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High pressure differential conductance measurements of (Pb,Sn)Se TIFFANY PAUL, DERRICK VANGENNEP, DANIEL JACKSON, AMLAN BISWAS, JAMES HAMLIN, Department of Physics, University of Florida, Gainesville, FL 32608 — Topological transitions have been recognized as a new type of quantum phase transition. Recently, a number of papers have reported scanning tunneling microscope (STM) measurements of the Landau level spectra of topologically non-trivial materials. Such measurements can offer substantial insight into the nature of the transition between topologically distinct phases. Although applied pressure represents an attractive means to drive a topological quantum phase transition, STM measurements can not be performed under high pressure conditions. In this talk, I will discuss our recent attempts to observe Landau level spectra in compressed (Pb,Sn)Se using differential conductance measurements.

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