Contribution ID: **112** Type: **not specified**

Lattice study of the confinement/deconfinement phase transition in SU(3)-gluodynamics in rotating frames

Friday, 23 October 2020 16:00 (20 minutes)

RFBR grant 18-02-40126

The influence of the rotation on the confinement/deconfinement phase transition in SU(3)-gluodynamics was investigated using the Monte-Carlo lattice simulations. The calculations have been performed in rotating reference frame, where the rotation is introduced using an external gravitational field. To study the confinement/deconfinement transition the Polyakov loop and its susceptibility have been computed for various values of the temperature and angular velocity. The obtained results show that the critical temperature of the confinement/deconfinement phase transition in SU(3)-gluodynamics increases with a growth in the angular velocity. It is shown that this effect does not depend on the lattice size and boundary conditions used.

Presenter: ROENKO, Artem (JINR, BLTP)

Session Classification: Theoretical studies of the dense baryonic matter produced in heavy-ion collisions at NICA