



ID de Contribution: 30

Type: Non spécifié

Quantum (and classical) detection of gravitational waves: scope and limitations

mercredi 11 mars 2026 15:50 (20 minutes)

LIGO, VIRGO and Kagra (just to name a few) represent outstanding feats of engineering that have launched us in a new era of gravitational-wave (GW) detection. Even so, we may wonder whether their sensitivity is enough to detect very high-frequency signals of beyond-Standard-Model origin, such as those sourced by primordial stochastic GW backgrounds, primordial black holes, or black hole superradiance. In this talk, I will argue that the sensitivity of present-day and near-future GW detectors will most likely prove insufficient in this regard. I will present the theoretical framework in which this question can be rigorously addressed and where to formally prove some heuristic expectations from the literature.

Orateur: BILISCO, Paolo (IPhT - Université Paris-Saclay)

Classification de Session: Particle cosmology