Unique ground state in Ce$_3$Au$_3$Sb$_4$. HAN-OH LEE, Los Alamos National Laboratory, YOUN-JUNG JO, National High Magnetic Field Laboratory, Florida State University, LUIS BALICAS, PEDRO SCHLOTTMANN, National High Magnetic Field Laboratory, Florida State University, ANDREW CHRISTIANSON, JON LAWRENCE, Department of Physics and Astronomy, University of California, Irvine, JASON GARDNER, NIST Center for Neutron Research, National Institute of Standards and Technology, Gaithersburg, MD, VLADMIR SIDOROV, Materials Physics and Application Division, Los Alamos National Laboratory, CATHIE CONDRON, SUSAN KAUZLARICH, Department of Chemistry, University of California, Davis, PETER KLAVINS, Department of Physics, University of California, Davis, JOE THOMPSON, Materials Physics and Application Division, Los Alamos National Laboratory, ZACHARY FISK, Department of Physics and Astronomy, University of California, Irvine — Ce$_3$Au$_3$Sb$_4$ has diverging specific heat coefficient at low temperature in a semiconducting state, a property which can be approached differently within the Kondo and band insulator viewpoints. Sample sensitivity here presents difficulty for determining the intrinsic behavior of this system. We will present pressure and powder neutron scattering experiment data in addition to its basic physical properties in order to discuss the underlying physics. This work has been supported by NSF-DMR-0503360.

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