

SIDC Space Weather Briefing

05 November 2023-12 November 2023

Vansintjan Robbe

& the SIDC forecaster team



Royal Observatory
of Belgium

Solar Influences
Data analysis Centre
www.sidc.be

Summary Report

Solar activity from 2023-11-05 12:00 to 2023-11-12 23:59

Active regions	13 ARs: NOAA AR 3474 - NOAA AR 3486
Flares	# C-class flare: 46 # M-class flare: 2 # X-class flare: 0
Coronal Holes	1 large CH-, 2 small CH+ & 1 small CH-
CMEs	One Earth directed halo CME & one possible glancing blow

Proton flux	Enhanced but remained under the 10 pfu threshold
Electron flux	Above 1000 pfu for most days

Solar wind and geomagnetic conditions

ICMEs	3 arrivals: 2 on Nov 5, 1 on Nov 12
Solar wind conditions	B : 0.33 - 40.98 nT //Bz: -23.87 nT to 40.77 nT //Speed: 390.9 - 721.4km/s
Geomagnetic conditions	max K _{Be} : 6, max K _p (NOAA): 7, Major Storm conditions

All Quiet Alert: Off

Solar Activity

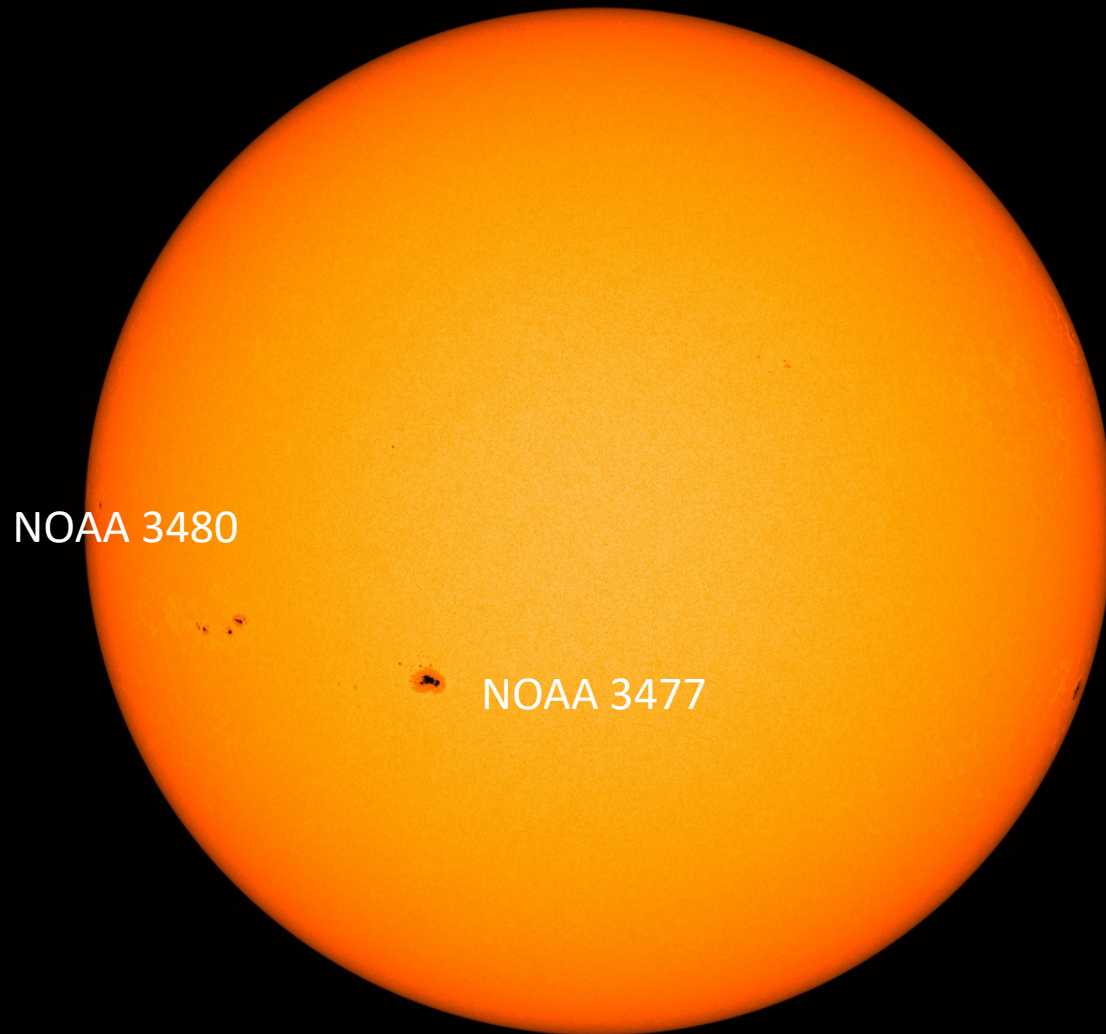


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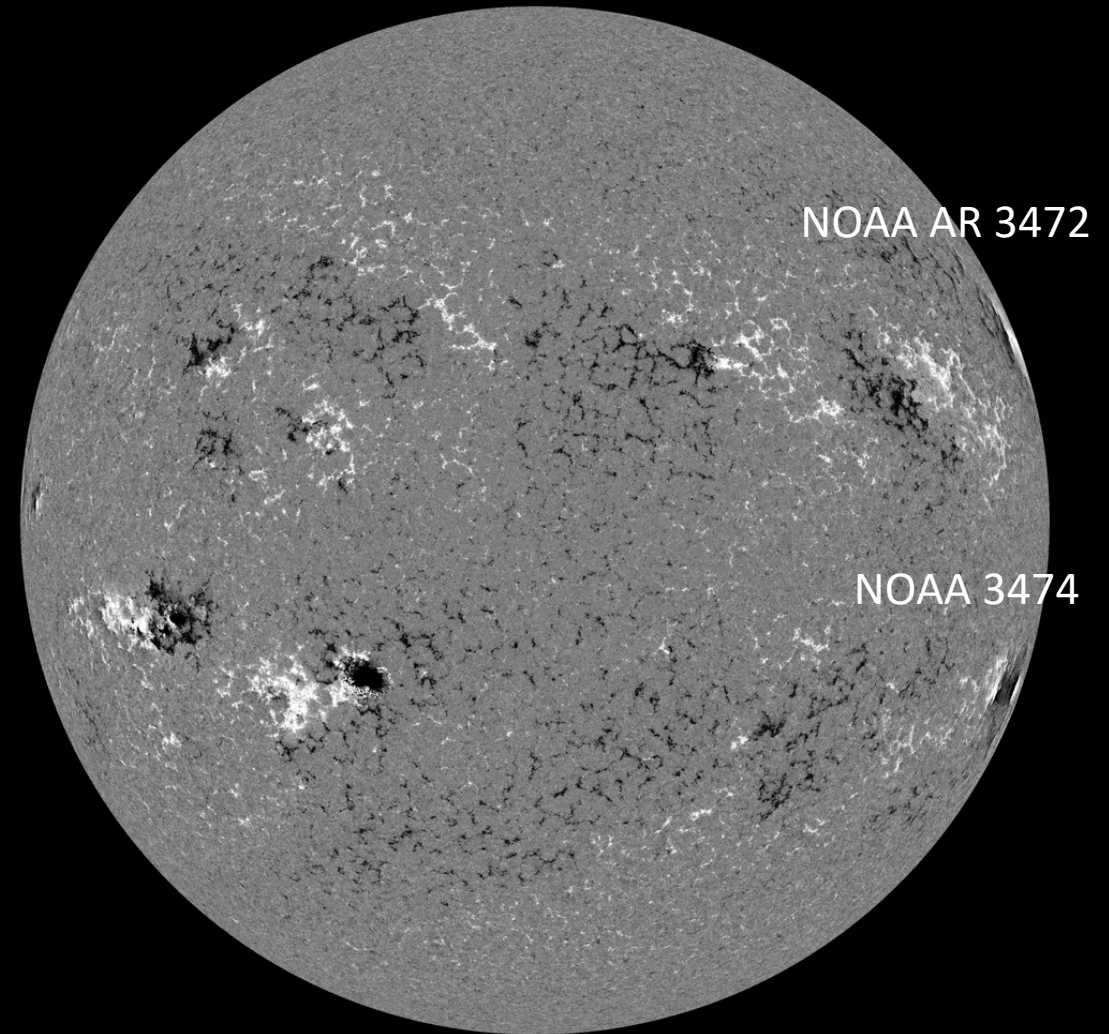
Solar active regions

SDO/HMI White Light 2023-11-05



SDO/HMI Quick-Look Continuum: 20231105_114500

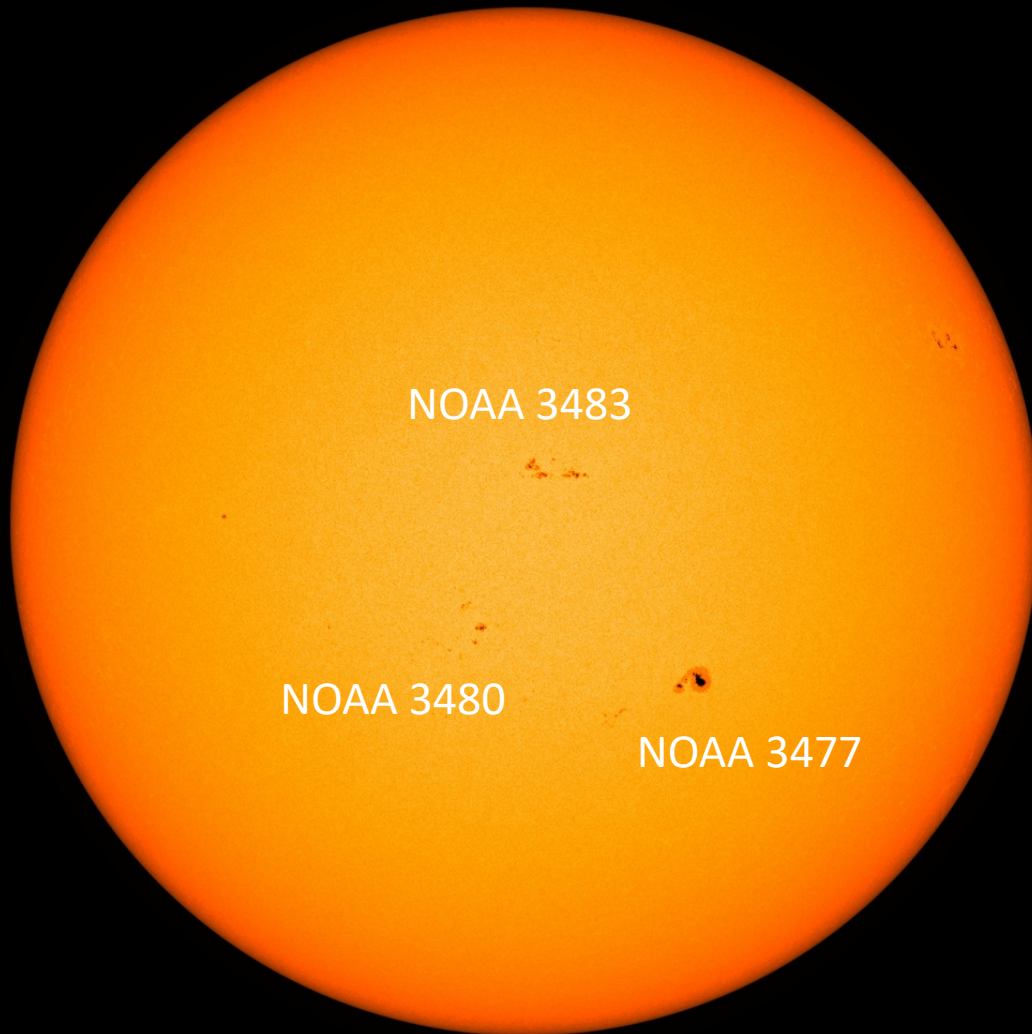
SDO/HMI Magnetogram 2023-11-05



SDO/HMI Quick-Look Magnetogram: 20231105_114500

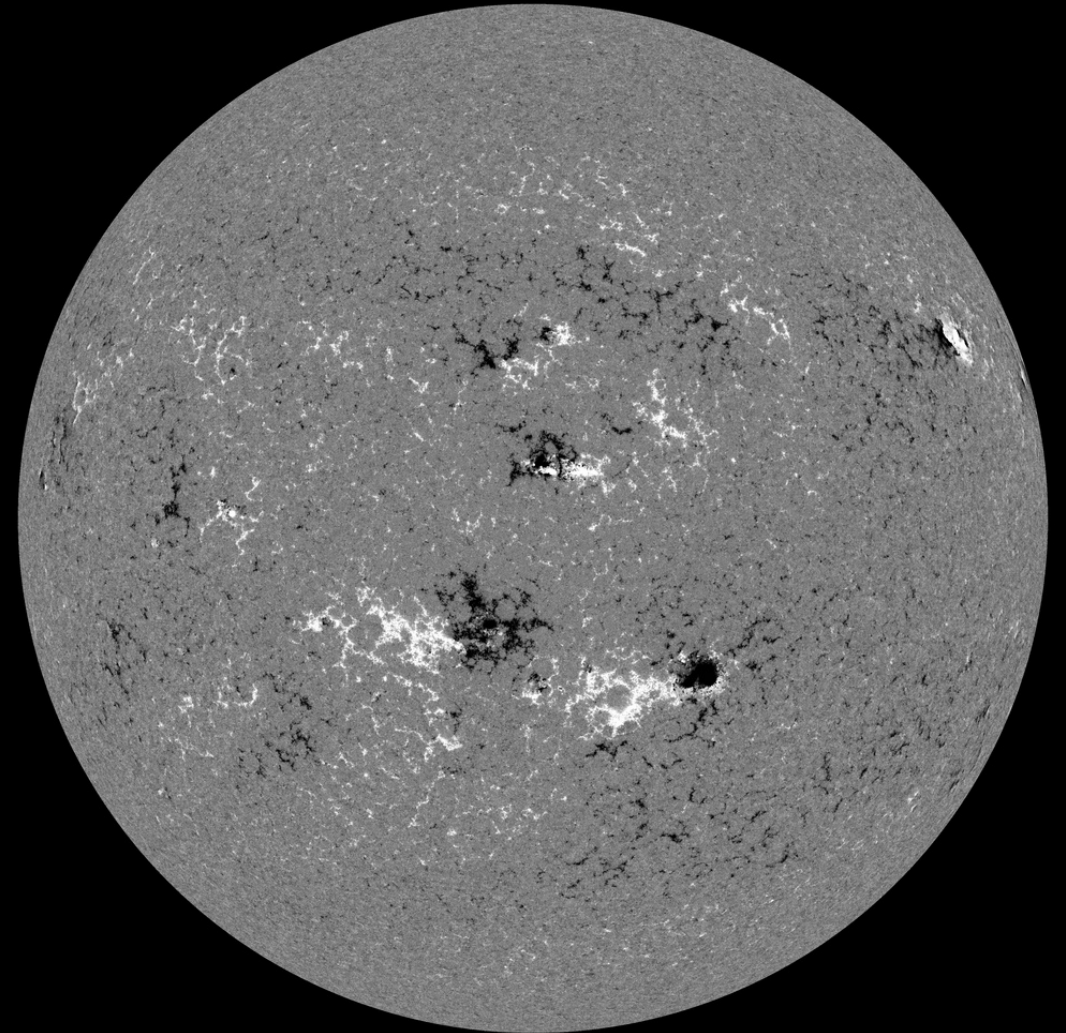
Solar active regions

SDO/HMI White Light 2023-11-08



SDO/HMI Quick-Look Continuum: 20231108_114500

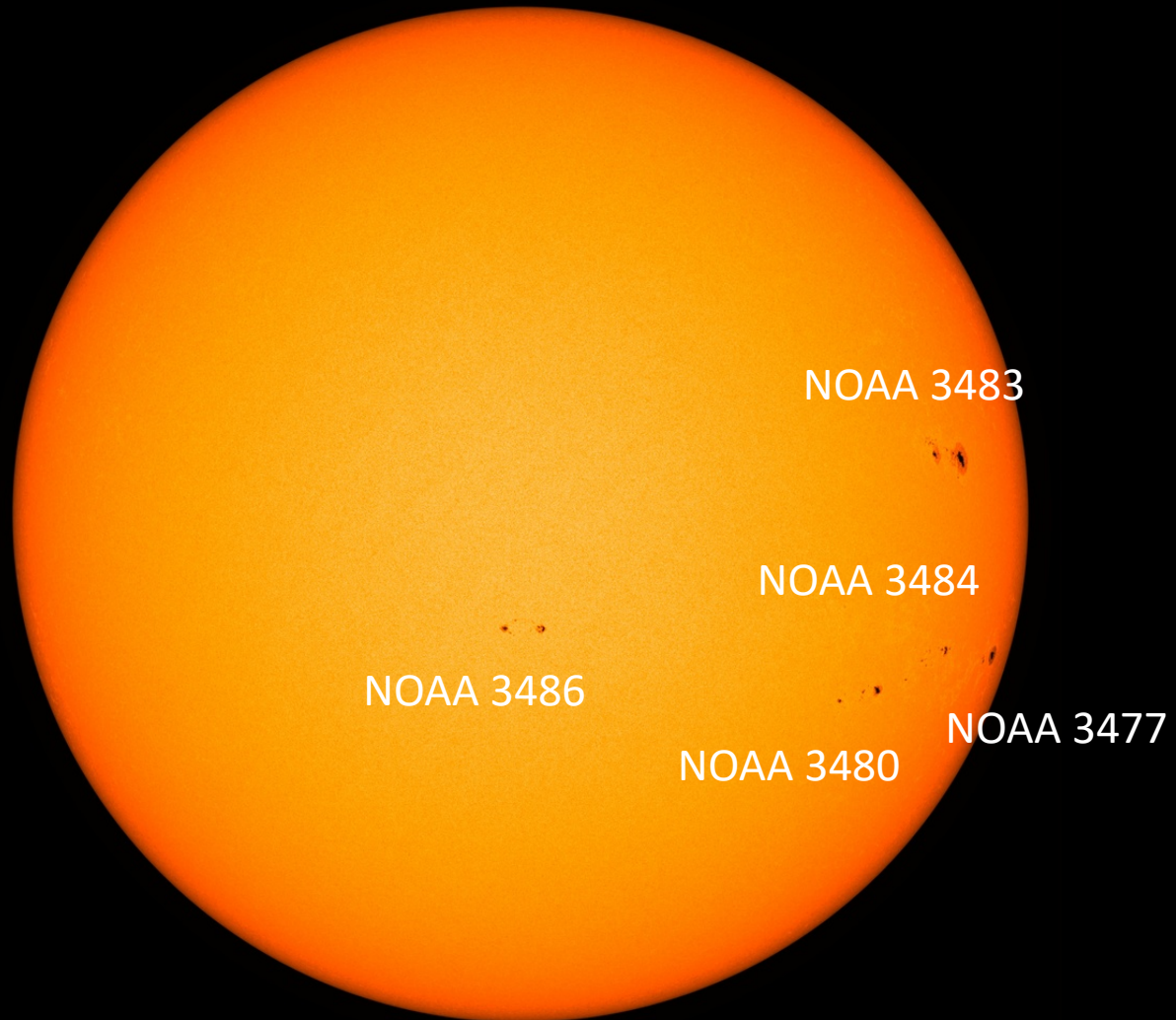
SDO/HMI Magnetogram 2023-11-08



SDO/HMI Quick-Look Magnetogram: 20231108_114500

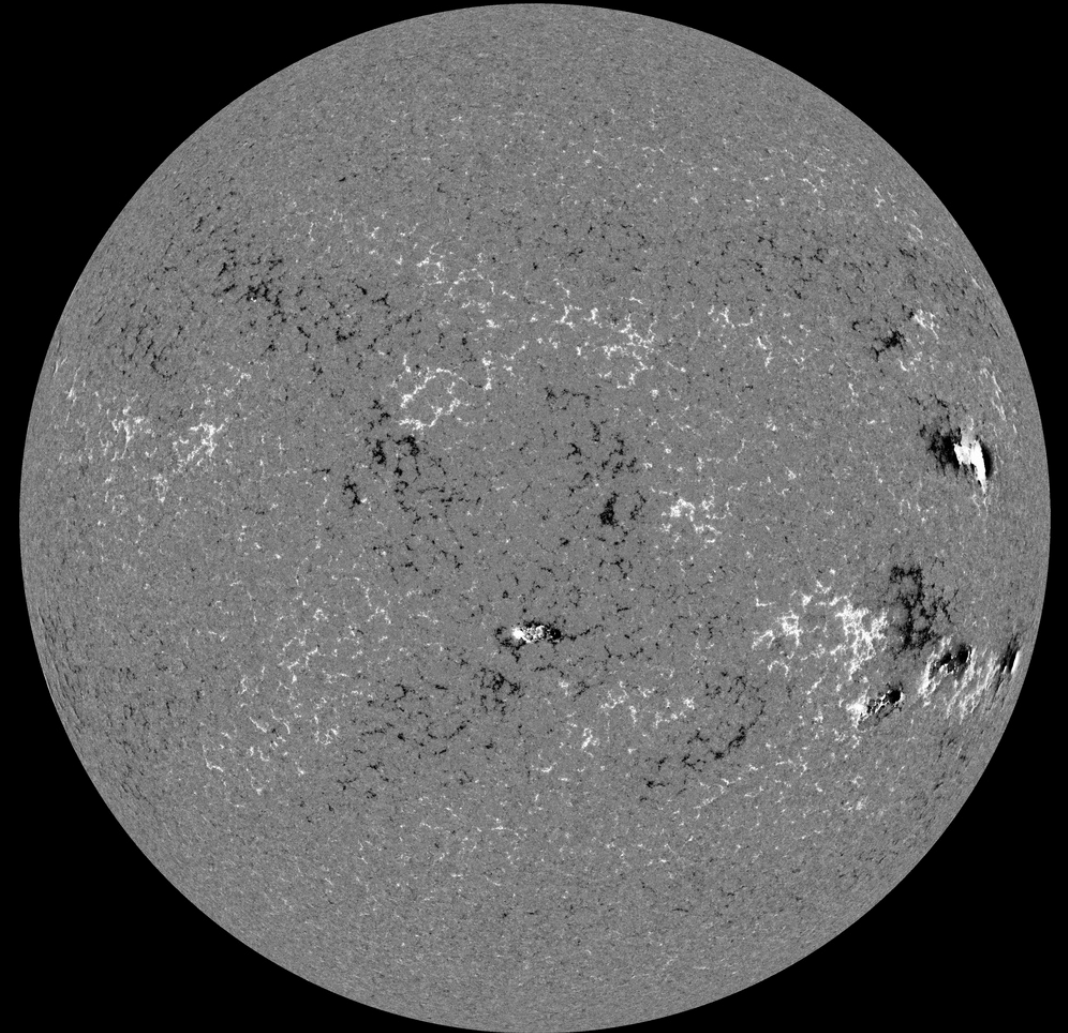
Solar active regions

SDO/HMI White Light 2023-11-12



SDO/HMI Quick-Look Continuum: 20231112_114500

SDO/HMI Magnetogram 2023-11-12

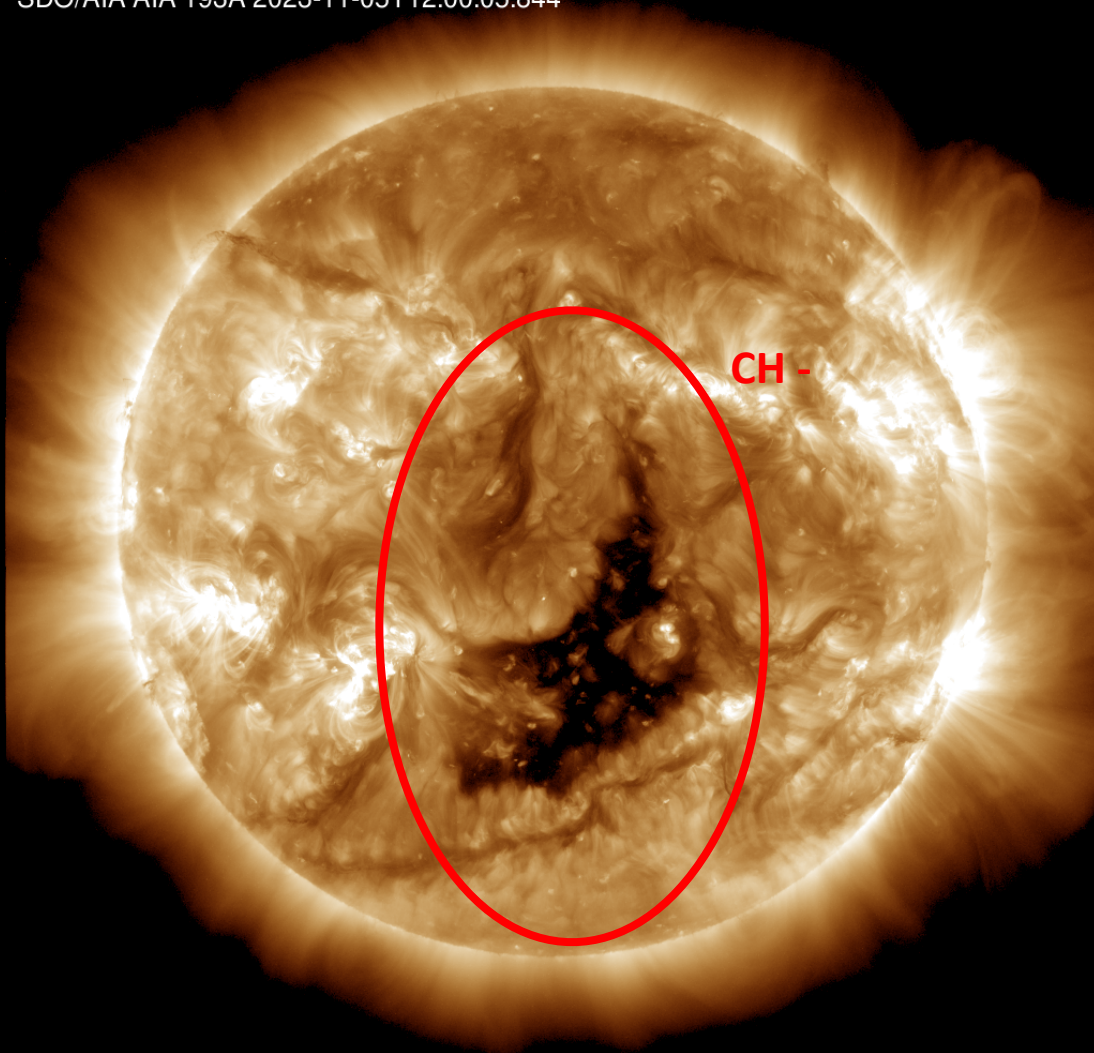


SDO/HMI Quick-Look Magnetogram: 20231112_114500

Coronal holes

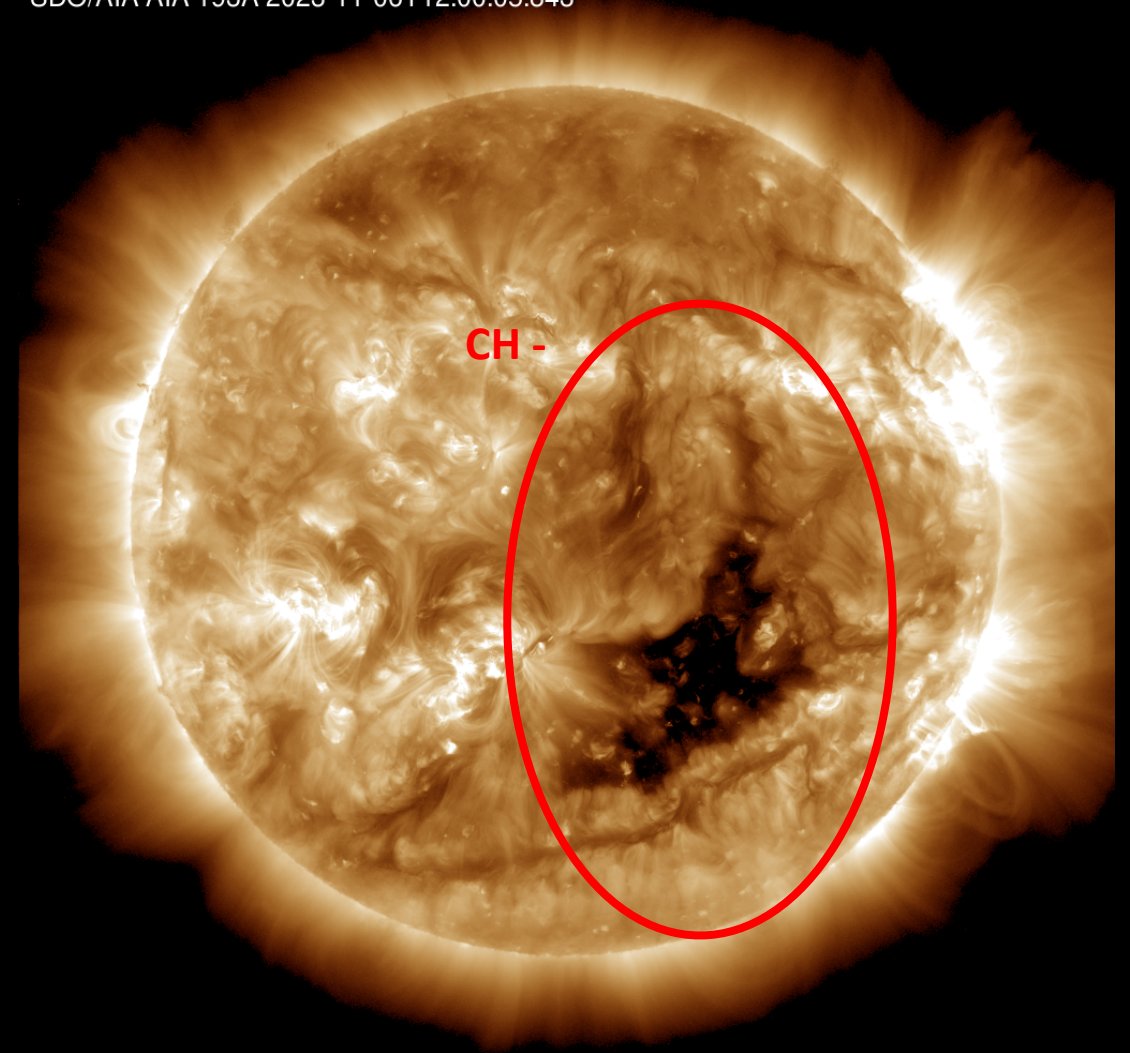
SDO/AIA 19.3 nm 2023-11-05

SDO/AIA AIA 193Å 2023-11-05T12:00:05.844



SDO/AIA 19.3 nm 2023-11-06

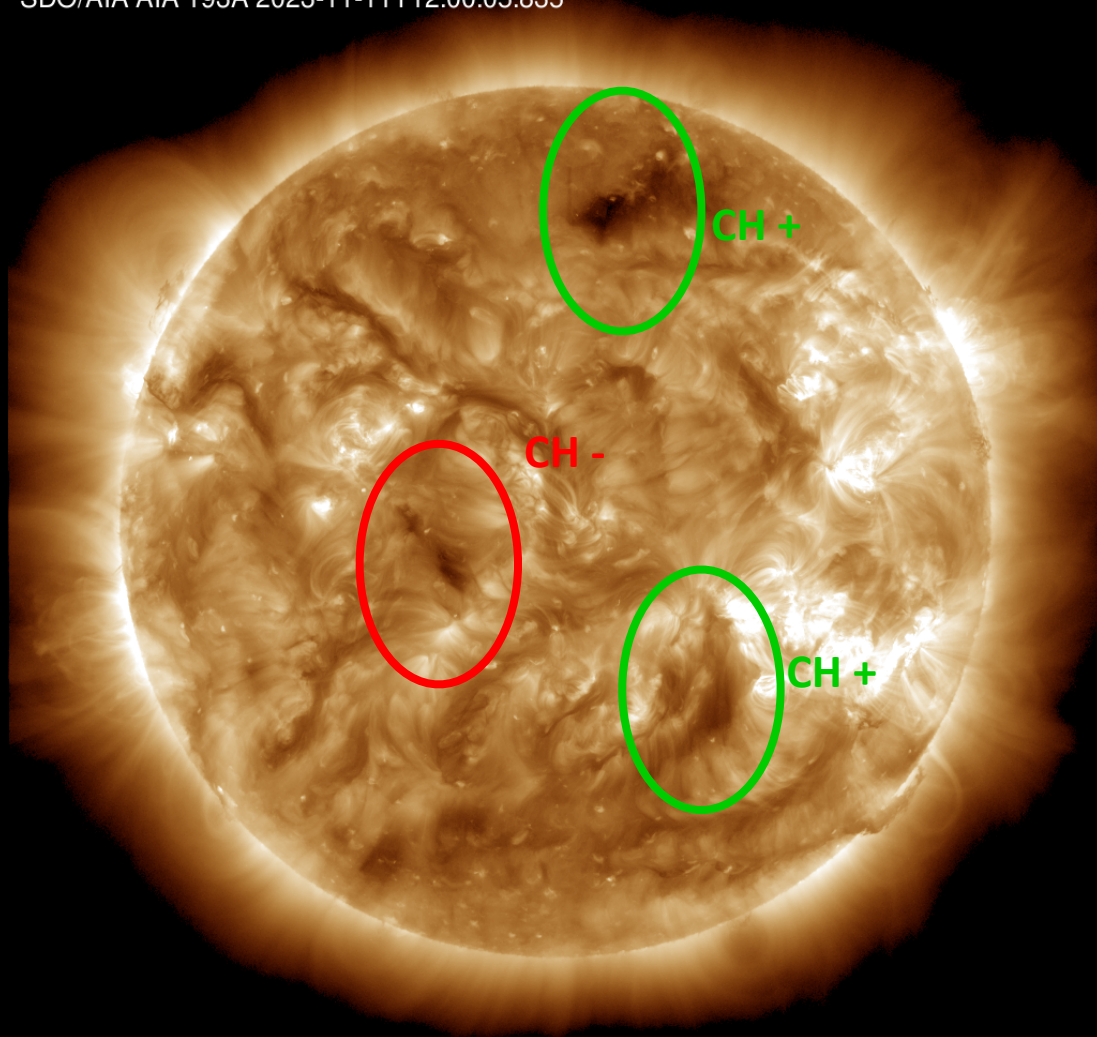
SDO/AIA AIA 193Å 2023-11-06T12:00:05.843



Coronal holes

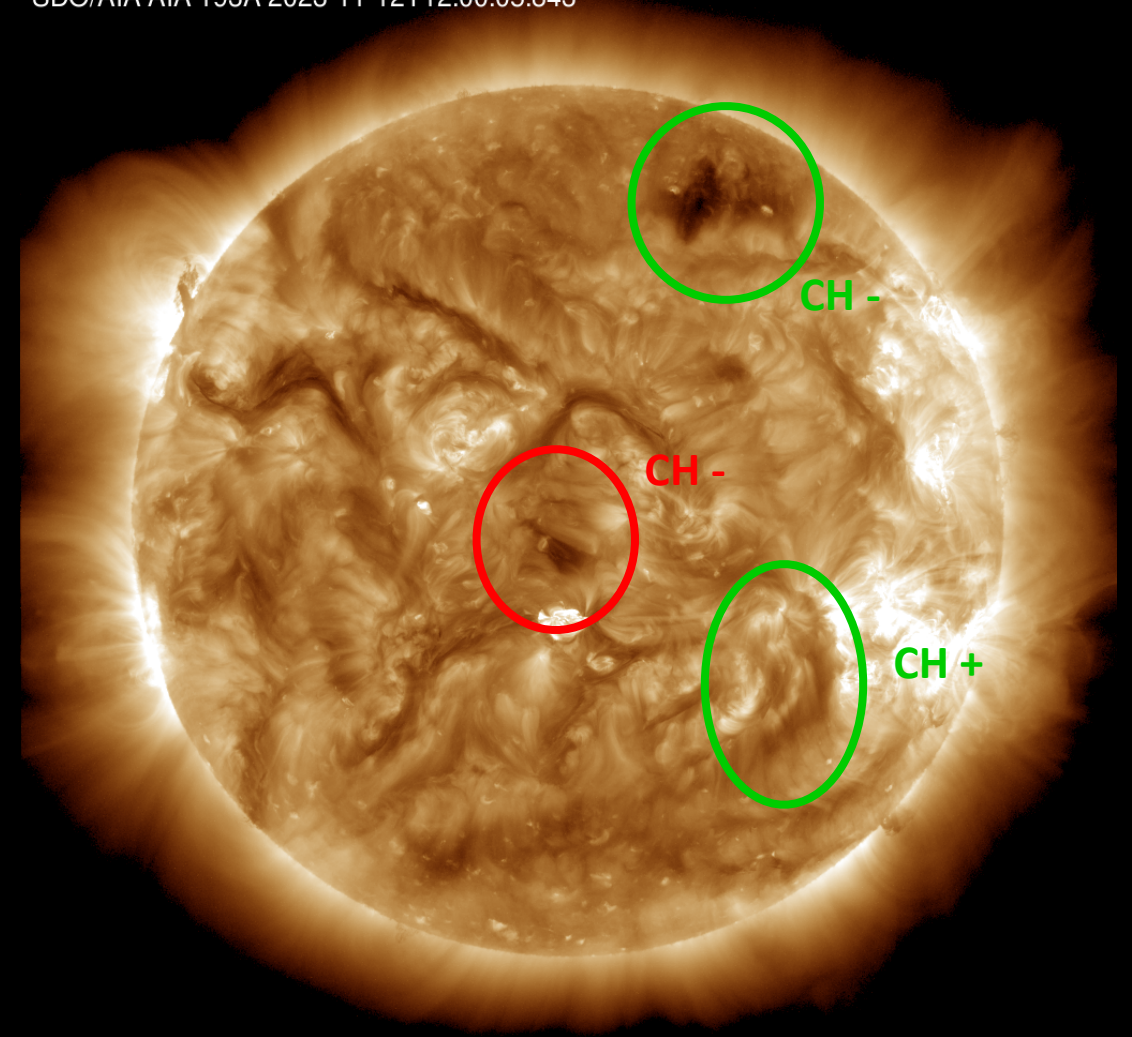
SDO/AIA 19.3 nm 2023-11-11

SDO/AIA AIA 193Å 2023-11-11T12:00:05.835



SDO/AIA 19.3 nm 2023-11-12

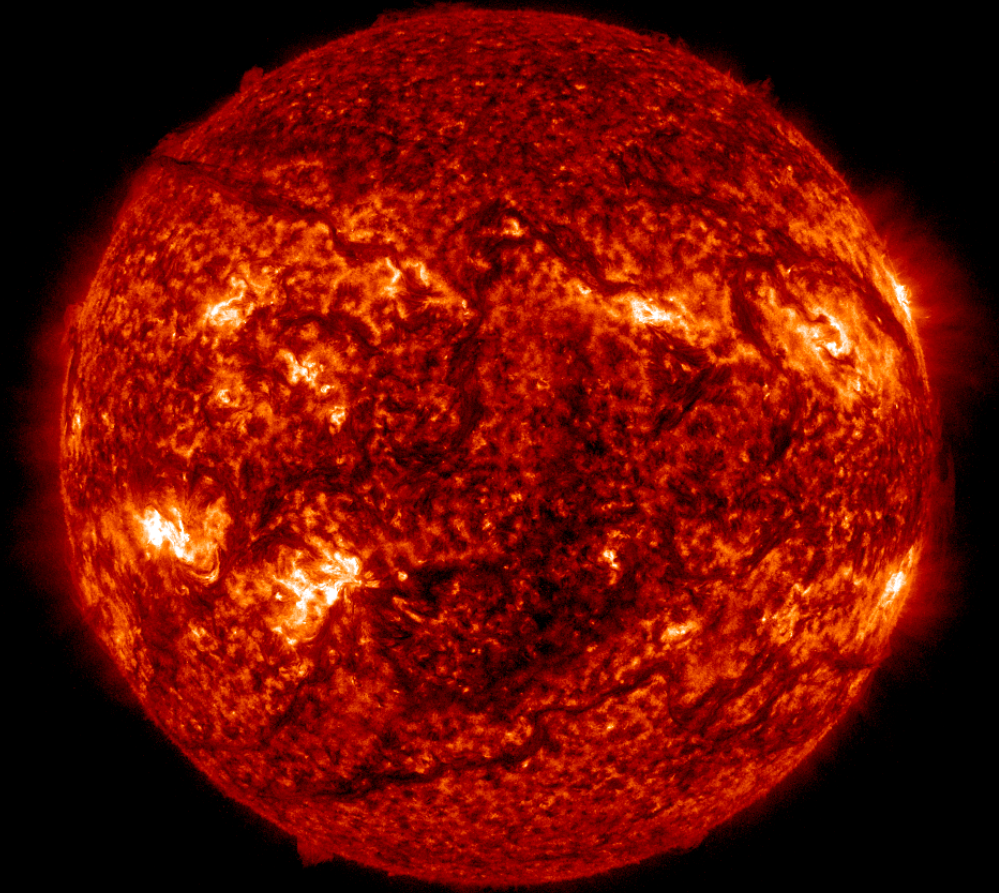
SDO/AIA AIA 193Å 2023-11-12T12:00:05.843



Filaments

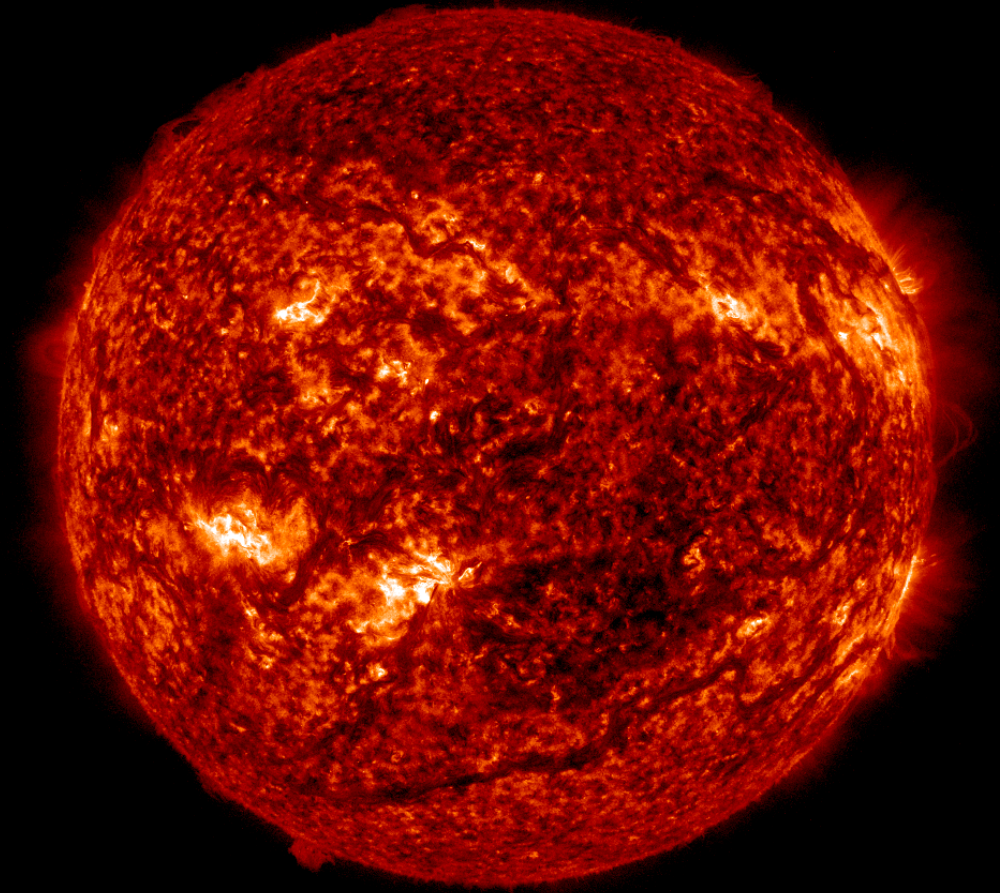
SDO/AIA 30.4 nm 2023-11-05

SDO/AIA AIA 304Å 2023-11-05T12:00:06.581



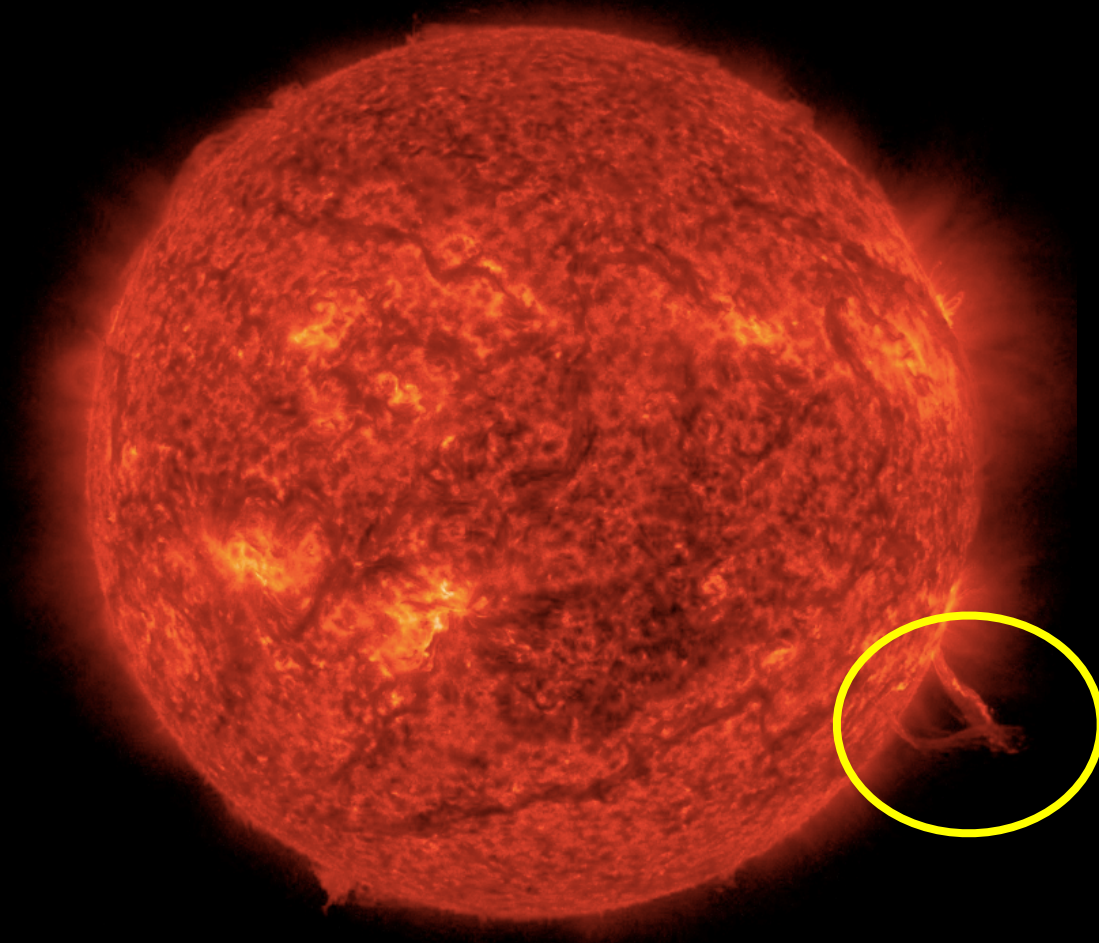
SDO/AIA 30.4 nm 2023-11-06

SDO/AIA AIA 304Å 2023-11-06T12:00:06.580



Filaments

SDO/AIA 30.4 nm 2023-11-06 06:58

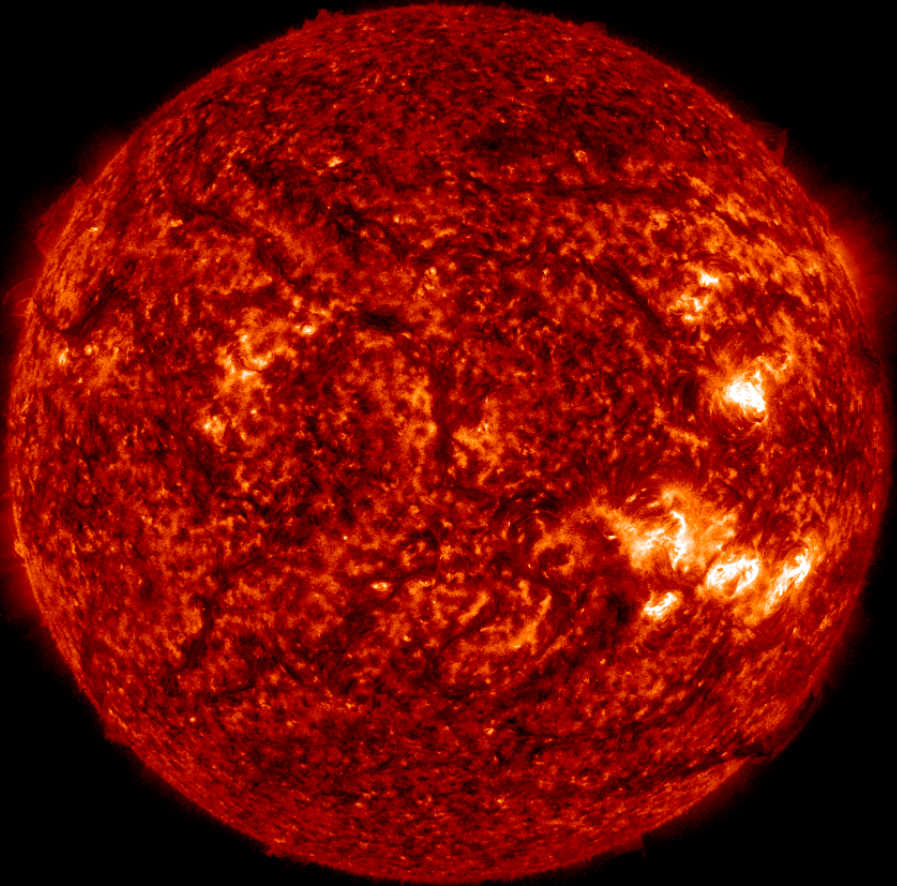


SDO/AIA 304 2023-11-06 06:58:30 UT

Filaments

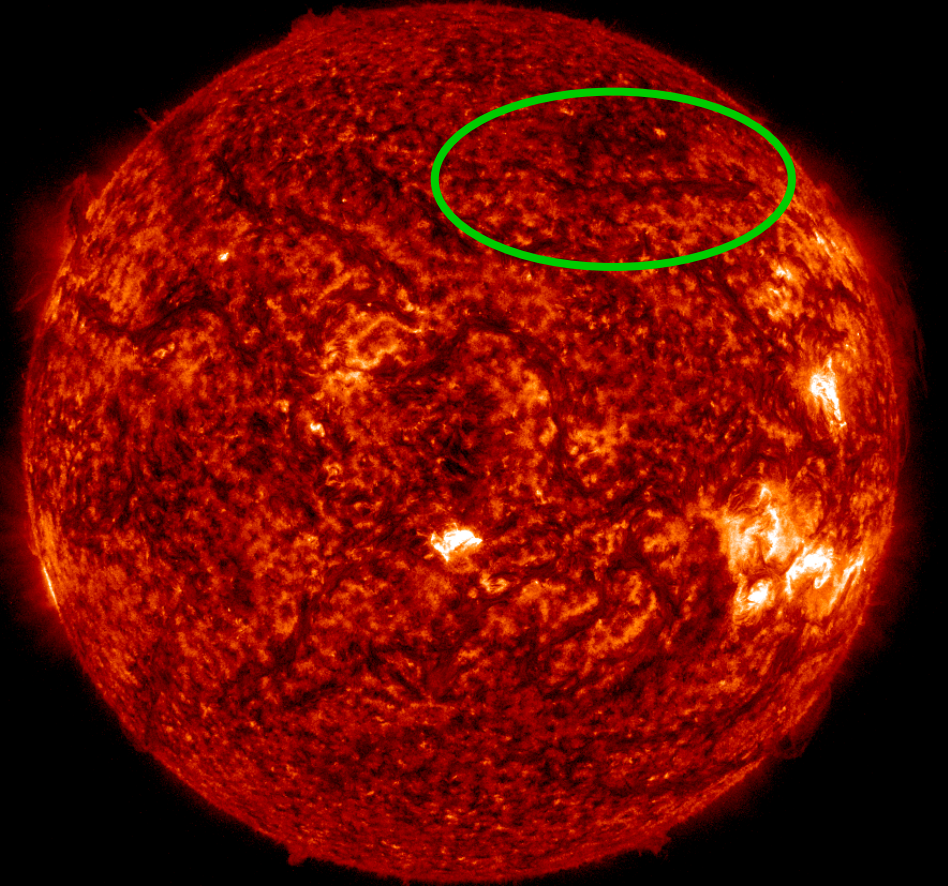
SDO/AIA 30.4 nm 2023-11-11

SDO/AIA AIA 304Å 2023-11-11T12:00:06.581



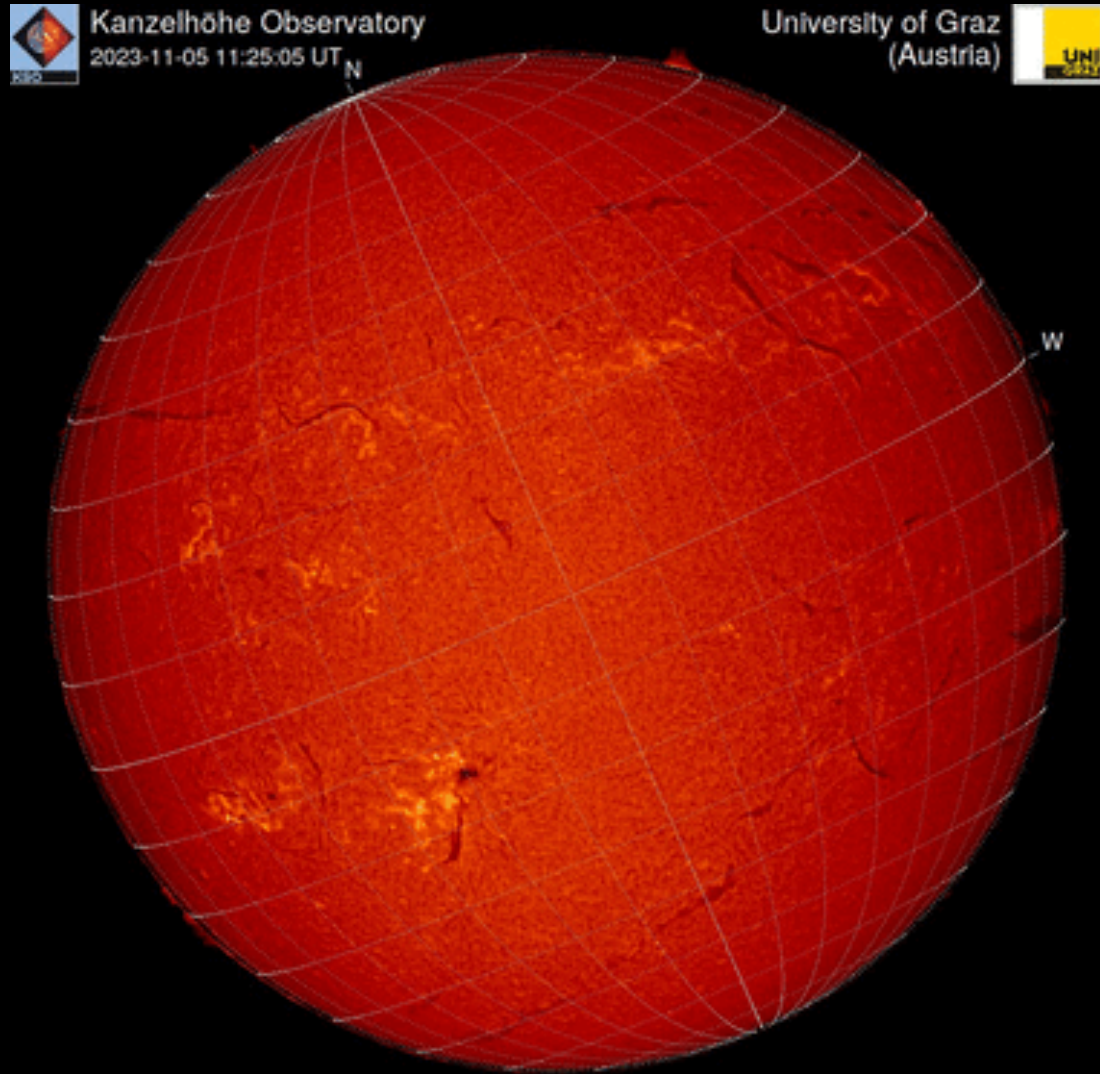
SDO/AIA 30.4 nm 2023-11-12

SDO/AIA AIA 304Å 2023-11-12T12:00:06.580

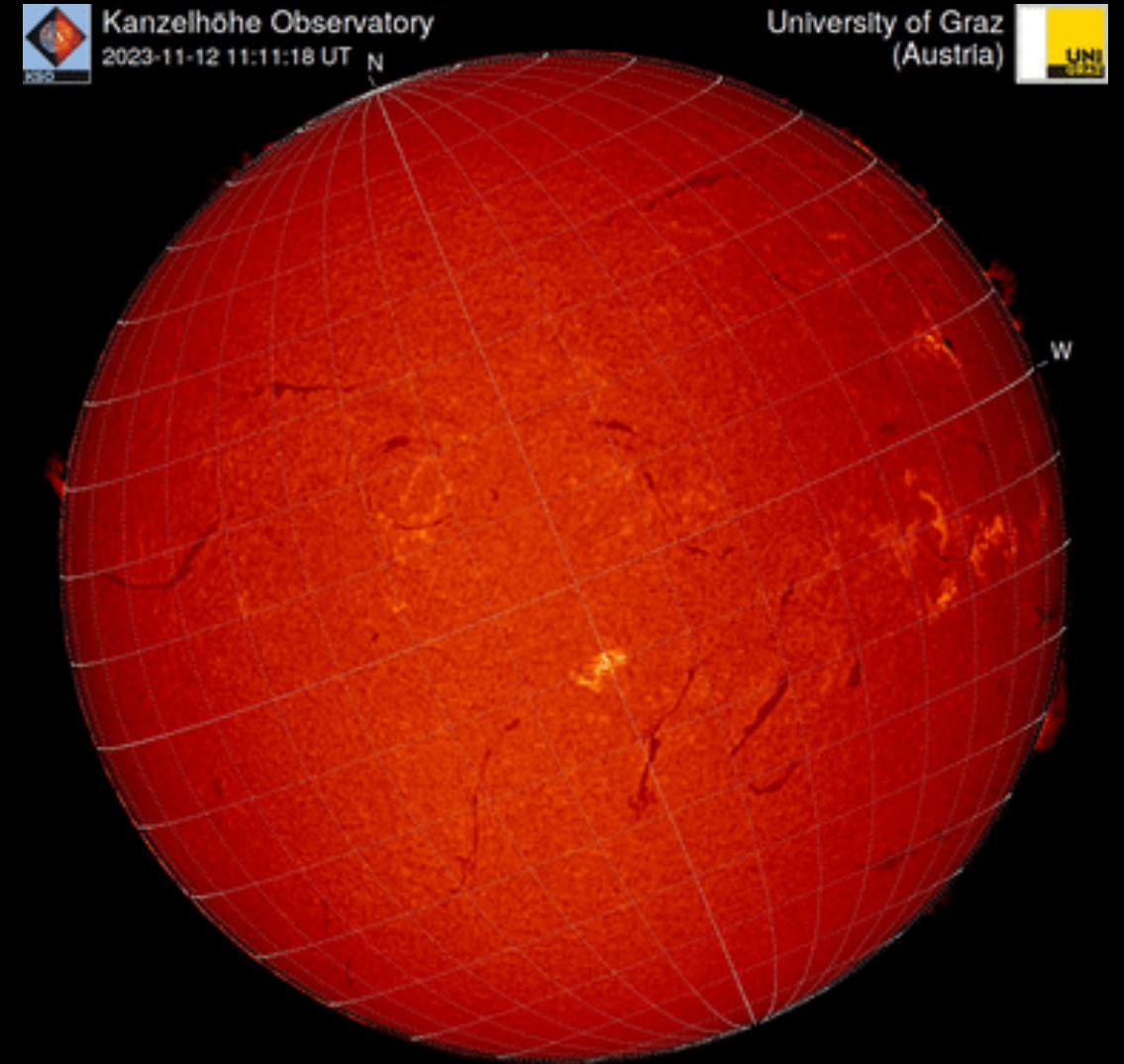


Filaments & Filament eruptions

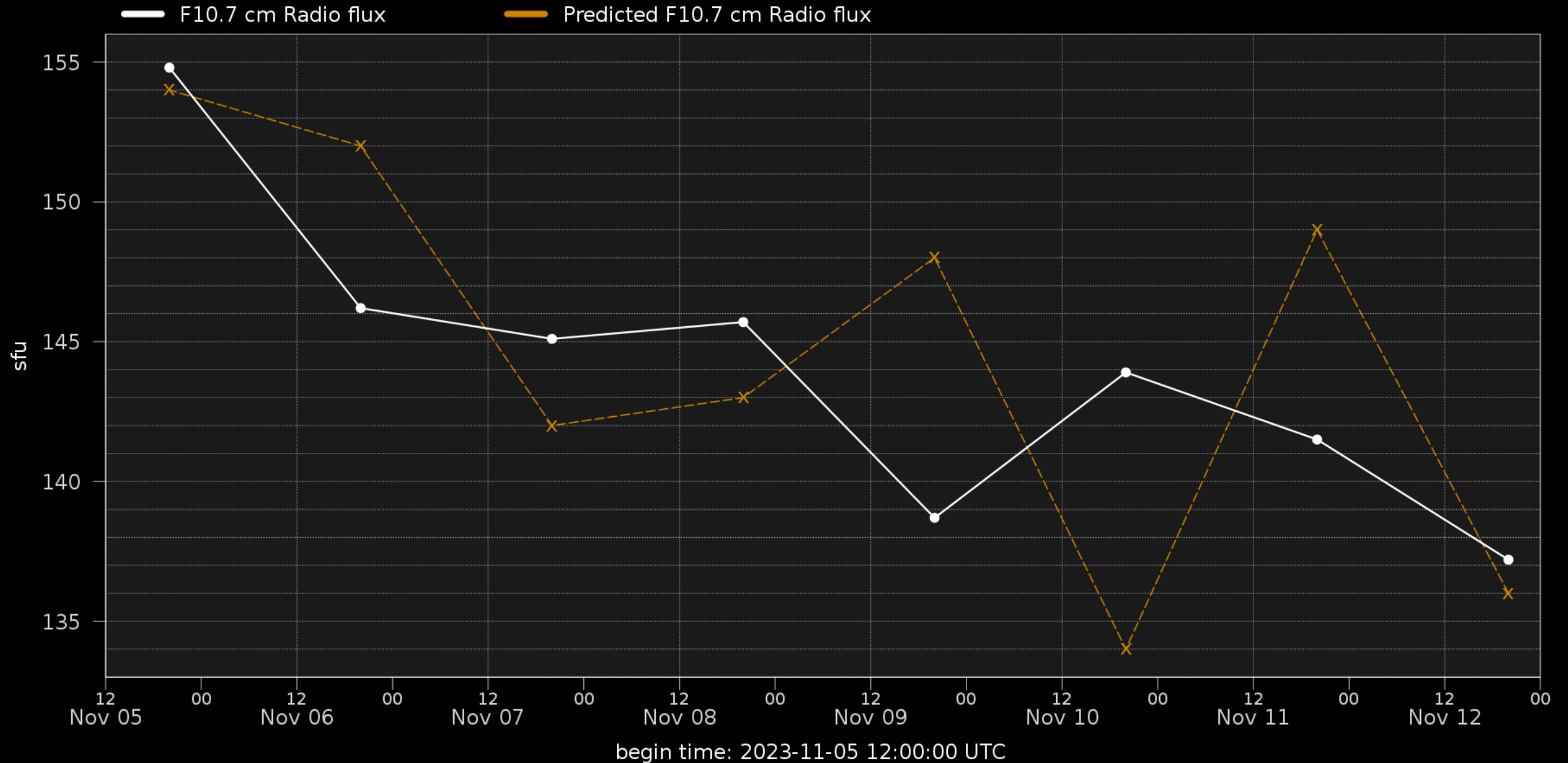
H-alpha 2023-11-05



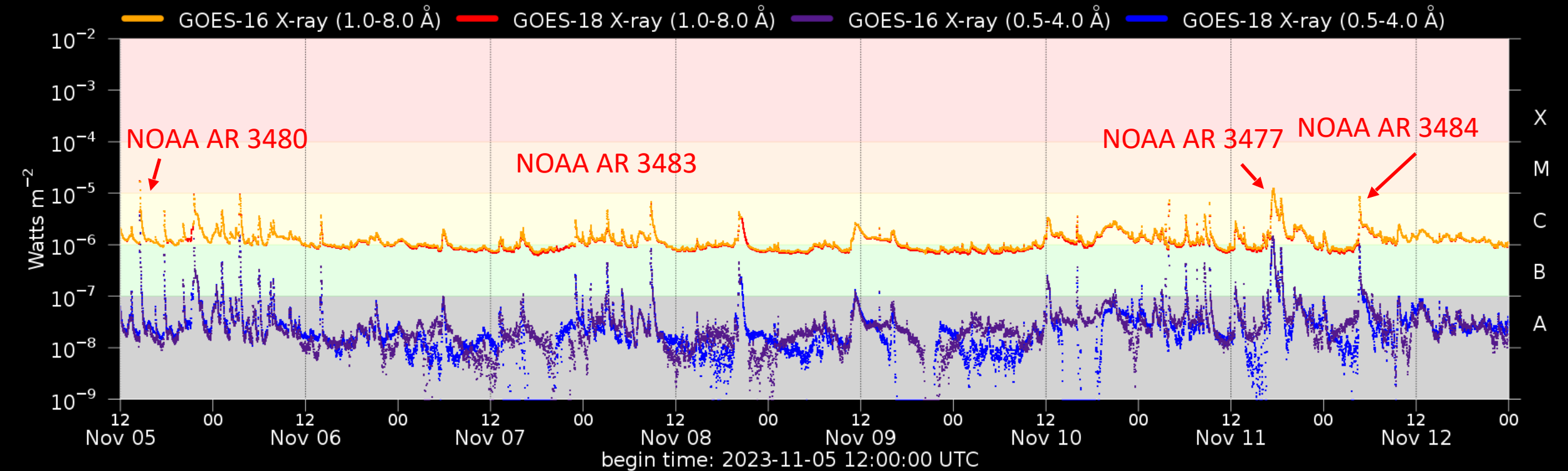
H-alpha 2023-11-12



Solar F10.7cm radio flux



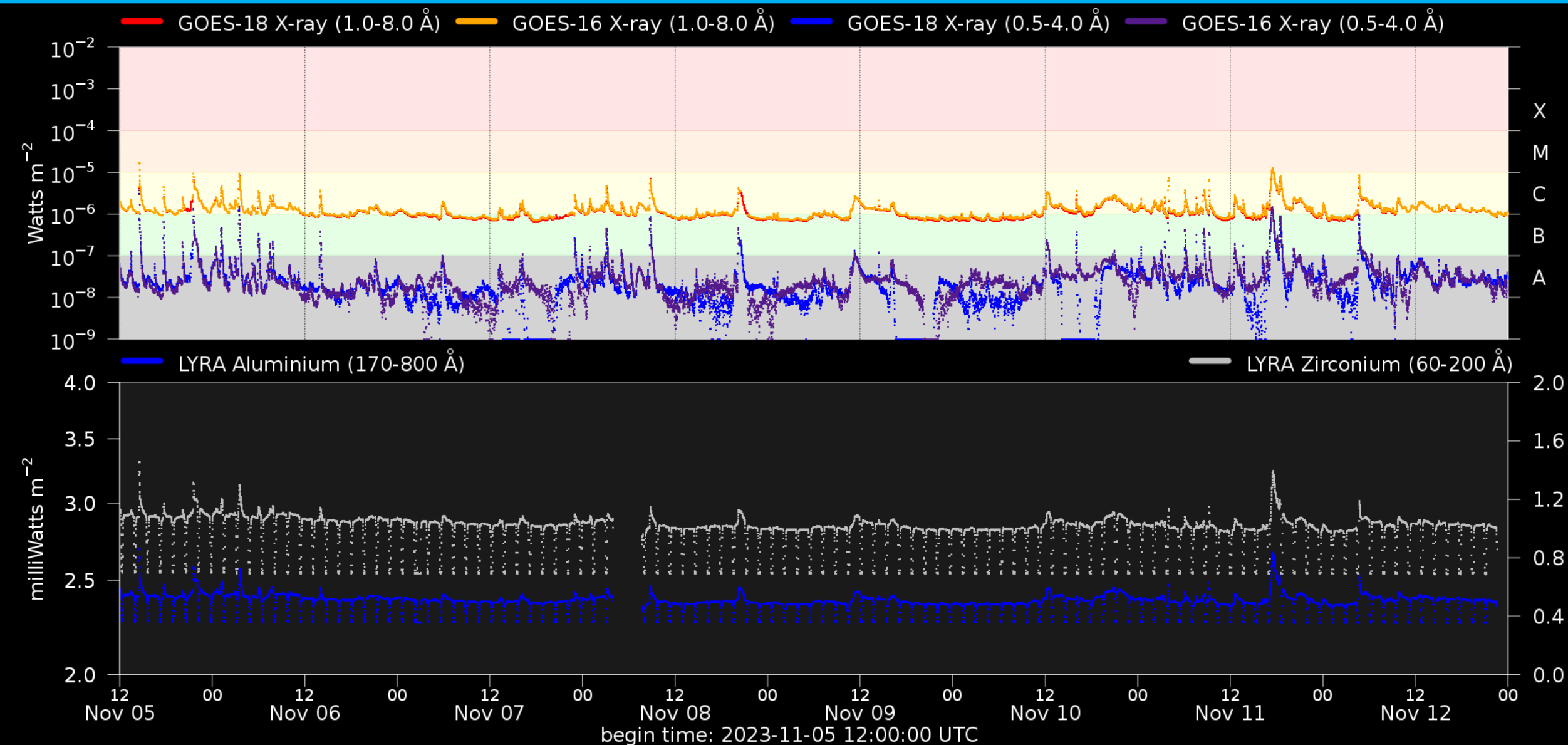
Flaring activity



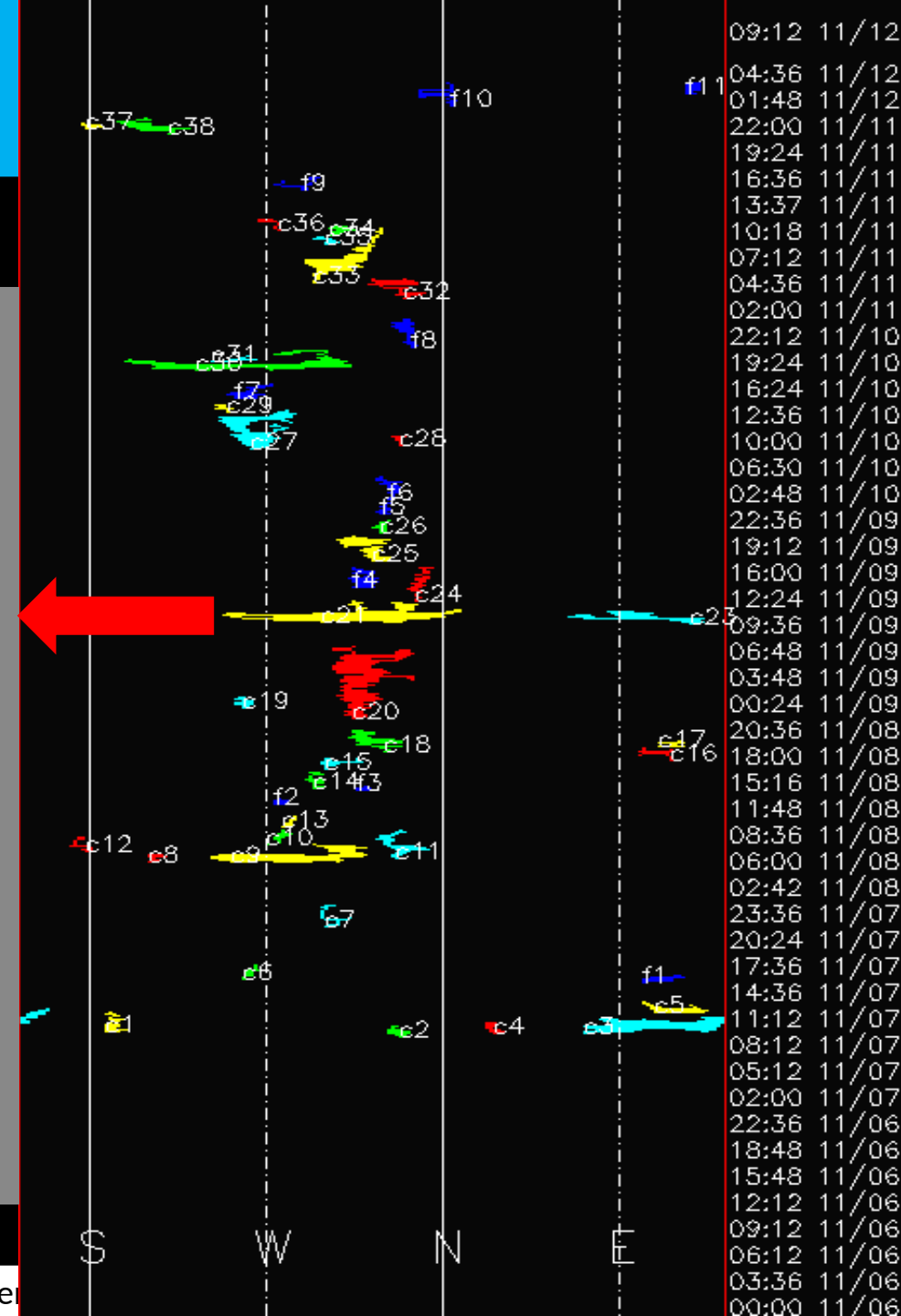
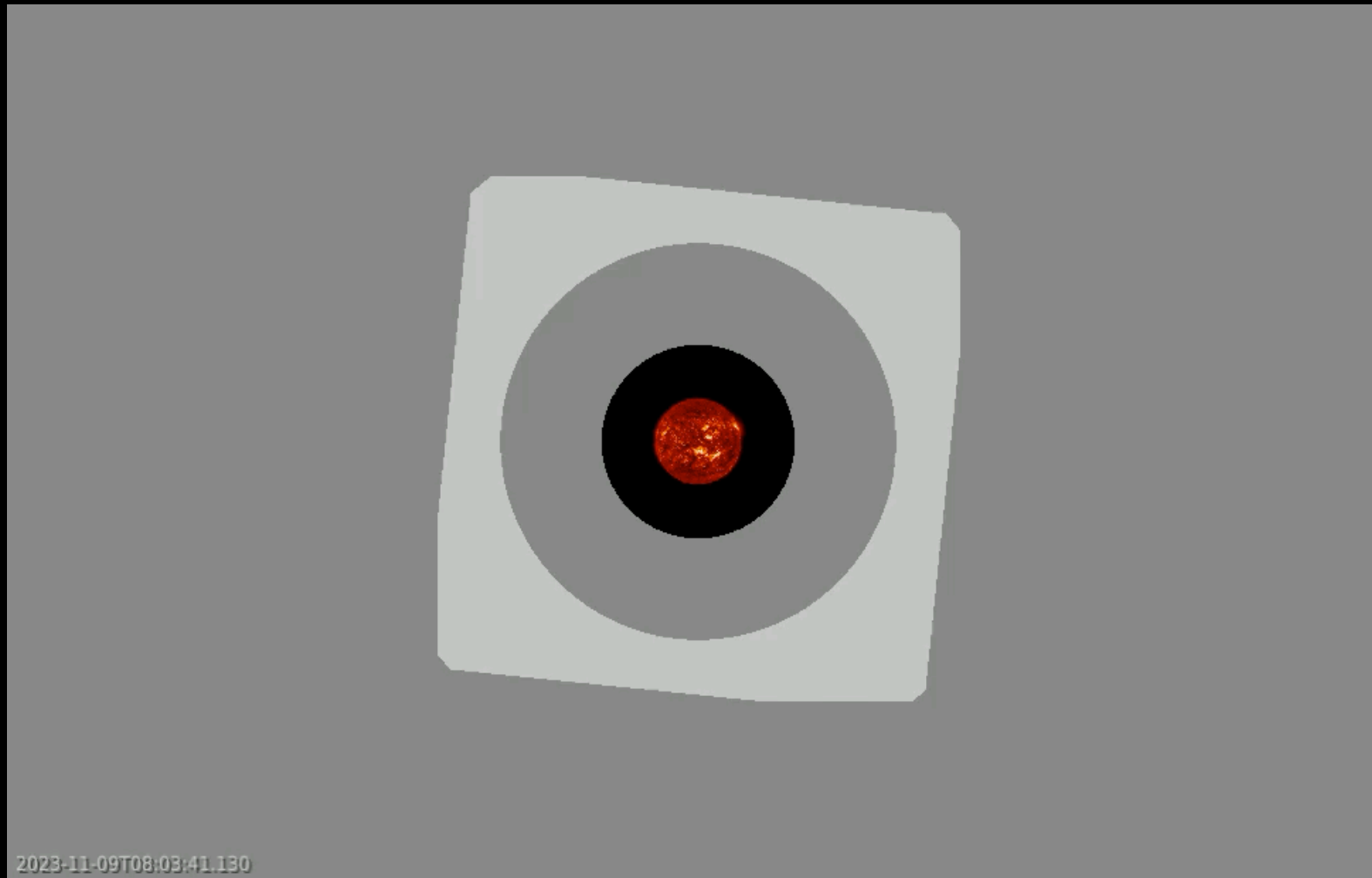
Probabilities (%) and occurrences (#) of C/M/X-flares daily, from noon to noon:

Issue date	2023-11-05	2023-11-06	2023-11-07	2023-11-08	2023-11-09	2023-11-10	2023-11-11	2023-11-12
Probability (%)	85 40 10	95 40 10	95 30 05	95 40 05	85 15 01	80 15 01	95 15 01	95 20 01
Observed (#)	14 01 00	02 00 00	08 00 00	03 00 00	00 00 00	10 00 00	08 01 00	01 00 00

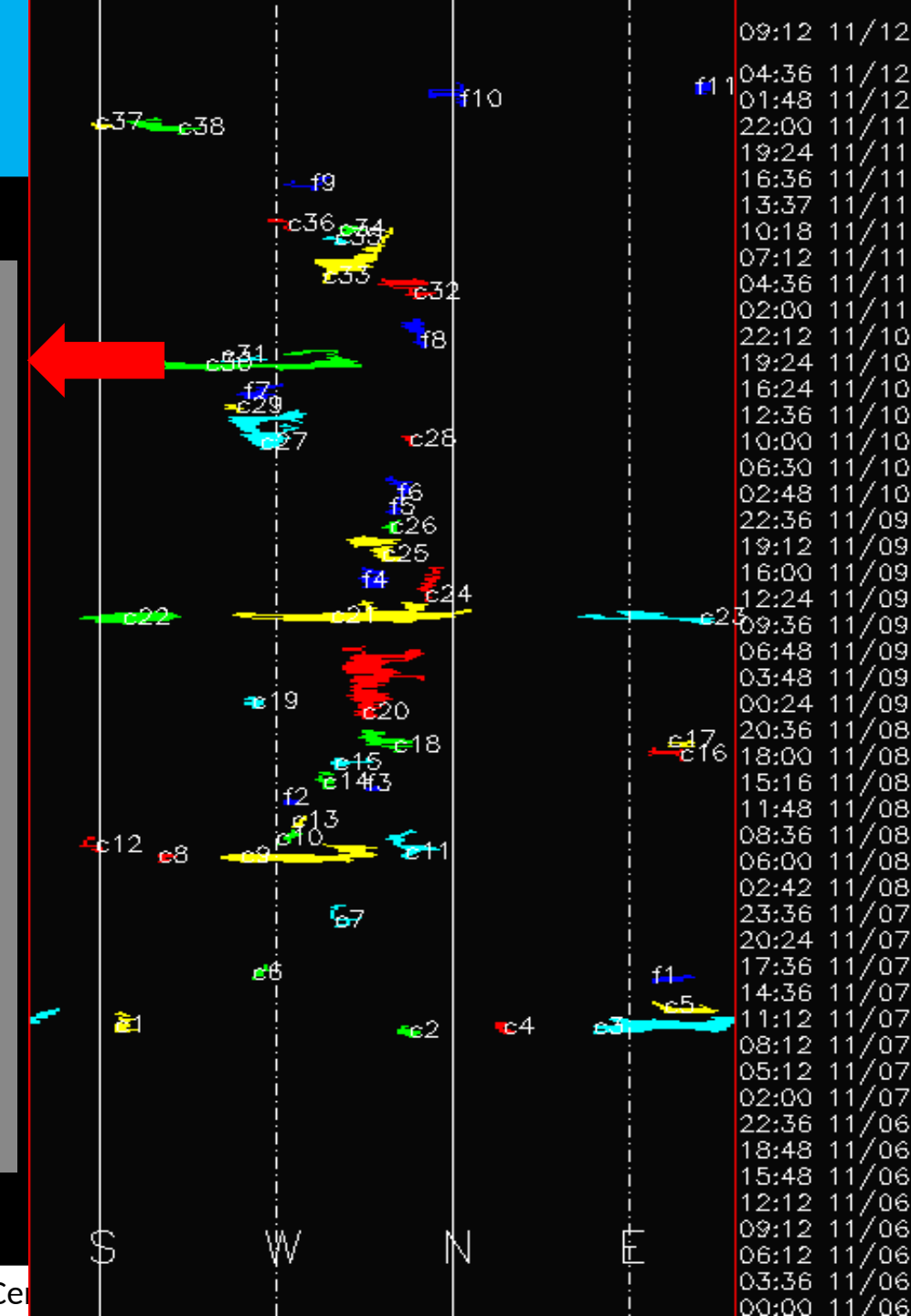
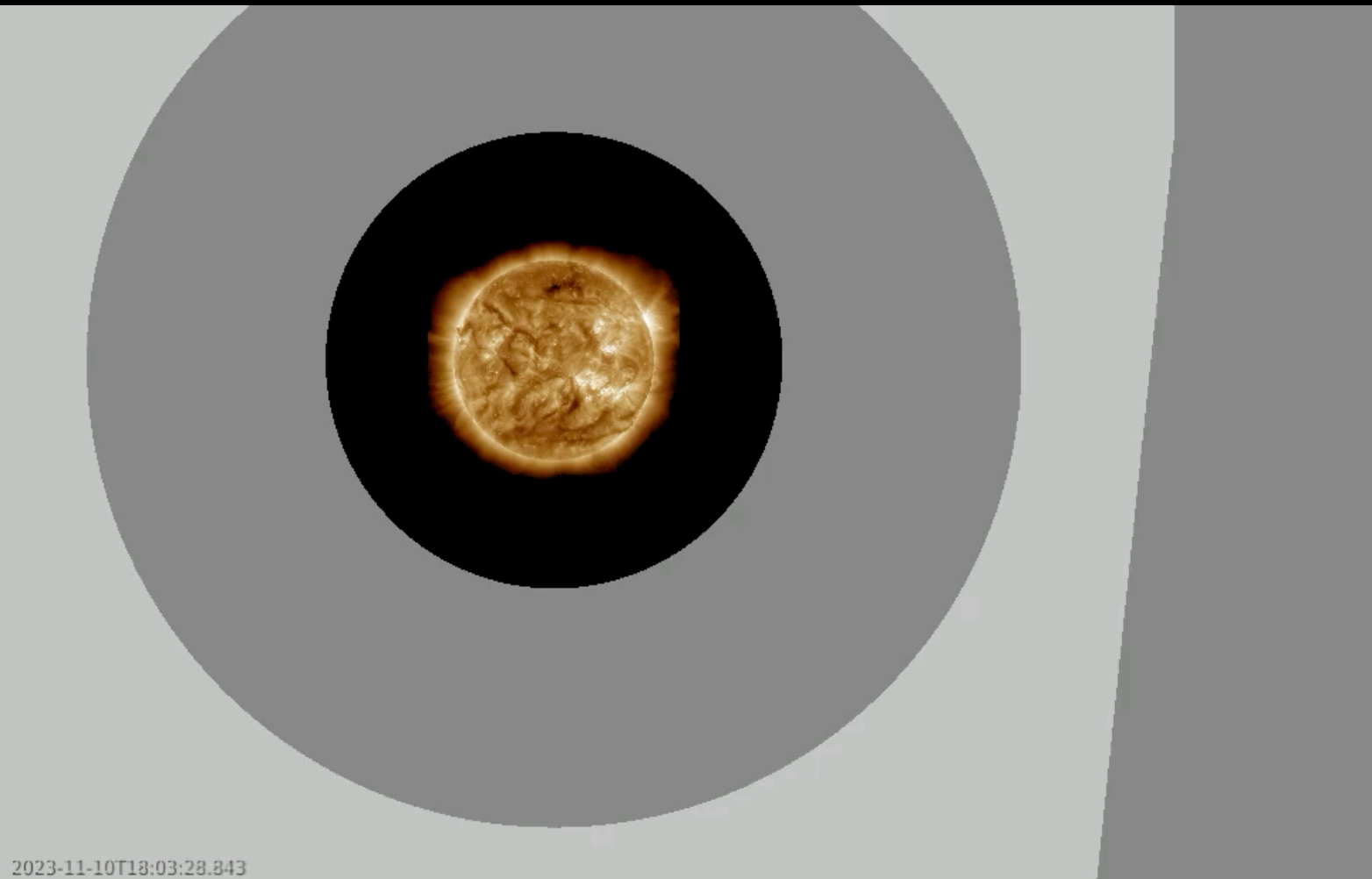
Solar X-Ray and UV flux



Coronal Mass Ejections



Coronal Mass Ejections



Solar Wind and

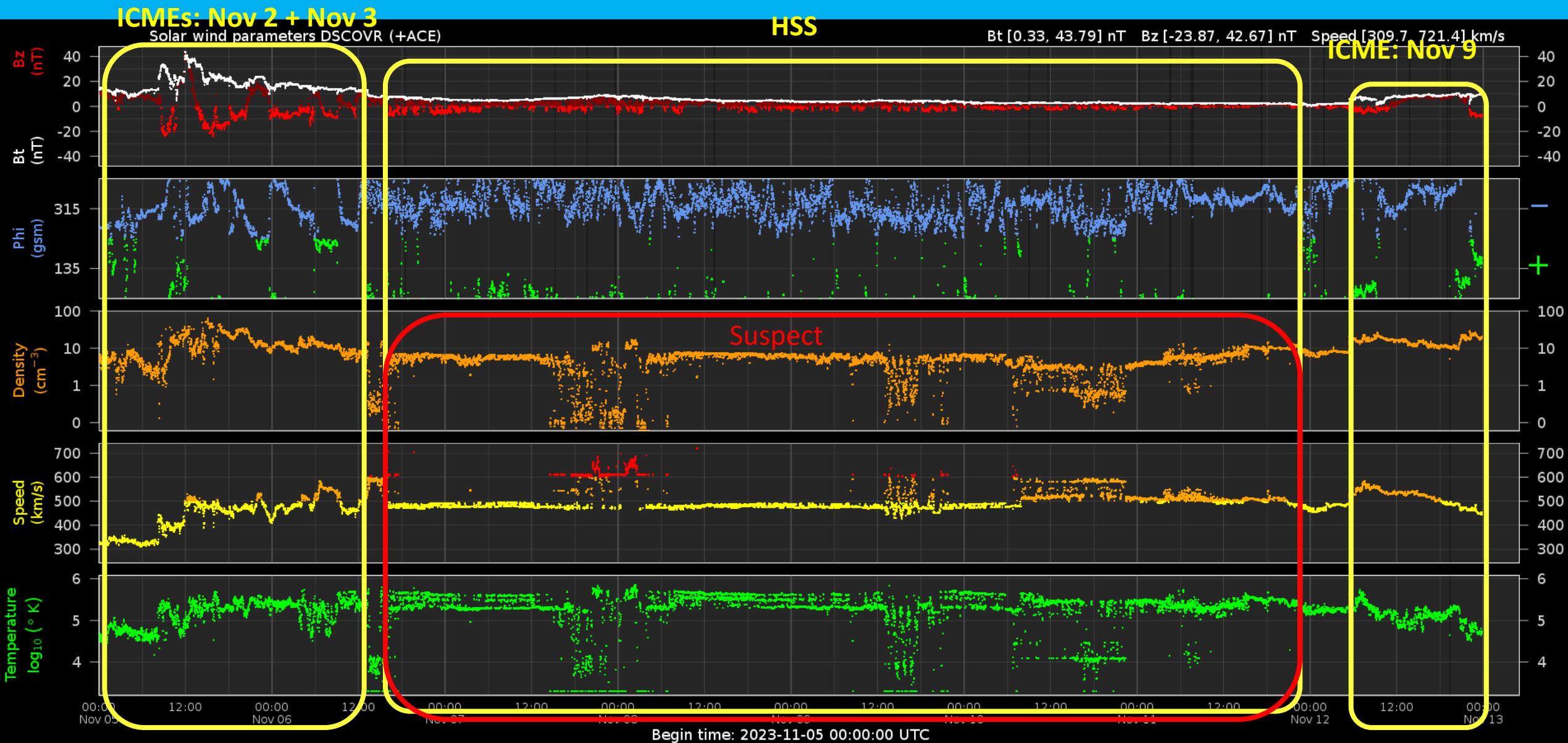
Geomagnetic Activity



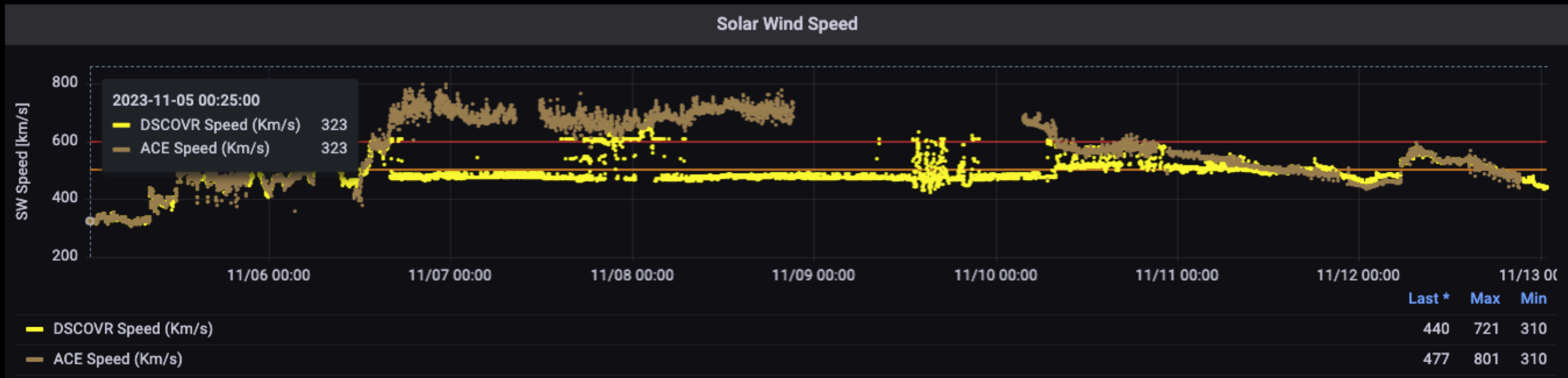
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Solar wind parameters



Solar wind parameters

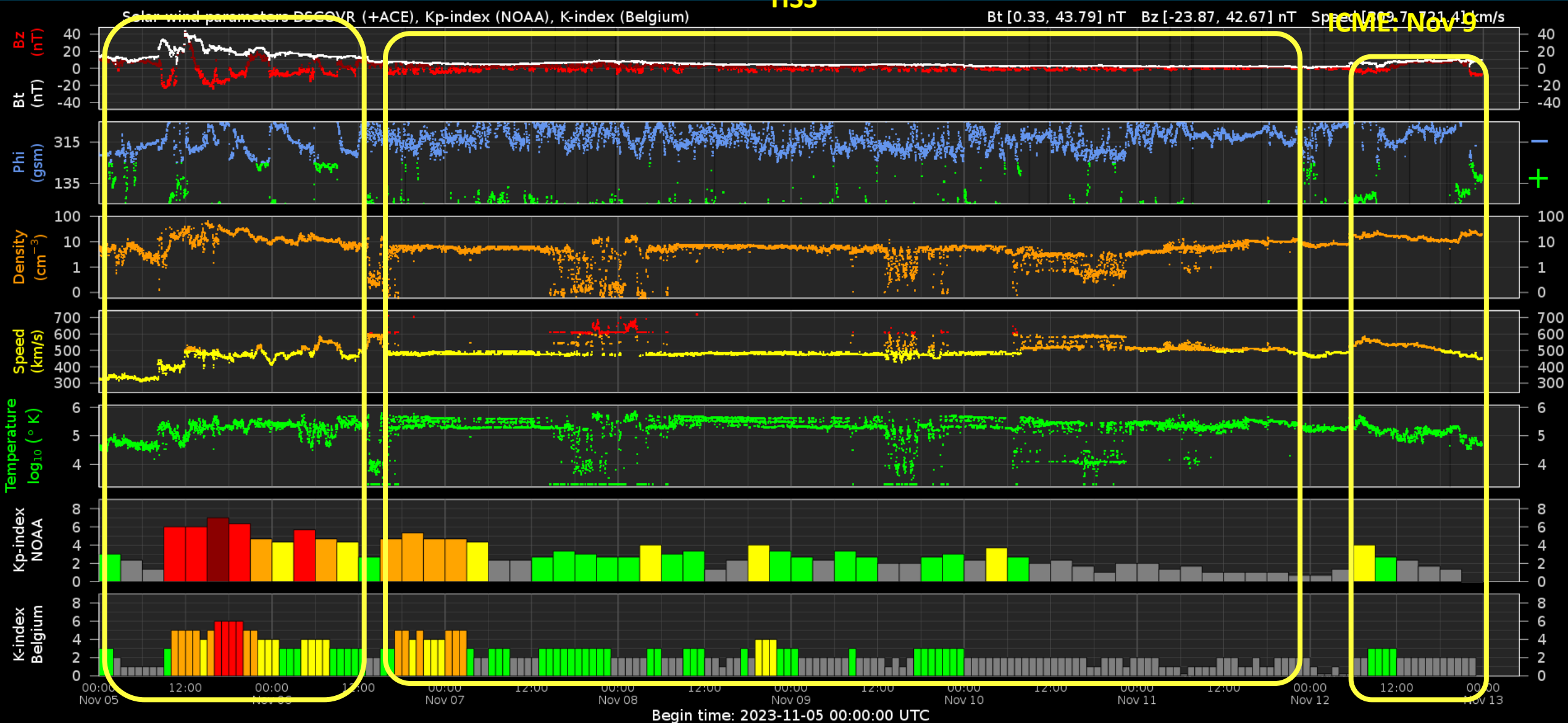


Solar wind parameters & K-indices

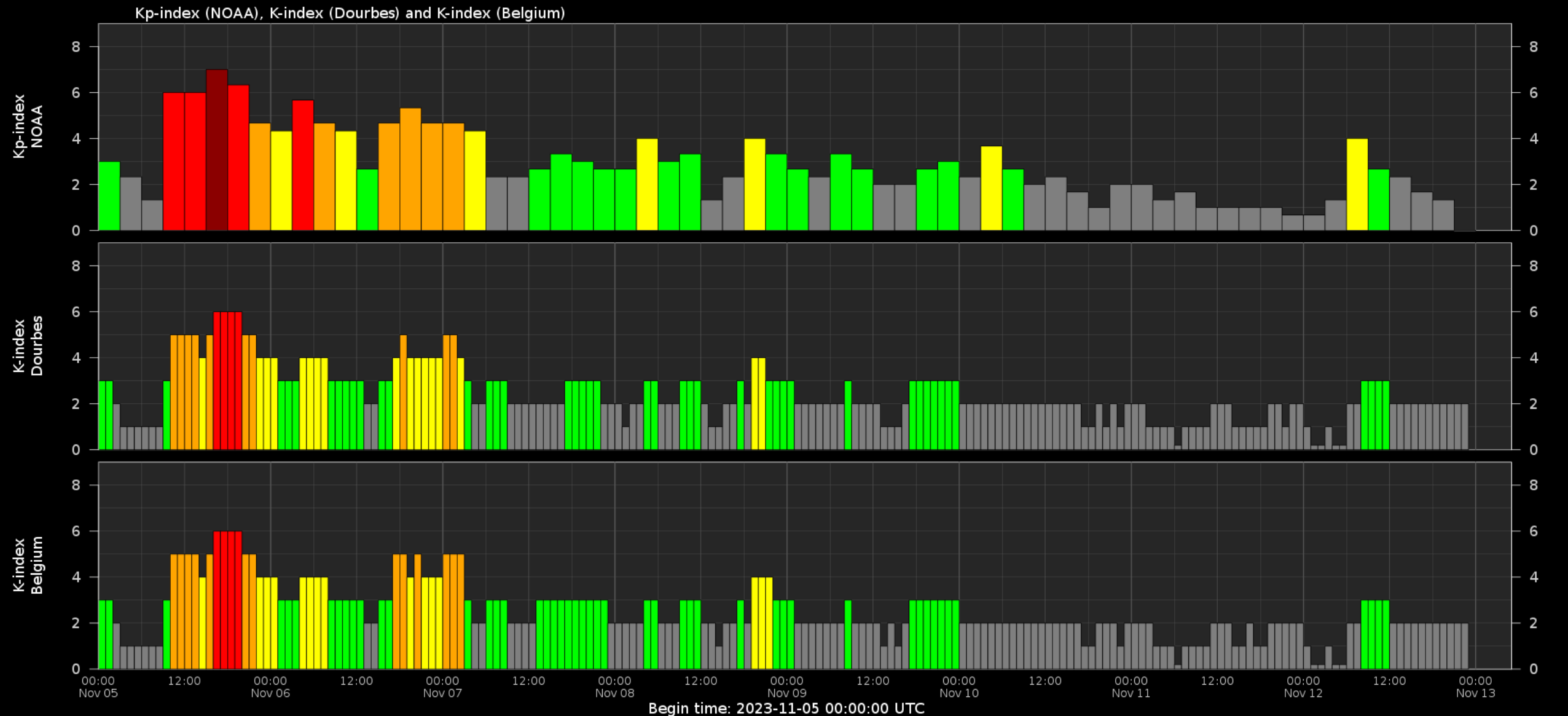
ICMEs: Nov 2 + Nov 3

HSS

ICME: Nov 9



Geomagnetic activity (K-indexes)



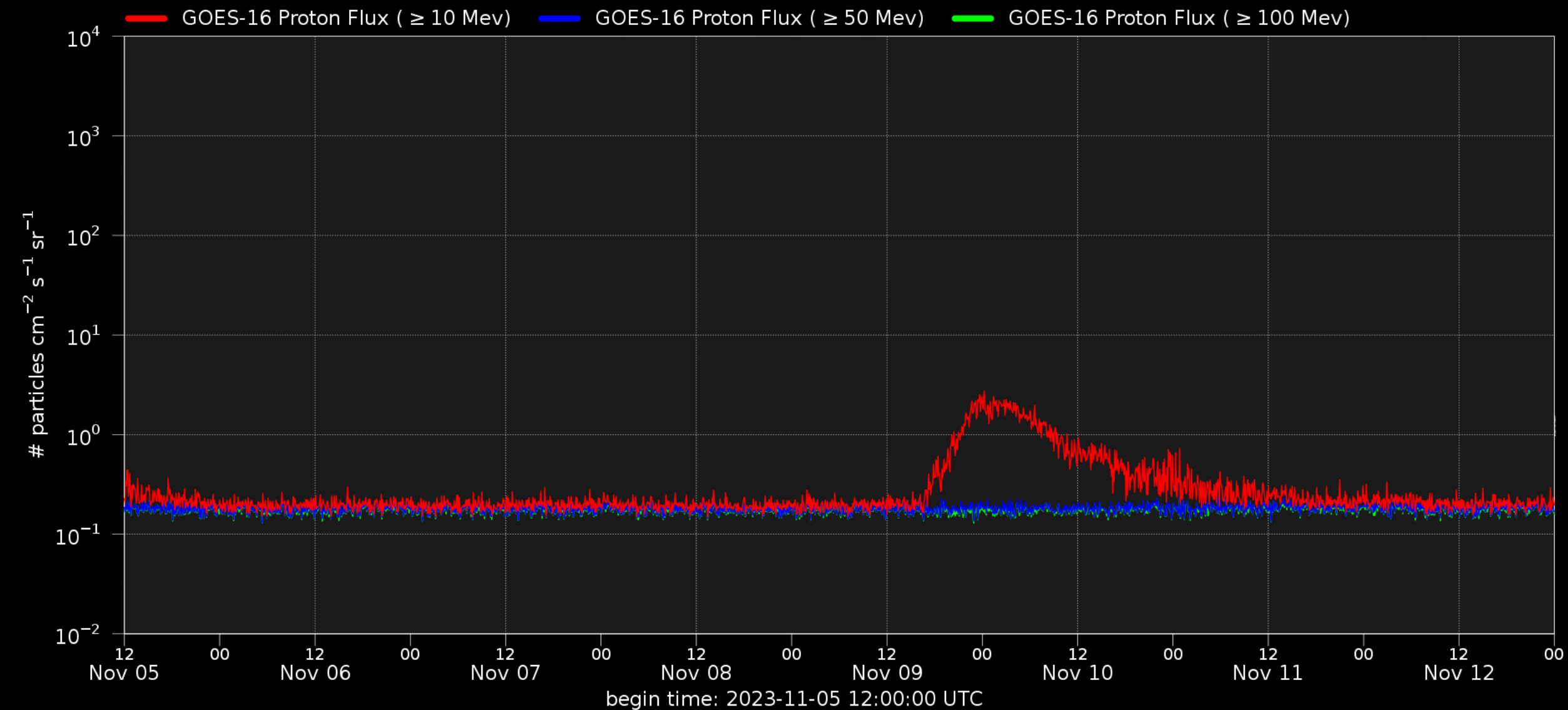
Energetic Particles



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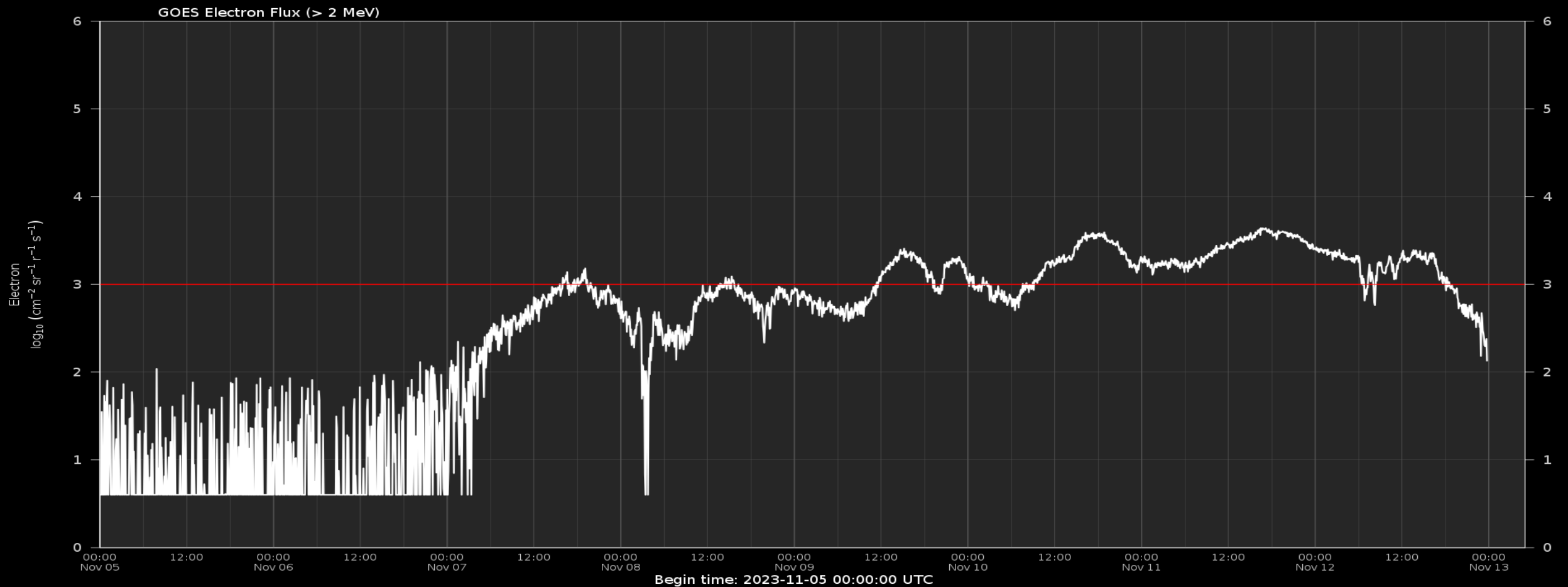
Solar proton flux



Electron flux at GEO

www.stce.be/educational/classification#electrons

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



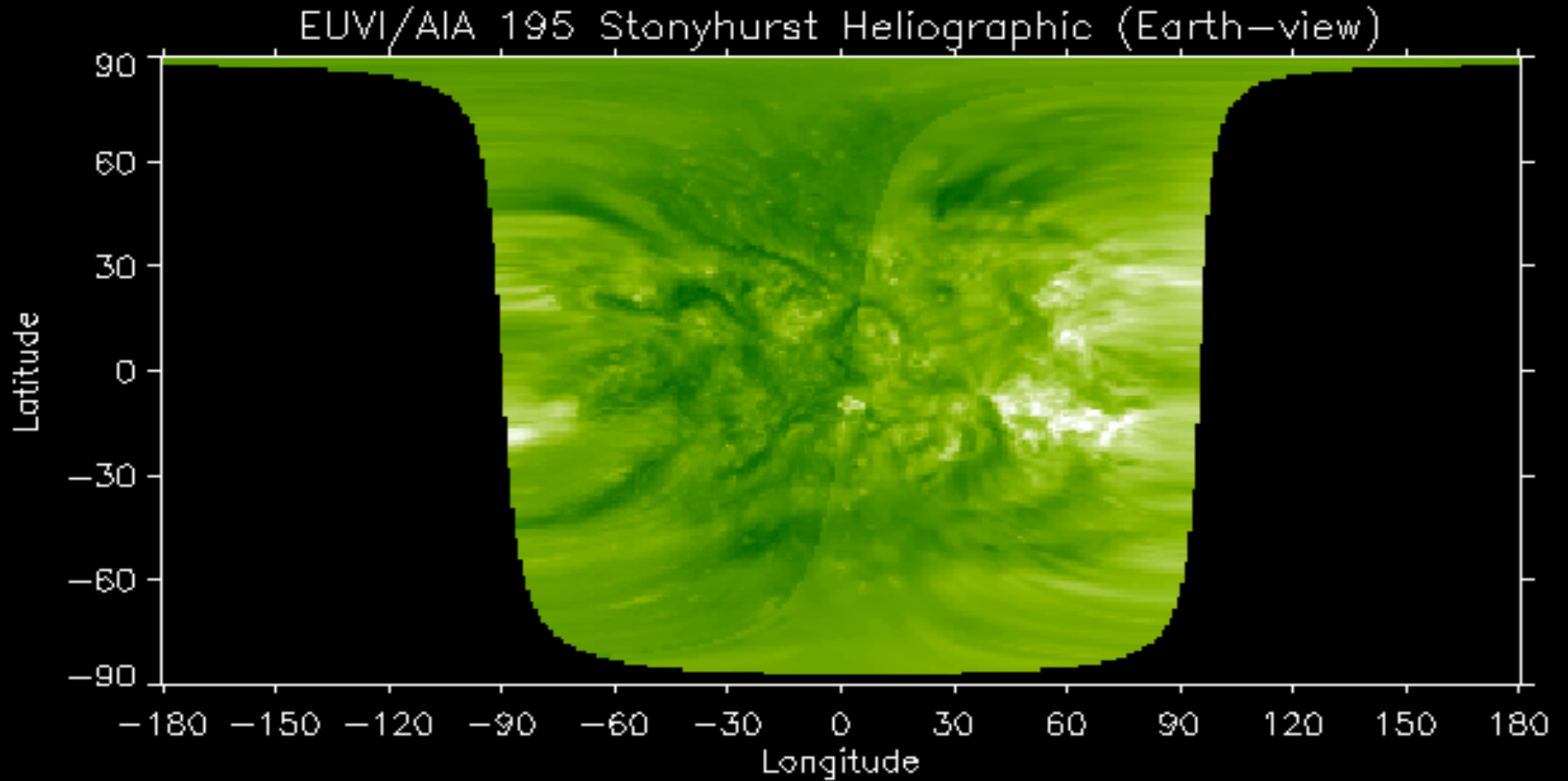
Outlook



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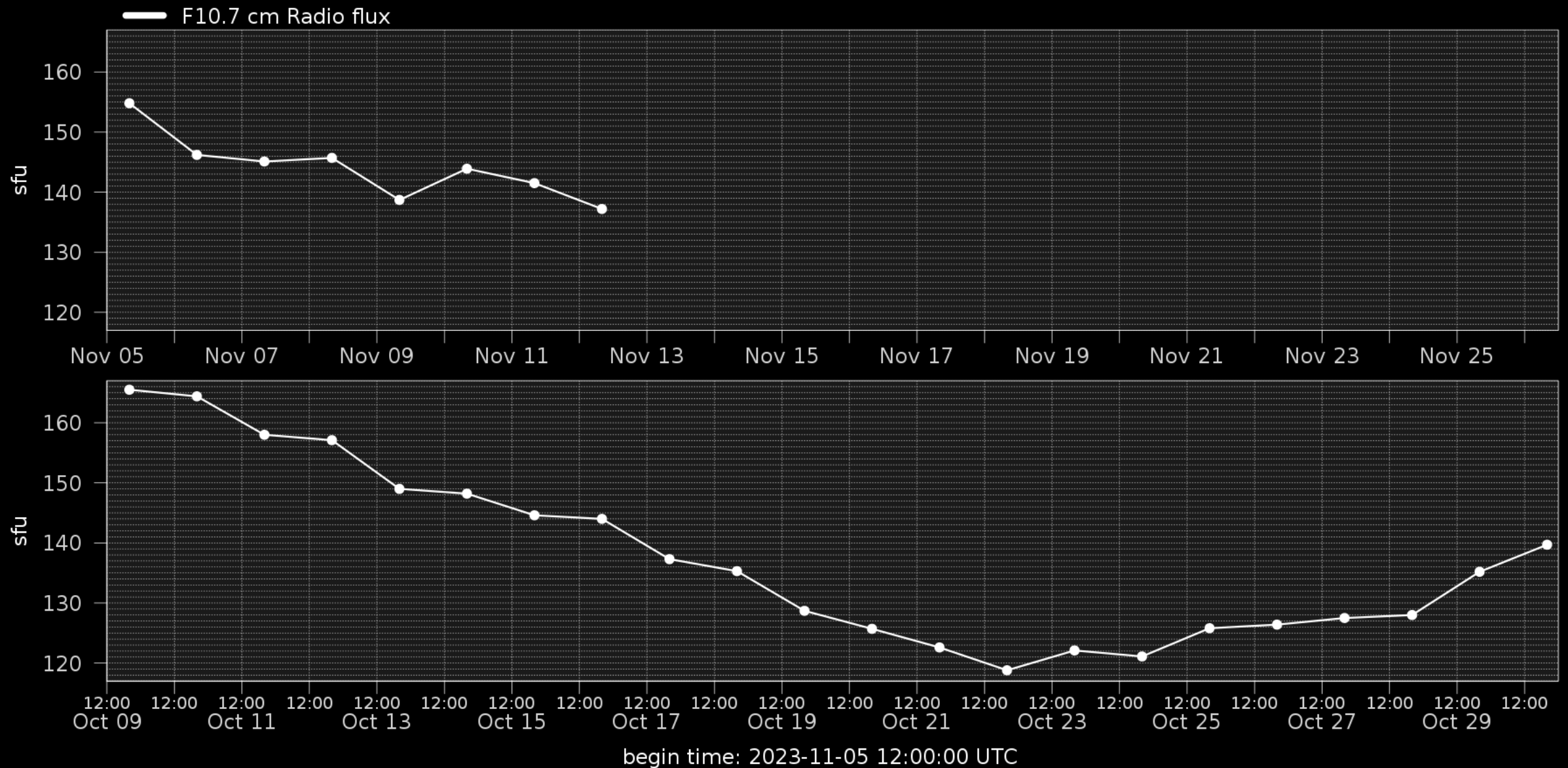
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Outlook: Solar activity

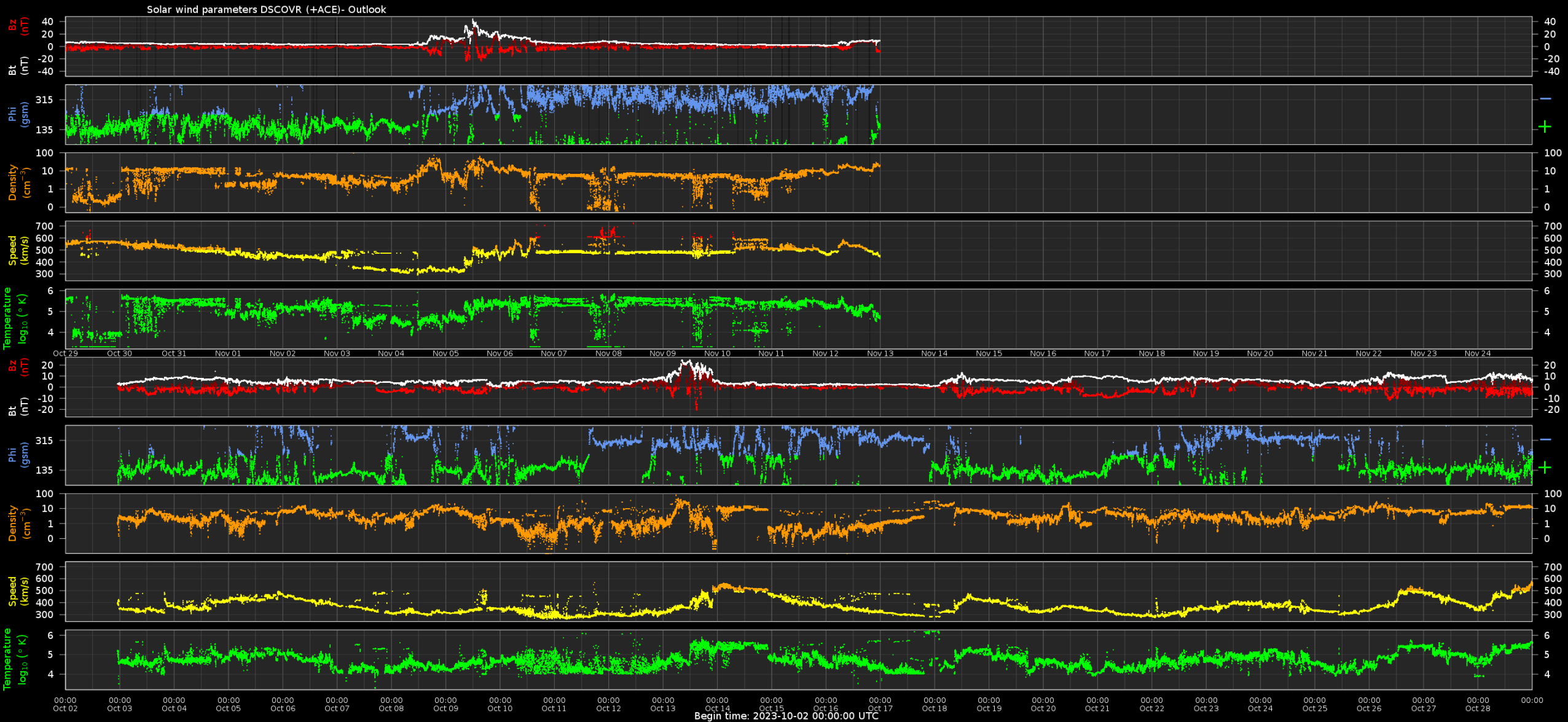


Observation date: 2023/11/12 19:05:00

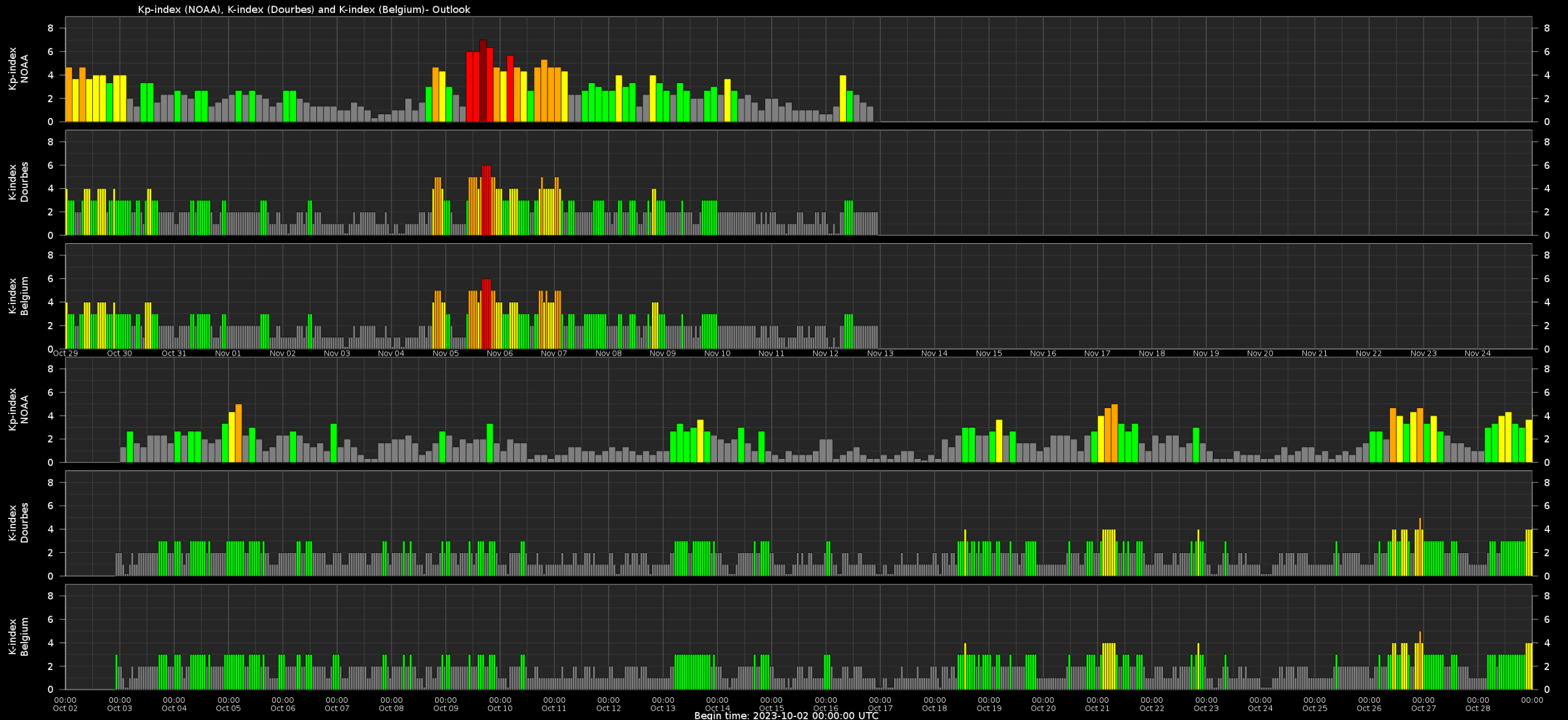
Outlook: Solar F10.7cm radio flux



Outlook: Solar wind parameters



Outlook: Geomagnetic activity



Outlook: Electron Flux at GEO Outlook



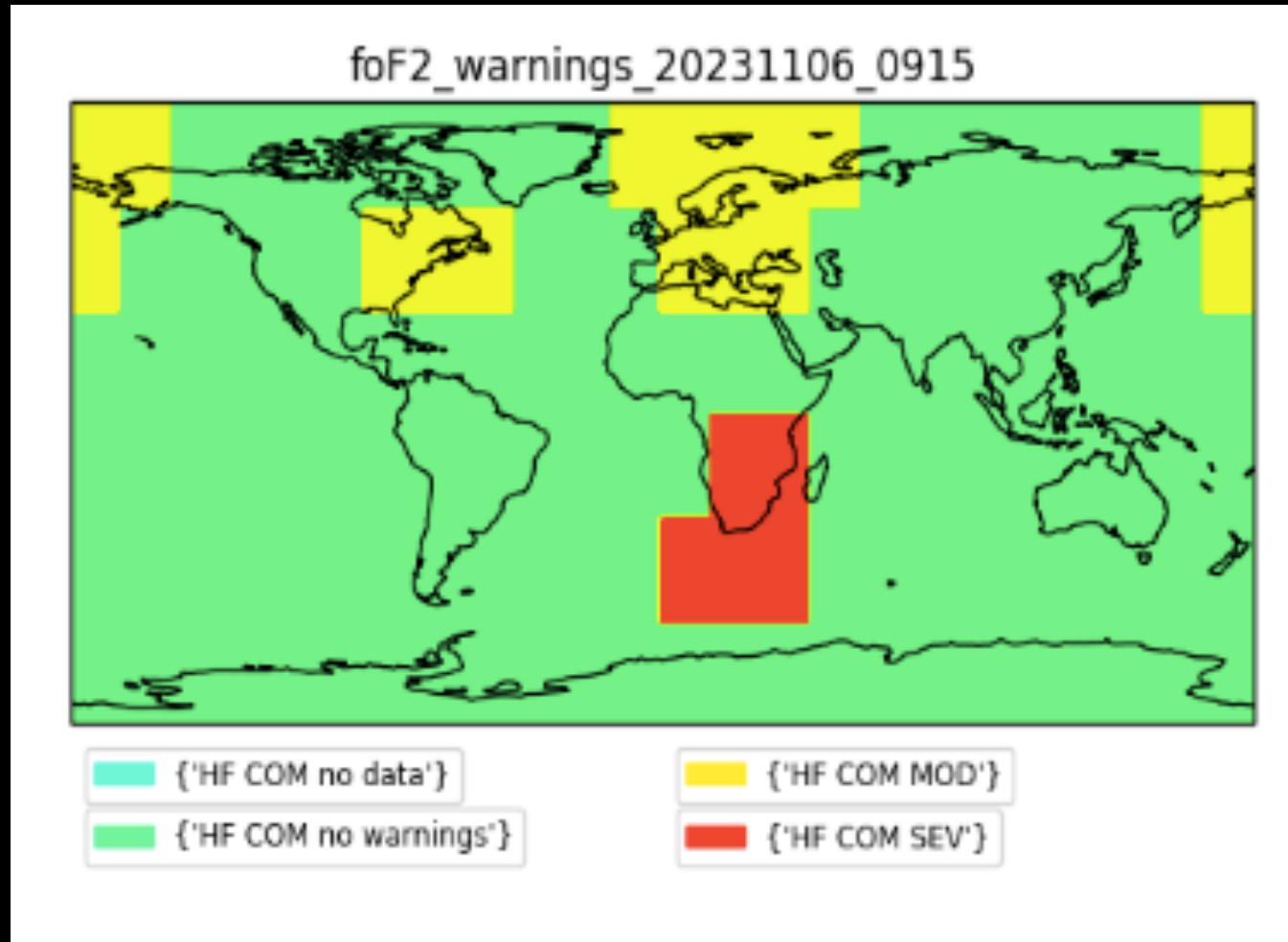
Pegasus



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Pecarus related events



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