

Abstract Submitted
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Heat Capacity and Neutron Scattering Studies on Geometrically Frustrated Ho Double Perovskites MATTHEW JACOBSEN, DANIEL ANTONIO, ANDREW CORNELIUS, RAVHI KUMAR, University of Nevada, Las Vegas, JASON GARDNER, Brookhaven National Laboratory & NIST Center for Neutron Research, YIMING QIU, NIST Center for Neutron Research & University of Maryland, CEDOMIR PETROVIC, Brookhaven National Laboratory — We have studied the magnetic properties of the frustrated double perovskites $A_2\text{HoSbO}_6$ ($A = \text{Sr}$ or Ba) by performing heat capacity measurements in applied magnetic field and inelastic neutron scattering. The Ho nuclear contribution to the heat capacity displays a unique field dependence that can be explained by the slowing down of the Ho electron spins in an applied field. The lowest magnetic level appears to be a doublet. Inelastic neutron scattering has conclusively determined the energy of these low lying crystalline electric field levels.

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