Abstract Submitted
for the DFD11 Meeting of
The American Physical Society

Three dimensional imaging of soft sphere packings under shear[1]
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The (microscopic) flow of three dimensional disordered athermal granular packings remains poorly understood. However, experimentally studying flow and deformations in a three dimensional packing of grains is challenging due to the opacity of such packings. Our goal is to study triaxial shear of granular materials, using refractive index matched scanning. We will present results on a study of the deformation of a three dimensional soft sphere packing under quasi static compression. The spheres are made from hydrogel and virtually frictionless, similar to the study by by Mukhopadhyay et. al. (2011). We track particles and image contact deformations, and look at the effect of cyclic shear flow.

[1]NSF-DMR0906908, ARO-W911NF-11-1-0110

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Date submitted: 05 Aug 2011 Electronic form version 1.4