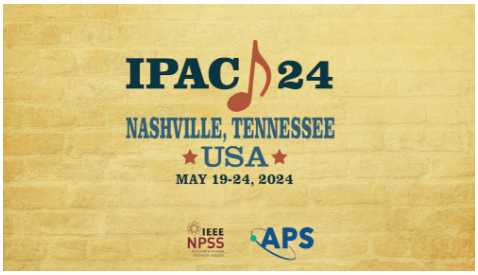

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Different scenarios for generating coherent THz radiation based on a compact electron accelerator

Monday, 20 May 2024 16:00 (2 hours)

Terahertz radiation sources have significant applications in non-invasive detection fields, including medical imaging, drug design, and the quantification of specific biochemical substances. Currently, accelerator-based terahertz sources play a crucial role in producing high-power terahertz radiation. To achieve high-power Terahertz output, beam manipulation is necessary. This paper presents various beam manipulation methods to generate a prebunched electron beam and achieve coherent Terahertz radiation. The proposed methods are based on a compact electron accelerator, and performances under different scenarios are discussed.

Footnotes

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Paper preparation format

Region represented

Asia

Primary author: LIU, Weihang (Institute of High Energy Physics)

Co-authors: JIANG, Shimin (Institute of High Energy Physics); LI, Xiao (Institute of High Energy Physics); WANG, Sheng (Institute of High Energy Physics, CAS); JIAO, Yi (Institute of High Energy Physics); LIU, Xingguang (Chinese Academy of Sciences); ZHAO, Yu (Institute of High Energy Physics); CHEN, Jianliang (Chinese Academy of Sciences)

Presenter: LIU, Weihang (Institute of High Energy Physics)

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