

SIDC Space Weather Briefing

31 January 2021 - 07 February 2021

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& the SIDC forecaster team



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Data analysis Centre
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Summary Report

Solar activity from 2021-01-31 12:00 to 2021-02-07 23:59

| | |
|--------------------|--|
| Active regions | NOAA AR 2801 |
| Flares | # C-class flare: 0 # M-class flare: 0 # X-class flare: 0 |
| Filament eruptions | None relevant |
| Coronal Holes | Two equatorial (1 positive, 1 negative polarity) |

| | |
|---------------|------------------------|
| Proton flux | Below threshold |
| Electron flux | Mostly below threshold |

Solar wind and geomagnetic conditions

| | |
|---------------|--|
| ICME | None |
| SW Conditions | B : 1.37 - 20.44 nT // Bz: -15.97 nT to 19.49 nT // Speed: 308.9 - 617.2km/s |
| K-indices | max K-index (Dourbes): 4 max Kp-index (NOAA): 5 |

All Quiet Alert: Off

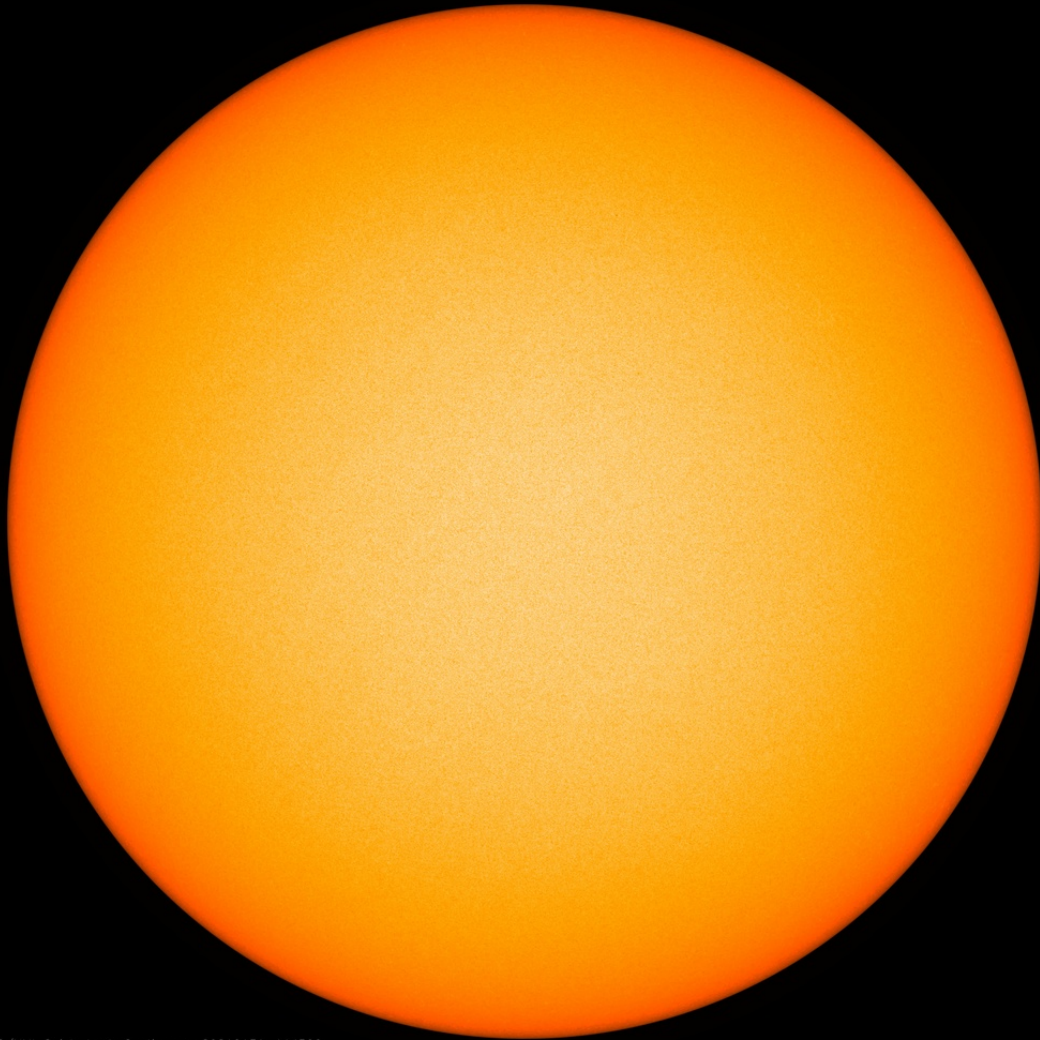
Solar Activity



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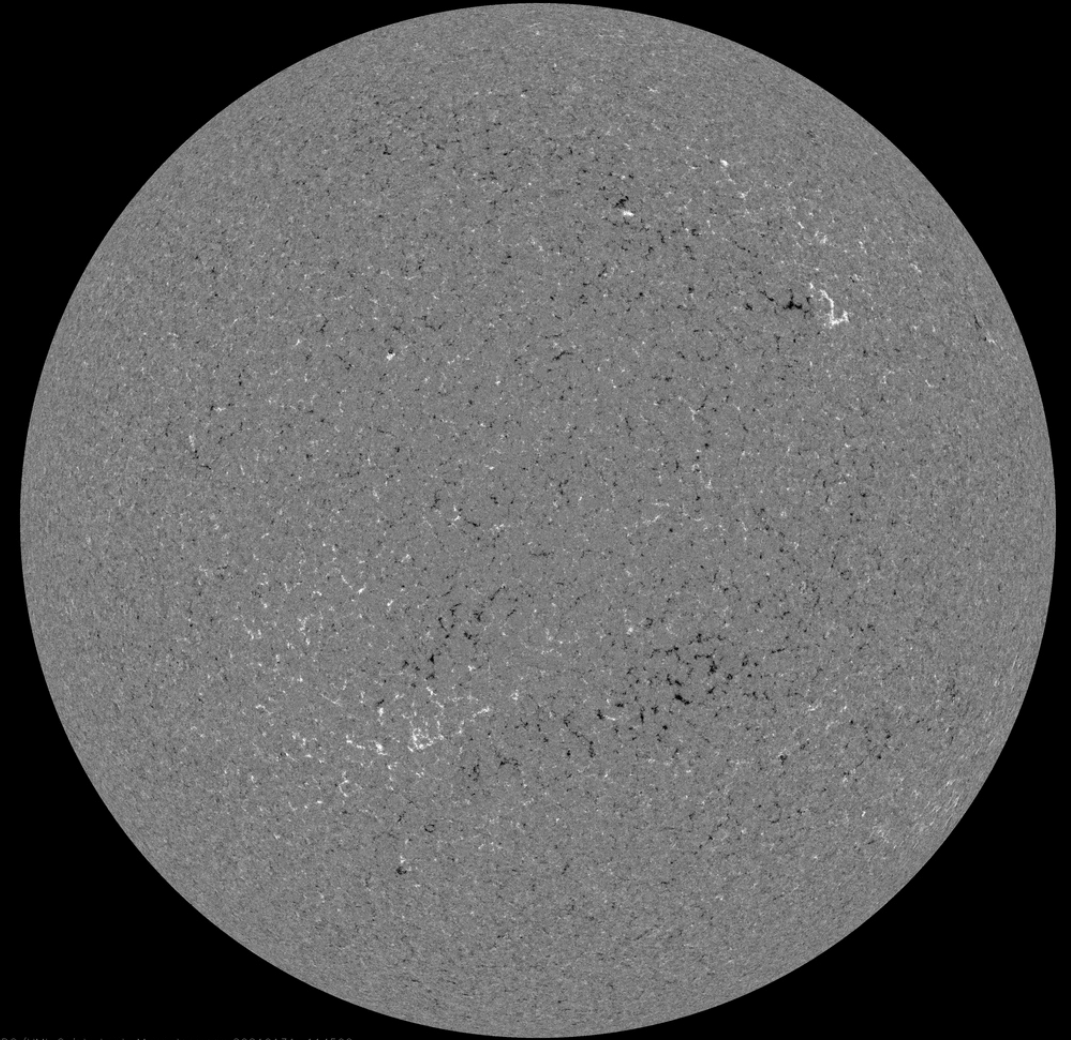
Solar active regions

SDO/HMI White Light 2021-01-31



SDO/HMI Quick-Look Continuum: 20210131_114500

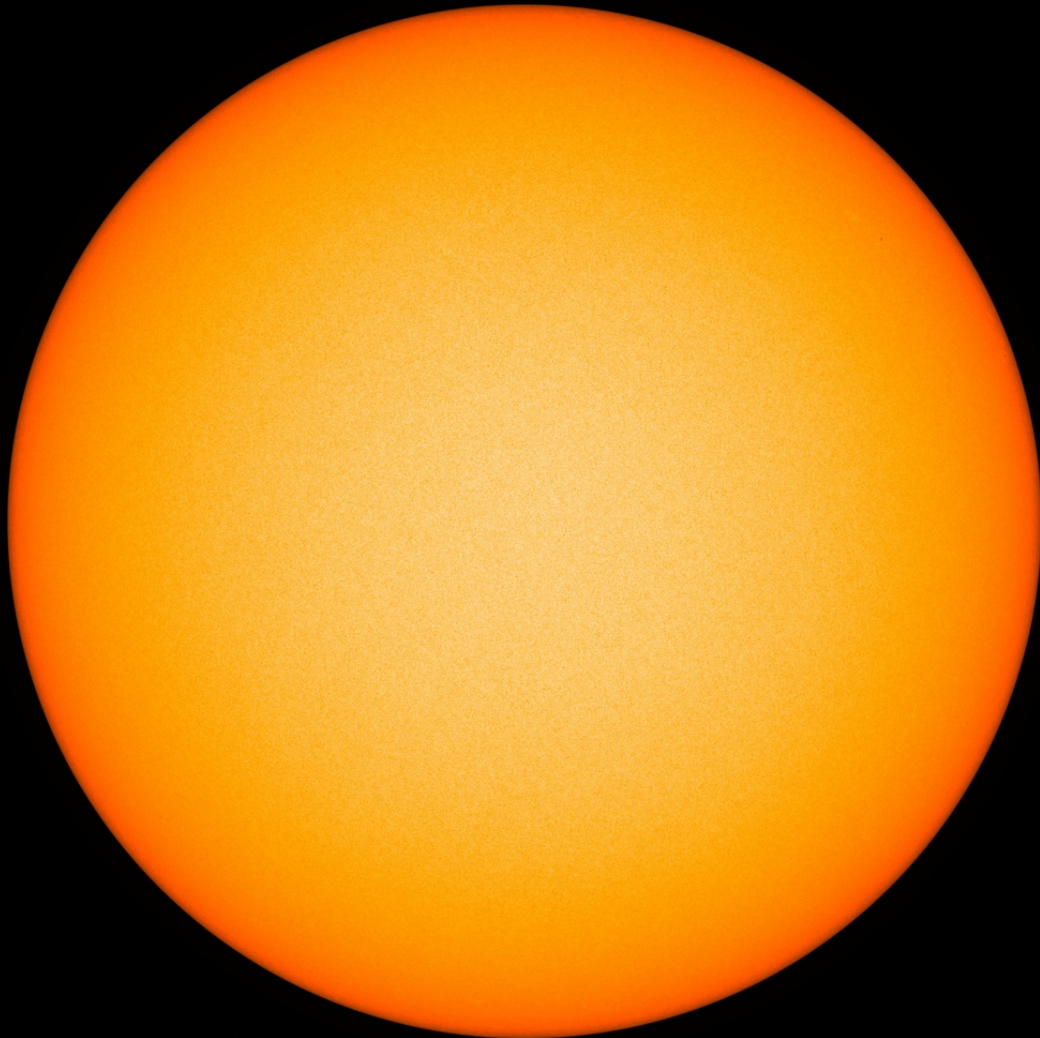
SDO/HMI Magnetogram 2021-01-31



SDO/HMI Quick-Look Magnetogram: 20210131_114500

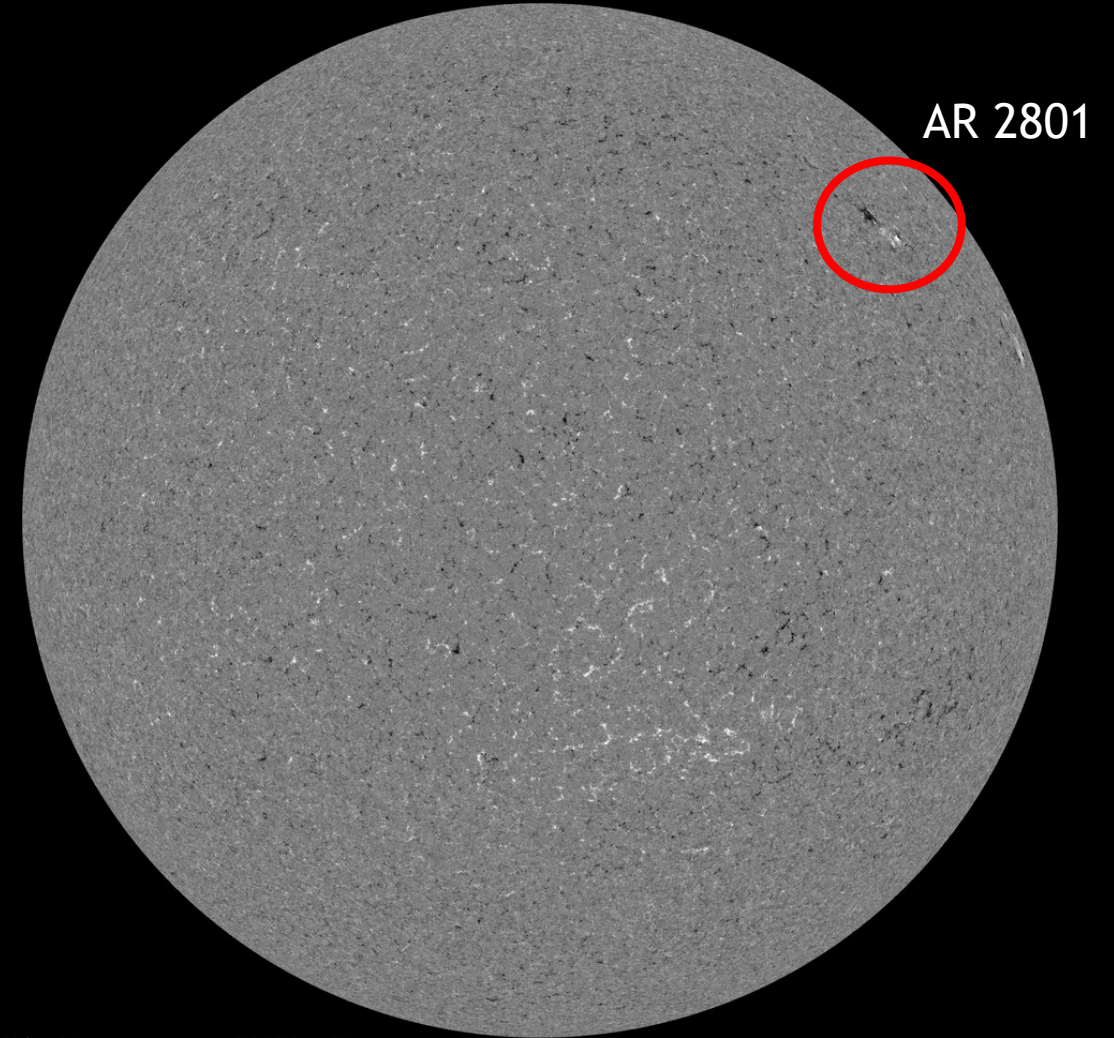
Solar active regions

SDO/HMI White Light 2021-02-03



SDO/HMI Quick-Look Continuum: 20210203_114500

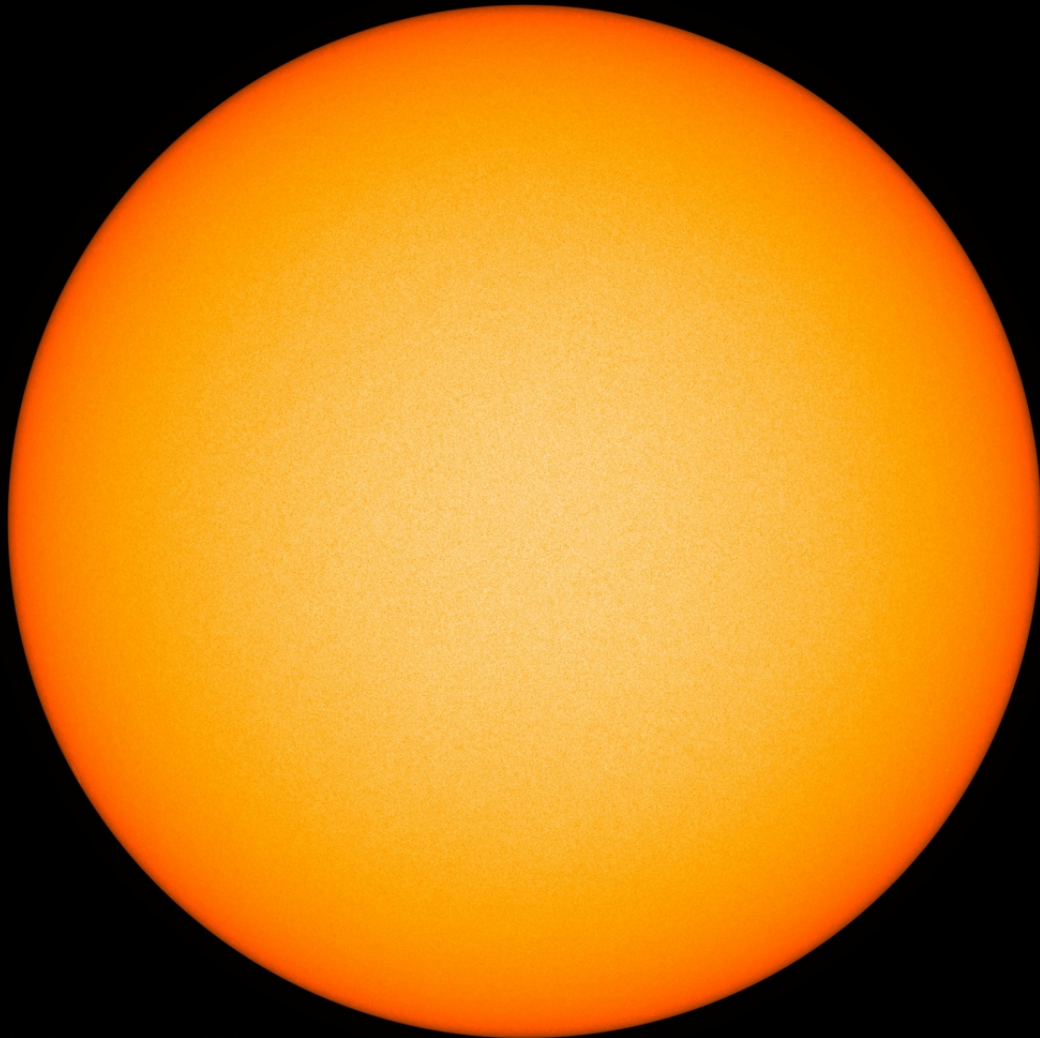
SDO/HMI Magnetogram 2021-02-03



SDO/HMI Quick-Look Magnetogram: 20210203_114500

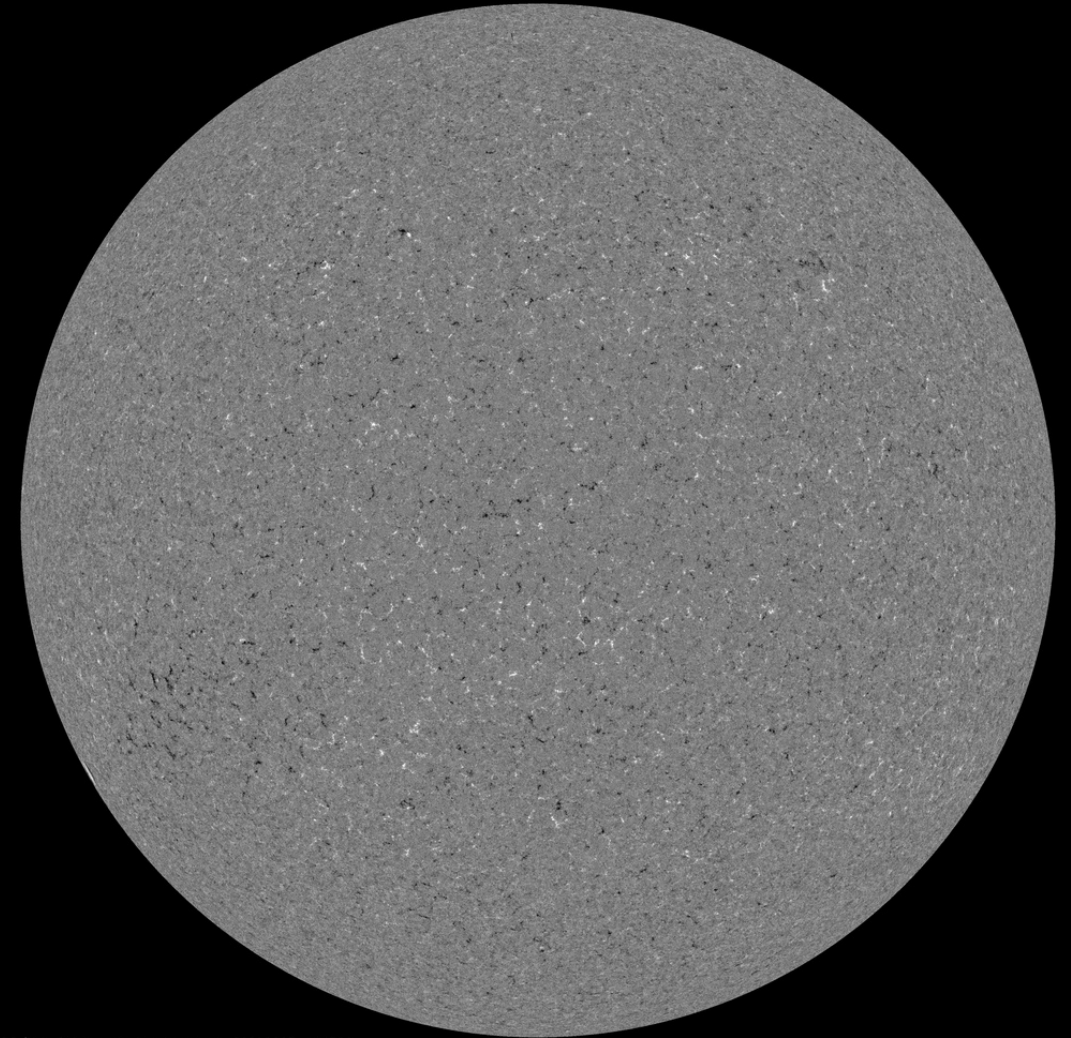
Solar active regions

SDO/HMI White Light 2021-02-07



SDO/HMI Quick-Look Continuum: 20210207_114500

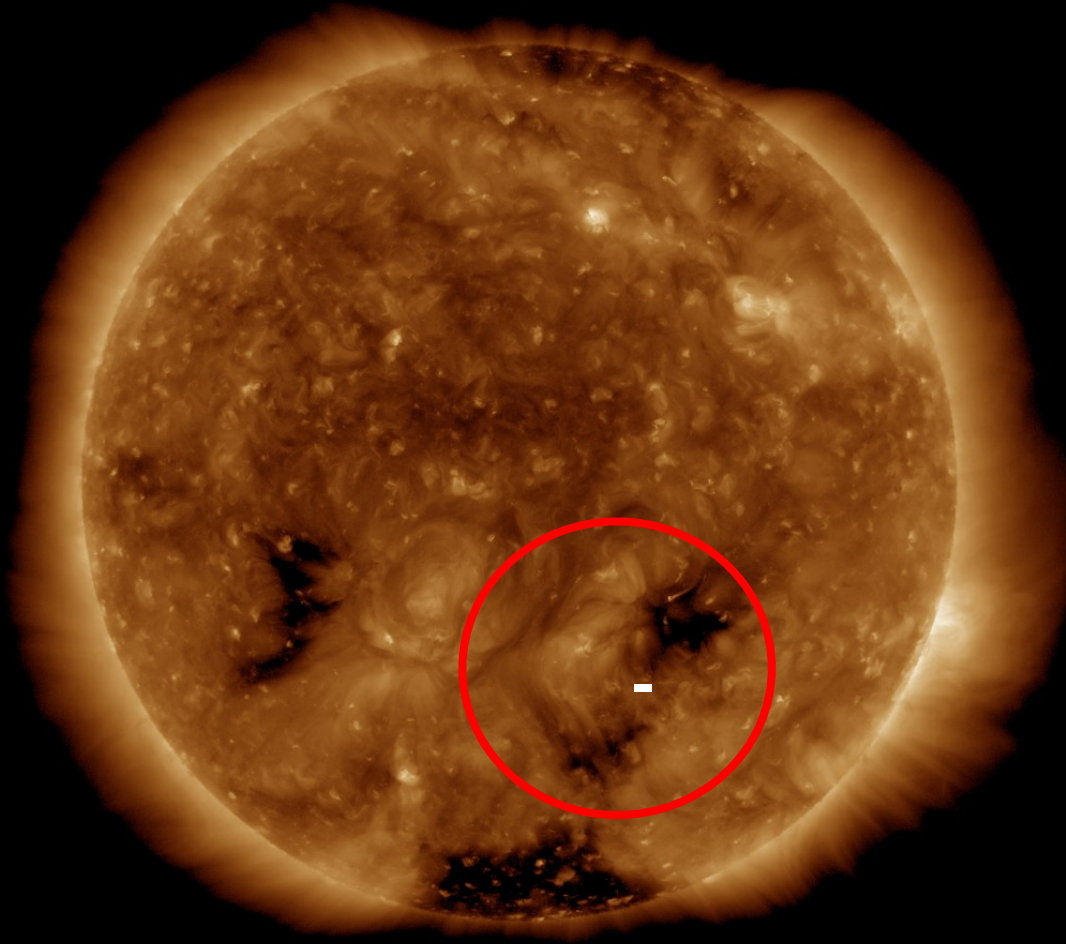
SDO/HMI Magnetogram 2021-02-07



SDO/HMI Quick-Look Magnetogram: 20210207_114500

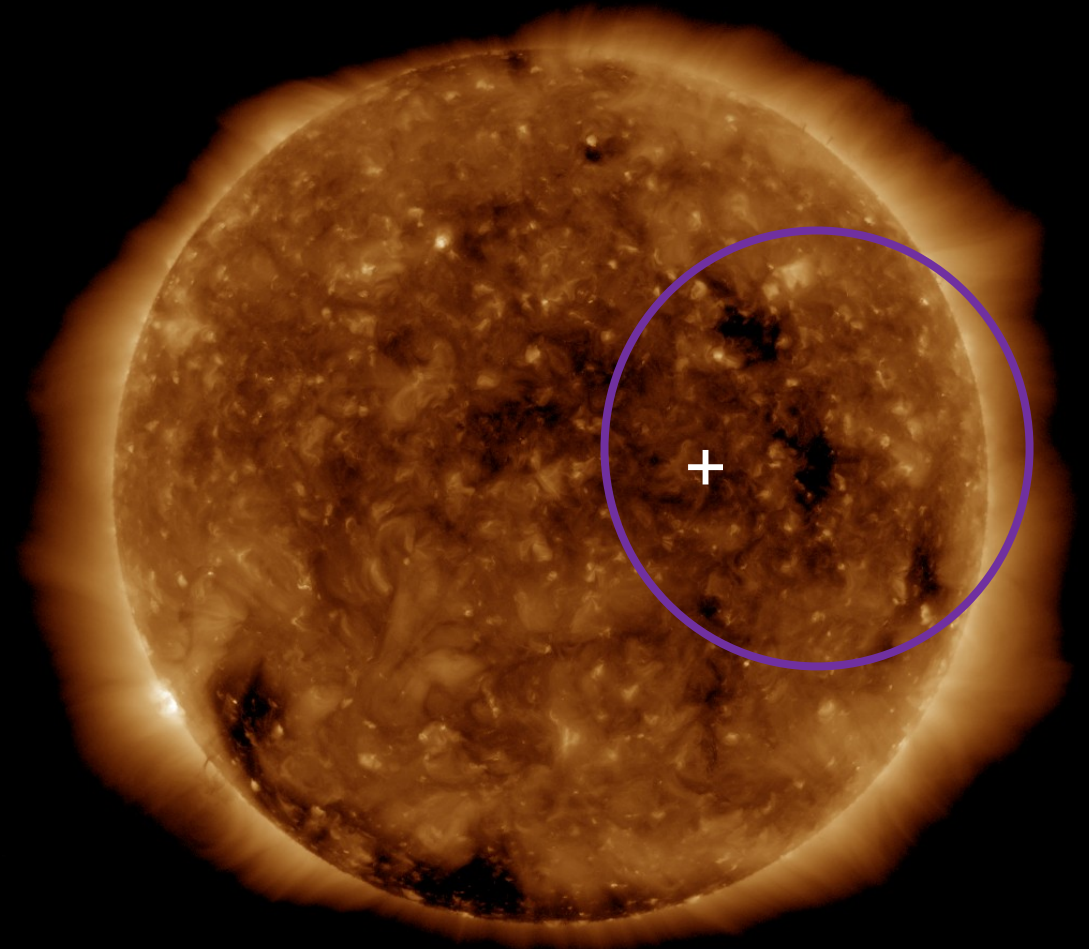
Coronal holes

SDO/AIA 19.3 nm 2021-01-31



SDO/AIA 193 2021-01-31 12:17:41 UT

SDO/AIA 19.3 nm 2021-02-07

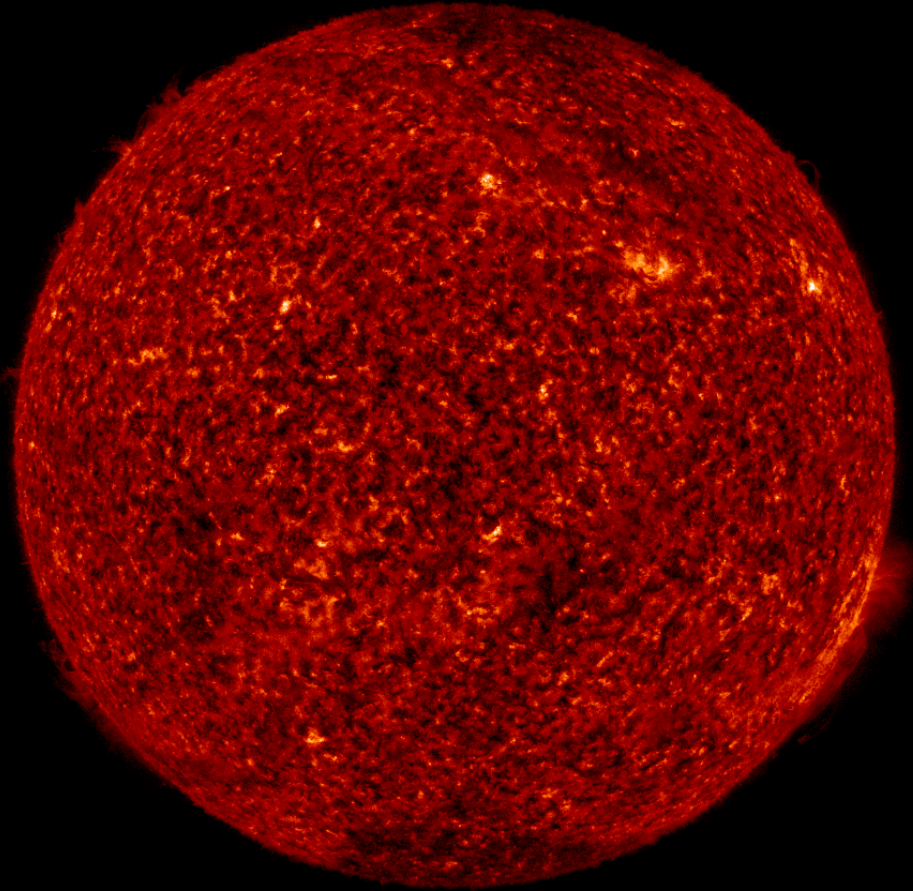


SDO/AIA 193 2021-02-07 12:18:05 UT

Filaments

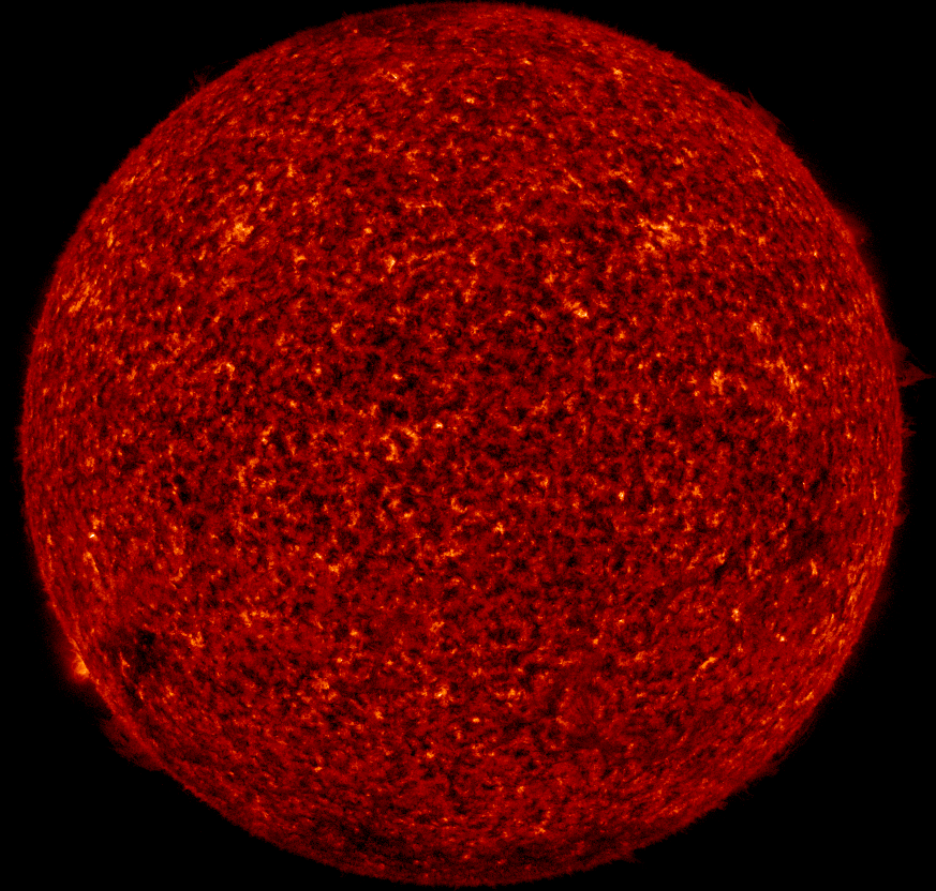
SDO/AIA 30.4 nm 2021-01-31

SDO/AIA AIA 304Å 2021-01-31T00:00:06.58

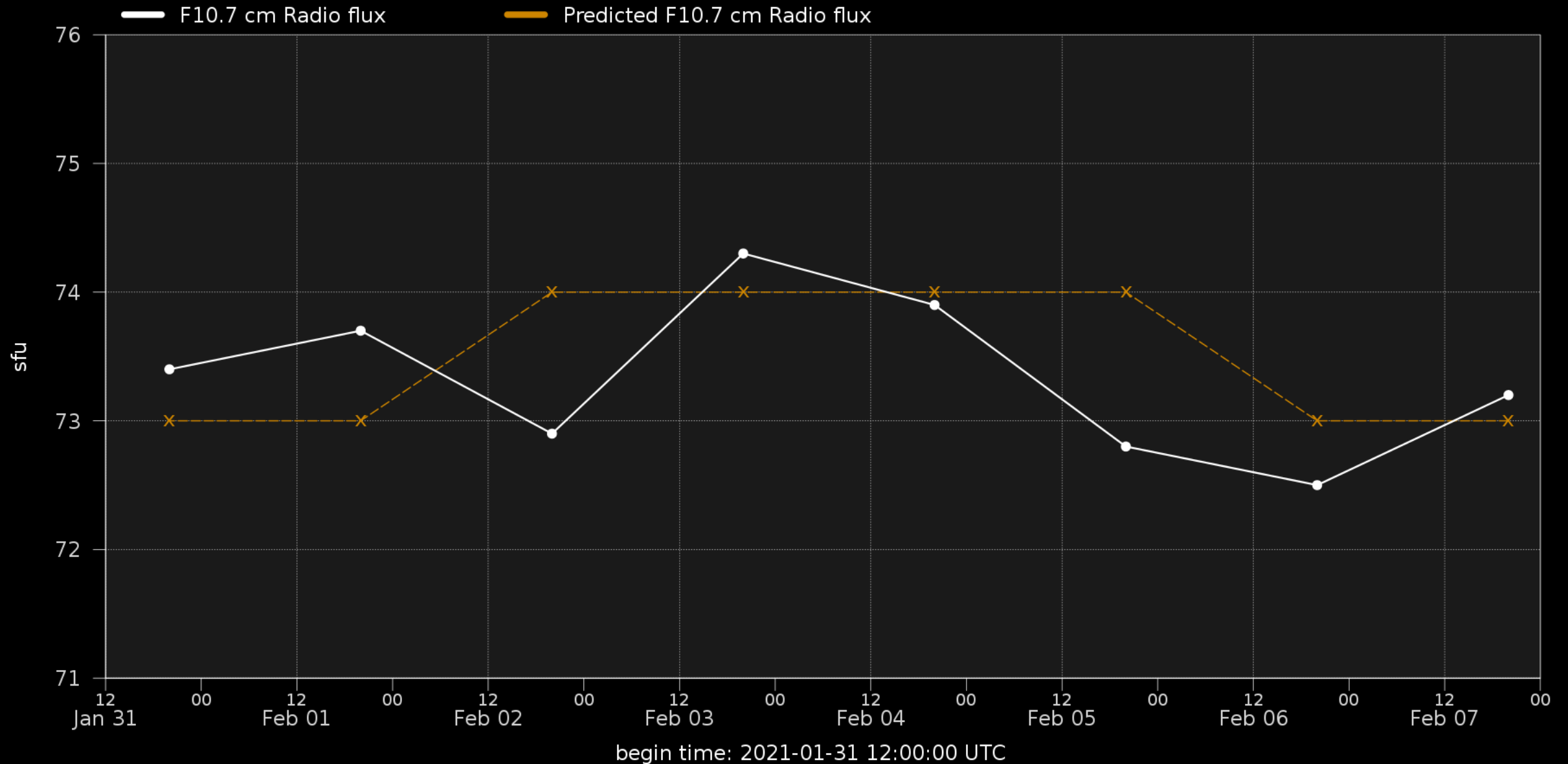


SDO/AIA 30.4 nm 2021-02-07

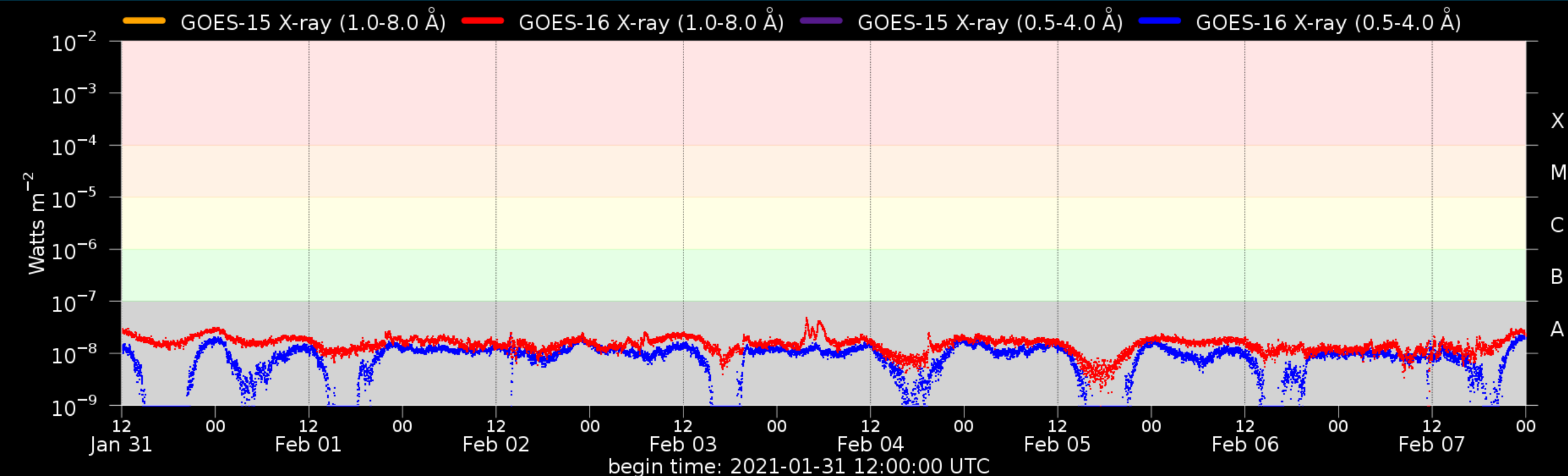
SDO/AIA AIA 304Å 2021-02-07T00:00:06.58



Solar F10.7cm radio flux



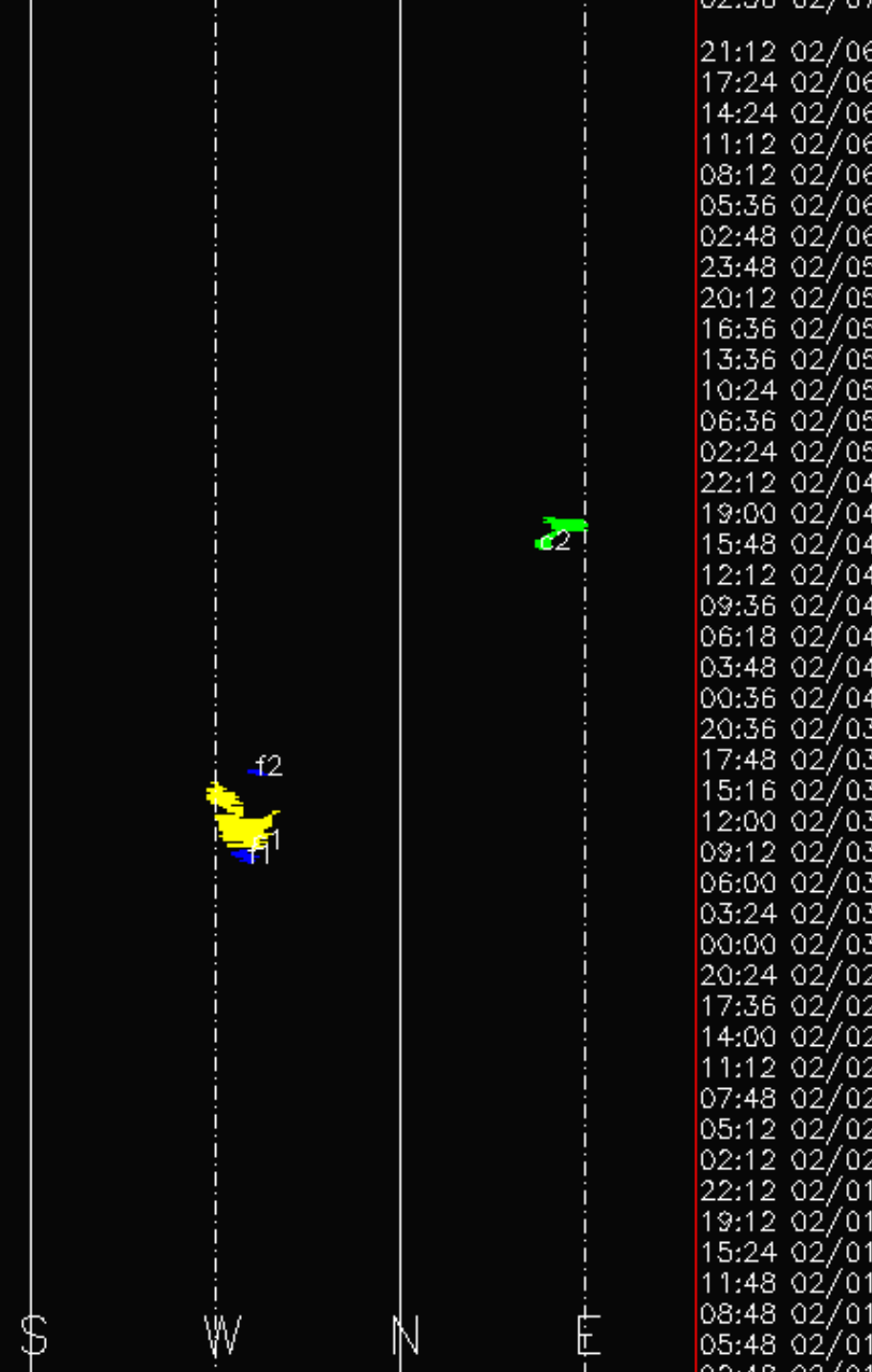
Flaring activity



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

| Issue date | 2021-01-31 | 2021-02-01 | 2021-02-02 | 2021-02-03 | 2021-02-04 | 2021-02-05 | 2021-02-06 | 2021-02-07 |
|-----------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Probability (%) | 01 01 01 | 01 01 01 | 01 01 01 | 05 01 01 | 03 01 01 | 01 01 01 | 01 01 01 | 01 01 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

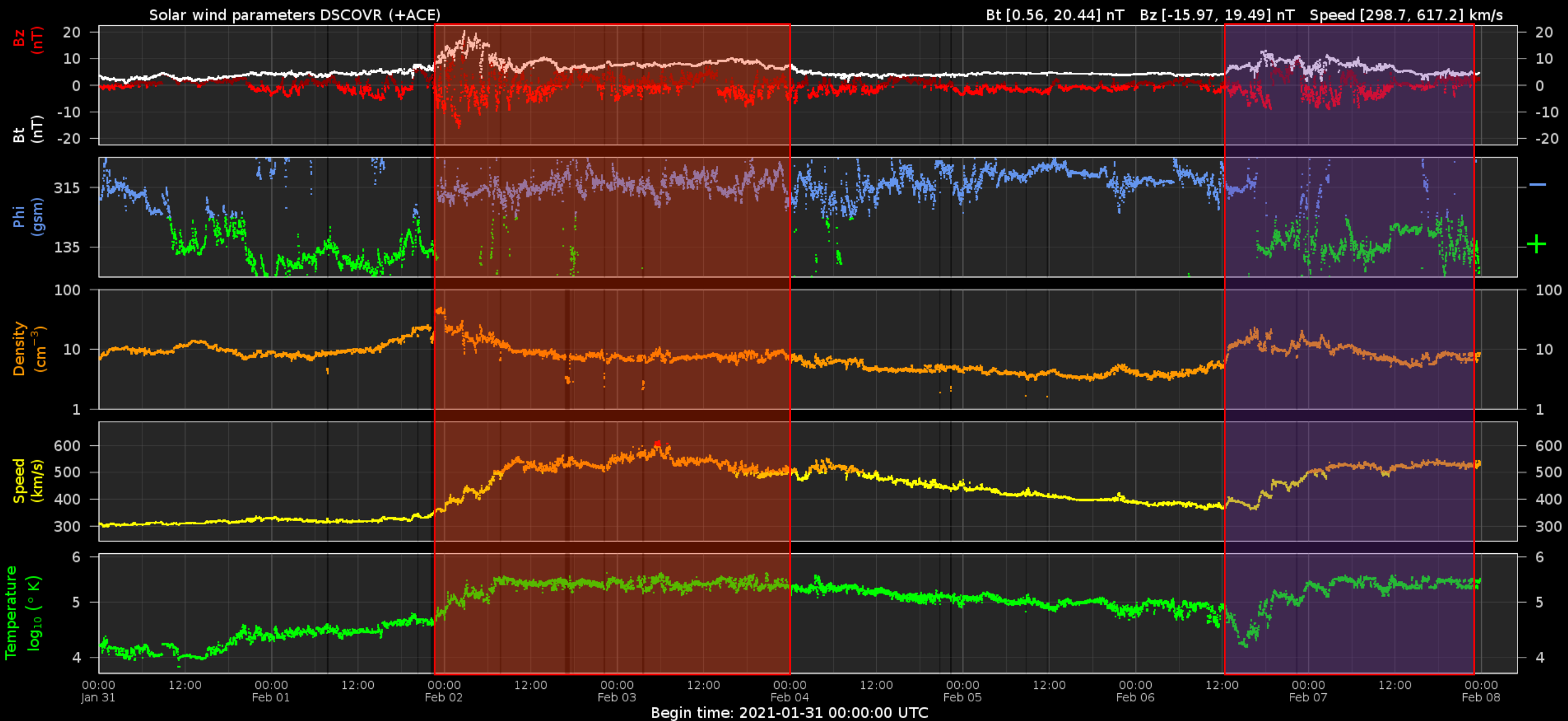


Solar Wind and Geomagnetic Activity

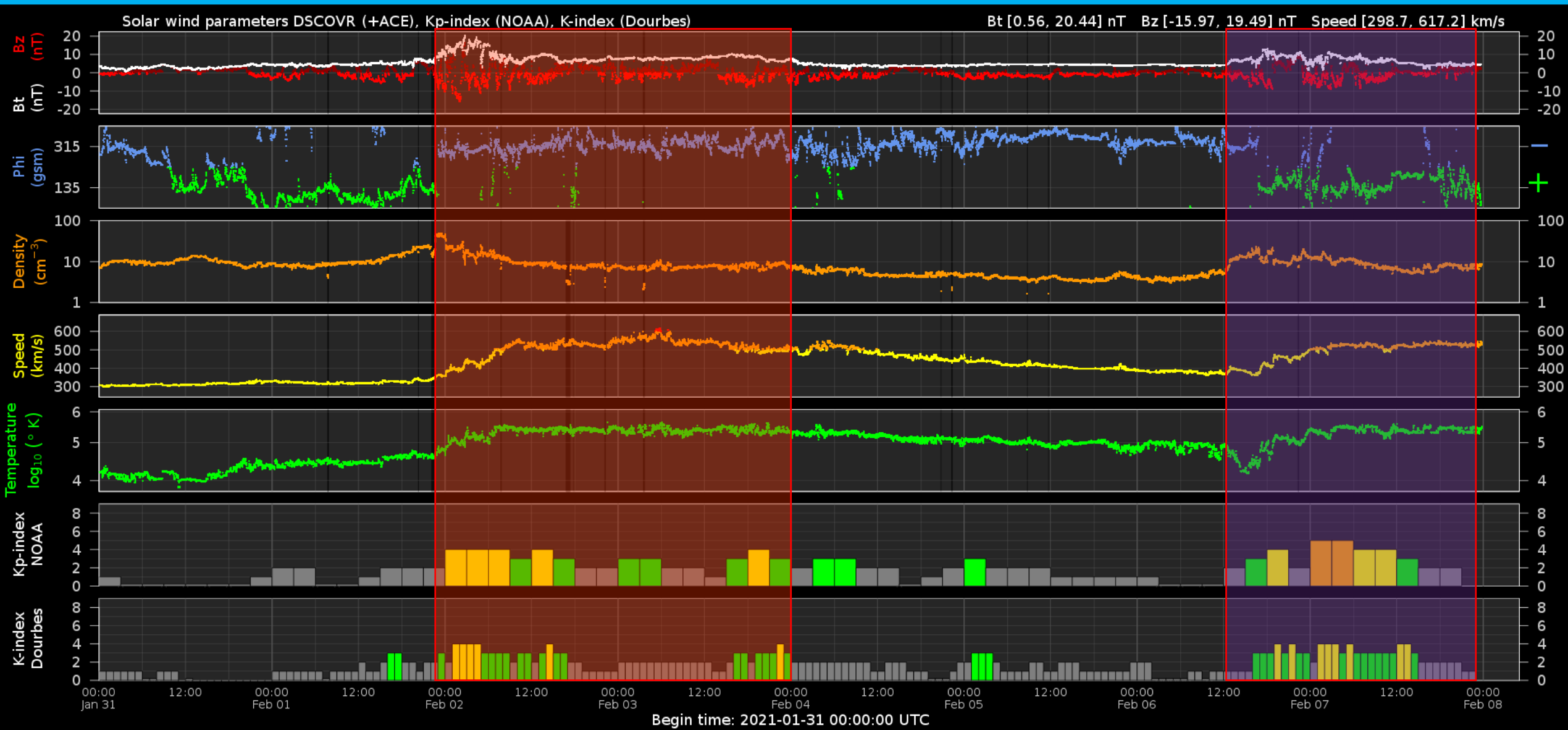


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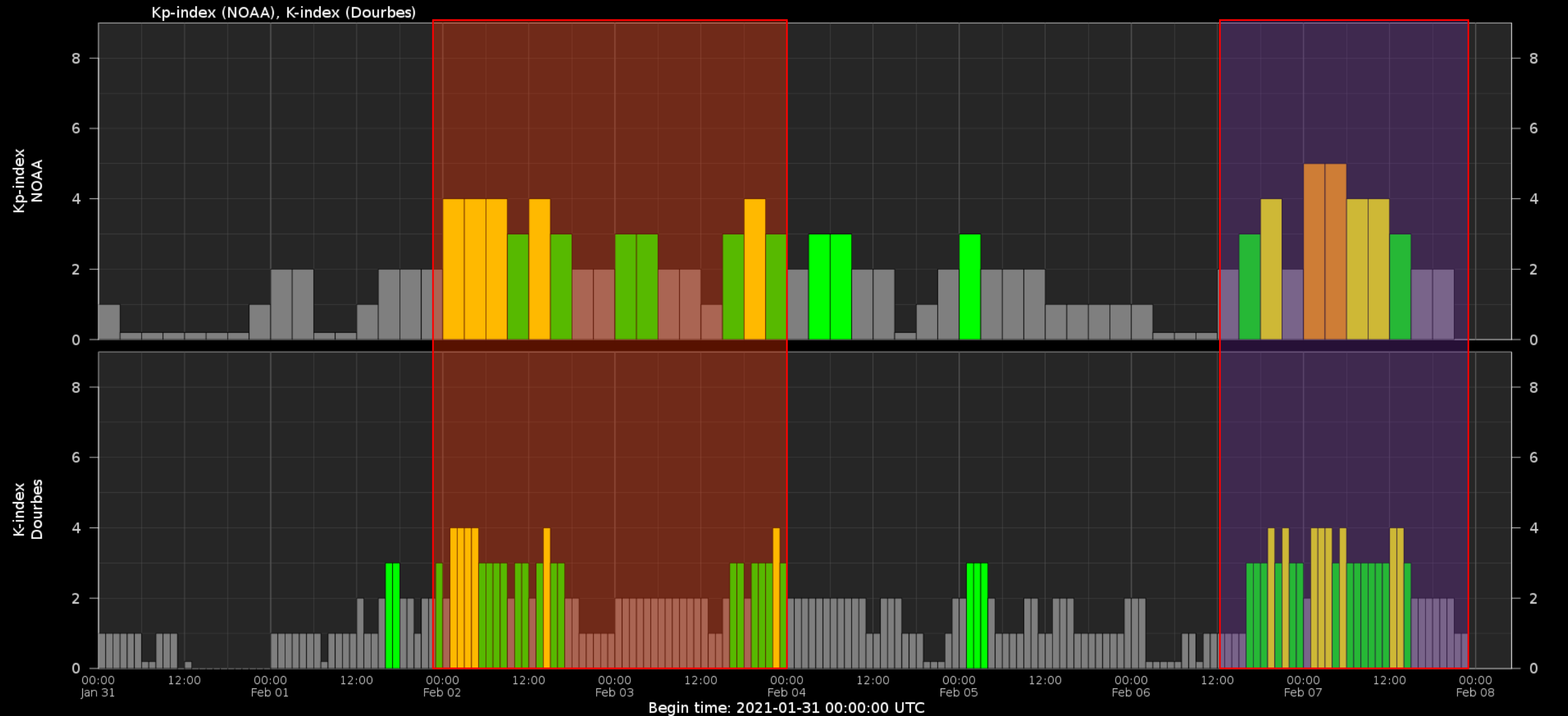
Solar wind parameters



Solar wind parameters & K-indices



Geomagnetic activity (K-indexes)



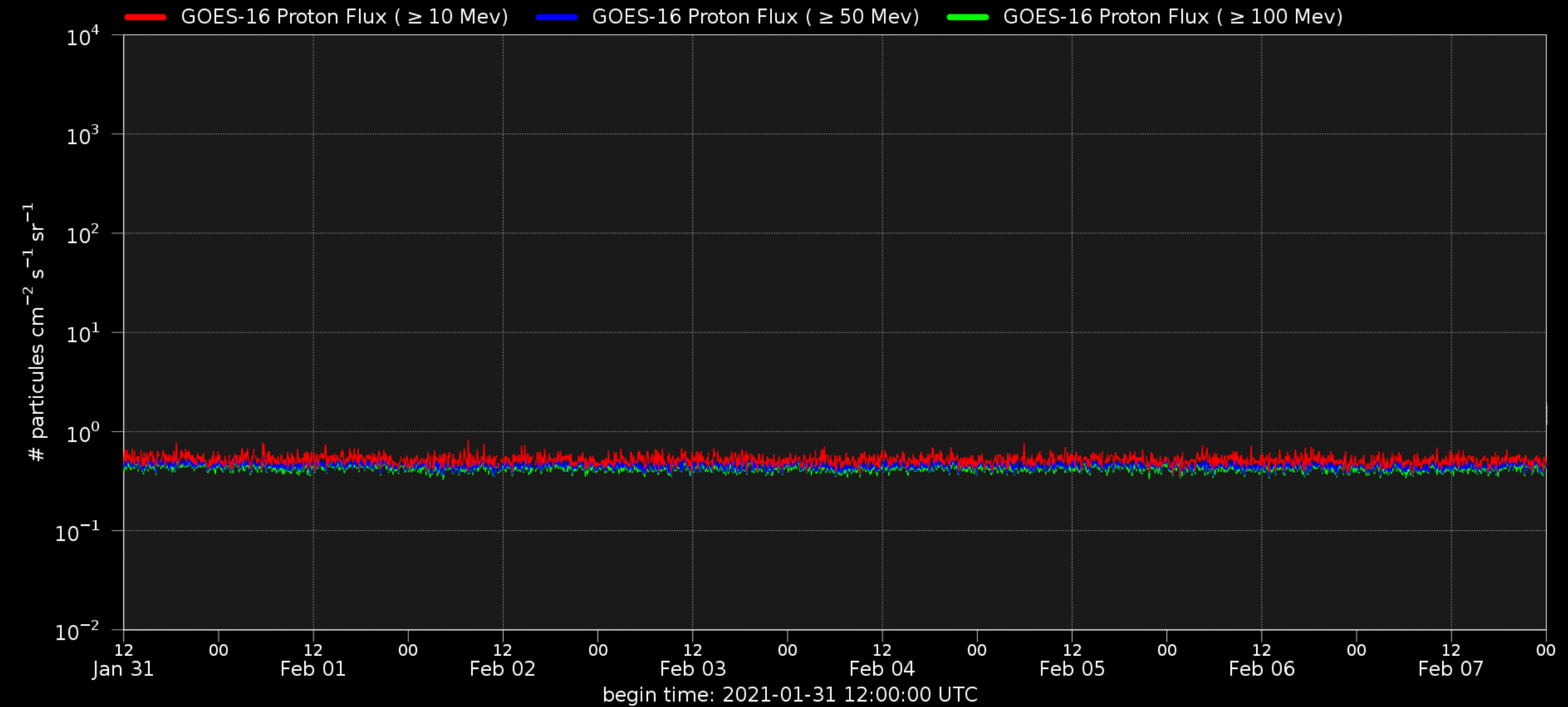
Energetic Particles



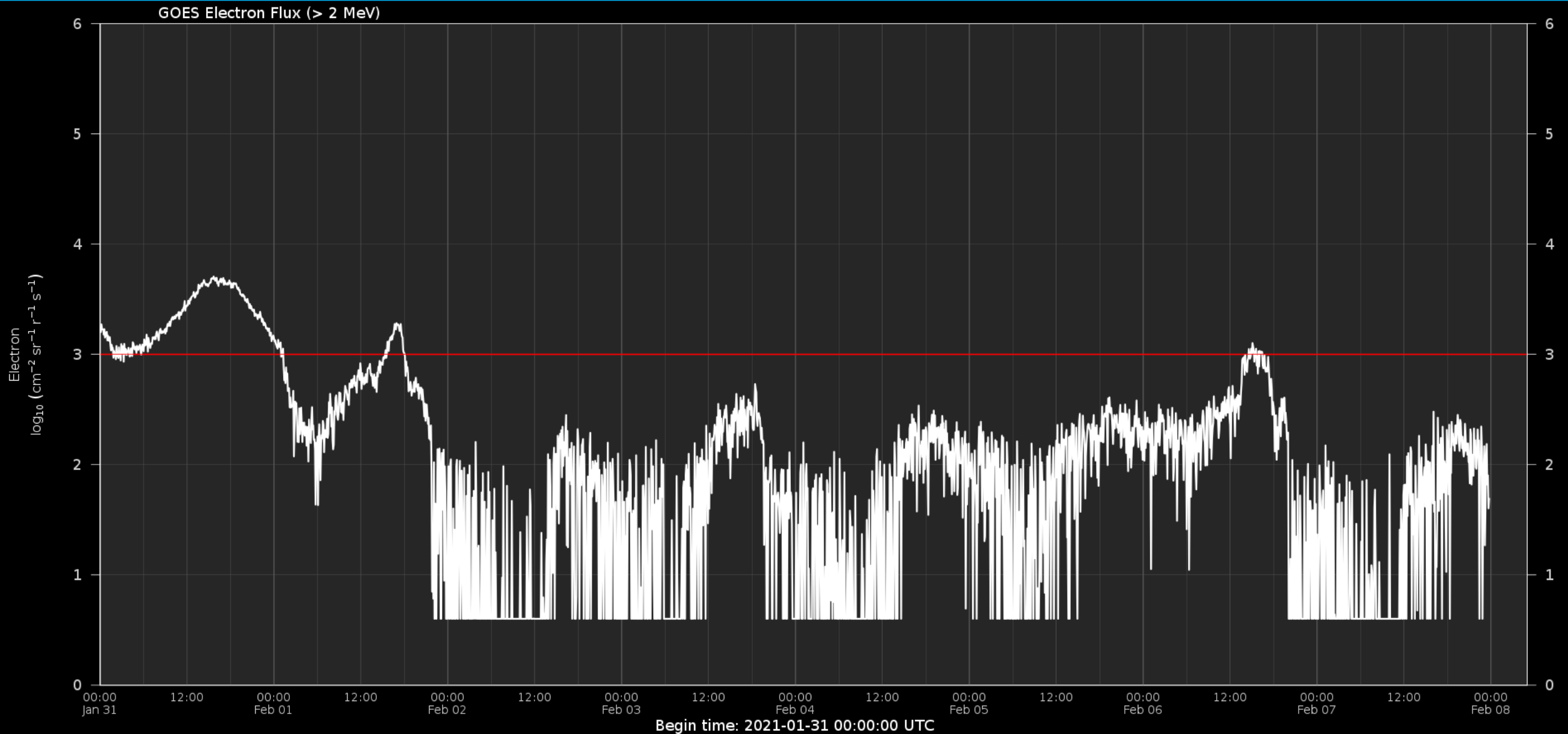
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Solar proton flux



Electron flux at GEO



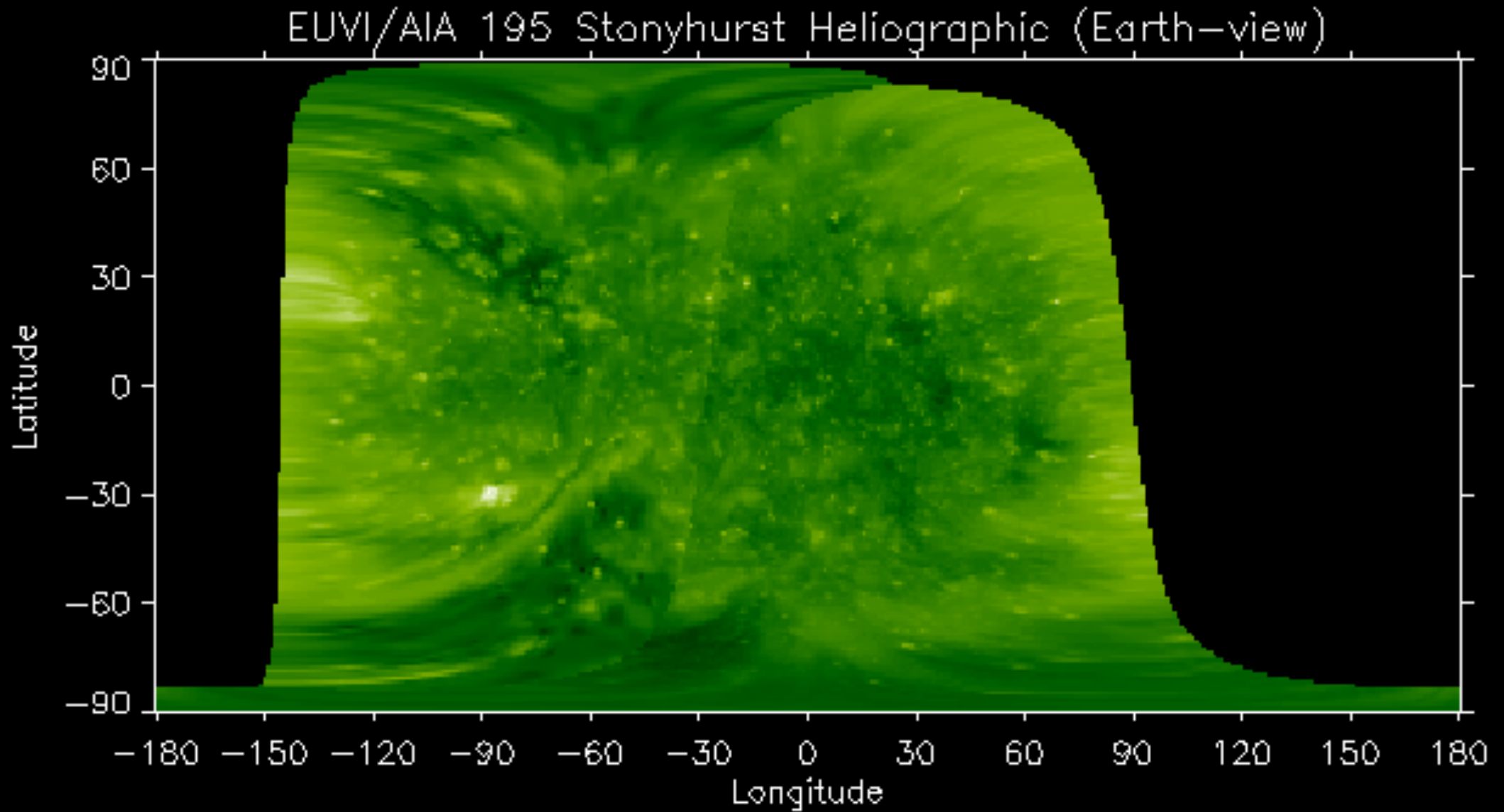
Outlook



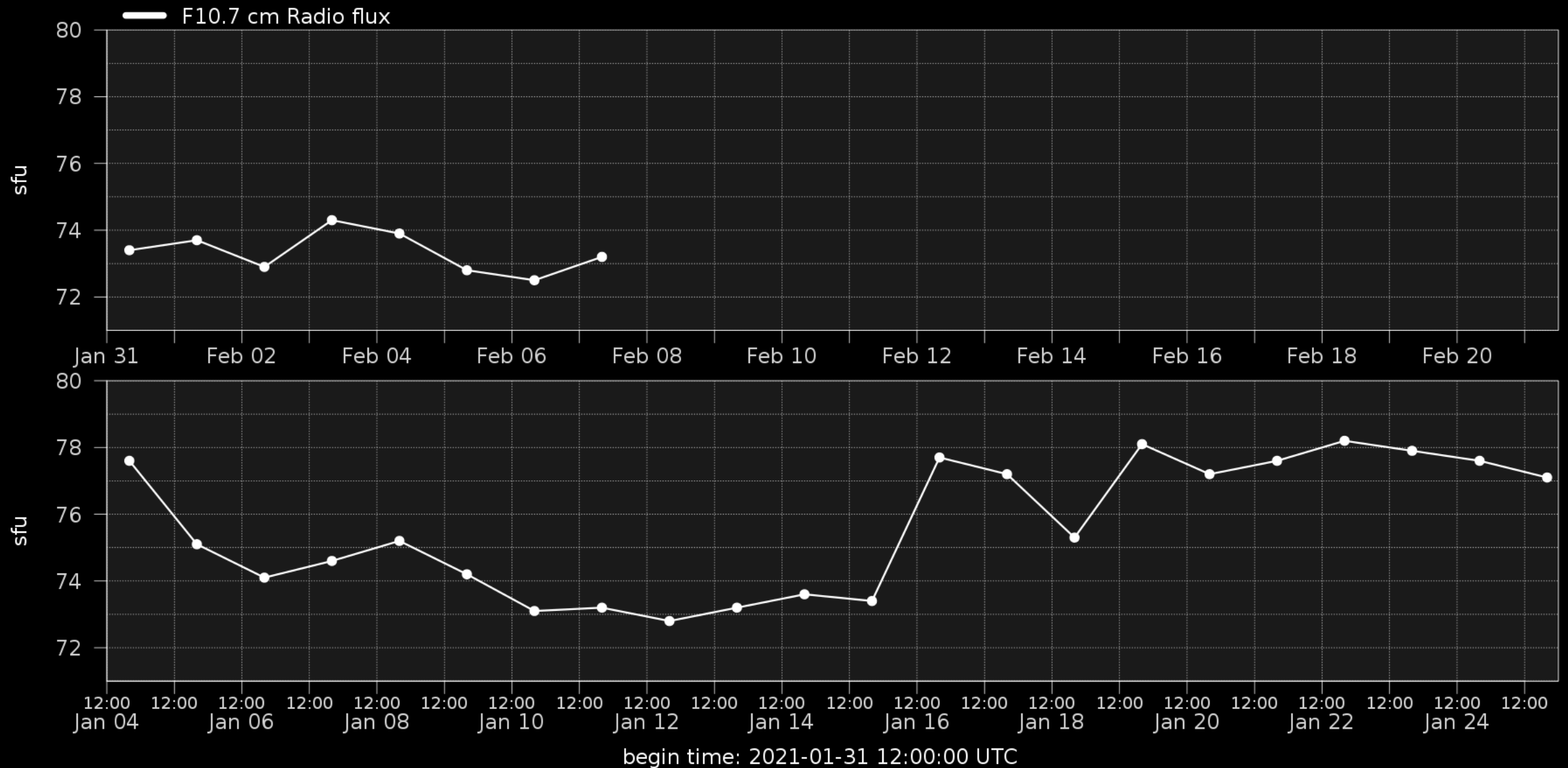
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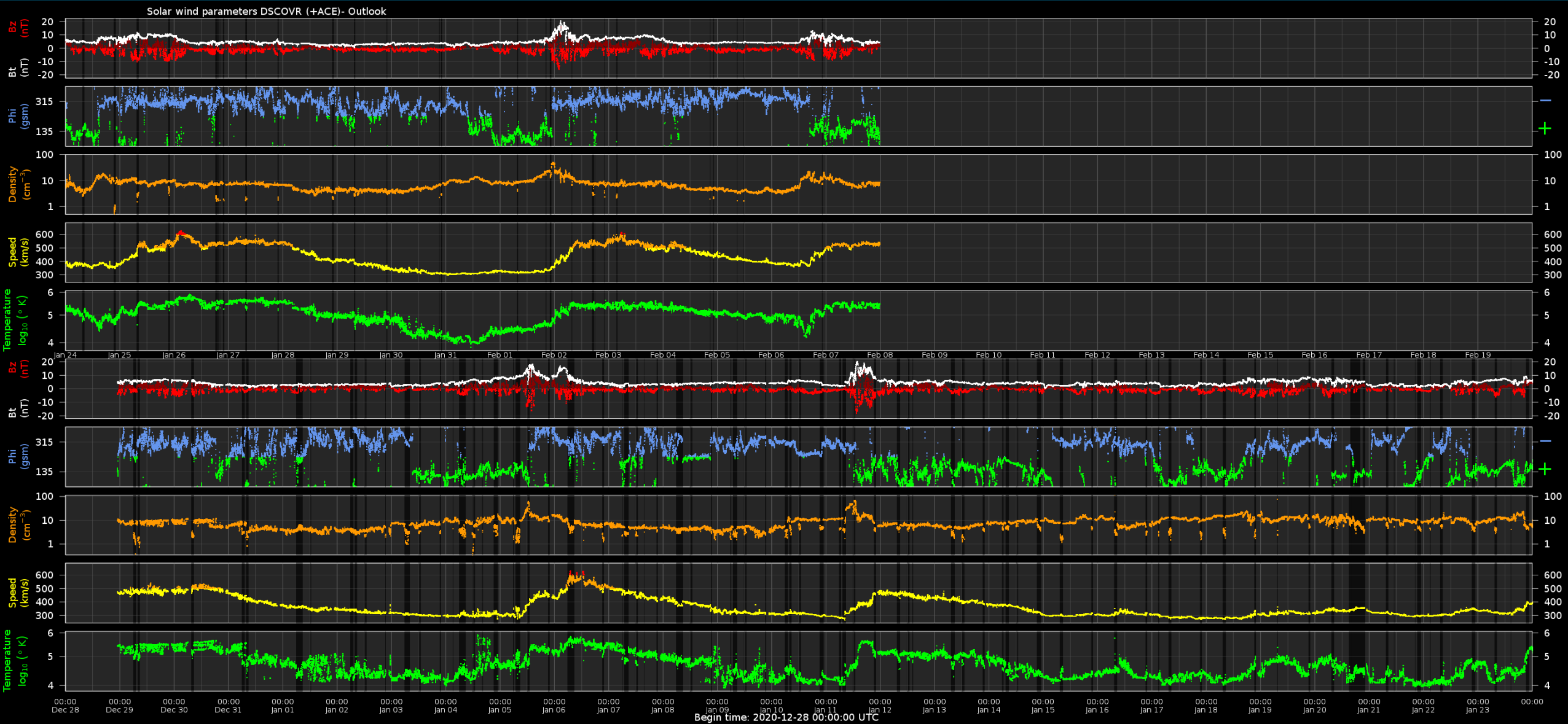
Outlook: Solar activity



Outlook: Solar F10.7cm radio flux



Outlook: Solar wind parameters



Outlook: Geomagnetic activity



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