

Effects of (axial)vector mesons on the chiral phase transition: initial results

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Collaboration

Abstract content

We investigate the effects of (axial)vector mesons on the chiral phase transition in the framework of an SU(3), (axial)vector meson extended linear sigma model with additional constituent quarks and Polyakov loops. We determine the parameters of the Lagrangian at zero temperature in a hybrid approach, where we treat the mesons at tree-level, while the constituent quarks at 1-loop level. We assume two nonzero scalar condensates and determine their temperature and baryochemical potential dependence according to the 1-loop level equations of states. We also investigate the changes of the tree-level scalar/vector meson masses in the hot and dense medium.

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