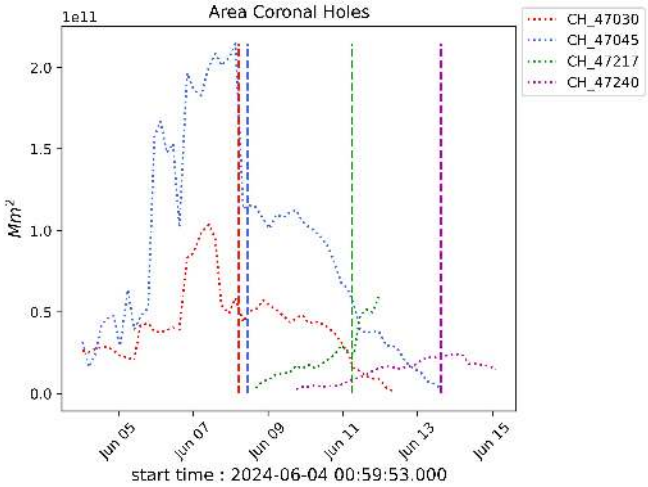
Solar - WSA-ENLIL

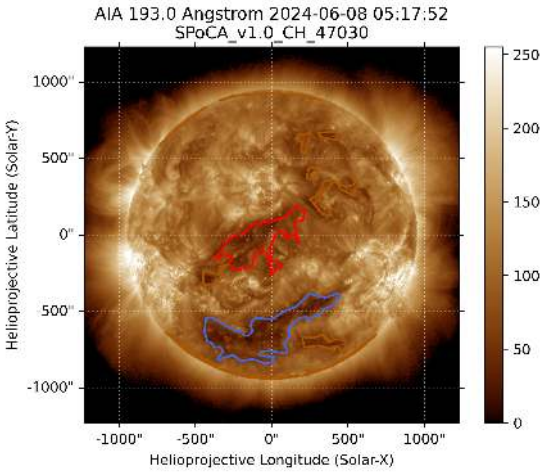
EMC (https://ccmc.gsfc.nasa.gov/donki/):

WSA-ENLIL(CME 2024-06-08 01:53:00 UT)
The simulation results indicate that the flank of CME will reach the DSCOVR mission between 2024-06-10 07:35:00 UT and 2024-06-10 21:35:00 UT.

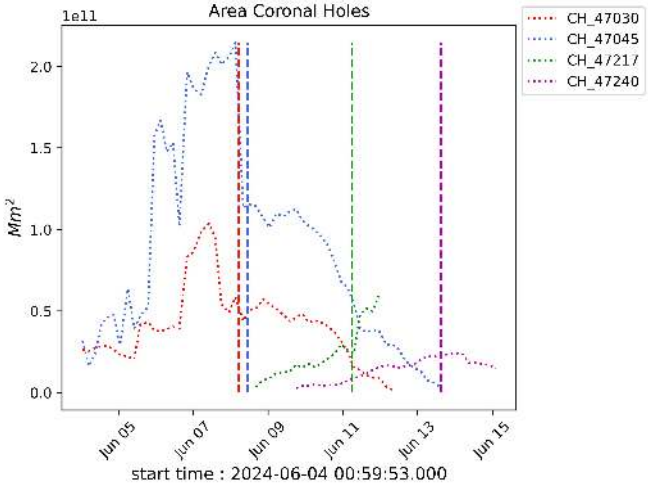
Solar - Coronal holes Spatial Possibilistic Clustering Algorithm (SPoCAS):



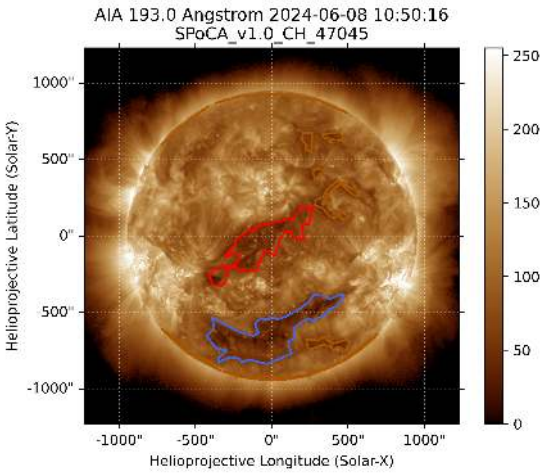
(a) The solid black line depicts the products of the sum of areas for each detection interval performed by SPOCA between June 04 and 15, 2024.



(b) Above the 193 Å image of the Sun are highlighted coronal holes observed by SPOCA around 05:18 UT on June 08, 2024 (red dot line).

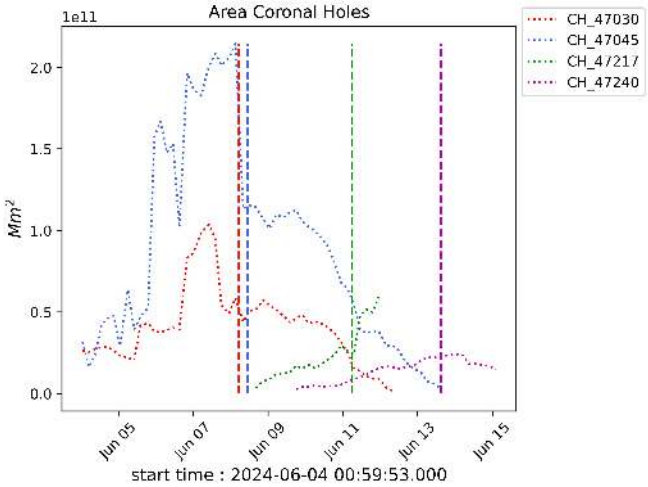


(a) The solid black line depicts the products of the sum of areas for each detection interval performed by SPOCA between June 04 and 15, 2024.

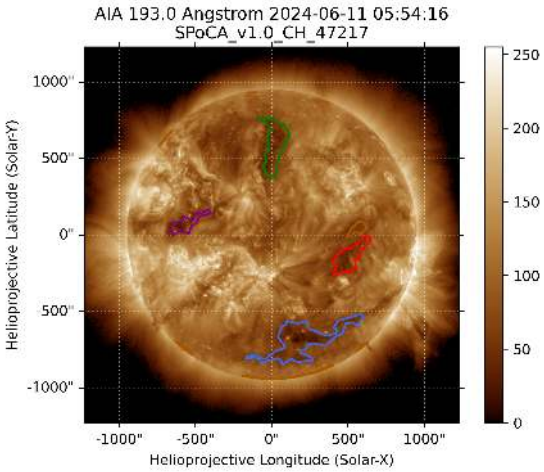


(b) Above the 193 Å image of the Sun are highlighted coronal holes observed by SPOCA around 10:50 UT on June 08, 2024 (blue dot line).

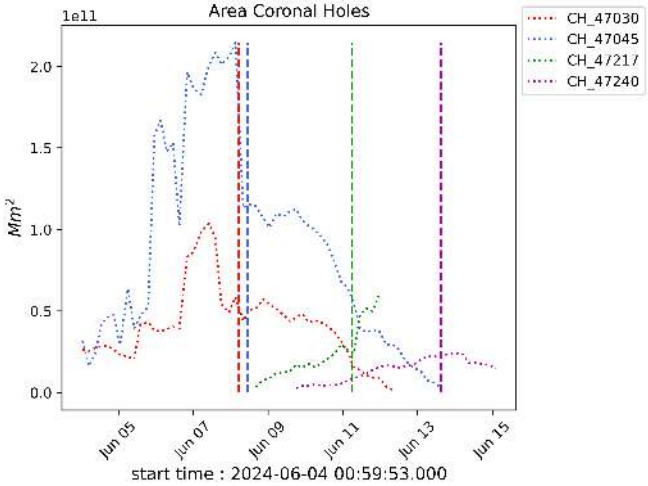
Solar - Coronal holes Spatial Possibilistic Clustering Algorithm (SPoCAS):



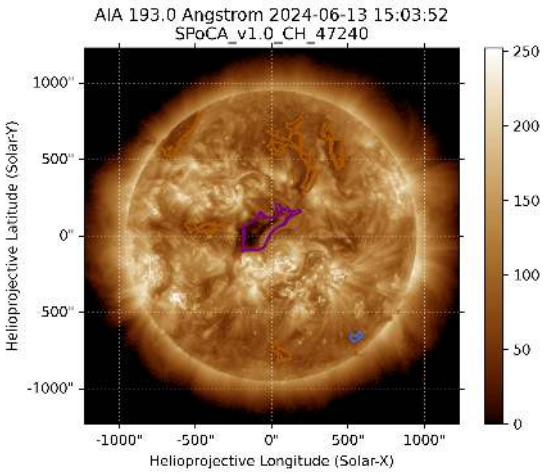
(a) The solid black line depicts the products of the sum of areas for each detection interval performed by SPOCA between June 04 and 15, 2024.



(b) Above the 193 Å image of the Sun are highlighted coronal holes observed by SPOCA around 05:54 UT on June 11, 2024 (magenta dot line).

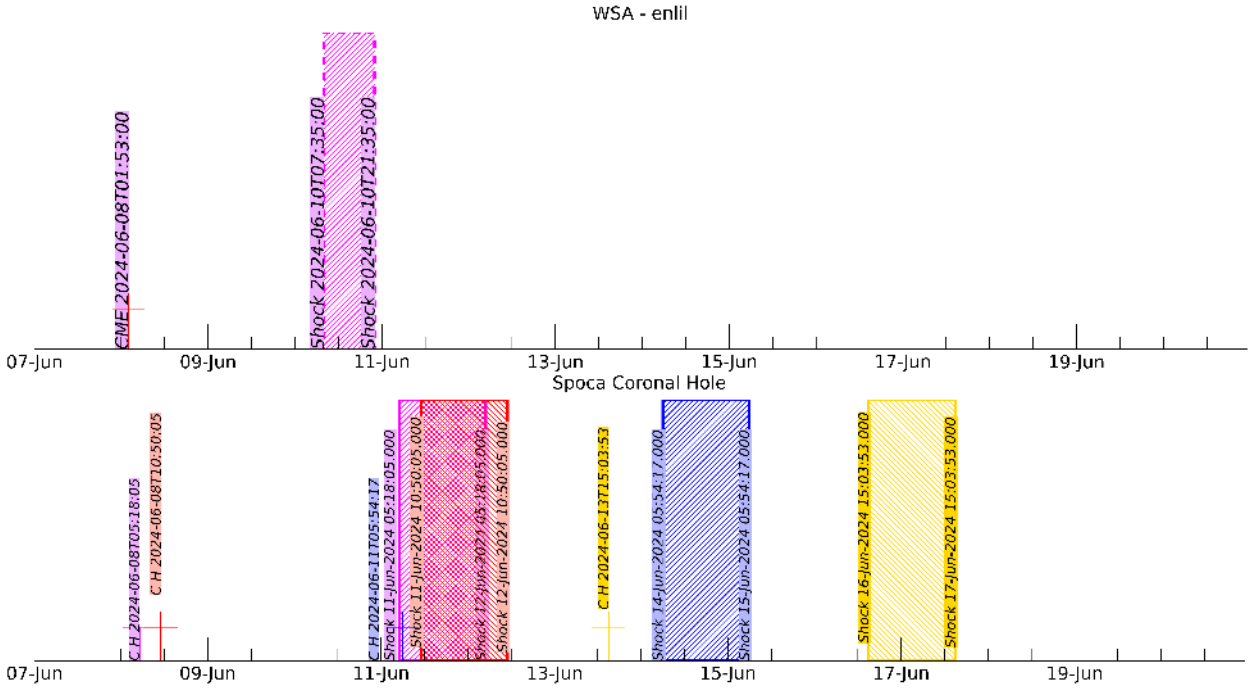


(a) The solid black line depicts the products of the sum of areas for each detection interval performed by SPOCA between June 04 and 15, 2024.



(b) Above the 193 Å image of the Sun are highlighted coronal holes observed by SPOCA around 15:03 UT on June 13, 2024 (yellow dot line).

Solar - WSA - ENLIL and SPoCA



EARTH'S RADIATION BELT

Responsible: Ligia Da Silva

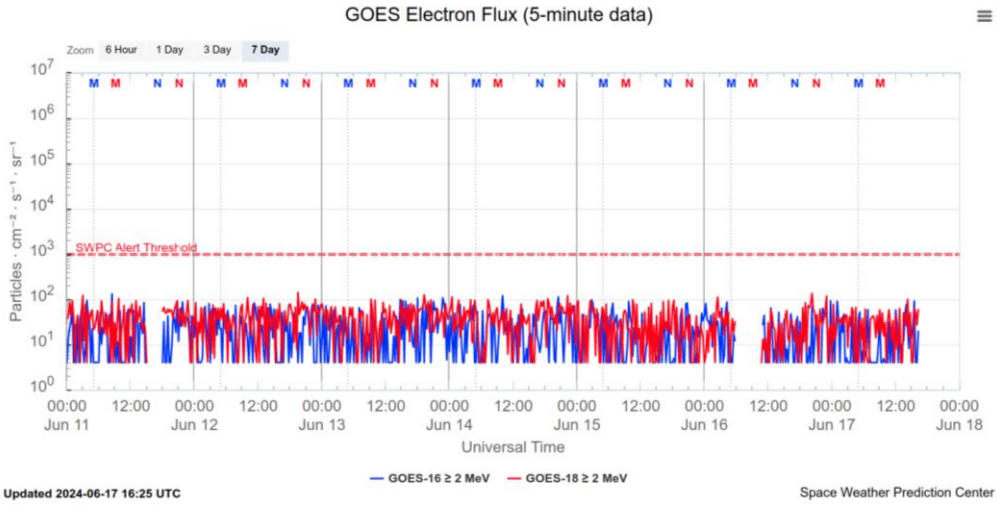


Figure 1: High-energy electron flux (> 2MeV) obtained from GOES-16 and GOES-18 satellite. Source: https://www.swpc.noaa.gov/products/goes-electron-flux

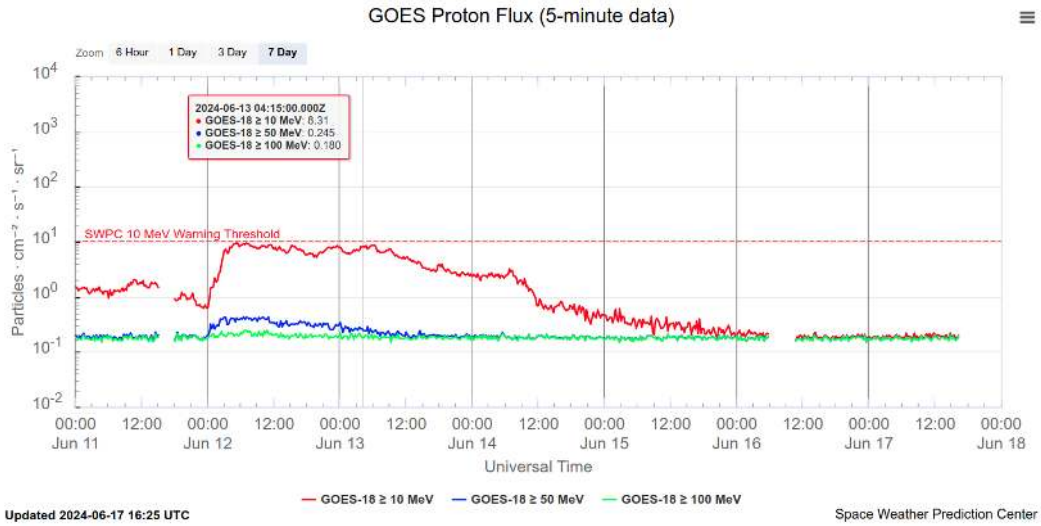


Figure 2: Proton flux (≥ 10MeV, ≥ 50MeV, ≥ 100MeV) obtained from GOES-18 satellite. Source: https://www.swpc.noaa.gov/products/goes-proton-flux

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 10^3 particles/(cm^2 s sr) throughout the analyzed period, without presenting significant variability.

Proton fluxes ≥ 10MeV, ≥ 50MeV and ≥ 100MeV at the outer boundary of the outer radiation belt obtained from the geostationary satellite GOES-18 (Figure 2) increased from June 12th. However, the proton flux ≥ 10MeV increased considerably more than the other energy levels, persisting at the threshold of 10^1 particles/(cm^2 s sr) until the beginning of June 13th, followed by a slow decay. This proton flux increase is associated with the arrival of solar wind structures in the magnetosphere.

Resumo

Nesta semana, foi observado um spread F fraco em São Luís todos os dias (Figura 1). Em Cachoeira Paulista, o spread F não foi observado nenhum dia da semana. As camadas Es atingiram escala máxima 3 em São Luís.

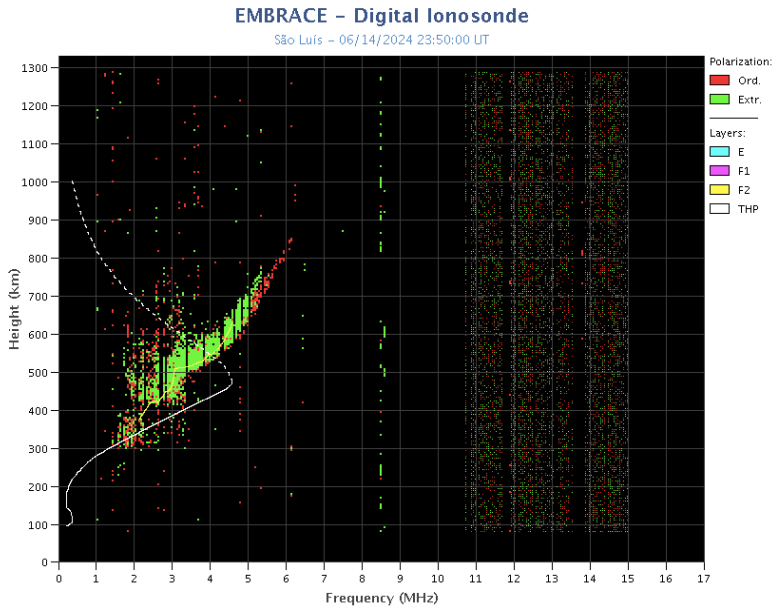


Figure 1 – Ionograma de São Luís, mostrando a ocorrência do spread F.

Ionosphere - ROTI
Summary for Week 2318 (June 9 to 15, 2024)

Carolina de Sousa do Carmo

In the week 2318 (June 9 to 15, 2024), ionospheric irregularities (plasma bubbles) were not observed. The Figure below shows the ROTI time series for four stations in the Brazilian sector (São Luís (SALU), Bacabal (MABB), Cuiabá (CUIB) and São José dos Campos (SJSP)).

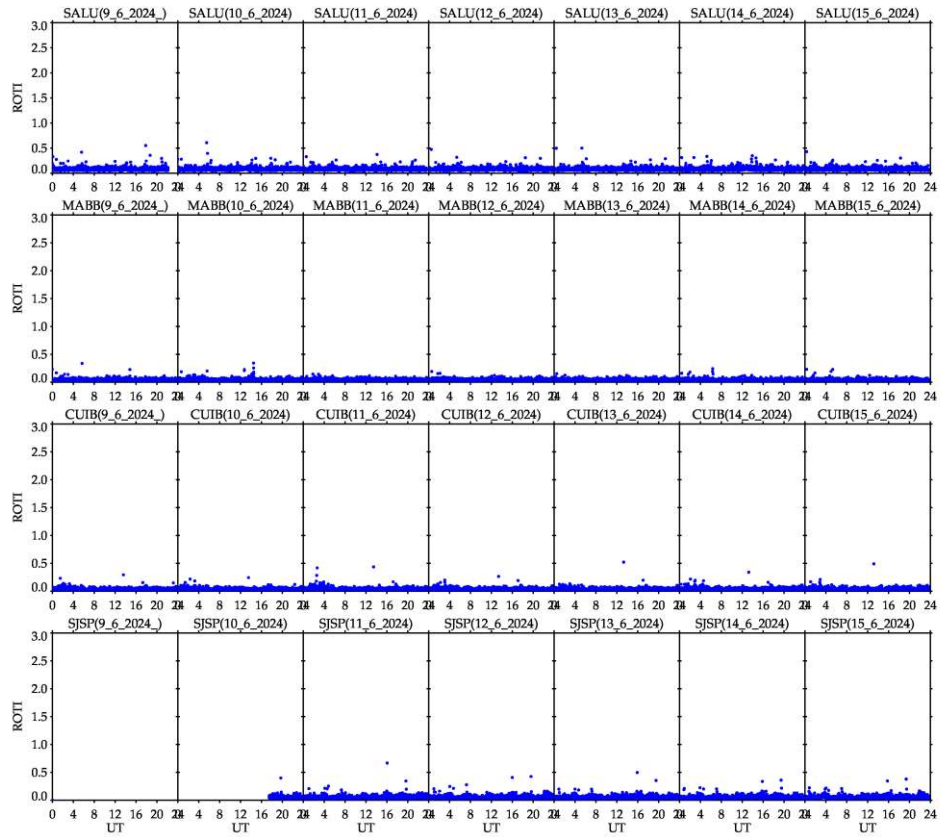


Figure – ROTI time series for four stations in the Brazilian sector (São Luís (SALU), Bacabal (MABB), Cuiabá (CUIB) and São José dos Campos (SJSP)), from June 9 to 15, 2024.