

Cosmic Explorer - a next-generation gravitational-wave detector

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Advanced LIGO and Virgo have detected dozens of gravitational waves, emitted from binary neutron stars and binary black holes. Third-generation observatories - such as Cosmic Explorer and the Einstein Telescope - will provide a significant boost in sensitivity and detect thousands of binary mergers per month, both from the local universe and from cosmological distances. In this talk I will review some of their key science goals. These include: measuring structure and composition of neutron stars' interiors; detecting the mergers of primordial black holes at high redshifts, testing general relativity and looking for dark matter particles.

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