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Josephson Vortex State in Strongly Anisotropic Superconductor Bi-2212 KAZUTO HIRATA, SHUICHI OOI, SHAN YU, EL HADI SMAIL SADKI, TAKASHI MOCHIKU, National Institute for Materials Science — We have reported that the periodic oscillations, observed in the Josephson-vortex (JV) flow resistance in Bi-2212 as a function of the parallel magnetic field, provide useful information on JV states. The 3D long-range-ordered state has been suggested from the “beats” phenomenon (Physica **C412-414**, 454(2004) in the oscillations. The 3D phase ranges from the lower magnetic field boundary (H_l) to the higher boundary (H_h), which is determined from the beginning and the end of the oscillations, respectively. The boundary H_l is independent of temperature and almost constant, and only depends on the anisotropy parameter γ . Crossing the boundary H_h , the JV flow resistance without any oscillations suggests 2D-quasi-long-range ordered state, proposed by Hu&Tachiki (PRB**70**, 064506(2004).

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