

Evolution of anisotropic flow of produced particles from Au+Au collisions at $\sqrt{s_{NN}}=4.5 - 200$ GeV in a hybrid models

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The beam energy scan program has been carried out by STAR experiment at the Relativistic Heavy Ion Collider to search for the onset of deconfinement and a possible critical point where the transition from a Quark Gluon Plasma to a hadronic phase changes from a rapid cross over to a first-order phase transition. Azimuthal anisotropy of produced particles is one of the important observables sensitive to the transport properties of the strongly interacting matter: the equation of state, the speed of sound, and the value of specific shear viscosity. In this work, we report on the calculations of azimuthal anisotropy of inclusive and identified charged hadrons produced in Au+Au collisions at $\sqrt{s_{NN}} = 4.5 - 200$ GeV from two hybrid models: AMPT and viscous hydro+hadronic cascade vHLE+UrQMD and direct comparison with published results from STAR experiment.

The results would be useful as predictions for the upcoming beam energy scan experiments at Nuclotron-based Ion Collider Facility (NICA).

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