

Abstract Submitted  
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**Thermal Expansion and Magnetostriction of the Ising Antiferromagnet TbNi<sub>2</sub>Ge<sub>2</sub>** S.M. HOLLEN, G.M. SCHMIEDESHOFF, Occidental College, S.L. BUD'KO, P.C. CANFIELD, Ames Laboratory and Iowa State University — TbNi<sub>2</sub>Ge<sub>2</sub> has been shown to be an extremely anisotropic, axial, Ising-like antiferromagnet. In zero field it enters incommensurate and commensurate antiferromagnetic states at 16.7 K and 9.6 K respectively; six additional metamagnetic phases have been observed in applied fields at 2 K. In this talk we present preliminary measurements of the thermal expansion and magnetostriction of this material along its c-axis from room temperature to 2 K and in magnetic fields ( $H||c$ ) to 14 T. This work was supported by the Director for Energy Research, Office of Basic Energy Sciences, US DOE and was partially supported by the NSF under DMR-0305397.

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