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Performance of PHENIX Resistive Plate Chambers MURAD SARSOUR, Georgia State University, PHENIX COLLABORATION — The PHENIX experiment at the Relativistic Heavy Ion Collider at BNL uses polarized pp collisions to study the proton spin structure. One of the major emphases of the PHENIX spin program is to cleanly measure the sea quark and antiquark polarizations via single spin asymmetry of the W-decay muons. At forward rapidity, Resistive Plate Chambers (RPCs) will be used at PHENIX as a level-1 trigger to select high transverse momentum muon events from a large background of low transverse momentum muons. In addition, RPCs will be used offline to reduce cosmic muon backgrounds. Detector modules for one RPC station are currently being installed and tested at the PHENIX experimental site. In parallel, RPC prototypes are continuously monitored at a separate testing facility to study various environmental effects on the RPC performance. A report on results from these tests and performance will be presented. Results from the RPC prototype cosmic run to study the RPC's efficiency will also be presented.

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