

Radiation spectrum of a massive quark-gluon antenna in a QCD medium

Tuesday, 5 November 2013 15:10 (20 minutes)

We derive the radiation spectrum of a massive quark-gluon antenna in a QCD medium. The calculation is done in the formalism of the classical Yang-Mills (CYM) equations and interactions with the medium are handled in the harmonic oscillator approximation, valid for soft gluon emissions. We discuss the effect produced by the presence of a mass scale and compare the results with the massless case. We put our findings in relation with the energy loss of heavy quarks in heavy ion collisions, one of the phenomenological puzzles of RHIC and LHC data.

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Session Classification: High Transverse Momentum Light and Heavy Flavor Hadrons

Track Classification: High Transverse Momentum Light and Heavy Flavor Hadrons