

Whispers from the Dark Universe - Particles & Fields in the Gravitational Wave Era

CLUSTER OF EXCELLENCE
QUANTUM UNIVERSE

DESY THEORY WORKSHOP

WHISPERS FROM THE DARK UNIVERSE – PARTICLES & FIELDS IN THE GRAVITATIONAL WAVE ERA

HELMHOLTZ

24 - 27 September 2024 DESY Hamburg, Germany



Contribution ID: 101

Type: **not specified**

Effective field theory in de Sitter space and the method of regions

Thursday 26 September 2024 14:51 (17 minutes)

Understanding the infrared dynamics of the massless, minimally coupled, real scalar field in de Sitter space remains an important open problem. When computed in perturbation theory, the in-in correlation functions are plagued by infrared divergences and secularly growing terms. The Soft de Sitter Effective Theory (SdSET) was developed as a framework in which these issues can be addressed. In this talk I will discuss how the Method of Regions can be applied to simplify the necessary matching computations to determine the free parameters of the SdSET and how the mentioned issues are resolved within the EFT.

Primary authors: SANFILIPPO, Andrea Federico (Technische Universität München); Prof. BENEKE, Martin (Technische Universität München); Dr HAGER, Patrick (Johannes Gutenberg-Universität Mainz)

Presenter: SANFILIPPO, Andrea Federico (Technische Universität München)

Session Classification: Parallel Thursday Strings & Mathematical Physics 1

Track Classification: Strings & Mathematical Physics