

Abstract Submitted
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Particle collisions in a granular gas¹ HONG-QIANG WANG, KLEBERT FEITOSA, NARAYANAN MENON, University of Massachusetts — We report a study of particle collisions in a 2D granular system vibrated in a vertical plane. We have previously studied this experimental system in a variety of contexts. With improved image analysis algorithms, we are able to locate particles with enough precision to allow detailed tracking of the collision process, when the particles are close to each other. This allows us to better study the role of the vertical walls in the collision process and to place a limit on the dissipation by mechanisms other than inelastic collisions. We report the distribution of collision parameters and comment on violations of molecular chaos resulting from the inelasticity of the system.

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