

Abstract Submitted
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Binary NS simulations using SpEC ROLAND HAAS, BELA SZILAGYI, JEFFREY KAPLAN, CHRISTIAN OTT, JONAS LIPPUNER, MARK SCHEEL, KEVIN BARKETT, Cal Inst of Tech (Caltech), CURRAN MUHLBERGER, Cornell, FRANCOIS FOUCART, CITA, MATTHEW DUEZ, Washington State University — NSNS binaries are expected to be one of the major sources of gravitational radiation detectable by Advanced LIGO. Together with neutrinos, gravitational waves are our only means to learn about the processes deep within a merging pair of NS, shedding light on the as yet poorly understood, equation of state governing matter at nuclear densities and beyond. We report on binary neutron star simulations using the Spectral Einstein Code (SpEC) developed by the Caltech-Cornell-CITA-WSU collaboration. We simulate the inspiral through many orbits, follow the post-merger evolution, and compute the full gravitational wave signal.

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