

Abstract Submitted  
for the DAMOP06 Meeting of  
The American Physical Society

**Gravitational Tests of Lorentz Symmetry with Atoms** JAY D. TASSON, V. ALAN KOSTELECKY, Indiana University — Violations of Lorentz symmetry provide a potential signal for new physics at the Planck scale. At our present energy scales, general Lorentz violation is described by the Standard-Model Extension (SME). In this talk, I will give an outline of the fermion sector of the SME and describe a new sensitivity to Lorentz violation that is attainable in experiment, arising from gravitational interactions with atoms.

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Date submitted: 24 Jan 2006

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