

Abstract Submitted
for the MAR07 Meeting of
The American Physical Society

Minimal Modeling of Driven Dissipative Systems YAIR SHOKEF,
Department of Physics & Astronomy, University of Pennsylvania, Philadelphia, PA,
USA, DOV LEVINE, Department of Physics, Technion, Haifa, Israel — By simple
modeling of dissipative interactions we resolve fundamental questions related to
systems far from thermal equilibrium, such as granular materials, foams and colloidal
suspensions. We solve the non-Boltzmann energy distribution, demonstrate the
violation of time-dependent fluctuation- dissipation relations, show that different
measures of effective temperatures generally differ, and address further issues such
as ergodicity breaking and detailed balance violation.

Yair Shokef
Department of Physics & Astronomy, University of Pennsylvania, Philadelphia, PA, USA

Date submitted: 17 Nov 2006

Electronic form version 1.4