String Cosmology: Axions

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Strings 2025

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Axion experiments can teach us about where we live in the string theory landscape.

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Dark matter probes
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Non-geometric compactifications

Non-CY geometric compactifications

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Closed string

$$\int_{\Sigma_p} C_p$$

Open string

$$|A|e^{i\psi}$$

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- Key question: if a QCD DM experiment produces a signal, what do we learn about our place in this landscape?

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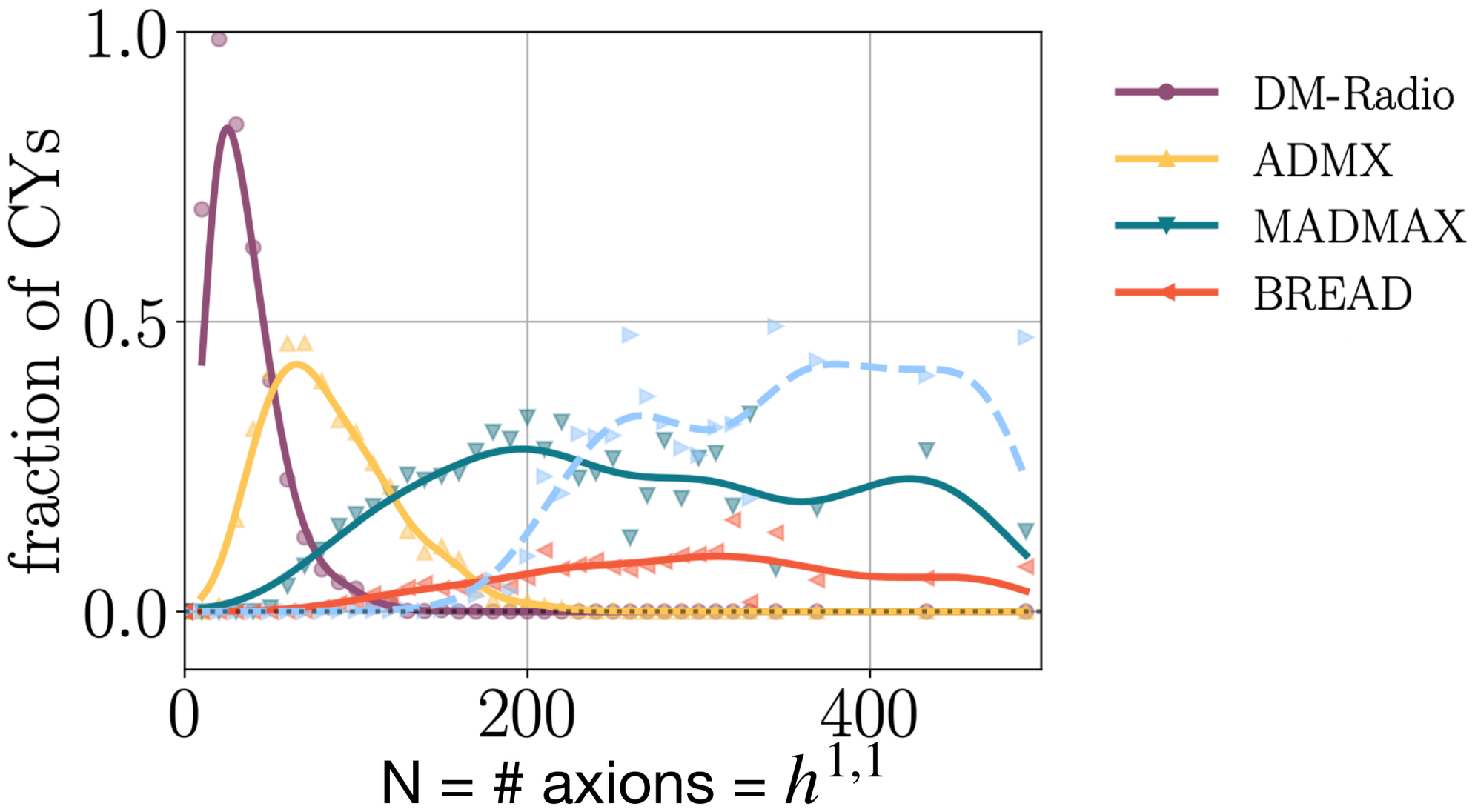

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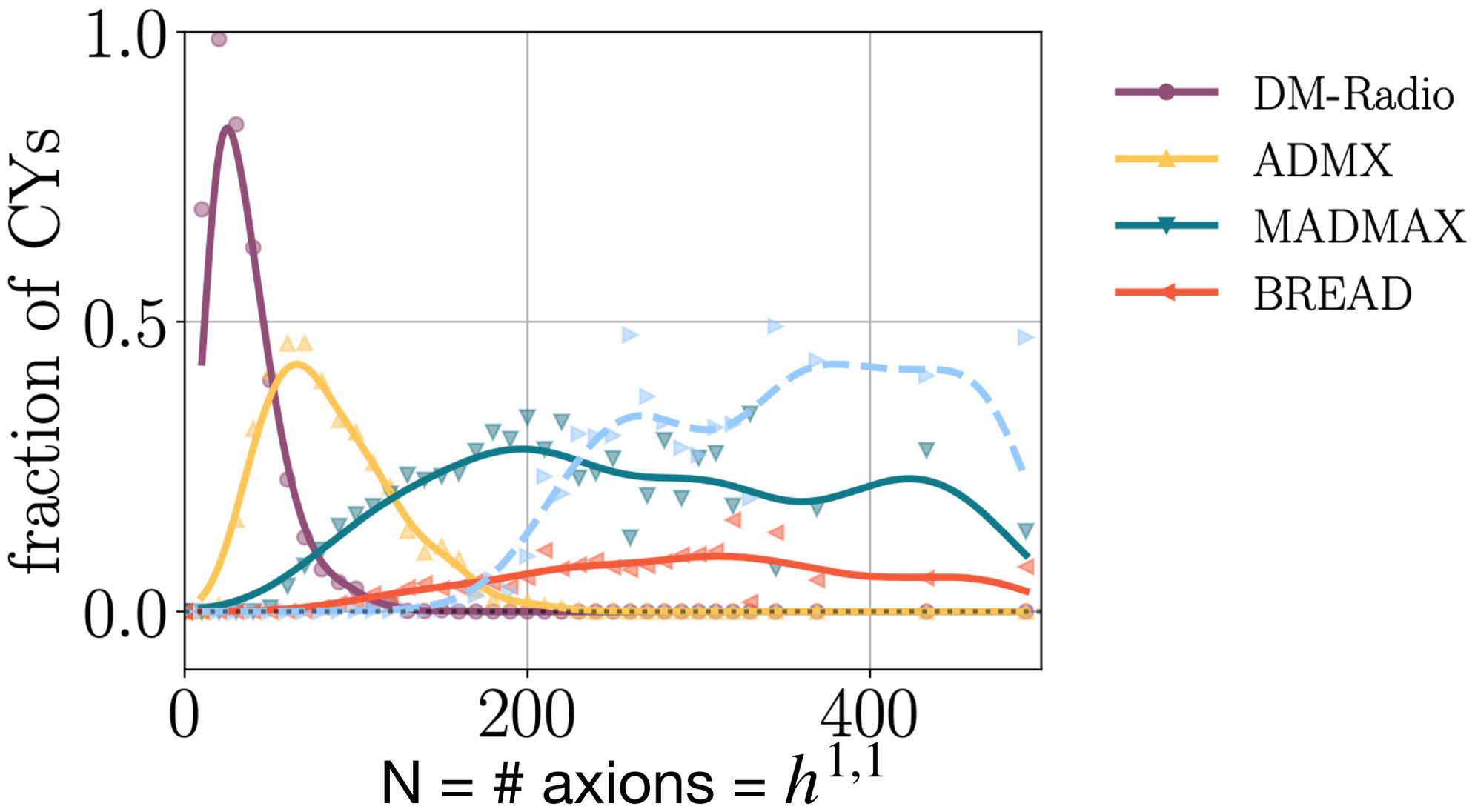
- Striking feature: **different experiments are indicative on different N.**



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3. What is the interplay between stringy axion physics and broader cosmological considerations?

4. Can axion physics tell us anything about *computational control* in our universe?