

SIDC Space Weather Briefing

22 November 2020 - 29 November 2020

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& the SIDC forecaster team



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Summary Report

Solar activity from 2020-11-22 to 2020-11-29

Active regions	7 active regions over the week: NOAA AR2783 – AR2789
Flares	# B-class flare: 38 # C-class flare: 18 # M-class flare: 1 (Nov 29) # X-class flare: 0
Filament eruptions	No Earth directed eruptions
Coronal Holes	Extension to the northern polar CH crossed central meridian on Nov 23

Proton flux	Background levels
Electron flux	Elevated: values reached above 1000 pfu threshold. Fluence at moderate levels

Solar wind and geomagnetic conditions from 2020-11-22 12:00:00 to 2020-11-29 12:00:00

ICME	None observed
SW Conditions	B : 0.5 - 8.83 nT // Bz: -7.25 nT to 6.06 nT // Speed: 350.9 - 642.4km/s
K-indices	max K-index (Dourbes): 5 max Kp-index (NOAA): 5

All Quiet Alert: Off all week (since Nov 20)

Solar Activity

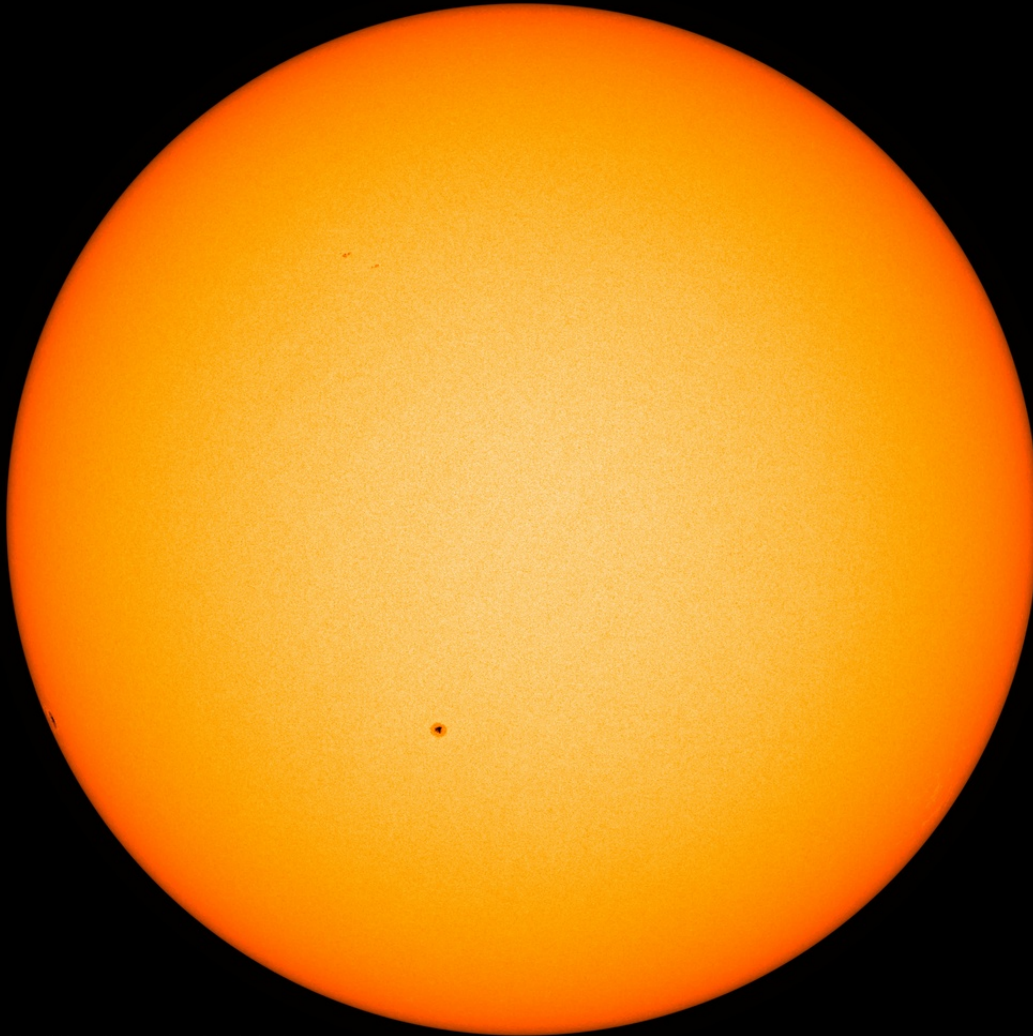


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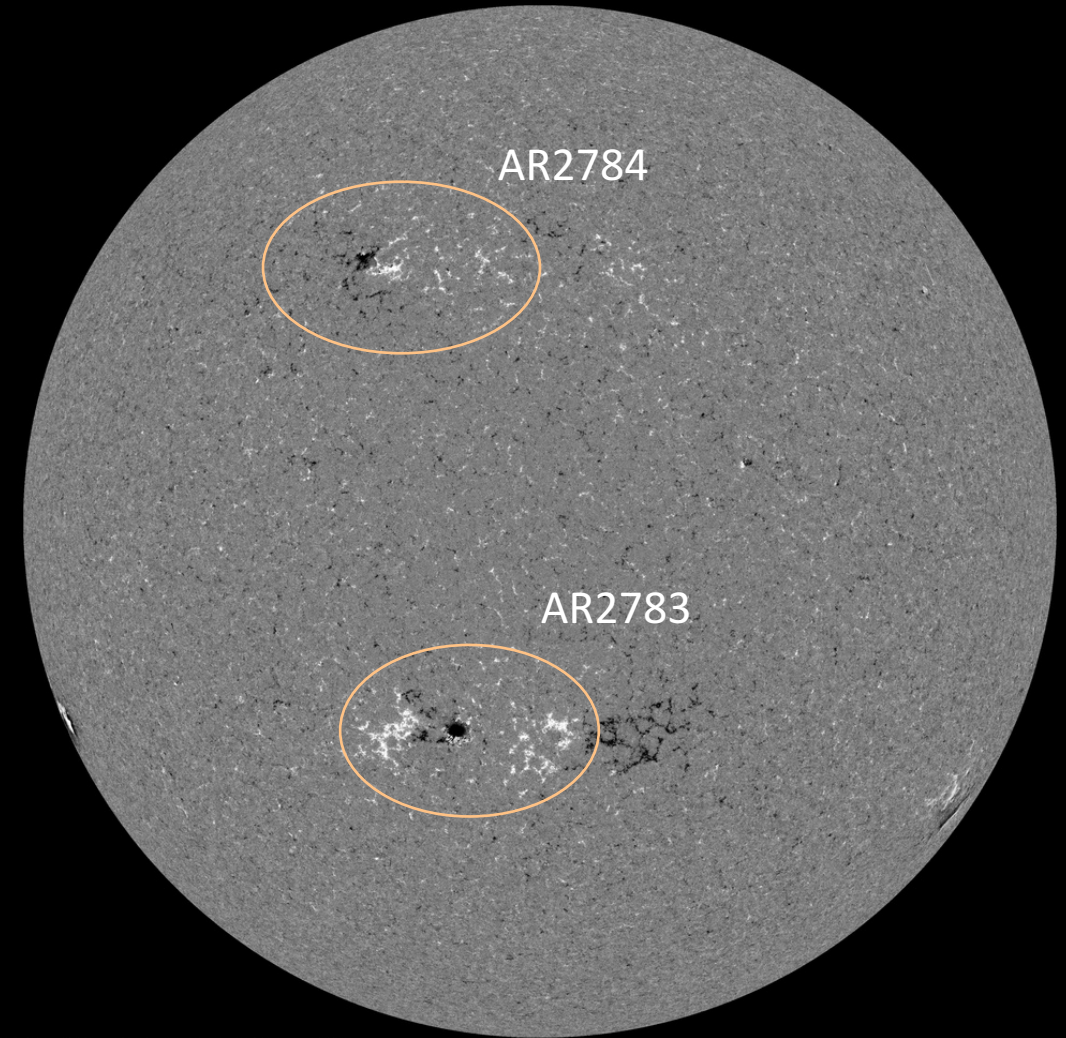
Solar active regions - Sunday

SDO/HMI White Light 2020-11-22



SDO/HMI Quick-Look Continuum: 20201122_114500

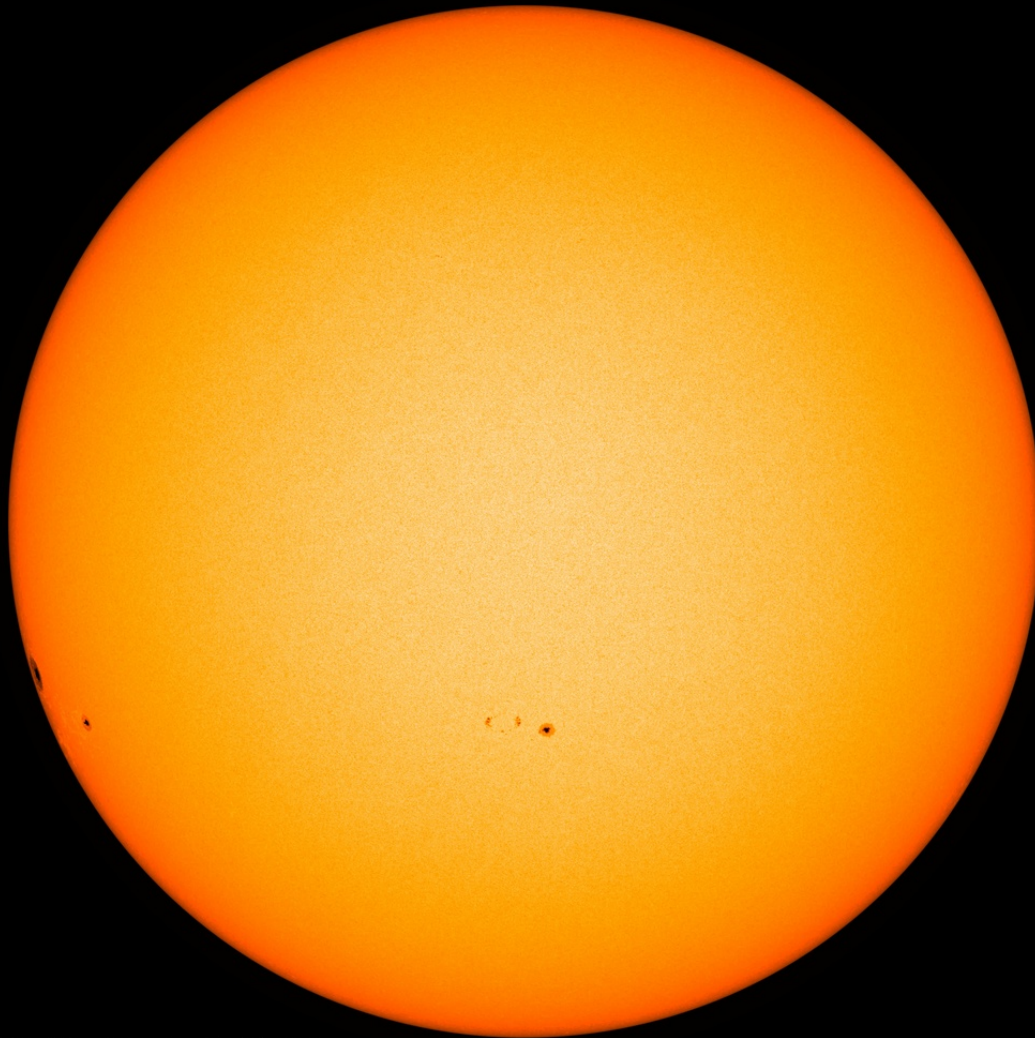
SDO/HMI Magnetogram 2020-11-22



SDO/HMI Quick-Look Magnetogram: 20201122_114500

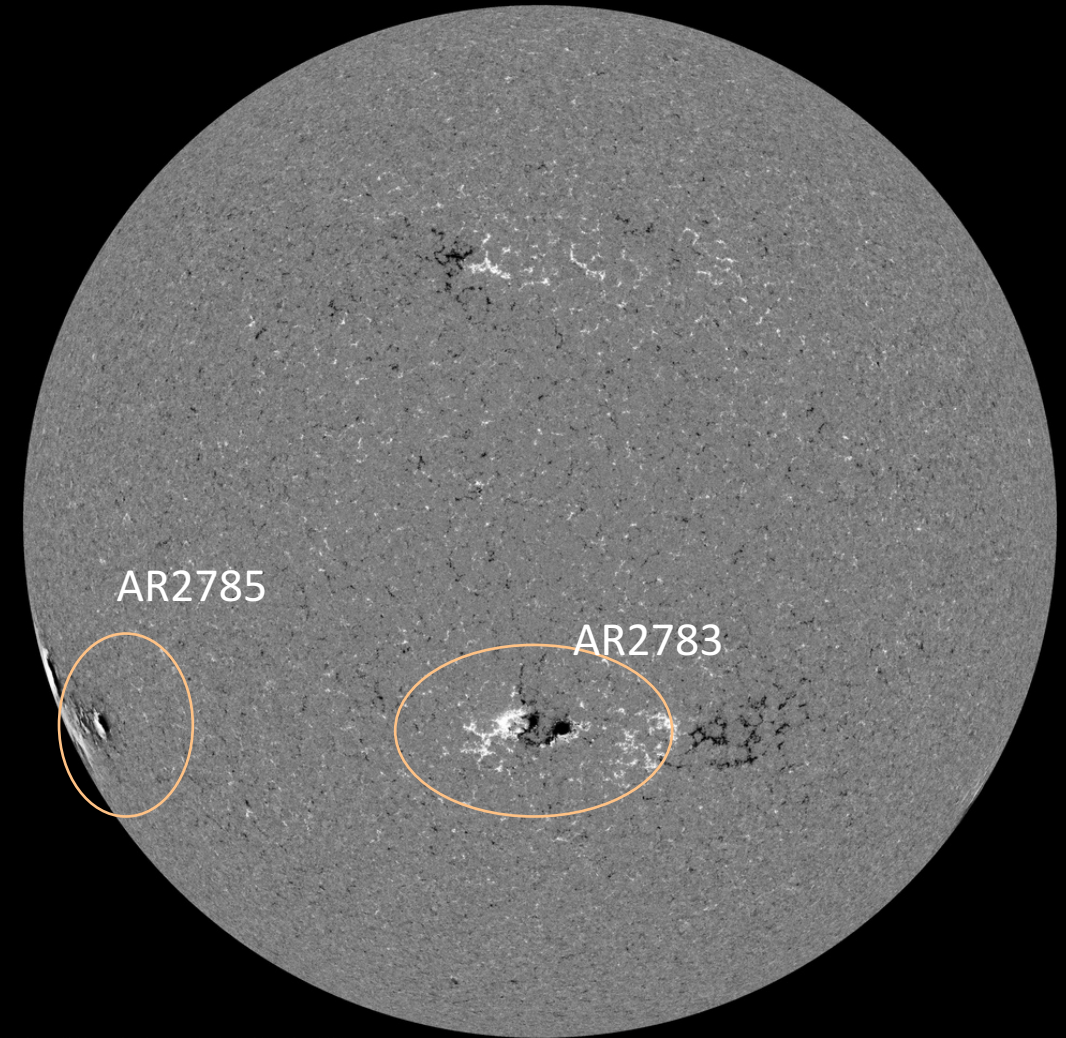
Solar active regions - Monday

SDO/HMI White Light 2020-11-23



SDO/HMI Quick-Look Continuum: 20201123_114500

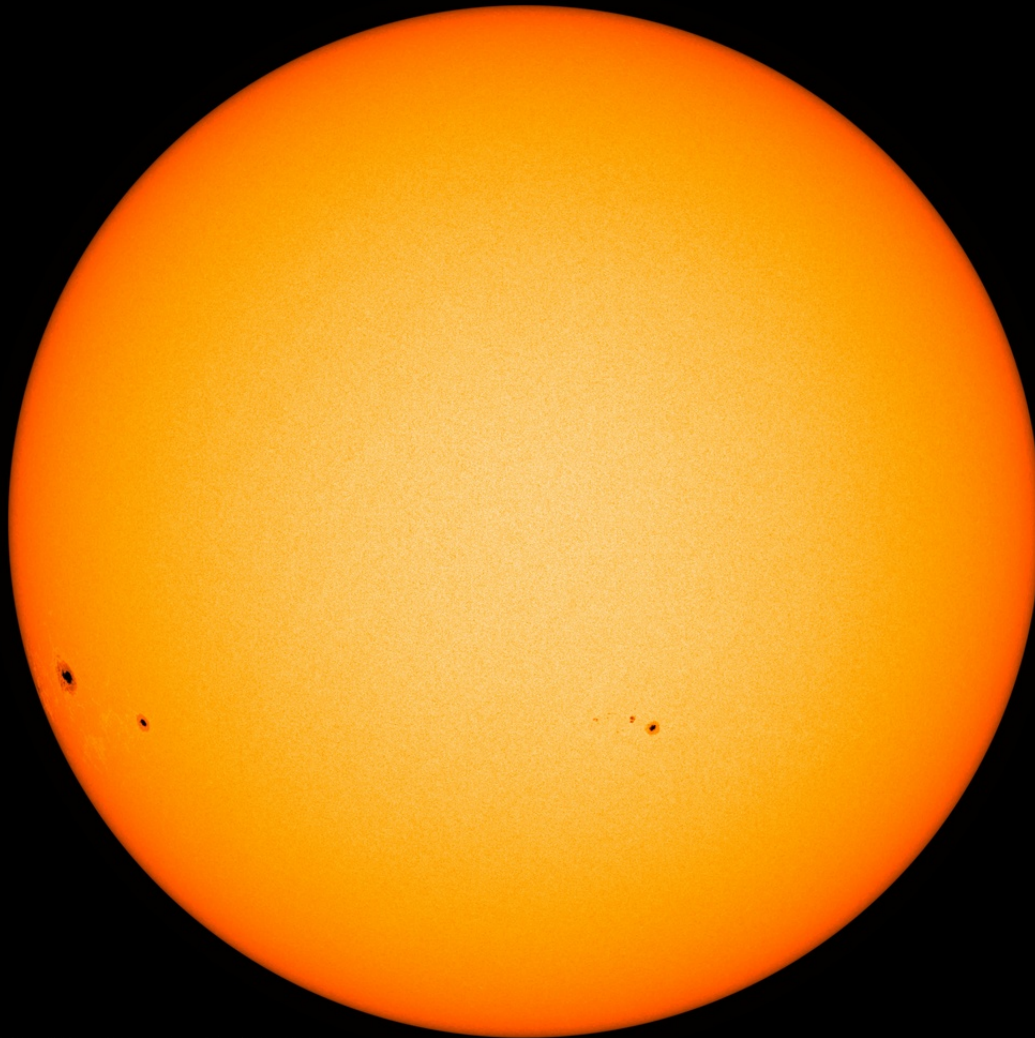
SDO/HMI Magnetogram 2020-11-23



SDO/HMI Quick-Look Magnetogram: 20201123_114500

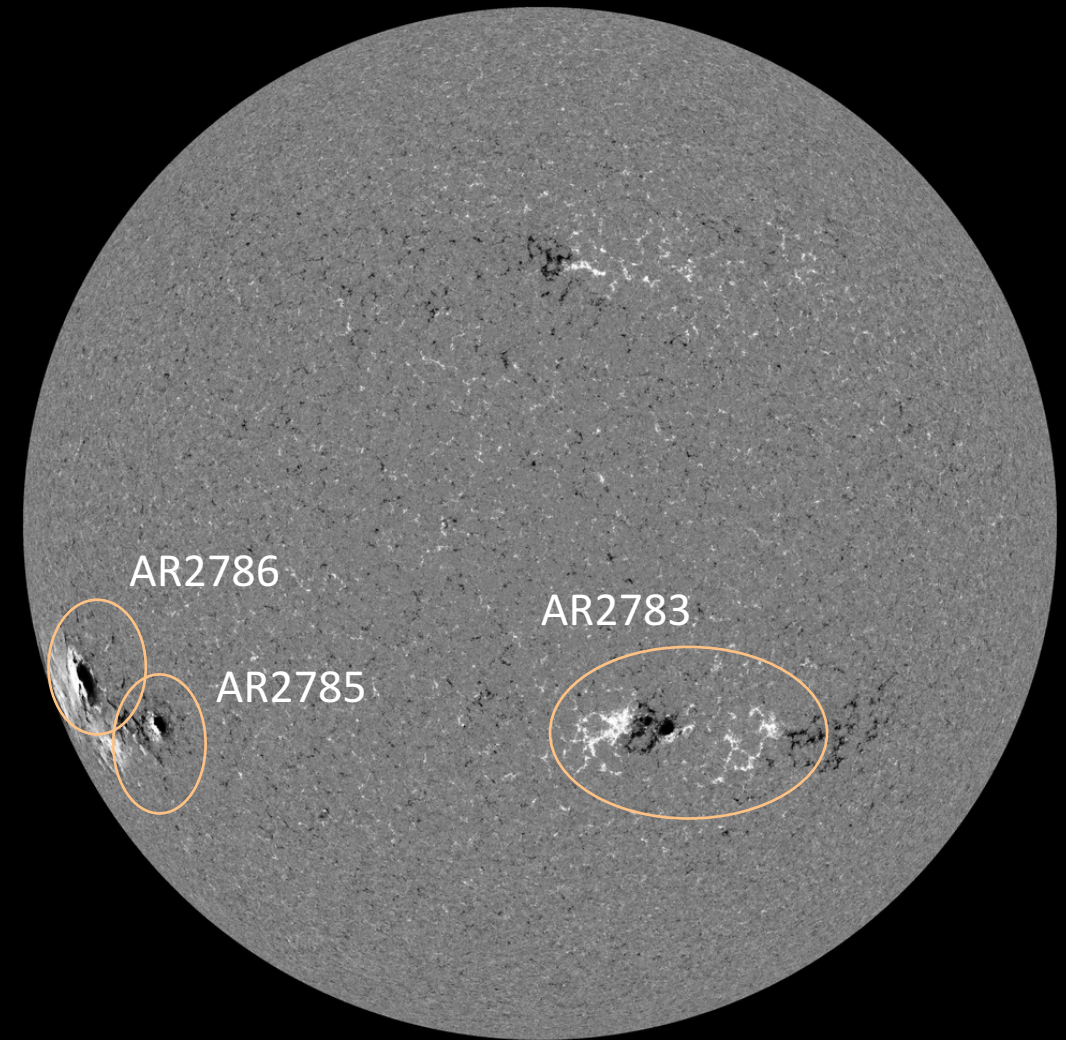
Solar active regions - Tuesday

SDO/HMI White Light 2020-11-24



SDO/HMI Quick-Look Continuum: 20201124_114500

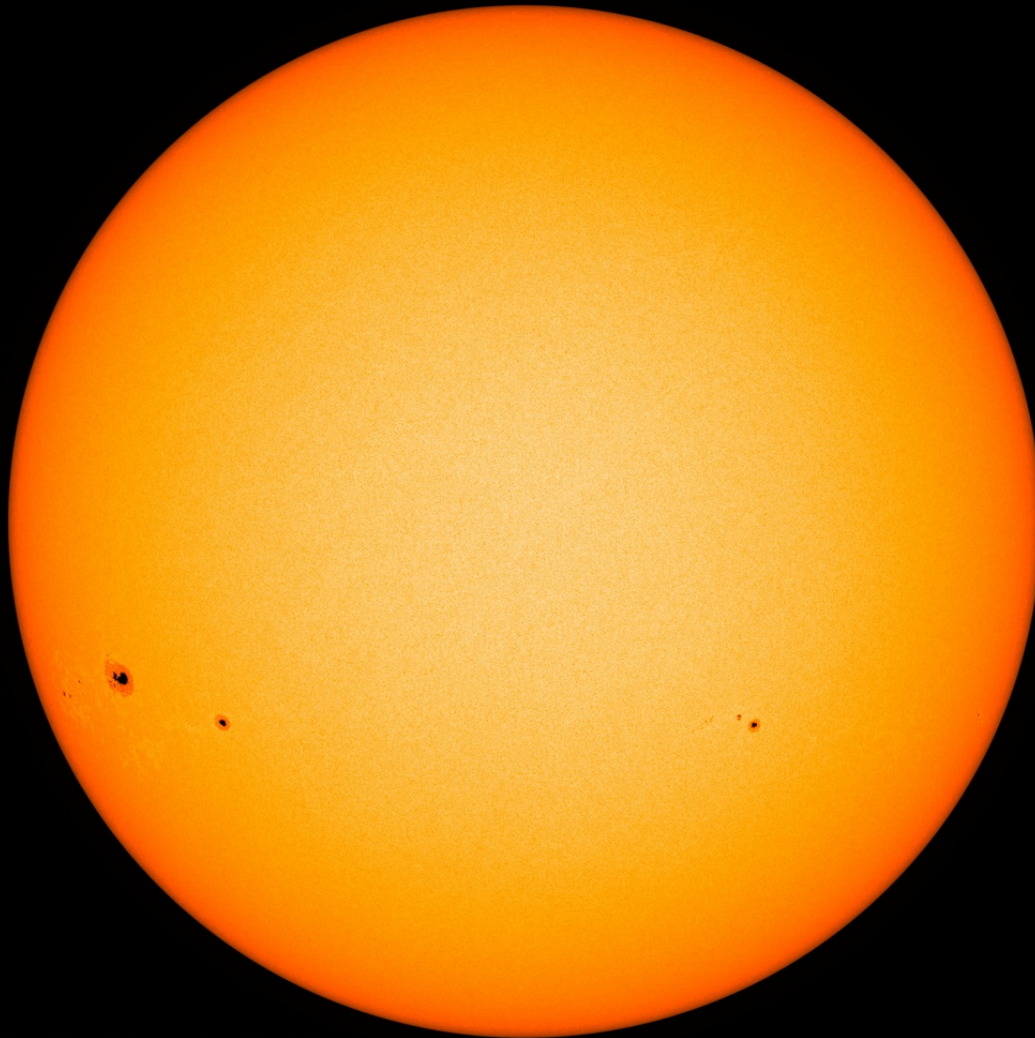
SDO/HMI Magnetogram 2020-11-24



SDO/HMI Quick-Look Magnetogram: 20201124_114500

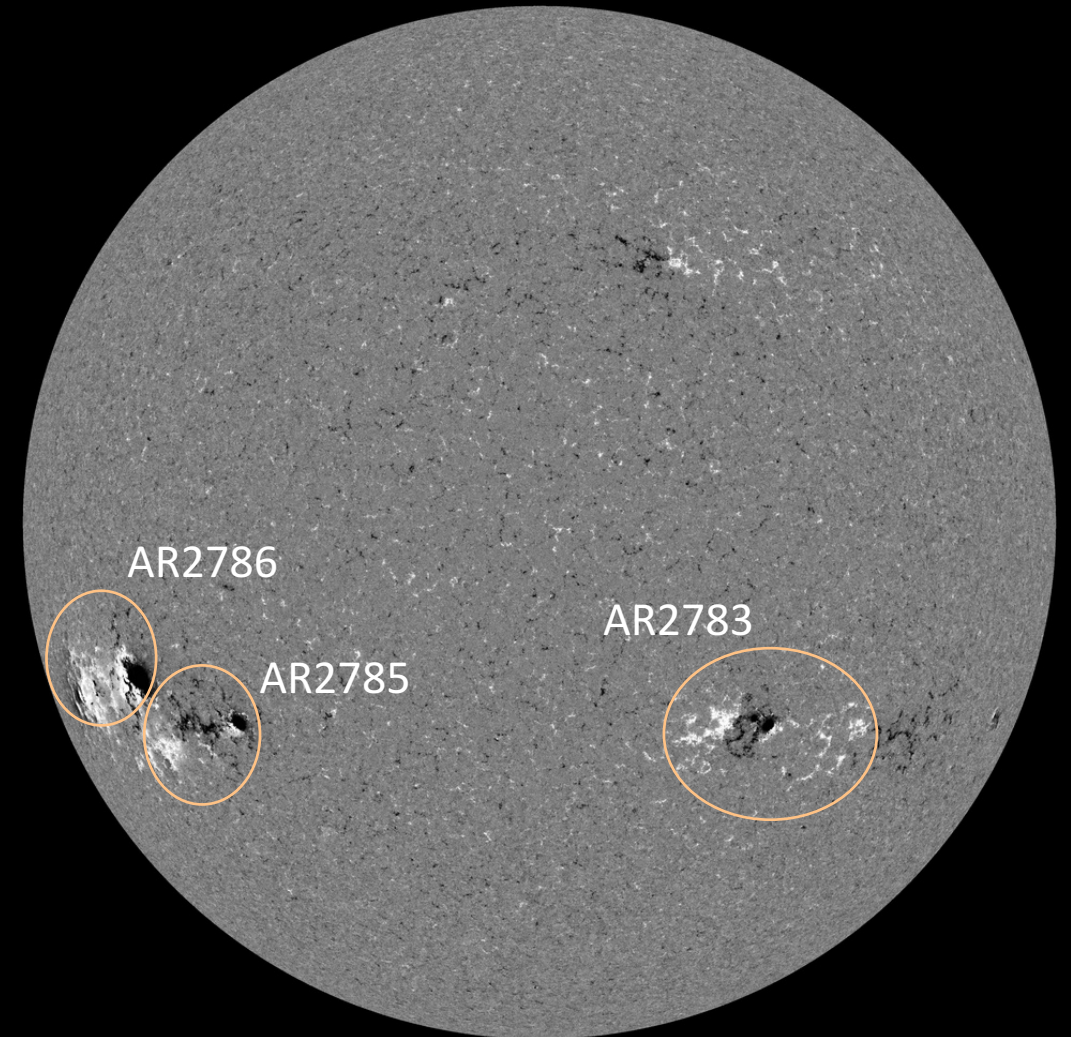
Solar active regions - Wednesday

SDO/HMI White Light 2020-11-25



SDO/HMI Quick-Look Continuum: 20201125_114500

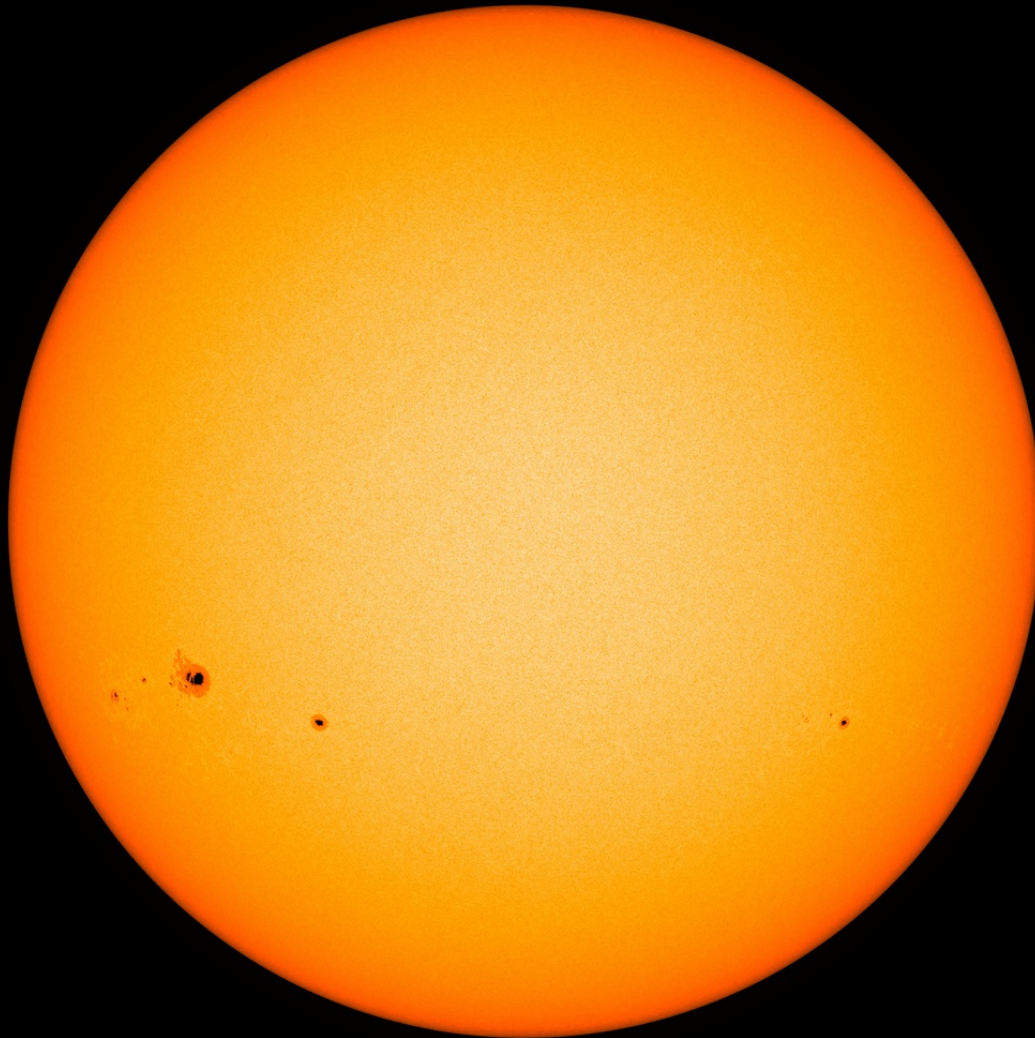
SDO/HMI Magnetogram 2020-11-25



SDO/HMI Quick-Look Magnetogram: 20201125_114500

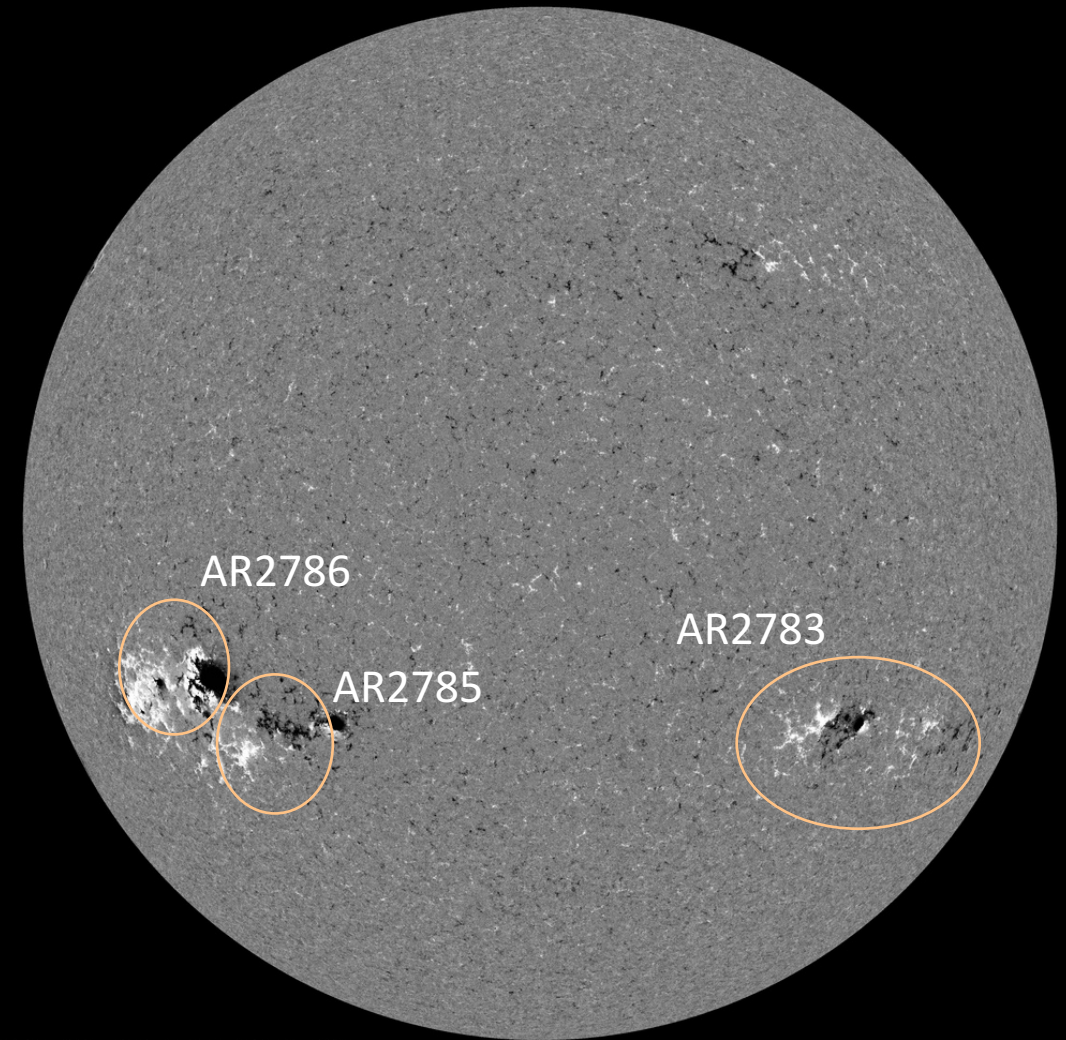
Solar active regions - Thursday

SDO/HMI White Light 2020-11-26



SDO/HMI Quick-Look Continuum: 20201126_114500

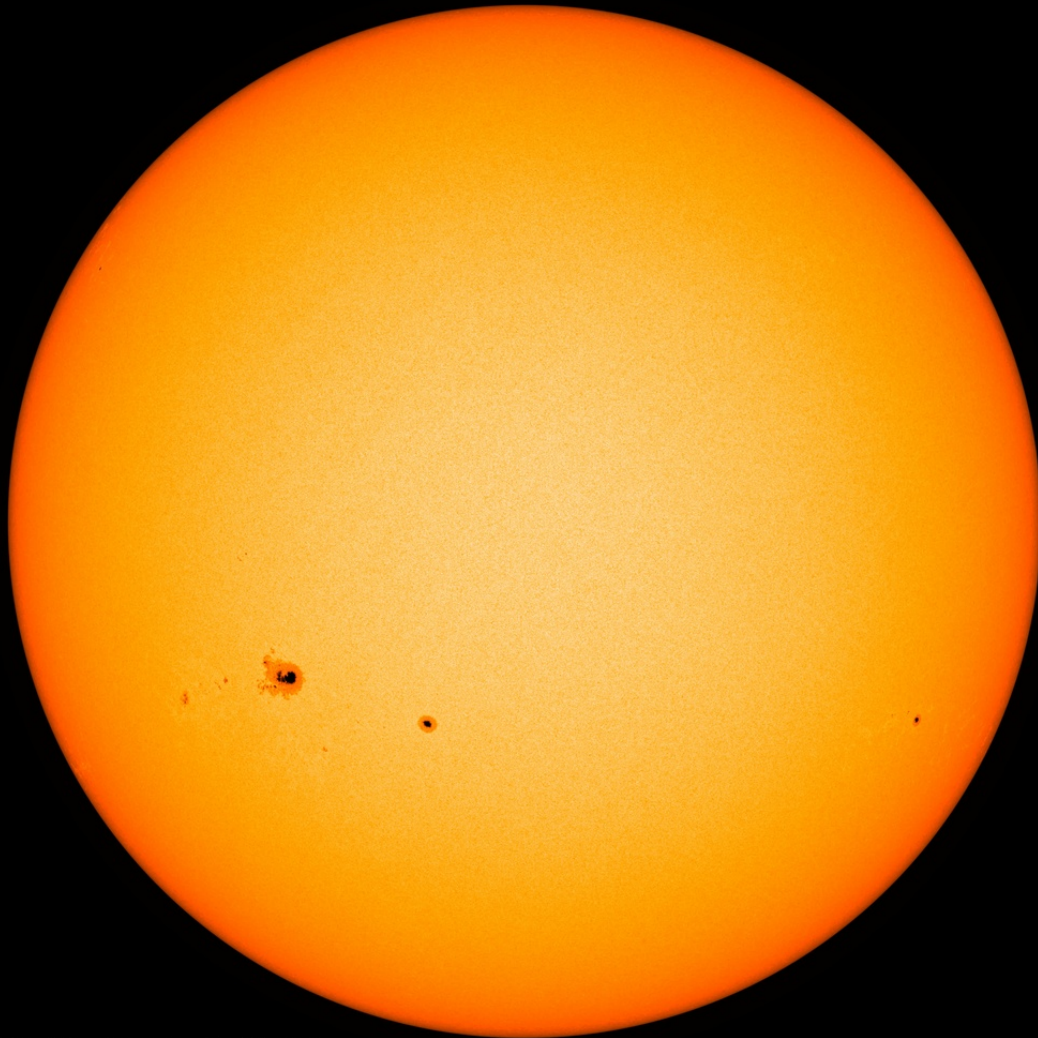
SDO/HMI Magnetogram 2020-11-26



SDO/HMI Quick-Look Magnetogram: 20201126_114500

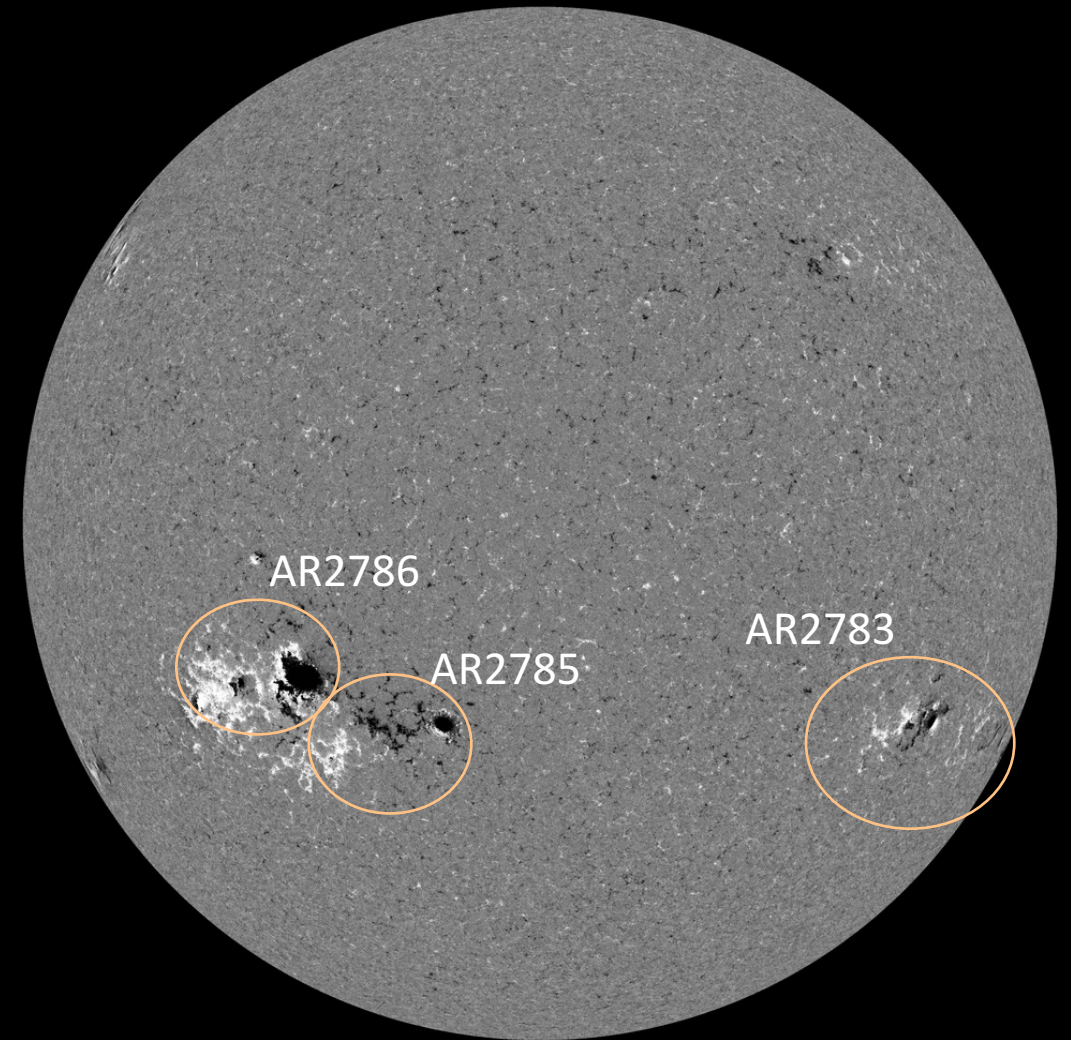
Solar active regions - Friday

SDO/HMI White Light 2020-11-27



SDO/HMI Quick-Look Continuum: 20201127_114500

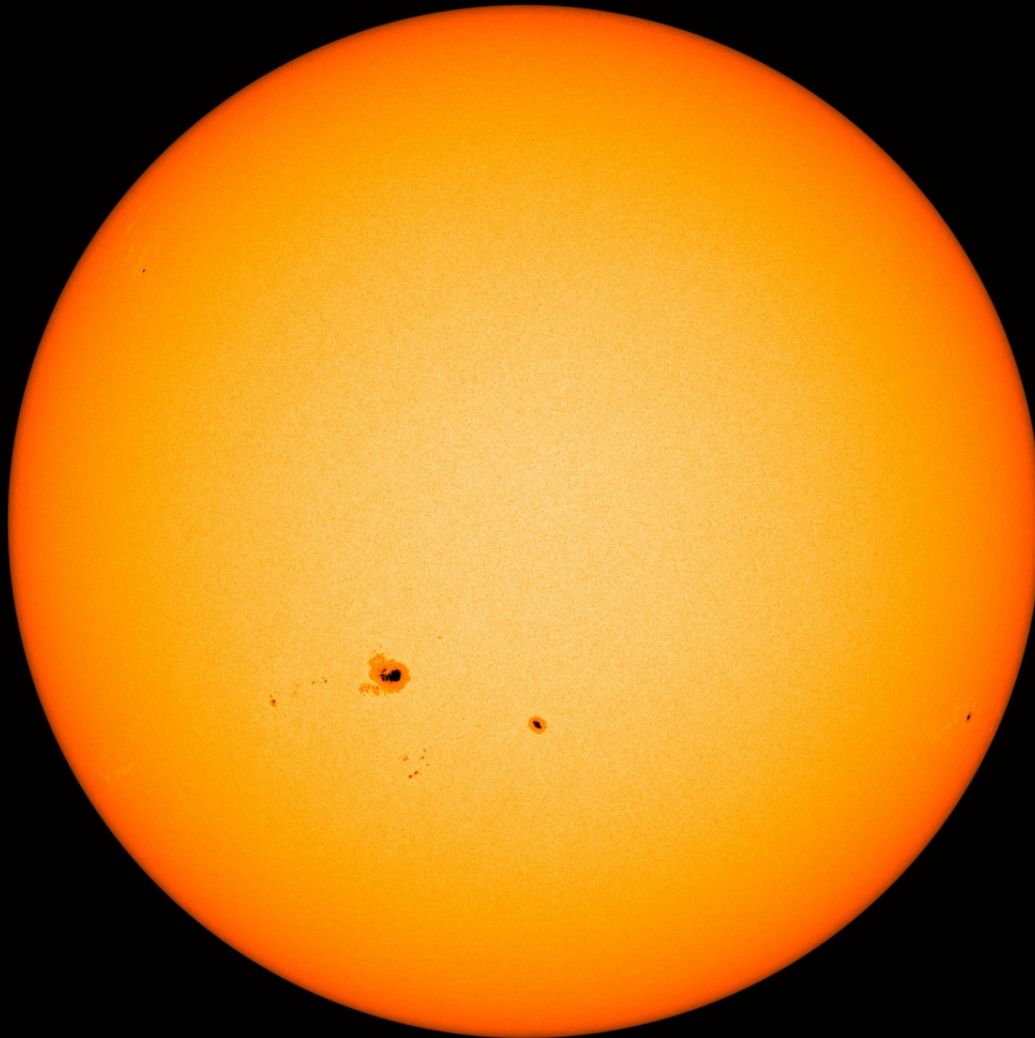
SDO/HMI Magnetogram 2020-11-27



SDO/HMI Quick-Look Magnetogram: 20201127_114500

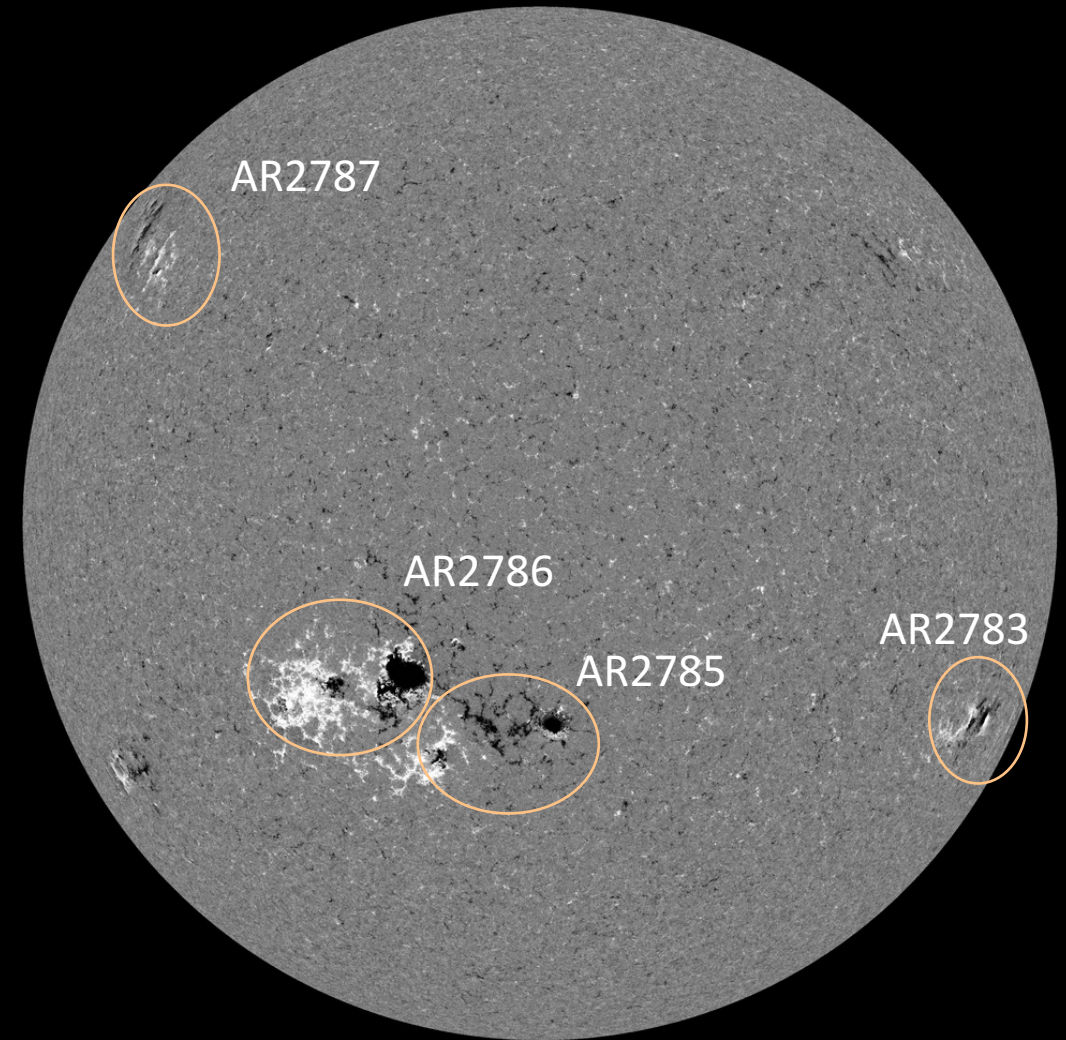
Solar active regions - Saturday

SDO/HMI White Light 2020-11-28



SDO/HMI Quick-Look Continuum: 20201128_114500

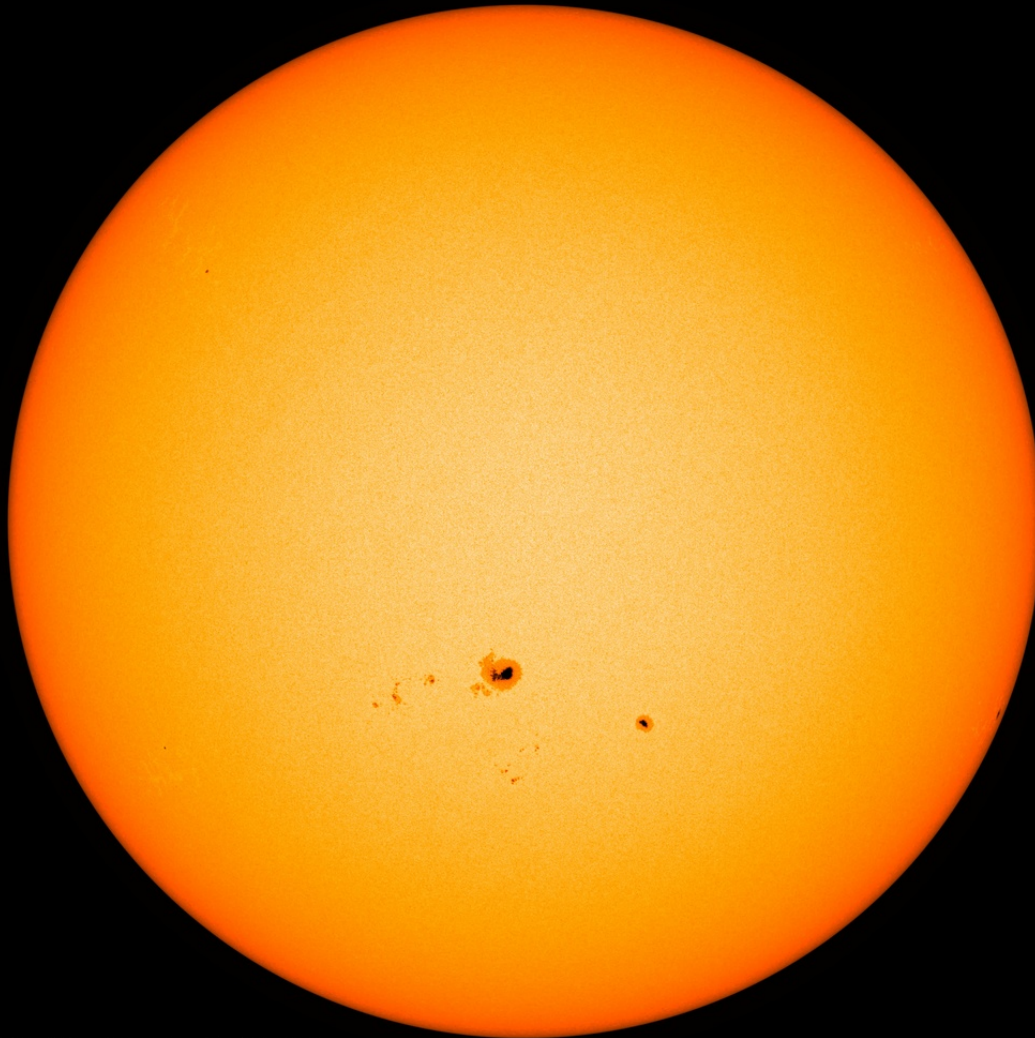
SDO/HMI Magnetogram 2020-11-28



SDO/HMI Quick-Look Magnetogram: 20201128_114500

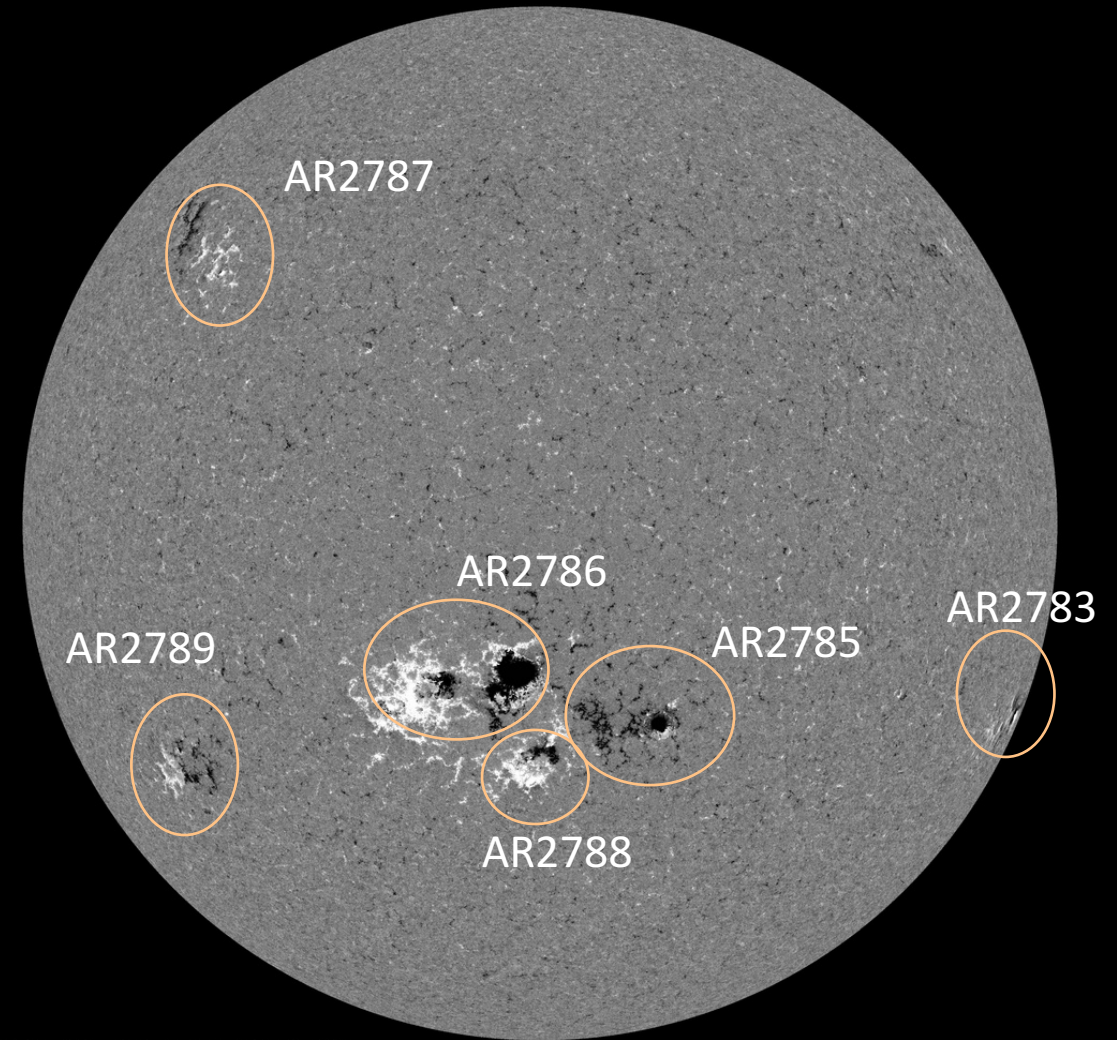
Solar active regions - Sunday

SDO/HMI White Light 2020-11-29



SDO/HMI Quick-Look Continuum: 20201129_114500

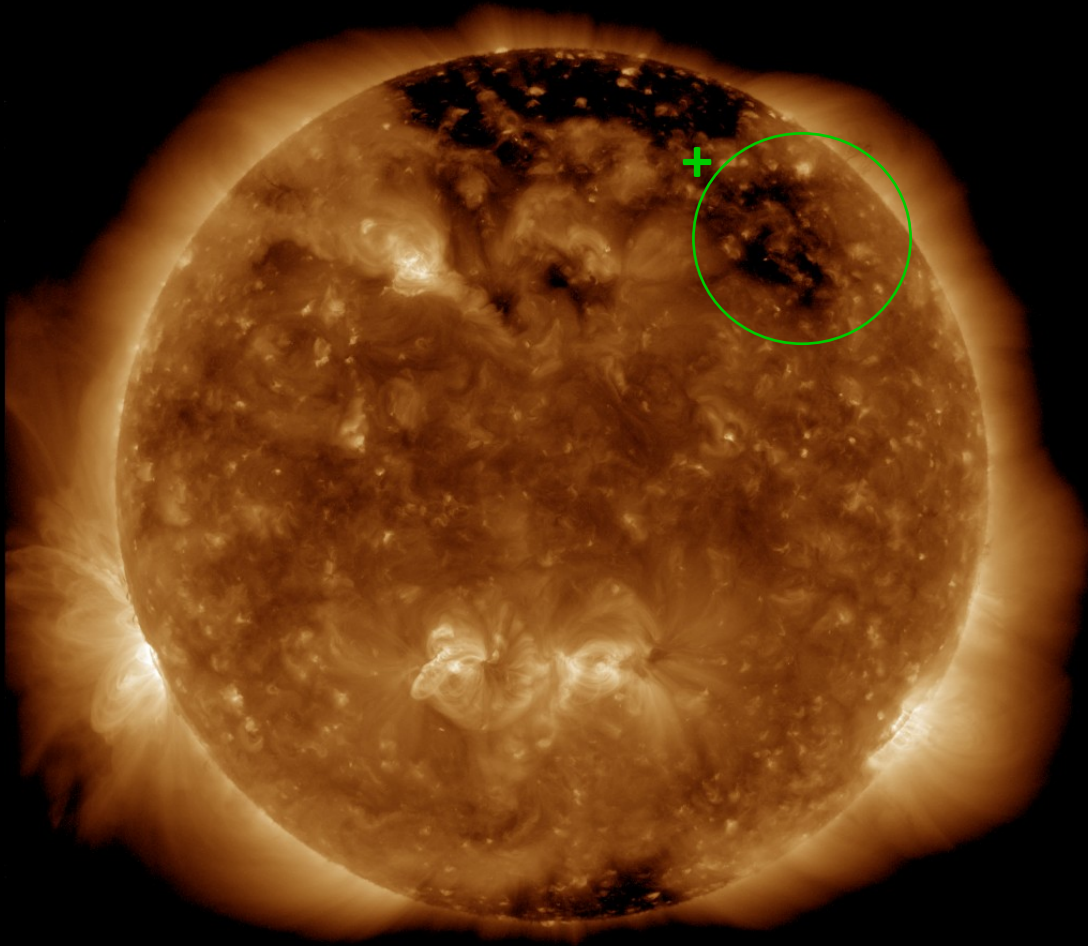
SDO/HMI Magnetogram 2020-11-29



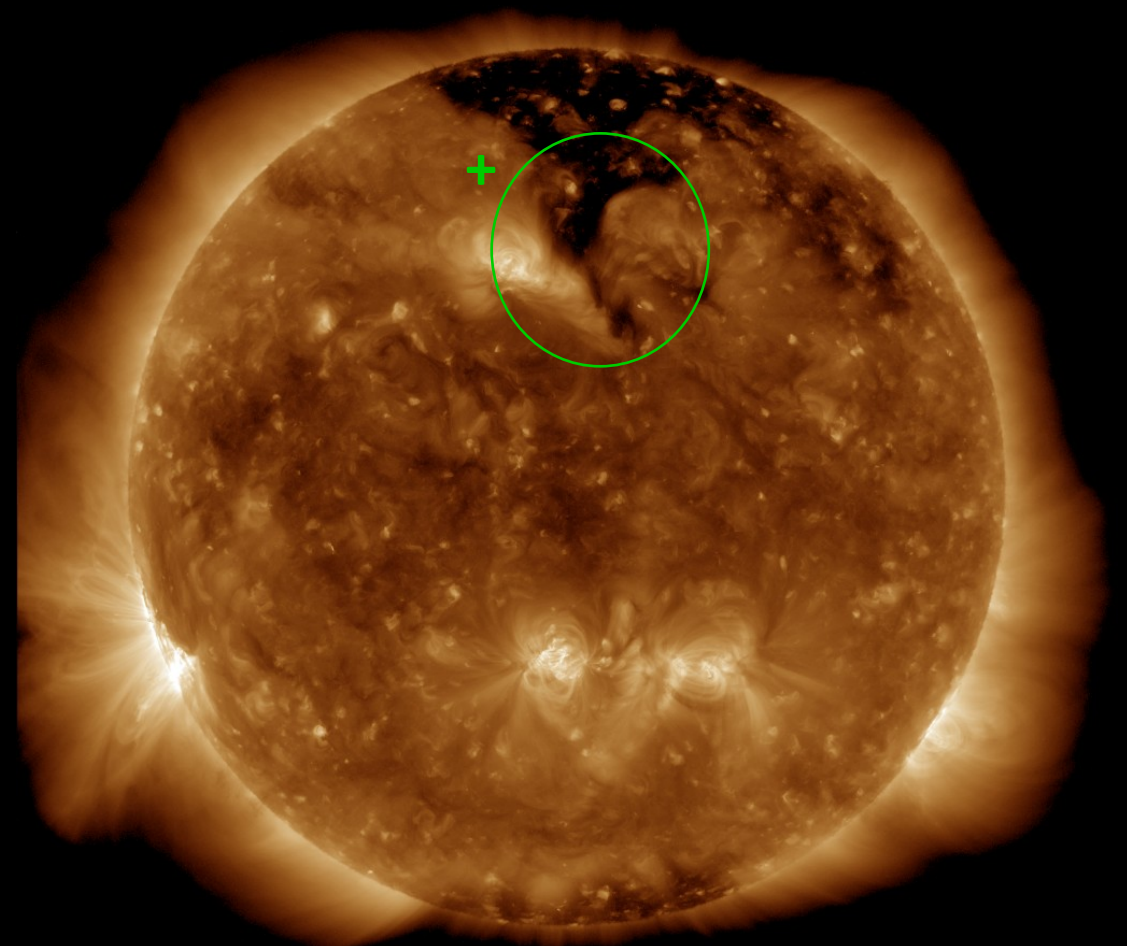
SDO/HMI Quick-Look Magnetogram: 20201129_114500

Coronal holes

SDO/AIA 19.3 nm 2020-11-22



SDO/AIA 19.3 nm 2020-11-23



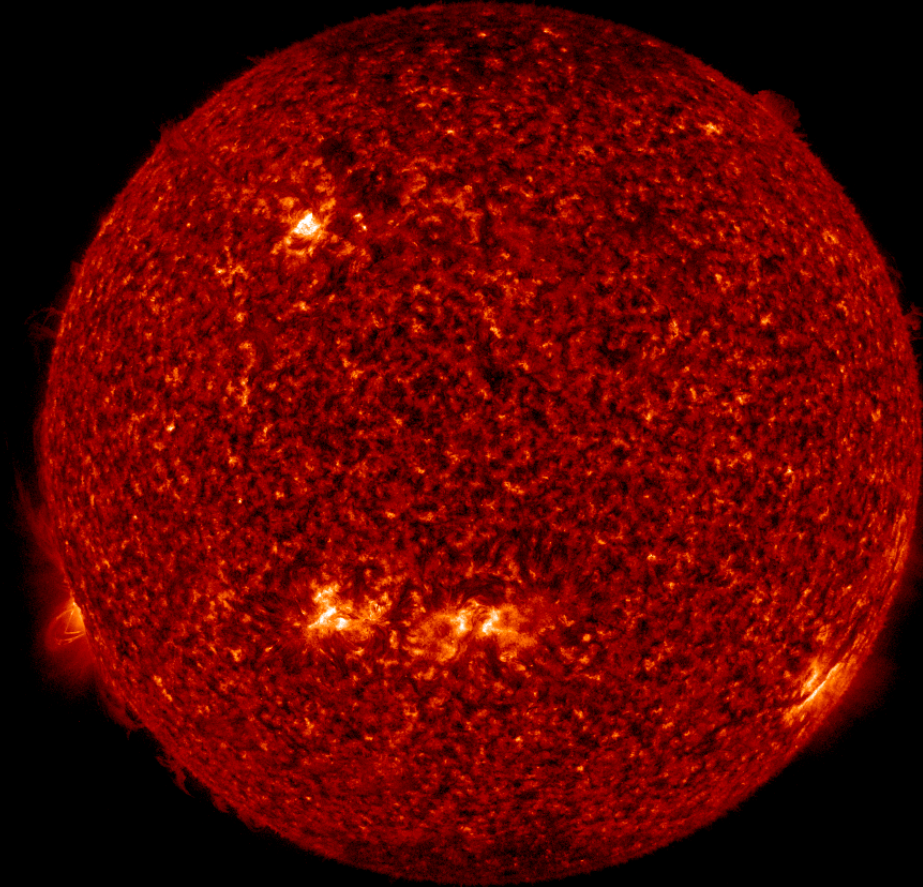
SDO/AIA 193 2020-11-22 12:18:41 UT

SDO/AIA 193 2020-11-23 12:18:05 UT

Filaments

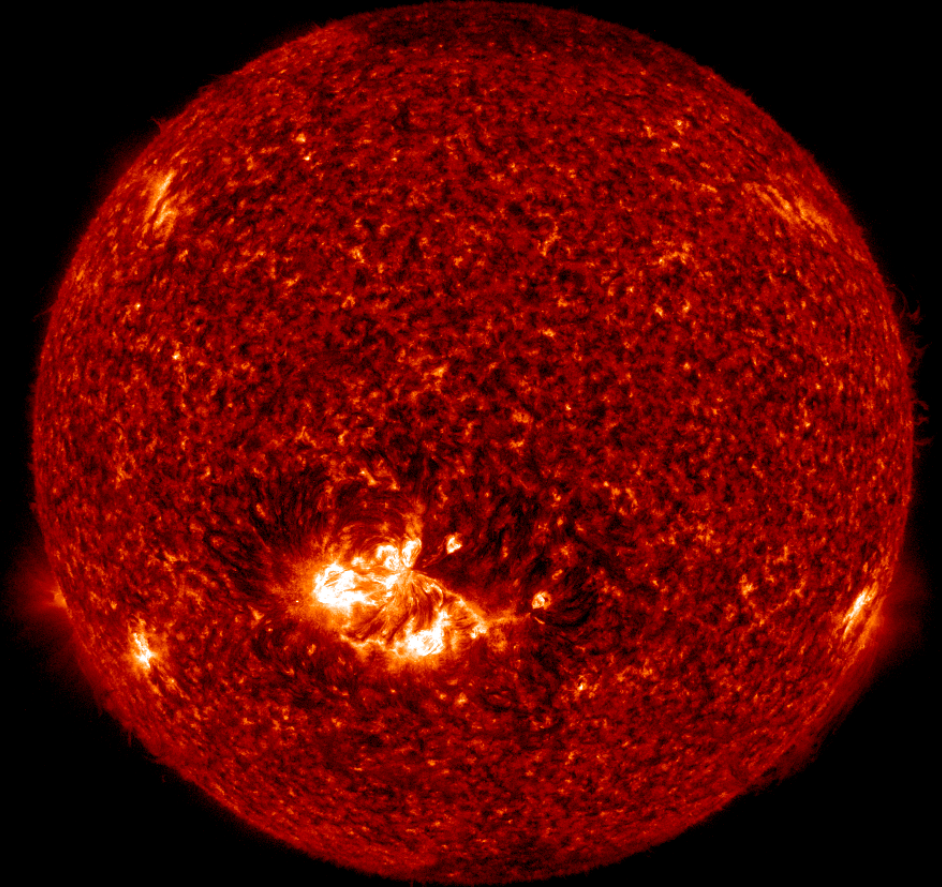
SDO/AIA 30.4 nm 2020-11-22

SDO/AIA AIA 304Å 2020-11-22T00:00:06.58

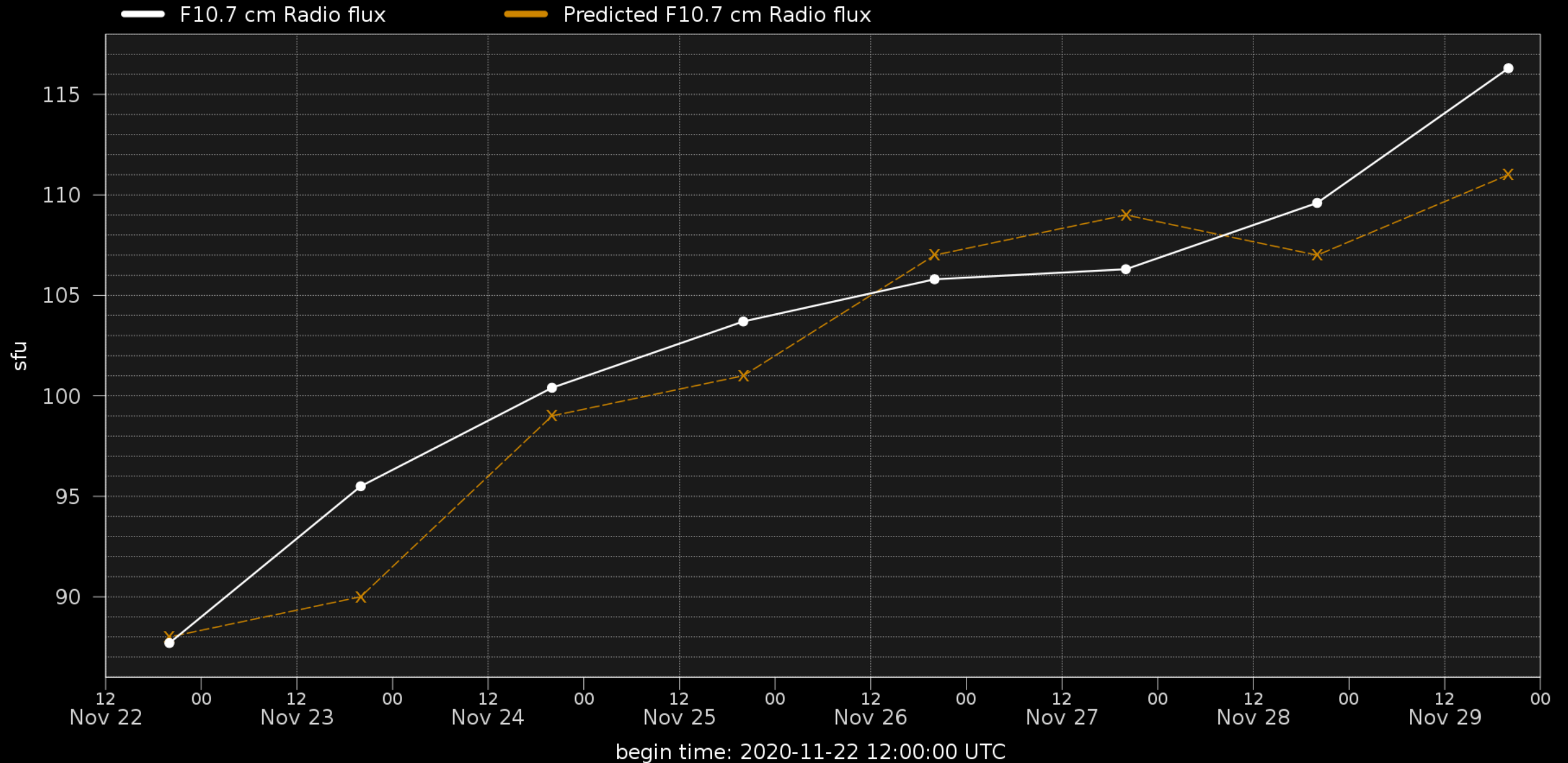


SDO/AIA 30.4 nm 2020-11-29

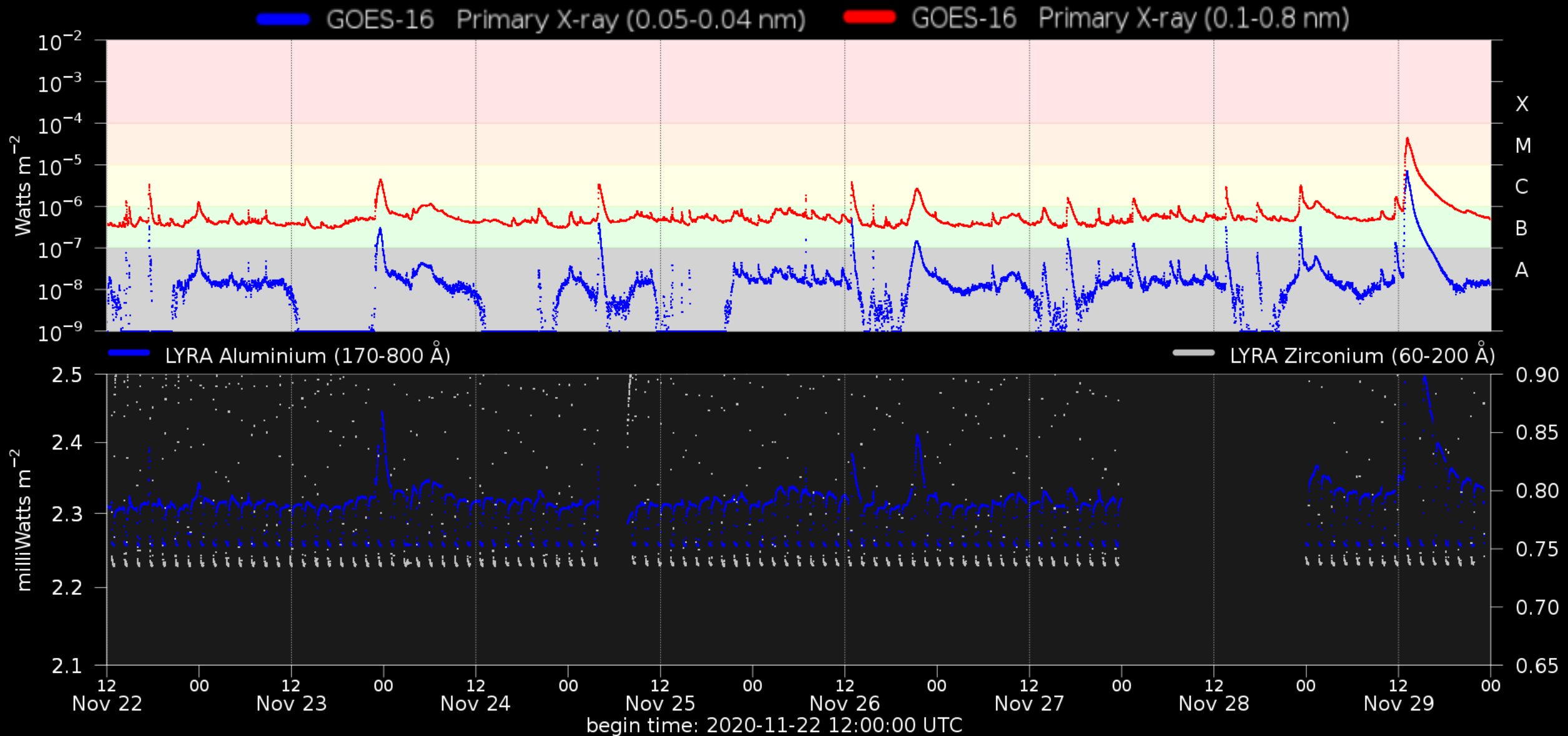
SDO/AIA AIA 304Å 2020-11-29T00:00:06.60



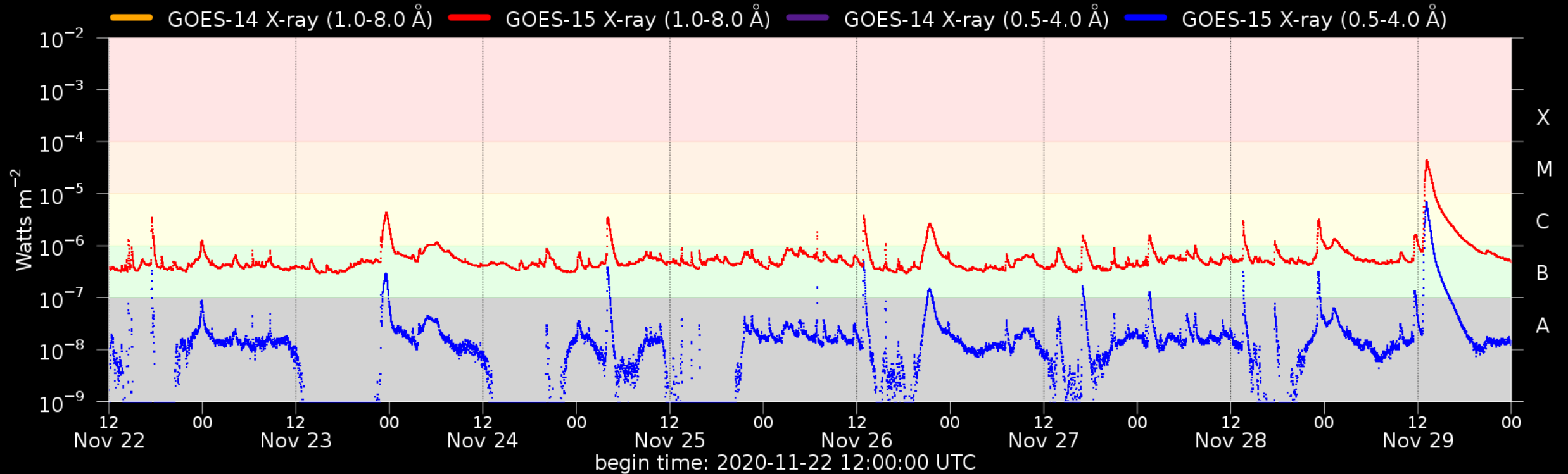
Solar F10.7cm radio flux



Solar X-Ray and UV flux



Flaring activity

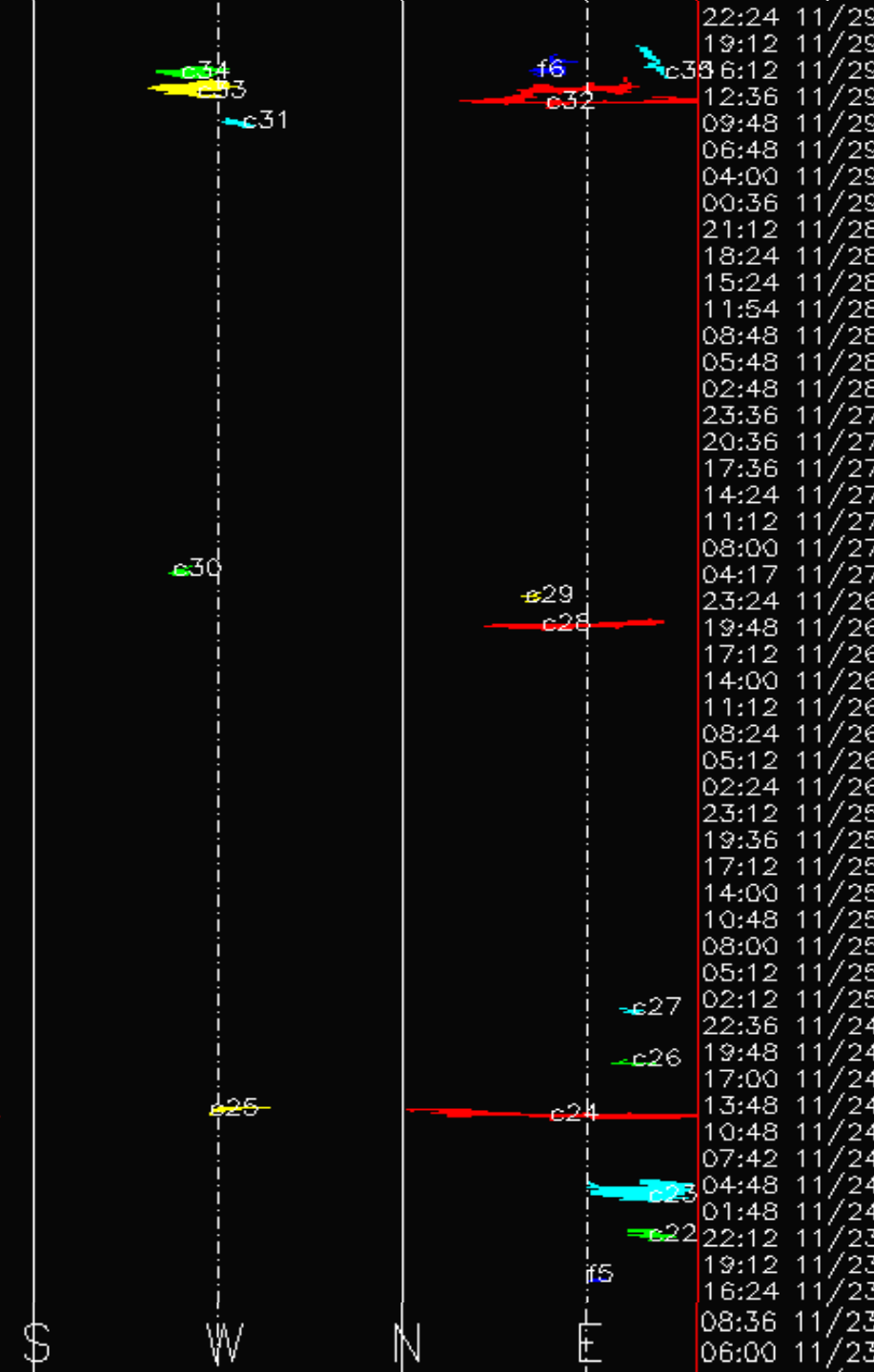
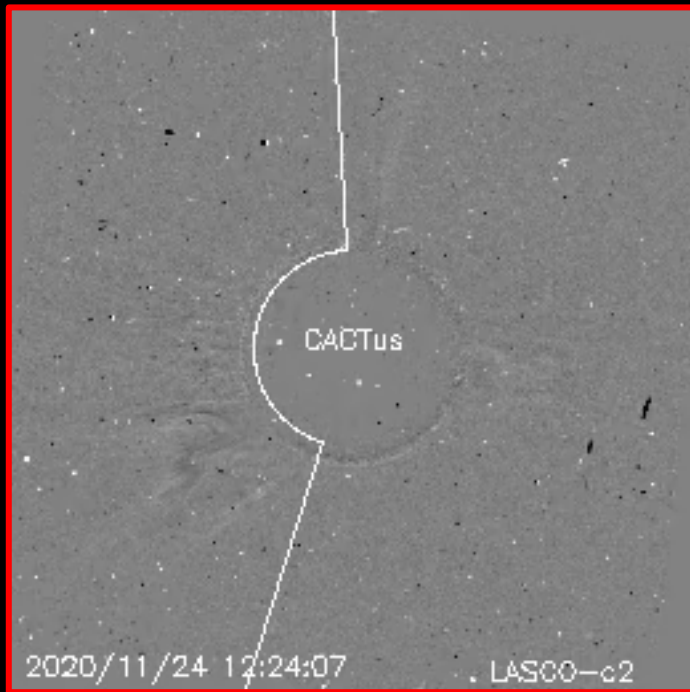


Probabilities (%) and occurrences (#) of B/C/M/X-flares issued at 12:30 and over the next 24h:

Issue date	2020-11-22	2020-11-23	2020-11-24	2020-11-25	2020-11-26	2020-11-27	2020-11-28	2020-11-29
Probability	-- 70 10 01	-- 70 10 01	-- 60 05 01	-- 60 05 01	-- 55 05 01	-- 65 15 01	-- 60 05 01	-- 65 10 01
Observed	08 03 00 0 0	02 02 00 0 0	05 01 00 0 0	06 01 00 0 0	04 03 00 0 0	08 03 00 0 0	03 03 00 0 0	02 02 01 0 0

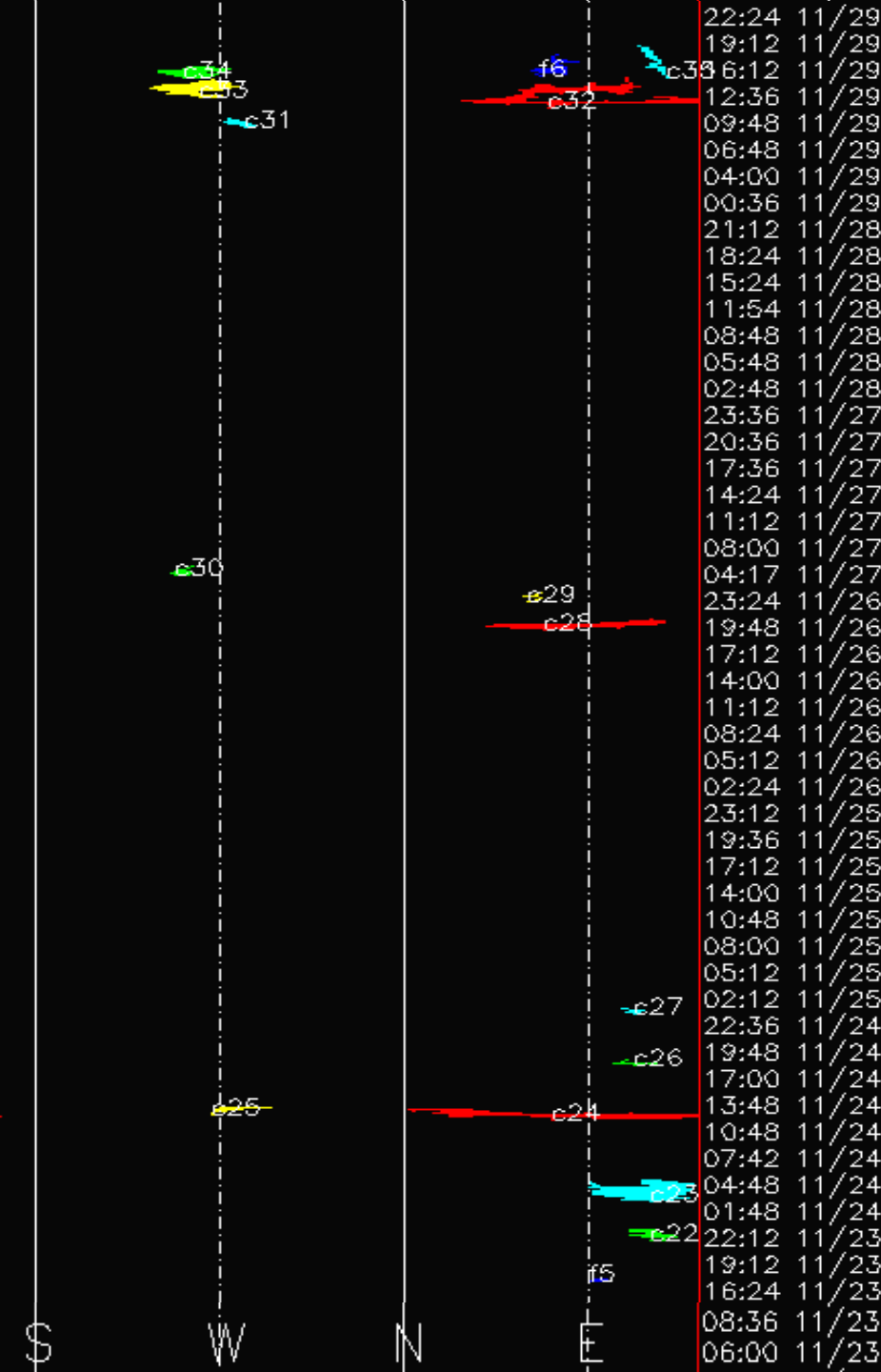
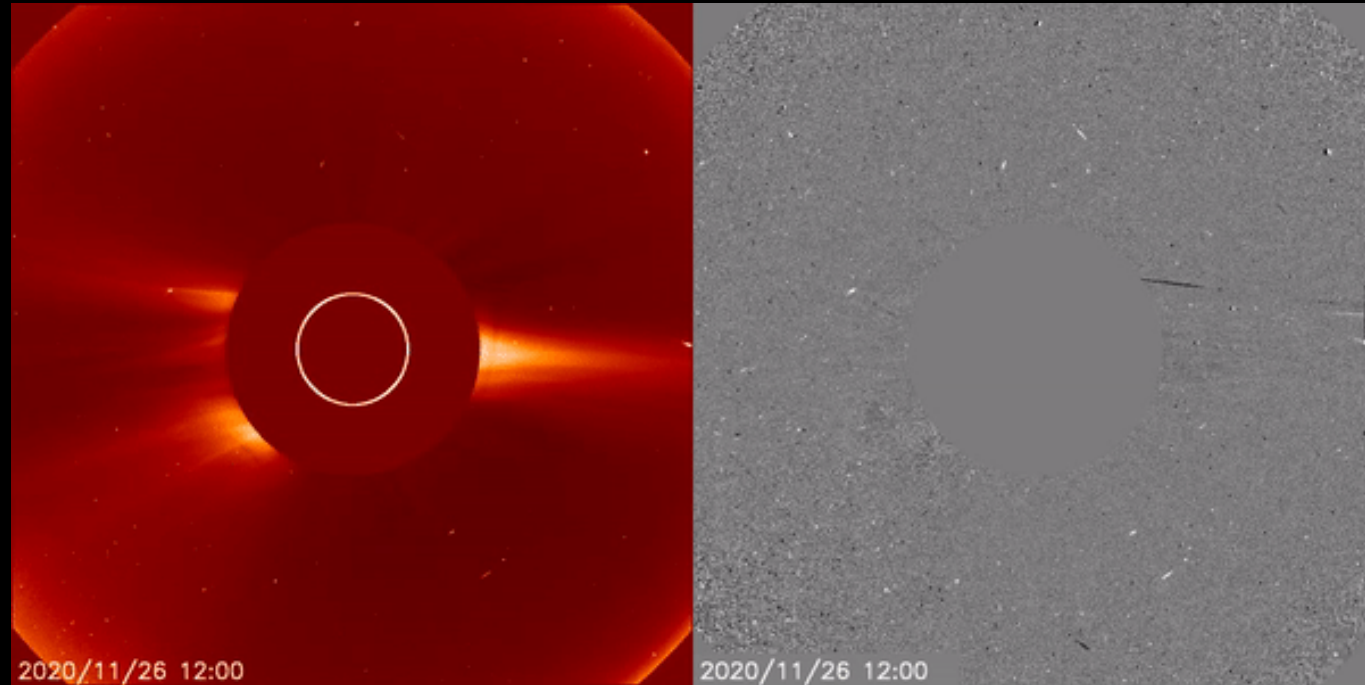
Coronal Mass Ejections

Asymmetric halo CME on Nov 24: **Back-sided**



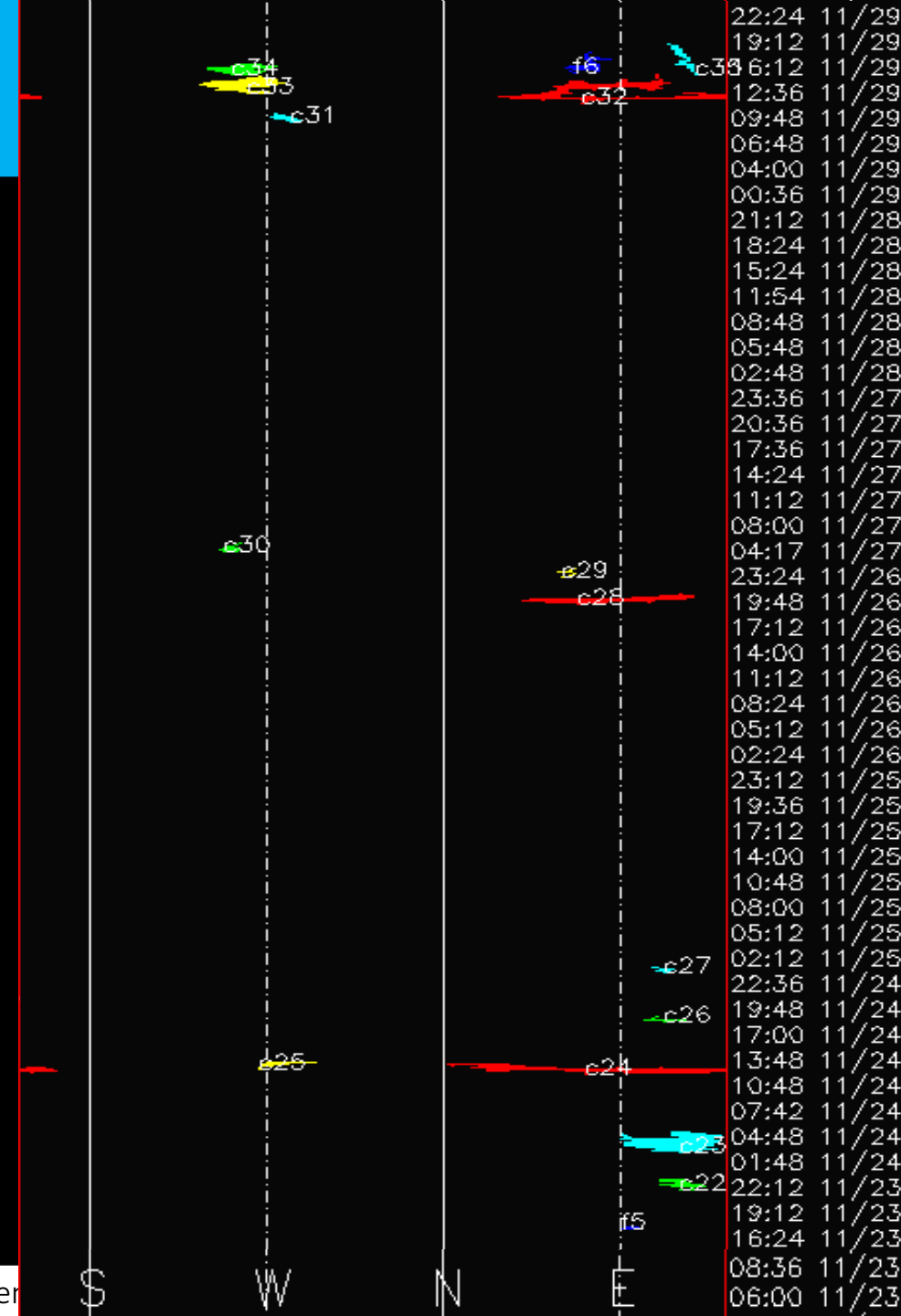
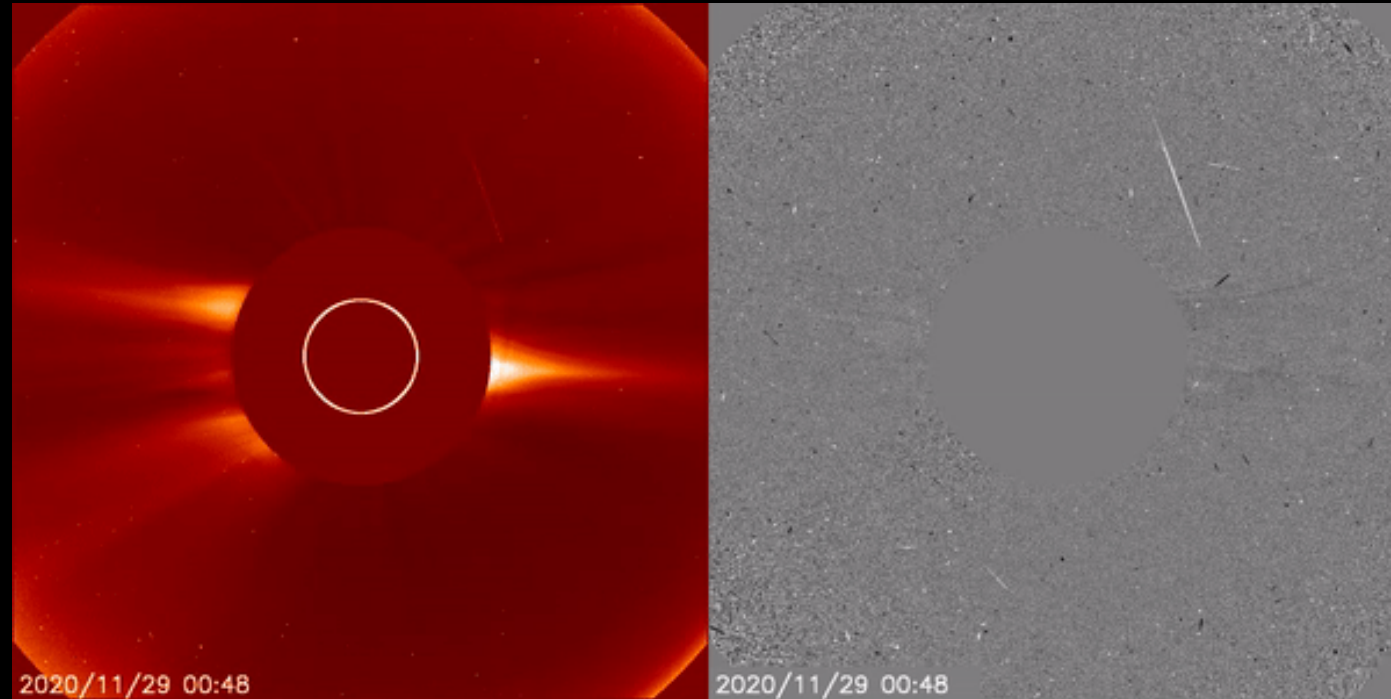
Coronal Mass Ejections

East limb CME on Nov 26



Coronal Mass Ejections

East limb CME on Nov 29: associated with M-flare



Solar Wind and

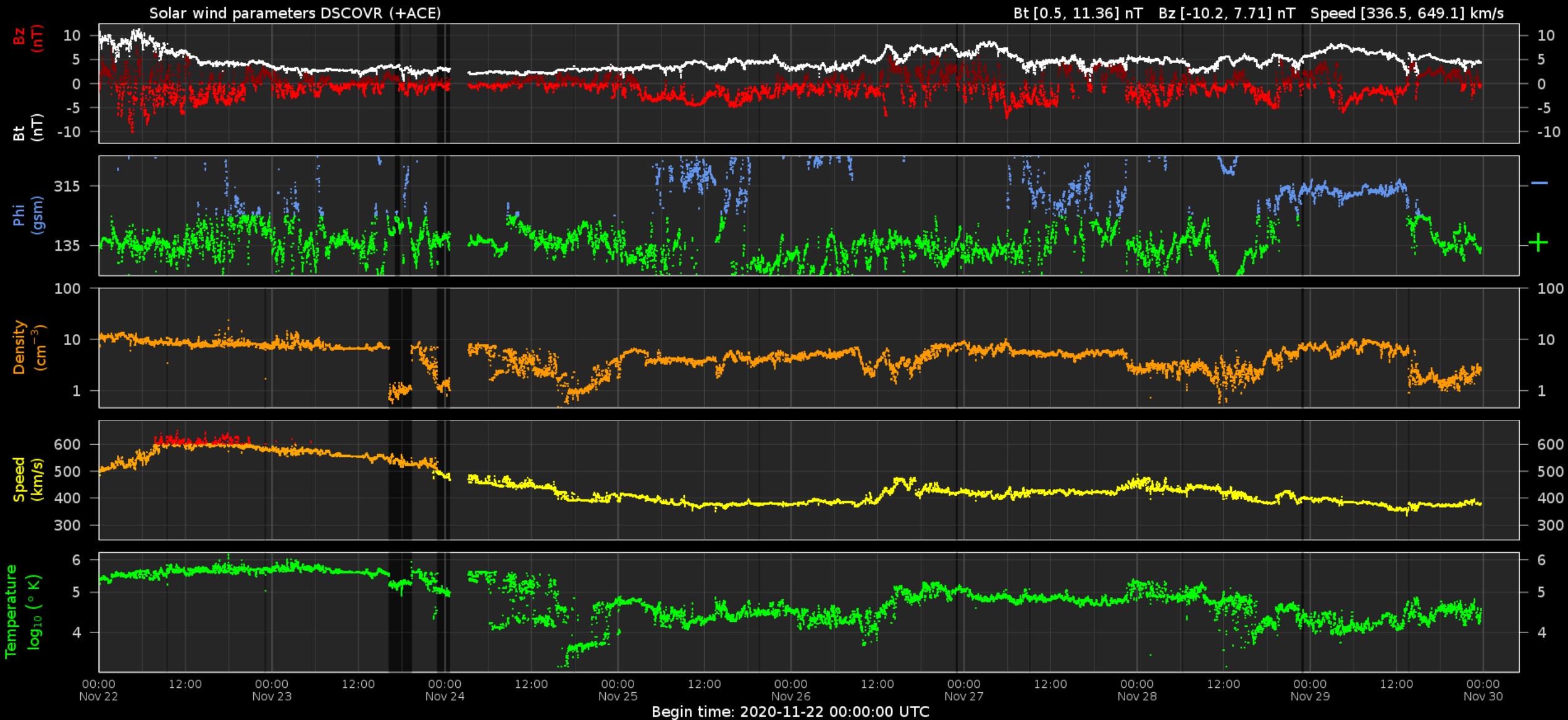
Geomagnetic Activity



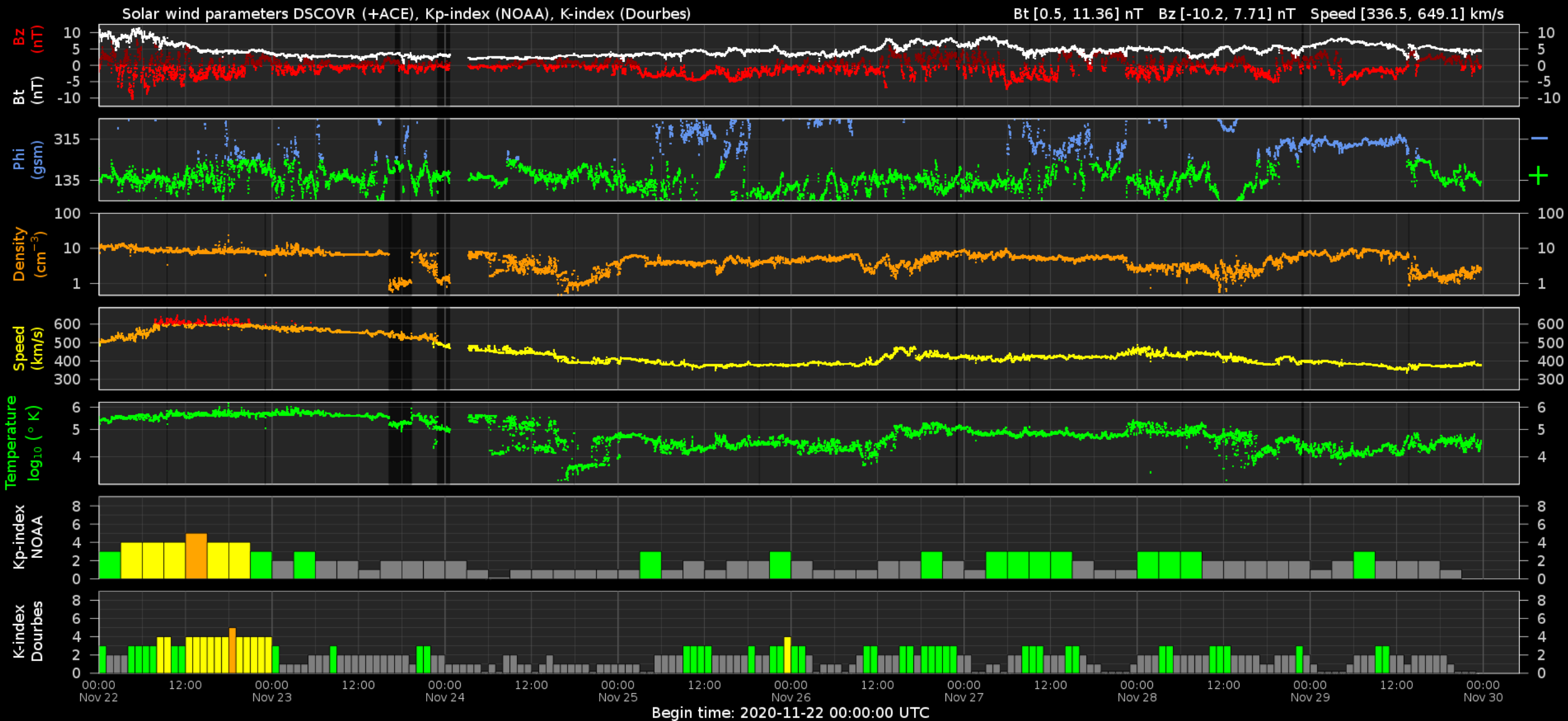
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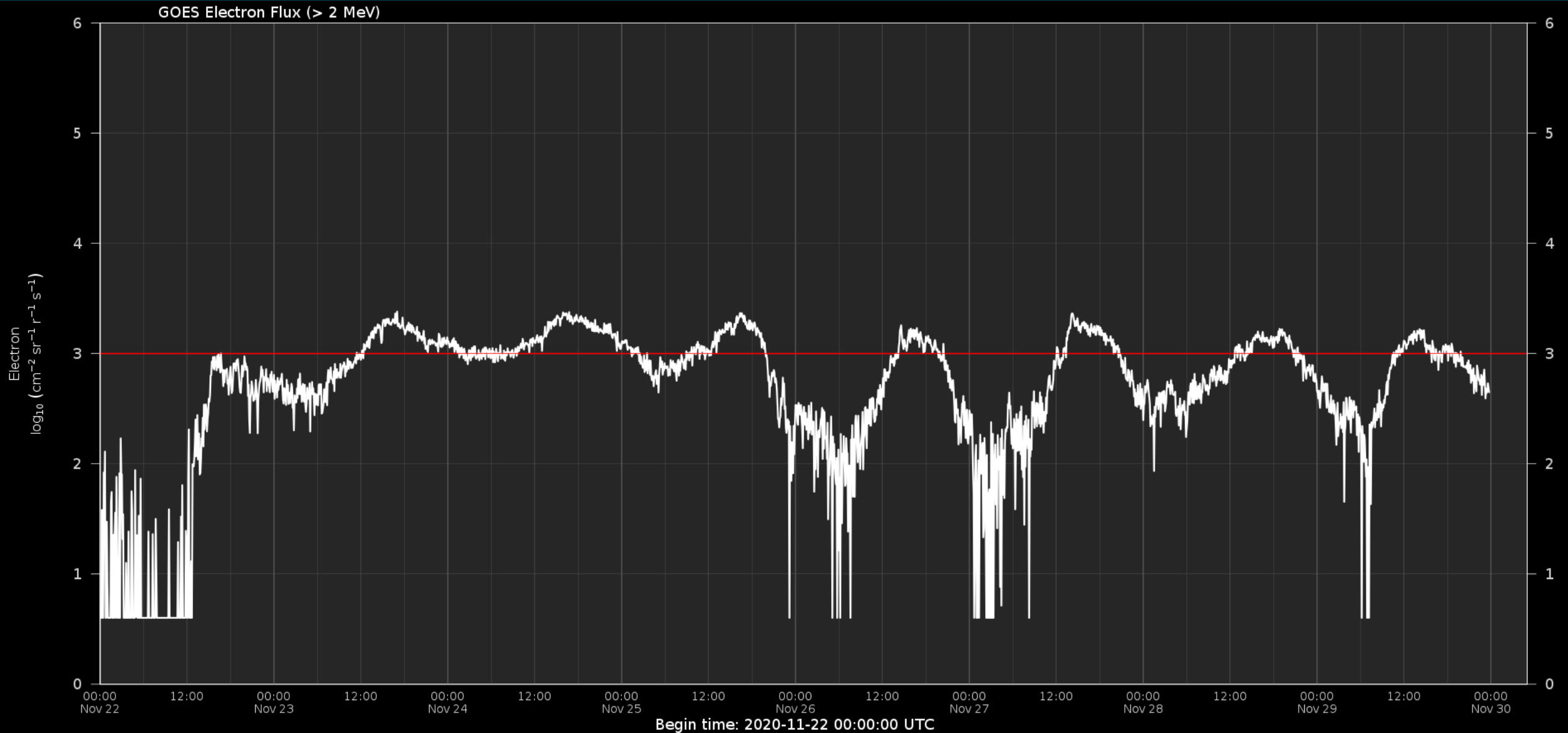
Solar wind parameters (DSCOVR data)



Solar wind parameters & K-index



Electron flux



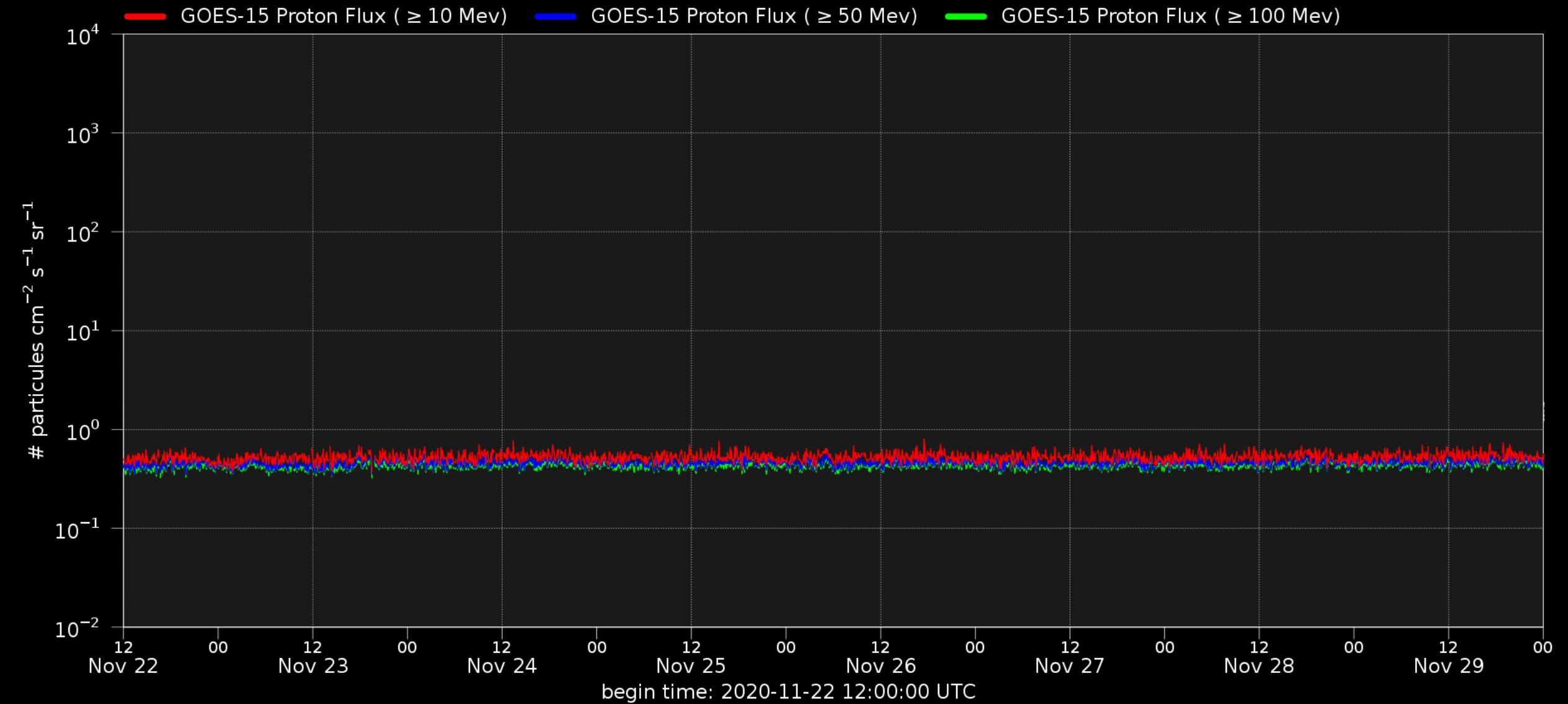
Solar Energetic Particles



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Solar proton flux



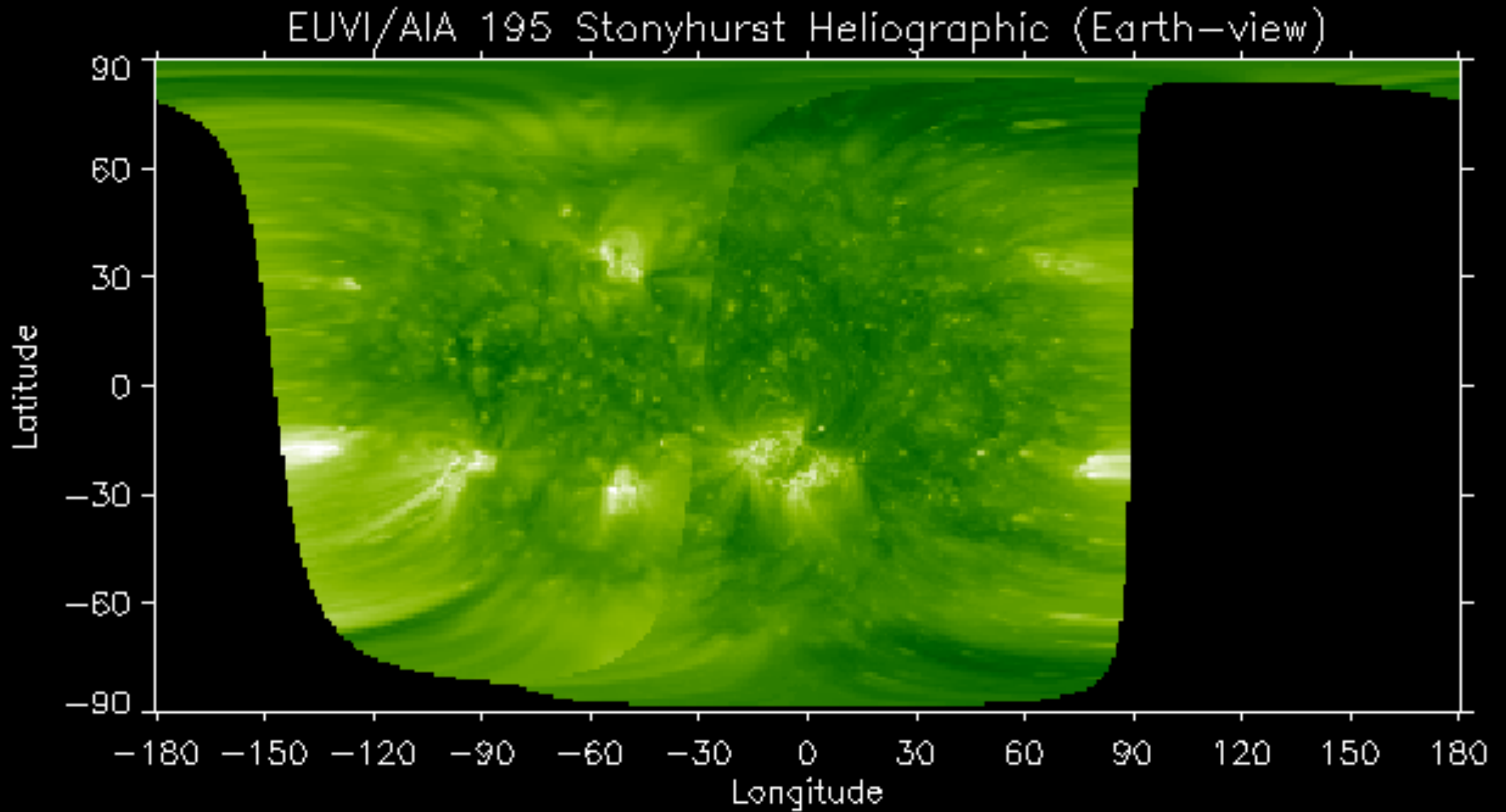
Outlook



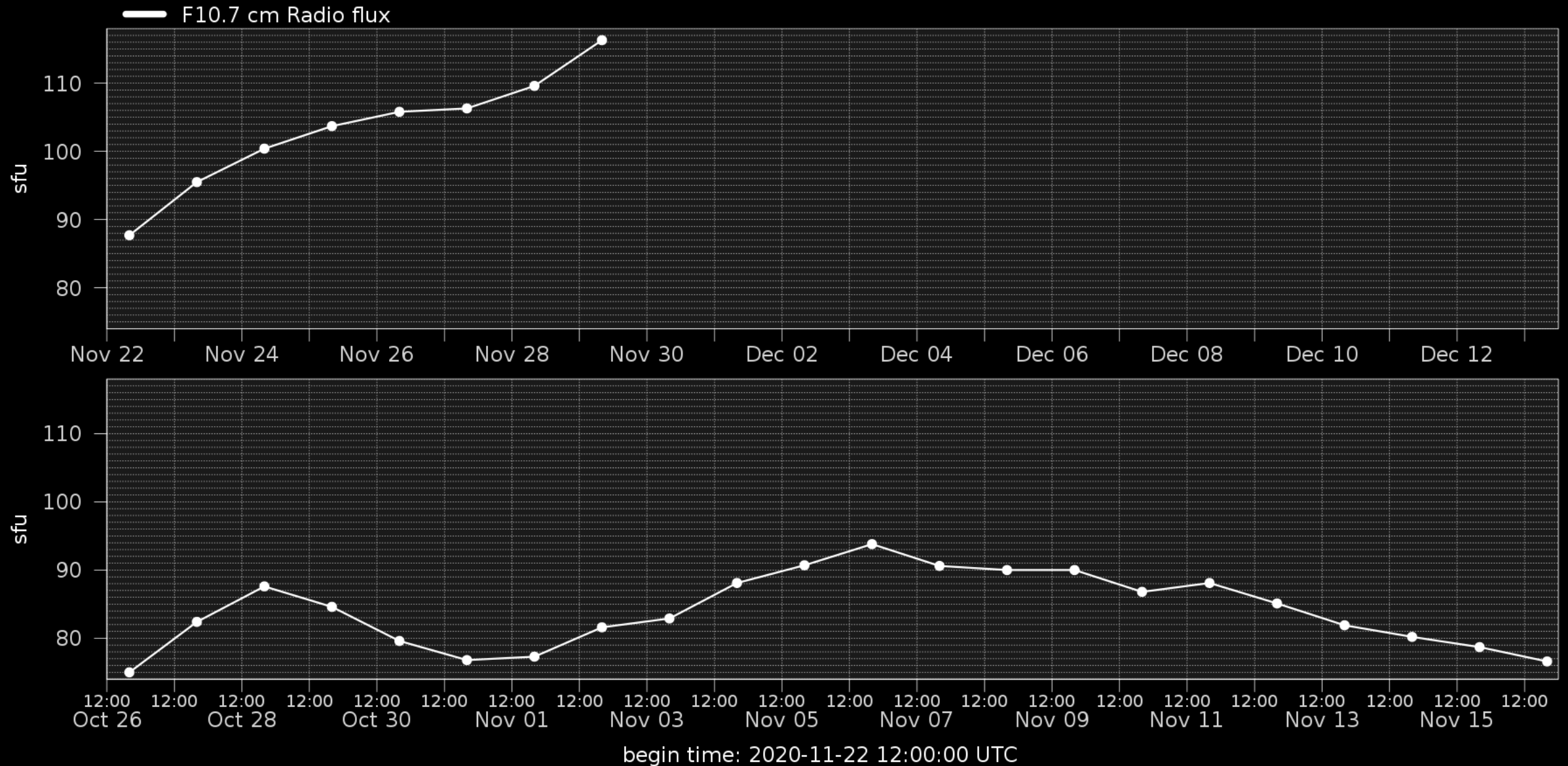
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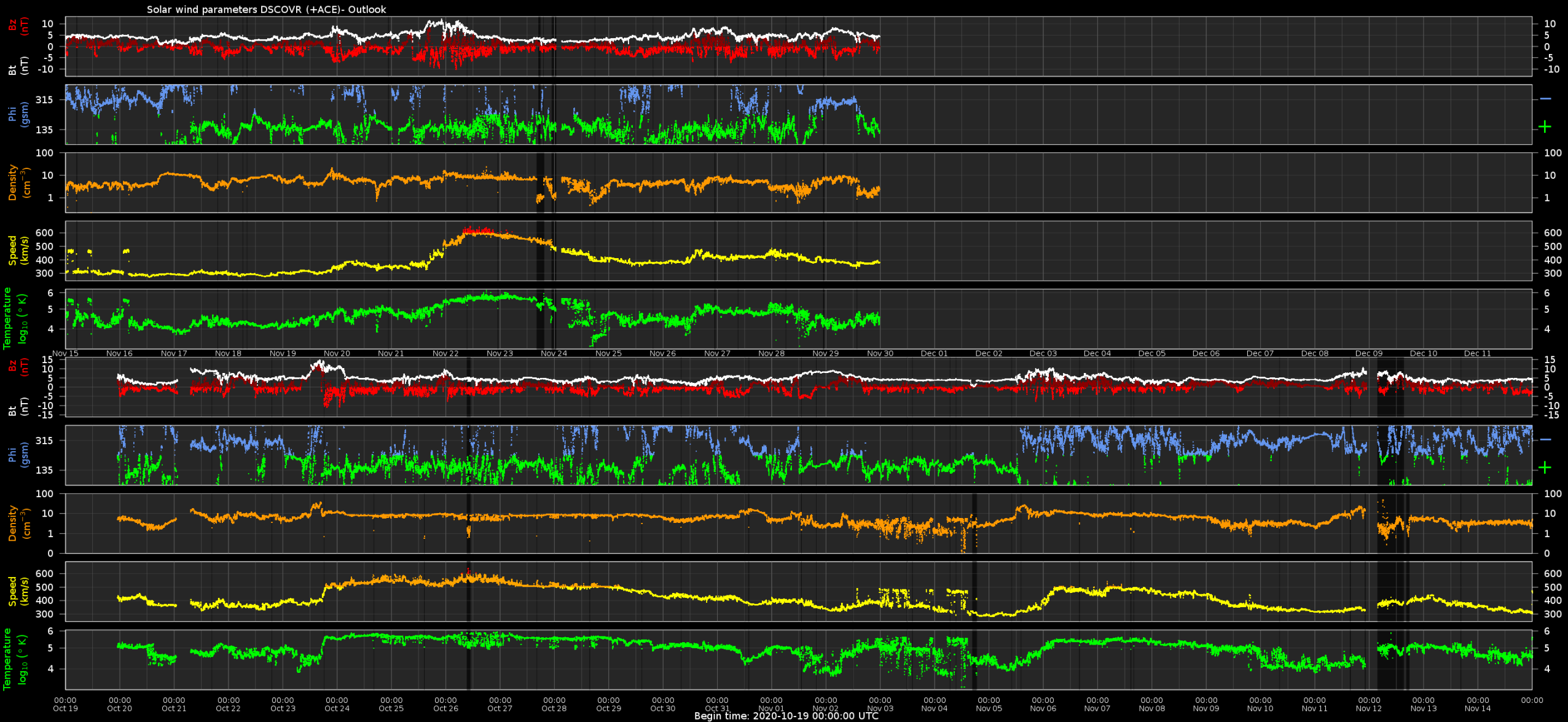
Outlook: Solar activity



Outlook: F10 flux



Outlook: Solar wind parameters



Outlook: Geomagnetic activity



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