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# Higgs physics at CLIC (15' + 5')

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The Compact Linear Collider (CLIC) is an option for a future multi-TeV electron-positron collider, offering the potential for a rich precision physics programme, combined with sensitivity to a wide range of new phenomena. The CLIC physics potential for measurements of the 125 GeV Higgs boson has been studied using full detector simulations for several centre-of-mass energies. The presented results provide crucial input to the energy staging strategy for the CLIC accelerator. The complete physics program for measurements of all accessible Higgs boson couplings is presented in this talk. All measurements available at a given centre-of-mass energy were included in combined fits. Operation at a few hundred GeV allows the couplings and width of the Higgs boson to be determined in a model-independent manner through the study of the Higgsstrahlung and WW-fusion processes. At a lepton collider, the measurement of the Higgsstrahlung cross section using the recoil mass technique with leptonic Z decays sets the absolute scale for all Higgs coupling measurements. Recently, it has been shown that this approach can be extended to hadronic decays of the Z boson which improves the statistical precision significantly. Operation at higher centre-of-mass energies provides large statistics for the study of Higgs boson decays and the potential to directly measure the top Yukawa coupling. At the highest centre-of-mass energy (presently assumed to be 3 TeV), the Higgs boson self-coupling can be determined with 10% precision.

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