

Measurement of energy and centrality dependence of triangular flow and higher harmonics by STAR in Au+Au collisions

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Initial state geometry fluctuations in relativistic heavy ion collisions can lead to flow fluctuations which induce non-zero higher harmonics in the final momentum space. These higher harmonics may dominate the near-side ridge and away-side structures seen in two-particle correlations. We present measurement of triangular flow (v_3) as well as higher harmonics (v_4 - v_7) in Au+Au collisions at $\sqrt{s_{NN}}=7.7$ – 200 GeV recorded with the STAR detector at RHIC using two-particle cumulant corrected for short-range $\Delta\eta$ correlations. We will also present the ratio of the corrected two-particle cumulant $v_n\{2\}$ to participant eccentricity ($\varepsilon_{n,\text{part}}$) from Monte-Carlo Glauber model. This provides a picture of how the efficiency for converting initial state geometry fluctuations into momentum space correlations changes with collision energy, system-size and harmonic.