

de Sitter as an Axion Detector

Tuesday, 7 May 2024 12:00 (10 minutes)

Axions, scalar fields with compact field spaces, are some of the most well-motivated candidates for physics beyond the Standard Model. In this talk, I will explain how inflationary correlations are uniquely sensitive to the topology of a scalar's field space, and can thus be used to distinguish axions from other light scalar fields even if they share the exact same action. As a proof of concept, I will show that axions can have a qualitatively distinct impact on a heavy field's cosmological collider signal. The talk will be based on arxiv: 2311.09219 and arxiv: 2310.01494.

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