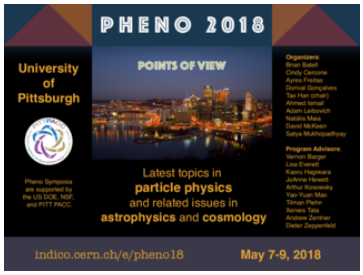

Contribution ID: **476** Type: **parallel talk**

Zh and hh Resonances : Hinting for The 2HDM !

Tuesday 8 May 2018 17:30 (15 minutes)

We show that within the two Higgs doublet model (T2HDM), where both Higgs doublet couple to fermions in same hierarchical pattern, there can be significant deviations in the Higgs-fermion couplings with respect to their respective standard model values, consistent with flavor constraints and known properties of the Higgs boson. The model is very predictive, implying unavoidable new physics signals like di-boson resonances (hh and Zh) from novel decays of $CP-$ even and $CP-$ odd Higgs fields at the Large Hadron Collider (LHC) and that may lead to an explanation of some intriguing di-boson signatures (Zh excess at 440 GeV and hh resonance at 280 GeV) observed at the ATLAS experiment.

Summary

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Session Classification: Higgs III