

1036-35-42

Doug Wright* (jdoug@math.drexel.edu), Drexel University, Department of Mathematics, 3141 Chestnut St, Phila, PA 19104, and **Daniel Spirn**. *Gravity induced dispersion for nearly flat vortex sheets.*

Using techniques from the theory of oscillatory integrals, we prove rigorous estimates which show that the linearization of the vortex sheet equations of motion about a quiescent state disperse under certain circumstances. Such dispersion is only possible only through the joint effects of surface tension (which damps high frequency modes) and gravitation (which damps low frequency modes). This work is joint with D. Spirn. (Received December 17, 2007)