Sol – Cecatto
Period: May 26 – Jun. 02, 2025

Summary

05/26 – M3.0 flare; Fast (=< 500 km/s) wind stream; 2 CME can have component toward the Earth;
05/27 – No M/X flare; Fast (=< 600 km/s) wind stream; 3 CME can have component toward the Earth;
05/28 – No M/X flare; Fast (=< 650 km/s) wind stream; 2 CME can have component toward the Earth;
05/29 – No M/X flare; Fast (=< 800 km/s) wind stream; 3 CME can have component toward the Earth;
05/30 – M3.5, M1.7 flares; Fast (=< 800 km/s) wind stream; 9 CME can have component toward the Earth;
05/31 – M8.3, M2.5, M4.6, M3.0 flares; Fast (=< 800 km/s) wind stream; 10 CME can have component toward the Earth;
06/01 – No M/X flare; Fast (=< 1100 km/s) wind stream; 3 CME can have component toward the Earth;
06/02 – M3.4 flare; Fast (=< 900 km/s) wind stream; 1 CME can have component toward the Earth
For.: Fast wind stream for the next 1-2 days; for while (65% M, 15% X) probability of M / X flares next 2 days; also, occasionally some other CME can present a component toward the Earth.

Resumo

26/05 – "Flare" M3.0; Vento rápido (=< 500 km/s); 2 CMEs podem ter componente p Terra;
27/05 – Sem "Flare" M/X; Vento rápido (=< 600 km/s); 3 CME com componente p/ Terra;
28/05 – Sem "Flare" M/X; Vento rápido (=< 650 km/s); 2 CME com componente p/ Terra;
29/05 – Sem "Flare" M/X; Vento rápido (=< 800 km/s); 3 CME podem ter componente p Terra;
30/05 – "Flares" M3.5, M1.7; Vento rápido (=< 800 km/s); 9 CME podem componente p Terra;
31/05 – "Flares" M8.3, M2.5, M4.6, M3.0; Vento rápido (=< 800 km/s); 10 CME com componente p Terra;
01/06 – Sem "Flare" M/X; Vento rápido (=< 1100 km/s); 3 CME podem ter componente p/ a Terra;
02/06 – "Flare" M3.4; Vento rápido (=< 900 km/s); 1 CME com componente para a Terra
Prev.: Vento rápido para o(s) próximo(s) 1-2 dia(s); probabilidade de “flares” M/X (65% M, 15% X) nos próximos 02 dias; eventualmente alguma(s) outra(s) CME pode(m) apresentar componente dirigida para a Terra.

Interplanetary Medium – IM – Daniele da S. F. Medeiros and Paulo R. Jauer
May 26th to June 02nd.

Summary

Summary of IM conditions for the last week. The interplanetary medium region in the last week showed a low to moderate level of plasma disturbances due to the possible interaction of CME-like structures identified by the DSCOVR satellite in the interplanetary medium.

- The magnitude of the interplanetary magnetic field component peaked on June 1st at 09:30 UT at 24.54 nT due to CME.
- The BxBy components presented variations in the analyzed period, keeping both oscillating within the interval [-24, +20] nT. Showing a possible rotation of the By component due to CME
- The Bz component presents negative values for most of the week with a maximum negative -17.76 nT at 00:30 UT on May 29th. It presented positive value of +15.46 nT on June 1st at 15:30 UT.
- The solar wind density maximum peaked on May 28th at 20:30 UT at 9.40 protons/cm^3.
- The solar wind speed fluctuated between 390 to 1063 km/s with the presence of a discontinuity on June 1st at 20:30 UT.
- The magnetopause position remained above the equilibrium position throughout the week.

Figure 1 ilustrates a set of parameters observed in the solar wind by the DSCVR satellite. The measured solar wind parameters can be identified in the following order starting in column 1: Interplanetary magnetic field modulus (IMF), the Bx and By components, Bz component, convection electric field Ey. Column 2: Solar wind density, speed, temperature and the last graph represents the position of the subsolar magnetopause.

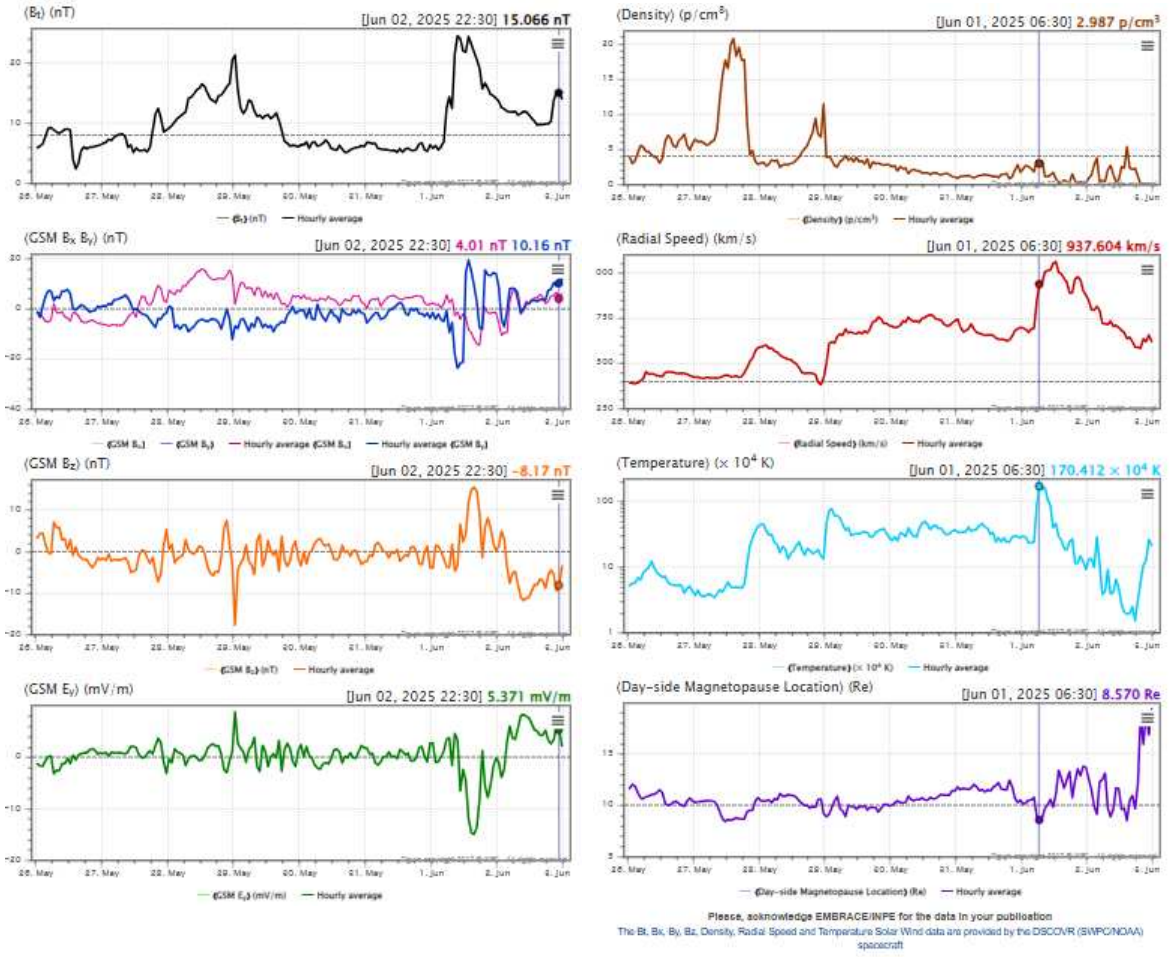

Figure 1: Illustrates a set of parameters observed in the solar wind by the DSCVR satellite.

Ionosfera – Digissonda (Laysa Resende)

Summary

Throughout the week, the Boa Vista station consistently recorded F-spread, whereas no F-spread was observed in Cachoeira Paulista. However, on May 28 and 29, F-spread appeared at the edge of the F region in Cachoeira Paulista, associated with TIDs. Additionally, on May 28, the Es layer in Boa Vista reached scale 5 (Figure 1).

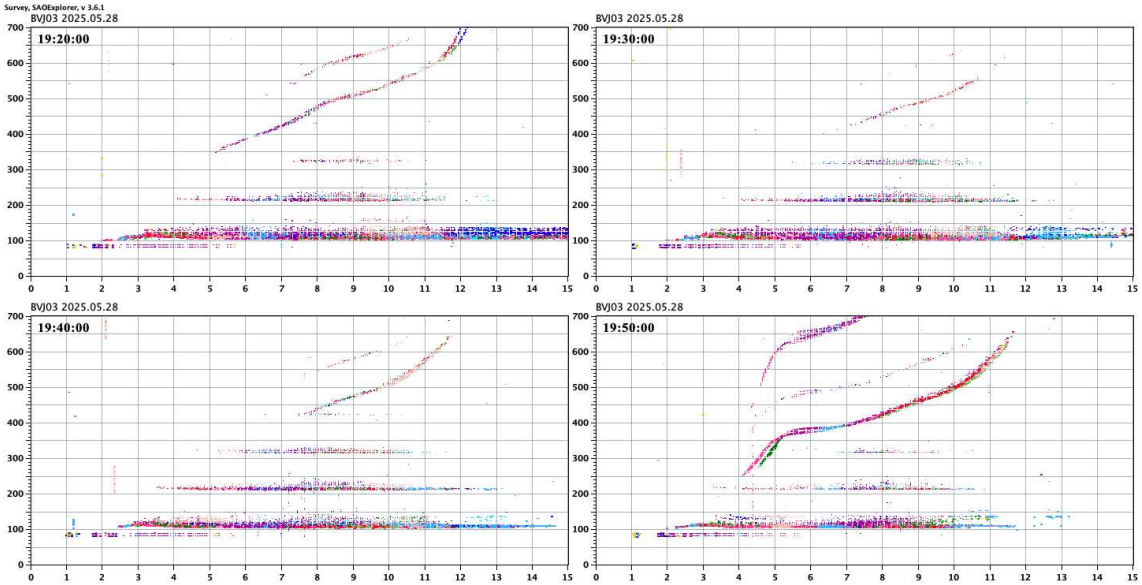

Figure 1 – Sequence of ionograms over Boa Vista, showing the strong Es layer occurred on May 28, 2025.