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Investigating QGP through Monte Carlo Jet Event Topology JEN-

NIFER COULTER, Rutgers University — Thrust, an infrared safe, perturbatively calculable event shape variable, has been used to explore the geometry of energy momentum flow in e^+e^- annihilation. The calculation of thrust, thrust major, and thrust minor is dictated by equations arising from QCD. Current QCD theory in e^+e^- predicts that thrust could have implications for determinations of the strong coupling constant and branching structure of collisions. In order to extend the work done in e^+e^- to apply to pp and PbPb collisions, analysis of Monte Carlo simulations was developed to create plots of thrust, thrust major, and thrust minor. Going forward, pp and PbPb thrust values from these simulations will be compared in order to study the effects of quenching and hopefully imply new information about quark-gluon plasma.

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