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Dmitry Golovaty* (dmitry@uakron.edu). *On minimizers of a Ginzburg-Landau variational problem in a domain with a vanishingly small hole.*

We consider minimizers of the Ginzburg-Landau functional over a circular domain with a vanishingly small hole. Assume that the radius of the hole is much larger than the Ginzburg-Landau parameter, and that the magnetic field does not exceed the value needed to generate bulk vortices. We demonstrate that the degree of the vortex located inside the hole coincides with the degree of a minimizer of a corresponding harmonic map problem. (Received February 13, 2014)