



國立成功大學 太空與電漿科學研究所
Institute of Space and Plasma Sciences, NCKU

Hearing the sound of gravitational waves from Core-Collapse Supernovae

潘國全 助理教授
清華大學天文研究所

演講地點：綜合大樓 2 樓 R.48218

演講日期：11 月 5 日(四) 14:10 PM

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 could be the next milestone of gravitational-wave astronomy and multimessenger astrophysics. In this presentation, I will discuss the numerical challenges in modeling for these systems that involved detailed both micro- and macro-physics and present a few recent full 3D simulations with neutrino transport. In particular, I will focus on the effects of the nuclear equation of state, rotation, and magnetic fields on the explosion engines and unique gravitational wave features that might be detected with the current gravitational wave detectors, e.g., Advanced LIGO and Virgo.

歡迎大家踴躍參加!