

Abstract Submitted
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Predicting Binary Black Hole Collisions Using Numerical Methods in Collaboration with LIGO NOUSHA AFSHARI, GEOFFREY LOVELACE, Cal State Univ- Fullerton — Detecting astronomical gravitational waves will soon open a new window on the universe. The effects of gravitational waves have already been seen indirectly, but a direct observation of these waves will test Einstein's theory of general relativity under the most extreme conditions. The Laser Interferometer Gravitational-Wave Observatory, or LIGO, will soon begin searching for gravitational waves, and the first direct detections are likely in the next few years. To help LIGO detect as many gravitational waves as possible, a major research effort is underway to accurately predict the expected waves. In this presentation, I will discuss new supercomputer simulations of merging black holes—some of the brightest sources of gravitational waves—that I have completed using the Spectral Einstein Code (<http://www.black-holes.org/SpEC.html>).

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