

New Data from the ISOIS instrument Suite on Parker Solar Probe

Friday 16 July 2021 19:18 (12 minutes)

NASA's Parker Solar Probe (PSP) mission's first eight orbits include perihelia as close as ~11 million km (~16 solar radii), much closer to the Sun than any prior human-made object. Onboard PSP, the Integrated Science Investigation of the Sun (ISOIS) instrument suite makes groundbreaking measurements of solar energetic particles (SEPs). Here we discuss the near-Sun energetic particle radiation environment over PSP's first two and a half years, which reveal where and how energetic particles are energized and transported. We find a great variety of energetic particle events accelerated both locally and remotely. These include co-rotating interaction regions (CIRs), "impulsive" SEP events driven by acceleration near the Sun, and events related to Coronal Mass Ejections (CMEs). These ISOIS observations made so close to the Sun provide critical information for investigating the near-Sun transport and energization of solar energetic particles, which has been difficult to resolve from prior observations. The Parker Solar Probe ISOIS data are made public soon after the receipt at Earth (which can be many months after the observations). We will also discuss how to get access to the data.

Keywords

Solar Energetic Particles; acceleration; inner heliosphere;

Collaboration

other Collaboration

Subcategory

Experimental Results

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Session Classification: Discussion

Track Classification: Scientific Field: SH | Solar & Heliospheric