

Topology of two-color QCD at low temperature and high density

Thursday, July 26, 2018 9:50 AM (20 minutes)

We study two-color QCD with nonzero chemical potential using Iwasaki gauge and Wilson fermion action. The two-color gauge theory coupled to an even number of fundamental fermions does not suffer from the sign problem because the fermion transforms in a real representation.

To perform the simulation even in high chemical potential regime, as in earlier publications, we introduce a diquark source term into the action.

In this talk, we show our results for the phase diagram in low temperature regime. Furthermore, we present the μ dependence of the topological susceptibility.

Primary author: ITOU, Etsuko (RCNP, Osaka University/Kouchi University)

Co-authors: IIDA, Kei (Kochi University); LEE, Tong-Gyu (Kochi University)

Presenter: ITOU, Etsuko (RCNP, Osaka University/Kouchi University)

Session Classification: Nonzero Temperature and Density

Track Classification: Nonzero Temperature and Density