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Jet-like Correlations in Au+Au Collisions at $\sqrt{s_{NN}} = 200$ GeV in STAR

Thursday, 20 December 2018 15:30 (15 minutes)

Hard scattered partons lose their energy when propagating through the hot dense medium created in relativistic heavy ion collision. Jets are excellent probes to study parton energy loss mechanisms. Experimentally high transverse momentum (p_T) trigger particles are taken as proxies of jets. Di-hadron correlation measurements in Au+Au collisions at $\sqrt{s_{NN}} = 200$ GeV will be presented in this talk, where all orders of flow background are subtracted using data themselves. They are used to study how the lost energy is redistributed at low to modest p_T. Moreover, the path length dependence of the parton energy loss can provide deeper understanding of the energy loss mechanisms. Di-hadron correlations as a function of both the azimuthal angle of the trigger particle with respect to the event plane and Event Shape Engineering selections will also be presented. These results will shed new lights on the path length and geometry dependence of jet-medium interactions.

Type

Parallel talk

Sessions (parallel only)

Heavy Ions

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