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Collision energy dependence of high transverse momentum R_{CP} of charged hadrons in STAR

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The observed suppression of high transverse momentum (p_T) hadrons in central Au+Au collisions at $\sqrt{s_{NN}} = 200\text{GeV}$, expressed via the nuclear modification factor R_{AA} (R_{CP}), is a clear indication of partonic energy loss due to the strongly-coupled medium created in heavy-ion collisions. That result is supported by high- p_T triggered azimuthal di-hadron correlations which compare the measured correlated yield of recoil jets in heavy-ion collisions to p+p or peripheral collision reference measurements. The collision energy dependence of jet quenching measurements can be used to put further constraints on theoretical descriptions of partonic energy loss. We will present measurements of charged hadron R_{CP} over a wide range of collision energies ranging from 7.7-200 GeV. In addition, we will present the analysis status of triggered di-hadron correlations at lower RHIC energies.

Primary author: HORVAT, Stephen (Y)

Presenter: HORVAT, Stephen (Y)

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