

Longitudinal Beam Instability Observation with a Streak Camera at SRRC, H.P. CHANG, K.T. HSU, C.S. HSUE*, C.C. KUO, W.K. LAU, J.C. LEE, H.J. TSAI and MIN-HUEY WANG, SRRC - The longitudinal beam instability of the 1.3 GeV TLS storage ring at SRRC was investigated by using a Hamamatsu C5680 streak camera. The single bunch length as a function of beam current was measured and a longitudinal broad band impedance was deduced. Variation of the bunch structure versus beam current was also measured. The longitudinal beam motions in the case of single bunch, two bunches and a few bunches were studied. A Hamamatsu PLP-02 pico second pulse laser had been used to calibrate the streak camera and the results are presented.

* Also National Tsing Hua University.