

## View Abstract

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**CONTROL ID:** 3486555

**TITLE:** Non-Kramers doublet ground state of the triangular-lattice spin-liquid candidate  $\text{TbInO}_3$

**Abstract Body:** Ferroelectric insulator  $\text{TbInO}_3$  has been proposed to be a 2D spin-liquid candidate. This material has a Weiss temperature of  $-17\text{K}$ , but no magnetic ordering occurs down to  $0.1\text{K}$  [Nat. Phys. 15, 262 (2019)]. It remains unclear whether the magnetic lattice has honeycomb or triangular symmetry at low temperature. We study the ground state properties of this system by probing its crystal-field (CF) excitations using inelastic light scattering. The experimentally established CF level scheme provides a satisfactory description for the low-temperature specific heat and entropy data. In particular, we demonstrate that the Tb ions have a non-Kramers doublet ground state, and these doublets form a triangular magnetic lattice.

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**Category Type:** Experimental

**AUTHORS (FIRST NAME, LAST NAME):** Mai Ye<sup>1</sup>, Xianghan Xu<sup>1</sup>, Xiangyue Wang<sup>1</sup>, Jaewook Kim<sup>2</sup>, Sang-Wook Cheong<sup>1</sup>, Girsh Blumberg<sup>1</sup>

**INSTITUTIONS (ALL):** 1. Department of Physics and Astronomy, Rutgers University-New Brunswick  
2. Korea Advanced Institute of Science & Technology

**Teams:** (none)

**PRESENTER:** Mai Ye