

# SIDC Space Weather Briefing

28 November 2021 - 05 December 2021

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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 2021-11-28 12:00 to 2021-12-05 12:00

Active regions	NOAA ARs 2898, 2900, 2901, 2902, 2903, 2904
Flares	# C-class flare: 13 # M-class flare: 1 # X-class flare: 0
Filament eruptions	Multiple filament eruptions observed.
Coronal Holes	Three positive polarity CHs that influenced the Earth

Proton flux	Nominal
Electron flux	Flux exceeded the 1000 pfu alert threshold. Fluence reached moderate levels.

Solar wind and geomagnetic conditions

ICME	None observed
SW Conditions	B : 0.8 - 15.54 nT // Bz: -13.12 nT to 9.25 nT // Speed: 327.6 - 576.6km/s
K-indices	max K-index (K_Bel): 4 max Kp-index (NOAA): 5

All Quiet Alert: Off all week

# Solar Activity

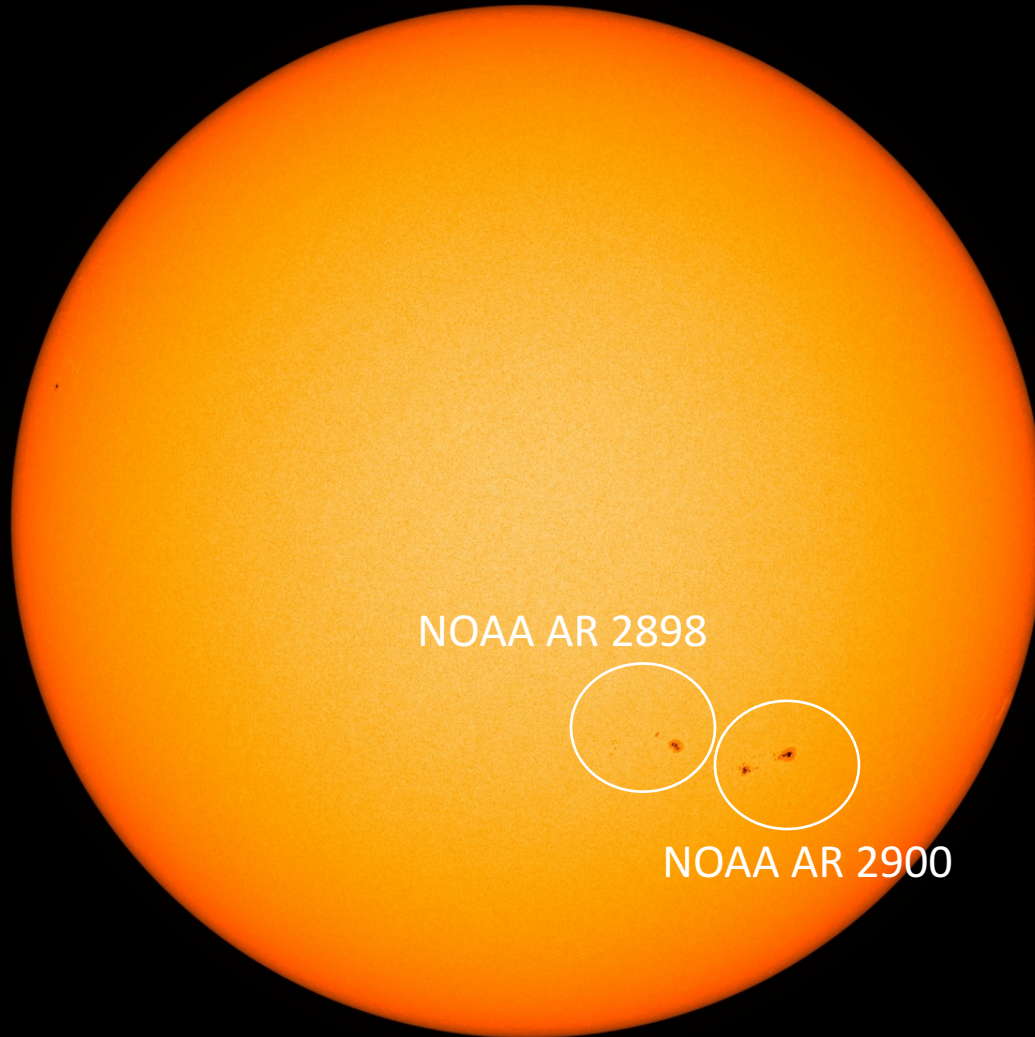


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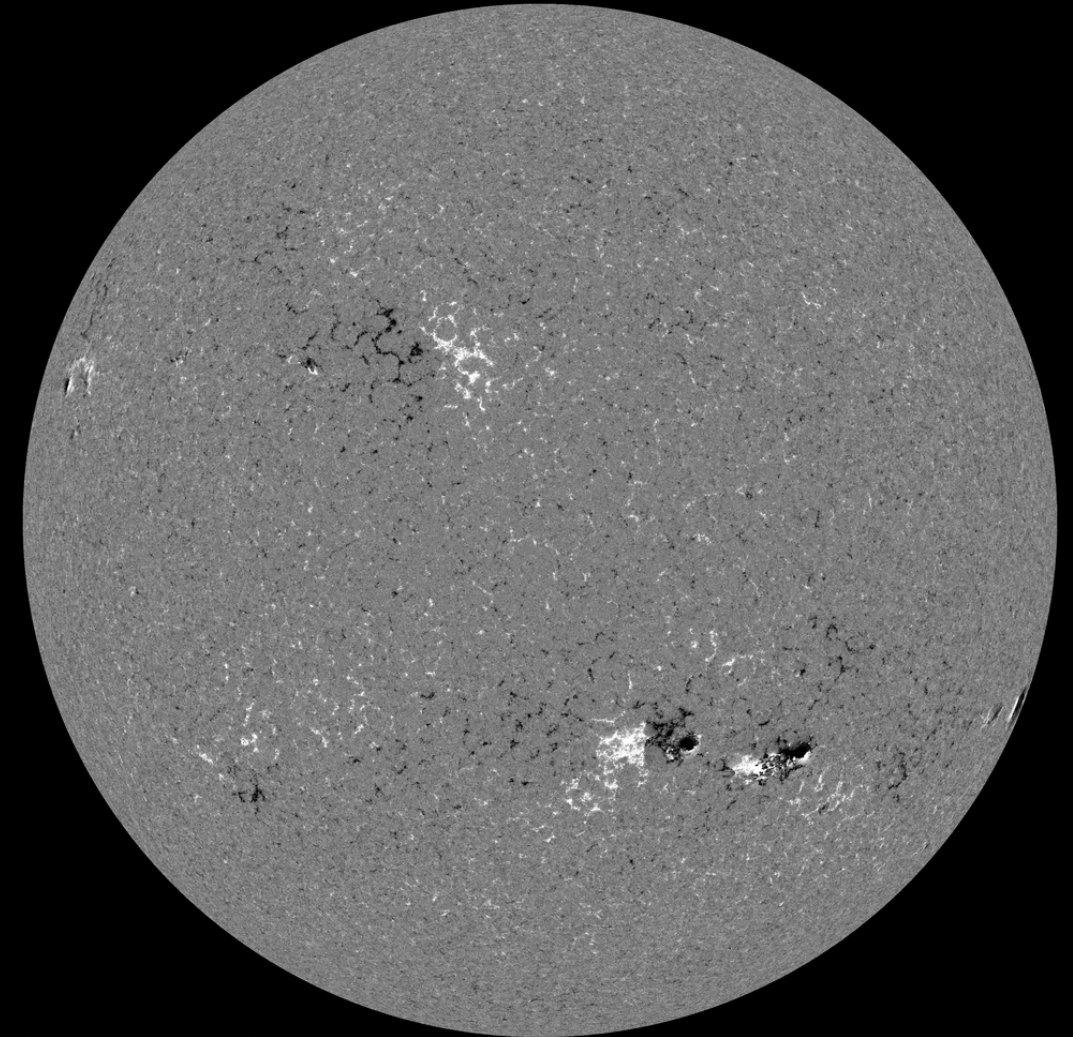
# Solar active regions

SDO/HMI White Light 2021-11-28



SDO/HMI Quick-Look Continuum: 20211128\_114500

SDO/HMI Magnetogram 2021-11-28

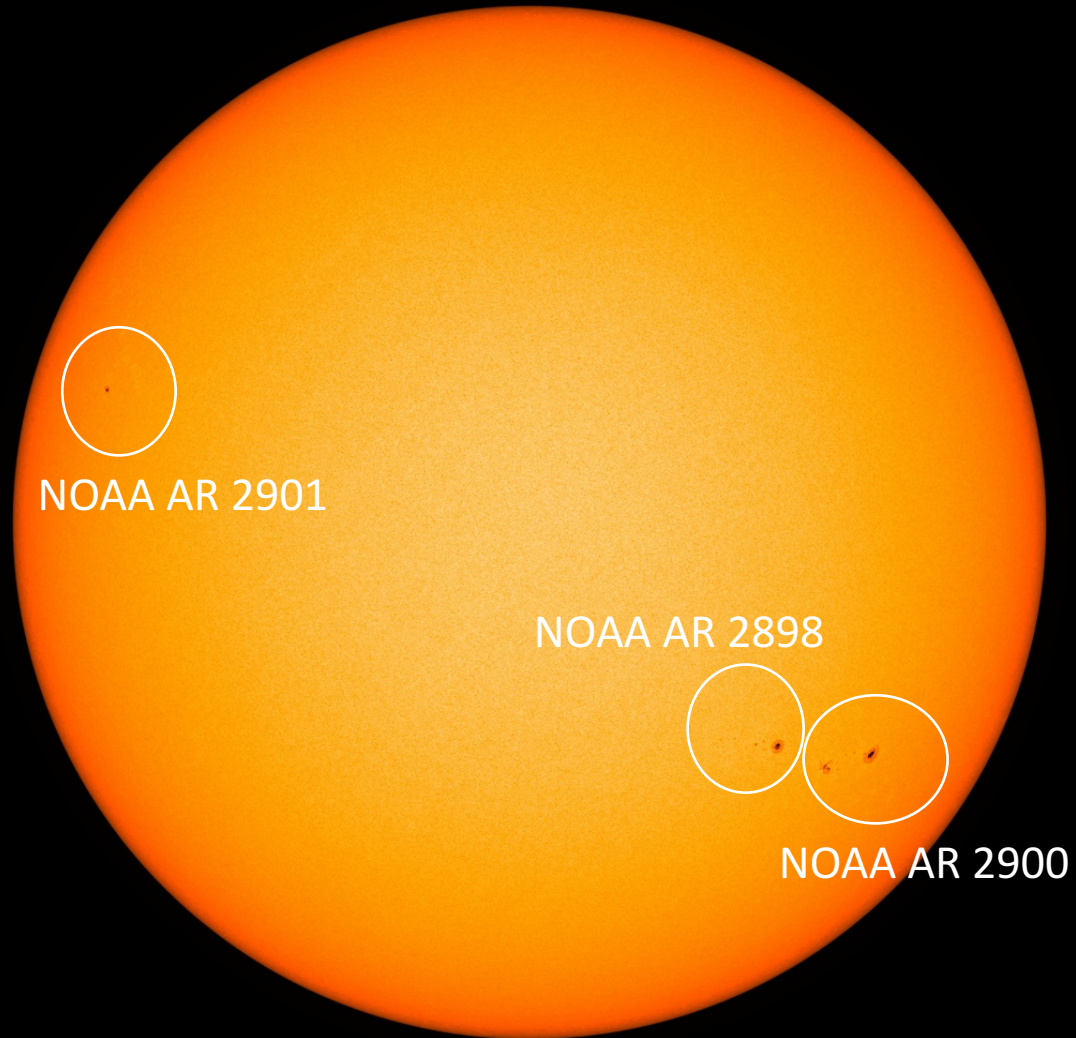


SDO/HMI Quick-Look Magnetogram: 20211128\_114500



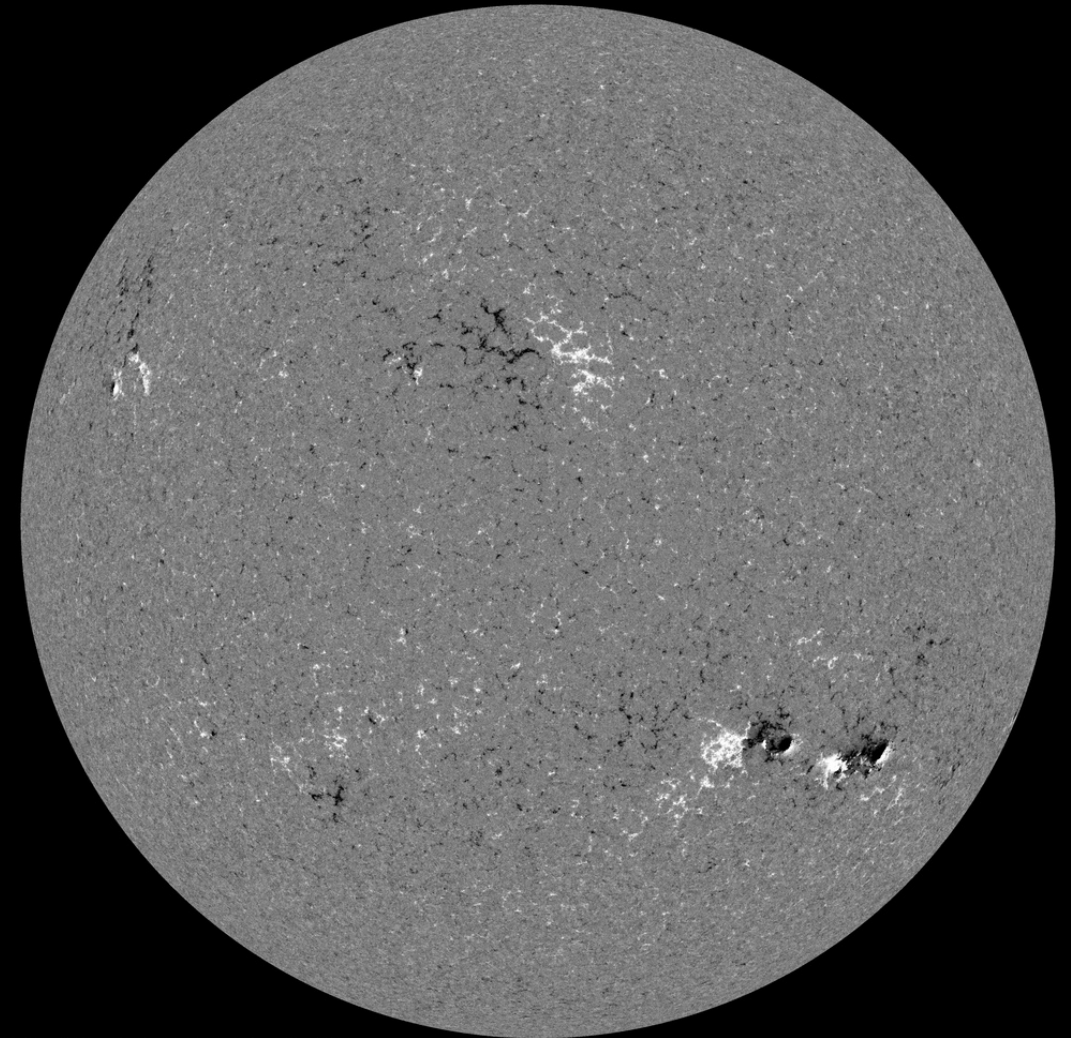
# Solar active regions

SDO/HMI White Light 2021-11-29



SDO/HMI Quick-Look Continuum: 20211129\_114500

SDO/HMI Magnetogram 2021-11-29

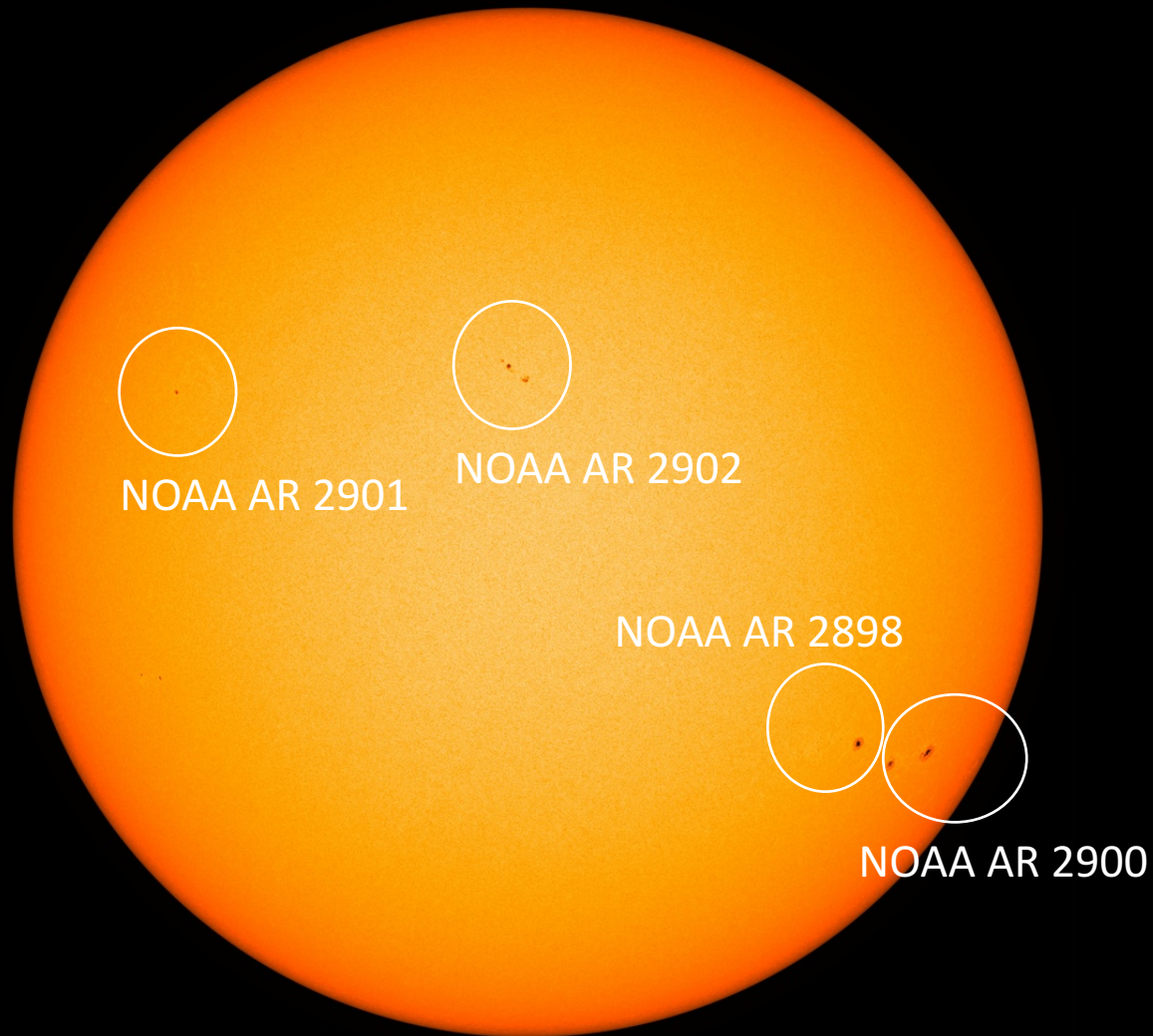


SDO/HMI Quick-Look Magnetogram: 20211129\_114500



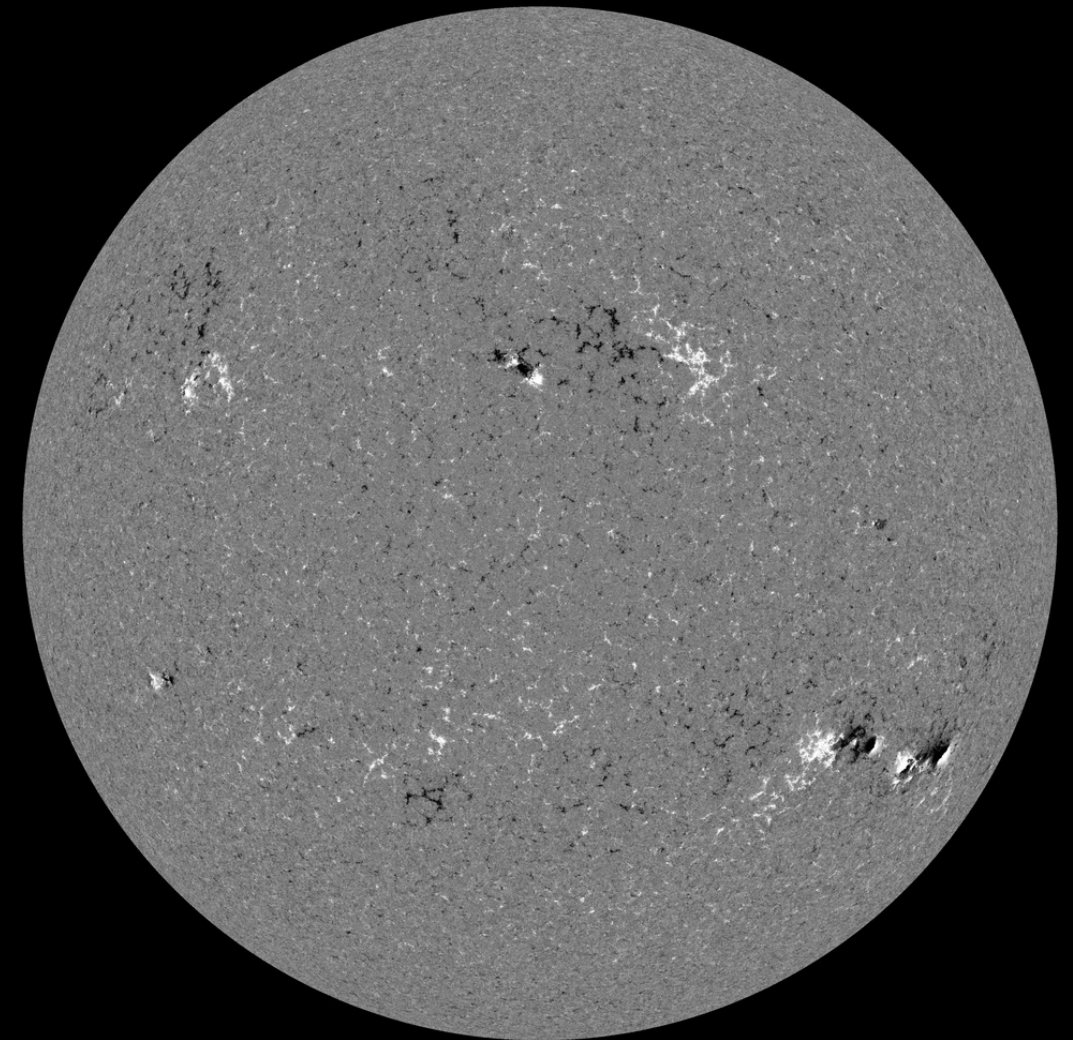
# Solar active regions

SDO/HMI White Light 2021-11-30



SDO/HMI Quick-Look Continuum: 20211130\_114500

SDO/HMI Magnetogram 2021-11-30

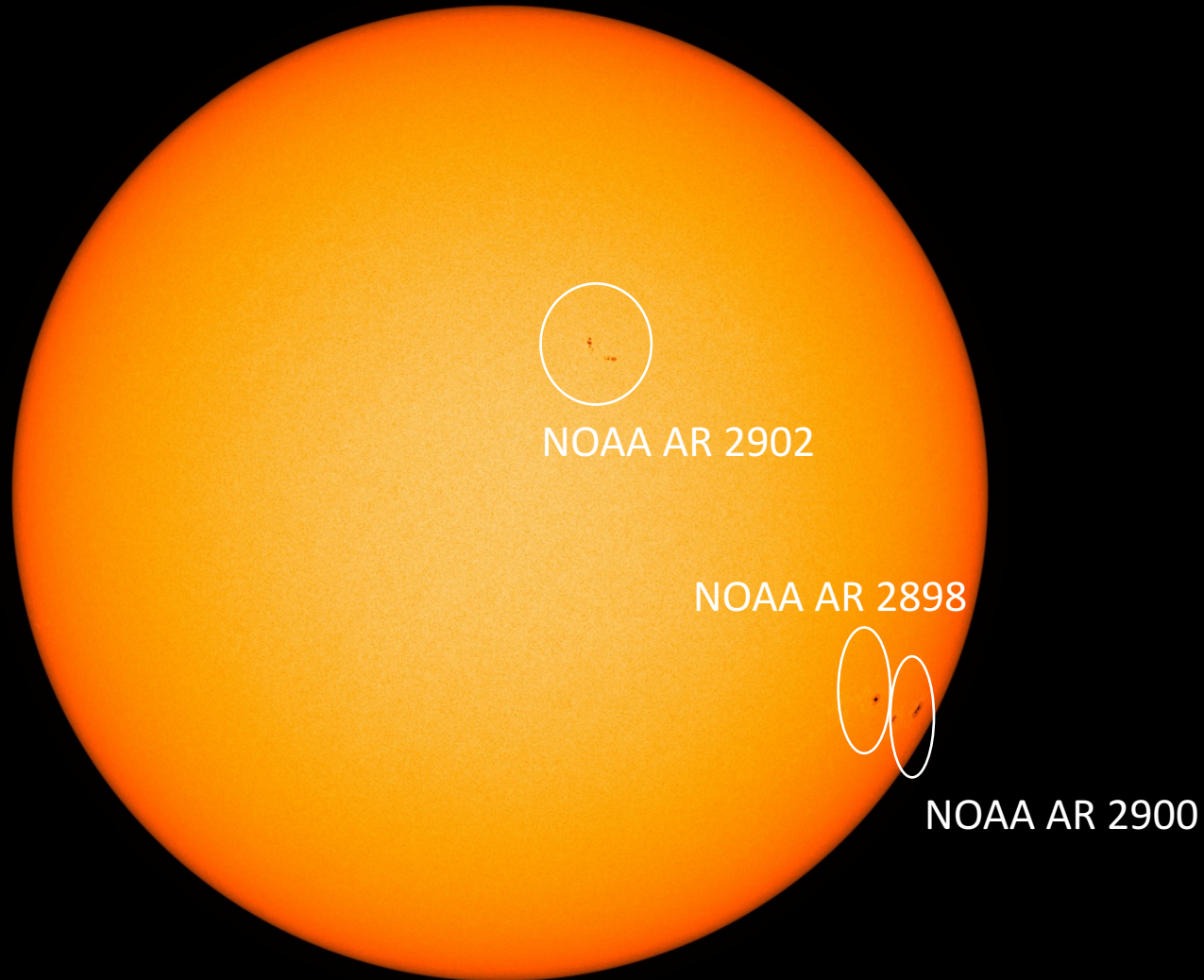


SDO/HMI Quick-Look Magnetogram: 20211130\_114500



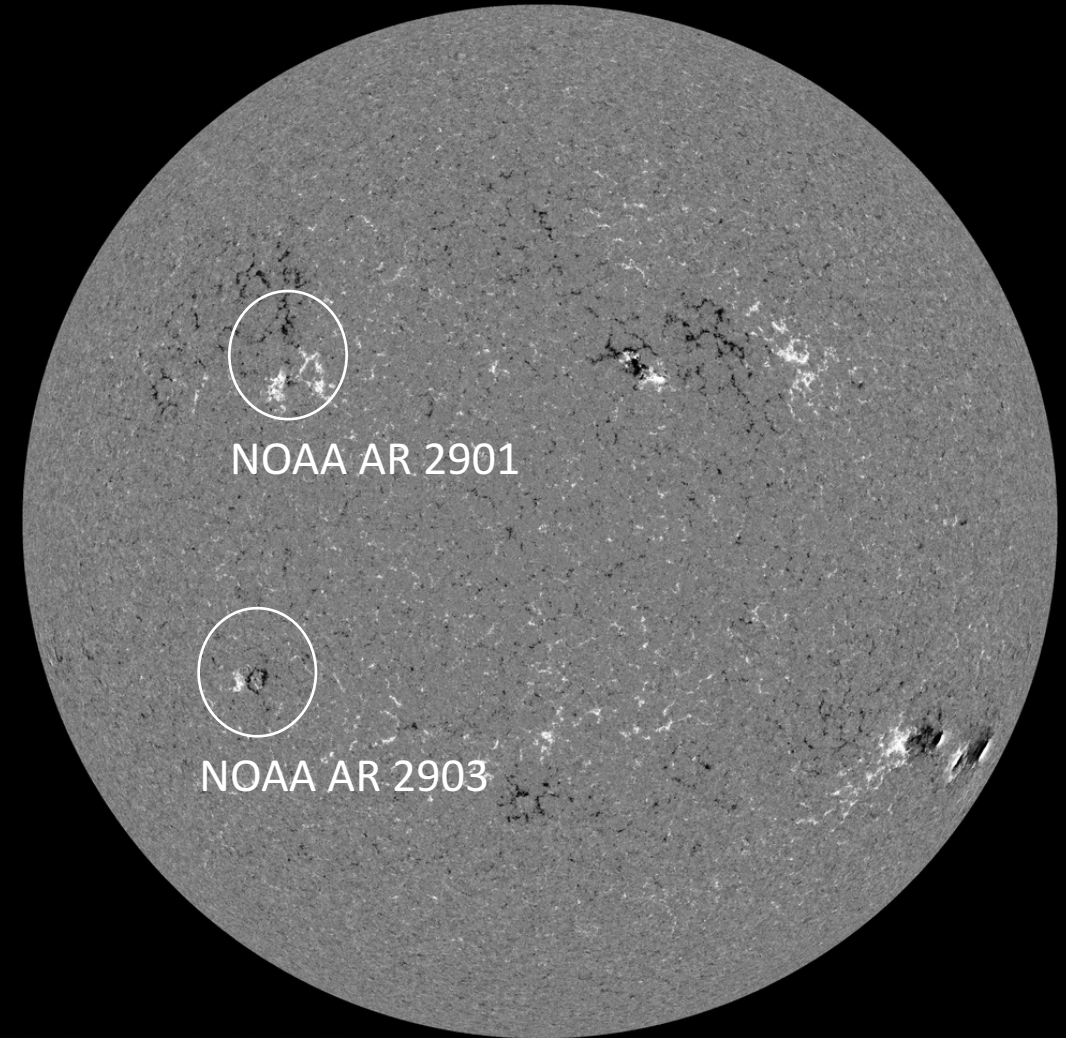
# Solar active regions

SDO/HMI White Light 2021-12-01



SDO/HMI Quick-Look Continuum: 20211201\_114500

SDO/HMI Magnetogram 2021-12-01

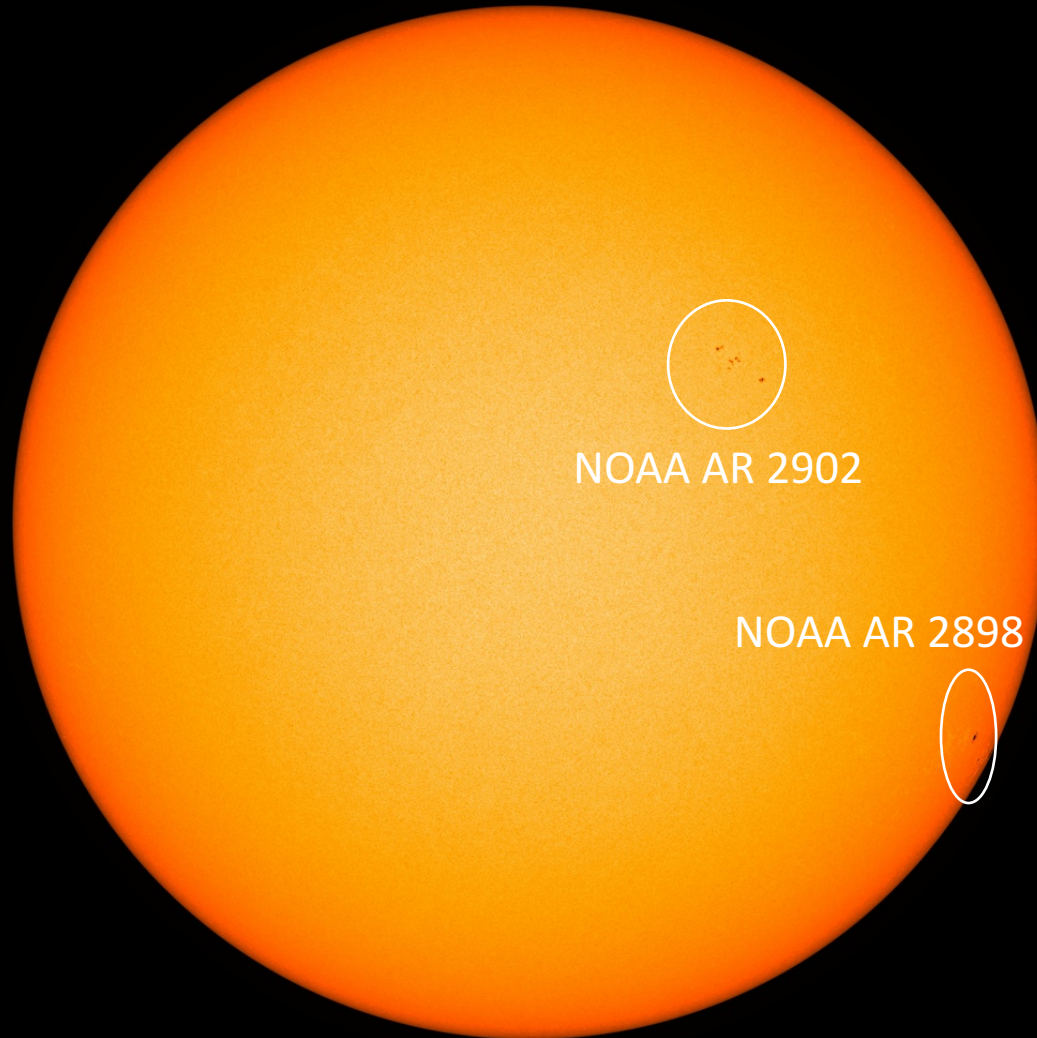


SDO/HMI Quick-Look Magnetogram: 20211201\_114500



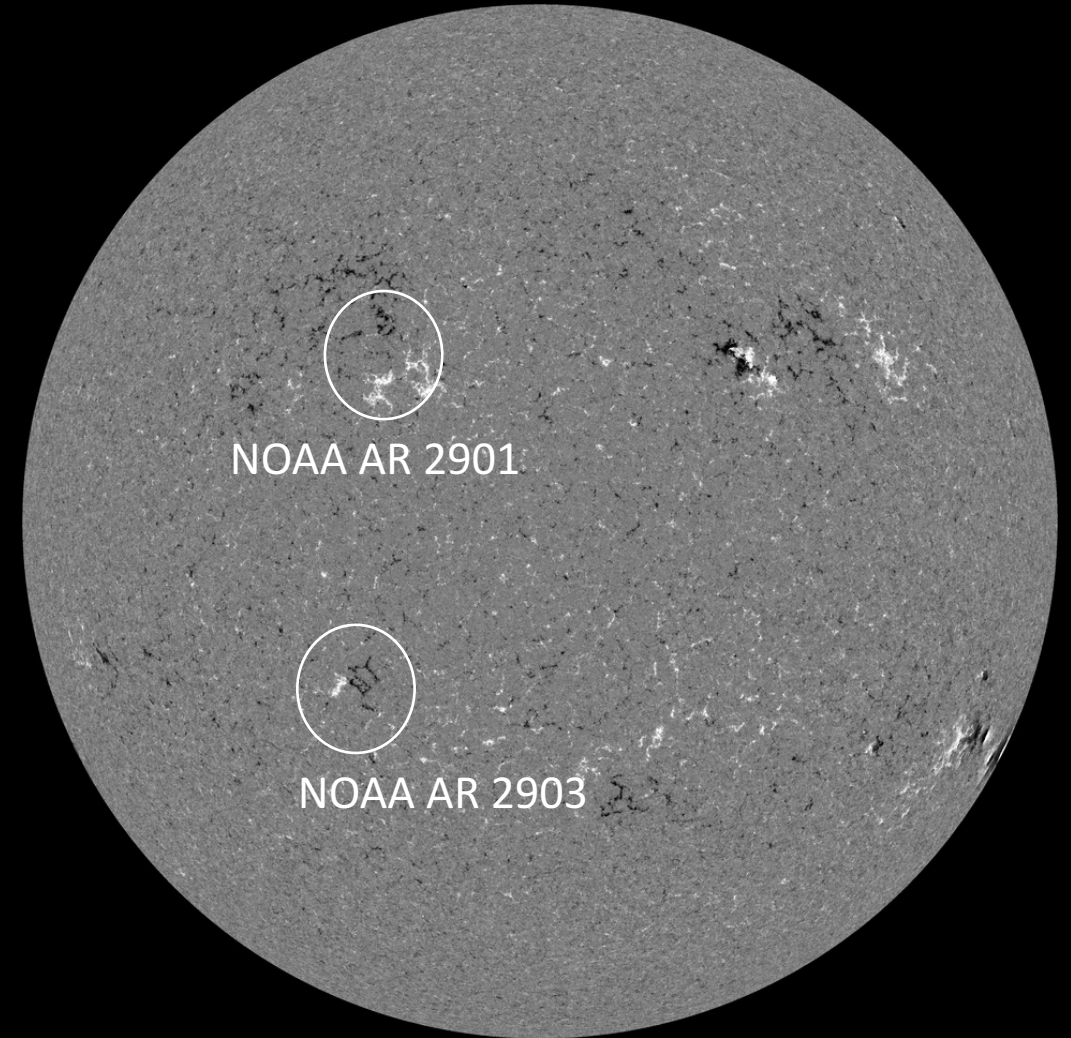
# Solar active regions

SDO/HMI White Light 2021-12-02



SDO/HMI Quick-Look Continuum: 20211202\_114500

SDO/HMI Magnetogram 2021-12-02

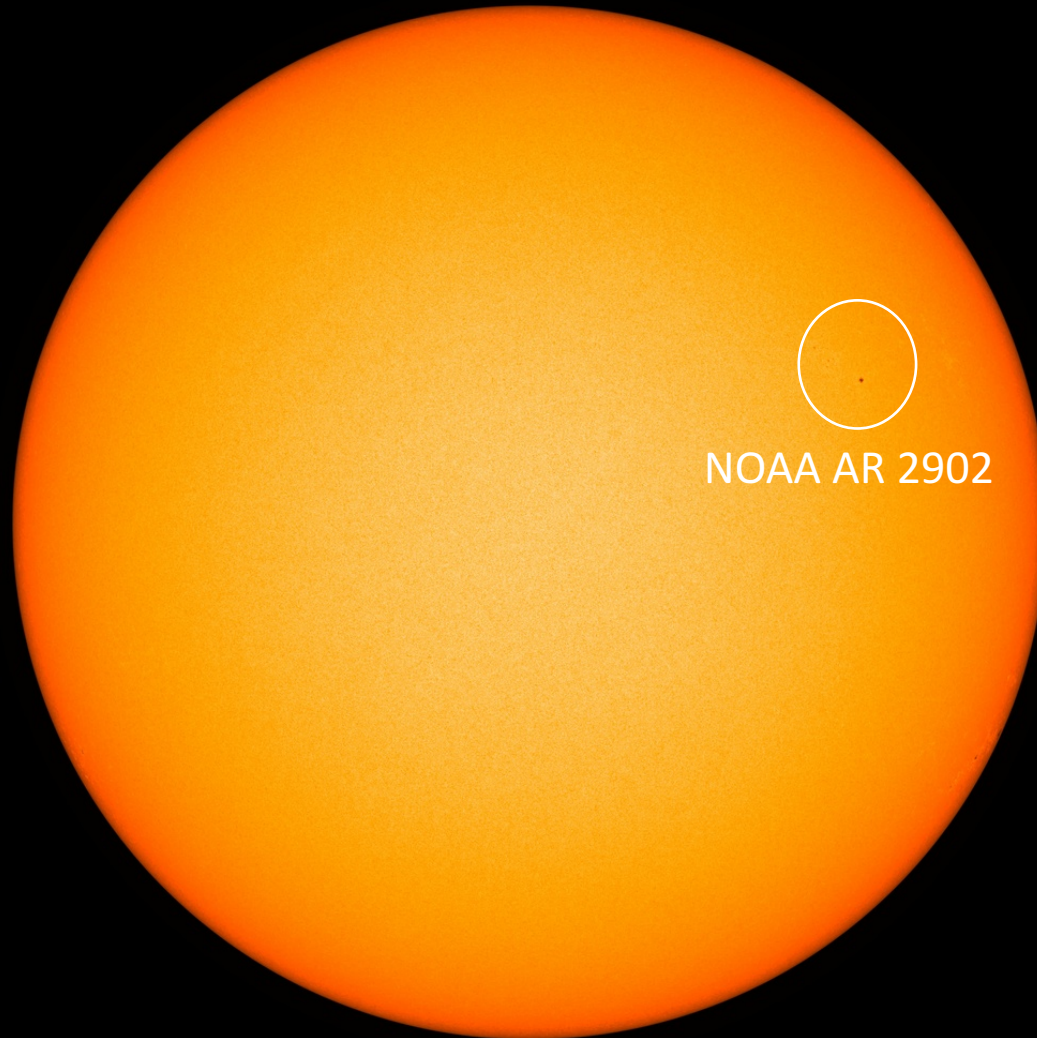


SDO/HMI Quick-Look Magnetogram: 20211202\_114500



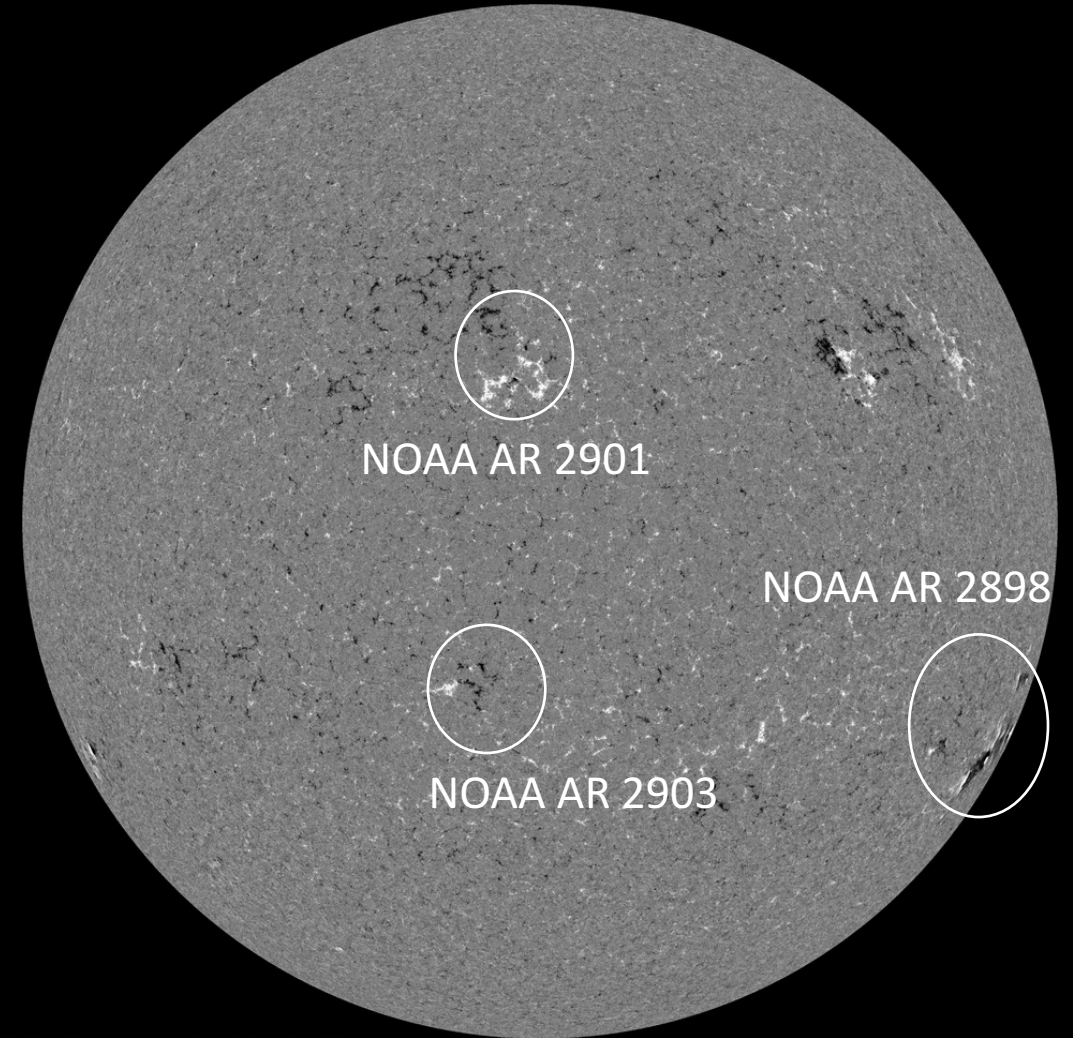
# Solar active regions

SDO/HMI White Light 2021-12-03



SDO/HMI Quick-Look Continuum: 20211203\_114500

SDO/HMI Magnetogram 2021-12-03

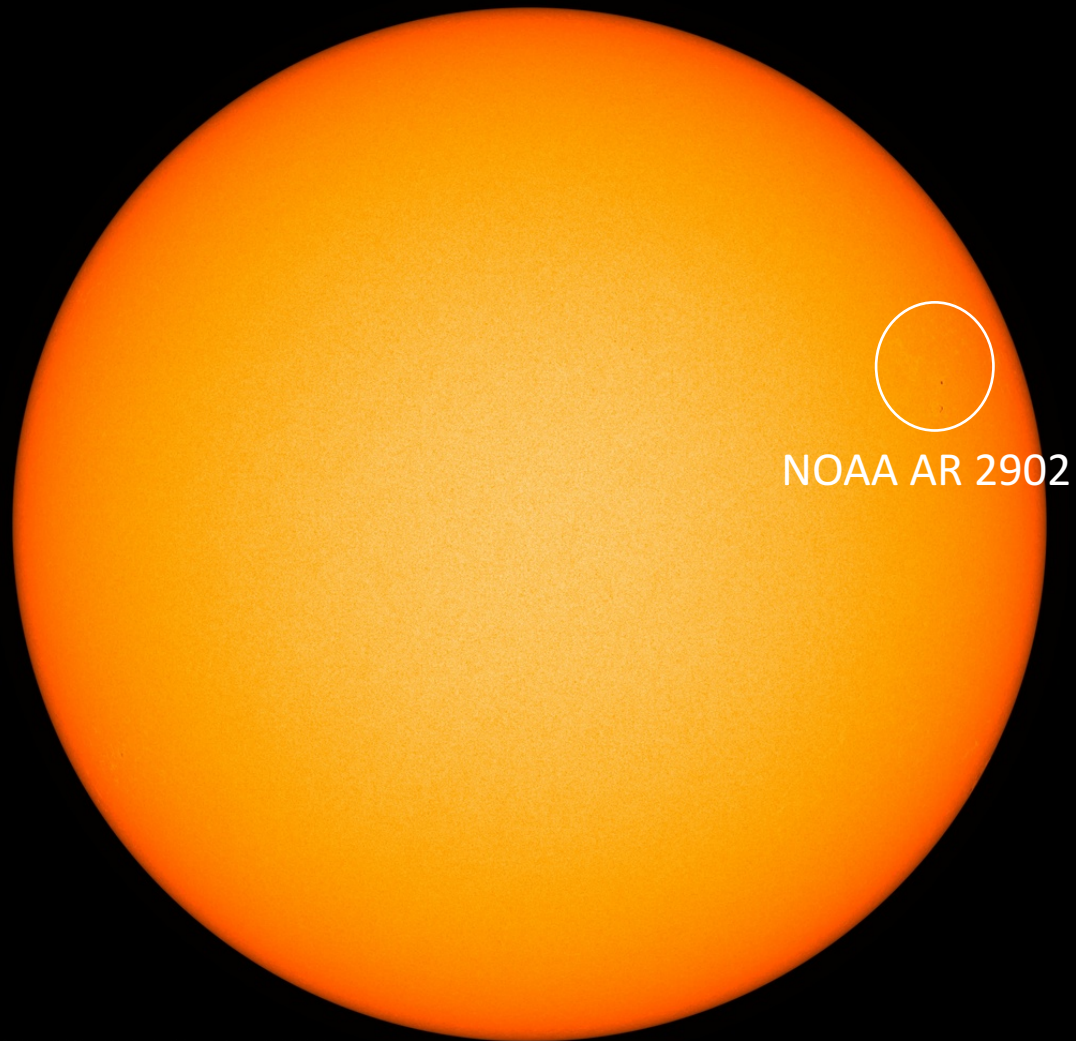


SDO/HMI Quick-Look Magnetogram: 20211203\_114500



# Solar active regions

SDO/HMI White Light 2021-12-04



SDO/HMI Quick-Look Continuum: 20211204\_114500

SDO/HMI Magnetogram 2021-12-04

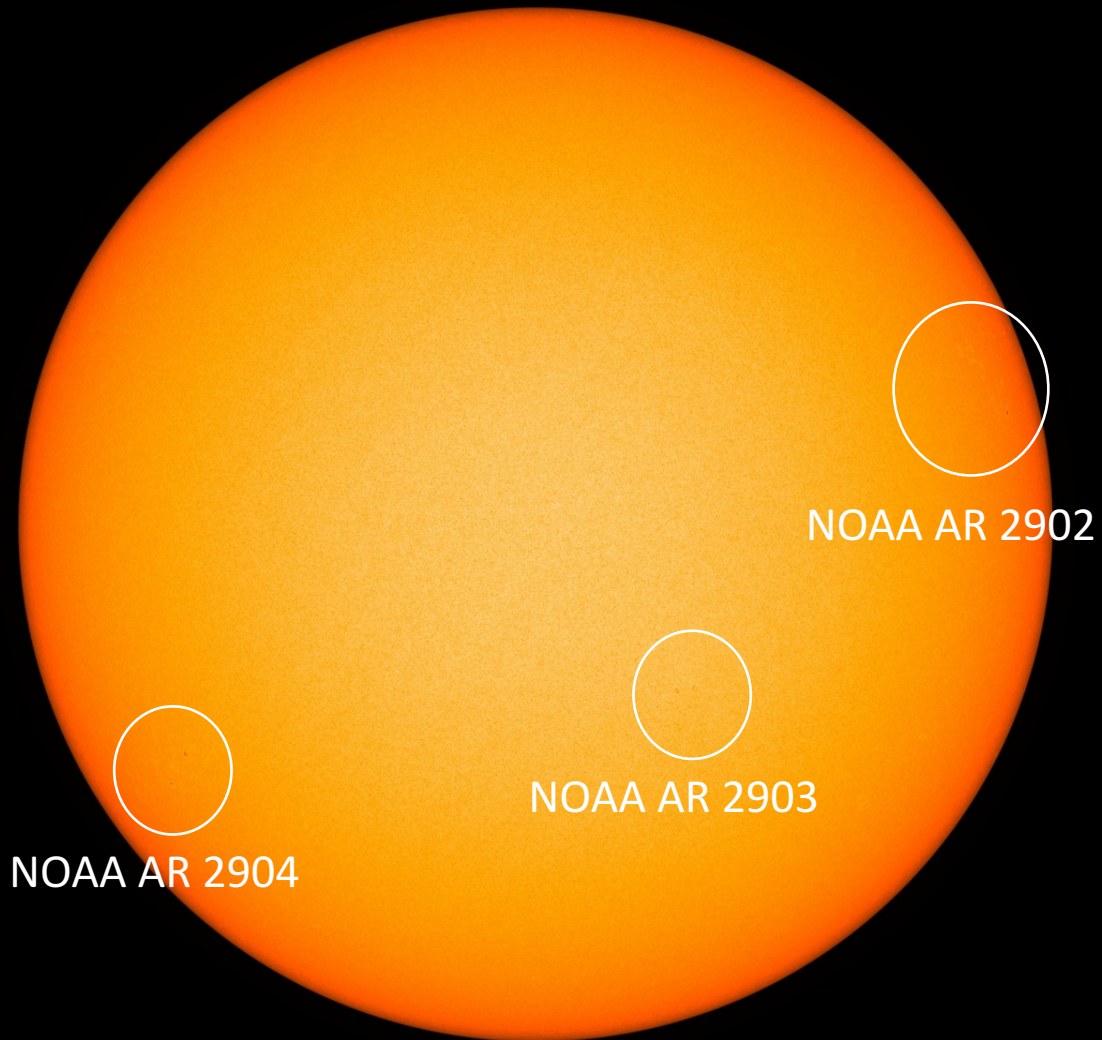


SDO/HMI Quick-Look Magnetogram: 20211204\_114500



# Solar active regions

SDO/HMI White Light 2021-12-05



SDO/HMI Quick-Look Continuum: 20211205\_114500

SDO/HMI Magnetogram 2021-12-05

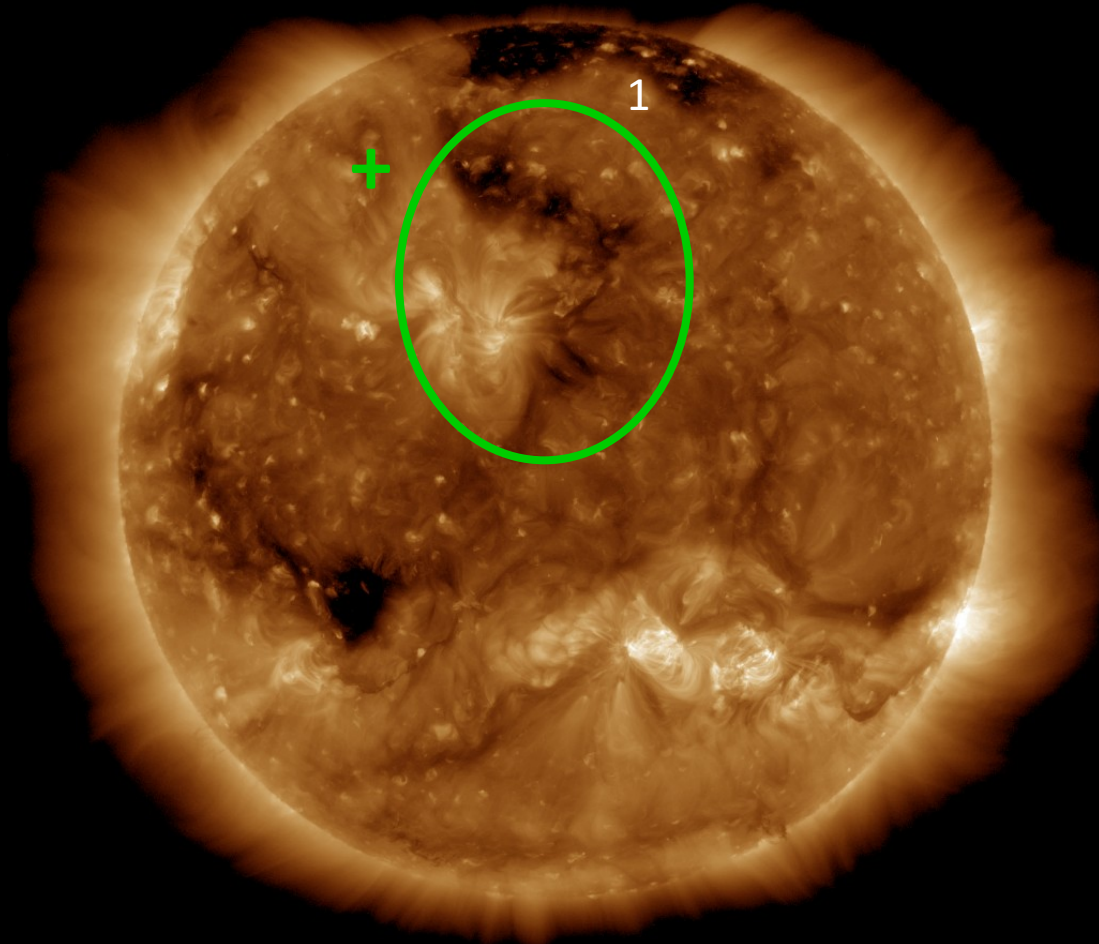


SDO/HMI Quick-Look Magnetogram: 20211205\_114500



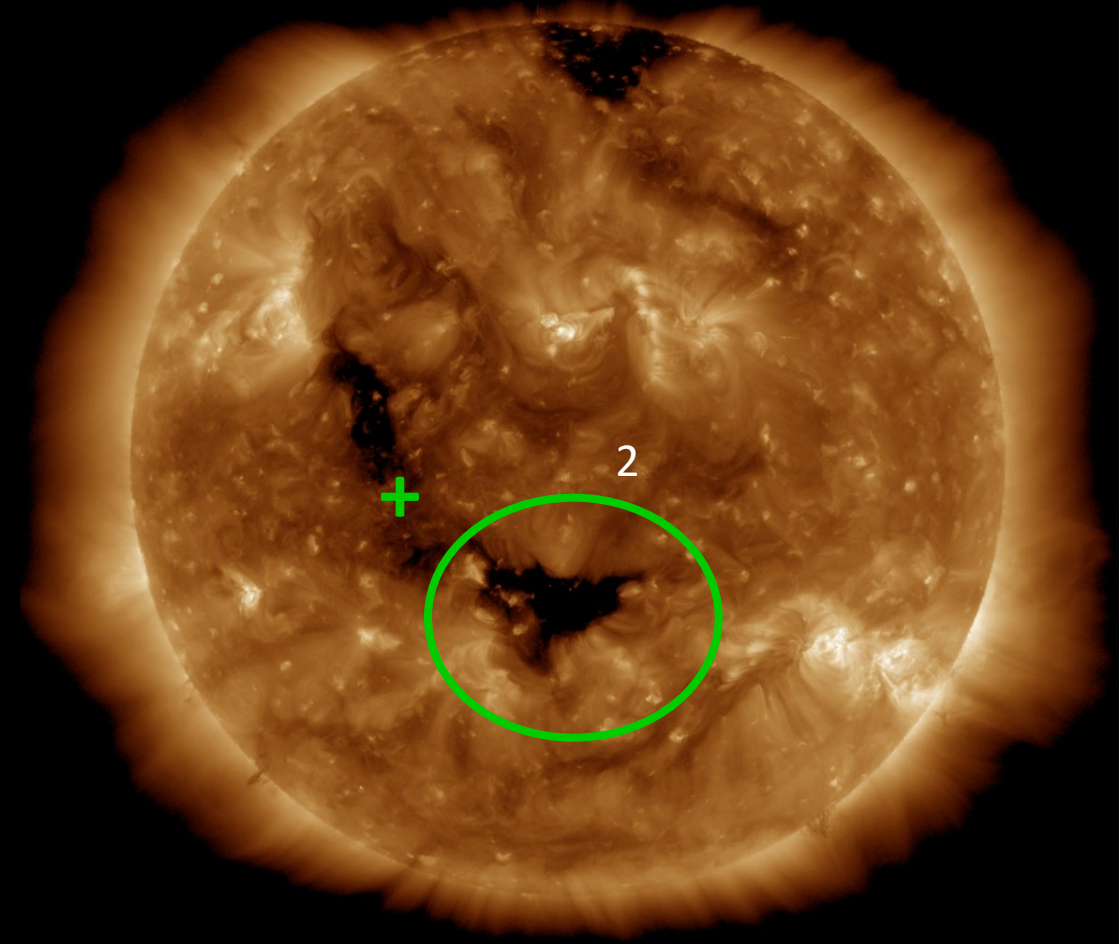
# Coronal holes

SDO/AIA 19.3 nm 2021-11-28



SDO/AIA 193 2021-11-28 12:57:53 UT

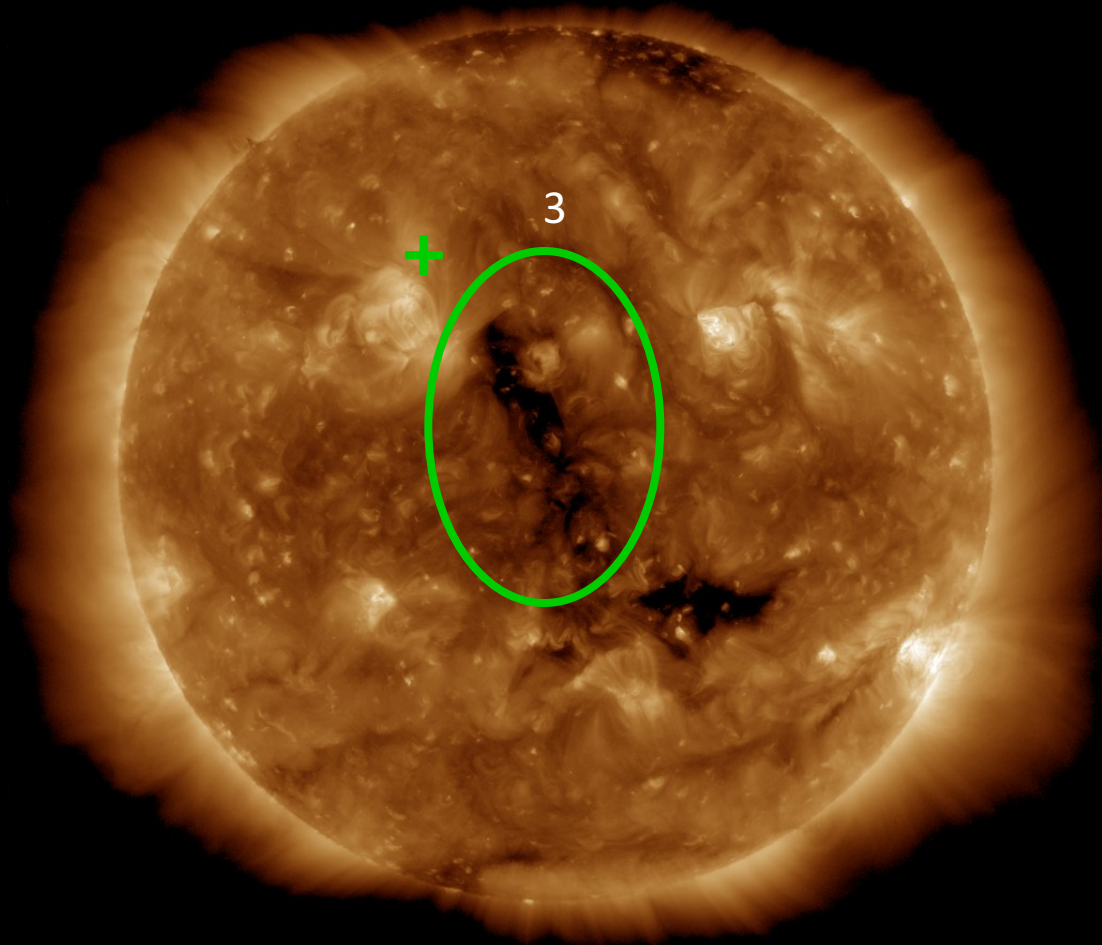
SDO/AIA 19.3 nm 2021-11-30



SDO/AIA 193 2021-11-30 13:17:53 UT

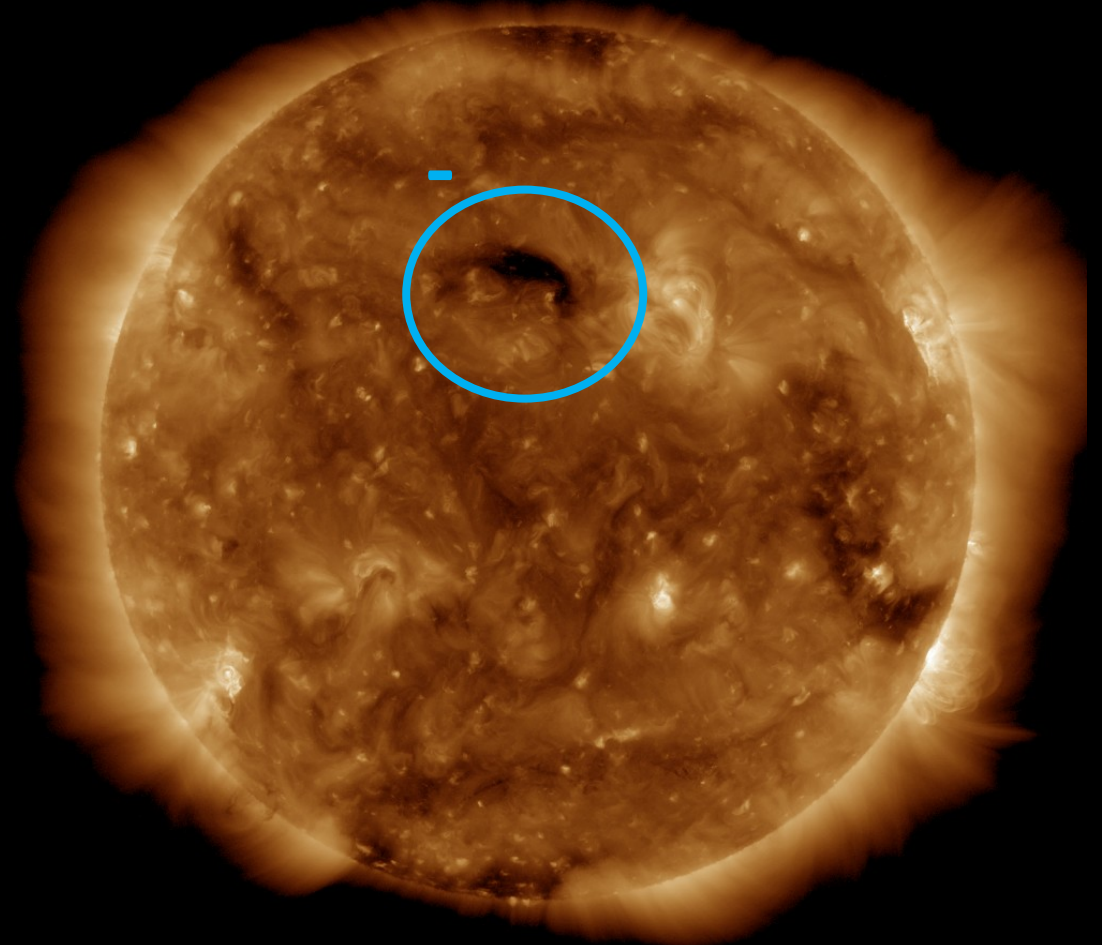
# Coronal holes

SDO/AIA 19.3 nm 2021-12-02



SDO/AIA 193 2021-12-02 07:37:41 UT

SDO/AIA 19.3 nm 2021-12-05



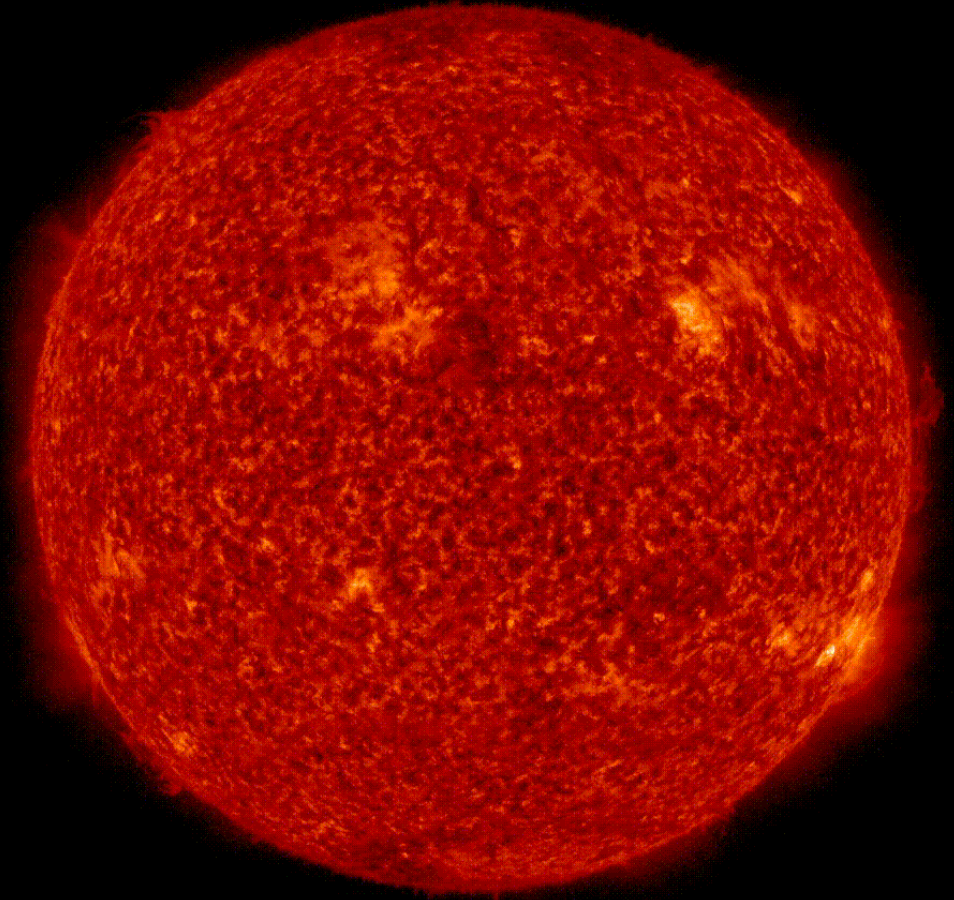
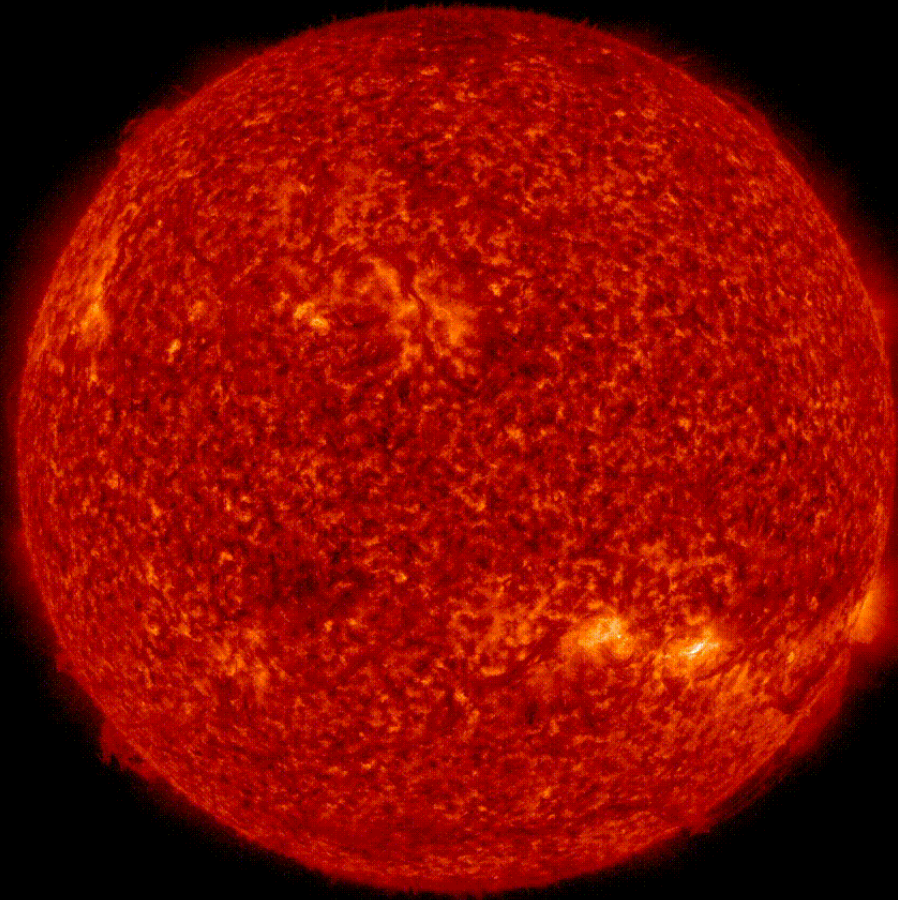
SDO/AIA 193 2021-12-05 11:17:41 UT



# Filaments

SDO/AIA 30.4 nm 2021-11-29

SDO/AIA 30.4 nm 2021-12-03



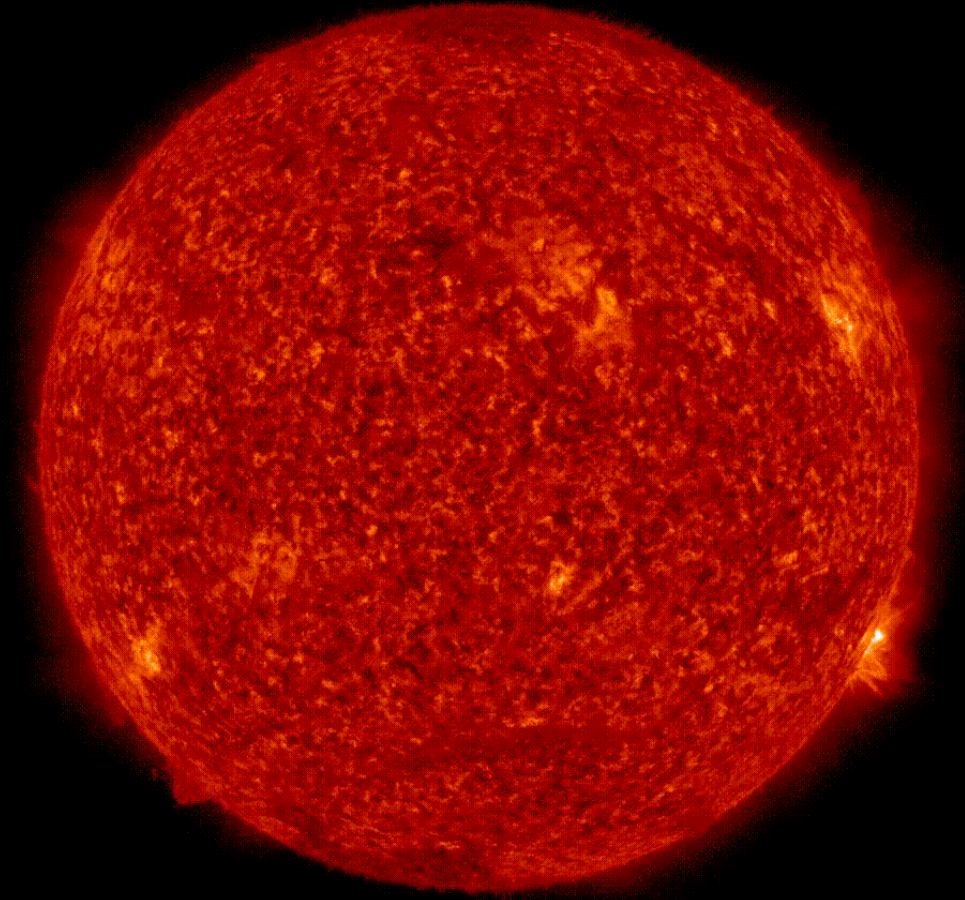
SDO/AIA 304 2021-11-29 02:48:54 UT

SDO/AIA 304 2021-12-03 00:08:42 UT



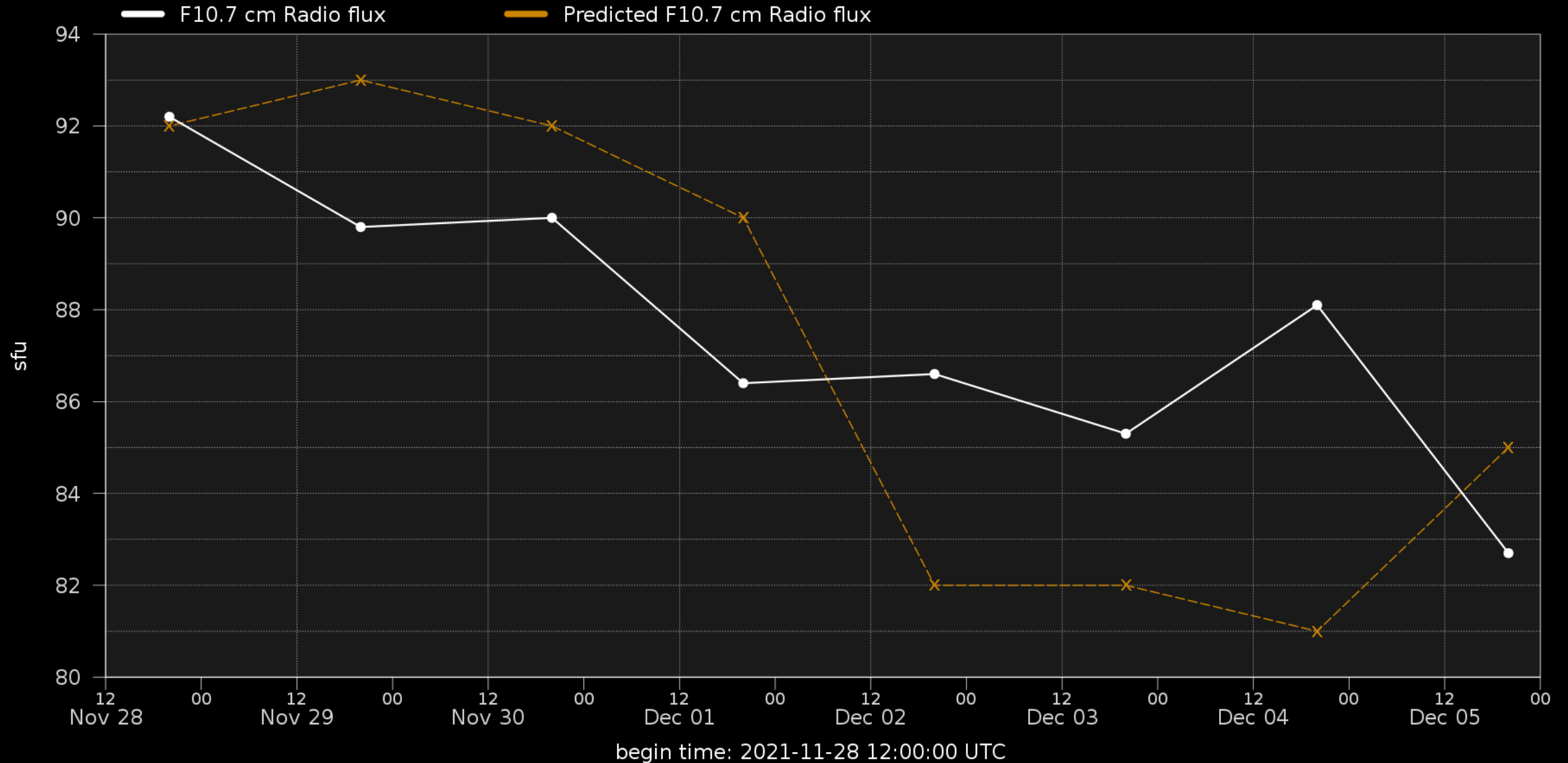
# Filaments

SDO/AIA 30.4 nm 2021-12-05

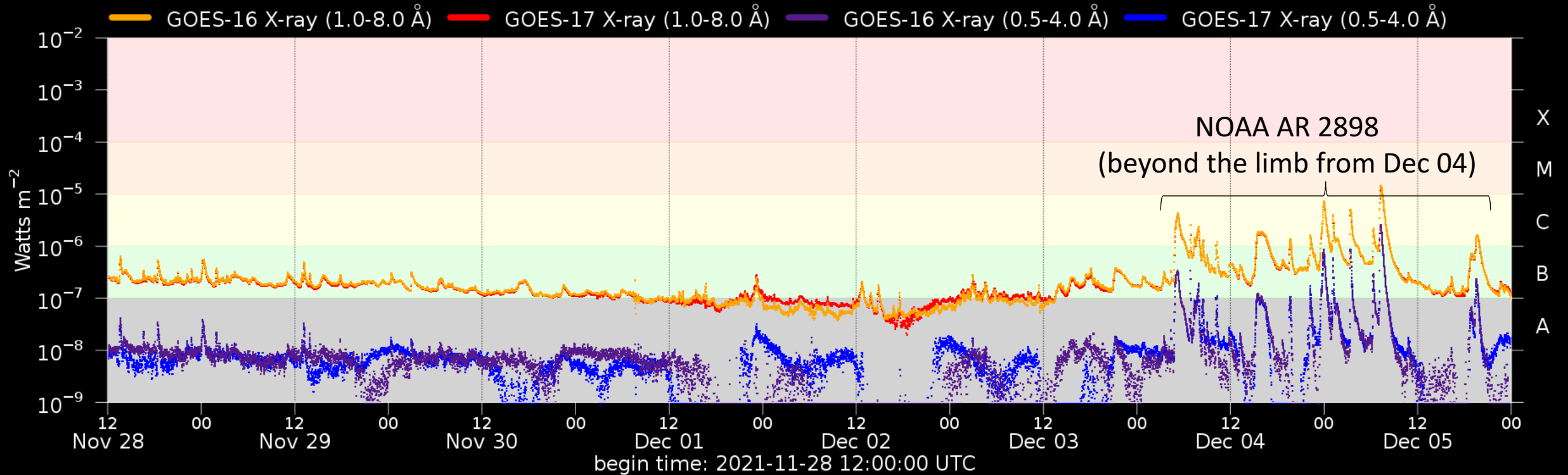


SDO/AIA 304 2021-12-05 00:09:06 UT

# Solar F10.7cm radio flux



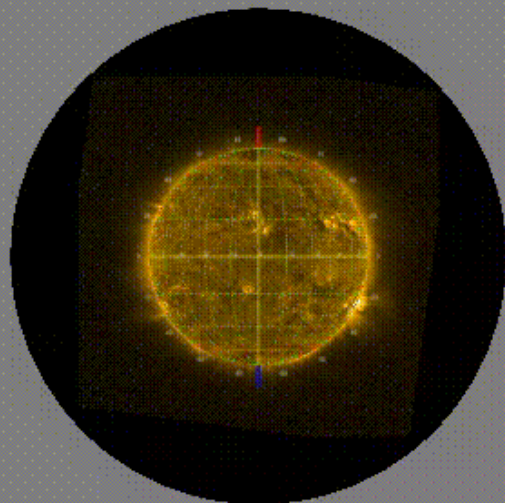
# Flaring activity



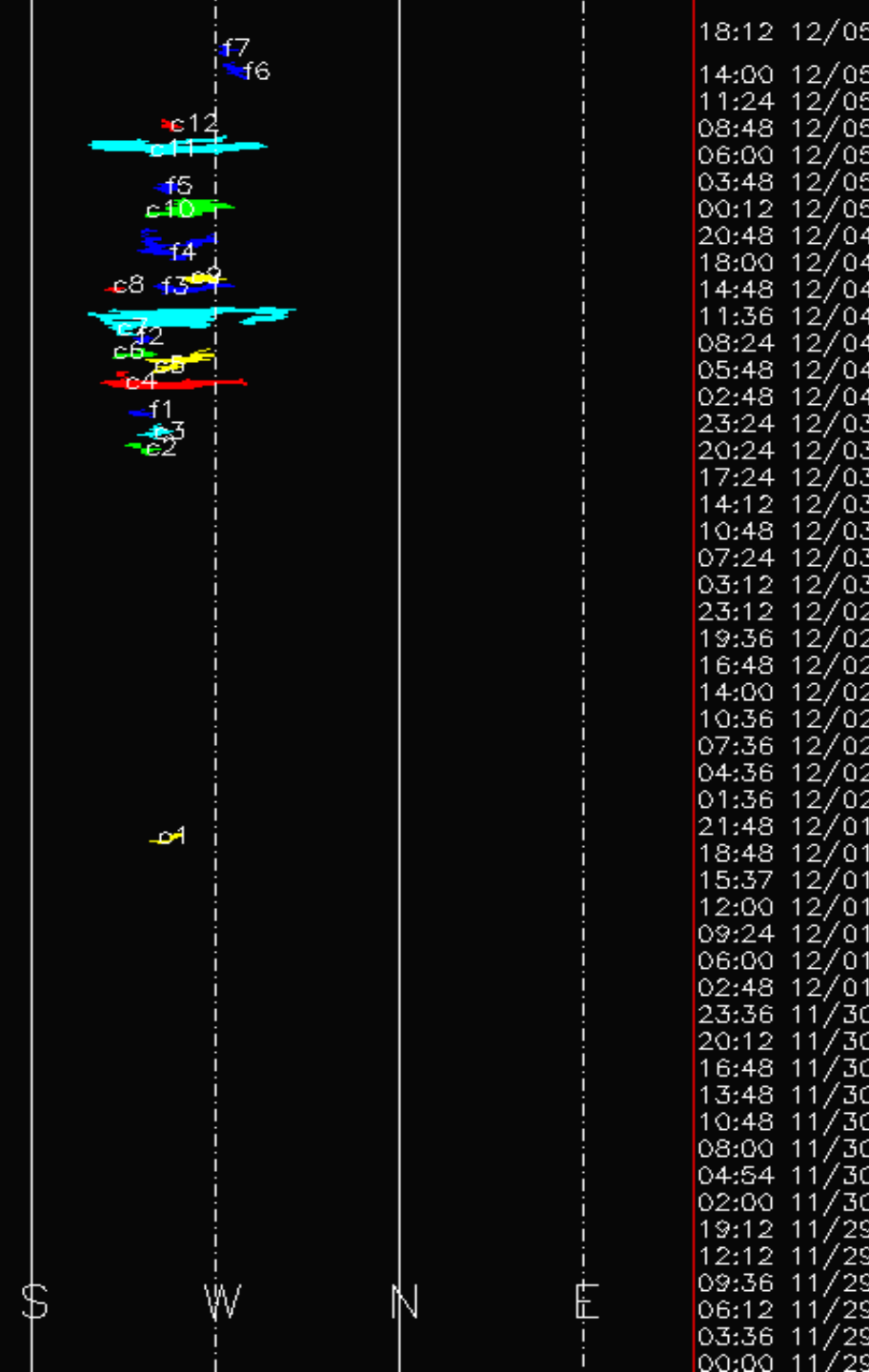
Probabilities (%) and occurrences (#) of C/M/X-flares daily, from noon to noon:

Issue date	2021-11-28	2021-11-29	2021-11-30	2021-12-01	2021-12-02	2021-12-03	2021-12-04	2021-12-05
Probability (%)	60 05 01	50 05 01	45 05 01	40 05 01	15 01 01	15 01 01	10 01 01	15 02 01
Observed (#)	00 00 00	00 00 00	00 00 00	00 00 00	00 00 00	06 00 00	06 01 00	01 00 00

# Coronal Mass Ejections



2021-12-03T18:24:36



# Solar Wind and

# Geomagnetic Activity

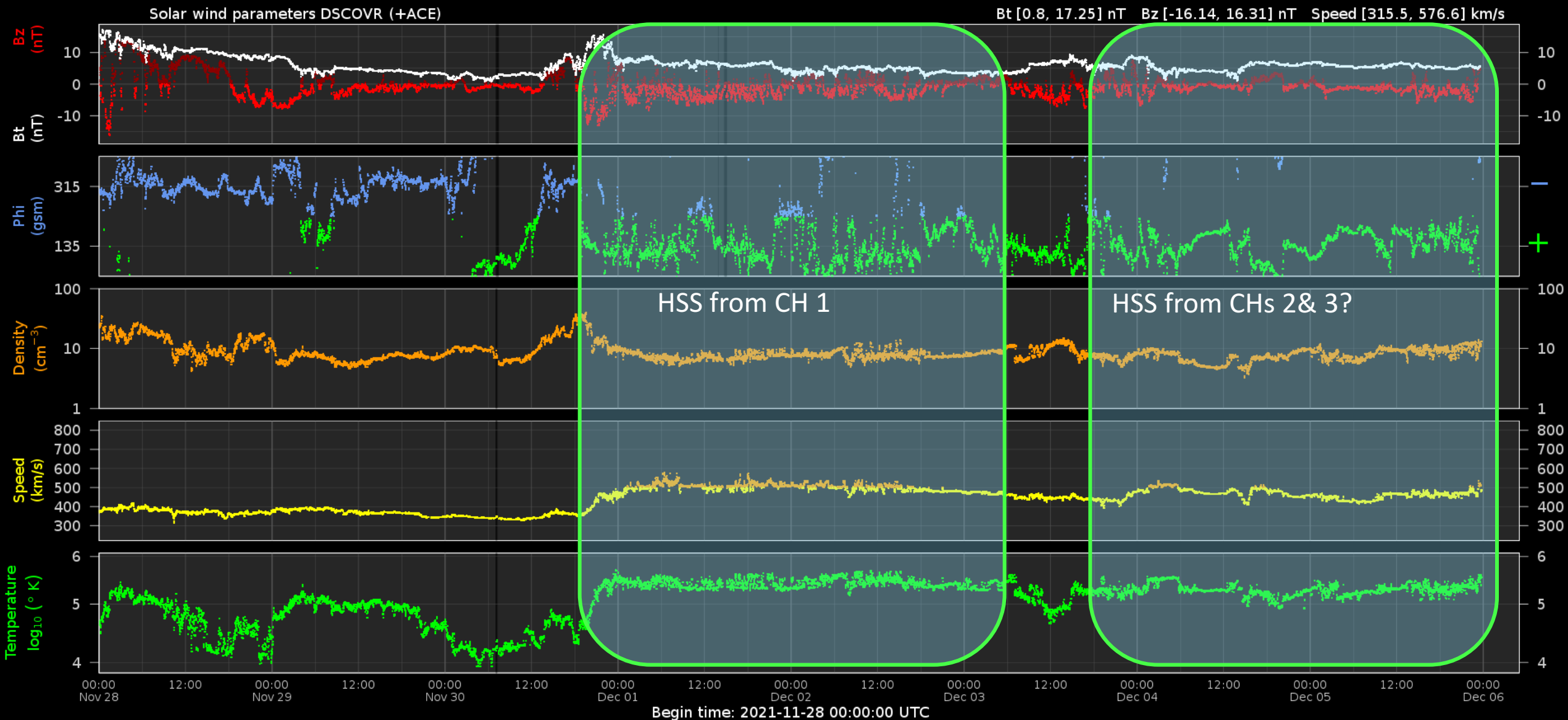


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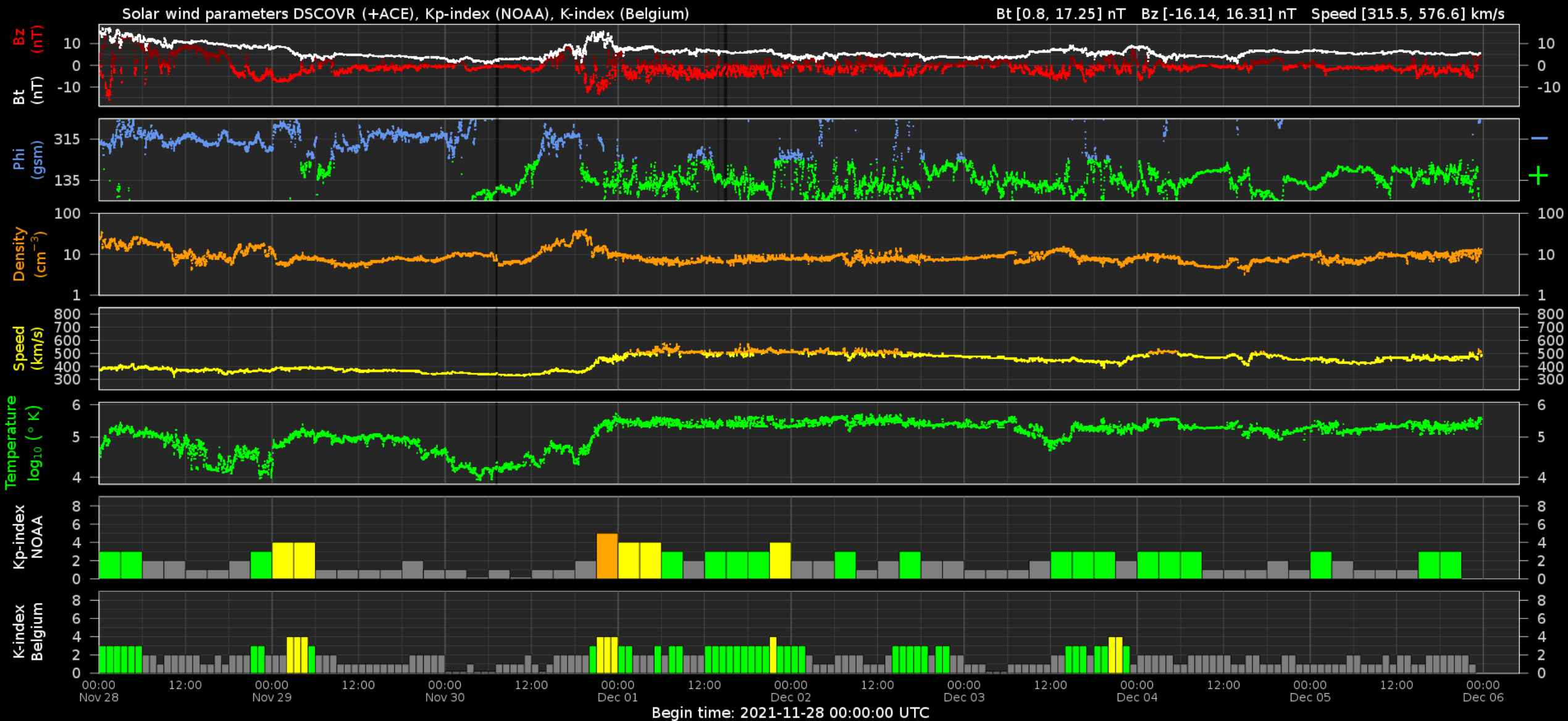
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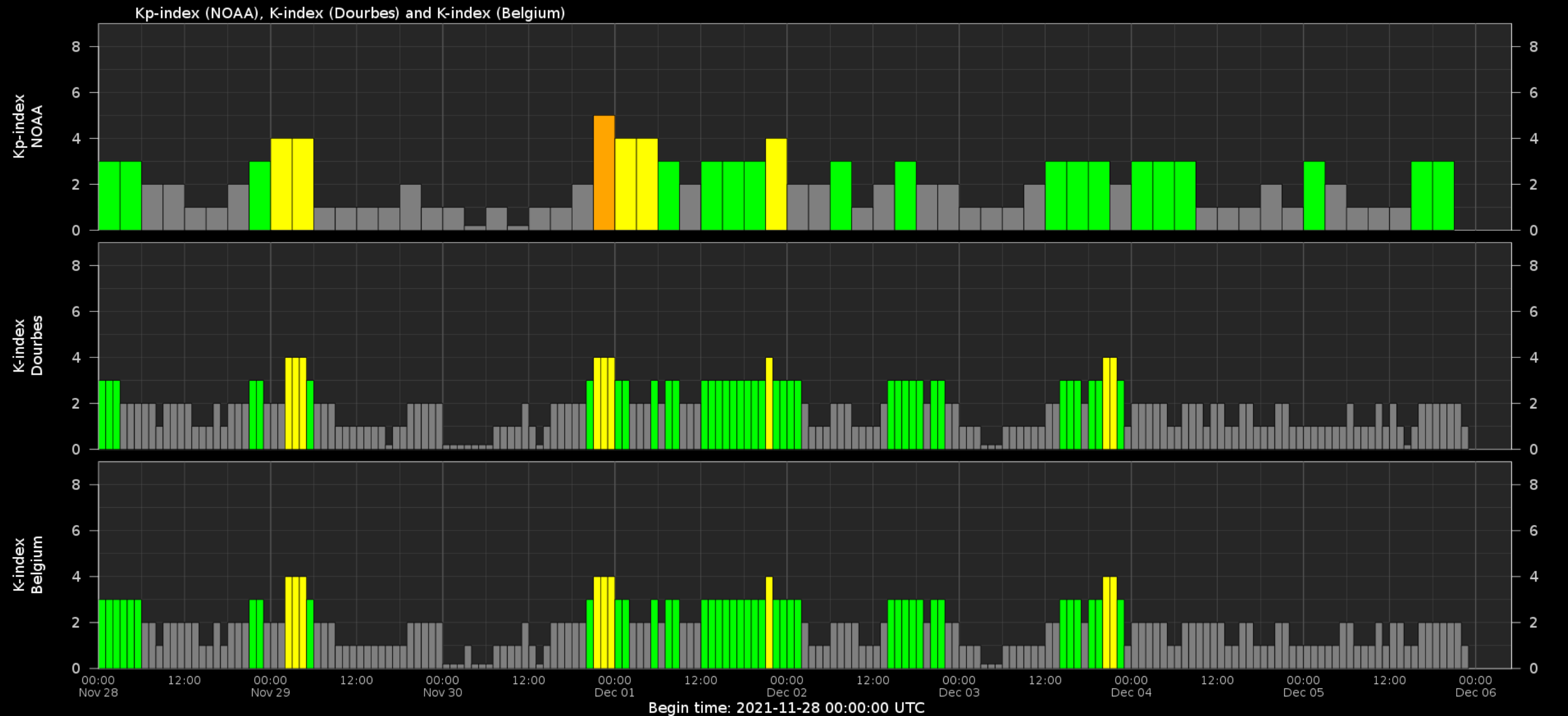
# Solar wind parameters



# Solar wind parameters & K-indices



# Geomagnetic activity (K-indexes)



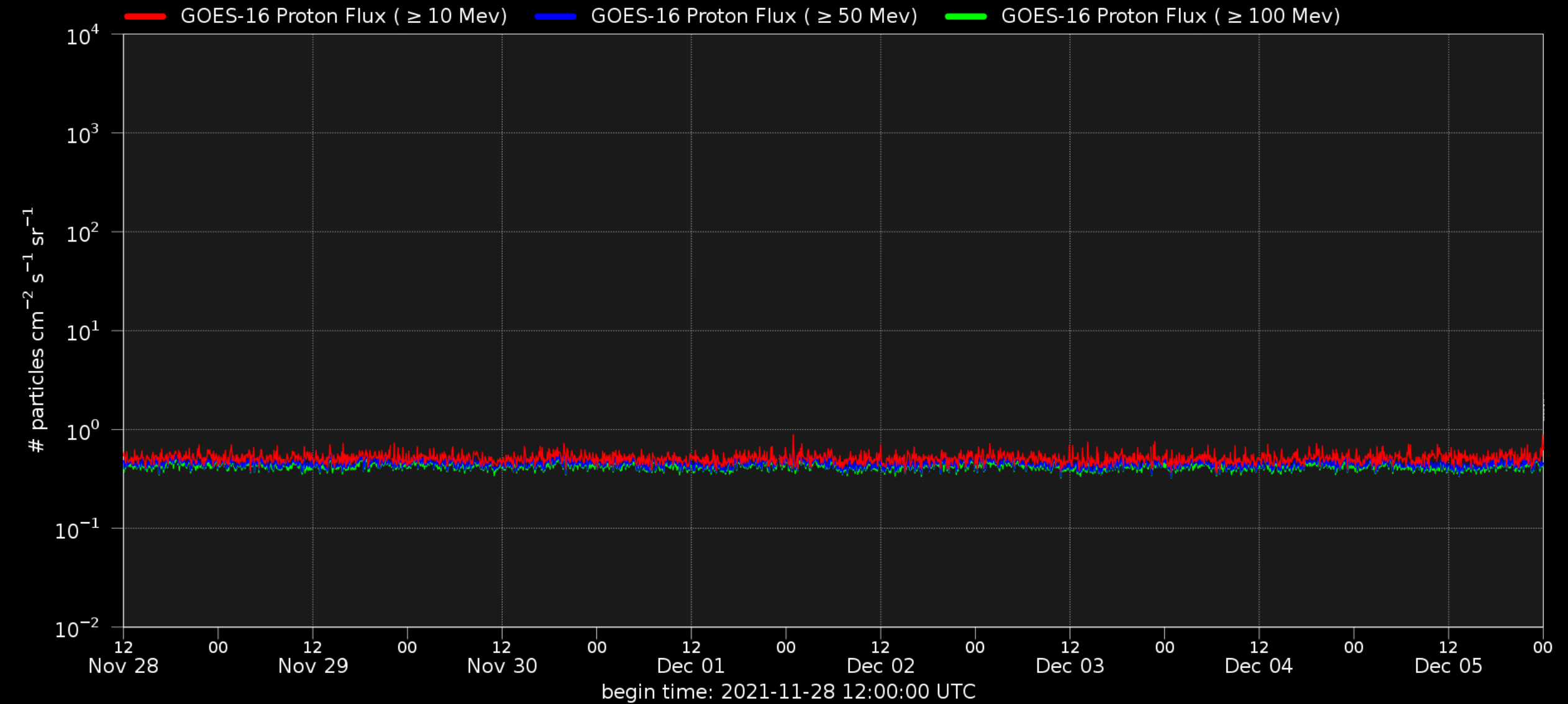
# Energetic Particles



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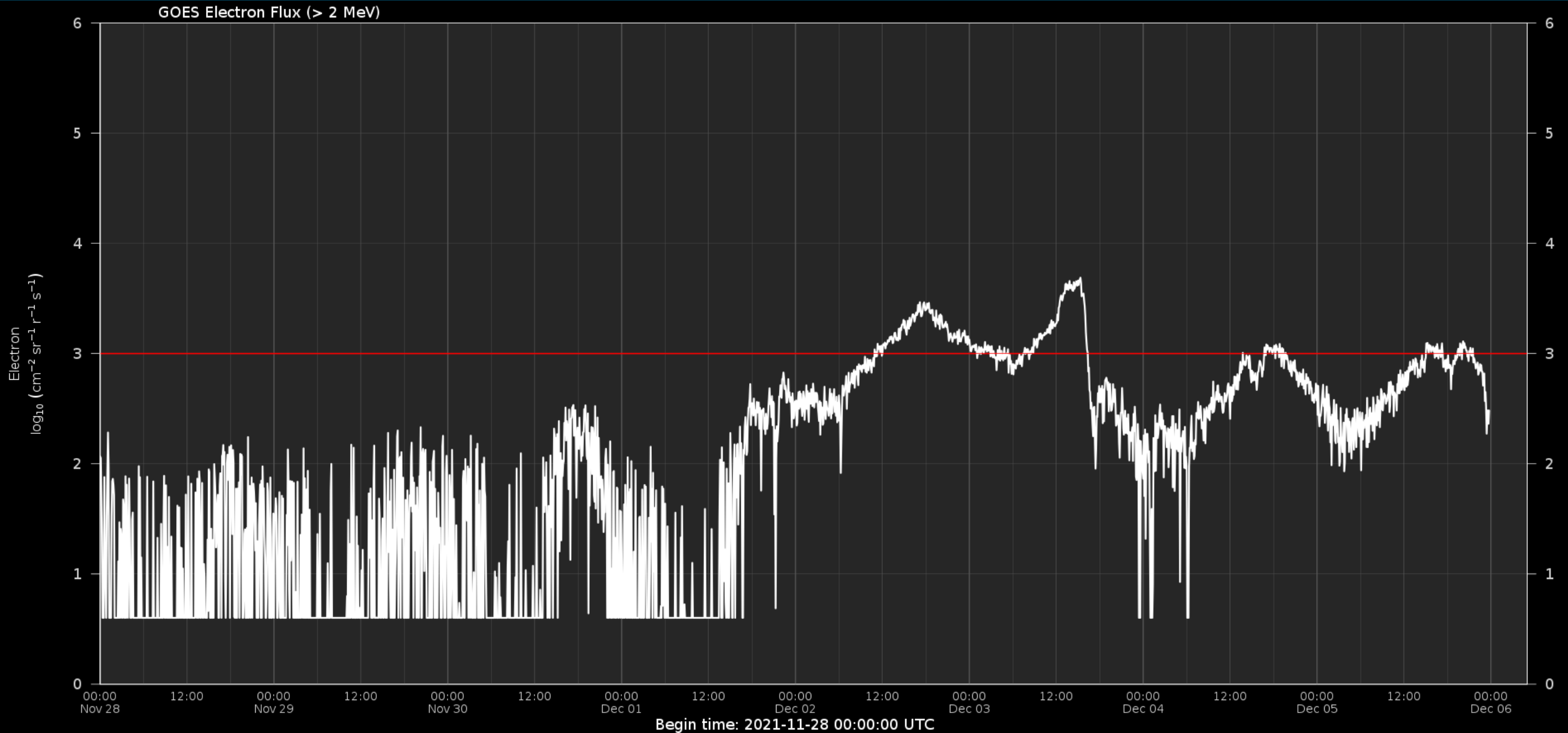
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# Solar proton flux





# Electron flux at GEO



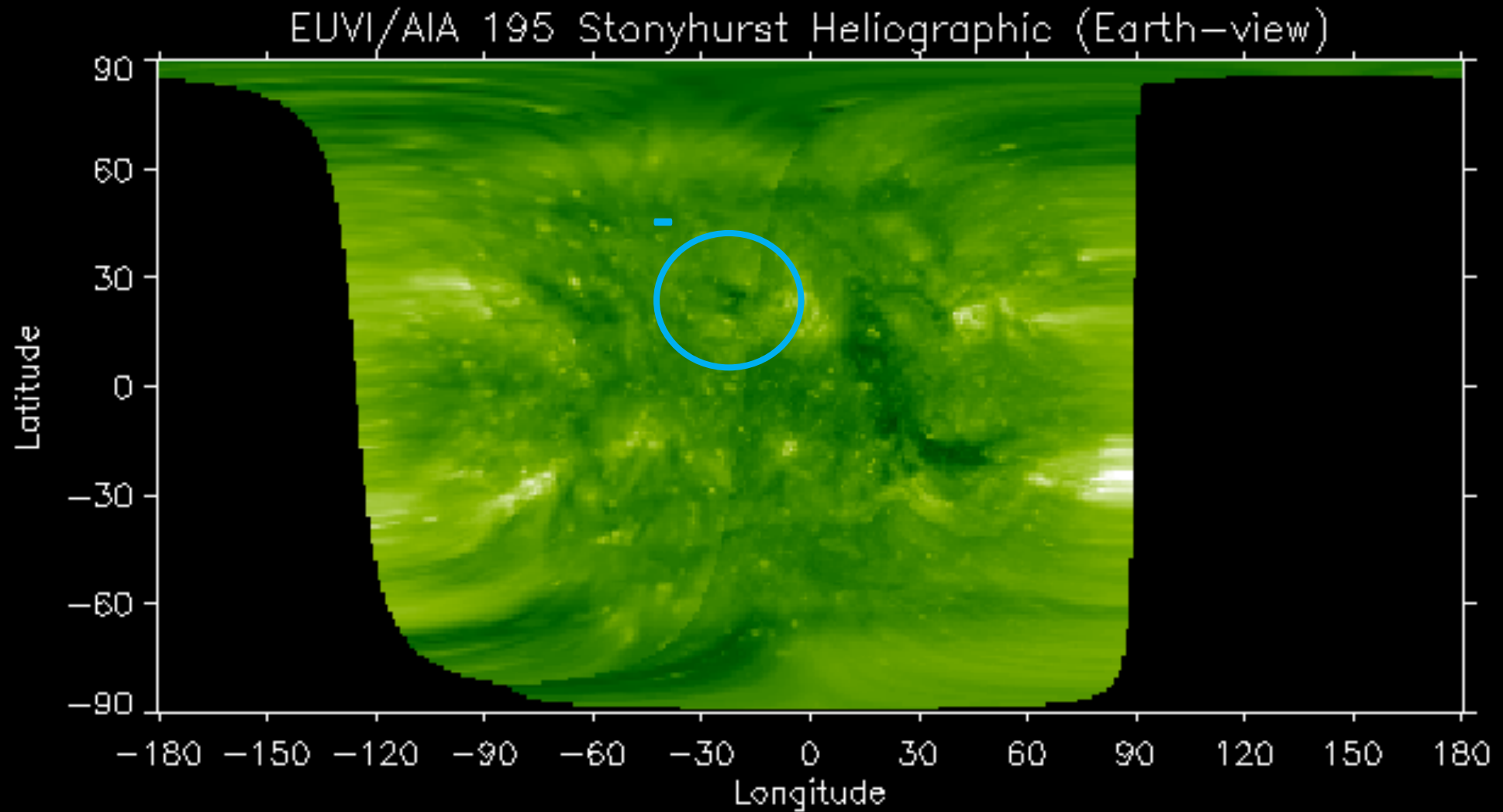
# Outlook



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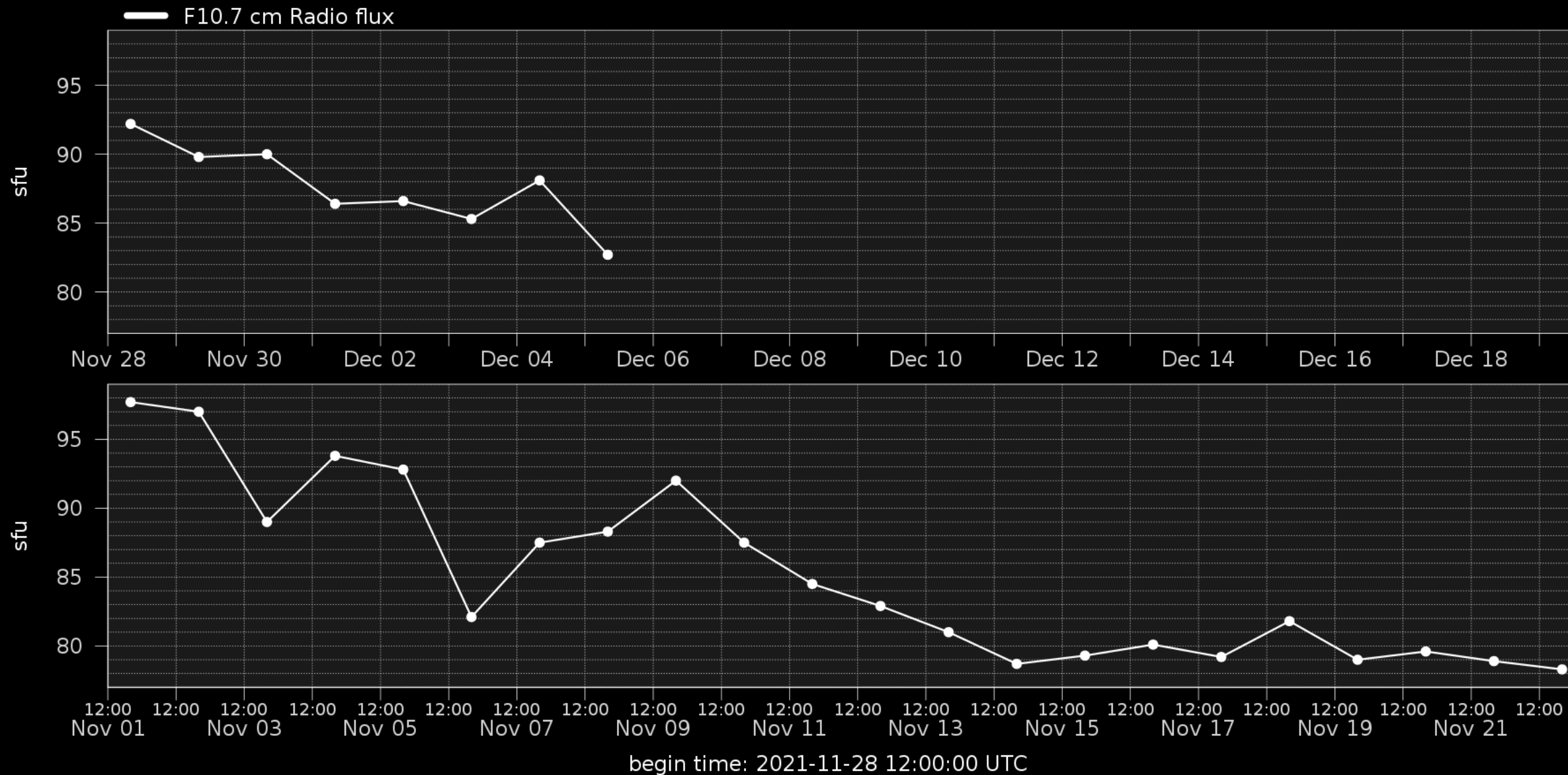
# Outlook: Solar activity



Observation date: 2021/12/03 17:45:30



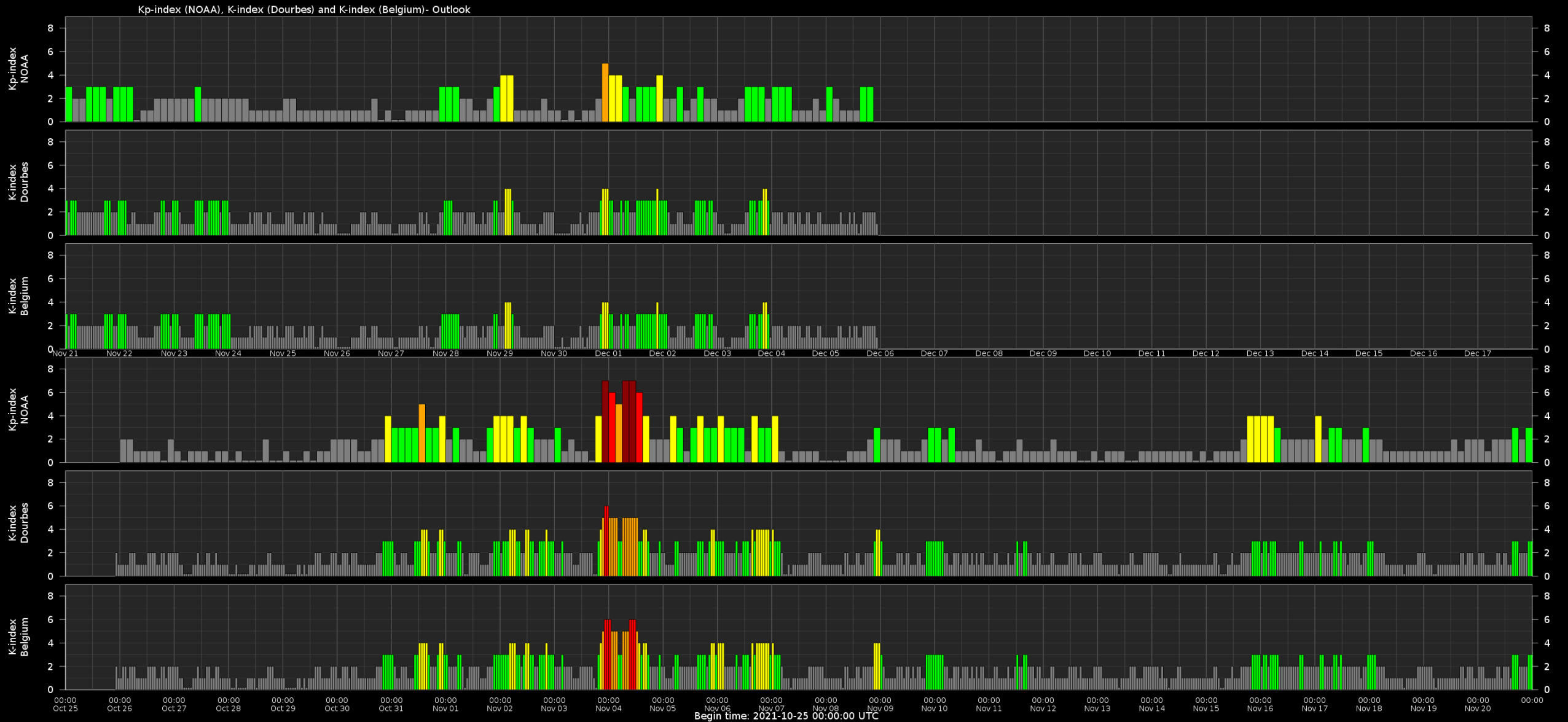
# Outlook: Solar F10.7cm radio flux



# Outlook: Solar wind parameters



# Outlook: Geomagnetic activity





# Outlook: Electron Flux at GEO Outlook



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