

PHENIX Results on π^0 -Hadron Correlation in $\sqrt{s}=200$ GeV Au+Au Collisions

As hard scattered partons traverse and interact with the quark-gluon plasma (QGP), they lose energy, and the resulting jet is expected to be broadened. Thus, by comparing the modified jets from Au+Au to p+p collisions, one can study the properties of the QGP. Using a high- p_T π^0 as a proxy for the jet, π^0 -hadron correlations can be used to measure modifications to jets. A previous two-particle correlation analysis from 200 GeV Au+Au data collected by PHENIX in 2007 indicated broadening of low momentum jets in the QGP. However, the previous analysis only accounted the effect of elliptic flow. This poster will present the π^0 -hadron correlation analysis from higher statistics Au+Au data sets from PHENIX that also includes the subtraction of triangular flow, which arises from fluctuations in the initial state geometry, and evaluate the influence from higher harmonic anisotropic flow.

Summary

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Session Classification: Poster Session