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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: $CeIrIn_5$, Ce_2IrIn_8, USb_2 and UPd_2Al_3. Small, but measureable 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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