Abstract Submitted
for the MAR13 Meeting of
The American Physical Society

Formation of a quasi-two dimensional bubble pile DANIEL SHORTS, James Madison University Student, KLEBERT FEITOSA, James Madison University Professor — We investigate the formative stages of a bubble pile at a liquid interface before the foam reaches steady-state. The pile is produced by a continuous bubbling of air into a soapy solution in a container of rectangular cross section. We find that above a critical flow rate, the bubbling produces a crater at the interface whose diameter is proportional to the flow rate. Extending from the borders of the crater, we observe a gentle slope at the water-foam interface whose angle with the horizontal is weakly dependent on the flow rate. As the pile is formed, the foam above the interface develops a dome-like profile that grows in diameter until it reaches the boundaries of the container. We show that the slope and the foam profile are a result of an isotropic pressure exerted by the arriving bubbles at the interface.

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Date submitted: 18 Nov 2012 Electronic form version 1.4