



Contribution ID: 68

Type: **not specified**

Cosmology with gravitational wave standard sirens: current results and future prospects

Thursday 10 December 2020 09:40 (30 minutes)

I will introduce the concept of standard siren, reviewing the methodologies that one can apply to probe the cosmic expansion using gravitational wave observations. I will then outline the gravitational wave sources that can be used as standard sirens for both Earth-based (LIGO/Virgo/3G) and space-based (LISA) detectors, pointing out for which of them an electromagnetic counterpart is expected to be observed. I will then discuss the constraints on the Hubble constant obtained with the recent LIGO/Virgo observations and what they will be able to tell us in the future. Finally I will present cosmological forecasts for LISA, which will be able to map the expansion of the universe at high redshift and probe cosmological models beyond Λ CDM in yet untested regimes.

Presenter: TAMANINI, Nicola (IPhT CEA/Saclay)

Session Classification: Invited talks