First Detection of the BAO Signal from Early DESI Data

DARK ENERGY SPECTROSCOPIC INSTRUMENT

U.S. Department of Energy Office of Science

Jeongin Moon   David Valcin   Michel Rashkovetskyi   Christoph Saulder
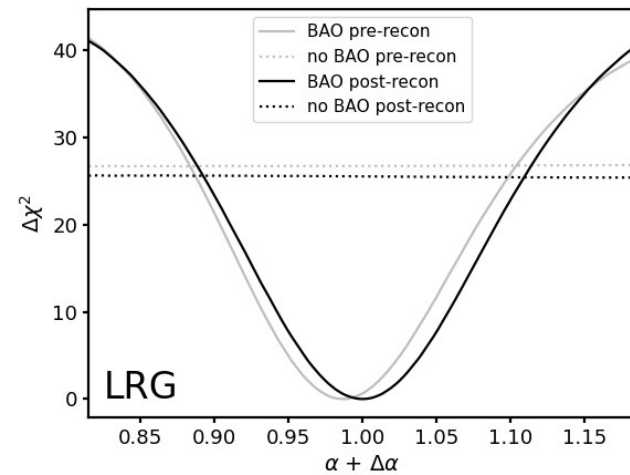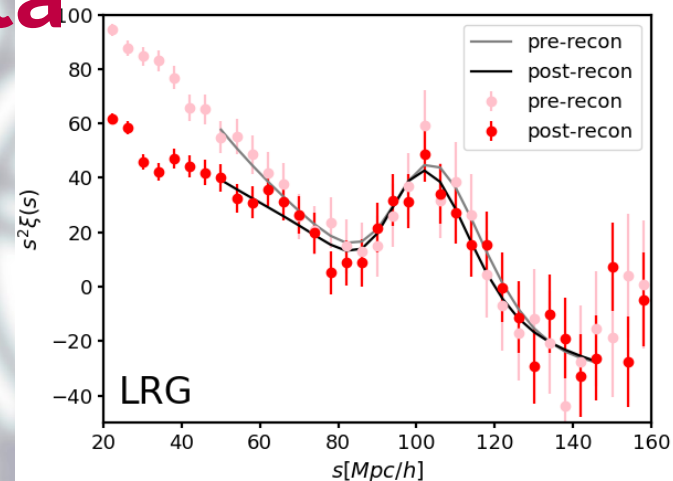
- **Tested with mocks (Abacus and EZmocks)**

- **Semi-analytic covariance matrix (RascalC)**

- **BAO detection with the first 2 months of DESI:**

  - **LRG: ~5σ with 1.6% precision**

  - **BGS: ~3σ with 2.6% precision**

- **Fisher forecast predicts ~0.29% precision for Y5**