

Abstract Submitted
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Di-jet Hadron Correlations in Central Au+Au Collisions at $\sqrt{s_{NN}} = 200$ GeV at STAR NICHOLAS ELSEY, Wayne State Univ, STAR COLLABORATION — Jets and their modifications due to partonic energy loss provide a powerful tool to study the properties of the QGP created in ultrarelativistic heavy-ion collisions.

For jets reconstructed with the anti- k_T algorithm with resolution parameter $R = 0.4$, previous measurements of the di-jet asymmetry A_J at STAR[?] indicate that the observed imbalance of an initial “hard-core” di-jet selection with $p_T^{\text{const}} > 2.0$ GeV/c, $p_T^{\text{lead}} > 20.0$ GeV/c and $p_T^{\text{sub}} > 10.0$ GeV/c is restored to the balance of the pp reference when soft constituents are included. The lost energy recovered with soft constituents suggests soft gluon radiation by high p_T partons.

Jet-hadron correlations with respect to di-jets allow a differential assessment of the kinematic properties of the soft gluon radiation spectrum induced by partonic energy loss in the QGP. We present charged hadron correlations with respect to the di-jets found in the above A_J analysis, and compare to similar measurements using a jet trigger at RHIC[?].

L. Adamczyk *et al.* (STAR), arXiv:1609.03878 [nucl-ex].

L. Adamczyk *et al.* (STAR), Phys. Rev. Lett. **112**, 122301 (2014).

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