

Hydrodynamics in a driven homogeneous granular gas

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We study the dynamics of a homogeneous granular gas heated by a stochastic thermostat, in the low density limit. It is found that, before reaching the stationary regime, the system quickly “forgets” the initial condition and then evolves through a universal state that does not only depend on the dimensionless velocity, but also on the instantaneous temperature, suitably renormalized by its steady state value. The existence of this state is exploited to derive hydrodynamic equations, obtaining explicit expressions for the transport coefficients which depend ex-

plicitely on the structure of the universal state. We find excellent agreement between the theoretical predictions and numerical simulations^{1,2}.

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² M. I. García de Soria, P. Maynar, and E. Trizac, Phys. Rev. E **87**, 022201 (2013)