

## Effect of NSI on tripartite entanglement in neutrino oscillations

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We investigate the impact of non-standard interactions (NSI), on various measures of tripartite entanglement in the context of three-flavor neutrino oscillations. Our analysis covers key entanglement measures such as concurrence, entanglement of formation (EOF), and negativity, evaluated across various experimental setups. We compare reactor experiments, including Daya Bay, JUNO, and KamLAND, with accelerator-based experiments, such as T2K, MINOS, and DUNE. The results highlight that accelerator experiments, particularly DUNE, show heightened sensitivity to NSI effects, especially at moderate to high neutrino energies. Notably, while negativity is generally weaker than concurrence and EOF, it demonstrates the greatest sensitivity to NSI in accelerator settings. In contrast, reactor experiments exhibit lower sensitivity to NSI. Our study provides insights into the potential of these experiments to probe new physics through entanglement measures.

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