Type: Parallel oral presentation

Hubble tension and matter inhomogeneities: a theoretical perspective

Tuesday 15 November 2022 15:00 (15 minutes)

We have studied how local density perturbations could reconcile the Hubble tension. We reproduced a local void through a perturbed FLRW metric with a potential Φ which depends on both time and space. This method allowed us to obtain a perturbed luminosity distance, which is compared with both local and cosmological data. We got a region of local parameters, q_0^{Lo} and j_0^{Lo} , which are in agreement with a local void of $\Omega_{m,\text{void}} = (-0.30 \pm 0.15)\Omega_m$ explaining the differences between the local H_0 and the Planck H_0 . However, when constraining local cosmological parameters with previous results, we found that neither Λ CDM nor $\Lambda(\omega)$ CDM could solve the Hubble tension.

Poster fallback option for rejected abstracts for parallel oral presentations

Yes

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Track Classification: Cosmology and gravitation