

BSM² - Beyond the Standard Model BrainStorming Meeting: Particle Physics and Cosmology interface



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Hubble tension in a nonminimally coupled curvature-matter gravity model

The presently open problem of the Hubble tension is shown to be removed in the context of a modified theory of gravity with a non-minimal coupling between curvature and matter. By evolving the cosmological parameters that match the cosmic microwave background data until their values from direct late-time measurements, we will show how to obtain an agreement between different experimental methods without disrupting their individual validity. These modified gravity models are shown to provide adequate fits for other observational data from recent astrophysical surveys and to reproduce the late-time accelerated expansion of the Universe without the inclusion of a cosmological constant. This talk is based on the work conducted in JCAP06(2024)025 (arXiv:2403.11683).

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