



Statistical study of the magnetopause boundary layer motion observed with the Themis spacecraft

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During the coast phase between February and September 2007 all five Themis spacecraft were flying on very similar orbits. Since the apogees of these orbits were at most times located beyond the magnetopause, a series of magnetopause crossings have been observed in Themis FGM and particle data. The configuration of the spacecraft at that time resembled pearls on a string; the magnetopause was traversed predominantly in radial direction. Due to this unique configuration simultaneous measurements could be obtained in the magnetosphere, the magnetopause boundary layer and the magnetosheath, offering the opportunity to study the magnetopause motion. Having made use of this advantage we present results of a statistical study of this boundary motion, its amplitude and velocity.