

The Cosmic Dipole Problem

Friday 7 February 2025 11:40 (20 minutes)

I will present our recent results exploring the integrity of the cosmological principle, the idea that, on sufficient scales, the universe is homogeneous and isotropic. Recent tensions have arisen between the dipole of cosmological sources and its interpretation from the CMB as a kinematic departure from the local Hubble Flow, bringing the cosmological principle into doubt. With a Bayesian-based approach, I explore the cosmological dipole in several cosmological surveys, using Bayesian evidence to assess differing hypotheses. The conclusion is that the picture is not completely clear, and the question of the cosmological principle remains to be answered.

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