

JOINT TUFTS/MIT COSMOLOGY SEMINAR

New Physics from the “Hubble Tension”

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Over the last decade, measurements of the expansion rate of the universe today, H_0 , made with cepheid-calibrated SN1a have become increasingly discrepant with the value predicted from the Λ CDM model when fit to CMB data. After a brief review of the experimental situation, I will show the potential implications of this “Hubble tension” for new physics. I will argue that it points to some new mechanism at play in the pre-recombination universe (i.e., redshift $z > 1000$), rather than a new dynamical effect at late-time (i.e. $0 < z < 1$). I will discuss some model-independent implications of the Hubble tension that can help shed light on its origin.

Tuesday, October 21, 2025, 2:30 pm
Cosman Seminar Room
Center for Theoretical Physics
Building 6C, Room 6C-442
Massachusetts Institute of Technology