

SIDC Space Weather Briefing

17 February 2019 - 24 February 2019

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& the SIDC forecaster team



Royal Observatory
of Belgium

Solar Influences
Data analysis Centre
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Summary Report

Solar activity from 2019-02-17 12:00 UT to 2019-02-24 12:00 UT

Active Regions	The Sun was spotless all week
Flaring	# B-class flare: 0 # C-class flare: 0 # M-class flare: 0 # X-class flare: 0
Filaments	A 20-degrees long filament erupted late on 23 February
CMEs	Two non-earth-directed CMEs were recorded
Proton Events	The >10 MeV proton flux was at nominal values.

Solar wind and geomagnetic conditions from 2019-02-17 12:00 UT to 2019-02-24 12:00 UT

Coronal Holes	Two equatorial Coronal Holes were observed
ICME	None
SW Conditions	Bz at -9 nT on 21 February, and speed at 500 km/s early 22 February
K-indices	max K-index (Dourbes): 3 max Kp-index (NOAA): 4

All Quiet Alert: ON since 16 February

Solar Activity

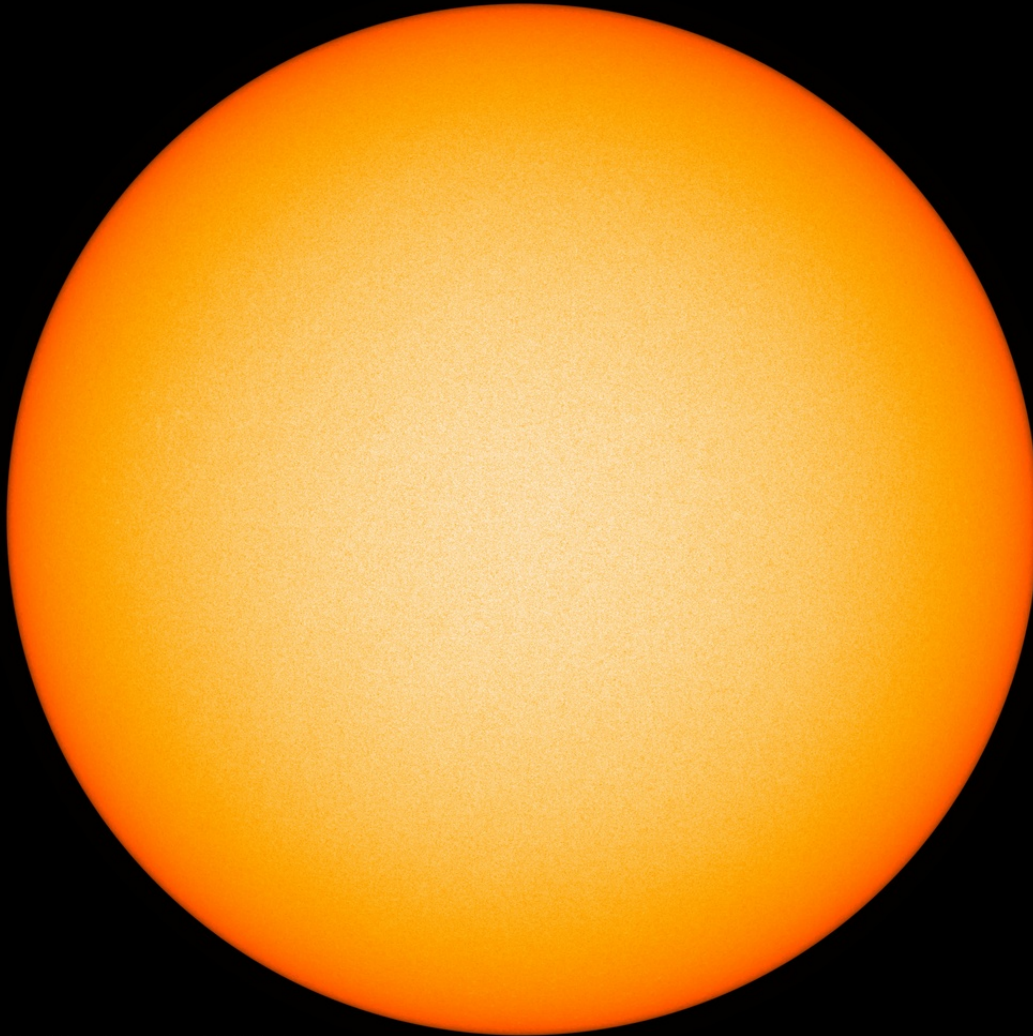


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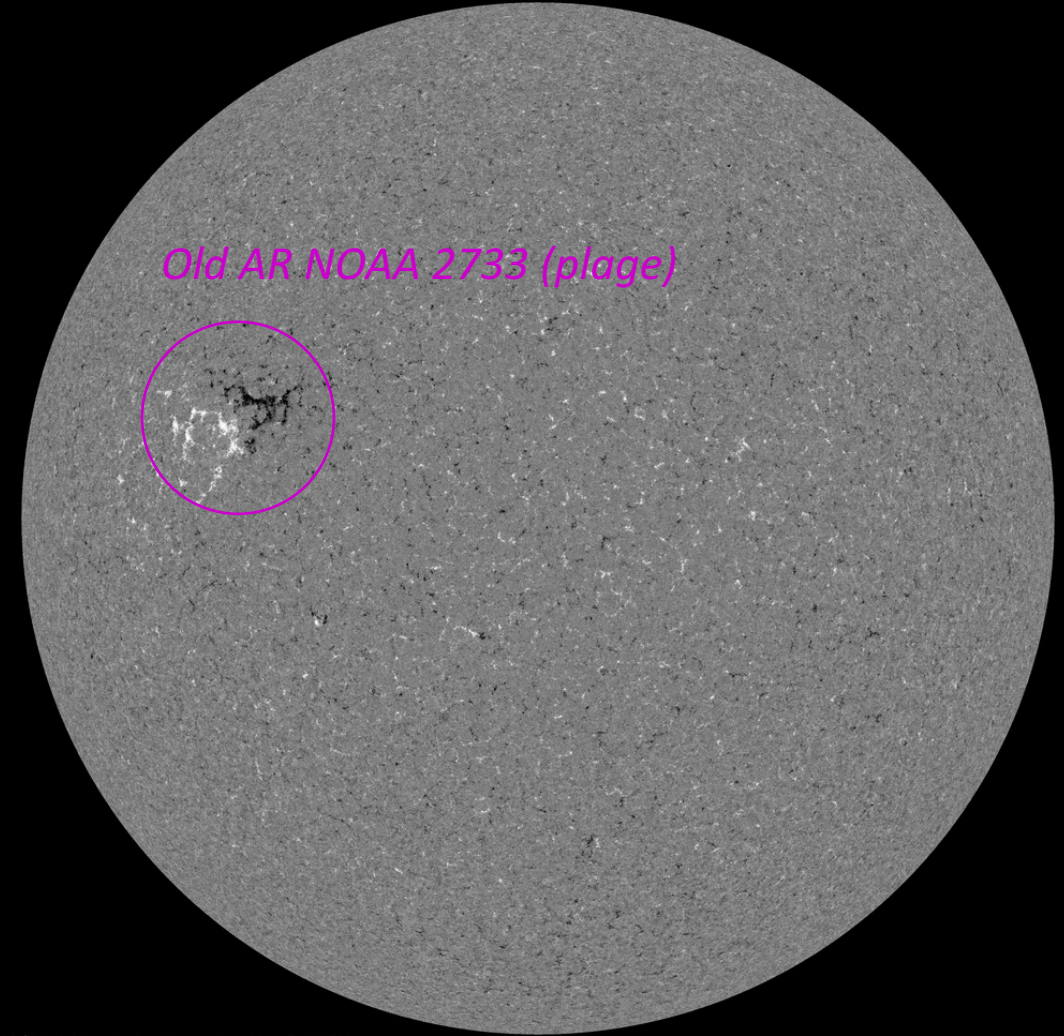
Solar active region - start of the week

SDO/HMI White Light 2019-02-17



SDO/HMI Quick-Look Continuum: 20190217_114500

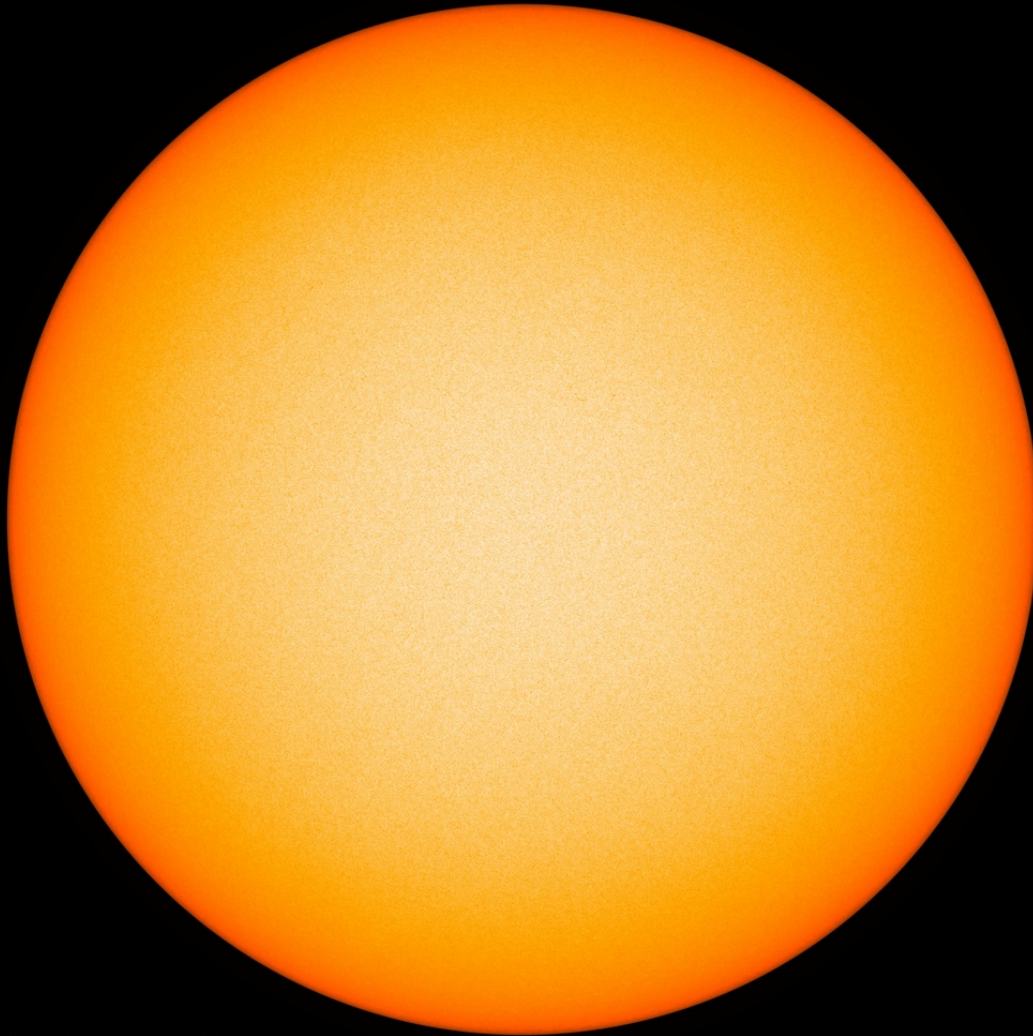
SDO/HMI Magnetogram 2019-02-17



SDO/HMI Quick-Look Magnetogram: 20190217_114500

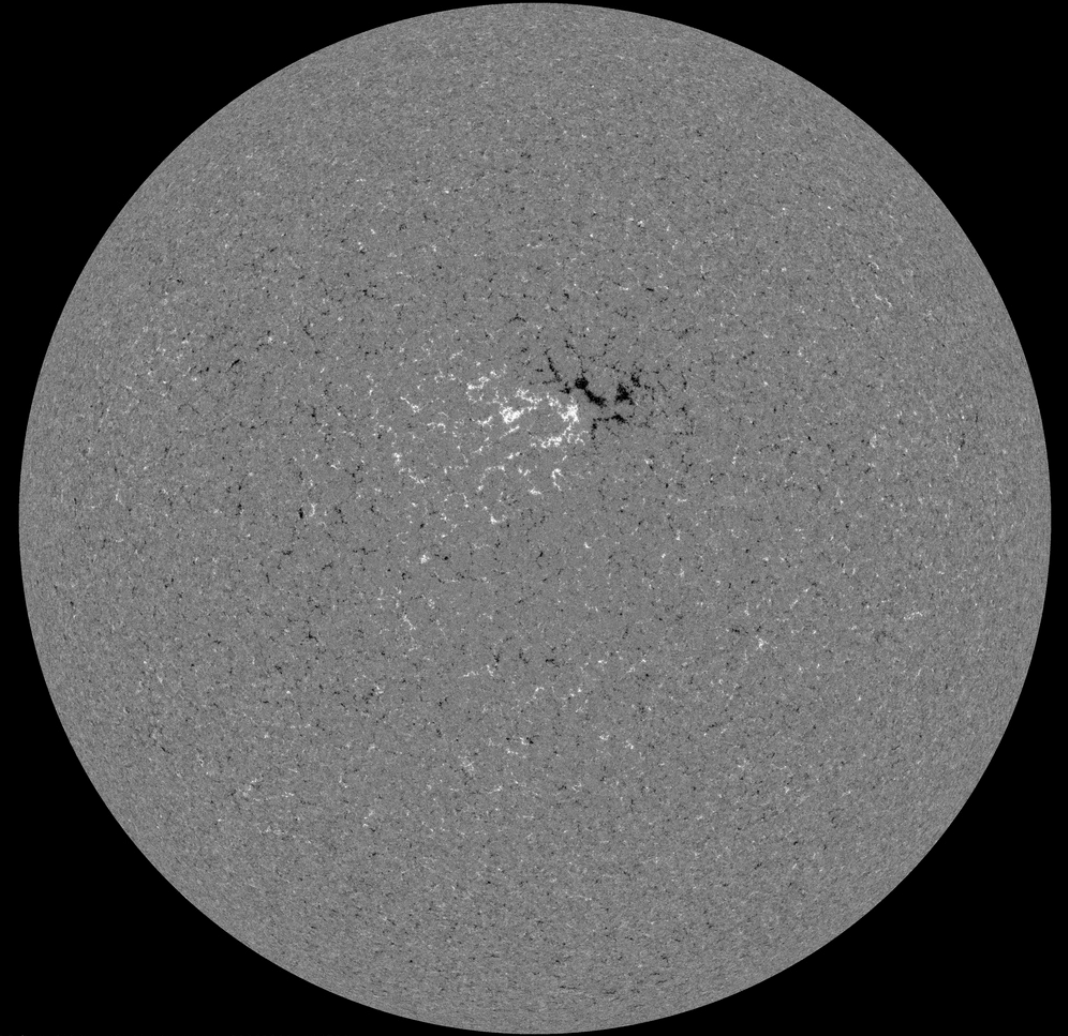
Solar active region - middle of the week

SDO/HMI White Light 2019-02-20



SDO/HMI Quick-Look Continuum: 20190220_114500

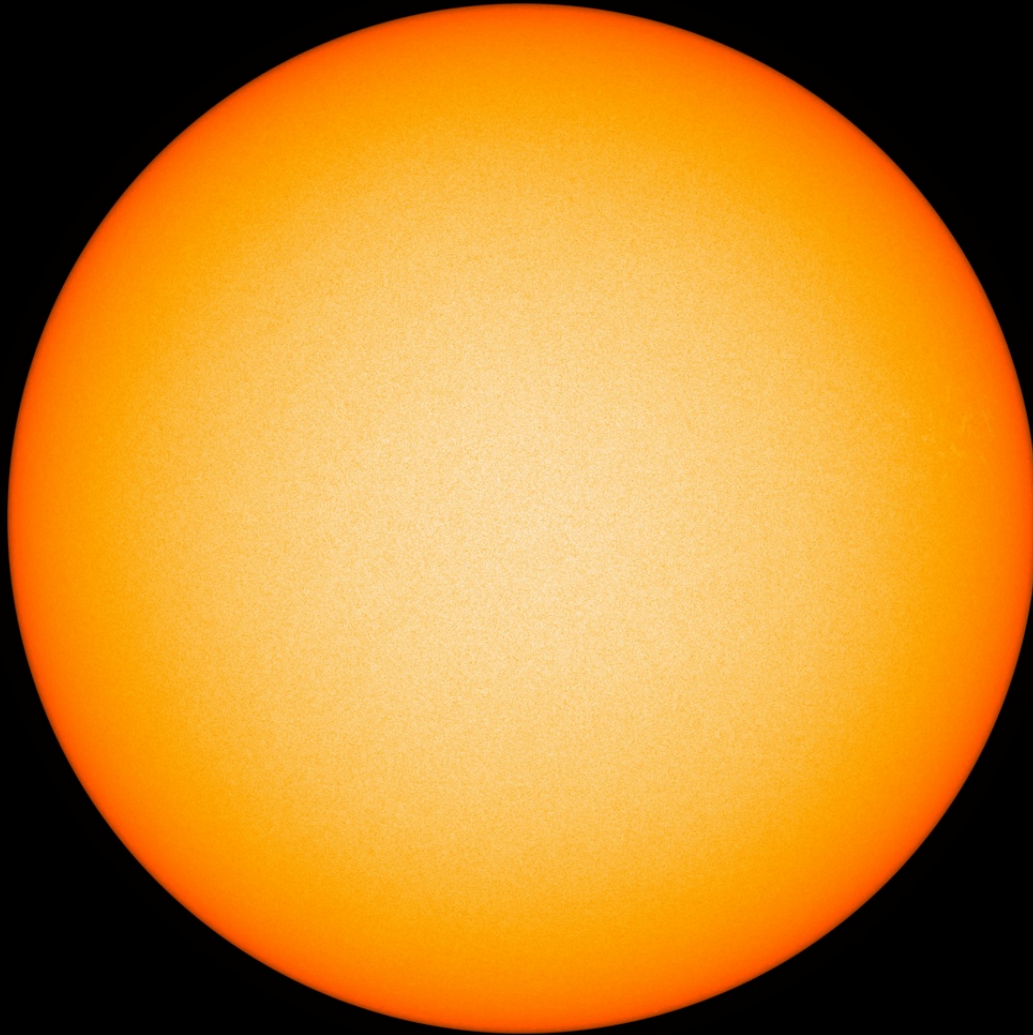
SDO/HMI Magnetogram 2019-02-20



SDO/HMI Quick-Look Magnetogram: 20190220_114500

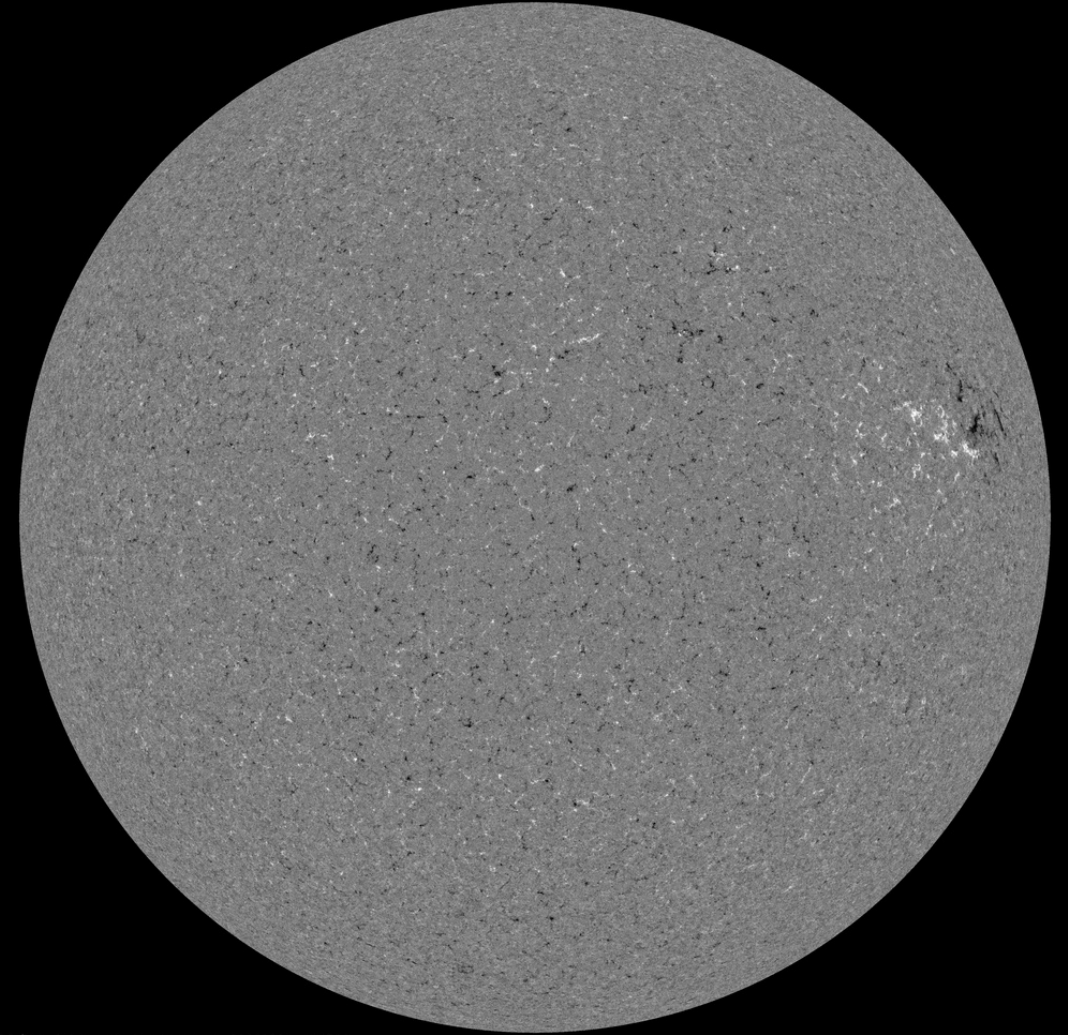
Solar active region - end of the week

SDO/HMI White Light 2019-02-24



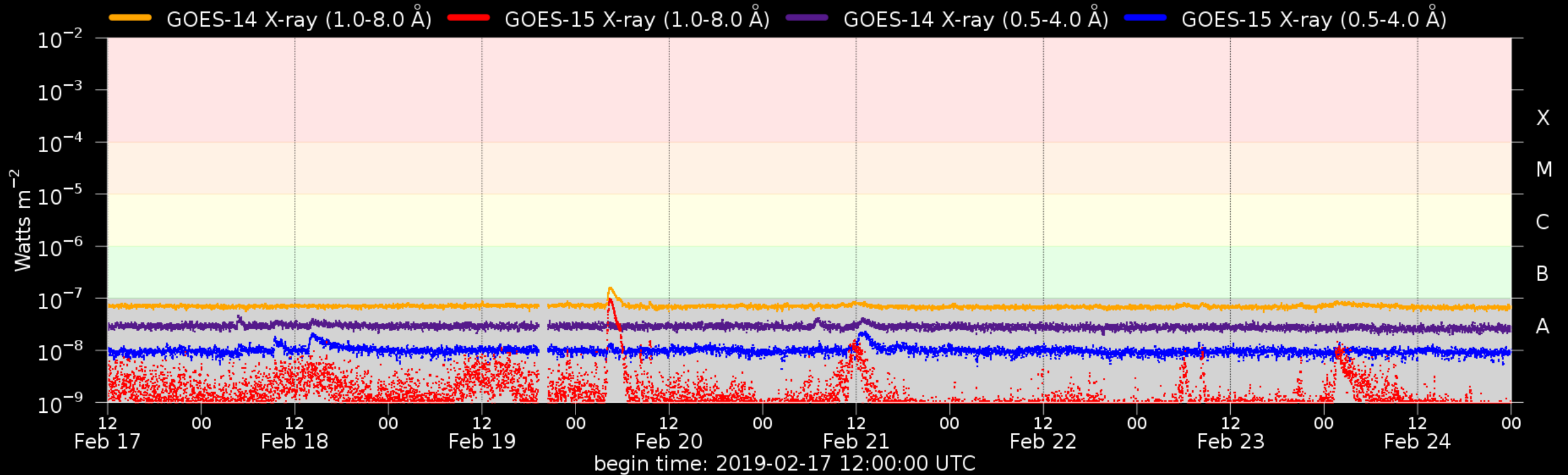
SDO/HMI Quick-Look Continuum: 20190224_114500

SDO/HMI Magnetogram 2019-02-24



SDO/HMI Quick-Look Magnetogram: 20190224_114500

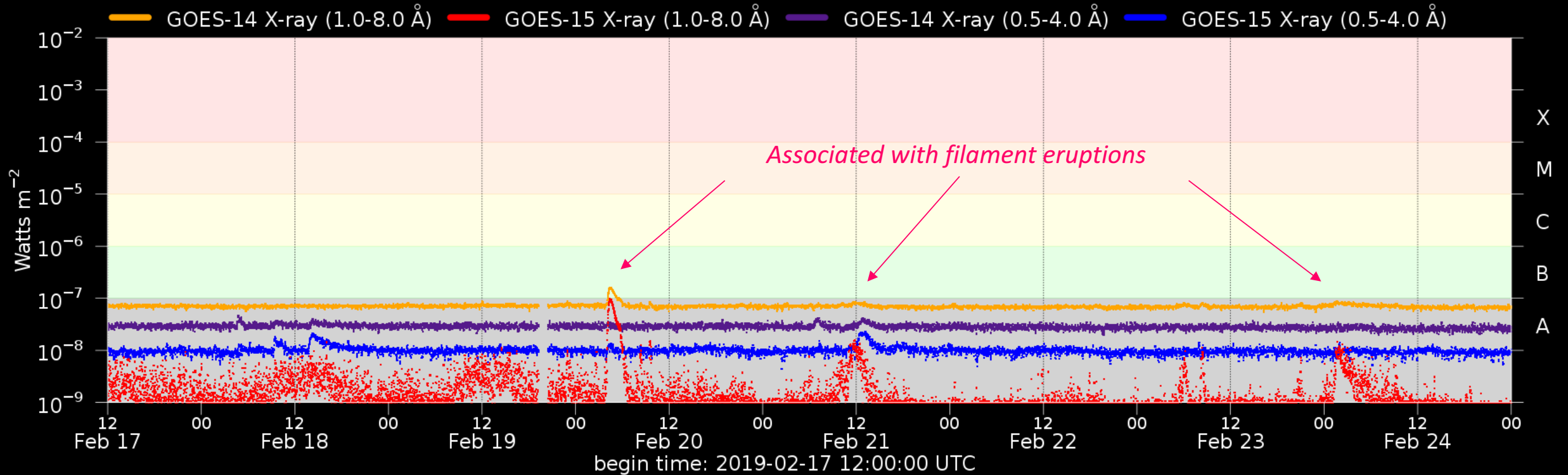
Flaring activity



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

Issue date	2019-02-17	2019-02-18	2019-02-19	2019-02-20	2019-02-21	2019-02-22	2019-02-23	2019-02-24
Probability	--- 05 01 01	--- 01 01 01	--- 01 01 01	--- 01 01 01	--- 01 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	00 00 00 00	00 00 00 00

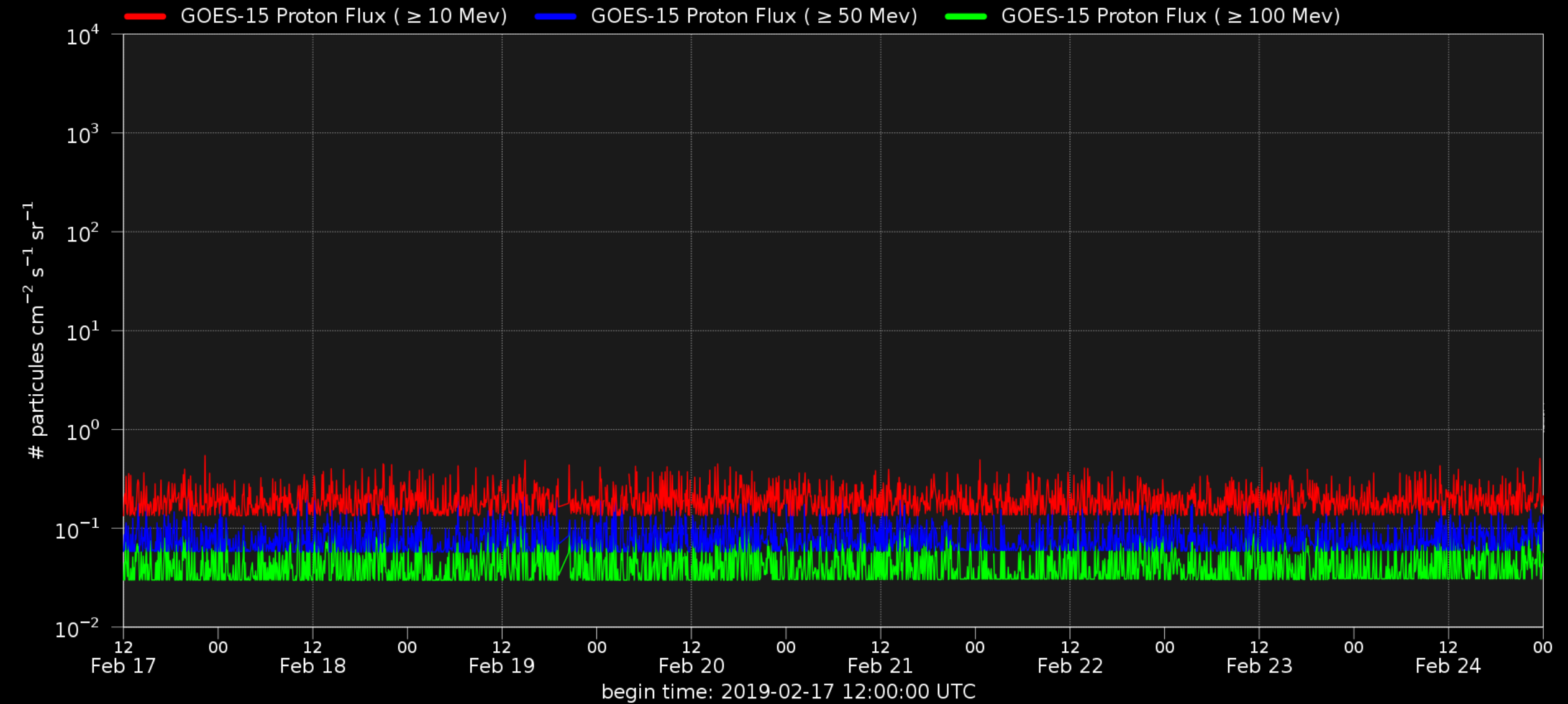
Flaring activity



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

Issue date	2019-02-17	2019-02-18	2019-02-19	2019-02-20	2019-02-21	2019-02-22	2019-02-23	2019-02-24
Probability	--- 05 01 01	--- 01 01 01	--- 01 01 01	--- 01 01 01	--- 01 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	00 00 00 00	00 00 00 00

Solar proton flux



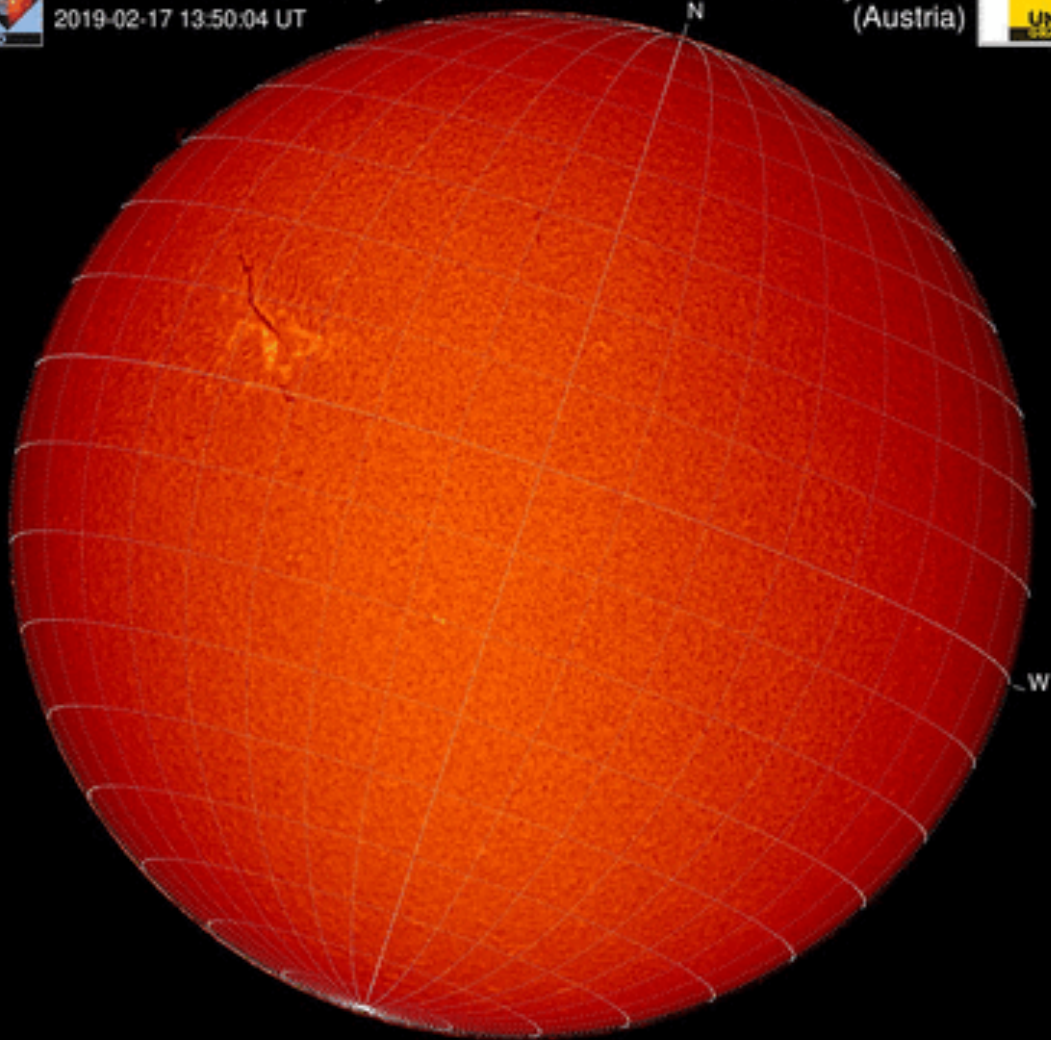
Filament & Filament eruptions

H-alpha 2019-02-17



Kanzelhöhe Observatory
2019-02-17 13:50:04 UT

University of Graz
(Austria)

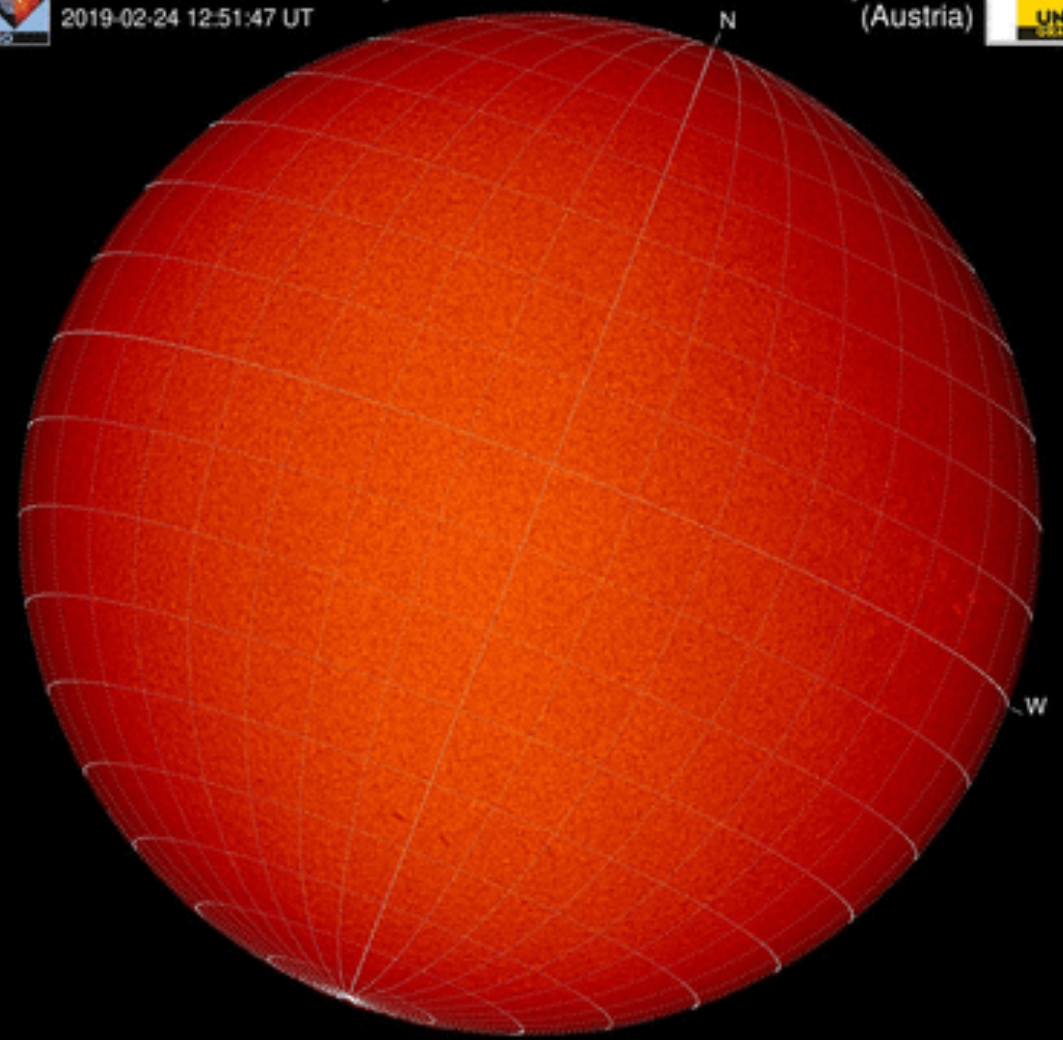


H-alpha 2019-02-24



Kanzelhöhe Observatory
2019-02-24 12:51:47 UT

University of Graz
(Austria)

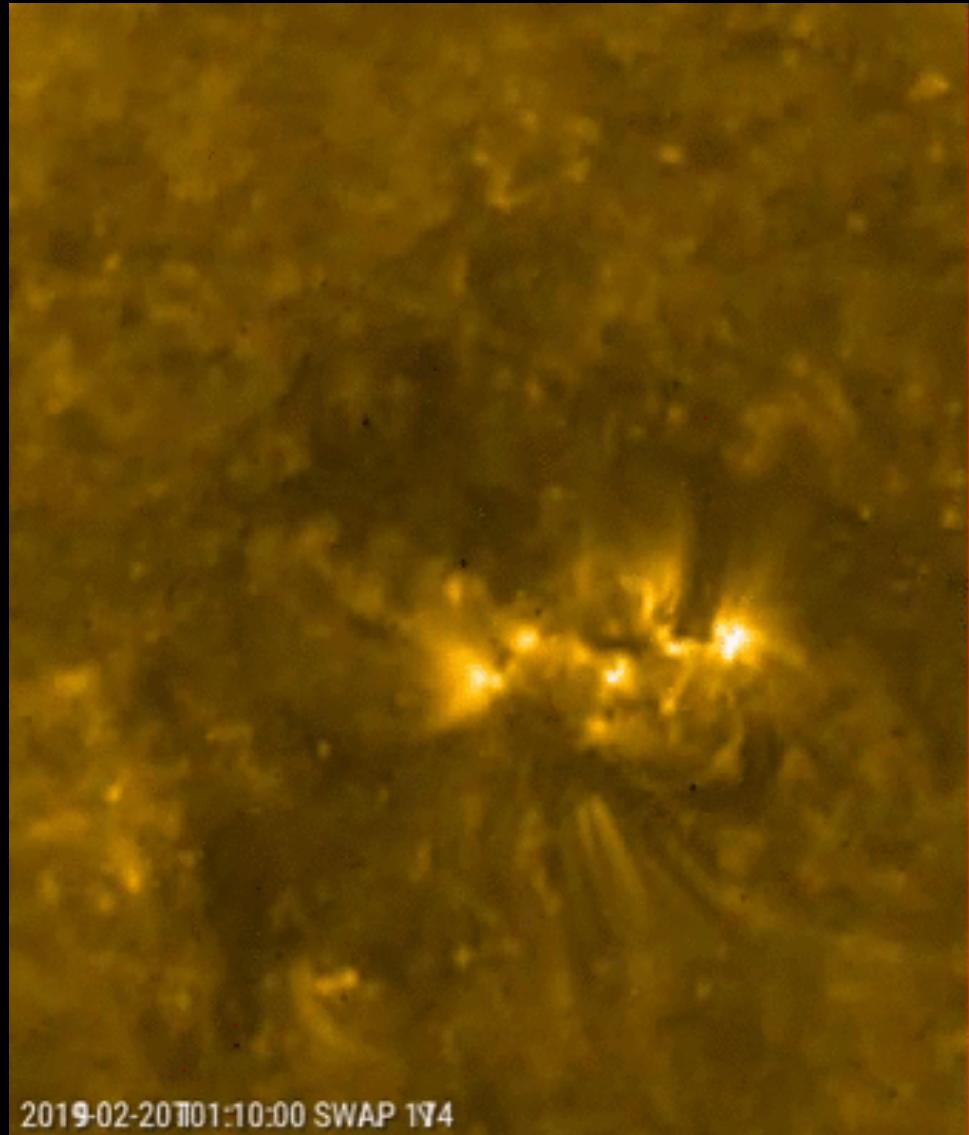


Filament & Filament eruptions (*GONG H α Network*)

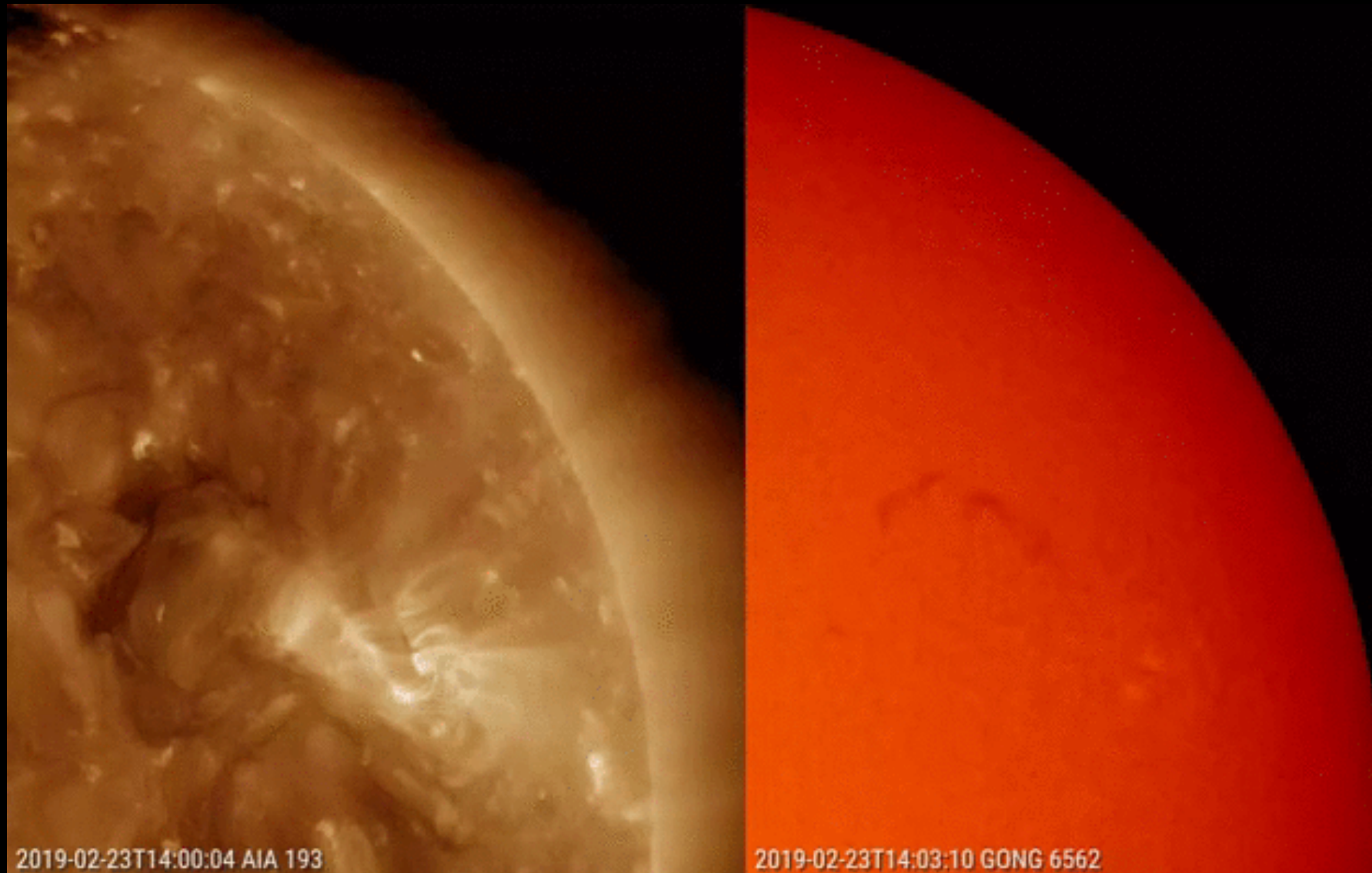


2019-02-18T12:00:50

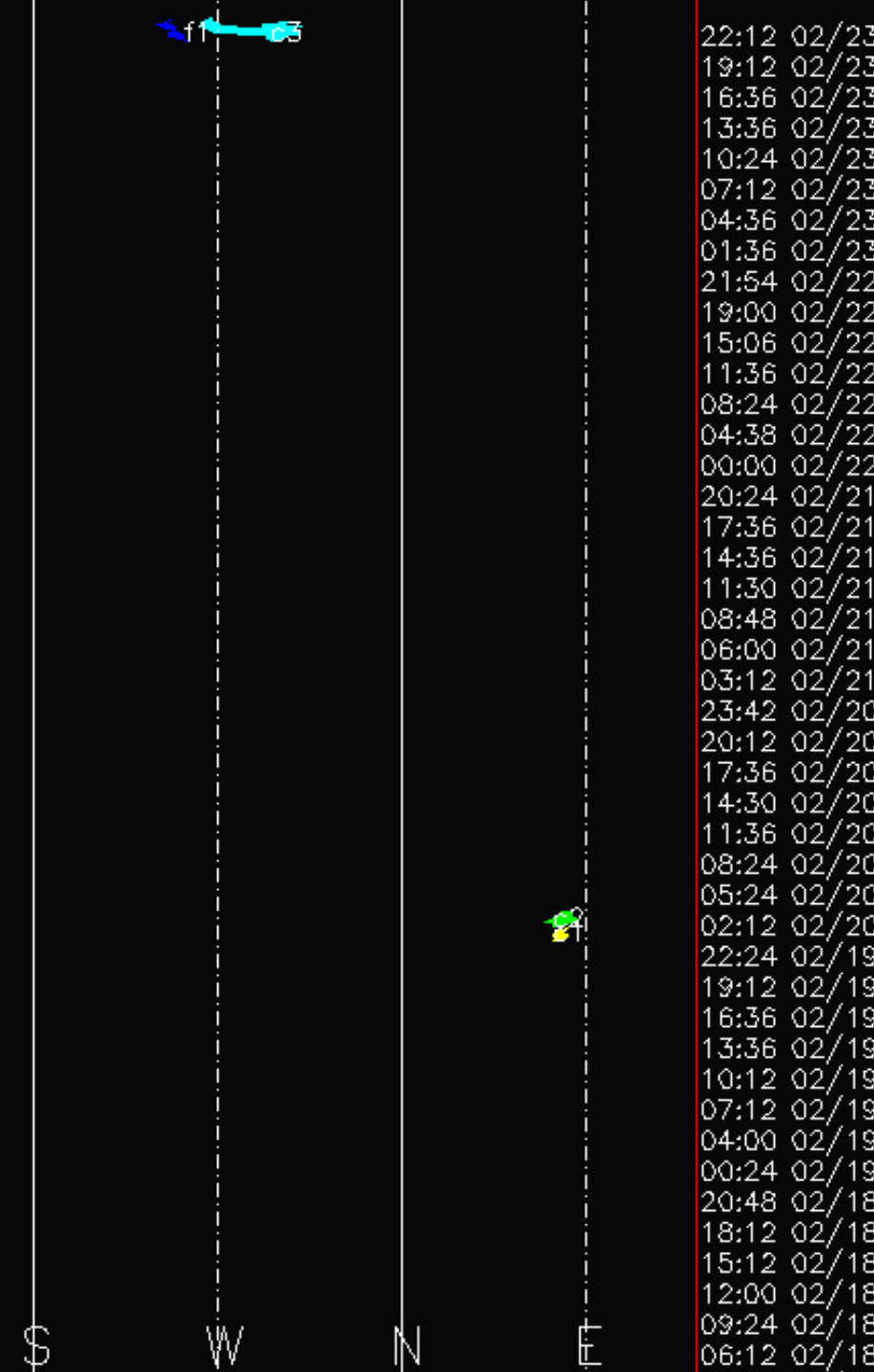
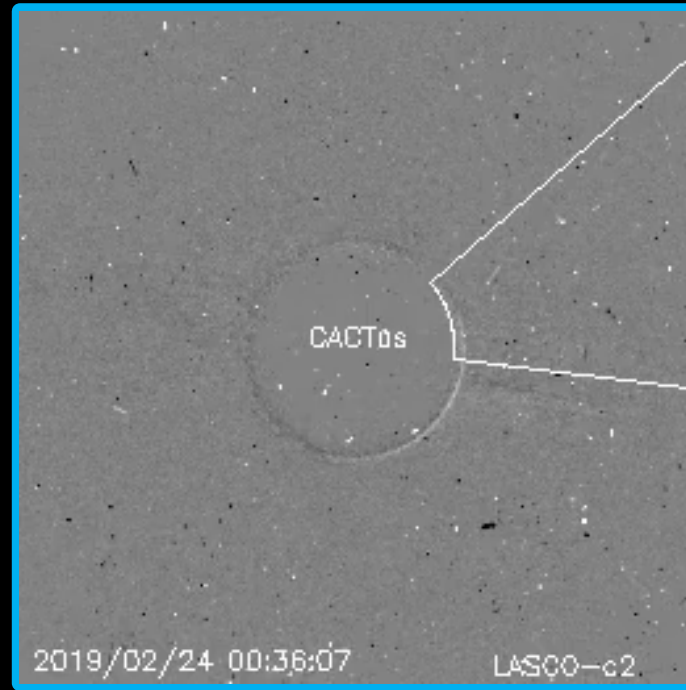
Filament eruption of 20 February (*PROBA2/SWAP & GONG H α Network*)



Filament eruption of 23 February (*SDO/AIA 193 & GONG H α Network*)

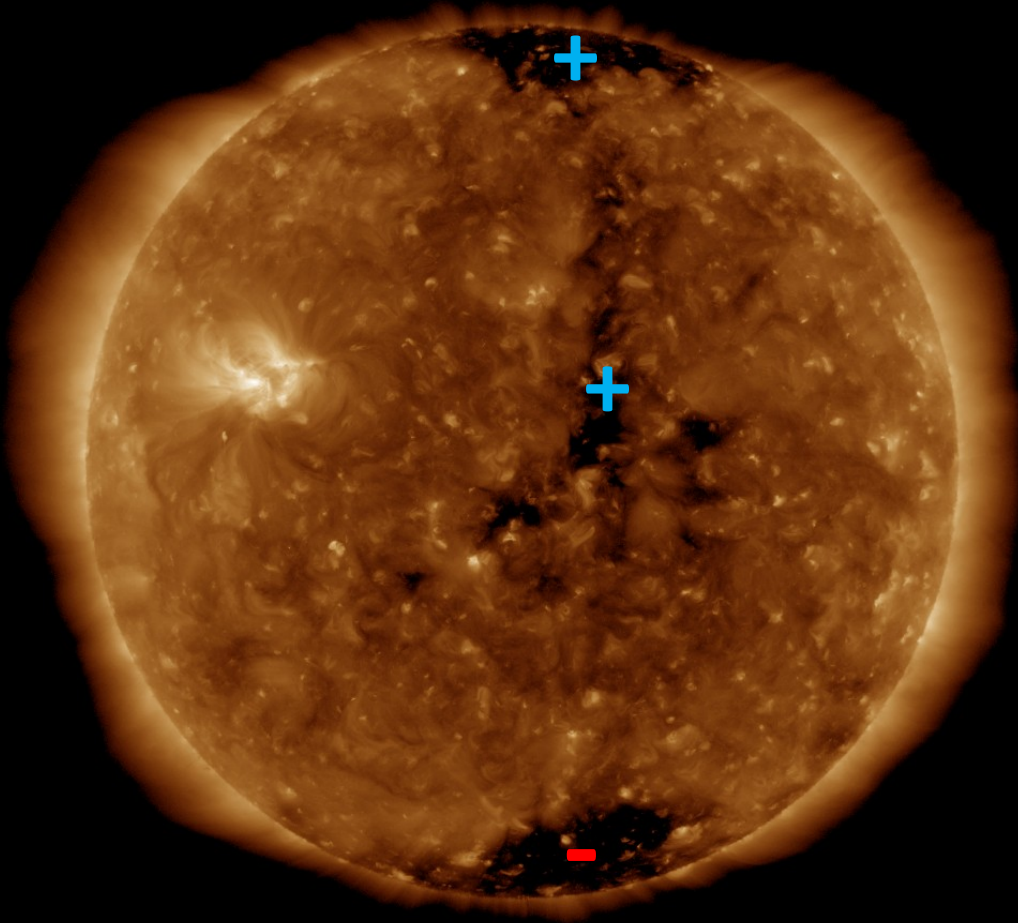


Coronal Mass Ejections

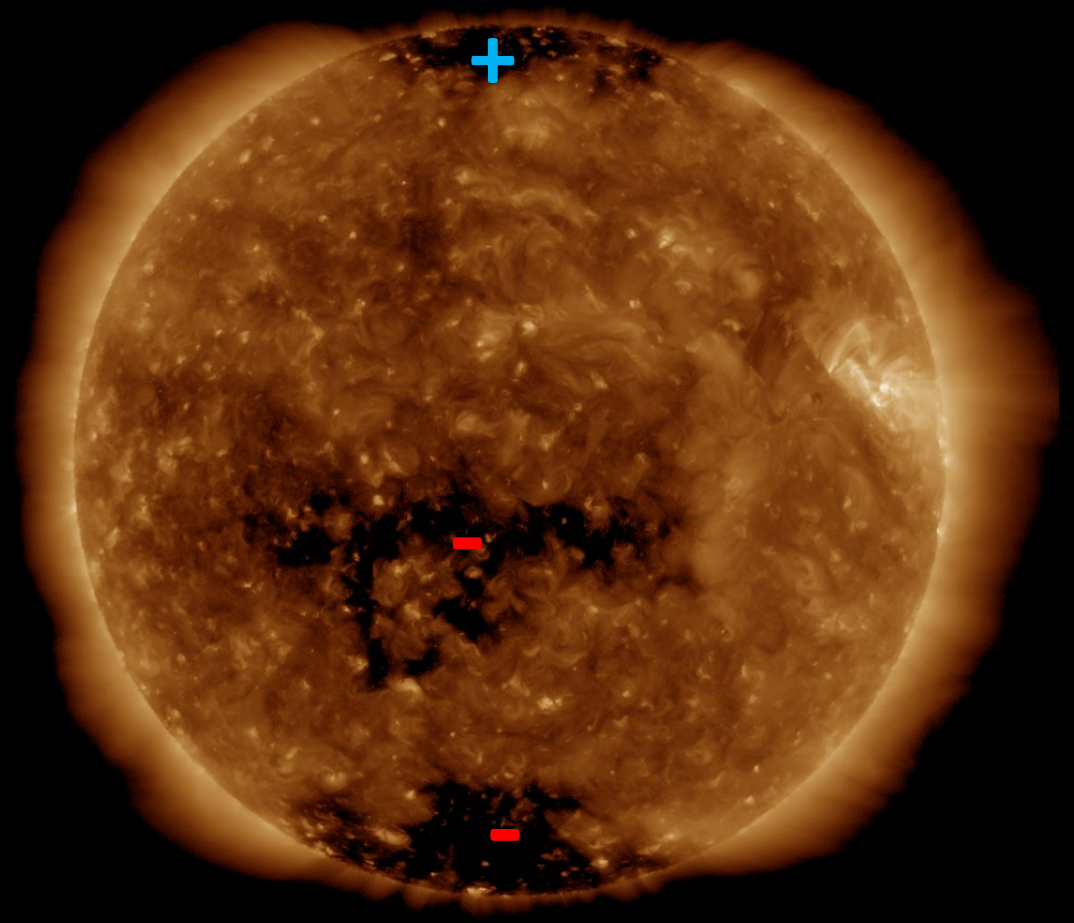


Solar active region & Coronal hole

SDO/AIA 19.3 nm 2019-02-17



SDO/AIA 19.3 nm 2019-02-24



SDO/AIA 193 2019-02-17 12:11:05 UT

SDO/AIA 193 2019-02-24 12:10:29 UT

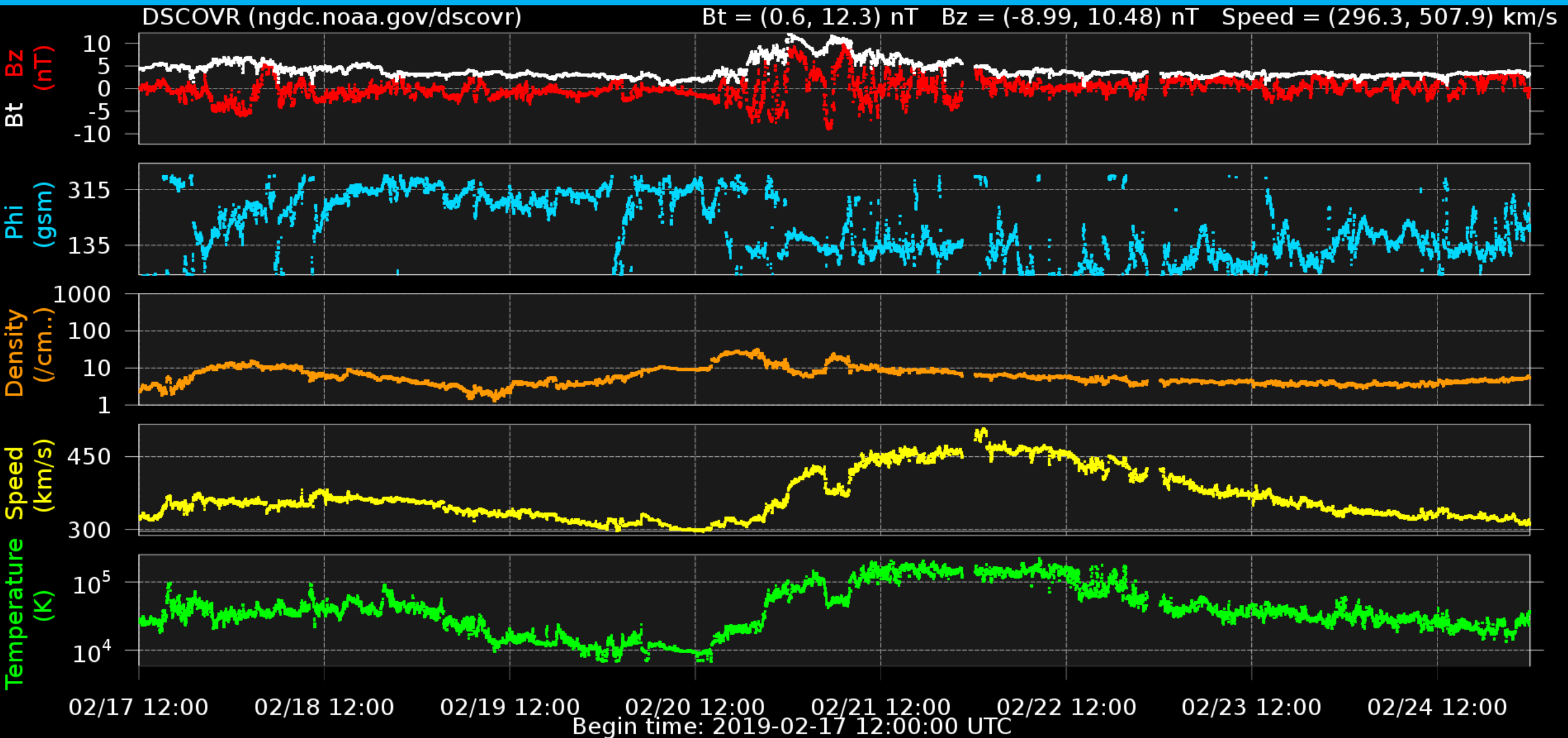
Solar Wind and Geomagnetic Activity



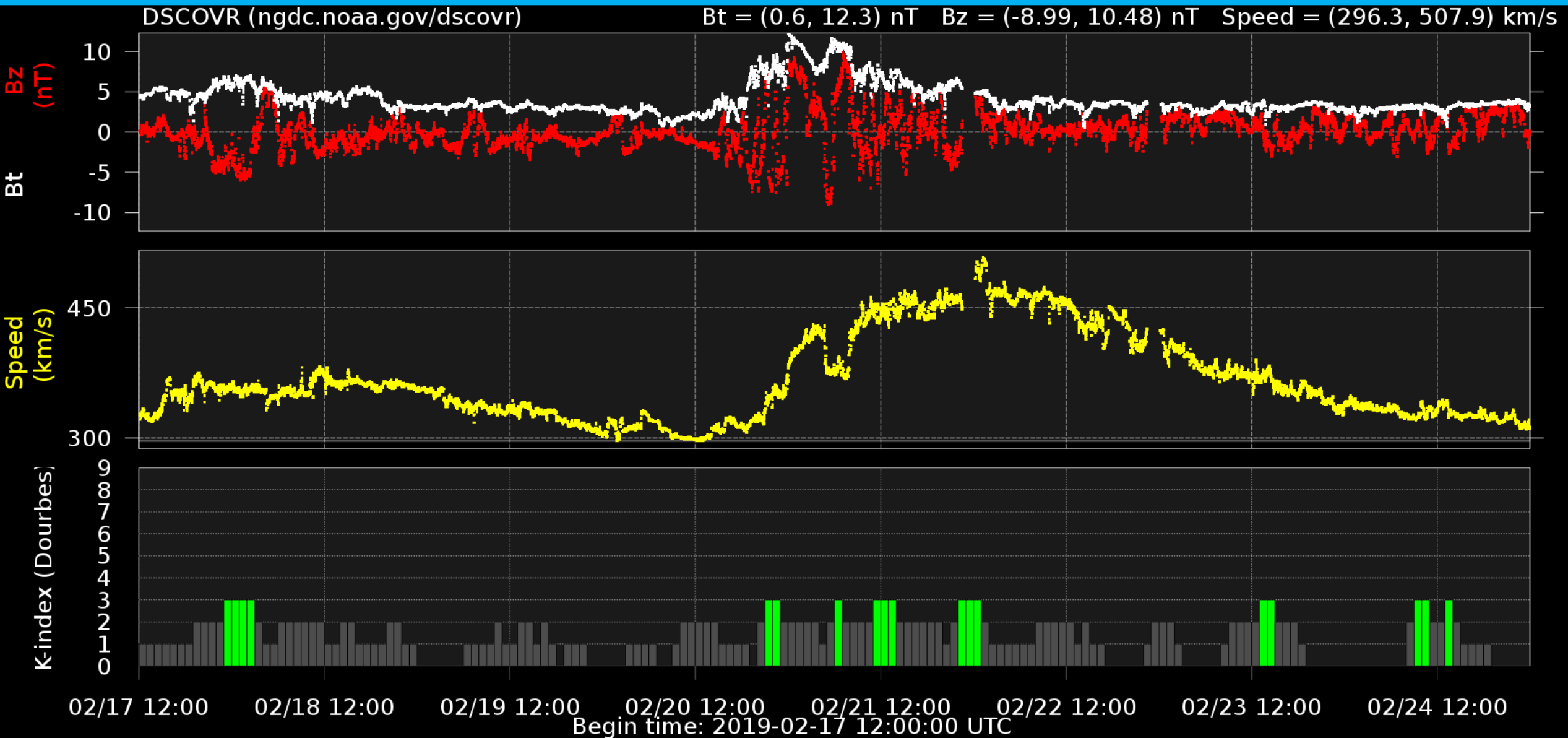
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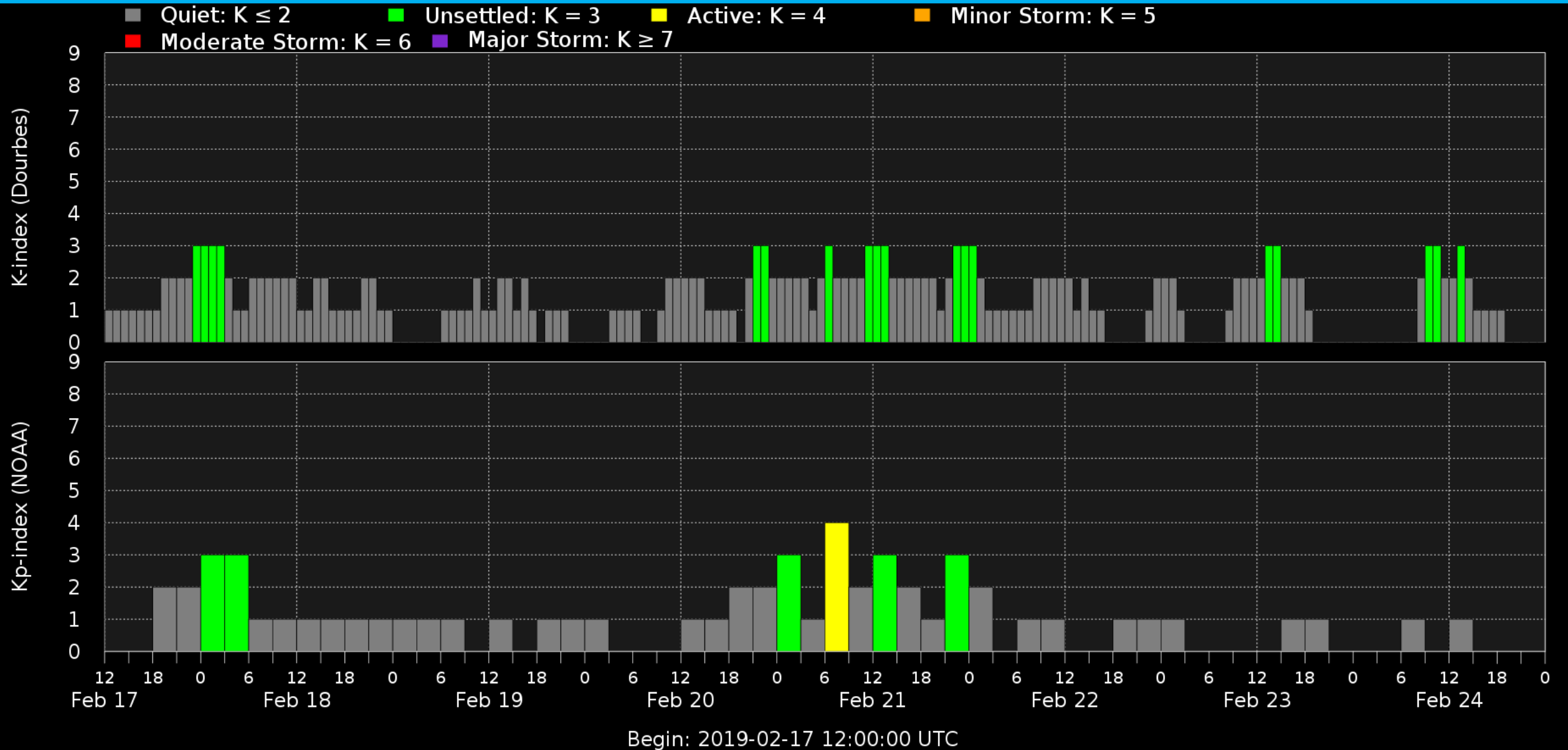
Solar wind parameters (DSCOVR data)



Solar wind parameters & K-index (DSCOVR/Dourbes)



Geomagnetic activity (K-indexes)



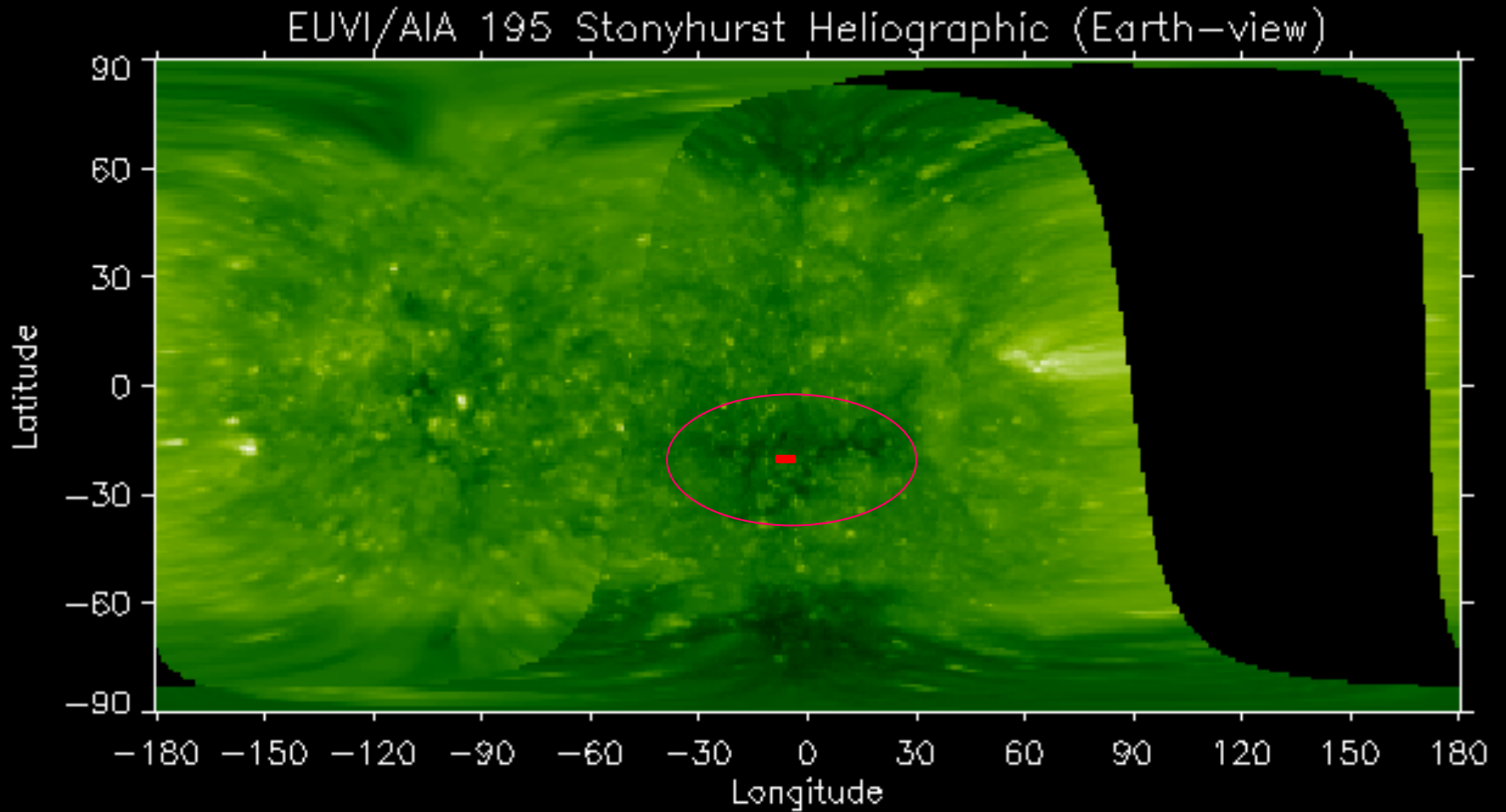
Outlook



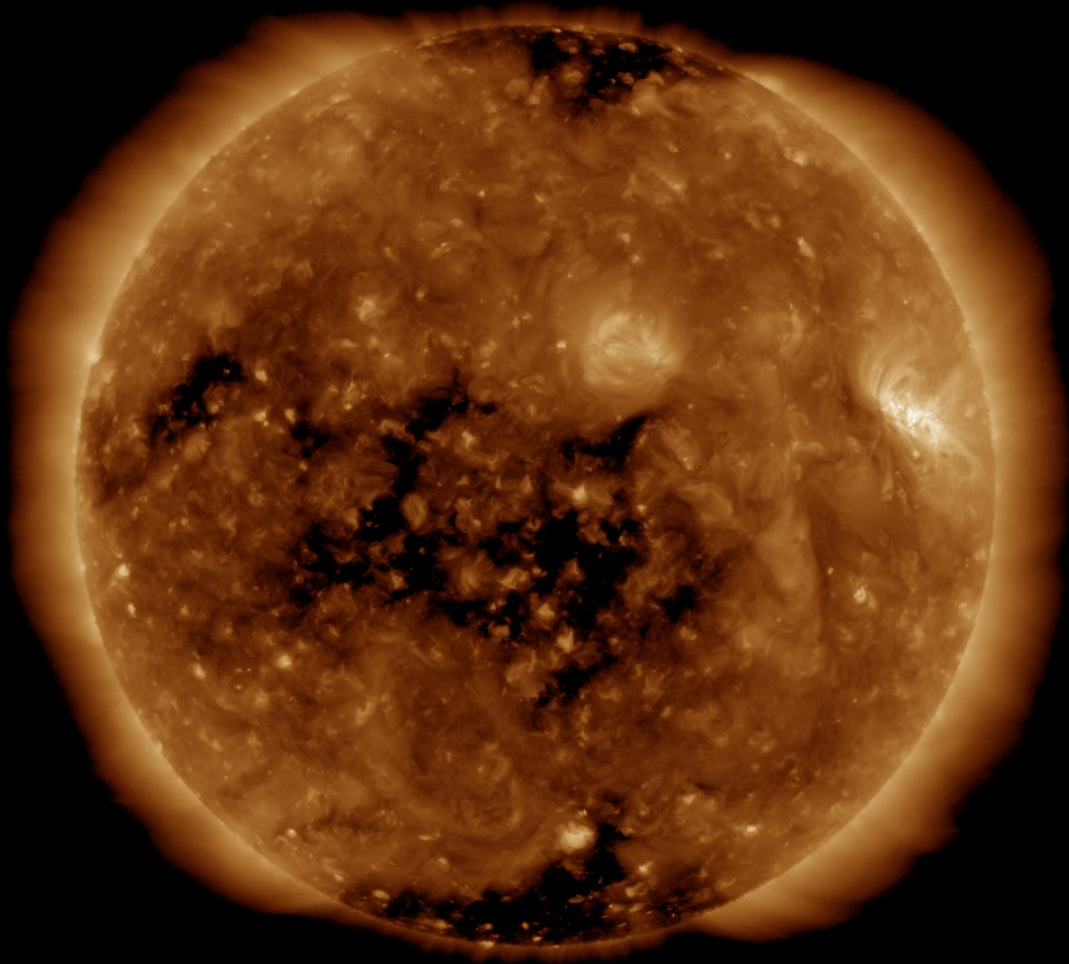
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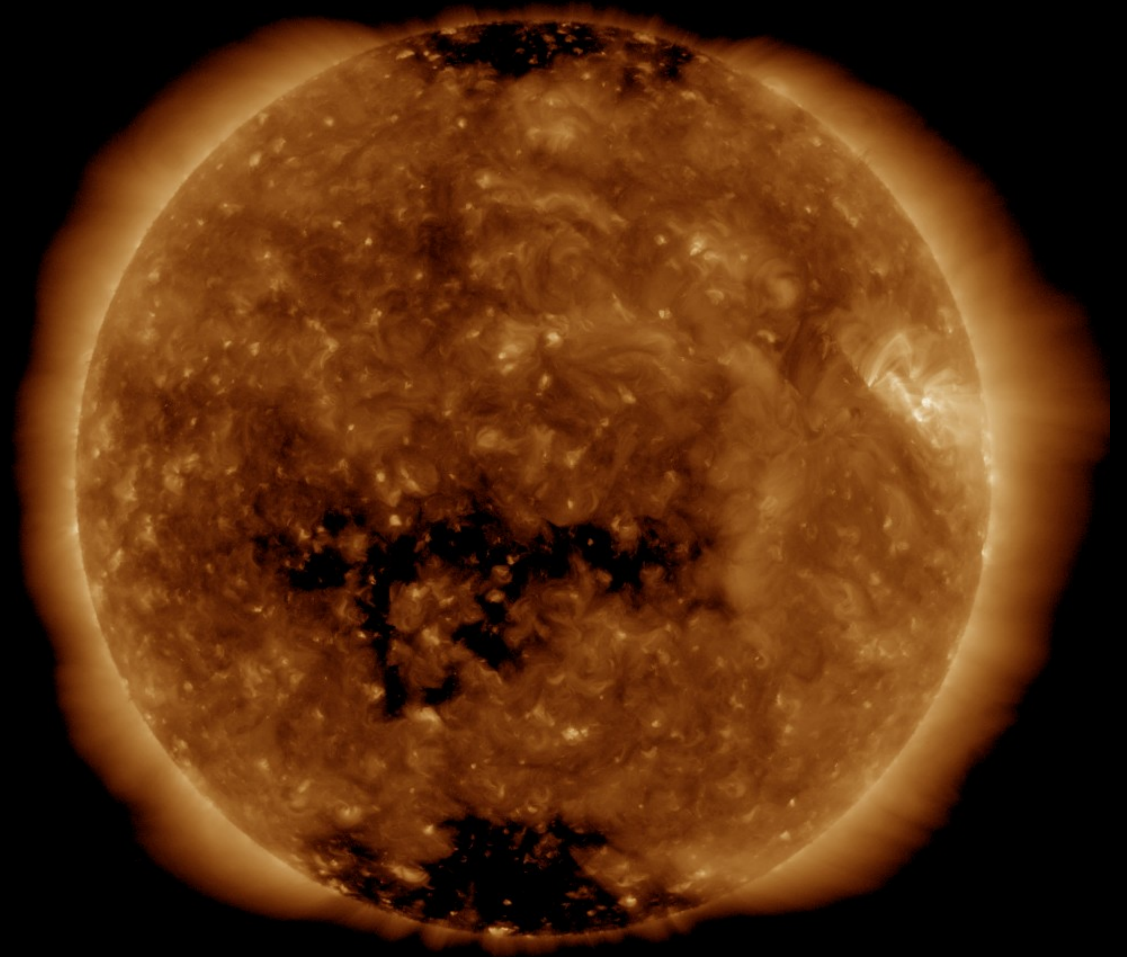
Outlook: Solar activity



Comparison Coronal Hole outlook

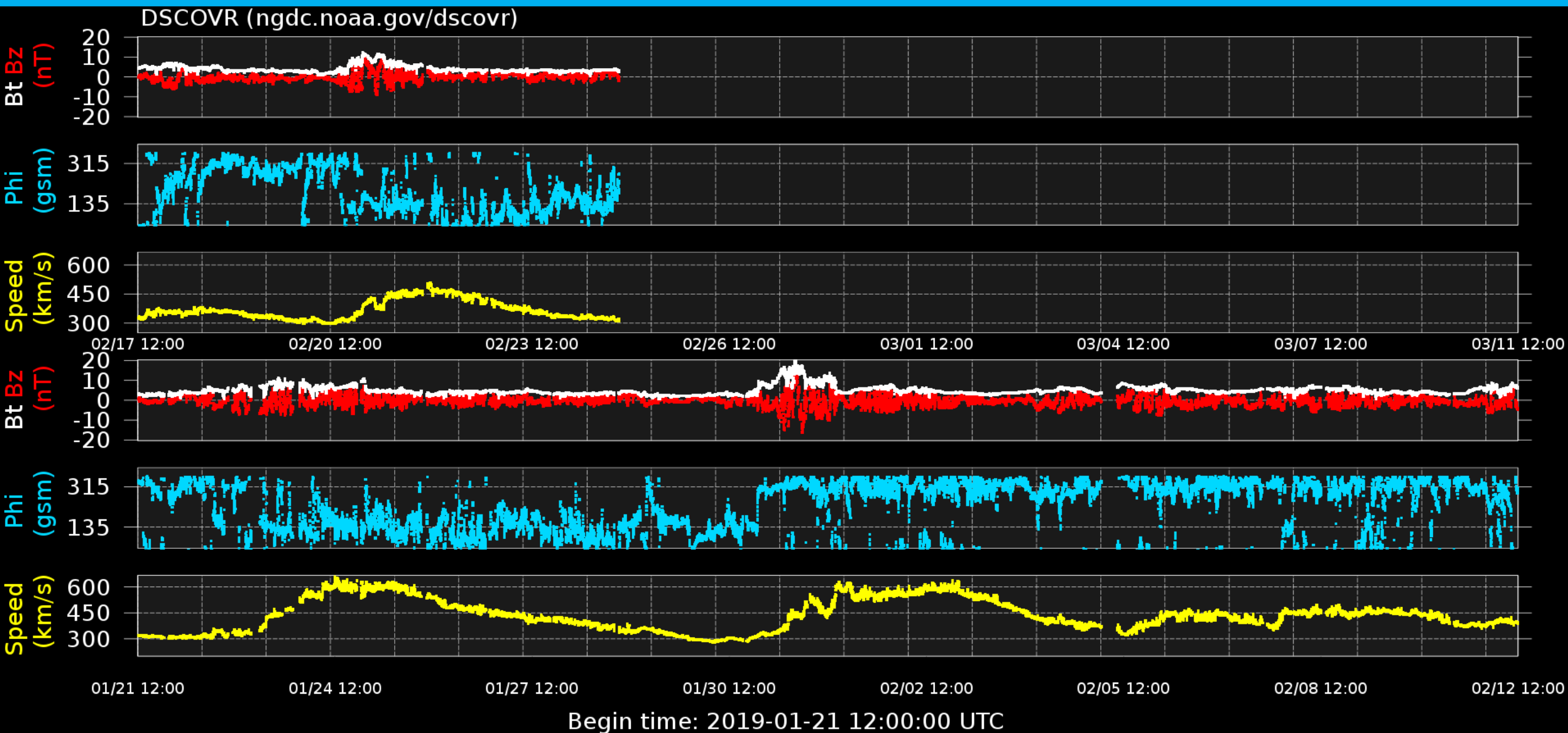


SDO/AIA 193 2019-01-28 12:11:05 UT

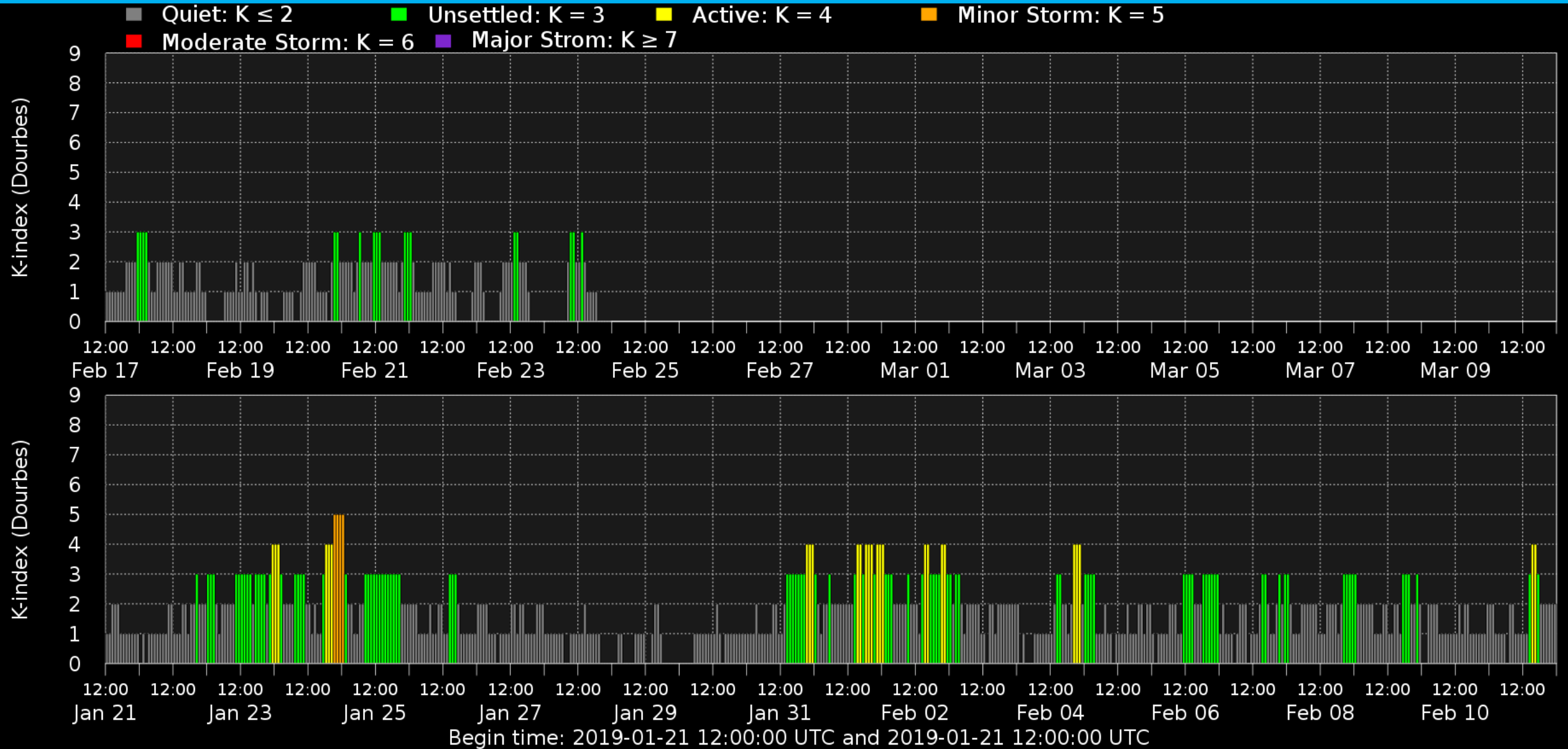


SDO/AIA 193 2019-02-24 12:10:29 UT

Outlook: Solar wind



Outlook: Geomagnetic activity



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See you at our next briefing!

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