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Study of aperture sharing injection scheme for Diamond-II

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The Diamond-II storage ring has been designed to increase photon brightness by up to two orders of magnitude compared to the existing Diamond facility. A single-bunch aperture sharing injection scheme using short stripline kickers applied with high-voltage nano-second pulsers was proposed to provide both high injection efficiency and high photon beam stability in top-up mode [1]. The quasi-transparent injection process has been optimised and studied using Accelerator Toolbox. The results of these study will be presented.

Funding Agency

Footnotes

[1] J. Kallestrup et al., "Aperture Sharing Injection for Diamond-II", in proc IPAC'22, Bangkok, Thailand, paper ID THPOPT018, June 2022

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