CONTINUOUS VERSUS PULSED RECONNECTION AT THE MAGNETOPAUSE

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Decades of research have established that magnetic reconnection is the dominant mechanism by which magnetic fields in different regions change topology to create open magnetic field lines that allow energy and momentum to flow into the magnetosphere. Observations and data analysis methods have reached the maturity to analyze the details of this universal process. One of the persistent problems of magnetic reconnection is the question of whether the process is continuous or intermittent. Observations from imagers that record FUV emissions caused by precipitating cusp ions demonstrate the global nature of magnetic reconnection. Those images show continuous ionospheric emissions even during changing IMF conditions. On the other hand, *in situ* observations from polar orbiting satellites show distinctive cusp structures in the ion flux distortion of precipitating ions; the tell-tale signature of intermittent reconnection. In this study we will investigate those cusp structures by analyzing the time since reconnection occurred to determine if the time profile is continuous or stepped.

Cusp, Magnetic Reconnection, Boundary Layer

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