

Abstract Submitted  
for the MAR10 Meeting of  
The American Physical Society

**Goldstone modes in Larkin-Ovchinnikov-Fulde-Ferrell superconductors**<sup>1</sup> KIRILL SAMOKHIN, Brock University, Canada —  
The order parameter in LOFF superconductors can break translational symmetry, as well as the phase-rotation symmetry, which leads to the existence of additional Goldstone modes. We derive the energy of these modes microscopically, both in the single plane wave (FF) and the two plane wave (LO) phases, and also calculate the superfluid density and the elastic moduli of the nonuniform superconducting phases.

<sup>1</sup>Supported by NSERC, Canada

Kirill Samokhin  
Brock University, Canada

Date submitted: 20 Nov 2009

Electronic form version 1.4