Abstract Submitted
for the MAR17 Meeting of
The American Physical Society

**Large-scale dynamics of colloidal gyrofluids** SOFIA MAGKIRIADOU, VISHAL SONI, University of Chicago, THEODORE HUECKEL, New York University, BENJAMIN C. VAN ZUIDEN, VINCENZO VITELLI, Leiden University, STEFANO SACANNA, New York University, WILLIAM T. M. IRVINE, University of Chicago — We study the collective behavior of colloidal magnets in rotating magnetic fields. When spun by the field, these particles coalesce into large aggregates owing to their magnetic interactions. These aggregates, composed of millions of particles, behave like a chiral fluid with unusual properties. In this talk, we report our experimental observations of the fluid dynamics and instabilities of this curious fluid.

Sofia Magkiriadou
University of Chicago

Date submitted: 11 Nov 2016 Electronic form version 1.4