

Abstract Submitted
for the TSS16 Meeting of
The American Physical Society

Occurrence Time of Magnetotail Stretching After Sudden IMF Change DERRIC EDWARDS, DAVID SOWARD, KEVIN PHAM, RAMON LOPEZ, University of Texas at Arlington — The Sun constantly emits the solar wind which carries the Sun's magnetic field; this is called the interplanetary magnetic field (IMF). We are looking for when the Z direction of the IMF transitions from positive to negative. Ideally, the solar wind parameters before and after should remain steady in order for us to isolate the transition event. When the IMF makes a transition to the negative direction, this has an effect on the structure of the Earth's magnetosphere. One of these effects is that the tail begins to stretch, which causes the current system to build up. Since it takes the system some finite amount of time to make a transition, we will show the average time that it takes for the tail to stretch after a transition occurs. We will use magnetic field data from the geosynchronous GOES satellite when it is on the Earth's night side or on the flanks between the day side and night side to find a signature of tail stretching.

Kevin Pham
University of Texas at Arlington

Date submitted: 08 Mar 2016

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