

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

CLUSTER OF EXCELLENCE
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DESY THEORY WORKSHOP

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

HELMHOLTZ

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From vacuum decay to gravitational waves

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Cosmological phase transitions are events during which the universe evolves from a metastable state to a stable state, through a process of bubble nucleation. The bubbles of the stable phase expand, collide, and interact with the cosmic fluid, leading to the production of gravitational waves. Such signals could be detectable by current and upcoming interferometer experiments.

This presentation focuses on recently developed numerical tools and analytical techniques for the calculation of phase transition parameters and gravitational waves spectra.

Primary authors: MORAIS, António (Aveiro U.); FINETTI, Marco (Aveiro U.); MATTEINI, Marco (Jozef Stefan Institute, University of Ljubljana); NEMEVŠEK, Miha (Jozef Stefan Institute, University of Ljubljana); BRDAR, Vedran (Oklahoma State U.)

Presenter: MATTEINI, Marco (Jozef Stefan Institute, University of Ljubljana)

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