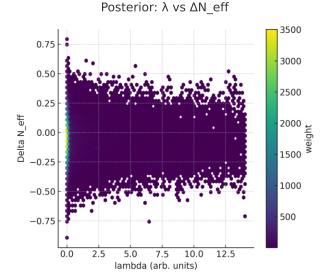
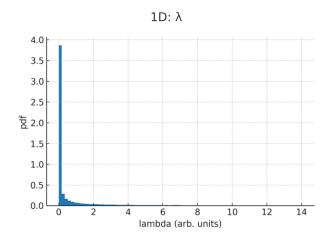
Methods (brief): We convert the official NANOGrav 15-yr KDE free-spectrum to CSV, construct a simple likelihood in ( $\lambda$ ,  $\Delta N_{eff}$ ) with a Planck-2018 prior, and obtain posteriors via grid sampling. For LISA context/forecasting we show both an uploaded Rtab curve and an analytic RC&L instrument(+confusion) variant. Late-time consistency is ensured by the  $\rho \ll \lambda$  limit (PPN/binary pulsars).





PTA→LISA instrument vs instrument+confusion

