

Title: DISCOSING THE FEATURES OF TRANSIENT GRAVITATIONAL WAVES  
INDIPENDENTLY FROM WAVEFORM MODELS

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A very general reconstruction and estimation of the transient gravitational wave features, i.e. not based on prior knowledge of the waveform models, is useful to catch unexpected characteristics of the signal. It complements the analyses based on parametrized models of the detected emissions from compact binary coalescences. In fact, we know that parametrized models may not always accurately cover all the gravitational wave emission features, such as orbital eccentricity, misaligned spins and post-merger emission from neutron star remnants.

We will overview the un-modeled methods developed in the framework of the open source coherent Wave Burst (cWB) algorithm. We will especially show how we can characterize the waveforms from a compact binary coalescence and compare them to the results of parametrized methods. Using events from the second LIGO and Virgo observing run, we will show how the un-modeled methods can highlight possibly not parametrized features.