GRAvitational-waves Science&technology Symposium (GRASS 2022)



Contribution ID: 40

Type: Invited Talk

Probing fundamental physics with continuous gravitational waves

Monday, 6 June 2022 12:35 (30 minutes)

In this talk I will review the physical mechanisms that can lead to continuous gravitational wave emission, focusing mainly on the role of neutron stars. I will discuss which physical scenarios can be explored with continuous waves, and review recent searches by the LIGO, Virgo, KAGRA collaboration. I will show, in particular, that the sensitivity of the searches has now reached the point where we are beginning to probe astrophysically significant portions of parameter space, and discuss the role of next generation detectors.

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Track Classification: Data analysis