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Charged vortices of finite energy in the Chern-Simons-Higgs theory.

The existence is shown of charged vortices of finite energy in the (2+1)-dimensional Higgs model with Chern-Simons term. The electric charge and magnetic charge of the vortices are both quantized. The solutions are constructed via a constrained minimization method applied on an indefinite action functional. (Received March 02, 2009)