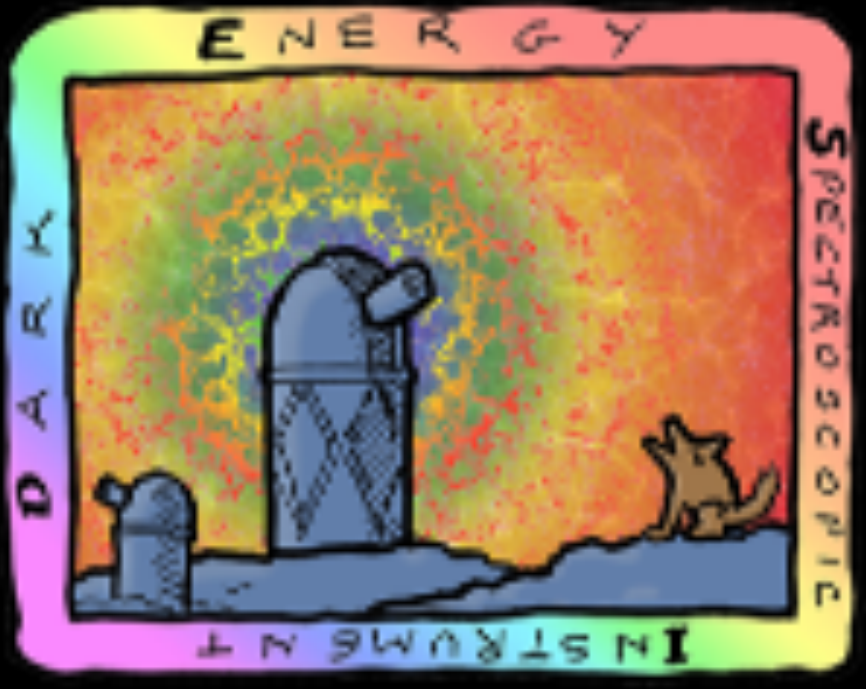

DARK ENERGY SPECTROSCOPIC INSTRUMENT

U.S. Department of Energy Office of Science

DESI VI. Cosmological constraints - Aug 2024 XII ICNFP @ Crete, Greece, 2024

Uendert Andrade (UMichigan)

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Calibrated BAO

Un-Calibrated BAO

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How do we learn cosmology from BAO?

- Measure angular positions, and redshifts of tracers (of the underlying matter density field, e.g., BGS, LRG, ELG, QSO, Lya)
- Work out distances to the tracers.

➡ If we know the characteristic scale from r_d early physics probes such as CMB or BBN, we measure absolute distances.

Calibrated BAO

➡ Otherwise, we measure distances in units of r_d.

Un-Calibrated BAO

- Infer cosmology

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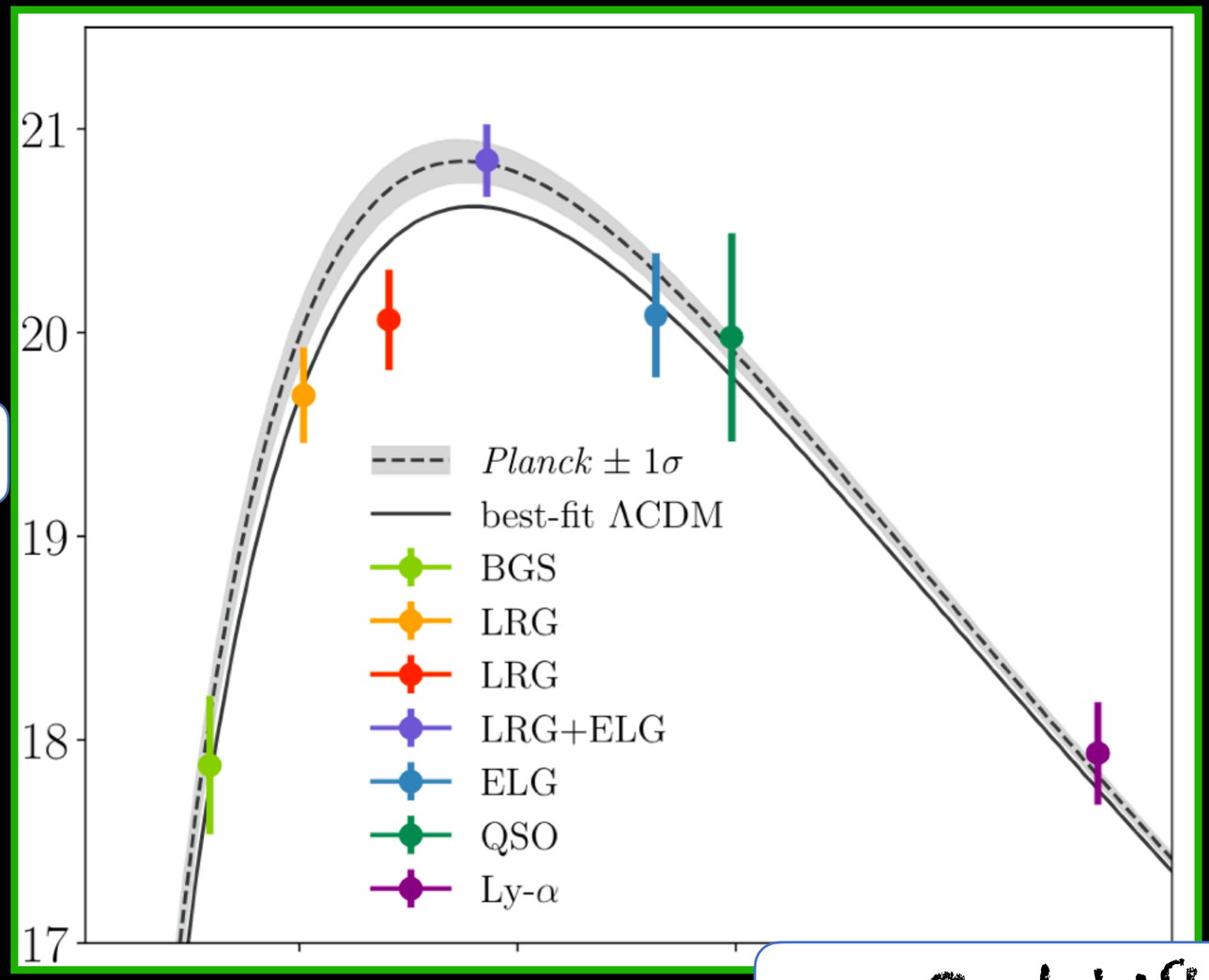
How do we learn cosmology from BAO?

Distance



Redshift