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# Measurement of the Higgs self-coupling at the ILC (20' + 5')

*Saturday 6 August 2016 12:30 (25 minutes)*

The self-coupling of the Higgs boson is a fundamental ingredient in the physics of electroweak symmetry breaking. Measurement of this parameter will give evidence on the form of the Higgs field potential and that nature of the phase transition to electroweak symmetry breaking in the early universe. In this talk, we will present estimates of the measurement accuracy for this parameter in e+e- collisions based on full-simulation studies for the ILC at 500 and 1000 GeV and put them in context with the situation at other colliders. The Higgs self-coupling is always measured through interference with other Standard Model diagrams. Thus, it is an advantage to measure multiple processes with different signs of the interference term, as can be done already at the ILC at 500 GeV. The talk will also update the expectations for precision measurement of the other Higgs boson couplings at the ILC, where model-independent measurements with part-per-mille accuracy are expected for many couplings.

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