

Combined Higgs boson measurements and their interpretations with the ATLAS experiment

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Very detailed measurements of Higgs boson coupling and kinematical properties can be performed using the data collected with the ATLAS experiment, exploiting a variety of final states and production modes, and probing different regions of the phase space with increasing precision. These measurements can then be combined to exploit the specific strength of each channel, thus providing the most stringent global measurement of the Higgs properties. This talk presents the latest combination of Higgs boson measurements by the ATLAS experiment, with results presented in terms of production modes, branching fractions, Simplified Template Cross Sections and coupling modifiers. These combined measurements are interpreted in various ways: 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. The results are based on pp collision data collected at 13 during Run 2 of the LHC.

Primary track

Precision Higgs measurements and calculations

Is the speaker a PhD student or post-doc?

No

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