

**The Correlation between the Beam Orbit Stability and the Utilities at SRRC,** C.R. CHEN, J.R. CHEN\*, H.M. CHENG, Y.S. HONG, G.Y. HSIUNG, T.F. LIN, Z.D. TSAI, SRRC - In order to reduce beam orbit fluctuations caused by temperature variations of the utilities, the correlations among the air temperature, the water temperature and the beam position were studied at Synchrotron Radiation Research Center (SRRC). A photon beam position monitor (vertical direction) was set up and experiments were performed to demonstrate these relations. The data, obtained from both the photon and electron beam position monitors, indicated that beam orbit fluctuations were strongly correlated to temperature variations, and recent improvements on SRRC utilities helped the beam stability. Experimental results showed that the fluctuations of the vertical beam position could be controlled to within 10 micron meters.

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