Contribution ID: **51** Type: **Poster presentation**

Combination of Higgs boson pair production and single Higgs production at the LHC with the ATLAS detector

Wednesday 7 September 2022 19:10 (20 minutes)

A combination of Higgs boson pair production and single Higgs production is performed using up to 139/fb of proton-proton collision data recorded with the ATLAS detector at a center-of-mass energy of sqrt(s) = 13 TeV at the LHC. The combination includes the bbbb, bbtautau and bbyy decay channels from the Higgs boson pair production and the ZZ to 4l, WW, yy, tt, bb, VH, bb (boosted), bb (VBF) and bb (ttH) decay channels from the single Higgs boson production. The results are expressed in terms of the constraints on the Higgs boson trilinear self-coupling modifier kLambda in two scenarios: 1. with all other coupling modifiers fixed to their SM values and 2. with the top coupling modifier kt profiled. In addition, a constraint contour on the (kLambda, kt) is also presented.

Details

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Is the speaker for that presentation defined?

Yes

Is this abstract from experiment?

Yes

Name of experiment and experimental site

ATLAS

Internet talk

Maybe

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Session Classification: Poster Session