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TPS booster power supply performance experiment and monitoring program

Thursday, 23 May 2024 16:00 (2 hours)

The TPS is a latest generation high-brightness synchro-tron light source scheduled to be commissioned in 2014. Its booster is designed to ramp electron beams from 150 MeV to 3 GeV at a frequency of 3 Hz. There are 54 dipole magnets, powered by one power supply unit, and 84 quadrupole magnets, powered by 4 power supply units according to their respective functions. During routine user time, a top-up injection occurs every 4 minutes. At this time, the stability of the booster's power supply units greatly affects the smoothness of the injection process. This paper will discuss how variations in the booster power output waveform affect injection and the monitor-ing program developed for this purpose.

Footnotes

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