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**Reconfiguration Time of Sudden Transitions of the Z Direction of the Interplanetary Magnetic Field** 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 a buildup of the current system. Since it takes the system some finite amount of time to make a transition, we will determine how long it takes for the tail to begin stretching after a transition occurs. We will use magnetic field data from the geosynchronous GOES satellite, when it is on the Earth's night side, to find when tail stretching begins.

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