



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, 18 декабря в 16.00  
в аудитории им. Д. И. Блохинцева (4 этаж)

**D. V. Blaschke, G. A. Contrera, A. G. Grunfeld**

### **Phase diagrams in nonlocal Polyakov-NJL models constrained by Lattice QCD results**

Based on lattice QCD-adjusted  $SU_f(2)$  nonlocal Polyakov-Nambu-Jona-Lasinio (PNJL) models, we investigate how the location of the critical endpoint in the QCD phase diagram depends on the strength of the vector meson coupling, as well as on the Polyakov-loop (PL) potential and the form factors of the covariant interaction model. These are constrained by lattice QCD data for the quark propagator. The strength of the vector coupling is adjusted such as to reproduce the slope of the pseudocritical temperature for the chiral phase transition at low chemical potential extracted recently from lattice QCD simulations. Our study supports the existence of a critical endpoint in the QCD phase diagram albeit the constraint for the vector coupling shifts its location to lower temperatures and higher baryochemical potentials than in the case without it.

Секретарь семинара: Я.Н. Клопот (klopot@theor.jinr.ru)