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Indications of an s-wave structure of pseudogap in high-T_c cuprate superconductors SHIRO SAKAI, University of Tokyo — The superconducting gap in high-T_c cuprates is d wave, as established by a SQUID experiment. Although no such phase-sensitive experimental result exists for a pseudogap it has also been believed to be d wave, on ground of the observations by angle-resolved photoemission spectroscopy (ARPES) However, since APRES focuses on the occupied spectra, little is actually known about the unoccupied side. Here we propose, based on a cluster dynamical mean-field calculation on the two-dimensional Hubbard model, that the pseudogap has an s-wave structure, where the gap in the nodal region is *above* the Fermi level. The s-wave structure indeed explains well the recent ARPES and STM observations of electron-hole asymmetry, as well as the anomalous behavior observed in electronic Raman spectroscopy, which captures the structure of the unoccupied spectra, essential for discriminating the s-wave pseudogap from the conventional d-wave one [S. Sakai et al., Phys. Rev. Lett. 111, 107001 (2013)] The work was done in collaboration with S. Blanc, M. Civelli, Y. Gallais, M. Cazayous, M.-A. Measson, J. S. Wen, Z. J. Xu, G. D. Gu, G. Sangiovanni, Y. Motome, K. Held, A. Sacuto, A. Georges, and M. Imada

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