

2nd Metis Science Meeting



Contribution ID: 15

Type: **not specified**

Monitoring the evolution of intense solar energetic particle events with the Solar Orbiter EPD-HET and Metis instruments

Galactic cosmic rays and solar particles above 70 MeV/n are energetic enough to pass through or interact deeply within the Solar Orbiter spacecraft. Particle tracks in the Metis visible light images are studied with a visual analysis of the cosmic-ray matrices. The results of this analysis are compared to Monte Carlo simulations carried out with the use of EPD/HET proton data gathered outside the satellite. The solar energetic particle events started on July 24, 2023 and February 9, 2024 have been considered in particular. Data availability for both EPD/HET and Metis instruments has constrained this choice among the most long and intense events observed during the present solar maximum.

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Session Classification: Metis Science