

Abstract Submitted
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Studies on Single Crystals CePdGa₆ and Ce₂PdGa₁₂ LONG PHAM, HAN-OH LEE, Department of Physics, University of California, SATORU NAKASUJI, Department of Physics, Kyoto University, NELSON MORENO, Los Alamos National Laboratory, ROBIN MACALUSO, Department of Chemistry, Louisiana, BRAD CARTER, National High Magnetic Field Laboratory, Florida State University, JULIA CHAN, Department of Chemistry, Louisiana, PETER KLAVINS, ZACHARY FISK, Department of Physics, University of California Davis — Single crystals of tetragonal CePdGa₆ and Ce₂PdGa₁₂ are found to be antiferromagnetic below a T_N of 5 and 12 K respectively, with ordering along the *c*-axis. The electronic specific heat coefficients at T_N are approximately 350 and 140 (mJ/mole-Ce-K²) for CePdGa₆ and Ce₂PdGa₁₂ respectively, suggesting strong Kondo competition. In addition, a metamagnetic transition can be driven by relatively small magnetic fields applied along the *c*-axis in both systems. Field dependent thermodynamic properties and magnetization data will be presented and the origin of the complex ground states will be discussed. This work was supported by NSF DMR-0433560.

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