

Request for Feedback: “Primer on ILC Physics and SiD Software Tools”



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Primer on ILC Physics and SiD Software Tools

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Abstract

We introduce colliders and collider detectors and describe the International Linear Collider (ILC) and the Silicon Detector (SiD). We then describe the Standard Model (SM) of particle physics, particle production and decay, and the expected signal and background at the Higgs factory. We then describe the available software tools for ILC event generation, SiD detector simulation, and event reconstruction. Finally we describe open avenues in research for detector optimization and physics analysis. The pedagogical level is suitable for advanced undergraduates and beginning graduate students.

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- The section on SiD optimization has not been written, your input is essential.
- Any feedback given is appreciated and will be acknowledged in the Acknowledgements.
- The objective will be cost reduction without sacrificing performance.