

Fierz-complete four-quark interactions within fRG-QCD

This work is based on 2+1 flavor quantum chromodynamics (QCD) calculations within the functional renormalization group (fRG) approach. We calculate the four-fermi interaction of QCD under the Fierz-complete basis, and improve the flow equations of dynamical hadronization. We also calculate the contributions of different four-fermi channels under finite temperature and density, split the Yukawa couplings to scalar and pseudo-scalar channels. Finally, we study their effects on the phase structure of QCD.

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Session Classification: Reception and Poster Session