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**Yaniv Almog\*** ([almog@math.lsu.edu](mailto:almog@math.lsu.edu)), Department of Mathematics, Lockett Hall, LSU, Baton Rouge, LA 70803. *Stability of the normal state of superconductors in the presence of electric currents.*

The stability of the normal state of superconductors in the presence of electric currents is analyzed within the framework of the time-dependent Ginzburg-Landau equations. We consider the large domain limit. Among other things we show that the stability picture obtained in the one-dimensional case by Physicists in the early 80's is preserved in this limit for general three-dimensional sample geometry and boundary conditions. (Received September 25, 2006)