



Contribution ID: 189

Type: **Parallel session talk**

Searches for Higgs boson pair production with the full LHC Run-2 dataset in ATLAS

Tuesday, 27 July 2021 09:30 (17 minutes)

The latest results on the production of Higgs boson pairs (HH) in the ATLAS experiment are reported, with emphasis on searches based on the full LHC Run 2 dataset at 13 TeV. In the case of non-resonant HH searches, results are interpreted both in terms of sensitivity to the Standard Model and as limits on κ_λ , i.e. a modifier of the Higgs boson self-coupling strength. Searches for new resonances decaying into pairs of Higgs bosons are also reported. Prospects of testing the Higgs boson self-coupling at the High Luminosity LHC (HL-LHC) will also be presented.

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Collaboration / Activity

ATLAS

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Session Classification: T09: Higgs Physics

Track Classification: Higgs Physics