



## 2017 Nobel Prize in Physics

Rainer Weiss, Barry C. Barish and Kip S. Thorne receive Nobel "for decisive contributions to the LIGO detector and the observation of gravitational waves"

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The Royal Swedish Academy of Sciences has announced that three prestigious scientists, Rainer Weiss, Barry C. Barish and Kip S. Thorne, are the 2017 Laureates of the prestigious Nobel Prize in Physics *for decisive contributions to the LIGO detector and the observation of gravitational waves*. Since the official announcement of the first observation of gravitational waves on February 12, 2016, the scientific community has expected his announcement from the Nobel committee, in agreement that the full implications of his monumental contribution will far exceed what we are able to fathom today.

LIGO, the Laser Interferometer Gravitational-Wave Observatory, is a collaborative project

with over one thousand researchers from more than twenty countries. For the past 50 years, this large-scale physics experiment and observatory has sought to detect cosmic gravitational waves generated from humongous astronomical bodies such as colliding Black Holes or compact binary objects, and to develop gravitational-wave observations as an astronomical tool for the study of the evolution of the Universe. LIGO is an Earth-based gigantic interferometer built to investigate these astronomical phenomena by studying and perfecting, among other things, general relativity concepts and implementations, precision stabilized lasers, classical and quantum optics, to name just a few, which are closely related to the research carried out at ICFO. Thus LIGO's achievements have been of great interest and followed by ICFOians over the years.

In fact, in September, 2015, just ten days before the first gravitational waves were detected, Prof. David Reitze, Executive Director of the LIGO Laboratory, offered an unforgettable Colloquium at ICFO, offering insights as to why, after 50 years of work, LIGO scientists were confident that gravitational waves would soon be detected. When the observation was officially reported in Physics Review Letters in 2016, ICFOians joined the world in celebrating.

This past May, the new Nobel Laureate, Kip Thorne visited ICFO to offer a Colloquium entitled Geometrodynamics, and Quantum Nondemolition Techniques for LIGO. Days later he also offered a public lecture to a packed audience at La Pedrera in the framework of the Fundacio Catalunya - La Pedrera · Ignacio Cirac Program Chair at ICFO on Gravitational Waves.

As the announcement of the Royal Swedish Academy of Sciences states, the 2017 Nobel Laureates have, with their enthusiasm and determination, each been invaluable to the success of LIGO.

ICFO congratulates all three Nobel Laureates and will continue to follow the fascinating revolution in Astrophysics that their achievement will inspire.



ICFO Colloquium given by Kip Thorne