



ID de Contribution: 282

Type: Poster

Correlations of harmonic flow coefficients at large baryon densities

mardi 4 juin 2024 19:06 (1 minute)

Correlations between the harmonic flow coefficients v_1 , v_2 , v_3 and v_4 of nucleons in peripheral Au+Au collisions at 1.23A GeV are investigated with the Ultra-relativistic Quantum Molecular Dynamics model employing different Equations-of-State (hard Skyrme, soft Skyrme, Chiral-Mean-Field). Using an event-by-event selection based on the final state v_2 it is shown that the triangular flow changes its slope around midrapidity while the quadrangular flow changes its curvature in these different v_2 -event classes. The correlations of the flow coefficients are explained with the intricate time dependence of spectator shadowing blocking the early in-plane expansion. The results on the flow correlations thus reveal a strong sensitivity to the EoS which will allow to measure the Equation-of-State at large baryon densities more precisely than is usually possible. Finally the model is used to calculate the first and predict the second order flow coefficients of hypernuclei.

Auteur principal: REICHERT, Tom

Co-auteurs: KITTIRATPATTANA, Apiwit; STEINHEIMER, Jan (Frankfurt Institute for Advanced Studies); BLEICHER, Marcus (Universität Frankfurt); M. SAVCHUK, Oleh (Bogolyubov Institute for Theoretical Physics)

Orateur: REICHERT, Tom

Classification de Session: Posters

Classification de thématique: Bulk matter phenomena, QCD phase diagram and Critical point