

Study of Lambda polarization at the MPD

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Content

The polarization of Λ hyperons is self-analyzed in their weak decays and represents a sensitive tool to explore the dynamics of hadronic reactions and heavy-ion collisions. It was extensively studied in hadronic reactions, where it is directed along the normal to the scattering plane. In heavy-ion collisions this observable is expected to decrease due to randomization of the scattering on different nucleons. At the same time, due to the presence of initial angular momentum in non-central heavy-ion collisions, global hyperon polarization emerges, directed along the normal to the reaction plane. Here we present the study of Λ polarization within the framework of the MPD experiment, performed via Monte Carlo simulation in order to analyze the sensitivity of the detector to these variables.

Area of contribution

Experiment: data analysis

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