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Testing General Relativity with Gravitational Wave Observations

Thursday, 26 August 2021 09:30 (30 minutes)

With an ever growing number of observed compact binary coalescences, LIGO and Virgo are enabling ever more precise tests of the fundamental nature of spacetime. Our ability to test general relativity in the strong field regime is driven by the signal-to-noise ratio of the individual observed binaries as well as the heterogeneity of the underlying astrophysical population of binary black holes. In this talk, I will summarize the status of testing general relativity with gravitational wave observations, including results from the second LIGO-Virgo catalog (GWTC-2), which has yielded some of our best constraints to date on the fundamental properties of astrophysical black holes. I will highlight future prospects for testing general relativity as well as some of the open questions and challenges that will play an increasingly important role in this rapidly evolving field of research.

Is this abstract from experiment?

Yes

Name of experiment and experimental site

Talk on behalf of the LIGO Scientific, Virgo and Kagra collaborations.

Is the speaker for that presentation defined?

Yes

Details

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Internet talk

Yes

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