



Contribution ID: 154

Type: Oral Presentation

Inhomogeneous phases in the 3+1-dimensional mean-field Nambu-Jona-Lasinio model on the lattice

Monday, August 8, 2022 5:50 PM (20 minutes)

At low temperature and large chemical potential QCD might exhibit a chiral inhomogeneous phase, as indicated by various simple low-energy models. One of these models is the 3+1-dimensional Nambu-Jona-Lasinio model, which is non-renormalizable – rendering the results possibly dependent on the employed regularization scheme. While most previously published results regarding the inhomogeneous phase in this model were obtained with the Pauli-Villars or similar regularizations, this talk explores the dependence of this phase on different lattice regularizations. Furthermore, the lattice approach allows us to determine the energetically preferred shape of the condensate without a specific ansatz.

Primary authors: PANNULLO, Laurin (Goethe University Frankfurt); WAGNER, Marc (Goethe University Frankfurt); WINSTEL, Marc (Goethe University)

Presenter: PANNULLO, Laurin (Goethe University Frankfurt)

Session Classification: Non-zero Density

Track Classification: QCD at Non-zero Density