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Vector D meson masses in hot and dense Δ resonance matter.

Our aim of study is to investigate the mass modification of vector D mesons in the baryonic medium consists of nucleons and Δ resonances employing the chiral SU(3) Model and QCD sum rules.

The primary objective is to understand the influence of finite density and temperature on the in-medium masses of spin-1 vector D mesons.

In QCD sum rules, the effective masses of D mesons are expressed in terms of chiral quark and gluon condensates.

We evaluate these condensates using chiral SU(3) model and use as input in QCD sum rules to obtain temperature and density dependent masses of D mesons.

Field of contribution

Theory

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