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**Recent Results on Lorentz Violation in Atomic Experiments** JAY

TASSON, ALAN KOSTELECKY, Indiana University — Tests of Lorentz symmetry provide a potential means of detecting new physics originating at the Planck scale. The effects of hypothetical violations of Lorentz symmetry in experiments performed at presently accessible energies are described by the Standard-Model Extension (SME). In this talk, I will discuss recently proposed tests of Lorentz symmetry based on an investigation of gravitational couplings in the matter sector of the SME. Atom interferometers, torsion pendula, and falling antimatter are among the systems that can attain new sensitivities.

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