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## A next generation, integrated community toolset for the modeling of linear colliders

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The design of the next generation of linear colliders demands a renewed, high-performance, integrated set of simulation codes. We present the Beam, pLasma & Accelerator Simulation Toolkit (BLAST), which includes legacy accelerator codes such as Impact-T, Impact-Z, Warp and Posinst, as well as a renewed generation of accelerator codes such as ImpactX, WarpX and HiPACE++. The new codes, born out of the US DOE Exascale Computing Project (ECP), all share a common foundation based on the AMReX library that gives native support for mesh refinement and high performance on both CPU-based and GPU-based computer architectures. The integrated set also includes python-driven workflows for efficient parametric optimization and coupling with machine learning frameworks. We will present the latest of the toolkit and new codes, with examples and discussion on their applications to start-to-end modeling of linear colliders from the source to the interaction point beam-beam effects, whether using conventional radiofrequency or plasma-based acceleration technologies, or a combination.

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