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Interpreting the 3 TeV WH resonance as a W' boson

Sunday, 25 June 2017 11:00 (5 minutes)

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.

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