Abstract Submitted
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Is the Low-Temperature Phase in $CePd_3Ga_8$ Fascinating or Just Novel?[1] K.E. GRAY, J.F. MITCHELL, H. CLAUS, QING'AN LI, Argonne National Laboratory, ROBIN MACALUSO, Northern Colorado University — Magnetization data for $CePd_3Ga_8$ strongly support the presence of two phase transitions, also seen in specific heat, C_p. The 11 K transition (suppressed for fields, B>3 T) has similarities to UCd_{11} and $CeAuSb_2$, but the lower temperature phase (T<6 K, B<2.5 T) is novel and its nature is a mystery. Its uniaxial magnetic anisotropy implies that $CePd_3Ga_8$ is an effective Ising system for the Ce spins, likewise consistent with C_p. The phase diagram of this fascinating material will be discussed in terms of combined magnetization, conductivity, C_p and neutron scattering data.

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