

What are gravitational waves?

Gravitational waves are ripples in the fabric of space and time produced by violent events in the distant universe, such as the collision of two black holes or shockwaves from the cores of supernova explosions.

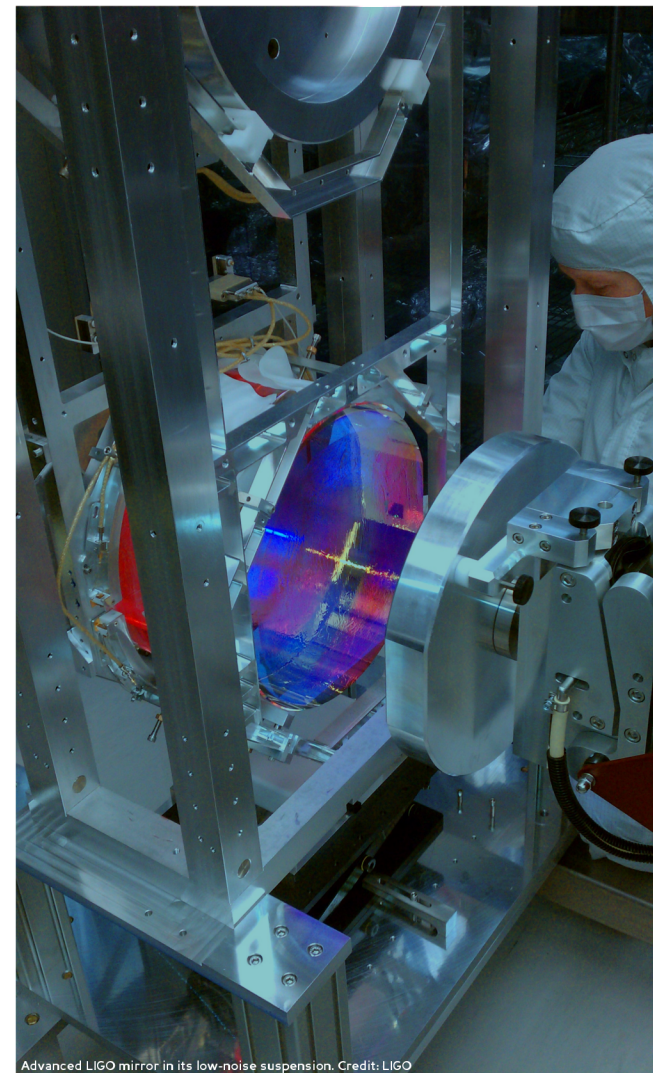
They are emitted by accelerating masses much as electromagnetic waves are produced by accelerating charges. These ripples in the space-time fabric travel across the universe, bringing with them information about their cataclysmic origins, as well as invaluable clues as to the nature of gravity.

Detection of gravitational waves may revolutionize our understanding of black holes, neutron stars and the processes that formed the universe



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Advanced LIGO mirror in its low-noise suspension. Credit: LIGO

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