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Screening of moving heavy quark and modification quarkonium states in quark gluon plasma

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Heavy quarks, such as charm and bottom quarks, and their quarkonium bound states are very useful internal probes of the hot and dense medium, Quark gluon-plasma, created in heavy-ion collisions. They are created in the collisions and are appreciably affected by the medium. This leads to distinctive features in their observed final yields which carries information about the bulk properties of the medium. I discuss the heavy quark potential modification due to the relative motion between the heavy quark and the QGP medium and corresponding changes in quarkonium states. We show the real and imaginary parts of the medium modified quarkonia potential and obtain their binding energies and the dissociation widths. It will be shown that the screened potential becomes strongly anisotropic as the velocity of the heavy quark increases and its possible effects on the modification of quarkonium states.

Present via

Online

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