

APR10-2009-000640

Abstract Submitted
for the APR10 Meeting of
The American Physical Society

Sorting Category: E5. (E)

Measurement of Low Transverse Momentum Direct Photons Via External Conversions in Au+Au Collisions at $\sqrt{s} = 200$ GeV with the PHENIX Detector at RHIC RICHARD PETTI, Stony Brook University, PHENIX COLLABORATION — Photons are an important probe of the hot and dense partonic medium created through the collision of heavy ions at the Relativistic Heavy Ion Collider (RHIC), located at Brookhaven National Laboratory. This is because they escape the medium with no modification and carry information about the earliest stages of the collision. This analysis measures low transverse momentum direct photons in Au+Au collisions at $\sqrt{s} = 200$ GeV as seen in the central arms of PHENIX ($|\eta| < 0.35$) during the 2007 data taking period. These measurements can then be compared to theoretical expectations. An inclusive real photon spectrum is obtained by measuring dilepton pairs that have been identified as photons converting in detector material. These dilepton pairs from real photons can be identified by cutting on the orientation of the opening plane of the pair relative to the magnetic field in the detector. A neutral pion tagged sample is also measured and other expected hadronic contributions are simulated based on actual measurements. An excess of direct photons above the inclusive sample are then quantified as a ratio of inclusive to hadronic decay photons. The status of this analysis will be discussed.

- Prefer Oral Session
 Prefer Poster Session

Richard Petti
richard.petti@gmail.com
Stony Brook University

Date submitted: 23 Oct 2009

Electronic form version 1.4