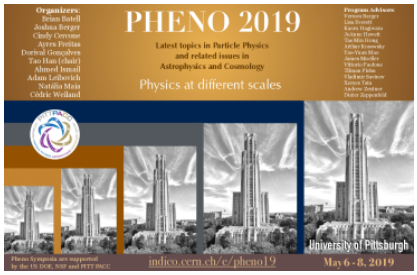

Contribution ID: **751** Type: **parallel talk**

SUSY GUTs and the Strong CP Problem

Tuesday 7 May 2019 14:00 (15 minutes)

We suggest simple ways of implementing Peccei-Quinn (PQ) symmetry to solve the strong CP problem in renormalizable SUSY SO(10) models with a minimal Yukawa sector. Realistic fermion mass generation requires that a second pair of Higgs doublets survive down to the PQ scale. We show how unification of gauge couplings can be achieved in this context. Higgsino mediated proton decay rate is strongly suppressed by a factor of $(MPQ/MGUT)^2$, which enables all SUSY particles to have masses of order TeV. With TeV scale SUSY spectrum, $p \to \bar{\nu} K^+$ decay rate is predicted to be in the observable range. Lepton flavor violating processes $\mu \to e\gamma$ decay and μ–e conversion in nuclei, induced by the Dirac neutrino Yukawa couplings, are found to be within reach of forthcoming experiments.

Summary

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