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The Effects of Modifying the Solar Wind Input into an MHD Simulation of the Whole Heliosphere Interval KEVIN PHAM, RAMON LOPEZ, University of Texas at Arlington — As high speed solar wind catches up to slower solar wind, it compresses the slower solar wind. This compressed region, called a corotating interaction region (CIR), has higher density, magnetic field magnitude, and temperature. CIRs interact with the Earth's magnetosphere and can cause geomagnetic storms. It has been suggested that the fluctuation in the magnetic field of the CIR and the following high speed stream play a large role in geomagnetic storm strength. We will be using the Lyon-Fedder-Mobarry global 3D magnetohydrodynamic(MHD) simulation to simulate the Whole Heliosphere Interval (March 20 - April 16, 2008) which contains two CIRs. Various modifications will be done to the solar wind input to determine the relative geoeffectiveness due to the average magnetic field and due to the fluctuation in the magnetic field.

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