



DÉPARTEMENT DE PHYSIQUE THÉORIQUE

COLLOQUE DE PHYSIQUE THÉORIQUE

Sujet: Cosmology with gravitational wave detection
Orateur: Chiara Caprini, IPhT, Saclay
Lieu: Auditoire Stueckelberg
Date: Vendredi 10 mars 2017
Heure: 14h15

Résumé:

After the direct observation of gravitational waves performed by the aLIGO/Virgo collaboration, and in preparation to the space-based interferometer LISA, it is now timely to investigate how gravitational waves can be exploited as a new mean to probe the universe, other than electromagnetic radiation and neutrinos. Gravitational wave detection, in fact, has the potential to be a powerful test for cosmology and the early universe. This talk introduces two observables through which one could gather new information on the characteristics of the universe: namely, the detection of a stochastic background of gravitational waves coming from the early universe, and the use of massive black hole binaries as 'standard sirens', to test the expansion of the universe.

Martin.Kunz@unige.ch