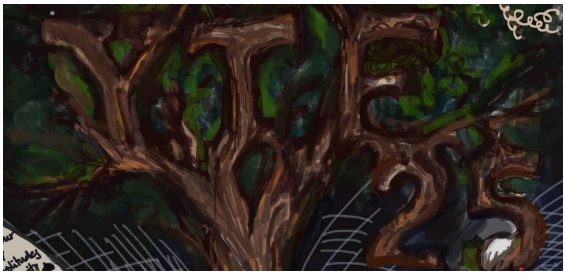

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Supercooling in Confining Theories

Thursday 18 December 2025 09:40 (30 minutes)

The thermal deconfinement-confinement transition in SU(N) gauge theory is known to be first-order for N ≥ 3, but the dynamics of this transition are poorly understood. Lattice data indicates the presence of a small coefficient in the exponent of the nucleation rate which likely strongly alters the phase transition dynamics. In this talk, I discuss our study in arXiv:2508.10091 that provides evidence that the small coefficient originates from a deconfined phase instability just below the critical temperature. I will also discuss its likely implications for possible future gravitational wave observations arising from such phase transitions in the early universe.

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