

Abstract Submitted
for the DFD06 Meeting of
The American Physical Society

Model and experimental visualization of a bubble interacting with an inclined wall¹ BERENGERE PODVIN, SULEMAN KHOJA, DANIEL ATTINGER, FRANCISCO MORAGA, Columbia University — We describe the motion of an air bubble rising through water as it interacts with a wall of variable inclination. The bubble diameter varies about $O(1)$ mm. We use lubrication theory to determine the modification of the bubble interface and compute the hydrodynamic force exerted by the wall. The present work is an extension of Moraga et al's model [Computers and Fluids 2006], which was devised for a horizontal wall. The predictions of the model are checked against experimental visualizations. The influence of the Weber number, Reynolds number and wall inclination is examined

¹Support from LIMSI-CNRS.

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Date submitted: 28 Jul 2006

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