

Properties of open and hidden charm meson in pionic matter

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With various experiments studying heavy-ion collisions a demand exists in the hadron physics community for theoretical predictions of hadronic properties at temperatures and densities far from standard nuclear physics scenarios. In this work we will study the implications of light-quark mesonic matter at finite temperatures on the open and hidden charm mesons. We will apply a chiral unitary approach which accounts for coupled channels. The in-medium solution accounts for the change in self-energy that the mesons acquire from interacting with the surrounding light quark mesonic matter, most notably pions. Ultimately, the solutions to the corresponding Lippmann-Schwinger Equations will be used to calculate observables such as the spectral function or the pion-induced width.

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