## ОБЩЕИНСТИТУТСКИЙ СЕМИНАР

28 июля (пятница) 15.00 Конференц-зал ЛТФ

## Nu Xu

(Nuclear Science Division Lawrence Berkeley National Laboratory)

## Search for Hadronic Shore in High-Energy Nuclear Collisions

In this talk, I will start with the discussion on the evidences for the formation of hot/dense matter in high-energy nuclear collisions at RHIC ( $\sqrt{s}$  = 200 GeV). In such high-energy collisions, the partonic degrees of freedom dominate the early dynamic evolution [1]. In order to demonstrate the transition from hadronic matter to partonic matter and identify the possible 'phase boundary' on the QCD phase diagram, the energy scan in the region  $\sqrt{s}$  = 200 – 2 GeV is necessary. The RHIC energy-scan program and the GSI-FAIR high-density program [2] then will be discussed. Finally, the requirements for detector system will be briefly addressed.

[1] N. Xu, INPC04 proceedings, Nucl. Phys. <u>A751</u>, 109c(2005) and J. Adams *et al.* (STAR Collaboration), Nucl. Phys. <u>A757</u>, 102(2005).

[2] <a href="https://www.bnl.gov/riken/QCDRhic/">https://www.bnl.gov/riken/QCDRhic/</a> and http://theory.gsi.de/%7Efriman/trento 06.html