



Sol – Cecatto
Period: April 29 – May 06, 2024

Summary

04/29 – M2.5, M3.7 flares; Fast (≤ 500 km/s) wind stream; 11 CME can have component toward the Earth;
04/30 – M1.6, M1.2, M1.3, M9.5 flares; Fast (≤ 450 km/s) wind stream; 2 CME can have component toward the Earth;
05/01 – M1.8, M1.8 flares; No fast wind stream; 6 CME can have component toward the Earth;
05/02 – M1.0, M2.7 flares; Fast (≤ 450 km/s) wind stream; 4 CME can have component toward the Earth;
05/03 – M2.7, X1.6, M4.4, M1.2, M1.0, M2.4 flares; Fast (≤ 500 km/s) wind stream; 6 CME can have component toward the Earth;
05/04 – M1.6, M9.1, M1.5, M1.3, M3.2, M9.0 flares; No fast wind stream; 5 CME can have component toward the Earth;
05/05 – M8.4, X1.3, M1.3, M2.3, M7.4, X1.2, M1.3, M2.2, M1.3, M1.0, M1.3 flares; No fast wind stream; 12 CME can have component toward the Earth;
05/06 – M1.6, M1.3, X4.5, M1.5, M1.2, M4.3 flares; Fast (≤ 550 km/s) wind stream; 3 CME can have component toward the Earth;
For.: Fast wind stream for today and next 1-2 days; for while (90% M, 50% X) probability of M / X flares next 2 days; also, occasionally some other CME can present a component toward the Earth.

Resumo

29/04 – "Flares" M2.5, M3.7; Vento rápido (≤ 500 km/s); 11 CMEs podem ter uma componente para a Terra;
30/04 – "Flares" M1.6, M1.2, M1.3, M9.5; Vento rápido (≤ 450 km/s); 2 CME podem ter uma componente para a Terra;
01/05 – "Flares" M1.8, M1.8; Sem vento rápido; 6 CME podem ter uma componente para a Terra;
02/05 – "Flares" M1.0, M2.7; Vento rápido (≤ 450 km/s); 4 CME podem ter uma componente para a Terra;
03/05 – "Flares" M2.7, X1.6, M4.4, M1.2, M1.0, M2.4; Vento rápido (≤ 500 km/s); 6 CME podem ter uma componente para a Terra;
04/05 – "Flares" M1.6, M9.1, M1.5, M1.3, M3.2, M9.0; Sem vento rápido; 5 CME podem ter uma componente para a Terra;
05/05 – "Flares" M8.4, X1.3, M1.3, M2.3, M7.4, X1.2, M1.3, M2.2, M1.3, M1.0, M1.3; Sem vento rápido; 12 CME podem ter uma componente para a Terra;
06/05 – "Flares" M1.6, M1.3, X4.5, M1.5, M1.2, M4.3; Vento rápido (≤ 550 km/s); 3 CME podem ter uma componente para a Terra.
Prev.: Vento rápido para hoje e próximo(s) 1-2 dia(s); probabilidade de "flares" M/X (90% M, 50% X) nos próximos 02 dias; eventualmente alguma(s) outra(s) CME pode(m) apresentar componente dirigida para a Terra.



Solar - WSA-ENLIL

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

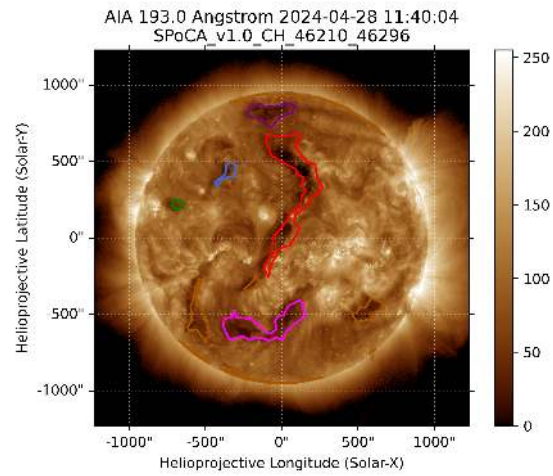
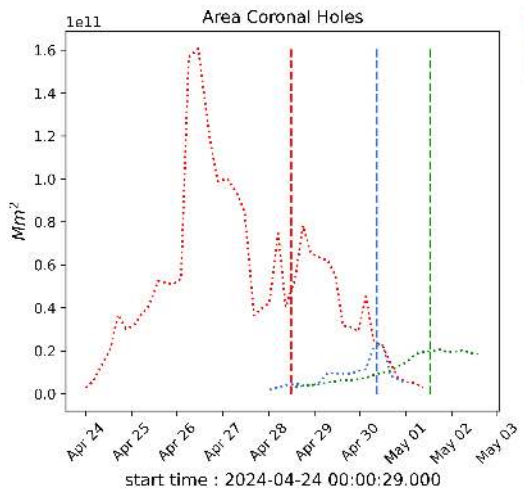
WSA-ENLIL(CMEs 2024-05-03 21:17:00 UT, 2024-05-03 21:28:00 UT and 2024-05-04 06:53:00 UT)

The simulation results indicate that the flank of CME will reach the DSCOVR mission between 2024-05-06 12:00:00 UT and 2024-05-07 02:00:00 UT.

WSA-ENLIL(CMEs 2024-05-05 02:09:00 UT, 2024-05-05 03:38:00 UT, 2024-05-05 06:38:00 UT, 2024-05-05 08:09:00 UT)

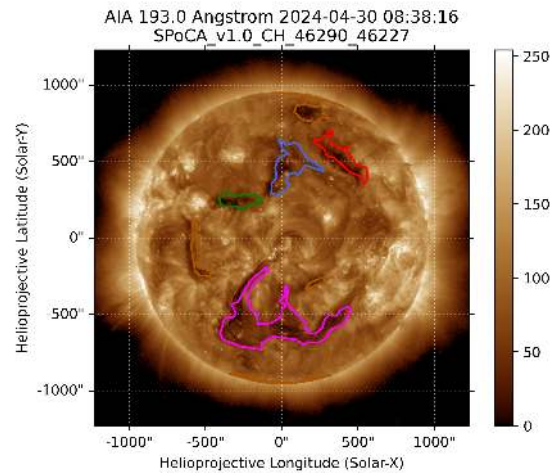
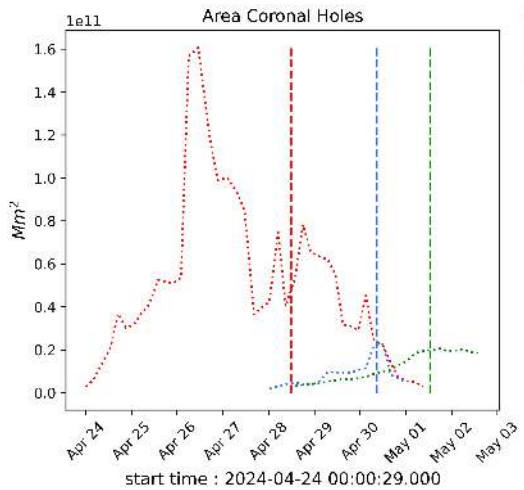
The simulation results indicate that the flank of CME will reach the DSCOVR mission between 2024-05-07 16:00:00 UT and 2024-05-08 06:00:00 UT.

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 April 22 and May 02, 2024.

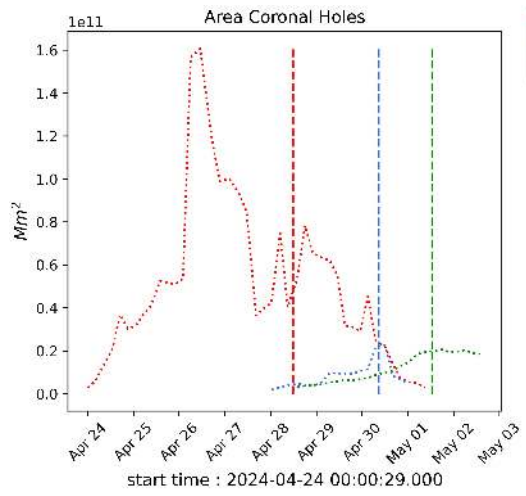
(b) Above the 193 Å image of the Sun are highlighted coronal holes observed by SPOCA around 11:40 UT on April 28, 2024 (red dot line).



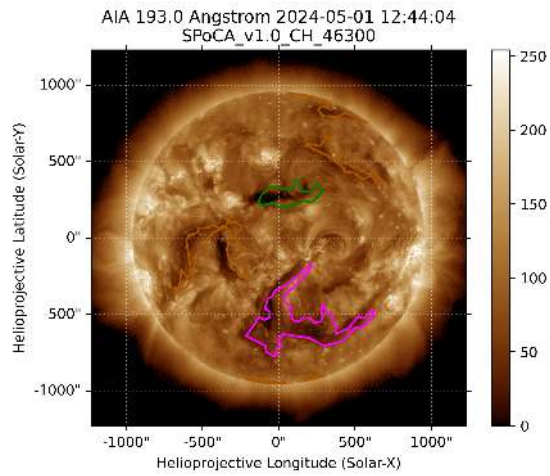
(a) The solid black line depicts the products of the sum of areas for each detection interval performed by SPOCA between April 22 and May 02, 2024.

(b) Above the 193 Å image of the Sun are highlighted coronal holes observed by SPOCA around 08:38 UT on April 30, 2024 (blue dot line).

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

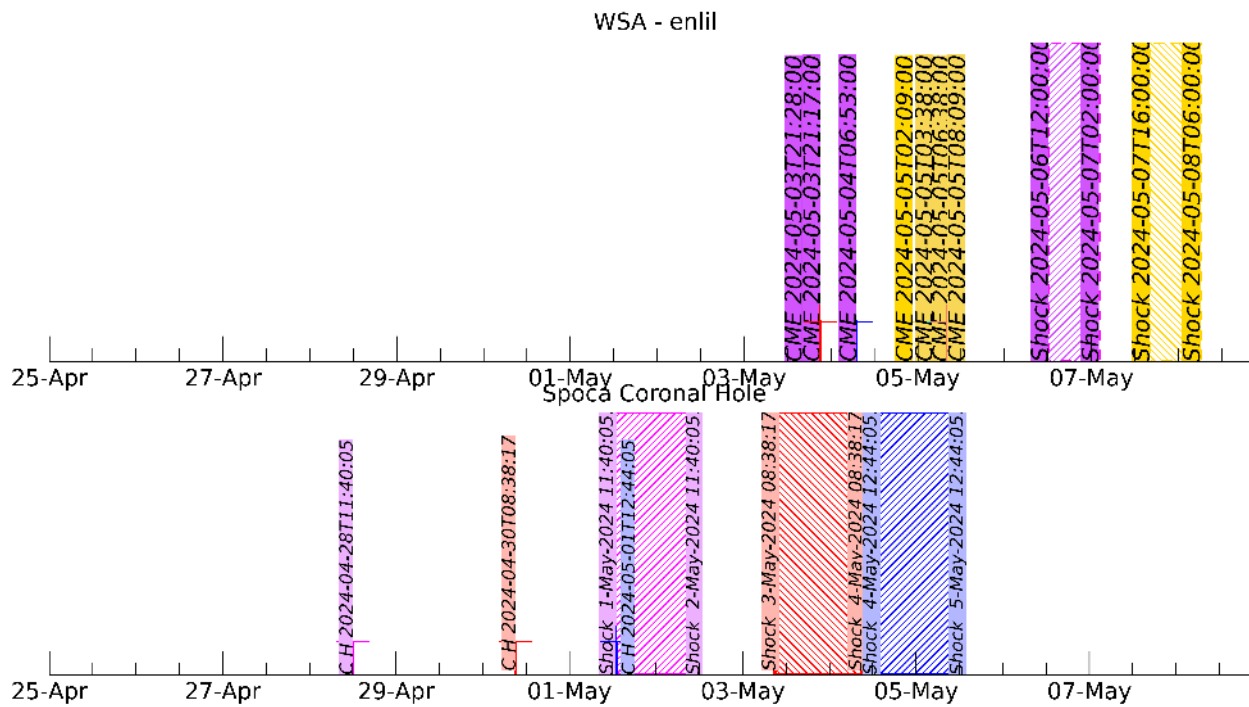


(a) The solid black line depicts the products of the sum of areas for each detection interval performed by SPOCA between April 22 and May 02, 2024.



(b) Above the 193 Å image of the Sun are highlighted coronal holes observed by SPOCA around 12:44 UT on May 01, 2024 (magenta dot line).

Solar - WSA - ENLIL and SPoCA



EARTH'S RADIATION BELT

Responsible: Ligia Da Silva

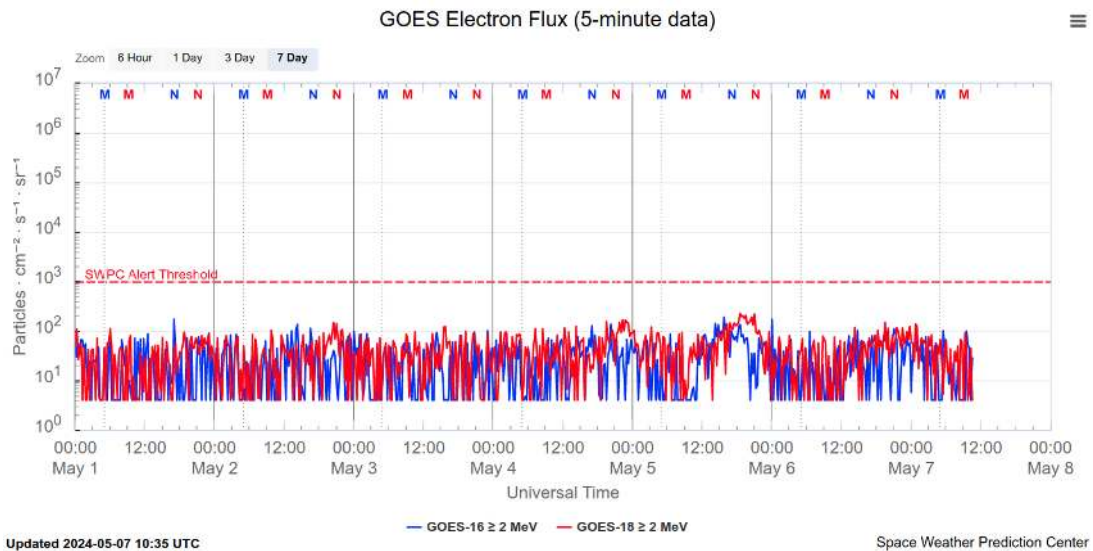


Figure 1: High-energy electron flux (> 2MeV) obtained from GOES-16 and GOES-18 satellite. Source: <https://www.swpc.noaa.gov/products/goes-electron-flux>

Summary

The high-energy electron flux (>2 MeV) in the outer boundary of the outer radiation belt obtained from geostationary satellite data GOES-16 and GOES-18 (Figure 1) is confined below 10^2 particles/(cm² s sr) until mid-May 4th, showing a slight increase on May 5th. After this, the flux decreased again, remaining below 10^2 particles/(cm² sr) until May 7th.

Ionosfera – Digisonda (Laysa Resende)

Summary

Spread F was observed in the region closest to the magnetic equator only. In Cachoeira Paulista, it was not observed spread F. We observe the E nocturnal region on May 01, 2024 over São Luís associated to the particle precipitation (Figure 1). The Es layer reached values of scale 3 in São Luís and in Cachoeira Paulista.

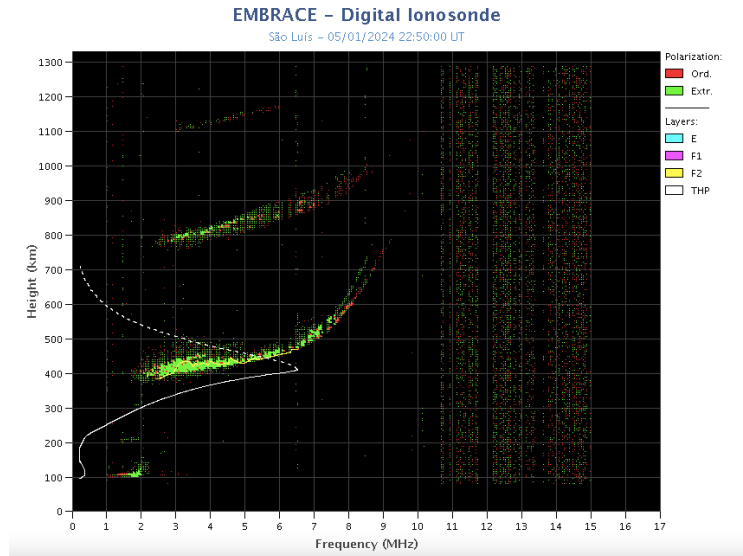


Figure 1 – Ionogram over São Luís, showing the E region occurrence in nighttime.