Abstract Submitted
for the DNP13 Meeting of
The American Physical Society

**Performance of the Newly Commissioned PHENIX Triggering Resistive Plate Chambers During RHIC RUN 13**[1] RUSTY TOWELL, Abilene Christian University, PHENIX COLLABORATION — Determining the contributions of the sea quarks and other partons to the spin structure of the proton is important to our understanding of QCD. Collisions of longitudinally polarized protons at high energies provide a measurement of the flavor dependent contributions. In particular, the production of W-bosons at forward rapidity is sensitive to the flavor dependent spin contributions. The PHENIX detector at RHIC is well designed to make this measurement but required an upgrade to the forward trigger. The new PHENIX Muon Trigger has enabled the selection of W-bosons events that can be detected through the appearance of a high-energy muon in one of the two existing muon spectrometers. The trigger upgrade is based on new front-end electronics for the muon tracking chambers and the addition of two stations of Resistive Plate Chambers in both muon arms. The performance of these new stations of RPCs during the just completed successful RHIC run has been studied and will be presented.

[1]This research was supported in part by the DOE under grant number DE-FG03-94ER40860.

Rusty Towell
Abilene Christian University

Date submitted: 01 Jul 2013 Electronic form version 1.4