

Abstract Submitted
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W-Boson Trigger-Rate Analysis for PHENIX¹ ANDREW MILLER,
Abilene Christian University, PHENIX COLLABORATION — PHENIX is the largest experiment at Brookhaven National Laboratory's Relativistic Heavy Ion Collider. One of the major goals of PHENIX is to investigate the spin structure of the proton. A primary way that PHENIX is achieving this is by measuring the single-spin W-boson asymmetry in polarized-proton collisions. The recently completed forward trigger upgrade has been specifically designed to select high transverse momentum muons that are largely from the decay of W-bosons. One important component of this trigger upgrade is the two stations of resistive plate chambers (RPCs) in each of the two muon arms. These chambers were used to collect extensive data from polarized-proton collisions for the first time during this past run. Trigger rates from this system were analyzed to determine when all components were functioning properly. Correlating changes in the trigger rates with changes in the configuration of the trigger or hardware will allow the data to be analyzed appropriately. By taking the current detector status into account, a more precise W-asymmetry measurement will be attainable. This poster will present the method and results of this analysis including trigger rates as a function of beam intensity.

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