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Phenomenology: Non-gaussian gravitational wave backgrounds across the GW spectrum

Monday, September 4, 2023 4:15 PM (15 minutes)

Stochastic gravitational wave backgrounds (SGWBs) are, to date, yet to be unequivocally observed. At the □□□ frequencies, tentative evidence for the observation of such signals has been recently reported.

In this talk, I will focus on prospects for the detection of SGWBs of astrophysical origin in the 10−4□□−103□□ frequency range.
I will show how recent progress in statistics and data-analysis tools for ground-based detectors might offer the opportunity for an imminent detection of popcorn-like SGWBs.

Moreover, I will describe the most recent findings on expected SGWBs of astrophysical origin, observable with future space-based observatories (e.g. LISA). They will pollute the observed datastreams, with far-reaching implications on the parameter reconstruction of individual resolvable sources.

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