

Viscous Evolution of a Quark Gluon Plasma

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This work investigates the consequence of the non-equilibrium phase space distribution on elliptic flow and particle spectra using a viscous hydrodynamic simulation. First, we show how various models of energy loss lead to different viscous corrections to spectra and make a connection between the shear viscosity coefficient and the transport parameter \hat{q} . The off-equilibrium distribution function is taken from leading order pQCD calculations which yields different corrections for quarks and gluons. Finally, we study a meson/baryon system with different viscous corrections due to the particles' different mean free paths. This leads to an alternative description of the experimentally observed quark number scaling.

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