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Two-dimensional attractive Fermi gases' excitations and radio-frequency spectra across the BEC/BCS crossover KADEN HAZZARD, JILA, NIST, and University of Colorado-Boulder — We calculate the radio-frequency spectra of two-dimensional attractive Fermi gases, including final state interactions, motivated by recent measurements by the groups of Koehl, Thomas, and Zwierlein. The calculation includes coherent excitations generated by the radio-frequency probe on top of the mean field solution. We find that although the gap is identical to the two particle theory, spectral shapes are modified both by many-body effects and by final state interactions. We compare these shapes to experimental measurements.

Kaden Hazzard
JILA, NIST, and University of Colorado-Boulder

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