

An overview of cosmological tensions - Addressing systematics and fundamental physics solutions

Tuesday, 10 September 2024 09:00 (40 minutes)

The standard concordance model has successfully explained all cosmological survey data for over two decades with unprecedented precision. However, our understanding of cosmology appears to be at a turning point in that predictions from the standard cosmological model from different surveys seem to give best-fit cosmological parameters that are in tension with each other. This may be due to systematics in our understanding of the underlying astrophysics for particular sectors. However, it may also be an indication of new physics in one or more cosmological sectors. In this talk, the specific areas where cosmic tensions have featured will be reviewed together with possible future areas of interest where new cosmic tensions may arise. The talk will also discuss some of the most promising areas of new physics that may address some of the cosmic tensions problem. There will also be a brief review of the CosmoVerse consortium and its upcoming activities and plans.

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