

SIDC Space Weather briefing

19 March – 25 March 2018

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&
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Solar Influences
Data analysis Centre
www.sidc.be



Royal Observatory
of Belgium

Summary Report

Solar Activity:

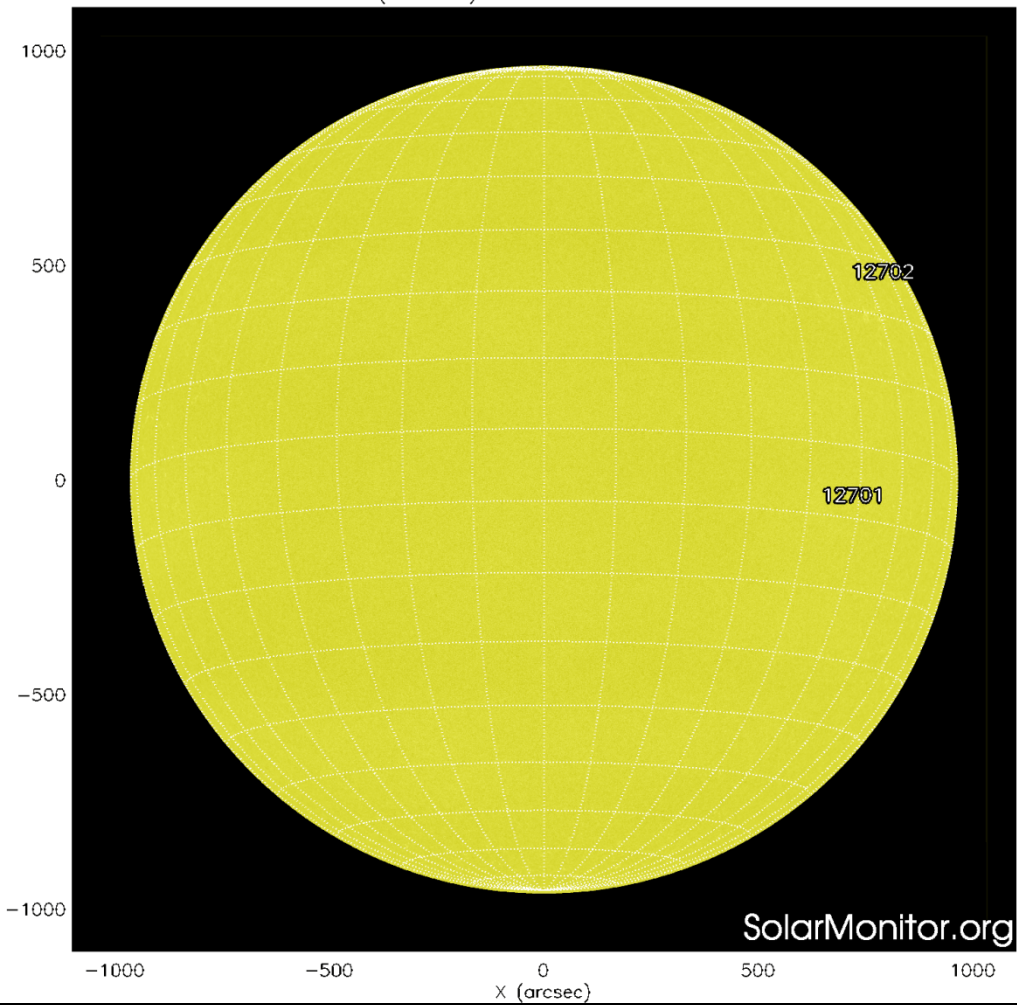
Active Regions	Spotless
Flaring	X-Ray flux below B-class level
Filaments	Some small filaments
CMEs	Two non-earth-directed CMEs
Proton Events	Proton flux at background level

Solar wind and Geomagnetic conditions:

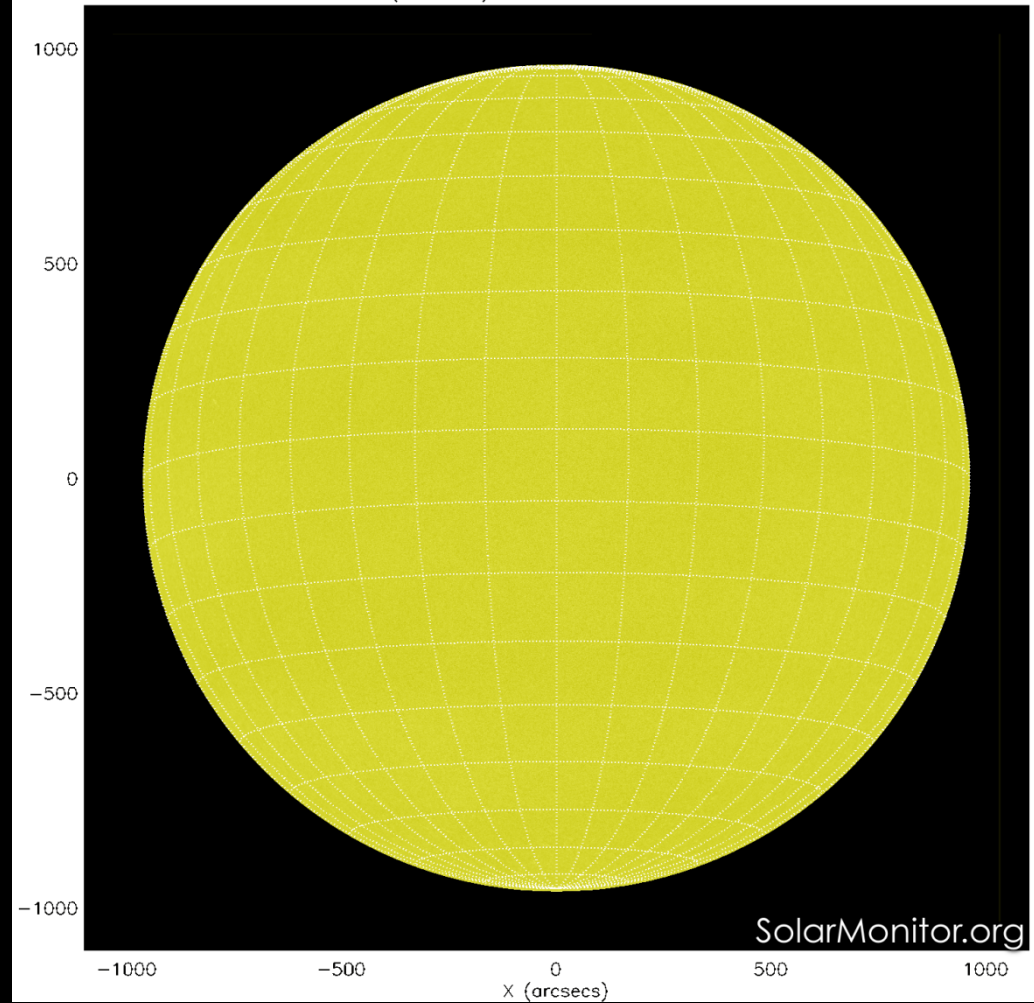
ICMEs	None
Coronal Hole	Some small & diffuse CHs; One polar CH extension
SW conditions	Variable between 320 and 610 km/s
Kp index	Mostly quiet to active conditions

Solar active region evolution

SDO HMI (6173 Å) 18-Mar-2018 19:46:35.600

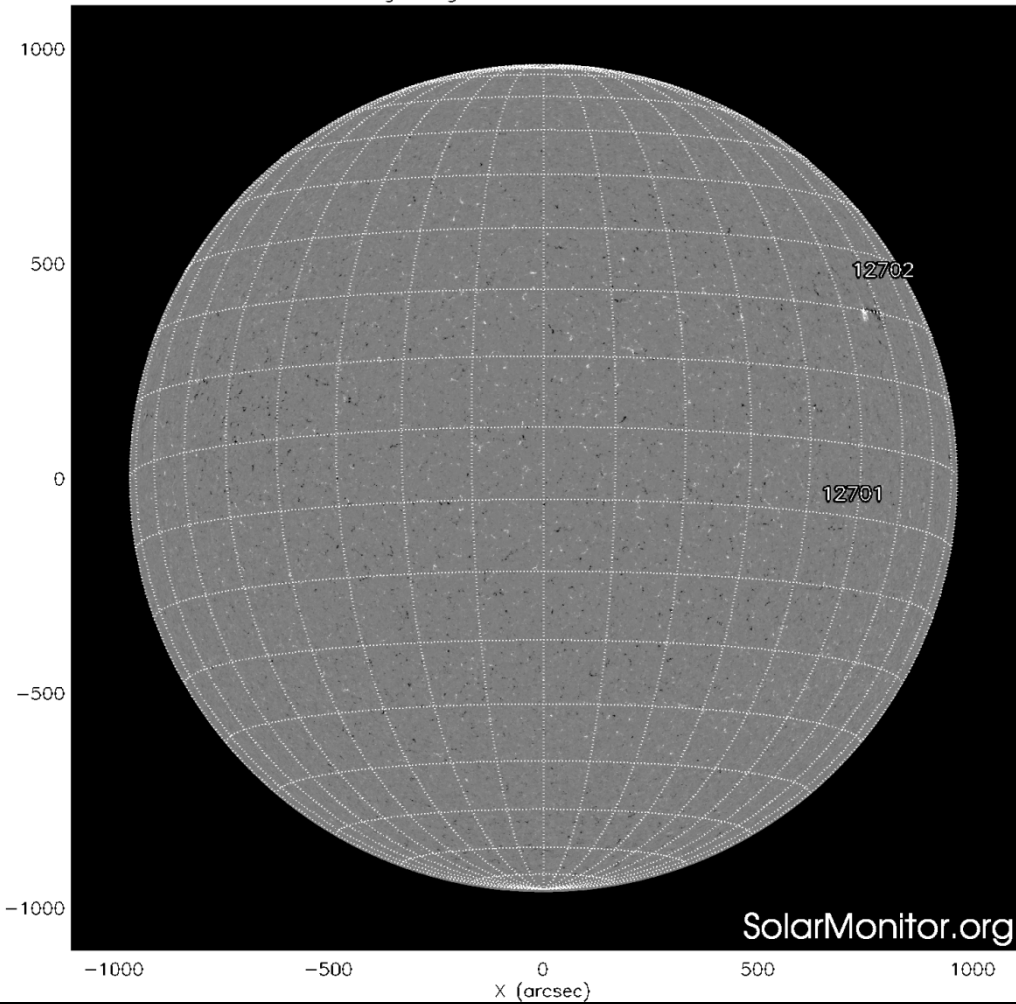


SDO HMI (6173 Å) 25-Mar-2018 10:46:36.700

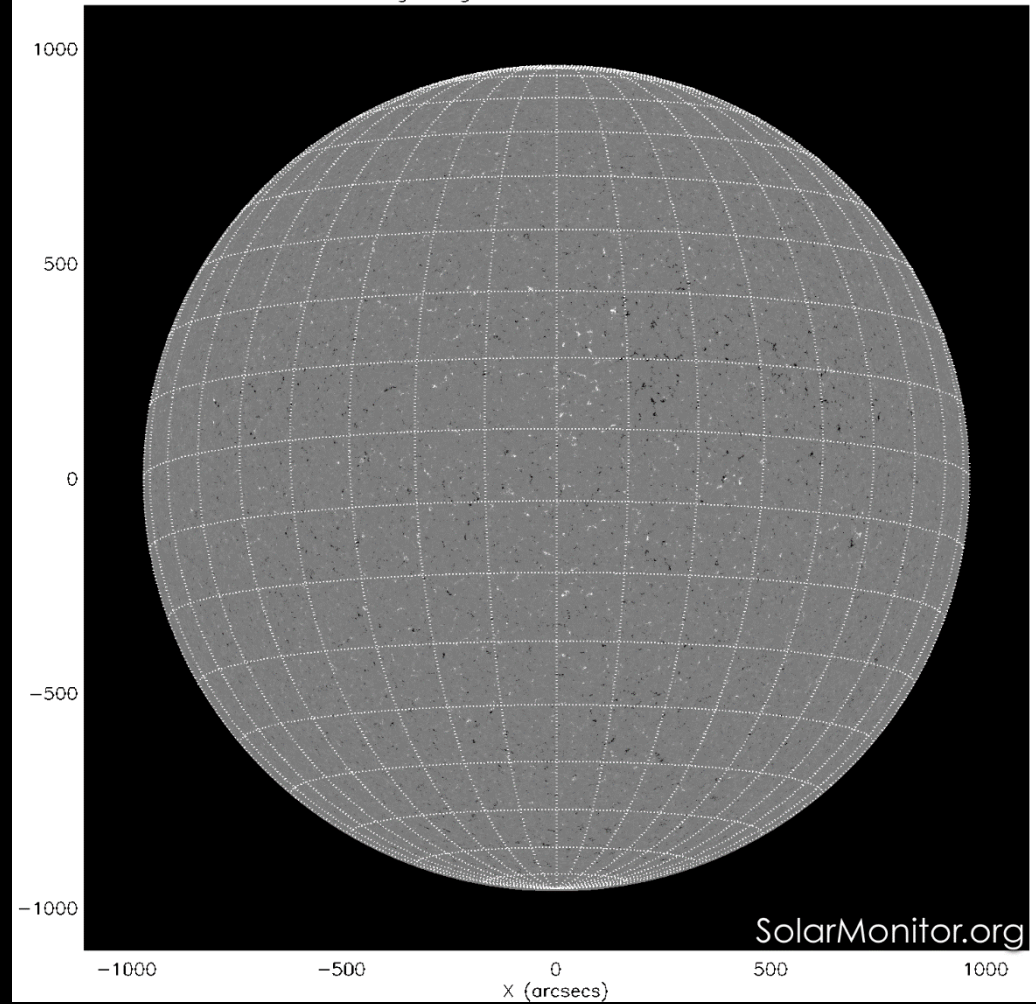


Solar active region evolution

SDO HMI Magnetogram 18-Mar-2018 19:46:35.600

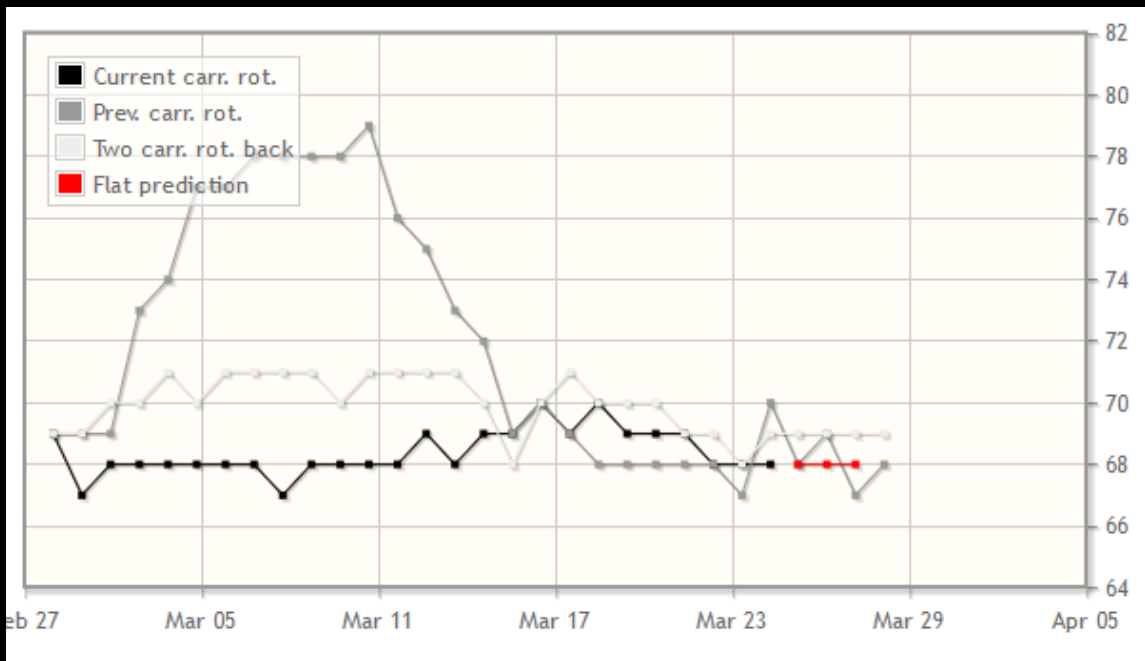


SDO HMI Magnetogram 25-Mar-2018 10:46:36.700



Evolution of 10.7cm Radio Flux

Predicted and observed 10.7cm Radio flux (sfu)

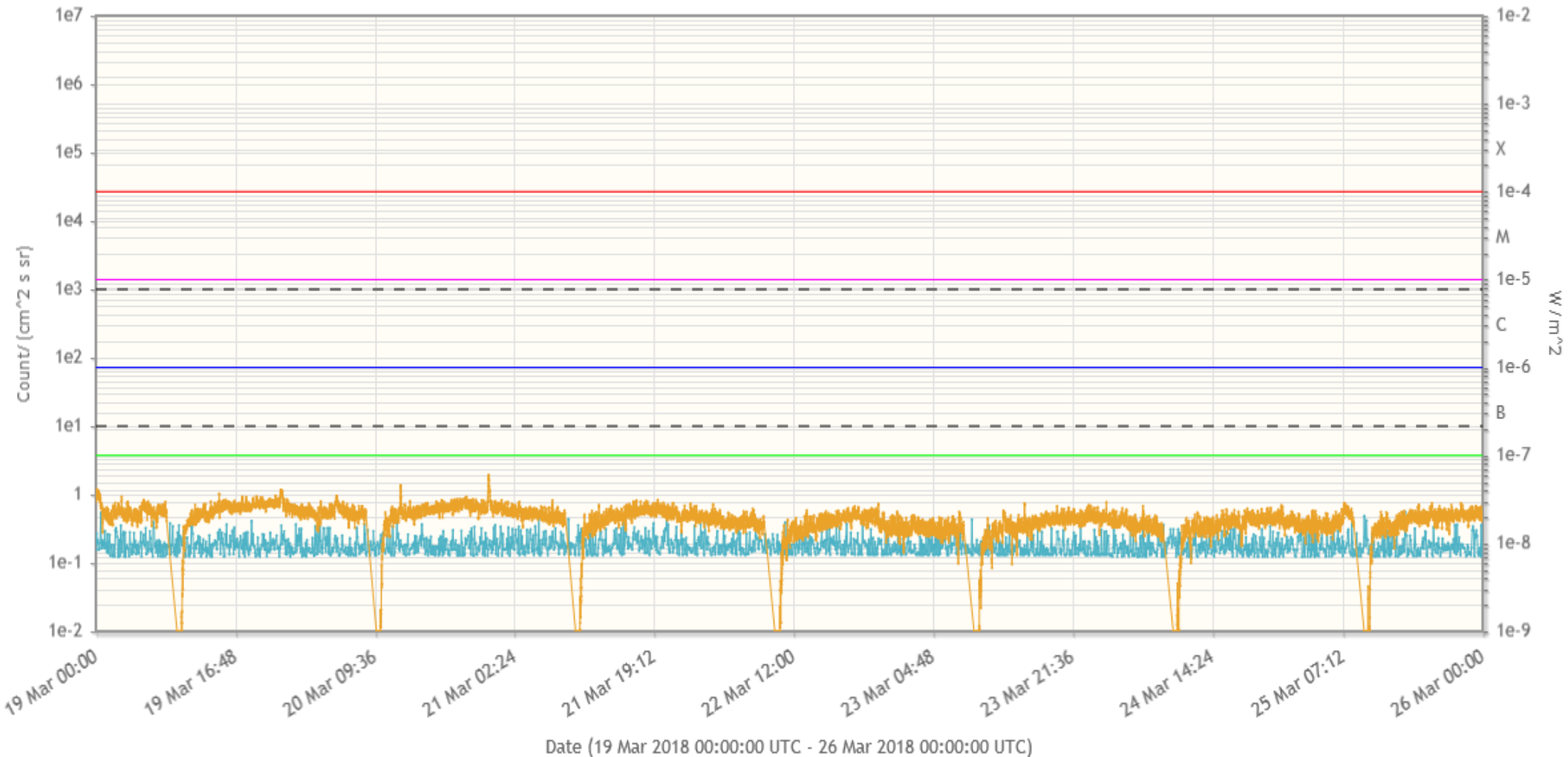


Issue time (12:30UT)	Pred.	Obs.
2018-03-19	68	70
2018-03-20	69	69
2018-03-21	68	69
2018-03-22	69	69
2018-03-23	68	68
2018-03-24	68	68
2018-03-25	67	68

Solar X-ray flux and ≥ 10 MeV proton flux (GOES)

www.staff.oma.be

■ Protons/Electrons - GOES Particles at > 10 Mev (quicklook) - (raw - 5 minute data)
■ X-Ray - GOES X-Ray flux 0.1-0.8 nm (quicklook) - (raw - 1 minute data)

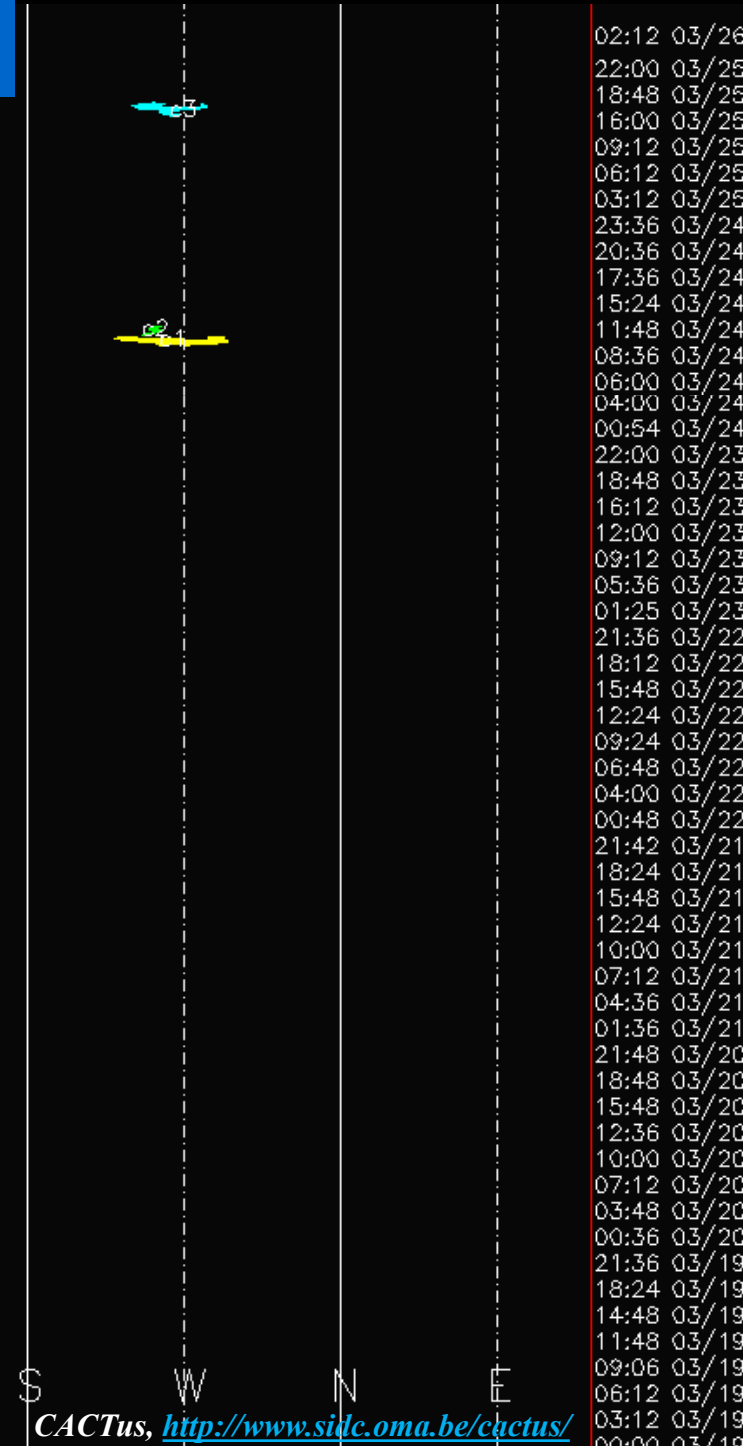
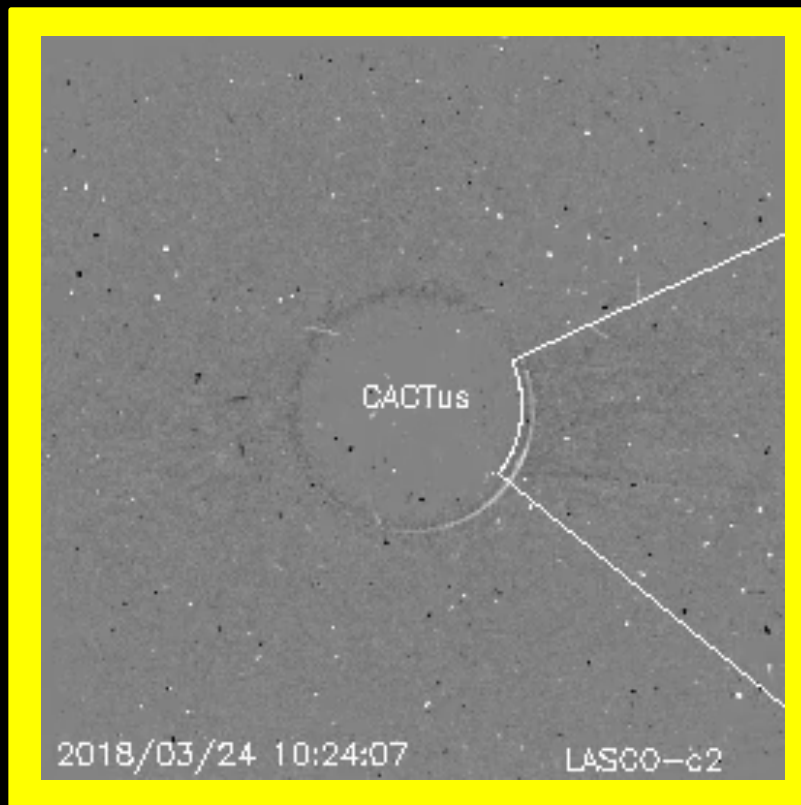


Evolution of Flare probability

Probability of full disk x-ray flare occurrence over next 24h

Issue time (12:30UT)	P(C)	P(M)	P(X)	#C obs.	#M obs.	#X obs.
2018-03-19	0.05	0.01	0.01	0	0	0
2018-03-20	0.01	0.01	0.01	0	0	0
2018-03-21	0.01	0.01	0.01	0	0	0
2018-03-22	0.01	0.01	0.01	0	0	0
2018-03-23	0.01	0.01	0.01	0	0	0
2018-03-24	0.01	0.01	0.01	0	0	0
2018-03-25	0.01	0.01	0.01	0	0	0

CMEs

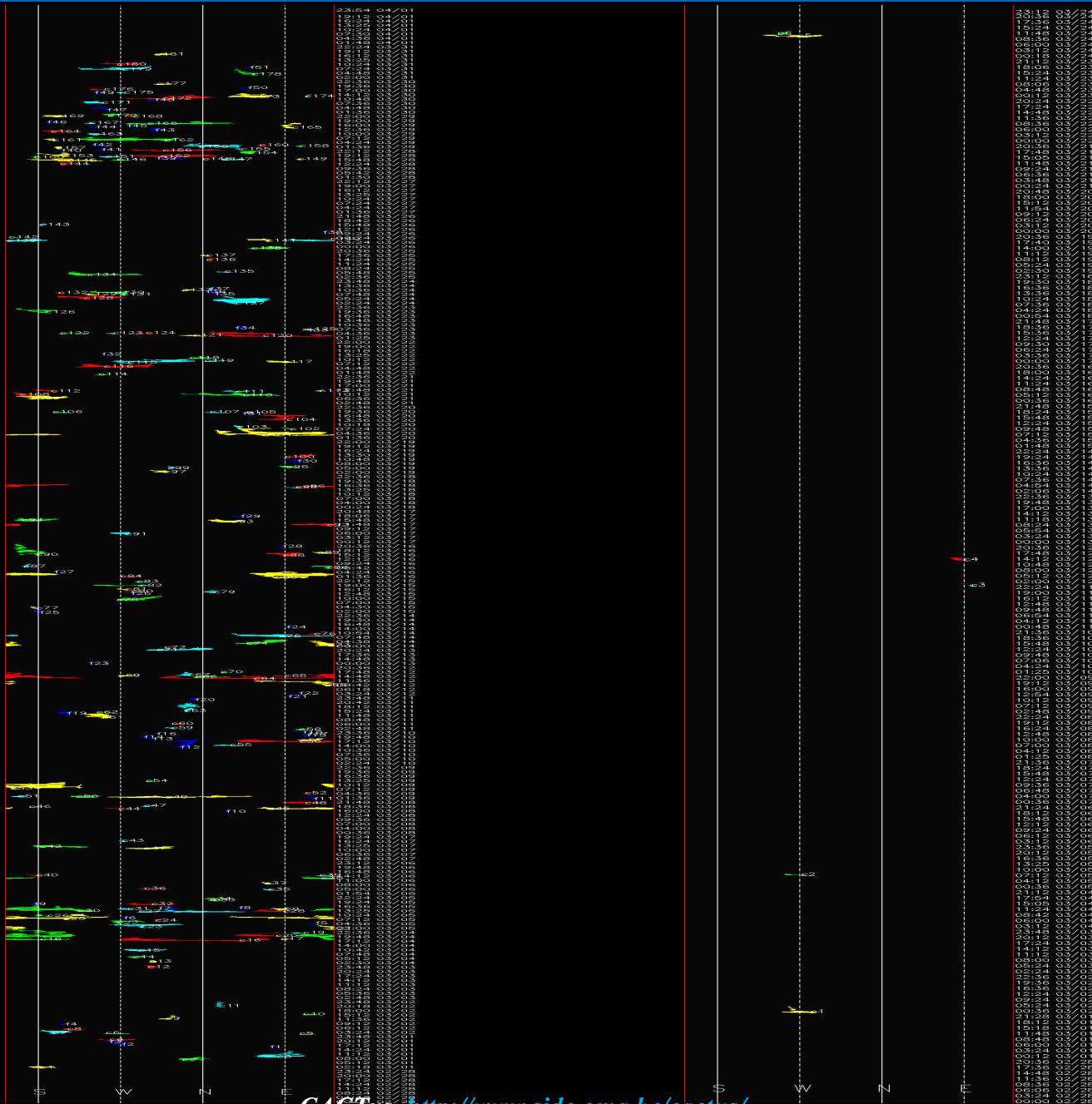


Comparison #CMEs in SC24

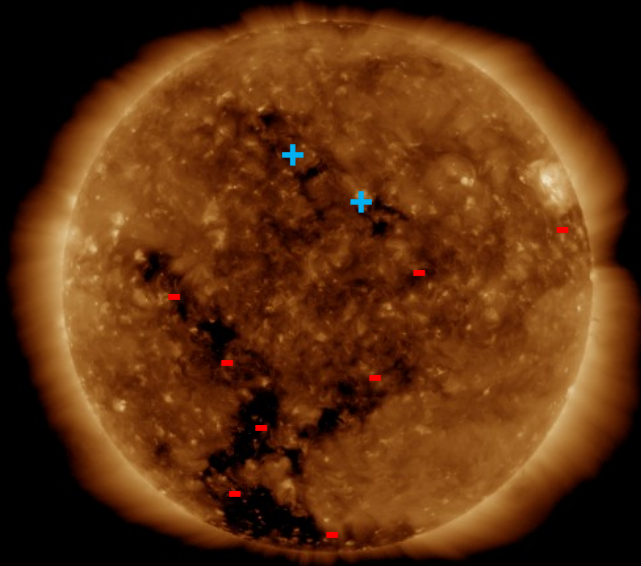
March 2014

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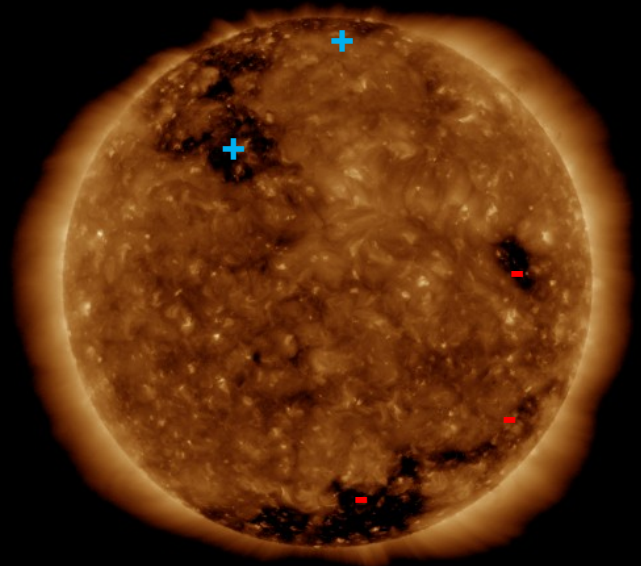
March 2018



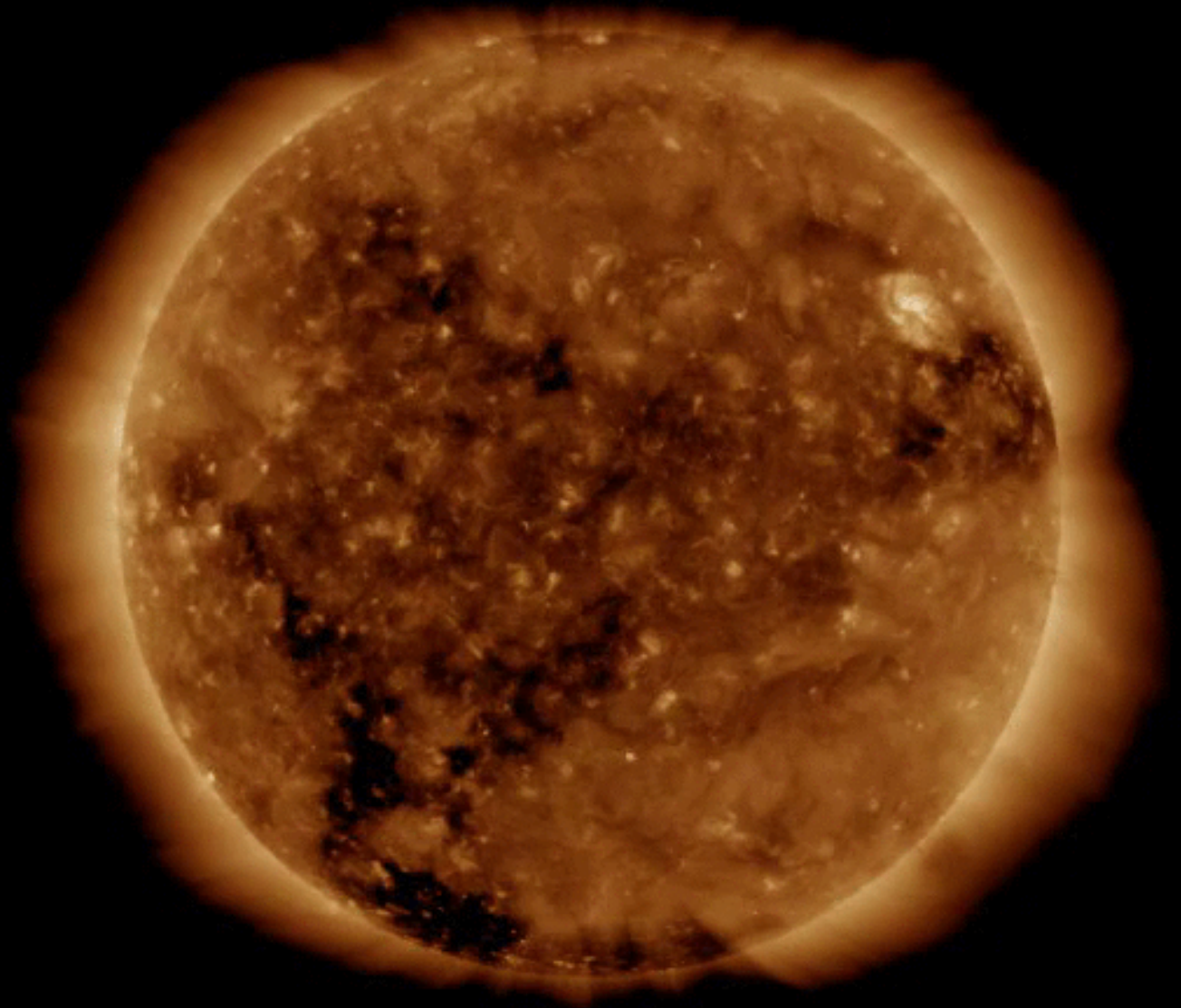
Coronal holes



SDO/AIA 193 2018-03-19 04:55:53 UT

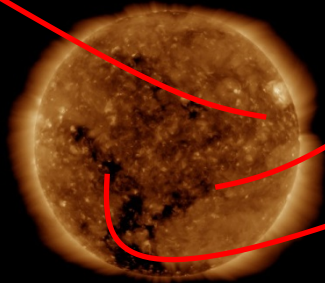
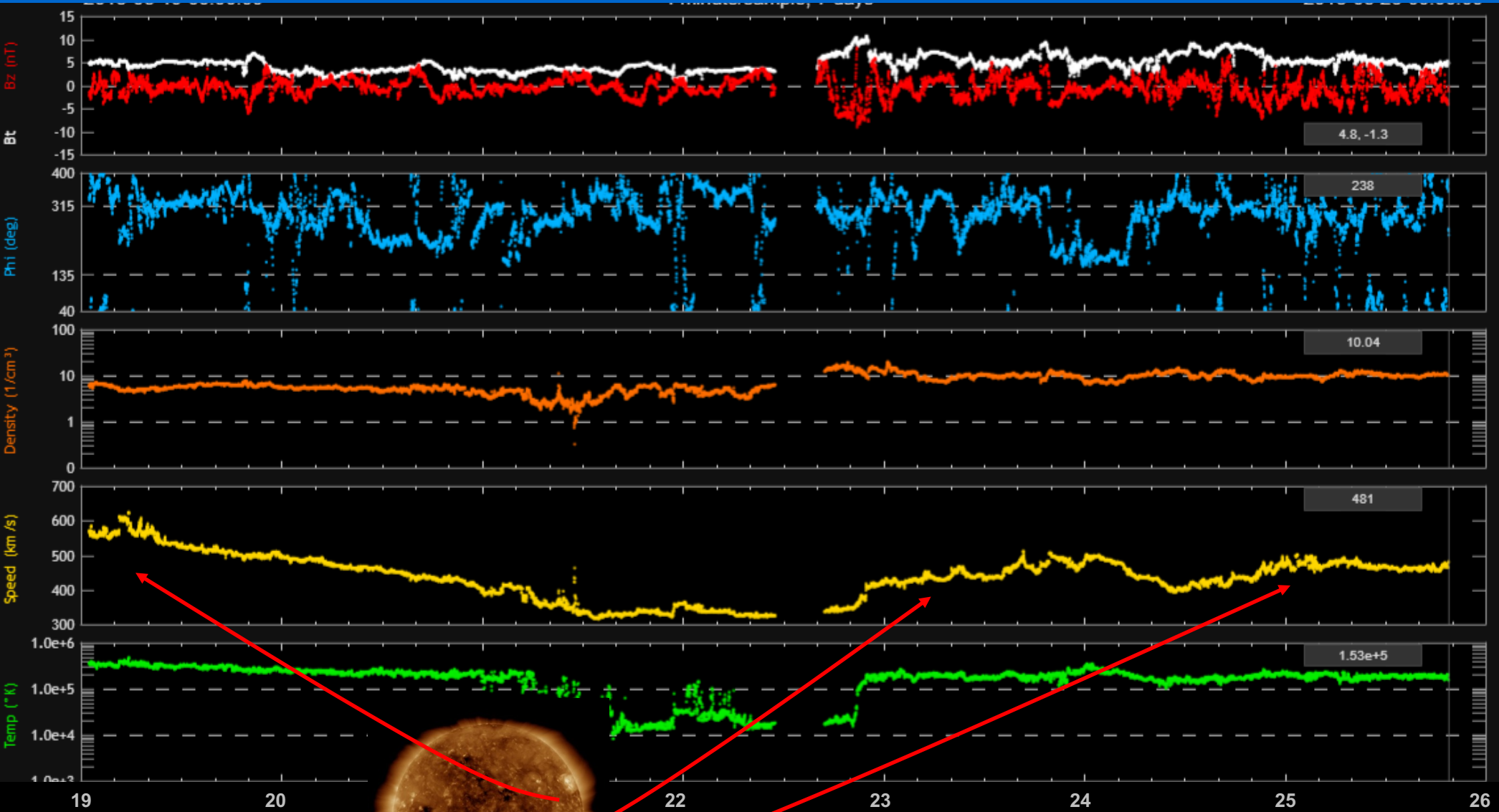


SDO/AIA 193 2018-03-25 04:55:41 UT



SDO/AIA 193 2018-03-18 00:56:05 UT

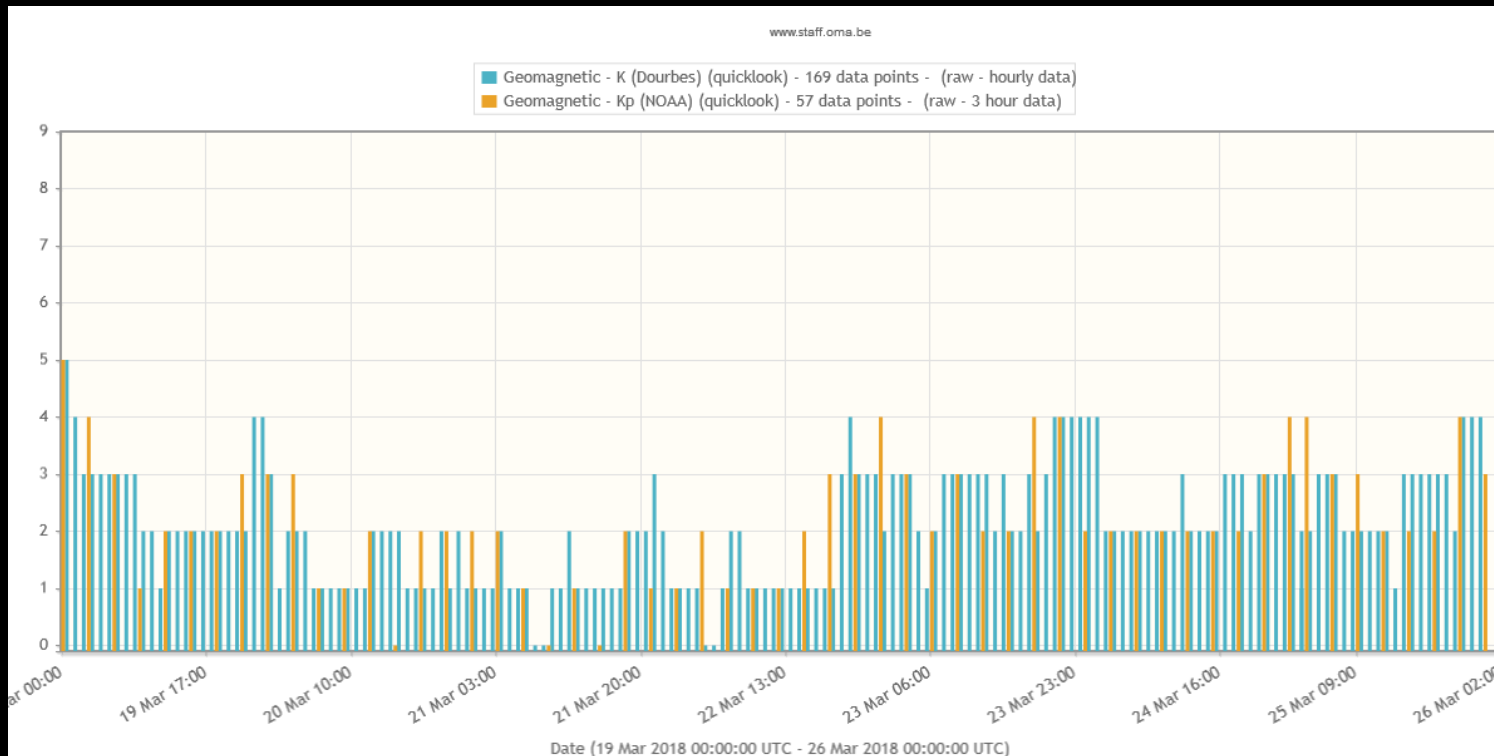
Solar wind



DSCOVR, <http://www.swpc.noaa.gov/products/real-time-solar-wind>

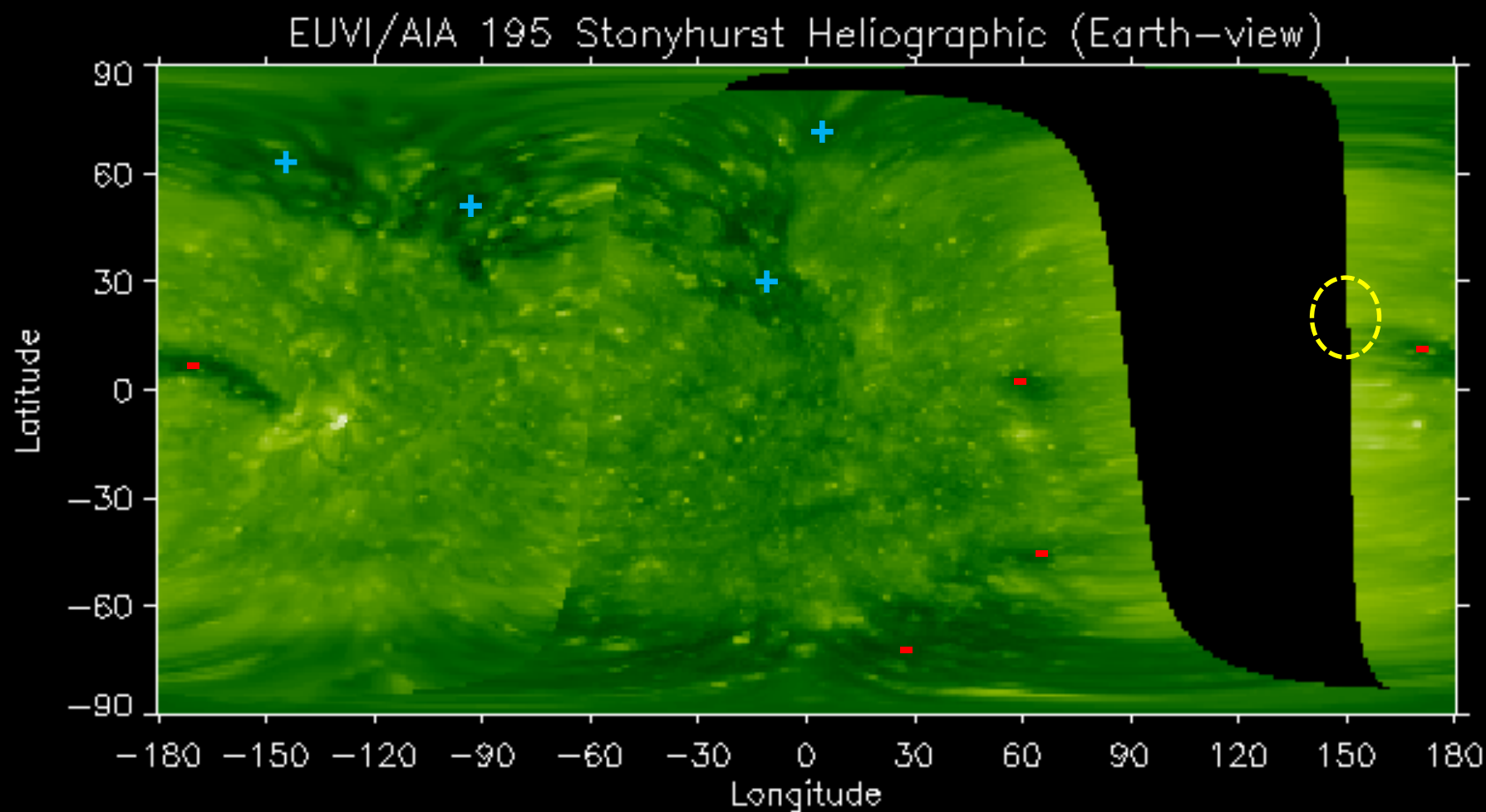
Geomagnetism

Predicted and observed K index Dourbes



Issue time (12:30UT)	Pred. K _≤	Obs. K
2018-03-19	4	4
2018-03-20	4	3
2018-03-21	3	3
2018-03-22	3	4
2018-03-23	5	4
2018-03-24	5	3
2018-03-25	4	4

Outlook



Observation date: 2018/03/26 06:05:30

SIDC Space Weather briefing

See you at our next briefing!

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