

Abstract Submitted  
for the DAMOP08 Meeting of  
The American Physical Society

**Radio Frequency spectroscopy of a strongly interacting Fermi gas**<sup>1</sup> JOHN STEWART, JOHN GAEBLER, DEBORAH JIN, JILA- University of Colorado — Experiments using ultra-cold atoms have allowed researchers to study the BCS-BEC crossover. We report on studies of the crossover using an ultracold gas of potassium-40 atoms and radio-frequency (RF) spectroscopy. Atoms from one of the two strongly interacting spin states are transferred into a third spin state, which can then be selectively imaged. Our experiments differ from previous measurements using lithium-6 atoms in that we output couple the atoms to a weakly interacting state.

<sup>1</sup>JILA, National Institute of Standards and Technology and University of Colorado, Department of Physics, University of Colorado, Boulder, CO 80309-0440

John Stewart  
JILA- University of Colorado

Date submitted: 01 Feb 2008

Electronic form version 1.4