

Abstract Submitted  
for the DFD07 Meeting of  
The American Physical Society

**Diffusion-Driven Layering**<sup>1</sup> MICHAEL ALLSHOUSE, TOM PEACOCK, Massachusetts Institute of Technology — Diffusion-driven flow arises in stratified fluids with inclined boundaries. We have discovered that when this phenomenon occurs on the surface of a concentration of neutrally-buoyant particles, the diffusion evolution of the system is significantly altered; providing a novel mechanism for generating thin density layers. We present a series of complementary analytical and experimental studies that clearly demonstrate the effect.

<sup>1</sup>We would like to thank the Paul E. Gray Fund.

Michael Allshouse  
Massachusetts Institute of Technology

Date submitted: 03 Aug 2007

Electronic form version 1.4