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Optimization of PLS-II

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PLS-II has been faithfully fulfilling its role for 13 years since it launched its user service in 2012. As the 4GSR project is currently underway in South Korea, upgrading PLS-II to PLS-III is expected to take a significant amount of time. Therefore, how PLS-II can be optimized and used well over a significant time in the future is an important question. In this presentation, we present how to improve the performance of the linear accelerator and the storage ring for PLS-II optimization. First, in the PLS-II linear accelerator, we consider using a Sub-Harmonic Buncher to generate a single bunch electron beam. For beam injection, we consider introducing a Nonlinear Kicker instead of the 4-Kicker in use. In the storage ring, we propose to improve the speed of a Fast Orbit Feedback System, which is presently limited from 800 Hz to a few kHz.

Footnotes

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