

Abstract Submitted
for the MAR06 Meeting of
The American Physical Society

Sorting Category: 21.15.1 (T)

Radio frequency spectroscopy and the pairing gap in trapped Fermi gases¹ YAN HE, University of Chicago, QIJIN CHEN, University of Chicago, KATHRYN LEVIN, University of Chicago — We present a theoretical interpretation of radio-frequency (RF) pairing gap experiments in trapped atomic Fermi gases, over the entire range of the BCS-BEC crossover, for temperatures above and below T_c . Our calculated RF excitation spectra, as well as the density profiles on which they are based, are in semi-quantitative agreement with experiment. We provide a detailed analysis of the physical origin of the two different peak features seen in RF spectra, one associated with nearly free atoms at the edge of the trap, and the other with (quasi-)bound fermion pairs. Reference: Phys Rev. A 72, 011602(R) (2005).

¹NSF-MRSEC Grant No. DMR-0213745

Prefer Oral Session
 Prefer Poster Session

Yan He
hey@uchicago.edu
University of Chicago

Date submitted: 30 Nov 2005

Electronic form version 1.4