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Fermi surfaces and band dispersions in 4d compound Sr_2RhO_4 B.J. KIM, School of Physics and Center for Strongly Correlated Materials Research, Seoul National University, Seoul, Korea, H. KOH, Advanced Light Source, Lawrence Berkeley National Laboratory, Berkeley, California 94720, USA, I. NA-GAI, S.I. IKEDA, National Institute of Advanced Industrial Science and Technology, Tsukuba, Ibaraki 305-8568, Japan, J.J. YU, School of Physics and Center for Strongly Correlated Materials Research, Seoul National University, Seoul, Korea, H.-D. KIM, Pohang Accelerator Laboratory, Pohang University of Science and Technology, Pohang 790-784, Korea, S. -J. OH, School of Physics and Center for Strongly Correlated Materials Research, Seoul National University, Seoul, Korea, C. KIM, Institute of Physics and Applied Physics, Yonsei University, Seoul, Korea — Fermi surface (FS) topology and band dispersions in 4d compound Sr_2RhO_4 are studied by angle-resolved photoemission spectroscopy (ARPES) and compared with the band structure calculation within the local-density approximation (LDA). The measured FS deviates significantly from the calculation, suggesting the electronic correlation effects are not negligible in this system. Core-level X-ray photoemission spectrum of Rh 3d shows correlation-induced satellite, from which we estimate the strength of the correlation, by simulating the spectrum with the recently proposed model calculation of core-level spectra incorporating the dynamical mean-field theory (DMFT).

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