



Contribution ID: 435

Type: **Experimental poster**

Search for heavy resonances decaying into a W boson and a Higgs boson in $lvbb$ final states in 139fb^{-1} of $\sqrt{s}=13\text{TeV}$ pp collisions with the ATLAS detector

Thursday, June 10, 2021 6:45 PM (1 hour)

This poster presents the search for new resonances decaying into a W boson and a 125GeV Higgs boson in the $lvbb$ final state, where $l=e^+$ or μ^+ , in pp collisions at $\sqrt{s}=13\text{TeV}$. The search includes a channel requiring one lepton and missing transverse energy, as well as a channel with only missing transverse energy for the case where the lepton is not reconstructed. The data used correspond to a total integrated luminosity of 139fb^{-1} collected with the ATLAS detector at the Large Hadron Collider with the full Run-2 dataset. The search is conducted by examining the reconstructed invariant and transverse mass distributions of Wh candidates for evidence of a localized excess in the mass range of 400GeV up to 5TeV. Upper limits are placed at the 95% confidence level on the production cross-section times branching fraction of heavy W' resonances in heavy-vector-triplet models.

Primary author: VESSELLA, Makayla (University of Massachusetts (US))

Presenter: VESSELLA, Makayla (University of Massachusetts (US))

Session Classification: Poster Session

Track Classification: TeV-Scale BSM