

Upper Bound on Thermal Gravitational Wave Backgrounds from Hidden Sectors

Tuesday 10 September 2024 16:00 (15 minutes)

Hot viscous plasmas unavoidably emit a gravitational wave background, similar to the electromagnetic black body radiation. In this talk, based on arXiv:2312.13855, I will study the contribution from hidden particles to the GW background emitted by the early universe primordial plasma. While this contribution can easily dominate over that from Standard Model particles, we find that both backgrounds are capped by a generic upper bound that makes them difficult to detect in the foreseeable future. We illustrate our results for axions and heavy neutral leptons.

Author: GEORIS, Yannis

Co-authors: KLARIC, Juraj (Universiteit van Amsterdam, Nikhef); DREWES, Marco; KLOSE, Philipp (Bielefeld University)

Presenter: GEORIS, Yannis

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