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

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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.

We will present measurements of the third-order flow coefficient 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, utilizing the Beam Energy Scan (BES-II) dataset from the STAR experiment at RHIC. 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.