

Abstract Submitted
for the MAR08 Meeting of
The American Physical Society

Magnetic X-ray scattering in multiferroic HoMn₂O₅ LAURENT CHAPON, ISIS, Rutherford Appleton Laboratory, GUILLAUME BEUTIER, ALESSANDRO BOMBARDI, Diamond Light Source, Rutherford Appleton Laboratory, CARLO VECCHINI, PAOLO RADAELLI, ISIS, Rutherford Appleton Laboratory, S. PARK, SANG-WOOK CHEONG, Rutgers University — The commensurate magnetic phase of multiferroic HoMn₂O₅ has been studied by x-ray magnetic scattering off resonance and at the L₃ edge of Holmium. The magnetic ordering of the Manganese ions below 40 K induces a magnetic order of Ho. Due to the element selectivity of the technique we were able to extract the temperature dependence of the Ho ordering up to temperature very close to T_N. Azimuthal scans confirm the recent model of the magnetic structure determined from single crystal neutron diffraction data, for both the Manganese and Holmium ions. The d-f coupling is discussed in the light of these results.

Laurent Chapon
ISIS, Rutherford Appleton Laboratory

Date submitted: 27 Nov 2007

Electronic form version 1.4