Quark Confinement and the Hadron Spectrum XI



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Heavy quarkonium suppression in a fireball

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The dissociation of heavy quarkonium seen in heavy-ion collisions is a phenomena that allows to extract information of the produced thermal medium. This was believed to be due to the screening of the static potential, but recently perturbative computations and some lattice studies have pointed out to the possibility of having an imaginary part of the potential that would also contribute to dissociation. In recent years a program to study heavy quarkonium with the use of non-relativistic effective field theories (EFTs) has been started, this allows to make the computations in a more systematic way by defining a more suitable power counting and making it more difficult to miss necessary resummations. However until now these studies have been done assuming thermal equilibrium. In this talk I will discuss what happens in the EFT formalism when heavy quarkonium is in a medium that is not in thermal equilibrium and what is the expected suppression when a medium with a time dependent effective temperature that follows Bjorken evolution is considered. This will be done adapting previous results from different temperature regimes.

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