



Multiple Overshoot and Rebound of a Bursty Bulk Flow

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Chen and Wolf [1999] used a thin-filament theory to construct a 2D model of a bursty bulk flow (BBF) motion inside the plasma sheet. The modeling revealed that the low-entropy filament overshoots its equilibrium position and executes a heavily damped oscillation about that position. In this talk we demonstrate, for the first time, the multiple overshoot and rebound of a BBF observed by the five THEMIS probes on 17 March 2008 just after 10:22 UT. We found that the BBF oscillatory braking was accompanied by interlaced enhancements and depletions of radial pressure gradients. The earthward and tailward flow bursts caused formation of vortices with opposite sense of rotation.