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An update on the SXS waveform catalog for binary black holes[1]

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Numerical solutions of binary black holes yield arguably the most accurate gravitational waveforms for the coalescence of two black holes. Such "numerical waveforms" are the basis for numerous inspiral-merger-ringdown waveform models used to detect gravitational waves from coalescing black holes, to estimate the properties of the coalescing binaries, and to test general relativity with the observed gravitational waves. "Numerical waveforms" are also used to study systematic errors of parameter estimation. Catalogs of numerical waveforms enable all these applications. Over the past years, the Simulating Extreme Spacetimes collaboration (SXS) has computed an increasingly comprehensive catalog of numerical waveforms, increasing greatly the original SXS catalog from 2013. This talk summarises the current status of this catalog, including its parameter space coverage and an assessment of the uncertainties in the numerical waveforms in the catalog.

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