

Abstract Submitted
for the MAR10 Meeting of
The American Physical Society

Near-Fermi level band renormalization effects in f electron systems TOMASZ DURAKIEWICZ, YINWAN LI, Los Alamos National Laboratory, PETER S. RISEBOROUGH, Temple University, PETER M. OPPENEER, Uppsala University, JOHN J. JOYCE, ERIC D. BAUER, KEVIN S. GRAHAM, Los Alamos National Laboratory — High energy and momentum resolution Angle Resolved Photoemission (ARPES) was used to analyze the near-Fermi level features in the electronic structure of 4f and 5f systems: CeIrIn₅, Ce₂IrIn₈, USb₂ and UPd₂Al₃. Small, but measurable kinks in the dispersion of both 4f and 5f electron bands are interpreted as signatures of interactions with bosonic modes as well as electron-electron interactions. Effects of hybridization and interband scattering on the electronic structure are found and discussed. Temperature - dependent ARPES is used to trace and characterize the changes in the near-Fermi level electronic structure related to the emergence of coherent quasiparticles.

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Date submitted: 20 Nov 2009

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