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Development of build-up optical cavity for broad-band THz pulse train

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Short bunch electron beam from linear accelerators can produce broad band and Carrier Envelope Phase fixed coherent radiation in THz spectrum range via various schemes, such as Coherent Synchrotron Radiation and Coherent Transition/Diffraction Radiation. Especially in the high-repetition (or multi-bunch) linac, a CEP-fixed mono-cycle THz pulse train will be available. In order to realize a higher peak intensity and to improve the mode purity at the same time, we consider to convert the multi-pulse into a single pulse by stacking them in an external optical cavity.

We have designed an optical cavity for stacking broad-band THz pulse, and planned a test experiment. We will discuss the principle of the design and present the plan.

Funding Agency

Footnotes

I have read and accept the Privacy Policy Statement

Yes

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