

Abstract Submitted  
for the DFD05 Meeting of  
The American Physical Society

**Angle of Repose and Packing Fraction of Large Granular Particles, as a Function of Shape** PAUL J. DOLAN, JR., BARBARA A. GORDON, Physics Dept., Northeastern Illinois University, Chicago, IL — Measurements of the angle of repose and the packing fraction of granular particles can be greatly affected by such factors as particle surface, static charging, moisture, interstitial gas, and the shape of the particles. The great majority of experimental data presented in the literature concerns small, spherical particles. In order to minimize effects of static charging and interstitial gas, we have studied the static properties of large, approximately 1 cm, monodisperse collections regular polyhedra (4-, 6-, 8- and 12-sided). We will present measurements of the Angle of Repose of these monodisperse, large granular particles as a function of particle shape, as well as measurements of the Packing Fraction of the particles in six differently shaped containers. Initial data for bi-disperse mixtures of these particles will also be presented.

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Date submitted: 23 Jun 2005

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