

SIDC Space Weather Briefing

09 January 2022 - 16 January 2022

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& the SIDC forecaster team



Royal Observatory
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Data analysis Centre
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Summary Report

Solar activity from 2022-01-09 12:00 to 2022-01-16 23:59

| | |
|--------------------|---|
| Active regions | NOAA 2924-2932 (Catania groups 1-9) |
| Flares | # C-class flare: 14 # M-class flare: 1 # X-class flare: 0 |
| Filament eruptions | None |
| Coronal Holes | Crossing on 13 Jan |

| | |
|---------------|---------------------------------------|
| Proton flux | Nominal levels |
| Electron flux | Nominal levels up until 16/1 15:00 UT |

Solar wind and geomagnetic conditions

| | |
|---------------|--|
| ICME | Arrival 14/1 14:00 UT |
| SW Conditions | B : 0.62 - 17.85 nT // Bz: -17.49 nT to 11.04 nT // Speed: 314.8 - 642.1km/s |
| K-indices | NOAA Kp 6 (K BEL 5) on 14/1 21:00-24, Kp 5 (K BEL 4) on 15/1 21:00-24:00 |

All Quiet Alert: off

Solar Activity

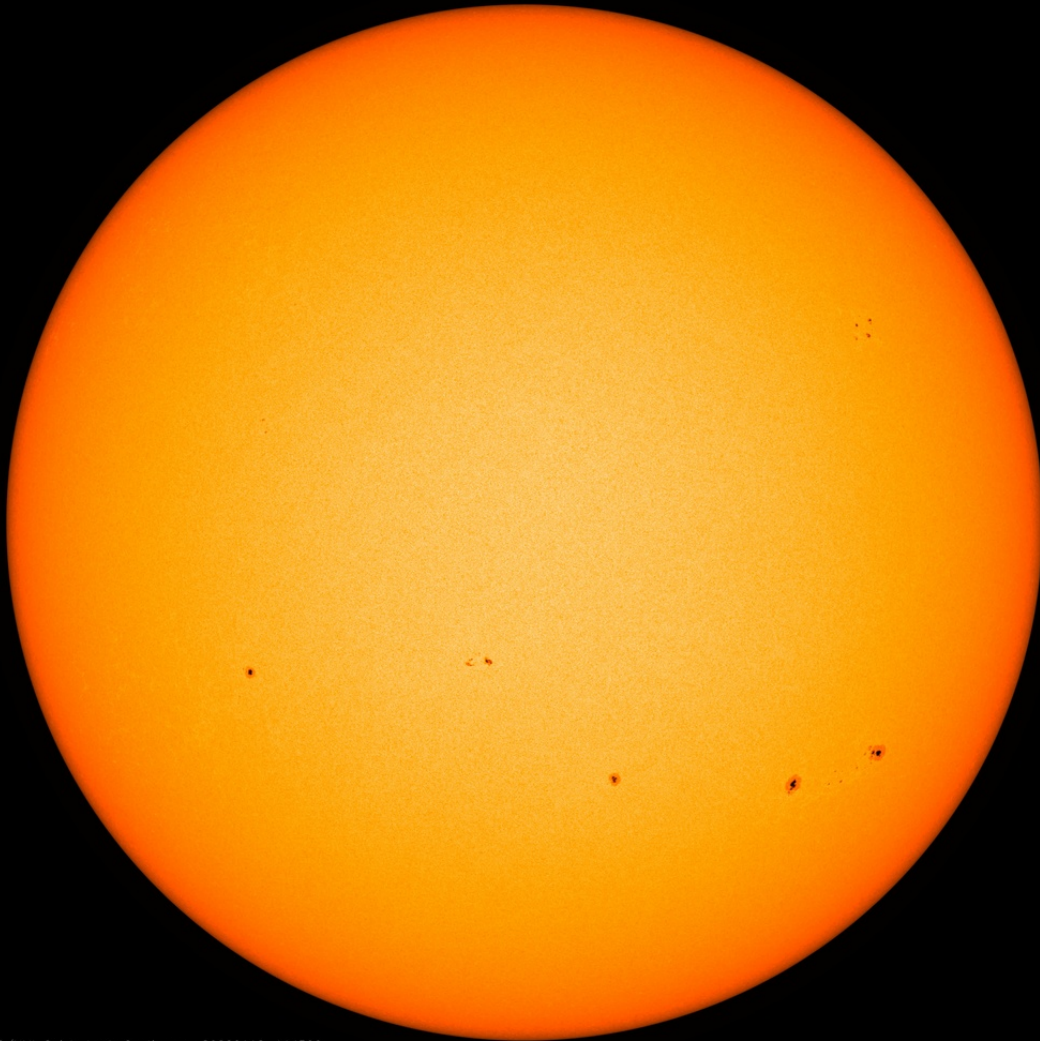


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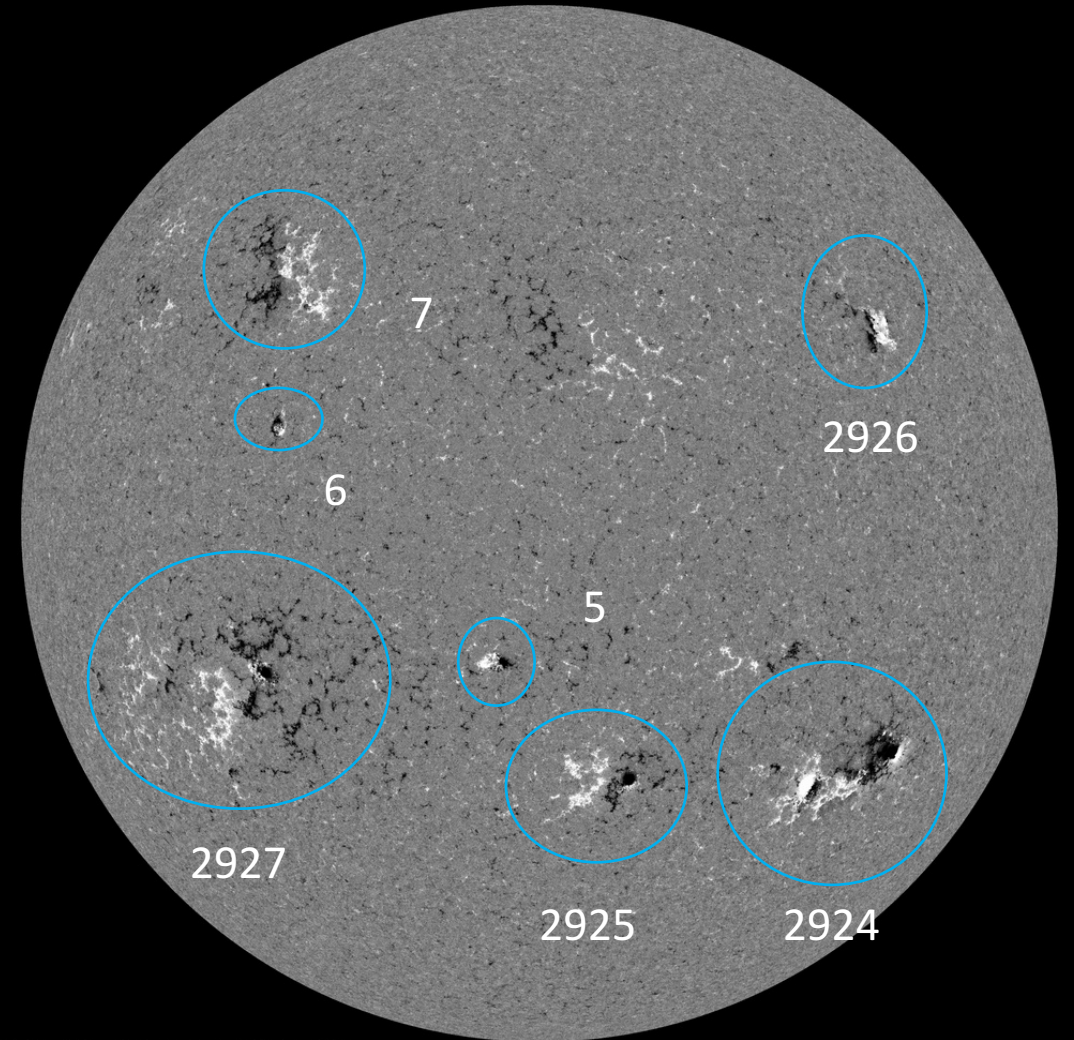
Solar active regions

SDO/HMI White Light 2022-01-12



SDO/HMI Quick-Look Continuum: 20220112_114500

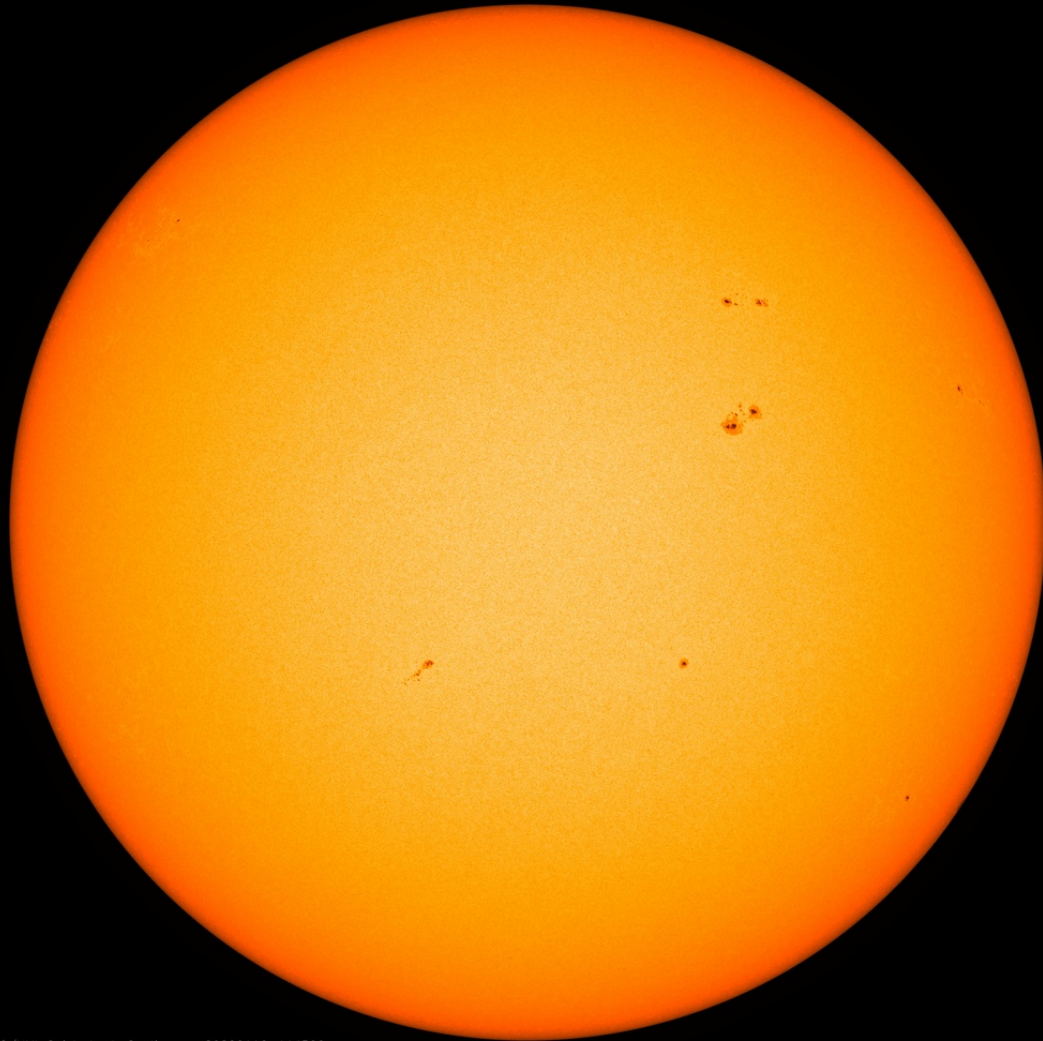
SDO/HMI Magnetogram 2022-01-12



SDO/HMI Quick-Look Magnetogram: 20220112_114500

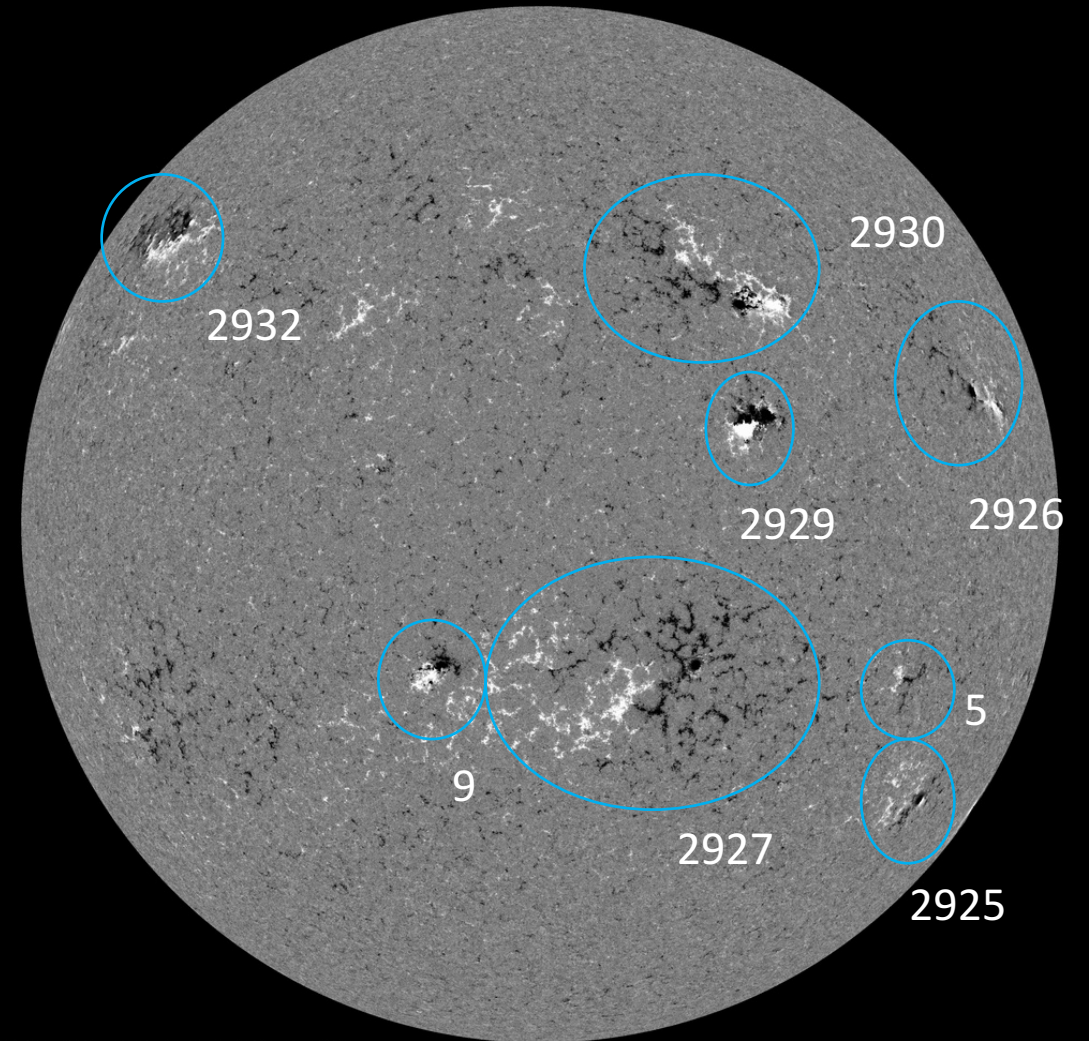
Solar active regions

SDO/HMI White Light 2022-01-16



SDO/HMI Quick-Look Continuum: 20220116_114500

SDO/HMI Magnetogram 2022-01-16

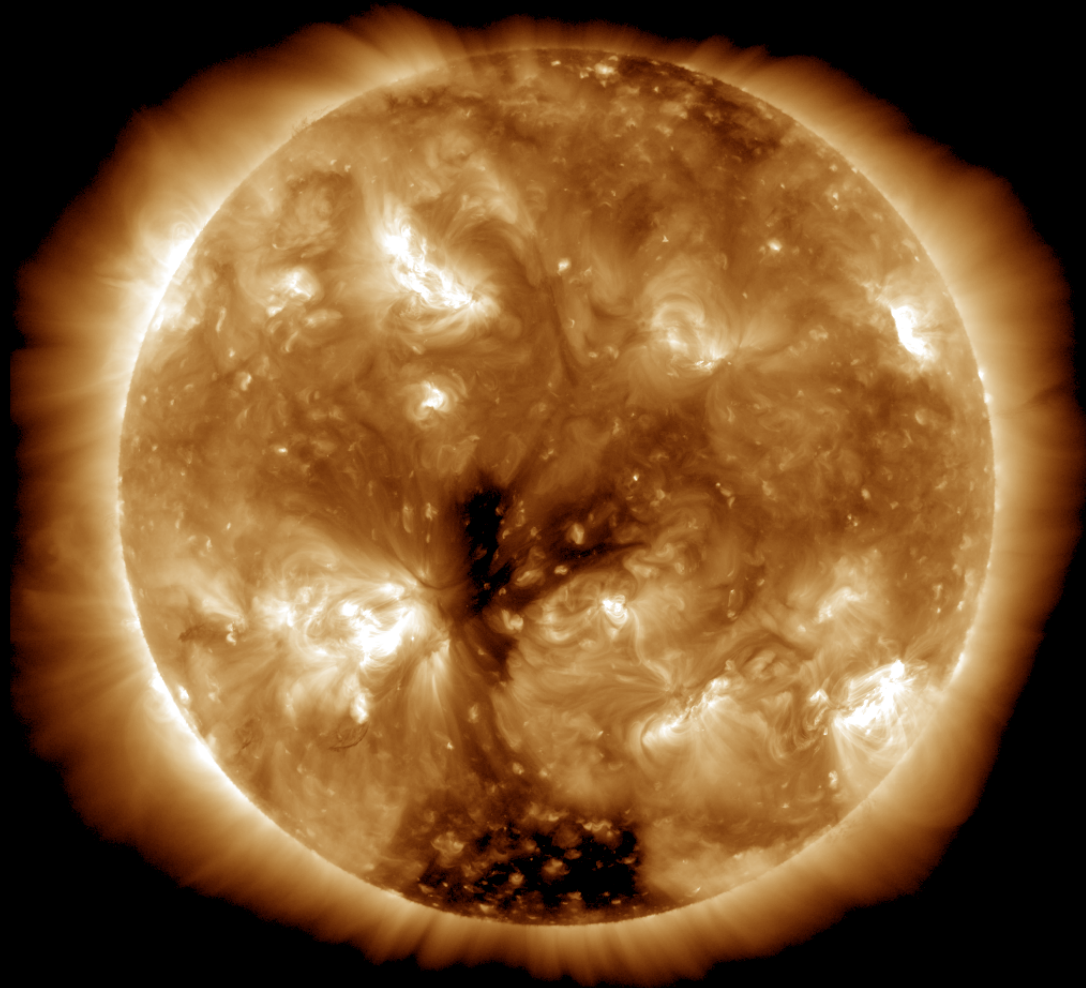


SDO/HMI Quick-Look Magnetogram: 20220116_114500

Coronal holes

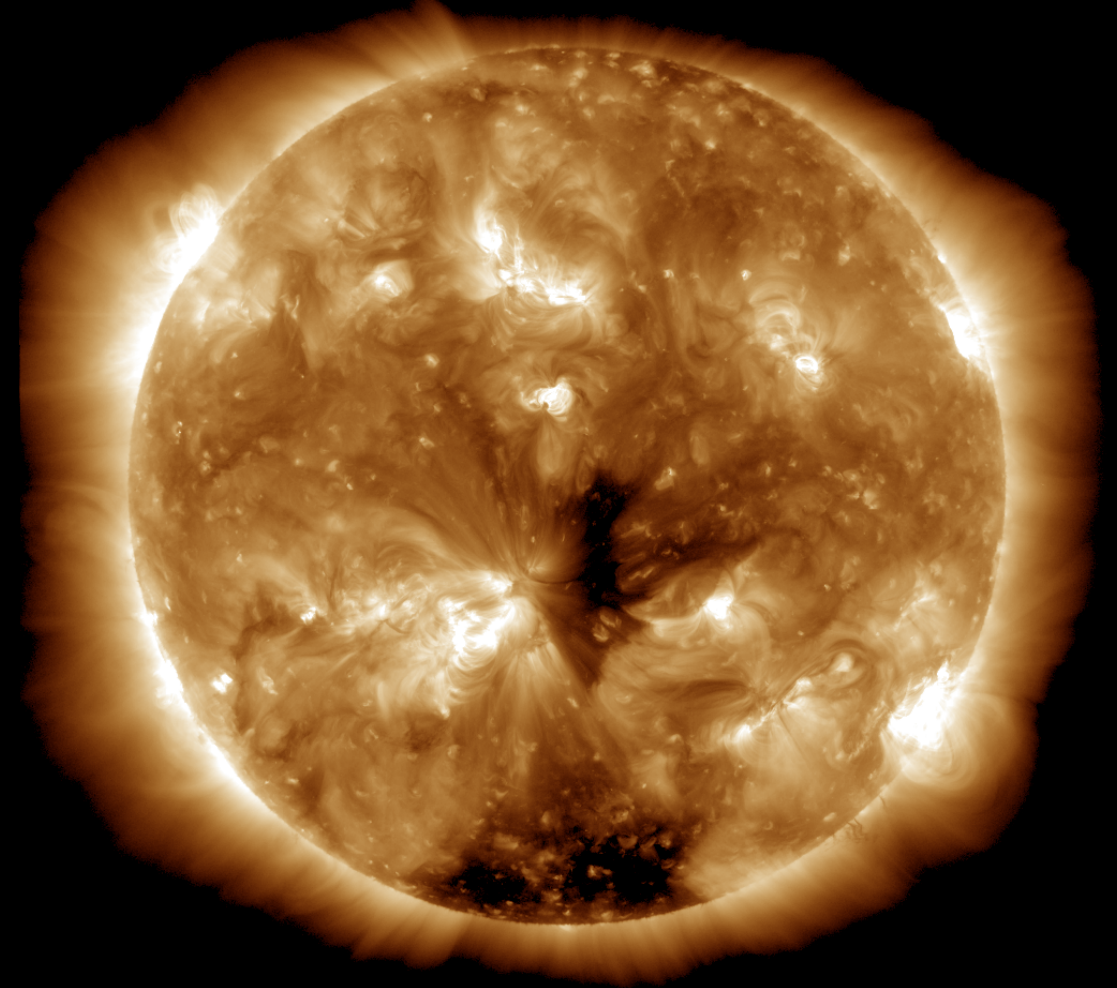
SDO/AIA 19.3 nm 2022-01-13

SDO/AIA AIA 193Å 2022-01-13T12:00:05.843

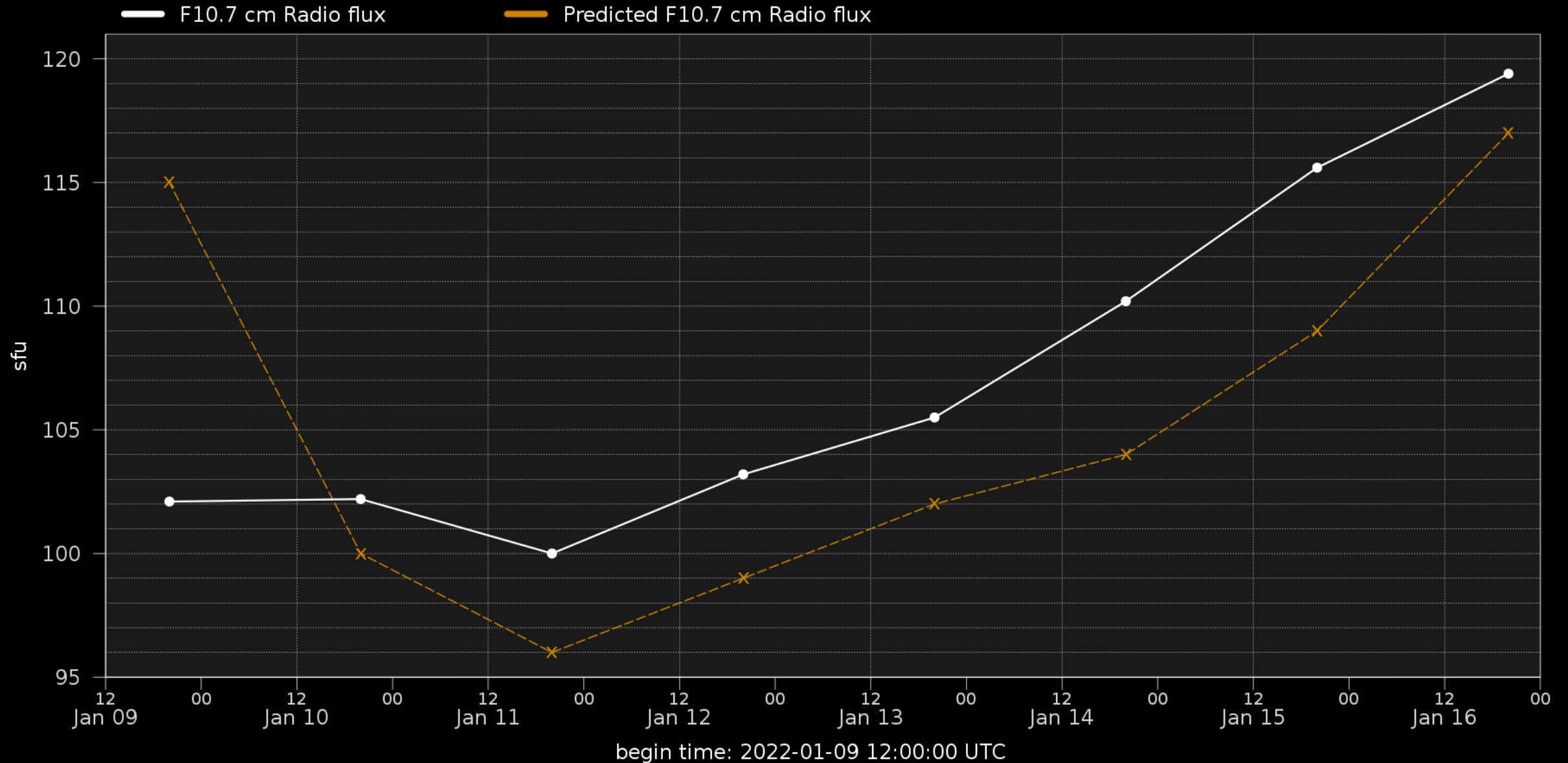


SDO/AIA 19.3 nm 2022-01-14

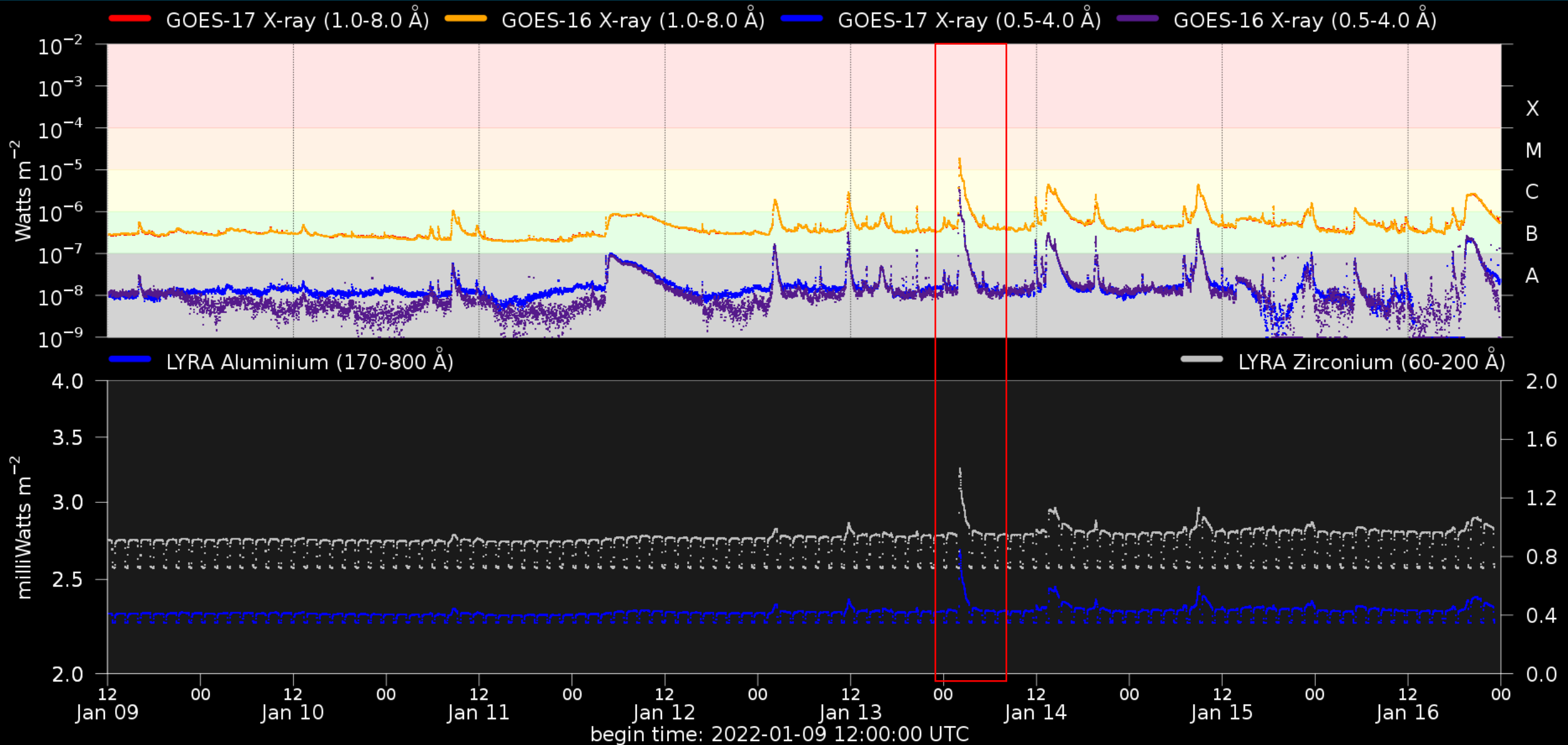
SDO/AIA AIA 193Å 2022-01-14T12:00:05.843



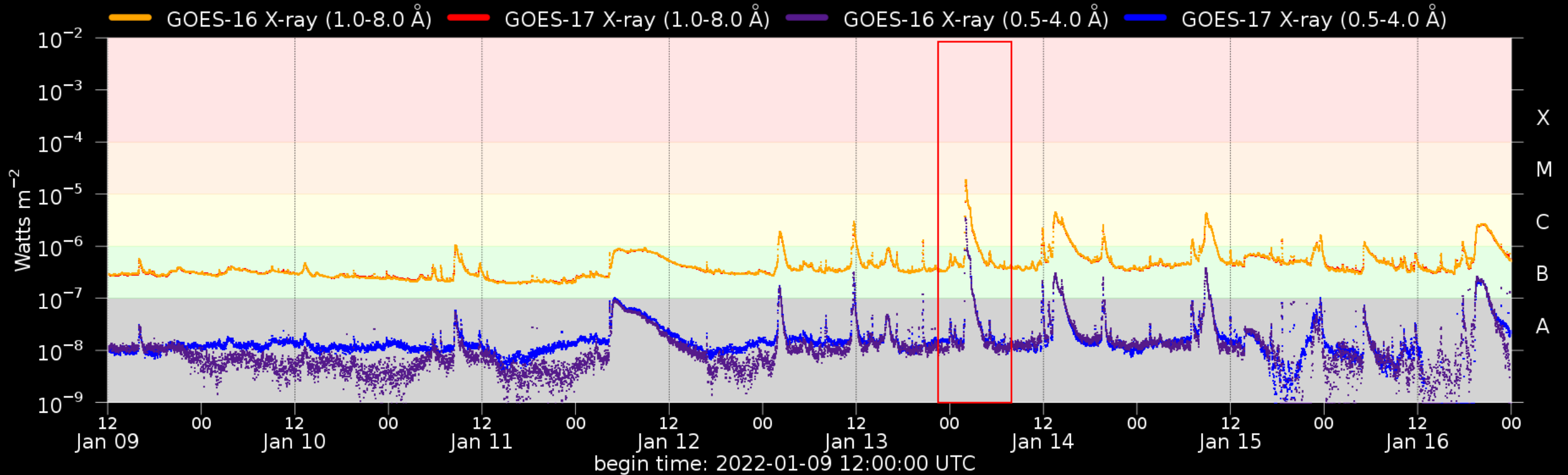
Solar F10.7cm radio flux



Solar X-Ray and UV flux



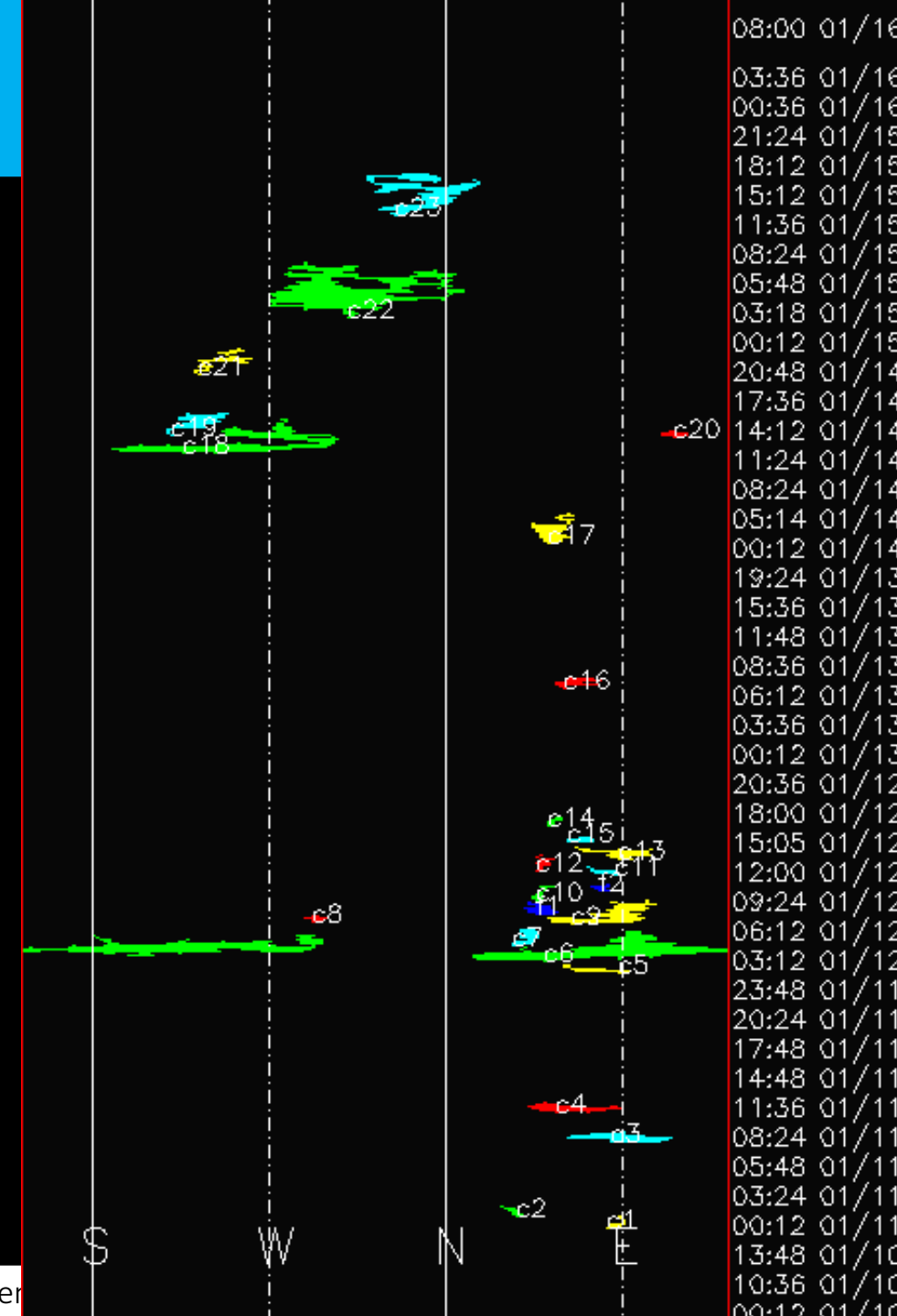
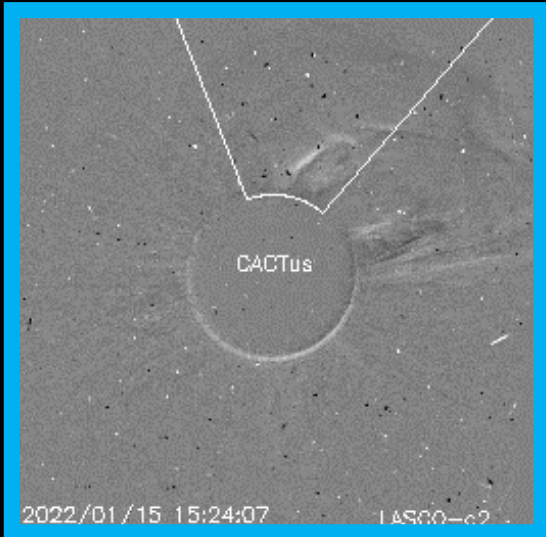
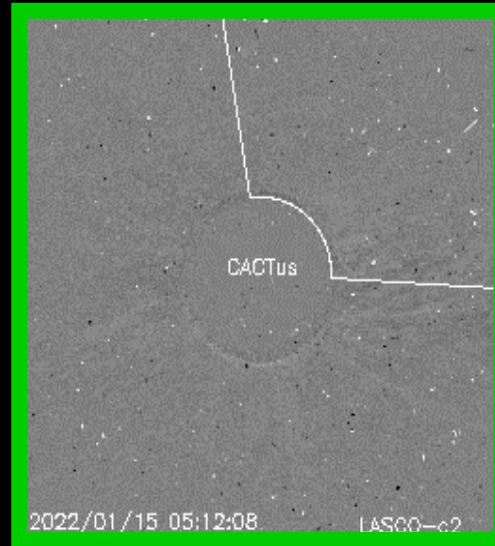
Flaring activity



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

| Issue date | 2022-01-09 | 2022-01-10 | 2022-01-11 | 2022-01-12 | 2022-01-13 | 2022-01-14 | 2022-01-15 | 2022-01-16 |
|-----------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Probability (%) | 55 10 01 | 50 01 01 | 60 10 01 | 60 01 01 | 40 01 01 | 80 50 10 | 90 40 05 | 95 15 01 |
| Observed (#) | 00 00 00 | 01 00 00 | 00 00 00 | 02 00 00 | 02 01 00 | 04 00 00 | 04 00 00 | 01 00 00 |

Coronal Mass Ejections



Solar Wind and

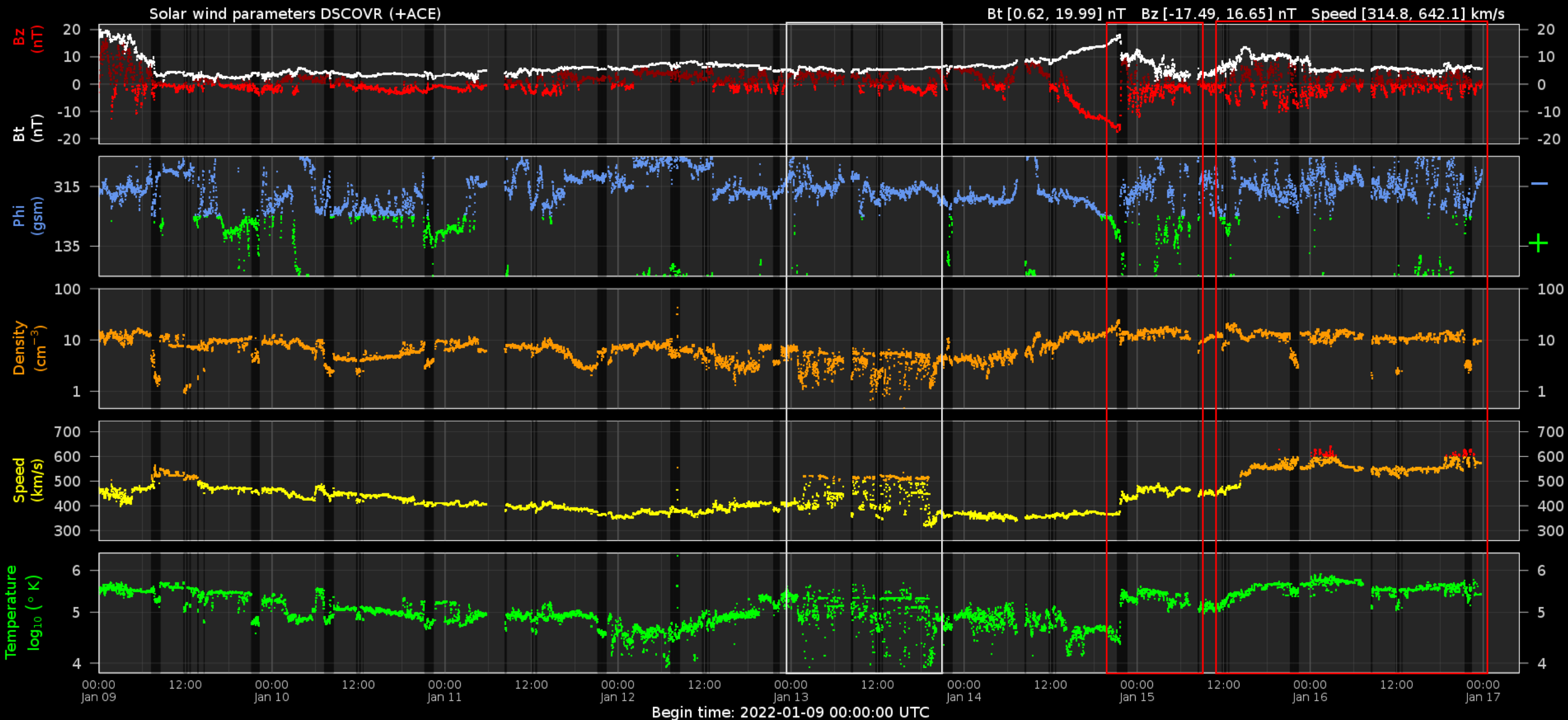
Geomagnetic Activity



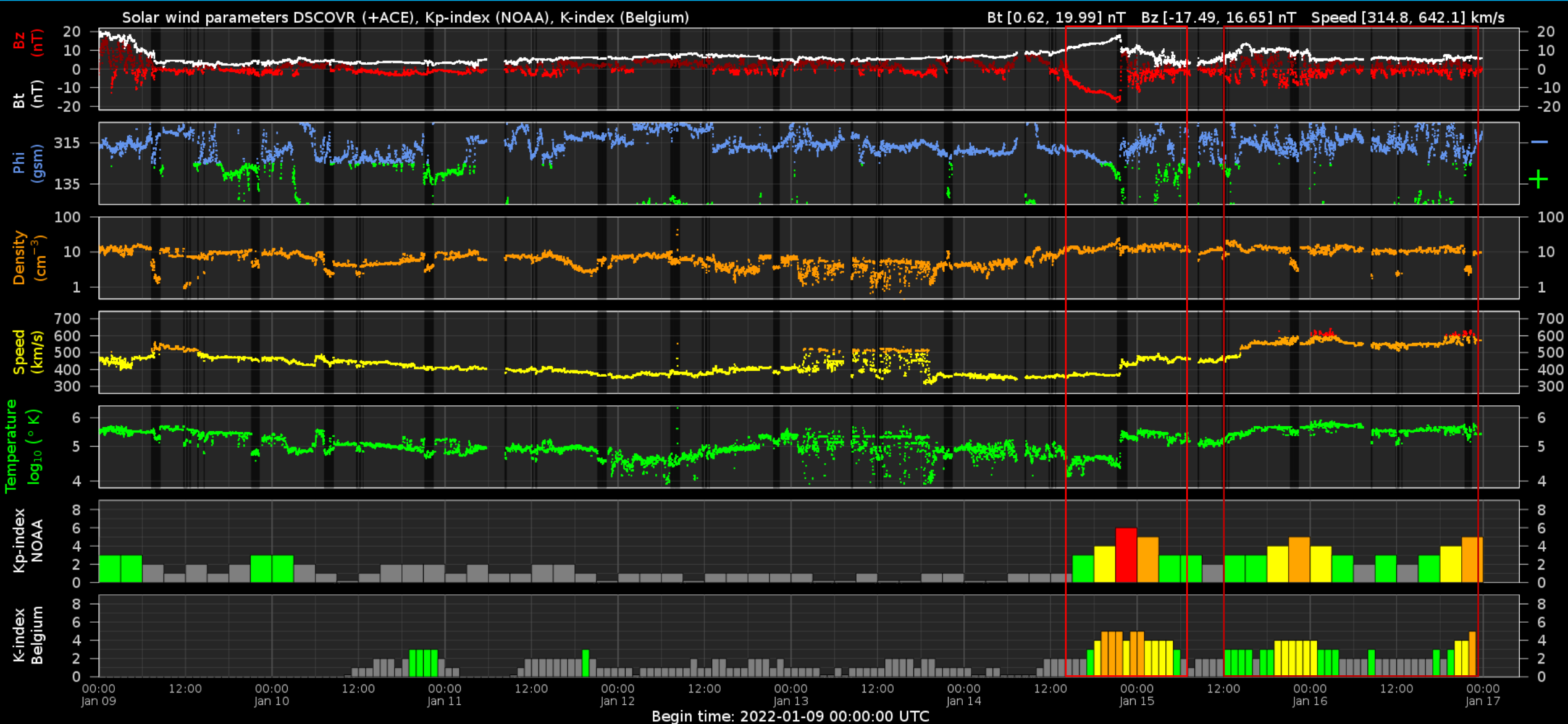
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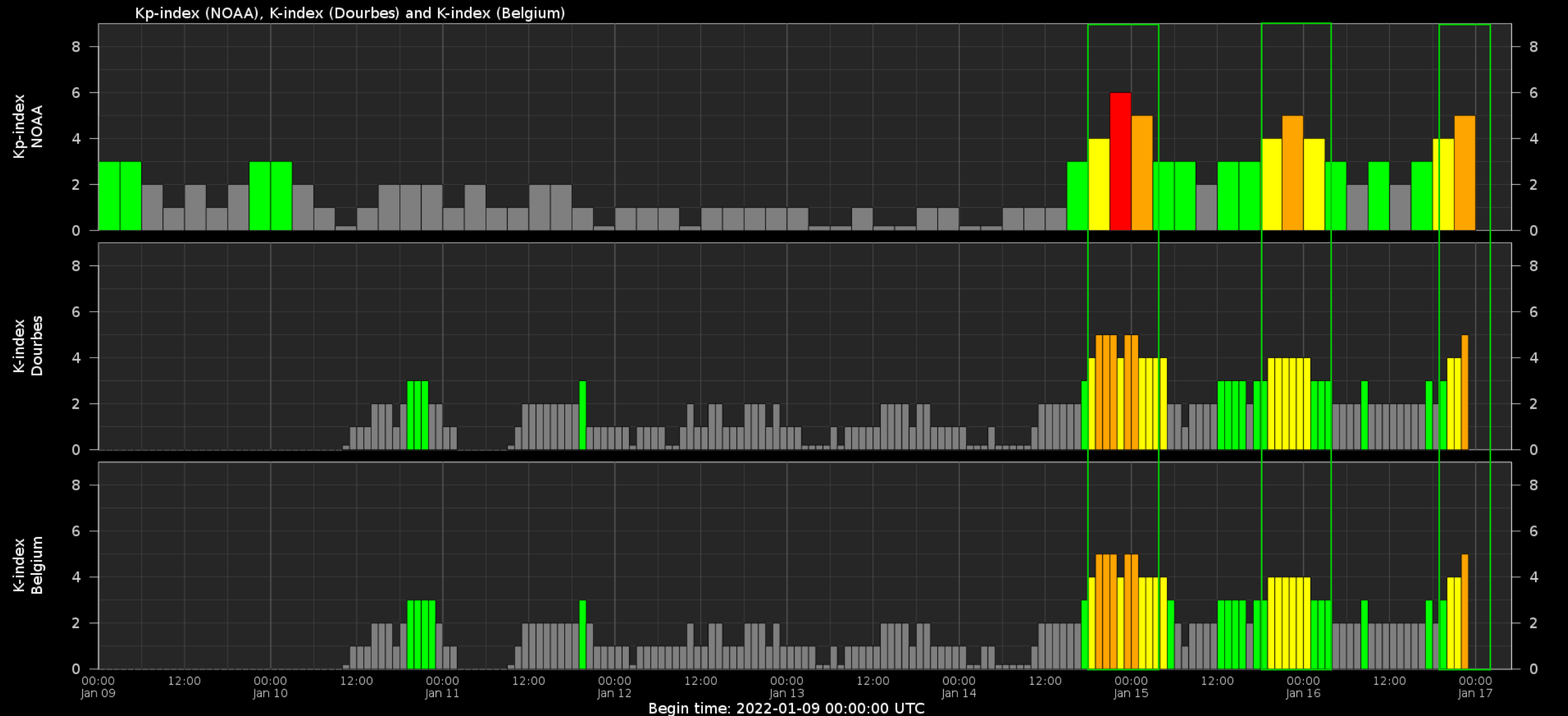
Solar wind parameters



Solar wind parameters & K-indices



Geomagnetic activity (K-indexes)



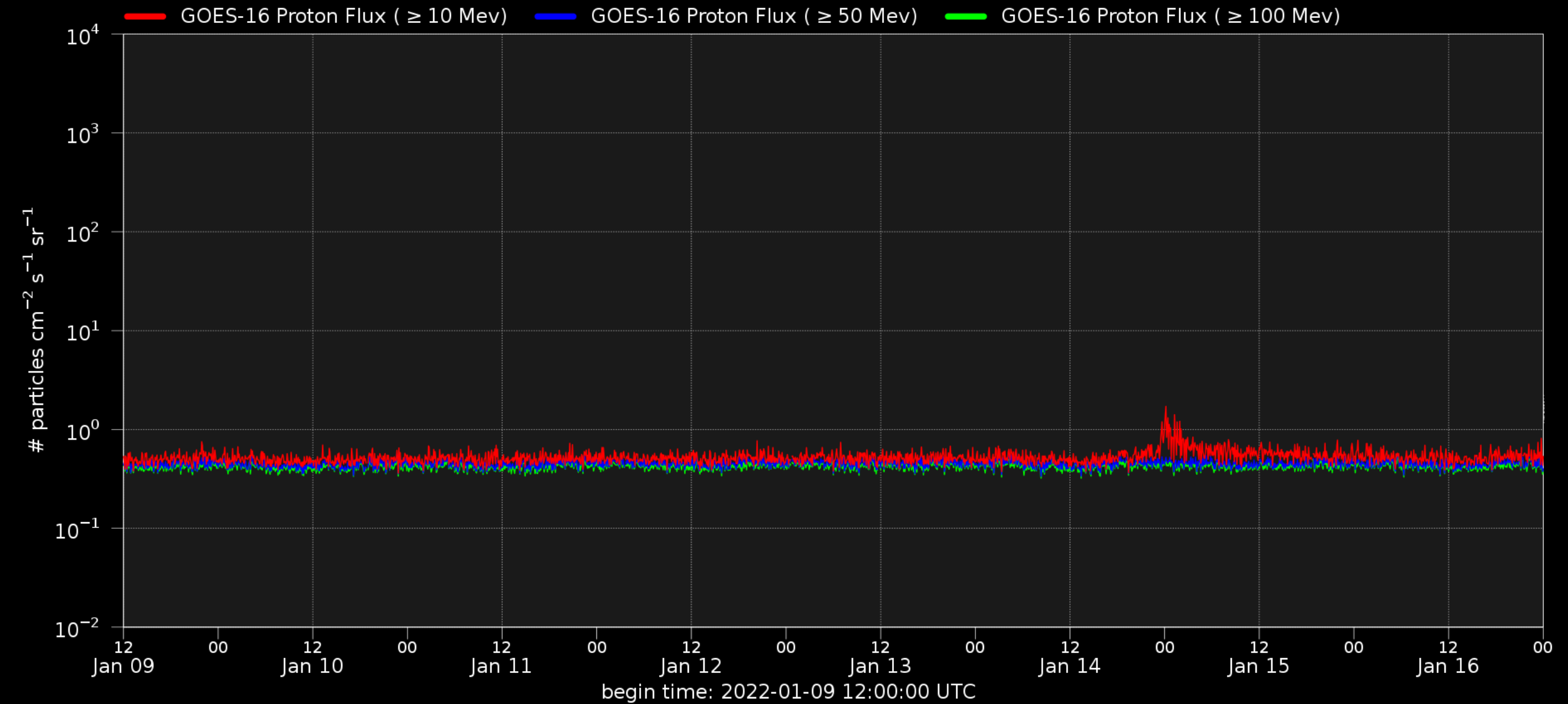
Energetic Particles



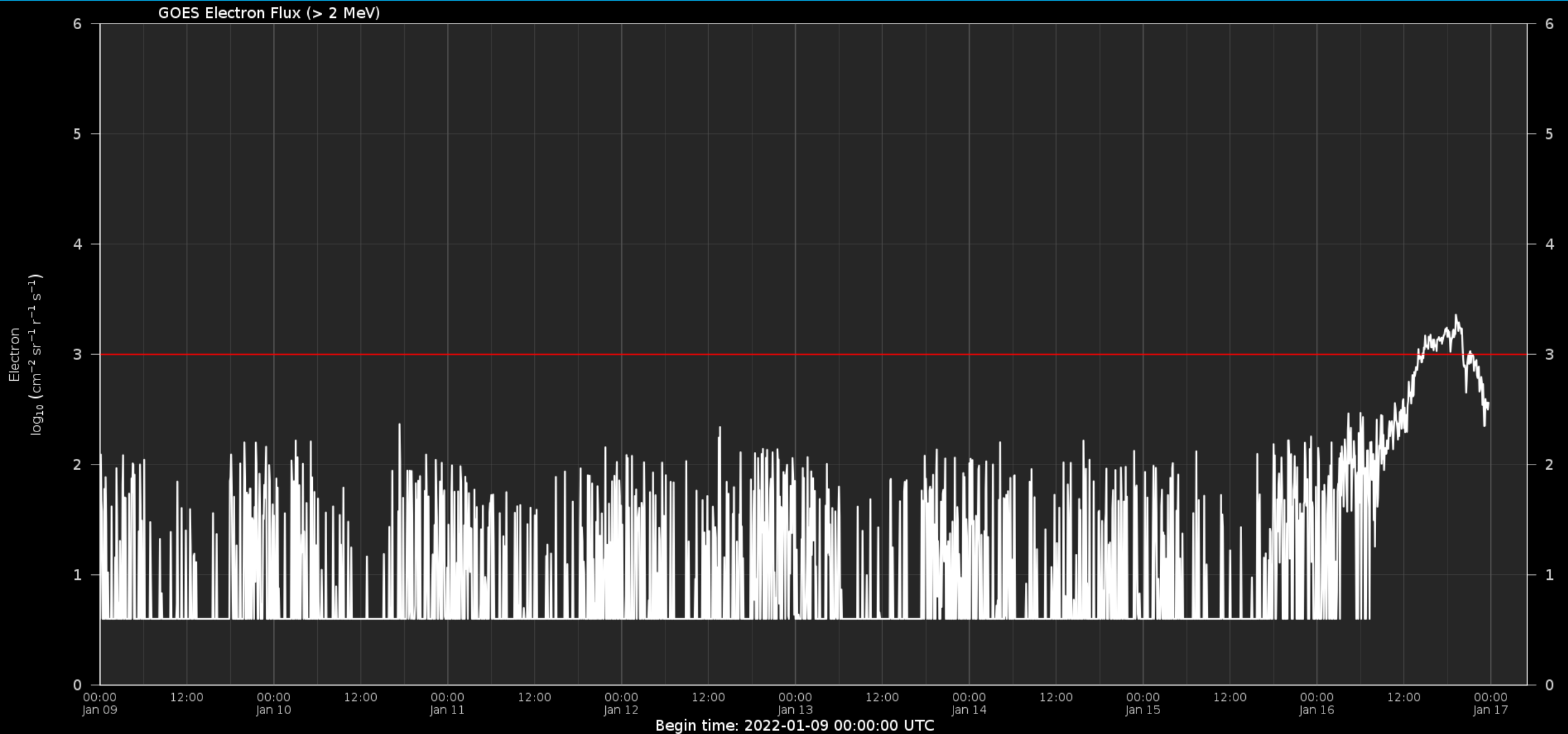
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Solar proton flux



Electron flux at GEO



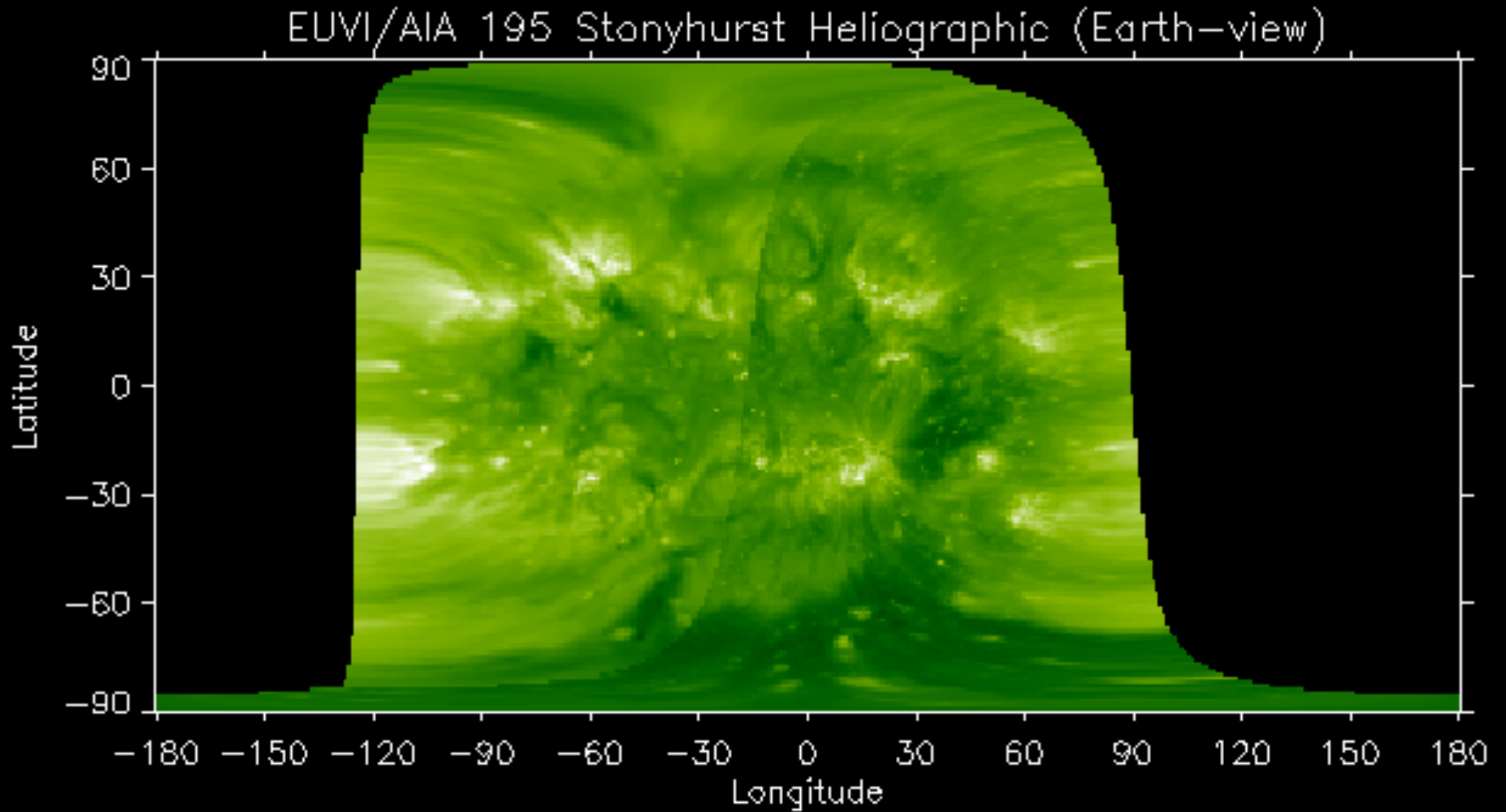
Outlook



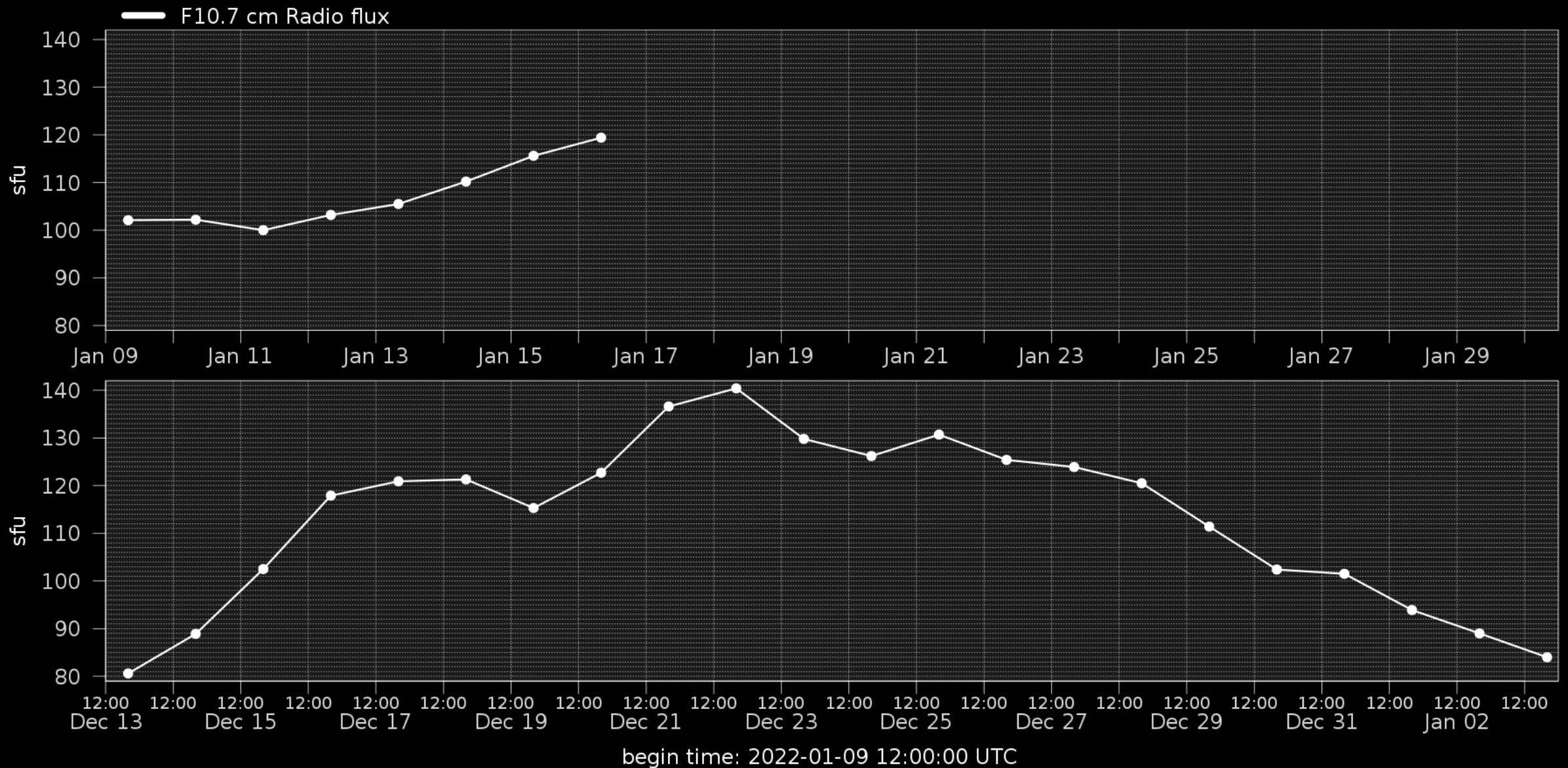
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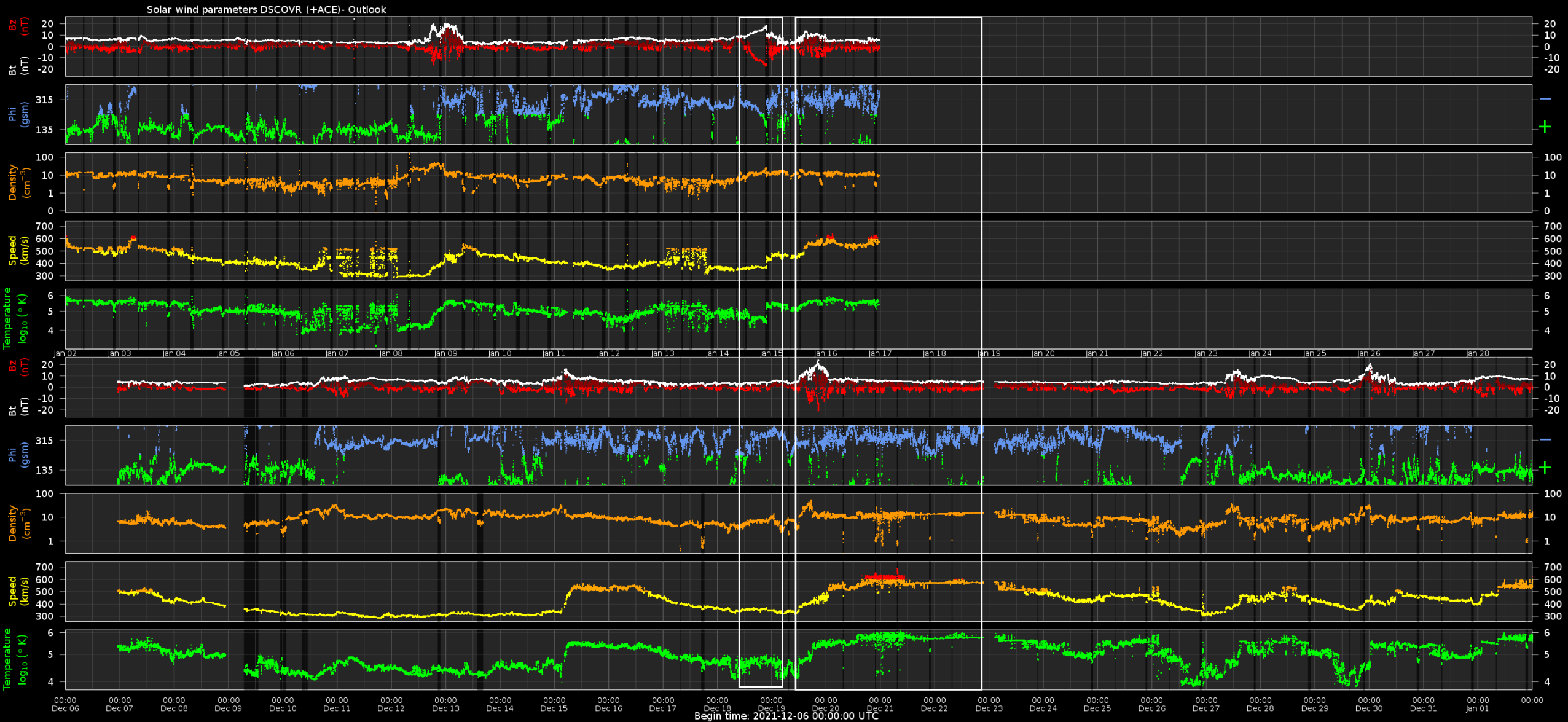
Outlook: Solar activity



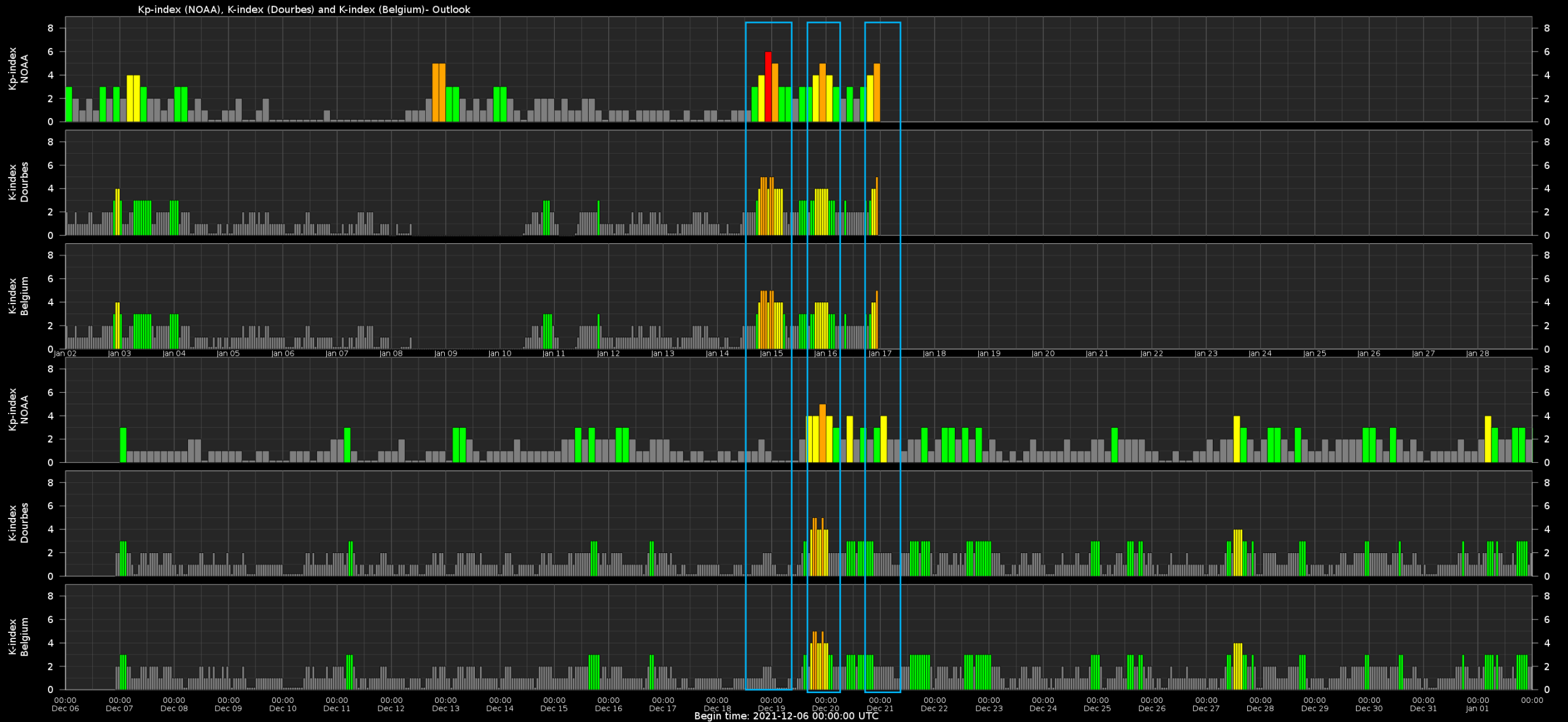
Outlook: Solar F10.7cm radio flux



Outlook: Solar wind parameters



Outlook: Geomagnetic activity



Outlook: Electron Flux at GEO Outlook



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See you at our next briefing!

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