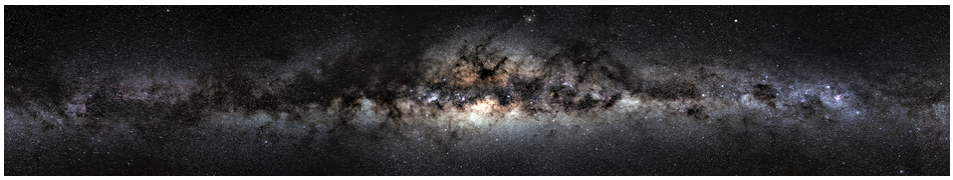

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Neutrino Masses and Leptogenesis in a Le-Lμ-L Model

Tuesday, 7 December 2021 08:20 (30 minutes)

We present a simple extension of the Standard Model with three right-handed neutrinos in a SUSY framework, with an additional U(1)_F abelian flavor symmetry with a non standard leptonic charge for lepton doublets and arbitrary right-handed charges. We show how it is possible to provide the correct predictions for the mixing angles of the PMNS matrix and for the r=(Δm_sun)^2/(Δm_atm)^2 parameter, with a moderate fine tuning. The baryon asymmetry of the Universe is generated via thermal Leptogenesis through CP-violating decays of the heavy right-handed neutrinos. We present a detailed numerical solution of the relevant Boltzmann equation accounting for the impact of the distribution of the asymmetry in the lepton flavors.

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Session Classification: Break and Poster Session