

Imaging the QGP in Ru+Ru and Zr+Zr Collisions using Energy Correlators at STAR

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In proton-proton (pp) collisions, hard-scattered partons will undergo perturbative fragmentation and hadronization, resulting in a collimated collection of hadrons that can be measured as a jet. The N-Point Energy correlator (ENC) is a jet substructure observable formed out of the distribution of angular distances between all particle groups of N constituents in a jet weighted by their energy product, separating perturbative and non-perturbative regimes of jet evolution. In heavy-ion collisions, the quark-gluon plasma has been seen to quench and modify the substructure of jets. Energy correlators can potentially isolate these modifications to identifiable angular scales, including the onset of effects such as color coherence and the medium wake. In this talk, measurements of the two- and three-point energy correlators in pp collisions will be shown alongside the first measurement of N-point energy correlators in isobar collisions (Ru+Ru, Zr+Zr) at RHIC at $\sqrt{s_{NN}} = 200$ GeV.