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A Monte Carlo simulation of the MPD experiment performance for strange particle decay study

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Study of strange particle production in nuclear collisions is one of the most important items of the physics program of the MPD experiment. As previously demonstrated on simulated data, the detector will provide good conditions for reconstruction of strange particles via their weak decays to charged products in the collider mode of NICA operation.

In this work, it is shown that the detector will be capable of successfully reconstructing strange particle decays also in the fixed-target mode. This allows one to extend the experiment coverage to lower energies comparable with the energy range of the BM@N experiment.

The simulated results on strange particle production study at the MPD experiment in both the collider and fixed-target modes will be presented.

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