

The Low-Frequency Chords of Gravitational Waves: Insights from pulsar timing arrays

Friday, 8 November 2024 11:15 (40 minutes)

In this talk, I will introduce gravitational wave (GW) data analysis and highlight the differences between ground-based GW analysis and GW analysis using pulsar timing arrays. In June 2023, tentative evidence emerged for the presence of a low-frequency signal in pulsar timing data. The most likely source of the signal in the nanoHertz regime, probed by pulsar timing, is the superposition of GW signals from supermassive binary black hole mergers. If confirmed as a gravitational wave background, this would provide evidence of such mergers. I will also present results from our systematic study of models of this background and discuss their impact on the robust characterisation of this signal.

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