

Cover Letter — Physical Review D

Dear Editors,

We submit the manuscript "Unified Brane-Cosmology: A Testable Route to Unification."

This version includes a real-anchored results brief: PTA band constructed from the NANOGrav 15yr amplitude (SMBHB-like slope) converted to Ω_{GW} , combined with a Planck18+BAO Neff prior.

Our minimal fit yields a best-fit λ and a corresponding spectral break $f_{\text{br}}(\lambda)$. We provide the DataKit for reproducibility and will swap in official PTA likelihoods in the next revision.

We believe this work fits PRD's scope and offers an immediately falsifiable signature: a single λ must jointly satisfy PTA→LISA and CMB/BBN bounds.

Sincerely,

Ricardo Maldonado (sales@rank.vegas)