

# SIDC Space Weather Briefing

11 December 2022-18 December 2022

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& the SIDC forecaster team



Royal Observatory  
of Belgium

Solar Influences  
Data analysis Centre  
[www.sidc.be](http://www.sidc.be)

# Summary Report

Solar activity from 2022-12-11 12:00 to 2022-12-18 23:59

Active regions	14 active regions: NOAA AR 3153, 3157, 3159, 3160, 3161, 3162, 3163, 3164, 3165, 3166, 3167, 3168, 3169, 3170
Flares	# C-class flare: 48 # M-class flare: 26 # X-class flare: 0
Coronal Holes	CH of negative polarity, elongated in longitude, nearby the southern polar coronal hole (Dec 14), equatorial coronal hole with positive polarity (Dec 17)
CMEs	No Earth directed CMEs
Proton flux	Background levels
Electron flux	Background levels

## Solar wind and geomagnetic conditions

ICMEs	None are Earth directed.
Solar wind conditions	B : 4 - 14 nT //Bz: -5 nT to 6 nT //Speed: 270 - 510km/s
K-indices	max K-index (KDou): 3 max Kp-index (NOAA): 3+

All Quiet Alert: Mostly quiet this week

# Solar Activity

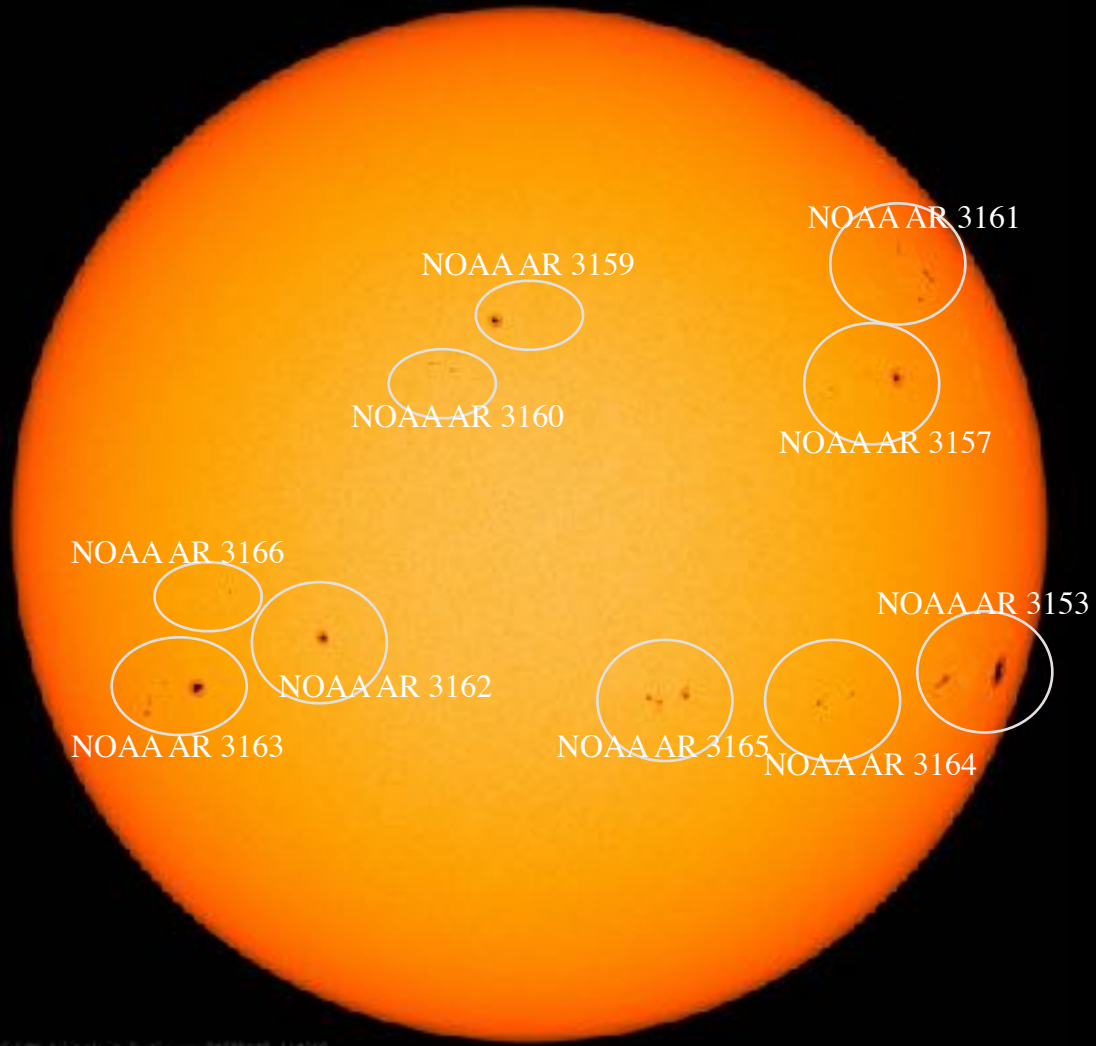


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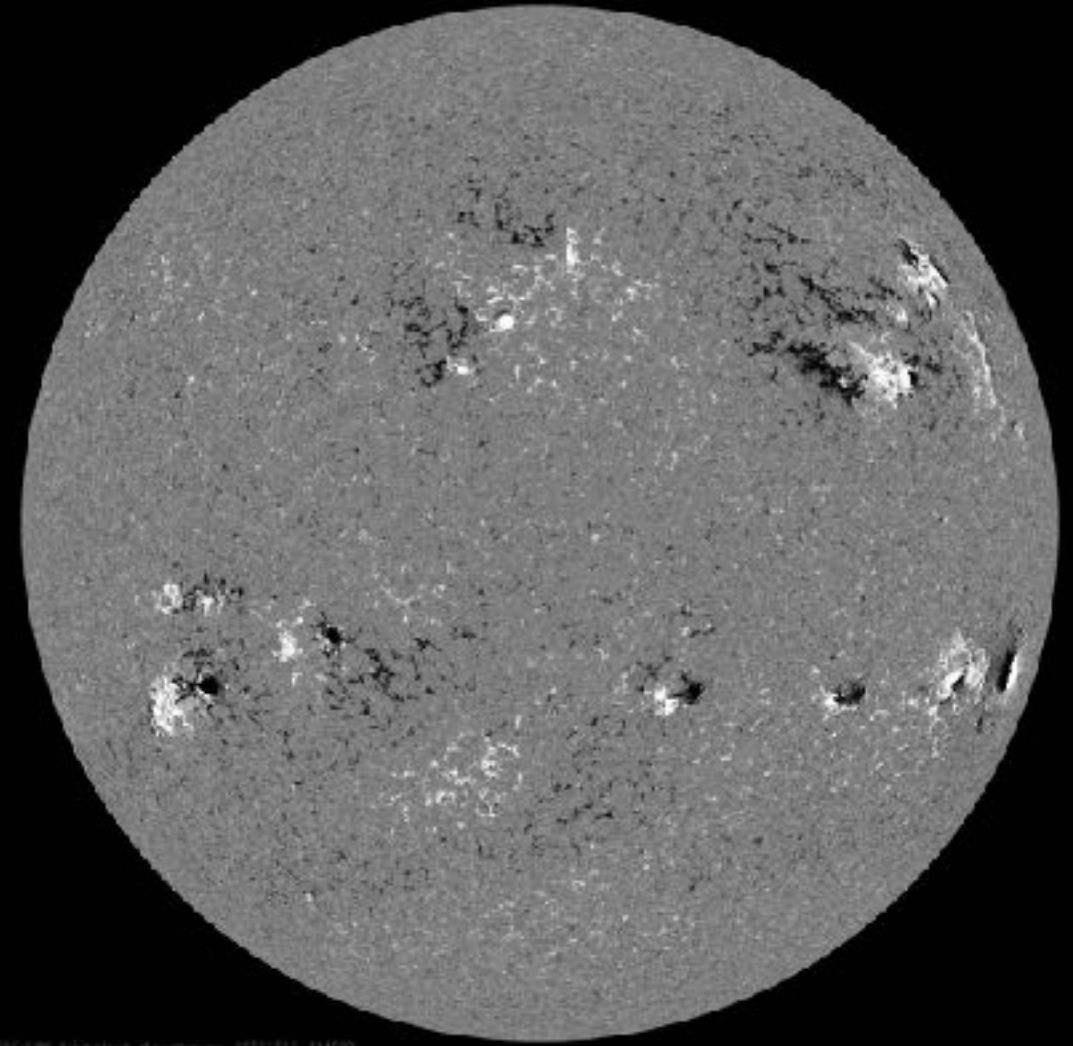
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# Solar active regions

SDO/HMI White Light 2022-12-12

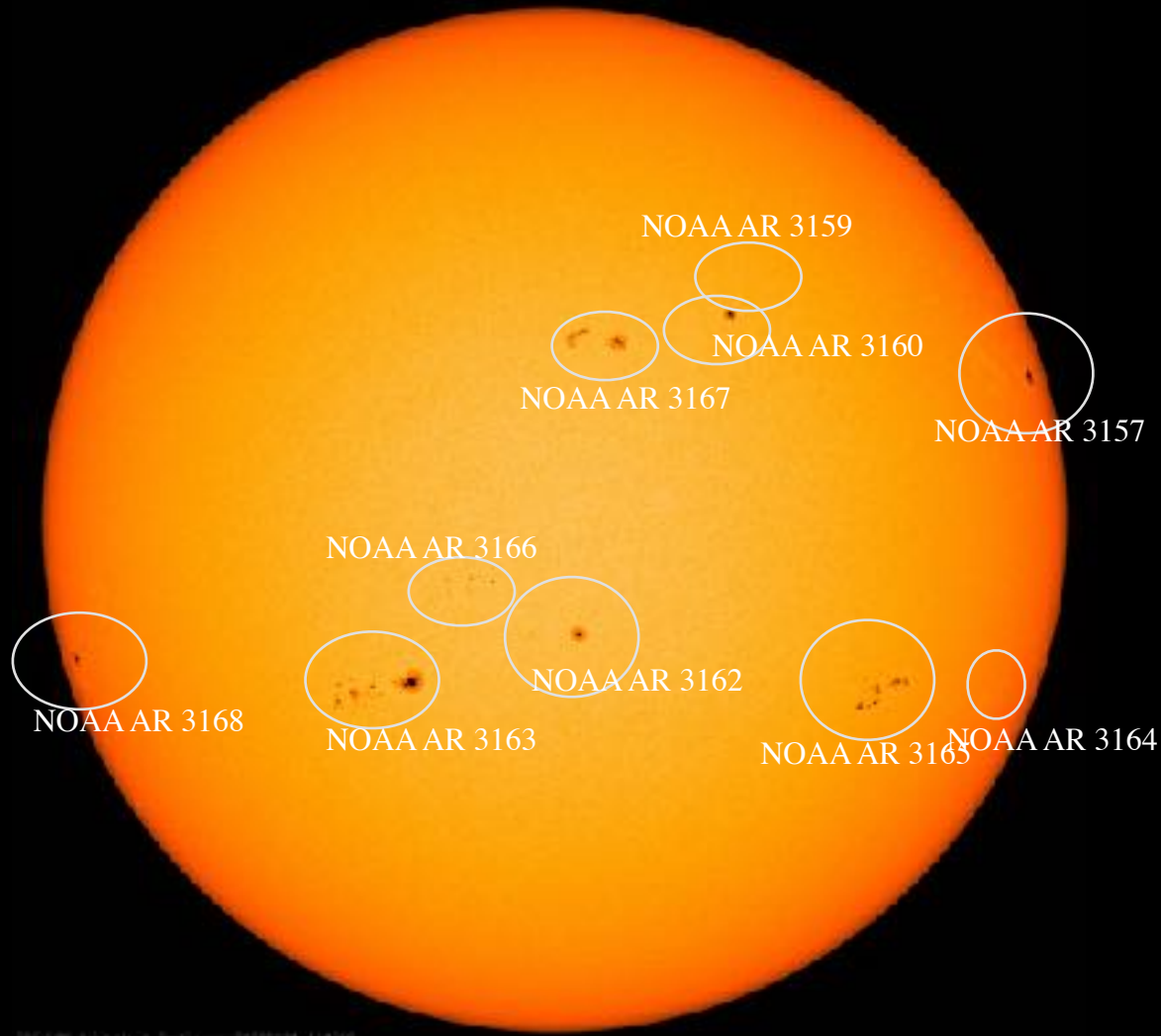


SDO/HMI Magnetogram 2022-12-12

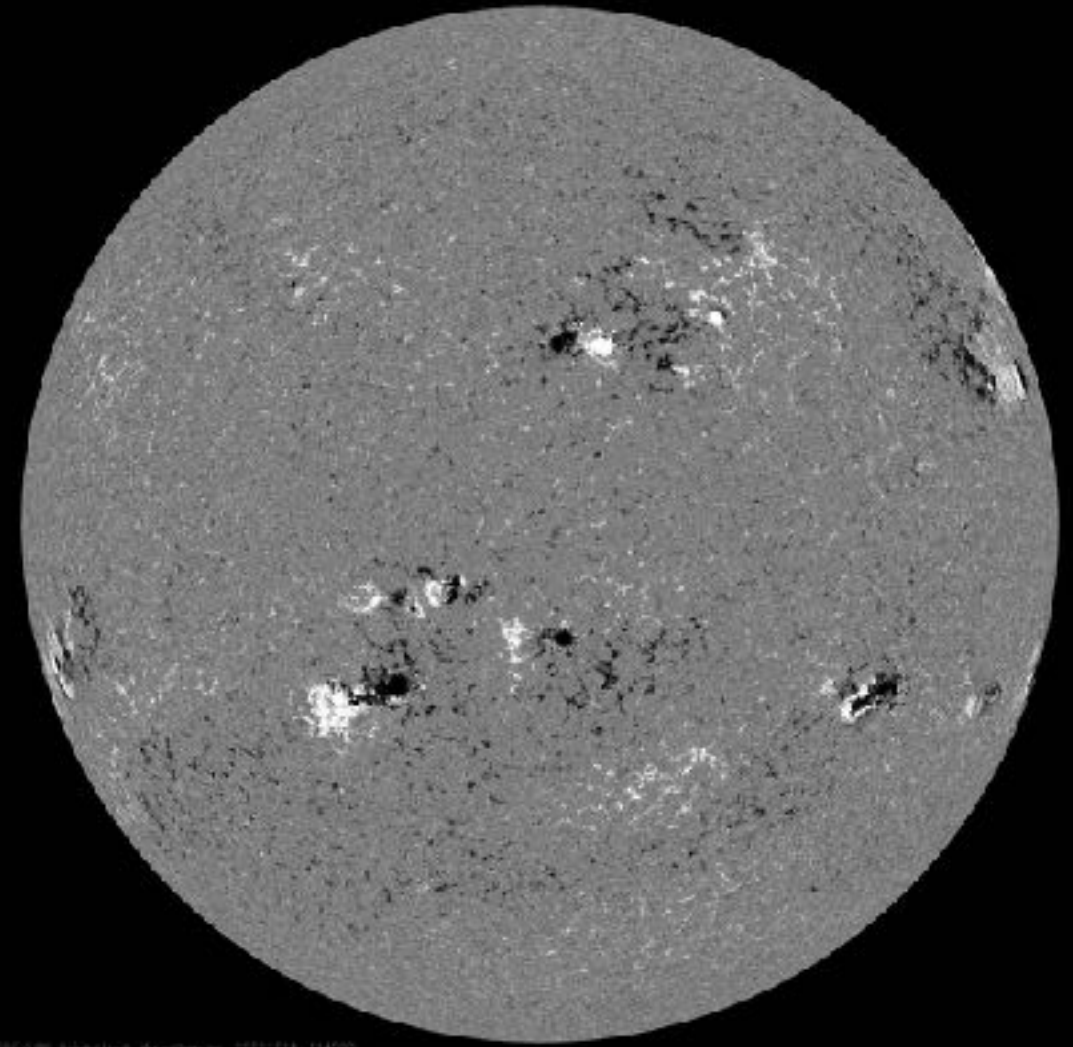


# Solar active regions

SDO/HMI White Light 2022-12-14

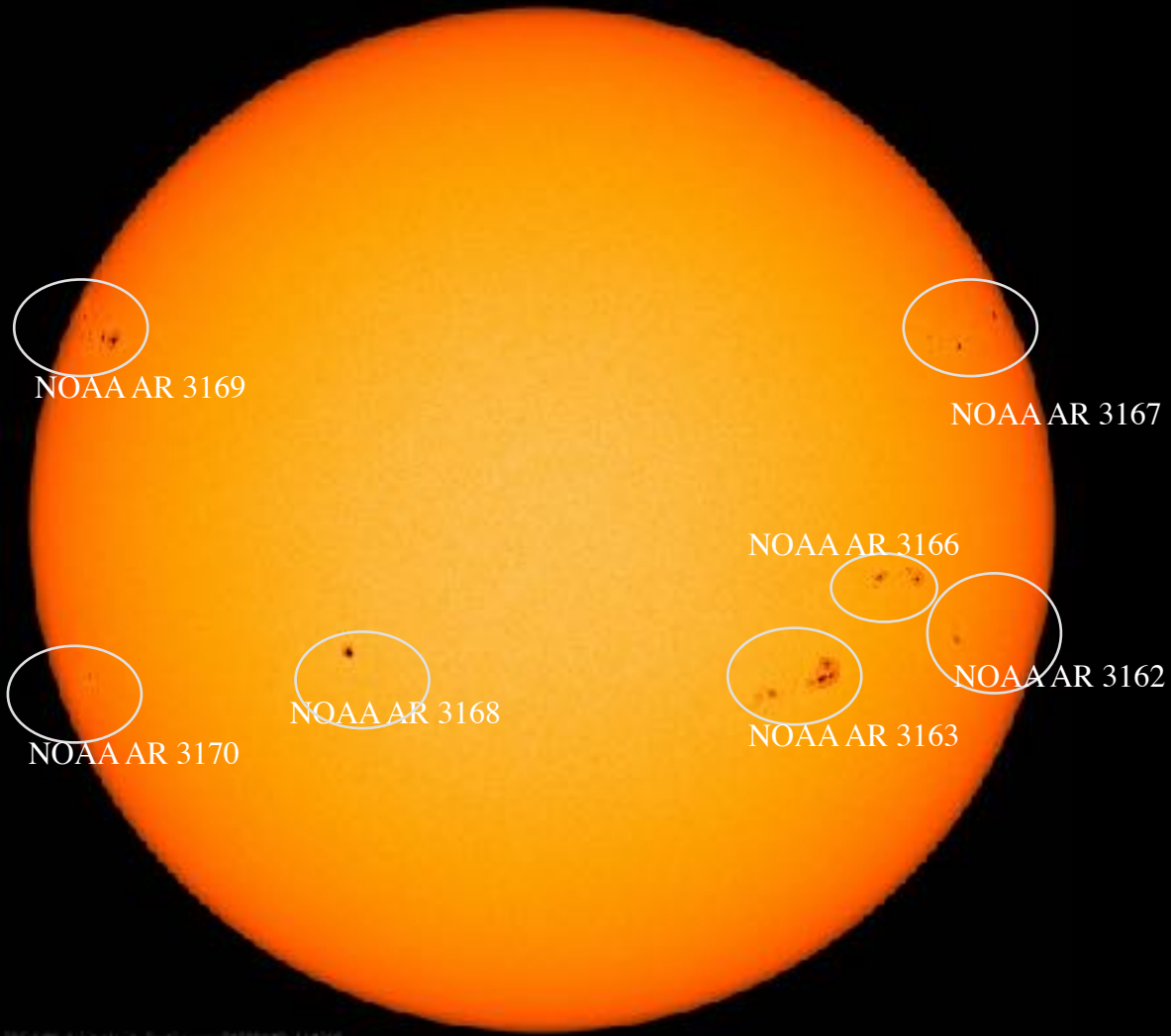


SDO/HMI Magnetogram 2022-12-14

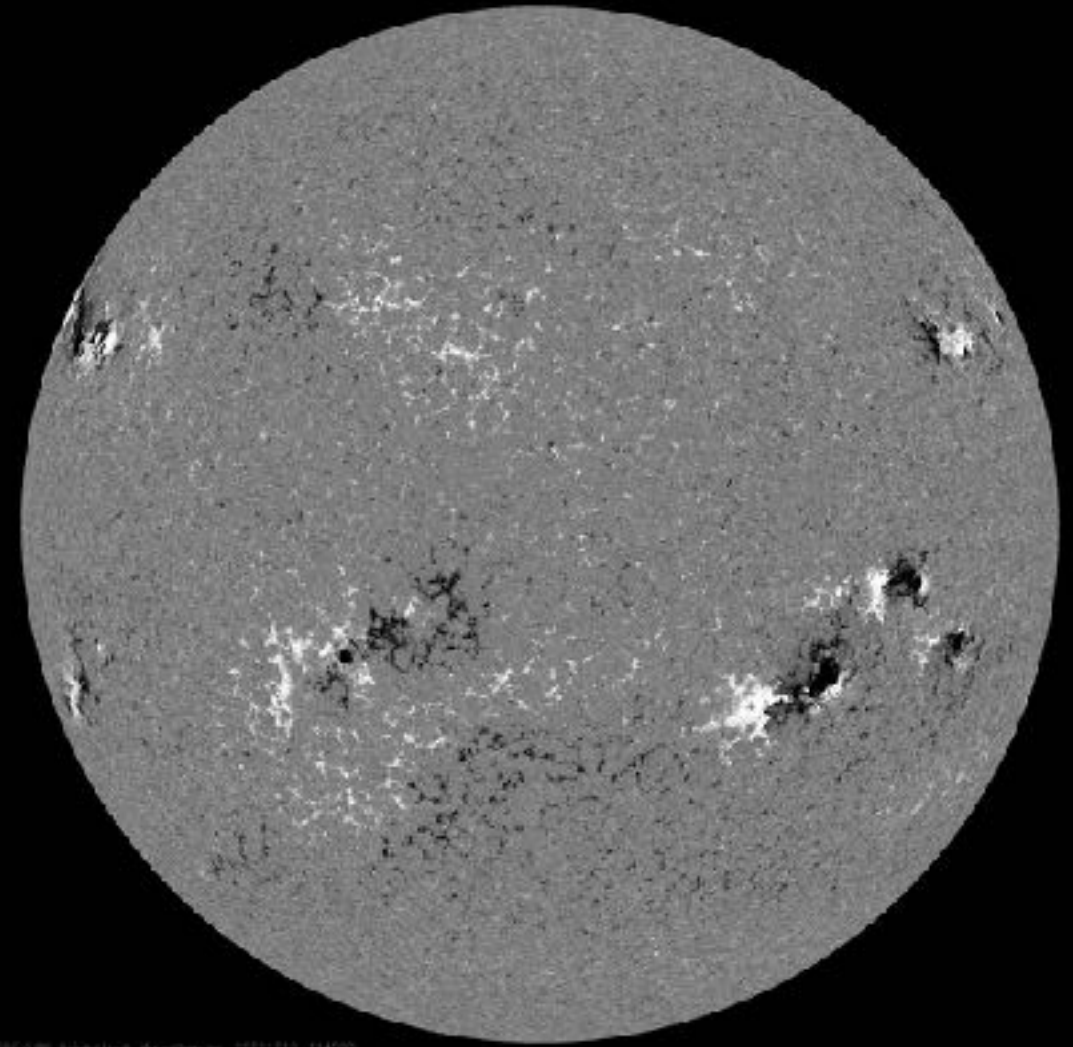


# Solar active regions

SDO/HMI White Light 2022-12-18



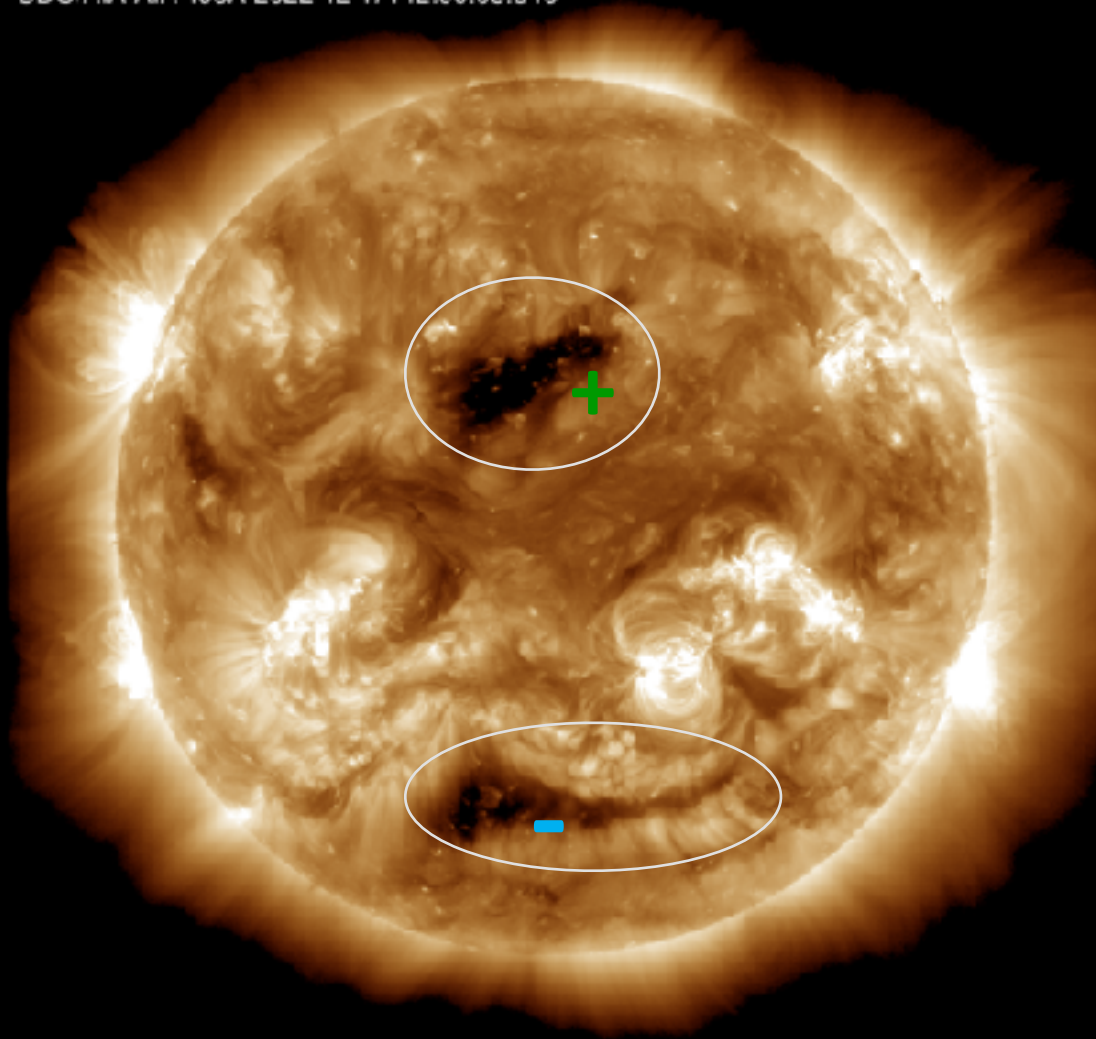
SDO/HMI Magnetogram 2022-12-18



# Coronal holes

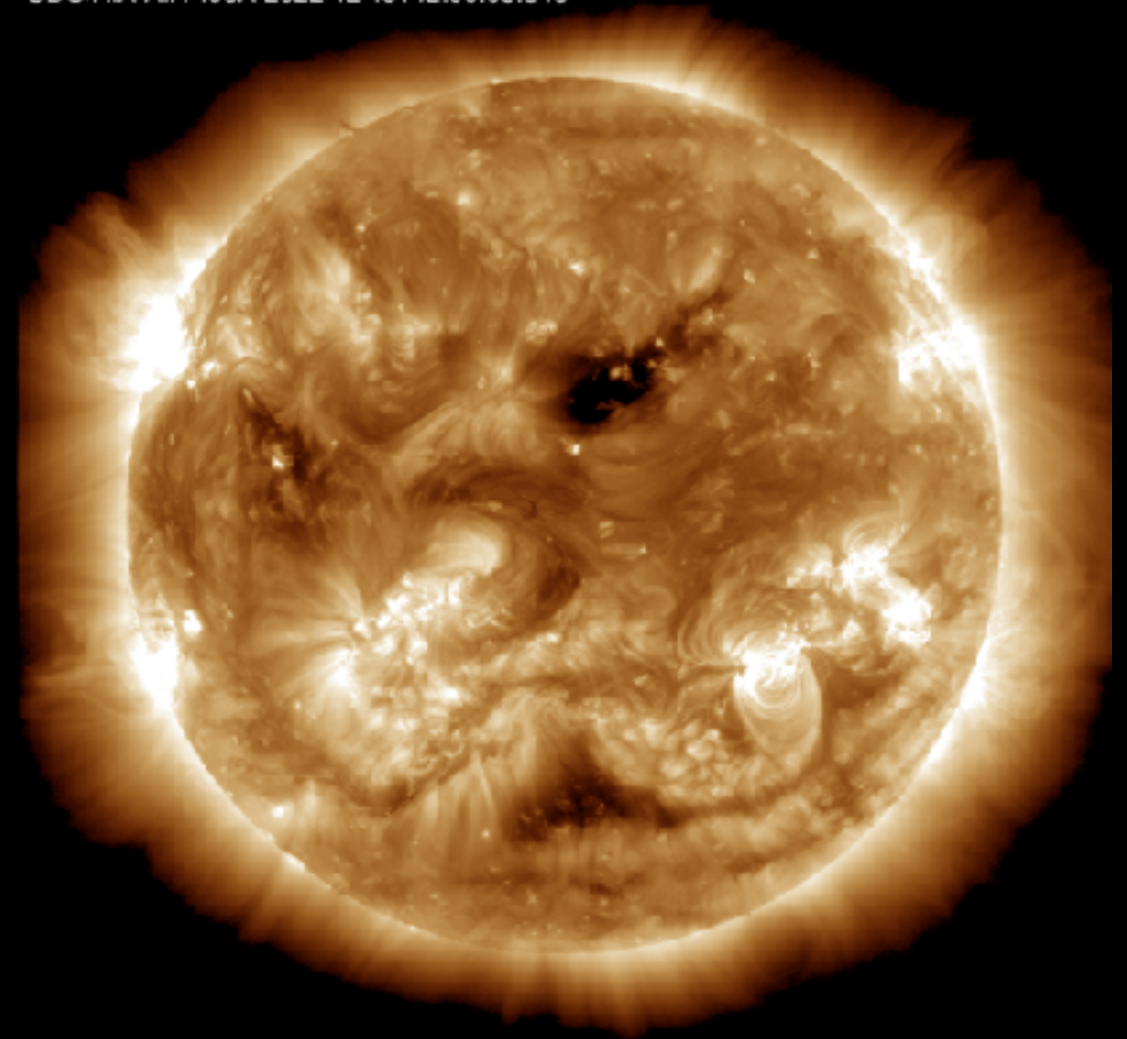
SDO/AIA 19.3 nm 2022-12-17

SDO/AIA AIA 193Å 2022-12-17T12:00:05.846



SDO/AIA 19.3 nm 2022-12-18

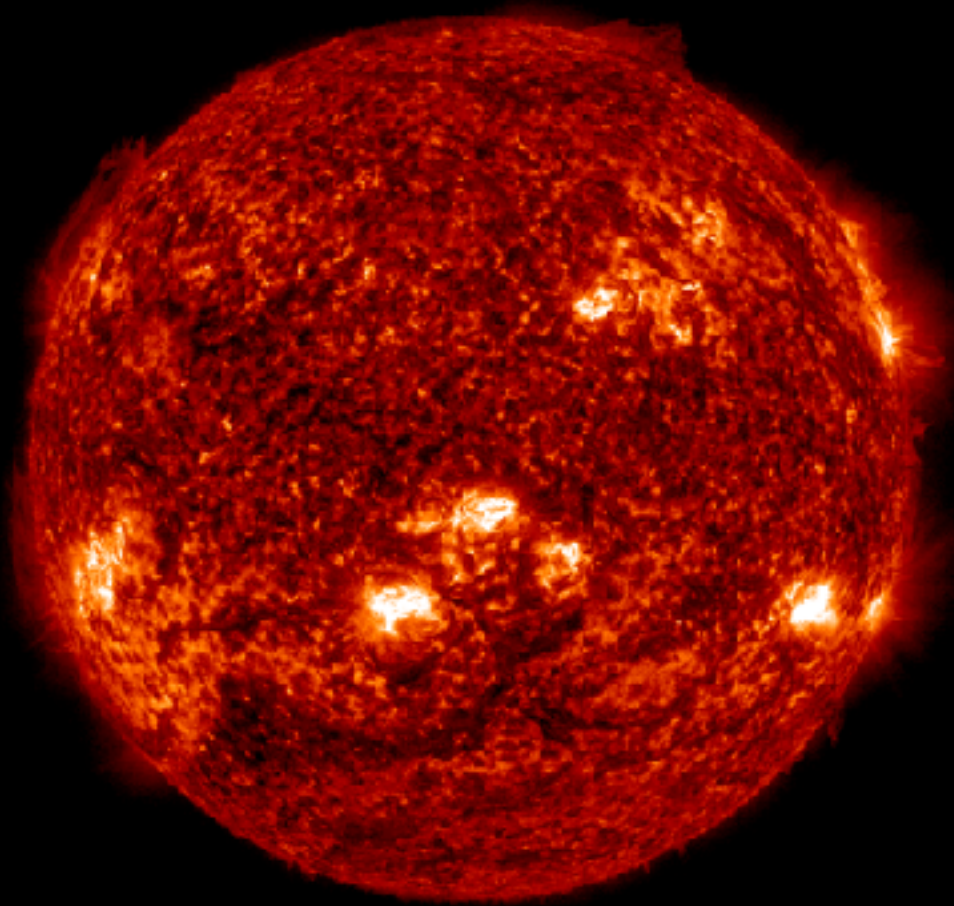
SDO/AIA AIA 193Å 2022-12-18T12:00:05.843



# Filaments

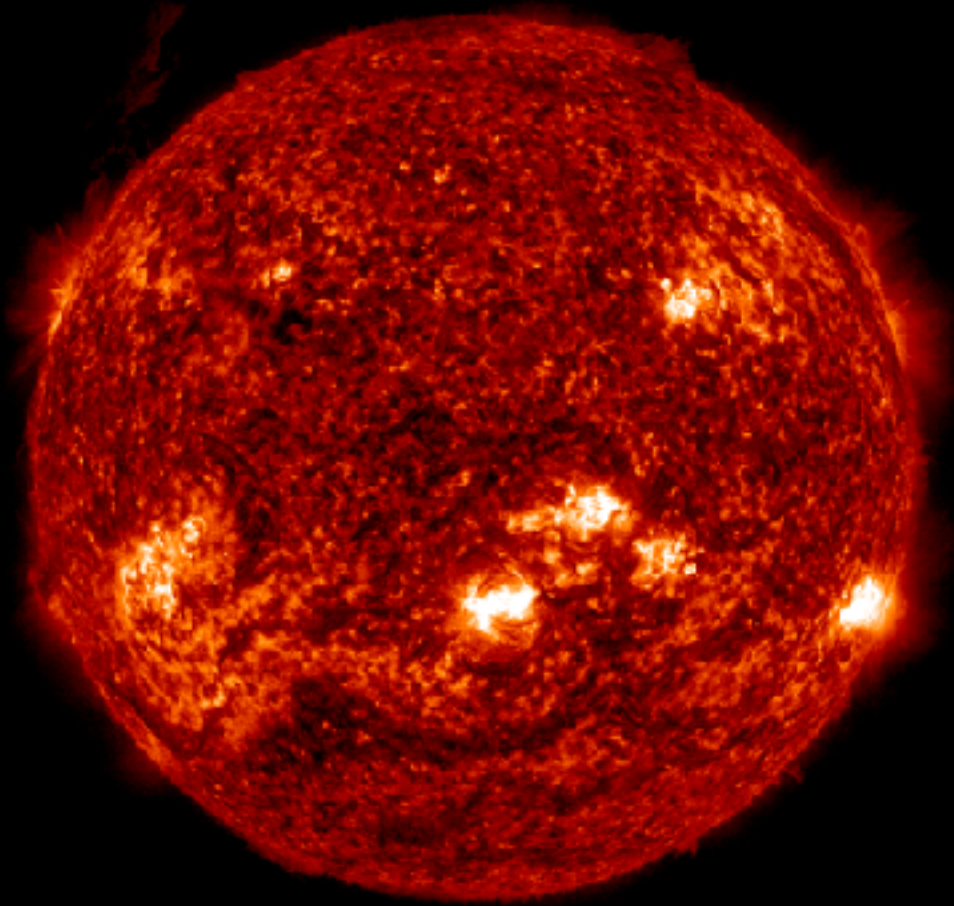
SDO/AIA 30.4 nm 2022-12-15

SDO/AIA AIA 304Å 2022-12-15T12:00:06.680



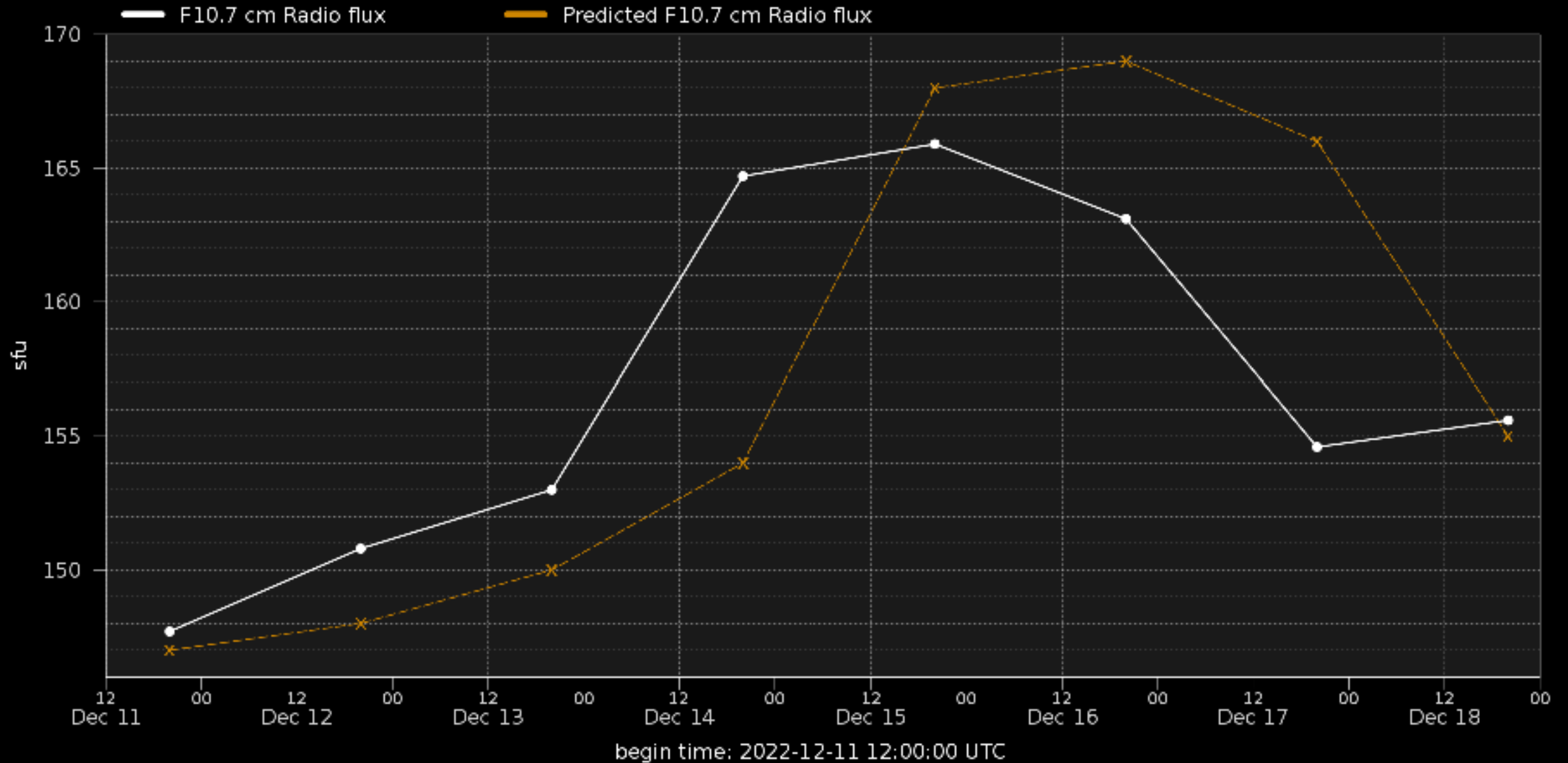
SDO/AIA 30.4 nm 2022-12-16

SDO/AIA AIA 304Å 2022-12-16T12:00:06.672

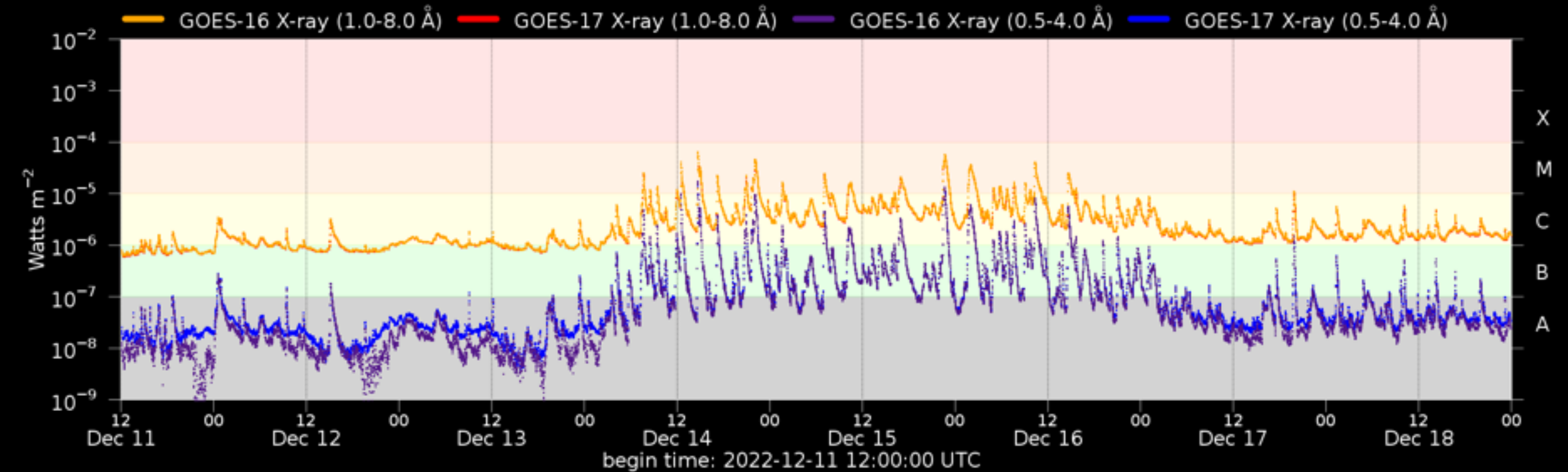




# Solar F10.7cm radio flux



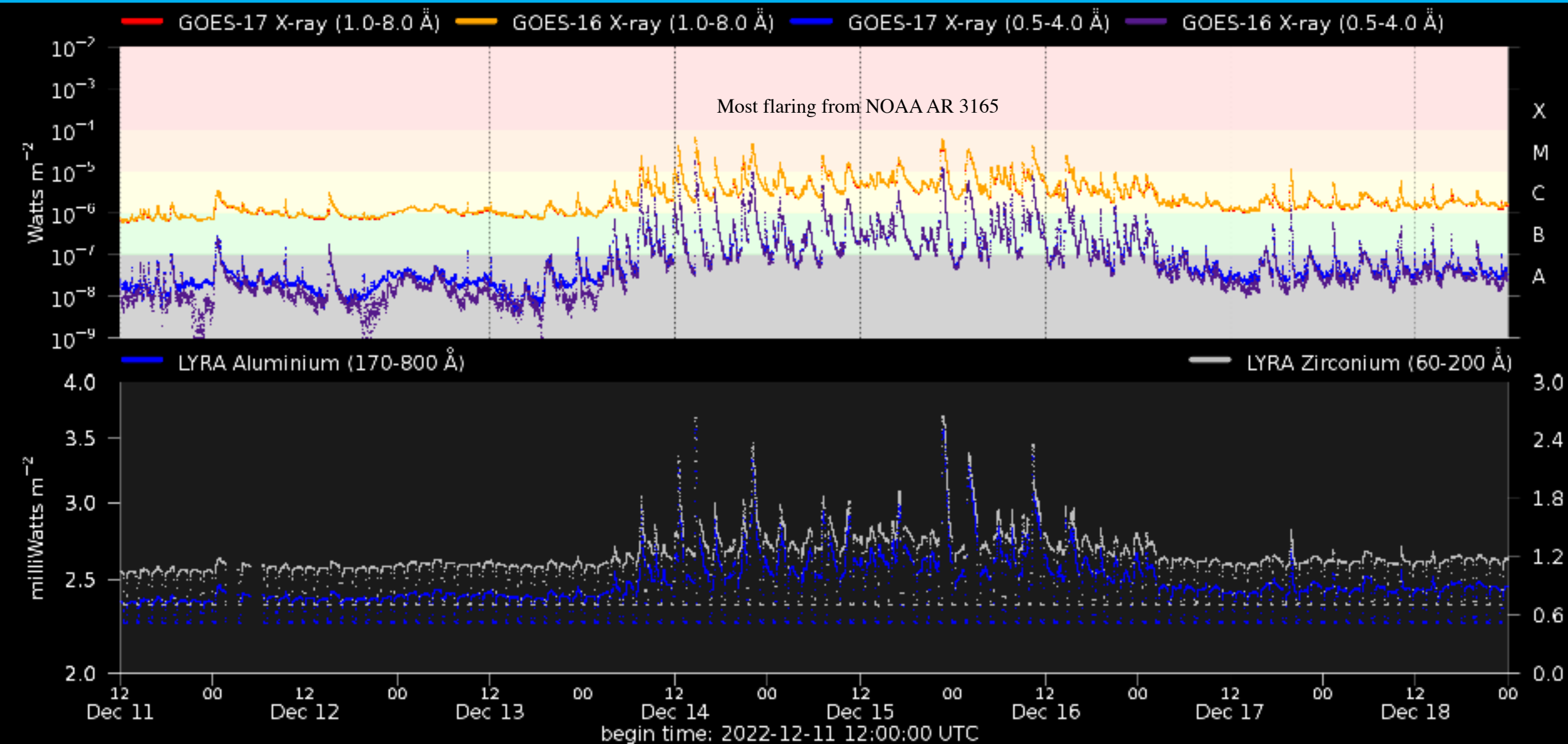
# Flaring activity



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

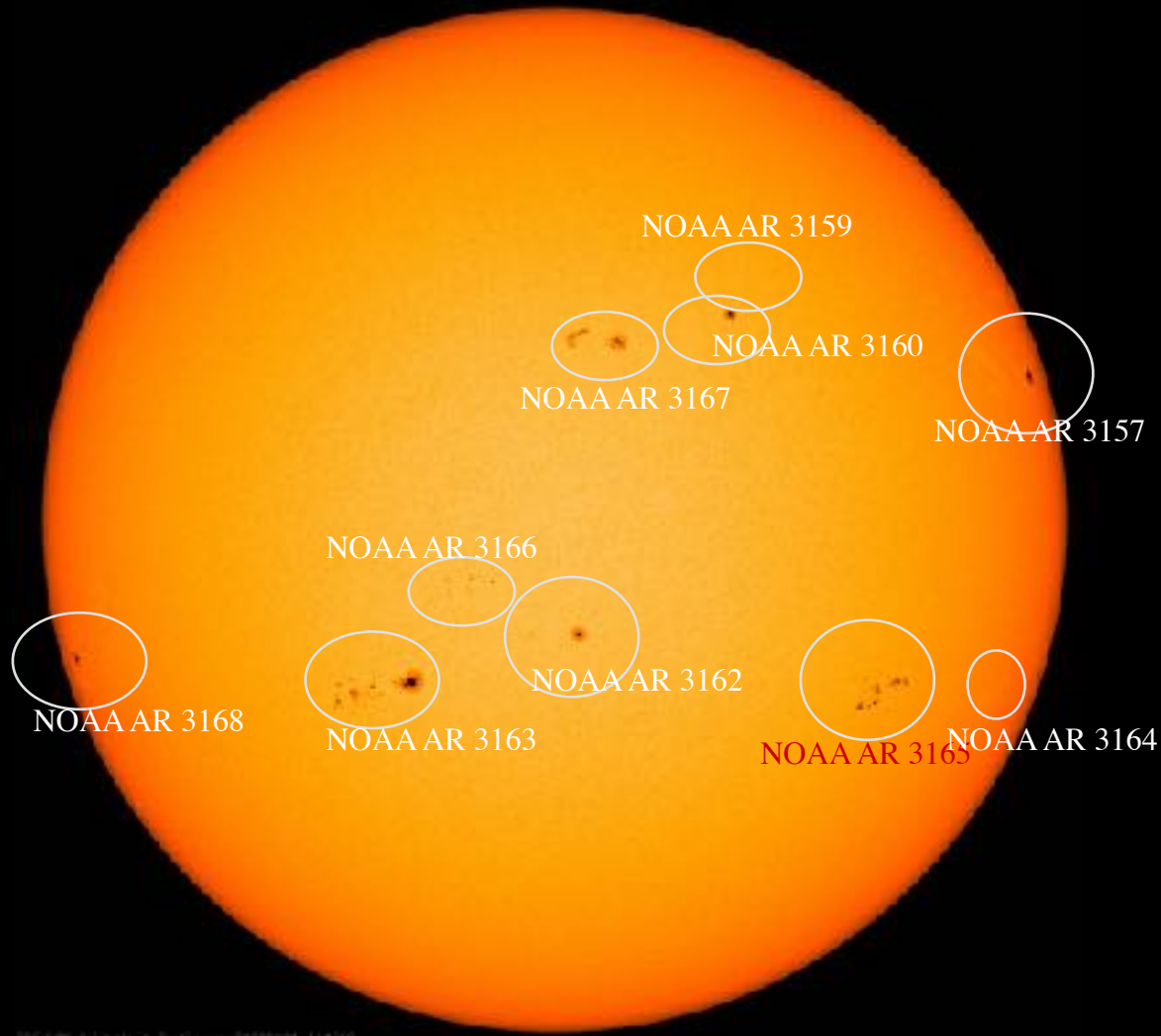
Issue date	2022-12-11	2022-12-12	NOAA AR 3165 2022-12-13	2022-12-14	2022-12-15	2022-12-16	2022-12-17	2022-12-18
Probability (%)	90 30 05	50 05 01	65 15 01	80 40 01	90 70 15	95 75 15	90 50 10	90 35 01
Observed (#)	08 00 00	03 00 00	07 03 00	03 09 00	05 11 00	12 02 00	06 01 00	04 00 00

# Solar X-Ray and UV flux

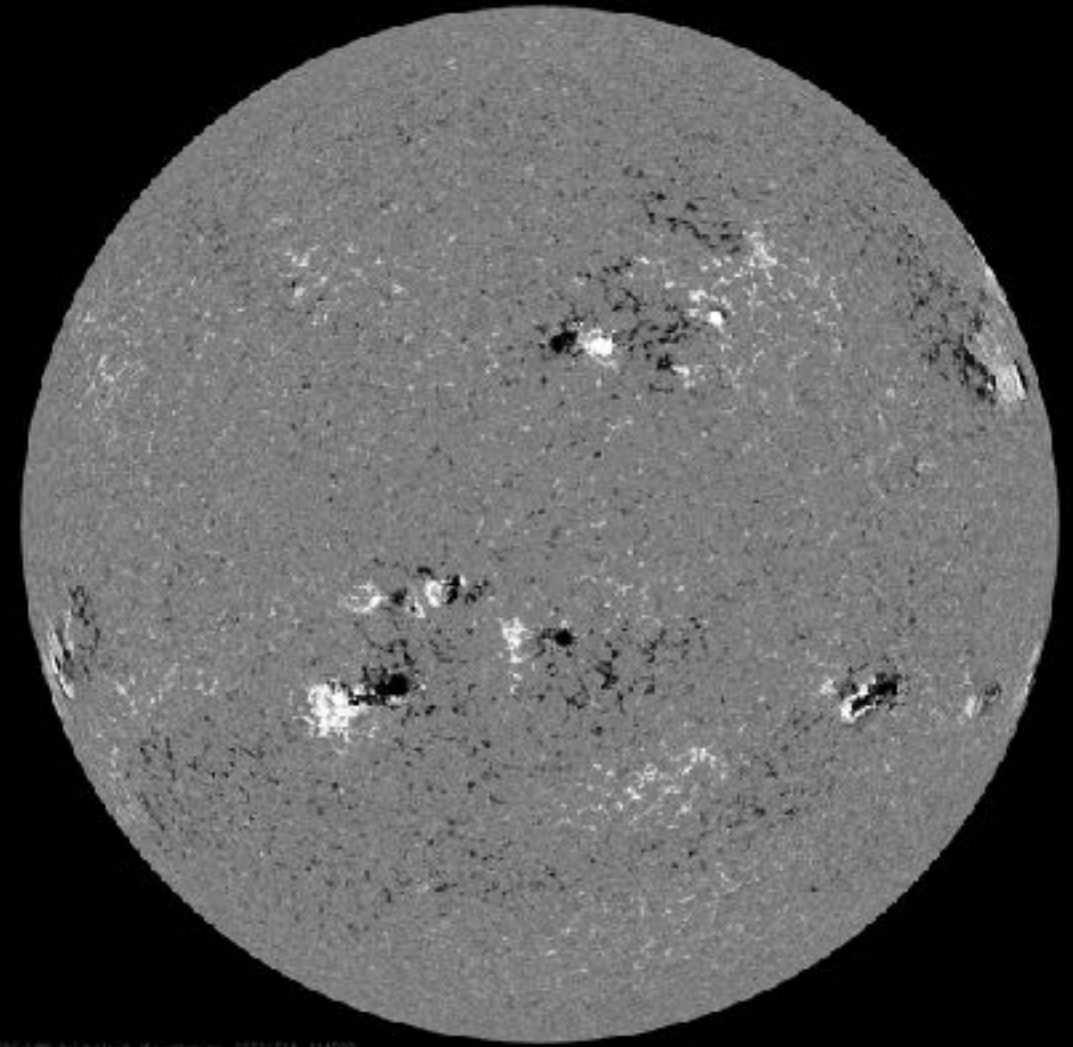


# Solar active regions

SDO/HMI White Light 2022-12-14

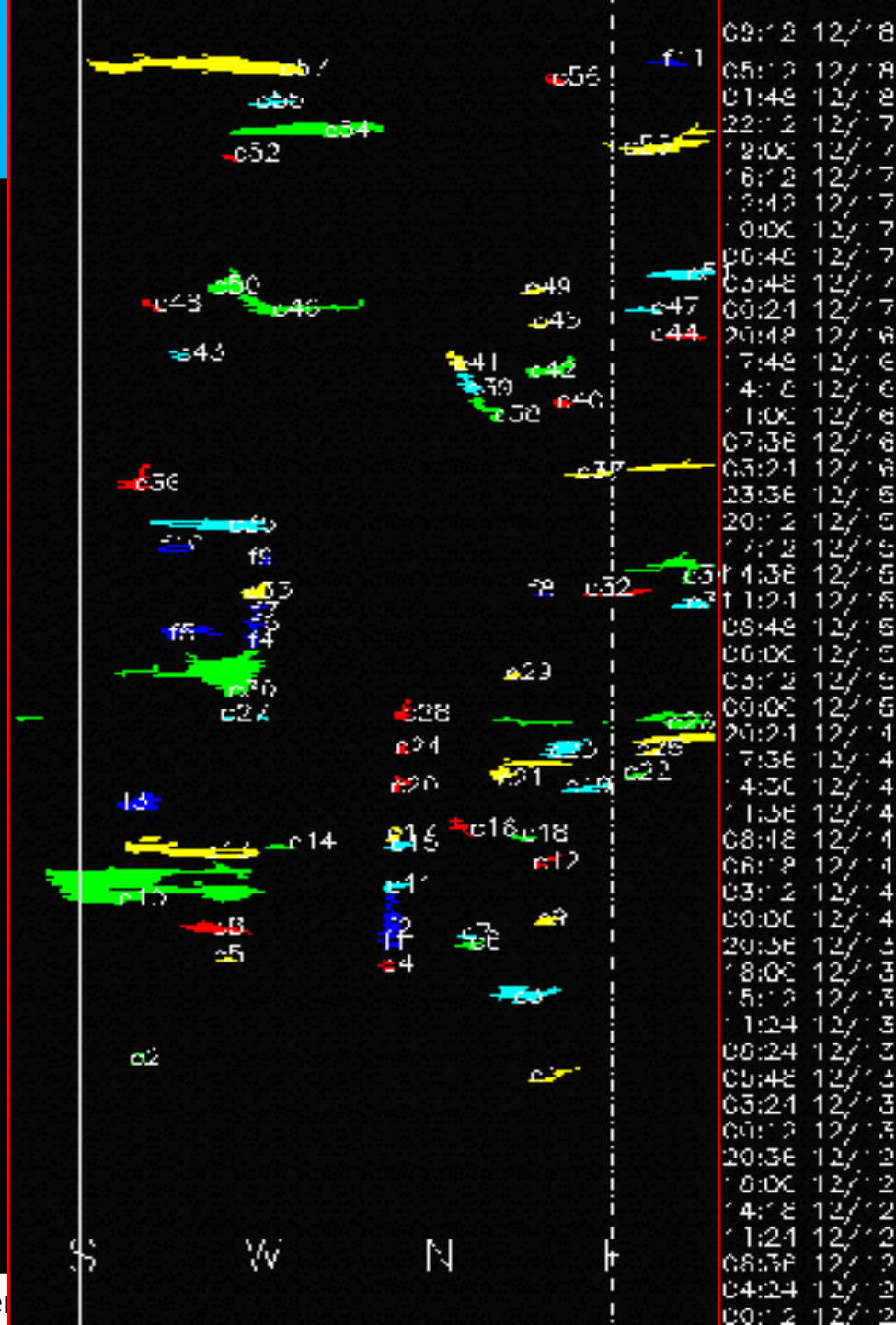


SDO/HMI Magnetogram 2022-12-14



# Coronal Mass Ejections

No Earth directed CMEs detected.



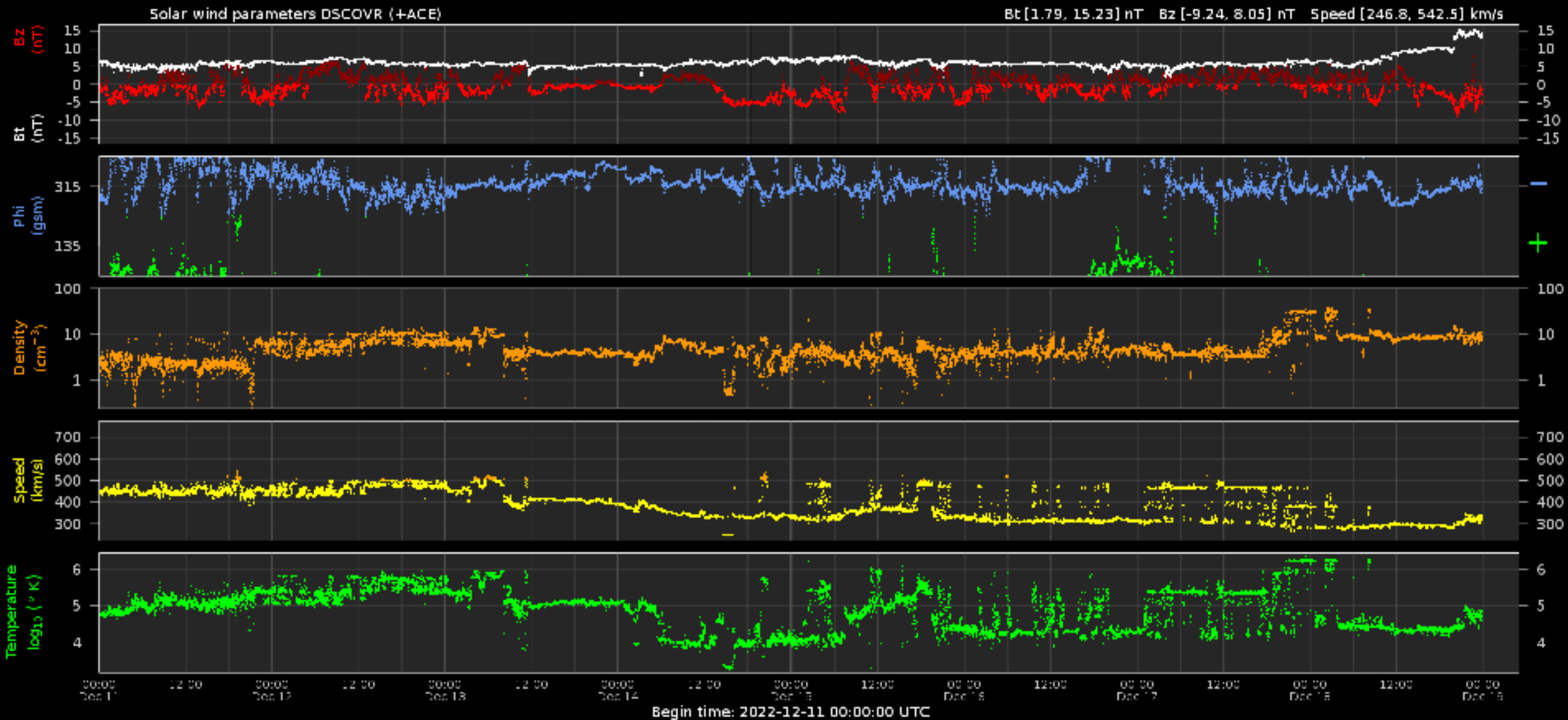
# Solar Wind and Geomagnetic Activity



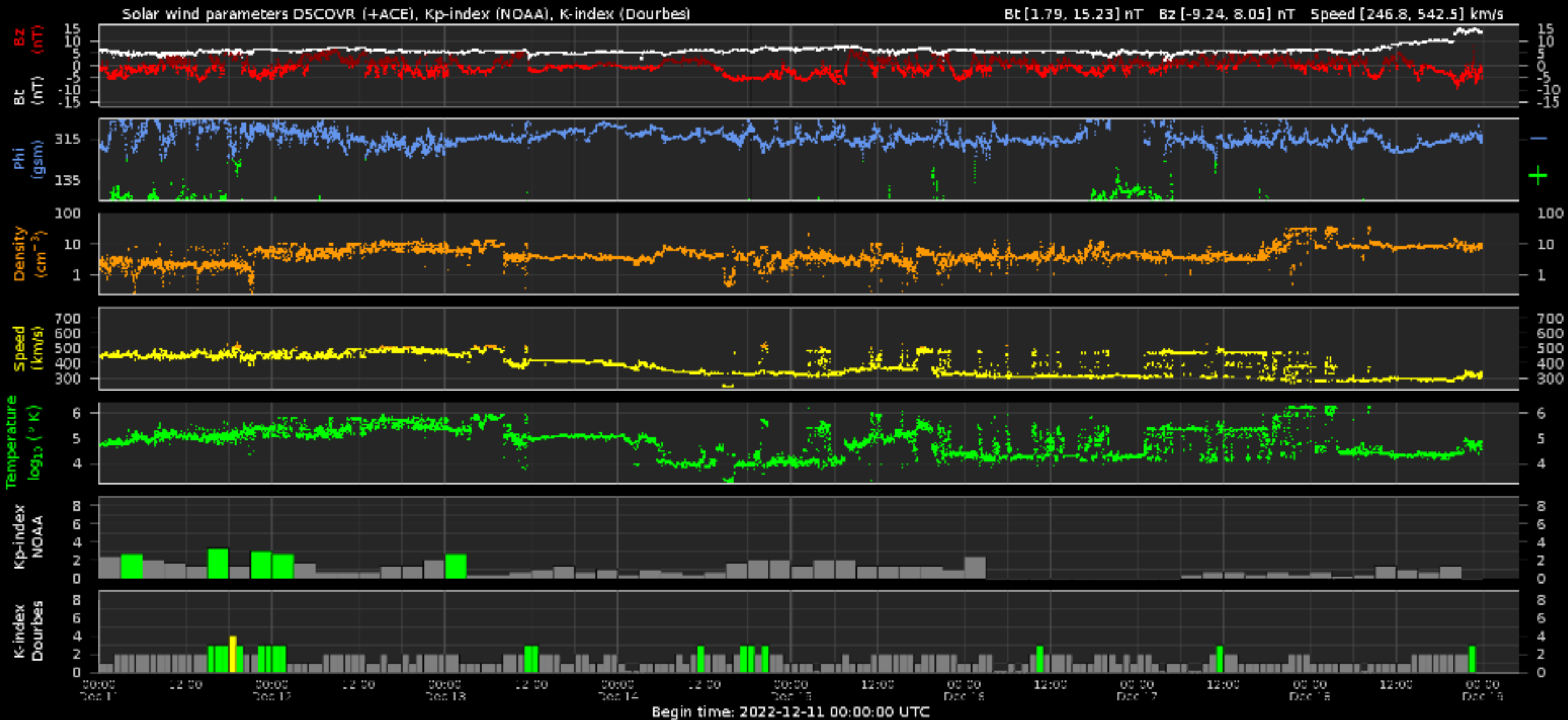
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# Solar wind parameters

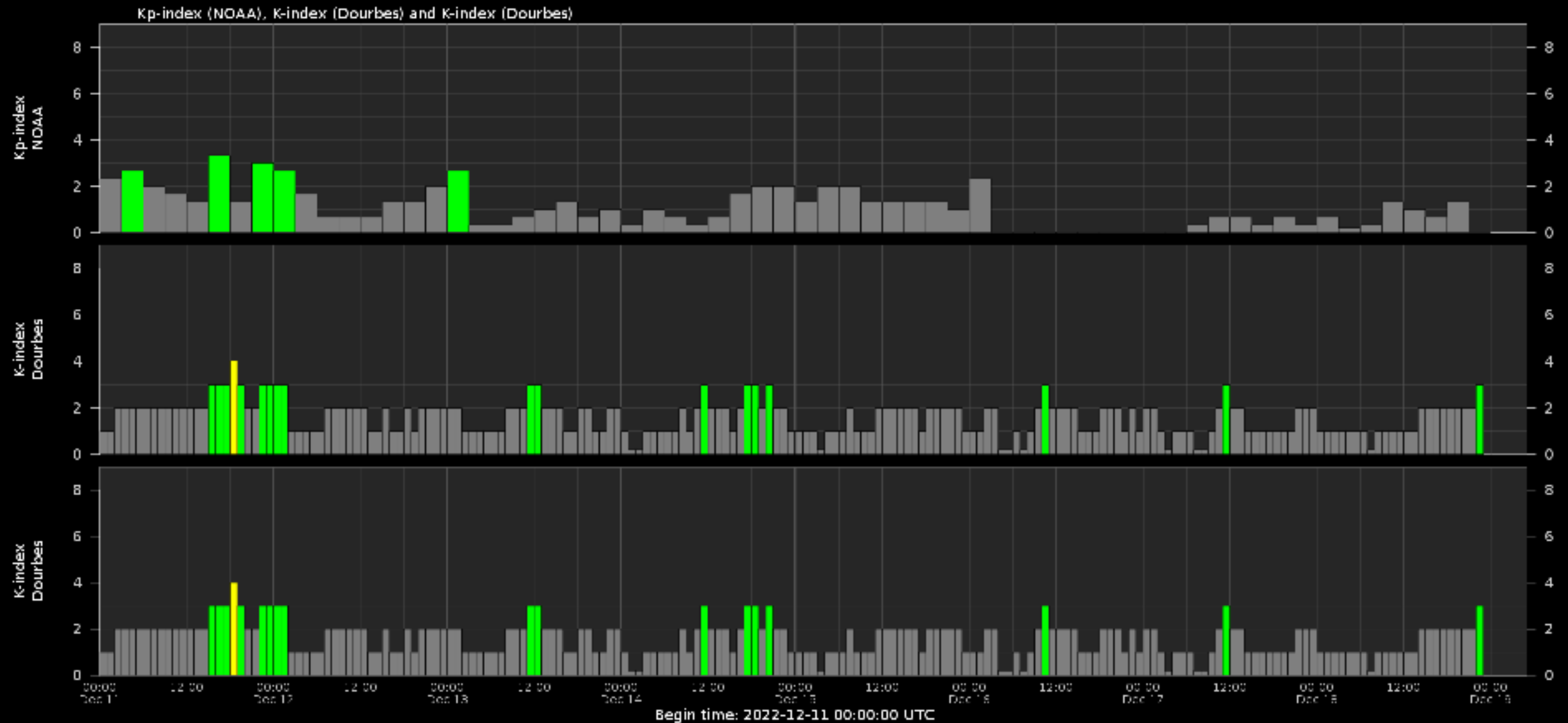


# Solar wind parameters & K-indices





# Geomagnetic activity (K-indexes)



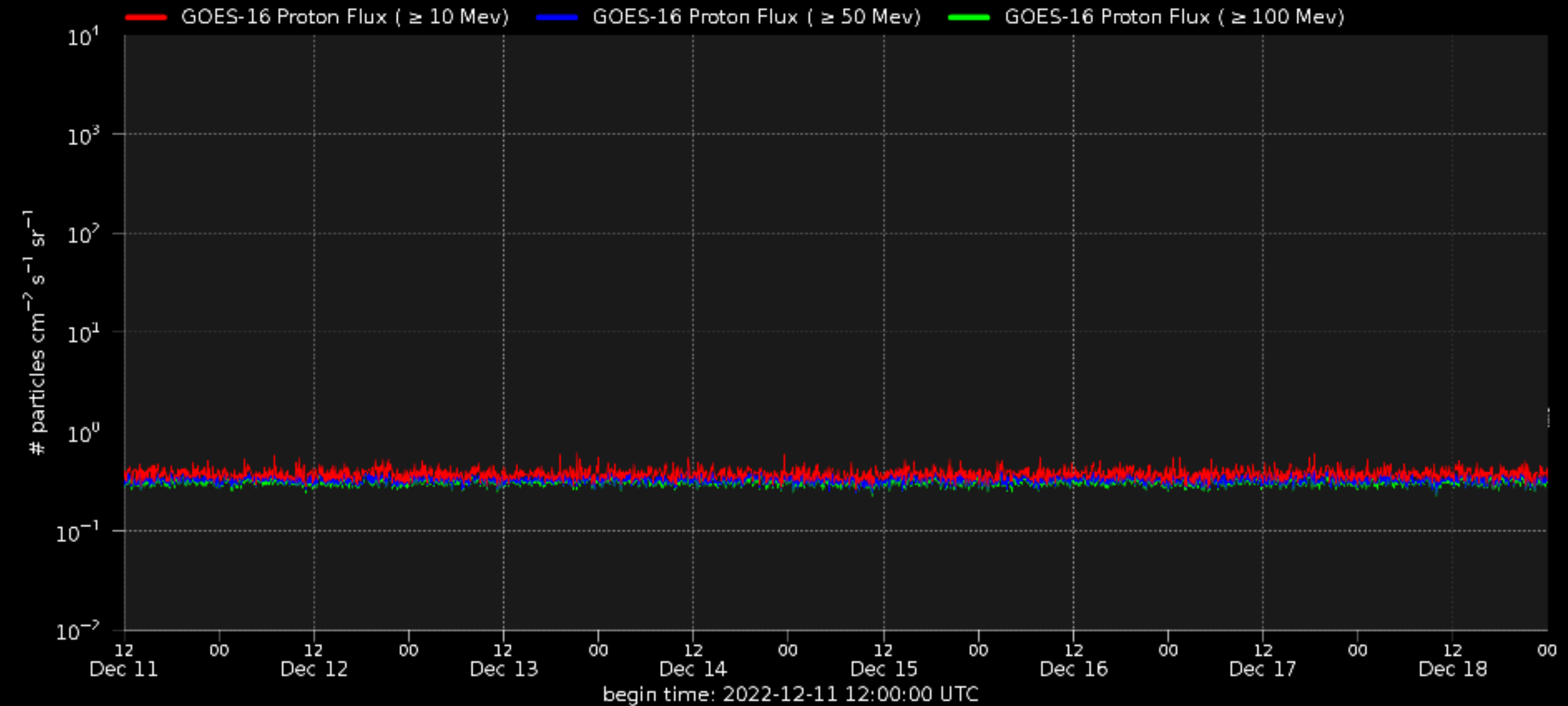
# Energetic Particles



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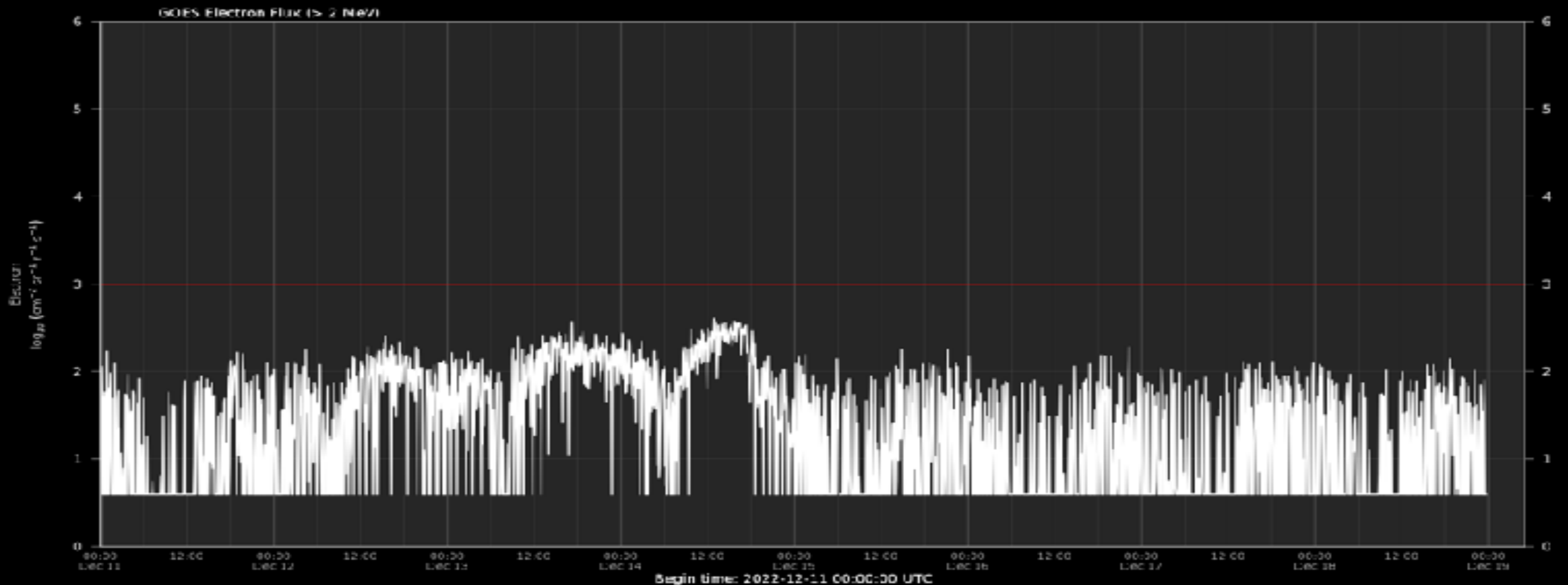
# Solar proton flux



# Electron flux at GEO

[www.stce.be/educational/classification#electrons](http://www.stce.be/educational/classification#electrons)

[www.spaceweather.gc.ca/forecast-prevision/space-spatiale/sffl-en.php](http://www.spaceweather.gc.ca/forecast-prevision/space-spatiale/sffl-en.php)



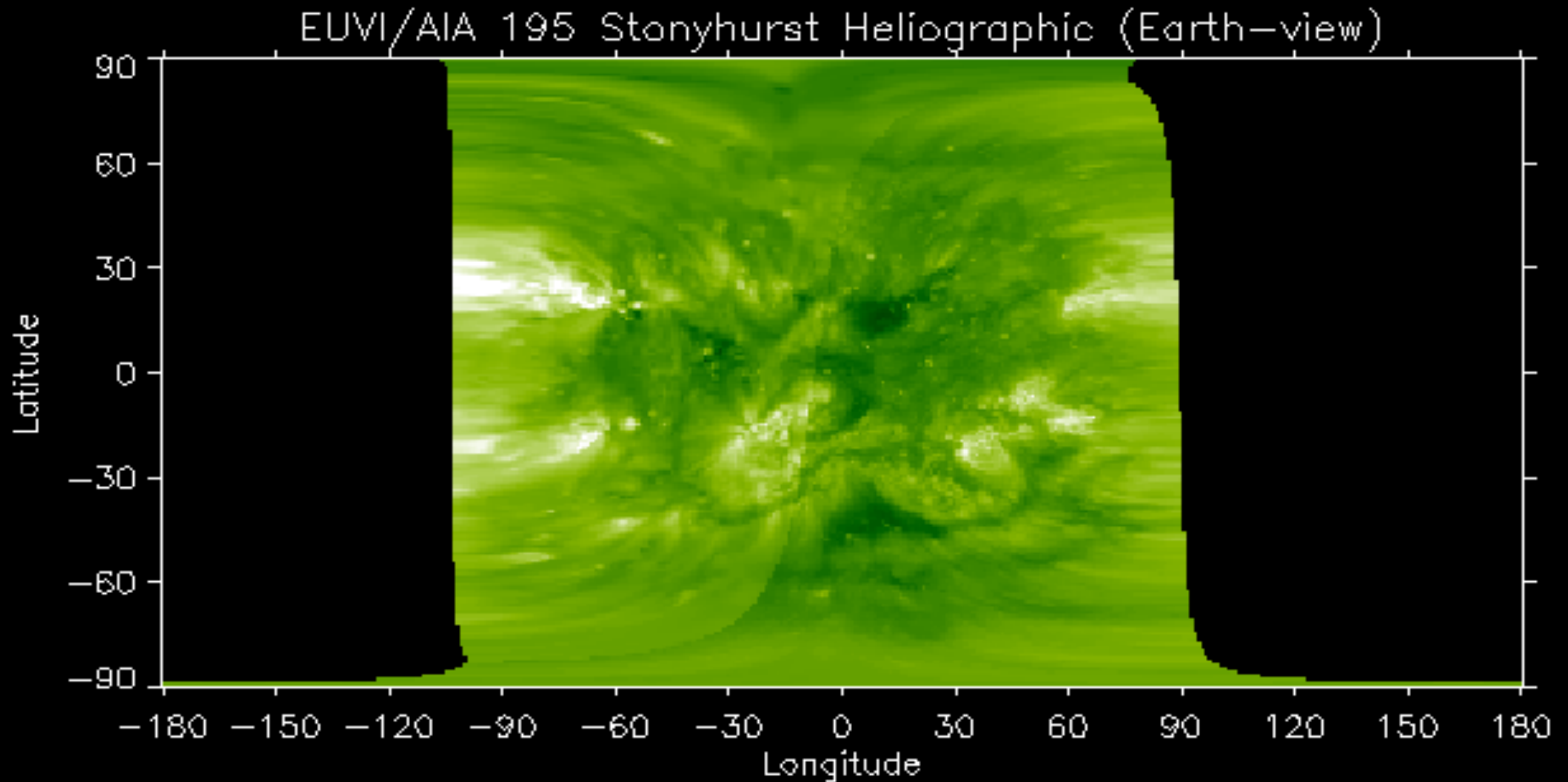
# Outlook



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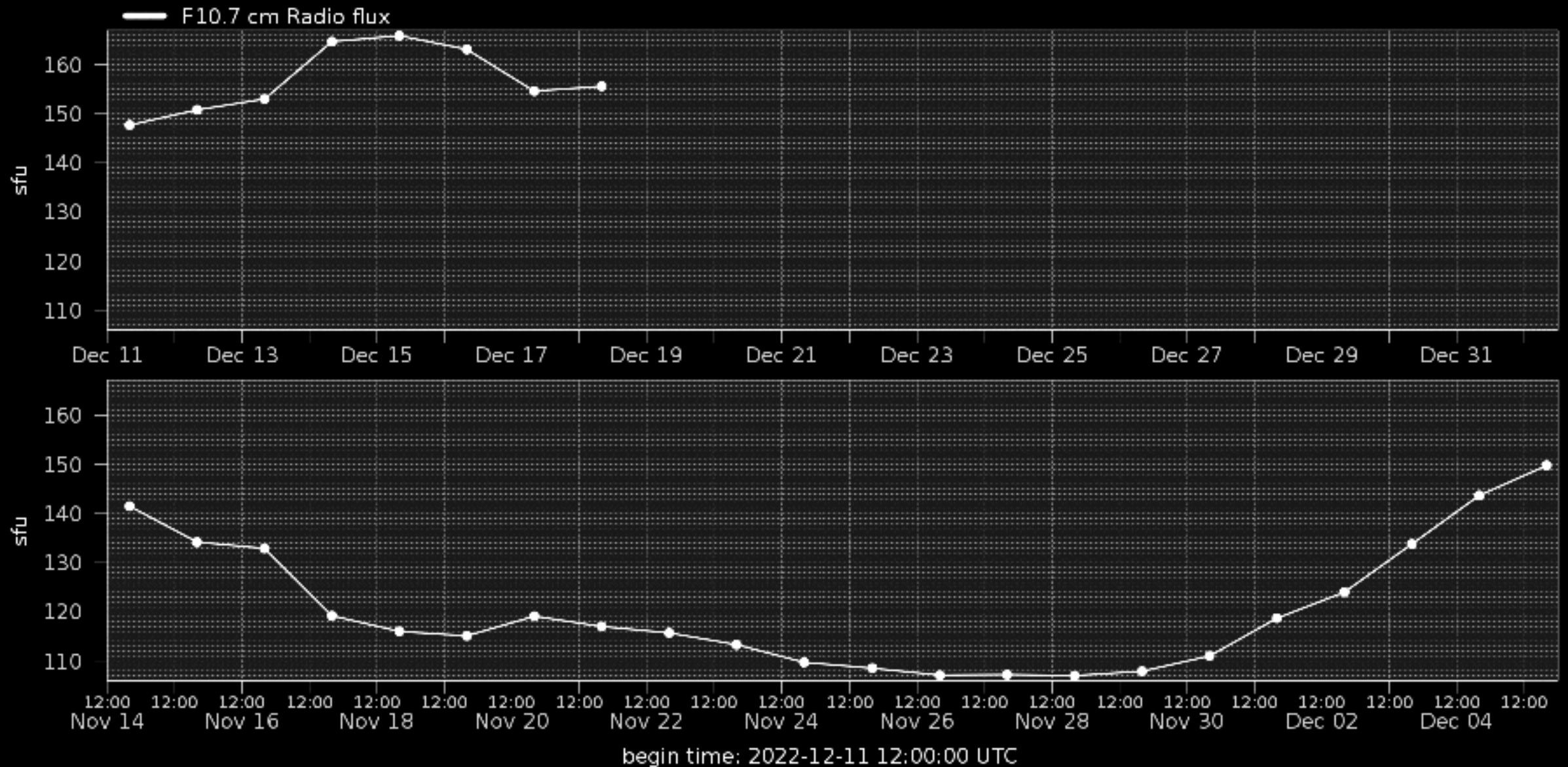
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# Outlook: Solar activity

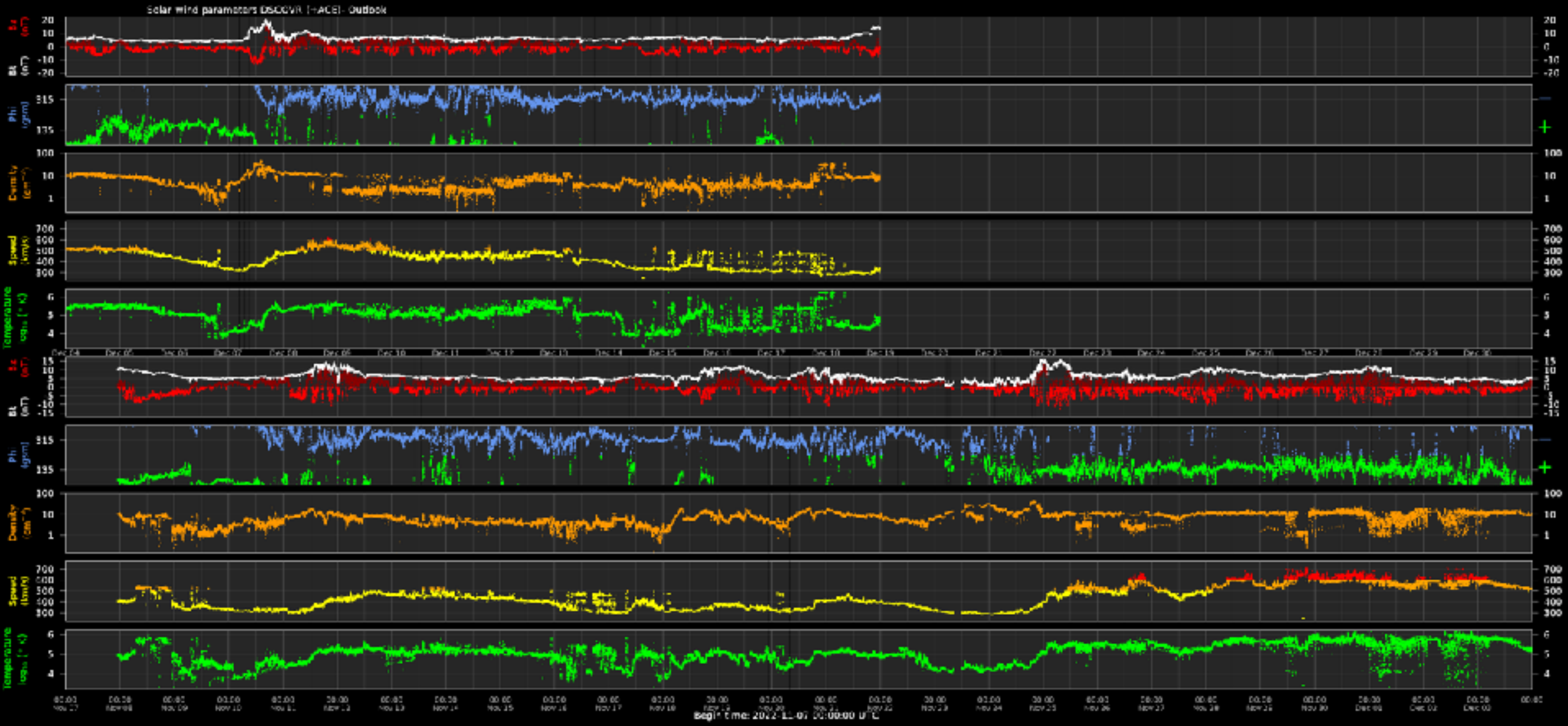


Observation date: 2022/12/18 21:35:00

# Outlook: Solar F10.7cm radio flux



# Outlook: Solar wind parameters

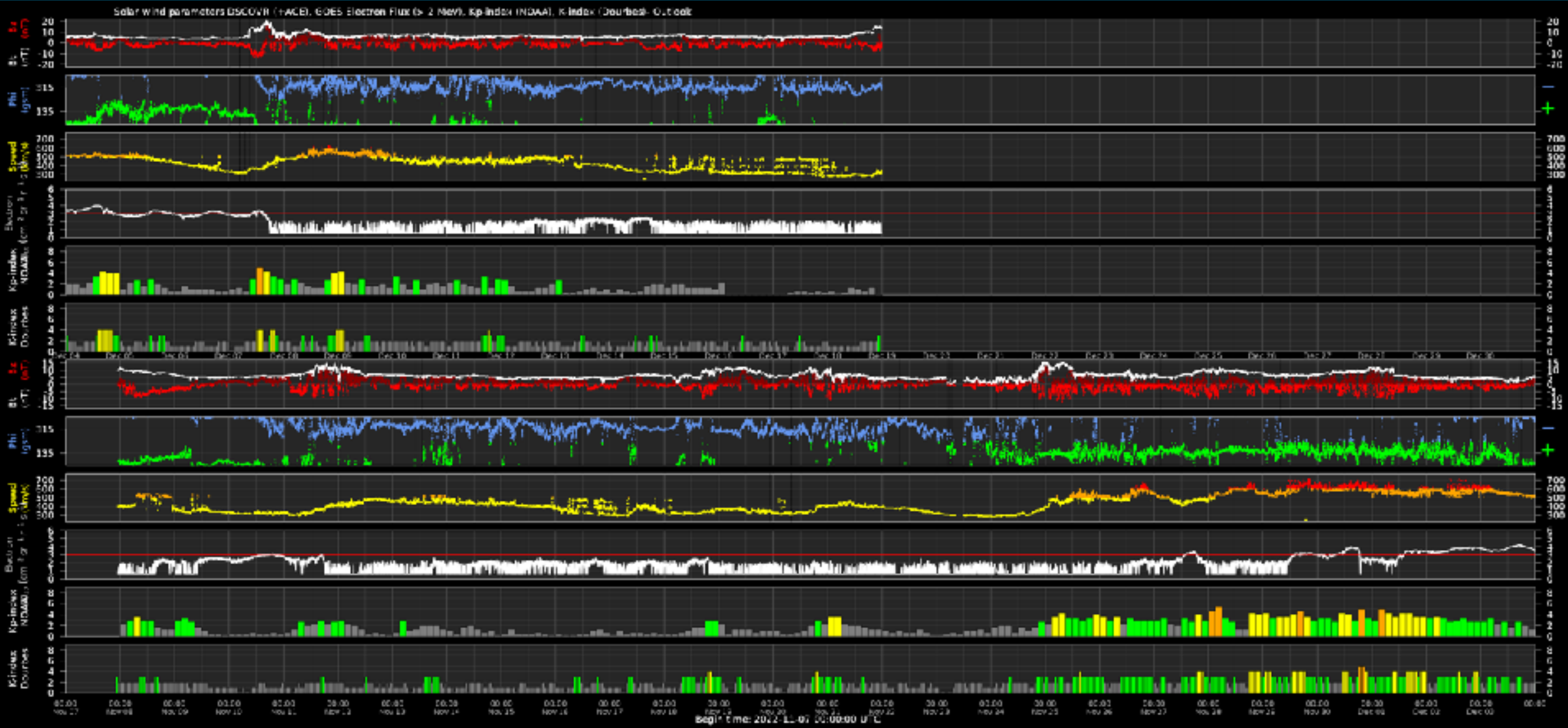




# Outlook: Geomagnetic activity



# Outlook: Electron Flux at GEO Outlook



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