

Abstract Submitted  
for the MAR13 Meeting of  
The American Physical Society

**Chiral  $CP^2$  skyrmions in three-band superconductors and layered superconducting structures**<sup>1</sup> JULIEN GARAUD, University of Massachusetts, Amherst, JOHAN CARLSTROM, KTH, University of Massachusetts, EGOR BABAEV, University of Massachusetts Amherst and KTH Stockholm, MARTIN SPEIGHT, University of Leeds — Recently discovered iron-based superconductors and well as multilayer structures involving  $s_{\pm}$  superconductors can exhibit a spontaneous breaking of the time reversal symmetry. This raises the question of experimental manifestations of this additional broken symmetry. We demonstrate that it can result in formation of experimentally detectable nontrivial flux-carrying excitations which are topologically different conventional vortices. This new kind of solitons can provide an experimental signature of the breaking of time reversal symmetry.

<sup>1</sup>Supported by NSF CAREER Award DMR-0955902, Knut and Alice Wallenberg Foundation through the Royal Swedish Academy of Sciences and Swedish Research Council. And Swedish National Infrastructure for Computing (SNIC) at National Supercomputer Center.

Julien Garaud  
University of Massachusetts, Amherst

Date submitted: 23 Jan 2013

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