



Объединенный институт ядерных исследований
ЛАБОРАТОРИЯ ТЕОРЕТИЧЕСКОЙ ФИЗИКИ
им. Н. Н. Боголюбова

Семинар
"ТЕОРИЯ АДРОННОГО ВЕЩЕСТВА ПРИ ЭКСТРЕМАЛЬНЫХ УСЛОВИЯХ"

Руководители: Э.-М. Илгенфритц и О. В. Теряев

Семинар состоится
в среду **24 февраля в 15.00**

в аудитории им. Д. И. Блохинцева (4 этаж)

D. Blaschke (Wroclaw U. & BLTP JINR), **N.-U. Bastian** (Wroclaw U.)

Three-fluid hydro based event simulation for the NICA energy scan and a new EoS with first-order phase transition

In the first part of the seminar we present first results of simulating the NICA energy scan ($\sqrt{s_{NN}} = 4 - 11$ GeV) with a new event generator that is based on a three-fluid hydrodynamics description of the early stage of the collision, followed by a particlization at the chemical freezeout to join a UrQMD "afterburner" accounting for hadronic final state interactions. We address the directed flow of protons and pions as well as the proton rapidity distribution for two model equations of state (EoS), with and without a first order phase transition. In the second part we present a recently developed hybrid EoS that fulfills the constraints from compact star phenomenology and describe its advantages over the one used in the simulation up to now.