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**Resonant activation and multi-junction switching characteristics of Bi-2212 intrinsic Josephson junctions** NOBUHIRO KITABATAKE, RIEC, Tohoku Univ., KUNIHIRO INOMATA, RIKEN, SHIGEO SATO, RIEC, Tohoku Univ., MITSUNAGA KINJO, Department of Electrical and Electronic Engineering, Univ. of the Ryukyus, HUABING WANG, TAKESHI HATANO, NIMS, KOJI NAKAJIMA, RIEC, Tohoku Univ. — Bi-2212 intrinsic Josephson junctions (IJJs) are expected to be applied to a superconductive qubit. We have studied quantum behavior of two different types of Bi-2212 IJJs, one is fabricated by FIB etching [2,3] and the other is fabricated by Double Side Etching Method (DSEM)[4]. In this report, we show their multi-junction switching properties with or without microwave irradiation. The experimental results indicate that the couplings between junctions change according to the sample fabrication process. [1] K.Inomata et al., Phys. Rev. Lett. 95, 107005 (2005) [2] S.-J.Kim et al., Appl. Phys. Lett. 74,1156 (1999) [3] Yu.I.Latyshev et. Al., JETP Lett. 69, 84 (1999) [4] H.B.Wang et al., Appl. Phys. Lett. 78, 4010 (2001)

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