



Contribution ID: 2

Type: **Talk**

## Search for a mixed phase of QCD matter at NICA

*Friday 3 June 2016 11:30 (30 minutes)*

The Nuclotron-based Ion Collider Facility (NICA) project is now under active realization 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 (up to Au) collisions at centre-of-mass energies up to 11 GeV per nucleon. Two modes of the operation are foreseen, collider mode and extracted beams, with the two detectors, MPD and BM@N. In the collider mode the average luminosity is  $10^{27} \text{ cm}^{-2} \text{ s}^{-1}$  for Au(79+). The fixed target experiment BM@N at the JINR superconducting synchrotron Nuclotron is in a preparation stage. Extracted beams of various nucleus species with maximum momenta 13 GeV/c (for protons) will be available. The NICA project also foresees a study of spin physics with the detector SPD with extracted and colliding beams of polarized deuterons and protons at centre-of-mass energies up to 27 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, construction status and physics program of the NICA complex will be presented.

**Author:** SORIN, Alexander (Joint Institute for Nuclear Research, Dubna)

**Presenter:** SORIN, Alexander (Joint Institute for Nuclear Research, Dubna)

**Session Classification:** Plenary session