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Status of the NICA Project

Nuclotron-based Ion Collider facility (NICA) project is under realization in the Joint Institute for Nuclear Research (JINR) in Dubna. The main goal of the project is the studying of hot and dense strongly interacting matter in heavy ion collisions with the MultiPurpose Detector (MPD) at the collider NICA providing centre-of-mass energies of $\sqrt{s_{NN}} = 4-11$ GeV (NN-equivalent) at average luminosity of $10E27$ cm⁻² s⁻¹ for Au (79+), and in the experiment Baryonic Matters at Nuclotron (BM@N) at the beam extracted from the upgraded superconducting synchrotron Nuclotron with energies up to 5.81 GeV/u (scaled to $A/Z = 2$). The program also foresees the further spin physics research with colliding beams of polarized deuterons and protons at the energies up to $\sqrt{s} = 26$ GeV and $\sqrt{s_{NN}} = 13$ GeV for protons and deuterons respectively. General design and construction status of the complex is presented, whereas some fresh results from current R&D program are briefly introduced.

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