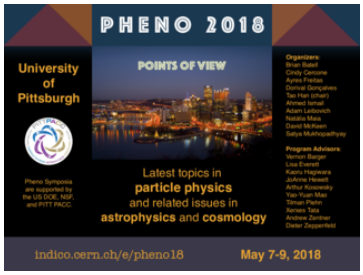

Contribution ID: **591** Type: **parallel talk**

On the Origin of a Two-Loop Neutrino Mass Model from a Renormalizable SU(5) Grand Unified Theory

Tuesday 8 May 2018 18:15 (15 minutes)

In this work we propose a new renormalizable SU(5)-GUT model which explains the origin of neutrino mass via a two-loop neutrino mass mechanism. We construct a viable model where gauge coupling unification is realized that simultaneously satisfies the proton decay constraints. In addition to correctly reproducing the Standard Model charged fermion masses and mixings, in this renormalizable model neutrino mass is generated at the quantum level, hence explains the extremely small neutrino masses. Explaining the experimentally observed neutrino oscillation data requires some beyond Standard Model particles present at the TeV scale. This model has the potential to be tested experimentally by measuring the proton decay in future experiments.

Summary

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