Neutrino mass in radiatively-broken scale-invariant models

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Abstract

Scale invariance may be a classical symmetry which is broken radiatively. This provides a simple way to stabilize the scale of electroweak symmetry breaking against radiative corrections. The simplest phenomenologically successful model of this type involves the addition of one real scalar field to the standard model. In this minimal model the electroweak Higgs can be interpreted as the pseudo-Goldstone boson of broken scale invariance. We study the possible origin of neutrino mass in such models, both at tree-level and radiatively. We comment on the possibility of scale invariance beyond the electroweak scale.

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