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Specific Heat of $\mathbf{Pr_{1-x}Nd_xOs_4Sb_{12}}$[1] BANCHONG SOMSANUK, HANK ANDERSON, PEI-CHUN HO, Physics/California State University, Fresno, M. BRIAN MAPLE, Physics/University of California, San Deigo, TATSUYA YANAGISAWA, Physics/Hokkaido University, Japan — The filled skutterudite compound, $PrOs_4Sb_{12}$, displays unconventional superconductivity at a relatively low critical temperature Tc=1.85K. The underlining physics behind this heavy fermion superconductor compound is largely unknown. To gain better insight into the underlining physics, we need to study the effect of ferromagnetism on unconventional superconductivity by using Neodymium-doped compounds, $Pr_{1-x}Nd_xOs_4Sb_{12}$. One of the parameters to study is the differences in their thermodynamic property. The specific heats of these compounds were measured using finite heat pulse relaxation calorimetry in an 11K cryocooler system. This presentation will report on the progress of the specific heat measurement of the doped compound $Pr_{1-x.}Nd_xOs_4Sb_{12}$ (x=1, 0.5) and the physics behind measuring heat capacity.

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