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Unusual pseudogap features observed in iron-oxypnictide superconductors Y. ISHIDA, RIKEN SPring-8 Center, T. SHIMOJIMA, K. ISHIZAKA, T. KISS, M. OKAWA, ISSP U. Tokyo, T. TOGASHI, RIKEN SPring-8 Center, S. WATANABE, ISSP U. Tokyo, X.-Y. WANG, C.-T. CHEN, CAS, Y. KAMIHARA[1], ERATO-SORST JST, in FRC, Tokyo Inst. Tech., M. HIRANO[2], H. HOSONO[3], Materials and Structural Lab. Tokyo Inst. Tech., S. SHIN[4], ISSP U. Tokyo — Laser photoemission spectroscopy is employed to investigate the electronic structures of LaFeAsO:F and LaFePO:F [1] exhibiting $T_c = 26$ and 5 K, respectively [2]. We find that the high-T_c LaFeAsO:F exhibits a temperature-dependent pseudogap extending over ∼0.1 eV about the Fermi level at 250 K, whereas such a feature is absent in low-T_c LaFePO:F. We also find ∼20-meV pseudogap features and signatures of superconducting gaps both in LaFeAsO:F and LaFePO:F. We discuss possible origin of the pseudogaps through comparison with the cuprates. [1] Y. Kamihara *et al.*, *JACS* **128**, 10012 (2006); **130**, 3296 (2008). [2] Y. Ishida *et al.*, arXiv:0805.2647.

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