



Contribution ID: 131

Type: **Asynchronous Talk**

The Singly-Charged Scalar Singlet as the Origin of Neutrino Masses

We consider the generation of neutrino masses via a singly-charged scalar singlet. Under general assumptions we identify two distinct structures for the neutrino mass matrix. This yields a constraint for the antisymmetric Yukawa coupling of the singly-charged scalar singlet to two left-handed lepton doublets, irrespective of how the breaking of lepton-number conservation is achieved. The constraint disfavours large hierarchies among the Yukawa couplings. We study the implications for the phenomenology of lepton-flavour universality, measurements of the W -boson mass, flavour violation in the charged-lepton sector and decays of the singly-charged scalar singlet. We also discuss the parameter space that can address the Cabibbo Angle Anomaly.

Primary authors: FELKL, Tobias (University of New South Wales); SCHMIDT, Michael (UNSW Sydney); HER-RERO GARCIA, Juan

Presenter: FELKL, Tobias (University of New South Wales)

Session Classification: Neutrino Physics Session 2

Track Classification: Neutrino Physics