

Recent Results on the Longitudinal Distribution of Solar Energetic Particles in the Heliosphere
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With the combined observations from near-Earth spacecraft and the twin STEREO spacecraft, the properties of solar energetic particle (SEP) events can be studied in detail simultaneously from multiple longitudinal locations. These measurements have revealed unexpected characteristics including fast particle intensity rise times from remote sources and broad longitudinal spreading from localized solar sources. With these multi-spacecraft observations it is possible to test theories on the longitudinal dependence of SEP heavy ion composition and how it relates to the properties of the coronal mass ejection and the magnetic connection to each observer. This presentation will review these recent results and discuss their implications for particle acceleration and transport in the inner heliosphere and for space weather predictive capabilities.