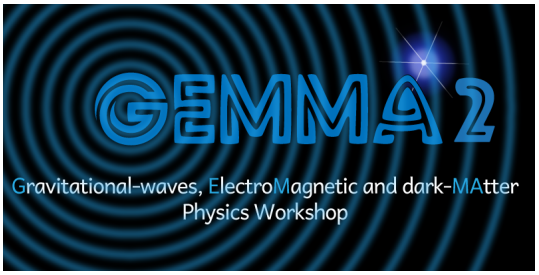

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Recent continuous wave searches and their astrophysical implications

Monday, 16 September 2024 09:55 (25 minutes)

The direct detection of gravitational waves from highly energetic collisions of compact binary systems comprising black holes and/or neutron stars has inaugurated
an exciting new era in astrophysical science. In recent years, searches have been designed to look for other types of gravitational radiation, including the much fainter long-duration, persistent emission known as continuous waves. Potential sources of continuous waves include spinning neutron stars with some non-axisymmetries, conjectured ultralight boson clouds around rotating black holes, etc. In this talk, I will give an overview of continuous wave sources and the latest search results from LIGO-Virgo-KAGRA's third observing run and discuss the astrophysical implications in the absence of a confident detection.

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