

Abstract Submitted
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Analysis of Resistive Plate Counter Detector used at Hadron Colliders ALEX BURNAP, PHENIX COLLABORATION — Resistive Plate Counters (RPC) used for muon detection in the ATLAS and CMS experiments at the Large Hadron Collider are essentially based on the same design as those currently being installed for the level one muon trigger upgrade of the PHENIX experiment at the Relativistic Heavy Ion Collider. A full size RPC prototype double gas gap RPC was constructed for detector performance studies in the PHENIX RPC assembly laboratory at BNL. The RPC was then taken to UIUC where a setup of scintillators and drift chambers makes it possible to reconstruct cosmic ray tracks with a position resolution of about 1 mm. This tracking makes it possible to characterize RPC efficiencies and position resolution as a function of position in the detector and to study the efficiency near the detector edges and in regions where mechanical spacers in the gas gaps are located.

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