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Lorentz Violation, Gravity, and Atomic Physics JAY D. TASSON, V. ALAN KOSTELECKY, Indiana University — Lorentz violation offers a potential probe for new physics arising from a fundamental theory at the Planck scale. At our presently accessible energies, these violations are described by the Standard-Model Extension (SME). An outline of the fermion sector of the SME in the presence of gravity is given, and some phenomenological issues are considered.

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