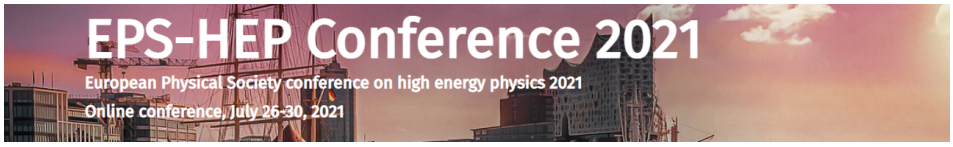

Contribution ID: **309** Type: **Parallel session talk**

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

Monday, 26 July 2021 10:00 (20 minutes)

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.

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Collaboration / Activity

PhD Research Project

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