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## Bounds on Planck-scale deformation of CPT from lifetimes and interference

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Deformed relativistic kinematics, expected to emerge in a flat-spacetime limit of quantum gravity, predicts the Planck-scale violation of CPT symmetry. Deformations of the action of CPT are derived from the kappa-deformed Poincare algebra. This entails a subtle but measurable corrections to characteristics of time evolution, e.g. particle lifetimes or oscillations in two-particle states at high energy. We argue that using the muon lifetime or quark flavour oscillations we can bound  $\kappa > 10^{14}$  GeV at LHC energy and move this limit to  $10^{16}$  GeV at future colliders.

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