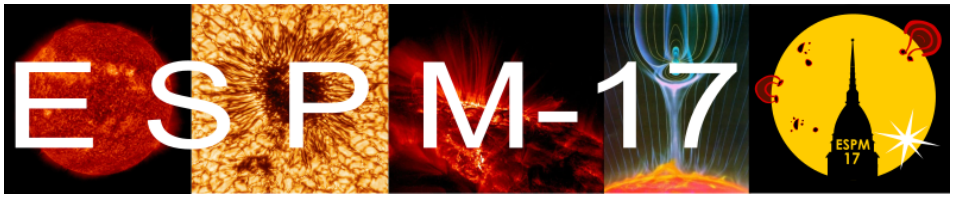

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Synthetic Parker Solar Probe Observables of an Idealized Pseudostreamer CME Eruption

Tuesday 10 September 2024 17:55 (15 minutes)

Coronal pseudostreamer flux systems have a specific magnetic configuration that influences the morphology and evolution of coronal mass ejections from these regions. Here we present the analysis of a recent, high-resolution magnetohydrodynamic simulation of a CME eruption from an idealized pseudostreamer configuration through the construction of synthetic remote sensing and in-situ observational signatures. We examine the pre-eruption and eruption signatures in the low corona and through the extended corona corresponding to typical EUV imaging and white light coronagraph fields-of-view. We calculate synthetic observations corresponding to several Parker Solar Probe-like trajectories at ~10Rs to highlight the fine-scale structure of the CME eruption in synthetic WISPR imagery and the differences between the in-situ plasma and field signatures of flank and central encounter trajectories. Finally, we conclude with a discussion of several aspects of our simulation results in the context of interpretation and analysis of current and future Parker Solar Probe data.

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