

SIDC Space Weather Briefing

04 - 11 September 2022

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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 2022-09-04 12:00 to 2022-09-11 23:59

Active regions	NOAA AR 3089-3101
Flares	# C-class flare: 55 # M-class flare: 1 # X-class flare: 0
Coronal Holes	No geo-effective CH crossed the central meridian
CMEs	No geo-effective CMEs

Proton flux	Below alert levels
Electron flux	Above 1000 pfu alert threshold, fluence at moderate levels

Solar wind and geomagnetic conditions

ICMEs	None
Solar wind conditions	B : 0.57 - 16.22 nT //Bz: -8.43 nT to 7.5 nT //Speed: 360.4 - 815.1km/s
K-indices	max K-index (K_Bel): 5 max Kp-index (NOAA): 6

All Quiet Alert: Not quiet

Solar Activity

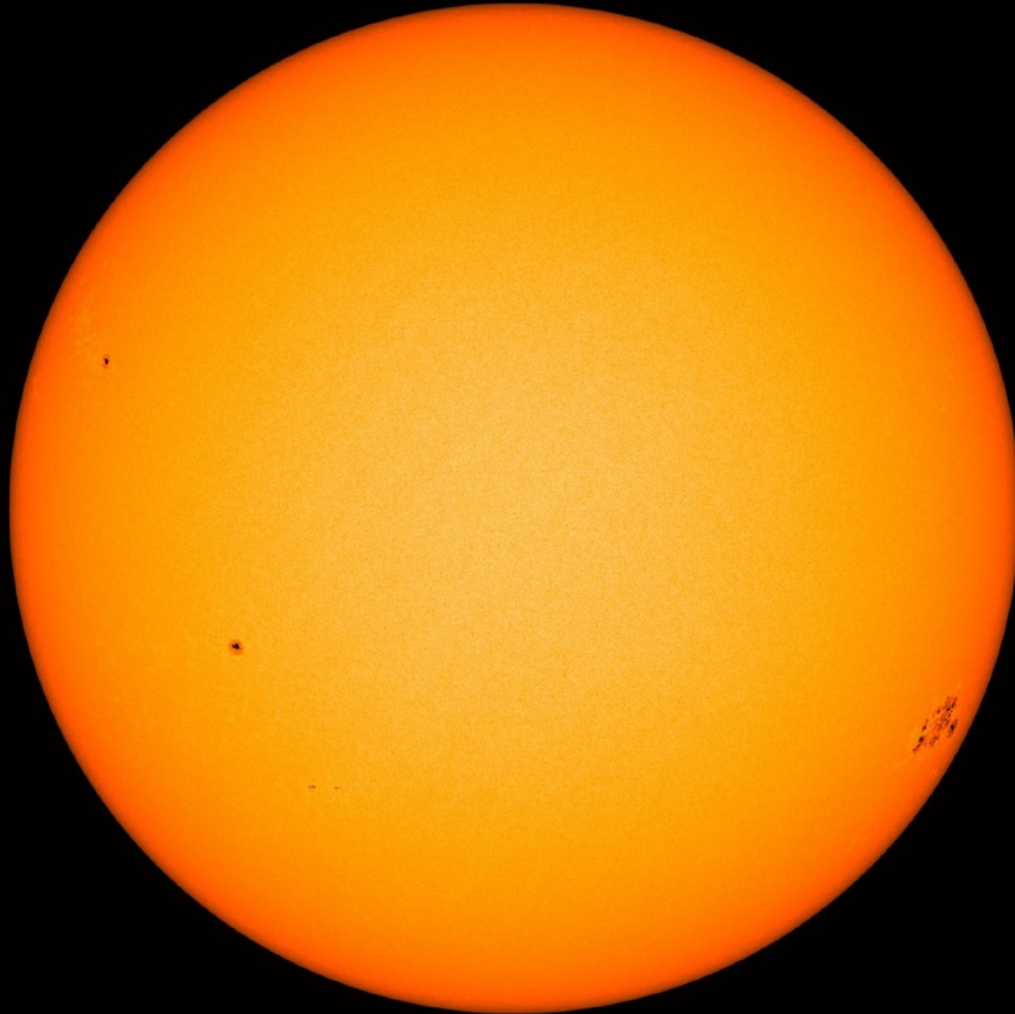


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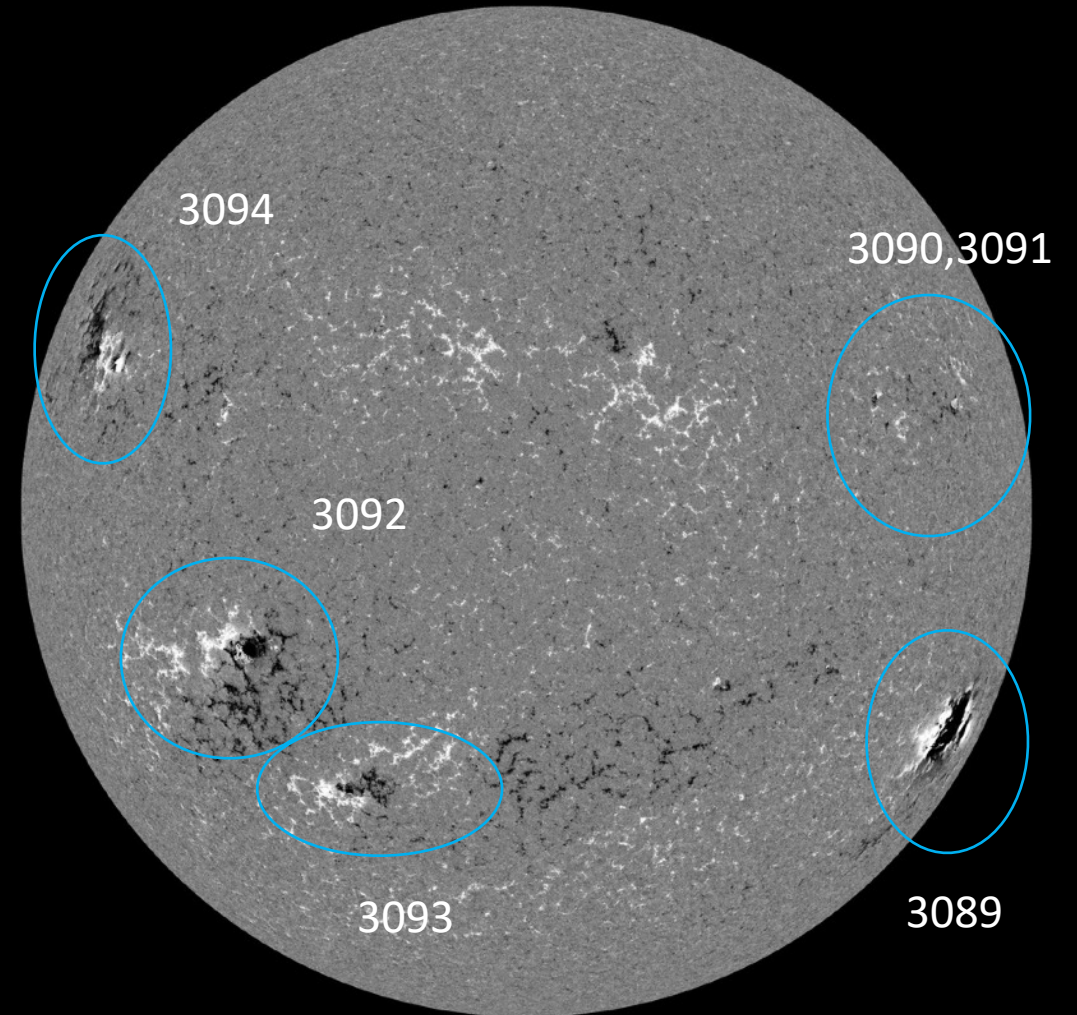
Solar active regions

SDO/HMI White Light 2022-09-04



SDO/HMI Quick-Look Continuum: 20220904_114500

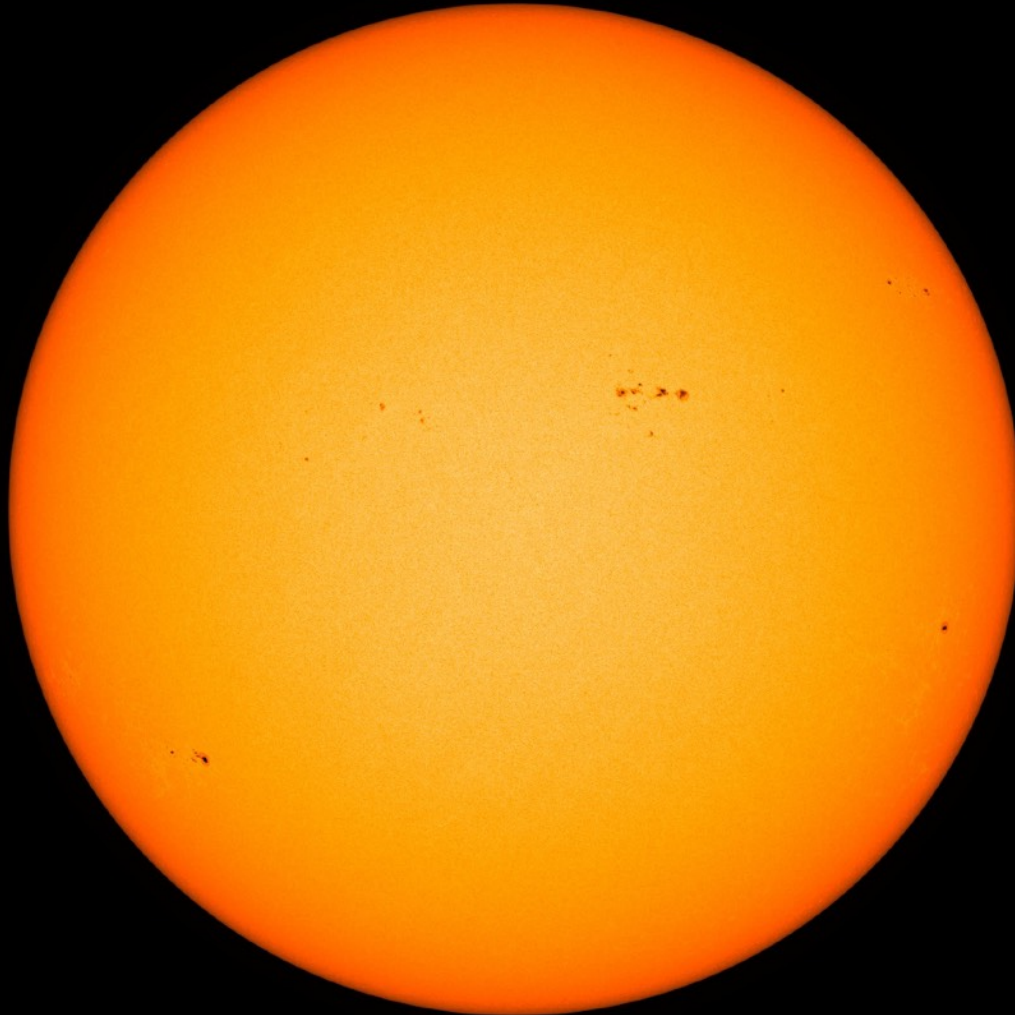
SDO/HMI Magnetogram 2022-09-04



SDO/HMI Quick-Look Magnetogram: 20220904_114500

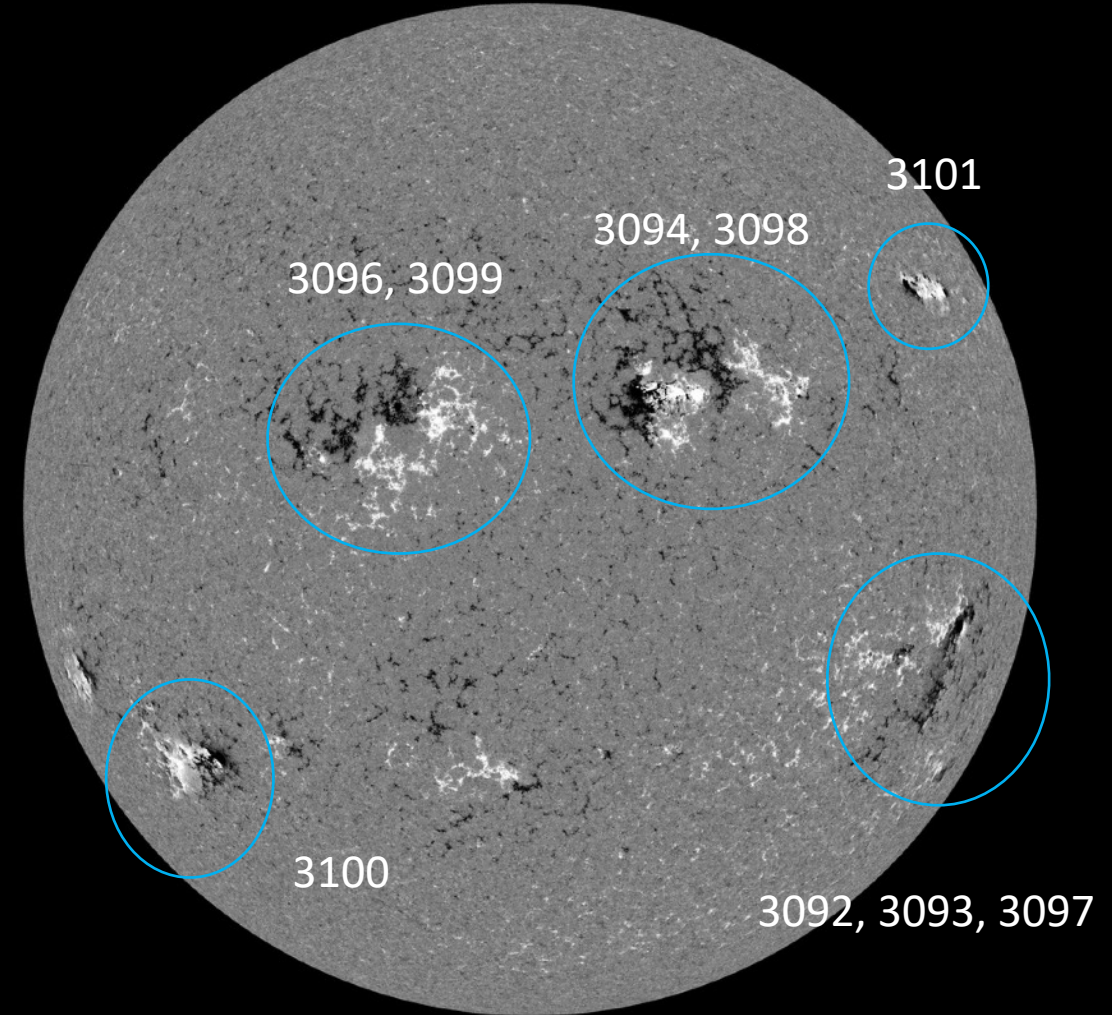
Solar active regions

SDO/HMI White Light 2022-09-11



SDO/HMI Quick-Look Continuum: 20220911_114500

SDO/HMI Magnetogram 2022-09-11

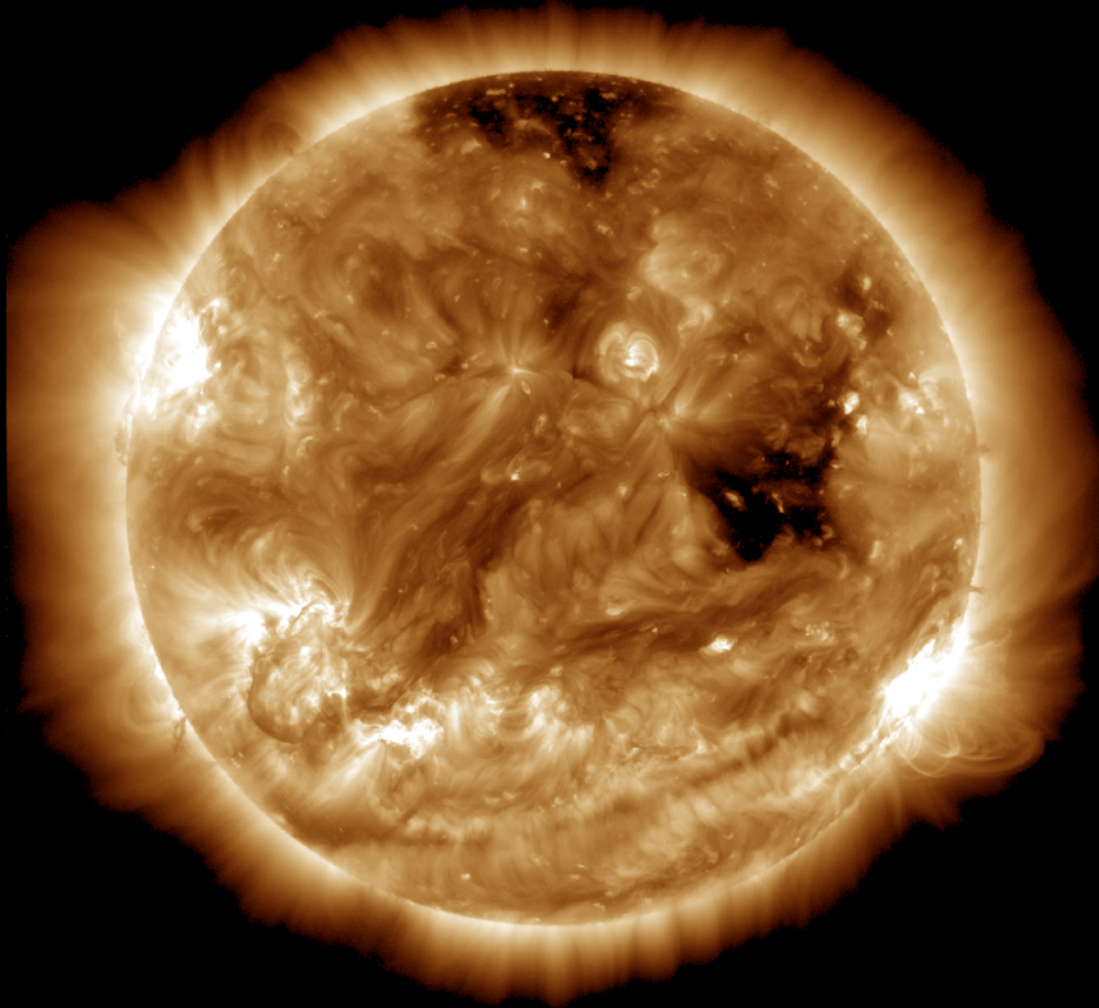


SDO/HMI Quick-Look Magnetogram: 20220911_114500

Coronal holes

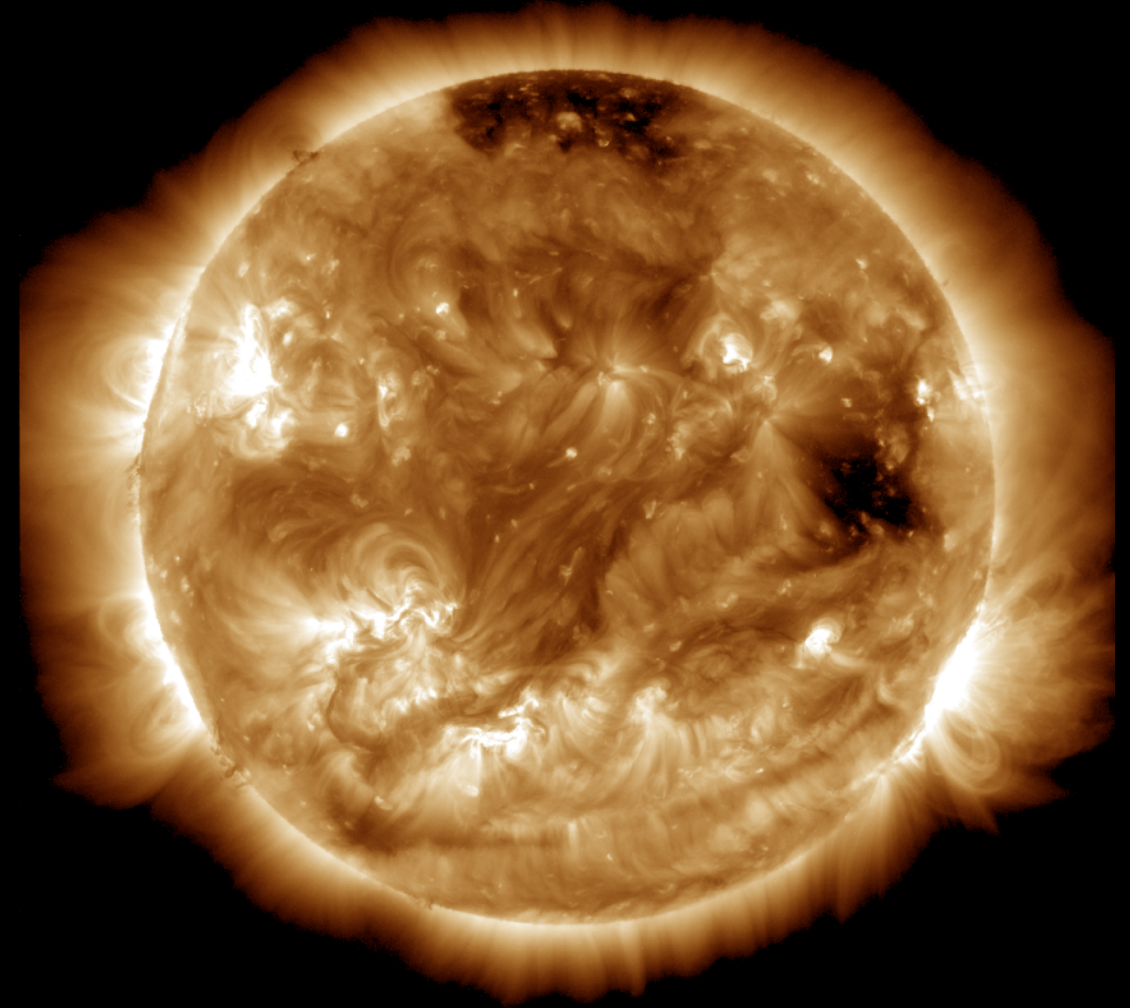
SDO/AIA 19.3 nm 2022-09-04

SDO/AIA AIA 193Å 2022-09-04T12:00:05.843



SDO/AIA 19.3 nm 2022-09-05

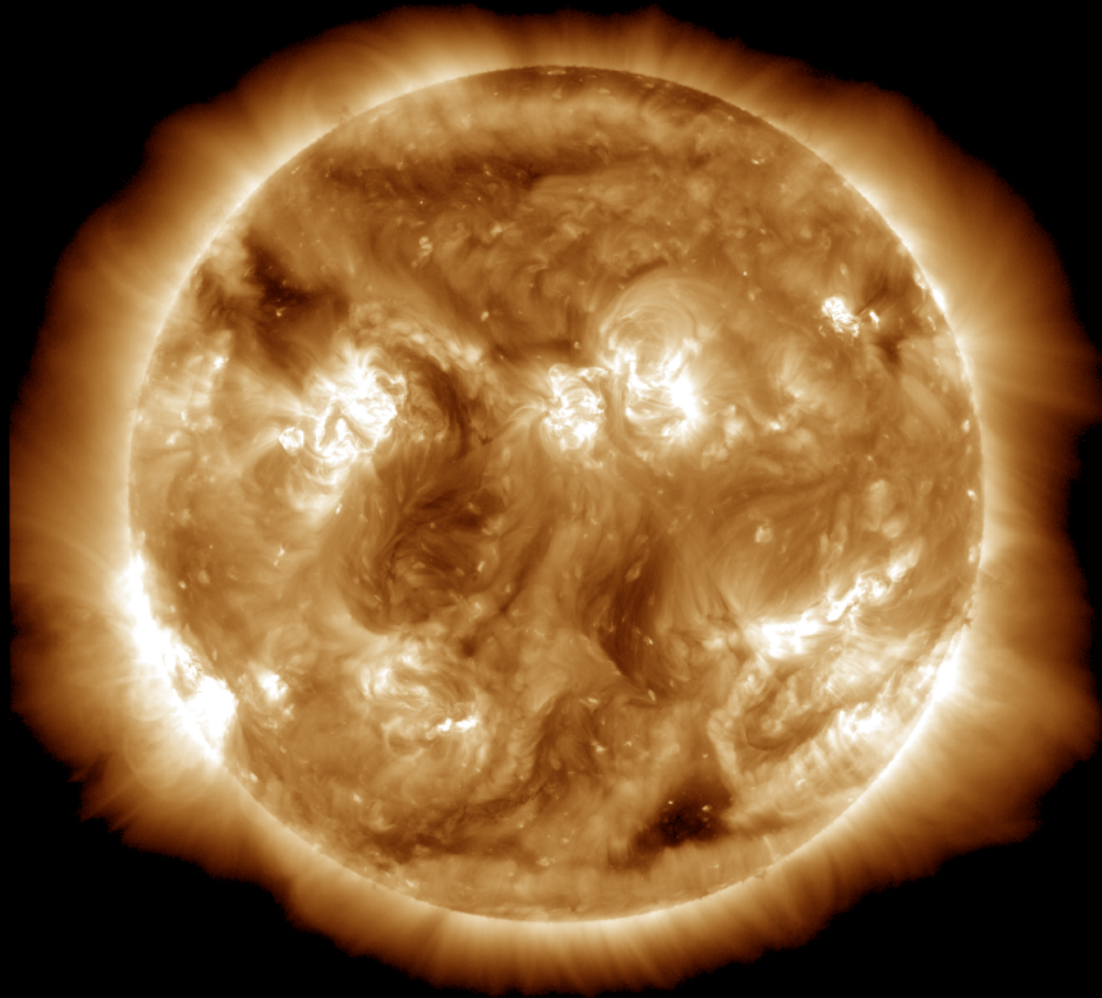
SDO/AIA AIA 193Å 2022-09-05T12:00:05.846



Coronal holes

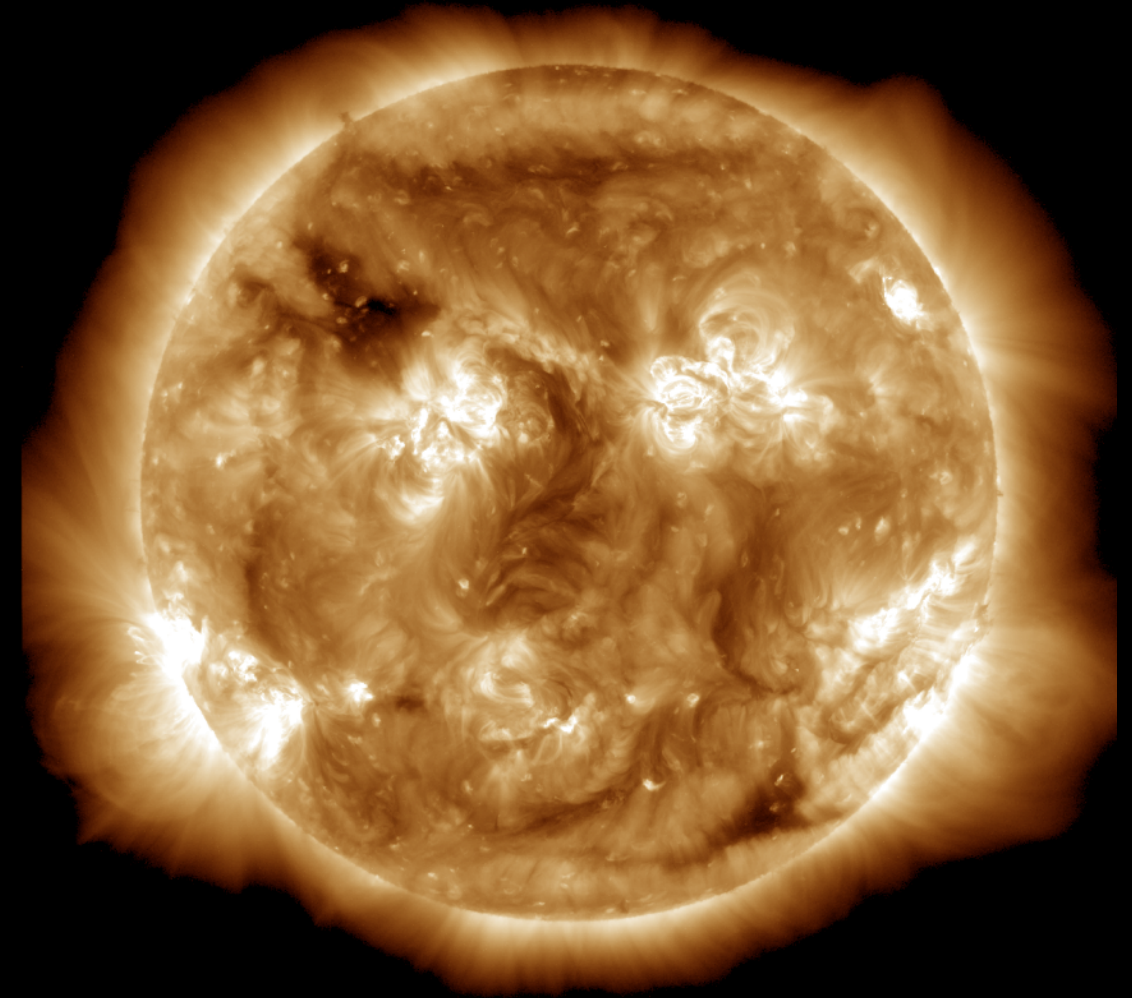
SDO/AIA 19.3 nm 2022-09-10

SDO/AIA AIA 193Å 2022-09-10T12:00:05.843



SDO/AIA 19.3 nm 2022-09-11

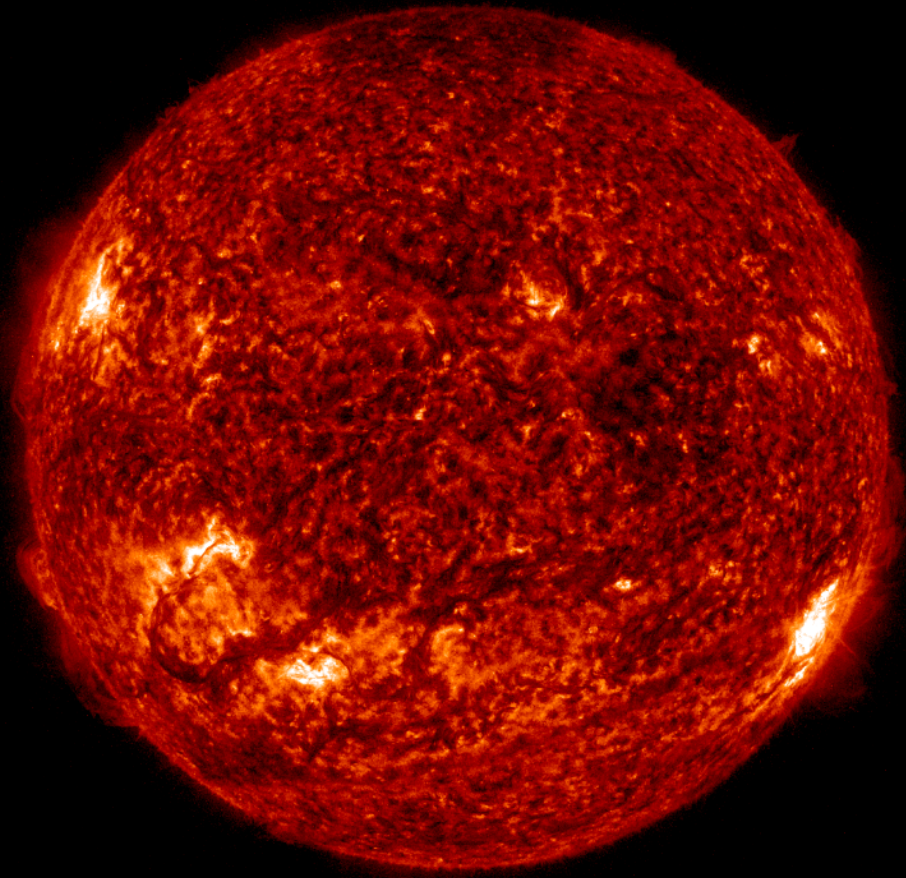
SDO/AIA AIA 193Å 2022-09-11T12:00:05.843



Filaments

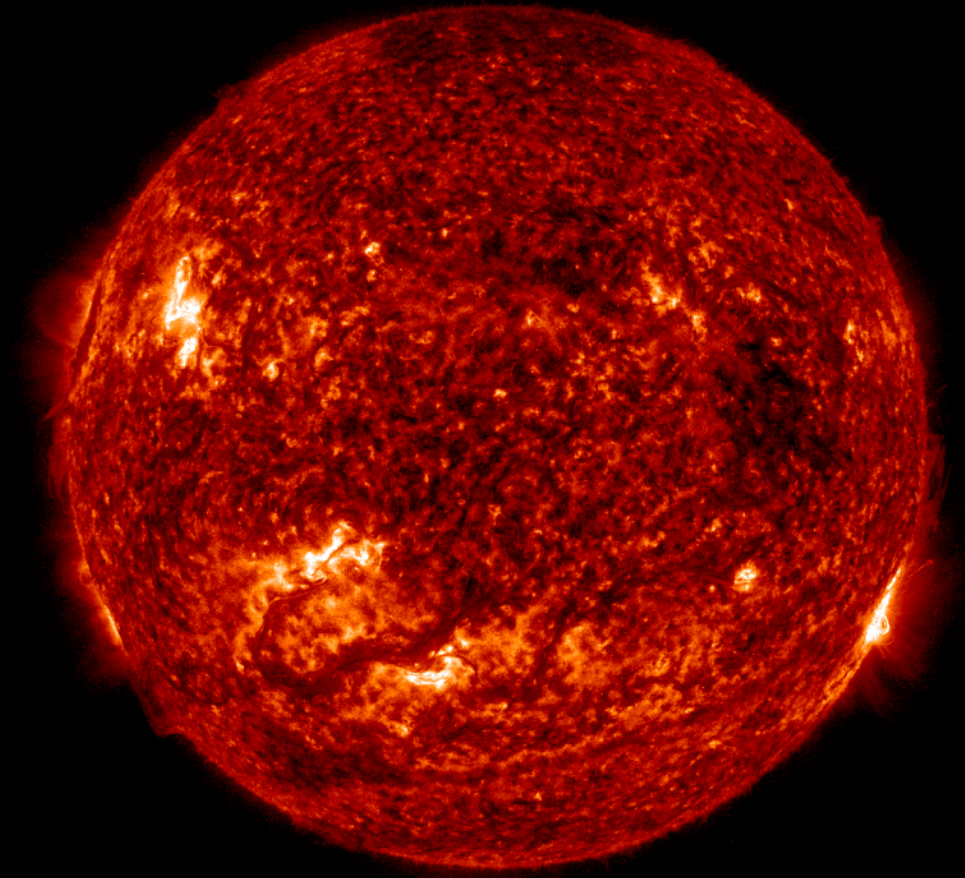
SDO/AIA 30.4 nm 2022-09-04

SDO/AIA AIA 304Å 2022-09-04T12:00:06.581



SDO/AIA 30.4 nm 2022-09-05

SDO/AIA AIA 304Å 2022-09-05T12:00:06.580



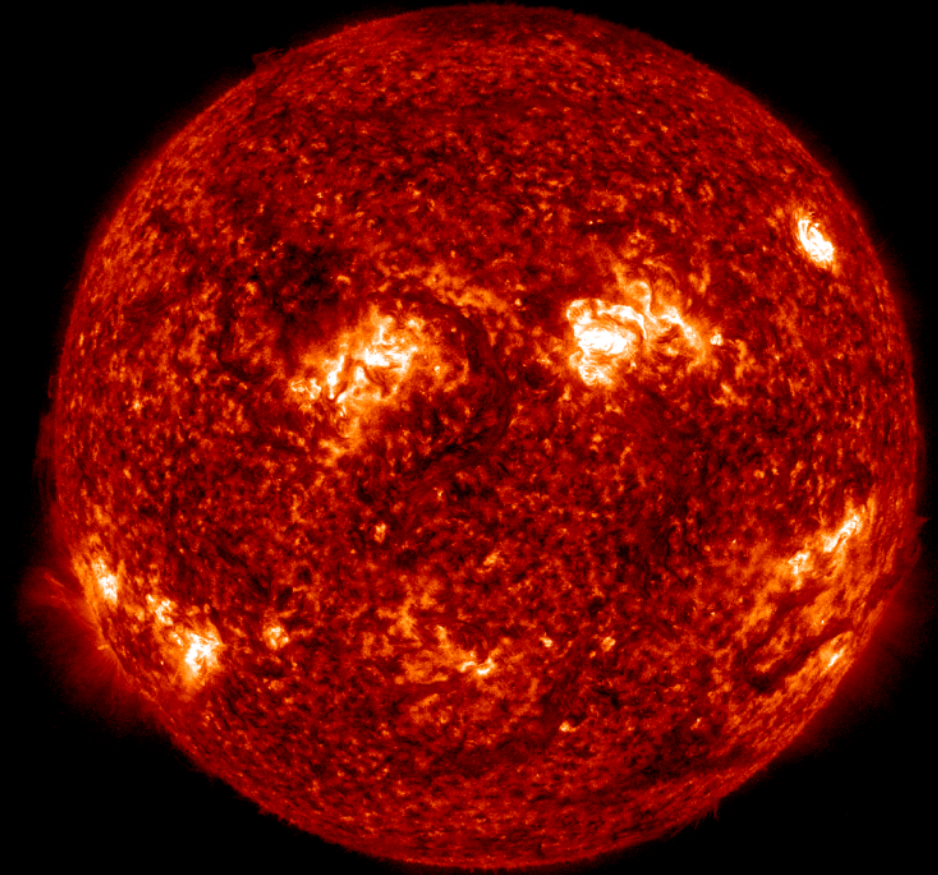
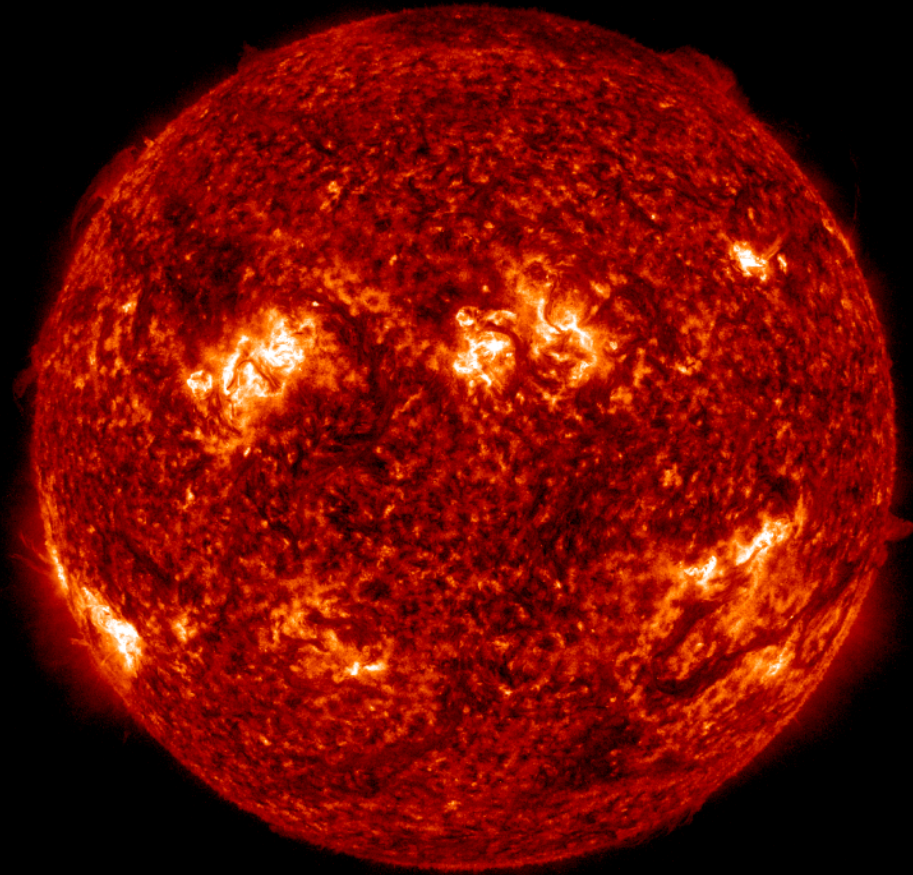
Filaments

SDO/AIA 30.4 nm 2022-09-10

SDO/AIA AIA 304Å 2022-09-10T12:00:06.580

SDO/AIA 30.4 nm 2022-09-11

SDO/AIA AIA 304Å 2022-09-11T12:00:06.572



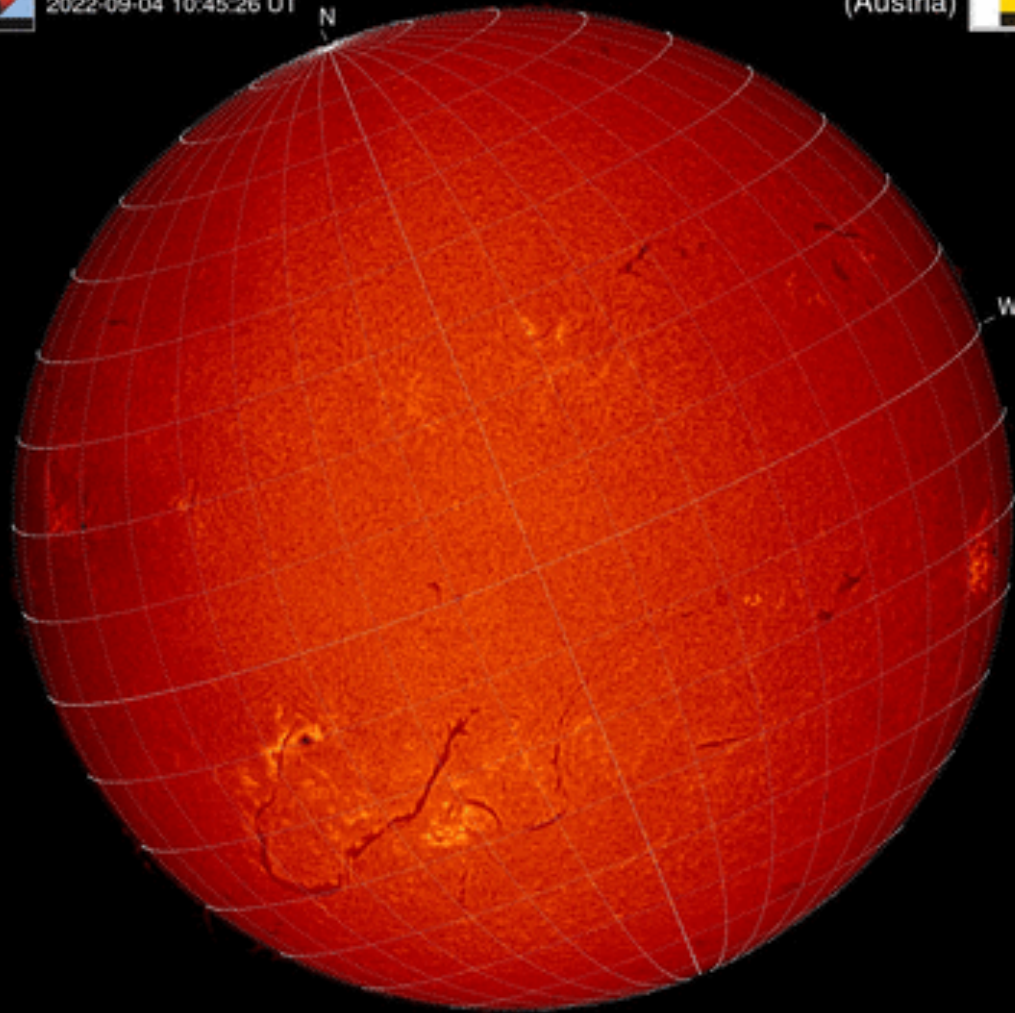
Filaments & Filament eruptions

H-alpha 2022-09-04



Kanzelhöhe Observatory
2022-09-04 10:45:26 UT

University of Graz
(Austria)

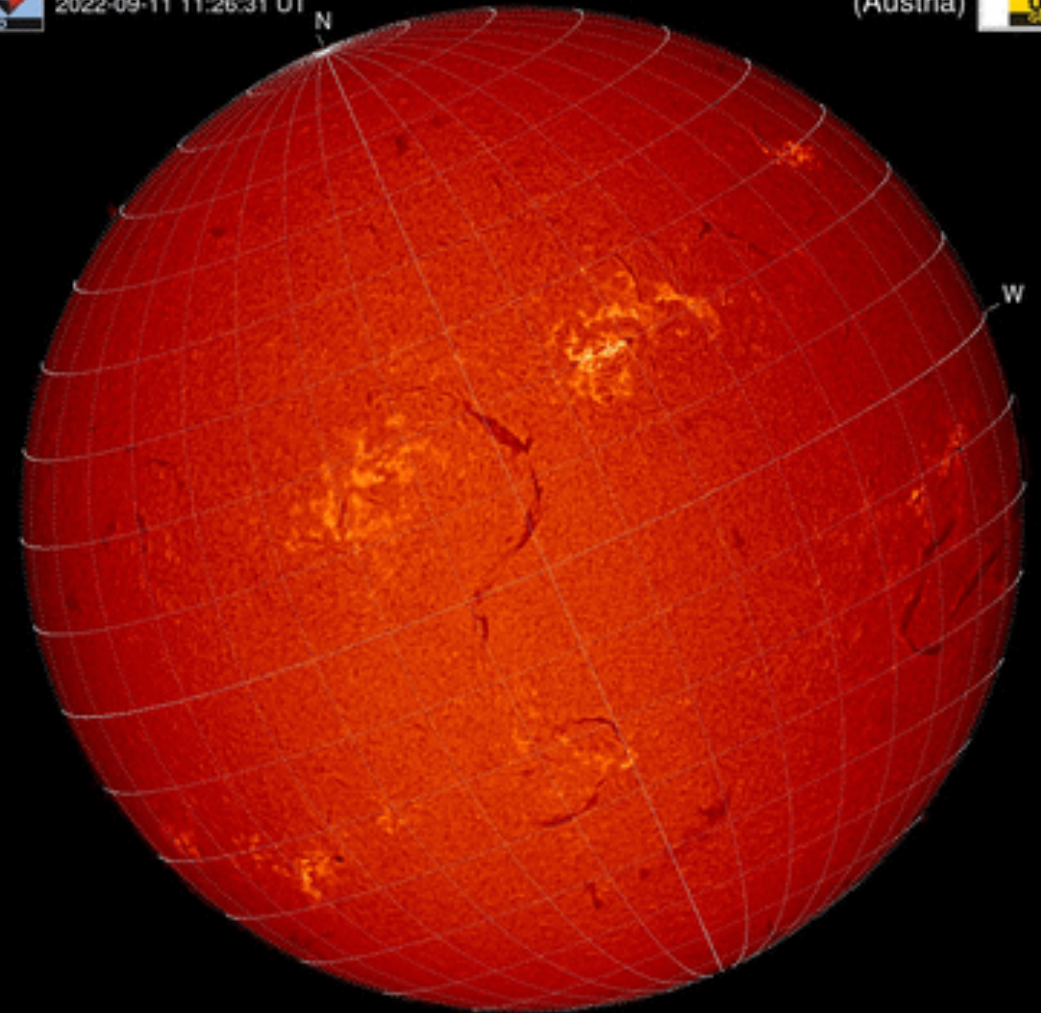


H-alpha 2022-09-11

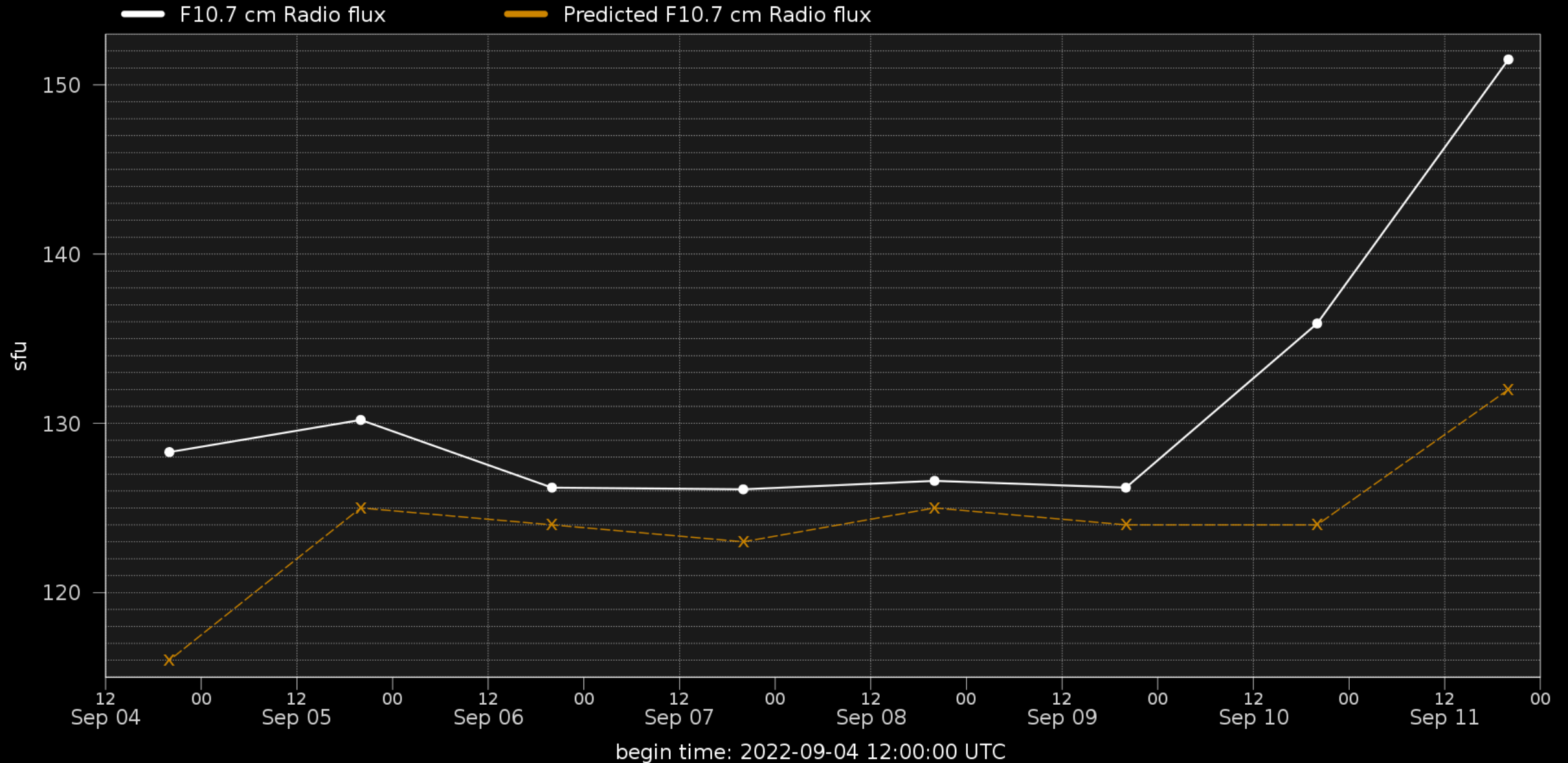


Kanzelhöhe Observatory
2022-09-11 11:26:31 UT

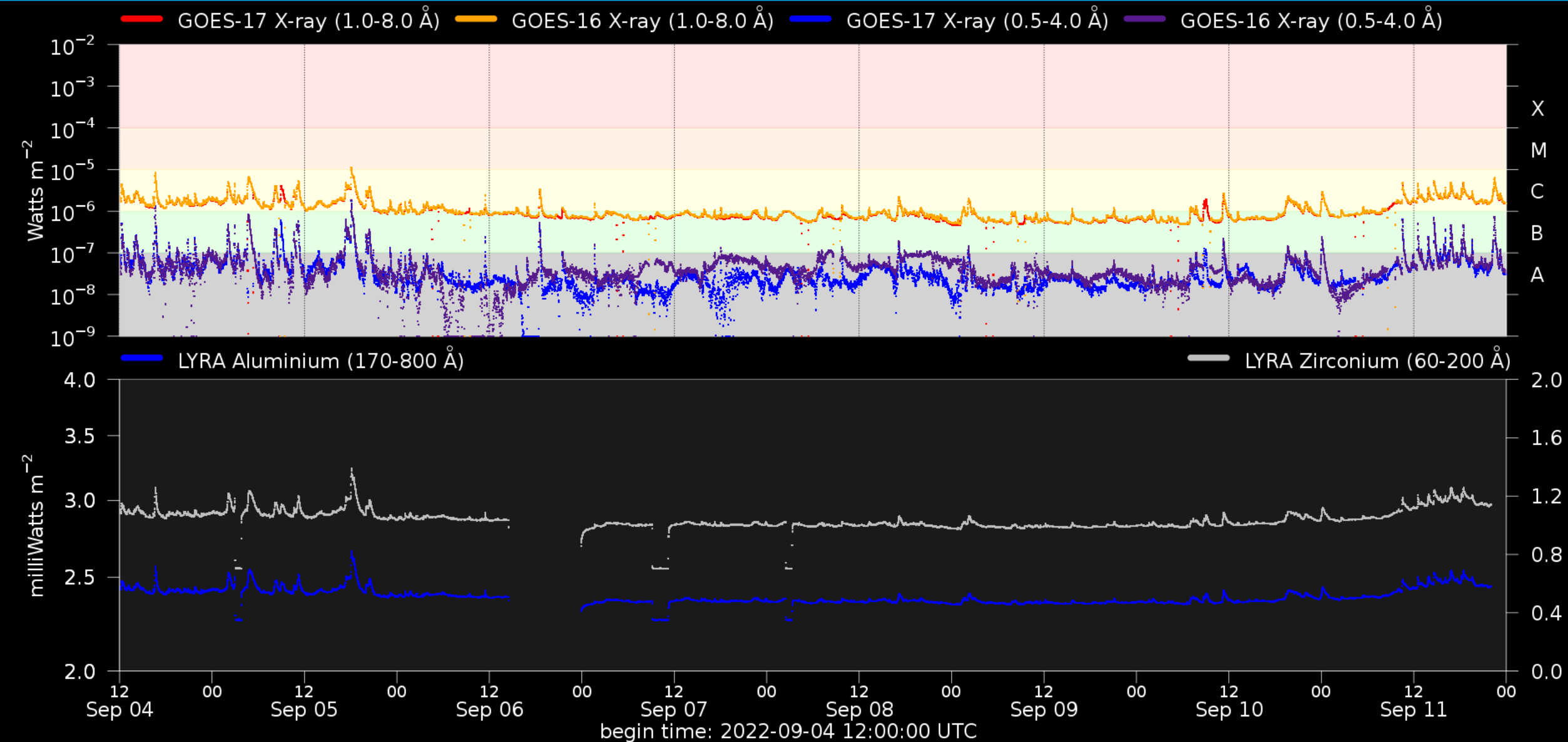
University of Graz
(Austria)



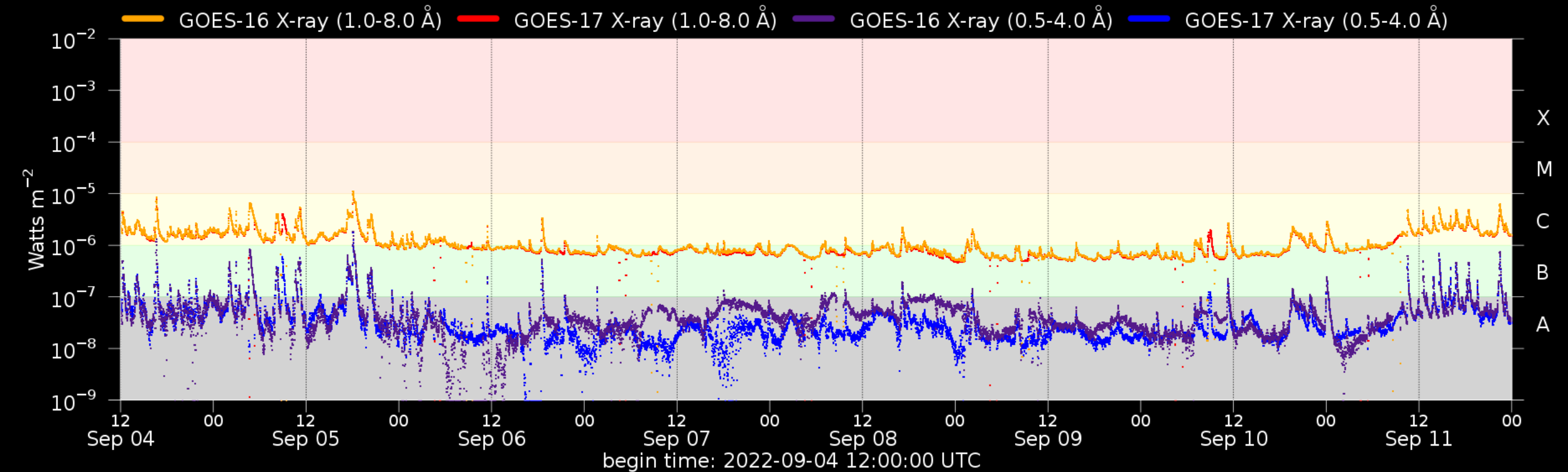
Solar F10.7cm radio flux



Solar X-Ray and UV flux



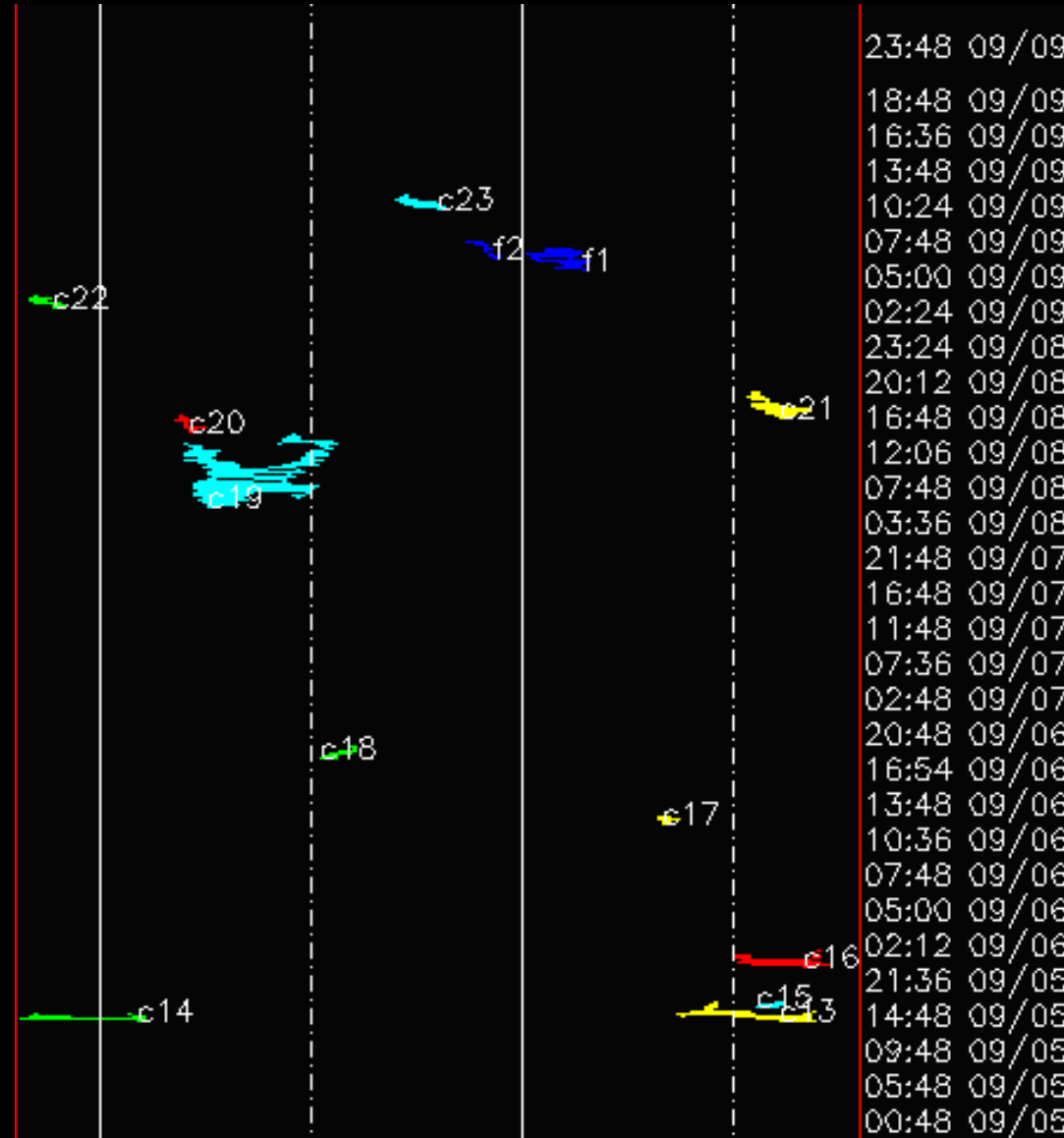
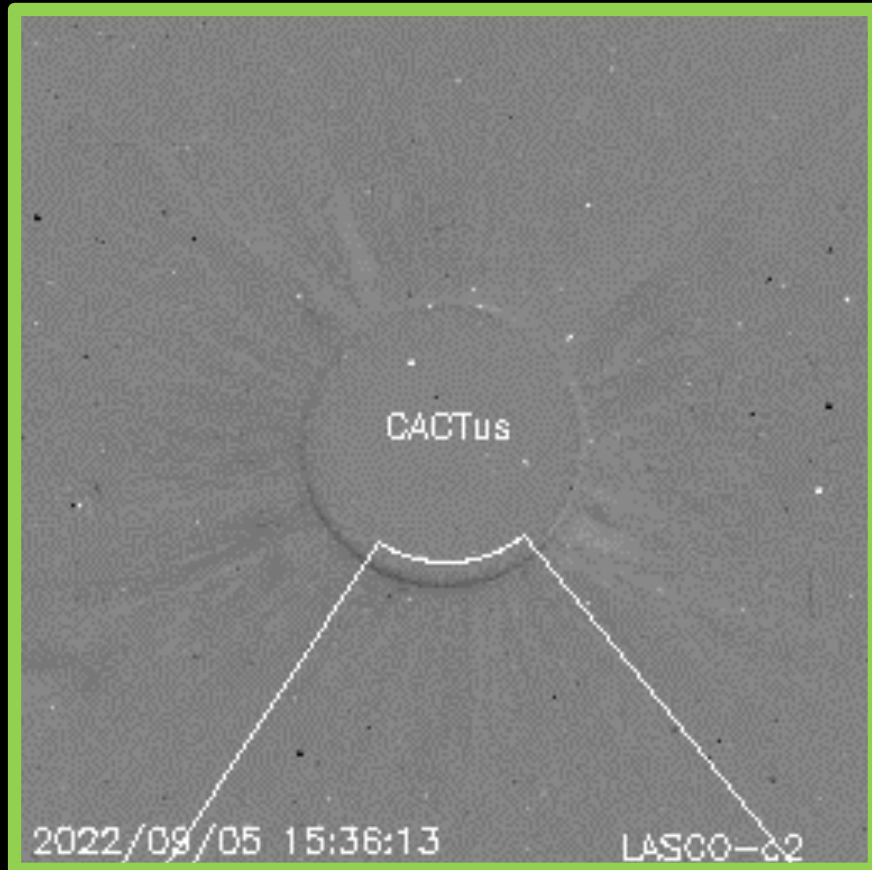
Flaring activity



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

Issue date	2022-09-04	2022-09-05	2022-09-06	2022-09-07	2022-09-08	2022-09-09	2022-09-10	2022-09-11
Probability (%)	80 25 05	90 05 01	50 01 01	55 01 01	85 05 01	95 10 01	95 10 01	90 05 01
Observed (#)	13 00 00	08 01 00	04 00 00	03 00 00	05 00 00	08 00 00	06 00 00	08 00 00

Coronal Mass Ejections



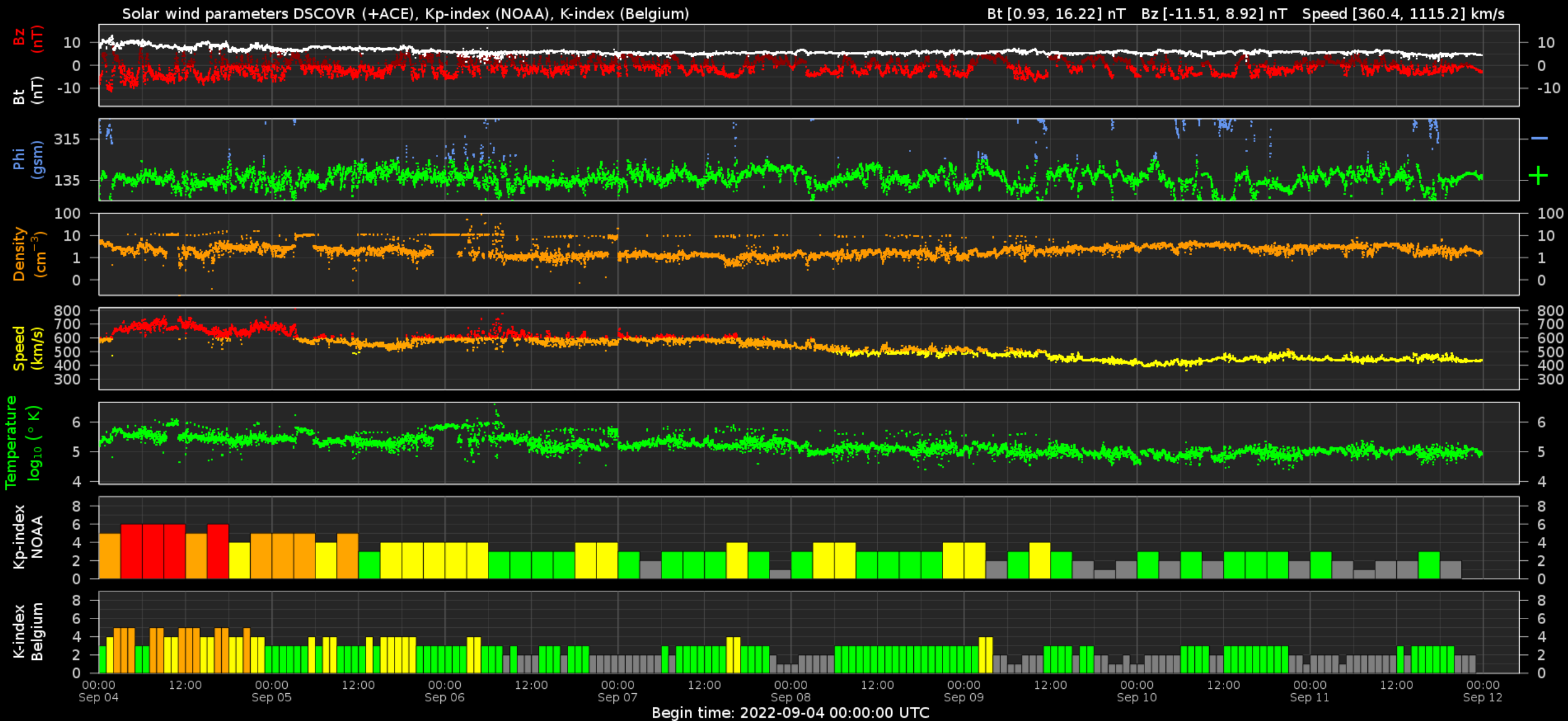
Solar Wind and Geomagnetic Activity



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Solar wind parameters & K-indices



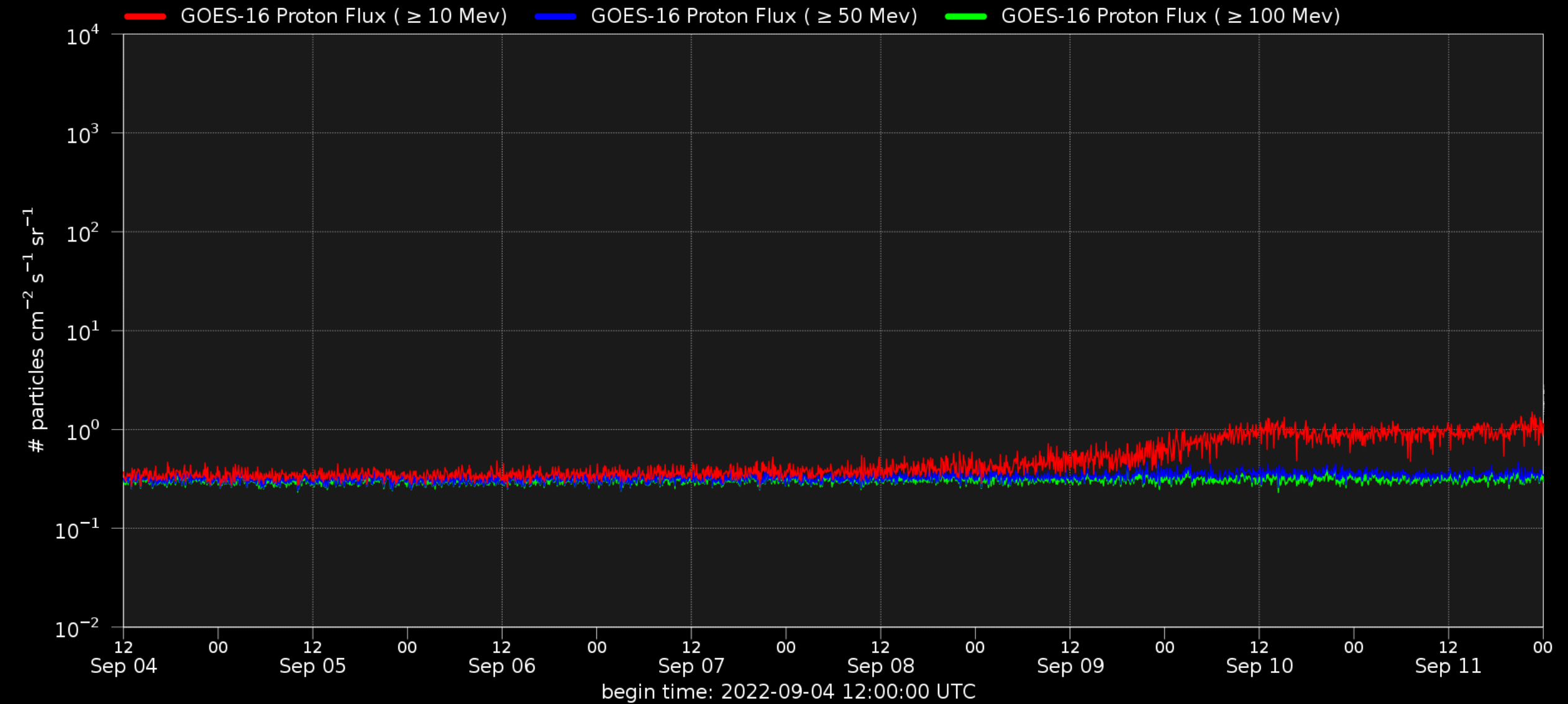
Energetic Particles



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Solar proton flux



Electron flux at GEO



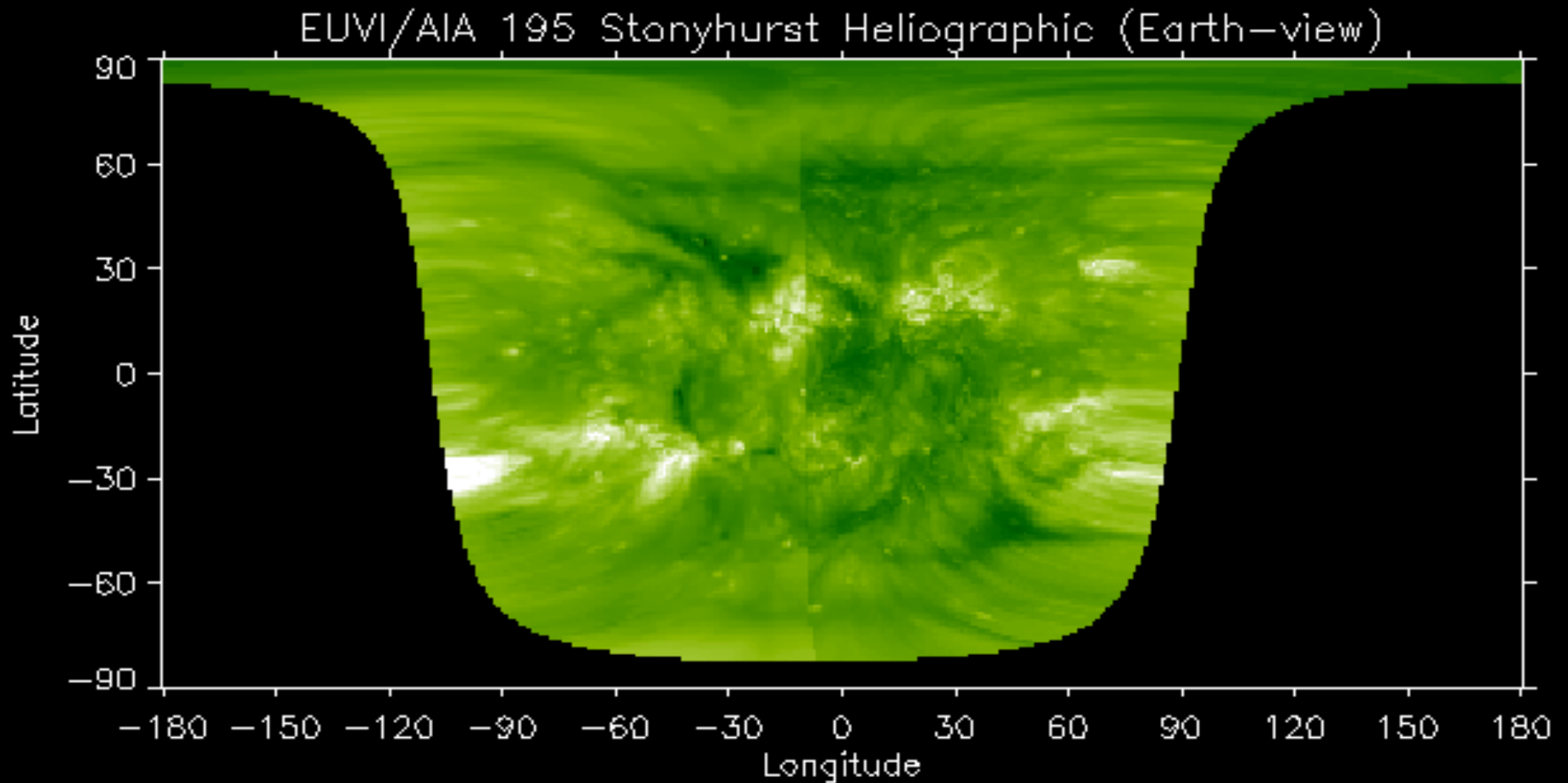
Outlook



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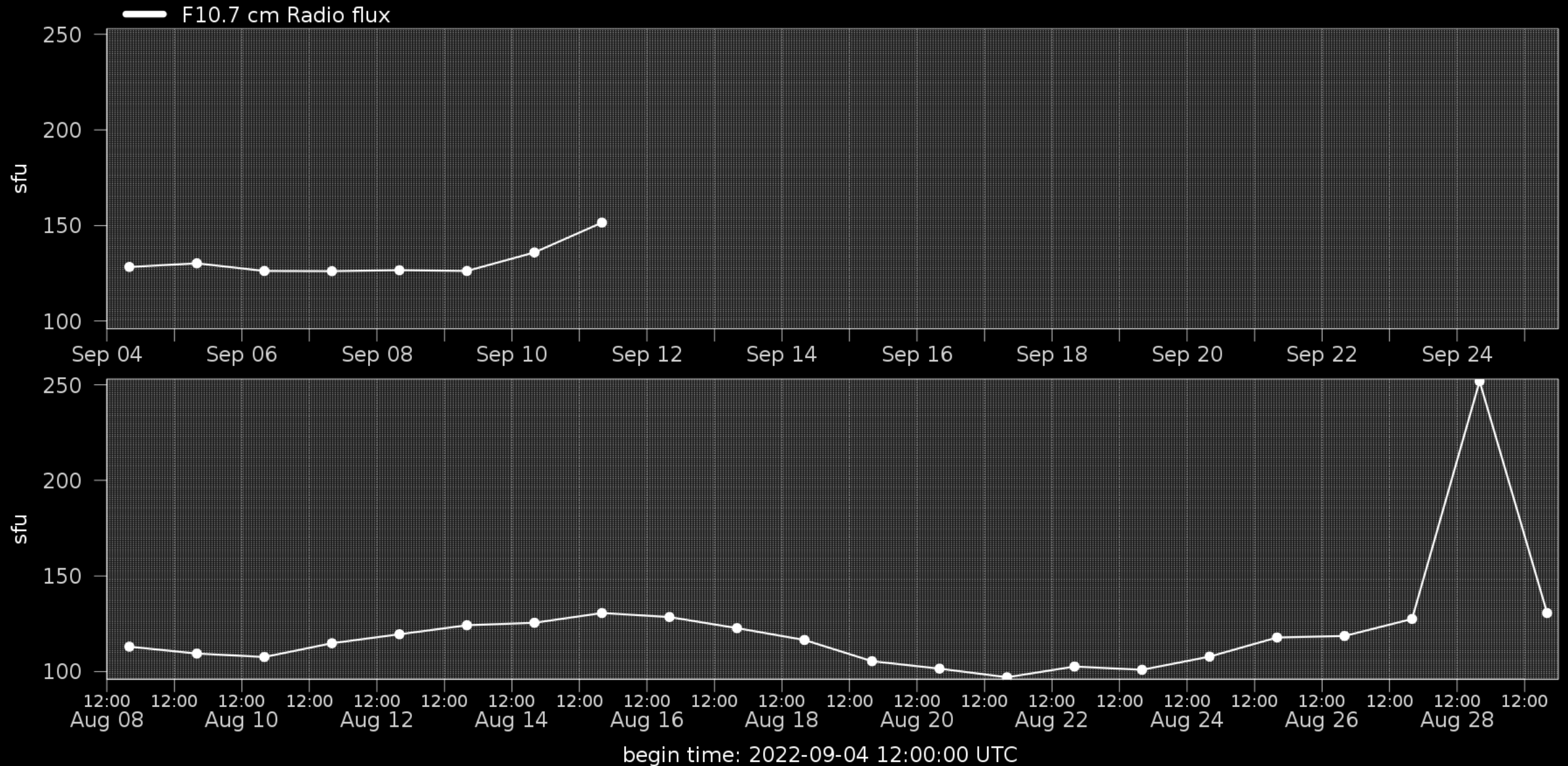
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Outlook: Solar activity



Observation date: 2022/09/11 19:55:00

Outlook: Solar F10.7cm radio flux



Outlook: Solar wind parameters



Outlook: Geomagnetic activity



Outlook: Electron Flux at GEO Outlook



Pegasus



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Pegasus related events

Moderate (high frequency bands) HF communication advisory from 5 until 8 Sep. The Post-Storm Depression (PSD) was the result of the High Speed Stream (HSS) arrival.

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