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Type: Poster Presentation

Halo Formation in High-Intensity Linacs: Modeling and Advanced Phase Space Diagnostics

Sunday 10 August 2025 15:00 (3 hours)

Work at the SNS Beam Test Facility aims to characterize halo formation in the early stages of a high-power linac and to reproduce halo measurements with well-benchmarked particle-in-cell simulations. The BTF is equipped with advanced phase space diagnostics that enable detailed characterization of beam distributions at the beginning and end of a 2.5 MeV, 10 meter test beamline. Diagnostic capabilities include direct measurement of the 6D phase space distribution, as well as imaging of 2D phase space projections with 6 orders of magnitude in dynamic range. This talk will compare predictions from the PyORBIT code to measured distributions, as well as discuss the parameters and limitations of the simulation model.

Please consider my poster for contributed oral presentation

No

Would you like to submit this poster in student poster session on Sunday (August 10th)

Yes

Footnotes

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I have read and accept the Privacy Policy Statement

Yes

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