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Spin Ordering Studies of Edge-sharing Iridates TESS SMIDT, Univ of California - Berkeley and Lawrence Berkeley National Lab, ITAMAR KIMCHI, Univ of California - Berkeley, MIN GYU KIM, Lawrence Berkeley National Lab, ZAHIR ISLAM, Argonne National Lab, ROBERT J. BIRGENEAU, ASHVIN VISH-WANATH, Univ of California - Berkeley, JEFFREY B. NEATON, JAMES G. AN-ALYTIS, Univ of California - Berkeley and Lawrence Berkeley National Lab — We have synthesized a material that is related to the layered honeycomb iridates. The magnetic order shows that this material has highly spin-anisotropic interactions, a key ingredient of the exotic possibilities associated with these compounds. We present X-ray studies of the spin ordering and lattice parameters, which aid in understanding the origin of the magnetic anisotropy and assess the possible proximity to a spin-liquid state.

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