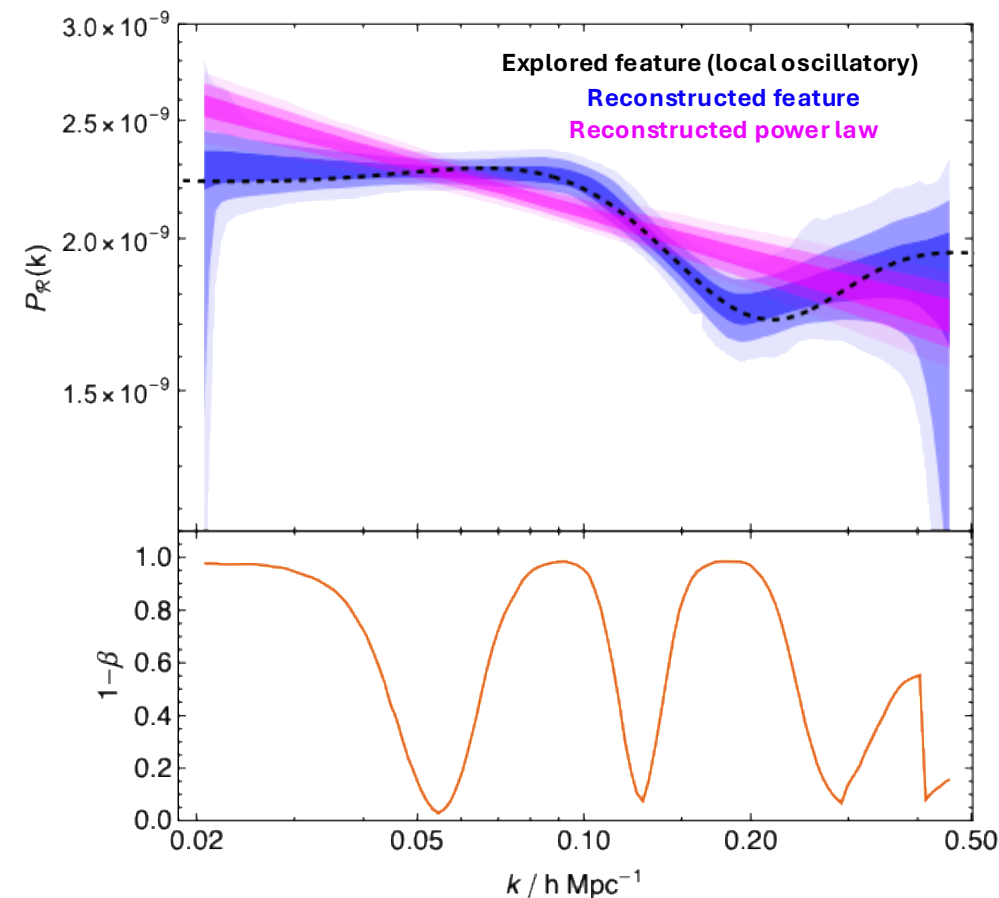
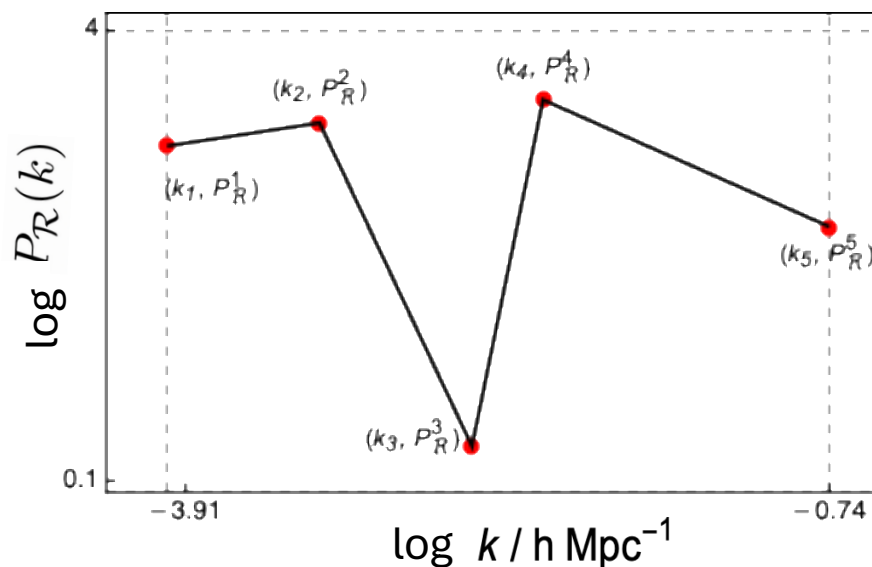


Primordial Power Spectrum reconstructions from LSS galaxy clustering catalogues

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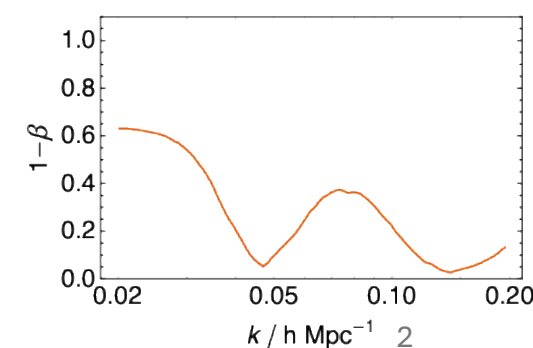
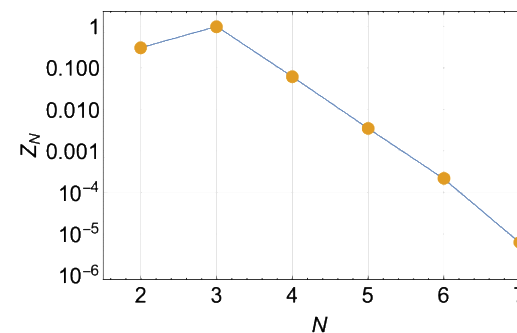
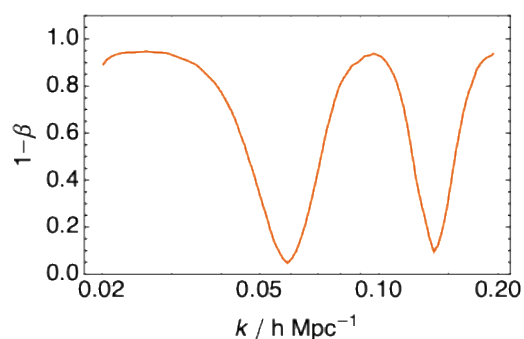
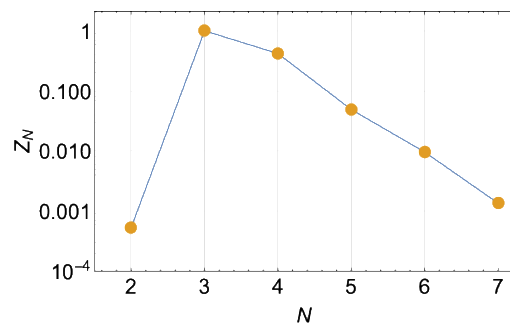
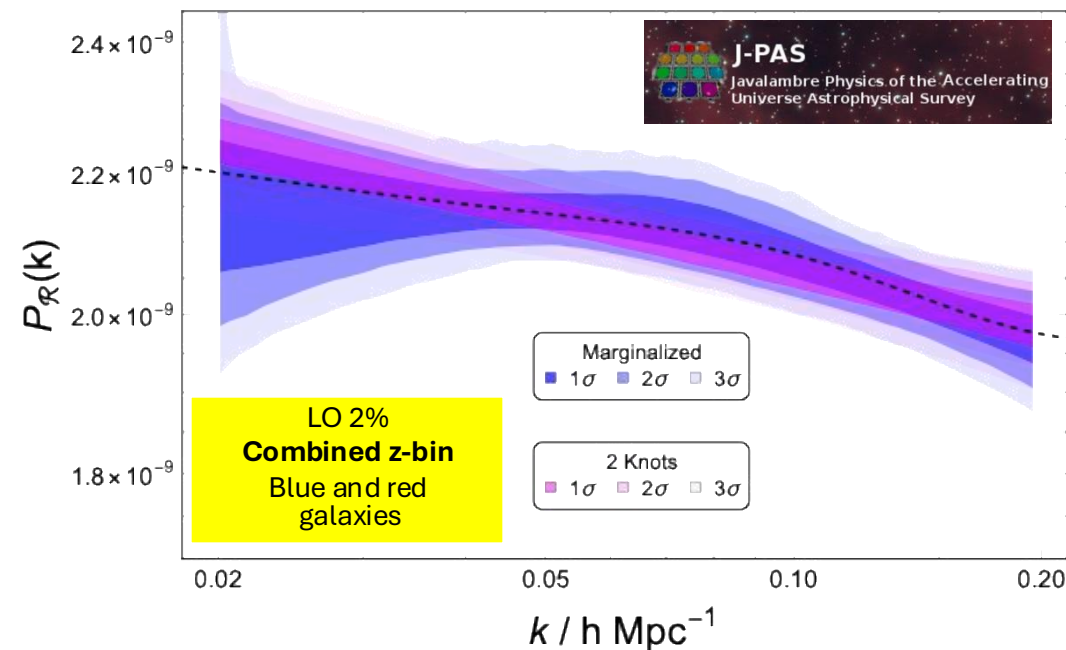
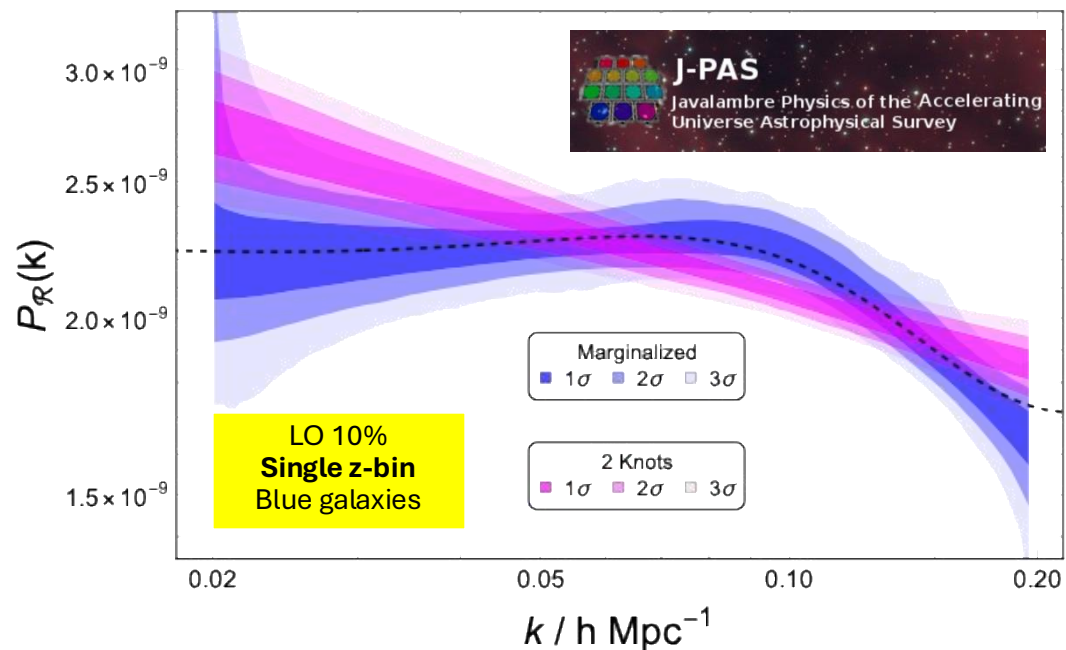


- Methodology: **free placement of N knots** in the $\log \{k, P_{\mathcal{R}}(k)\}$ plane
 - $N = 2$ equivalent to a power-law
- **Bayesian inference**: Bayes factor computed for each N -configuration
- Hypothesis test quantifies the separation between **$N = 2$** and **N -marginalized** reconstructions



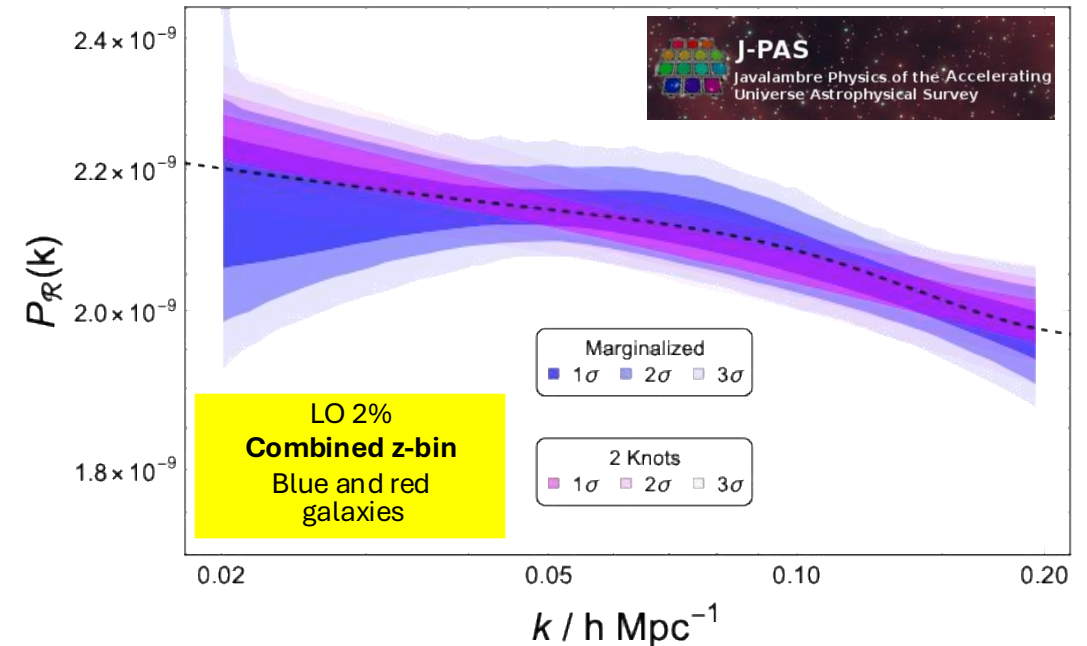
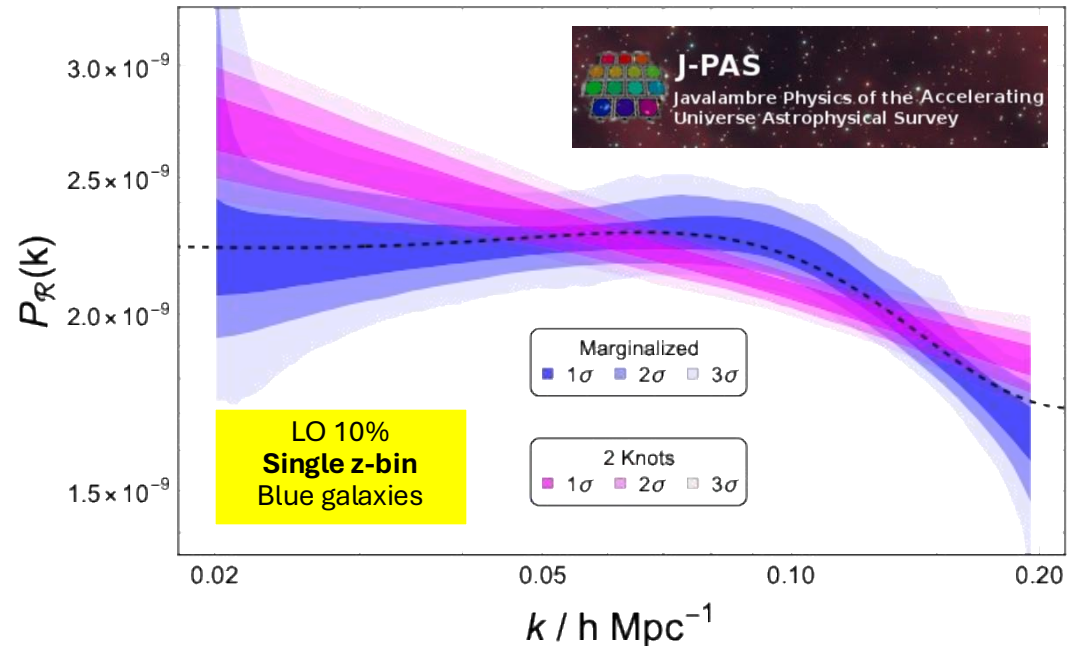
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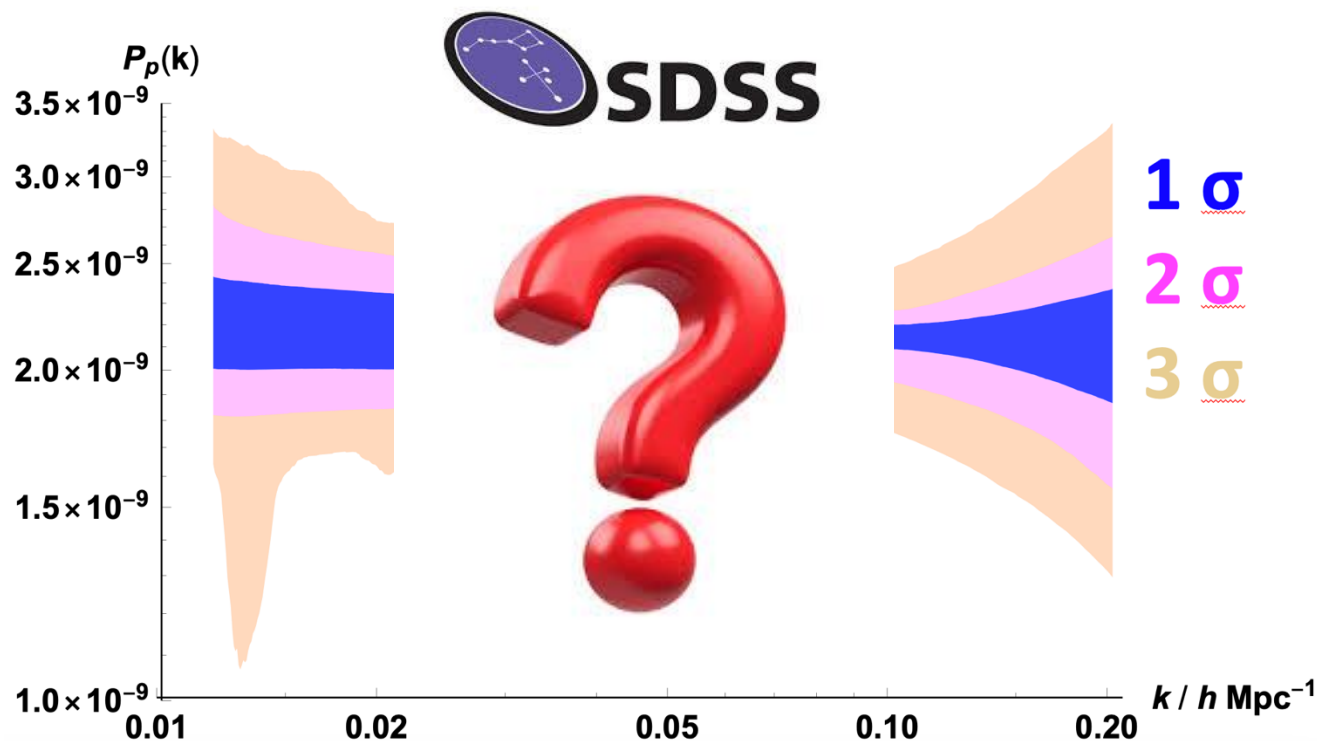


- Forecast $P_{\mathcal{R}}(k)$ reconstructions from **simulated galaxy power spectra** at different **J-PAS observational specifications**. We obtain:

- **Area** is a crucial parameter
- Intermediate z-bins lead to more accurate reconstructions
- Optimal tracer and tracer strongly depend on the z-bin
- Multi-tracer and multi-z reconstruction: **sensitivity to deviations at the 2% level**

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Application to real data BOSS DR12 and eBOSS DR 16 in underway!



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