

Abstract Submitted  
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**Bulk properties and quantum oscillations in  $\text{Bi}_2\text{Se}_3$  topological insulator crystals** NICHOLAS BUTCH, KEVIN KIRSHENBAUM, JOHN-PIERRE PAGLIONE, Center for Nanophysics and Advanced Materials, Department of Physics, University of Maryland, College Park, MD 20742 — The compound  $\text{Bi}_2\text{Se}_3$ , a member of the recently heralded class of topological insulators, possesses a spin polarized metallic surface state and is theoretically expected to be a bulk insulator. In practice, stoichiometric  $\text{Bi}_2\text{Se}_3$  is metallic, with carriers believed to arise from intrinsic doping by defects. The synthesis of undoped  $\text{Bi}_2\text{Se}_3$  will be presented, along with measurements of electrical resistivity, Hall effect, and angle-dependent quantum oscillations.

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