



On the propagation time of Sudden Impulses through the magnetosphere

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The observations of Sudden Impulses in the magnetosphere typically occur earlier in the dusk side and later in the dawn side. This feature is currently interpreted in terms of the position of the impact point of the solar wind fronts on the magnetopause. On the basis of a simple geometrical model we evaluated the propagation times of disturbances related to corotating fronts with respect to those expected for fronts impinging on the magnetopause nose. A preliminary analysis of experimental observations along geostationary orbit reveals a substantial agreement with model predictions and allows estimates of the propagation speed of SI disturbances through the dayside magnetosphere.