
Contribution ID: **310** Type: **Oral Presentation**

# Searches for heavy resonances decaying to top, $b$-quarks or bosons using jet substructure in ATLAS

While the Standard Model (SM) of particle physics is a very successful theory, it is not a complete theory. Extensions of the SM proposed to address issues in the theory often predict the existence of high-mass resonances that decay to final states with top quarks and $W$ bosons. This talk describes the searches for such new phenomena in $pp$ collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector using jet substructure techniques to reconstruct the hadronic decay products of the boosted top quarks and $W$ bosons produced by the decays of those hypothetical particles. No evidence for new physics is observed, but stringent limits are placed on the production of those resonances.

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**Session Classification:** Beyond Standard Model

**Track Classification:** Beyond Standard Model Physics