

Transport properties of the strongly interacting quark-gluon plasma

Saturday 20 July 2024 17:15 (15 minutes)

We investigate the role of elastic and inelastic (radiative) processes in the strongly interacting quark-gluon plasma (sQGP) within the effective dynamical quasi-particle model (DQPM) constructed for the description of non-perturbative QCD phenomena of the strongly interacting quark-gluon plasma (sQGP) in line with the lattice QCD equation-of-state.

We present the results for the:

- 1) Energy, temperature and μ_B dependencies of the total and differential radiative cross sections and compare them to the corresponding elastic cross sections.
- 2) Transition rate and relaxation time of radiative versus elastic scatterings.
- 3) Jet transport coefficients such as the transverse momentum transfer squared per unit length as well as the energy loss per unit length and investigate their dependence on the temperature T and momentum of the jet parton depending on the choice of the strong coupling in thermal, jet parton and radiative vertices.

Alternate track

1. Heavy Ions

I read the instructions above

Yes

Authors: GRISHMANOVSKII, Ilia (ITP, Frankfurt); SOLOVEVA, Olga (Goethe University Frankfurt); SONG, Taesoo; GREINER, Carsten (University of Frankfurt); BRATKOVSKAYA, Elena

Presenter: GRISHMANOVSKII, Ilia (ITP, Frankfurt)

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