

Tensions in Cosmological Probes and Quasar Cosmology

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In the current era of precision cosmology, the emergence of crucial tensions in the determination of the universe expansion has led to a twofold need to determine a criterion for combining different probes in a physically meaningful way, and to extend the mapping of the expansion of the universe to include data at redshifts not currently covered. In this talk, I will present recent compatibility estimates of cosmological data and illustrate the possibility of using Quasar as cosmological probes, which can extend the Hubble diagram of SNe to a higher redshift range ($z = 2.4 - 7.5$) in which the predictions of cosmological models can be distinguished. The LCDM model and some of its extensions and tensions are tested and possible incompatibility between BAO, SNe and QSO data are explored.

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