



Contribution ID: 3

Type: Parallel talk

Heavy neutrino searches at the LHC with displaced vertices

Friday 7 December 2018 11:50 (20 minutes)

For Majorana neutrino masses the lowest dimensional operator possible is the Weinberg operator at $d = 5$. Here we discuss the possibility that neutrino masses originate from higher dimensional operators. Specifically, we consider all tree-level decompositions of the $d = 9$, $d = 11$ and $d = 13$ neutrino mass operators. Despite the large number of possible models, we found only very few genuine neutrino mass models: At $d = (9, 11, 13)$ we find only $(2,2,2)$ genuine diagrams and a total of $(2,2,6)$ models. Here, a model is considered genuine at level d if it automatically forbids lower order neutrino masses without the use of additional symmetries.

We also analyse systematically all possible genuine 1-loop dimension 7 neutrino mass models and discuss 2 examples in detail.

Author: Mr HELO, Juan (Universidad de La Serena)

Presenter: Mr HELO, Juan (Universidad de La Serena)