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**Quantum Criticality in Kondo Compound CeAgBi<sub>2</sub>** SEAN THOMAS, PRISCILA ROSA, ZACHARY FISK, JING XIA, Univ of California - Irvine — We report a systematic study of the dense Kondo compound CeAgBi<sub>2</sub> by means of electrical resistivity, heat capacity, and magnetic measurements, including torque magnetometry and Sagnac interferometry. By comparing our results with previous reports, we observe at zero field a slightly larger antiferromagnetic ordering temperature at  $T_N = 6.4$  K. Moreover, five field-induced metamagnetic transitions are observed in magnetic fields up to 12 T applied parallel to the  $c$ -axis, including a remarkable signature for a first order transition at  $H_c \sim 8$  T. The low temperature specific heat coefficient  $\gamma$  and the  $T^2$  resistivity coefficient also show a divergence at the same  $H$ , indicating a putative quantum critical point. This work is supported by NSF grant DMR-1350122. The development of Sagnac interferometer is supported by NSF grant ECCS-1346603.

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