

Flavour effects in low scale leptogenesis and their experimental tests

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Flavour effects play an important role for leptogenesis in the type-I seesaw model with Majorana masses below the TeV scale. The requirement to simultaneously explain the light neutrino oscillation data and the baryon asymmetry of the universe impose constraints on the neutrino Yukawa couplings that can be probed at accelerator experiments. These predictions depend on the number of heavy neutrino flavours, the light neutrino mass ordering, the lightest SM neutrino mass, and the phases in the PMNS matrix. If any heavy neutral leptons are discovered at the LHC or fixed target experiments, combining their data with neutrino experiments would allow for a first test of the hypothesis that these particles are responsible for the origin of matter in the universe.

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