

Azimuthal anisotropy of the identified charged hadrons in Au+Au collisions at $\sqrt{S_{NN}} = 39 - 200$ GeV at RHIC.

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A new form of nuclear matter, where quarks and gluons are deconfined and interact strongly with each other, is produced in heavy ion collisions at the relativistic heavy ion collider (RHIC). Azimuthal anisotropies of particle distributions relative to the symmetry plane in high energy heavy ion collisions are used to characterize the collision dynamics. The results of measurements of the azimuthal anisotropy parameters v_n ($n=2,3$) of identified charged hadrons (pions, kaons and protons) as a function of centrality and transverse momentum in Au+Au collisions at $\sqrt{S_{NN}} = 39, 62.4$ and 200 GeV will be presented and discussed. The energy dependence of the difference between the flow of the particles and their anti-particles will be discussed as well.

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