



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

Семинар
"ТЕОРИЯ АДРОННОГО ВЕЩЕСТВА ПРИ ЭКСТРЕМАЛЬНЫХ УСЛОВИЯХ"

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Семинар состоится в среду,
14 мая в 16.00
в аудитории им. Д. И. Блохинцева (4 этаж)

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Femtосcopy of heavy ion and pp collisions at high energies.

The femtoscopic correlations allow one to measure the space-time characteristics of particle production thanks to the effects of quantum statistics for identical particles and final state interactions for both identical and non-identical ones. The main features of the femtосcopy measurements in heavy-ion collisions at SPS and RHIC are i) the value of the radii almost independent on the beam energy, ii) the increase of the correlation radii with increasing multiplicity of events and iii) the decrease of the radii with increasing of pair transverse momentum. These are understood as a manifestation of the strong collective flow. Such effects were also observed at the LHC with the interferometry volume increased twice compared with RHIC. The data from Pb-Pb collisions and its comparison with the dynamical models will be presented. The high multiplicity pp collisions reach particle densities comparable to the ones measured in peripheral Cu-Cu and Au- Au collisions at RHIC so it is natural to investigate collective behaviour in pp. The similarities and differences between pp and heavy-ion data are discussed.