

# Dark Conformal Phase Transition and Pulsar Timing Arrays

*Thursday, 3 August 2023 16:00 (20 minutes)*

We will explore the possibility that the nano-Hz stochastic gravitational wave background recently reported by several Pulsar Timing Arrays is due to a first-order phase transition of a nearly conformal dark sector, using the dual radion effective potential formalism. The dark radiation from the secluded dark sector can alleviate the Hubble tension without violating the  $\Delta N_{\text{eff}}$  bound, and will be probed by future CMB-S4 experiment. We will also comment on the scenario where the dark sector decays into the visible sector.

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**Session Classification:** Parallel talks (3)