

Abstract Submitted
for the MAR13 Meeting of
The American Physical Society

Topological Phases of Point Group Symmetric Weyl Superconductors VASUDHA SHIVAMOGGI, University of Illinois. Urbana-Champaign, CHEN FANG, Princeton University, TAYLOR HUGHES, MATTHEW GILBERT, University of Illinois. Urbana-Champaign — We study superconductivity in a Weyl semimetal with broken time-reversal symmetry and stabilized by a point-group symmetry. The resulting superconducting phase is characterized by topologically protected bulk nodes and surface states with Fermi arcs. We derive a phase diagram of possible superconducting phases which are distinguished by the number of bulk nodes and discuss novel properties of the corresponding surface states. We show how the topological behavior may be understood in terms of the properties of the parent Weyl semimetal at high-symmetry momenta.

Vasudha Shivamoggi
University of Illinois, Urbana-Champaign

Date submitted: 07 Nov 2012

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