

Abstract Submitted  
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**Numerical construction of Non-Abelian vortices in holographic superconductors** ADAM PETERSON, Lawrence Berkeley National Laboratory, ROBERTO AUZZI, Universita Cattolica del Sacro Cuore, GIANNI TALLARITA, Universidad Adolfo Ibanez — I discuss our recent work on the construction and analysis of non-Abelian vortices in a holographic superconductor. I will begin with a short introduction to the AdS/CFT correspondence in the context of condensed matter systems. I will then present the underlying theory and discuss the computational approach to constructing vortex solutions of the Einstein equations. Using these solutions I will discuss their interpretation from the thermodynamic potentials in the holographic dual description and determine some properties of a strongly coupled superconductor. If time permits I will offer a brief discussion on the interaction of these vortices with the low energy excitations in the model.

Adam Peterson  
Lawrence Berkeley National Laboratory

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