

Journée des groupes de travail "Cosmologie" et "Tests de la relativité générale et théories alternatives" du GdR Ondes Gravitationnelles

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Talk 4 - Danny Laghi

vendredi 13 octobre 2023 14:15 (45 minutes)

Titre : "Gravitational wave cosmology with standard sirens: a review of cosmological constraints from LVK observations and future prospects with LISA"

"Gravitational waves emitted by the compact binary coalescence of binary black holes, neutron star-black holes, and neutron stars, are examples of standard sirens, capable of completely bypassing the cosmic distance scale ladder that hinders local electromagnetic measurements. With additional information on their redshifts, they can be used to constrain cosmological parameters. This talk will review the cosmological constraints obtained from the most recent gravitational wave observations, with a focus on the latest results produced by the LIGO-Virgo-KAGRA Collaboration, also discussing cosmological forecasts with the standard sirens observed by the future space-born gravitational wave detector LISA."