

Abstract Submitted
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Half-quantum vortices in superconducting networks¹

ILYA SOCHNIKOV, KATHRYN MOLER, Department of Physics and Department of Applied Physics, Stanford University, Stanford, California 94305, USA, VICTOR VAKARYUK, Argonne National Laboratory, Argonne, Illinois 60439, USA — We study numerically the magnetic field and temperature dependence of vortex occupation in superconducting wire networks assuming that the underlying material allows for the presence of half-quantum vortices. We focus on thermodynamic stability of half-quantum vortices, which are believed to be present in large size networks even when a stability of a single isolated half-quantum vortex is not expected. The spatial arrangements of half- and full vortices in networks are studied as well.

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