

Quarkonia Spectral Function at Finite Momenta

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Heavy quark-antiquark bound states such as $c\bar{c}$ and $b\bar{b}$, serve as essential tools for probing the properties of quark-gluon plasma (QGP). However, its finite momentum behaviour remains largely unexplored, despite its experimental significance. Here, we present an extension of quarkonia dynamics from zero-momentum to finite-momentum by observing its spectral function. We obtained the spectral function in threshold region by solving the Schrödinger equation with finite-momentum perturbative potential. We will model this spectral function with perturbative vacuum part to describe the lattice correlators at temperatures of $1.20 T_c$, $1.40 T_c$, and $1.62 T_c$ in 2+1 flavor QCD.

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