

Fermion masses and mixings in 3HDM with S_3 flavor symmetry

Tuesday 7 June 2022 17:15 (15 minutes)

We investigate the Yukawa and the scalar sectors of a general S_3 -symmetric three-Higgs doublet model. Assuming that the quarks and leptons belong to 2+1 dimensional representations of S_3 , we obtain consistent fits to quark and lepton masses and mixings, including neutrino oscillations. We analyze the stability of the Higgs potential as well as perturbative unitarity constraints on the couplings. We explore the lowest allowed heavy Higgs boson mass in this framework, consistent with FCNC and neutron EDM constraints and find it to be in the few TeV range.

Authors: BABU, Kaladi; XU, Shiyuan; WU, Yongcheng (Oklahoma State University)

Presenter: XU, Shiyuan

Session Classification: Parallel