

Derivation of the Ornstein-Uhlenbeck process for a massive particle in a rarified gas of particles

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We consider the statistical motion of a large non spherical rigid body in a gas of N (spherical) atoms close to thermodynamic equilibrium. We prove that the movement of the rigid body is described asymptotically by the Ornstein-Uhlenbeck process. This is a joint work with Thierry Bodineau and Laure Saint-Raymond.