

The effect of spacetime torsion on neutrino mixing

Thursday 10 July 2025 14:40 (20 minutes)

Within the framework of quantum field theory, we investigate neutrino oscillations in the presence of a torsion background. Adopting the Einstein–Cartan theory, we analyze both the cases of constant torsion and torsion that varies linearly with time. We derive new neutrino oscillation formulae that depend on the spin orientation and obtain an expression for CP asymmetry.

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Session Classification: Poster Session 3

Track Classification: S07 –Nuclear Physics, Energy Science and Technology, Accelerators and beams