

SIDC Space Weather Briefing

17 October 2021 - 24 October 2021

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& the SIDC forecaster team



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Summary Report

Solar activity from 2021-10-17 12:00 to 2021-10-24 23:59

Active regions	NOAA AR 2886 (Catania sunspot grp 64), Catania sunspot grp 65, NOAA AR 2887
Flares	# C-class flare: 0 # M-class flare: 0 # X-class flare: 0
Filament eruptions	No Earth-directed filament eruptions
Coronal Holes	Extension to southern polar CH crossed central meridian on Oct 17 A small negative CH crossed central meridian on Oct 21 Small extension to northern polar CH crossed central meridian on Oct 24
Proton flux	Nominal levels
Electron flux	Nominal levels

Solar wind and geomagnetic conditions

ICME	Enhancement in the Interplanetary Magnetic Field (IMF) – possible ICME on Oct 18
SW Conditions	B : 0.54 - 12.93 nT // Bz: -8.63 nT to 10.99 nT // Speed: 306.8 - 561.4km/s
K-indices	max K-index (Dourbes): 4 max Kp-index (NOAA): 4

All Quiet Alert: On between 21-23 Oct 2021

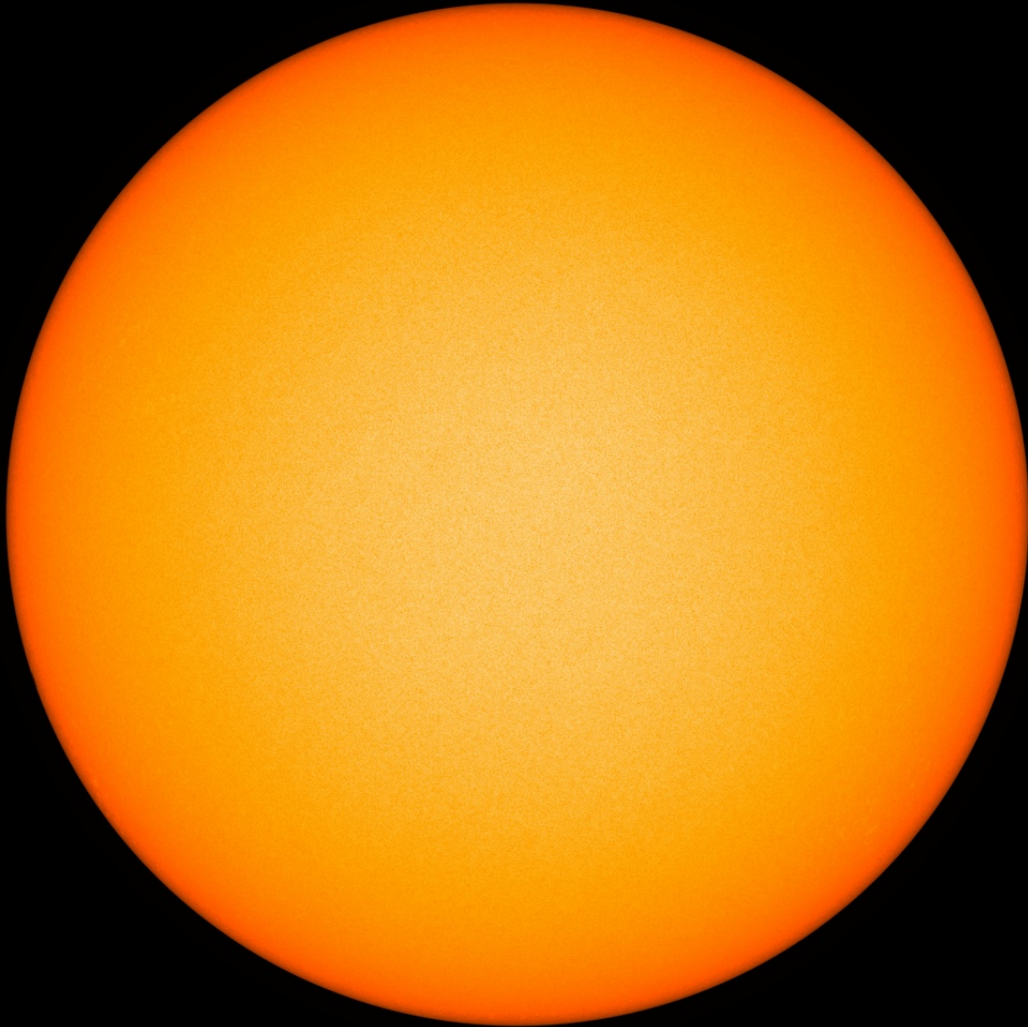
Solar Activity



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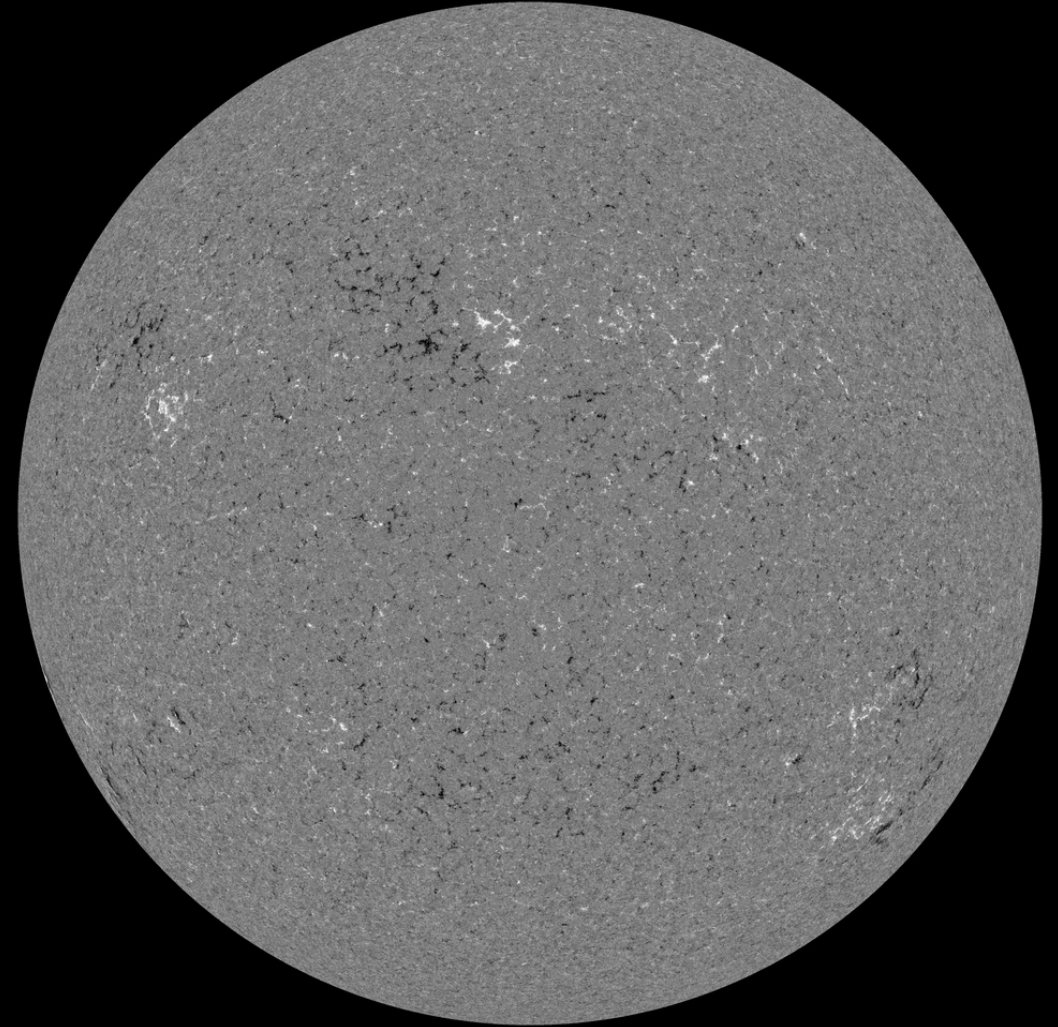
Solar active regions

SDO/HMI White Light 2021-10-17



SDO/HMI Quick-Look Continuum: 20211017_114500

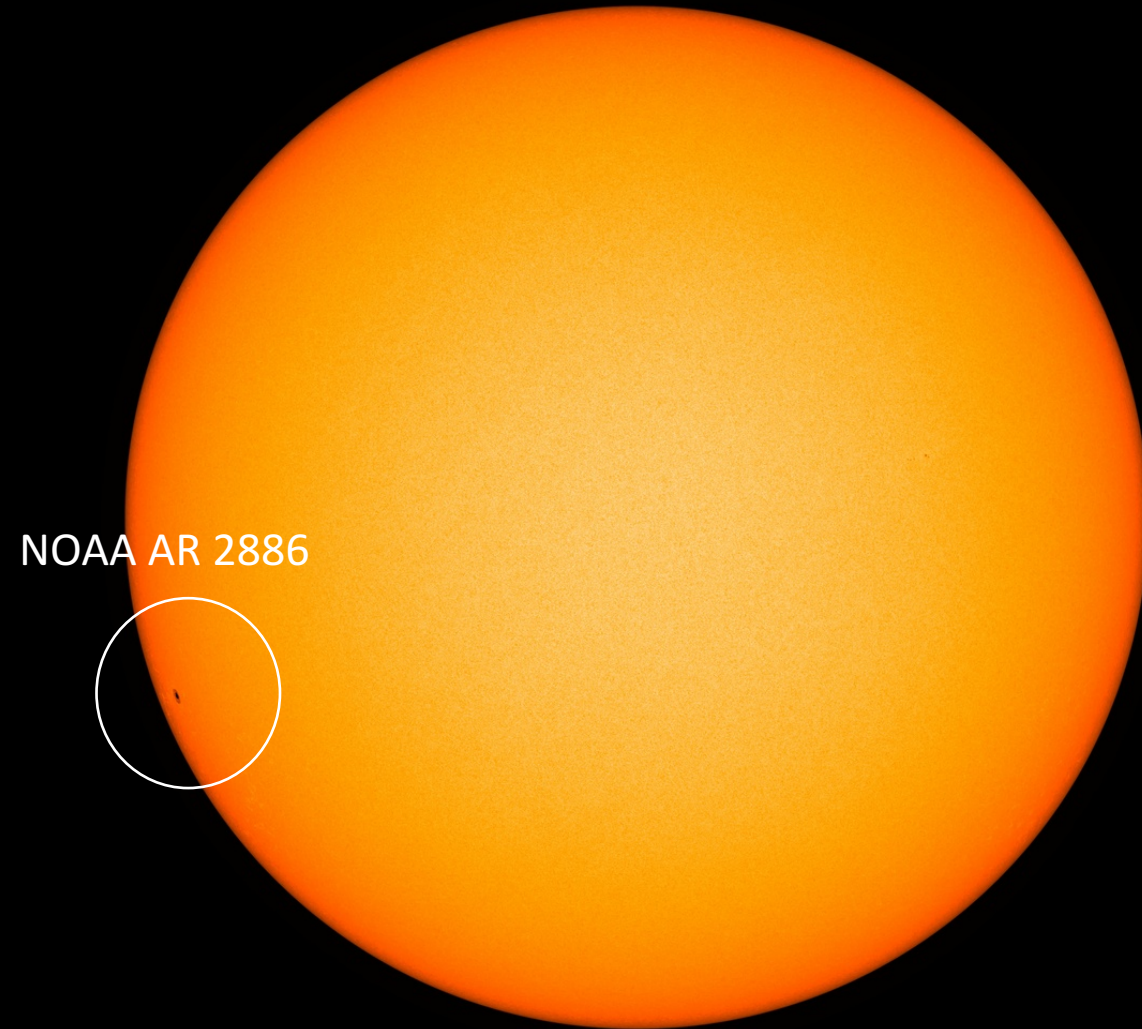
SDO/HMI Magnetogram 2021-10-17



SDO/HMI Quick-Look Magnetogram: 20211017_114500

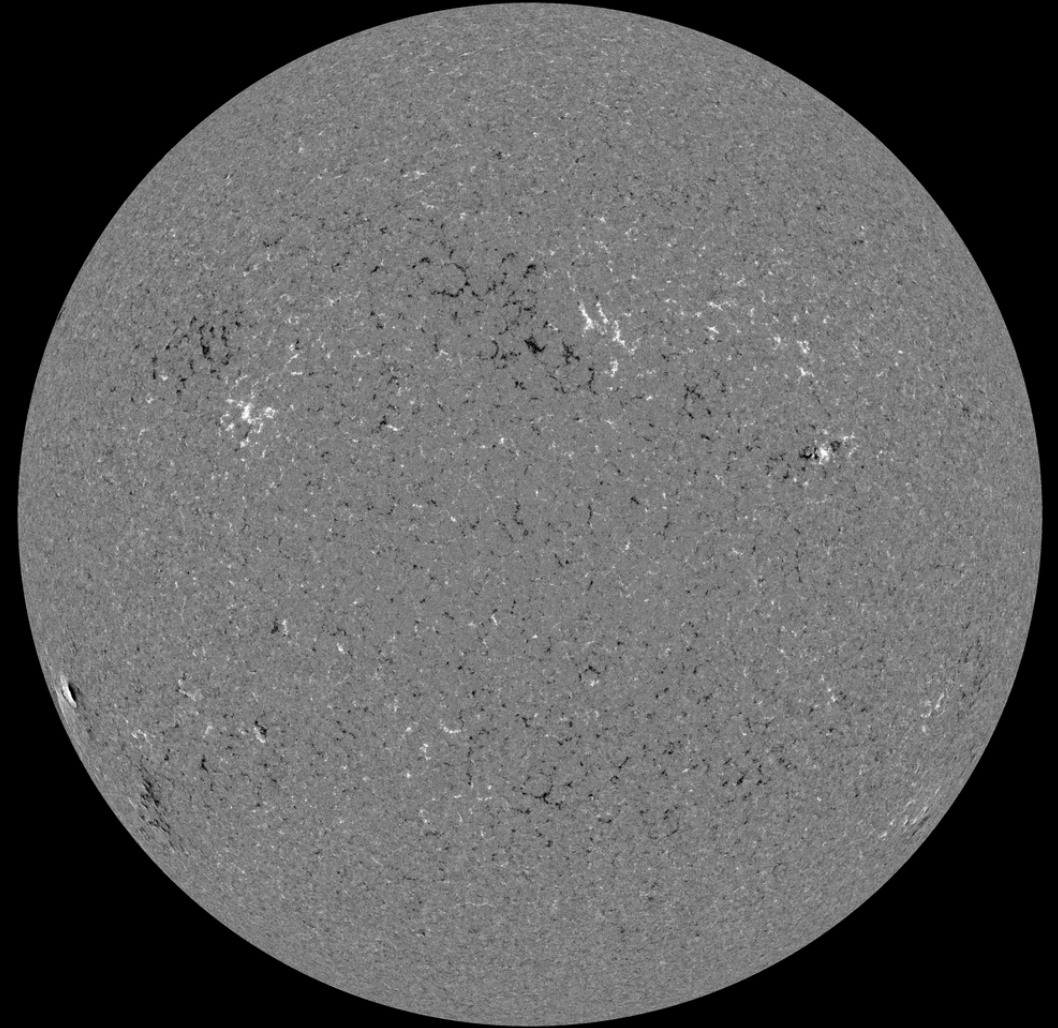
Solar active regions

SDO/HMI White Light 2021-10-18



SDO/HMI Quick-Look Continuum: 20211018_110000

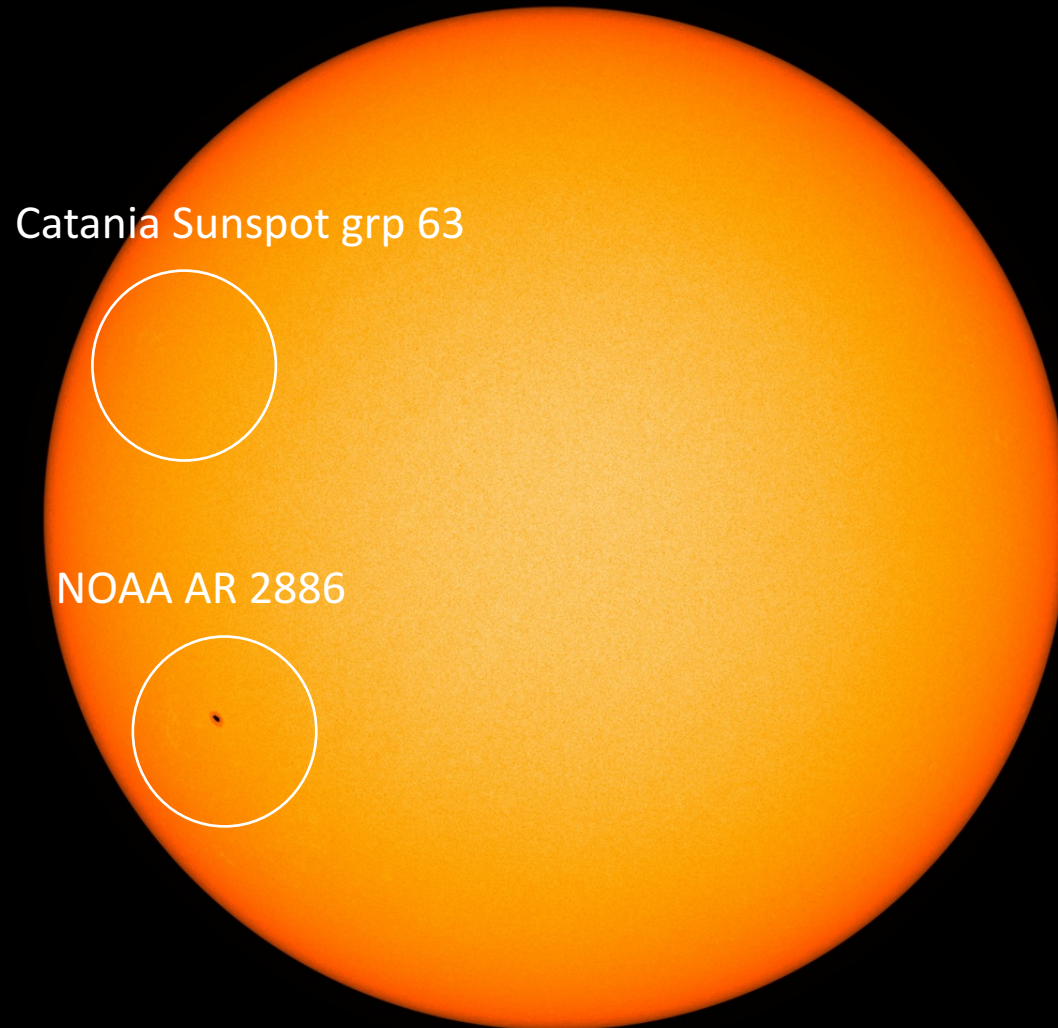
SDO/HMI Magnetogram 2021-10-18



SDO/HMI Quick-Look Magnetogram: 20211018_114500

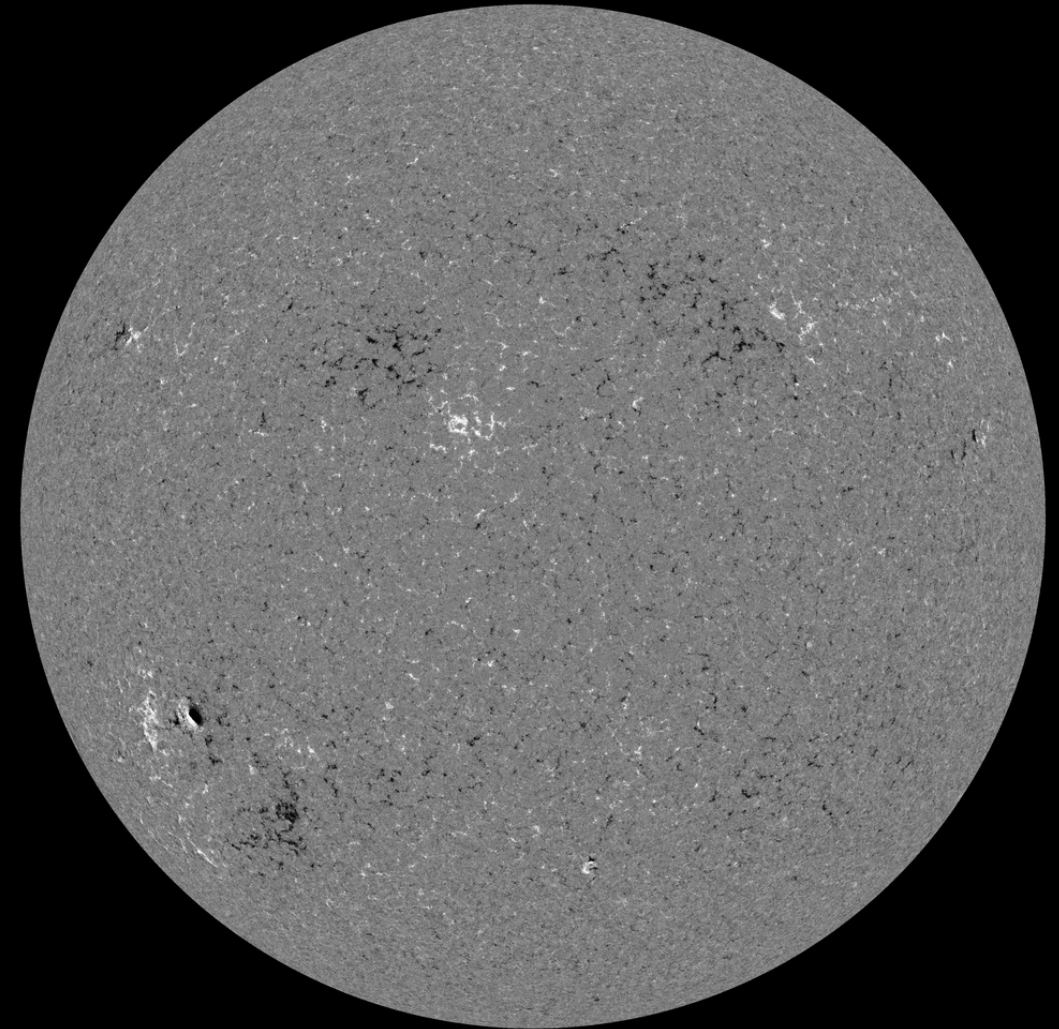
Solar active regions

SDO/HMI White Light 2021-10-20



SDO/HMI Quick-Look Continuum: 20211020_114500

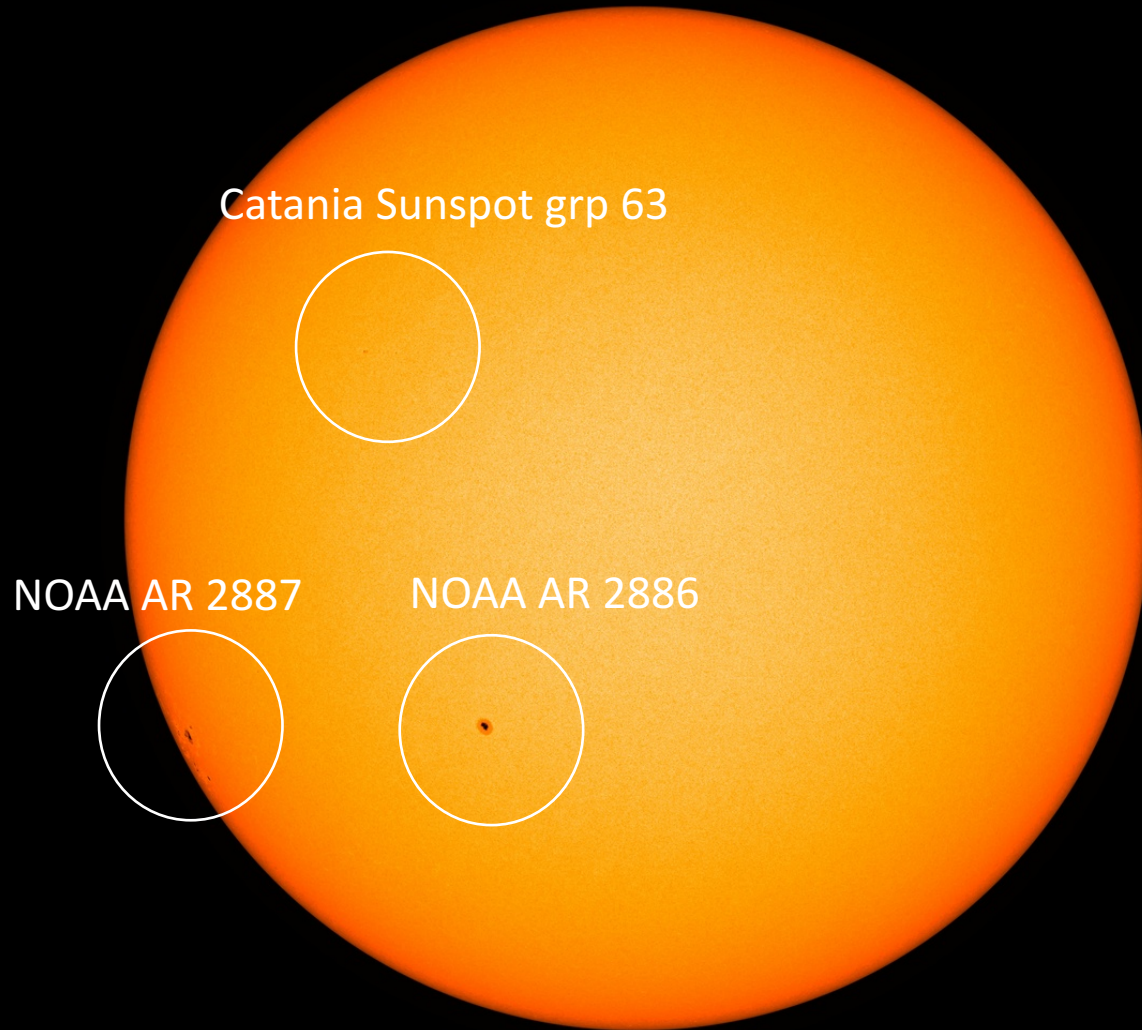
SDO/HMI Magnetogram 2021-10-20



SDO/HMI Quick-Look Magnetogram: 20211020_114500

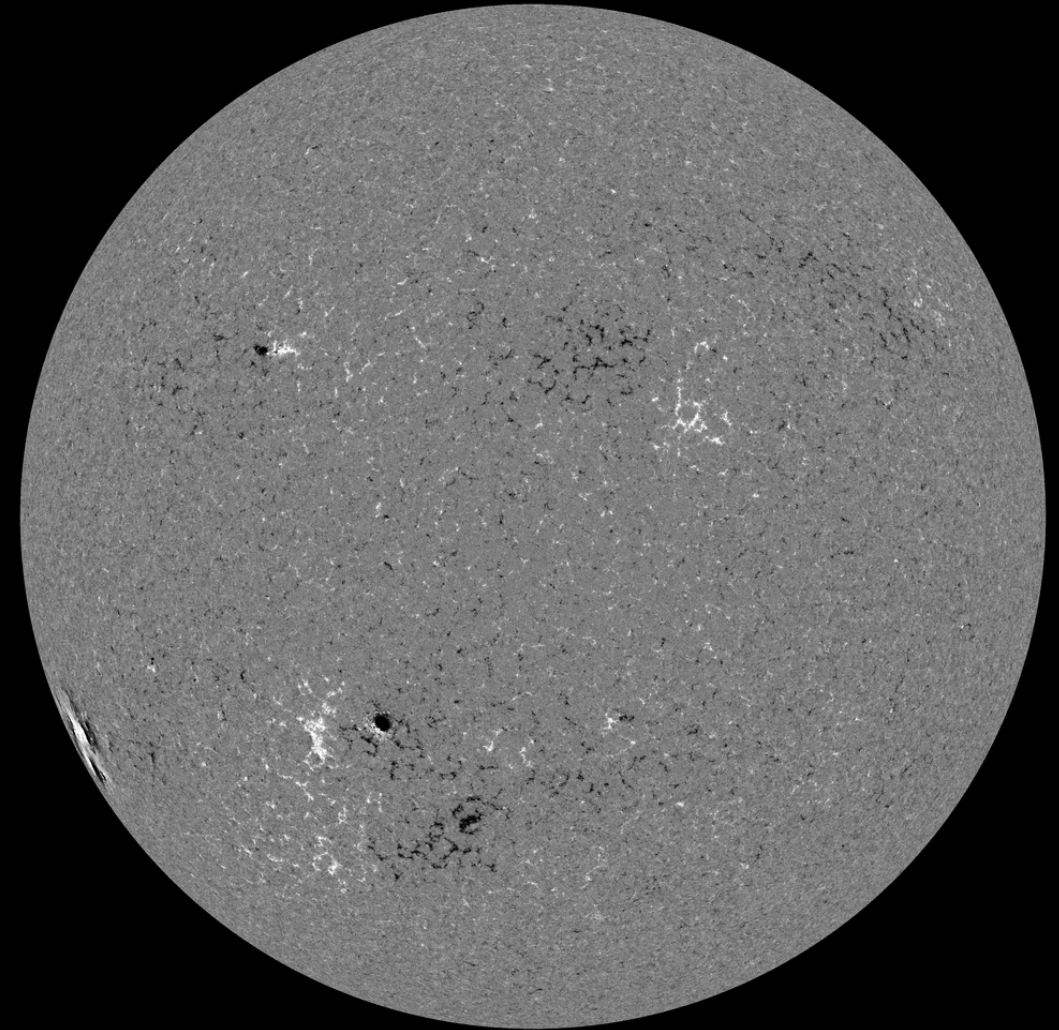
Solar active regions

SDO/HMI White Light 2021-10-22



SDO/HMI Quick-Look Continuum: 20211022_114500

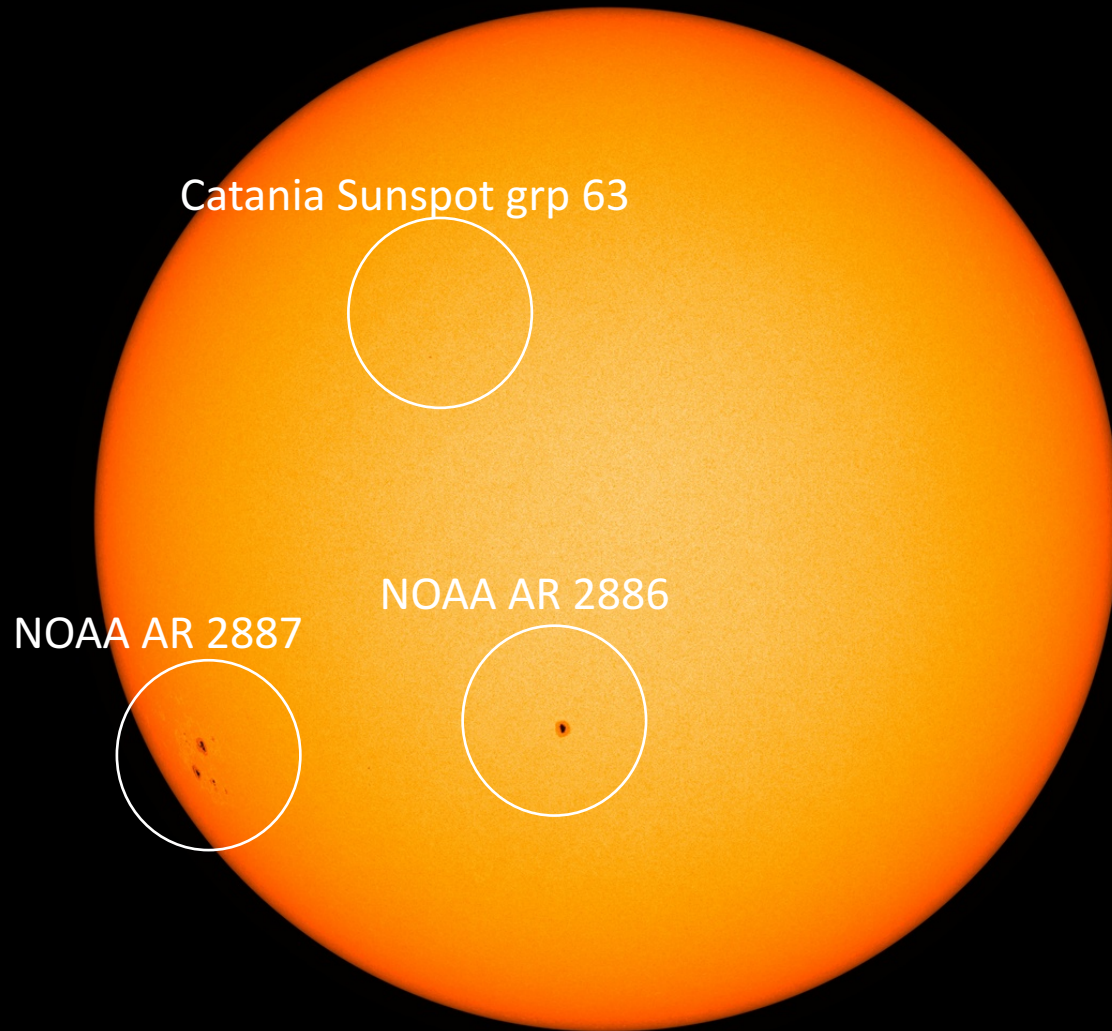
SDO/HMI Magnetogram 2021-10-22



SDO/HMI Quick-Look Magnetogram: 20211022_114500

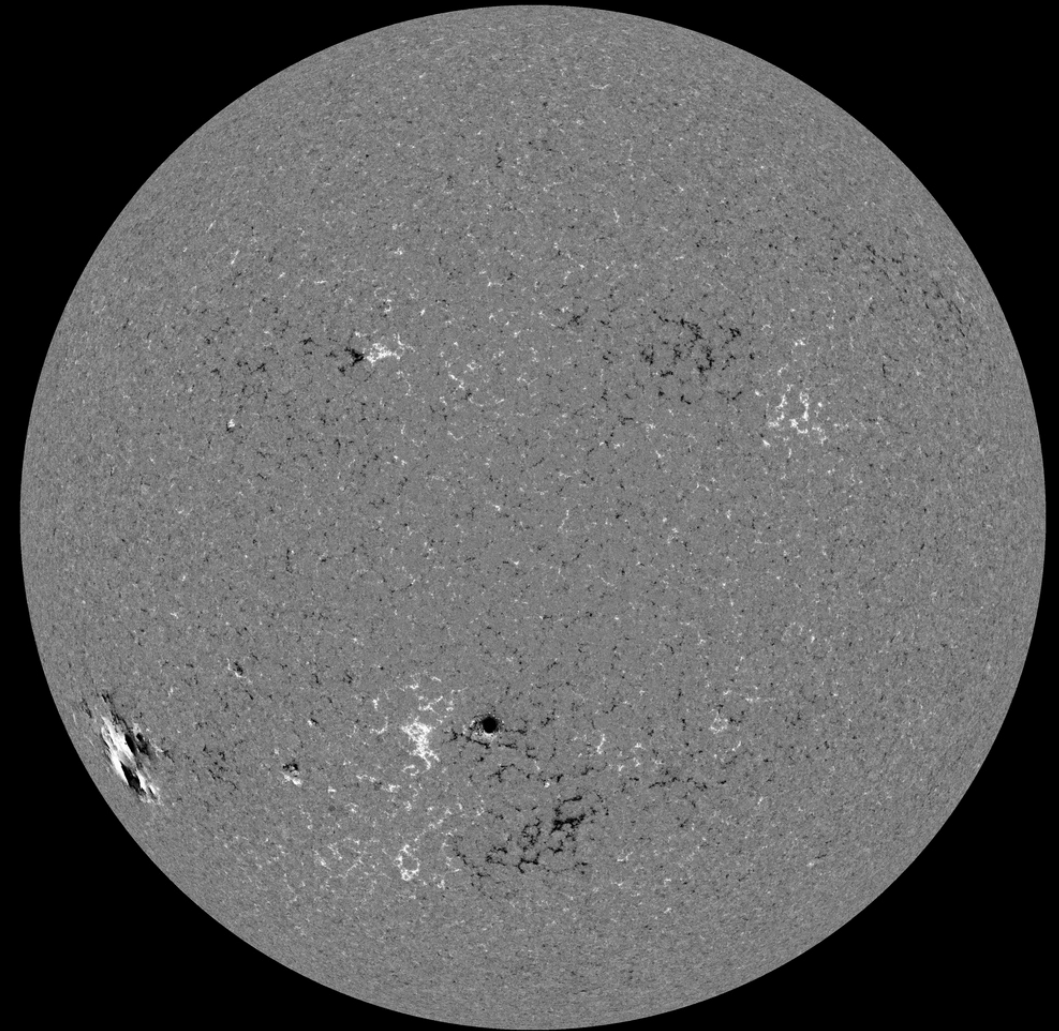
Solar active regions

SDO/HMI White Light 2021-10-23



SDO/HMI Quick-Look Continuum: 20211023_114500

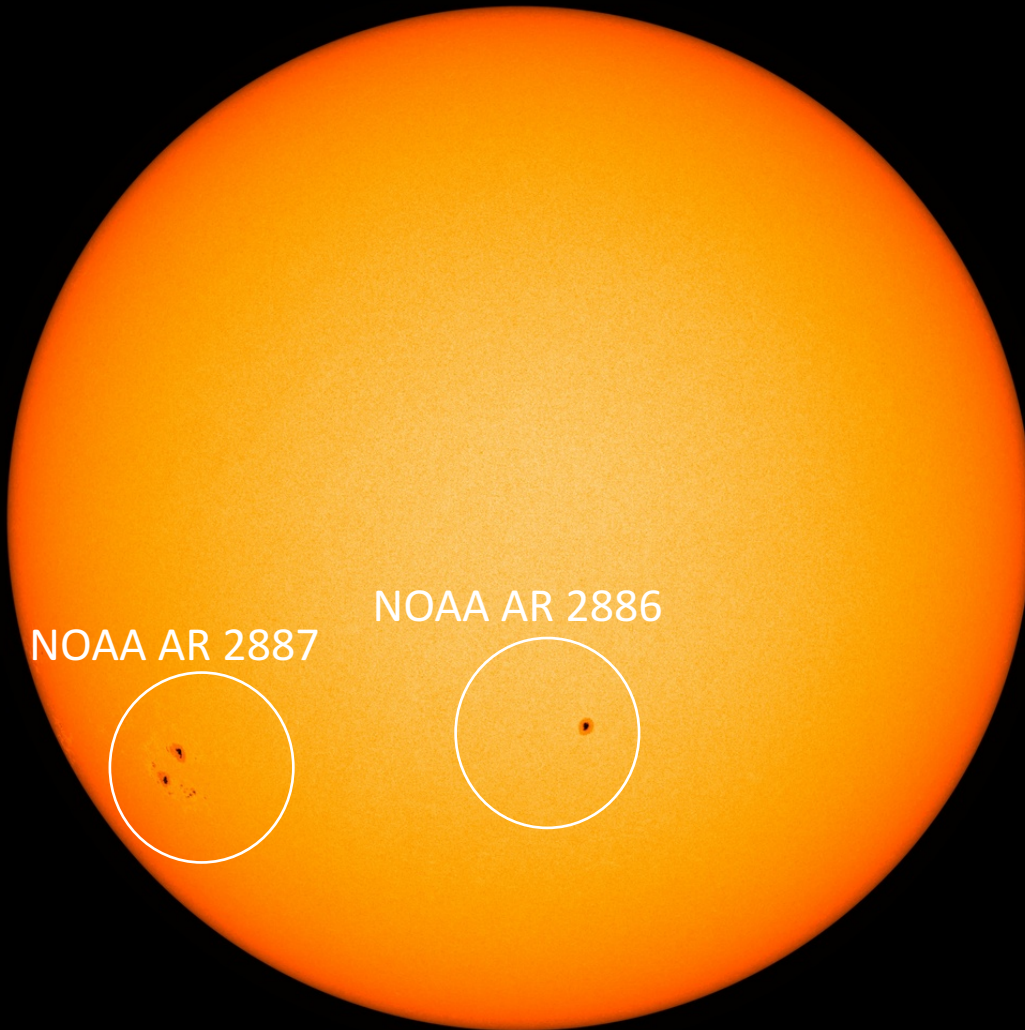
SDO/HMI Magnetogram 2021-10-23



SDO/HMI Quick-Look Magnetogram: 20211023_114500

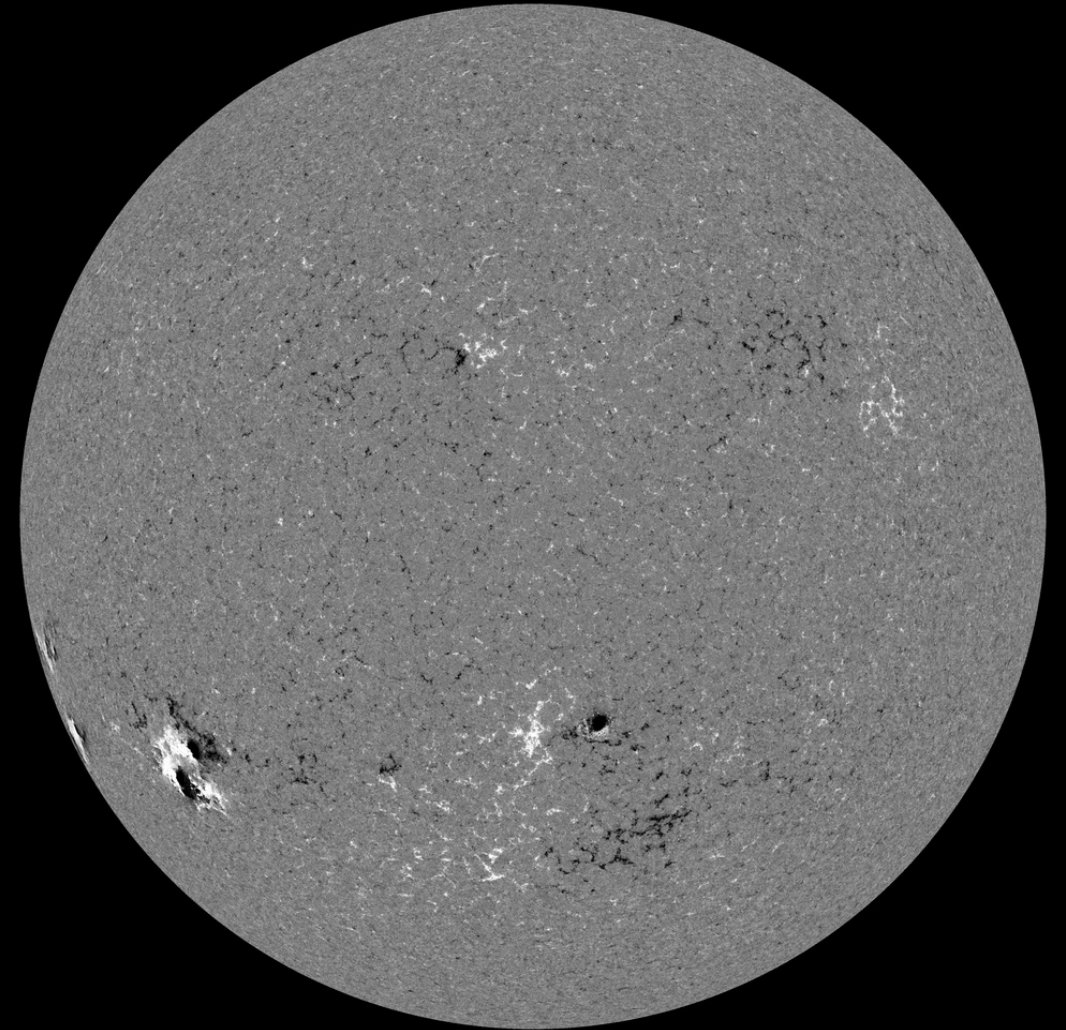
Solar active regions

SDO/HMI White Light 2021-10-24



SDO/HMI Quick-Look Continuum: 20211024_114500

SDO/HMI Magnetogram 2021-10-24

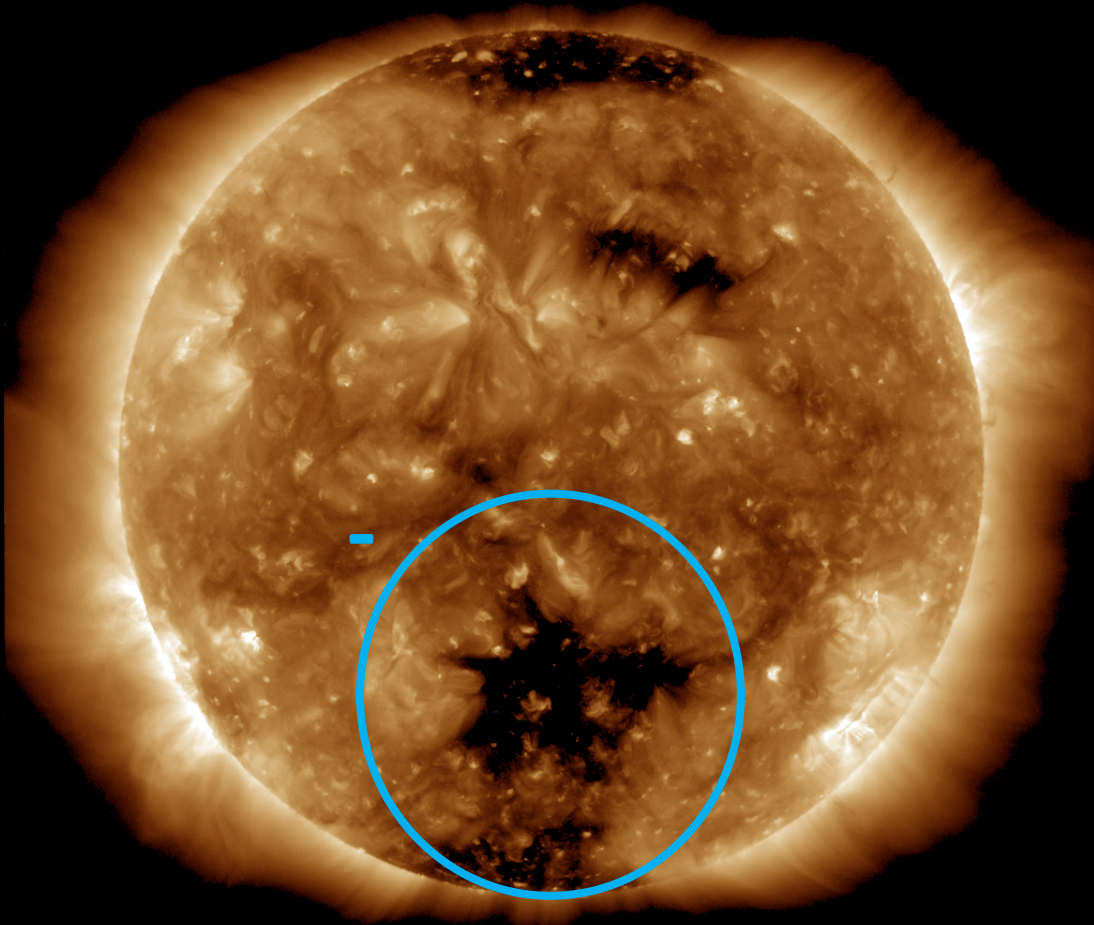


SDO/HMI Quick-Look Magnetogram: 20211024_114500

Coronal holes

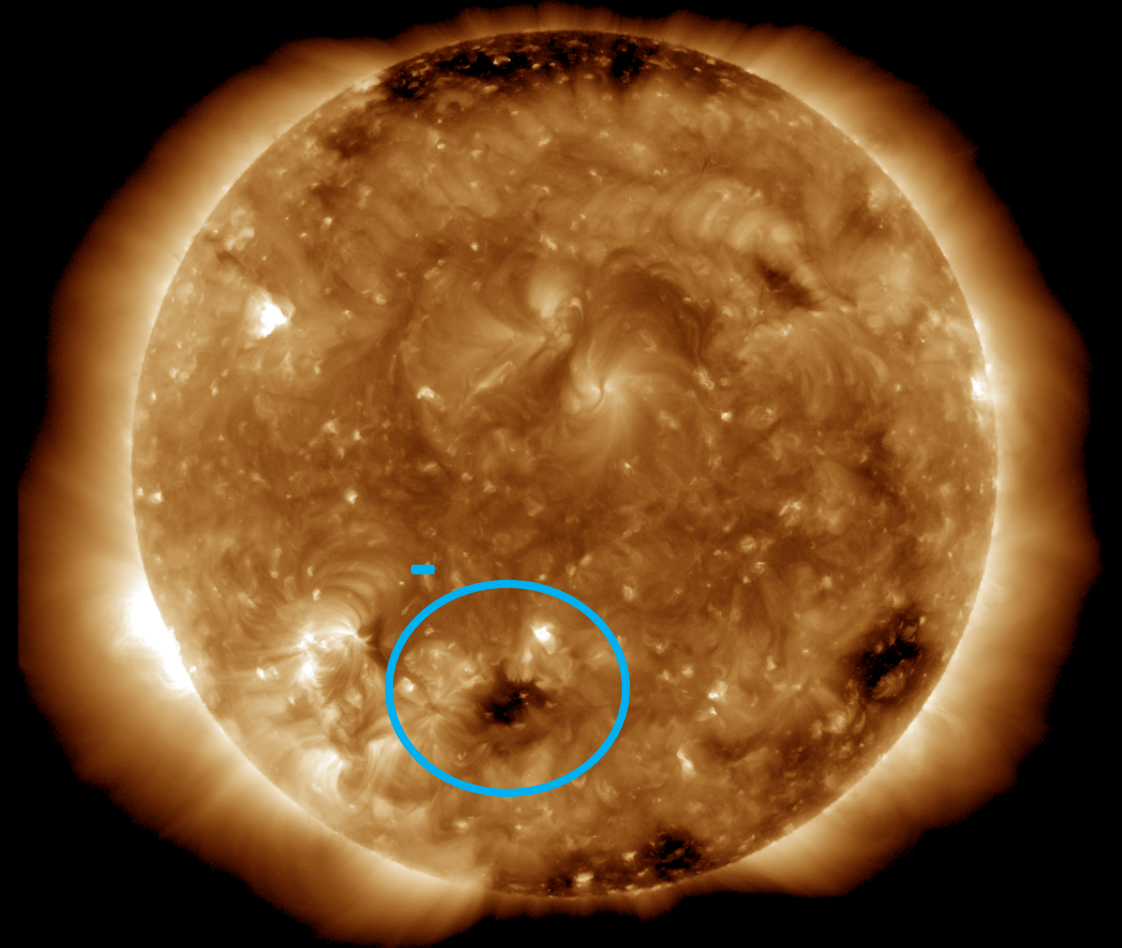
SDO/AIA 19.3 nm 2021-10-17

SDO/AIA AIA 193Å 2021-10-17T12:00:05.835



SDO/AIA 19.3 nm 2021-10-21

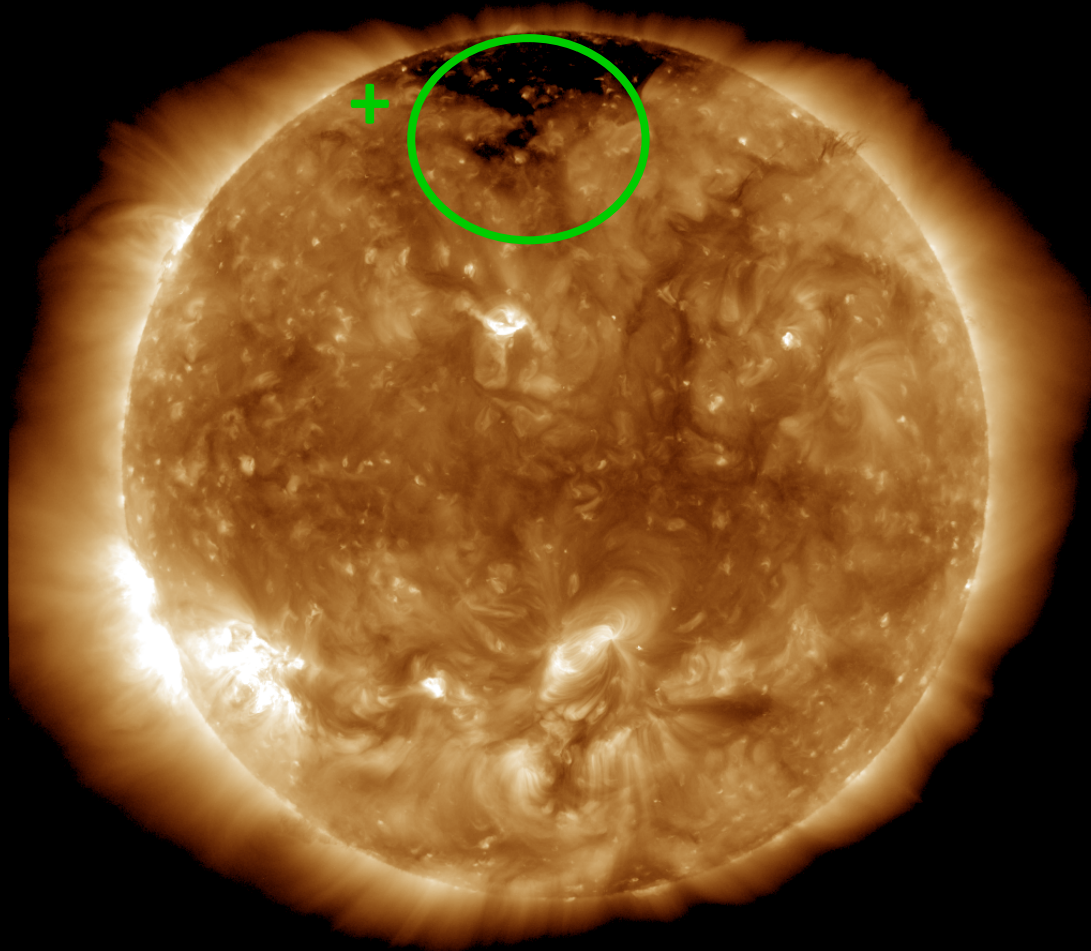
SDO/AIA AIA 193Å 2021-10-21T12:00:05.843



Coronal holes

SDO/AIA 19.3 nm 2021-10-24

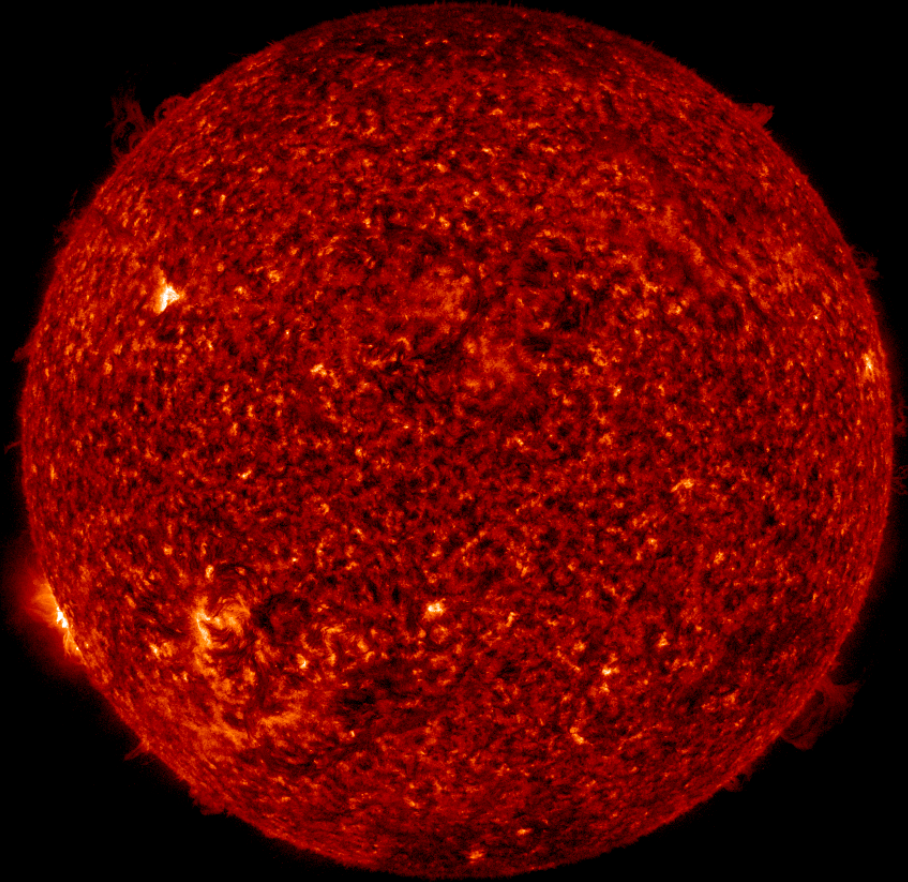
SDO/AIA AIA 193Å 2021-10-24T12:00:05.843



Filaments

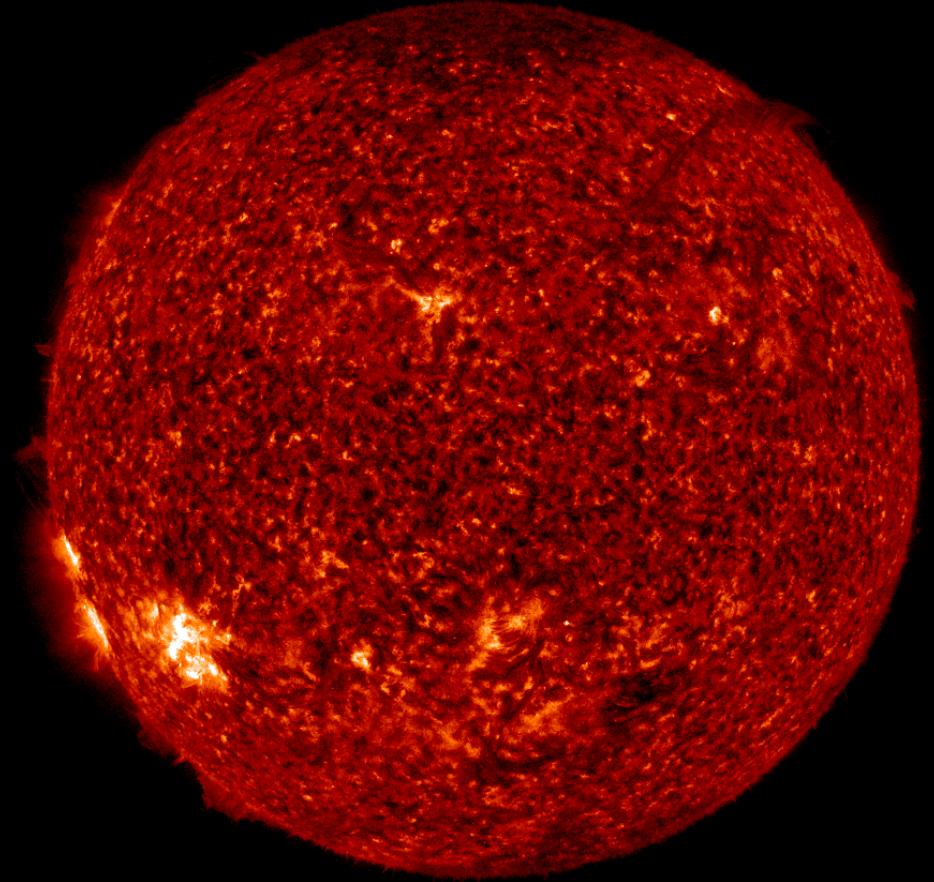
SDO/AIA 30.4 nm 2021-10-21

SDO/AIA AIA 304Å 2021-10-21T12:00:06.581

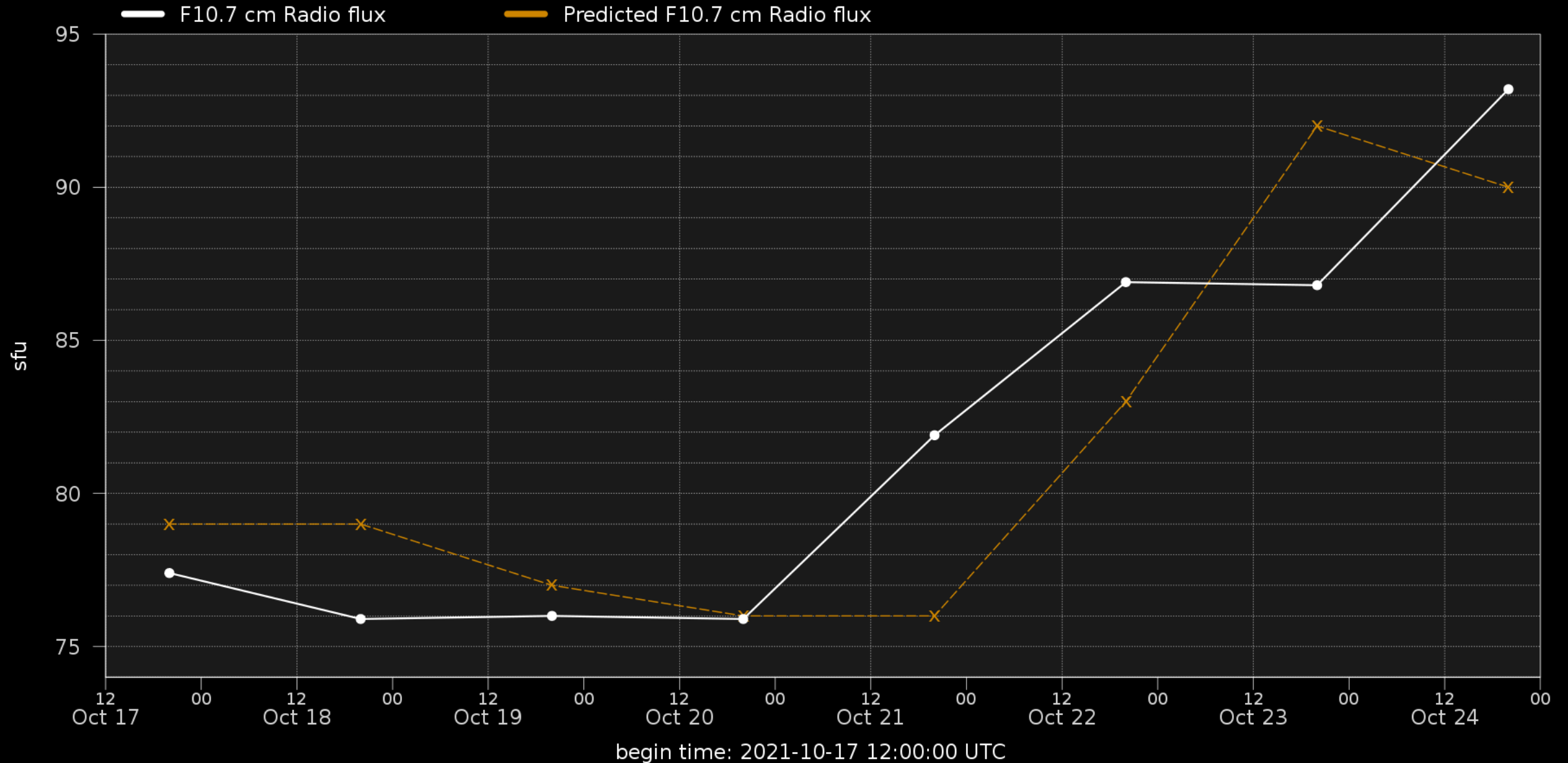


SDO/AIA 30.4 nm 2021-10-24

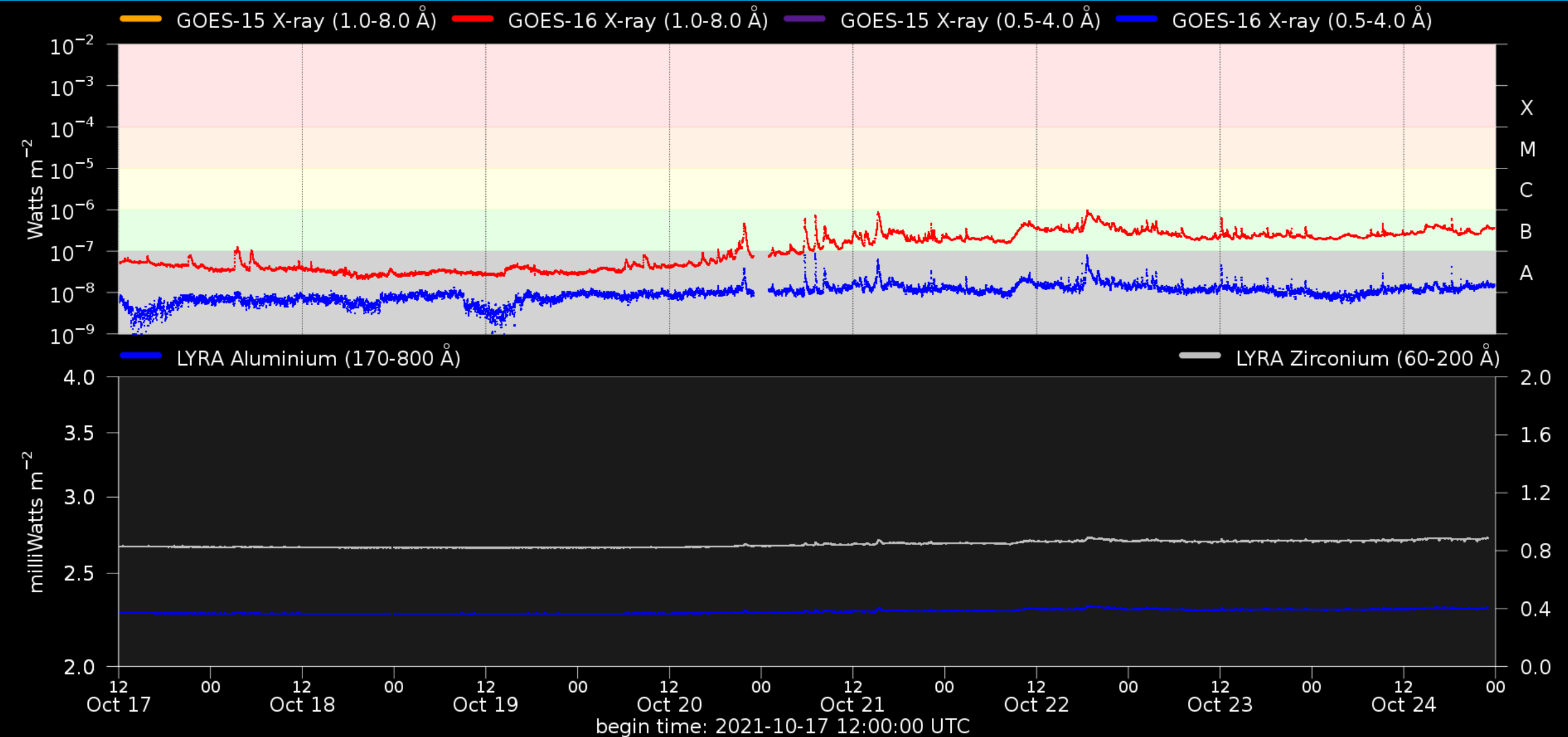
SDO/AIA AIA 304Å 2021-10-24T12:00:06.580



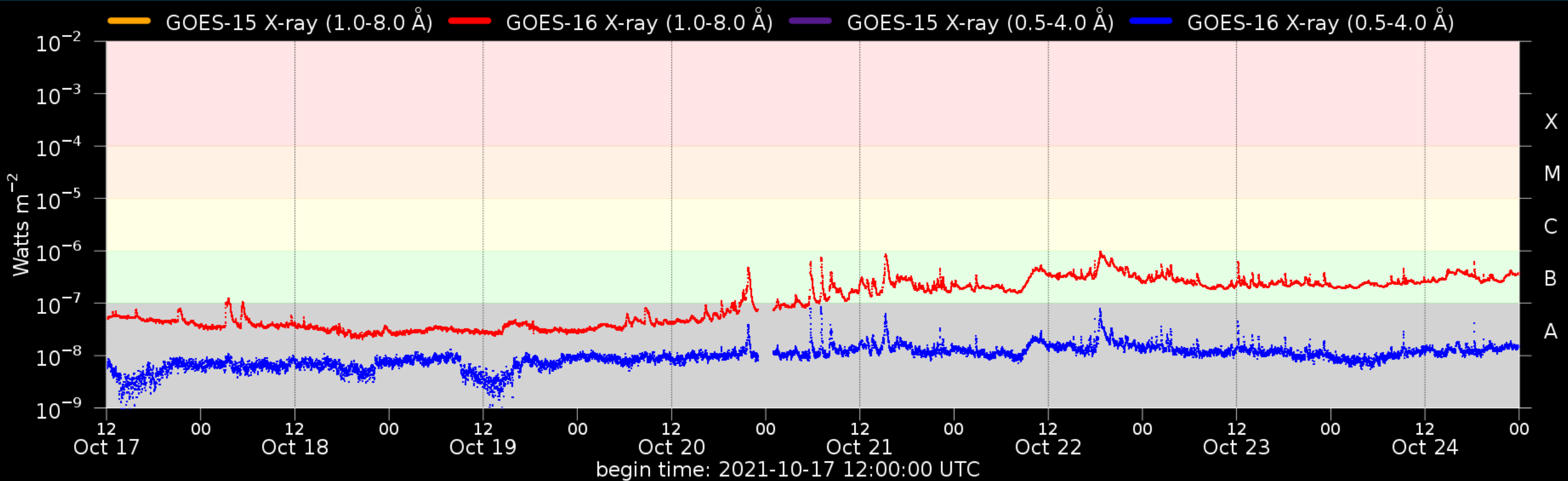
Solar F10.7cm radio flux



Solar X-Ray and UV flux



Flaring activity

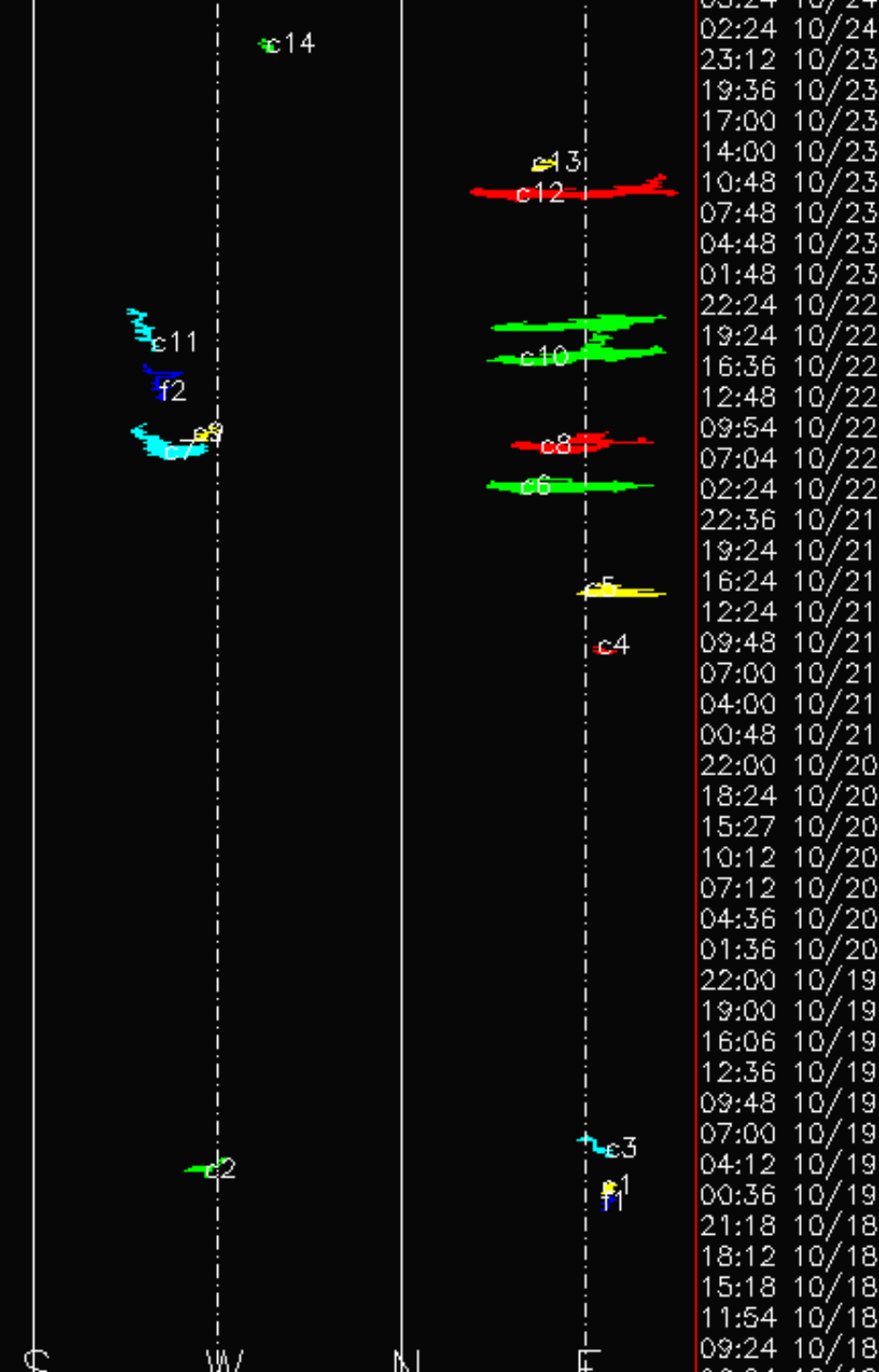
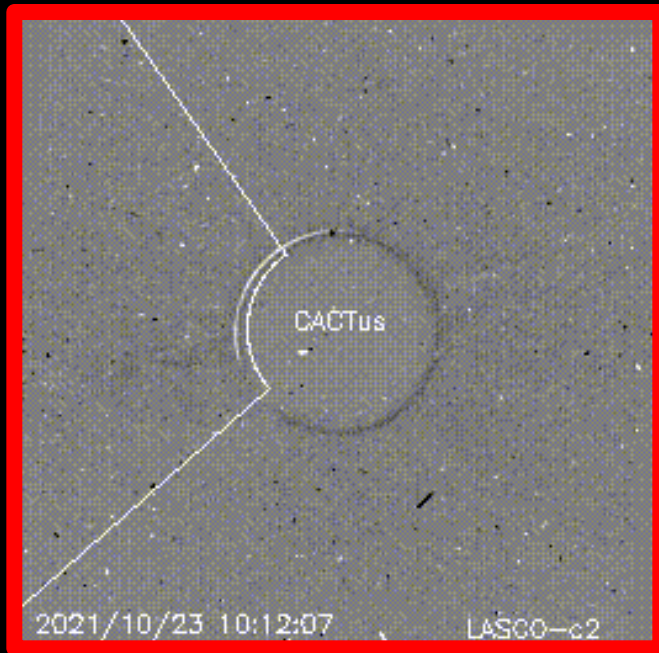


Probabilities (%) and occurrences (#) of C/M/X-flares daily, from noon to noon:

Issue date	2021-10-17	2021-10-18	2021-10-19	2021-10-20	2021-10-21	2021-10-22	2021-10-23	2021-10-24
Probability (%)	15 01 01	15 01 01	05 01 01	05 01 01	10 01 01	15 01 01	40 05 01	55 10 01
Observed (#)	00 00 00	00 00 00	00 00 00	00 00 00	00 00 00	00 00 00	00 00 00	00 00 00

Coronal Mass Ejections

No Earth Directed Coronal Mass Ejections (CMEs)



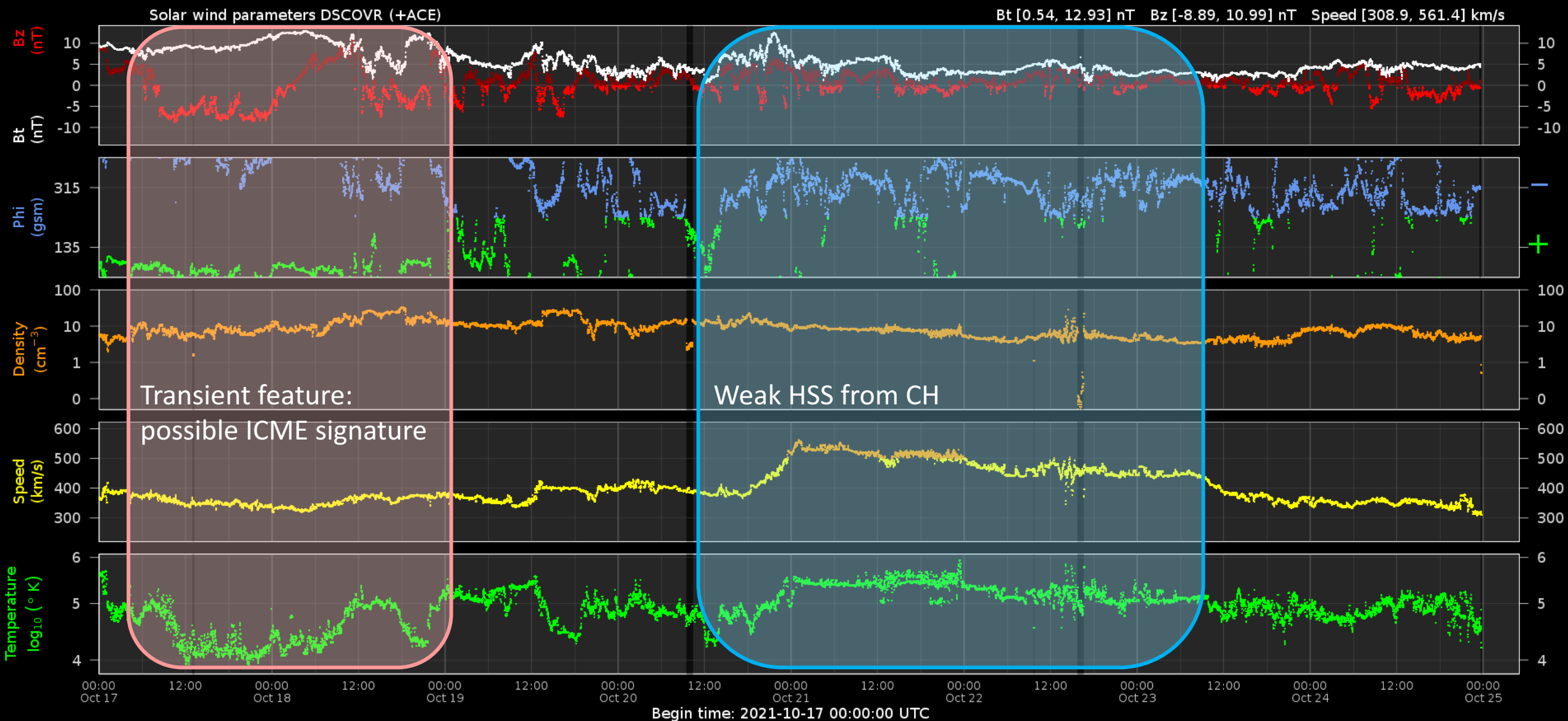
Solar Wind and Geomagnetic Activity



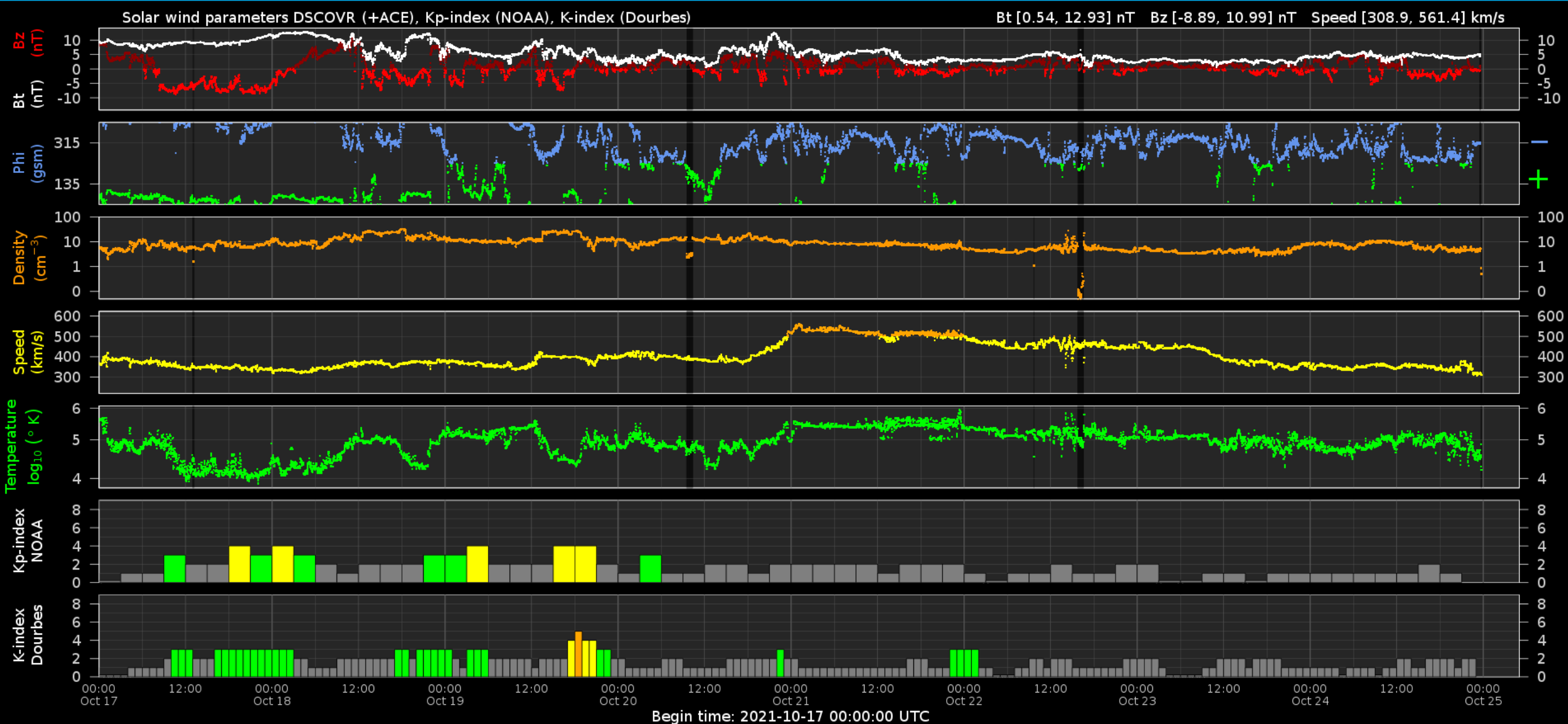
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Solar wind parameters



Solar wind parameters & K-indices

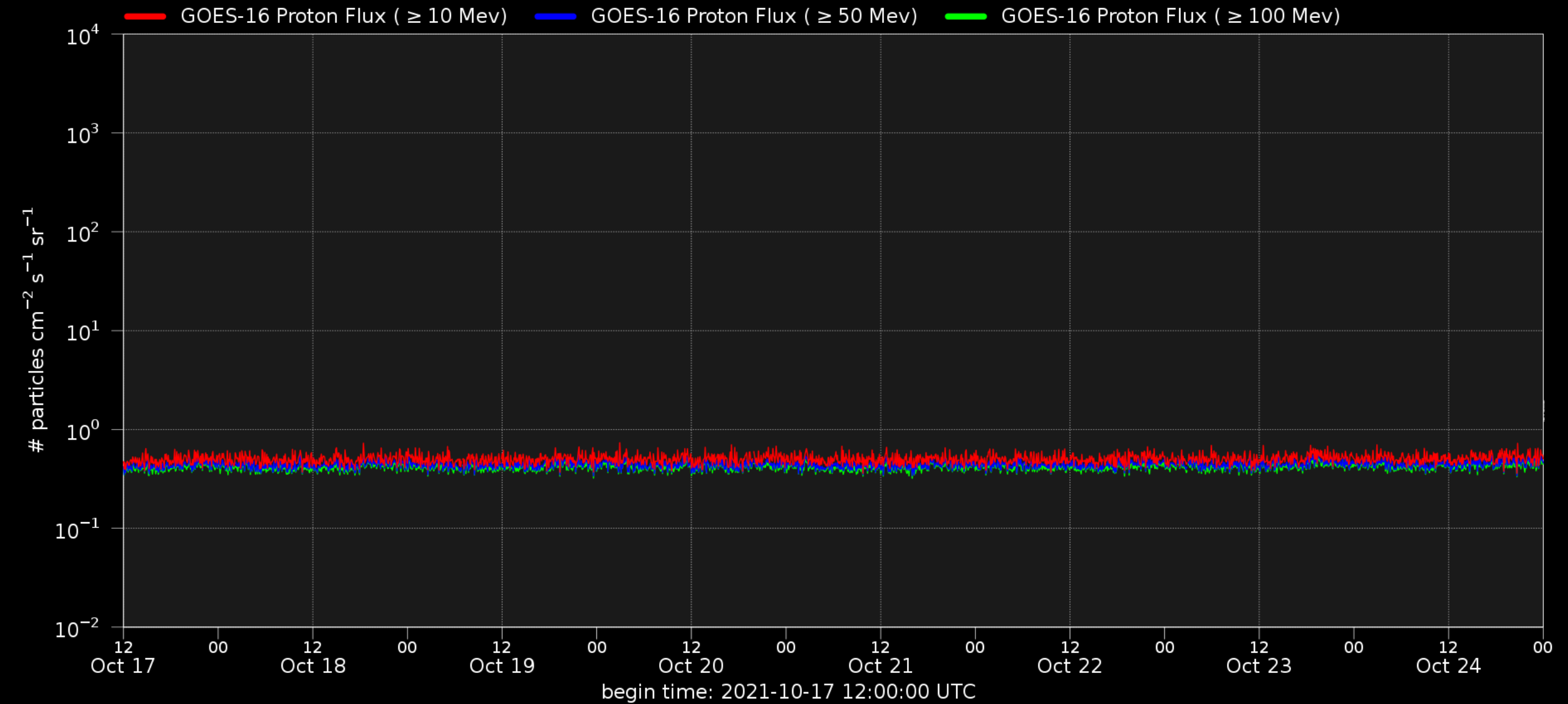


Energetic Particles

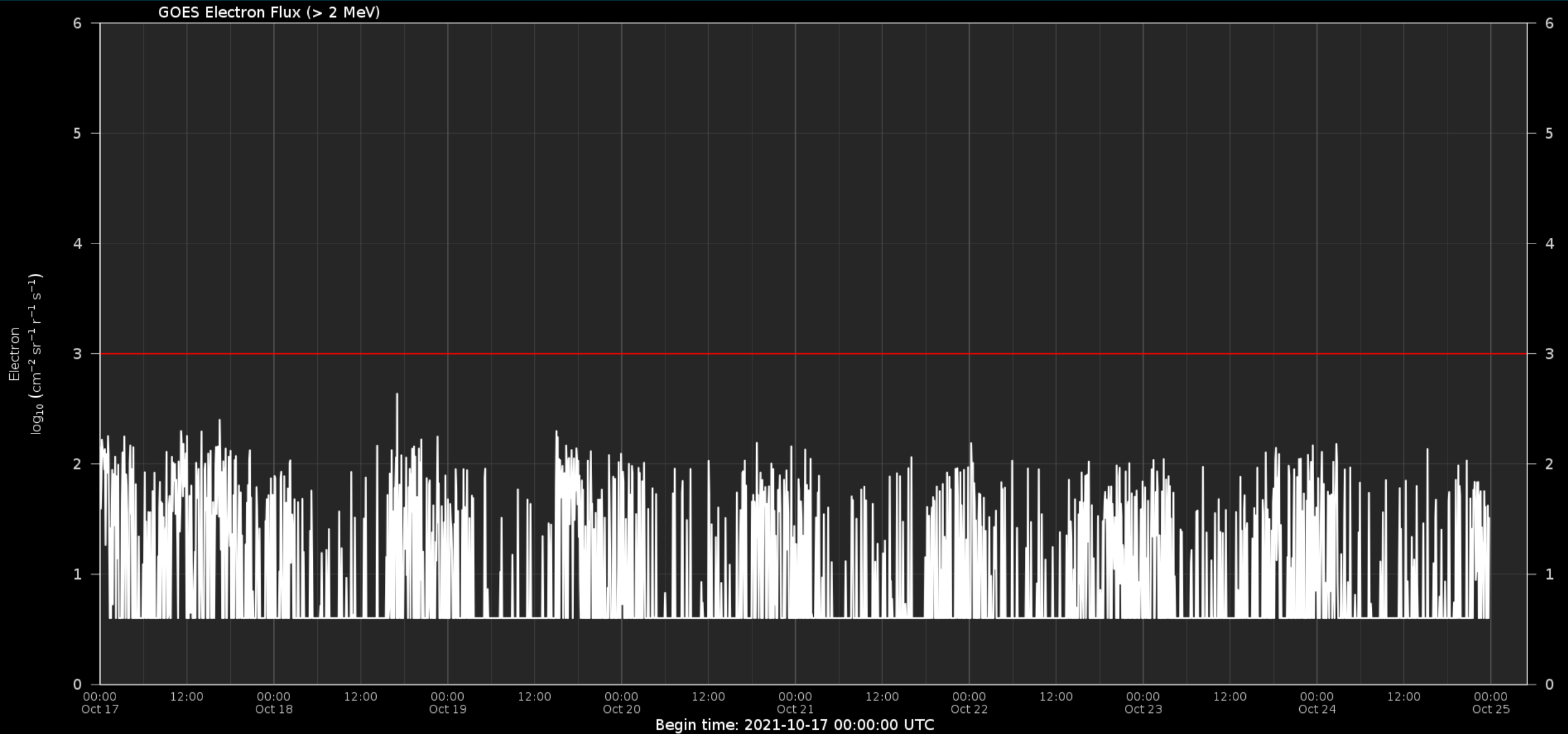


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Solar proton flux



Electron flux at GEO



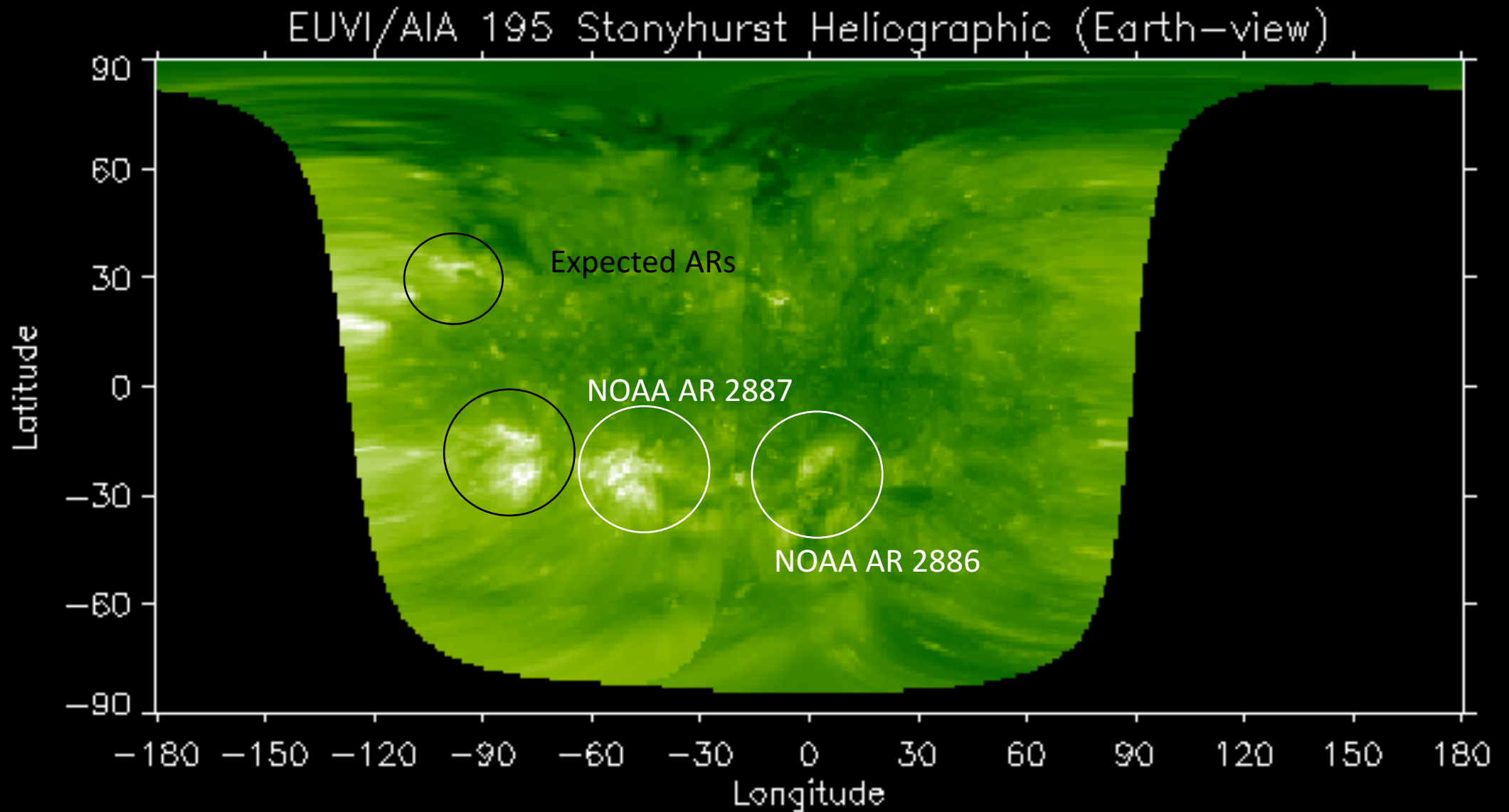
Outlook



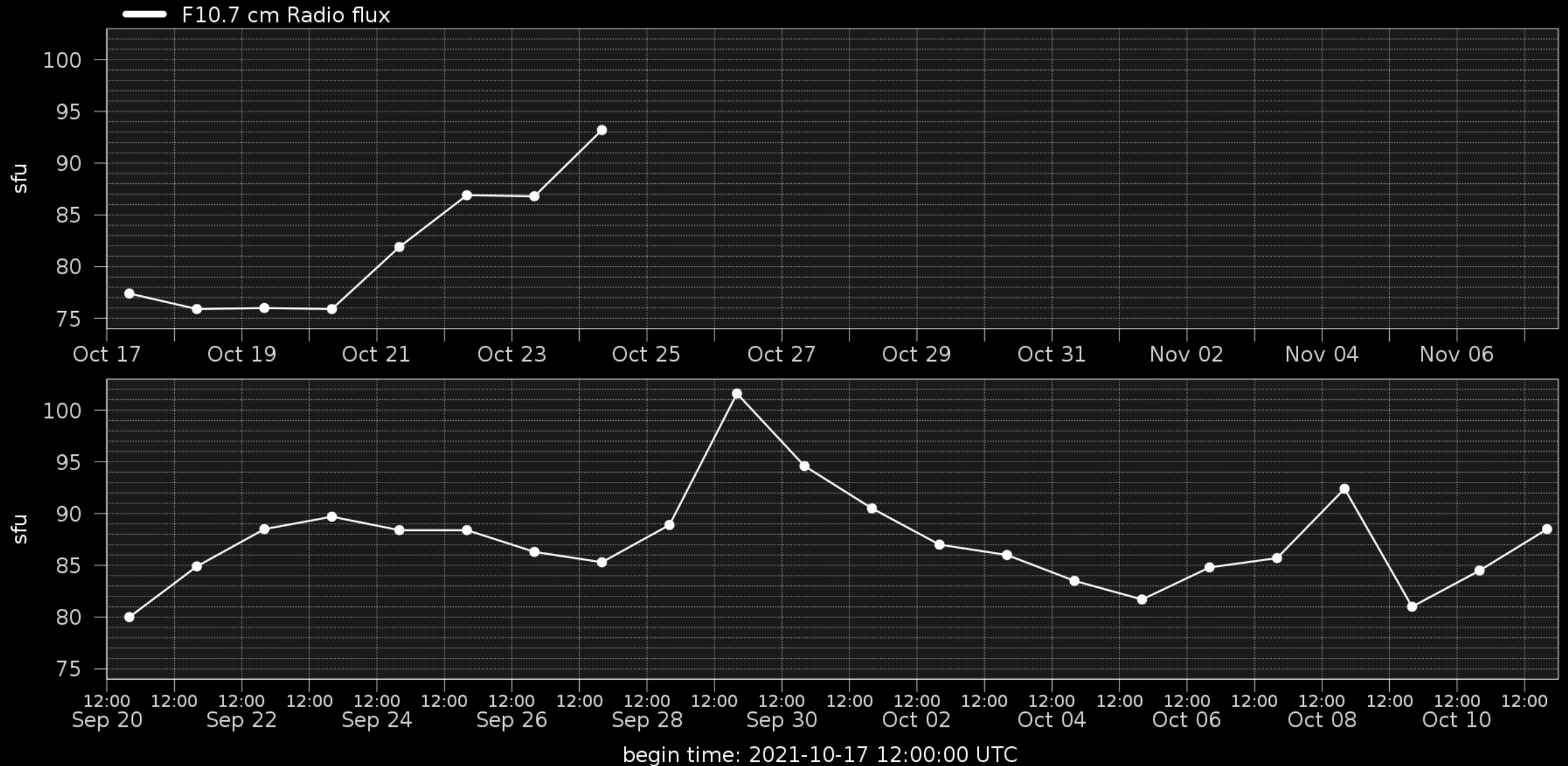
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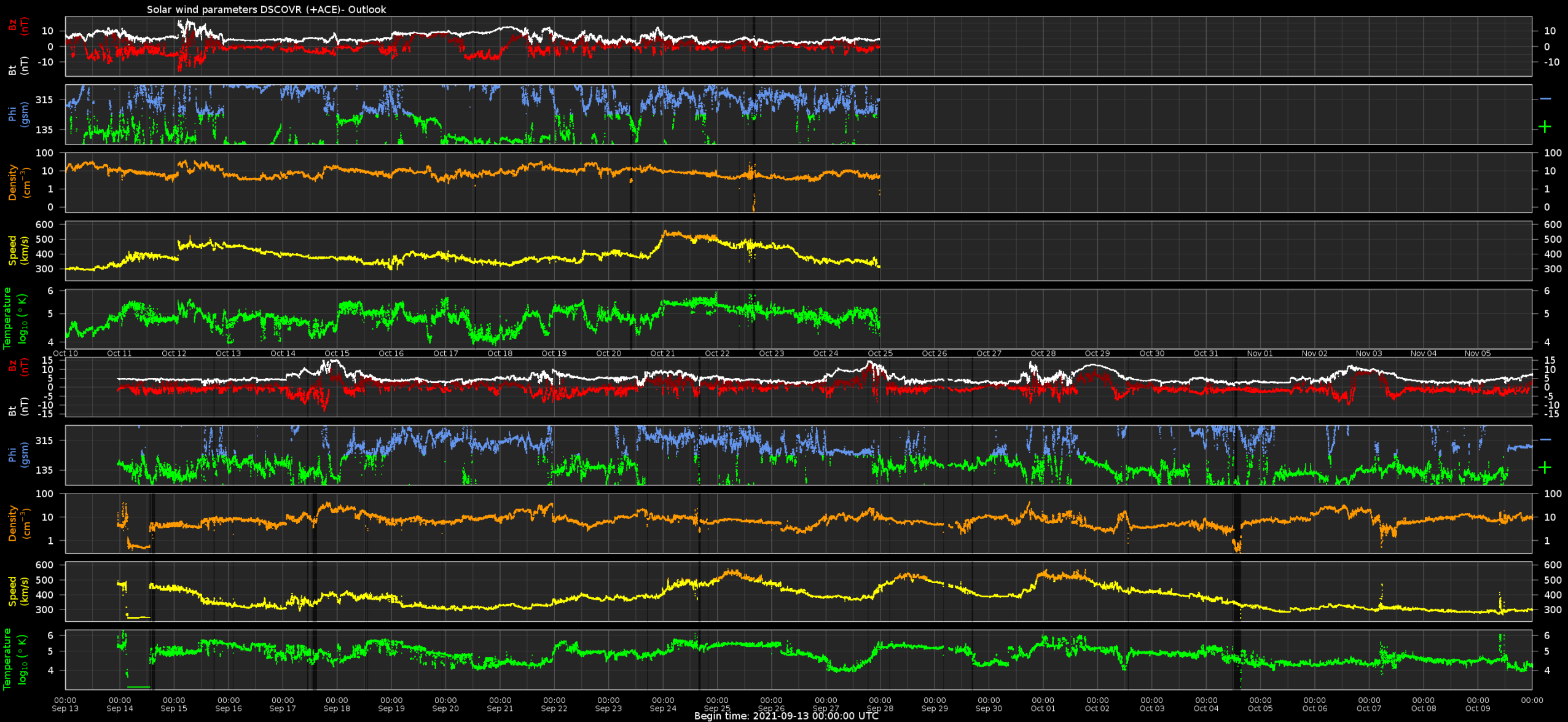
Outlook: Solar activity



Outlook: Solar F10.7cm radio flux



Outlook: Solar wind parameters

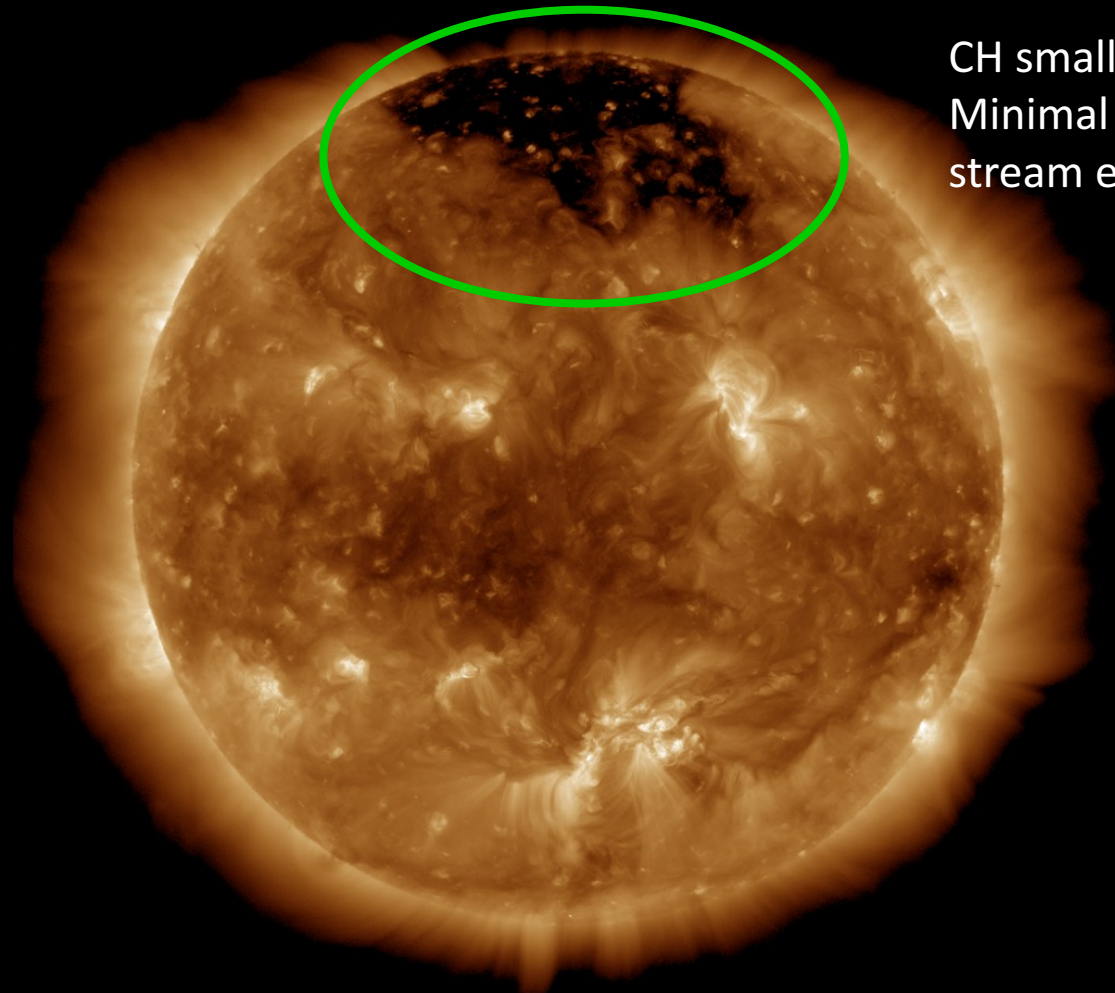


Outlook: Solar wind parameters



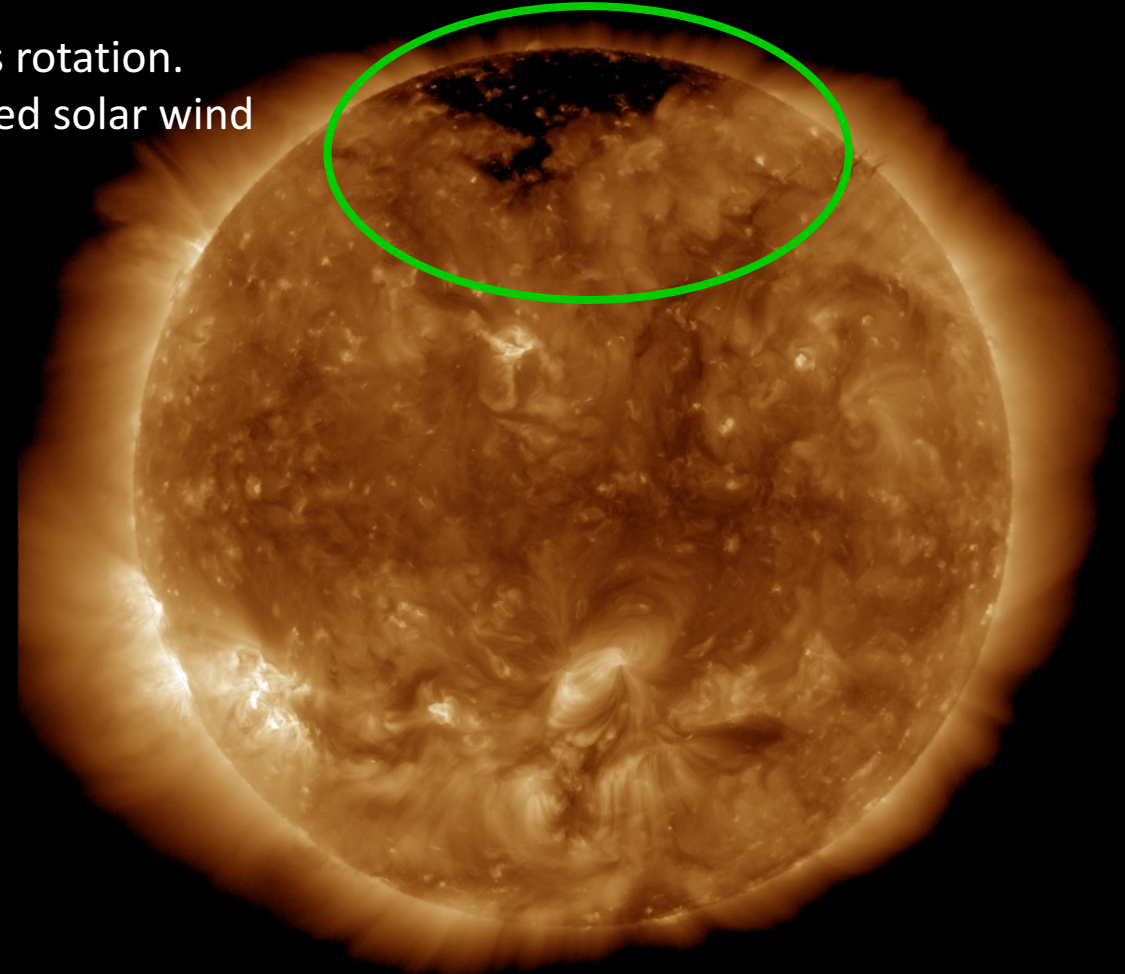
Coronal holes

SDO/AIA 19.3 nm 2021-09-26



CH smaller in this rotation.
Minimal associated solar wind
stream expected.

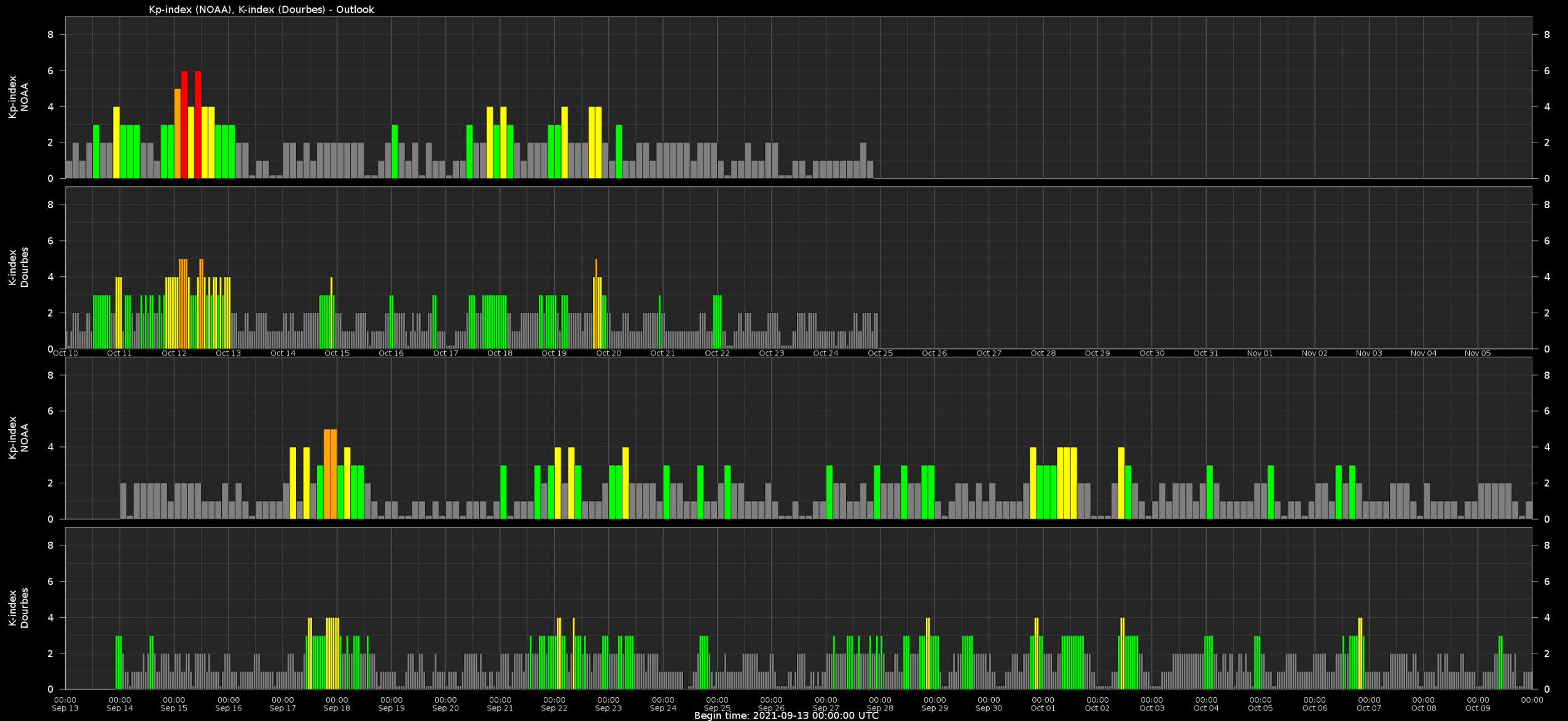
SDO/AIA 19.3 nm 2021-10-24



SDO/AIA 193 2021-09-26 00:08:41 UT

SDO/AIA 193 2021-10-24 09:47:29 UT

Outlook: Geomagnetic activity



Outlook: Electron Flux at GEO Outlook



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See you at our next briefing!

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