

Hot Medium effects on Pseudotensor η_2 , π_2 and K_2 Mesons

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Collaboration

Abstract content

The investigation of mesons in hot medium can give valuable information about the nature of QCD vacuum and deconfinement phase transition. In this study, thermal properties of light-light pseudo tensor $\eta_2(1645)$, $\pi_2(1670)$ and $K_2(1770)$ mesons are examined via QCD sum rules at finite temperature. Masses and decay constants of these light unflavored mesons with $J^P = 2^-$ are estimated up to dimension-five by considering the new operators emerging at finite temperature. Our numerical results manifest that after a certain point the decay constants and masses decrease significantly due to the hot medium effects. The attained results at $T = 0$ and $T \neq 0$ might be observed in future heavy ion collision experiments.

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