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Adiabatic capture of longitudinal phase space

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Thus ends 63 years without a theory of longitudinal capture able to predict the final beam distribution and optimize the voltage law. We show the relationship between average values of the initial and final Hamiltonian is a universal function independent of voltage law, provided the adiabaticity parameter is small. The deviations from average are also given. This means the bunch profile and energy spectrum are predictable, without particle tracking. Beam measurements at the BNL AGS Booster and MedAustron are also reported.

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Footnotes

I have read and accept the Privacy Policy Statement

Yes

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