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Poster
Solar wind, in the presence of a mean magnetic field, exhibits several types of anisotropies including wavevector anisotropy and variance anisotropy (Shebalin et al. 1983, Horbury et al. 2012; Oughton et al. 2015). Since the solar wind fluctuations are distributed over a broad range of length scales, the nature of anisotropy changes across scales. Further, as the solar wind expands from the corona into interplanetary space, the magnetically controlled outer corona becomes the dynamic solar wind, and large-scale, more isotropic turbulence starts to develop (DeForest et al. 2016). This is suggestive of the evolvement of anisotropy with distance from the Sun. PUNCH has the combined global spatial coverage with temporal and spatial resolution, which enables the measurement of anisotropy across scales and at different heliospheric positions. We will evaluate the 2D second-order structure function S(r_perp, r_parallel) as a function of spatial scales parallel and perpendicular to the mean magnetic field to infer the nature of the anisotropy.
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