

Leptogenesis from U(1) flavor symmetry

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We present a simple extension of the Standard Model with three right-handed neutrinos with an additional U(1) abelian flavor symmetry, with a non standard leptonic charge \mathbb{Z}_3 - \mathbb{Z}_3 - \mathbb{Z}_3 for lepton doublets and arbitrary right-handed charges. We present a see-saw realization of such a scenario. The baryon asymmetry of the Universe is generated via thermal leptogenesis through CP-violating decays of the heavy sterile neutrinos. We present a detailed numerical solution of the relevant Boltzmann equations in two different scenarios: three quasi-degenerate heavy Majorana neutrino masses and a hierarchical mass spectrum.

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