

Gordon Research Seminar in Particle Physics: Pushing the Frontiers of Particle Physics During the LHC Run II Era

Contribution ID: 17

Type: **not specified**

Interpreting the 3 TeV WH resonance as a W' boson

Motivated by a local 3.2-3.4 sigma resonance in WH and ZH in the ATLAS Run 2 data, we attempt to interpret the excess in terms of a W' boson in a $SU(2)_1 \times SU(2)_2 \times U(1)_X$ model. We stretch the deviation from the alignment limit of the Equivalence Theorem, so as to maximize WH production while keeping the WZ production rate below the experimental limit. We found a viable though small region of parameter space that satisfies all existing constraints on dijet, diboson, as well as the precision Higgs data. The cross section of W' to WH that we obtain is about 5-6 fb.

Presenter: TSENG, Po-Yen

Session Classification: Poster Session