

Triangular flow in Au + Au collisions at $\sqrt{s_{NN}} = 17.3$ GeV from RHIC-STAR

Yuli Kong

(for the STAR collaboration)

Triangular flow in heavy-ion collisions, v_3 , represents the third harmonic coefficient in the Fourier expansion of the azimuthal distribution of produced particles relative to the collision event plane. Since v_3 is sensitive to initial fluctuations of nucleons, it serves as a valuable tool for studying the fluctuations of the early initial conditions of the system and the subsequent evolution process.

Using the RHIC-STAR Beam Energy Scan dataset, we will present measurements of v_3 for π^\pm , K^\pm , p , \bar{p} , Λ , $\bar{\Lambda}$, K_S^0 , Ξ^- , $\bar{\Xi}^+$, Ω^- , $\bar{\Omega}^+$ and ϕ mesons in $Au + Au$ collisions at $\sqrt{s_{NN}} = 17.3$ GeV. We will discuss the centrality dependence of v_3 as well as the number of constituent quark scaling (NCQ scaling) for all the particles mentioned above.