

SIDC Space Weather Briefing

26 September 2021 - 03 October 2021

Luciano Rodriguez

& the SIDC forecaster team



Solar Influences
Data analysis Centre
www.sidc.be

Summary Report

Solar activity from 2021-09-26 12:00 to 2021-10-03 23:59

Active regions	NOAA Ars 2871, 2872, 2877, 2878, 2880, 2881
Flares	# C-class flare: 8 # M-class flare: 0 # X-class flare: 0
Coronal Holes	Low latitudinal extensión of the northern polar CH

Proton flux	Below threshold
Electron flux	Below threshold

Solar wind and geomagnetic conditions

ICME	2
SW Conditions	B : 0.4 - 14.75 nT // Bz: -9.17 nT to 13.28 nT // Speed: 352.8 - 568.7km/s
K-indices	max K-index (Dourbes): 4 max Kp-index (NOAA): 4

All Quiet Alert: Off

Solar Activity

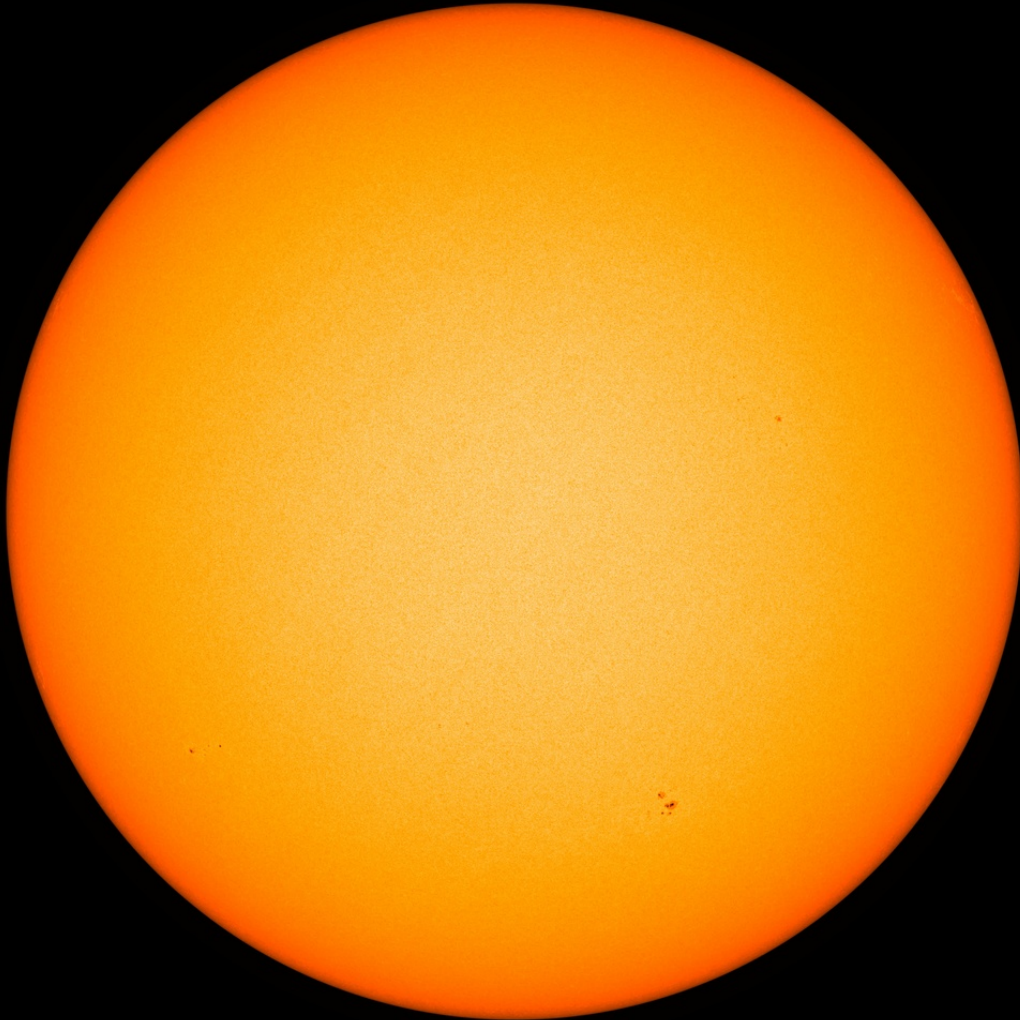


Royal Observatory
of Belgium

Solar Influences
Data analysis Centre
www.sidc.be

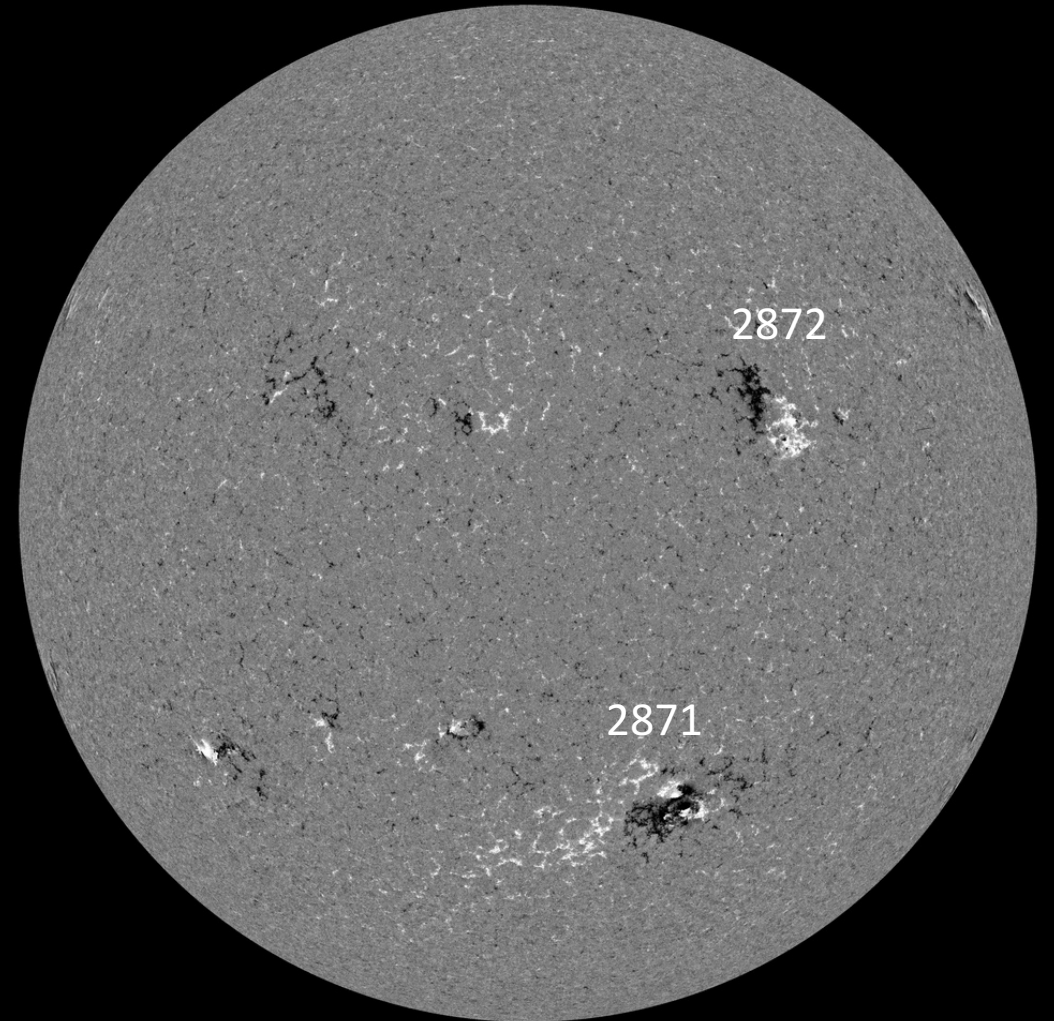
Solar active regions

SDO/HMI White Light 2021-09-26



SDO/HMI Quick-Look Continuum: 20210926_114500

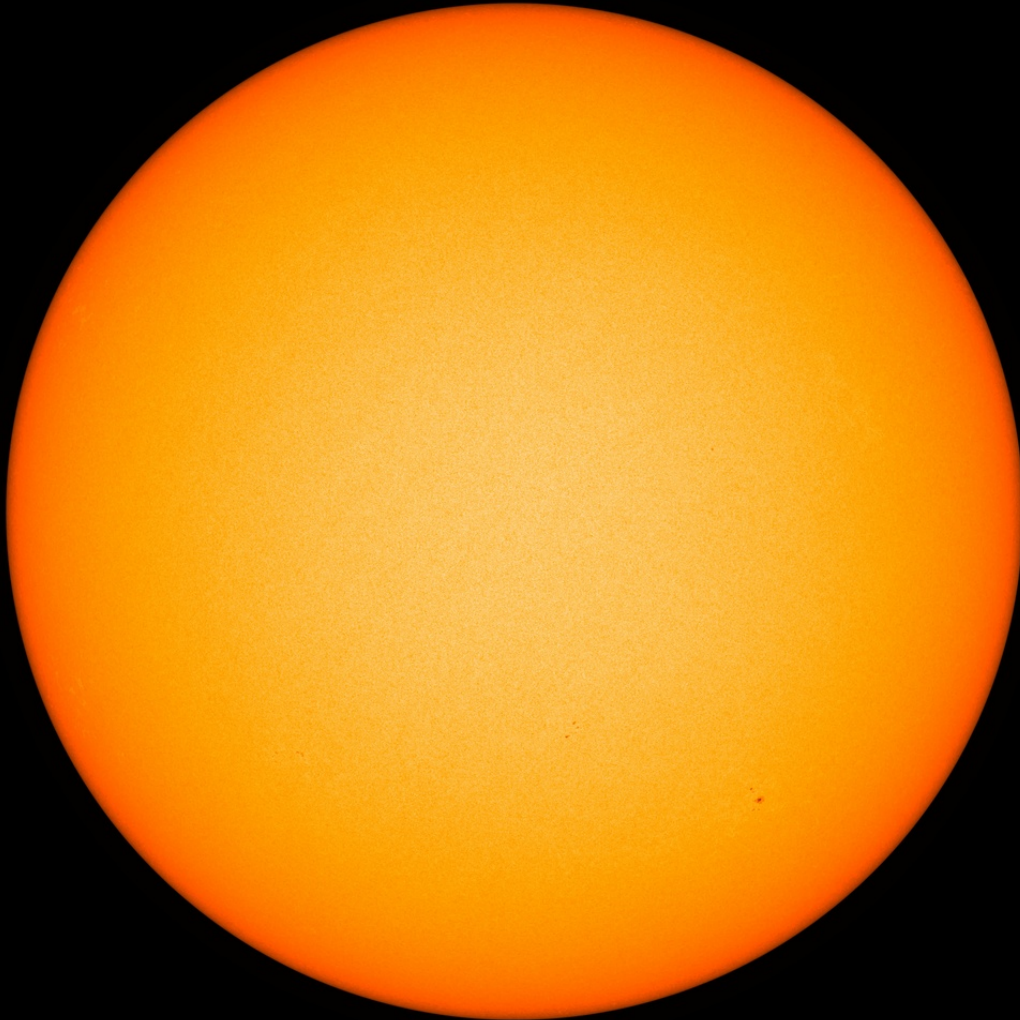
SDO/HMI Magnetogram 2021-09-26



SDO/HMI Quick-Look Magnetogram: 20210926_114500

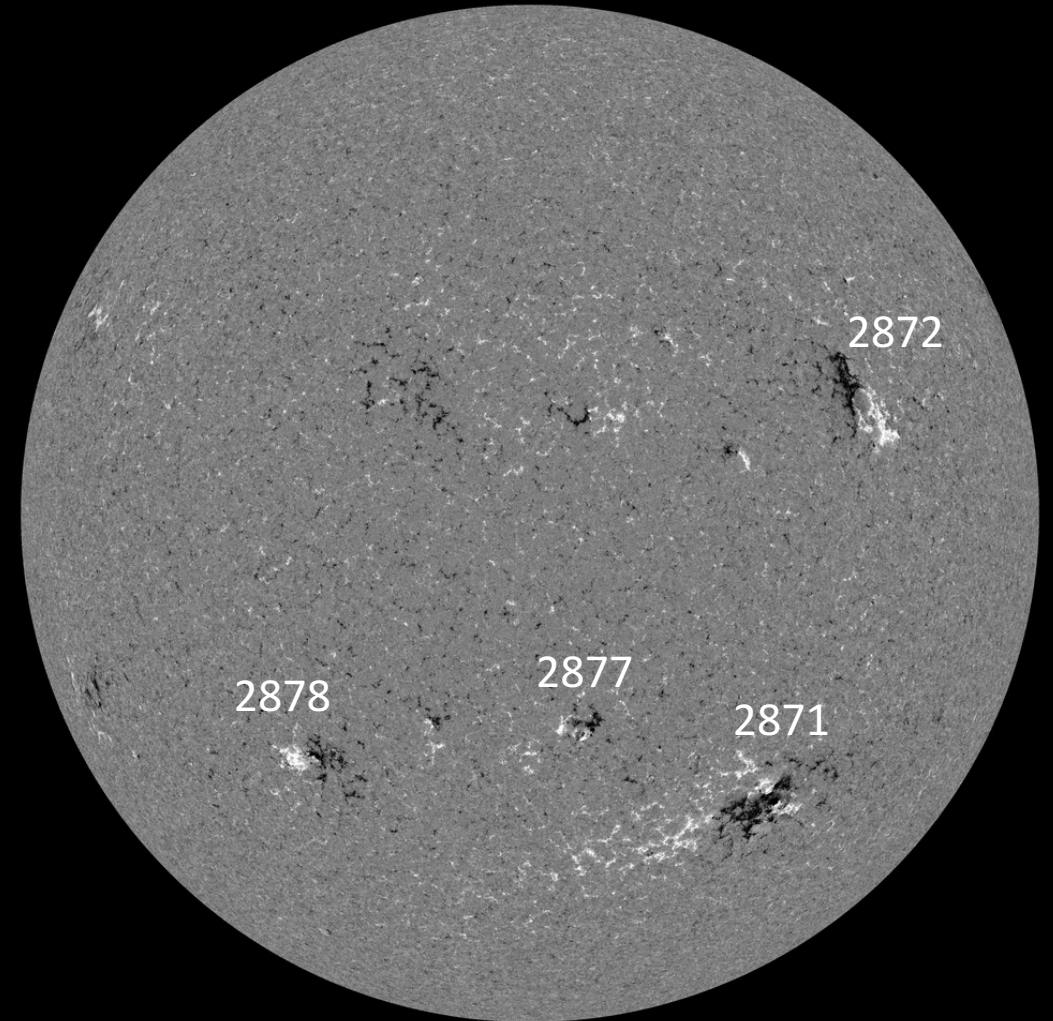
Solar active regions

SDO/HMI White Light 2021-09-27



SDO/HMI Quick-Look Continuum: 20210927_114500

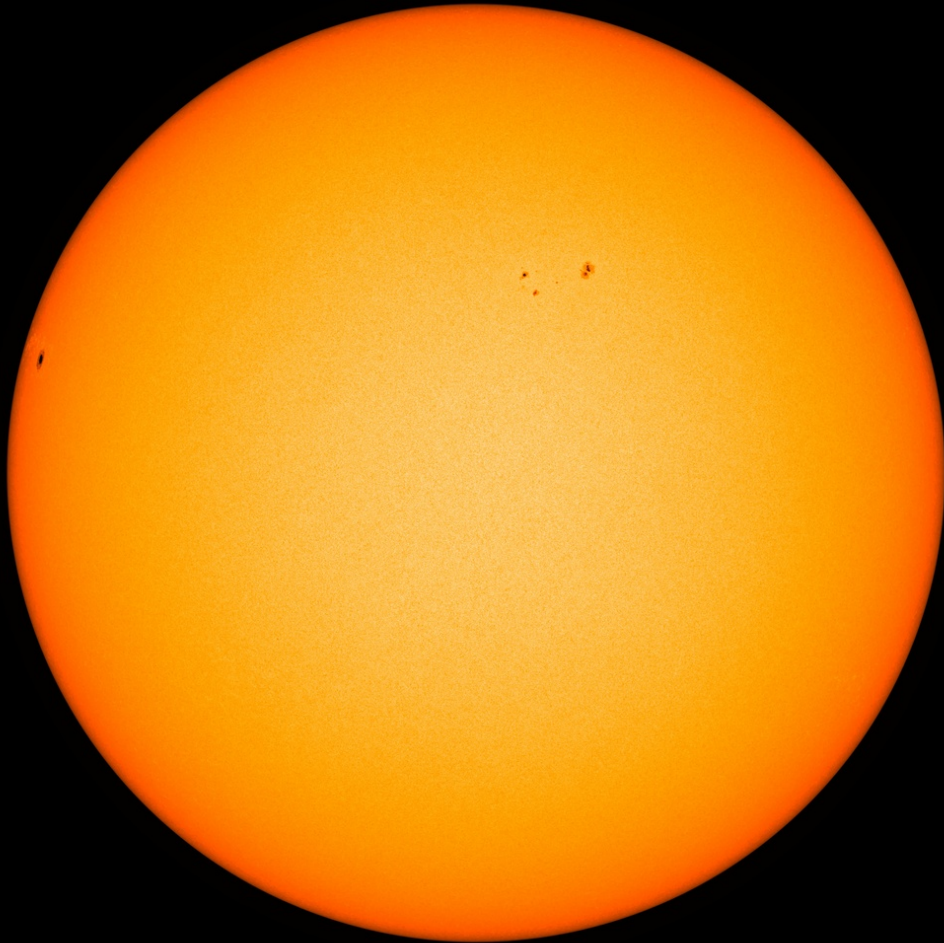
SDO/HMI Magnetogram 2021-09-27



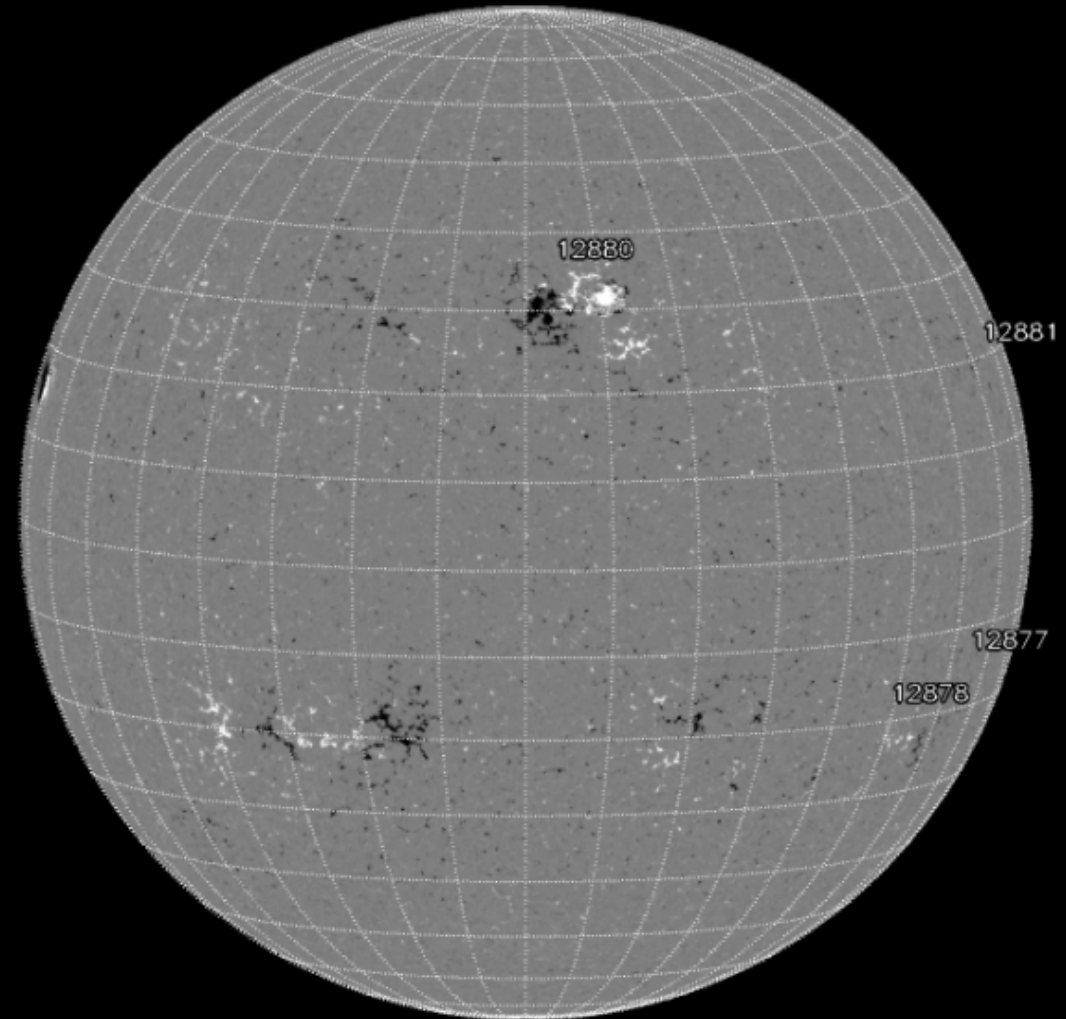
SDO/HMI Quick-Look Magnetogram: 20210927_114500

Solar active regions

SDO/HMI Magnetogram 2021-10-03



SDO/HMI Quick-Look Continuum: 20211004_081500

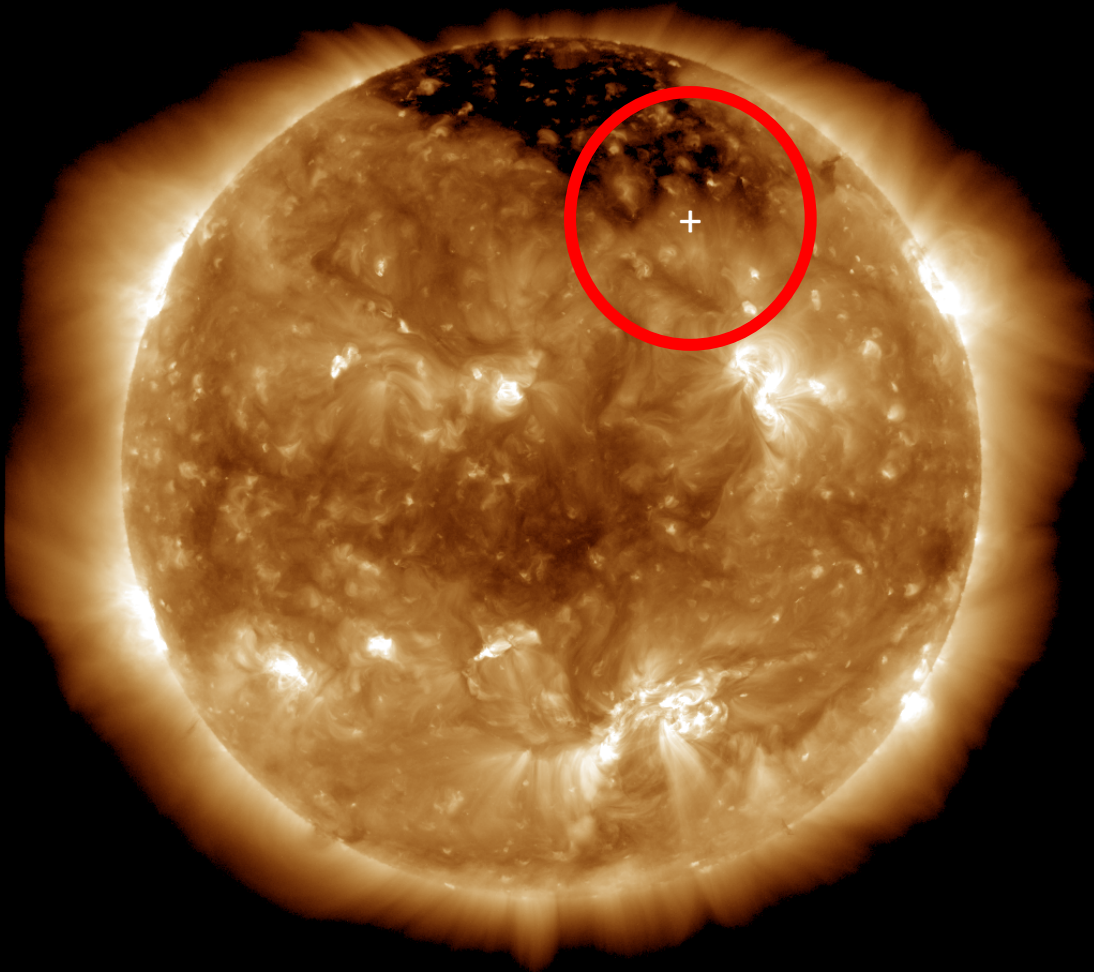


SolarMonitor.org

Coronal holes

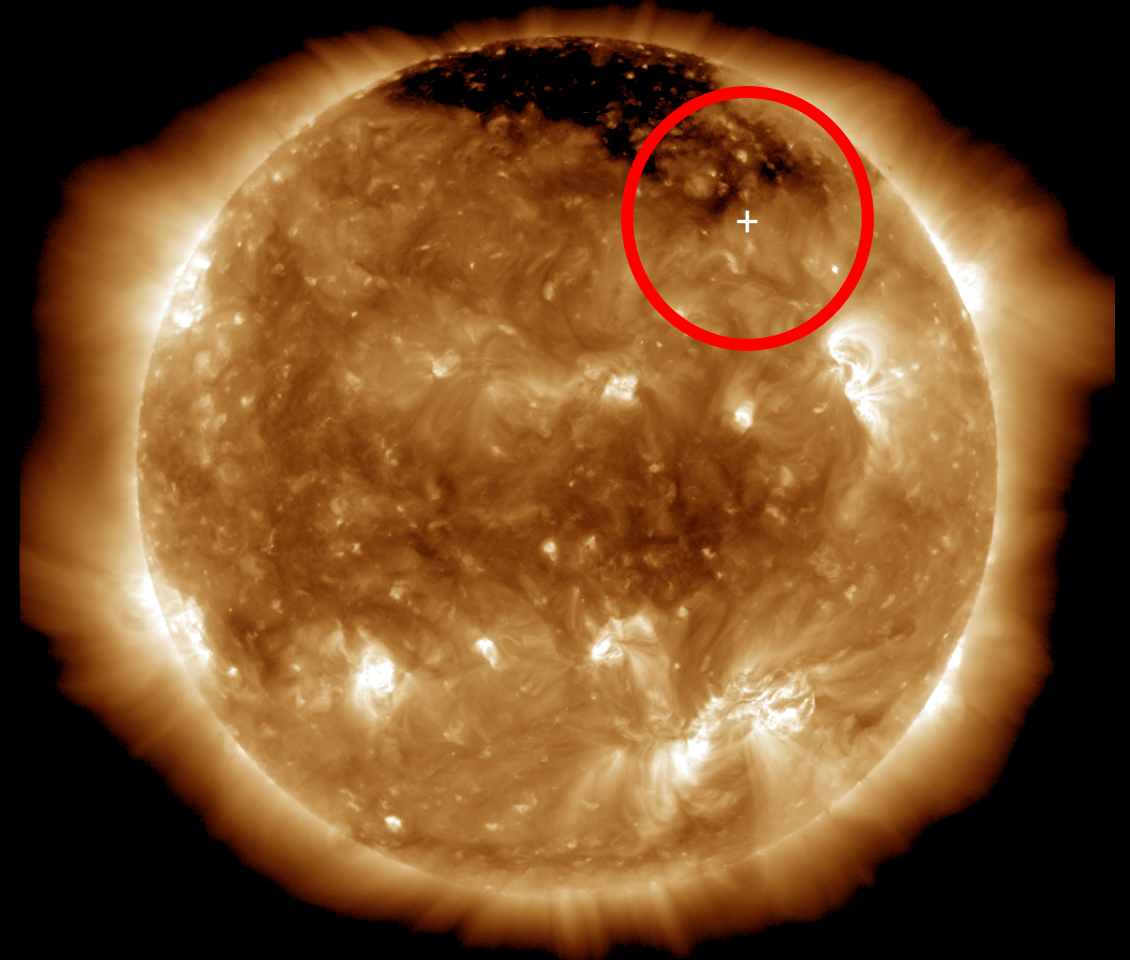
SDO/AIA 19.3 nm 2021-09-26

SDO/AIA AIA 193Å 2021-09-26T12:00:05.843



SDO/AIA 19.3 nm 2021-09-27

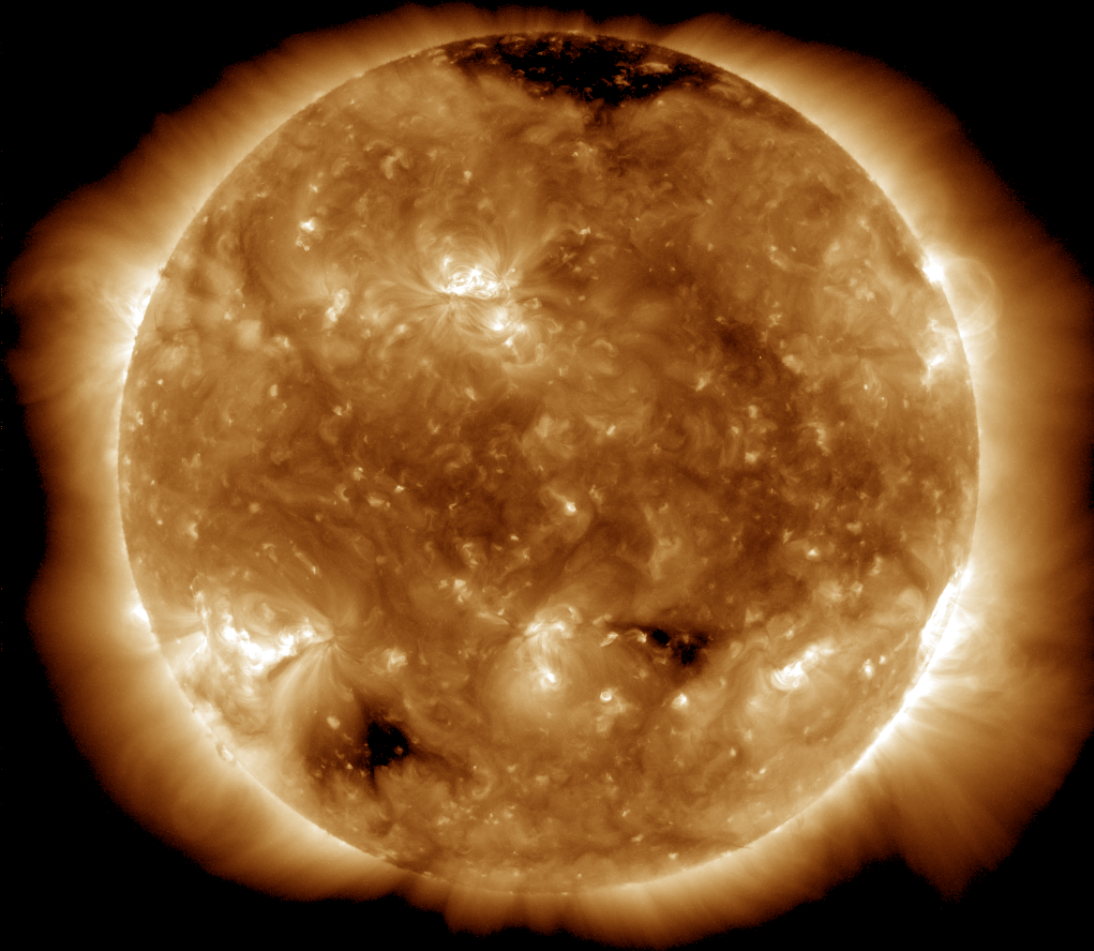
SDO/AIA AIA 193Å 2021-09-27T12:00:05.843



Coronal holes

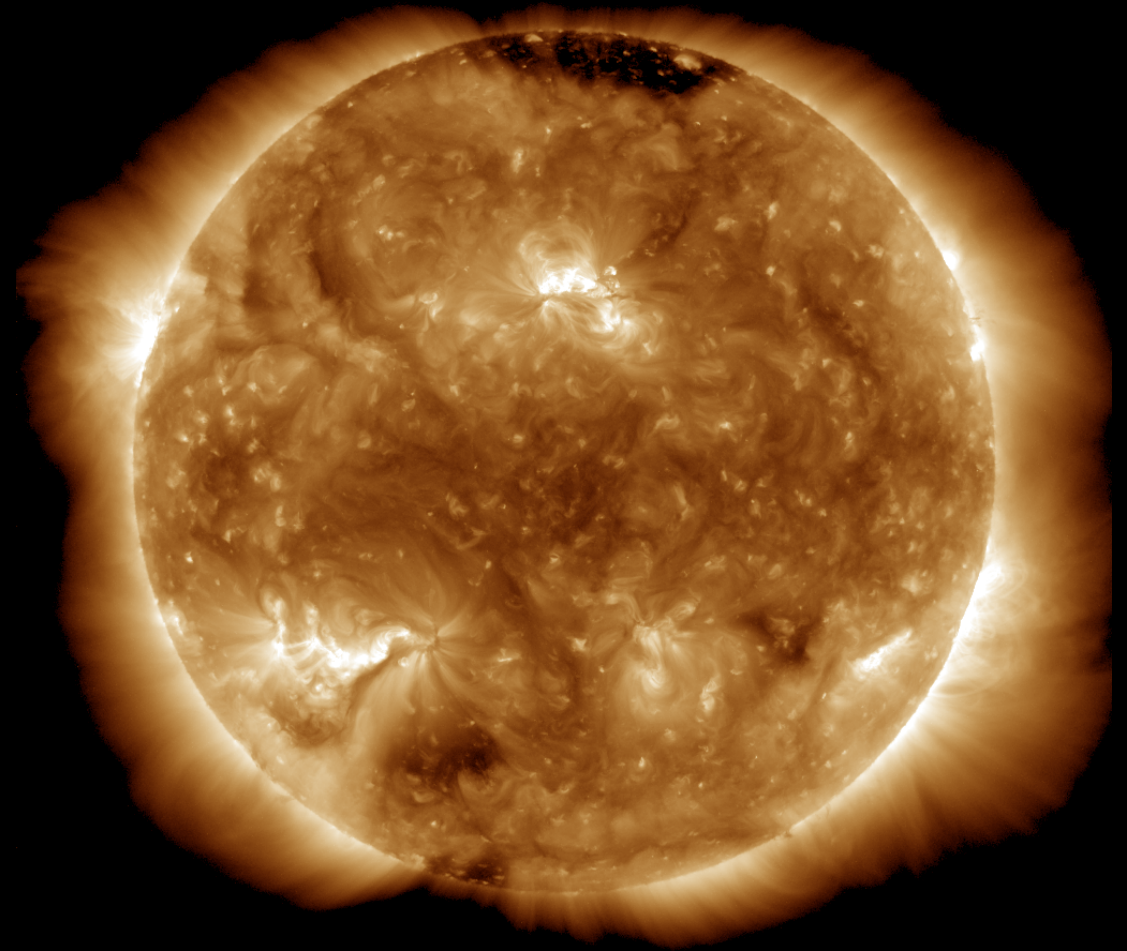
SDO/AIA 19.3 nm 2021-10-02

SDO/AIA AIA 193Å 2021-10-02T12:00:05.839

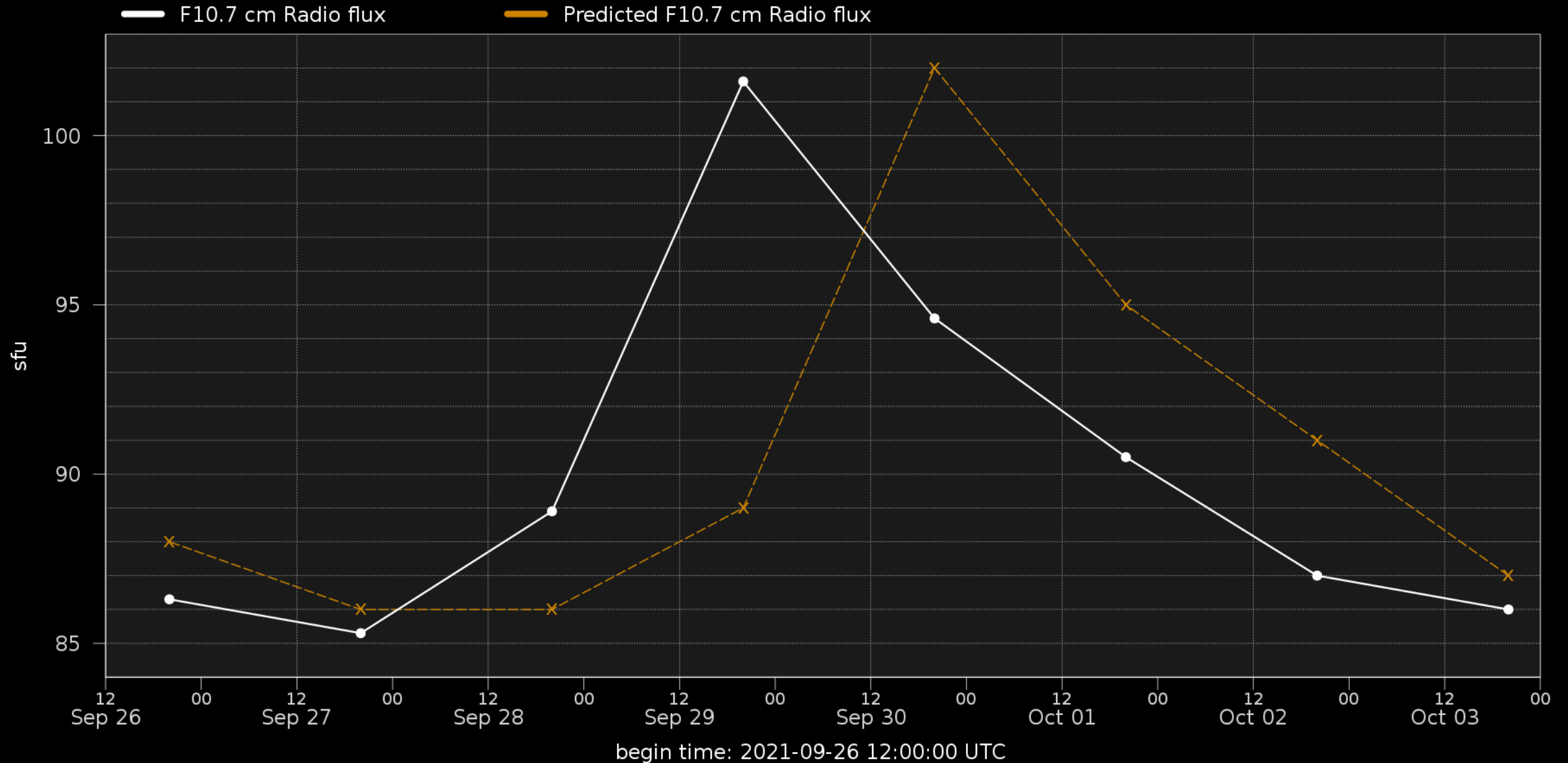


SDO/AIA 19.3 nm 2021-10-03

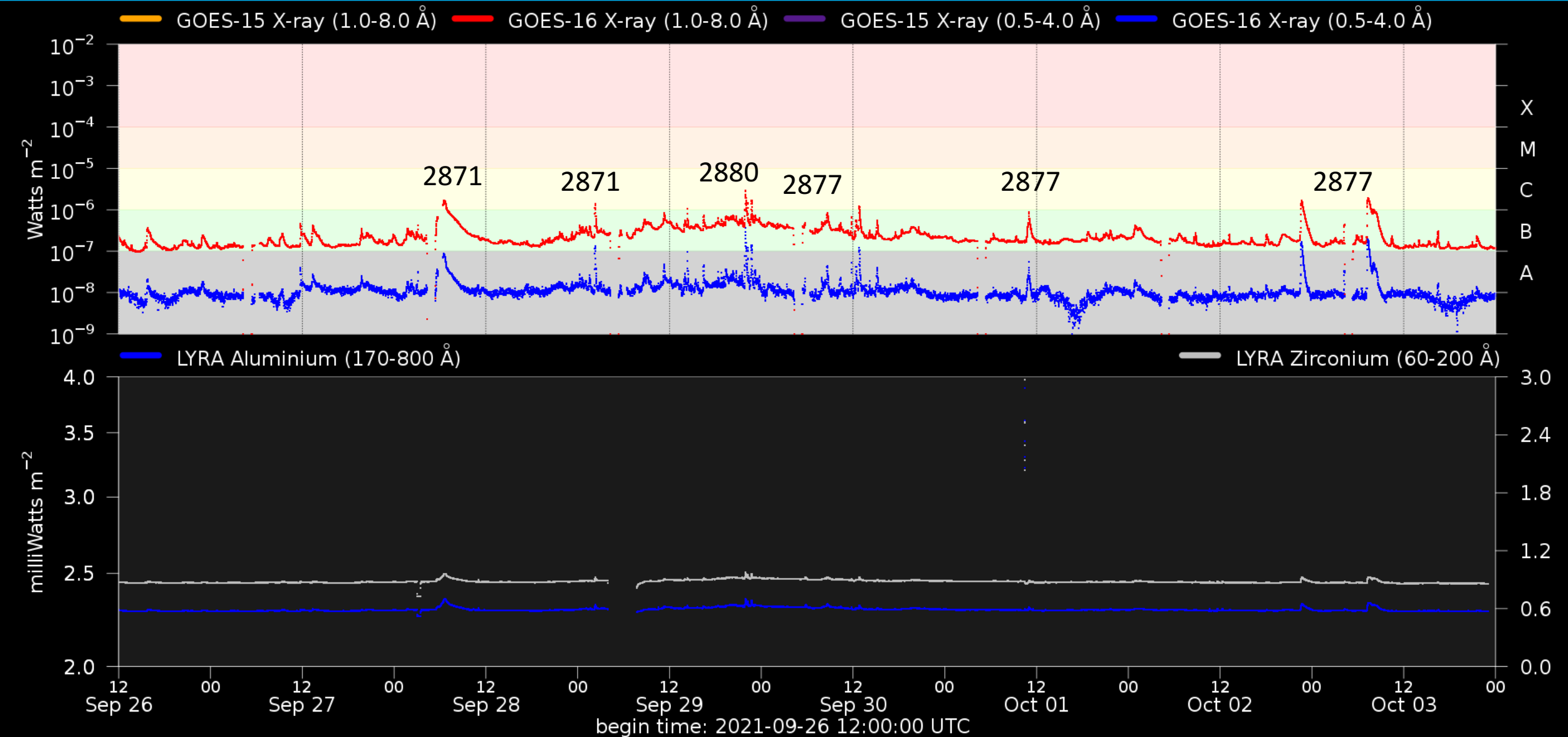
SDO/AIA AIA 193Å 2021-10-03T12:00:05.843



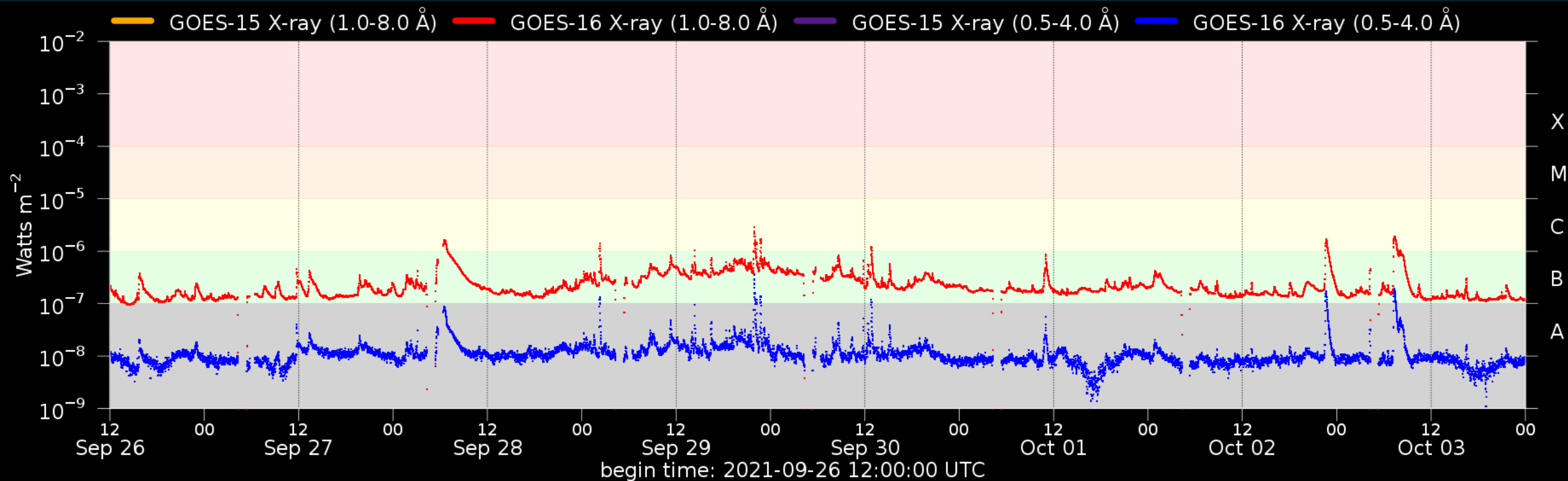
Solar F10.7cm radio flux



Solar X-Ray and UV flux



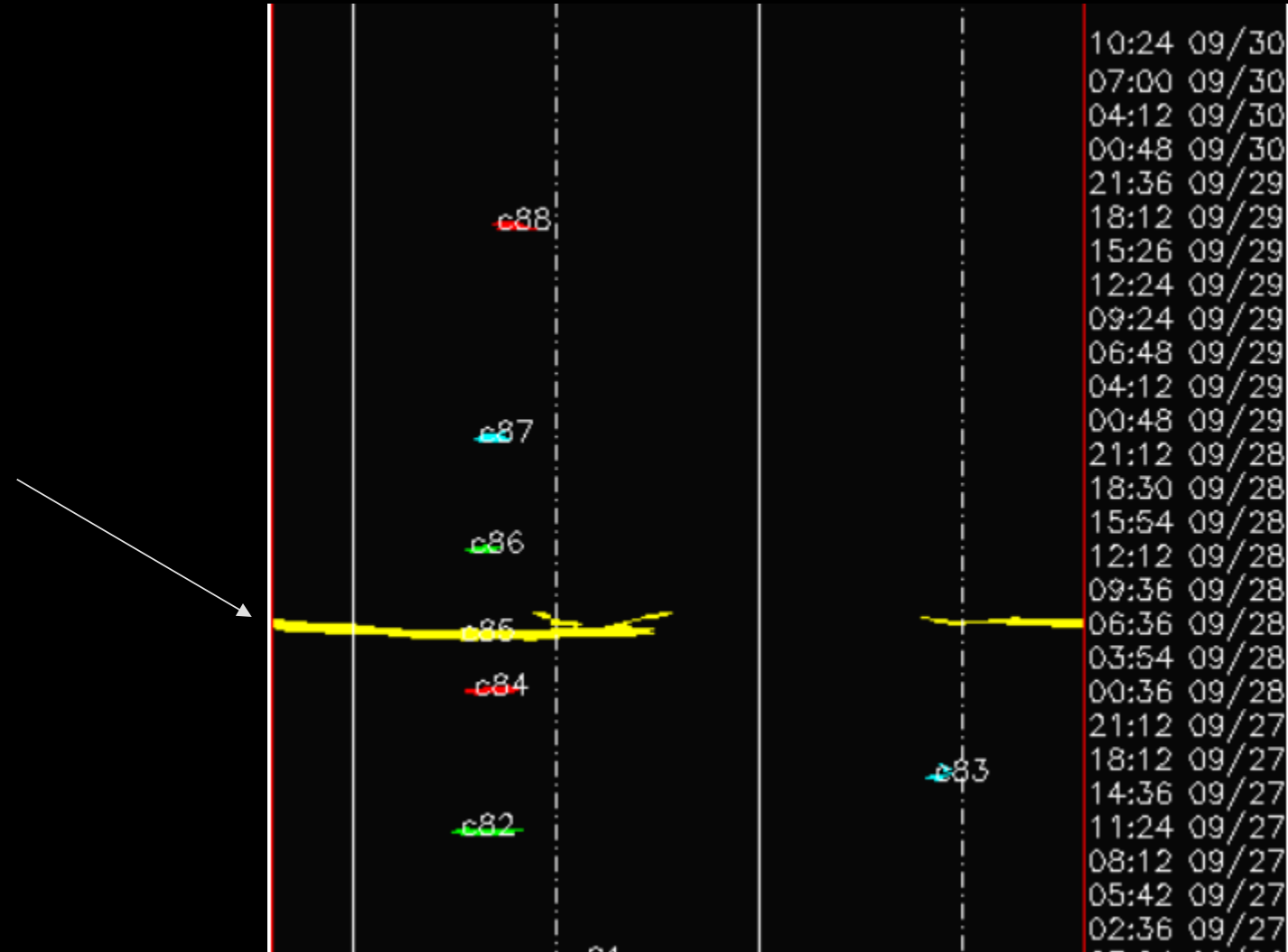
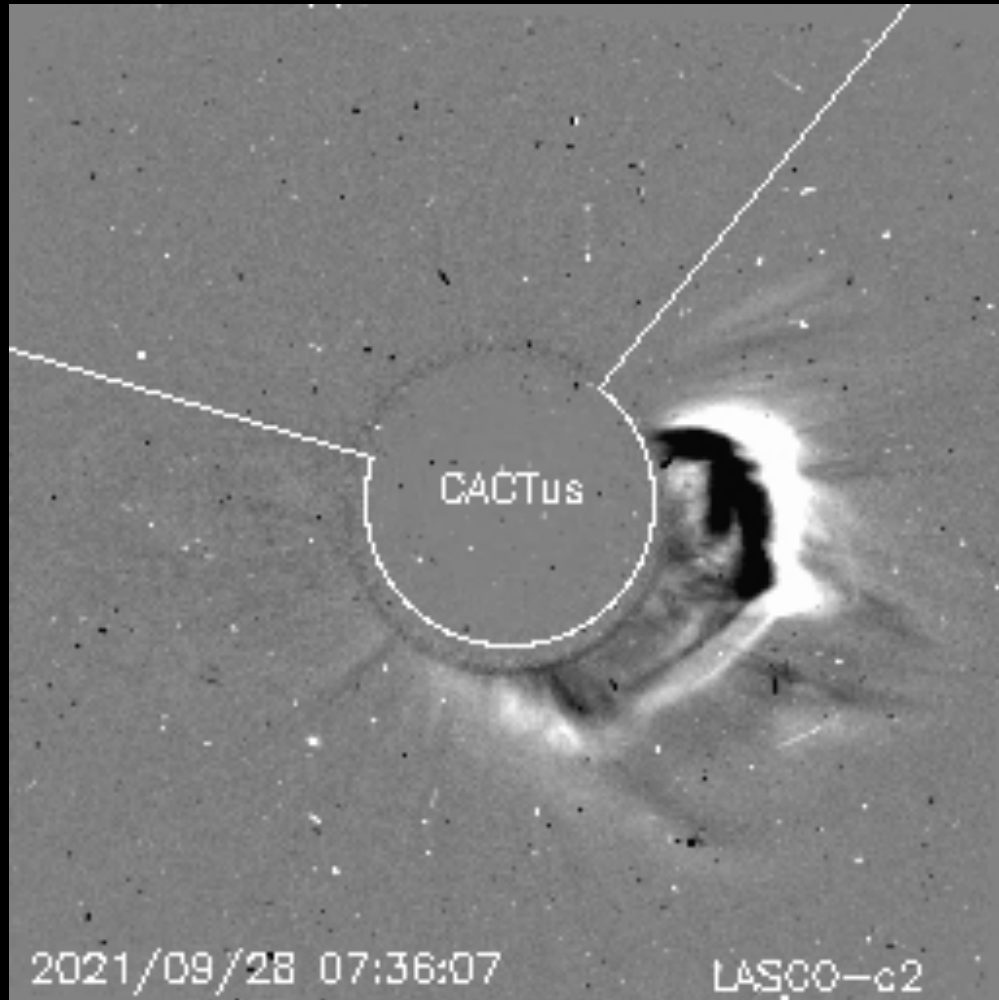
Flaring activity



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

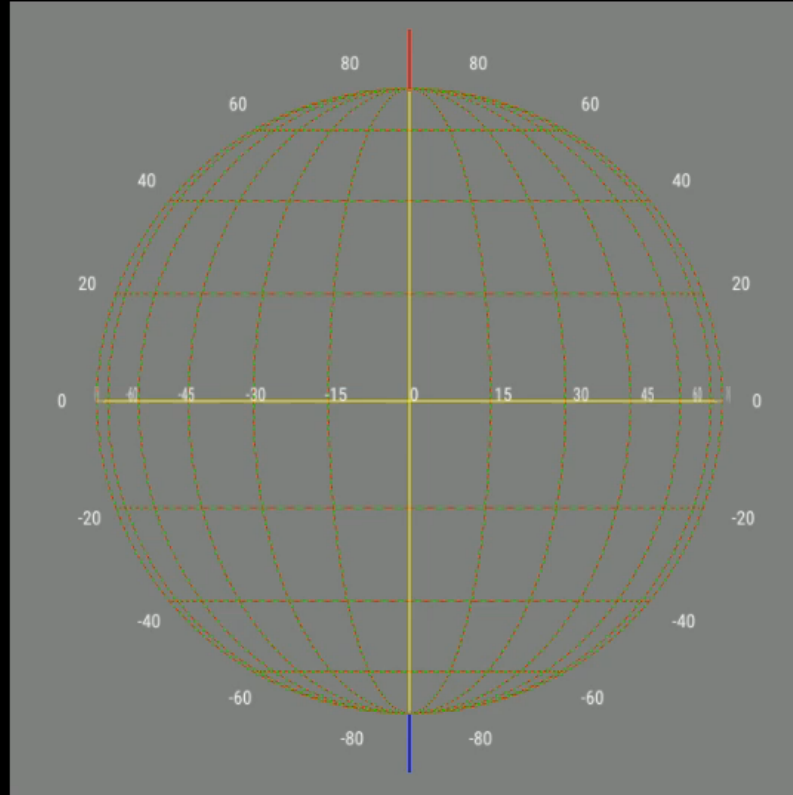
Issue date	2021-09-26	2021-09-27	2021-09-28	2021-09-29	2021-09-30	2021-10-01	2021-10-02	2021-10-03
Probability (%)	65 05 01	55 10 01	55 05 01	50 03 01	75 20 03	50 03 01	45 01 01	55 01 01
Observed (#)	01 00 00	00 00 00	01 00 00	03 00 00	01 00 00	00 00 00	02 00 00	00 00 00

Coronal Mass Ejections



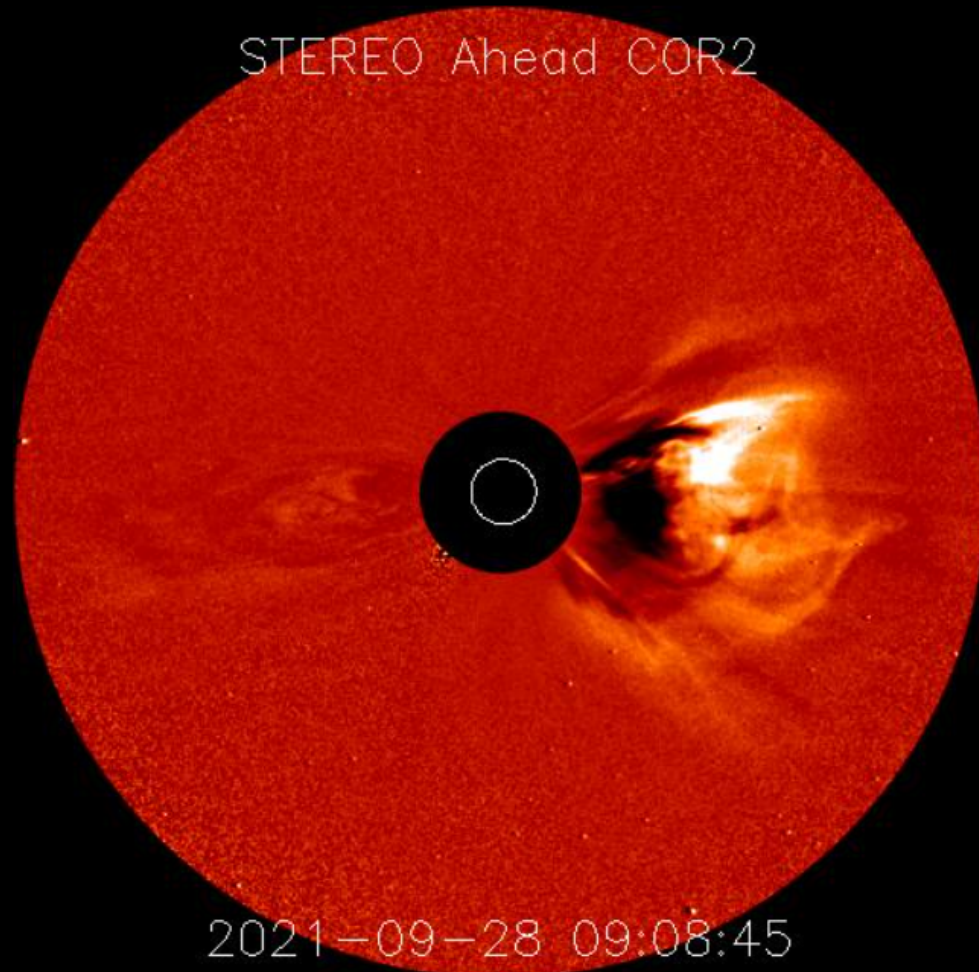
Coronal Mass Ejections

SDO AIA – 193 A



2021-09-28T03:18:28.843

Coronal Mass Ejections



- Calculated speed: 934 km/s
- Expected arrival time to the Earth 18:00 UT on 30 September.

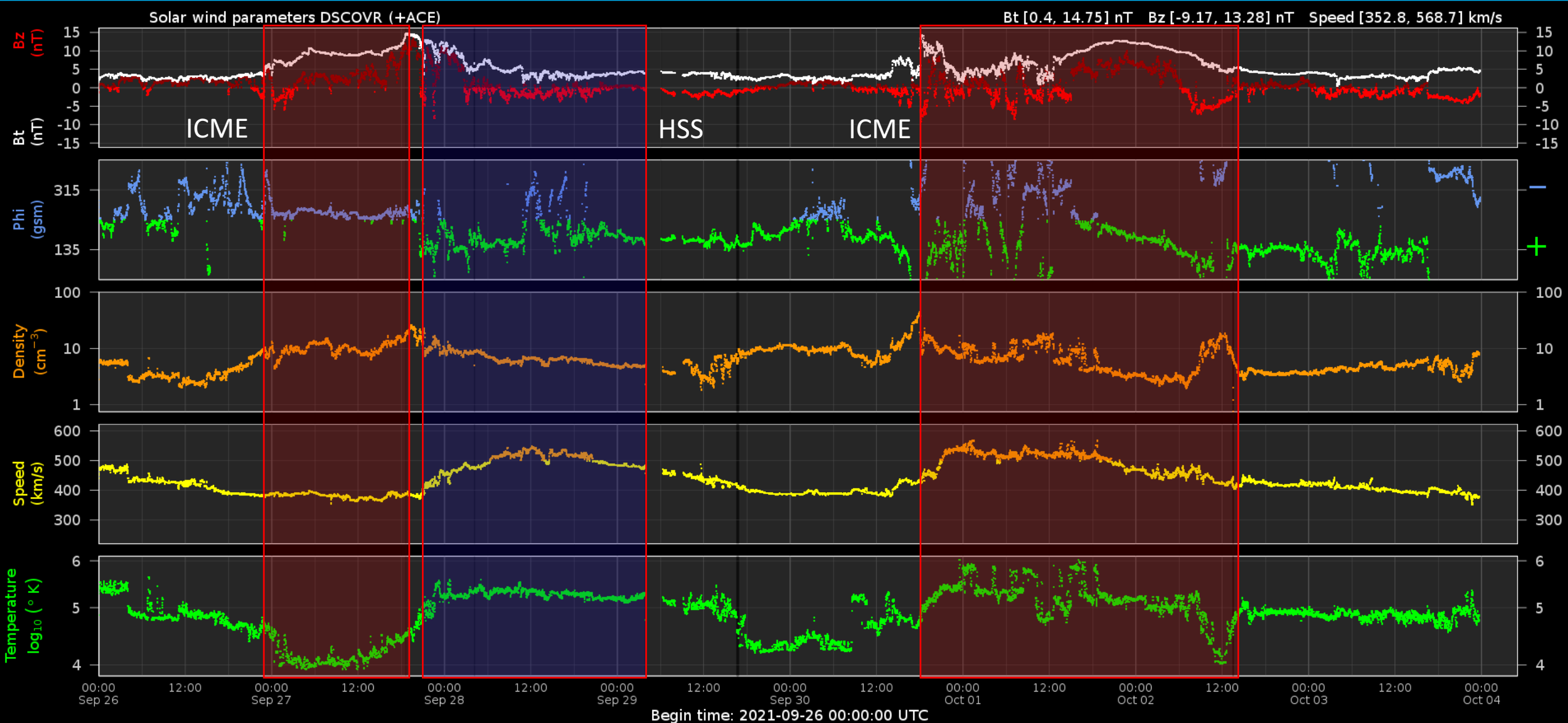
Solar Wind and Geomagnetic Activity



Royal Observatory
of Belgium

Solar Influences
Data analysis Centre
www.sidc.be

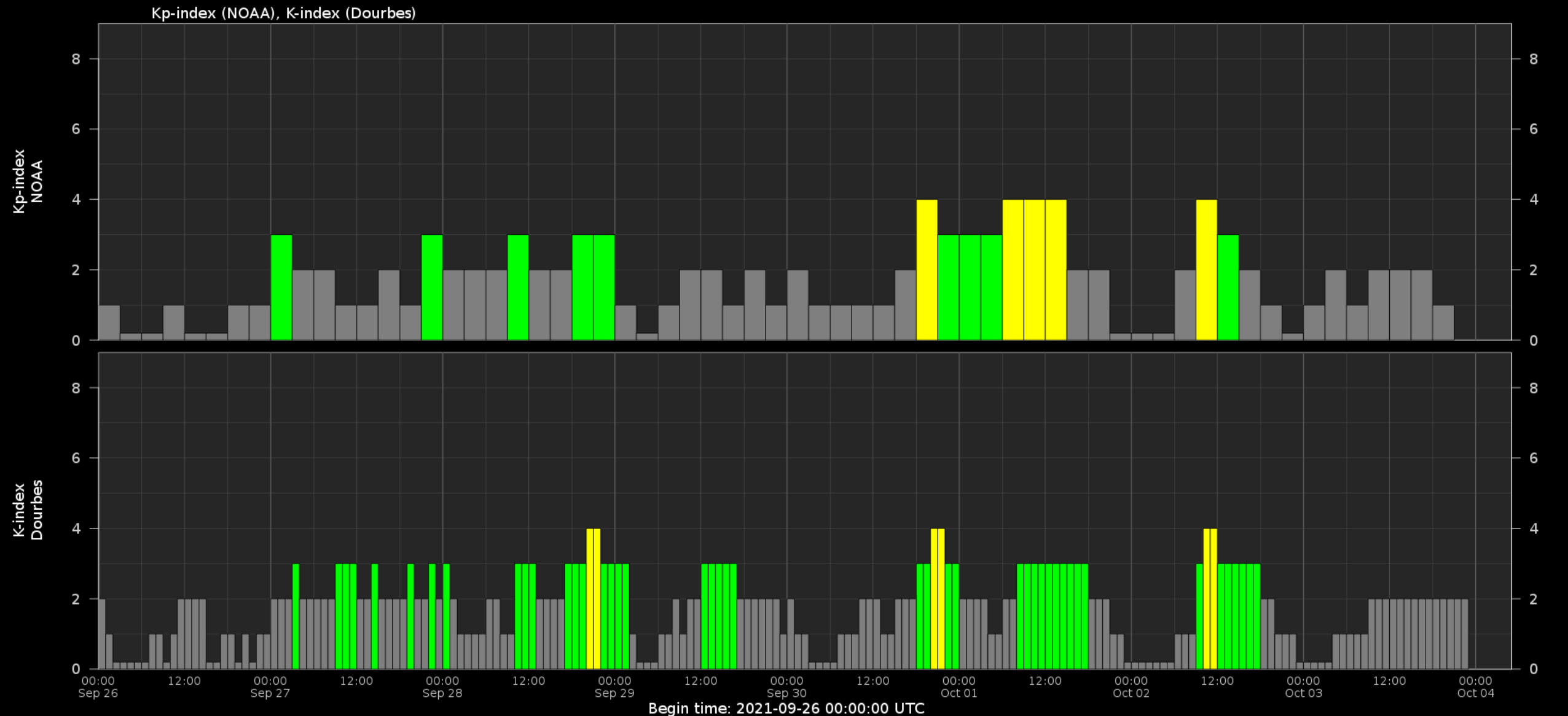
Solar wind parameters



Solar wind parameters & K-indices



Geomagnetic activity (K-indexes)

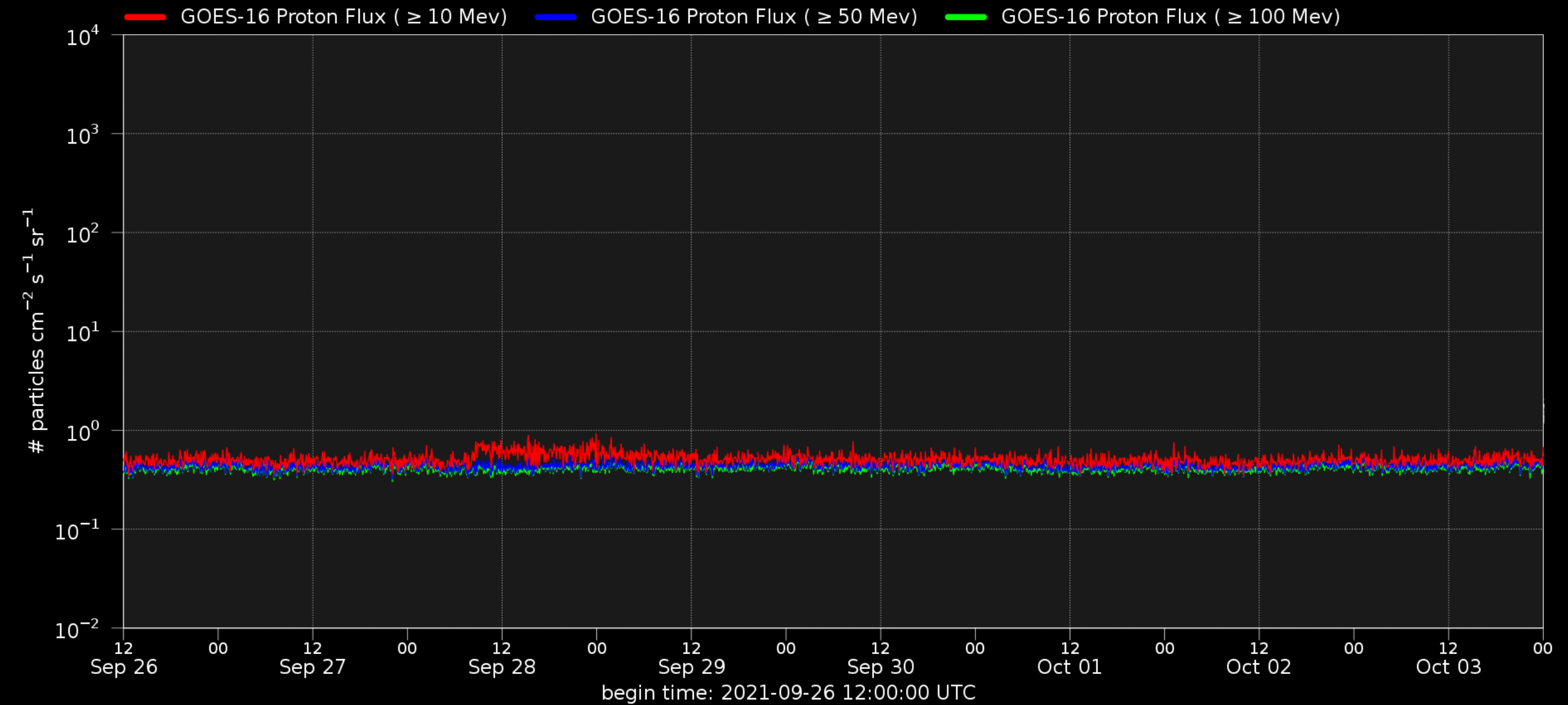


Energetic Particles

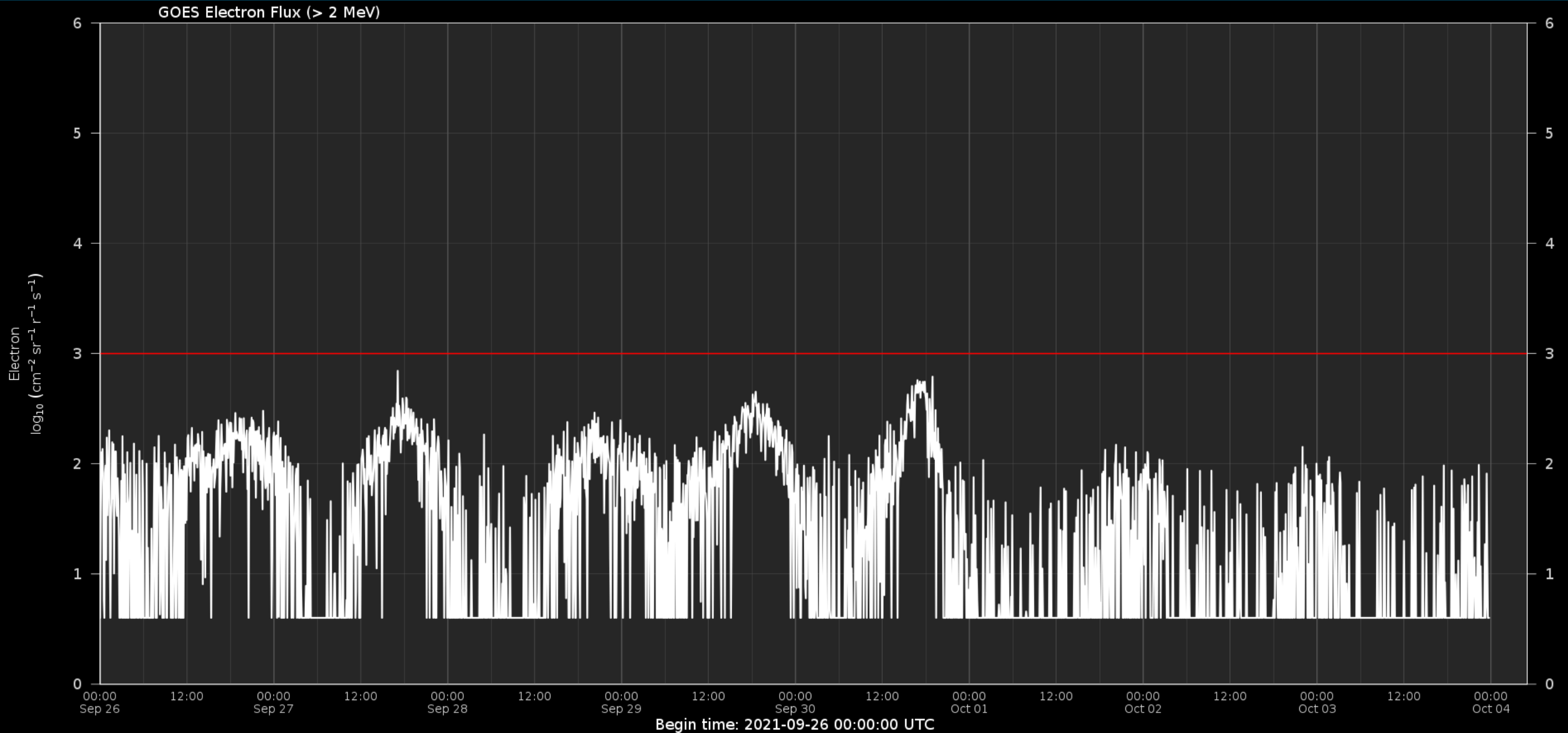


Solar Influences
Data analysis Centre
www.sidc.be

Solar proton flux



Electron flux at GEO



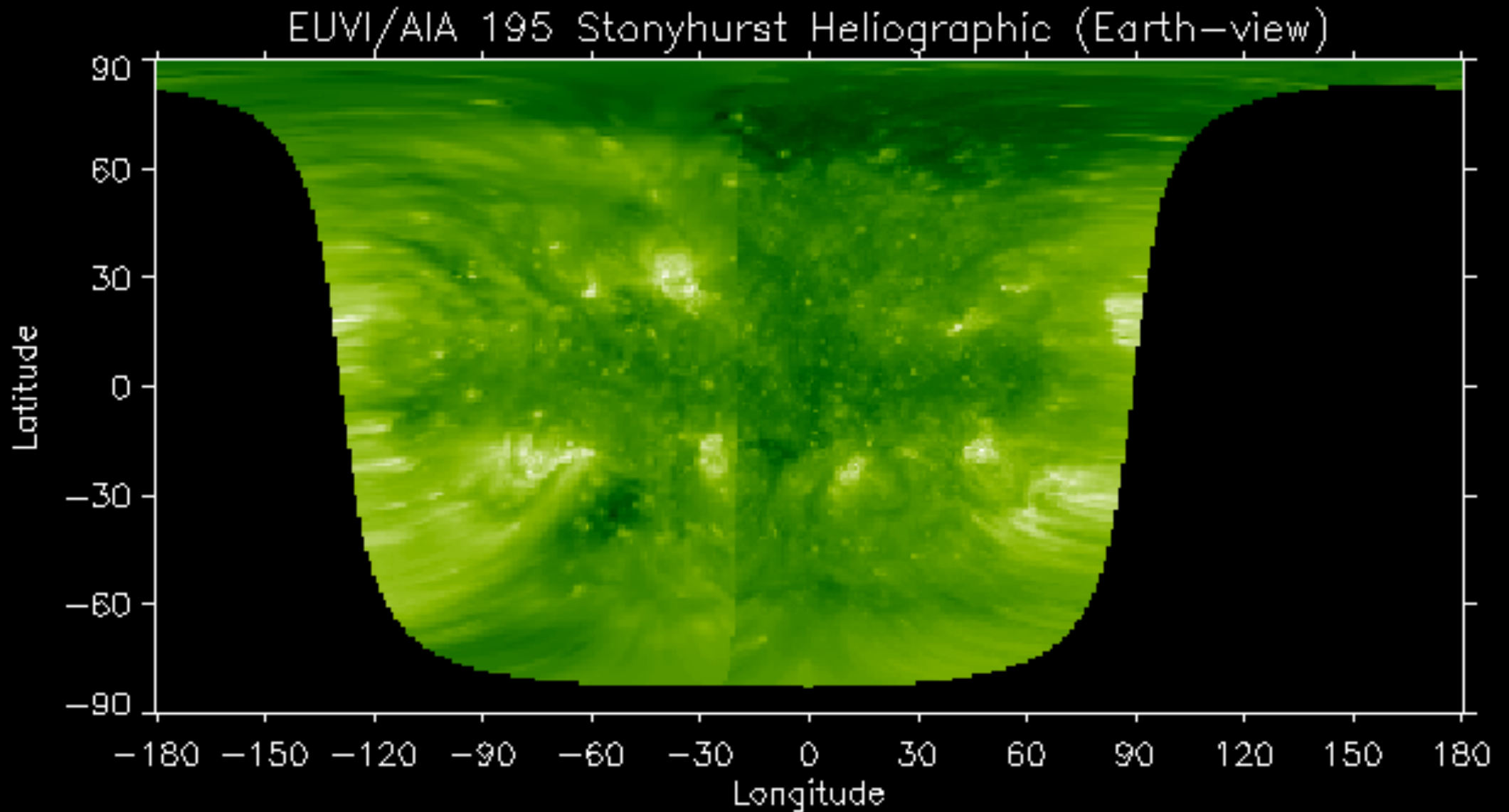
Outlook



Royal Observatory
of Belgium

Solar Influences
Data analysis Centre
www.sidc.be

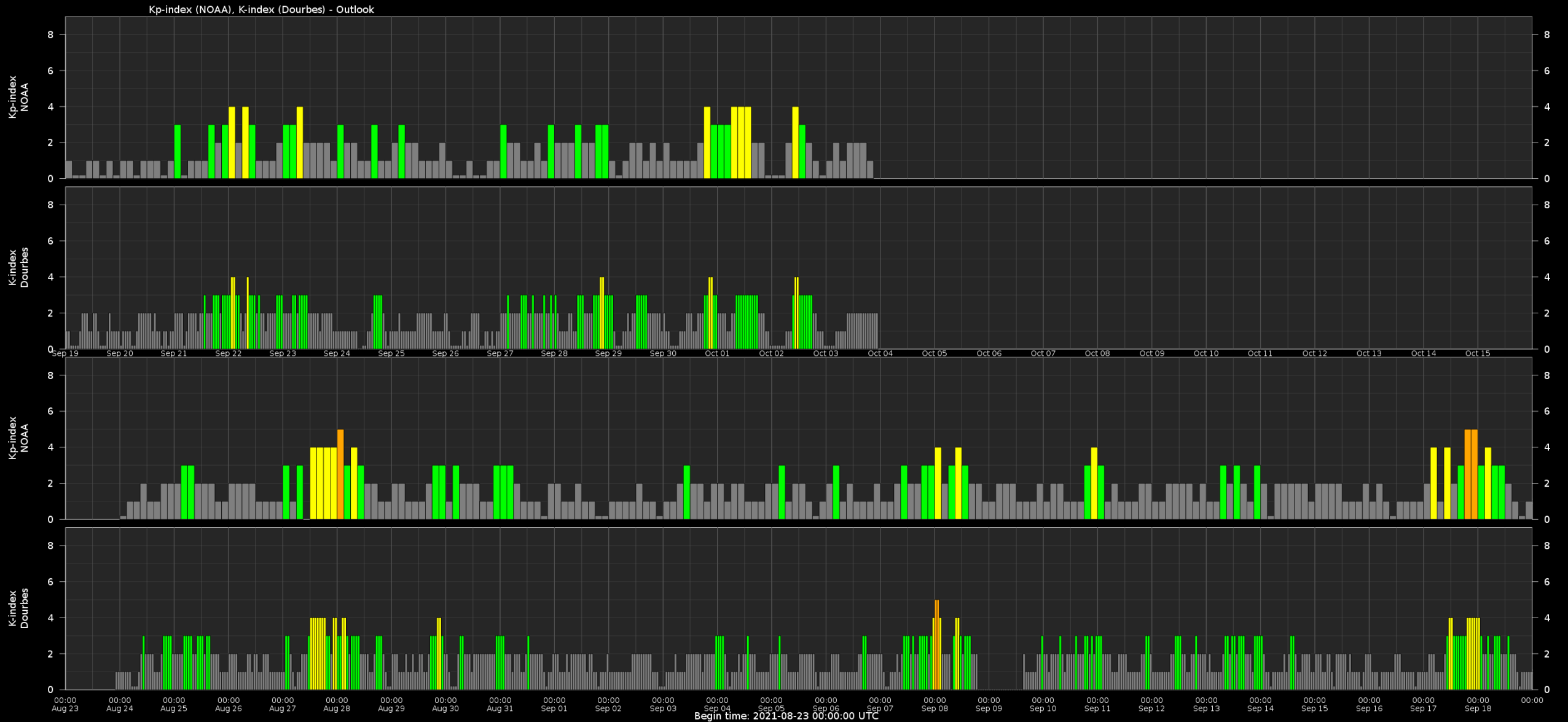
Outlook: Solar activity



Outlook: Solar wind parameters



Outlook: Geomagnetic activity



SIDC Space Weather Briefing

See you at our next briefing!

Or visit us at www.sidc.be



Solar Influences
Data analysis Centre
www.sidc.be