

# Constraining running with the Lyman alpha forest

*Wednesday, 8 May 2024 11:00 (15 minutes)*

The power spectrum of fluctuations in the Lyman alpha (Lya) forest can be used to measure the amplitude of the linear power spectrum on megaparsec scales, smaller than those accessible from galaxy surveys or the cosmic microwave background (CMB).

By combining CMB measurements from Planck with the Lya dataset of DESI one should be able to constrain running at the 0.002 level, a factor of 3 better than from Planck alone (DESI Collaboration 2016).

If there was interest on this, I could talk a bit about the challenges of this measurement in DESI, and about the possibility to do this measurement with Spec-S5.

**Primary author:** FONT RIBERA, Andreu (IFAE)

**Presenter:** FONT RIBERA, Andreu (IFAE)

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