Abstract Submitted
for the MAR12 Meeting of
The American Physical Society

Finite pulse relaxation calorimetry and specific heat of $NdOs_4Sb_{12}$[1] B. SOMSANUK, U.I. URBINA, P.-C. HO, Physics/California State University, Fresno, M.B. MAPLE, Physics/University of California, San Diego, T. YANAGISAWA, Hokkaido University, Japan — The compound $NdOs_4Sb_{12}$ is a mean-field ferromagnet at about 1 K. As inferred from specific heat measurements below 10 K, the electronic specific heat coefficient of this compound is very large ($\sim$ 520 mJ/mol-K^2). Intriguingly, a recent ultrasonic measurement shows that this compound has double ultrasonic dispersions at $\sim$15 K and 40 K. We have used our newly developed relaxation calorimeter to measure the specific heat of $NdOs_4Sb_{12}$ in the temperature range 11 K to 300 K. In this presentation, we will describe the experimental setup used for the finite pulse relaxation calorimetry in a crycooler and the results of our measurements on the $NdOs_4Sb_{12}$ sample.

[1]Research at CSU-Fresno is supported by NSF DMR-1104544; at UCSD by NSF DMR-0802478 and US DOE DE FG02-04ER46105; at Hokkaido U by MEXT, Japan.

B. Somsanuk
Physics/California State University, Fresno

Date submitted: 11 Nov 2011 Electronic form version 1.4