Contribution ID: **18** Type: **talk**

Searching for gravitational waves in real LIGO noise using neural networks

Wednesday 3 September 2025 12:10 (20 minutes)

Conventional searches for gravitational wave signals in detector data are computationally demanding and struggle when certain transient noise sources are present. Recently, machine-learning algorithms have been proposed to address current and future challenges. We present a neural-network based algorithm to search for binary black hole waveforms. We also apply our algorithm to real O3b data and recover the relevant events of the GWTC-3 catalog.

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Session Classification: Morning