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The Higgs self-coupling at CLIC

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The Compact Linear Collider (CLIC) is a mature option for a future electron-positron collider operating at centre-of-mass energies of up to 3 TeV. CLIC will be built and operated in a staged approach with three centre-of-mass energy stages currently assumed to be 380 GeV, 1.5 TeV, and 3 TeV. The Higgs self-coupling is of particular interest: for determining the shape of the Higgs potential, and due to its sensitivity to a variety of BSM physics scenarios. At the higher-energy stages CLIC will produce Higgs boson pairs both via double Higgsstrahlung and via vector-boson fusion. Recent results will be presented showing that measurements of these processes lead to a determination of the Higgs self-coupling with a precision of around 10%.

Primary authors: CLICDP COLLABORATION; SCHNOOR, Ulrike (CERN)

Presenter: SCHNOOR, Ulrike (CERN)

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