

Abstract Submitted
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Impact of Polycarbonate Spacers on Resistive Plate Chamber Efficiencies NICHOLAS MUCIA, University of Illinois Urbana / PHENIX — The PHENIX experiment at the Relativistic Heavy Ion Collider at Brookhaven National Laboratory will measure the flavor dependent quark and anti-quark polarizations in the proton through parity violating W-production. A new dedicated muon trigger spectrometer is being built to select high momentum muons from the decay of W bosons. The muon spectrometer relies on Resistive Plate Chambers (RPCs) developed for the CMS experiment at the Large Hadron Collider. PHENIX continues to pursue detailed studies of CMS RPC technology to ensure that these detectors will be optimally deployed and operated in PHENIX. In this poster we present two dimensional efficiency measurements with cosmic rays in RPC prototypes. In particular we have studied the impact polycarbonate spacers used to define the 2 mm wide RPC gas gaps have on the detector efficiency. We will present two dimensional efficiency measurements in the region adjacent to the spacers including the radial dependence of the efficiency with respect to the center of the spacer.

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