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## **An analytic frequency-domain model for the post-merger gravitational wave emission in neutron star mergers**

We construct an analytic frequency-domain model for gravitational waves in the post-merger phase of binary neutron star mergers. The model is based on an analytic continuous Fourier Transform of the time-domain model presented by Soutanis, Bauswein & Stergioulas (2022). We demonstrate perfect agreement with a numerical FFT in a representative case. We are planning to implement the frequency-domain post-merger model in a complete inspiral-merger-post-merger waveform model, to be used in Bayesian parameter estimation for future detections.

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