

Enskog equation for confined systems

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An Enskog like equation is formulated for a system of hard spheres confined with a hard wall of arbitrary shape. The difference with the usual Enskog equation is that, closed to the walls, the possible collisions are restricted due to the geometrical constraints induced by the walls.

Remarkably, the equation admits an H -theorem and, in the long time limit, the distribution function tends to a Maxwellian distribution with the density profile predicted by equilibrium Statistical Mechanics.