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Gravity and Atomic Tests of Lorentz Symmetry JAY D. TASSON, V. ALAN KOSTELECKY, Indiana University — Lorentz violation is a promising candidate signal for new physics arising from a fundamental theory at the Planck scale. Low-energy effects of these violations are described by the Standard-Model Extension (SME). An outline of the fermion sector of this theory in the presence of gravity is provided, along with a discussion of some associated phenomenology.

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