Abstract Submitted
for the MAR07 Meeting of
The American Physical Society

Thermal expansion and magnetostriction in RAl_3 (R = Tm,Yb,Lu) single crystals[1] S.L. BUD'KO, J. FREDERICK, P.C. CANFIELD, Ames Laboratory and Dept. of Physics and Astronomy, Iowa State University, G.M. SCHMIEDESHOFF, Dept. of Physics, Occidental College, Los Angeles — We present temperature dependent thermal expansion and low temperature longitudinal magnetostriction measurements taken using a capacitance dilatometer [G.M. Schmiedeshoff et al., RSI, in press] in a PPMS-14 instrument for several cubic RAl_3 (R = rare earth) compounds. Quantum oscillations in the magnetostriction were observed in $LuAl_3$ and $YbAl_3$, including few new frequences for the latter. Data on qualitative changes in $TmAl_3$ thermal expansion in presence of the longitudinal magnetic field will be presented and discussed.

[1]This work was supported by DOE, Office of Basic Energy Sciences (SLB, JF, PCC) and NSF (GMS)

Sergey Bud'ko
Iowa State University

Date submitted: 09 Nov 2006 Electronic form version 1.4