

Abstract Submitted
for the MAR14 Meeting of
The American Physical Society

Probing the Origin of Large Magnetic Field coupled Electric Polarization in the $\text{RAI}_3(\text{BO}_3)_4$ system HAN ZHANG, TIAN YU, TREVOR TYSON, NJIT, CHRISTINE NELSON, Brookhaven Nat. Lab., LEONARD BEZ-MATERNYKH, L.V. Kirensky Institute of Physics — The multiferroic system $\text{RAI}_3(\text{BO}_3)_4$ (R=rare earth) is known to exhibit a strong coupling of the magnetic field to the electrical polarization. To understand the origin of this behavior, detailed structural studies on single crystals and powders derived from crystals were conducted. The structure as a function of temperature, magnetic field and pressure was explored. The results are compared with magnetic field dependent electric polarization and heat capacity measurements. This work is supported by DOE Grants DE-FG02-07ER46402 (NJIT).

Trevor Tyson
NJIT

Date submitted: 15 Nov 2013

Electronic form version 1.4