Abstract Submitted
for the DFD08 Meeting of
The American Physical Society

Instability of Free Films with Plateau Borders[1] ANTHONY ANDERSON, Northwestern University, LUCIEN BRUSH, University Washington, STEPHEN DAVIS, Northwestern University — A surfactant-free foam of low liquid fraction coarsens by the rupture of the free films separating adjacent gas bubbles. One can find asymptotic solutions for the film and Plateau borders (Brush, L. N. & Davis, S. H., *J. Fluid Mech.*, **534**, 2005, 227-236). Using this time-dependent, flowing, non-planar solution as a basic state, we examine the linearized instability numerically. The numerical method utilizes grid generation to facilitate a finite difference calculation of the linear stability problem.

[1]this research is supported by an NSF RTG grant (DMS-0636574)

Anthony Anderson
Northwestern University

Date submitted: 04 Aug 2008 Electronic form version 1.4