

Heavy Flavor Jet Quenching at RHIC and LHC Energies

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Heavy quarks serve as valuable probes of the QGP properties as well as the mass hierarchy of parton energy loss. In this talk, different model calculations of heavy quark energy loss inside the QGP are compared to each other within the same framework, from which we narrow down the systematical uncertainty of the extracted heavy quark transport coefficients from model to data comparison. In addition, a multi-stage evolution approach is introduced to heavy quark energy loss. This combines a rare-scattering multiple emission formalism at momenta large compared to the mass of heavy quarks and a single scattering induced emission formalism at momenta comparable to the mass. This new approach reduces the difference of energy loss between charm and beauty quarks and simultaneously describes the nuclear modification of D and B mesons.

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