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Type: **Parallel Sessions**

Development of novel experimental techniques to improve our understanding of the Higgs boson at the ATLAS experiment

Wednesday 20 October 2021 09:30 (10 minutes)

With the full Run 2 pp collision dataset collected at 13 TeV by the ATLAS experiment, it is now possible to perform detailed measurements of Higgs boson properties in many production and decay modes. In many cases, novel experimental techniques were developed to allow for these measurements. This talk presents various such techniques, including embedding of simulated objects in data; special object weighting techniques to maximize statistical precision; developing special trigger, reconstruction, and identification algorithms for non-standard objects; special treatments of sources of two-point theory systematic uncertainties; and special developments in likelihood-based fitting techniques.

speaker known

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Session Classification: Parallel: Precision and Properties

Track Classification: Higgs-boson precision physics