



## Solar - WSA-ENLIL

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

WSA-ENLIL(CME 2024-07-26 15:23:00 UT )

The simulation results indicate that the flank of CME will reach the DSCOVR mission between 2024-07-30 07:00:00 UT and 2024-07-30 21:00:00 UT.

WSA-ENLIL(CME 2024-07-27 11:12:00 UT )

The simulation results indicate that the flank of CME will reach the DSCOVR mission between 2024-07-30 21:00:00 UT and 2024-07-31 11:00:00 UT.

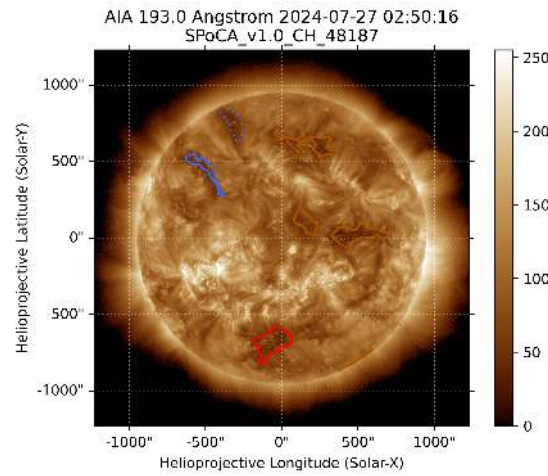
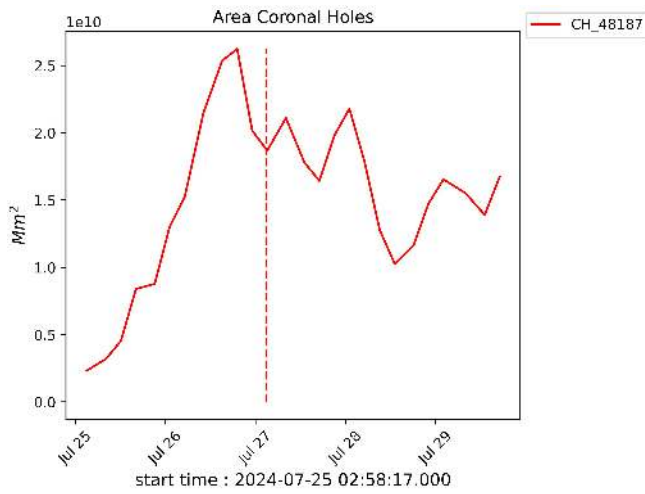
WSA-ENLIL(CME 2024-07-27 21:36:00 UT )

The simulation results indicate that the flank of CME will reach the DSCOVR mission between 2024-07-31 13:00:00 UT and 2024-08-01 03:00:00 UT.

WSA-ENLIL(CMEs 2024-07-29 02:00:00 UT, 2024-07-29 02:12:00 UT and 2024-07-29 13:25:00 UT)

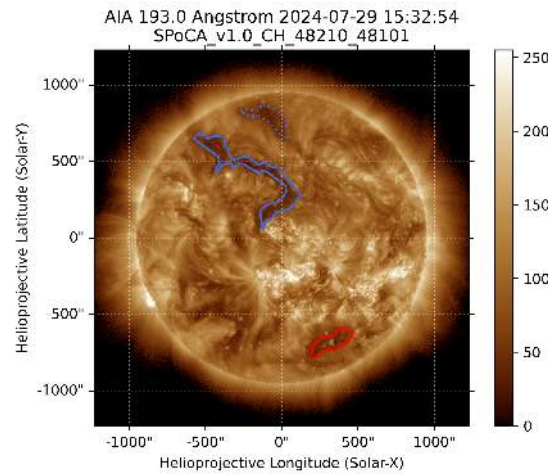
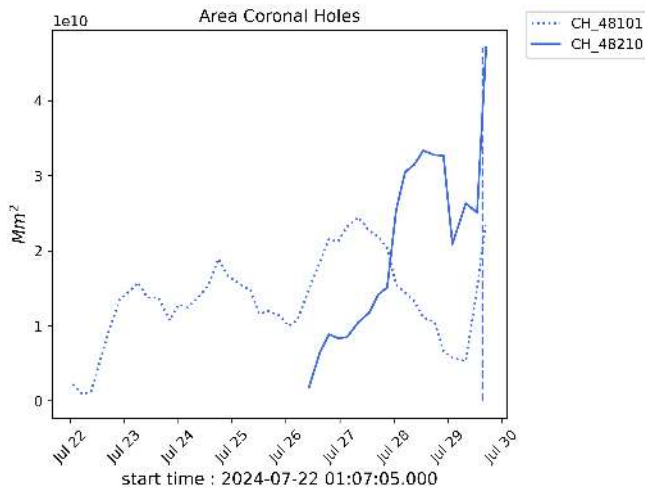
The simulation results indicate that the flank of CME will reach the DSCOVR mission between 2024-08-01 09:00:00 UT and 2024-08-01 23:00:00 UT.

## 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 July 22 and 29, 2024.

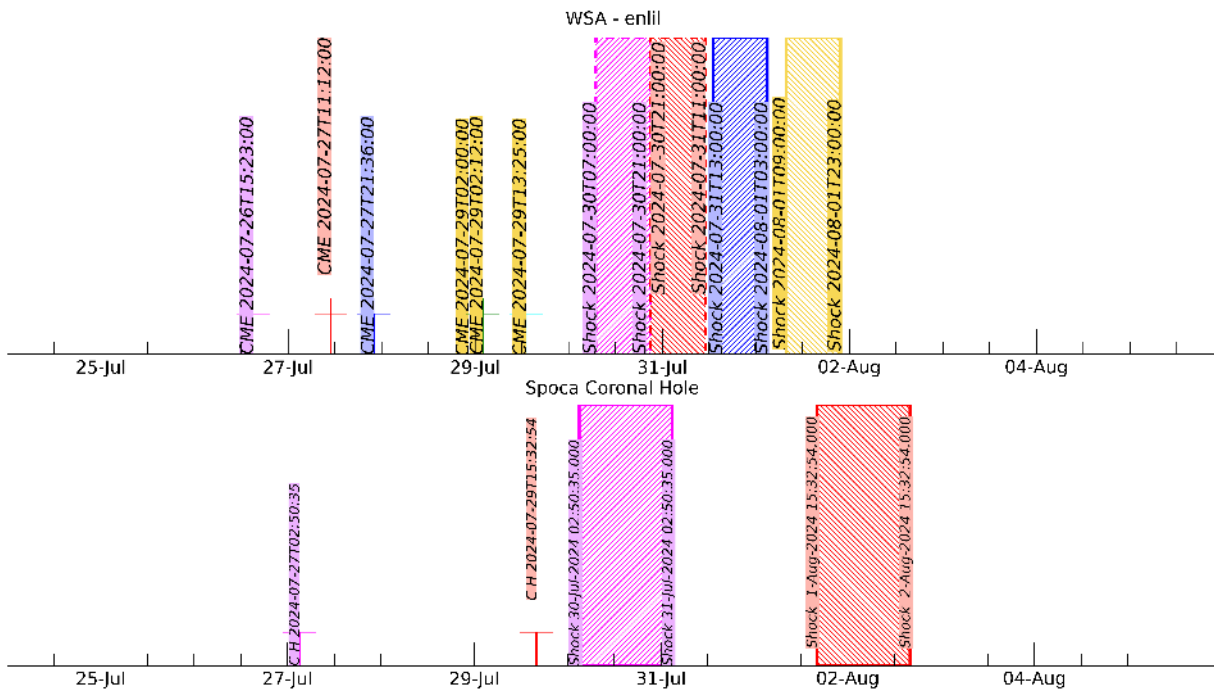
(b) Above the 193 Å image of the Sun are highlighted coronal holes observed by SPOCA around 02:50 UT on July 27, 2024 (red dot line).



(a) The solid black line depicts the products of the sum of areas for each detection interval performed by SPOCA between July 22 and 29, 2024.

(b) Above the 193 Å image of the Sun are highlighted coronal holes observed by SPOCA around 15:32 UT on July 29, 2024 (blue dot line).

# Solar - WSA - ENLIL and SPoCA



## EARTH'S RADIATION BELT

**Responsible: Ligia Da Silva**

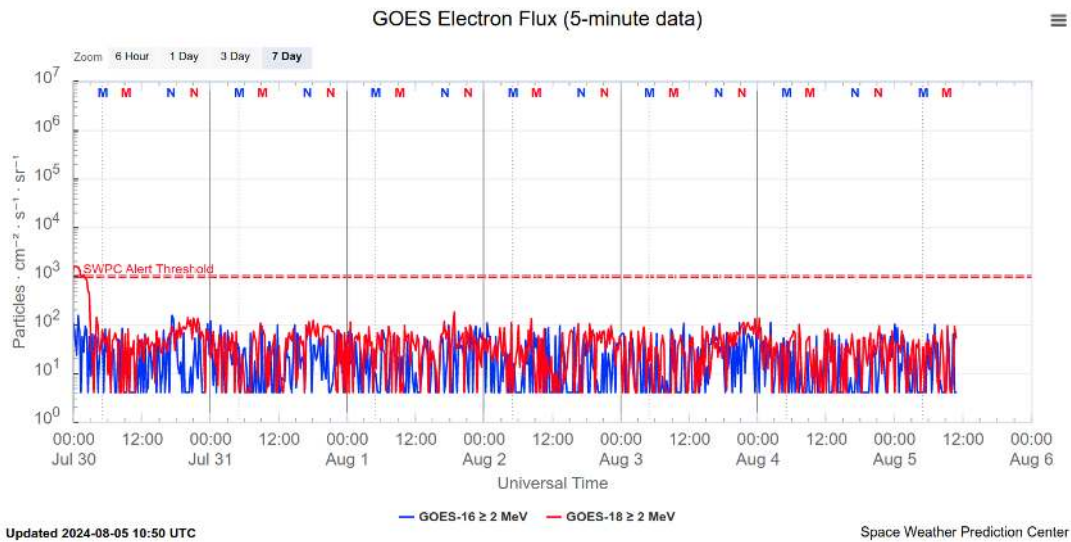


Figure 1: High-energy electron flux (> 2MeV) obtained from GOES-16 and GOES-18 satellite. Source: <https://www.swpc.noaa.gov/products/goes-electron-flux>

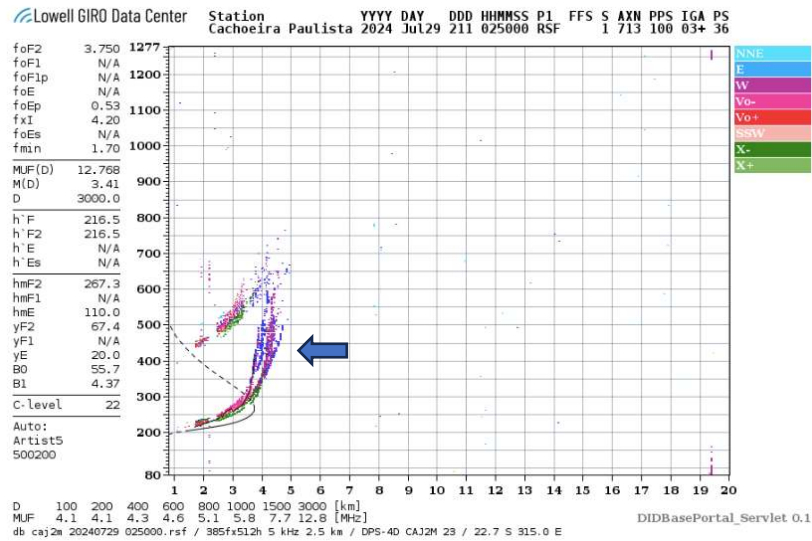
### Summary

The high-energy electron flux (>2 MeV) in the outer boundary of the outer radiation belt obtained from geostationary satellite data GOES-16 (Figure 1 – blue line) is confined below  $10^2$  particles/(cm<sup>2</sup> s sr) throughout the analyzed period. On the other hand, GOES-18 (Figure 1 – red line) presented the electron flux slightly above  $10^3$  particles/(cm<sup>2</sup> s sr) in the first hour of July 30<sup>th</sup>, followed by a flux decrease and confining itself to  $10^2$  particles/(cm<sup>2</sup> s sr) throughout the rest of the analyzed period.

## Ionosphere – Digisonde (Laysa Resende)

### Summary

We observed spread F in Boa Vista, a region near of the geographical equator, during this week. Over Cachoeira Paulista, the F region trace was the atypical trace (Figure 1), resembling the action of MSTIDs. The Es layers were weak, reaching the scale 2.

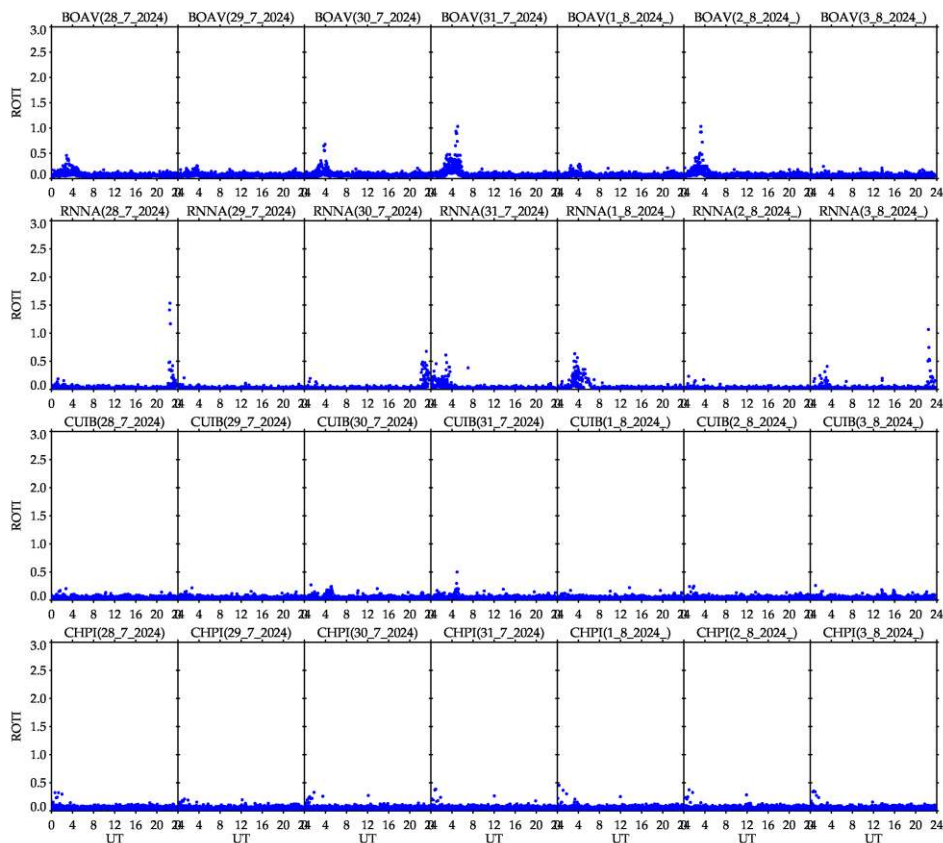


**Figure 1** – Ionogram over Cachoeira Paulista, showing the atypical F region’s trace.

## Ionosphere - ROTI Summary for Week 2325 (July 28 to August 3, 2024)

Carolina de Sousa do Carmo

In the week 2325 (July 28 to August 3, 2024), ionospheric irregularities (plasma bubbles) were observed at Boa Vista on July 30, 31, and August 2, and at Natal on July 28, 31, August 1, and 3. The Figure below shows the ROTI time series for four stations in the Brazilian sector (Boa Vista (BOAV), Natal (RNNA), Cuiabá (CUIB), and Cachoeira Paulista (CHPI)).



**Figure** – ROTI time series for four stations in the Brazilian sector (Boa Vista (BOAV), Natal (RNNA), Cuiabá (CUIB), and Cachoeira Paulista (CHPI)), from July 28 to August 3, 2024.