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Status of the NICA project at JINR

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The NICA (Nuclotron-based Ion Collider fAcility) project is now under active realization stage at the Joint Institute for Nuclear Research (JINR, Dubna). The main goal of the project is an experimental study of hot and dense strongly interacting matter in heavy ion collisions at centre-of-mass energies $\sqrt{s}\_NN$ = 4 - 11 GeV (NN-equivalent) and the average luminosity of 10E27 cm-2 s-1 for Au(79+) in the collider mode (NICA collider). In parallel, the fixed target experiment BM@N at the JINR superconducting synchrotron Nuclotron is in preparation stage. Extracted beams of various nuclei species up to Au(79+) with maximum momenta 13 GeV/c (for protons) will be available. The NICA project also foresees a study of spin physics with extracted and colliding beams of polarized deuterons and protons at the energies up to $\sqrt{s}$ = 26 GeV (for protons). The proposed program allows to search for possible signs of the phase transitions and critical phenomena as well as to shed light on the problem of nucleon spin structure. General design and construction status, physical program of the NICA complex is presented.

On behalf of collaboration:

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