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Status of the MPD experiment at NICA

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The main heavy-ion experiment at Nuclotron-based Ion Collider fAcility (NICA) is the Multi-Purpose Detector (MPD). It covers the energy range from 2.4 to 3.5 GeV in fixed-target mode and from 4 to 11 GeV in collider mode. This allows us to examine the region of the QCD phase diagram with a high baryon chemical potential, where a first-order phase transition and the onset of the critical endpoint are predicted to occur. Preparations for data collection in the MPD experiment will be concluded in 2026. The study of hadron spectra and hypernucleus production, collective flow, correlations and fluctuations, hyperon global polarization, electromagnetic probes, and open charm production are important contributions to the MPD physics program. In this talk, the project's current status and recent results of the feasibility study will be presented.

Primary author(s): PARFENOV, Peter (JINR, NRNU MEPHI)

Presenter(s): PARFENOV, Peter (JINR, NRNU MEPhI)

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