



ID de Contribution: 57

Type: Poster

Hierarchical data-driven approach to fitting waveform models for non-precessing binary black holes to numerical data

mercredi 31 mai 2017 16:46 (4 minutes)

In previous work we have developed a method to systematically approach the problem of fitting a model to the 3-dimensional parameter space of non-precessing quasi-circular binary black holes, and applied it to construct accurate fits to final spin, radiated energy and peak luminosity, which avoid over-fitting. In this work we extend our approach to a phenomenological waveform model in the frequency domain for the dominant quadrupole spherical harmonic. This model extends the PhenomD model that is currently in use in data analysis to unequal spins and extreme mass ratios, and increases the number of numerical waveforms used for calibration by an order of magnitude. We discuss the accuracy of the model and implications for data analysis.

Auteur principal: Dr HUSA, Sascha (University of the Balearic Islands)

Co-auteurs: M. RAMOS BUADES, Antoni (University of the Balearic Islands); M. GARCÍA QUIRÓS, Cecilio (University of the Balearic Islands); Dr KEITEL, David (University of Glasgow); Dr JIMÉNEZ FORTEZA, Francisco (University of the Balearic Islands); Dr PRATTEN, Geraint (University of the Balearic Islands); Dr COLLEONI, Marta (University of the Balearic Islands); Dr JAUME, Rafel (University of the Balearic Islands)

Orateur: Dr HUSA, Sascha (University of the Balearic Islands)

Classification de Session: Posters