

Abstract Submitted
for the MAR07 Meeting of
The American Physical Society

Statistical properties of granular gas under microgravity — one dimensional inelastic hard rod system MASAHARU ISOBE, AKINORI OCHIAI, Nagoya Institute of Technology — We have studied numerically statistical properties of granular gas in a one-dimensional inelastic (viscoelastic) hard rod model under microgravity, which is designed to the mimic experimental granular vibrated beds by introducing a velocity- dependent restitution coefficient. Our systematic simulations show that various macroscopic properties of this model are quantitatively different from a linear combination of the previous simulations based on the constant restitution coefficient. The present results are significantly important to study a vibration response and dynamics of granular gas especially in microgravity experiment.

Masaharu Isobe
Nagoya Institute of Technology

Date submitted: 26 Dec 2006

Electronic form version 1.4