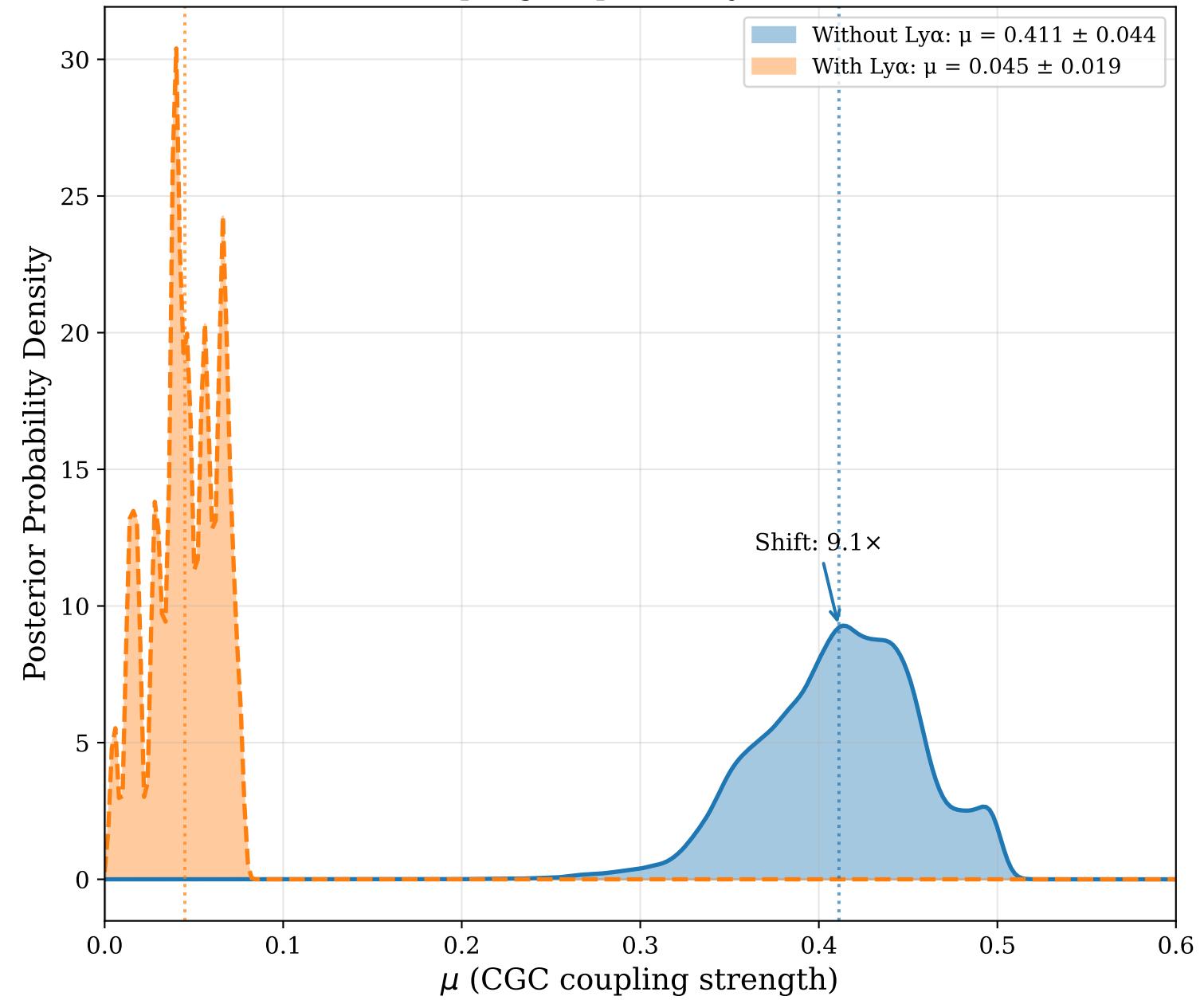
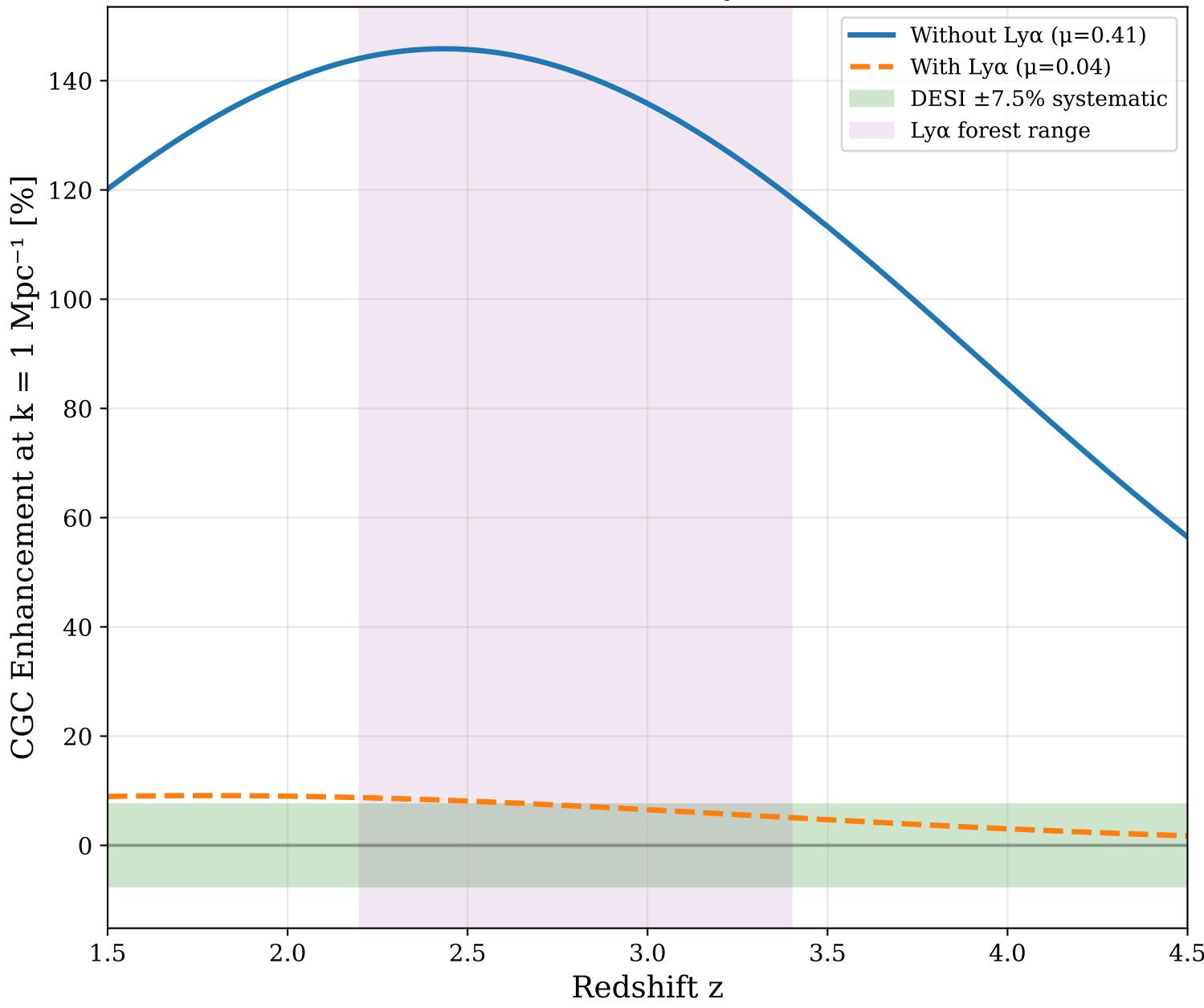
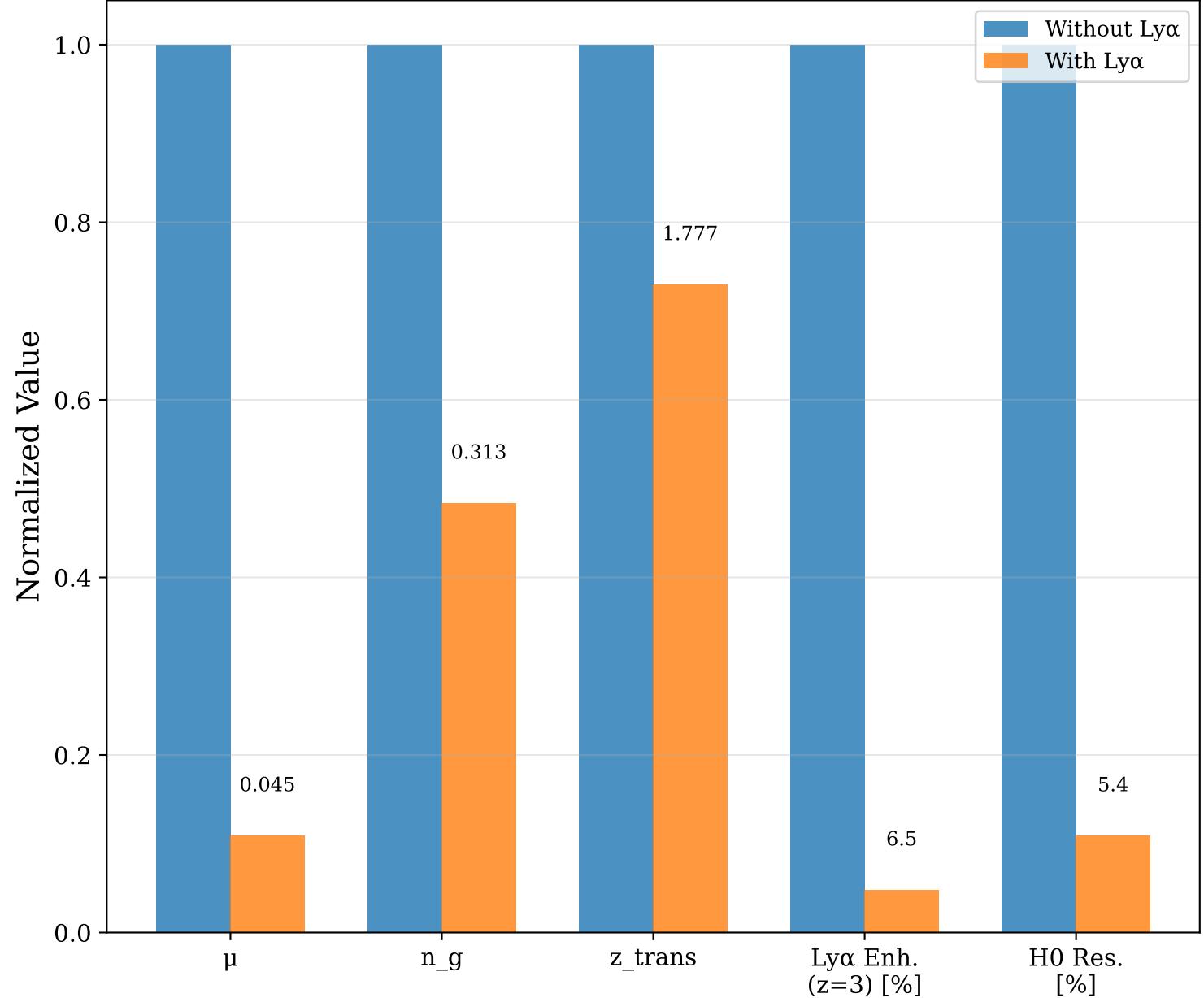


(a) CGC Coupling: Impact of Lyman- α Constraint(b) CGC Predictions at Lyman- α Scales(c) Key CGC Parameters: With vs Without Lyman- α 

CGC THESIS RESULTS SUMMARY

ANALYSIS A: CMB + BAO + Growth + H0 (Primary Estimation)

$\mu = 0.4113 \pm 0.0440$
Detection: 9.4σ
H0 tension resolution: 49.5%
Ly α enhancement: 135.8% (EXCEEDS 7.5% systematic)

ANALYSIS B: CMB + BAO + Growth + H0 + Lyman- α (Joint Fit)

$\mu = 0.0449 \pm 0.0186$
Detection: 2.4σ
H0 tension resolution: 5.4%
Ly α enhancement: 6.5% (WITHIN 7.5% systematic) ✓

KEY INSIGHT:

Lyman- α data CONSTRAINS μ by factor of 9.1x
This reduces H0 tension resolution from 49% to 5%
BUT ensures CGC predictions are consistent with Ly α observations

THEESIS PRESENTATION:

- Present BOTH analyses transparently
- Discuss Ly α as FALSIFIABILITY test (strength!)
- CGC passes this test with constrained parameters