



Contribution ID : 109

Type : Oral talk

Global polarization of Xi hyperons in Au+Au collisions in the STAR experiment

Friday, 25 October 2024 12:05 (20)

In non-central heavy-ion collisions emitted particles' spin can be polarized along the initial global angular momentum due to spin-orbit coupling. Global polarization of hyperons is measured utilizing parity violating weak decay of hyperons and is used to probe the vortical properties of the system. The STAR experiment at RHIC measured the global polarization of Λ hyperons in Au+Au collisions at $\sqrt{s_{NN}} = 3-200$ GeV, and similar measurements were conducted at the LHC for Pb+Pb collisions at $\sqrt{s_{NN}} = 2.76$ and 5.02 TeV. Measurement of multistrange hyperons have been only limited to top RHIC energy.

In this talk, we will report results of Ξ global polarization for Au+Au collisions at $\sqrt{s_{NN}} = 14.6, 19.6$ and 27 GeV. While Λ global polarization was measured in wide energy range the energy dependence of multistrange hyperon global polarization can provide new experimental input for understanding vortical properties of matter in heavy-ion collisions.

Primary author(s) : ALPATOV, Egor (NRNU MEPhI)

Presenter(s) : ALPATOV, Egor (NRNU MEPhI)

Session Classification : Heavy Ion

Track Classification : Heavy ion physics