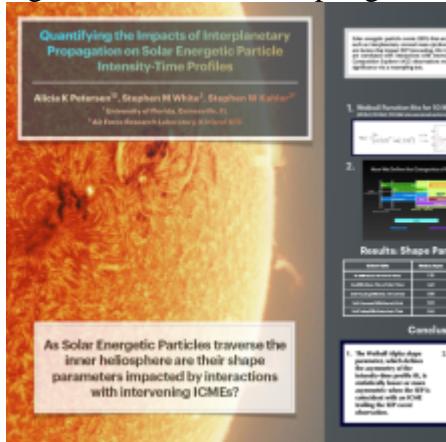


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Solar energetic particle events (SEPs) that are produced in the solar corona and propagate through the inner heliosphere and interplanetary space may encounter intervening magnetic obstacles such as interplanetary coronal mass ejections (ICMEs) or the heliospheric current sheet (HCS). Such encounters impact SEP acceleration and propagation. SEP propagation speed and intensity are factors that impact SEP forecasting. We investigate the extent to which unusual in-situ measurements of the rise phase and Weibull fit shape parameters of SEP intensity-time profiles at 1 AU are correlated with interactions with intervening structures in the inner heliosphere. In a multi-year survey using Geostationary Operational Environmental Satellites (GOES) and Advanced Composition Explorer (ACE) observations we quantitatively compare correlations between potential ICME and HCS interactions with features of SEP intensity-time profiles and determine their significance via a resampling test.



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