

Abstract Submitted
for the MAR09 Meeting of
The American Physical Society

Effective temperature of a sheared foam¹ DANIEL VALDEZ-BALDERAS, University of Rochester, PETER OLSSON, Umea University, STEPHEN TEITEL, University of Rochester — We perform computer simulations of a model for an overdamped, sheared foam in two dimensions at zero temperature. We measure an effective temperature with the use of an embedded oscillator, in manner analogous to experiments done by Abate and Durian on a different system [arXiv:0806.0765v2]. Our oscillator is one of the bubbles in the foam, which, in addition to its interaction with other bubbles, is also subject to a harmonic potential. We define an effective temperature based on the fluctuations in the position of the oscillator. We compare our results to the effective temperatures computed with the use of measurements of the fluctuations of the shear stress and fluctuations of the energy, respectively.

¹Supported by DOE Office of Basic Energy Sciences, grant DE-FG02-06ER46298

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Date submitted: 21 Nov 2008

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