Abstract Submitted
for the MAR14 Meeting of
The American Physical Society

Emergent magnetic scale in an exotic lithium iridate compound[1]
NICHOLAS BREZNAY, Lawrence Berkeley National Laboratory, TESS SMIDT, University of California, Berkeley, KIMBERLY MODIC, ARKADY SHEKHTER, ROSS MCDONALD, Los Alamos National Laboratory, JAMES ANALYTIS, University of California, Berkeley — We study the low temperature magnetic properties of an exotic iridate compoud. Iridium-oxide materials show a range of interesting magnetic driven by their strong spin-orbit coupling and structural anisotropy, and may realize exotic magnetic behavior arising from Kitaev interactions. Newly synthesized single crystals exhibit a 3D structure and strongly anisotropic magnetic properties. We observe a kink in the low-temperature magnetization at a field H^*, corresponding to an induced moment of 0.2 μ_B. We will discuss the appearance and evolution of this new field scale, and its connections to magnetic order in this new family of materials.

[1]This work was supported by the U.S. Department of Energy under Contract No. DE-AC02-05CH11231.

Nicholas Breznay
Lawrence Berkeley National Laboratory

Date submitted: 15 Nov 2013 Electronic form version 1.4