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Unveiling the Higgs at FCC-hh with new diboson precision measurements.

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The lack of evidence of New Physics coming from direct searches of resonances at the LHC calls for an increase in efforts to devise new observables that can indirectly probe New Physics. Additionally, the future FCC-hh will make available new processes, inaccessible so far due to their low number of events. Studying the high transverse momentum distribution of diboson production processes at FCC-hh is then an interesting path to explore. I will discuss how the diboson processes Wh and Zh, with leptonic decays for W and Z and the Higgs decaying to 2 photons, will allow us to know more about the physics of the Higgs boson in an EFT framework. I will also focus on how doubly differential distributions give us access to higher-dimension operators that, otherwise, would require more specific observables. Finally, I will show how these processes will help to improve the bounds on aTGCs obtained from electron-positron colliders.

Summary

Author: ROSSIA, Alejo (Deutsches Elektronen-Synchrotron DESY)

Co-authors: GROJEAN, Christophe (DESY (Hamburg) and Humboldt University (Berlin)); Mr ENGLERT, Philipp (DESY); BISHARA, Fady Adibsamy (DESY); PANICO, Giuliano (University of Florence and INFN Florence); MONTULL GARCIA, Marc (Deutsches Elektronen-Synchrotron DESY); DE CURTIS, Stefania (Universita e INFN, Firenze (IT)); DELLE ROSE, Luigi (University of Florence)

Presenter: ROSSIA, Alejo (Deutsches Elektronen-Synchrotron DESY)

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