

**Upgrade of the BPM Readout Electronics for the ATF Damping Ring, N. TAKANO, Toho University; H. HAYANO, J. URAKAWA, KEK; T. OKUGI, Tokyo Metropolitan University** - The ATF damping ring has been operated since January in 1997 at KEK, and several beam studies have been started. For the orbit measurement, button-type beam position monitors (BPM) are installed in the ATF damping ring together with a conventional readout electronics. This readout electronics includes clipping circuits with two Schottky diodes to measure a charge induced in each button-type electrode by a beam. Schottky diodes used in the current clipping circuit can hardly respond to high frequency components ( $>30$  MHz) in a BPM signal. This fact finally limits the position resolution of BPM. However, the high position resolution ( $<5$  micro-m) will be increasingly required. We tried to use an FET as a clipping device instead of Schottky diodes, and found out a few good properties to improve performance of the clipping circuit. We will report on performance of a prototype clipping circuit using an FET.