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Where to Look and How to Look for High-Frequency Gravitational Waves

Tuesday 11 June 2024 11:30 (45 minutes)

Abstract: Stochastic backgrounds of gravitational waves can potentially open a window on extremely high energies, giving us information on phase transitions at the GUT scale and many other BSM phenomena. In this talk I will discuss simple heuristic arguments that allow to establish the smallest detectable energy density in a primordial gravitational wave background. I will focus mainly on what is achievable with realistic detectors, and comment on the potential of advanced quantum sensing techniques. In the foreseeable future, it is not feasible to go beyond the BBN bound for frequencies above 100 kHz.

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