



KCETA Colloquium

Search for new physics with gravitational waves

Thursday, July 13, 2023

Kleiner Hörsaal A (CS) 15:45 - 17:00

Prof. Dr. Pedro Schwaller
(Johannes Gutenberg-Universität Mainz)

In this presentation, we explore the potential of gravitational waves as powerful instruments for investigating new physics in the early Universe. Beginning with a comprehensive overview of the topic's significance, we delve into several noteworthy scenarios that give rise to primordial gravitational waves, specifically highlighting the impact of first-order phase transitions and axion dynamics.

Additionally, we examine the intriguing observation of a tentative stochastic gravitational wave background at low frequencies using pulsar timing arrays, shedding light on its implications for novel models in the realm of new physics.

By illuminating these avenues of research, this talk aims to underscore the transformative role of gravitational waves in uncovering the mysteries of our cosmic origins and the underlying laws that govern the Universe.

Please note: The colloquium will also be live-streamed to B401 SR 410 (CN).

KIT Center Elementary Particle and Astroparticle Physics (KCETA)
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