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An optimization of the ILC E-driven positron source with the TPE algorithm

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The International Linear Collider (ILC) is a next-generation electron-positron collider based on the superconducting linear accelerator. Many positrons are required for the ILC because beams are not reused in linear colliders. Therefore, the ILC electron-driven (E-driven) positron source system should be designed to optimize efficient positron generation. In this study, we optimize the accelerator parameters including the booster linac RF phase and amplitude, ECS RF phase and amplitude, optics over the system, etc. by the black-box optimizer with TPE algorithm. The results of the optimization are presented.

Footnotes

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