

Abstract

Scaling of collective flow of charged and identified hadrons in Au+Au collisions at $\sqrt{s_{NN}} = 11.5 - 62.4$ GeV from the STAR experiment

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Heavy-ion collisions create matter which is characterized by high temperature and energy density, called Quark-Gluon Plasma (QGP). Azimuthal anisotropy of produced particles is sensitive to the transport properties of QGP (the equation of state, speed of sound and specific shear viscosity) and may provide information about initial state of the collision. In this work, we report results for elliptic (v_2) and triangular (v_3) flow of charged and identified hadrons ($\pi^\pm, K^\pm, p, \bar{p}$) in Au+Au collisions at $\sqrt{s_{NN}} = 11.5, 14.5, 19.6, 27, 39$ and 62.4 GeV from the STAR experiment at RHIC. Measurements of the collective flow coefficients v_2 and v_3 are presented as a function of particle transverse momenta (p_T) and collision centrality. In addition the number of constituent quark scaling will be presented for these energies.