

The Ups and Downs of Early Dark Energy

Sunday 10 September 2023 09:00 (1 hour)

Early Dark Energy (EDE), an additional component of dark energy active in the decade of redshift before recombination, has emerged as one of the most effective models at resolving the Hubble tension. By reducing the size of the sound horizon that calibrates CMB and BAO observations, it is able to fit a variety of datasets including the variety of high- H_0 measurements, and may shed light upon the yet-unknown nature of dark energy, and even inflation. Yet, it is clear that EDE cannot be the end of the story at least in its current form, as it brings up a number of theoretical and observational issues. In this talk, I will review the current status of EDE models and present some new developments, highlighting both the successes and challenges that EDE is facing, and draw implications of what we have learned about EDE towards establishing a new “concordance cosmology”.

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