## **Cover Letter — Physical Review Letters**

Dear Editors of Physical Review Letters,

I submit a short manuscript advancing a testable brane-world cosmology:

 $H^2=(8\pi G/3)\rho(1+\rho/(2\lambda))+\Lambda_4/3+C/a^4$  (k=0), with a single-parameter falsification linking a stochastic GW spectral break to  $\Delta N_eff$ .

Included files: Unified\_Theory\_ALL\_in\_ONE\_LITE\_20250813\_202913.pdf, Two-Pager (physical units), Compactification page, and a minimal Repro Pack (CSV+figures).

The late-time limit recovers GR; early-time  $\rho^2$  era and dark radiation are explicit. I welcome rapid assessment and am ready to provide source/SM on request.

Sincerely, Ricardo Maldonado — sales@rank.vegas