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Measurement of the Higgs to di-photon branching fraction at 3 TeV CLIC

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In this talk we address a potential of 3 TeV center-of-mass energy Compact Linear Collider (CLIC) to measure the Standard Model (SM) Higgs boson decay to two photons. Since photons are massless, they are coupled to the Higgs boson at a loop level, in exchange of heavy particles either from the Standard Model or beyond. Any deviation of the Higgs to di-photon branching fraction and consequently of the Higgs to photon coupling may indicate a New Physics. Measurement is fully simulated on 5000 samples of pseudo-experiments assuming integrated luminosity of 5 ab-1 with unpolarized beams.

Time Zone

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