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Performance evaluation of the Stage-I Inner Tracking System for hyperon reconstruction at MPD/NICA

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The upgrade program of the Multi-Purpose Detector (MPD) experiment at the Nuclotron-Based Ion Collider Facility (NICA) complex considers assembly and installation of an Inner Tracking System (ITS) made of Monolitic Active Pixel Sensors (MAPSs) between the beam pipe and the Time Projection Chamber (TPC). It is expected that the new detector will enhance the experimental potential for reconstruction of short-lived particles —in particular, open-charm hadrons.

The new detector is planned to be built in two stages. At the first stage, two outermost layers will be installed. In the talk, results of a Monte Carlo study of the performance of this configuration for reconstruction of (multi)strange hyperons will be presented.

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