

Abstract Submitted
for the DNP07 Meeting of
The American Physical Society

Quality Analysis and Control Procedures for the PHENIX RPC

Forward Trigger Upgrade DILLON THOMAS, Abilene Christian University, PHENIX COLLABORATION — The PHENIX detector is located at Brookhaven National Laboratory on the Relativistic Heavy Ion Collider (RHIC) ring where it studies both heavy ion and polarized proton-proton collisions. One of the primary goals of the polarized proton program is to improve our understanding of the proton's spin structure. A level 1 trigger upgrade is currently being constructed for PHENIX. This will involve the installation of Resistive Plate Chambers (RPCs). These new chambers will improve our ability to trigger on high transverse single muons that are produced in the decay of W bosons. Before these new chambers can be installed they must pass a series of quality control tests. Simple but effective tests will be preformed on internal components of the RPC such as the gas gaps before individual RPC modules are assembled. These tests will yield a pass or fail result for each gas gap. All gaps that pass these tests can then be used in the construction of the RPC modules. Additional tests will be preformed on each assembled RPC module. A list of tests, why they are important, and how they are performed, will be presented.

Dillon Thomas
Abilene Christian University

Date submitted: 31 Jul 2007

Electronic form version 1.4