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NICA ion collider and its acceleration complex

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The Nuclotron-based Ion Collider fAcility (NICA) is under construction at JINR. The NICA project goal is to provide colliding beams for studies of hot and dense strongly interacting baryonic matter and spin physics. The NICA Collider includes two rings with 503 m circumference each and the injection complex. For the heavy ion mode, the injection complex consists of following accelerators: 3.2 MeV/u linac (HILAC), 600 MeV/u ($A/Z=6$) superconducting booster synchrotron (Booster) and main superconducting synchrotron (Nuclotron) with kinetic energy up to 3.9 GeV/u ($A/Z=2.5$). The injection complex has been under commissioning for more than 2 years. The latest half-year Run ended in February of 2023. It was devoted to preparations for the collider operation and also delivered slowly extracted 3.9 GeV/u xenon beam to the BM&N experiment. Now the injection complex is shut down for its further development and an assembly of the collider. Cryogenic tests of the collider magnetic structure are expected at the end of 2023. The next run of the injection complex is aimed at an increase of ion flux by more than an order of magnitude and will be started at 2024.

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Footnotes

I have read and accept the Privacy Policy Statement

Yes

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