Abstract Submitted
for the DPP14 Meeting of
The American Physical Society

Analysis of CME and CIR driven storms based on observations made by TWINS BIANCA TRIGO, GUNNER ROBINSON, JERRY CARR JR., Texas Lutheran University, AMY KEESEE, West Virginia University, TLU PLASMA RESEARCH TEAM, WVU PLASMA RESEARCH TEAM — Geomagnetic storms are categorized into two different groups: coronal mass ejection (CME) and corotating interaction regions (CIR) driven storms. This work will analyze a CIR-driven storm observed on 13 Oct 2012 to see if it follows similar patterns observed in a superposed epoch analysis discussed in Keesee et al. (2014)[1] and compared to the 22 July 2009 CIR-driven storm discussed in Keesee et al. (2012).[2] The temperature and movement of the ions will be studied as the storm progresses. The ion temperature will be monitored during the recovery phase of the storm and the ion temperatures of the night side and the day side will be evaluated. To verify the accuracy of the analysis for the October storm, the data from the CME driven September storm on the 26 in 2011 referenced by Keesee et al. (2014)[3] will be used as a baseline model for comparison.

[1]Keesee, A.M., et al., Superposed epoch analyses of ion temperatures during CME and CIR/HSS driven storms. J. Atmos. Sol. Terr. Phys. (2014), doi:10.1016/j.jastp.2013.08.009
[2]Keesee, A. M., et al., Inner magnetosphere convection and magnetotail structure of hot ions imaged by ENA during a HSS-driven storm. J. Geophys. Res. (2012), doi:10.1029/2011JA017319
[3]Keesee (2014)

Bianca Trigo
Texas Lutheran University

Date submitted: 10 Jul 2014 Electronic form version 1.4