Abstract Submitted
for the MAR14 Meeting of
The American Physical Society

Electrical transport measurements on honeycomb artificial spin ice. KATHARINA ZEISSLER, MEGHA CHADHA, LESLEY COHEN, WILL BRANFORD, Imperial College London, FUNCTIONAL MAGNETISM GROUP TEAM — Artificial spin ice is a macroscopic playground for magnetically frustrated systems. We have previously shown that in a cobalt honeycomb artificial spin ice composed of 1 micron long nanowires there are unusual features in the magneto-transport below 50K. Here we explore the low temperature transport of equivalent artificial spin ice structures fabricated from permalloy. We discuss the extent to which the phenomenon is generic to the honeycomb artificial spin ice geometry and the effect of changing the constituent material on the onset temperature and the magnitude of the magnetotransport effect.

Katharina Zeissler
Imperial College London

Date submitted: 15 Nov 2013 Electronic form version 1.4