

Abstract Submitted
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Observing liquid-gas nucleation in a colloid-polymer solution using digital holographic microscopy RYAN MCGORTY, VINOOTHAN N. MANOHARAN, Harvard University — We study liquid-gas nucleation in a colloid-polymer solution. Though the colloidal particles are too small to resolve, we are able to observe nucleating droplets due to the refractive index mismatch between the two fluid phases. By using digital holographic microscopy we are able to observe the three-dimensional structure of the nucleating phase. The experimental setup and algorithms for reconstructing the holography data will be discussed. We hope that our data will allow us to better understand nucleation kinetics and that analysis of the fluctuating droplets will provide us with the surface tension between the two phases.

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