

SIDC Space Weather Briefing

01 December 2024-08 December 2024

Daria Shukhobodskaja

& the SIDC forecaster team



Royal Observatory
of Belgium

Solar Influences
Data analysis Centre
www.sidc.be

Summary Report

Solar activity from 2024-12-01 12:00 to 2024-12-08 23:59

Active regions	14 Active Regions: NOAA AR 3902, 3905, 3906, 3910-3920
Flares	# C-class flare: 81 # M-class flare: 10 # X-class flare: 1
Coronal Holes	Two positive polarity CHs
CMEs	09:24 on December 8

Proton flux	Nominal levels
Electron flux	Below event threshold

Solar wind and geomagnetic conditions

ICMEs	20:07 on December 2
Solar wind conditions	B : 0.64 - 14.41 nT //Bz: -13.4 nT to 11.97 nT //Speed: 325.2 - 541.5km/s
Geomagnetic conditions	max K _{Bel} : 4.0, max K _p (NOAA): 3.67, Active conditions

All Quiet Alert: Not all quiet

Solar Activity

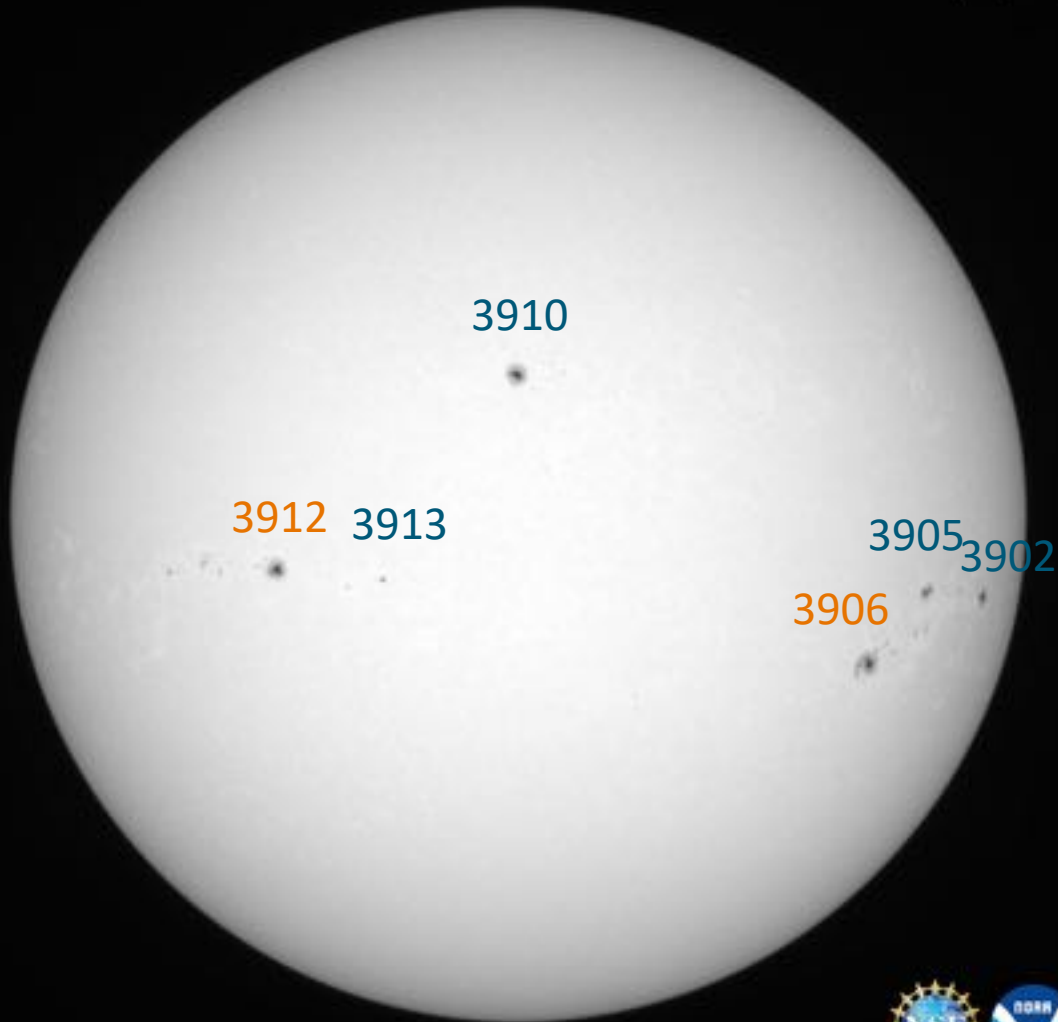


Royal Observatory
of Belgium

Solar Influences
Data analysis Centre
www.sidc.be

Solar active regions

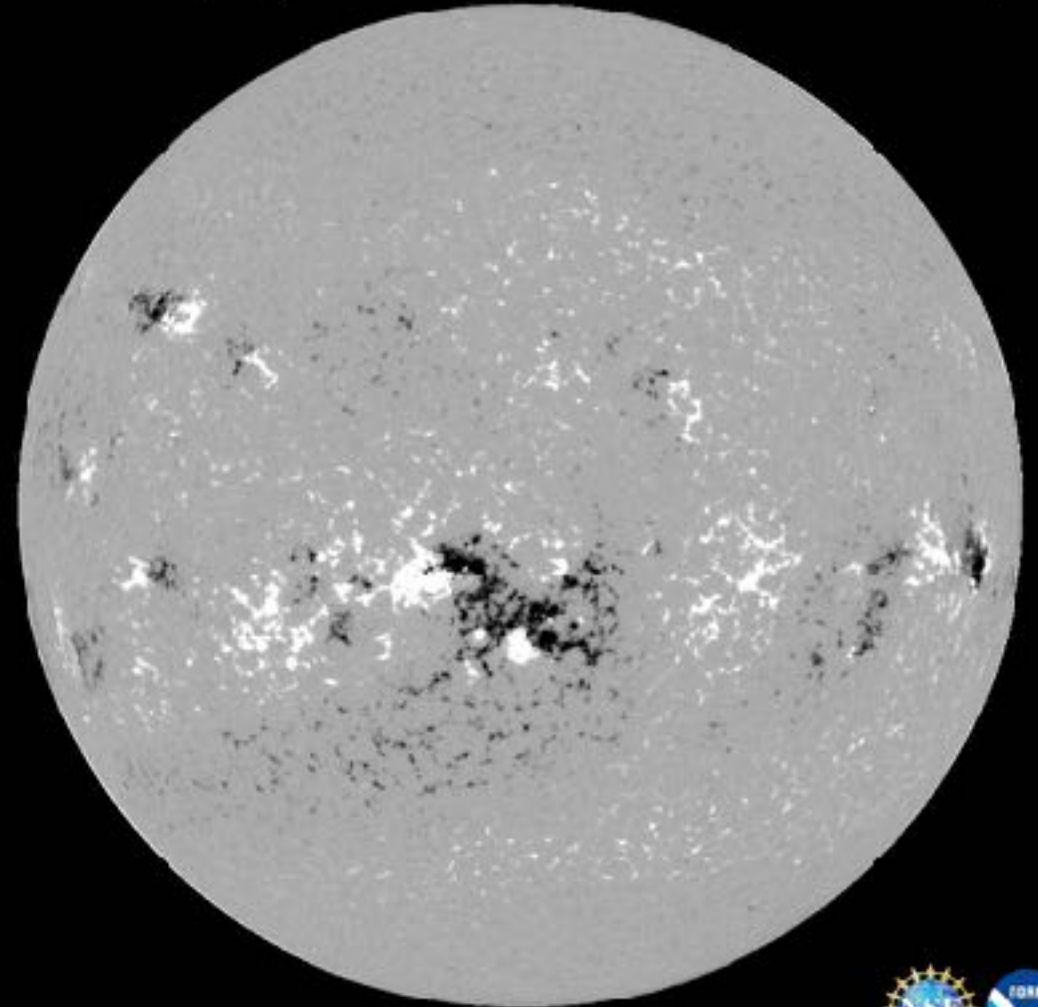
NSO/GONG 677 nm 2024-12-02



2024-12-02 09:14Z



NSO/GONG Magnetogram 2024-12-02

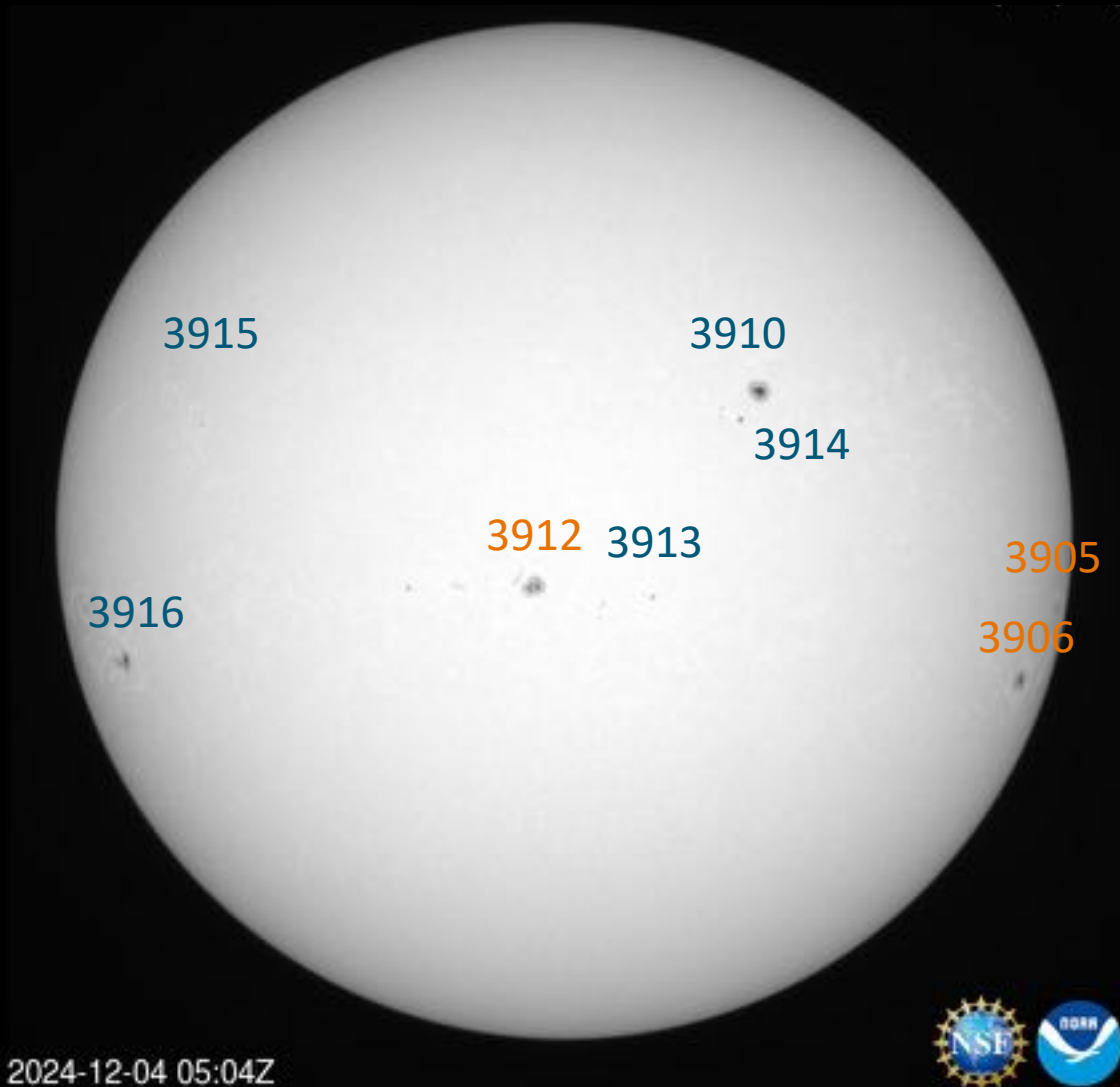


2024-12-09 07:04Z

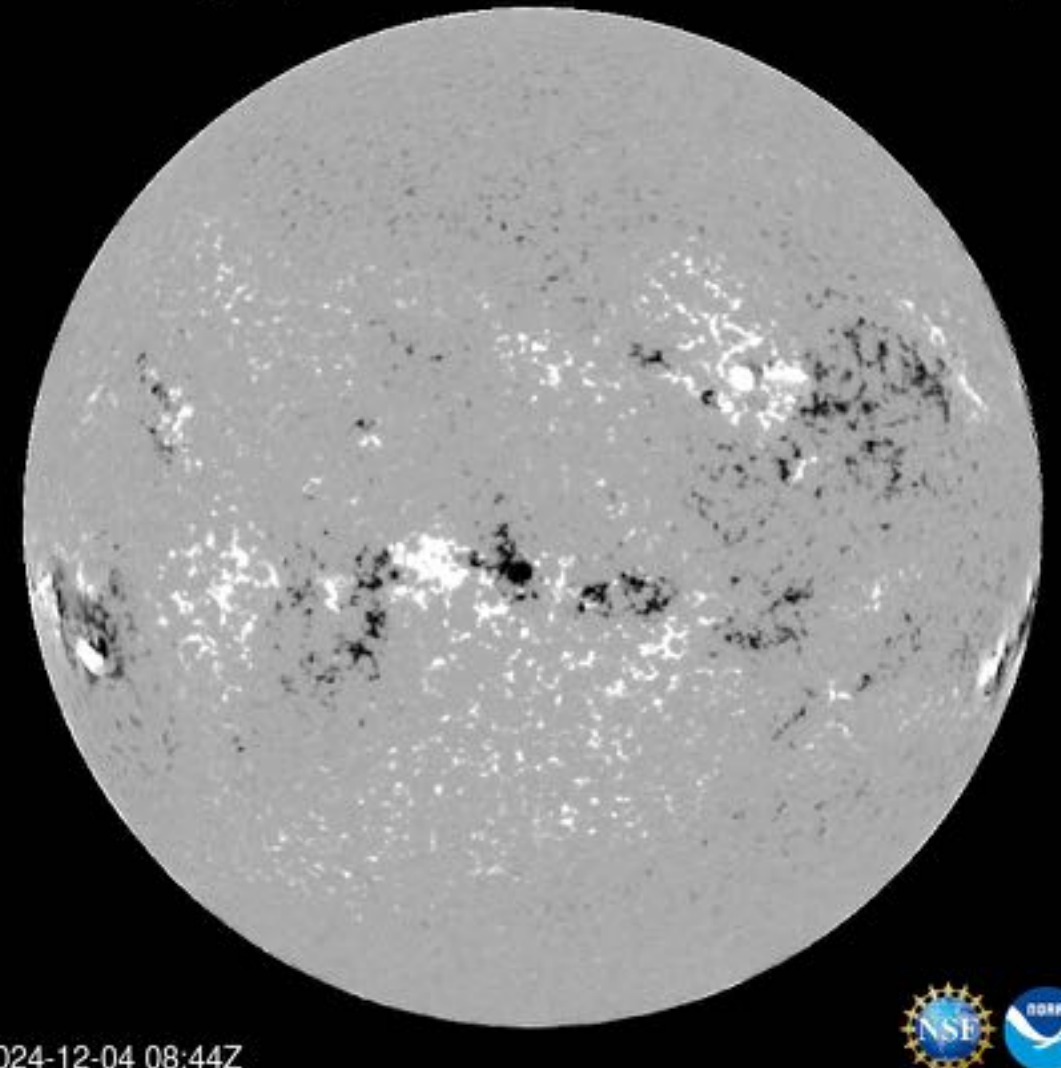


Solar active regions

NSO/GONG 677 nm 2024-12-04

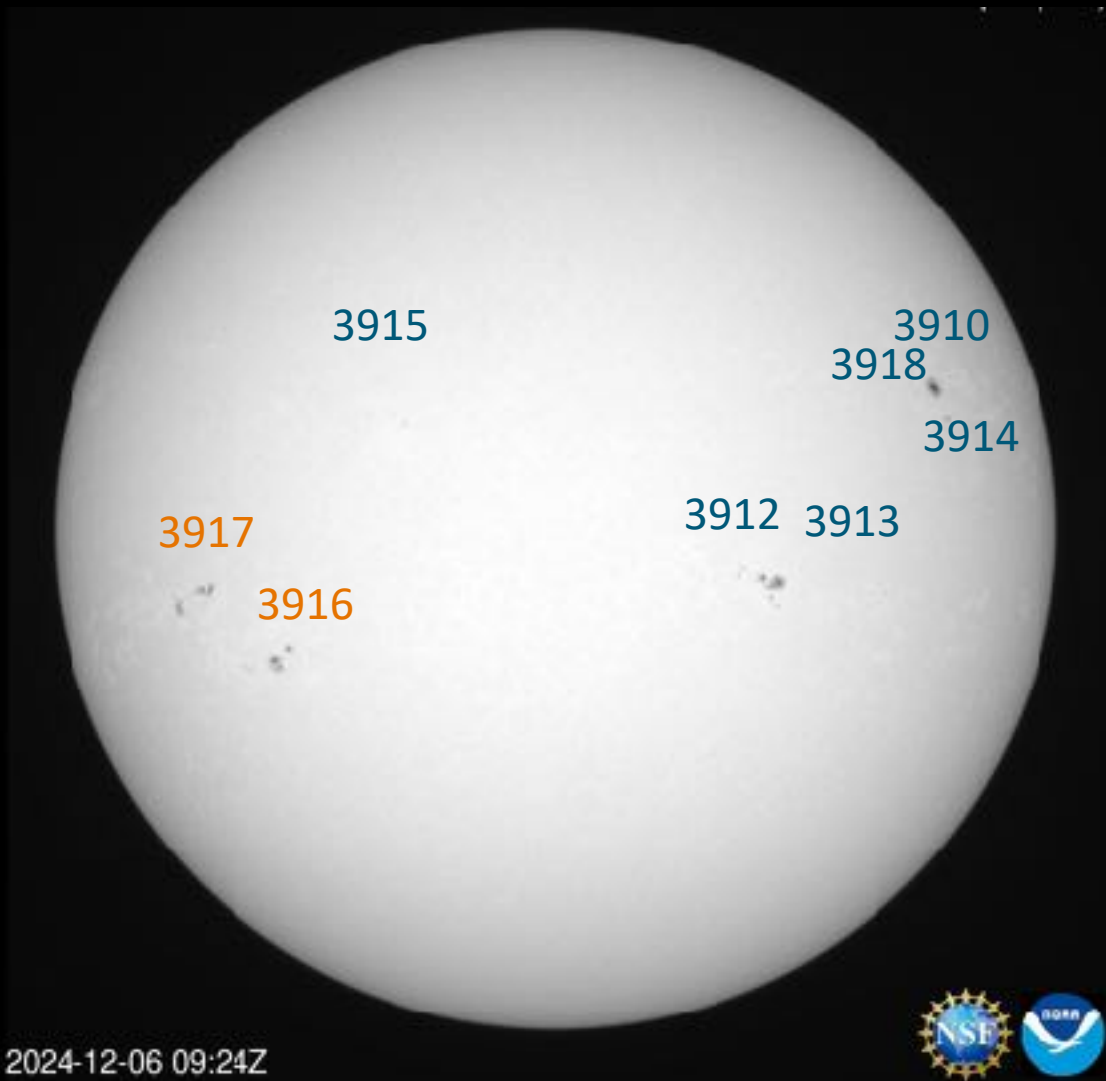


NSO/GONG Magnetogram 2024-12-04



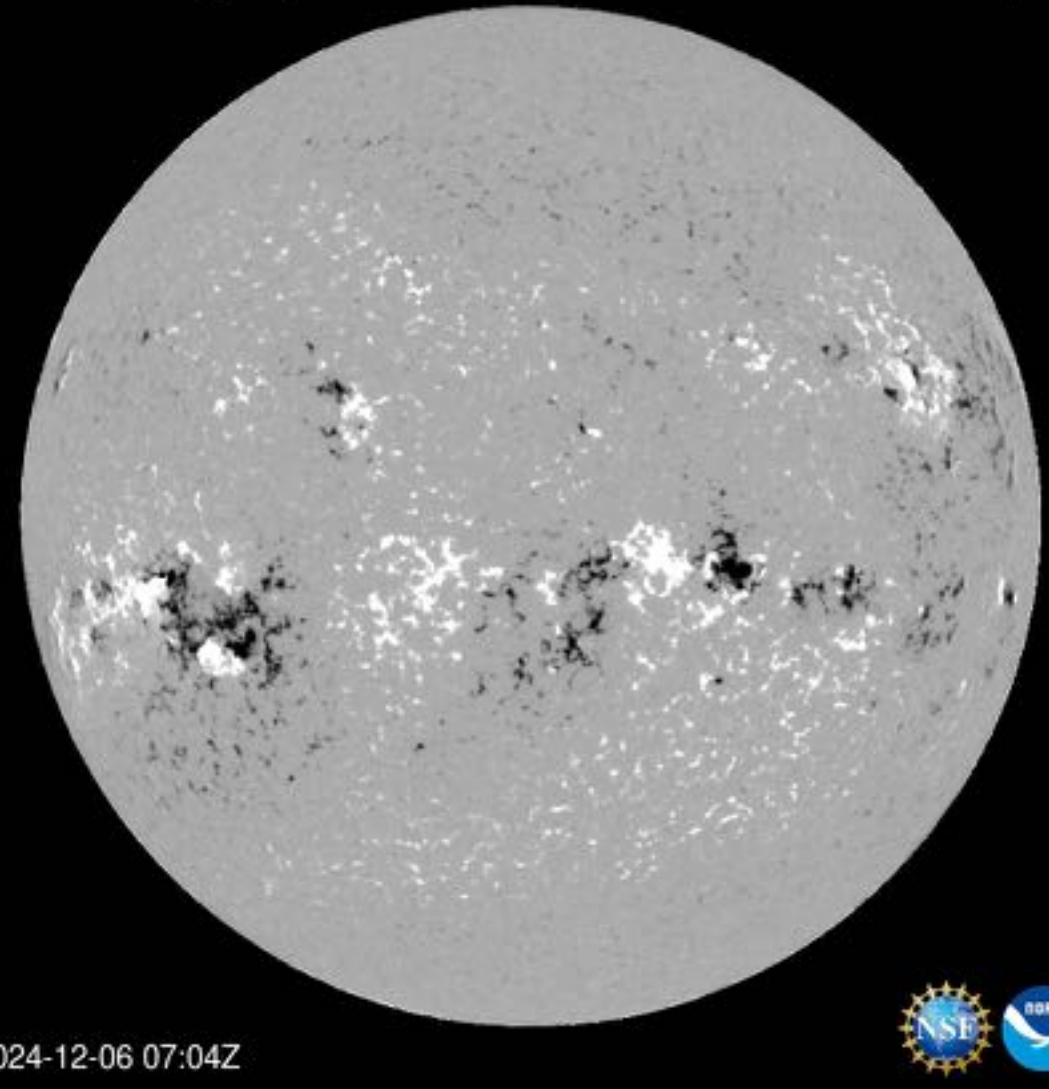
Solar active regions

NSO/GONG 677 nm 2024-12-06



2024-12-06 09:24Z

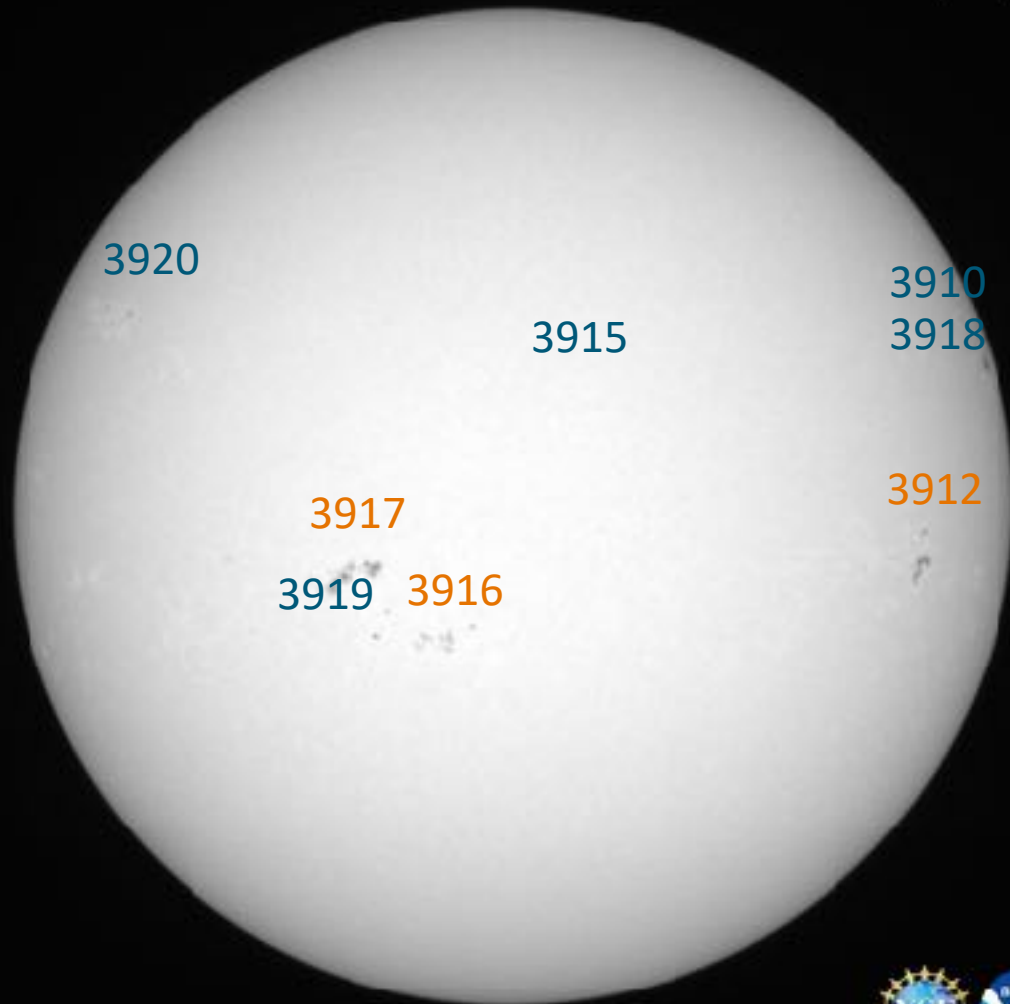
NSO/GONG Magnetogram 2024-12-06



2024-12-06 07:04Z

Solar active regions

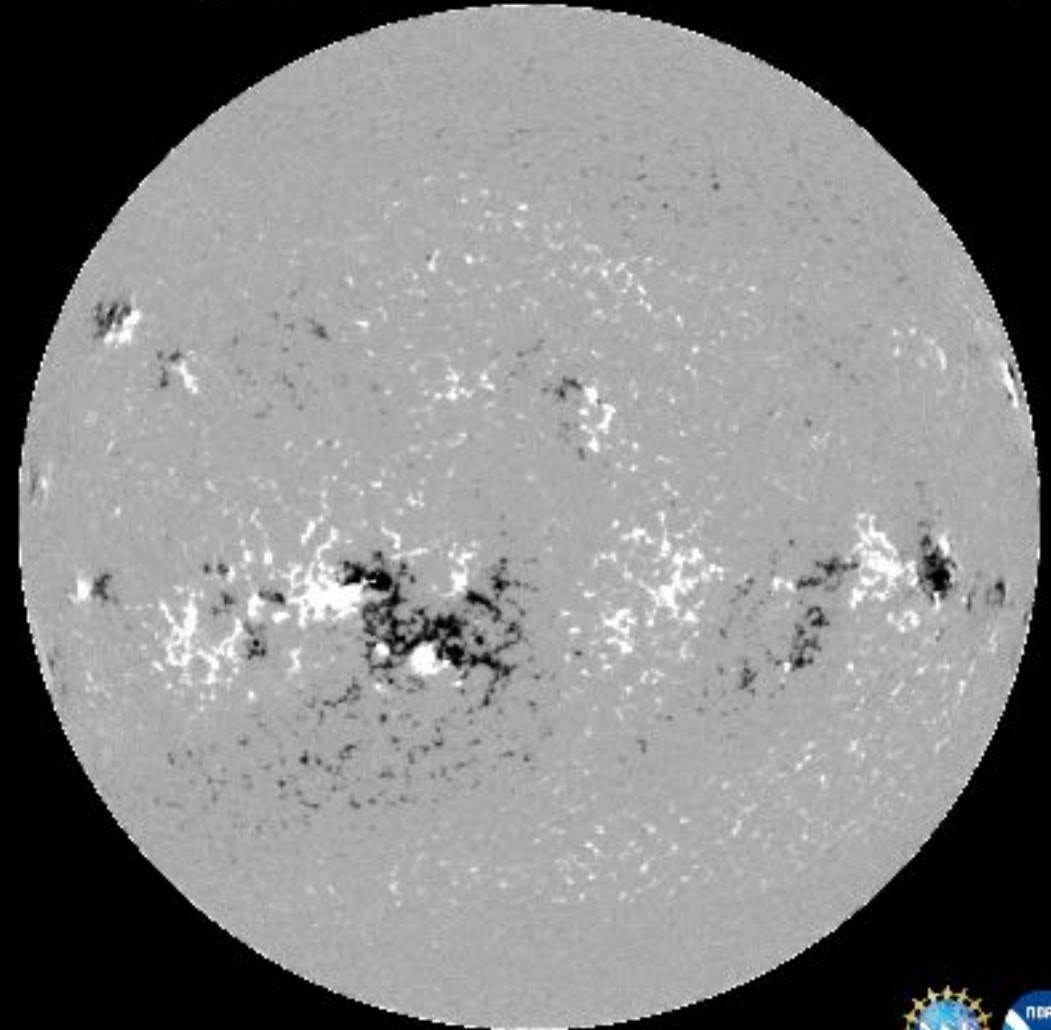
NSO/GONG 677 nm 2024-12-08



2024-12-08 11:24Z



NSO/GONG Magnetogram 2024-12-08

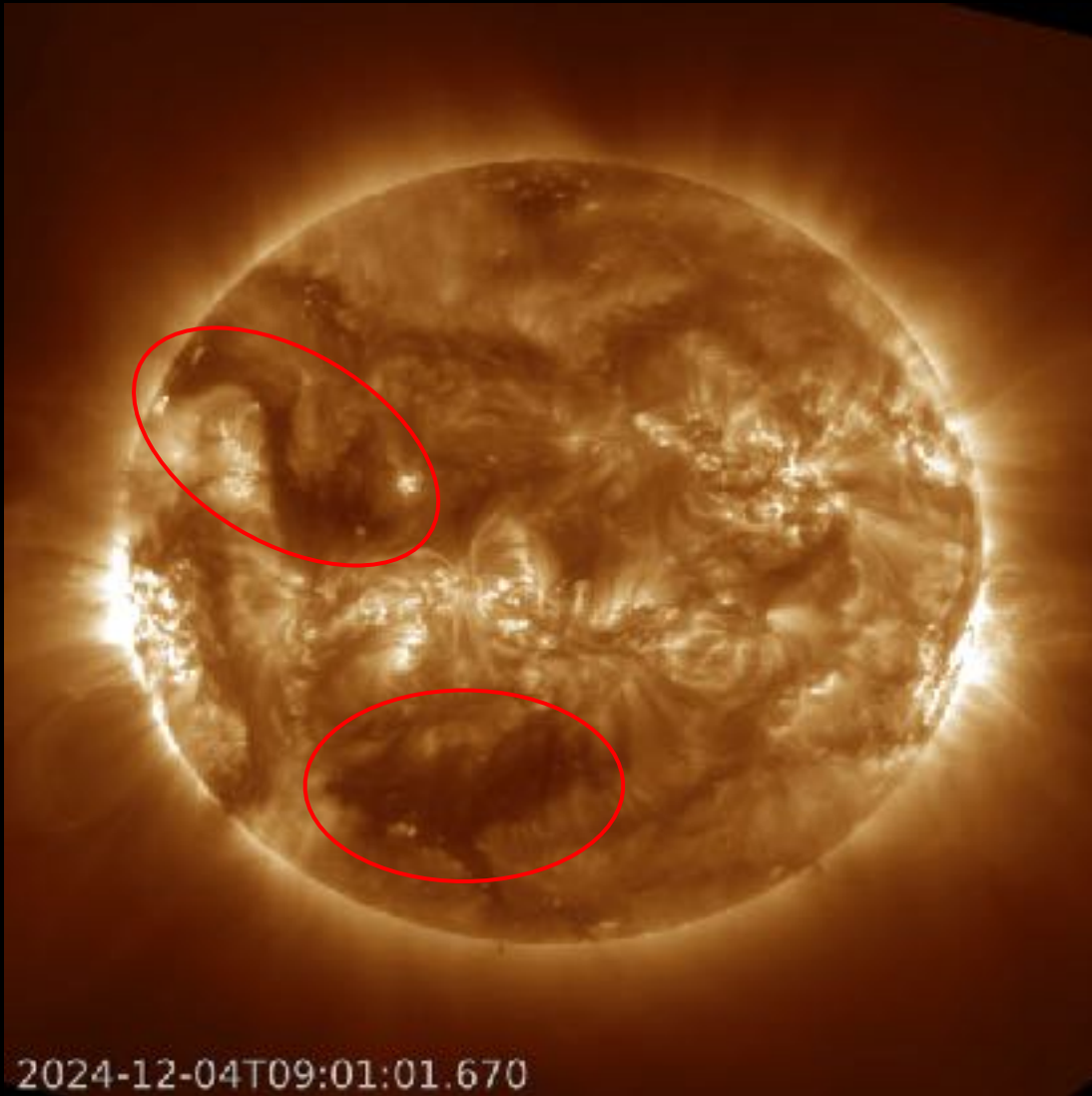


2024-12-08 09:44Z

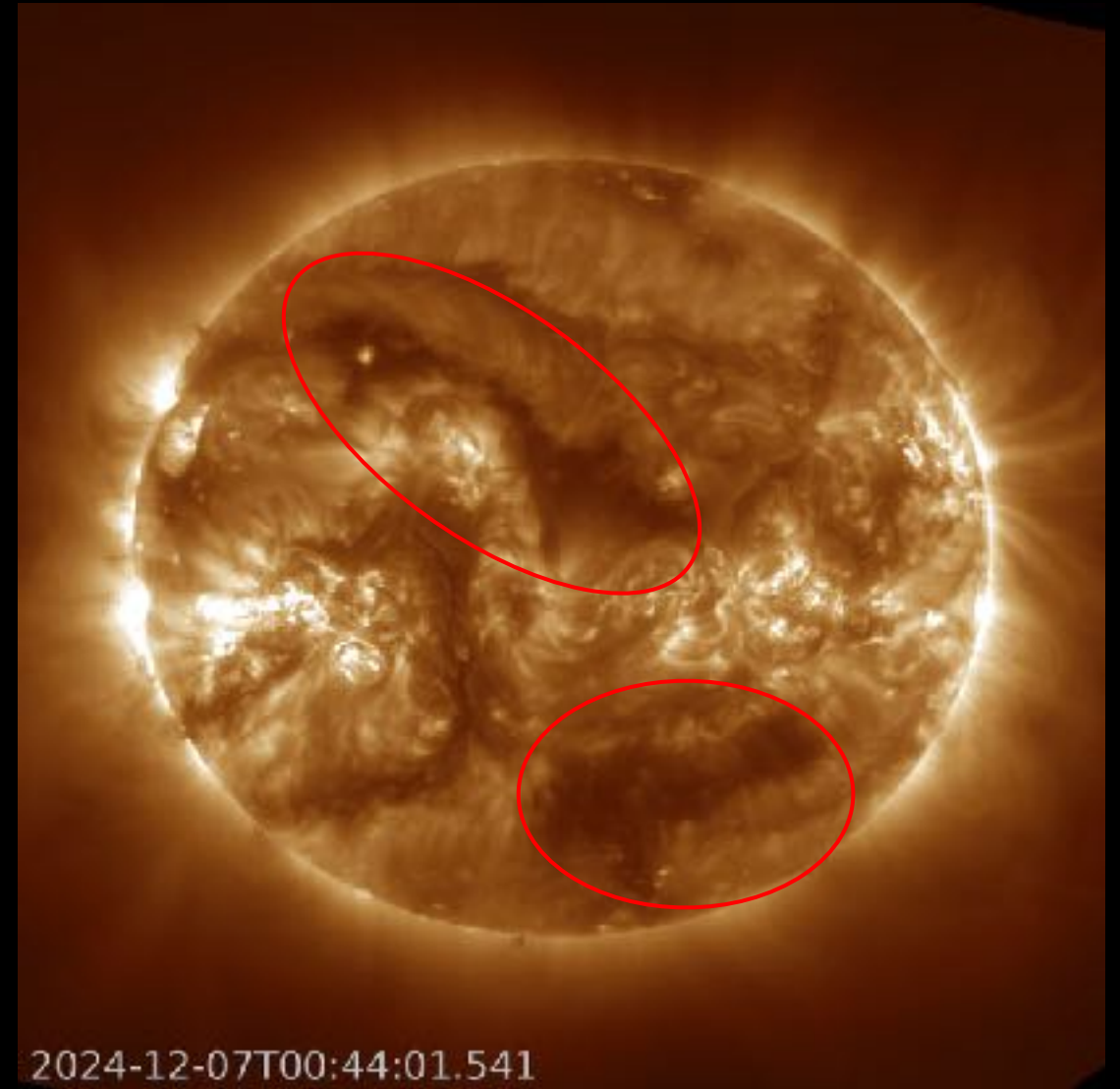


Coronal holes

GOES-R/SUVI 19.5 nm 2024-12-04

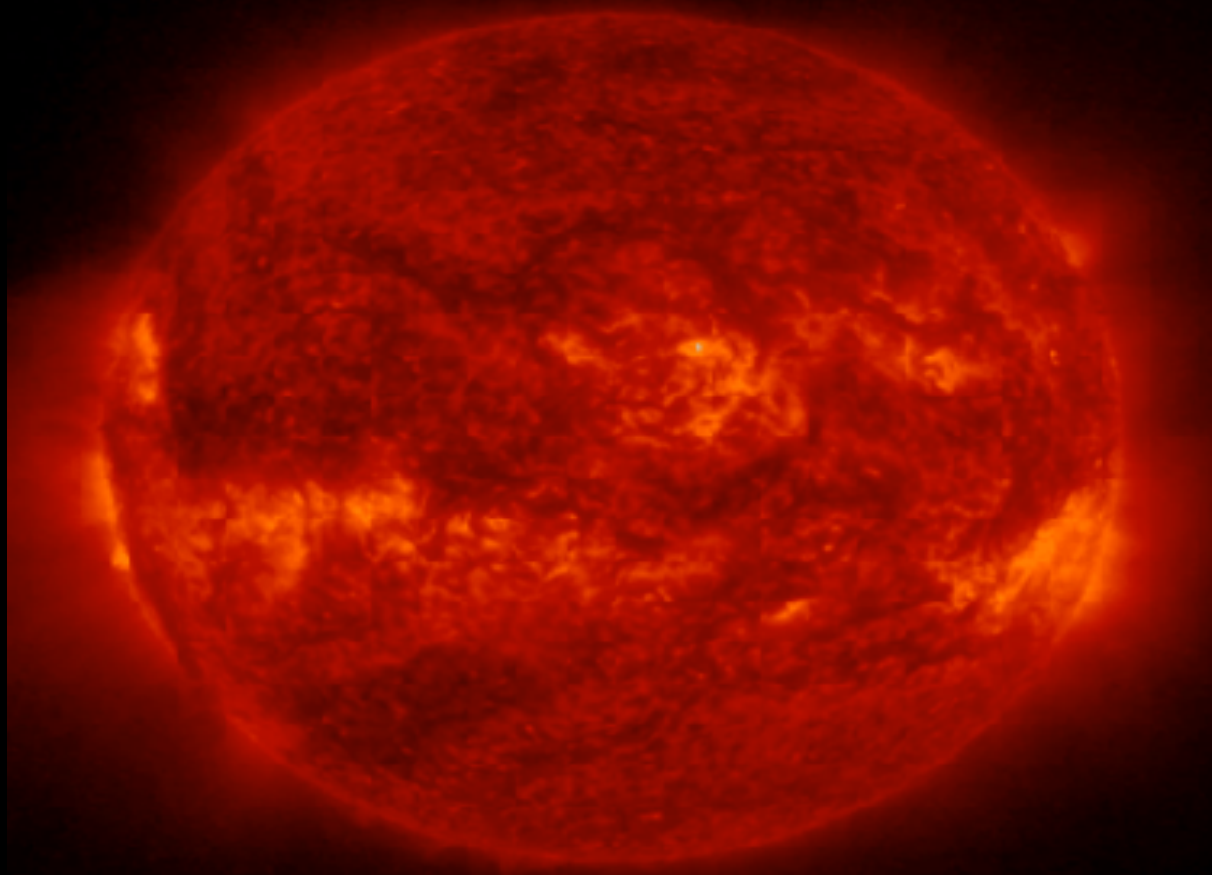


GOES-R/SUVI 19.5 nm 2024-12-07



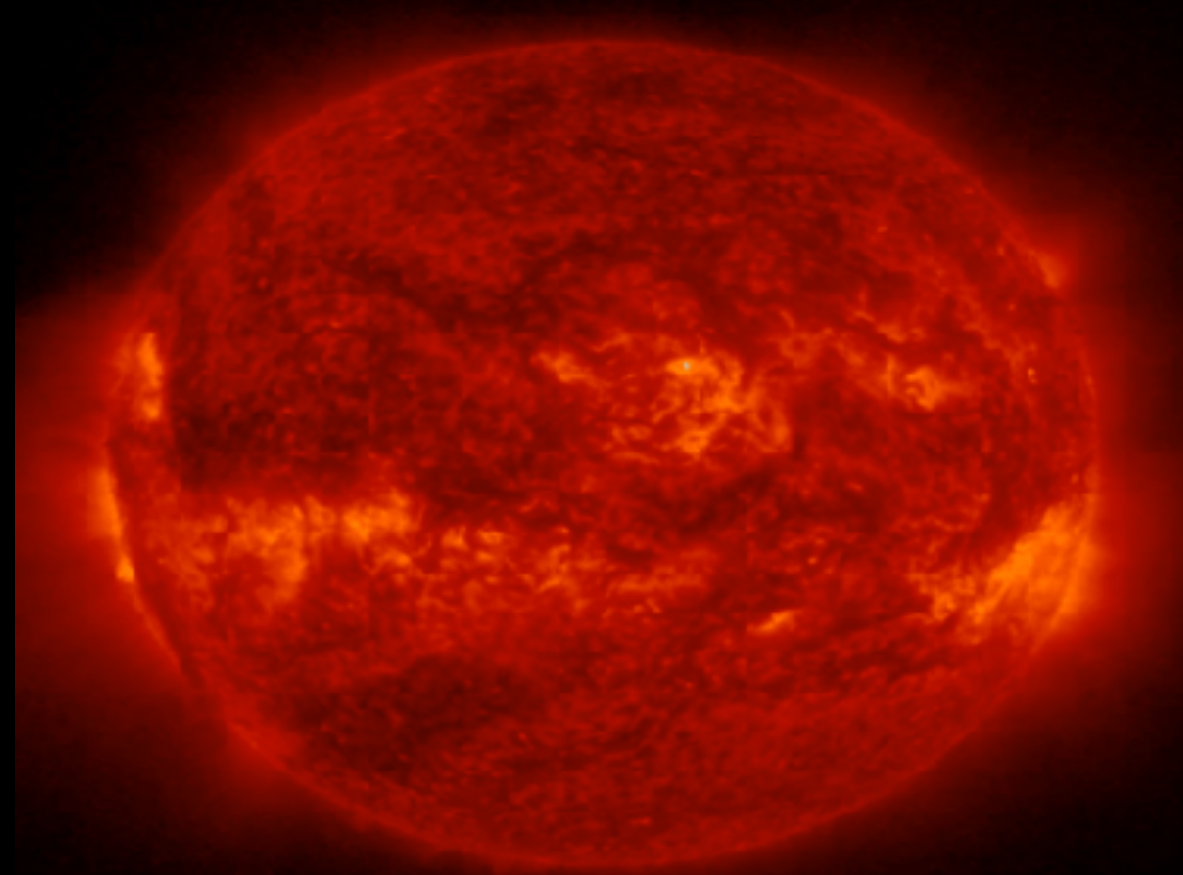
Filaments

SOLO/EUI FSI 30.4 nm 2024-12-02



2024-12-02T10:48:25.329

SOLO/EUI FSI 30.4 nm 2024-12-02



2024-12-02T10:48:25.329

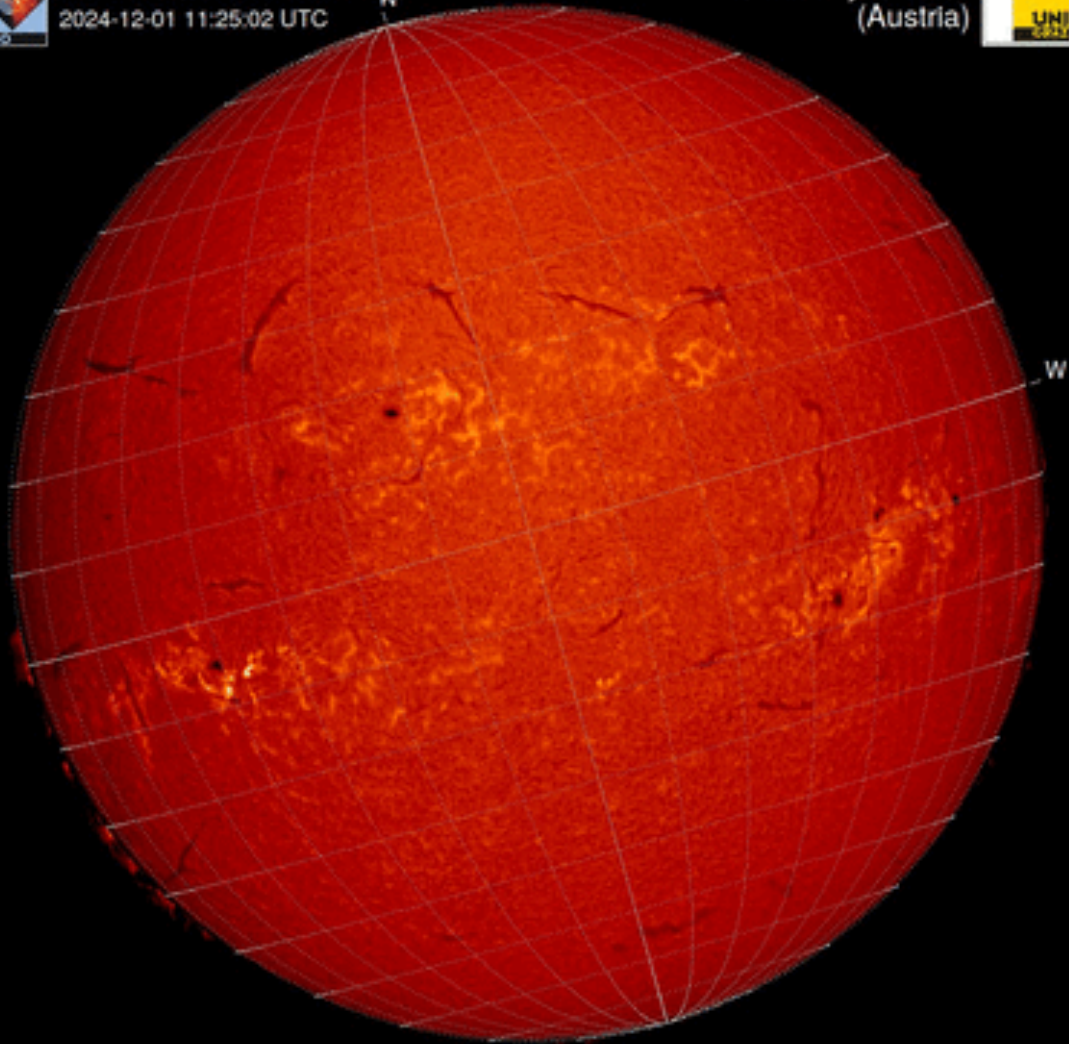
Filaments & Filament eruptions

H-alpha 2024-12-01



Kanzelhöhe Observatory
2024-12-01 11:25:02 UTC

University of Graz
(Austria)

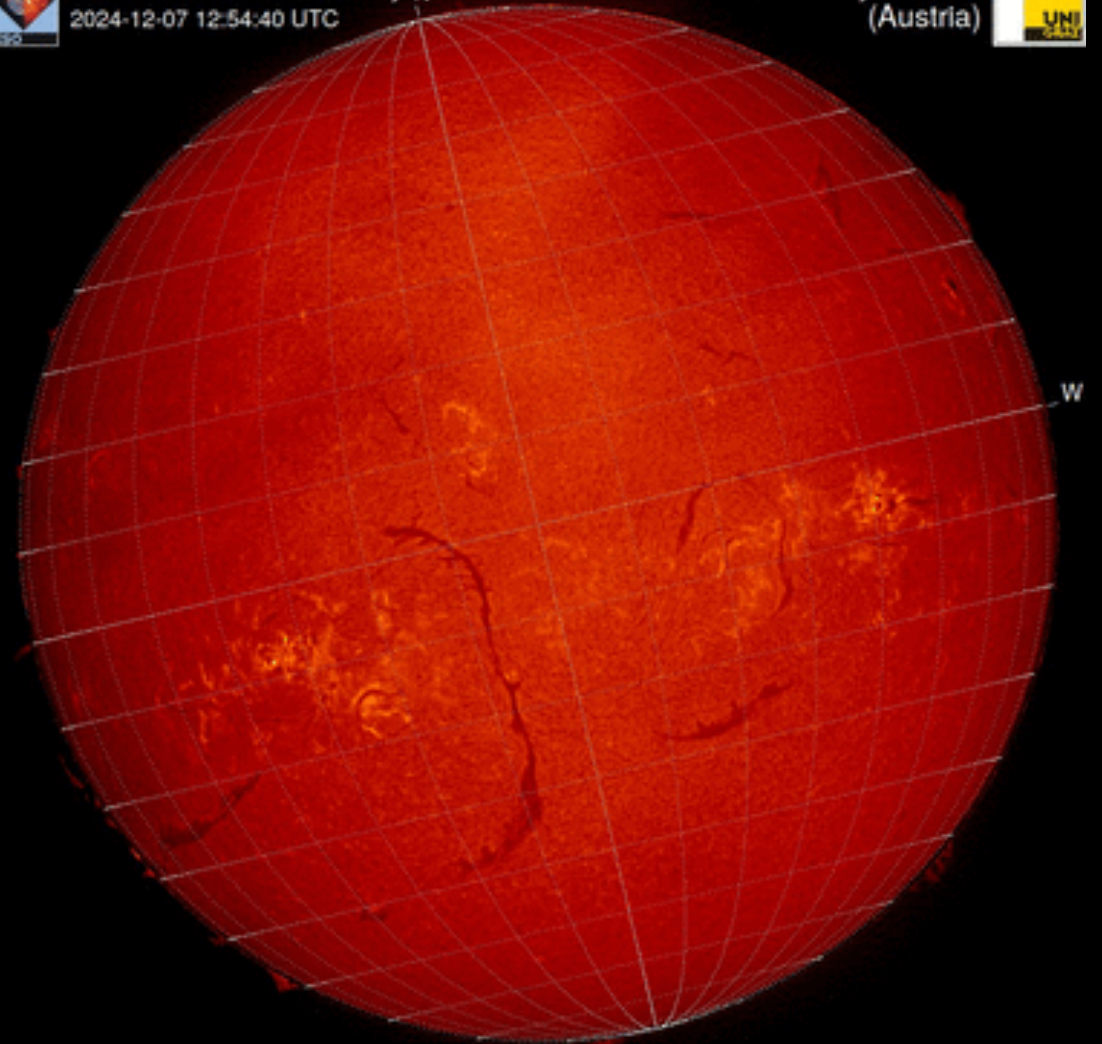


H-alpha 2024-12-08

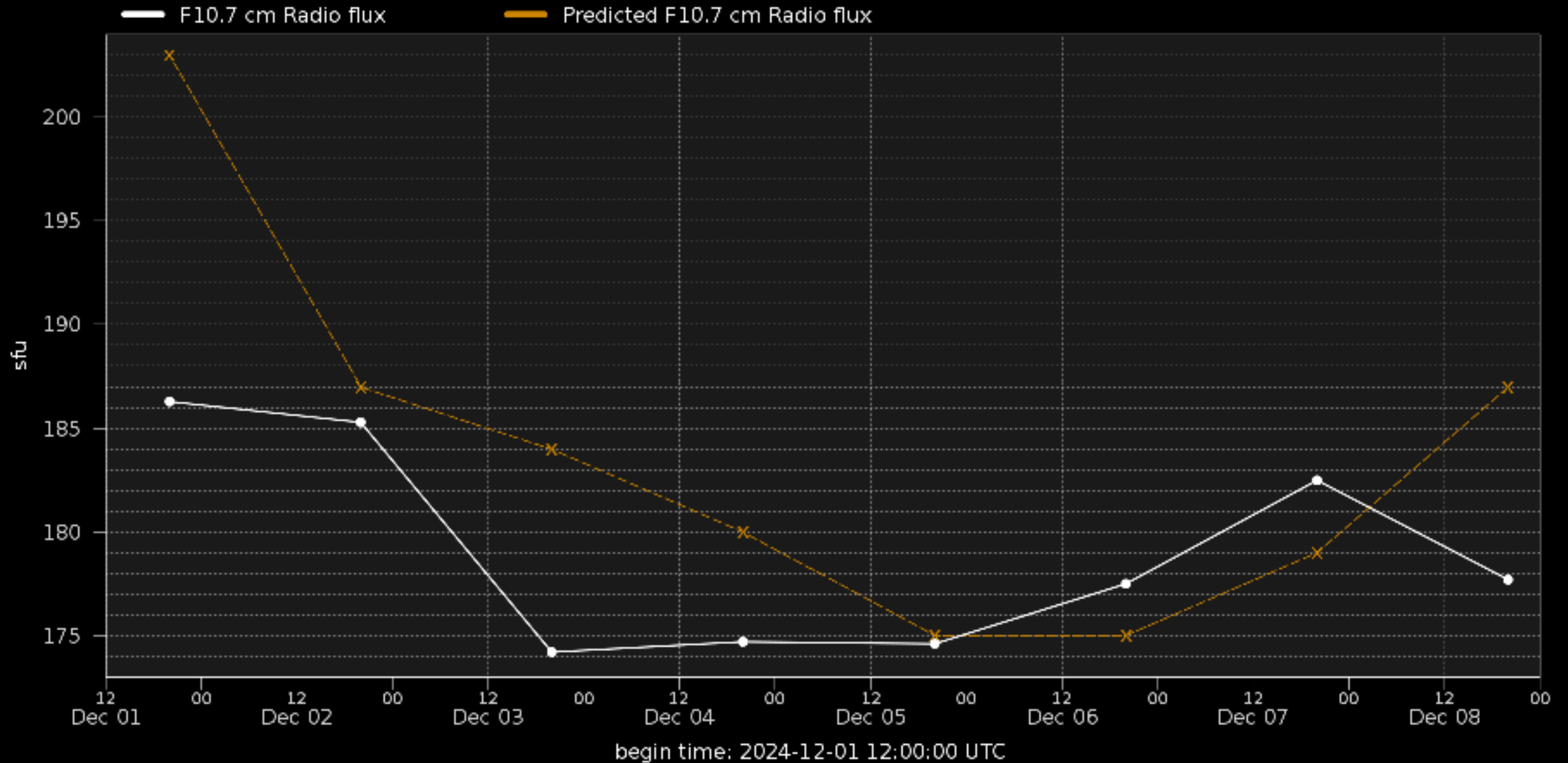


Kanzelhöhe Observatory_N
2024-12-07 12:54:40 UTC

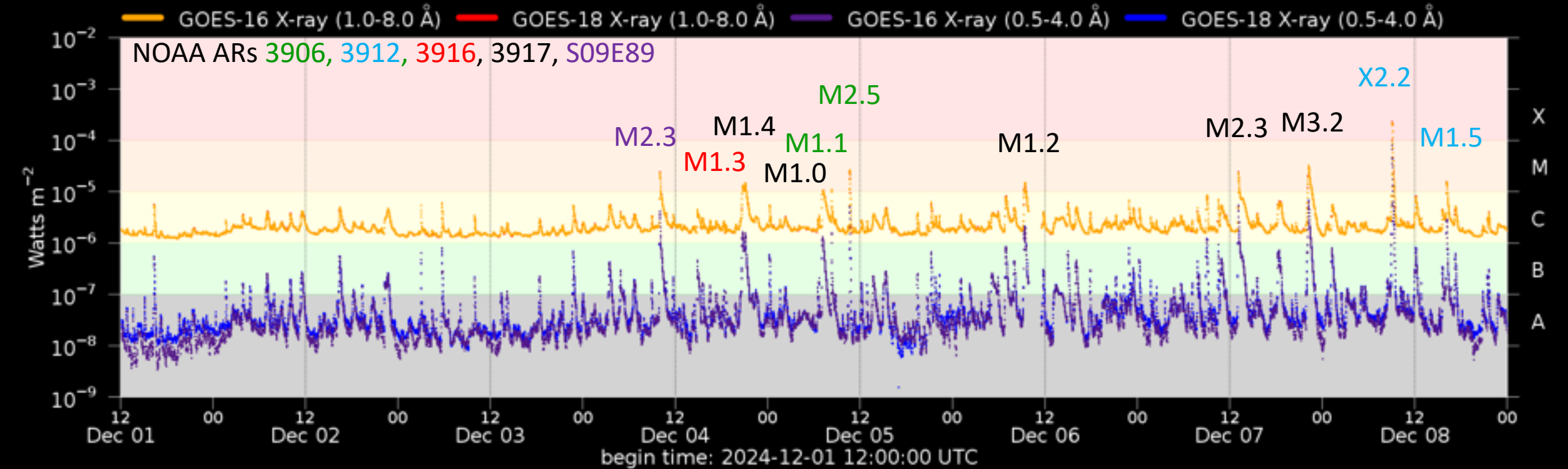
University of Graz
(Austria)



Solar F10.7cm radio flux



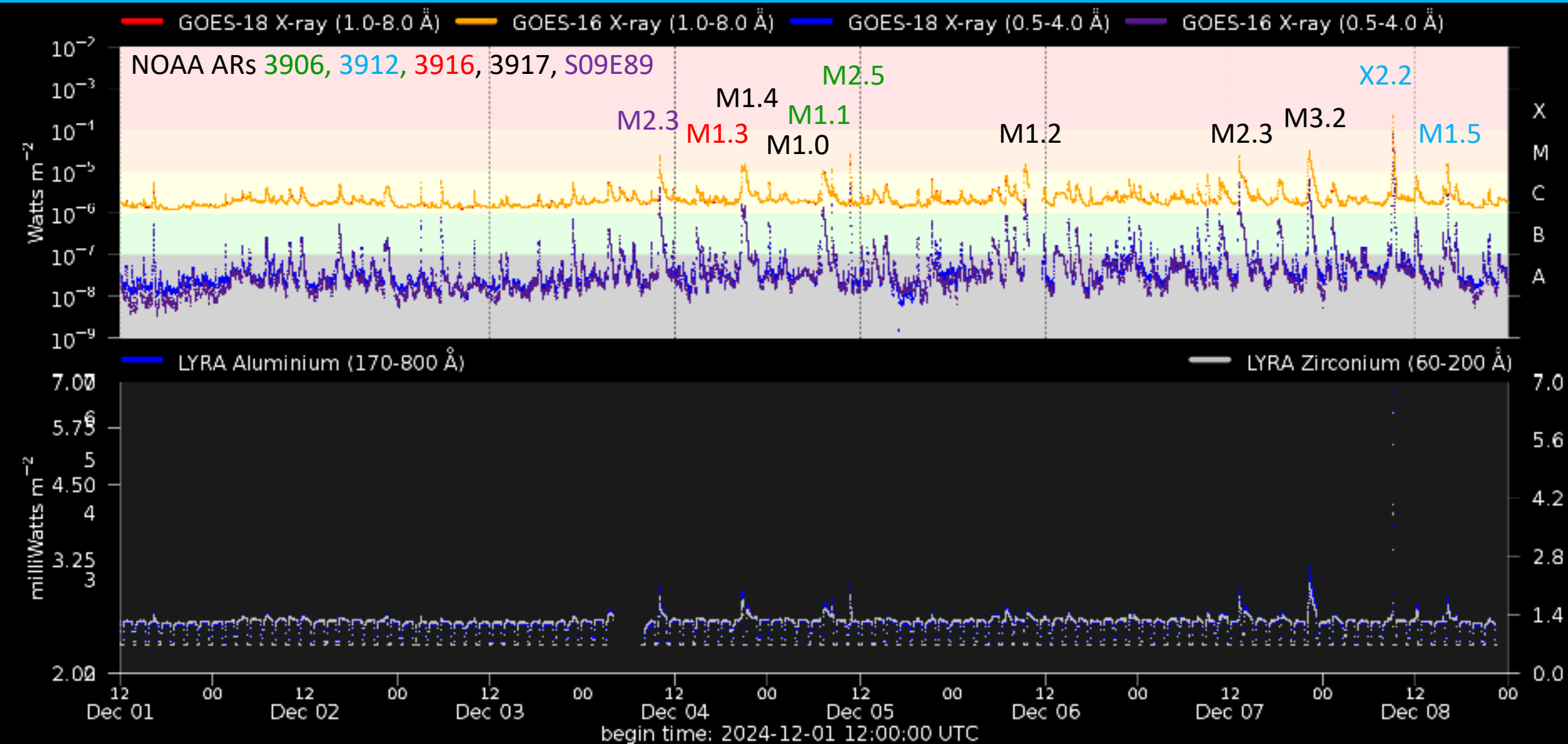
Flaring activity



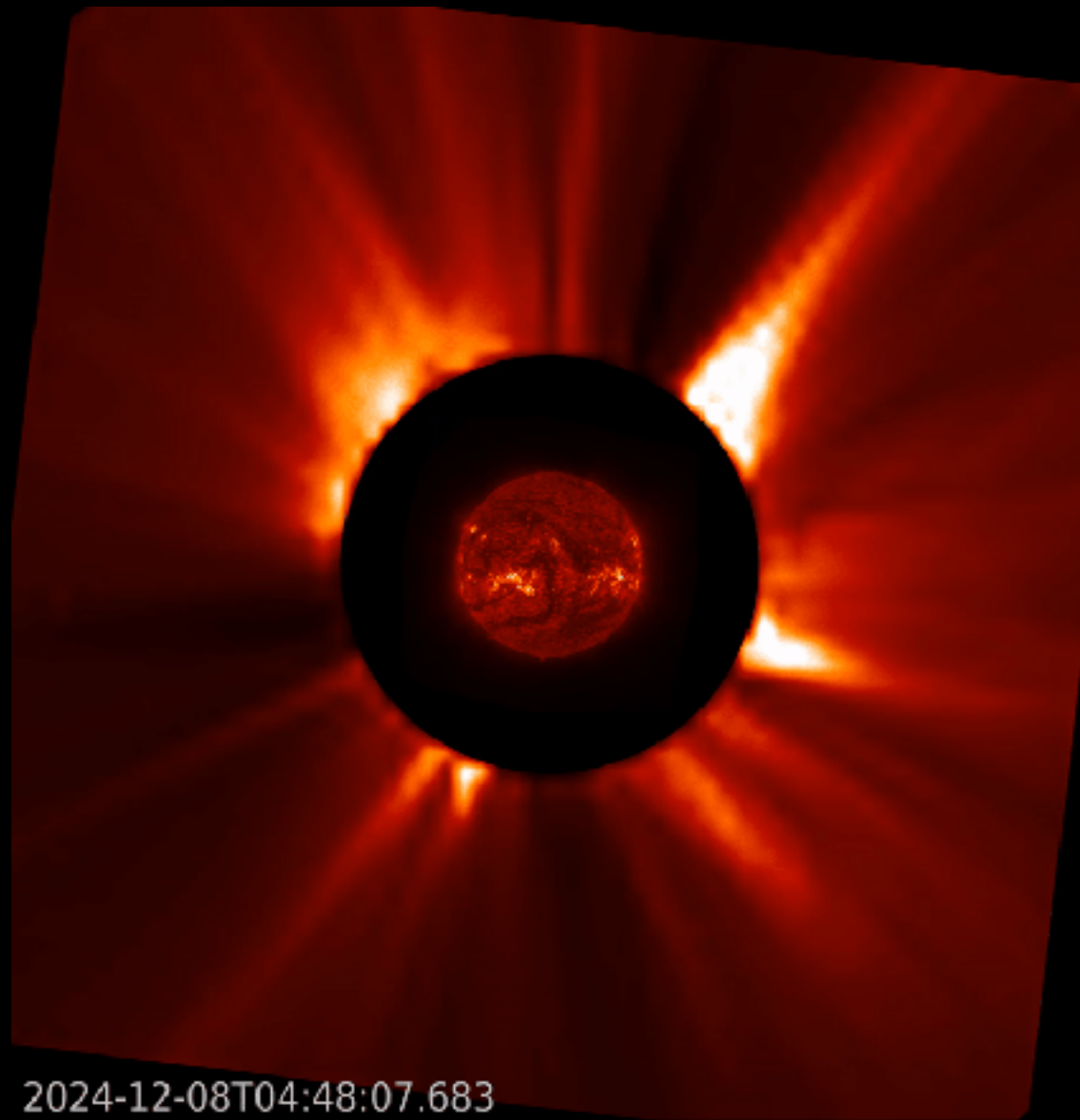
Probabilities (%) and occurrences (#) of C/M/X-flares daily, from noon to noon:

Issue date	2024-12-01	2024-12-02	2024-12-03	2024-12-04	2024-12-05	2024-12-06	2024-12-07	2024-12-08
Probability (%)	99 70 10	99 40 05	99 40 05	99 40 05	99 50 05	99 50 05	99 40 05	99 60 20
Observed (#)	07 00 00	06 00 00	08 01 00	07 05 00	15 01 00	20 00 00	13 02 01	05 01 00

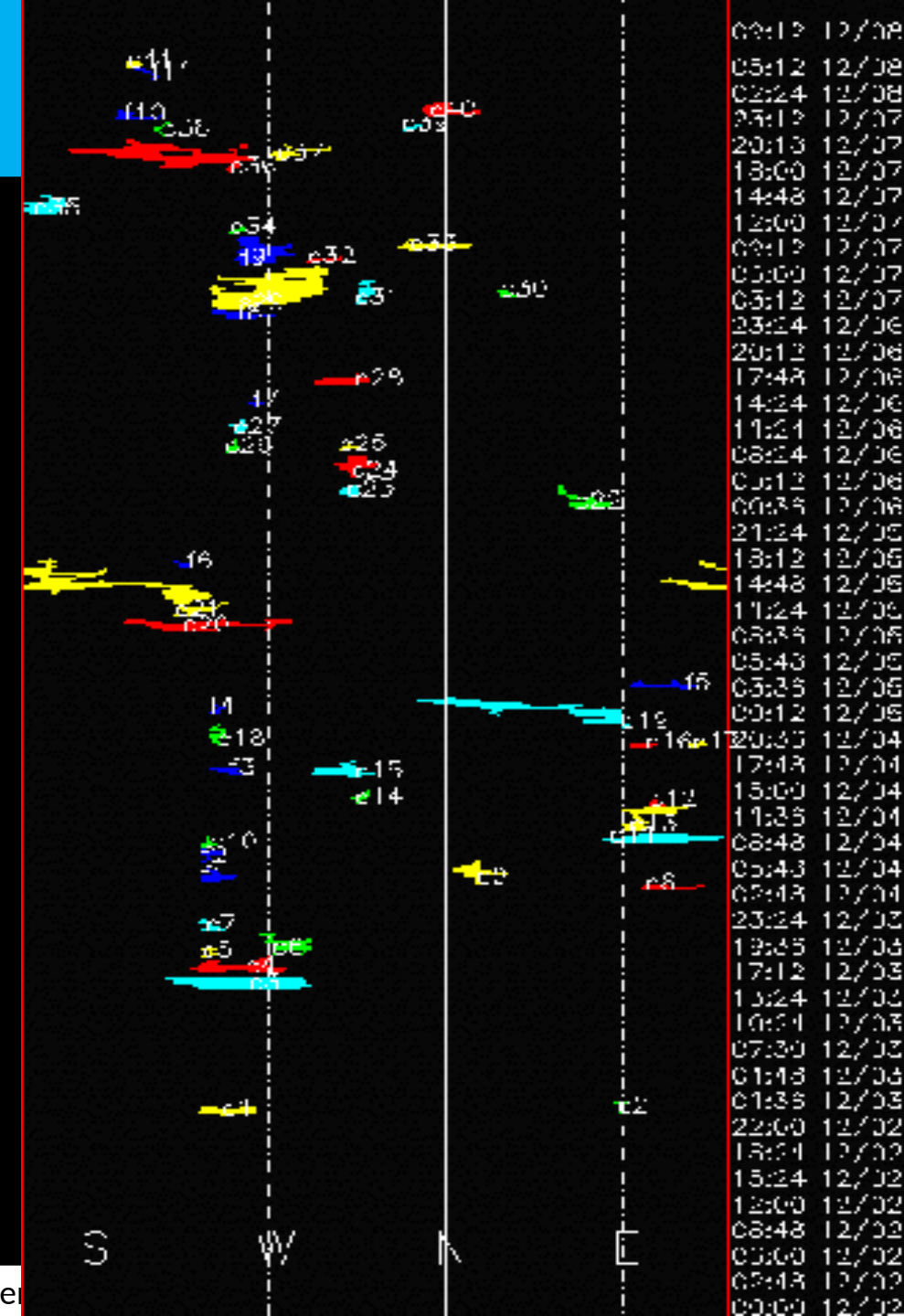
Solar X-Ray and UV flux



Coronal Mass Ejections



2024-12-08T04:48:07.683



Solar Wind and

Geomagnetic Activity



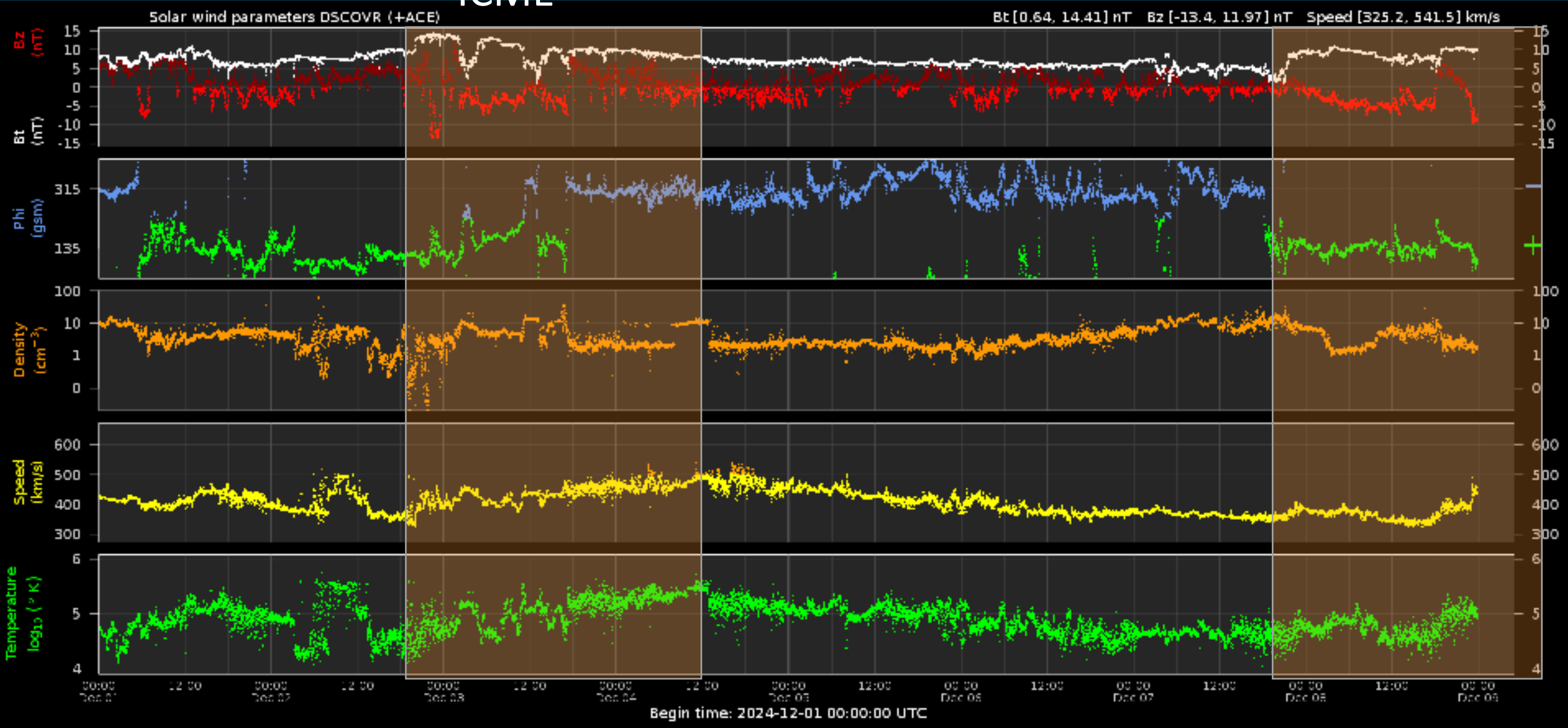
Royal Observatory
of Belgium

Solar Influences
Data analysis Centre
www.sidc.be

Solar wind parameters

ICME

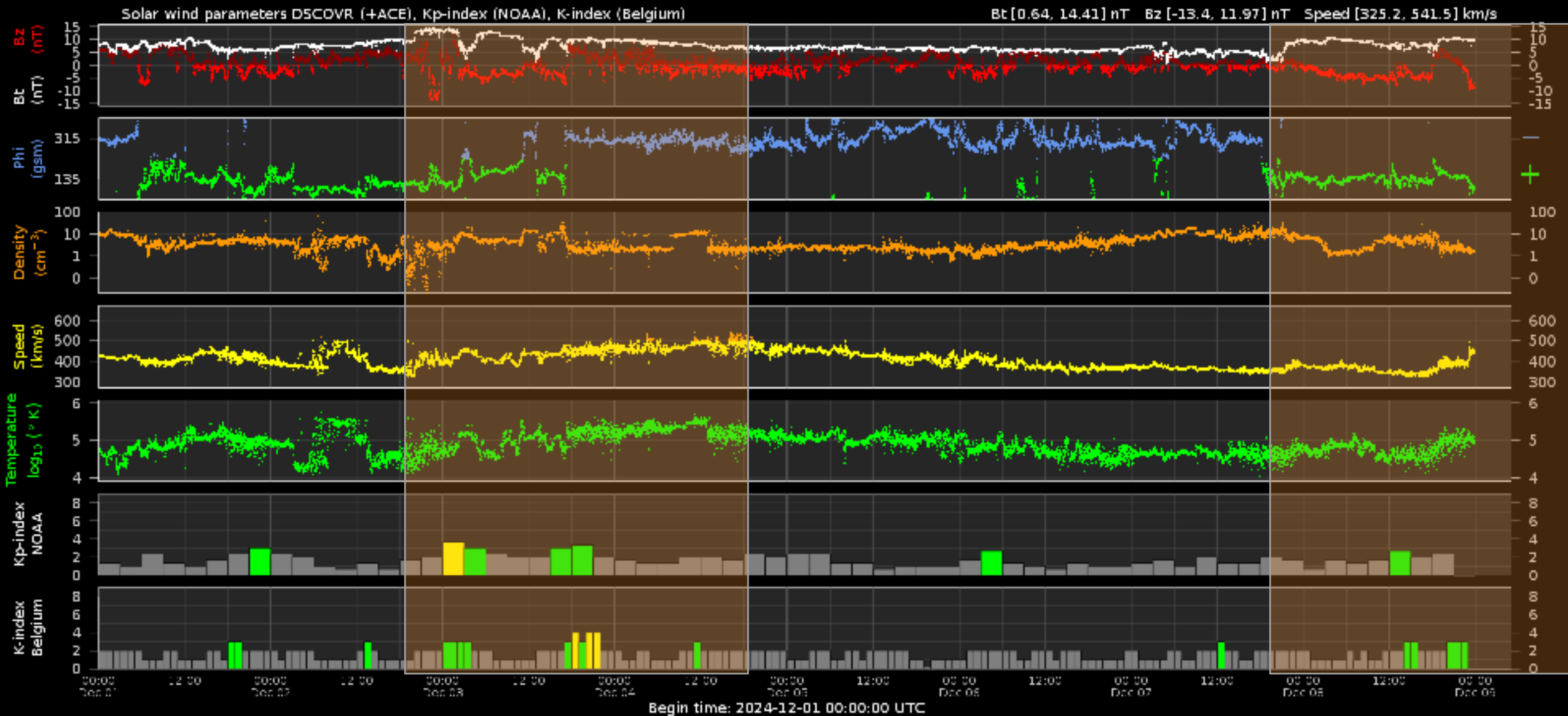
HSS



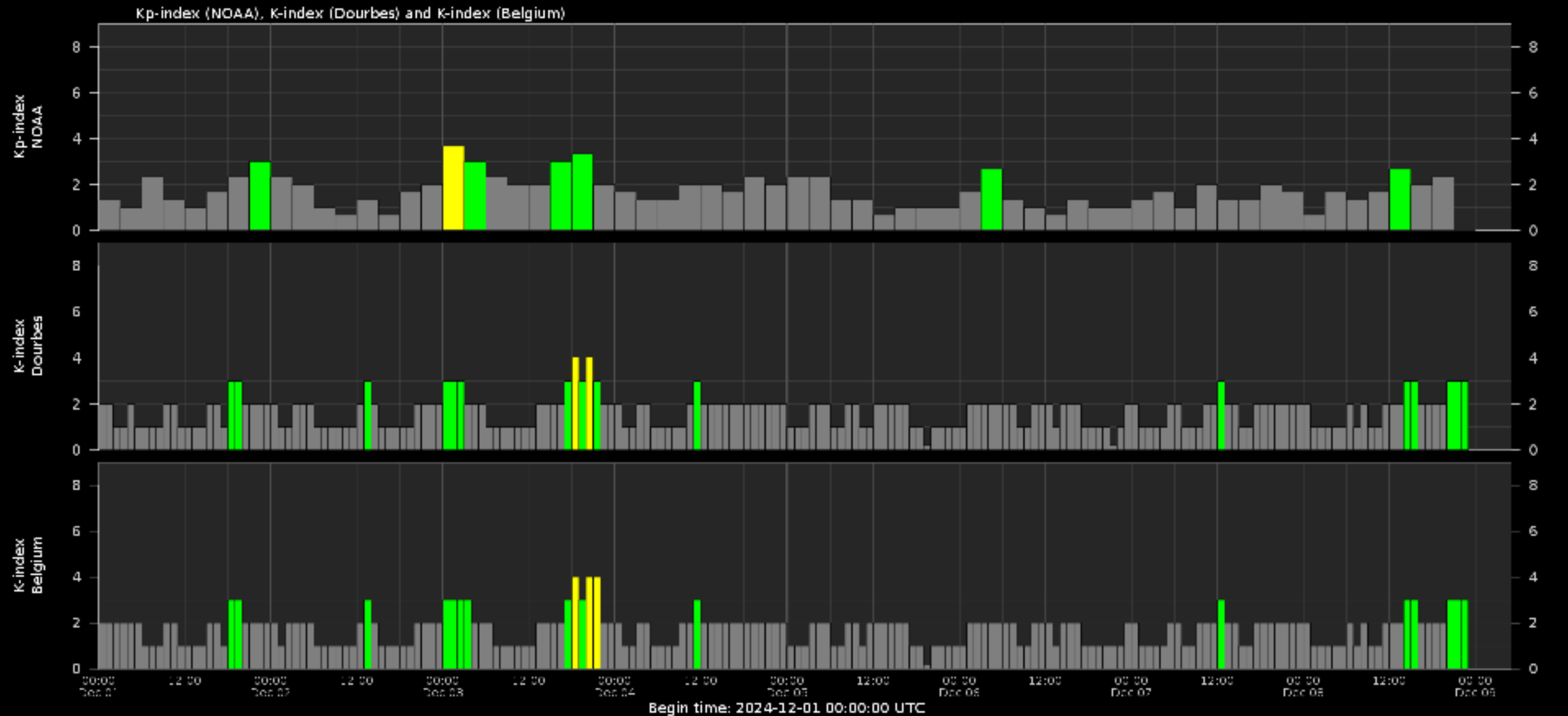
Solar wind parameters & K-indices

HSS

ICME



Geomagnetic activity (K-indexes)



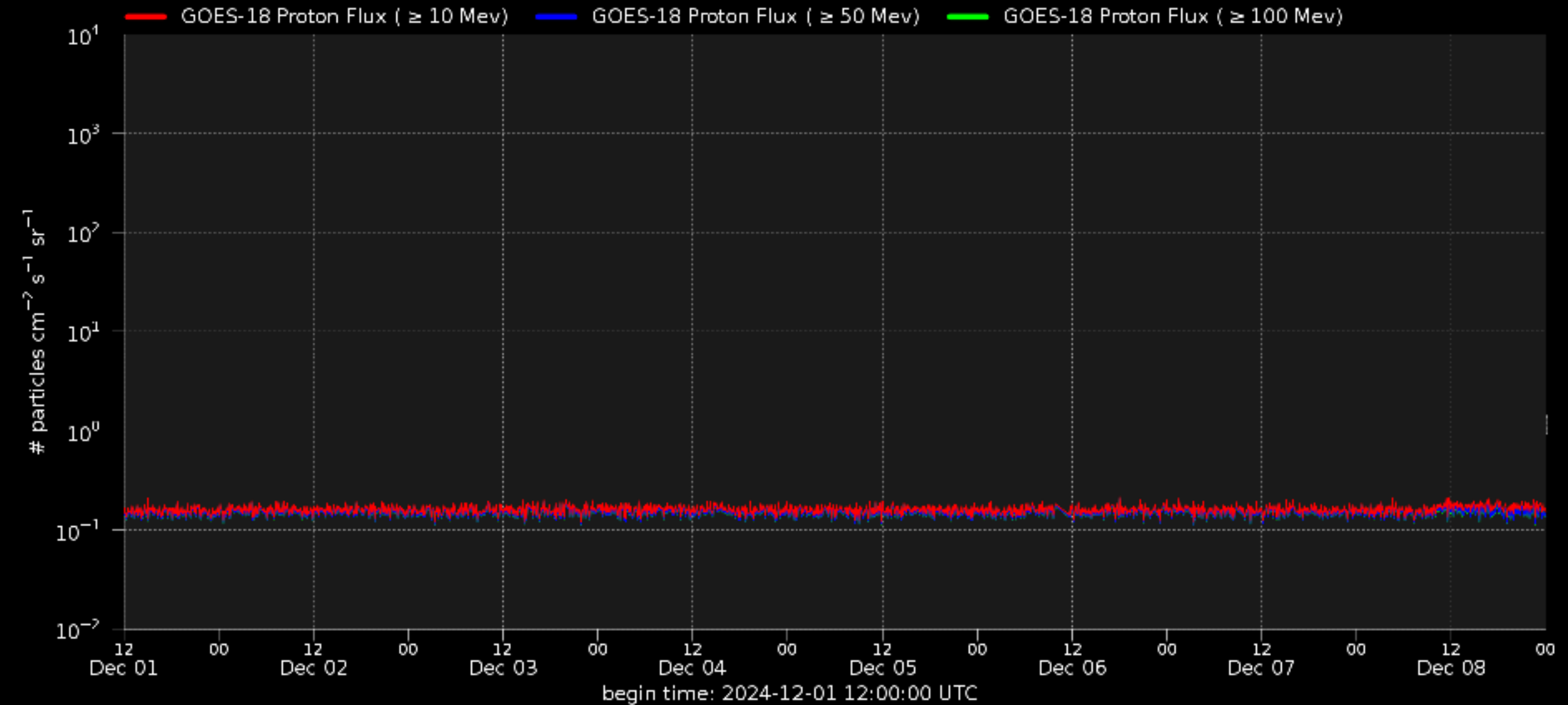
Energetic Particles



Royal Observatory
of Belgium

Solar Influences
Data analysis Centre
www.sidc.be

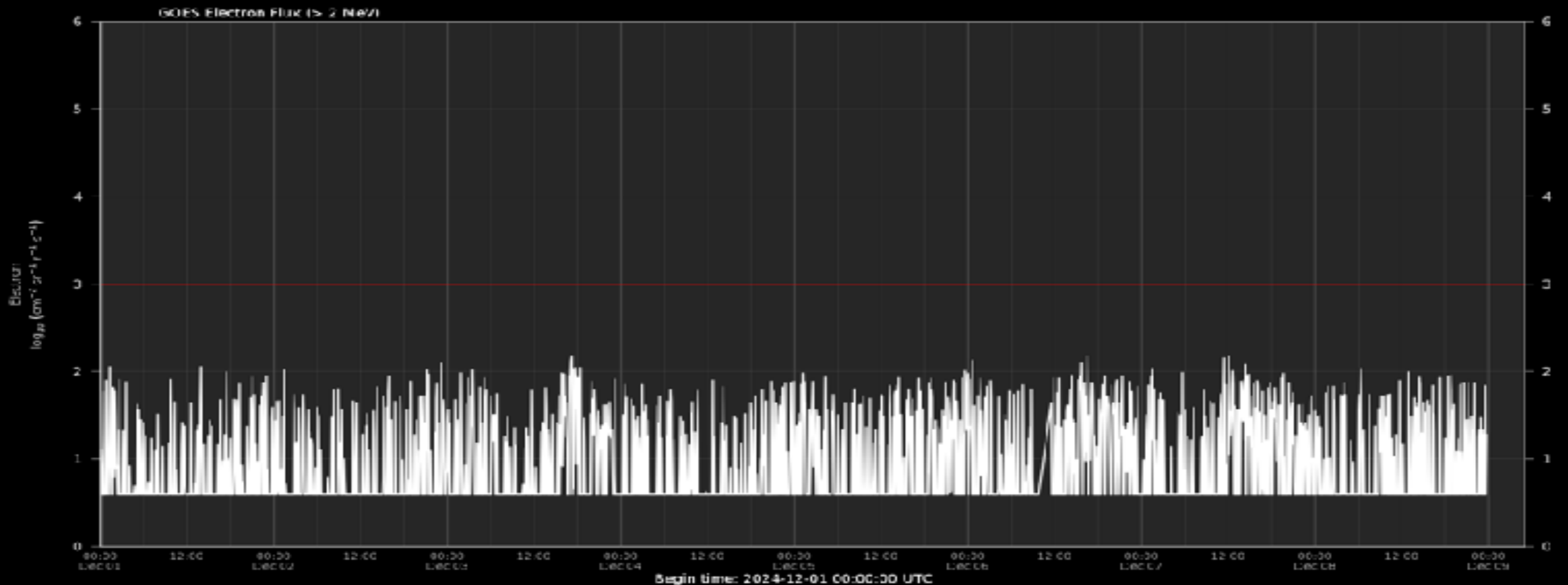
Solar proton flux



Electron flux at GEO

www.stce.be/educational/classification#electrons

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



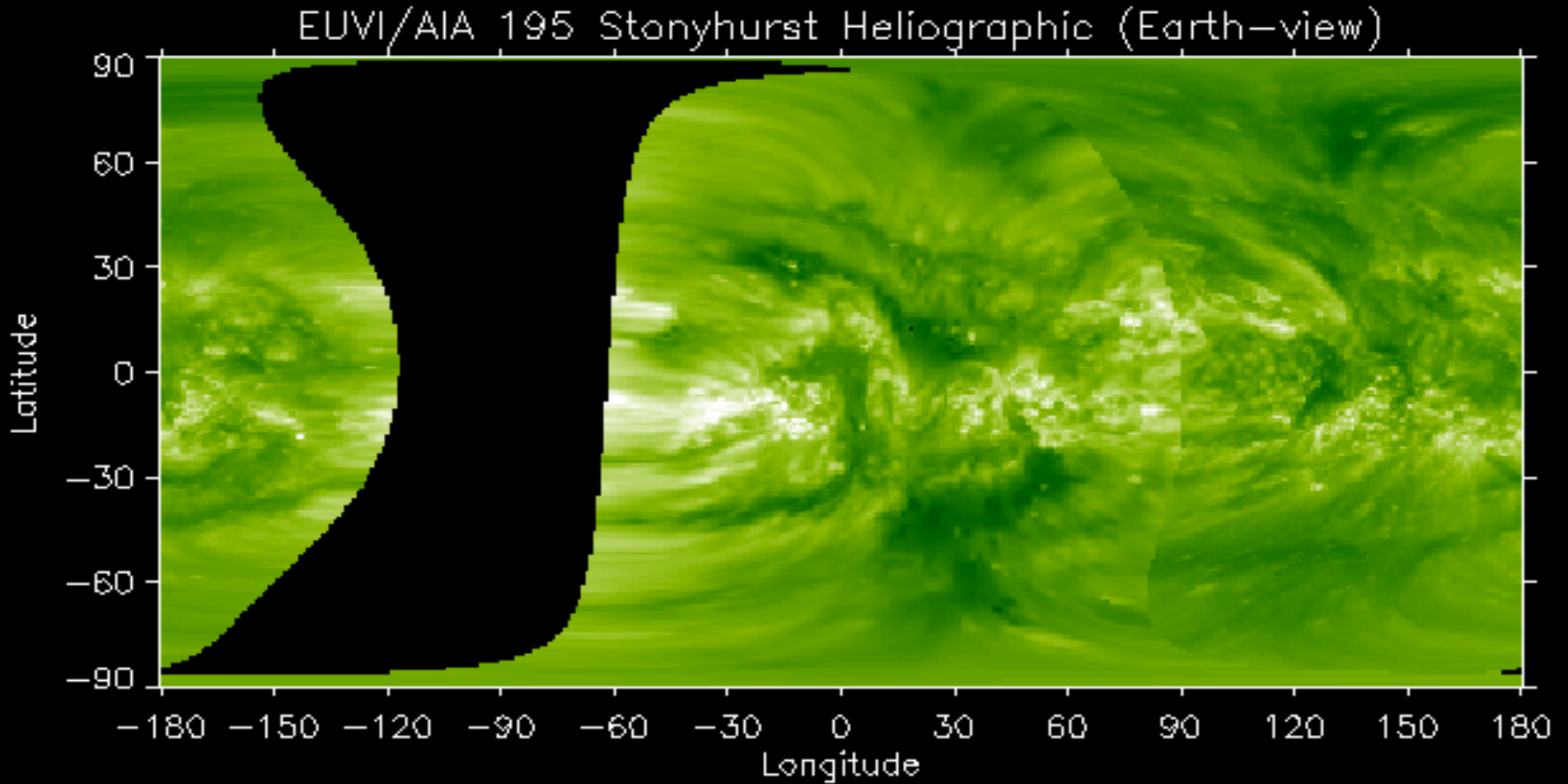
Outlook



Royal Observatory
of Belgium

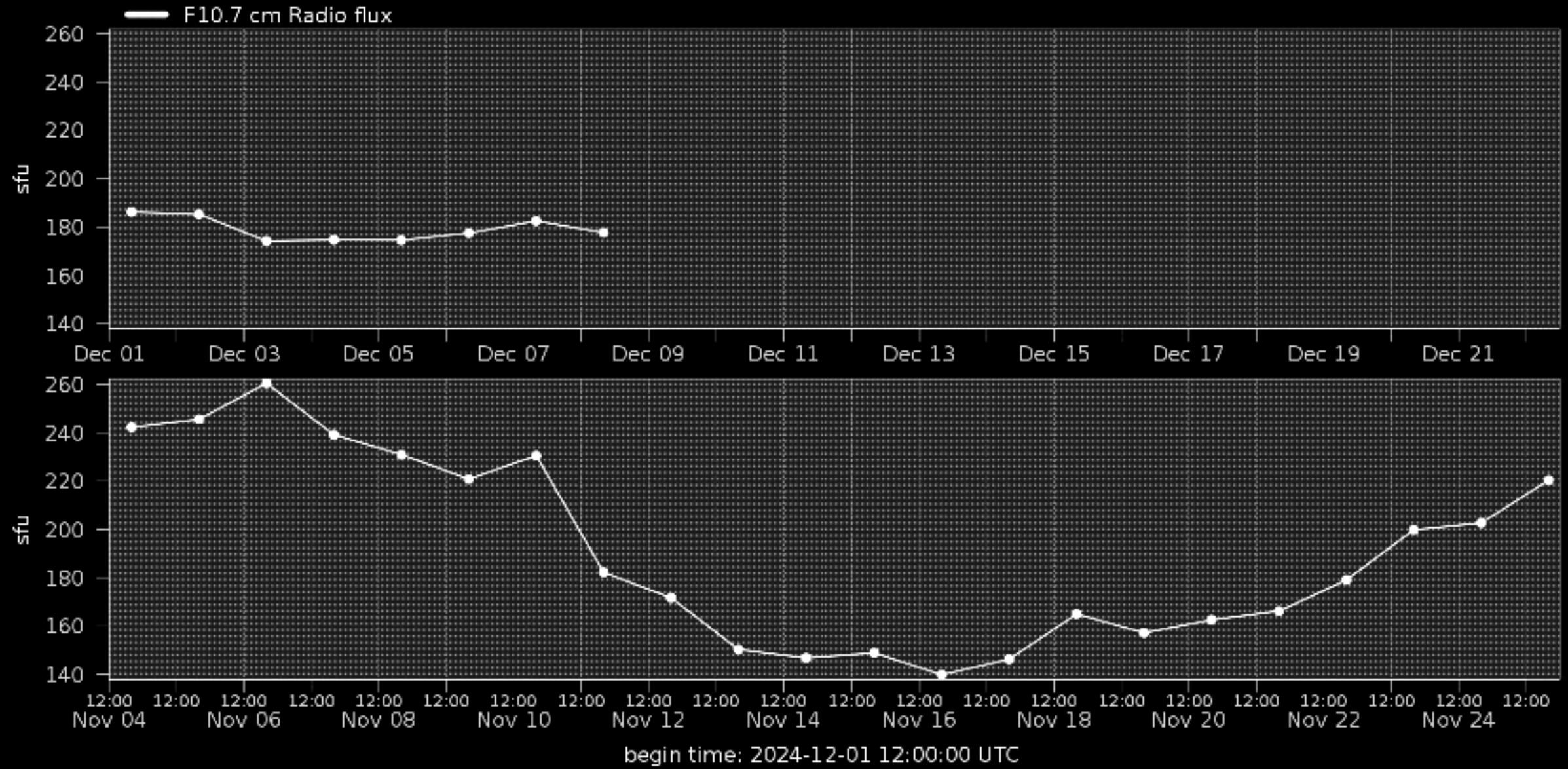
Solar Influences
Data analysis Centre
www.sidc.be

Outlook: Solar activity

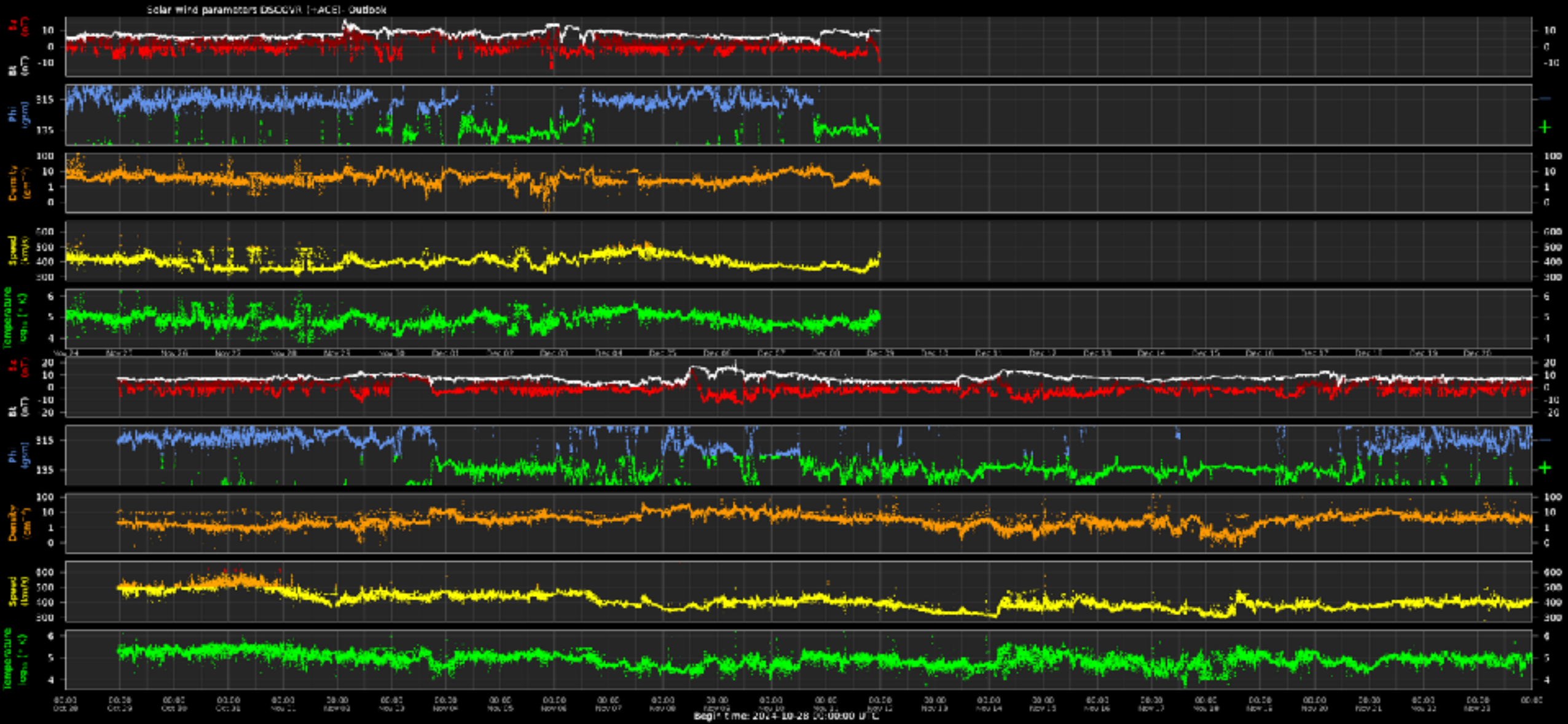


Observation date: 2024/12/08 11:35:00

Outlook: Solar F10.7cm radio flux



Outlook: Solar wind parameters



Outlook: Geomagnetic activity



Outlook: Electron Flux at GEO Outlook



PECASUS



Royal Observatory
of Belgium

Solar Influences
Data analysis Centre
www.sidc.be

SIDC Space Weather Briefing

See you at our next briefing!

Or visit us at www.sidc.be



Royal Observatory
of Belgium

Solar Influences
Data analysis Centre
www.sidc.be