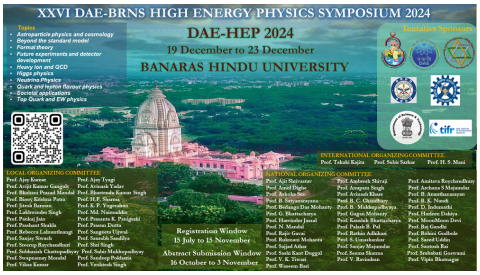

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Inertial force on Casimir energy in non-commutative space-time

In this study, we investigate the influence of the noncommutativity on the centripetal force on a rotating Casimir apparatus in κ-deformed space-time. We set up the Casimir apparatus rotating with constant angular speed using appropriate κ-deformed coordinates. We compute the κ-deformed centripetal force on the Casimir energy associated with parallel plates. We show that the Casimir energy experiences centripetal forces exactly like a conventional mass in accordance with the equivalence principle in the κ-space-time.

Field of contribution

Theory

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Track Classification: Formal theory