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Quality Assurance Testing of RPC Modules for the PHENIX Muon Trigger Upgrade KYLE SULLIVAN, Muhlenberg College — The Relativistic Heavy Ion Collider (RHIC) collides polarized protons to answer fundamental questions regarding the angular momentum of the proton. The PHENIX collaboration is preparing to measure single spin asymmetries of muons from the decay of W bosons in polarized p+p collisions produced by the RHIC collider. An upgrade to the PHENIX muon trigger is necessary to accomplish this goal. Much of this upgrade has already been completed. New front end electronics (FEE) have already been installed on the existing muon tracking system and a station of resistive plate chambers have been installed in the North Arm. This summer, Muhlenberg College contributed to the assembly of a South RPC station. This poster will describe the quality assurance testing of the individual RPC modules as well as the attachment of the FEE boards to the modules. The modules are tested for noise, dark current, gas leaks, efficiency, and cluster size. In addition, the effect of changing the high voltage and thresholds is studied.

Kyle Sullivan
Muhlenberg College

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