

Abstract Submitted
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Universal spectral weight transfer in high temperature superconductors JEFF GRAF, Materials Sciences Division, Lawrence Berkeley Natl. Laboratory, Berkeley, CA 94720, USA, G.-H. GWEON, Dept. of Physics, University of California Berkeley, CA 94720, USA, K. MCELROY, Materials Sciences Division, Lawrence Berkeley Natl. Laboratory, Berkeley, CA 94720, USA, S.Y. ZHOU, C. JOZWIAK, Dept. of Physics, University of California Berkeley, CA 94720, USA, E. ROTENBERG, Advanced Light Source, Lawrence Berkeley Natl. Laboratory, Berkeley, CA 94720, USA, A. BILL, Dept. of Physics, University of California Berkeley, CA 94720, USA, T. SASAGAWA, Dept. of Advanced Materials Science, University of Tokyo, Kashiwa, Chiba 277-8561, Japan, H. EISAKI, AIST, 1-1-1 Central 2, Umezono, Tsukuba, Ibaraki, 305-8568, Japan, S. UCHIDA, Dept. of Physics, University of Tokyo, Yayoi, 2-11-16 Bunkyo, Tokyo 113-8656, Japan, H. TAKAGI, Dept. of Advanced Materials Science, University of Tokyo, Kashiwa, Chiba 277-8561, Japan, D.-H. LEE, A. LANZARA, Dept. of Physics, University of California Berkeley, CA 94720, USA — High resolution angle resolved photoemission spectroscopy (ARPES) studies of the electronic structure of several cuprate families, over the entire phase diagram, from undoped to highly overdoped regime are reported. A detailed study of the one-electron dynamics as a function of momentum, temperature and doping is presented. A universal spectral weight transfer is observed for all systems and discussed in terms of a strong interplay between the electron-lattice and electron-electron interaction in these materials.

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