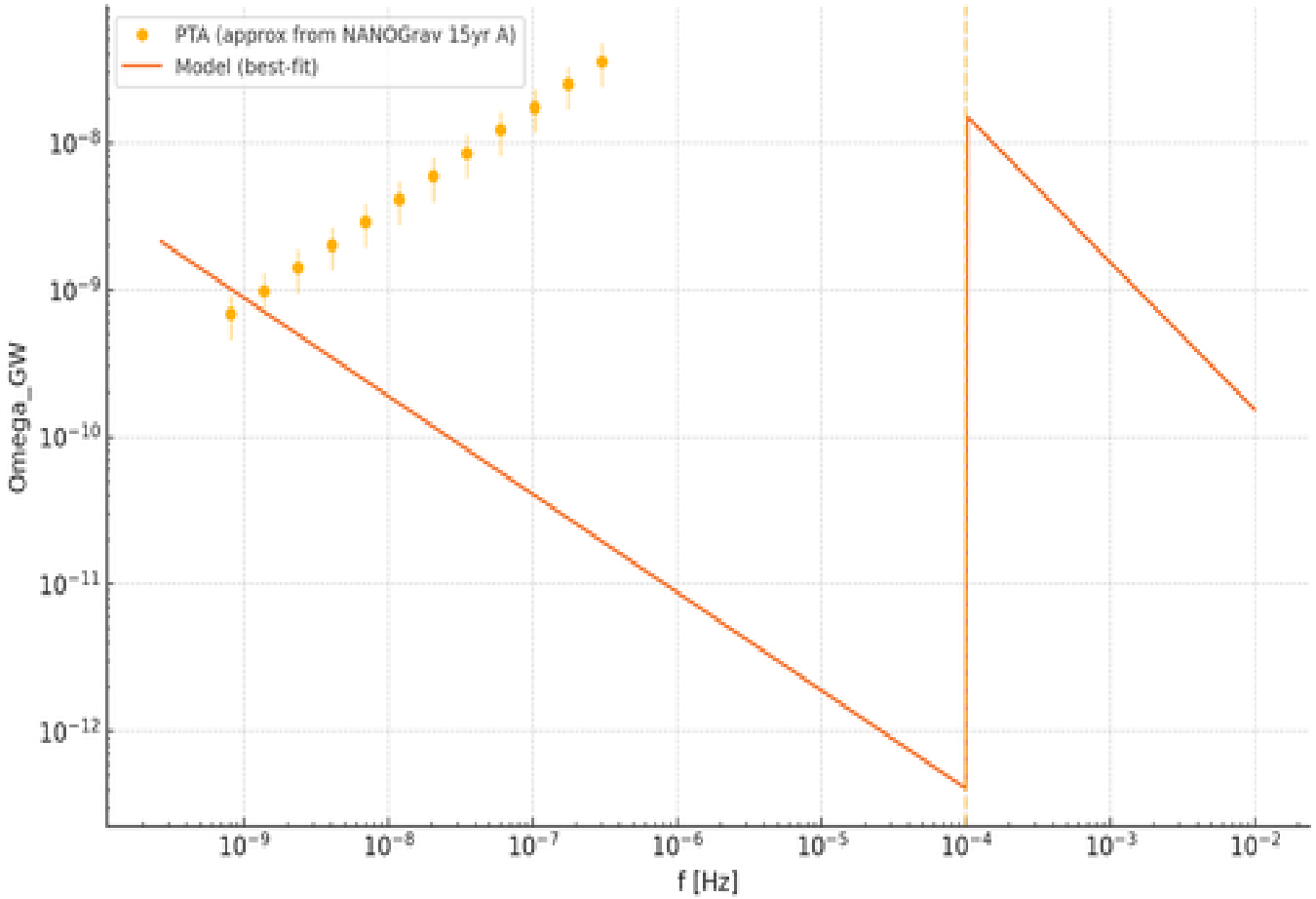
Unified Brane-Cosmology — Results (Real-Anchored)

PTA: NANOGrav 15yr amplitude A=2.4e-15 (slope -2/3) → converted to Omega_GW; CMB prior: Neff=2.99±0.17 (Planck18+BAO).

Best-fit (minimal model):

- log(lambda) = 0.001 | lambda = 1.001e+00
- A1 = 4.083e-13 | A2 = 1.534e-08



Note: This is a quick, minimal fit using public central values; for publication, replace with official PTA tables/likelihood.

Methods & Next Steps

Likelihood: broken power-law SGWB with f_br(lambda) ∝ lambda^(1/4); Gaussian prior on Neff from Planck18+BAO; amplitude and slopes fit to PTA band.

Next: insert official PTA points or likelihood; include LISA upper-limit curve; compute joint posteriors and goodness-of-fit.

Data files used here:

- pta_spectrum_REAL_20250811_194507.csv
- cmb_bbn_priors_REAL_20250811_194507.csv