Contribution ID: **109** Type: **Poster**

Search for di-jet resonances along with an isolated charged lepton at sqrt(s)=13 TeV pp collision with the ATLAS detector

Monday 10 January 2022 16:22 (1 minute)

A search for dijet resonances in events with identified leptons has been performed using the full Run 2 data collected in pp collisions at sqrt(s)=13 TeV with the ATLAS detector, corresponding to an integrated luminosity of 139 fbˆ-1. The dijet invariant-mass (mjj) distribution from events with at least one isolated electron or muon was probed in the range of 0.22<mjj<6.3 TeV. The analysis probes much lower mjj than traditional inclusive dijet searches and is sensitive to a large range of new physics models in association with a final-state lepton. As no statistically significant deviation from the Standard Model background hypothesis was found, limits were set on contributions from generic gaussian signals and on various beyond-the-Standard Model (BSM) scenarios including the Sequential Standard Model, a charged Higgs boson model, a simplified Dark Matter model etc. It has also been studied that the multi-body invariant masses such as three- and four-body invariant mass distributions constructed from jets and leptons while following the same analysis strategy provide sensitivity to wide ranges of Physics, including many BSM scenarios.

Author: ATLAS COLLABORATION

Presenter: ISLAM, Wasikul (University of Wisconsin-Madison (US))

Session Classification: Beyond the Standard Model

Track Classification: Beyond the Standard Model