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Dirac leptogenesis in the left-right symmetric model

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In this talk, I explain the baryon asymmetry of the universe via Dirac leptogenesis in the left-right symmetric model in which the fermion masses are generated through a universal seesaw mechanism. This model is further motivated by providing an axionless solution to the strong CP problem. Similar to standard leptogenesis, the decay of heavy vector-like leptons generates CP violation and leads to a departure from thermal equilibrium. To account for neutrino oscillation data and the observed baryon asymmetry, in the non-degenerate mass scenario, the left-right symmetry breaking scale required to be approximately $\kappa_R > 10^{13} \, {\rm GeV}$. However, in the degenerate mass scenario for vector-like leptons, the scale can be significantly reduced.

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