

A review on the post-merger gravitational waves emitted in binary neutron star mergers

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Abstract

Gravitational waves detected from the inspiral stage of a binary neutron star merger give information about the nature of the initial components such as their masses, spins, radii and tidal deformabilities. Similarly, observations of the post-merger stage would give hints on the characteristics and the evolution of the remnant of these coalescences. Since post-merger observations by earth-based detectors are not available yet, only numerical simulations are used to study this stage. Therefore, we will review the main characteristics of this kind of merger, as well as the results given by the numerical simulations in order to better understand the different outcomes that are produced in these systems and how the final fate is related to the initial components.