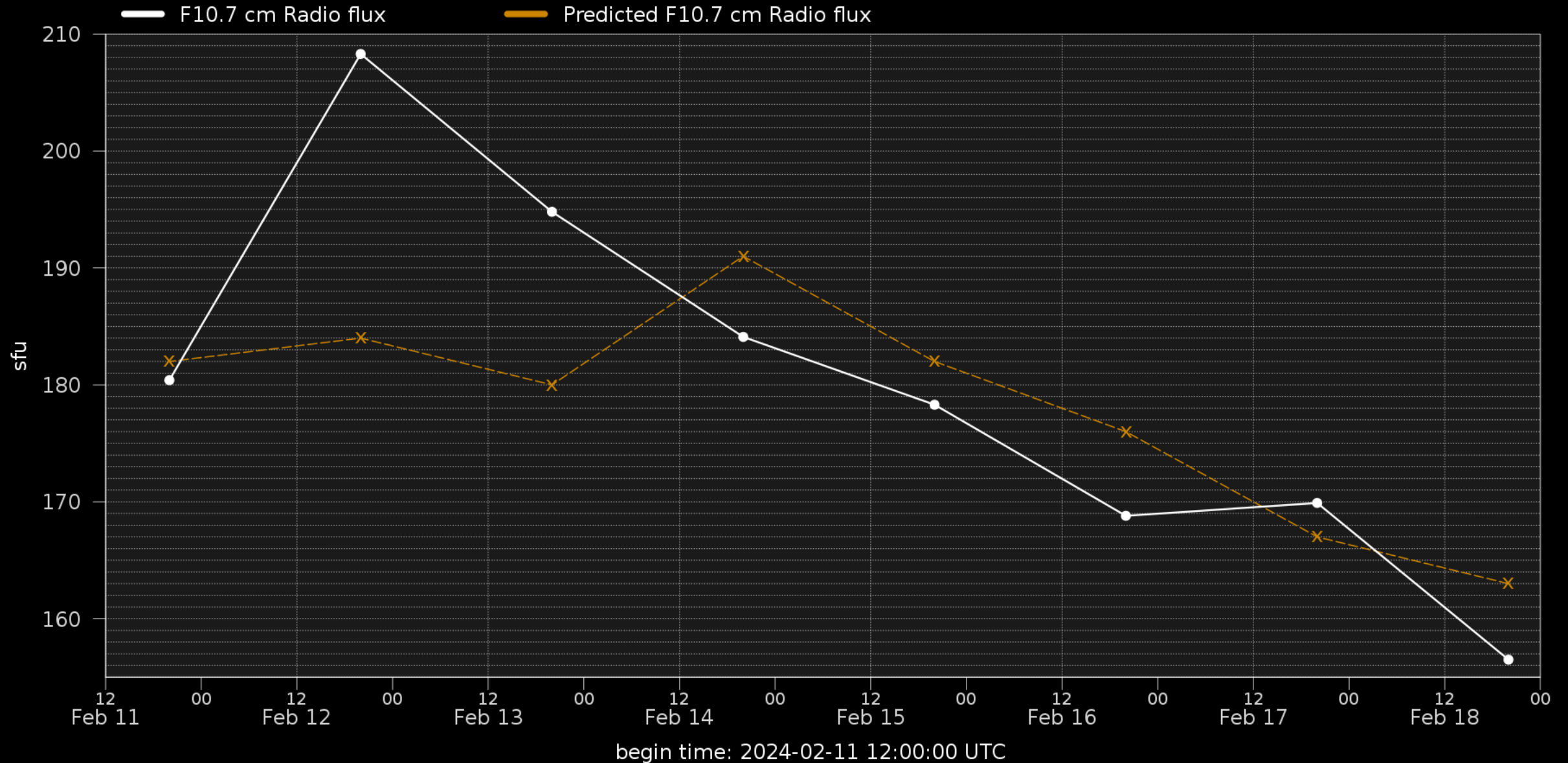


Kanzelhöhe Observatory
2024-02-18 12:20:36 UT

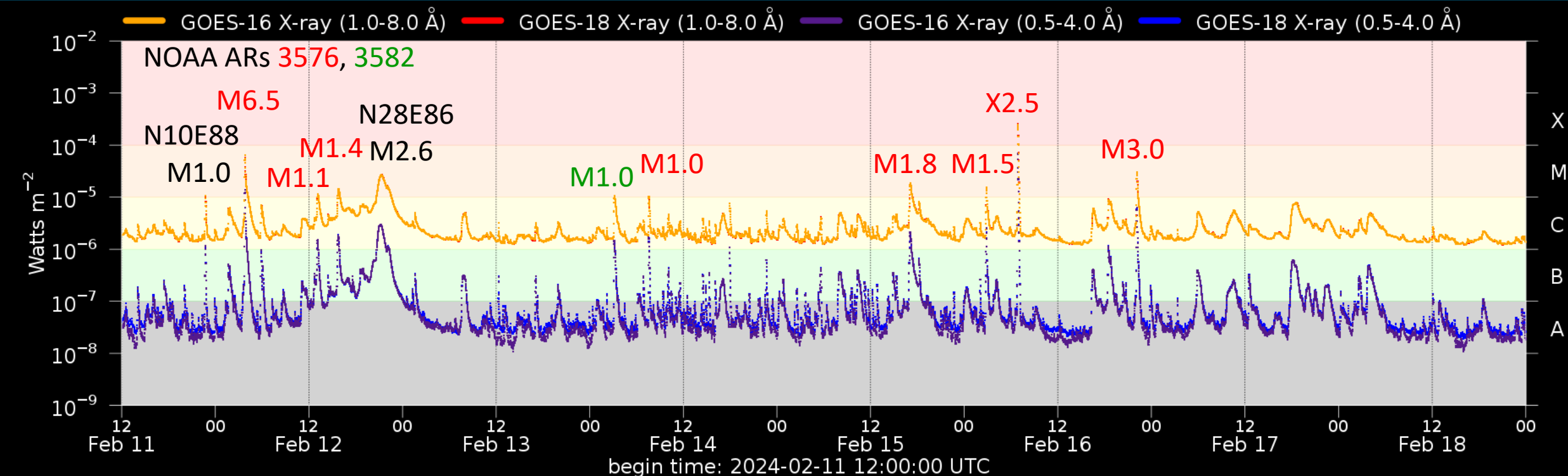
University of Graz
(Austria)



Solar F10.7cm radio flux



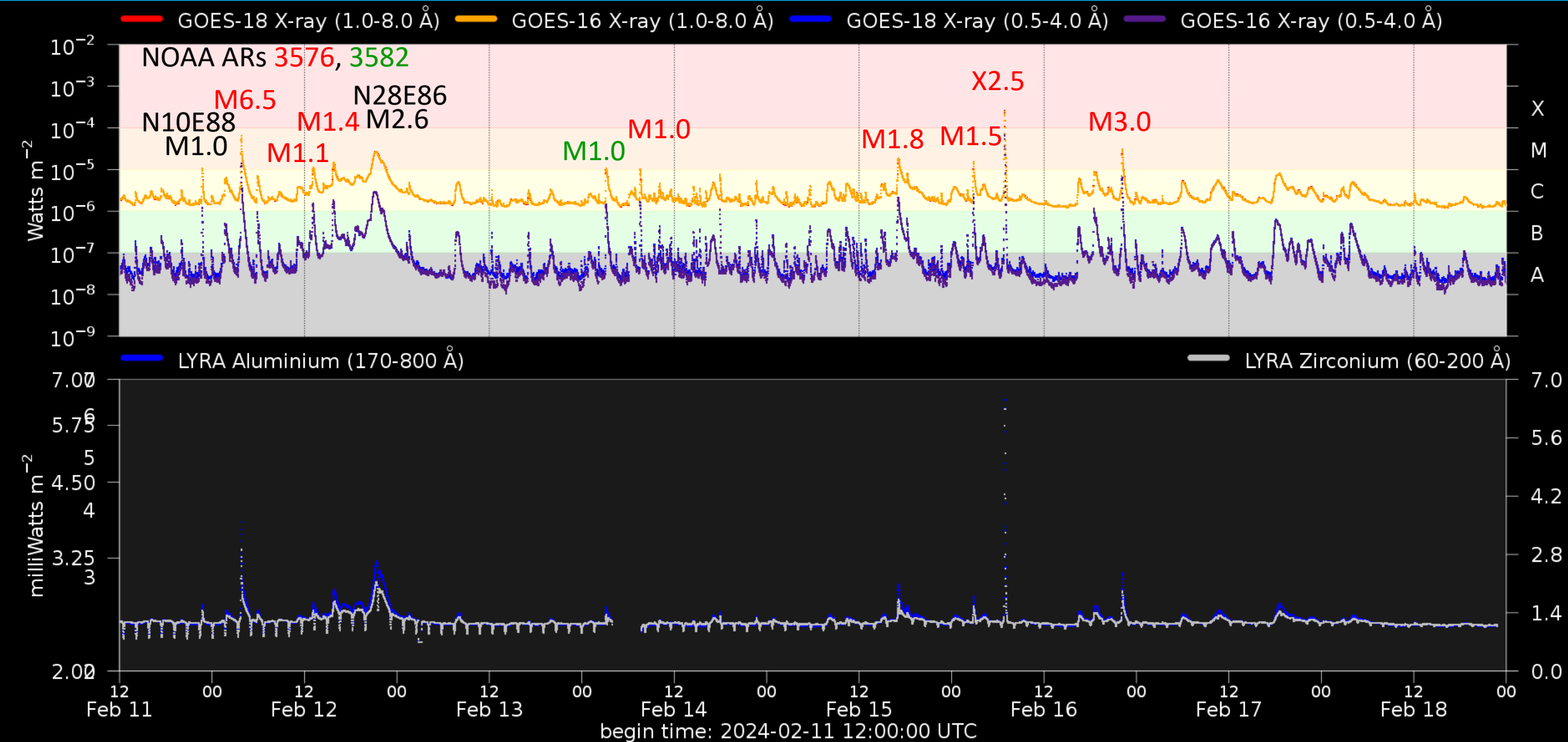
Flaring activity



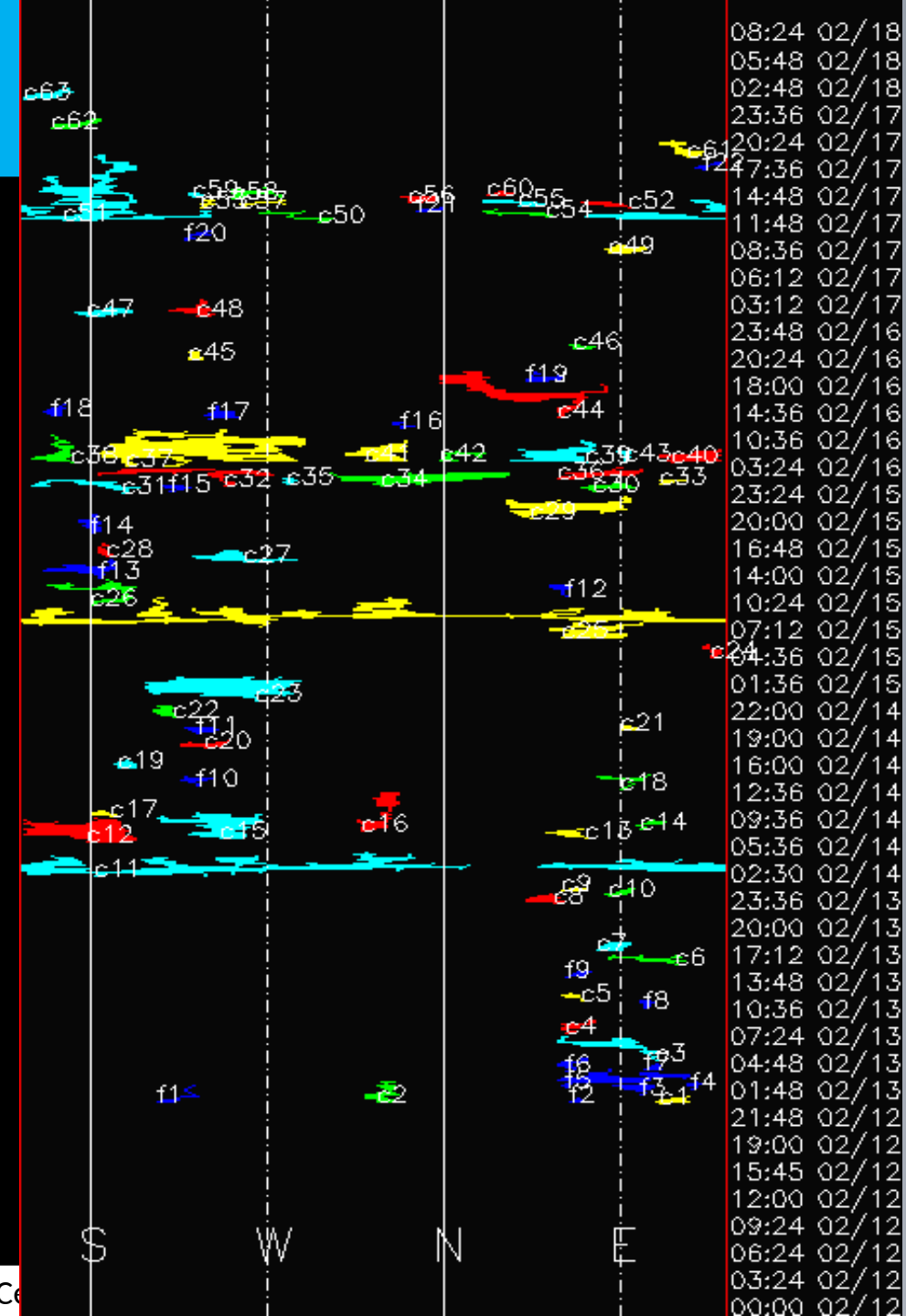
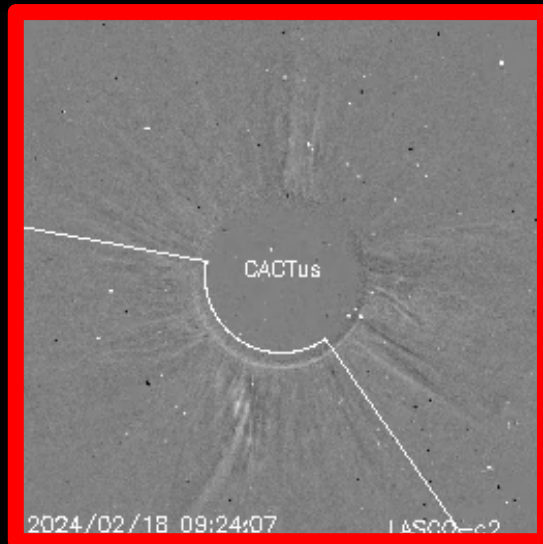
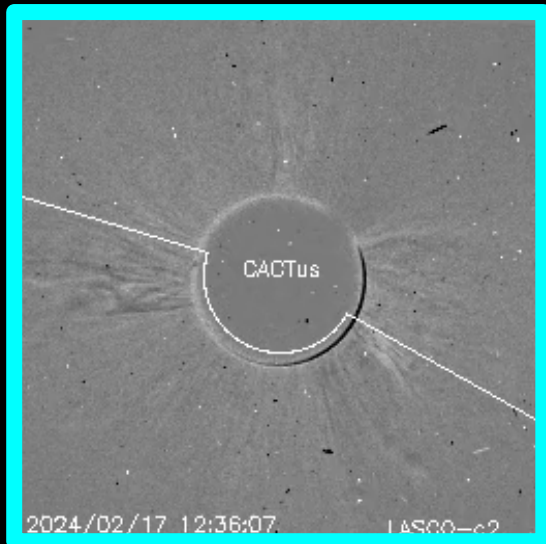
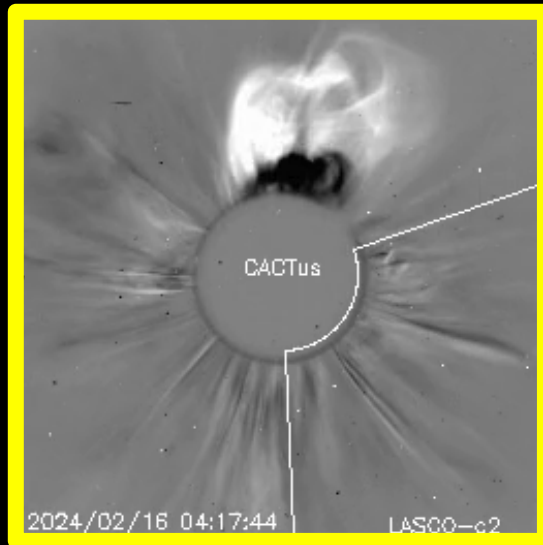
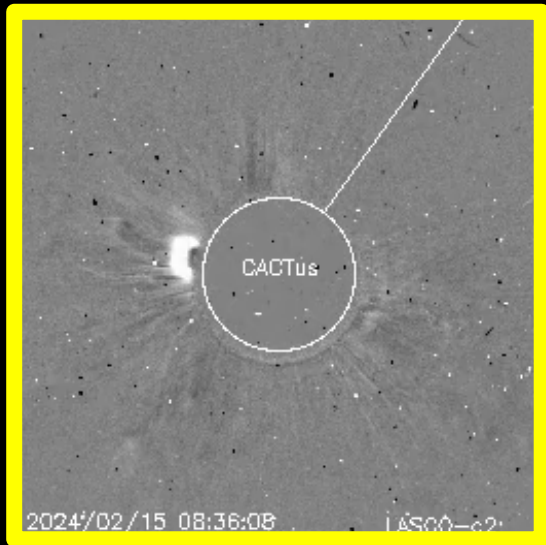
Probabilities (%) and occurrences (#) of C/M/X-flares daily, from noon to noon:

Issue date	2024-02-11	2024-02-12	2024-02-13	2024-02-14	2024-02-15	2024-02-16	2024-02-17	2024-02-18
Probability (%)	99 75 30	99 65 20	99 75 25	99 60 15	99 55 15	99 65 20	99 55 15	99 40 10
Observed (#)	10 02 00	04 03 00	13 02 00	21 00 00	08 02 01	08 01 00	09 00 00	02 00 00

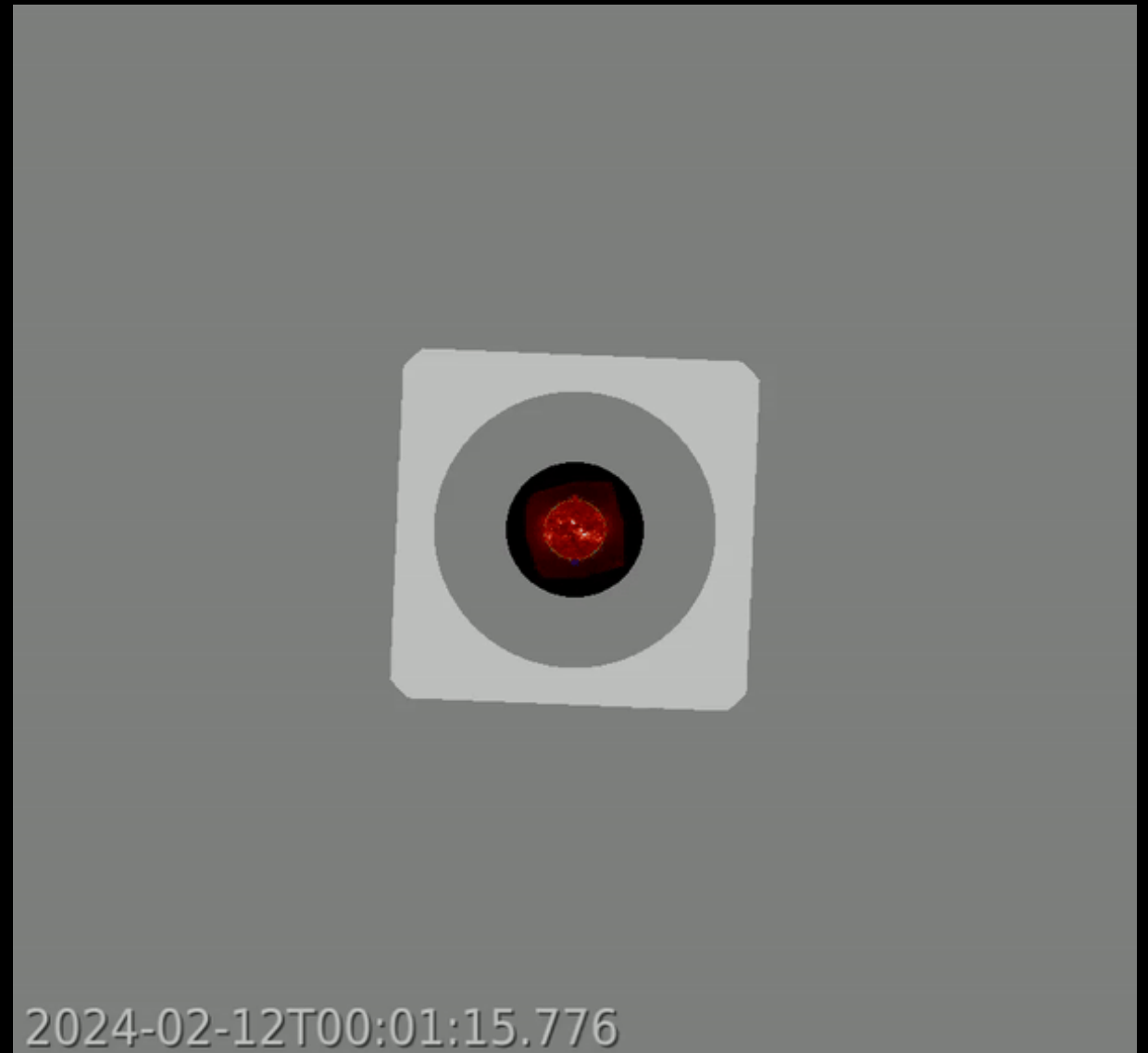
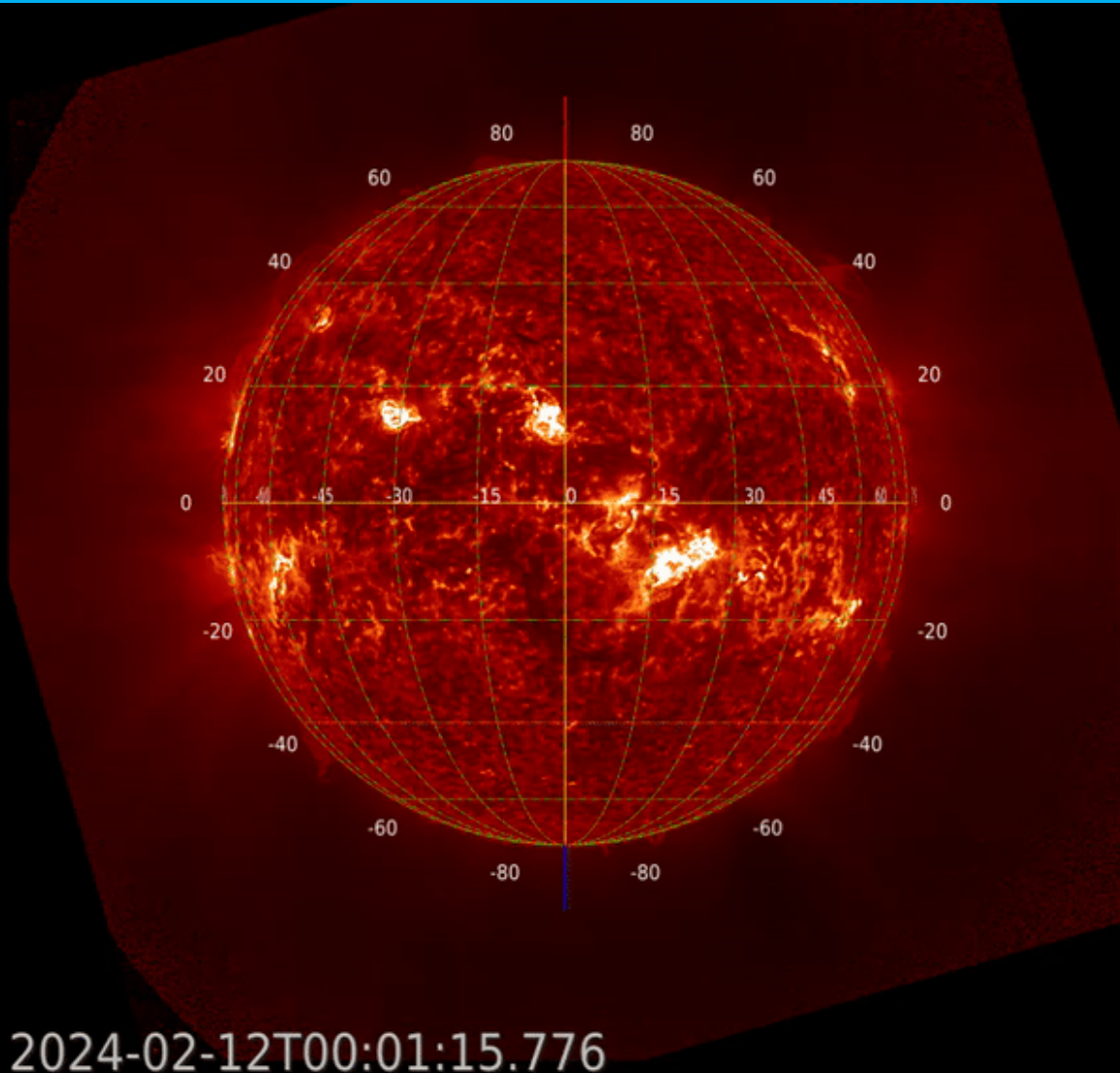
Solar X-Ray and UV flux



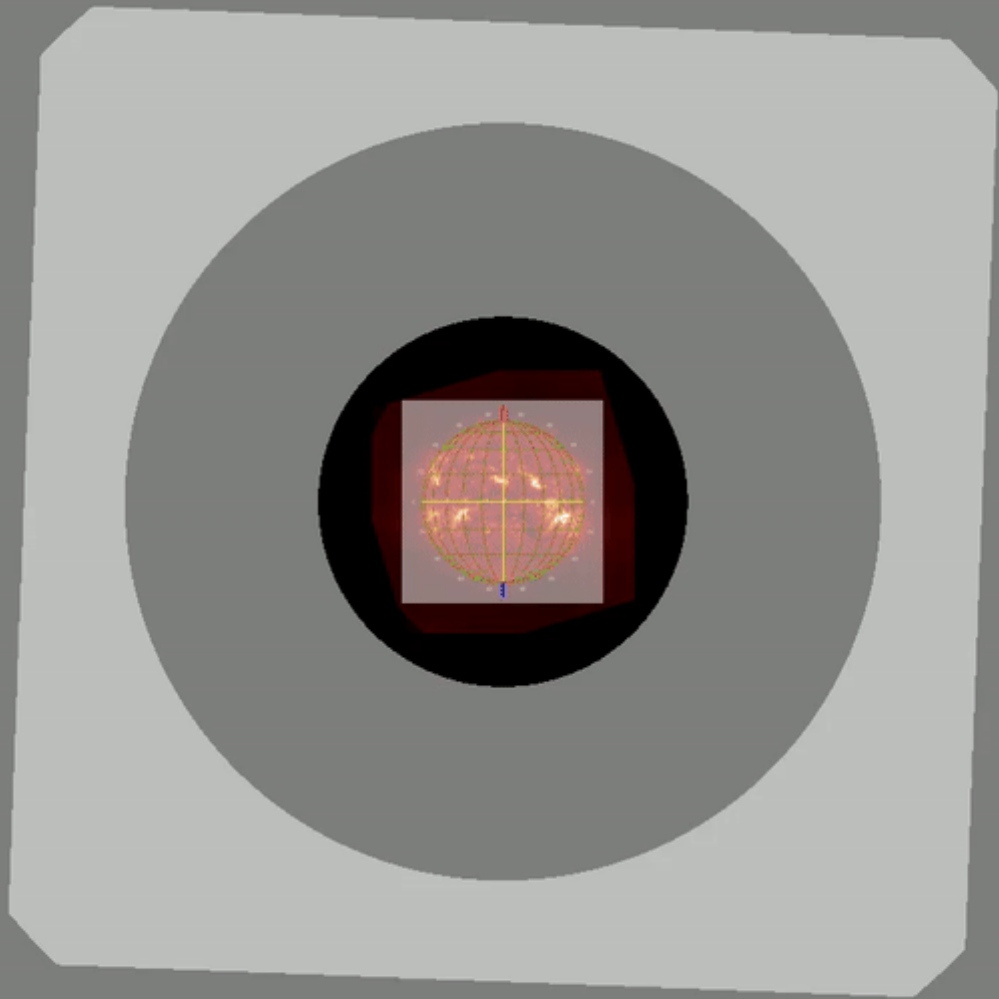
Coronal Mass Ejections



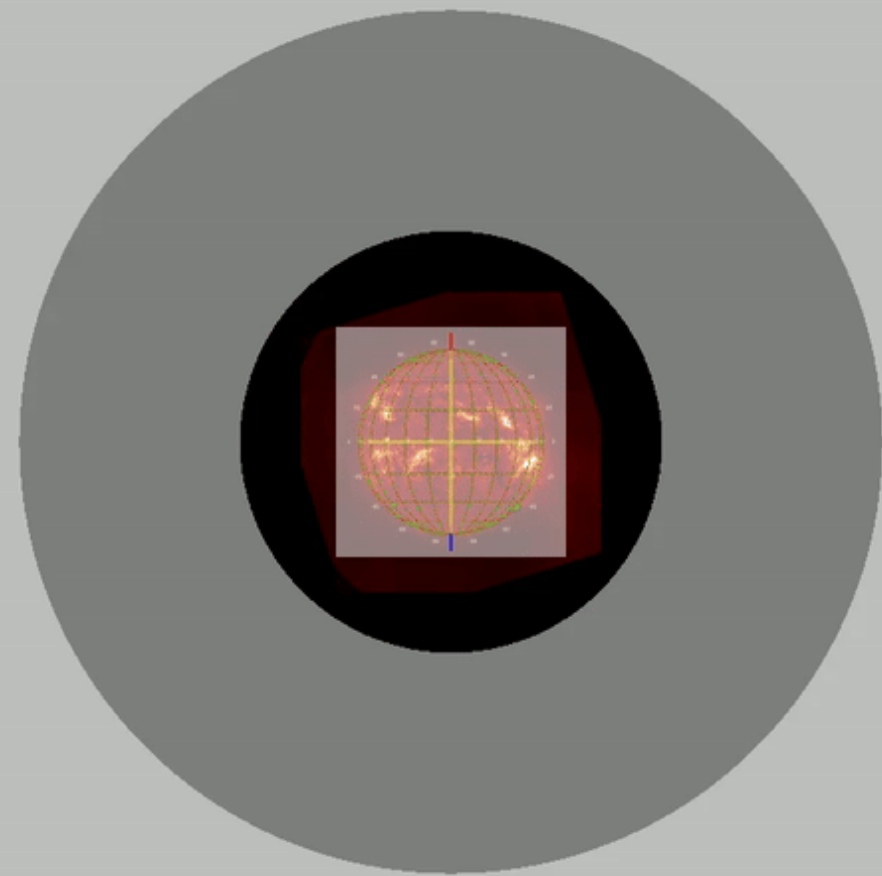
Coronal Mass Ejections



Coronal Mass Ejections

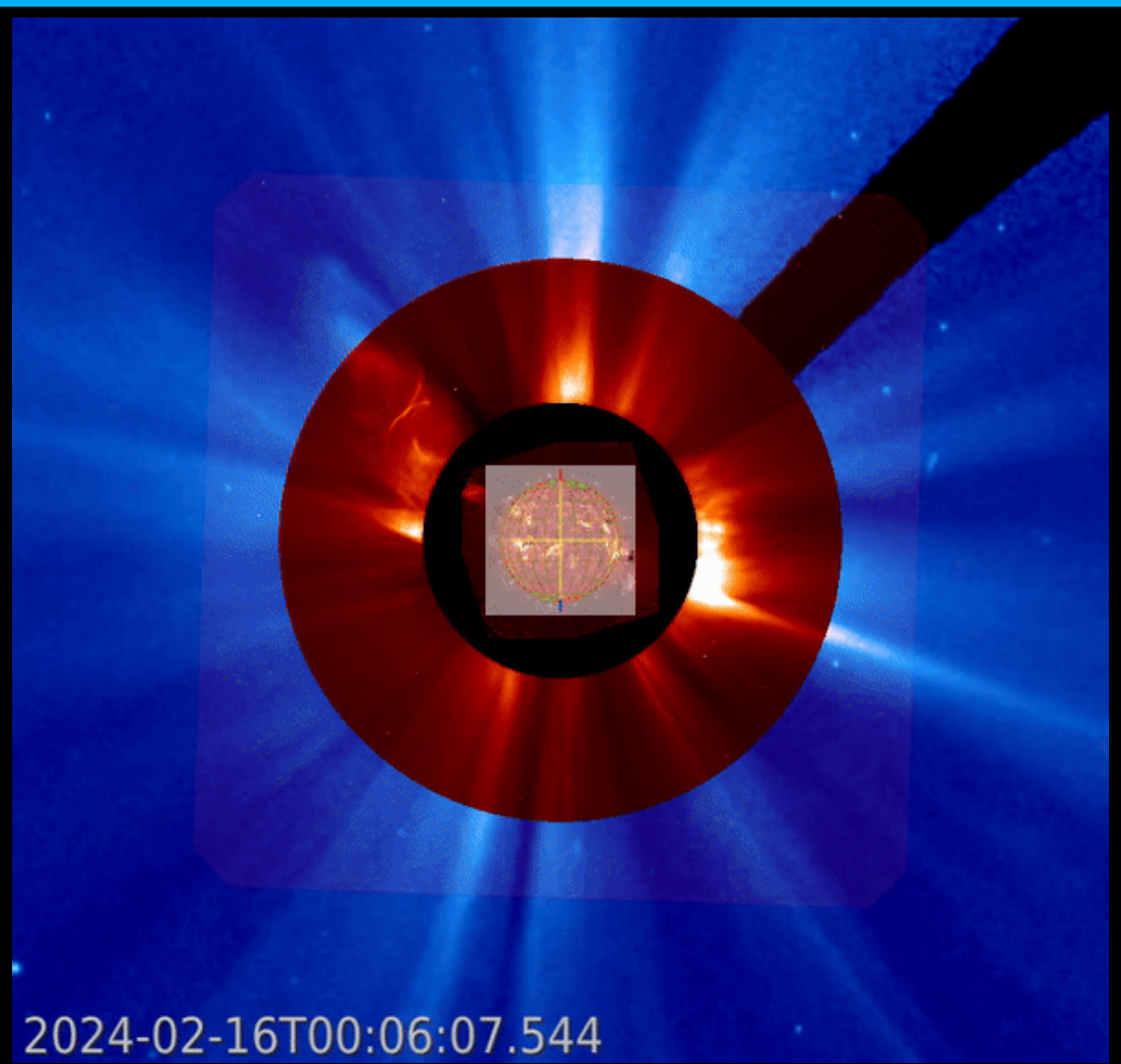
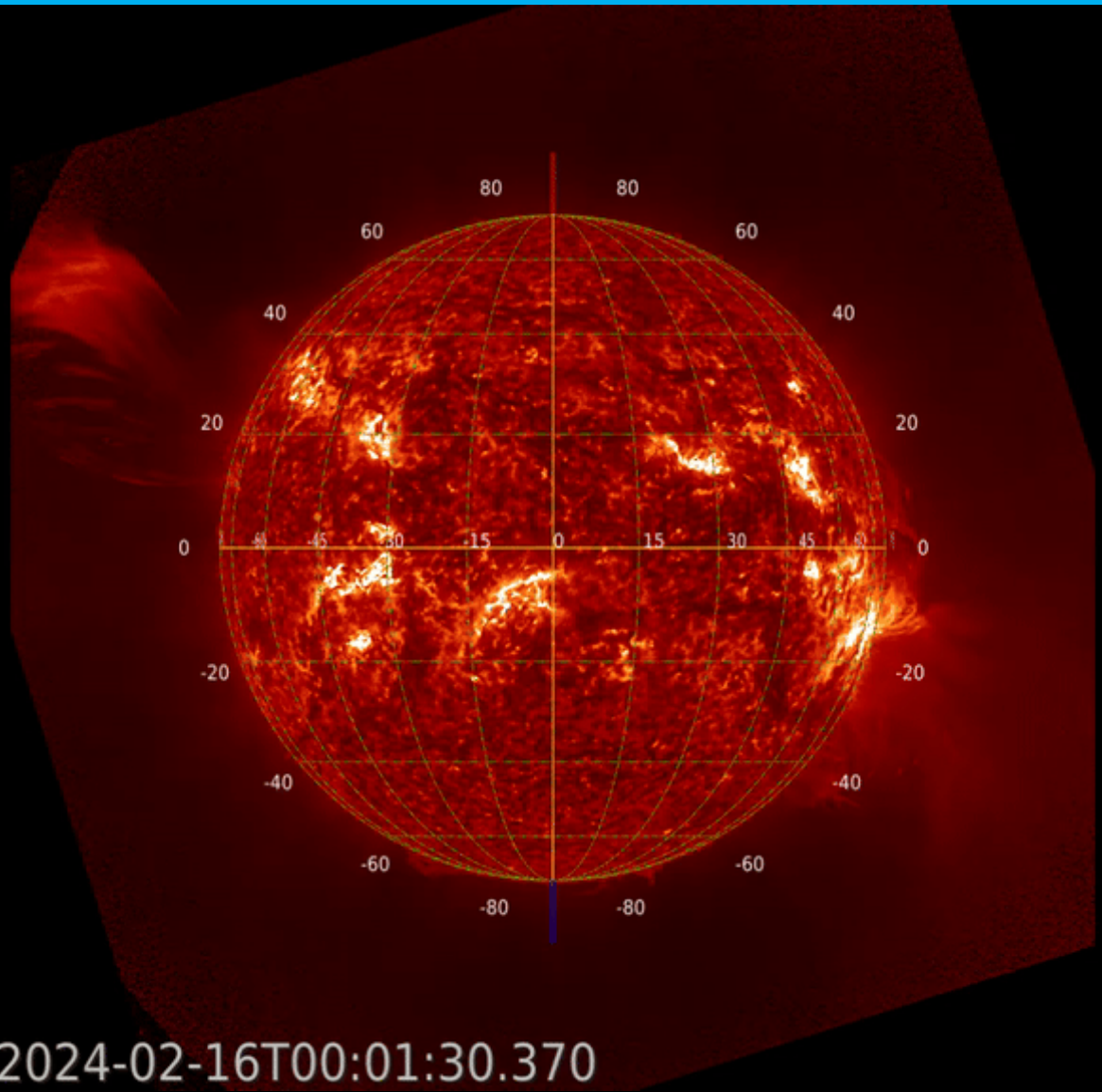


2024-02-14T00:01:04.835

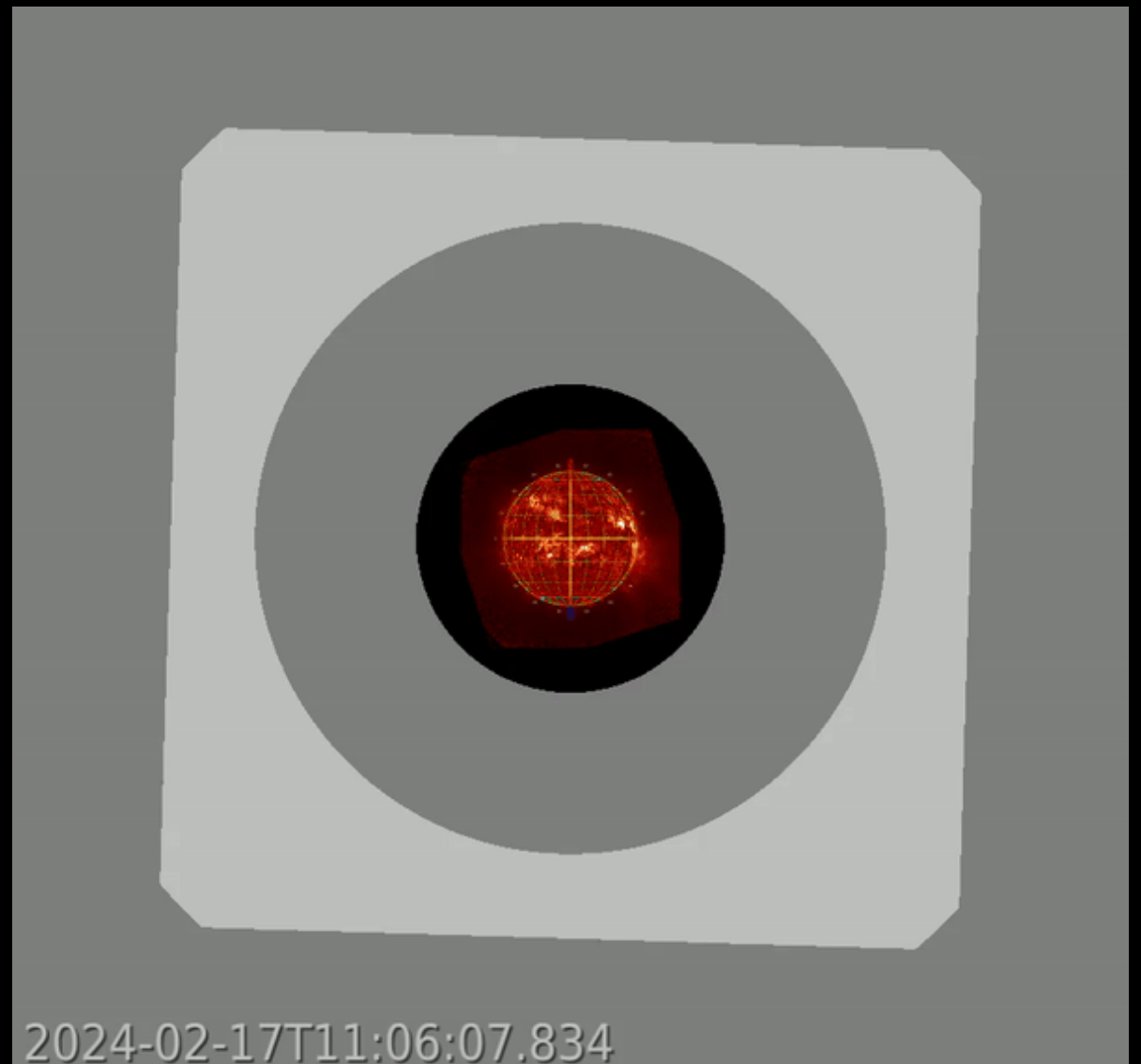
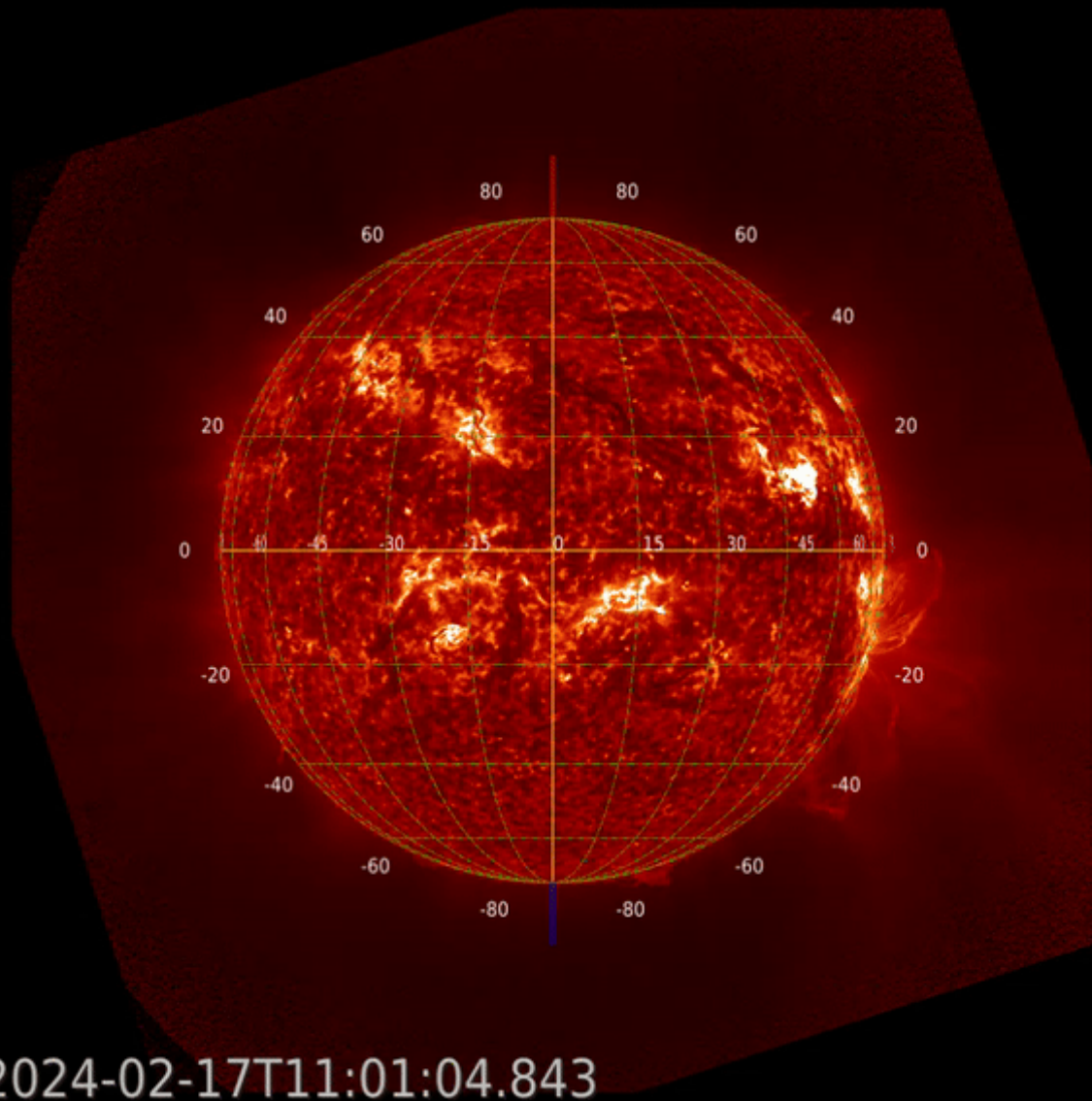


2024-02-15T00:01:04.835

Coronal Mass Ejections



Coronal Mass Ejections



Solar Wind and

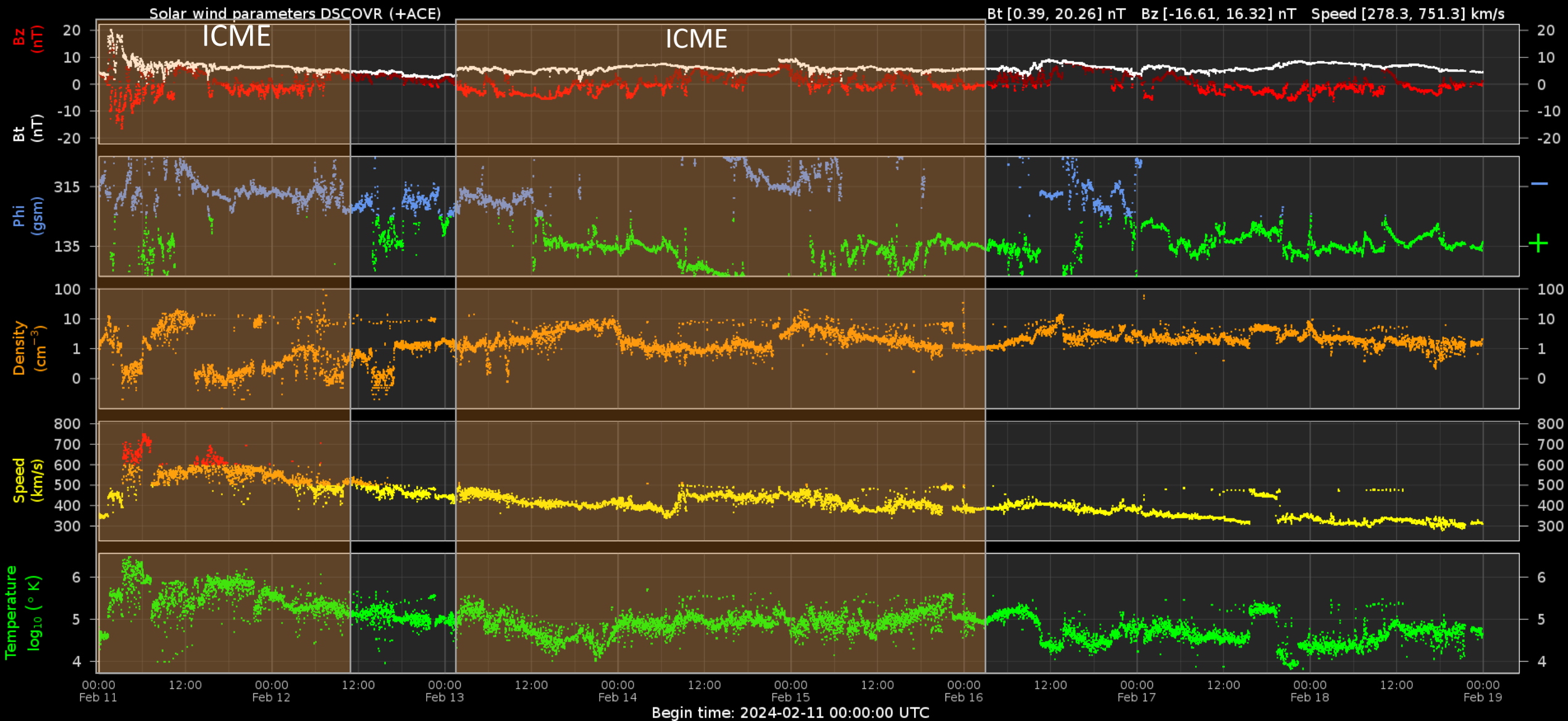
Geomagnetic Activity



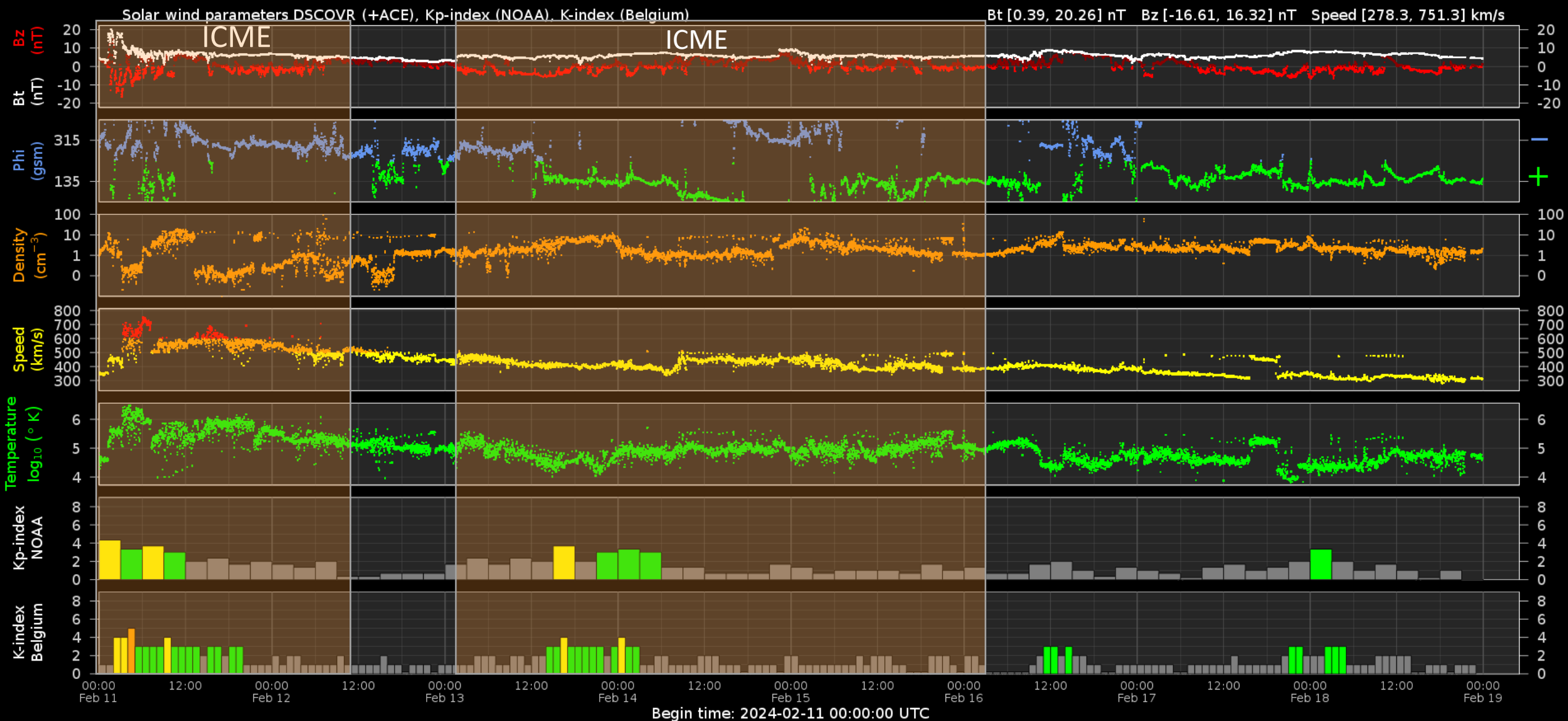
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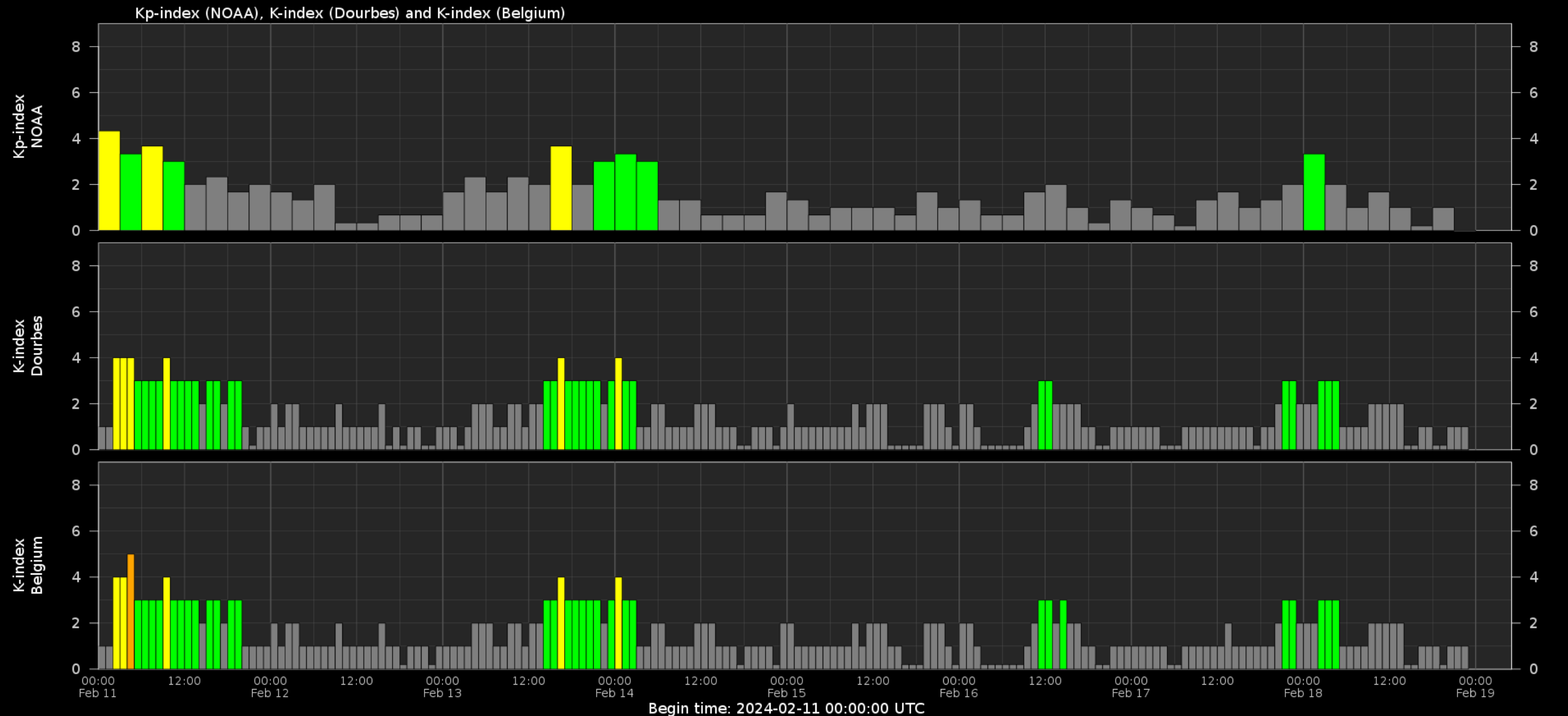
Solar wind parameters



Solar wind parameters & K-indices



Geomagnetic activity (K-indexes)



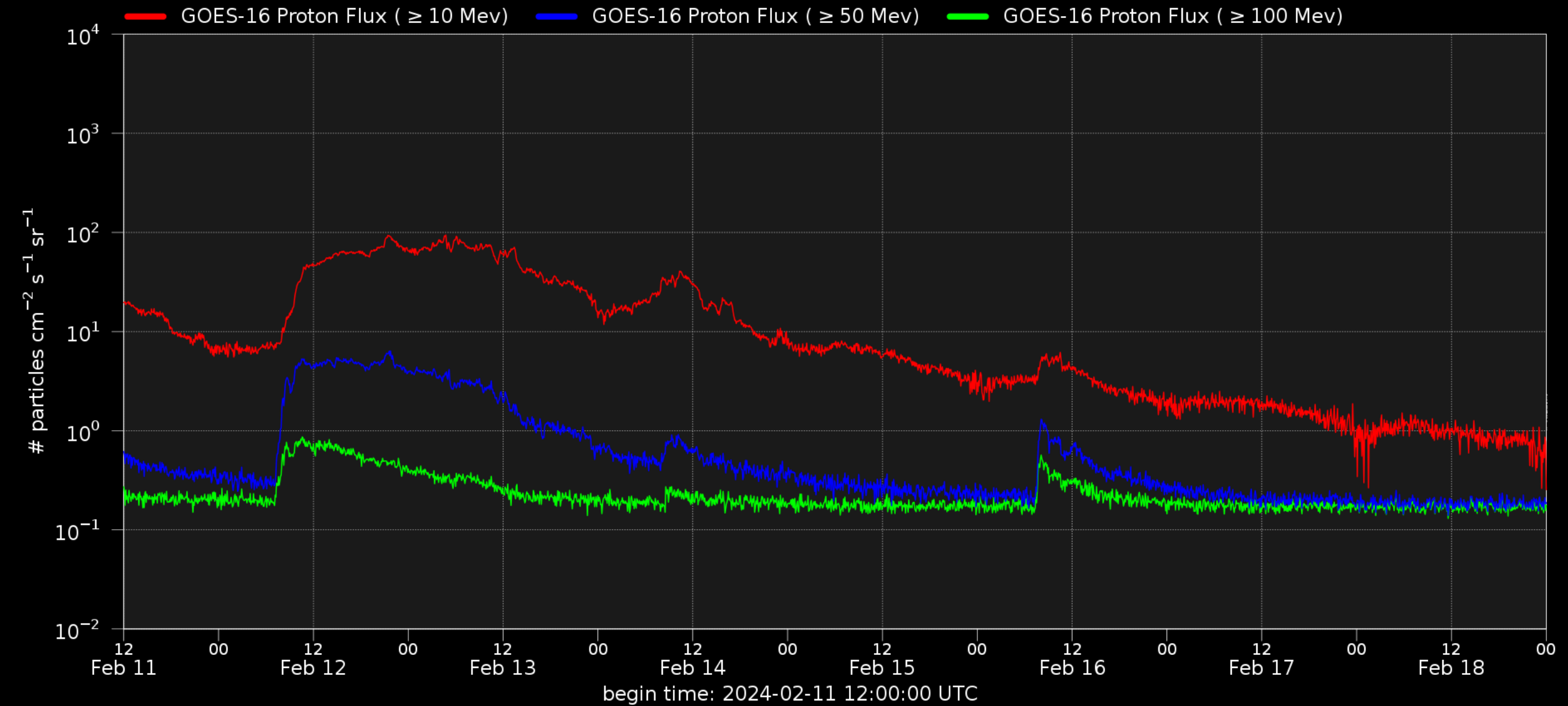
Energetic Particles



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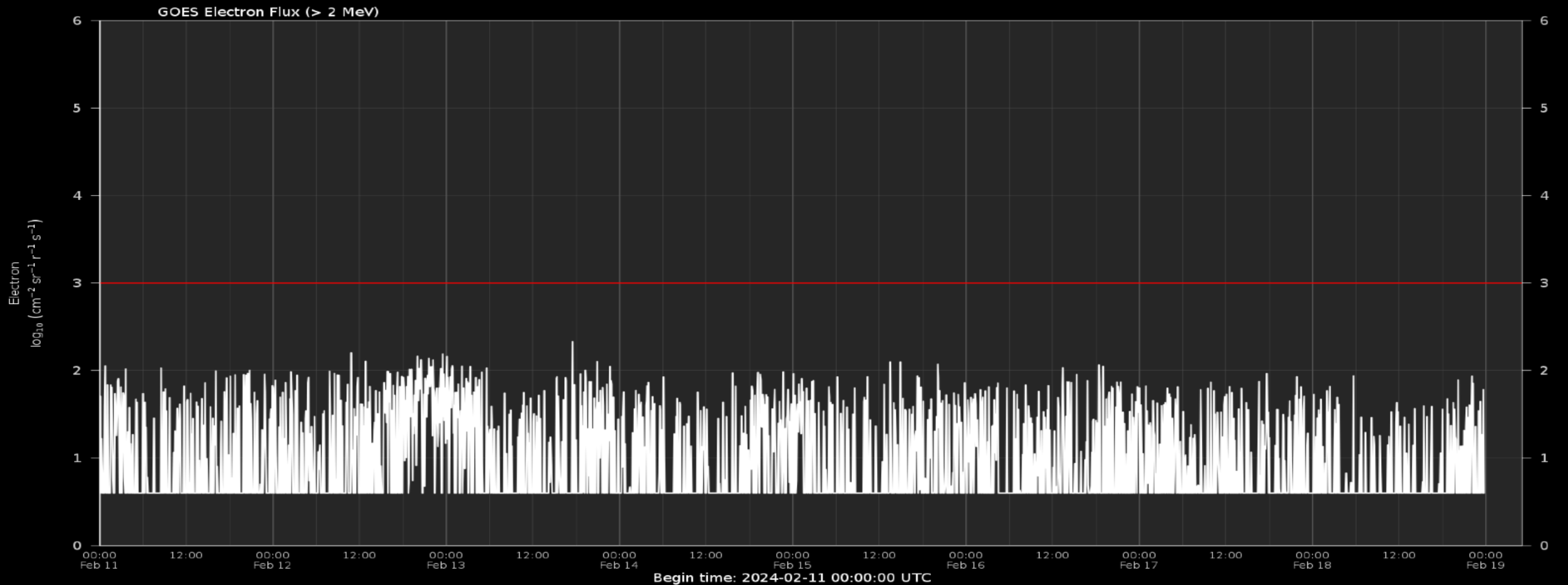
Solar proton flux



Electron flux at GEO

www.stce.be/educational/classification#electrons

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



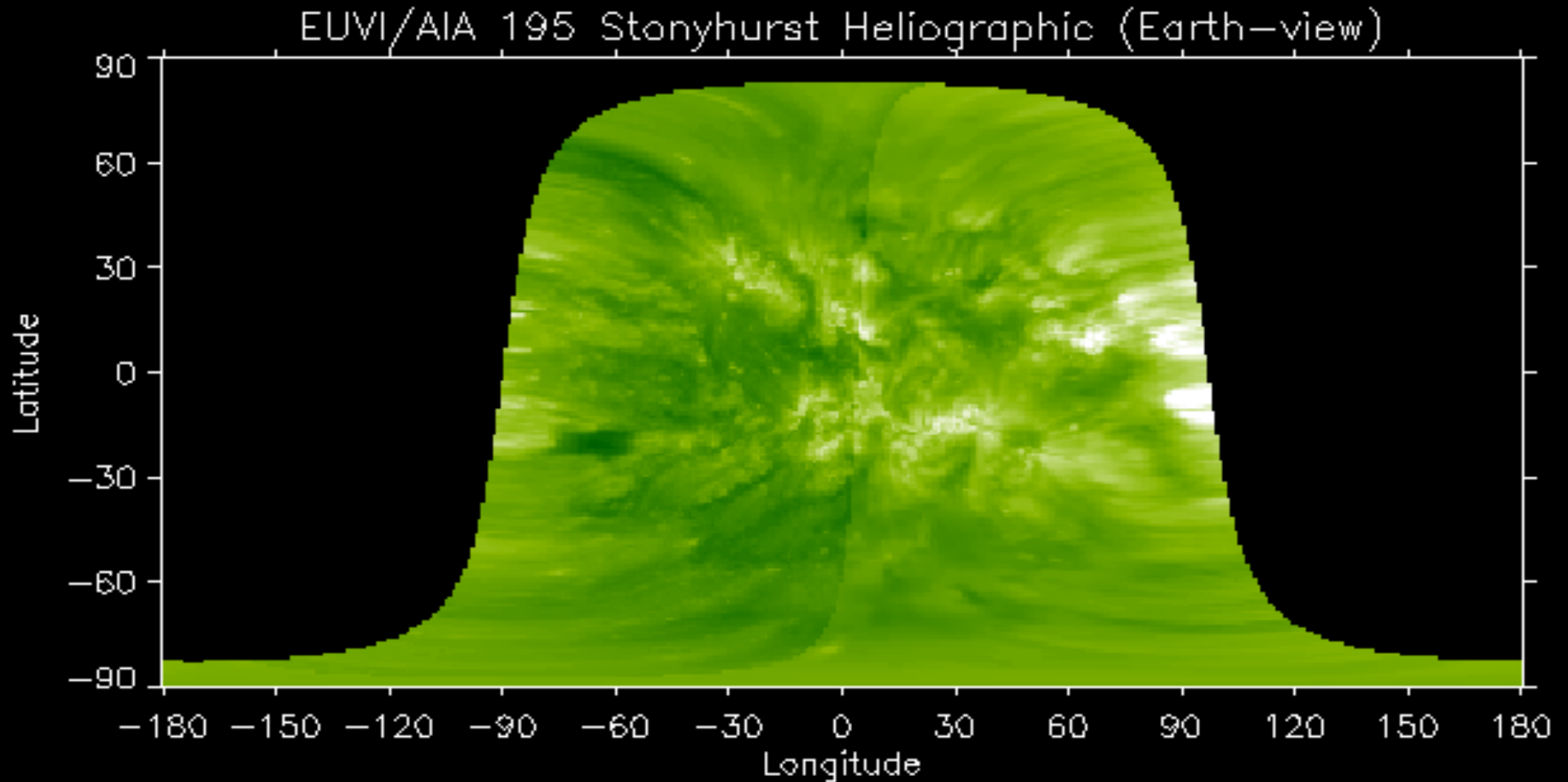
Outlook



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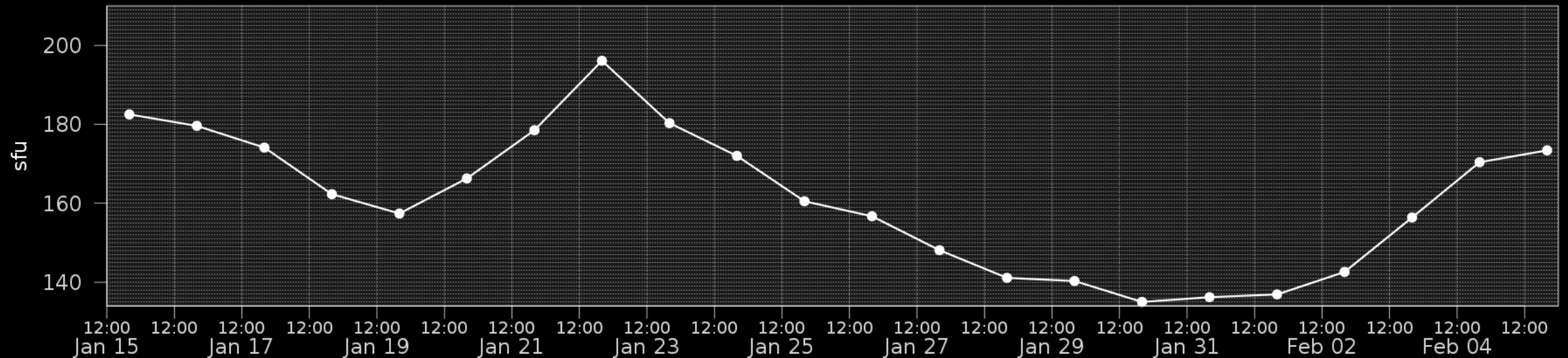
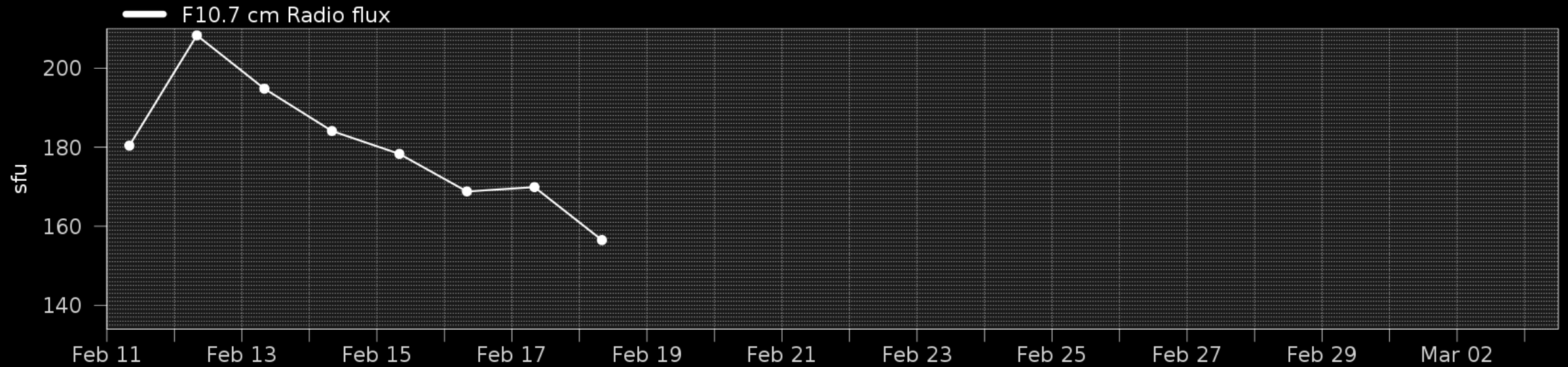
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Outlook: Solar activity



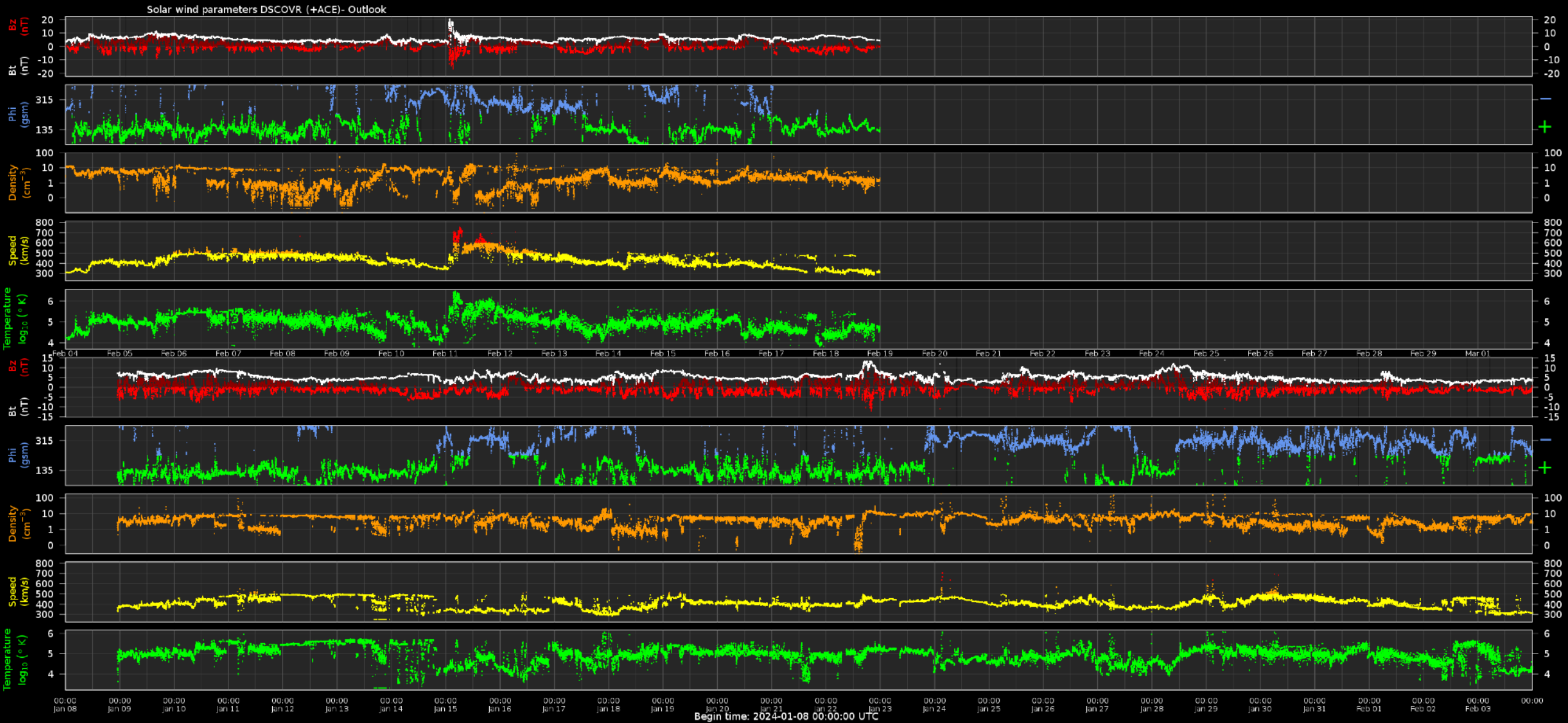
Observation date: 2024/02/18 15:35:00

Outlook: Solar F10.7cm radio flux

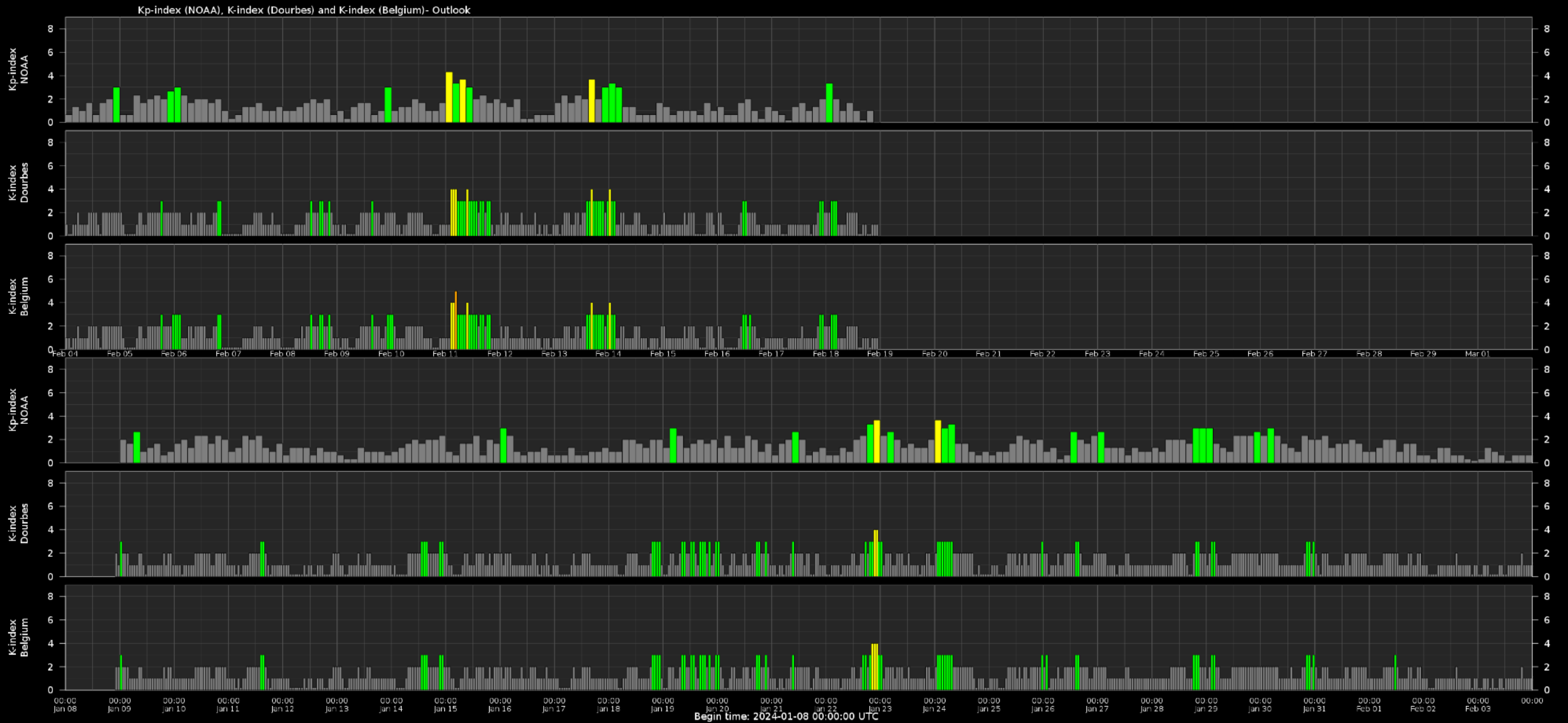


begin time: 2024-02-11 12:00:00 UTC

Outlook: Solar wind parameters



Outlook: Geomagnetic activity



Outlook: Electron Flux at GEO Outlook



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