Contribution ID: **74** Type: **not specified**

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

Tuesday 16 March 2021 07:40 (20 minutes)

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

Europe/Africa/Middle East

Primary author: KACAREVIC, Goran (University of Belgrade (RS))

Co-authors: Dr AGATONOVIC JOVIN, Tatjana (VINCA Institute of Nuclear Sciences, University of Belgrade); Dr BOZOVIC JELISAVCIC, Ivanka (VINCA Institute of Nuclear Sciences, University of Belgrade); Dr MILUTINOVIC DUMBELOVIC, Gordana (VINCA Institute of Nuclear Sciences, University of Belgrade); Dr RADULOVIC, Mirko (Vinca Institute of Nuclear Sciences, University of Belgrade); Dr SMILJANIC, Ivan (VINCA Institute of Nuclear Sciences, University of Belgrade); Dr STEVANOVIC, Jasna (Department of Physics, Faculty of Science, Kragujevac University, Kragujevac, Serbia); Ms VUKASINOVIC, Natasa (VINCA Institute of Nuclear Sciences, University of Belgrade)

Presenter: KACAREVIC, Goran (University of Belgrade (RS))

Session Classification: PD3: Physics Analyses

Track Classification: Physics and Detectors Tracks: PD3: Physics Analyses