

Abstract Submitted
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Detector response of the PHENIX Muon Piston Colorimeter for $\sqrt{S_{nn}}=200$ GeV Au+Au collisions¹ BENJAMIN KIMELMAN, Muhlenberg College, PHENIX COLLABORATION — Transverse energy is often used to characterize the energy density in ultra-relativistic heavy ion collisions. Most measurements are obtained in the the central rapidity region; however, the PHENIX Muon Piston Calorimeter (MPC), a homogeneous electromagnetic calorimeter, is a useful tool for measuring this quantity in the forward/backward pseudo-rapidity regions. A full Geant3 detector simulation is used for assessing detector response and the effects of particle decays on the measurement of transverse energy in the pseudo-rapidity range $3.1 < |\eta| < 3.9$. In 2010, $\sqrt{S_{NN}}=200$ GeV Au+Au collisions were obtained and are being analyzed. Various event generators are used as input to the detector simulation to help determine the effects of inflow, outflow, and hadronic response of the MPC.

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