

The Langevin description of deep-inelastic heavy-ion collisions

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A specific feature of the deep-inelastic collisions is the high loss of kinetic energy of the collision heavy ions. This means that the latter become highly excited during the collision. The mechanism of the energy loss of the colliding nuclei is described within the theory of Brownian motion as classical friction due to the coupling of the relative motion of heavy ions to the internal nucleonic degrees of freedom, which are represented by a “heat bath” of harmonic oscillators.

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