

Testing Lorentz invariance in a weak gravitational field

Wednesday, 14 July 2021 16:45 (15 minutes)

Lorentz violation has been a popular topic in recent year in the search for experimental signals beyond known physics. We build the general Lorentz-violating terms in the context of effective field theory and analyze measurements in different gravity potentials, comparisons of gravitational accelerations, interferometer experiments, and studies of neutron gravitational bound states to extract first constraints on certain coefficients for Lorentz violation and spin-gravity couplings.

Are you are a member of the APS Division of Particles and Fields?

Yes

Primary authors: LI, Zonghao (Indiana University Bloomington); KOSTELECKY, Alan (unknown)

Presenter: LI, Zonghao (Indiana University Bloomington)

Session Classification: Gravity and Gravitational Waves

Track Classification: Gravity and Gravitational Waves