

Low pT direct photon measurement in Au+Au at 200GeV with PHENIX

One of the major goals in heavy ion physics is to study the property of Quark Gluon Plasma (QGP). Direct photons turn out to be golden probes due to their small interaction with the medium. Direct photons are also produced in every known or conjectured stages of the collision hence carrying information of the entire evolution of the system. PHENIX has discovered a large excess of thermal photons at low pT in Au+Au collisions at 200 GeV with a large azimuthal anisotropy. These observations are challenging current state of the art theoretical models. Using the high statistics data sample of Au+Au collisions taken in 2014, PHENIX will be able to reduce the experimental uncertainties on the low pT direct photon measurement and measure flow to higher orders. In these new measurements we detect photons via external conversions to electron-positron pairs. In this poster we will present the improvements and the current status of the analysis.

Preferred Track

Electromagnetic Probes

Collaboration

PHENIX

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