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Type: **Parallel session talk**

Polarization of lambda hyperons, vorticity and helicity structure in heavy-ion collisions

Monday, 26 July 2021 17:45 (15 minutes)

Simulations of peripheral Au+Au collisions at NICA energies was performed in the PHSD transport model. The properties of velocity and vorticity fields, hydrodynamic helicity was studied at different impact parameters and energies. The general structure of velocity field follows the “little bang” pattern which may be quantified by the velocity dependence allowing to extract the “Hubble” constant. Quadrupole structures of the vorticity field in transverse reaction plane was obtained. The effect of helicity separation was detected. Calculation of Λ - hyperons polarization is performed in thermodynamic and anomalous models at NICA energies. The polarization of Λ -hyperons at NICA energies was calculated in thermodynamic approximation and anomalous mechanism, based on Chiral Vortical Effect.

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