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A new design of the S-band acceleration unit

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The performance of a photoinjector relies on the brightness preservation. For acceleration structures used for emittance compensation, it will lead to a smaller additional emittance growth with fewer nonlinearities. To compensate for the possible asymmetry on both sides of the installation, an S-band acceleration structure with a novel coupler was designed. The beam test results show a significant improvement in the higher-order fields for the beam of the photoinjector.

Footnotes

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Paper preparation format

Region represented

Asia

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