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Gautam Iyer and **Daniel Spirn*** (spirn@math.umn.edu), School of Mathematics, 206 Church St. S.E., Minneapolis, MN 55455. *Model for vortex nucleation in superconductors.*

We will discuss questions related to the dynamic transition between local and global minimizers in the Ginzburg-Landau theory of superconductivity. We derive a heuristic equation governing the dynamics of vortices that are close to the boundary and of dipoles with small inter vortex separation. We then consider a small random perturbation of this equation and study the asymptotic regime under which vortices nucleate. (Received February 02, 2017)