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The effect of massive gravitons on wormhole formation in ghost-free gravity

In my talk, I will explore the intriguing aspects of ghost-free dRGT massive gravity, which introduces two additional characteristics scales, γ and Λ, representing non-zero graviton masses. I will delve into how these parameters influence wormhole solutions, ultimately leading to a loss of asymptotic flatness near the throat region. This inconsistency arises from the induced repulsive effects of gravity within massive gravitons, exerting a significant influence on spacetime geometry and disrupting curvature. Furthermore, the discussion will encompass the potential for wormhole models featuring ordinary matter at the throat, satisfying all energy conditions, while the massive gravitons serve as a source for negative energy density. This investigation sheds light on the nature of gravity and complex interplay between graviton masses and wormhole dynamics.

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