

Body motion in a resistive medium: An exactly solvable model

Molina,

We introduce and solve in closed form, using momentum and kinetic energy balance, a simplified microscopic model of a body propagating in a one dimensional resistive medium. For a whole family of collisions with varying degree of inelasticities, we find that the effective resistive force on the moving body is opposite to and proportional to the square of the body's velocity.