

RICARDO MALDONADO – UNIFIED THEORY OF EVERYTHING (DEMO PACK)

Grand equation (flat FRW with dark radiation):

$$H^2 = (8\pi G/3) \rho (1 + \rho/(2\lambda)) + \Lambda_{4/3} + C/a^4 \quad (k=0)$$

Two test links (falsifiable):

$$f_{\text{br}}(\lambda) \propto \lambda^{\{1/4\}}$$

$$C/\rho_{\{\gamma,0\}} = (7/8)(4/11)^{\{4/3\}} \Delta N_{\text{eff}}$$

One-number rule: the same λ must fit both the SGWB break and ΔN_{eff} bounds.

This demo Two-Pager was generated from the CSVs in the Repro Pack:

- PTA spectrum: exported_pta_spectrum_DEMO_30f.csv
- LISA curve: ESA_RCL2019_4yr_instrument_ONLY_demo.csv
- Best-fit JSON: BestFit_with_uncertainties_YYYYMMDD.json

Replace the CSVs with your official files and re-run reproduce_posteriors.py for publication-grade overlays.

PTA fit with LISA overlay (demo)

SGWB PTA fit with LISA overlay (demo)

