Abstract Submitted
for the MAR15 Meeting of
The American Physical Society

High Pressure Transport Studies of $NdIn_3$ KENNETH PURCELL, Univ of Southern Indiana, DAVID GRAF, National High Magnetic Field Laboratory, TAKAO EBIHARA, Shizuoka University — $NdIn_3$ is a cubic antiferromagnetic metal that orders with a Neel temperature of 5.9 K and belongs to a family of rare earth intermetallic compounds RIn_3 that have a cubic $AuCu_3$-type crystal structure. At 0.5 K and the magnetic field applied in 100 direction, $NdIn_3$ exhibits metamagnetic transitions at 7.8 T and 8.9 T before entering a field induced paramagnetic state at 11.1 T. We report high pressure transport studies of single crystal $NdIn_3$ and the effect that pressure has on the Neel temperature, critical field, and metamagnetic transitions observed in the magnetoresistance. Comparisons to the behavior of the pressure induced superconductor $CeIn_3$ will be discussed.

Kenneth Purcell
Univ of Southern Indiana

Date submitted: 06 Nov 2014 Electronic form version 1.4