Topology and Diquark Condensation in Two Color QCD on the Lattice

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Abstract

We analyze the eigenvalue spectrum of the staggered Dirac matrix in two-color QCD at nonzero baryon density when the eigenvalues become complex. An analogous analysis is performed for the spectrum of the Gor'kov representation of the fermionic action. The quasi-zero modes and their role for chiral and diquark condensation are examined. We present results for the topological susceptibility, and we contrast the mechanism of deconfinement and string breaking at finite temperature and density.

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