

Abstract Submitted  
for the DNP13 Meeting of  
The American Physical Society

**Calibrating the PHENIX Muon Piston Calorimeter for Au+Au Collisions at  $\sqrt{S_{NN}} = 200$  GeV<sup>1</sup>** CORA WALLACE, Muhlenberg College, PHENIX COLLABORATION — The PHENIX Muon Piston Calorimeter (MPC) has been used extensively for p+p and d+Au collisions and, to a lesser extent, Au+Au collisions at RHIC. Progress on calibrating the MPC for measuring forward/backward transverse energy in ultra-relativistic heavy ion collisions will be reported. In particular, the status of calibrations of RHIC data taken in 2010 (in which Au+Au collisions were recorded at  $\sqrt{S_{NN}} = 200, 62.4, 39,$  and  $7.7$  GeV) will be relayed. The approach is to follow the procedure developed in earlier p+p and d+Au analyses. Neutral pions are reconstructed from decay photons that strike the MPC. The position of reconstructed neutral pion mass peaks are compared to those expected from a perfectly calibrated detector (as determined by simulation) adjusting the gains of each calorimeter tower until the data are brought into agreement with the simulation. In the past, these calibrations have utilized the Pythia event generator to calibrate p+p and d+Au data. In the case of these heavy ion data, initially, peripheral collisions will be compared to the Pythia p+p results, but eventually, Hijing will be used to calibrate the Au+Au data.

<sup>1</sup>We gratefully acknowledge support from the NSF Grant Number 1209240

Cora Wallace  
Muhlenberg College

Date submitted: 01 Aug 2013

Electronic form version 1.4