Contribution ID: **877** Contribution code: **TUPB065** Type: **Poster Presentation**

Base features of electron cooling systems for NICA collider

Tuesday 3 June 2025 16:00 (2 hours)

The project NICA (Nuclotron-based Ion Collider fAcility) aims to provide colliding beams for studying heavy ion collision in the energy range 1-4.5 GeV/u. The experiments relating tonuclear and hadron physics require a more powerful longitudinal and transverse cooling that stimulates searching new technical solutions.Such beam quality may be realized with stochastic and electron coolingat energy of the physics experiment.The electron cooling system on 2.5 MeV consists of two coolers, which cool both ion beams simultaneously. The Budker Institute of Nuclear Physics (BINP SB RAS) already built and commissioned the electron cooling system for the NICA booster with a maximum energy of 60 keV and now it develops the high voltage electron cooling system for the collider. The article describes the status of the electron coolers development

Footnotes

Paper preparation format

Word

Region represented

Asia

Funding Agency

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Session Classification: Tuesday Poster Session

Track Classification: MC4: Hadron Accelerators: MC4.A11 Beam Cooling