

The impact of gravitational wave memory in constraining binary black holes parameters

Friday, June 2, 2023 12:06 PM (5 minutes)

Besides the transient effect, the passage of a gravitational wave also causes a persistent displacement in the relative position of an interferometer's test masses through the "nonlinear memory effect".

This effect is generated by the gravitational backreaction of the waves themselves and encodes additional information about the source.

In this talk, we present the implications of using this information for the parameter estimation of massive binary black holes with LISA.

The main focus is the potential breaking of the degeneracy between the inclination and luminosity distance of the source and the latest forecast for the detectability of the memory for an astrophysical population of massive binary black holes.

Would you be interested in presenting a poster? (this will not impact the decision on your talk)

yes

Primary author: GASPAROTTO, Silvia (IFAE)

Presenter: GASPAROTTO, Silvia (IFAE)

Session Classification: Gravitational Waves