1047-76-404　　　　**James P Kelliher*** (`kelliher@math.ucr.edu`), University of California, Riverside, Math Dept, Surge 253, 900 University Ave., Riverside, CA 92507. *Vanishing viscosity and the accumulation of vorticity on the boundary.*

We say that the vanishing viscosity limit holds in the classical sense if the velocity for a solution to the Navier-Stokes equations converges in the energy norm uniformly in time to the velocity for a solution to the Euler equations as the viscosity vanishes. I will show that, for a bounded domain in dimension 2 or higher, the vanishing viscosity limit holds in the classical sense if and only if a vortex sheet forms on the boundary. (Received February 02, 2009)