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UV sensitivity of Higgs inflation

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The idea of introducing a non minimal coupling between the Higgs boson and the gravity sector gives successful predictions for inflation without needing new particles beyond the ones we know. Quantum mechanically the model is only consistent until the unitarity cutoff.

Possible UV completions beyond this cutoff could change its predictions. If this is the case it means that we would lose the minimalist approach that inspires the model.

Treating Higgs inflation in the context of effective field theories we consider the effect of threshold corrections on the renormalization group flow. We show that the CMB predictions are protected from this type of UV corrections.

Primary author: Mr FUMAGALLI, Jacopo (Nikhef)

Co-author: Dr POSTMA, Marieke (Nikhef)

Presenter: Mr FUMAGALLI, Jacopo (Nikhef)

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