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Constraints on Lorentz and CPT violation in the quark sector using ZEUS data

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Tests of Lorentz invariance continue to inform and challenge our modern understanding of spacetime symmetries. Using a model-independent framework based on effective field theory, generic perturbations from exact Lorentz invariance, CPT invariance, and other fundamental symmetries can be studied in a wide class of physical systems. Despite the large number of constraints extracted over the past two decades, stringent limits on many quark-sector effects remain relatively scarce. We present preliminary results on several coefficients parametrizing Lorentz- and CPT-violating effects in the quark sector using deep inelastic scattering data collected in 2006 by the ZEUS experiment.

In-person participation

Yes

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