

Abstract Submitted
for the MAR10 Meeting of
The American Physical Society

Quantitative Imaging of Membrane Shape Transformation and Pearling STEPHEN ANTHONY, University of Illinois, YAN YU, UC Berkeley, STEVE GRANICK, University of Illinois — Experiments show, in areas from vesicle budding, to pearling and even stochastic fluctuation of shape, the ubiquity of non-spherical shape in phospholipid assemblies. Here we focus on pearling and the massive stochastic fluctuations which precede it when nanoparticles induce this transformation by adsorption to the inner leaflet of a giant unilamellar vesicle (GUV). Novel methods to quantify non-spherical contours in movies with massive numbers of frames allow us to imagine membrane fluctuations frame-by-frame, even in the case of low signal-to-noise.

Stephen Anthony
University of Illinois

Date submitted: 19 Nov 2009

Electronic form version 1.4