

Abstract Submitted  
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**Comparison of the Fermi Surfaces of  $\text{Bi}_2\text{Se}_3$ ,  $\text{Cu}_x\text{Bi}_2\text{Se}_3$ , and  $\text{Nb}_x\text{Bi}_2\text{Se}_3$**  BENJAMIN LAWSON, PAUL CORBAE, GANG LI, FAN YU, TOMOYA ASABA, COLIN TINSMAN, Univ of Michigan - Ann Arbor, Y. QIU, J. E. MEDVEDEVA, Y.S. HOR, Missouri University of Science and Technology, LU LI, Univ of Michigan - Ann Arbor — Topological insulator  $\text{Bi}_2\text{Se}_3$  is made superconducting with Cu and Nb doping. These have been the leading candidates to realize topological superconductivity. To understand the new physics showcased in these system, a detailed knowledge of the electronic structure is needed. We present a comparison of the quantum oscillations in the magnetization and transport of undoped, Cu-doped, and Nb-doped  $\text{Bi}_2\text{Se}_3$ . Whereas Cu dopants in  $\text{Bi}_2\text{Se}_3$  simply raise the chemical potential indicated by a larger Fermi pocket, Nb-doped  $\text{Bi}_2\text{Se}_3$  has two distinct oscillation frequencies. The multiple frequencies observed in the quantum oscillations indicate that the doping changes the band structure of Nb-doped  $\text{Bi}_2\text{Se}_3$  with interesting implications for its topological nature.

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