

Abstract Submitted
for the DNP07 Meeting of
The American Physical Society

Decomposition of awayside components of dijet correlation in Au+Au collisions at $\sqrt{s_{NN}} = 200$ GeV CHIN-HAO CHEN, Stony Brook University, PHENIX COLLABORATION — A hot dense QCD matter is created by heavy ion collision in Relativistic Heavy Ion Collider (RHIC). Since parton fragments from high- p_T scattering form back-to-back hadron pairs, studying the di-hadron or photon-hadron angular correlation can probe the medium response to energy deposited by the partons. At intermediate transverse momentum (p_T), modified away-side dijet correlation has been observed. Unlike p+p collisions, where the away side peaks at $\Delta\phi = \pi$, there is a local minimum at $\Delta\phi = \pi$ in Au+Au. The modified shape suggests a medium response to energy deposited by the transiting parton. We present photon-hadron correlations from $\sqrt{s_{NN}} = 200$ GeV Au+Au collisions in the PHENIX run4 data set. We separate the jet components which “punch through” the medium from the side peak due to the medium response, counting the number of particles observed in each. These are studied as a function of collision centrality and compared with the p+p dijet correlation.

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Date submitted: 02 Jul 2007

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