Contribution ID: **86** Type: **Talk**

QCD with isospin chemical potential: pion condensation

Thursday, July 28, 2016 4:30 PM (20 minutes)

We study the QCD phase diagram at nonzero isospin chemical potential using 2+1 flavors of staggered fermions with physical quark masses at different lattice spacings and volumes. The talk focuses on the transition to the pion condensation phase at high chemical potentials. This phase is characterized by a proliferation of low modes that slow down the simulation considerably and necessitate the use of an infrared regulator. We discuss a novel strategy to determine the pion condensate in the limit of vanishing regulators.

Primary author: Dr ENDRODI, Gergely (University of Frankfurt)

Presenter: Dr ENDRODI, Gergely (University of Frankfurt)

Session Classification: Nonzero Temperature and Density

Track Classification: Nonzero Temperature and Density