



Contribution ID: 754

Type: **not specified**

Can we use Baryon Acoustic Oscillations distances?

Tuesday 14 May 2024 14:00 (30 minutes)

Baryon Acoustic Oscillations are considered one of the most powerful cosmological probes. They are assumed to provide distance measures independent of a specific cosmological model. At the same time the obtained distances are considered agnostic with respect to other cosmological observations. However, in current measurements, the inference is done assuming parameter values of a fiducial LCDM model and employing prescriptions tested to be unbiased only within some LCDM fiducial cosmologies. Moreover the procedure needs to face the ambiguity of choosing a specific correlation function model-template to measure cosmological distances.

Does this comply with the requirement of model and parameter independent distances useful, for instance, to select cosmological models, detect Dark Energy and characterize cosmological tensions?

In this talk I will review the subject, answer compelling questions and explore new promising research directions.

Plenary (Invited talks only)

Mini Symposia (Invited Talks Only)

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Session Classification: Cosmology & Dark Energy

Track Classification: Cosmology & Dark Energy