

Neutrino masses from Planck-scale lepton number breaking in models with multiple Higgs doublets

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We explore how the observed characteristics of neutrino masses —small mass scale, mild hierarchy, large mixing angles—can be explained in a simple extension of the standard model, where lepton number is broken at the Planck-scale.

While the correct mass scale for the light neutrinos is naturally explained in this model without the need for a new scale in the theory, the mild hierarchy can be taken to point to the presence of a second Higgs doublet.

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