

Abstract Submitted
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Data Acquisition in Research and Development of Resistive Plate Chambers for the Trigger Upgrade for the PHENIX experiment at RHIC

JOHN WOOD, Abilene Christian University — To study the contributions of different flavors of quarks to the total spin of the proton, the PHENIX experiment at RHIC is installing a first-level trigger system employing Resistive Plate Chambers (RPC's). The trigger will allow data to be taken from the decay of bosons produced in the parity-violating interactions of quarks during polarized p-p collisions with far less background by triggering on detection of high- p_t muons produced during the decay. Prototypes of RPC's are being built with different materials and tested at the University of Illinois to determine characteristics such as position resolution, timing resolution, and rate capability. The data acquisition system and visualization software for the test stand is presented in this poster. The system uses a number of CAMAC modules including a Jorway 73A crate controller.

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