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Vorticity structure and polarization of lambda hyperons in Au-Au collisions

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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 all planes was obtained. The effect of helicity separation was detected. Calculation of Λ - hyperons polarization is performed in thermodynamic and anomalous models at NICA energies. Polarization of $\bar{\Lambda}$ in progress.

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