

Abstract Submitted  
for the TSS13 Meeting of  
The American Physical Society

**Correlation Between Corotating Interaction Regions' Magnetic Orientations and Magnetic Storm Strengths Near Earth** JOSEPH SCHINCO, BLAKE BARNETT, KEVIN PHAM, RAMON LOPEZ, University of Texas Arlington — The solar wind occasionally contains irregularities called CIRs, or corotating interaction regions. A CIR occurs when a region of slow moving solar wind (slow-speed stream) is followed by a region of fast moving solar wind (high-speed stream). This setup causes a compression in the rear part of the slow-speed stream, since the high-speed stream eventually “catches up” and applies pressure to it. CIRs have been known to be directly linked to some magnetic storms in the near Earth environment. Although we do know that CIRs can create magnetic storms, we do not yet know if a specific magnetic type of CIR creates stronger storms than the rest. We have analyzed data from the solar wind that will allow us to compare multiple magnetic types of CIRs, in order to see which ones create the strongest storms.

Robert Bruntz  
University of Texas Arlington

Date submitted: 04 Mar 2013

Electronic form version 1.4