UK Cosmology Meeting / Ruth Fest



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Bounding Effective Field Theories in Cosmological Spacetimes

Monday 13 May 2024 14:30 (20 minutes)

In this talk, I will present a novel method for obtaining bounds on the Wilson coefficients of EFTs living in cosmological backgrounds by requiring that their physical modes do not propagate further than a minimally coupled photon by a resolvable amount. In analogy with causality bounds for flat spacetimes which are based on the time delay, I will explain how the cosmological version arises by computing spatial shifts. I will show explicit examples of the bounds on shift symmetric scalars and generalized Galileon theories.

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