

XXV International Baldin Seminar on High Energy Physics Problems
"Relativistic Nuclear Physics and Quantum Chromodynamics"



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on High Energy Physics Problems
Relativistic Nuclear Physics & Quantum Chromodynamics
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Global polarization of Ξ hyperons in Au+Au collisions in the STAR experiment

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Vortical structure of hot-dense matter in heavy ion collisions can be observed through global polarization of emitted particles.

Hyperon's weak decays provides opportunity to measure this phenomenon. Global polarization of Λ hyperons was measured by the STAR experiment at RHIC for Au+Au collisions with $\sqrt{s_{NN}} = 3-200$ GeV and at the LHC for Pb+Pb collisions with $\sqrt{s_{NN}} = 2.76$ and 5.02 TeV.

Global polarization of multistrange hyperons, such as Ξ , can provide new information for hydrodynamic description of the system and its vorticity structure. In this talk, we will report results of Ξ global polarization measurement for Au+Au collisions at $\sqrt{s_{NN}} = 19.6$ and 27 GeV.

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