Contribution ID: **234** Type: **Poster**

Polarization of Λ and anti-Λ hyperons in heavy-ion collisions at intermediate energies in hydrodynamic and microscopic transport models

Tuesday 14 June 2022 17:22 (1 minute)

Using 3-fluid dynamical (3FD) model and microscopic transport model UrQMD, we made predictions for the global polarization of Λ and anti-Λ hyperons in Au+Au and Ag+Ag collisions at moderately relativistic collision energies of √(s_NN) = 2.4–11 GeV. The dependence of the polarization on the centrality of the collision, as well as on the rapidity and transverse momentum, is studied. The obtained results agree well with the available experimental data. The polarization is predicted to reach a maximum or plateau (depending on the equation of state and centrality) at √(s_NN) ≈ 3 GeV. It is found that the global polarization increases with increasing width of the rapidity interval in the central rapidity region. The global polarization Λ and anti-Λ, originated from axial vortex effect (AVE), was also calculated within the 3FD model. It is found that the equation of state with the deconfinement transition leads to splitting in polarization of Λ and anti-Λ in good agreement with the STAR data.

Present via

Authors: ZABRODIN, Evgeny; BRAVINA, Larisa; VITIUK, Oleksandr (University of Wroclaw, Institute of Theoretical Physics); IVANOV, Yuri (Joint Institute for Nuclear Research (RU))

Presenter: BRAVINA, Larisa

Session Classification: Poster

Track Classification: Light-flavor and Strangeness