

Abstract Submitted
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Calibrating the Muon Piston Calorimeter (MPC) MARIANNE SKOLNIK, Muhlenberg College, PHENIX COLLABORATION — The Muon Piston Calorimeter (MPC) is a subsystem of the PHENIX detector. The MPC, an electromagnetic calorimeter, is effective at measuring the energy of photons and electrons produced from collisions at the Relativistic Heavy Ion Collider (RHIC). The MPC outputs a voltage signal that we then convert into an energy reading. One common way to calibrate electromagnetic calorimeters is to use photons from π^0 decays. Since many of the photons that enter the detector are the result of natural pion decay, we can pair up the photons and create π^0 candidates. We then plot their masses tower by tower and with the correct cuts a mass peak will appear close to the position predicted by the simulation PISA of the PHENIX detector. Then, we relate the mass peaks from the measured data to mass peaks from simulated data to adjust the gains. Once the MPC is calibrated we can use it to study Au+Au collisions. Previously, the detector has been used to study spin physics using data collected from p+p collisions, and cold nuclear matter effects using d+Au collisions. These new calibrations will allow us to measure new global variables such as transverse energy in both the forward and backward kinematic regions, $3.1 < |\eta| < 3.9$.

MariAnne Skolnik
Muhlenberg College

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