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Measurements of the Higgs boson properties and their interpretations with the ATLAS experiment

Monday, 21 February 2022 09:30 (15 minutes)

With the full Run 2 pp collision dataset collected at 13 TeV, very detailed measurements of Higgs boson properties and its interactions can be performed using its decays into bosons and fermions, shining light over the electroweak symmetry breaking mechanism. This talk presents the latest measurements of the Higgs boson properties by the ATLAS experiment in various decay channels, including production mode cross sections, simplified template cross sections, differential and fiducial cross sections, as well as their combination and interpretations. Specific scenarios of physics beyond the Standard Model are tested, as well as a generic extension in the framework of the Standard Model Effective Field Theory.

Summary

Presenter: LUISE, Ilaria (Stony Brook University (US))

Session Classification: Monday