

Abstract Submitted
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3D Fermi Surface Mapping of Ce_2RhIn_8 ¹ J.D. DENLINGER, Lawrence Berkeley National Lab, F. WANG, J.W. ALLEN, U. of Michigan, M.B. MAPLE, U.C. San Diego, S. ELGAZZAR, P.M. OPPENEER, Uppsala University — Photon-dependent multi-Brillouin zone angle-resolved photoemission (ARPES) measurements are presented for the antiferromagnet heavy fermion bilayer compound Ce_2RhIn_8 . Highly automated Fermi Surface (FS) mapping for excitation energies of 90-120 eV allow visualization of k_z -variations of the electronic structure and permit a k_z -tomographic determination of the three-dimensional (3D) FS topology with sufficient detail for quantitative comparison to dHvA orbit areas and LDA-predicted topological shapes. In addition to confirming the quasi-2D circular and square topologies centered on the Brillouin zone corner, highly 3D k_z -variations are observed along the (100) directions Γ -X (Z-R). Results are compared to a similar ARPES determination of the 3D electronic structure and FS of the single layer compound CeCoIn_5 .

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