

Azimuthal correlation and anisotropic flow measurements from the PHENIX experiment at RHIC

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An important goal of the experiments at the Relativistic Heavy Ion Collider (RHIC) is to produce and study the hot and dense matter produced in heavy-ion collisions. To this effect, several probes are used to infer the properties of the matter formed. Two such probes are jets produced in hard scattering processes and anisotropic flow from pressure gradients which develop in the expanding system. It has been found that back-to-back angular correlations of high p_T hadrons from jets are suppressed in the most central Au+Au collisions due to partons losing energy as they traverse the dense medium. Anisotropic flow measurements, which carry information about the conditions during the early stages of the collisions, compare well with hydrodynamic models and their scaling patterns can help elucidate the dynamics of the evolution of the system. In this talk, I will present a brief overview of azimuthal correlation and anisotropic flow measurements from the PHENIX experiment and discuss what they indicate about the properties of the matter formed at RHIC.

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