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Bounds on Lorentz Violation Parameters: present and future

String theory and loop quantum gravity suggest that Lorentz Invariance Violation may occur at the Planck scale. Nevertheless, this violation could be observable at a lower energy scale accessible to current experiments under the Standard Model Extension (SME) framework. This study aims to investigate and catalog current bounds for the Lorentz Invariance Violation (LIV) parameters using data from experiments. We also will study new bounds that new experiments will impose on these parameters. The methodology of this work is quantitative, using bibliographic research and data collection from academic materials and articles. This work is expected to result in a repository of parameter values for neutrino physics, facilitating data access and interpretation.

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