

An update of the LIV tests with astroparticles: subluminal and superluminal limits

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Content

Astroparticle physics has recently reached a new status of precision due to the construction of new observatories, operating innovative technologies, and the detection of large numbers of events and sources. The precise measurements of cosmic and gamma rays can be used as a test for fundamental physics, such as the Lorentz invariance violation (LIV). Although LIV signatures are expected to be small, the very high energies and long distances that astrophysical sources involve, lead to an unprecedented opportunity for this task. In this talk, I will present an update of the latest exclusion limits from different astrophysical LIV tests in the photon sector using the subluminal pair production threshold shift and superluminal photon decays. Updated perspectives for the next generations of gamma-ray telescopes will also be addressed.

Summary

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