

SIDC Space Weather Briefing

02 January 2022 - 09 January 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 2022-01-02 12:00 to 2022-01-09 23:59

Active regions	NOAA ARs 2918, 2916, 2922, 2924, 2925, 2926, 2927
Flares	# C-class flare: 3 # M-class flare: 0 # X-class flare: 0
CMEs and Filament eruptions	No Earth directed CMEs or filament eruptions observed
Coronal Holes	Extension to Southern Polar CH, traversed Central Meridian on Jan 05

Proton flux	Nominal levels
Electron flux	Slightly enhanced and exceeded 1000pfu threshold briefly

Solar wind and geomagnetic conditions

ICME	None
SW Conditions	B : 0.62 - 20.53 nT // Bz: -16.58 nT to 18.07 nT // Speed: 247.7 - 621.7km/s
K-indices	max K-index (K_Bel): 4 max Kp-index (NOAA): 5

All Quiet Alert: On between 2022-01-04 to 2022-01-06

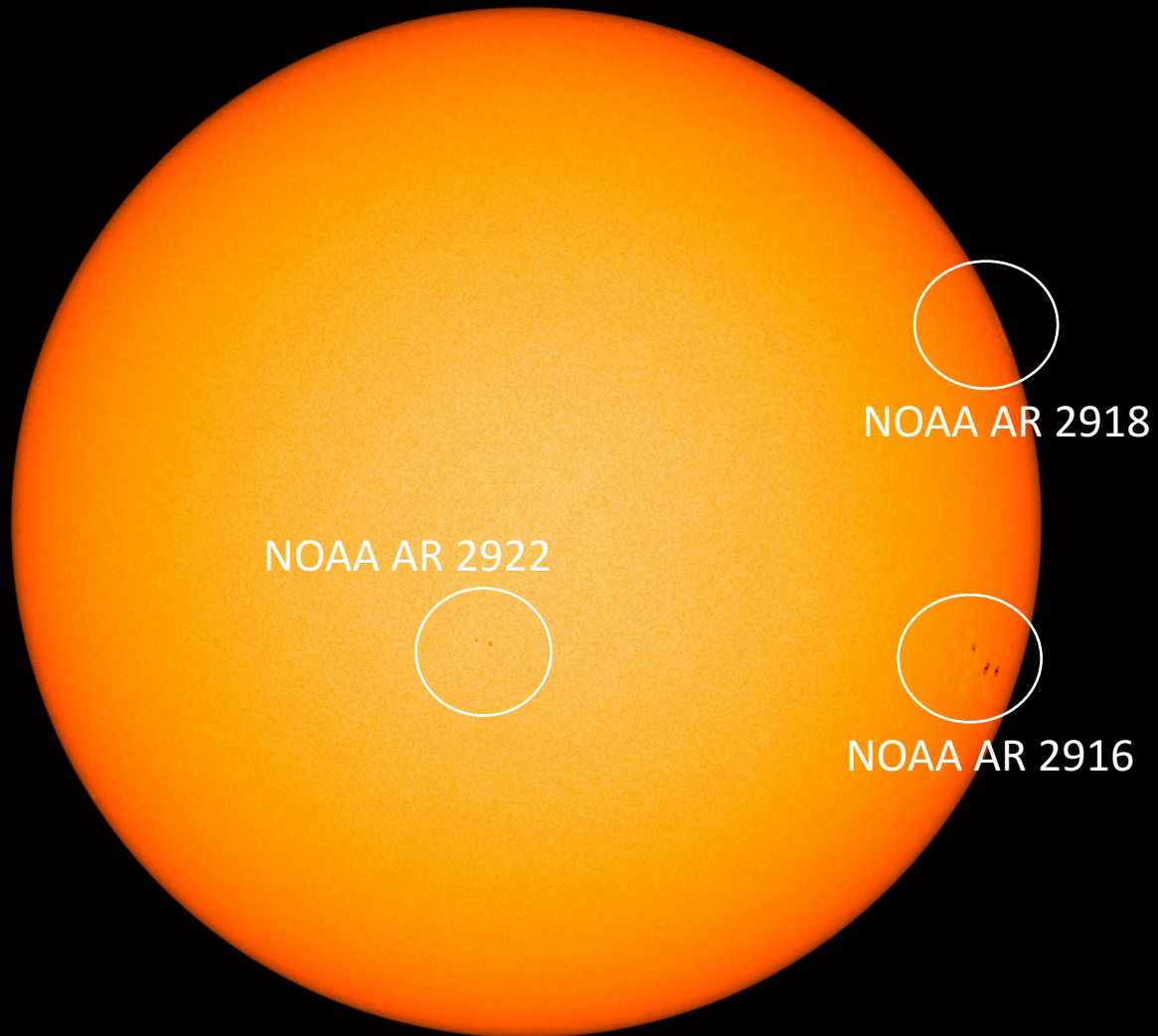
Solar Activity



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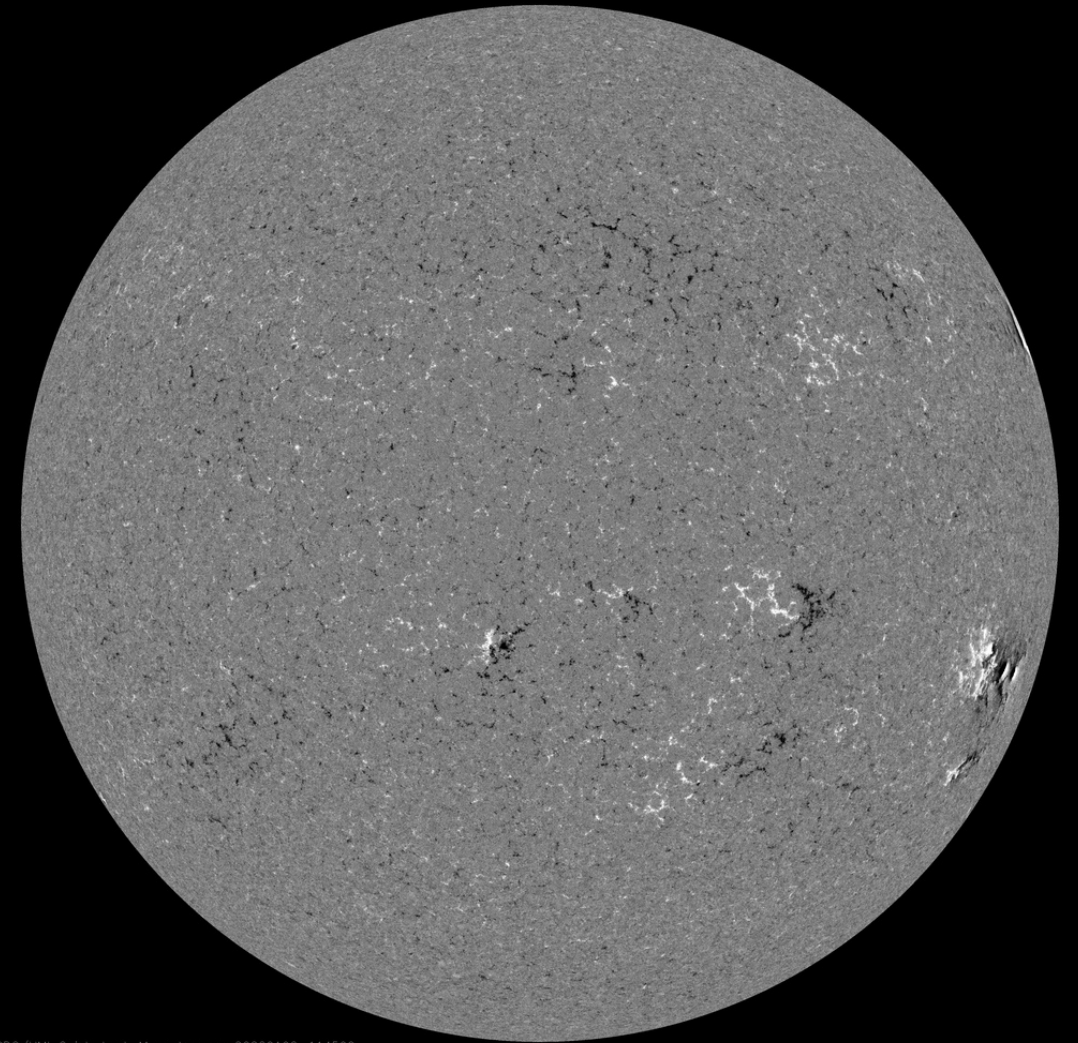
Solar active regions

SDO/HMI White Light 2022-01-02



SDO/HMI Quick-Look Continuum: 20220102_114500

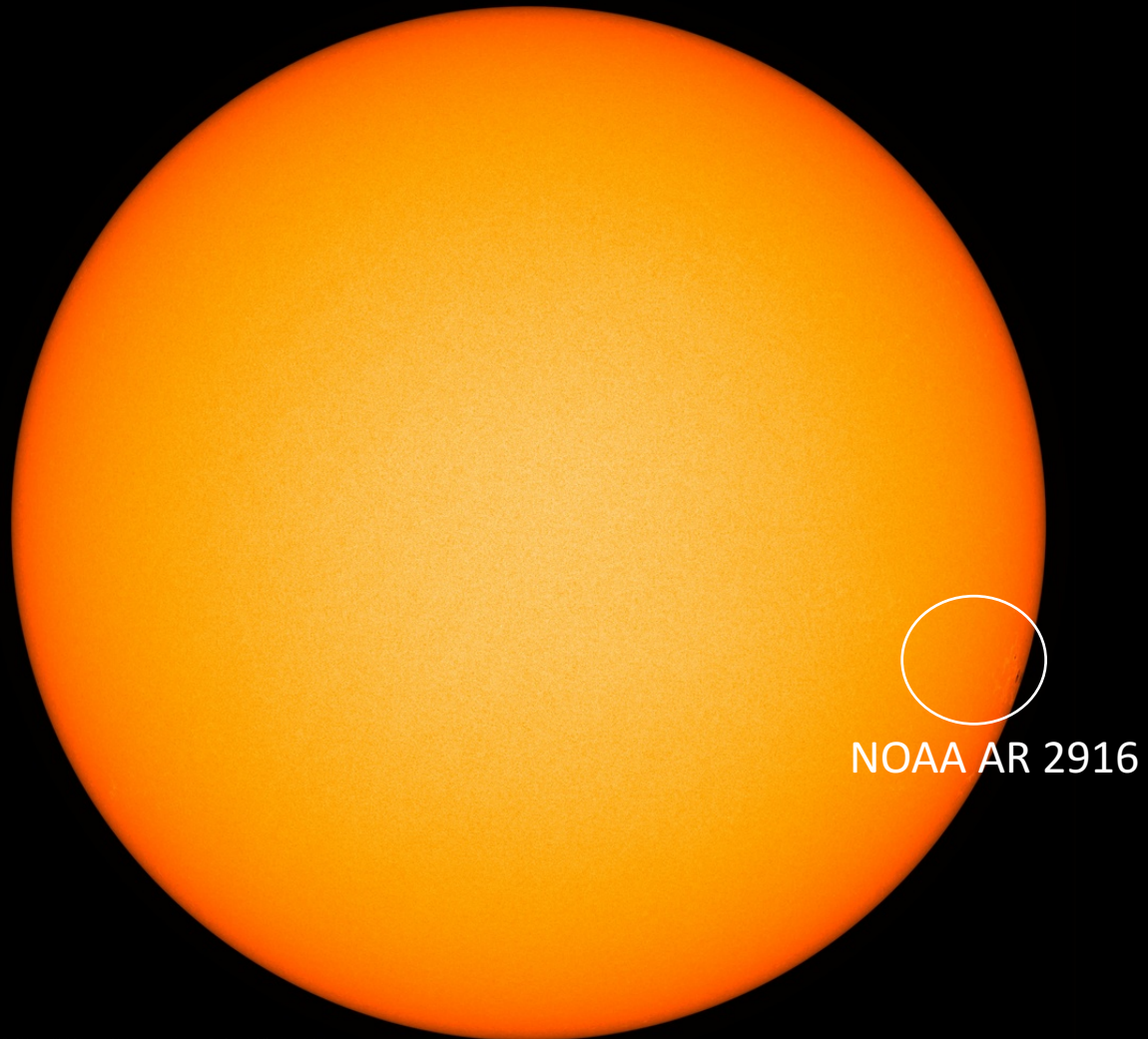
SDO/HMI Magnetogram 2022-01-02



SDO/HMI Quick-Look Magnetogram: 20220102_114500

Solar active regions

SDO/HMI White Light 2022-01-03



SDO/HMI Quick-Look Continuum: 20220103_114500

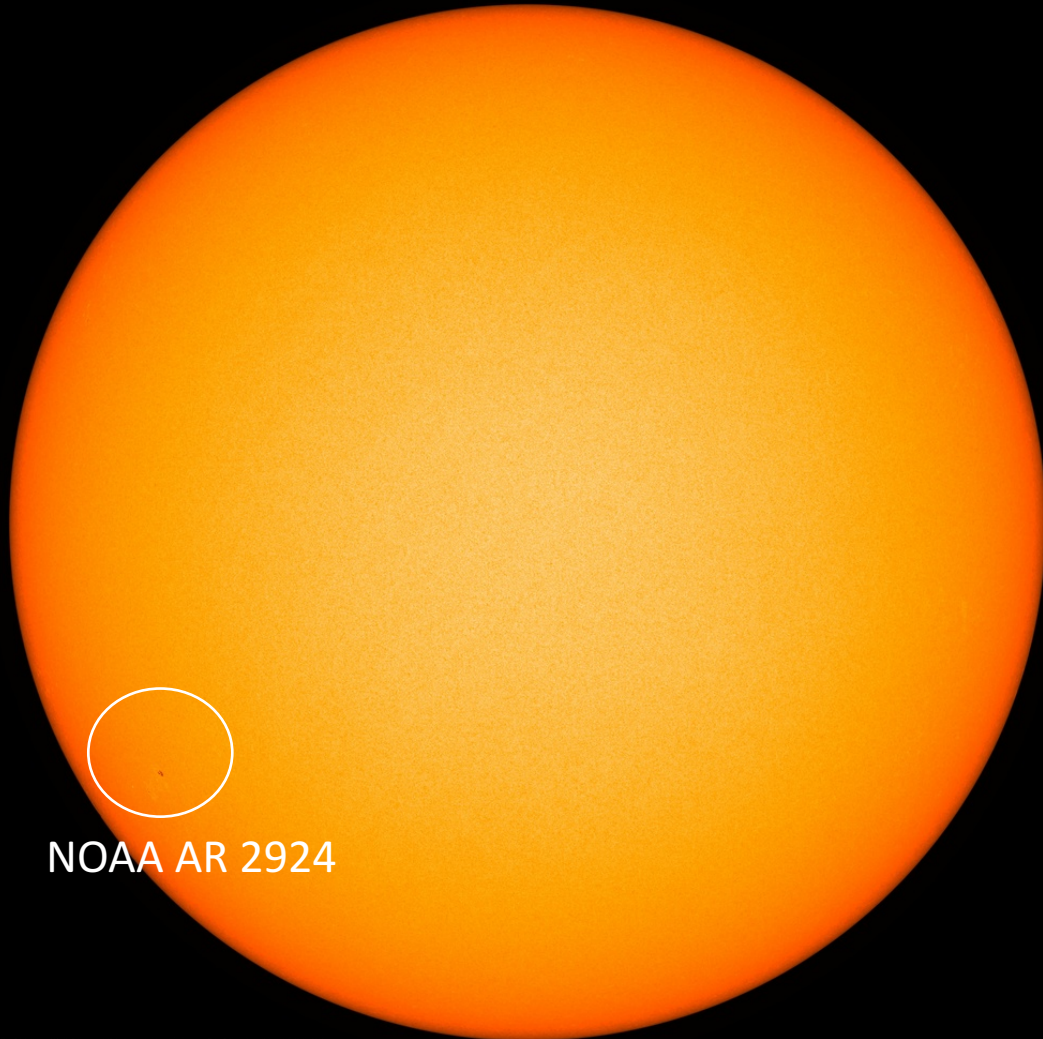
SDO/HMI Magnetogram 2022-01-03



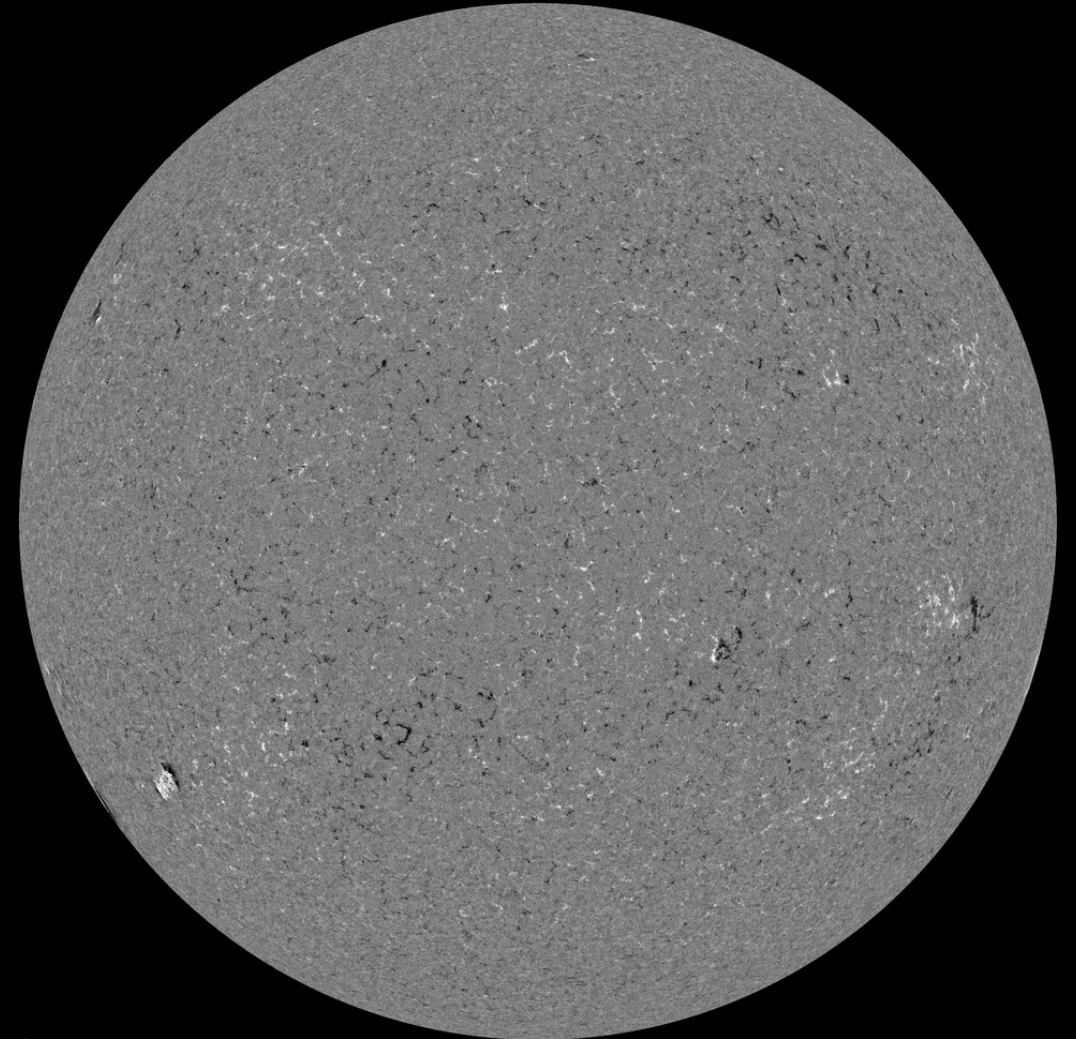
SDO/HMI Quick-Look Magnetogram: 20220103_114500

Solar active regions

SDO/HMI White Light 2022-01-04



SDO/HMI Magnetogram 2022-01-04

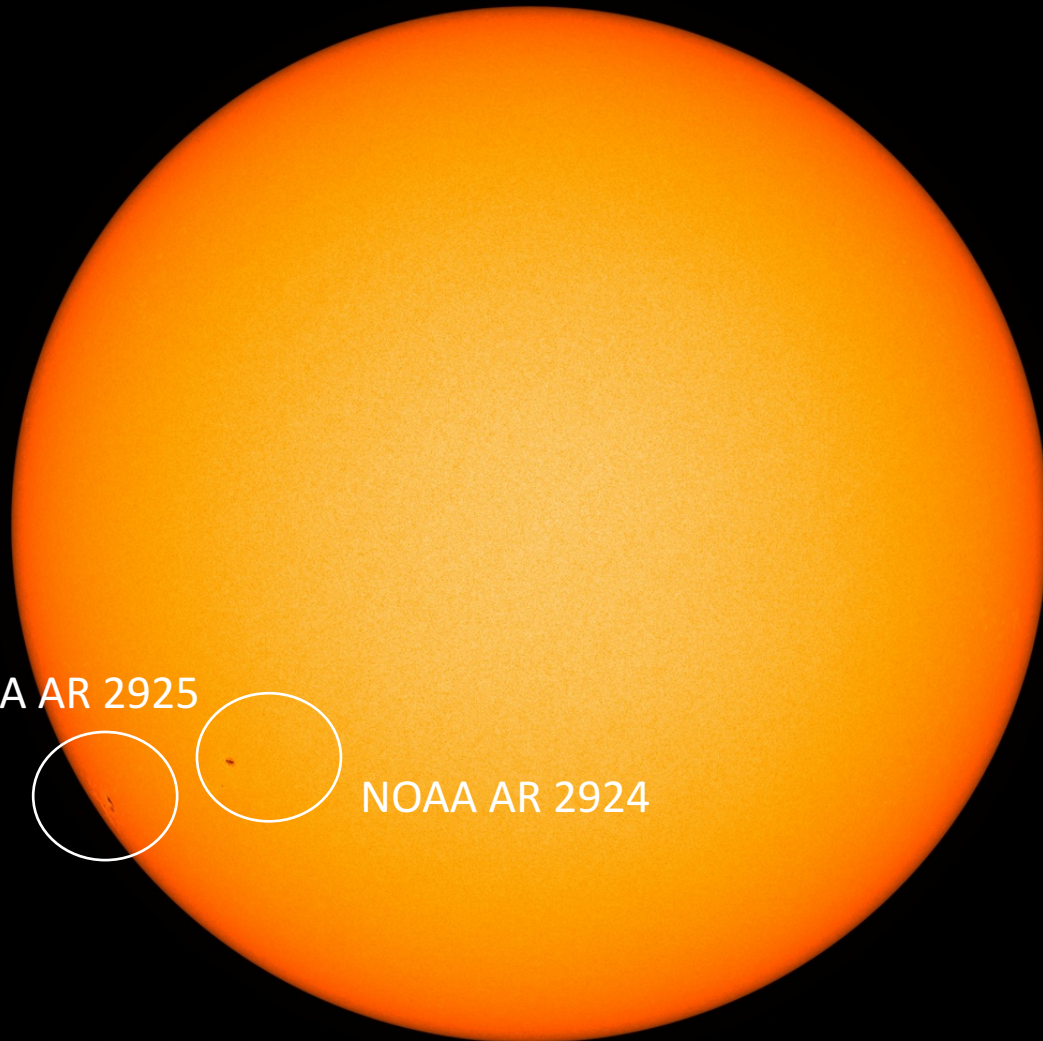


SDO/HMI Quick-Look Continuum: 20220104_114500

SDO/HMI Quick-Look Magnetogram: 20220104_114500

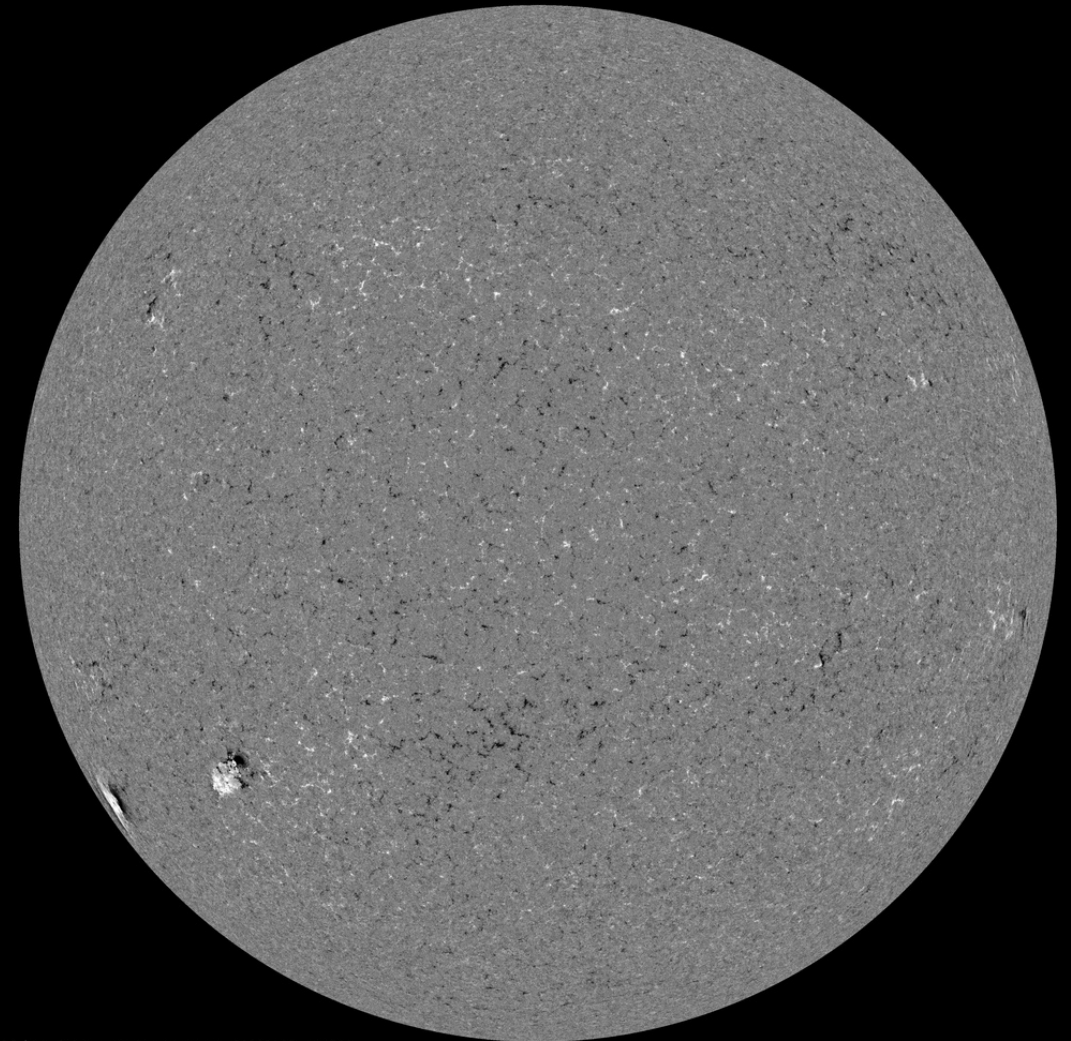
Solar active regions

SDO/HMI White Light 2022-01-05



SDO/HMI Quick-Look Continuum: 20220105_114500

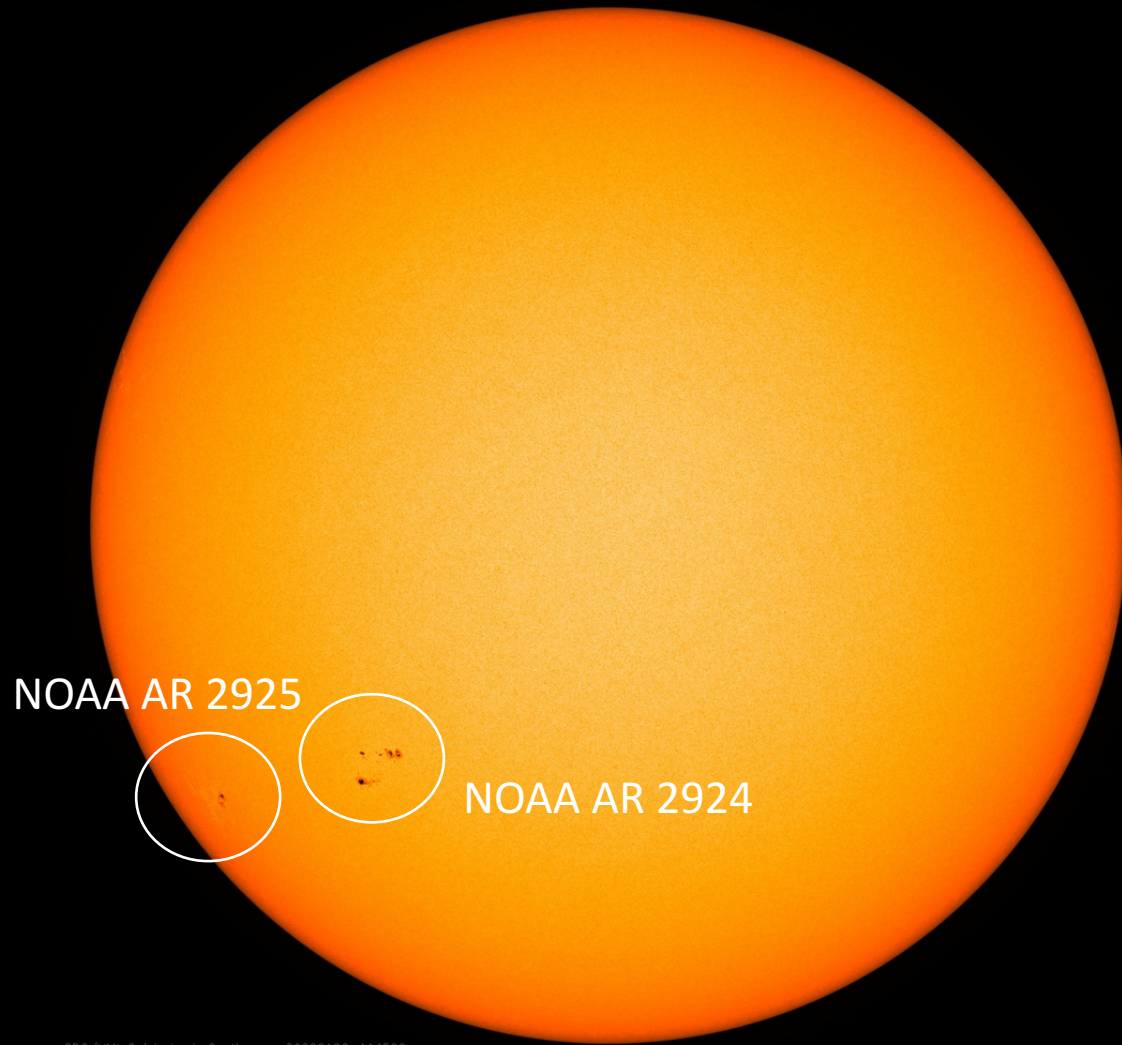
SDO/HMI Magnetogram 2022-01-05



SDO/HMI Quick-Look Magnetogram: 20220105_114500

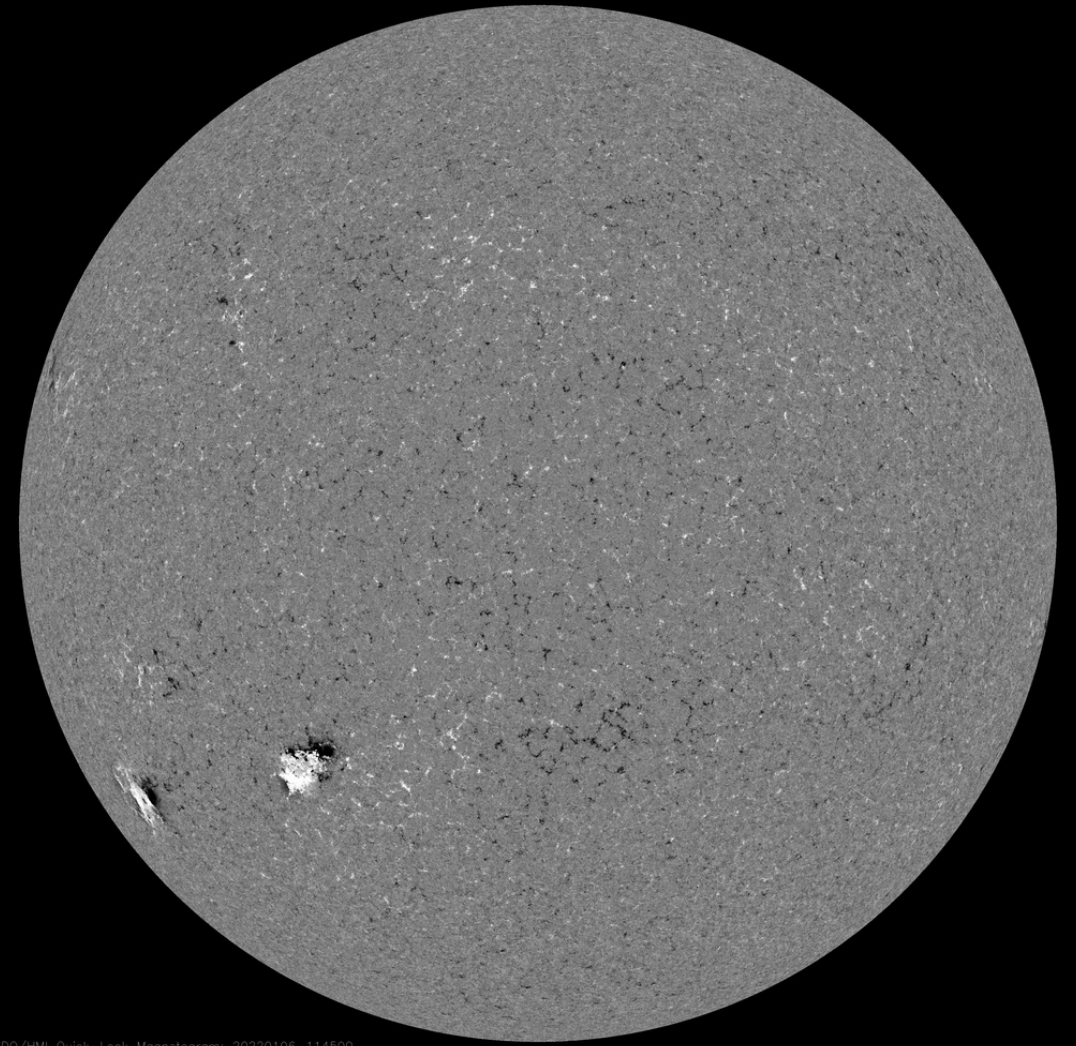
Solar active regions

SDO/HMI White Light 2022-01-06



SDO/HMI Quick-Look Continuum: 20220106_114500

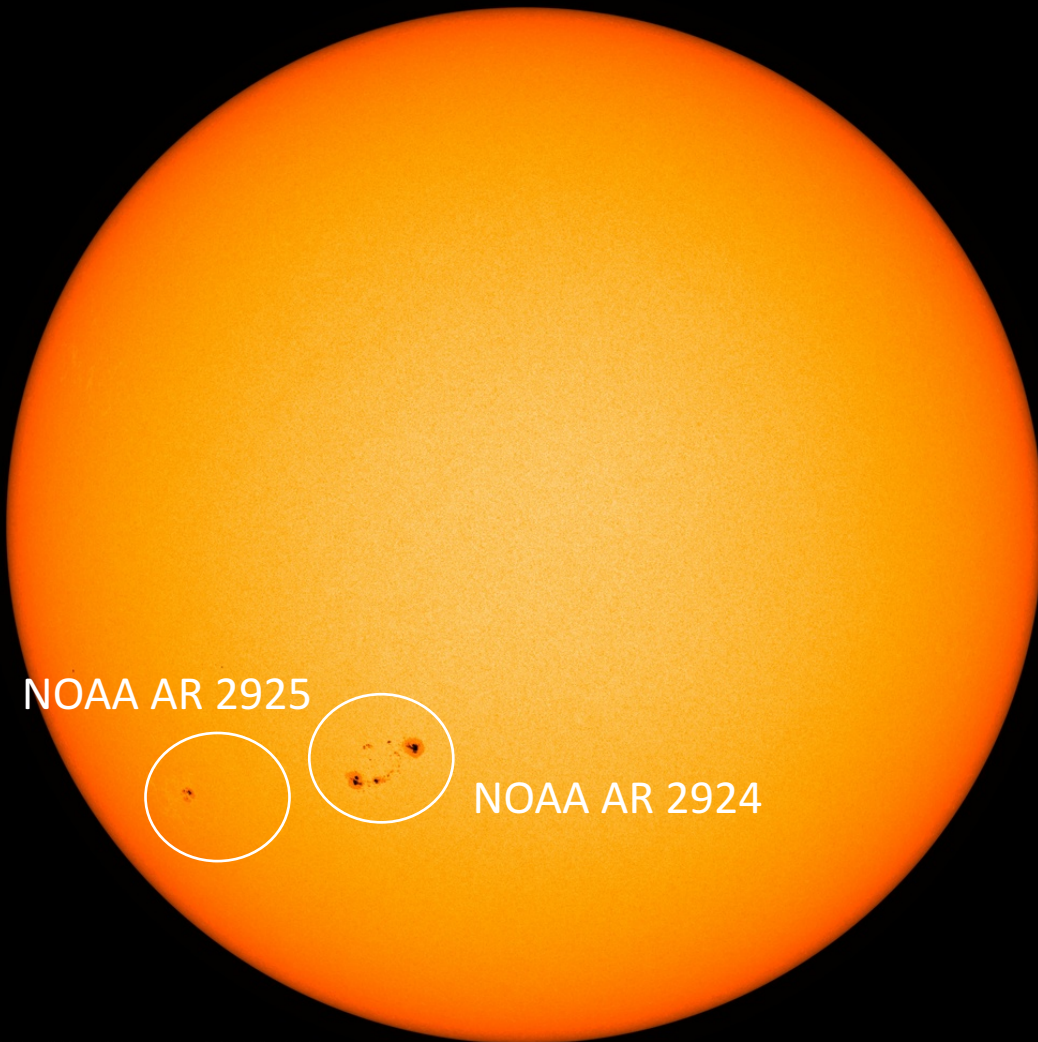
SDO/HMI Magnetogram 2022-01-06



SDO/HMI Quick-Look Magnetogram: 20220106_114500

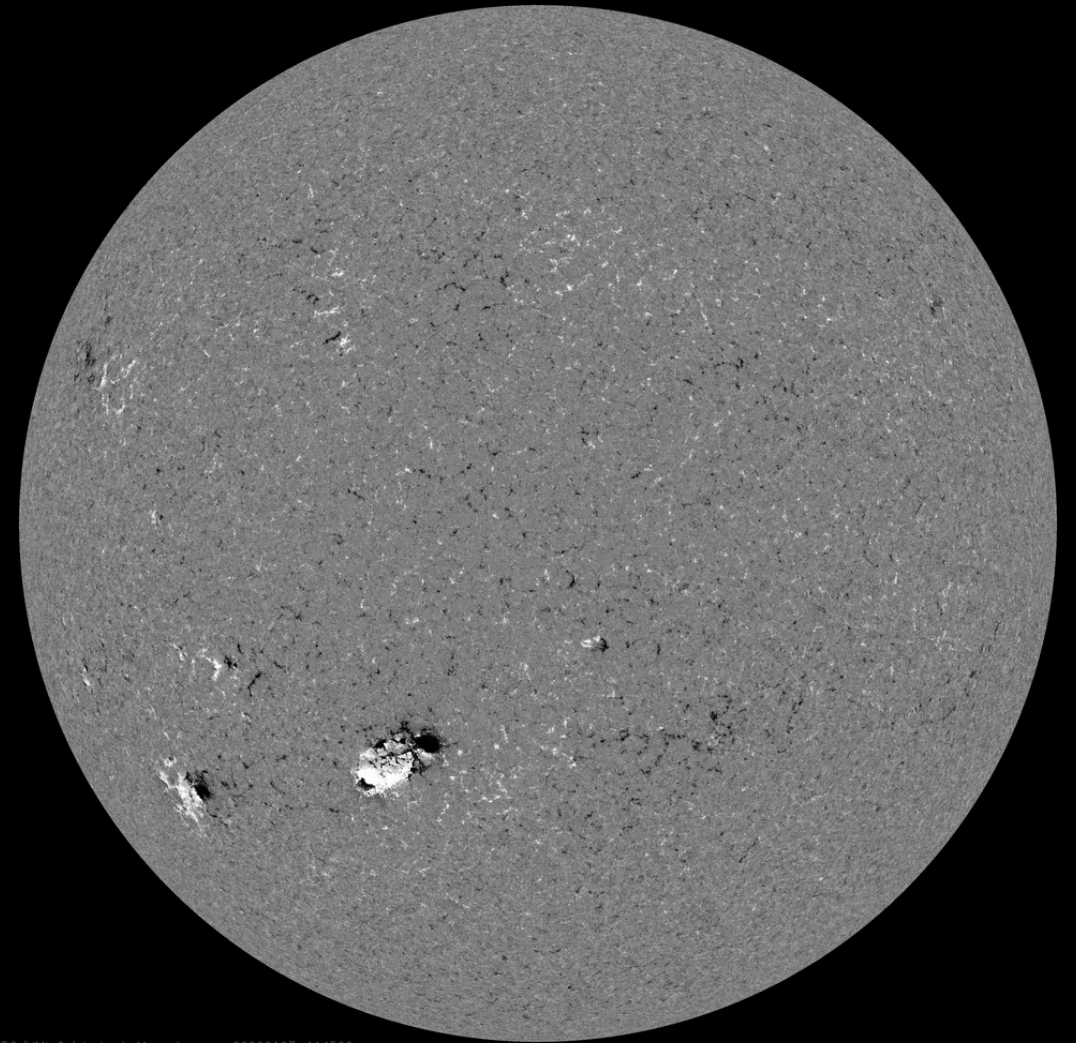
Solar active regions

SDO/HMI White Light 2022-01-07



SDO/HMI Quick-Look Continuum: 20220107_114500

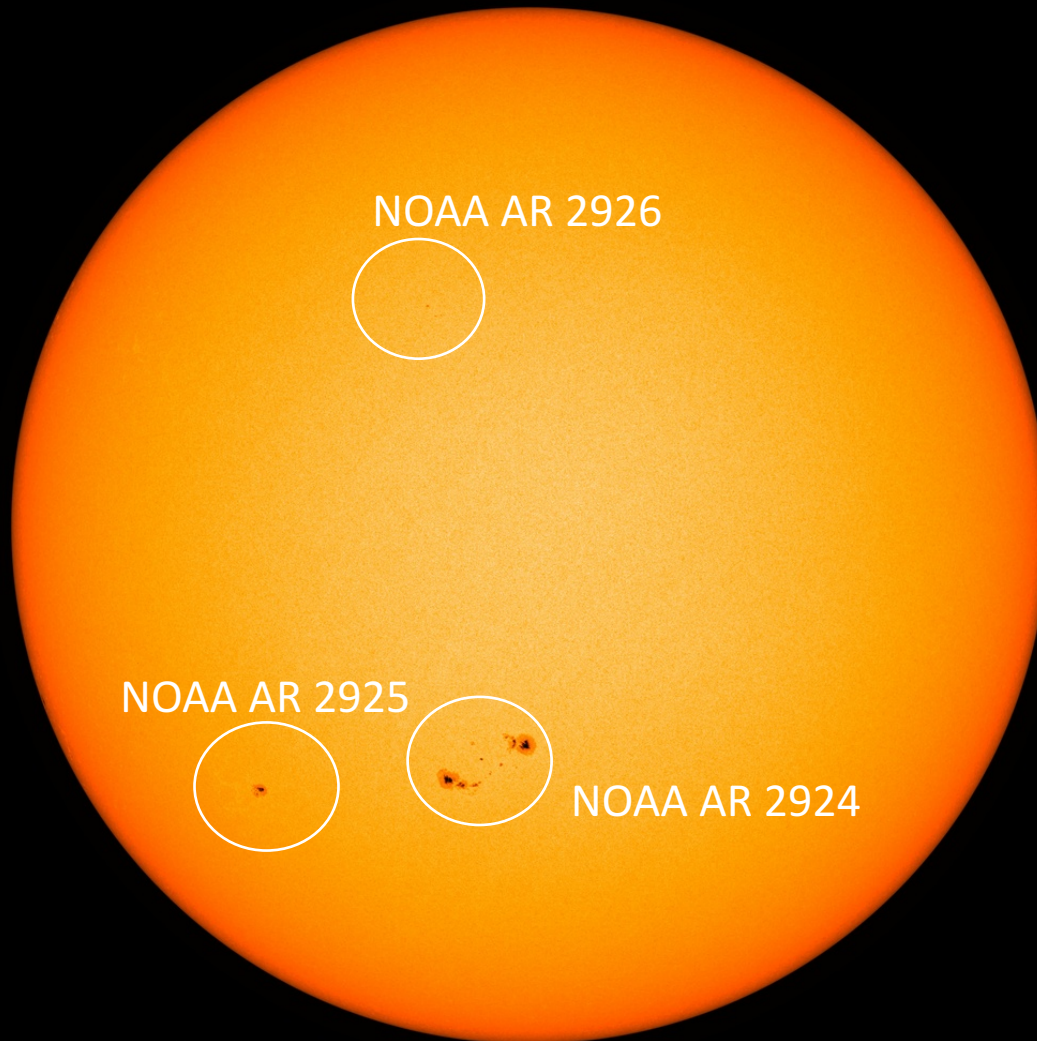
SDO/HMI Magnetogram 2022-01-07



SDO/HMI Quick-Look Magnetogram: 20220107_114500

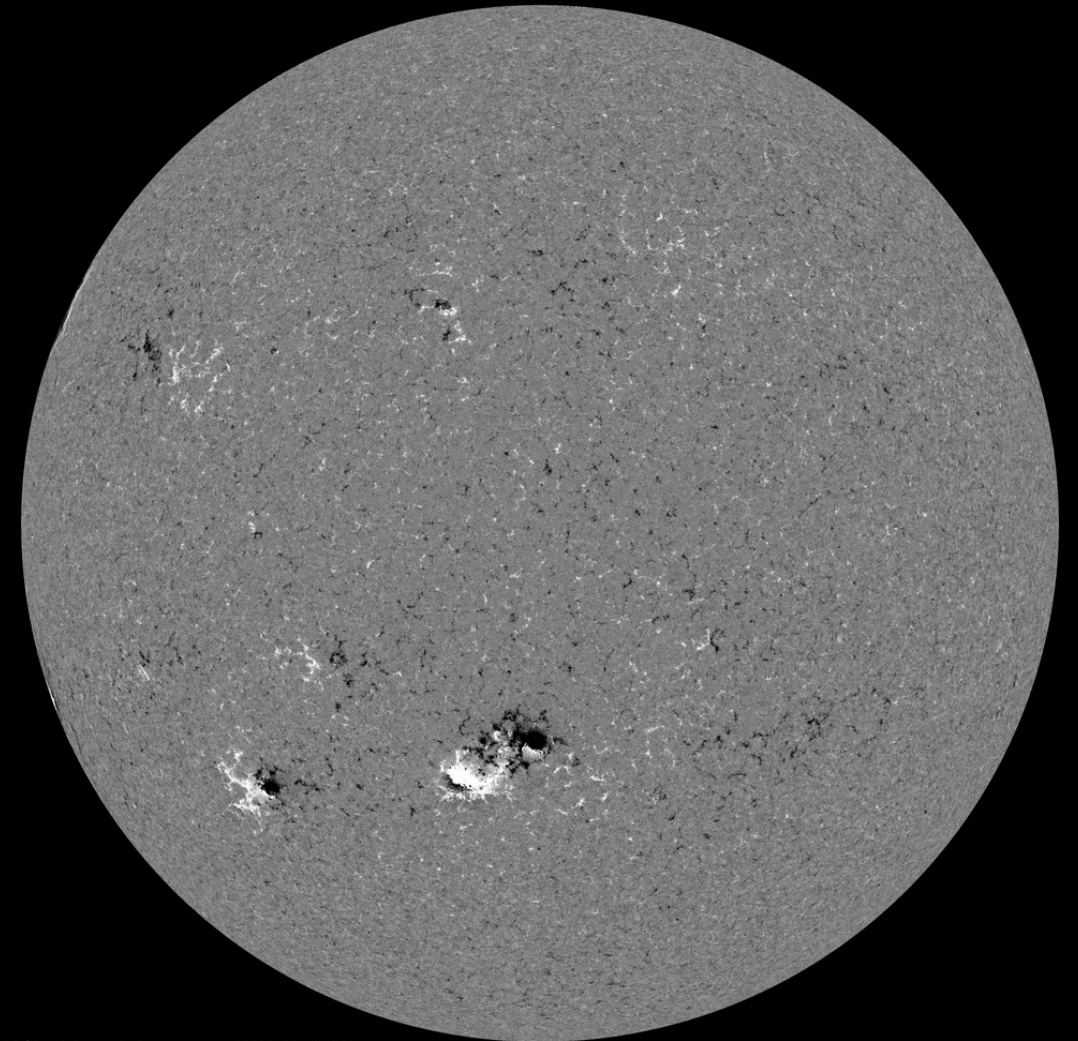
Solar active regions

SDO/HMI White Light 2022-01-08



SDO/HMI Quick-Look Continuum: 20220108_114500

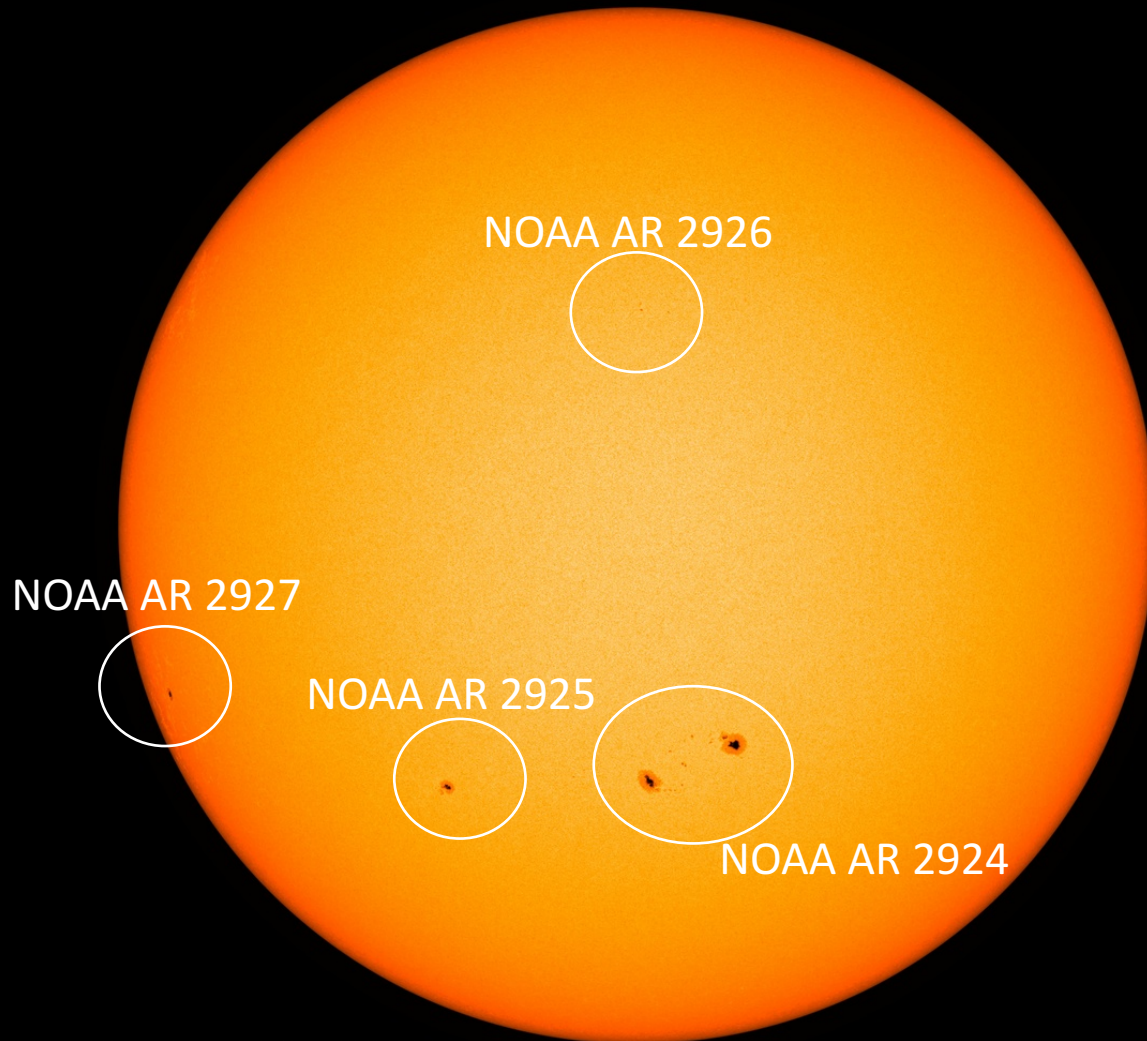
SDO/HMI Magnetogram 2022-01-08



SDO/HMI Quick-Look Magnetogram: 20220108_114500

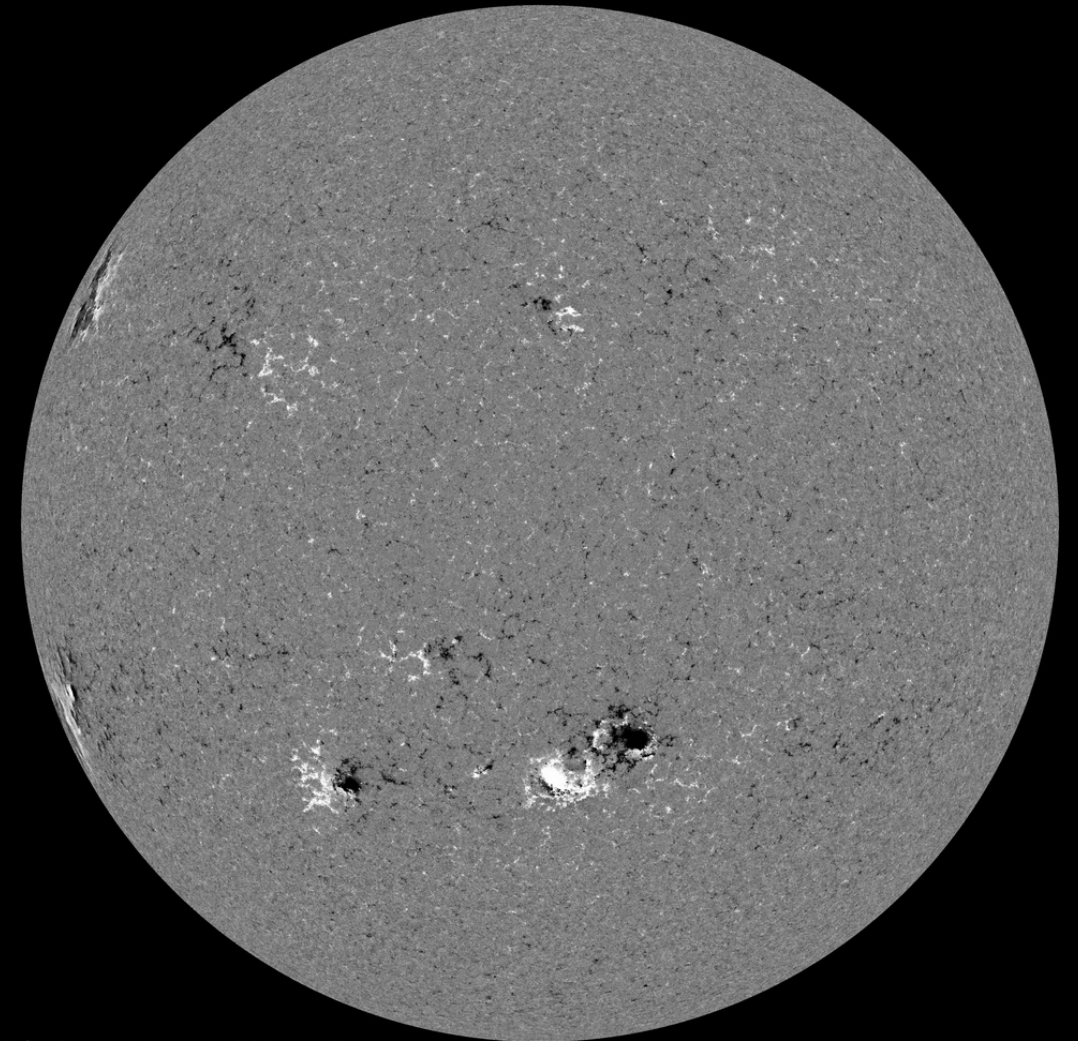
Solar active regions

SDO/HMI White Light 2022-01-09



SDO/HMI Quick-Look Continuum: 20220109_114500

SDO/HMI Magnetogram 2022-01-09

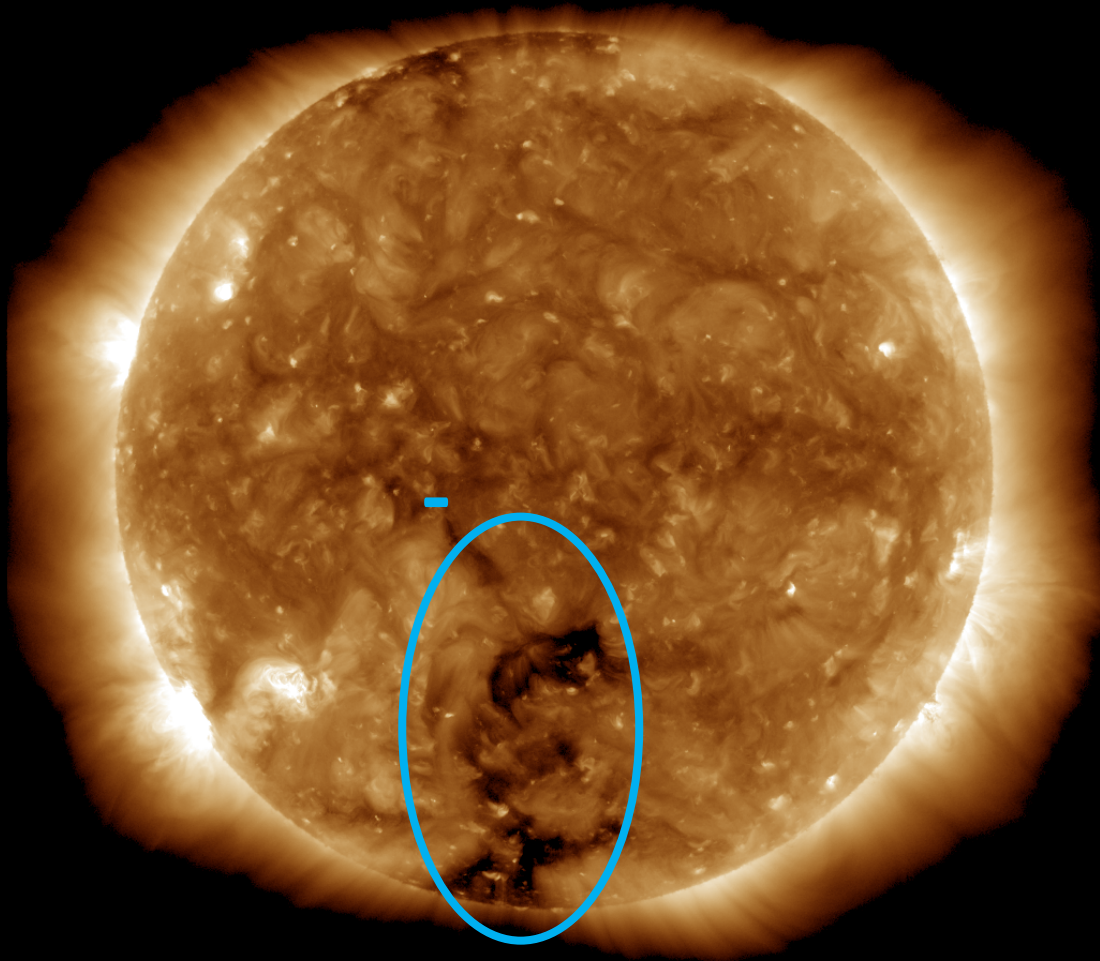


SDO/HMI Quick-Look Magnetogram: 20220109_114500

Coronal holes

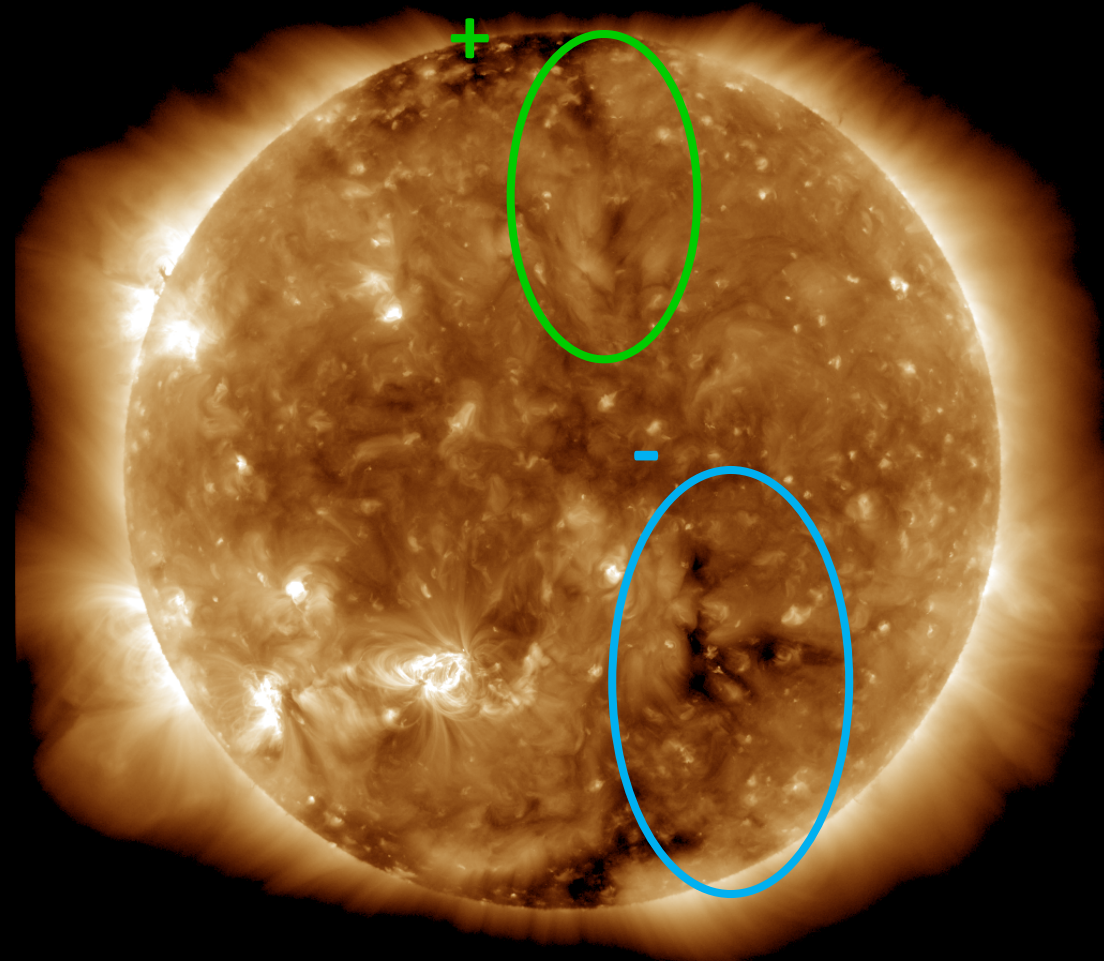
SDO/AIA 19.3 nm 2022-01-05

SDO/AIA AIA 193Å 2022-01-05T12:00:05.842



SDO/AIA 19.3 nm 2022-01-07

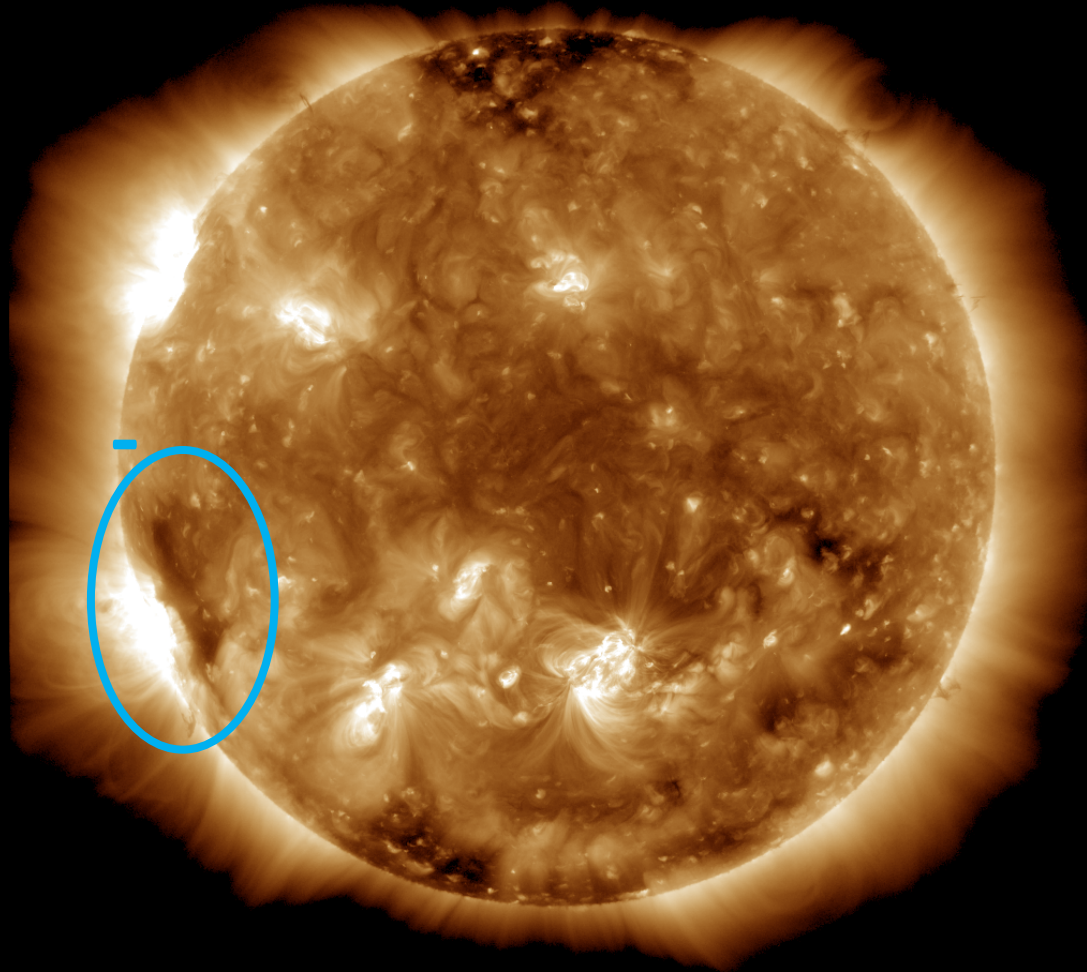
SDO/AIA AIA 193Å 2022-01-07T12:00:05.843



Coronal holes

SDO/AIA 19.3 nm 2022-01-09

SDO/AIA AIA 193Å 2022-01-09T12:00:05.835



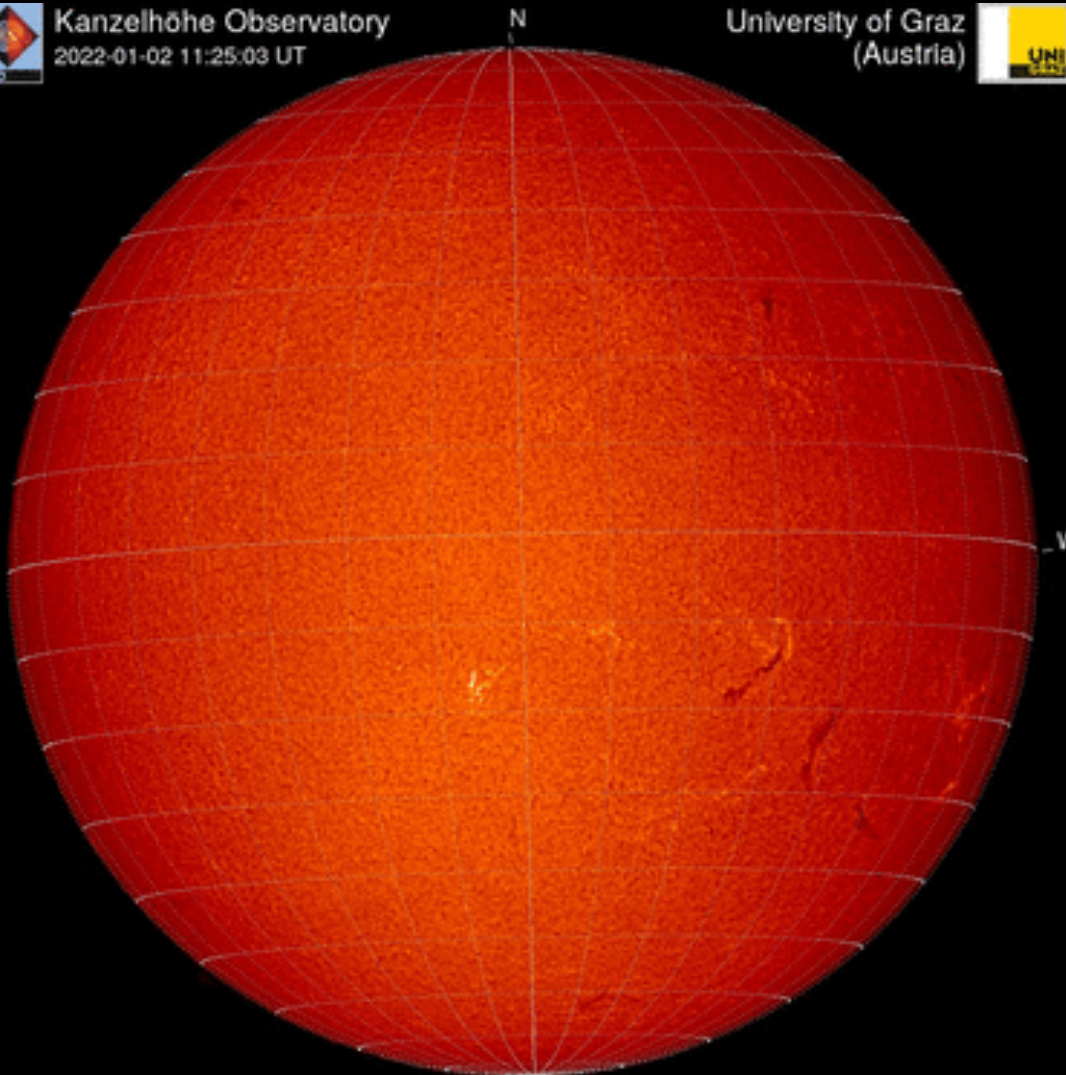
Filaments & Filament eruptions

H-alpha 2022-01-02

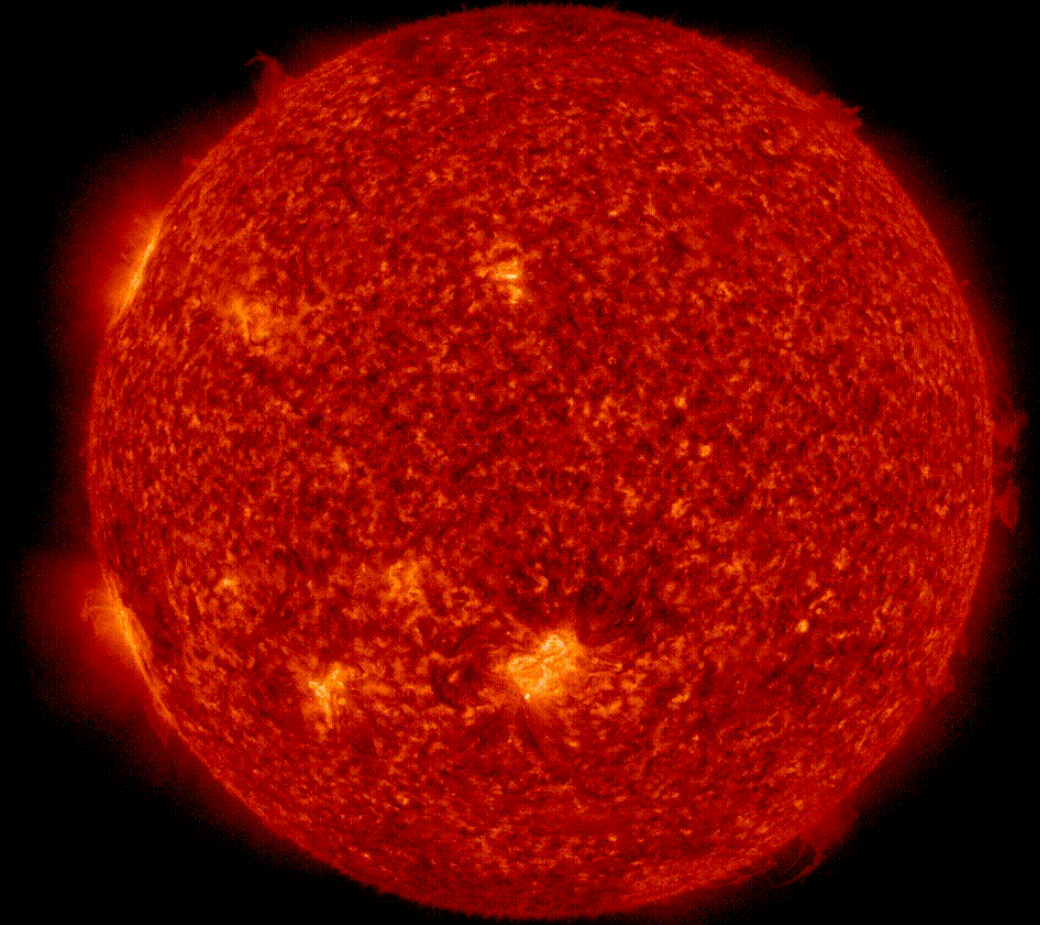


Kanzelhöhe Observatory
2022-01-02 11:25:03 UT

University of Graz
(Austria)

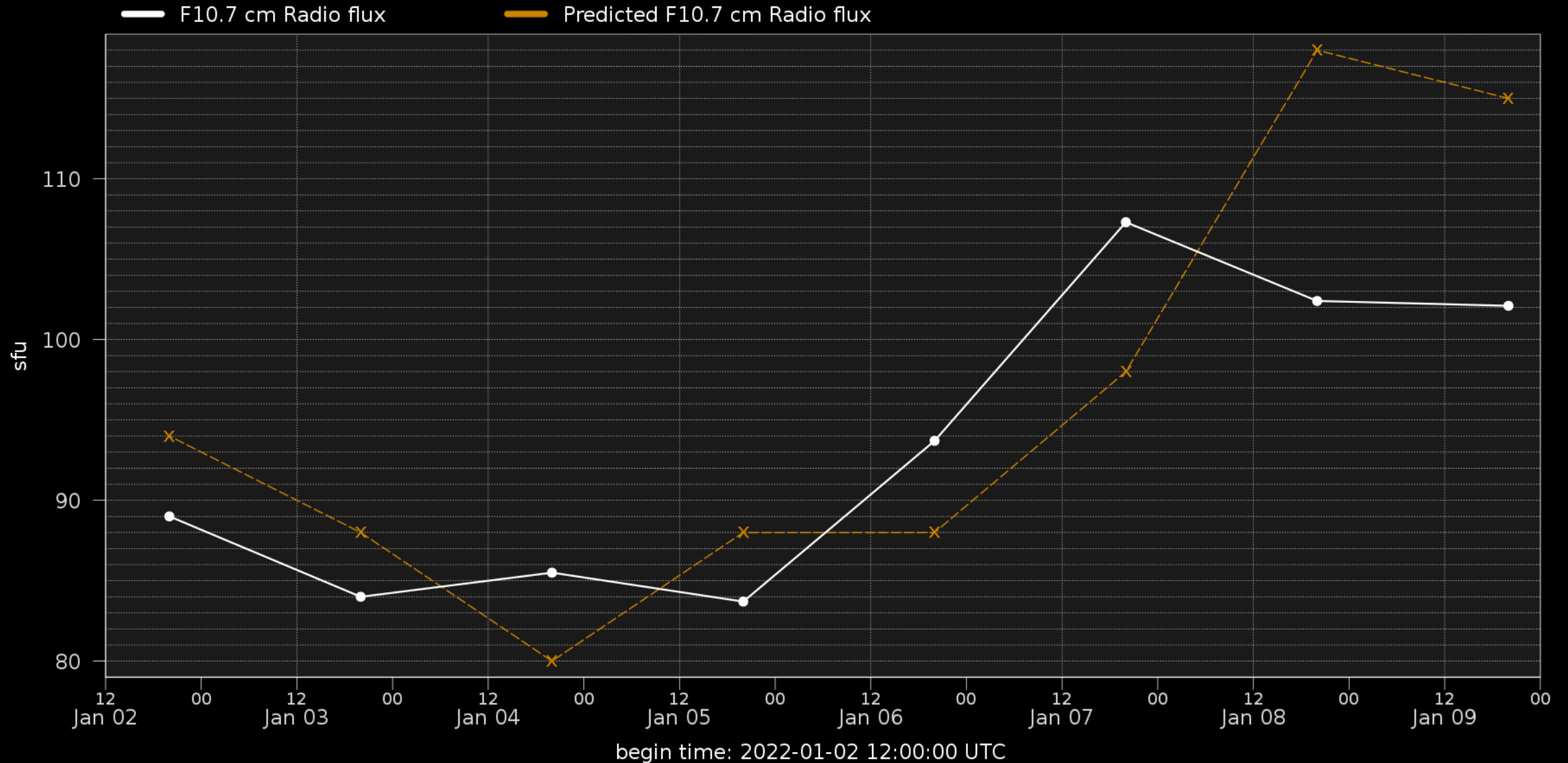


SDO/AIA 30.4 nm 2022-01-09

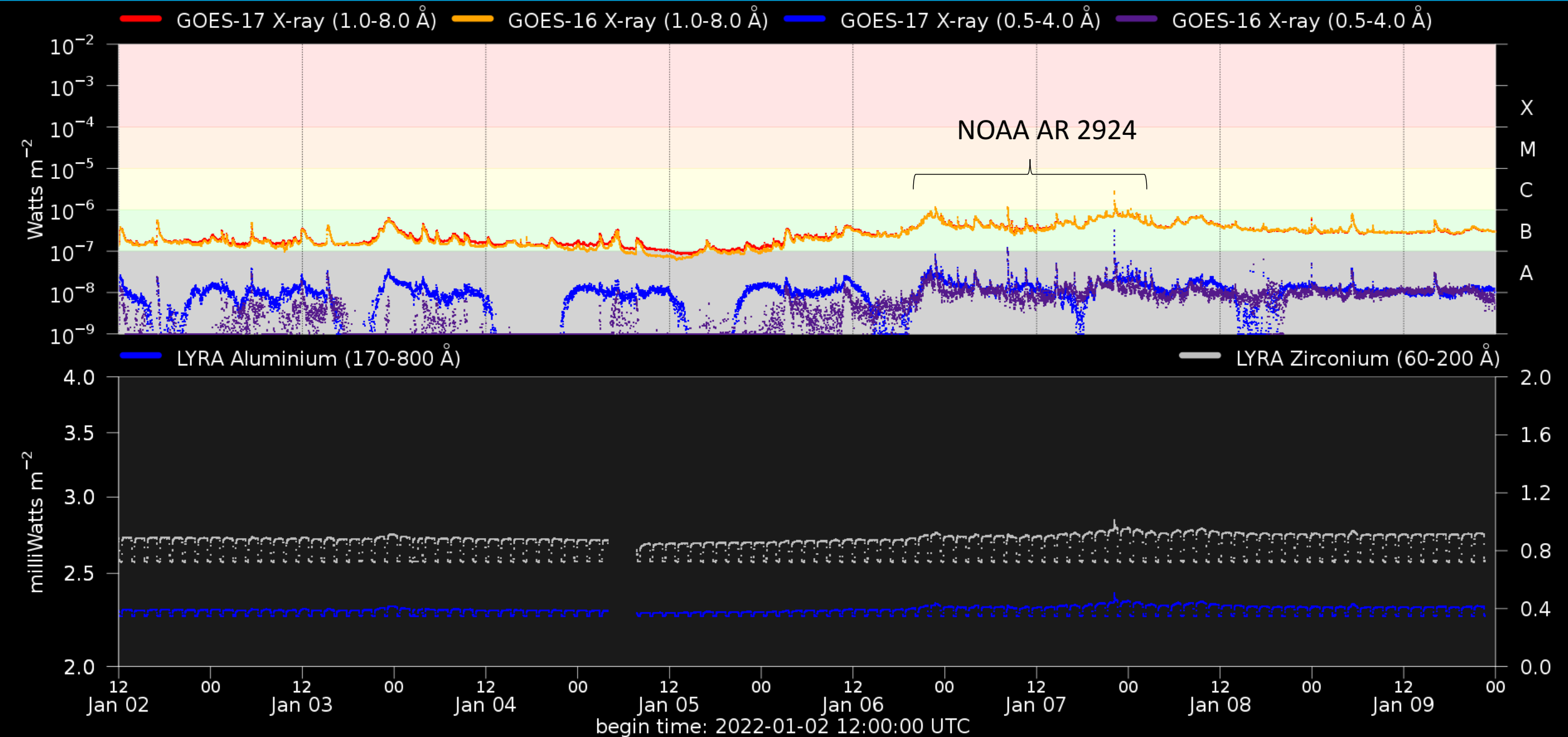


SDO/AIA 304 2022-01-09 00:08:42 UT

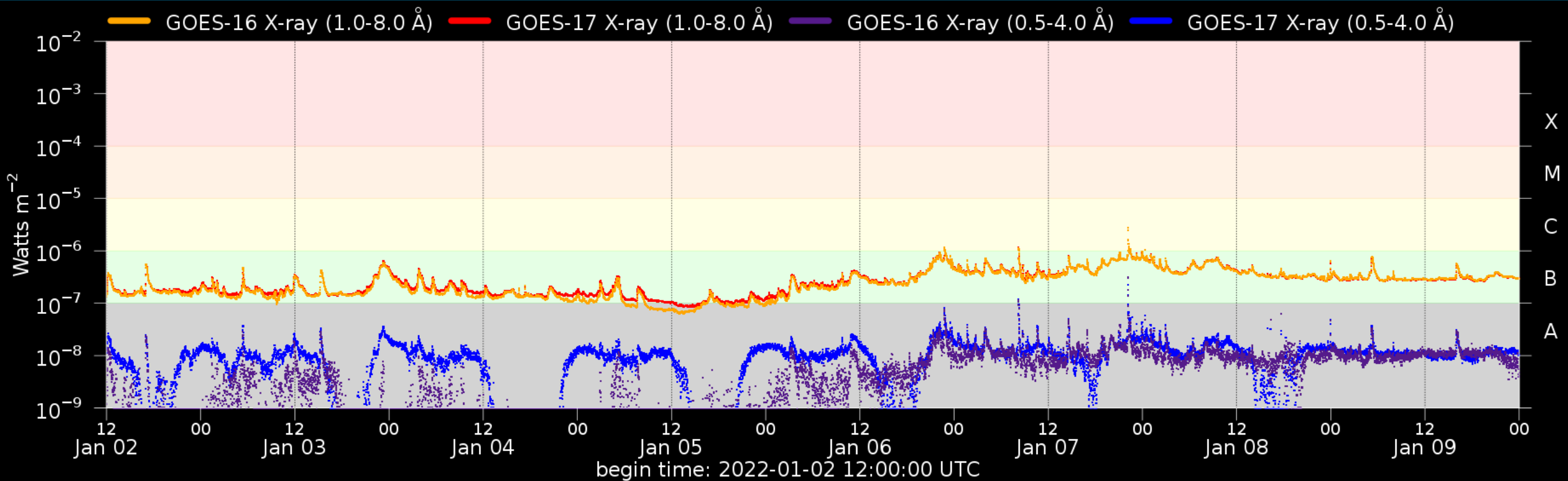
Solar F10.7cm radio flux



Solar X-Ray and UV flux



Flaring activity

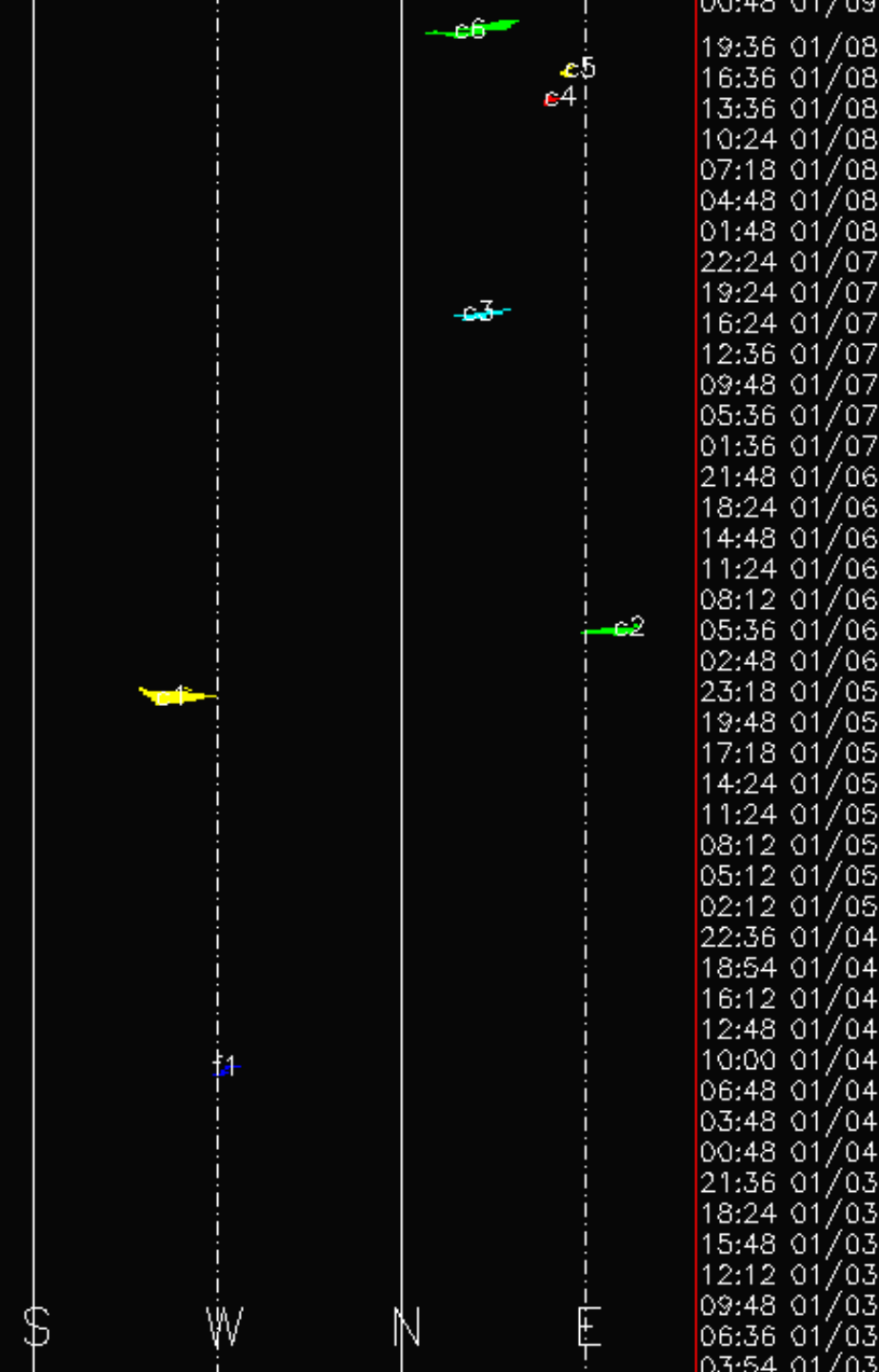


Probabilities (%) and occurrences (#) of C/M/X-flares daily, from noon to noon:

Issue date	2022-01-02	2022-01-03	2022-01-04	2022-01-05	2022-01-06	2022-01-07	2022-01-08	2022-01-09
Probability (%)	80 15 01	50 10 01	15 01 01	10 01 01	40 05 01	60 05 01	65 10 01	55 10 01
Observed (#)	00 00 00	00 00 00	00 00 00	00 00 00	02 00 00	01 00 00	00 00 00	00 00 00

Coronal Mass Ejections

No Earth-directed CMEs

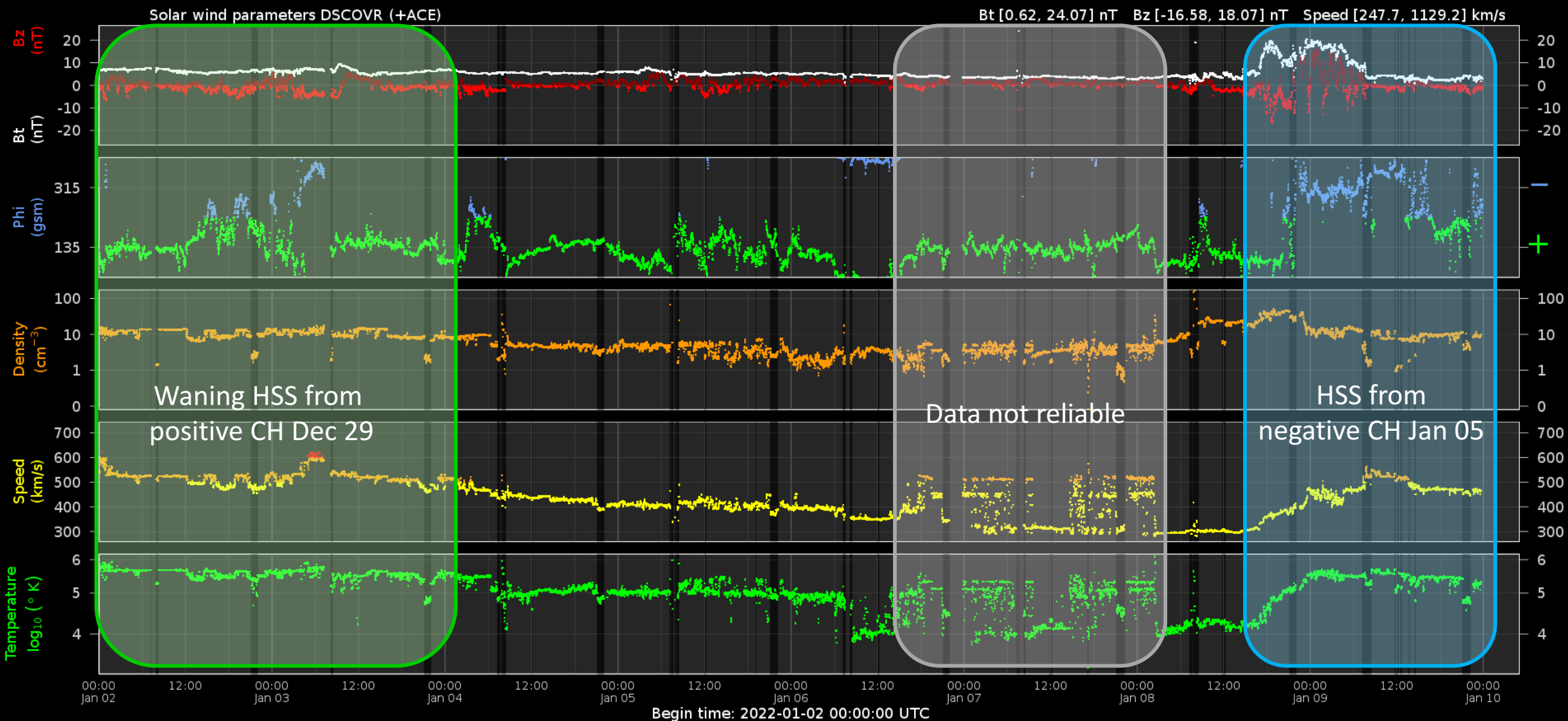


Solar Wind and Geomagnetic Activity



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Solar wind parameters

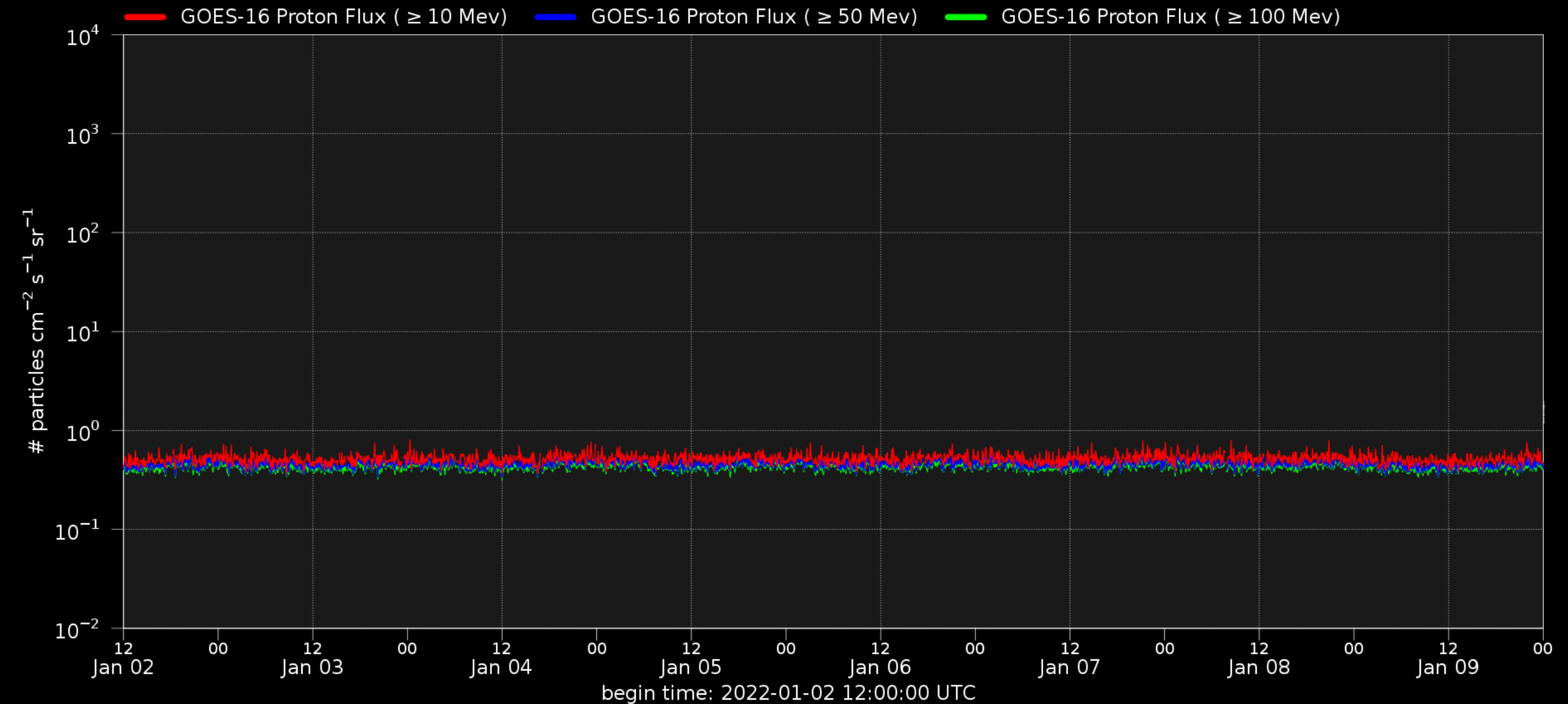


Solar wind parameters & K-indices

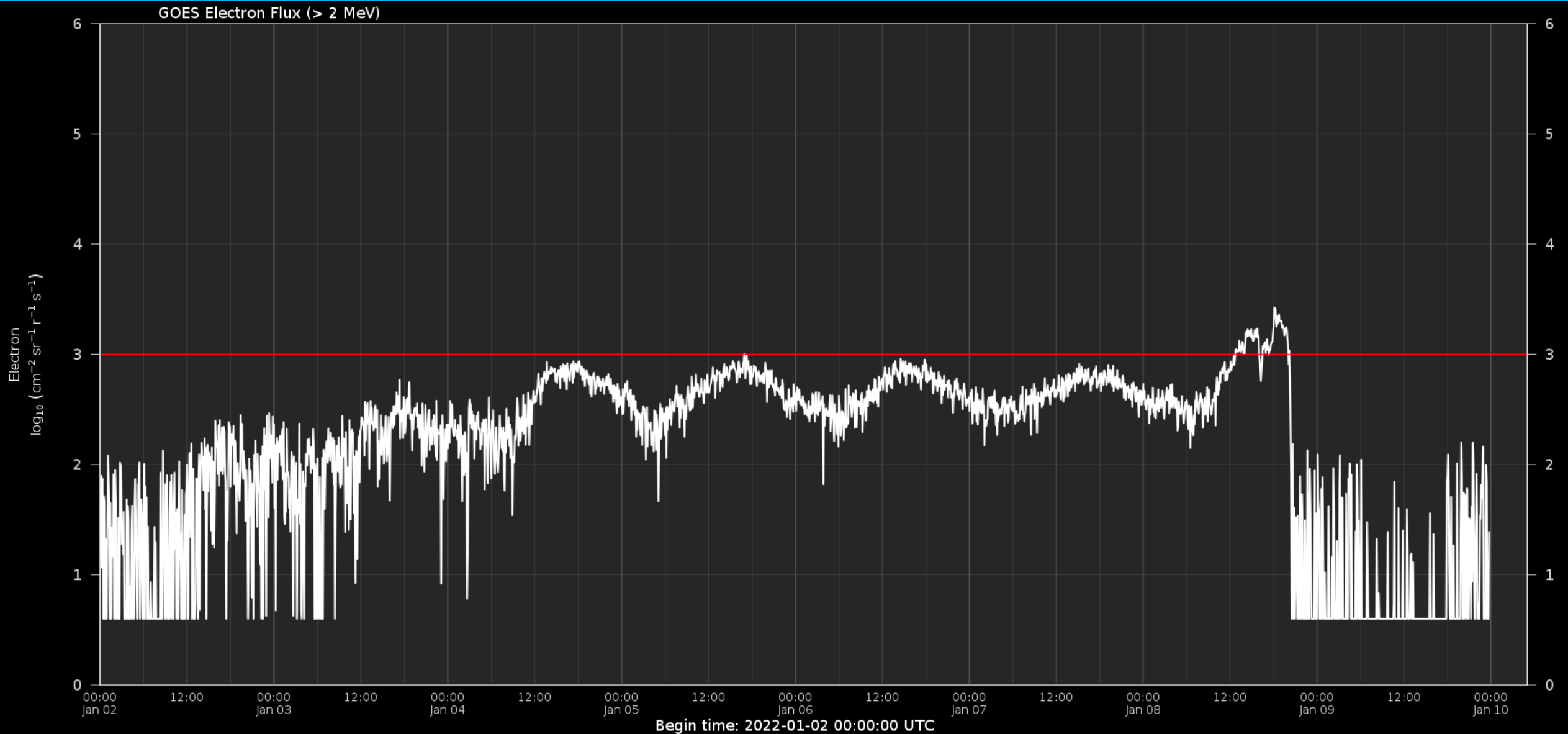


Energetic Particles

Solar proton flux



Electron flux at GEO



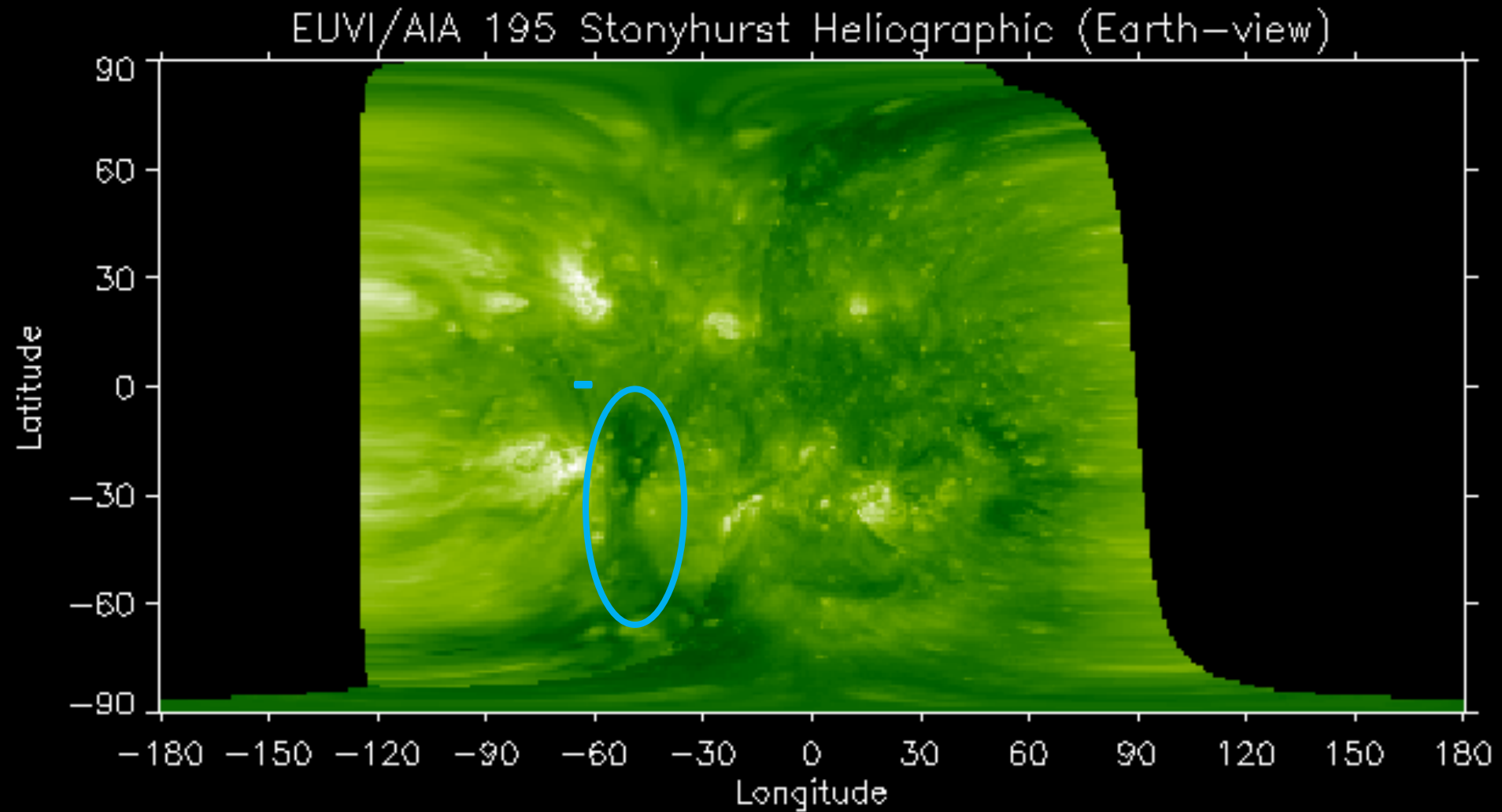
Outlook



Royal Observatory
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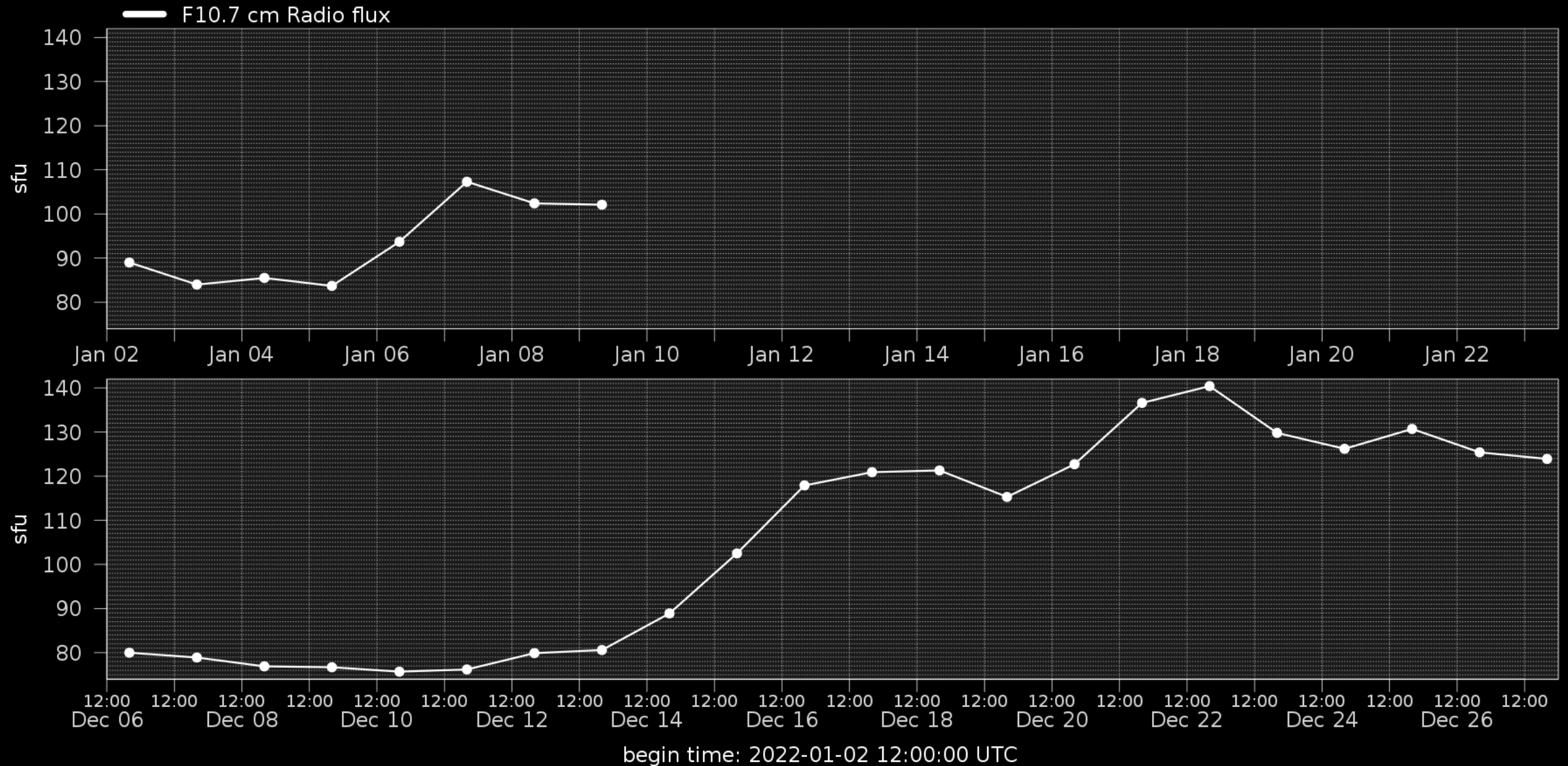
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Outlook: Solar activity

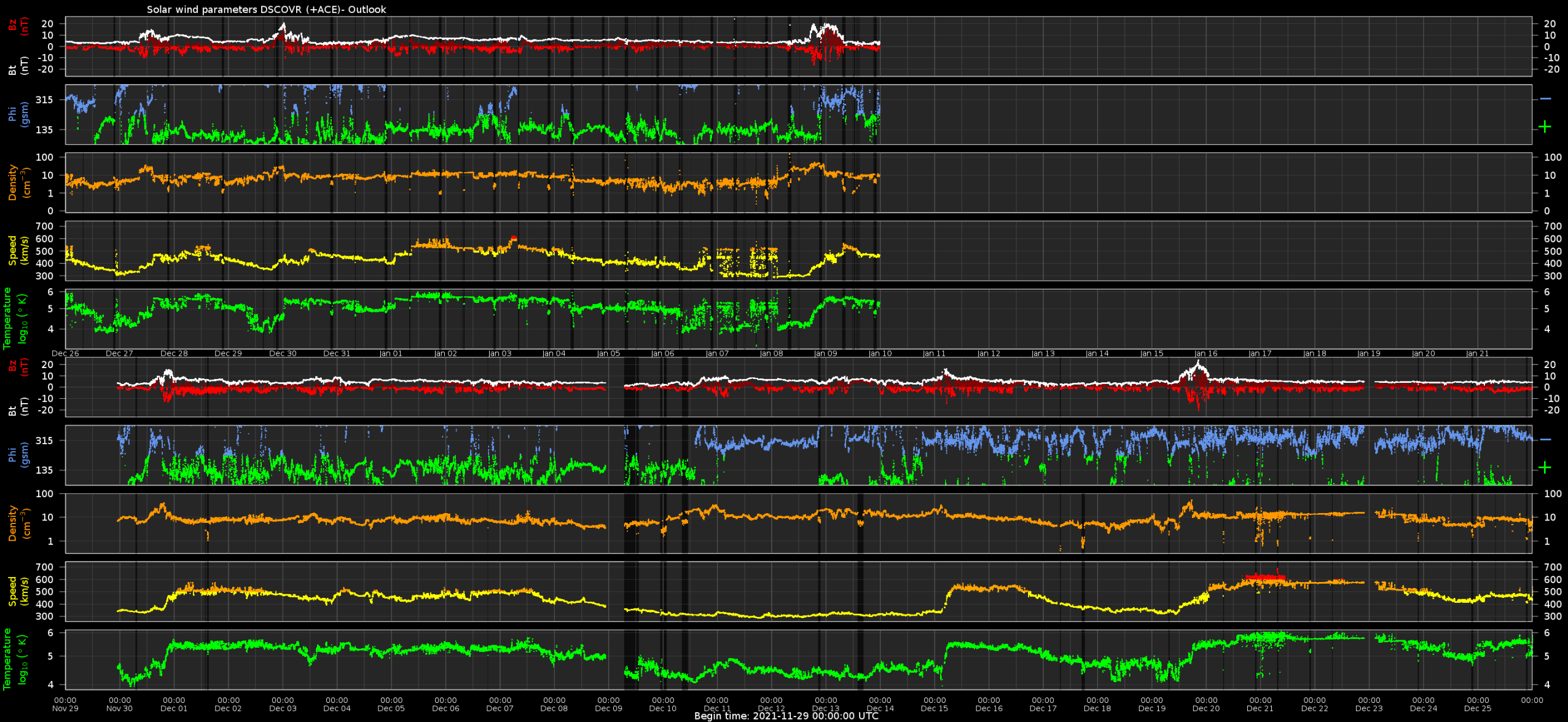


Observation date: 2022/01/10 07:34:59

Outlook: Solar F10.7cm radio flux



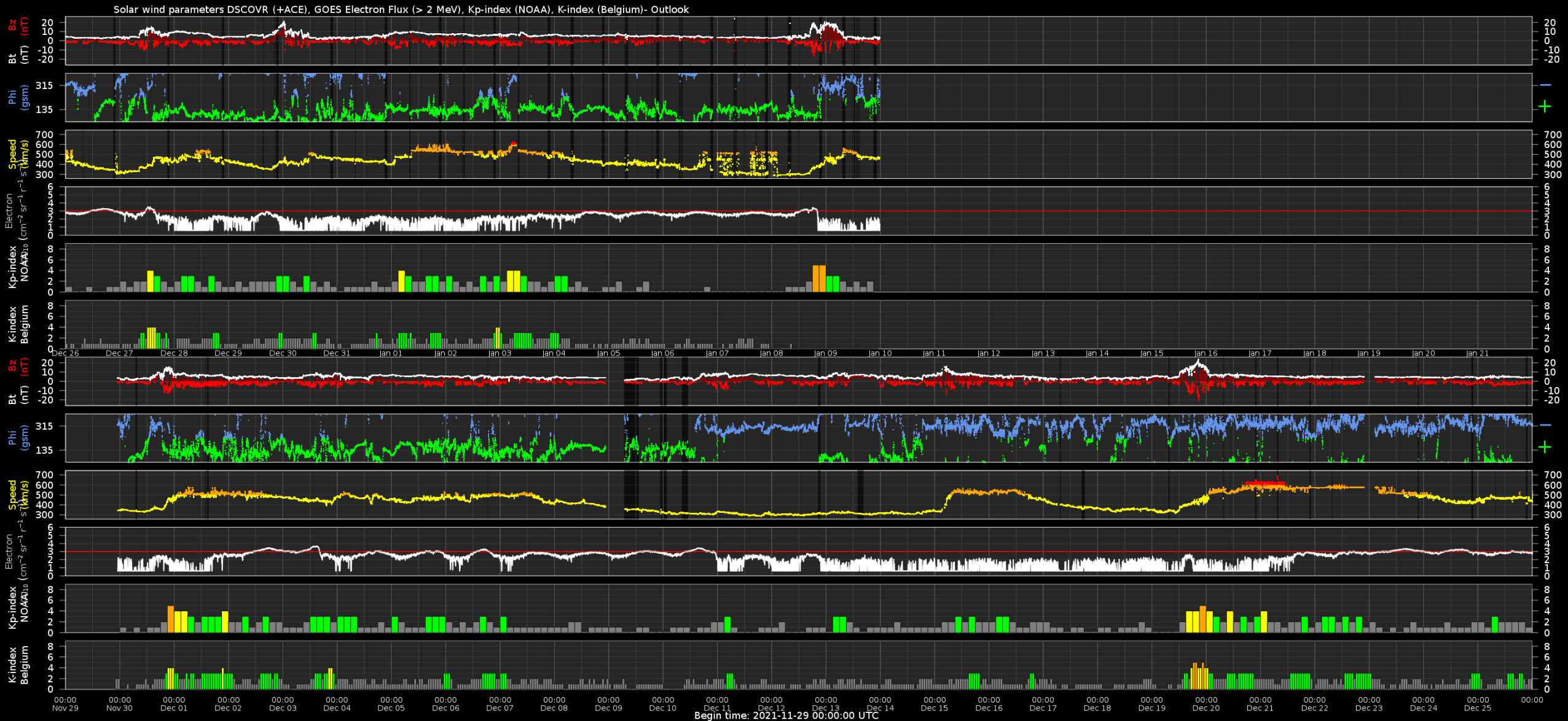
Outlook: Solar wind parameters



Outlook: Geomagnetic activity



Outlook: Electron Flux at GEO Outlook



SIDC Space Weather Briefing

See you at our next briefing!

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