

SOL (Cecatto)

Summary – Week March 04 – March 11

03/04 – No M/X flare; Fast (≤ 450 km/s) wind stream; 5 CME can have component toward the Earth;

03/05 – No M/X flare; Fast (≤ 450 km/s) wind stream; 11 CME can have component toward the Earth;

03/06 – No M/X flare; Fast (≤ 500 km/s) wind stream; 4 CME can have component toward the Earth;

03/07 – No M/X flare; Fast (≤ 450 km/s) wind stream; 4 CME can have component toward the Earth;

03/08 – M1.3 flare; ; Fast (≤ 550 km/s) wind stream; 6 CME can have component toward the Earth;

03/09 – No M/X flare; ; Fast (≤ 500 km/s) wind stream; 9 CME can have component toward the Earth;

03/10 – M7.4 flare; ; Fast (≤ 500 km/s) wind stream; 9 CME can have component toward the Earth;

03/11 – No M/X flare; No fast wind stream; 1 CME can have component toward the Earth

Prev.: No fast wind stream for today and next 1 day; for while low (25% M, 05% X) probability of M / X flares next 2 days; also, occasionally some other CME can present a component toward the Earth.

Resumo – Semana de 04 a 11 de Março

04/03 – Sem "flare" M/X; Vento rápido (< 450 km/s); 5 CME podem ter uma componente para a Terra;

05/03 – Sem "flare" M/X; Vento rápido (< 450 km/s)); 11 CME podem ter uma componente para a Terra;

06/03 – Sem "flare" M/X; Vento rápido (< 500 km/s); 4 CME podem ter uma componente para a Terra;

07/03 – Sem "flare" M/X; Vento rápido (< 450 km/s); 4 CME podem ter uma componente para a Terra;

08/03 – "Flare" M1.3; Vento rápido (< 550 km/s); 6 CME podem ter uma componente para a Terra;

09/03 – Sem "flare" M/X; Vento rápido (< 500 km/s); 9 CME podem ter uma componente para a Terra;

10/03 – "Flare" M7.4; Vento rápido (< 500 km/s); 9 CME podem ter uma componente para a Terra;

11/03 – Sem "flare" M/X; Sem vento rápido; 1 CME podem ter uma componente para a Terra

Prev.: Sem vento rápido para hoje e amanhã; probabilidade de “flares” M/X (25% M, 05% X) nos próximos 02 dias; eventualmente alguma outra CME pode apresentar componente dirigida para a Terra.



Solar - WSA-ENLIL

EMC (<https://ccmc.gsfc.nasa.gov/donki/>):

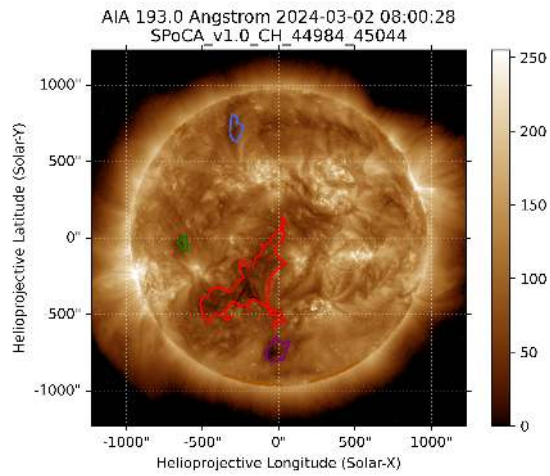
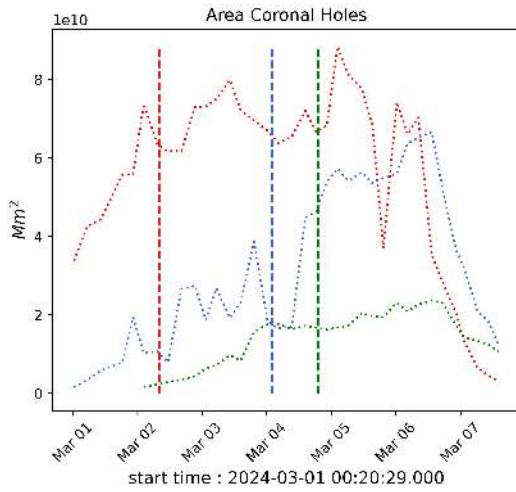
WSA-ENLIL(CME 2024-03-05 21:24:00 UT)

The simulation results indicate that the flank of CME will reach the DSCOVR mission between 2024-03-08 15:00:00 UT and 2024-03-09 05:00:00 UT.

WSA-ENLIL(CME 2024-03-10 12:48:00 UT)

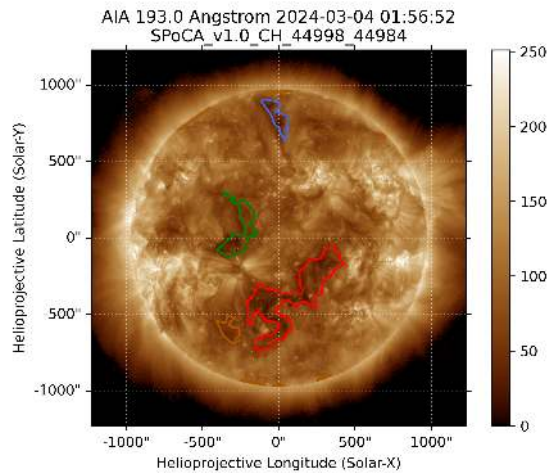
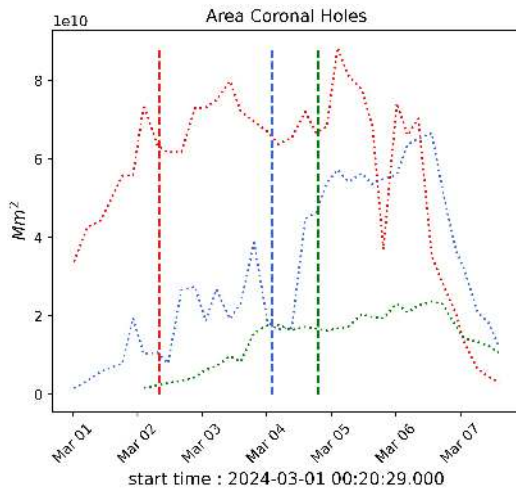
The simulation results indicate that the flank of CME will reach the DSCOVR mission between 2024-03-13 22:00:00 UT and 2024-03-14 12:00:00 UT.

Solar - Coronal holes Spatial Possibilistic Clustering Algorithm (SPoCAS):



(a) The solid black line depicts the products of the sum of areas for each detection interval performed by SPOCA between March 02 and 07, 2024.

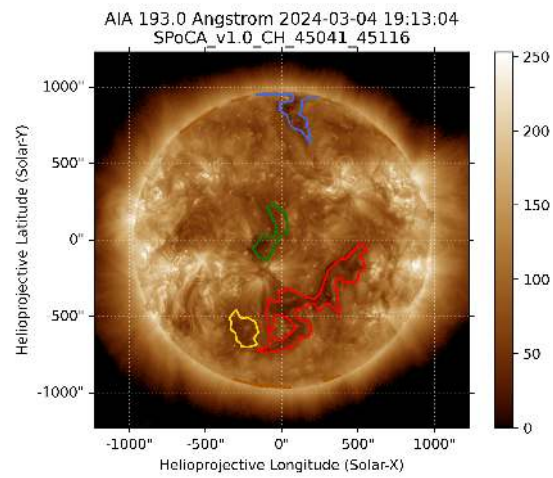
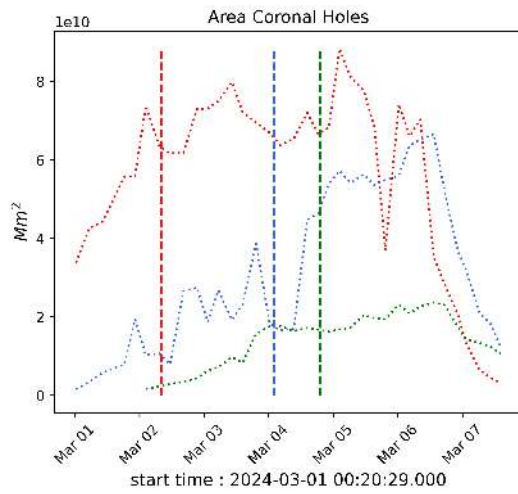
(b) Above the 193 Å image of the Sun are highlighted coronal holes observed by SPOCA around 08:00 UT on March 02, 2024 (red dot line).



(a) The solid black line depicts the products of the sum of areas for each detection interval performed by SPOCA between March 02 and 07, 2024.

(b) Above the 193 Å image of the Sun are highlighted coronal holes observed by SPOCA around 01:56 UT on March 04, 2024 (blue dot line).

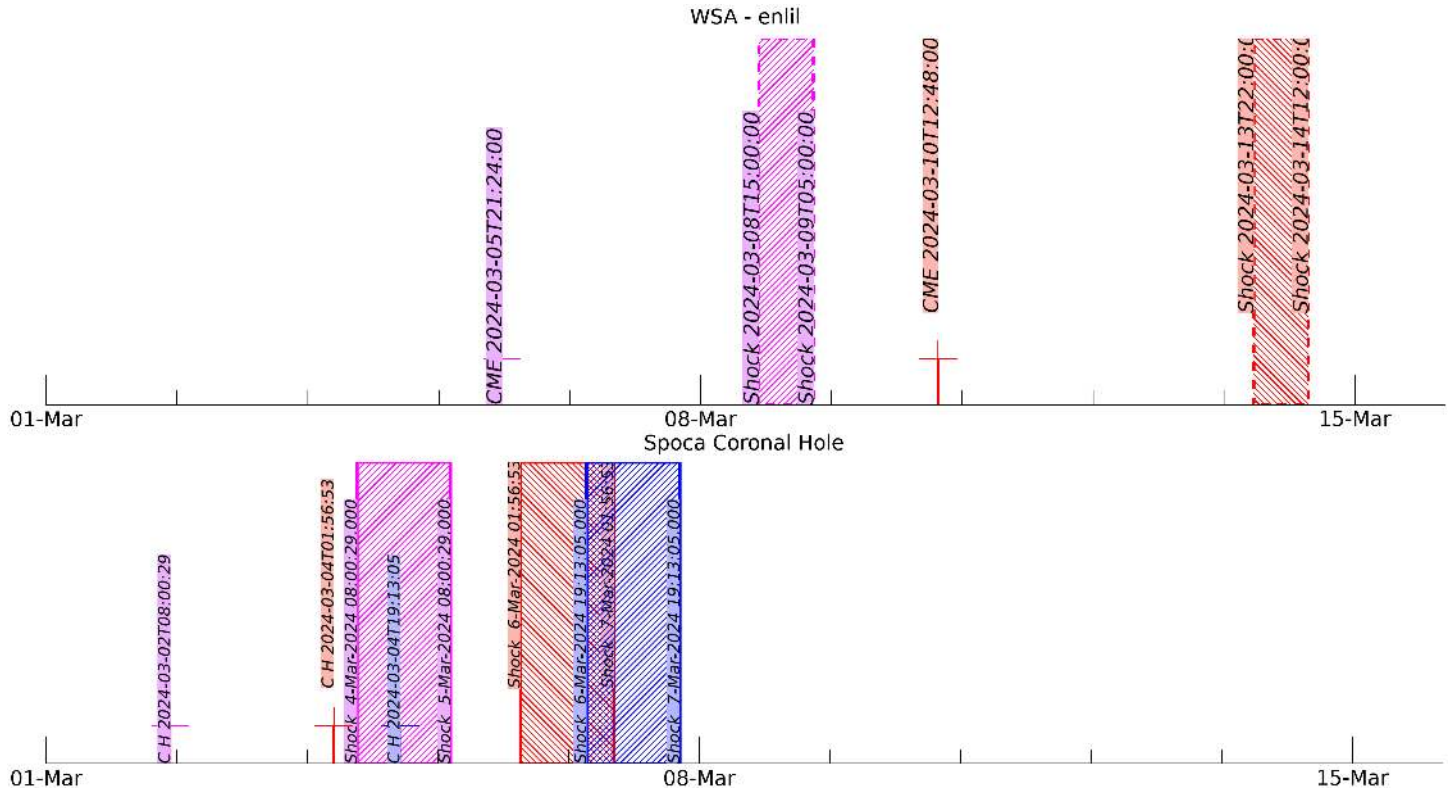
Solar - Coronal holes Spatial Possibilistic Clustering Algorithm (SPoCAS):



(a) The solid black line depicts the products of the sum of areas for each detection interval performed by SPOCA between March 02 and 07, 2024.

(b) Above the 193 Å image of the Sun are highlighted coronal holes observed by SPOCA around 19:13 UT on March 04, 2024 (green dot line).

Solar - WSA - ENLIL and SPoCA



EARTH'S RADIATION BELT

Responsible: Ligia Da Silva

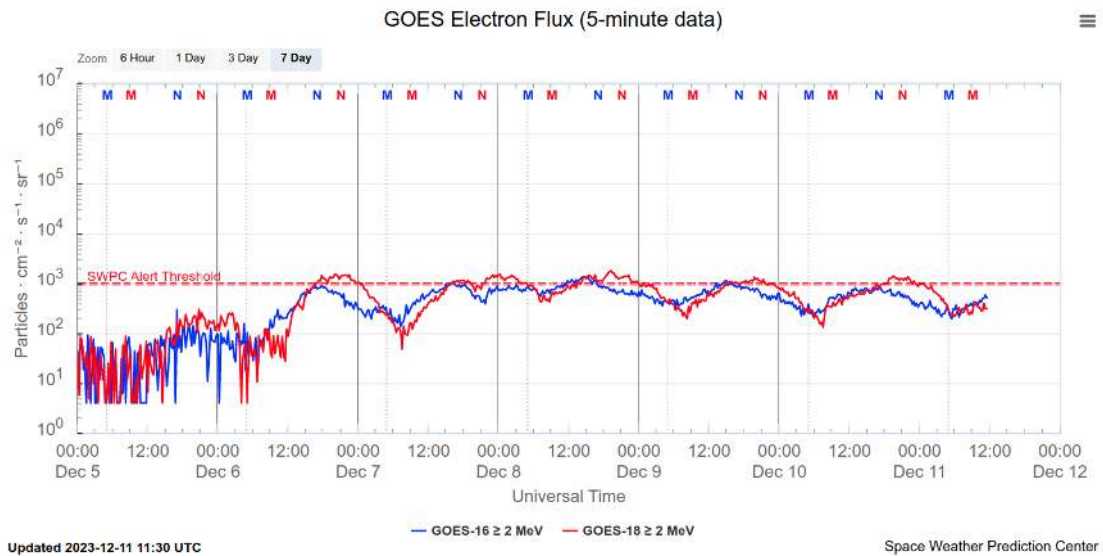


Figure 1: High-energy electron flux (> 2 MeV) obtained from GOES-16 and GOES-18 satellite. Source: <https://www.swpc.noaa.gov/products/goes-electron-flux>

Summary

The high-energy electron flux (> 2 MeV) in the outer boundary of the outer radiation belt obtained from geostationary satellite data GOES-16 and GOES-18 (Figure 1) is below 10^2 particles/($\text{cm}^2 \text{ s sr}$) almost the entire analyzed period. An increase was observed from March 8th, with peaks above 10^3 particles/($\text{cm}^2 \text{ s sr}$) on March 9th and 10th.

Ionosfera – Digissonda (Laysa Resende)

Summary

We observed the F spread F in Fortaleza and Cachoeira Paulista in the most days during this week, except on March 04. The F region irregularities were inhibited due to the magnetic storm occurrence. The Es layers reached a maximum of scale 3 in Cachoeira Paulista and Fortaleza (Figure 1).

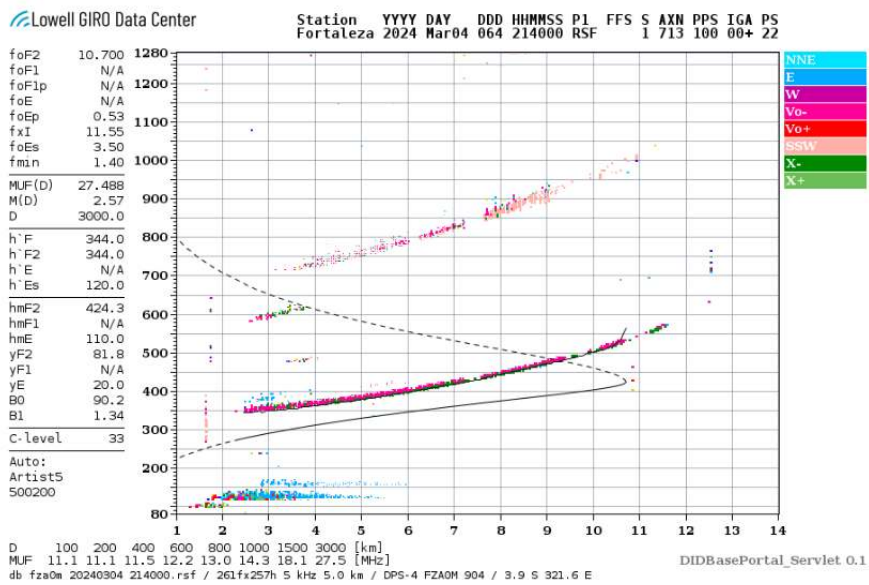


Figure 1 – Ionogram over Fortaleza, showing the strong Es layer occurred on March 04, 2024.

Ionosphere - ROTI Summary for Week 2304 (March 3 to 9, 2024)

Carolina de Sousa do Carmo

In the week 2304 (March 3 to 9, 2024) there were ionospheric irregularities (plasma bubbles) on all analyzed nights, except for the night of March 3rd, which showed suppression. The Figure below shows the ROTI time series for four stations in the Brazilian sector (Natal (RNNA), Bacabal (MABB), Cuiabá (CUIB) and São José dos Campos (SJSP)).

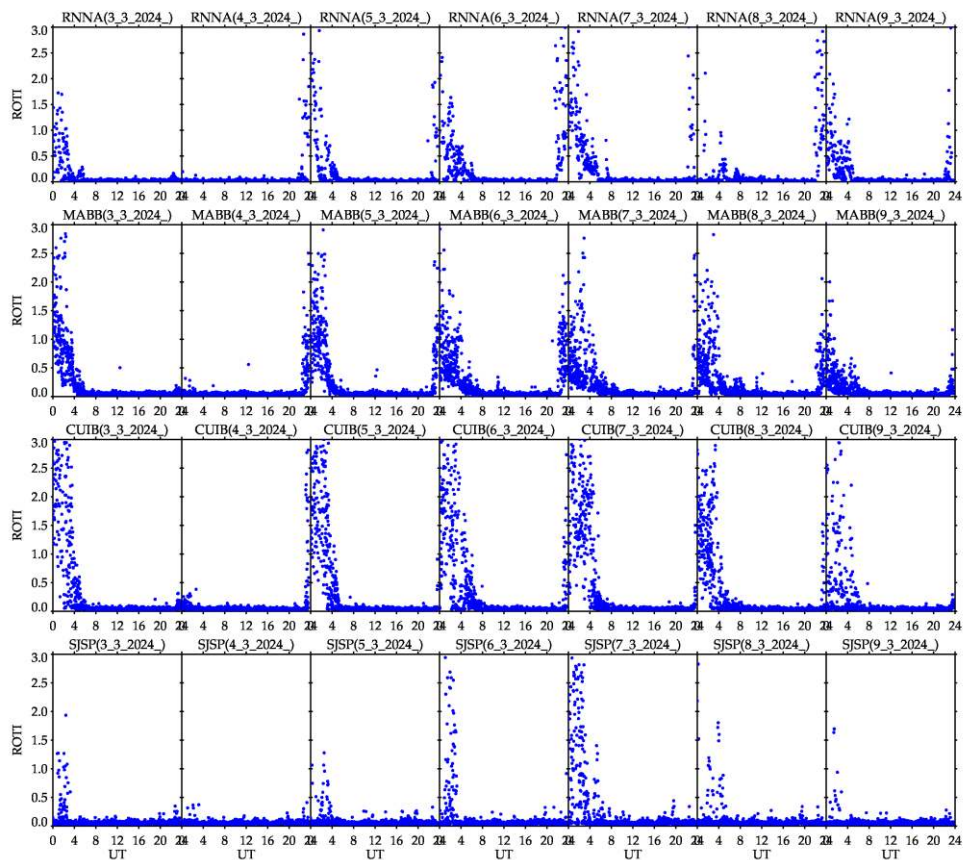


Figure – ROTI time series for four stations in the Brazilian sector (Natal (RNNA), Bacabal (MABB), Cuiabá (CUIB) and São José dos Campos (SJSP)), from March 3 to 9, 2024.