

PRISMA+ Colloquium

July 5, 2017 at 1 p.m.
Lorentz-Raum 05-127, Staudingerweg 7

Dr. Valérie Domcke
APC - Université Paris Diderot

Probing the early Universe with gravitational waves

Gravitational waves are unique messengers to explore the very early universe, probing energy ranges far beyond the reach of photon or even neutrino astronomy. The holy grail in this context is the stochastic gravitational wave background of cosmic inflation, which would shed light on the microphysics of inflation as well as on the entire subsequent cosmological history. In the simplest model of inflation this signal is however beyond the reach of current and planned gravitational wave interferometers. After reviewing this standard picture, I will discuss how modifications of this standard scenario can be a real game-changer, boosting the primordial gravitational wave signal into the range accessible by experiments such as eLISA and LIGO/VIRGO.