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Covariant Effective Action for Generalized Proca Theories

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We check quantum stability of the generalized Proca theories in curved spacetime by computing the quantum gravitational corrections using Vilkovisky- Dewitt formalism. First we consider a range of the coupling constants to maximize the predictability of EFT. We find that there exists a regime where classical nonlinearity dominates while quantum corrections are still suppressed protecting EFT at scales where the Vainshtein mechanism screens the extra degrees of freedom.

References:

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Primary authors: Dr PANDA, Sukanta (IISER Bhopal); Mr TINWALA, Abbas; Mr VIDYARTHI, Archit

Presenter: Dr PANDA, Sukanta (IISER Bhopal)

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