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In-medium masses of scalar D mesons in Δ resonance matter

This research investigates the influence of dense non-strange resonance matter, consisting of nucleons and delta baryons (Δ^{++} , Δ^{+} , Δ^{0} , and Δ^{-}), on the masses of scalar D mesons (D_{0}^{+} , D_{0}^{0}) under finite temperature conditions. The modifications of the above mesons in this medium arise from changes in the quark and gluon condensates. Using the chiral SU(3) mean-field model, we obtain the in-medium chiral condensates, which subsequently employed in QCD sum rules to evaluate the effective mass of D mesons.

Field of contribution

Theory

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