

Beam Parameters and Automatic Stability Measurement System using a Pin-hole Detector,
M.J. HONG, T.H. LI, G.H. LUO, R. SAH, SRRC-
The Taiwan Light Source (TLS) provides 200 mA, 1.5 GeV electron beam to generate photon source for academic and industrial research scientists. The beam stability, lifetime, current, and emittance are the key issues to the photon beam line users. Most of the synchrotron light users demand short-term peak-to-peak beam stability well within 0.5%. A 50 μm pin-hole combined with a photon detector, which intercepts the synchrotron light focused by a vertical focusing mirror, is driven by an automatic peak-current detecting program with the compensation of the motor's backlash. The measurement results is one of the archived signals to indicate the crucial performance for TLS. The measurement system, control algorithm, and basic measurement results will be discussed.