

Abstract Submitted
for the DNP12 Meeting of
The American Physical Society

Transverse Energy in Forward/Backward Directions from RHIC Au+Au Collisions at Several Beam Energies¹ BRETT FADEM, Muhlenberg College, PHENIX COLLABORATION — In 2010, RHIC produced Au+Au collisions at $\sqrt{s_{NN}} = 200, 62.4, 39,$ and 7.7 GeV. Progress in measuring transverse energy in the range $3.1 < |\eta| < 3.8$ using the PHENIX Muon Piston Calorimeter will be reported. Transverse energy has been used to estimate energy density in ultra-relativistic heavy ion collisions and to discriminate between competing models of hadronic interactions. At forward rapidities the net baryon densities are much higher than those at mid-rapidity, so one can probe these models at high baryon chemical potential. Furthermore, fluctuations in transverse energy might signal the presence of a critical point in the phase diagram of nuclear matter.

¹NSF PHY 08-55762

Brett Fadem
Muhlenberg College

Date submitted: 06 Jul 2012

Electronic form version 1.4