

The International Linear Collider

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Abstract

The *Large Hadron Collider* (LHC) at CERN is opening up the TeV energy scale for exploration. We fully expect we will soon begin a new era in particle physics that will provide strong motivation to build a companion accelerator, a lepton collider. In anticipation, the International Linear Collider (ILC) is being conceived and designed by a unique global process involving coordinated R&D and design work by leading accelerator physicists worldwide. The ILC is technically a very challenging enterprise, involving development of high gradient superconducting radio-frequency (SCRF) accelerating cavities, as well as highly demanding sources, damping rings, beam dynamics and final focus optics. Achieving the required event rate will require both high power and very small emittance beams. Highlights of the technical systems, including vacuum requirements, will be presented for a design that could be implemented on a timescale of the early 2020s.