

The International Linear Collider: By the Numbers

Collisions: Electrons and their antiparticles, positrons, in bunches

of 5 nanometres in height containing 10 billion particles

and colliding 14,000 times per second

Energy: Up to 500 GeV with an option to upgrade to 1 TeV

Collision Rate: Bunches consisting of 2x10¹⁰ electrons and positrons

each collide 14000 times per second, focused to a tiny

area a few millionths of millimetres across

Acceleration Technology: Superconducting radiofrequency using accelerating

cavities made of pure niobium

Length: Approximately 31 kilometres, plus two damping rings

each with a circumference of six kilometres.

Accelerating Gradient: 31.5 megavolts per metre

Cavities: 16,000

Cryomodules: 2000

Cavity temperature: 1.8 Kelvin (-271.2 °C or -456°F).

Detectors: 2 in an interchangeable push-pull configuration

Site: To be determined in the next phase of the project

ILC Community: More than 100 laboratories and universities around the

world involving currently about 1000 people are working

on R&D programmes for the ILC

Management: Global Design Effort, a team of approximately 60

scientists and engineers led by Barry Barish

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On the Web: http://www.linearcollider.org/

