

Hearing the sound of gravitational waves from Core-Collapse Supernovae

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Google Meet: <https://meet.google.com/tgv-wzqv-ayp>

Abstract: Core-Collapse supernovae are among the most energetic explosions in the universe and are birthplaces of neutron stars and stellar-mass black holes. Detection of gravitational waves from a nearby core-collapse supernova will be the next milestone of gravitational-wave astronomy and multimessenger astrophysics. In this presentation, I will discuss the numerical challenges in modeling these systems that involved detailed micro-and macro-physics and present a few recent full 3D simulations with realistic neutrino transport. In particular, I will focus on a few unique gravitational wave features from core-collapse supernovae that might be detected with the current gravitational wave detectors, e.g., Advanced LIGO, Virgo, and KAGRA.