

Trouble with Hubble

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The current consensus cosmological model, Λ CDM, is for the most part in good agreement with observations. However, not all is well: as our measurements of both early and modern Universe are becoming more and more precise, a gap opens between different indirect measurements of the Hubble constant, i.e. the rate at which the Universe is expanding today. Many attempts to cross this gap have been made, but none have resoundingly solved the H_0 problem. The presentation outlines the current state of the problem and showcases the difficulties in solving it with an extended theoretical cosmological model (the phantom-crossing dark energy) and the necessity of carefully choosing how to combine observational datasets when comparing between models, as the most significant case of the H_0 tension arises from a discordance in type Ia supernova magnitude calibrations using a local and an inverse distance ladder.

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