

Status of the NICA project

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The global scientific goal of the NICA/MPD (Nuclotron-based Ion Collider fAcility / Multy Purpose Detector) project realizing at JINR is to explore the phase diagram of strongly interacting matter in the region of high compression. The proposed program allows to search for possible signs of the phase transitions and critical phenomena in heavy ion (up to Au) collisions at centre-of-mass energies up to 11 GeV/u. The collider experiment provides optimum conditions for efficient measurements at energy scan. Main accelerator of the NICA complex is the Nuclotron – 251.52 m long superconducting ion synchrotron equipped with two injection chains: for heavy (including small superconducting synchrotron – the Booster) and for light ions. The collider experiments will be provided at two storage rings with two interaction points based on double-aperture (top-to-bottom) superconducting magnets. For the moment, the modernization of the Nuclotron light ion injection chain was provided. New linear accelerator of the heavy ion injection chain was constructed and commissioned in 2016. All superconducting magnets for the Booster were fabricated at JINR, the Booster assembly is completed. Assembly of the MPD has been started in 2020, production of the collider systems is in progress. Completion of the collider assembly is scheduled for 2022.

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Session Classification : Session 10: Theoretical ideas and experimental searches of the critical point (NOTE! Early starting time)

Track Classification : Theoretical ideas and experimental searches of the critical point