Fermi surface of the parent compound of iron-based superconductor T. SHIMOJIMA, ISSP U. Tokyo, Y. ISHIDA, RIKEN SPring-8, N. KATAYAMA, K. OHGUSHI, K. ISHIZAKA, T. KISS, M. OKAWA, ISSP U. Tokyo, T. TOGASHI, RIKEN SPring-8, X.-Y. WANG, C.-T. CHEN, CAS, S. WATANABE, ISSP U. Tokyo, T. OGUCHI, U. Hiroshima, S. SHIN, ISSP U. Tokyo — Fermi surface of the parent compound of iron-based superconductor BaFe2As2 is studied by angle-resolved photoemission spectroscopy using VUV-laser. This compound shows structural and magnetic phase transition around TN = 140 K [1]. We found the transformation of Fermi surface across TN. We will discuss its origin comparing with the first principle band calculation.