Abstract Submitted
for the MAR13 Meeting of
The American Physical Society

Capillary Condensation Transitions for Various Geometries CAROLINA ILIE, ANASTASIA YORKE, KATHARYN CHRISTIANA, MARIE ROMANO, Physics Department, State University of New York at Oswego — We explore herein the capillary condensation for planar geometry. Capillary condensation is studied in the presence of van der Waals forces. We derive the grand free energy for one planar substrate, then for two identical substrates, and we analyze the phase transitions, the absorption isotherms and the triple point. Phase transitions between full, empty and two films are investigated. Other interesting cases, for example the capillary condensation between two cylinders, may be inspected.

Anastasia Yorke
Physics Department, State University of New york at Oswego

Date submitted: 29 Nov 2012 Electronic form version 1.4