

Abstract Submitted  
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**Superconducting properties of  $\text{Ce}_2\text{CoIn}_8$**  N. HUR, T. PARK, E. D. BAUER, J. D. THOMPSON, J. L. SARRAO, Los Alamos National Laboratory, Material Science Technology Division, MST-10, Los Alamos, NM 87545 — The new family of Ce-based heavy-fermion compounds with the general formula  $\text{Ce}_n\text{TIn}_{3n+2}$  (T=transition metal) have attracted sparked interest in recent years owing to their various interesting phenomena, such as pressure induced superconductivity, quantum criticality, and non-Fermi liquid behaviors. However, among n=2 compounds,  $\text{Ce}_2\text{CoIn}_8$  has not been studied sufficiently mainly because of the difficulty in the synthesis of crystals of decent size. Herein, we report the successful reproduction of  $\text{Ce}_2\text{CoIn}_8$  single crystals and present their magnetic, thermal and transport properties. Observed anomalies in resistivity and their magnetic field dependence will be explained within the context of a filamentary superconductivity. The nature and possible origin of the resistivity transition is discussed in comparison with that in  $\text{CeIrIn}_5$ .

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