You are welcome to nominate speakers to colloquium@nao.cas.cn. The video and slides of previous colloquia and more information can be found at http://colloquium.bao.ac.cn/.

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Time: Tuesday 2:30 PM, Apr. 16th Location: A601, NAOC

Gravitational-Wave Astronomy: Progress and Prospects

Prof. Yanbei Chen

California Institute of Technology

Prof. Yanbei Chen received his B.S. from Peking University in 1999 and Ph.D. from California Institute of Technology in 2003. He is now a professor of Physics at California Institute of Technology. His research interests are in gravitational wave physics, general relativity and macroscopic quantum mechanics.

Abstract

Since the operation of Advanced Laser Interferometer Gravitational-wave Observatory (LIGO) in 9/2015, 10 pairs of binary black hole mergers have been observed. These detections have provided important information regarding the rates of such mergers, and have tested various predictions of general relativity. In 8/2017, the observation of neutron-star merger event marked the beginning of multi-messenger astronomy. In the future, upgraded detectors will allow us to observe sources from the distant universe, and to more precisely study the predictions of general relativity and the properties of black holes. Laser Interferometer Space Antenna (LISA), schedule for the 2030s, will be able to detect gravitational waves from binaries that contain supermassive black holes. Multi-band gravitational-wave astronomy, involving both ground- and space-based detectors, is a new direction of research that started after the realization that heavier stellar-mass black hole binary mergers can also be detected by the Laser Interferometer Space Antenna (LISA). In recent years, Taiji and TianQin projects are making rapid progress in China, making the future of gravitational-wave astronomy even brighter.

All are welcome ! Tea and coffee will be served at 2:15 PM.