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Relativistic heavy ion physics at JINR: status of the BM@N and MPD experiments

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The comprehensive heavy-ion program launched recently at JINR (Dubna) is
devoted to the study of the properties of strongly interacting matter, including a search for possible signals of deconfinement phase transition, chiral symmetry restoration and the QCD critical endpoint. The future accelerator facility NICA will supply ion species ranging from polarized proton to heavy ions with design luminosity of up to 10^27 cm^â^'2c^â^'1 for Au nuclei in the region of the collider energy up to \sqrt(s_NN) = 11 GeV.
It will complement the existing accelerator Nuclotron, which is being currently upgraded in order to be able to accelerate Au nuclei up to Ekin = 4.65 A GeV (\sqrt(s_NN) = 3.5 GeV).
These machines will host two heavy ion detectors: BM@N (Baryonic Matter at Nuclotron) and MPD (Multi-Purpose Detector) at NICA.
The research programs of these experiments will be presented along with some results of their performance studies.

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