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Performance of the MPD detector at NICA in the fixed-target configuration

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Multi-Purpose Detector (MPD) at NICA collider is designed to study heavy-ion collisions in the energy range 4-11 GeV. Physics program of the MPD can be extended to lower energies 2.4-3.5 GeV by detecting collisions of one of the NICA beams with a fixed target installed in the beam pipe. The fixed target configuration also provides high event rate even at low beam intensities, which may be a significant benefit in the initial period of collider operation. In this presentation, we review performance of the MPD detector in the fixed-target configuration, discuss detector acceptance and trigger system efficiency. We also propose different methods for the measurement of event centrality.

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