

Topping Up Experiments at SRRC, J. CHEN, K. T. HSU, K.K. LIN, T.S. UENG, W.T. WENG*, SRRC, Hsinchu, Taiwan - In the operation of a synchrotron radiation facility, it is very desirable to be able to provide beam with almost constant intensity. This has considerable advantage in terms of calibration and normalization of detectors, heat load at optical components, and the duration of data-taking time. To achieve that goal, the topping up mode injection has been tested at SRRC. The experiment was performed to automatically fill stored beam current up to 200 mA whenever it was decreased to a preset low limit value. Following items have been examined: reproducibility of the bunch train structure of the injected beam, stability of the storage ring pulsed injection magnets, injection start-up and bucket addressing system. Effects on the stored beam stability will be studied and methods to minimize disruption to research program during injection time will be investigated.

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