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Momentum Resolved Radio Frequency Spectroscopy in Trapped Polarized Gases KATHRYN LEVIN, James Franck Institute and Department of Physics, University of Chicago, CHIH-CHUN CHIEN¹, HAO GUO, James Franck Institute and Department of Physics, University of Chicago — With recent advances in momentum resolved radio frequency (RF) spectroscopy, both experiment and theory, one can consider doing analogous experiments on polarized Fermi gases. In this talk we present predictions for the behavior of the fermionic spectral functions in the majority and minority bands. By truncating the integrated trap contributions at varying radii, the spectral functions will reflect the increase in the local polarization from nearly zero at the center to large values at the edges. We present predictions for these spectral functions and discuss their implications for future experiments.

- [1] Stewart, J T et al. Nature 454, 744 (2008)
- [2] Chen, Q. and Levin, K. Phys. Rev. Lett. 102, 190402 (2009)
- [3] Chen, Q. et al. Rep. Prog. Phys. 72, 122501 (2009)

¹Los Alamos National Laboratory

Kathryn Levin
James Franck Institute and Department of Physics, University of Chicago

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