

On the implications of the cosmic calibration tension beyond H_0 and the synergy between early- and late-time new physics

Monday 18 November 2024 14:00 (1 hour)

The cosmic calibration tension is a $> 5\sigma$ discrepancy between the cosmological distance ladder built from baryonic acoustic oscillations calibrated by the Planck/ Λ CDM sound horizon and Type Ia supernovae calibrated with the SH0ES absolute magnitude. In this talk, I will emphasize the consequences of this tension beyond the value of the Hubble constant, and the implications for physics beyond Λ CDM. First, I will show that the SH0ES calibration implies (in addition to a higher value of H_0) a larger physical matter density, a larger clustering amplitude S_8 , as well as a lower age of the universe. Second, I will talk about the role of early- and late-time new physics in resolving all these discrepancies.

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