

Abstract Submitted  
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**Error analysis of numerical gravitational waveforms from coalescing binary black holes** HEATHER FONG, Canadian Institute for Theoretical Astrophysics, TONY CHU, Princeton University, PRAYUSH KUMAR, HARALD PFEIFFER, Canadian Institute for Theoretical Astrophysics, MICHAEL BOYLE, Cornell University, DANIEL HEMBERGER, California Institute of Technology, LAWRENCE KIDDER, Cornell University, MARK SCHEEL, BELA SZILAGYI, California Institute of Technology, SXS COLLABORATION — The Advanced Laser Interferometer Gravitational-wave Observatory (Advanced LIGO) has finished a successful first observation run and will commence its second run this summer. Detection of compact object binaries utilizes matched-filtering, which requires a vast collection of highly accurate gravitational waveforms. This talk will present a set of about 100 new aligned-spin binary black hole simulations. I will discuss their properties, including a detailed error analysis, which demonstrates that the numerical waveforms are sufficiently accurate for gravitational wave detection purposes, as well as for parameter estimation purposes.

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