



SPEAKER: David Reitze

TITLE: **Gravitational Waves: An Entirely New Window onto the Cosmos**

DATE: 29 Aug 2017, 19:30

PLACE: 500-1-001 - Main Auditorium

ABSTRACT

On September 14, 2015, scientists from the LIGO Scientific Collaboration and the Virgo Collaboration using the LIGO detectors observed the collision and fusion of two black holes by directly measuring the gravitational waves emitted during their collision. This detection came almost exactly 100 years after Einstein developed his revolutionary general theory of relativity that predicted their existence, and 50 years after scientists began searching for them in earnest. Since then, two more gravitational-wave events have been confidently detected.

These discoveries have truly profound implications for physics and astronomy. Gravitational waves provide unique information on the most energetic astrophysical events, revealing unique insights into the nature of gravity, matter, space, and time. LIGO has opened a new window onto the cosmos. I will talk about how we made the detection and discuss how gravitational wave astronomy promises to change our understanding of universe.