

Beyond Standard Cosmology: New Statistical Approaches to Lorentz Invariance Violation

Wednesday 9 July 2025 12:00 (20 minutes)

The Hubble tension poses serious questions not only to cosmology, but also to fundamental physics. In this talk, we will summarize our results so far as to how combining Lorentz Invariance Violation (LIV) time-delay measurements from gamma-ray bursts (GRBs) with standard cosmological datasets (BAO, SN) reveal interdependence between quantum gravity phenomena and cosmological models, how the choice of a model for the intrinsic time delay affects the LIV results and how we could use statistical tools to gain new information about the constraining power of our datasets. Our findings emphasize the importance of going beyond standard cosmological approaches when exploring potential evidences of quantum gravity across different energy scales.

Working Group

WG1 - High Energy QG Theory

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