

KMI Colloquium

The Dawn of Gravitational Wave Astronomy



Seiji KAWAMURA
(ICRR, The University of Tokyo)

Wednesday, 26th April, 17:00-
KMI Science Symposia (ES635)

Abstract:

Gravitational waves were finally detected in September 2015 by the advanced LIGO detectors for the first time in the history of science. It was found that the gravitational waves had been emitted from the black hole binary with masses of about 30 solar masses at about 410 Mpc away from the earth. This detection gave the dawn of gravitational wave astronomy. In the future we expect to further detect gravitational waves coming from various objects, such as neutron star binary, supernova, pulsar, beginning of the universe, etc. In this colloquium, after a brief review of the gravitational wave and its detection method, the aimed science, the first detection, the design of the detector, and the current status of large scale detectors, such as the Japanese detector KAGRA will be described in detail. Finally a possible project beyond KAGRA such as the Japanese space antenna DECIGO will be discussed.

