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3 Title
A catalog of numerical relativity and hybrid waveforms of eccentric black-hole binary systems

4 Abstract
Population synthesis studies show that globular clusters and galactic nuclei may host a population of moderate and high eccentric black-hole binaries emitting gravitational waves in the frequency band of ground-based detectors. The production of gravitational waveform models describing such systems requires calibration to numerical relativity simulations. In this talk, we present a catalog of numerical eccentricity simulations and hybrid waveforms connecting these simulations to post-Newtonian results. We discuss our workflow to generate these data, from prescribing a desired initial eccentricity, carrying out the simulations with an acceptable accuracy for waveform modelling with two available codes [1], BAM and EinsteinToolkit, to constructing the hybrid waveforms [2]. Finally, we discuss open challenges in the post-Newtonian prescription and in numerical simulations, as relevant for the waveform modelling for spinning highly eccentric binaries.

5 References
2) Ramos-Buades, Antoni and Husa, Sascha and Pratten, Geraint in preparation.