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Strange and charm quark production in hot QCD

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We investigate the time evolution of strange and charm quark number densities utilizing the rate equations in the quasiparticle approach. The deconfined matter then consists of the dynamical quarks and gluons dressed by the effective temperature-dependent masses. The temperature dependence is specified by a running coupling deduced from lattice QCD thermodynamics. For the evolution of the QGP in 2+1 dimensions, we employ the results of hydrodynamic simulations, which incorporate the shear viscosity computed in the quasiparticle model. We study the heavy quark production in hot QCD medium with $N_f = 2 + 1(+1)$ with the charm quarks contributing to the equation of state.

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