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Gravitational Waveforms for generic precessing binaries in the Fourier domain ANTOINE KLEIN, Univ of Mississippi, NEIL CORNISH, NICOLAS YUNES, Montana State University — The first direct observations of gravitational waves are expected within the next few years. With this in mind, efficient waveforms are needed for reliable parameter estimation. We present here an algorithm for computing the inspiral gravitational wave response of a detector to a passing gravitational wave emitted by a fully generic precessing binary system in the Fourier domain. The algorithm can be used with any phasing or precession model, and should provide a substantial speed-up with respect to time-domain waveforms for inspiral-dominated systems.

Antoine Klein
Univ of Mississippi

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