

SIDC Space Weather Briefing

06-13 November 2022

de Patoul Judith

& the SIDC forecaster team



Royal Observatory
of Belgium

www.sidc.be

Summary Report

Solar activity from 2022-11-06 12:00 to 2022-11-13 23:59

Active regions	Several Active Regions – The most productive: NOAA AR 3140 and NOAA AR 3141
Flares	# C-class flare: 40 # M-class flare: 4 # X-class flare: 0
Coronal Holes	Small equatorial Coronal Hole
CMEs	No Earth-directed Coronal Mass Ejection

Proton flux	Background levels
Electron flux	Has crossed the the 1000 pfu threshold

Solar wind and geomagnetic conditions

ICMEs	No clear signature of ICME arrival.
Solar wind conditions	B : 2.24 - 15.00 nT // Bz: -14.59 nT to 14.52 nT // Speed: 295.3 - 546.8km/s
K-indices	max K-index (KDou): 5 max Kp-index (NOAA): 5

All Quiet Alert: OFF

Solar Activity

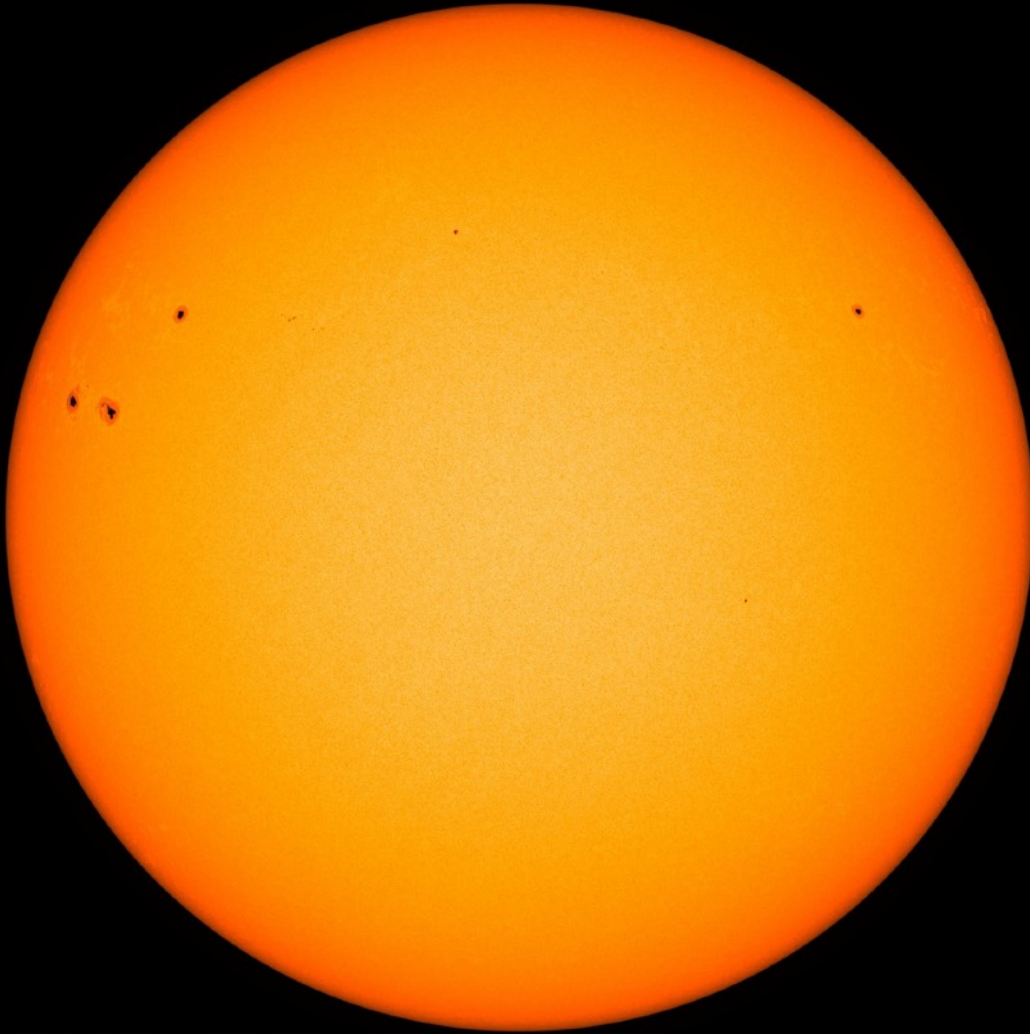


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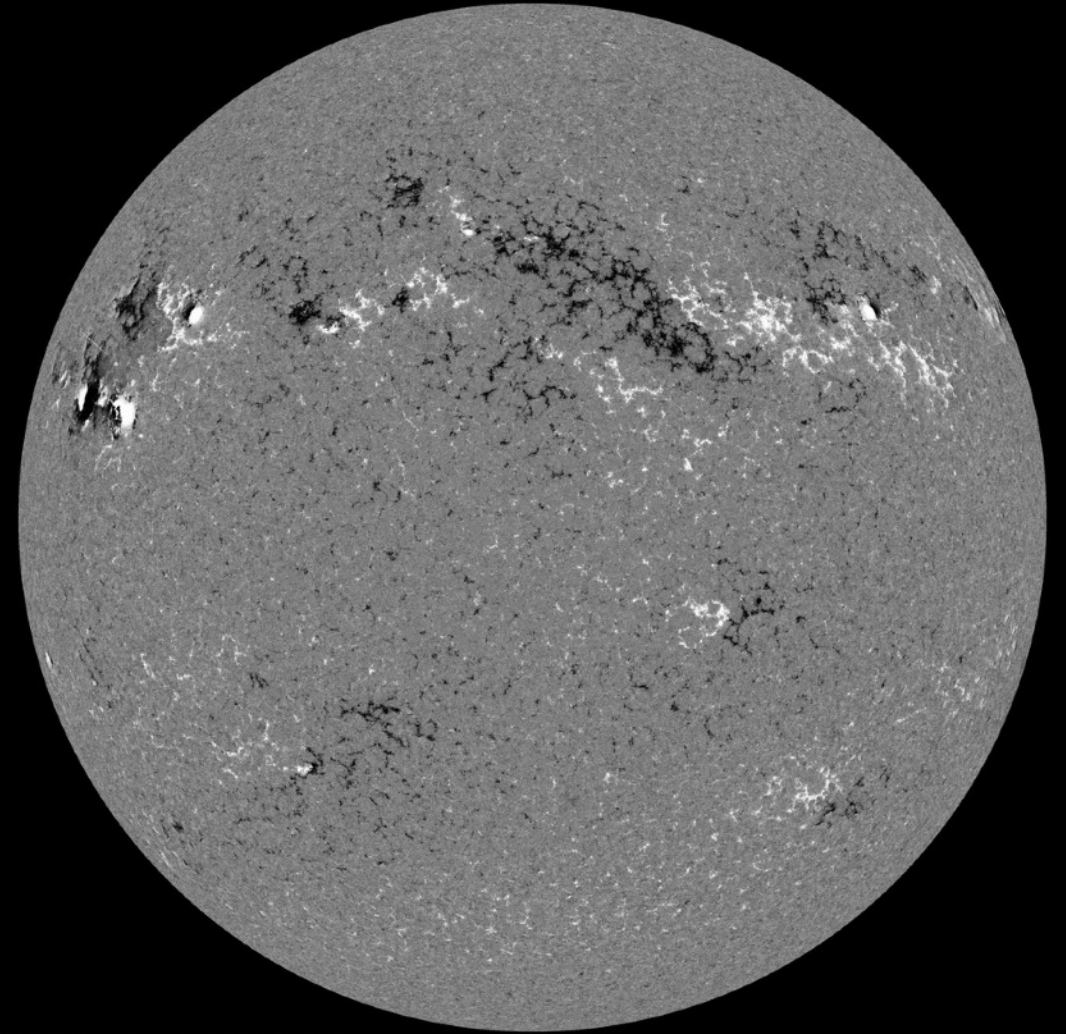
Solar active regions

SDO/HMI White Light 2022-11-06



SDO/HMI Quick-Look Continuum: 20221106_114500

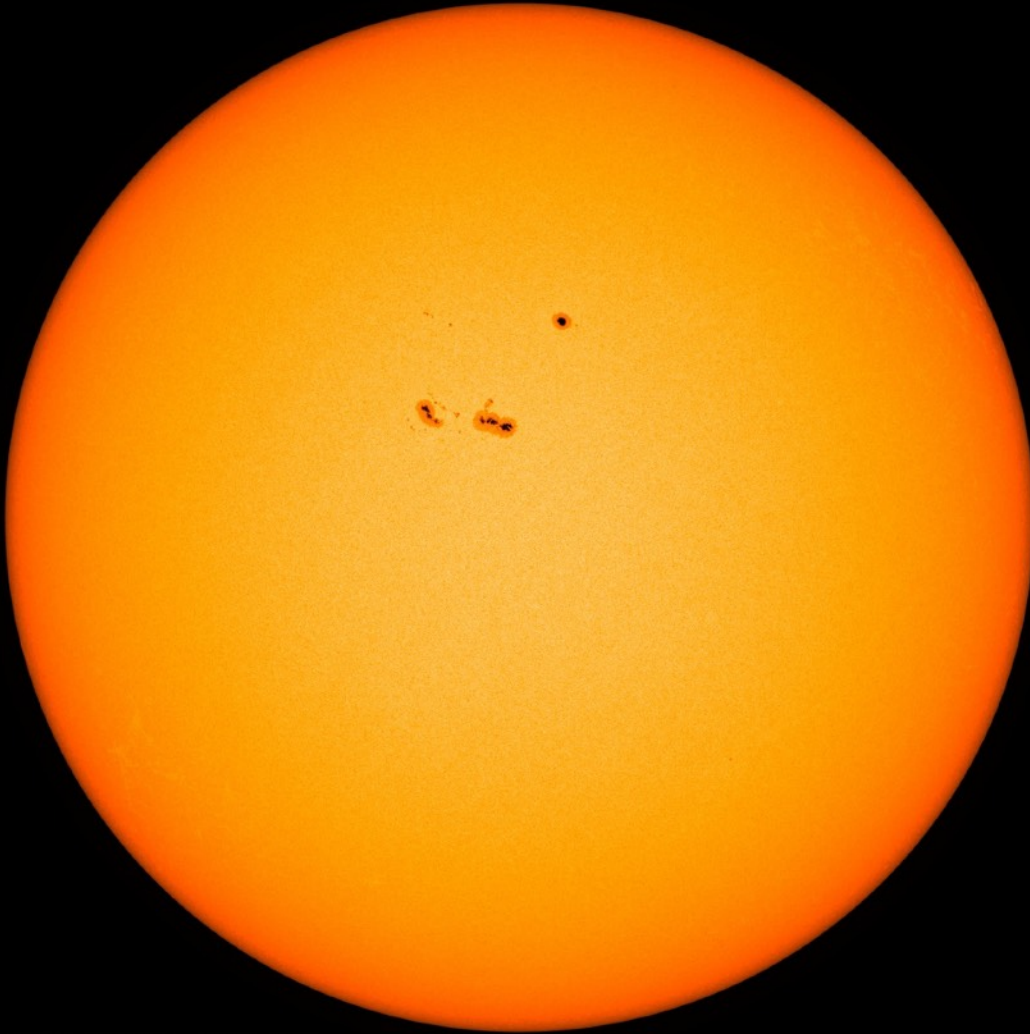
SDO/HMI Magnetogram 2022-11-06



SDO/HMI Quick-Look Magnetogram: 20221106_114500

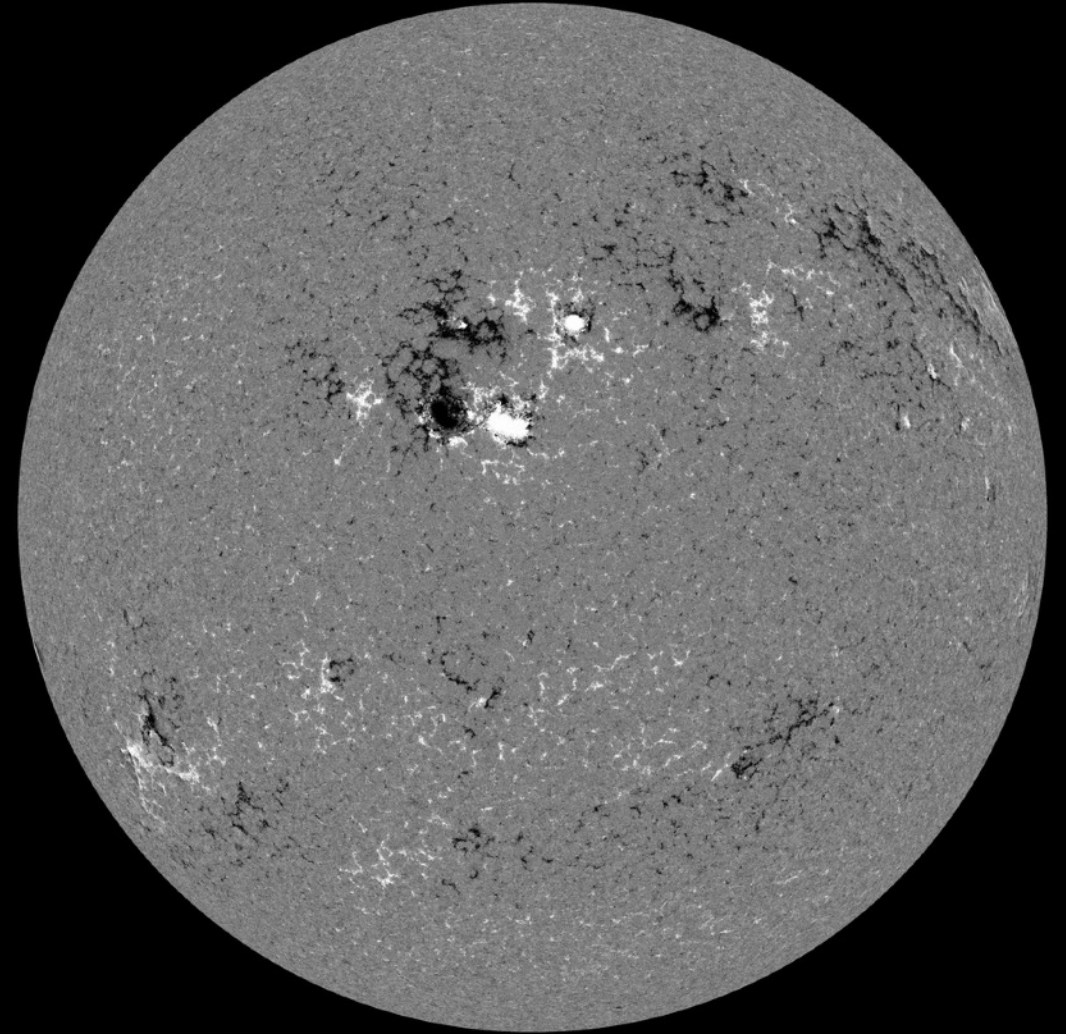
Solar active regions

SDO/HMI White Light 2022-11-10



SDO/HMI Quick-Look Continuum: 20221110_120000

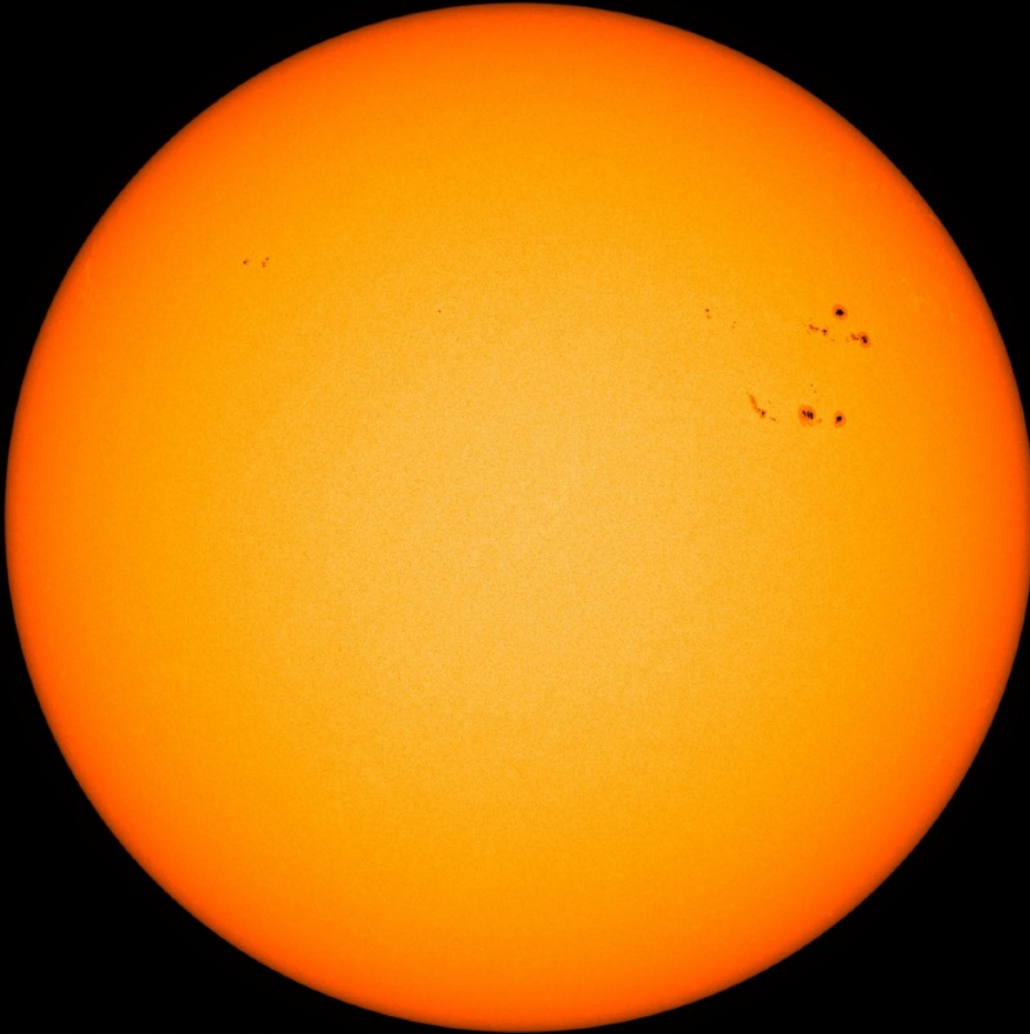
SDO/HMI Magnetogram 2022-11-10



SDO/HMI Quick-Look Magnetogram: 20221110_120000

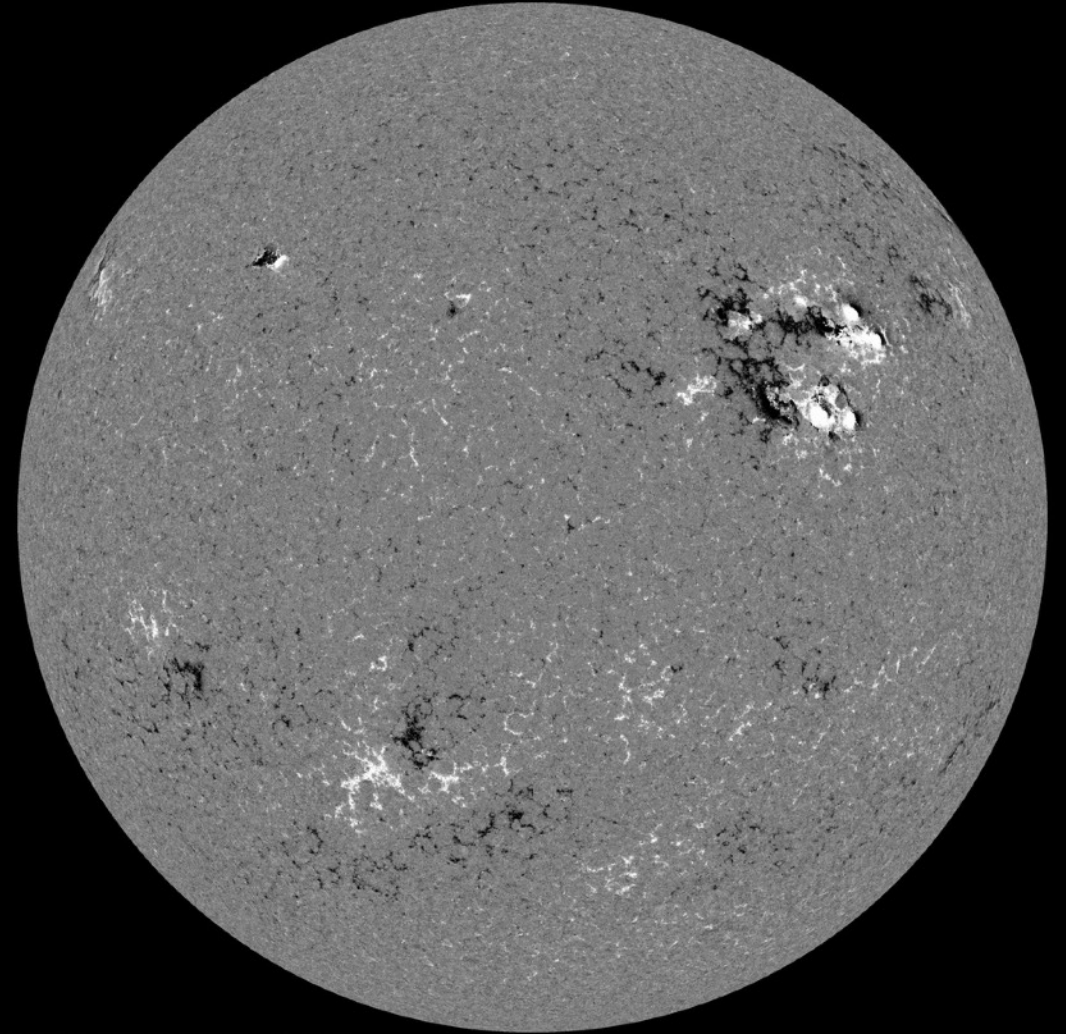
Solar active regions

SDO/HMI White Light 2022-11-13



SDO/HMI Quick-Look Continuum: 20221113_111500

SDO/HMI Magnetogram 2022-11-13

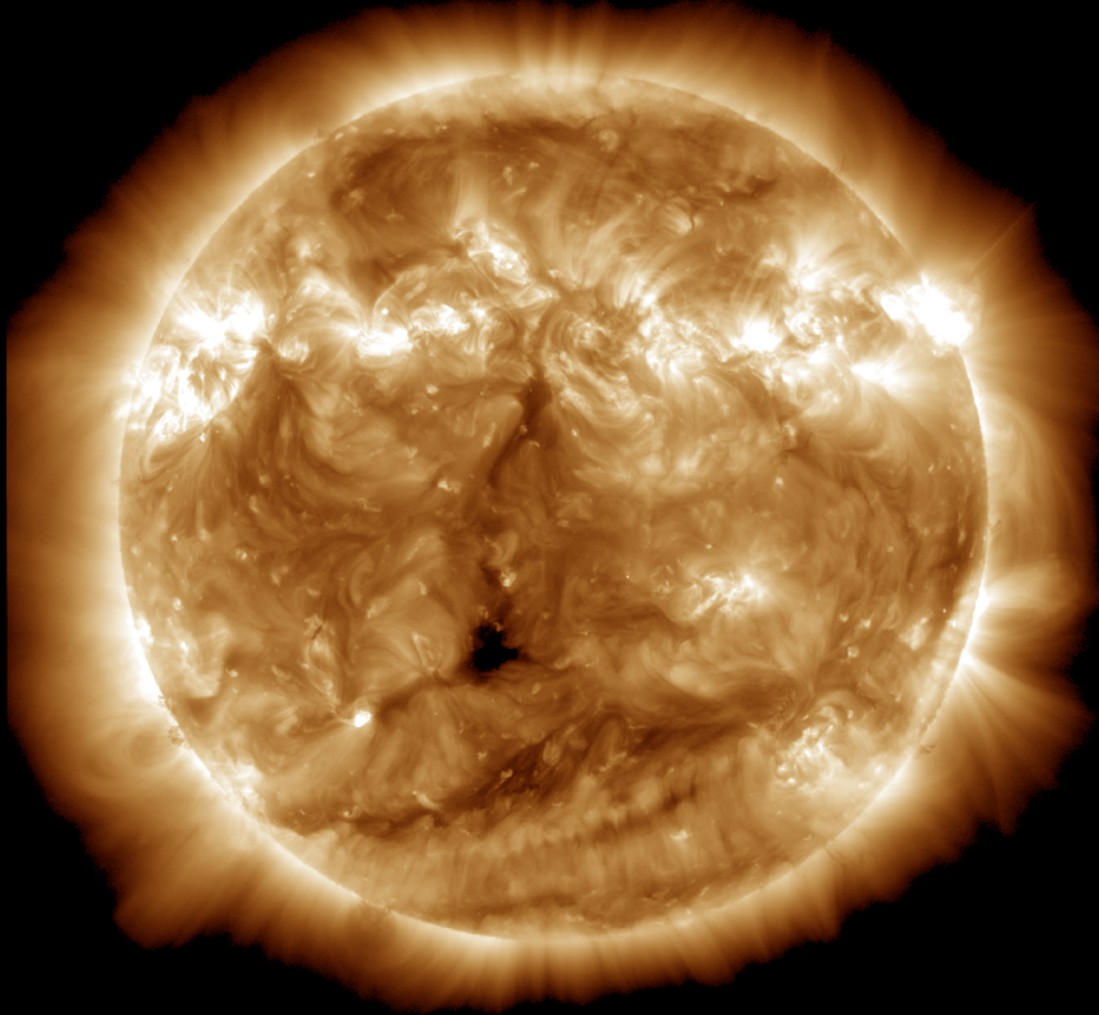


SDO/HMI Quick-Look Magnetogram: 20221113_111500

Coronal holes

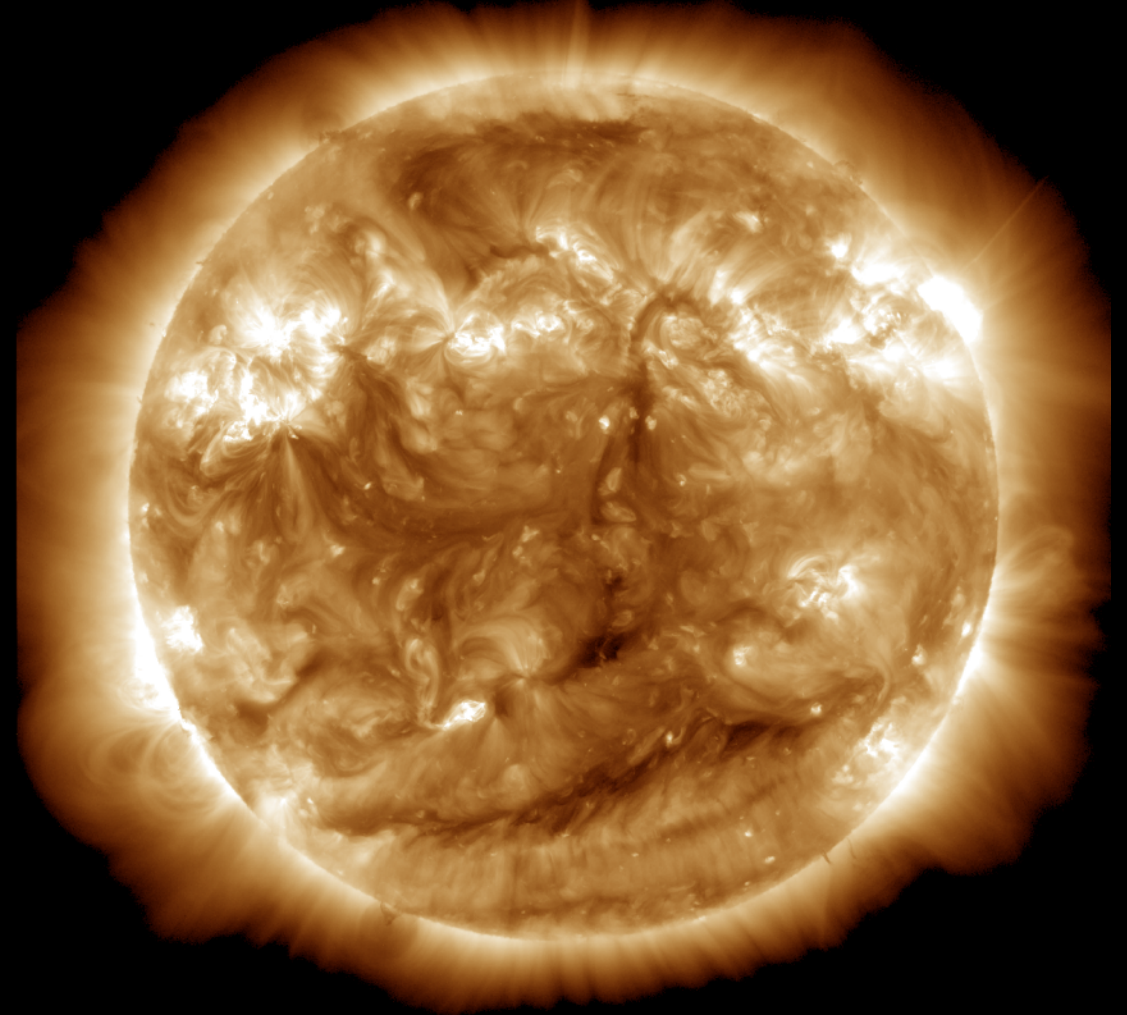
SDO/AIA 19.3 nm 2022-11-06

SDO/AIA AIA 193Å 2022-11-06T12:00:05.843



SDO/AIA 19.3 nm 2022-11-07

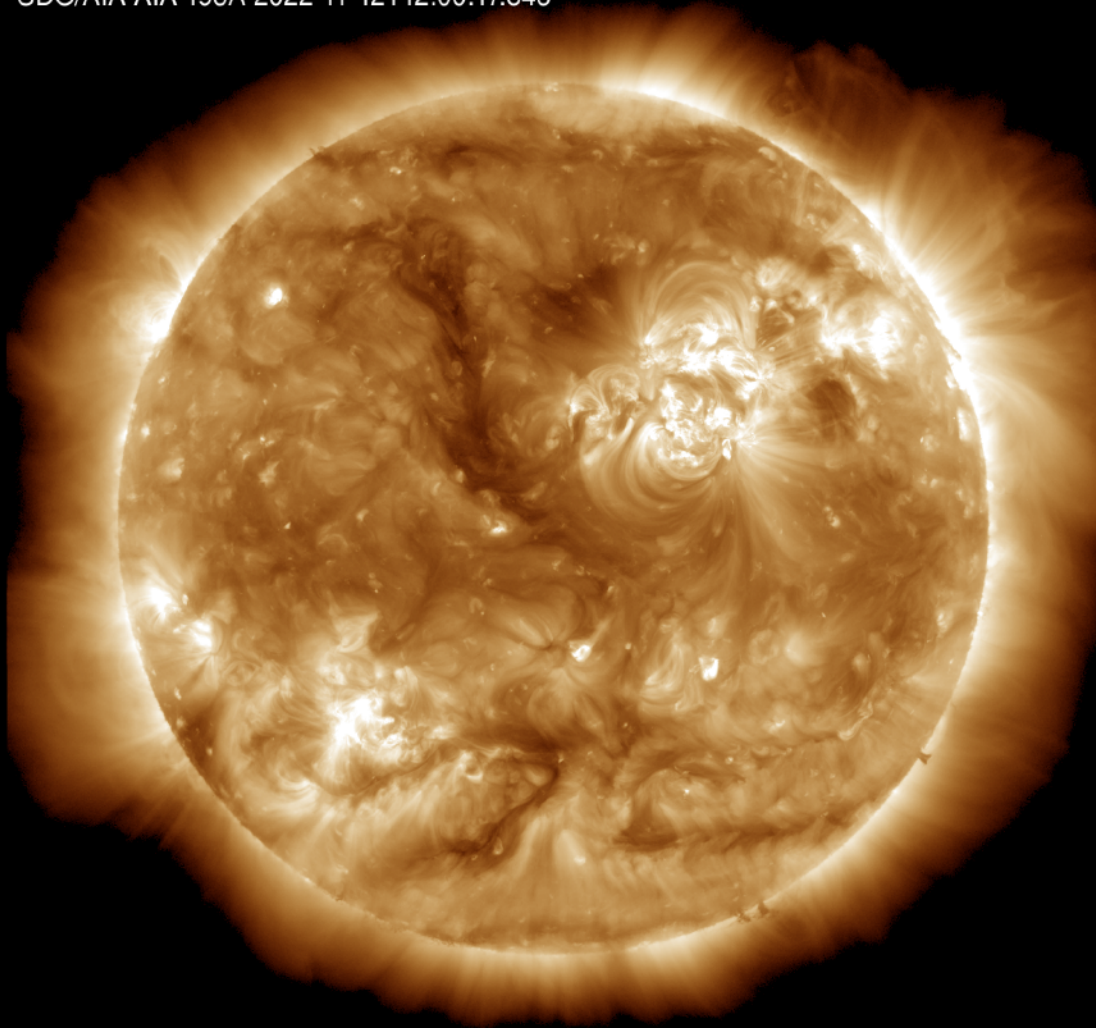
SDO/AIA AIA 193Å 2022-11-07T12:00:05.842



Coronal holes

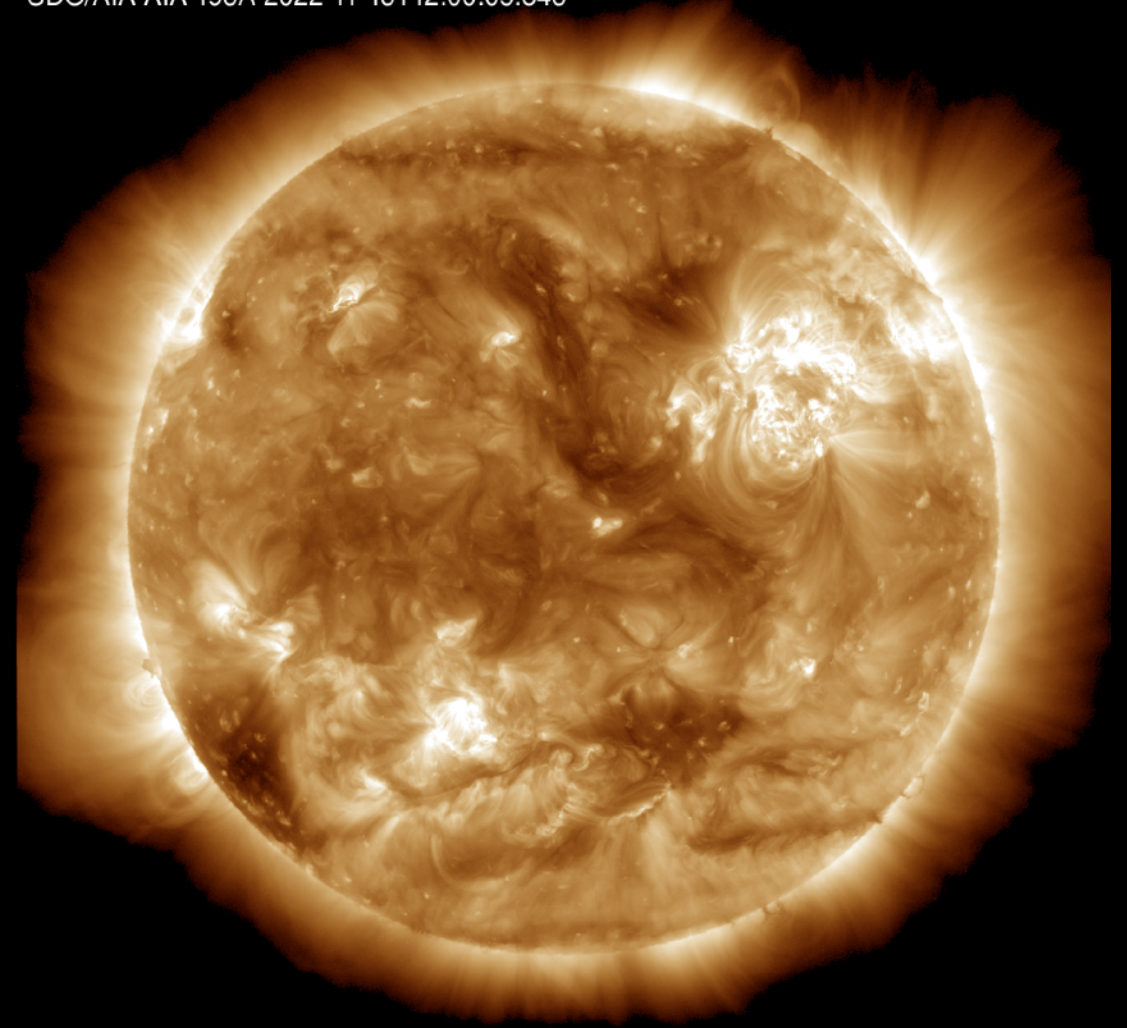
SDO/AIA 19.3 nm 2022-11-12

SDO/AIA AIA 193Å 2022-11-12T12:00:17.843

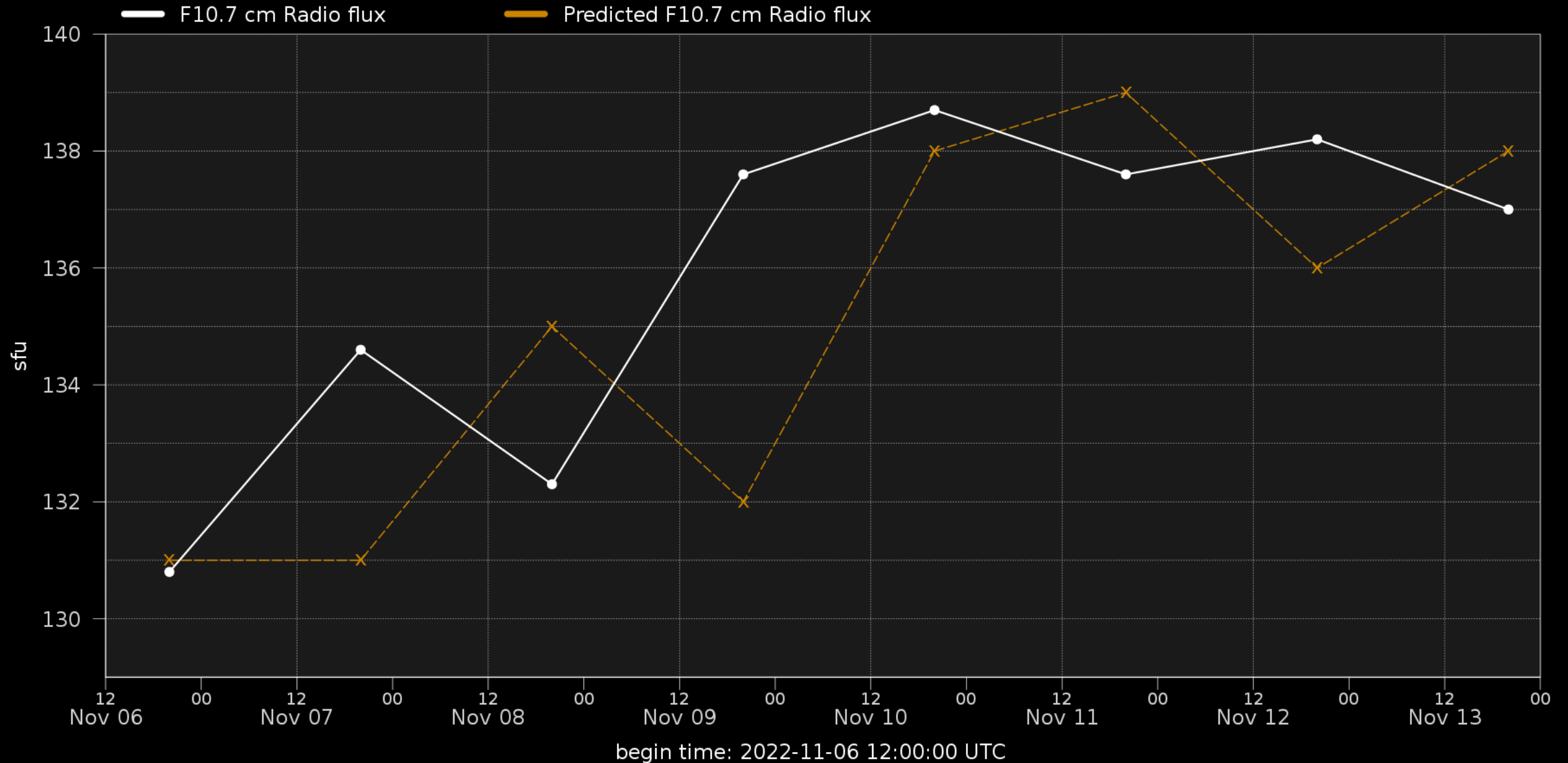


SDO/AIA 19.3 nm 2022-11-13

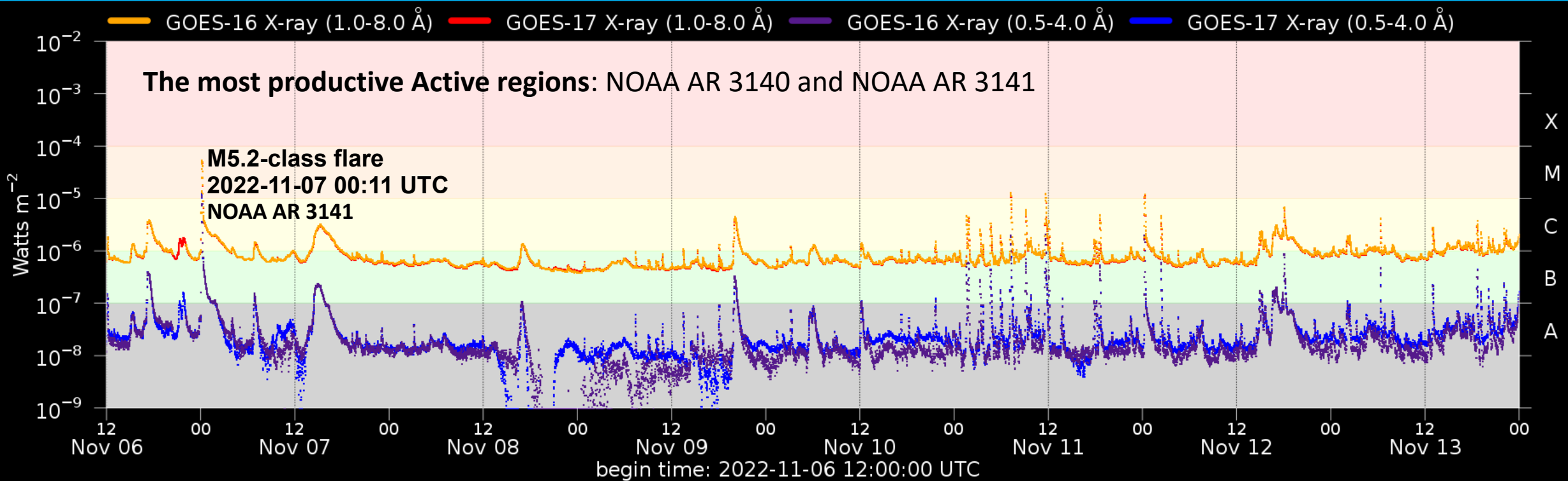
SDO/AIA AIA 193Å 2022-11-13T12:00:05.843



Solar F10.7cm radio flux



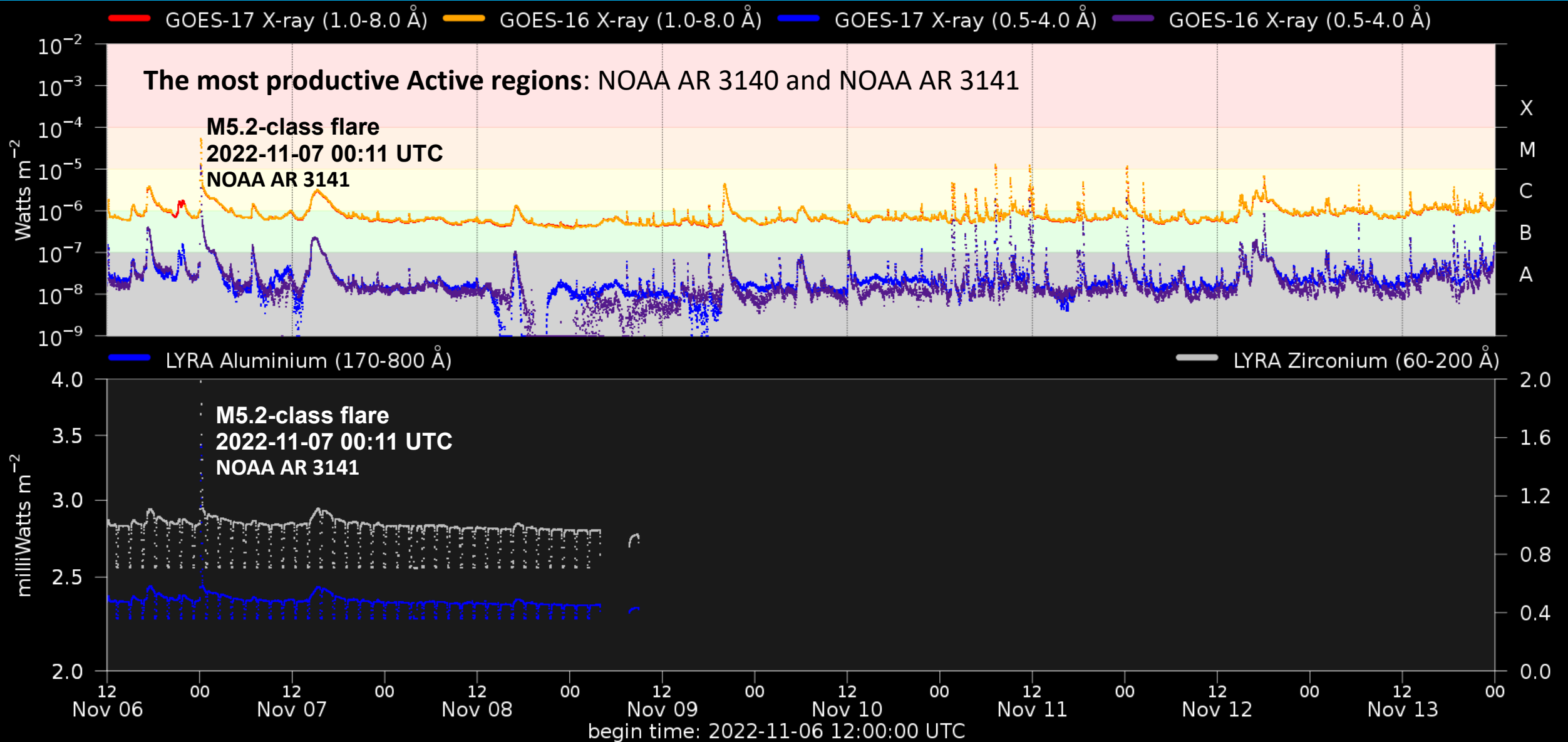
Flaring activity



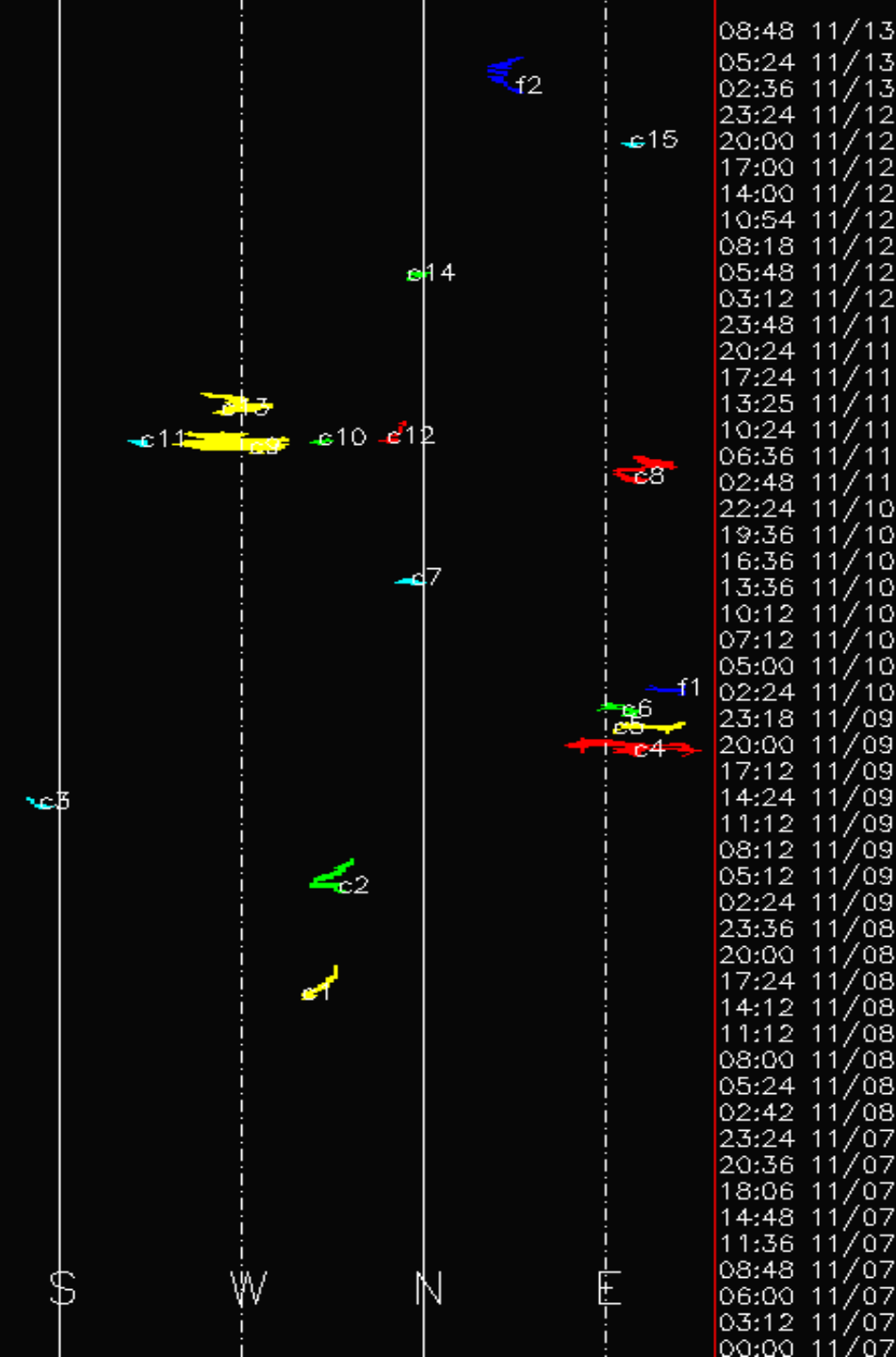
Probabilities (%) and occurrences (#) of C/M/X-flares daily, from noon to noon:

Issue date	2022-11-06	2022-11-07	2022-11-08	2022-11-09	2022-11-10	2022-11-11	2022-11-12	2022-11-13
Probability (%)	50 10 03	92 62 15	89 51 01	55 05 01	80 10 01	92 55 15	92 40 05	95 55 10
Observed (#)	05 01 00	00 00 00	01 00 00	05 00 00	11 02 00	05 01 00	07 00 00	06 00 00

Solar X-Ray and UV flux



Coronal Mass Ejections



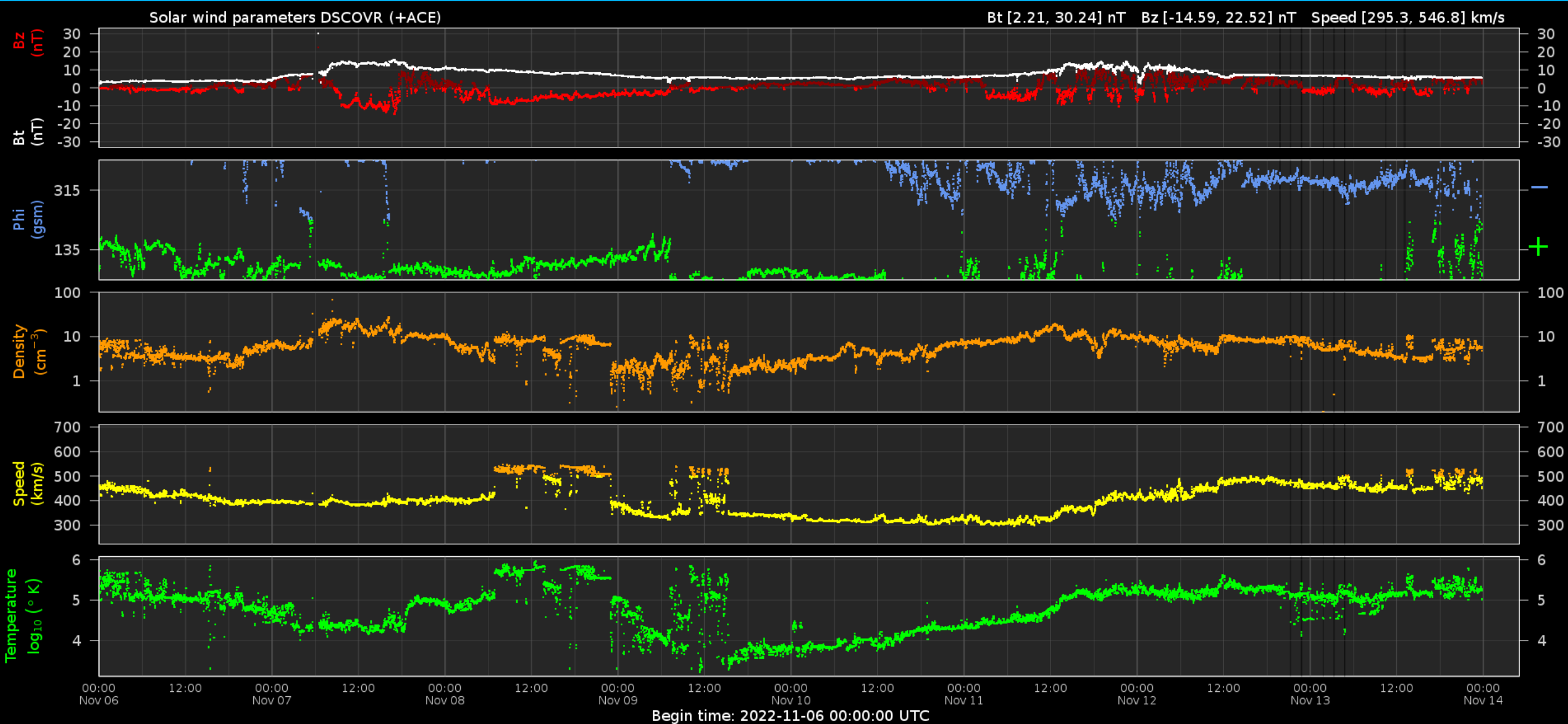
Solar Wind and Geomagnetic Activity



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Solar wind parameters



Solar wind parameters & K-indices



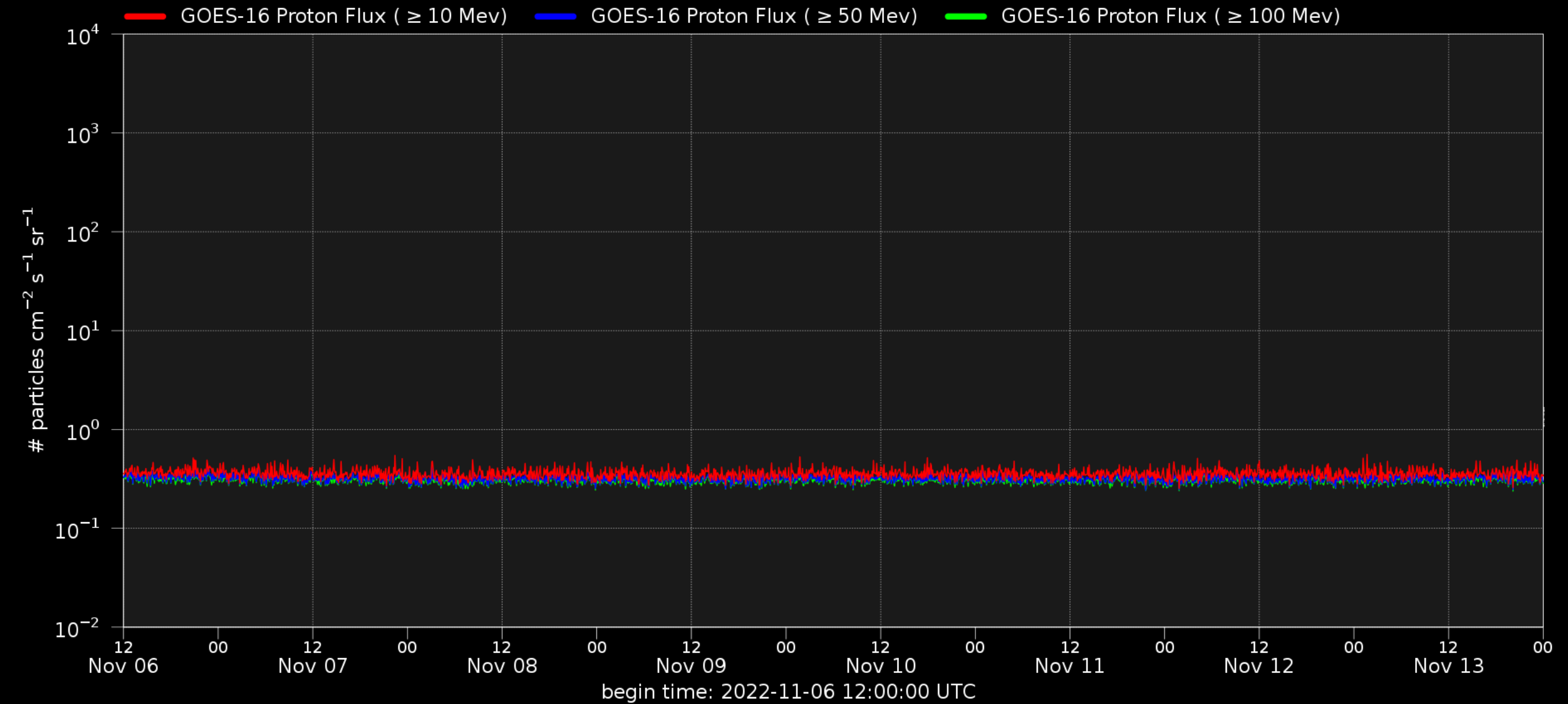
Energetic Particles



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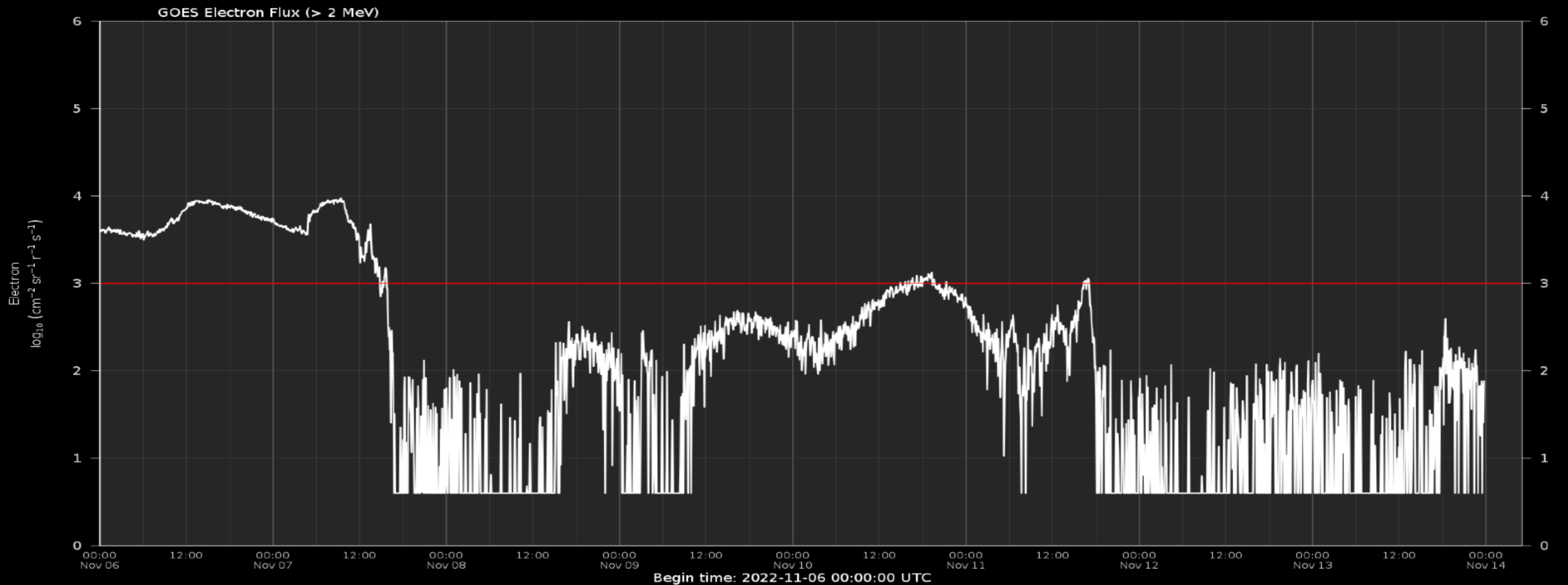
Solar proton flux



Electron flux at GEO

www.stce.be/educational/classification#electrons

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



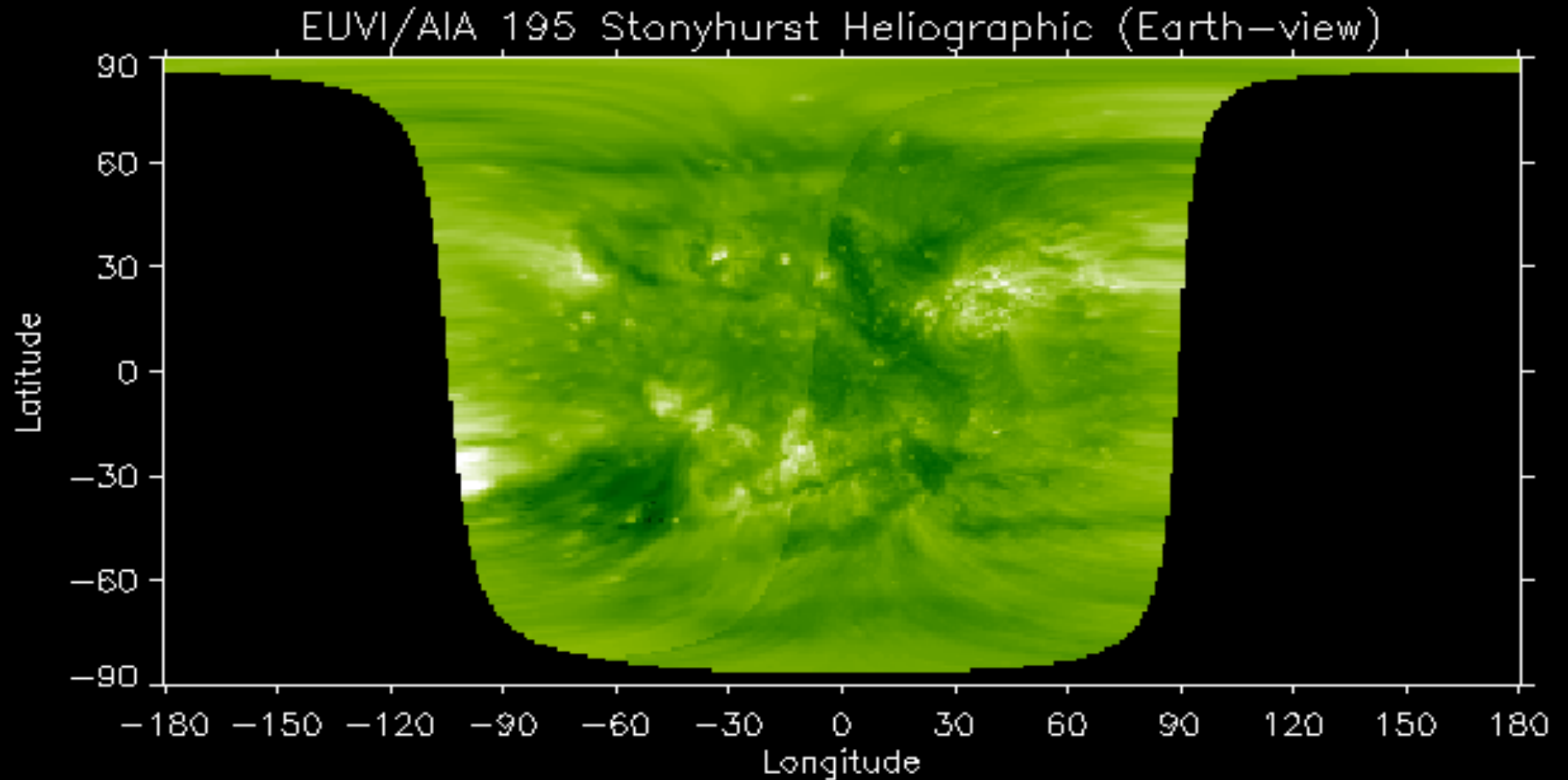
Outlook



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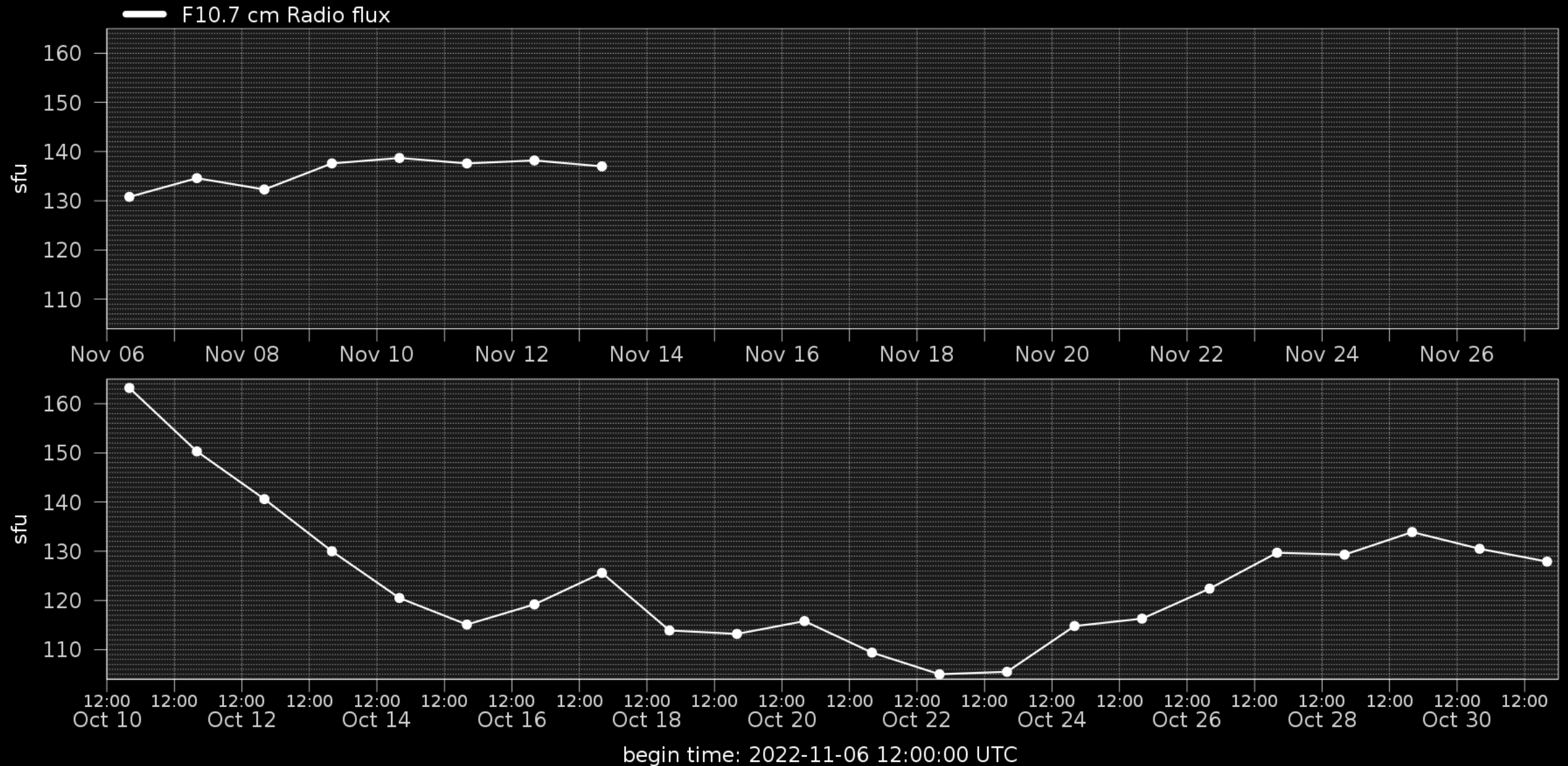
www.sidc.be

Outlook: Solar activity

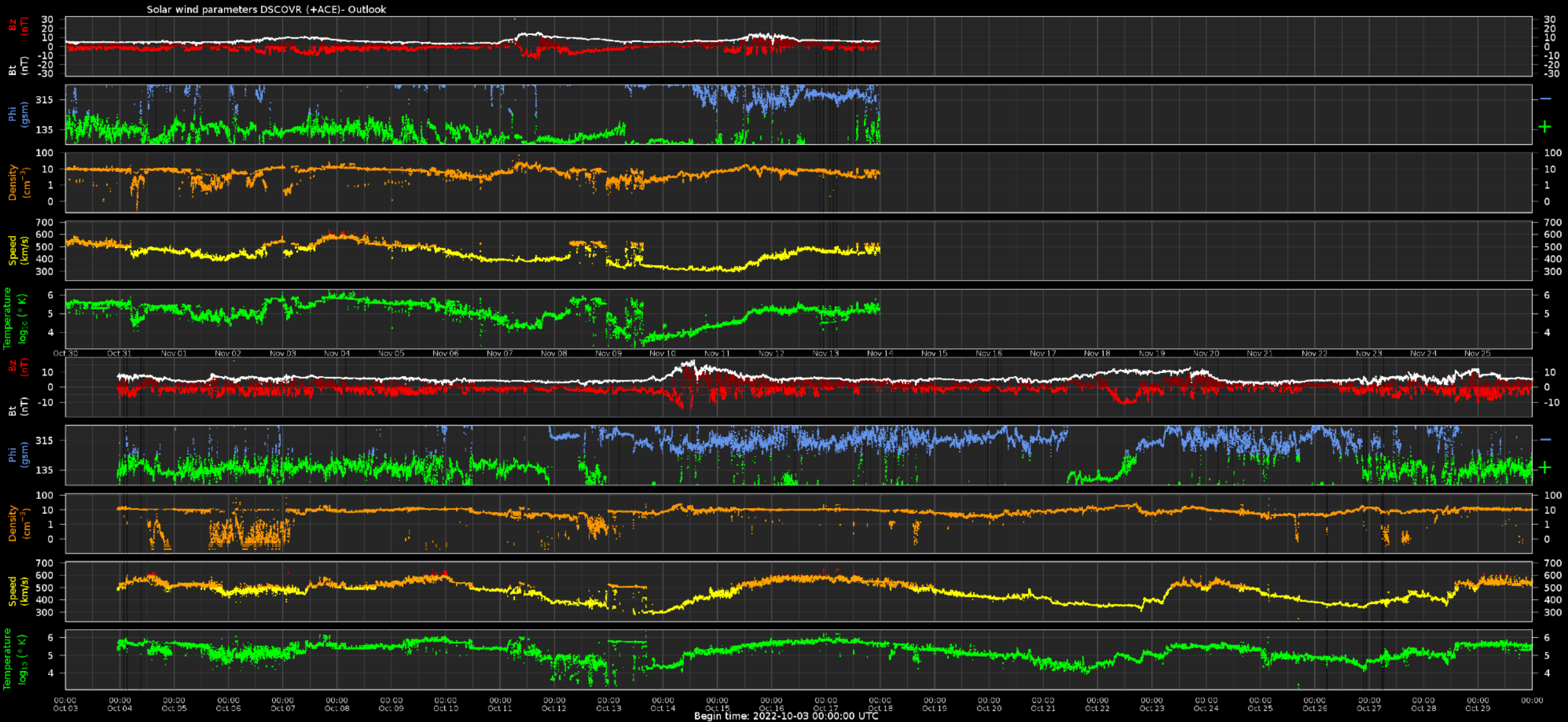


Observation date: 2022/11/13 20:35:00

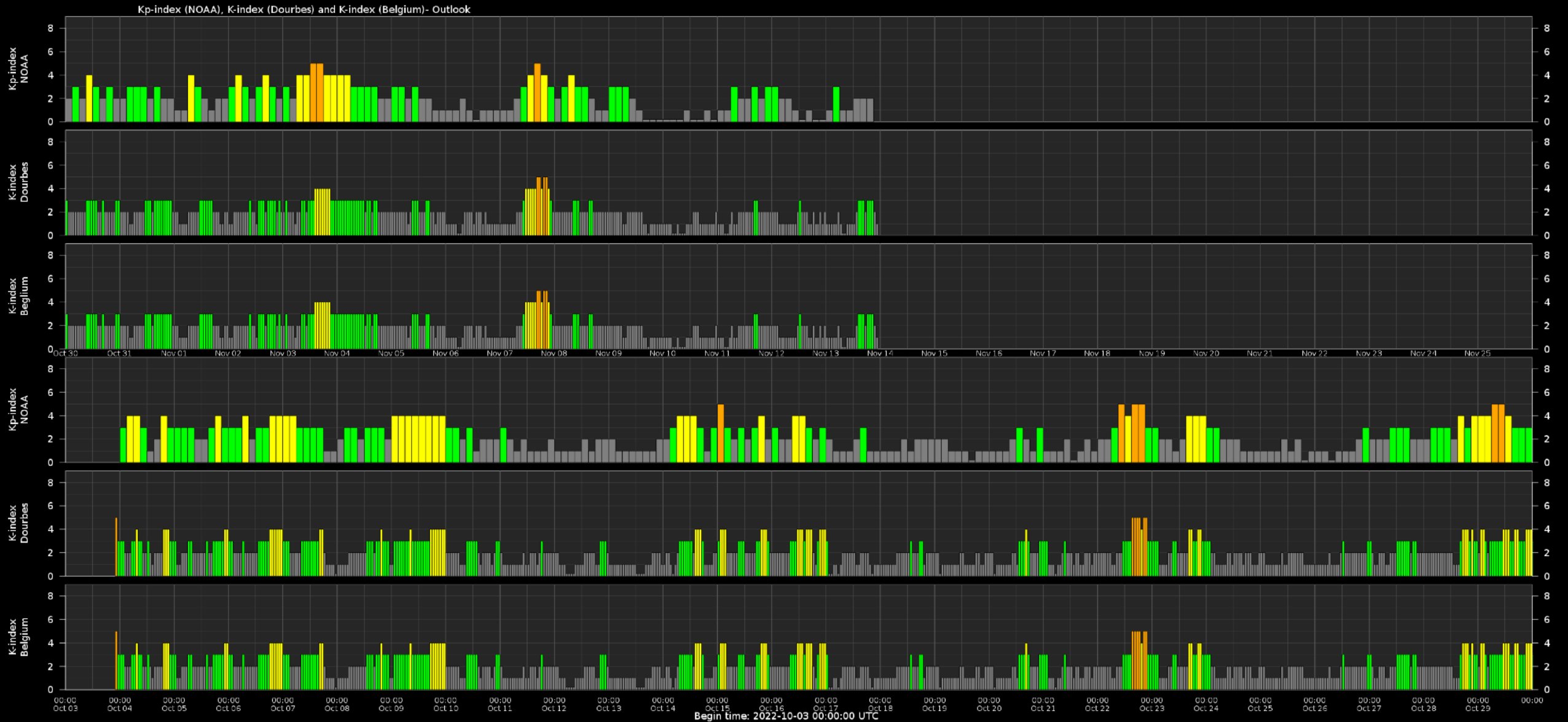
Outlook: Solar F10.7cm radio flux



Outlook: Solar wind parameters



Outlook: Geomagnetic activity



Outlook: Electron Flux at GEO Outlook



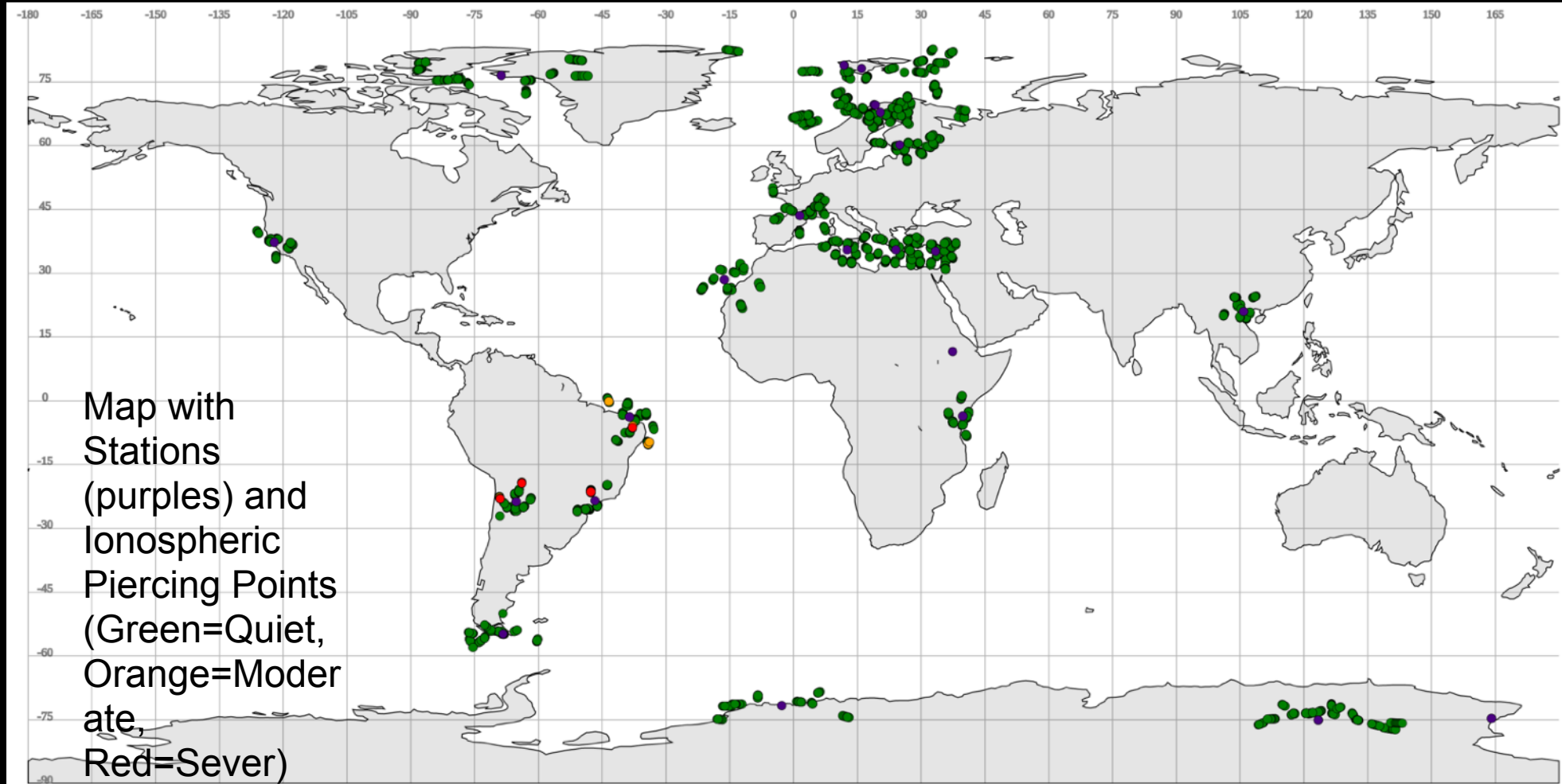
PECASUS



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PECASUS related events



Pecasus related events

PECASUS DUTY STATUS: On Duty Centre

GNSS	Moderate	Severe	Time UTC	Values	Status	Alert	Max-3h values	Max-3h status
<u>Amplitude Scintillation</u>	0.5	0.8	2022-11-14 10:00	0.30	QUIET		0.30	QUIET
<u>Phase Scintillation</u>	0.4	0.7	2022-11-14 10:00	0.22	QUIET		0.36	QUIET
<u>Vertical TEC</u>	125	175	2022-11-14 10:00	72.08	QUIET		81.92	QUIET

RADIATION	Moderate	Severe	Time UTC	Flags	Status	Alert	Max-3h flags	Max-3h status
<u>Effective Dose FL ≤ 460</u>	30	80	2022-11-14 10:00	0	QUIET		0	QUIET
<u>Effective Dose FL > 460</u>	/	80	2022-11-14 10:00	0	QUIET		0	QUIET

HF COM	Moderate	Severe	Time UTC	Values/Flags	Status	Alert	Max-3h values	Max-3h status
<u>Auroral Absorption (AA)</u>	8	9	2022-11-14 10:02	2.0	QUIET		2.0	QUIET
<u>Polar Cap Absorption (PCA)</u>	2	5	2022-11-14 10:05	0.15	QUIET		0.39	QUIET
<u>Shortwave Fadeout (SWF)</u>	x1.0	x10.0	2022-11-14 10:07	< M5 flare	QUIET		< M5 flare	QUIET
<u>Post-Storm Depression (PSD)</u>	30%	50%	2022-11-14 10:00	0	QUIET		0	QUIET

SIDC Space Weather Briefing

See you at our next briefing!

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