

The LINACs simulation framework

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LINACs is a simulation framework for designing optics and beam dynamics of charged particles in particle accelerators. LINACs is an open-source software that enables the user complete control over all design and simulation parameters of RFQs. This includes beam-driven design, fully 3D simulation using precise quadrupolar symmetry, and rigorous Poisson solution for external and space charge fields. The code can handle simultaneous particle beams with analytical input distributions and allows input beam scans. The software offers a relatively short running time and provides extensive analysis techniques. This work provides a historical overview of the code, presents results from RFQ models, and discusses future developments.

Footnotes

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