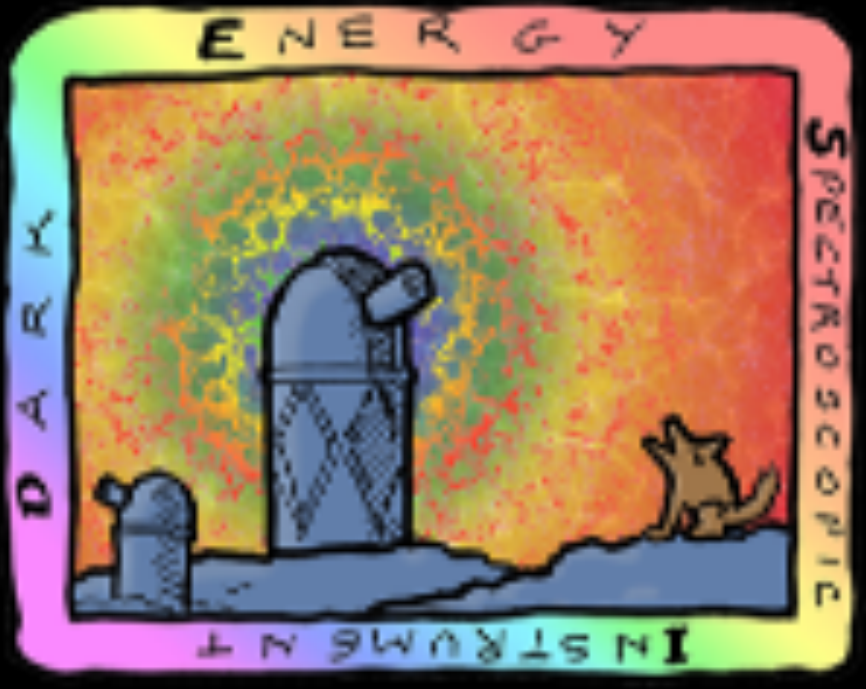

DARK ENERGY SPECTROSCOPIC INSTRUMENT

U.S. Department of Energy Office of Science

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

Uendert Andrade (UMichigan)

22

the biggest ever BAO dataset

Blind analysis

Unified BAO pipeline

U. Andrade et al (2024): arXiv:2404.07282

DARK ENERGY SPECTROSCOPIC INSTRUMENT

U.S. Department of Energy Office of Science

How is the DESI BAO analysis different?

- The data! – already **the biggest ever BAO dataset** (both in and volume)
- **Blind analysis** to mitigate observer/confirmation biases (catalogue-level blinding)
- Theory developments in BAO fitting procedure
- New and improved reconstruction methods
- **Unified BAO pipeline** applied to all tracers/redshifts consistently
- Wide-ranging tests of systematic errors, done before unblinding
- New combined tracer method used for overlapping galaxy samples (LRG and ELG in $0.8 < z < 1.1$)

Validating the Galaxy and Quasar Catalog-Level Blinding Scheme for the DESI 2024 analysis: U. Andrade et al (2024): arXiv:2404.07282

Cosmological Constraints from DESI BAO