CosmoVerse@Istanbul 2025



Contribution ID: 43

Type: Talk

Cosmic Dipole Tensions: Confronting Planck, NVSS, RACS and CatWISE

Wednesday 25 June 2025 15:45 (25 minutes)

The cosmic dipole measured in surveys of cosmologically distant sources is generally in disagreement with the kinematic expectation of the Cosmic Microwave Background (CMB). This discrepancy represents severe tension with the Cosmological Principle and challenges the standard model of cosmology. We present a Bayesian analysis that quantifies the tension between datasets used to measure the cosmic dipole. Here, we examine active galaxies in the NRAO VLA Sky Survey (NVSS), the Rapid ASKAP Continuum Survey (RACS) and the Wide-field Infrared Survey Explorer catalogue (CatWISE), and jointly analyse them with the *Planck* LFI observations of the CMB. Whilst we find that the *Planck*-quasar-dipole tension is strong, we conclude that deeper radio observations are required to disentangle the *Planck*-radio-dipole tension, which may be detectable at high significance in the near-future.

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Session Classification: Afternoon session 2