

Gravitational Waves: From Einstein to a New Science

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Albert Einstein predicted the existence of gravitational waves 100 years ago, but the effects are so tiny that even Einstein thought they could never be detected. After 40 years of controversy, theorists finally developed a consensus that they really do exist. Then the problem became whether experimental physicists could develop instruments sensitive enough to actually detect them? The Laser Interferometer Gravitational-wave Observatory (LIGO), using exquisitely sensitive techniques, has made the dramatic observations of gravitational waves coming from the collision of two Black Holes and more recently, Binary Neutron Stars. These observations have opened a totally new window on the universe. The history, discoveries and future science will all be discussed.

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