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## Quantum and Gradient Corrections to False Vacuum Decay on a de Sitter Background

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We study the effects of a fixed de Sitter geometry background in scenarios of false vacuum decay. It is currently understood that bubble nucleation processes associated with first order phase transitions are particularly important in cosmology. Considering the geometry of spacetime complicates the interpretation of the decay rate of a metastable vacuum. However, the effects of curvature can still be studied in the particular case where backreaction is neglected. We compute the imaginary part of the action in de Sitter space, including the one-loop and the gradient corrections. We use two independent methodologies and quantify the size of the corrections without any assumptions on the thickness of the wall of the scalar background configuration.

Based on https://arxiv.org/abs/2205.10136

## Summary

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