



Contribution ID: 43

Type: **Non-Invited Talk**

Leptogenesis via heavy right-handed neutrinos in a CPT violating background field.

Wednesday 28 November 2018 14:50 (25 minutes)

A model of Leptogenesis with tree-level decay processes of heavy right-handed Majorana neutrinos into leptons and anti-Leptons in the presences of a temperature dependent CPT violating background field B_0 . Approximate analytic solutions of the Boltzmann equations show that in the presence of such a background field an asymmetry is generated between the Lepton and anti-Leptons at decoupling temperatures around the mass of the heavy right-handed neutrino. The solution gives an estimate for the magnitude of the background field needed at decoupling to generate the asymmetry and it can be shown that the field decreases fast enough to be too small to be observed today.

Content of the contribution

Theory

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Session Classification: T, C, P, CP and CPT symmetries

Track Classification: [1] T, C, P, CP and CPT symmetries