

**Phase Space Monitor System at the Photon Factory Storage Ring, Y. KOBAYASHI, T. MITSUHASHI,**

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We have developed a fast beam position monitor circuit to observe a transverse betatron oscillation of a single bunch beam at the Photon Factory Storage Ring. This circuit has six channels connected to six button-type electrodes of the beam position monitor (BPM) independently and synchronizes with a fast kicker magnet by external trigger signal. Each channel consists of band-pass filter, variable amplifier, peak detection, 20 MHz 8 bit flash ADC, and 128 kbyte memory. The digitized voltage of BPM is stored in the memory and data taking is controlled by on-line computer (PC9801) through GP-IB interface. Using these two circuits connected to two different BPM we can now obtain the phase space information for the transverse betatron oscillation of a single bunch beam though some constraints are still remained.