

Abstract Submitted  
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**High Field Torque Magnetometry of SmB<sub>6</sub>** COLIN TINSMAN, GANG LI, University of Michigan, ZIJI XIANG, University of Michigan, University of Science and Technology of China, FAN YU, TOMOYA ASABA, BENJAMIN LAWSON, University of Michigan, PENG CAI, University of Michigan, TsingHua University, ADAM BERKLEY, STEVEN WOLGAST, YUN SUK EO, University of Michigan, DAE-JEONG KIM, University of California, Irvine, CAGLIYAN KURDAK, JAMES ALLEN, KAI SUN, University of Michigan, XIANHUI CHEN, University of Science and Technology of China, YAYU WANG, TsingHua University, ZACHARY FISK, University of California, Irvine, LU LI, University of Michigan — The Kondo Insulator SmB<sub>6</sub> has been observed to have a small, residual surface conductance apparent below 5 K. Torque Magnetometry was employed to find quantum oscillations in the magnetization – the de Haas-van Alphen effect. Using magnetic fields up to 45 T, we were able to resolve 3 different pieces of Fermi Surface, at frequencies of 35 T, 300 T, and 400 T. Angular dependence of these oscillation frequencies indicate that they are two dimensional in nature. Additionally, Landau Level indexing analysis for the 35 T pocket gives a  $-1/2$  intercept in the infinite field limit, a Berry phase contribution consistent with Dirac electronic system such as graphene.

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