1064-60-280 **Hakima Bessaih*** (bessaih@uwyo.edu), DEPT. 3036, 1000 East University Avenue, Laramie, WY 82071, and **Annie Millet**. *Inviscid Large Deviation Principle and the 2D Navier-Stokes Equations with a free boundary condition.* Preliminary report.

Using a weak convergence approach, we prove a LDP for the solution of the 2D stochastic Navier-Stokes equations with a free boundary condition, when the viscosity converges to zero and the noise intensity is multiplied by the square root of the viscosity. Unlike previous results on LDP for hydrodynamical models, the weak convergence is proven by tightness properties of the distribution of the solution in appropriate functional spaces. (Received September 12, 2010)