

Global Bounds on Type III Seesaw

Wednesday 17 April 2019 09:25 (25 minutes)

We derive general bounds on the Type-III Seesaw parameters from a global fit to flavor and electroweak precision data. We will explore and compare three Type-III seesaw realizations: a general scenario, where an arbitrary number of heavy triplets is integrated out without any further assumption, and the more constrained cases in which only 3 or 2 additional heavy states are included and the light neutrino masses and mixing as measured in neutrino oscillations experiments are generated. The latter assumption implies non-trivial flavor correlations in the Yukawa flavor structure of the model and thus qualitative differences can be found with the more general scenario. In particular, we find that the constraints on the simplest model with 2 triplets are much stronger than the ones in the general and 3 triplet scenarios. The relevant processes analyzed in the global fit include searches for Lepton Flavour Violating (LFV) decays, probes of the universality of weak interactions, CKM unitarity bounds and electroweak precision data.

Author: LOPEZ PAVON, Jacobo (IFIC, CSIC-Universitat de València)

Presenter: LOPEZ PAVON, Jacobo (IFIC, CSIC-Universitat de València)

Session Classification: Neutrinos

Track Classification: Neutrinos