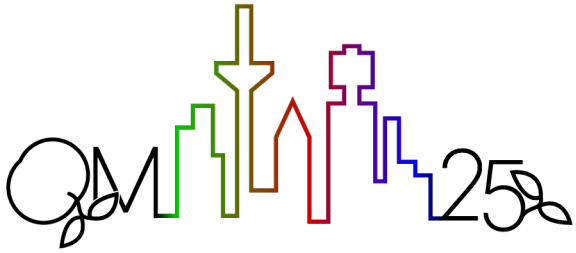

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Speed of sound in superconducting 2SC phase with the Quark-Meson model

In this talk I will discuss the properties of the 2SC-phase of dense quark matter. We formulate the quark-meson diquark model as an effective low energy model of QCD. We then calculate the thermodynamic potential to one loop including quark loops. The phase diagram in the $\mu_B - T$ plane is mapped out. We focus on the speed of sound c_s at $T = 0$. c_s has a distinct peak of $c_s \approx 0.4$ at around $\mu \approx 0.4$ GeV and approaches the conformal limit from above. This general behavior seems to be a generic feature of these types of effective models as the same behavior is found at finite isospin chemical potential.

Category

Theory

Collaboration (if applicable)

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