



Contribution ID: 284

Type: **Poster presentation**

ATLAS searches for Higgs boson decays to BSM dark-Z bosons in four-lepton final States

Tuesday, 31 August 2021 19:04 (4 minutes)

ATLAS searches conducted for a BSM light boson using as portal events where a Higgs boson with mass 125 GeV decays to four leptons will be reported. This decay is presumed to occur via an intermediate state which contains one or two on-shell, promptly decaying bosons: $H \rightarrow ZX/XX \rightarrow 4l$, where X is a new dark vector boson Z_d (or a pseudo-scalar α), with mass between 1 and 60 GeV. These exotic Higgs decays searches using pp collisions data collected with the ATLAS detector at the LHC will be described. The results are found to be consistent with SM background predictions and limits are set with interpretations in specific benchmark theory models.

Is this abstract from experiment?

Yes

Name of experiment and experimental site

ATLAS

Is the speaker for that presentation defined?

Yes

Details

Theodota Lagouri
theodota.lagouri@cern.ch

Internet talk

Maybe

Primary author: LAGOURI, Theodota (Instituto De Alta Investigacion Universidad de Tarapaca (CL))

Presenter: LAGOURI, Theodota (Instituto De Alta Investigacion Universidad de Tarapaca (CL))

Session Classification: Poster Session