

Exploring Phase Space Deformation through a Correspondence between Modified Gravity and Generalized Uncertainty Principle, and Earthquakes as Testing Grounds

Wednesday, January 17, 2024 2:30 PM (30 minutes)

I will briefly explore the connection between modified theories of gravity and models based on the generalized uncertainty principle. This connection enables the examination of gravity proposals through tabletop experiments. Using the Landau model of liquid helium as an illustrative example, we will delve into the details. Additionally, I will demonstrate the application of Earth seismic data to constrain quantum and modified gravity proposals. Further, we will discuss essential enhancements needed for this method.

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Session Classification: The CREDO Collaboration Meeting