

Longitudinal dependence of open heavy flavor observables in relativistic heavy ion collisions

Heavy flavor probes consist of an important asset to the study of the properties of the quark gluon plasma formed in heavy ion collisions. Furthermore, the longitudinal dependence of observables in addition to the mid-rapidity regime can provide further insight on the dynamics of the medium. In this work we investigate D mesons coupling with the medium in the rapidity range $-5.0 < y < 5.0$ using a relativistic Langevin equation with gluon radiation [1] and a Linearized Boltzmann Equation [2,3] within the DABMod framework [4]. We use the CLVisc (3+1)D viscous hydrodynamics [5] medium background and obtain both R_{AA} and v_2 of the D mesons. The results are compared with available experimental data at mid-rapidity and predictions are made for large rapidity.

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Summary

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