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## Search for heavy neutral resonances in vector boson fusion $qq \rightarrow l\nu l\nu qq$ with the ATLAS detector

In the Standard Model, the Higgs mechanism is introduced to break the electroweak symmetry and gives masses to different elementary particles. VBF processes provide unique means to examine the EWSB mechanism and to search for physics beyond the SM, and any non-SM HVV coupling in VBF process could indicate the existence of new resonance.

This talk presents a search for heavy neutral resonances produced through VBF process  $qq \rightarrow l\nu l\nu qq$  using 3.2 /fb of data collected with the ATLAS detector in pp collisions at 13 TeV. The numbers of observed candidate events in data are found to be compatible with the Standard Model predictions. Limits are set on the production of five types of new resonances in the electroweak chiral Lagrangian with the K-Matrix unitarization model. The latest study with 2016 datasets is also ongoing.

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