

Measurements of Λ global polarization in Beam Energy Scan Phase II at RHIC-STAR

Kosuke Okubo (for the STAR Collaboration)
University of Tsukuba

The medium generated by non-central nuclear-nuclear collision has a large angular momentum, also known as vorticity of the Quark-Gluon Plasma (QGP). Due to the spin-orbit coupling, spin directions of particles formed by combining from the QGP could reflect the spin direction aligned with the angular momentum of the system. Global polarization has been measured from 7.7 to 200 GeV in Au+Au collisions via Λ hyperon decay by the STAR collaboration. A recent study using a high-statistics data set at $\sqrt{s_{NN}} = 200$ GeV has shown the dependence of Lambda polarization on centrality, transverse momentum, pseudorapidity. Recently STAR collaboration has gathered high-statistics data sets at $\sqrt{s_{NN}} = 27$ and 54.4 GeV. In this talk, various differential measurements of the Λ global polarization in Au+Au collisions at 27 and 54.4 GeV will be reported.