Machine Learning Applications for Injection and Bursty Bulk Flow Identification

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Abstract

Bursty Bulk Flows, and reconnection related injections more broadly, occupy an important part of global magnetospheric convection. Particle fluxes related to these events can span several orders of magnitude (across the thermal and energetic populations), as well as events can often (not always) be associated with (short and long term) depolarization, and may or may not be visible in the bulk velocity (with peak velocity in the 100s of km/s). The variety of particle injections across the tail region presents an interesting use case for machine learning classification.

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