

Abstract Submitted
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Proton Spin RPC Characteristics at PHENIX RYAN PINSON, Abilene Christian University — At Brookhaven National Laboratory the PHENIX experiment on the Relativistic Heavy Ion Collider (RHIC) studies polarized proton-proton collisions in an effort to better understand the spin structure of the proton. This is achieved by looking at the single-spin asymmetry of the W bosons created in polarized p+p interaction. To enable PHENIX to detect rare collisions, multiple Resistive Plate Chambers (RPCs) were integrated into both the north and the south muon arms of the spectrometer and utilized as part of the trigger. The RPCs were a critical component of the W trigger due to their excellent timing resolution. A systematic study of the RPC high voltage status, trigger rates, and efficiencies was completed on a run-by-run basis. While completing this initial analysis, changes in RPC performance were correlated with changes in detector conditions. The data and patterns of the RPC characteristics will be the focus of this presentation.

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