

Abstract Submitted
for the DFD08 Meeting of
The American Physical Society

Spreading of a Fluorescent Surfactant on a Glycerine Layer

DAVID FALLEST, North Carolina State University, CHRISTOPHER FOX, Harvey Mudd College, KAREN DANIELS, North Carolina State University — We study the spreading of a fluorescent surfactant on a thin layer of glycerine. Measurements of the height profile of the capillary ridge are conducted as the surfactant travels outward from the point of deposition. We examine the dynamics of the ridge as a function of the volume of surfactant released, and find that for the largest volumes the shape and speed of the spreading ridge are influenced by the outer edge of the underlying glycerine layer. The intensity of the fluorescence is also used to visualize the position and the concentration of surfactant as it spreads. The location of the surfactant is compared to the location of the capillary ridge.

David Fallest
North Carolina State University

Date submitted: 02 Aug 2008

Electronic form version 1.4