

Abstract Submitted
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Study of experimental protocols for producing random close packed colloids KELSEY HATTAM, ERIC R. WEEKS — A collection of spheres can be packed tightly into an amorphous state known as “random close packing.” In our experiment, colloidal particles are allowed to slowly sediment forming a random close packed state. By adjusting the solvent’s density we finely control the rate at which the sedimentation occurs. We then use confocal microscopy to image the sample. By imaging overlapping regions we determine the positions of hundreds of thousands of particles. From this data, we measure the distribution of Voronoi volumes and the contact number distribution, and examine how these distributions depend on the sedimentation rate.

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