

Abstract Submitted
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Thermodynamic Measurement of Angular Anisotropy at the Hidden Order Transition of URu₂Si₂¹ JENNIFER TRINH, UC Santa Cruz, EKKES BRUCK, TU Delft, THEO SIEGRIST, Florida State University/National High Magnetic Field Lab, REBECCA FLINT, Iowa State University, PREMALA CHANDRA, PIERS COLEMAN, Rutgers University, ARTHUR RAMIREZ, UC Santa Cruz — The heavy fermion compound URu₂Si₂ continues to attract great interest due to the unidentified hidden order it develops below 17.5 K. The unique Ising character of the spin fluctuations and low-temperature quasiparticles is well established. We present detailed measurements of the angular anisotropy of the nonlinear magnetization that reveal a $\cos^4\theta$ Ising anisotropy both at and above the ordering transition. With Landau theory, we show this implies a strongly Ising character of the itinerant hidden order parameter.

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