



Working on applying tools from Information theory (AIC, BIC, DIC, WAIC) and Bayesian Statistics to problems in model selection for a variety of problems in astrophysics and cosmology. Some datasets to which I have applied these techniques include residual event rate data from direct dark matter detection experiments, expansion rate measurements using cosmic chronometers, residual torque data from Eot-Wash experiment in University of Washington etc.

References:

[1] Model Comparison of Λ CDM vs $R_h=ct$ using Cosmic Chronometers

H. Singirikonda and S. Desai Eur. Phys. J. C 80, 694 (2020)

[2] Model comparison tests of modified gravity from the Eöt-Wash experiment
A. Krishak and S. Desai, JCAP 7,006 (2020)

[3] Robust model comparison tests of DAMA/LIBRA annual modulation
A. Krishak, A. Dantuluri, S. Desai JCAP, 2, 007 (2020)

[4] An independent assessment of the significance of annual modulation in COSINE-100 data A. Krishak and S. Desai, Open Journal of Astrophysics 2, 1 (2019)

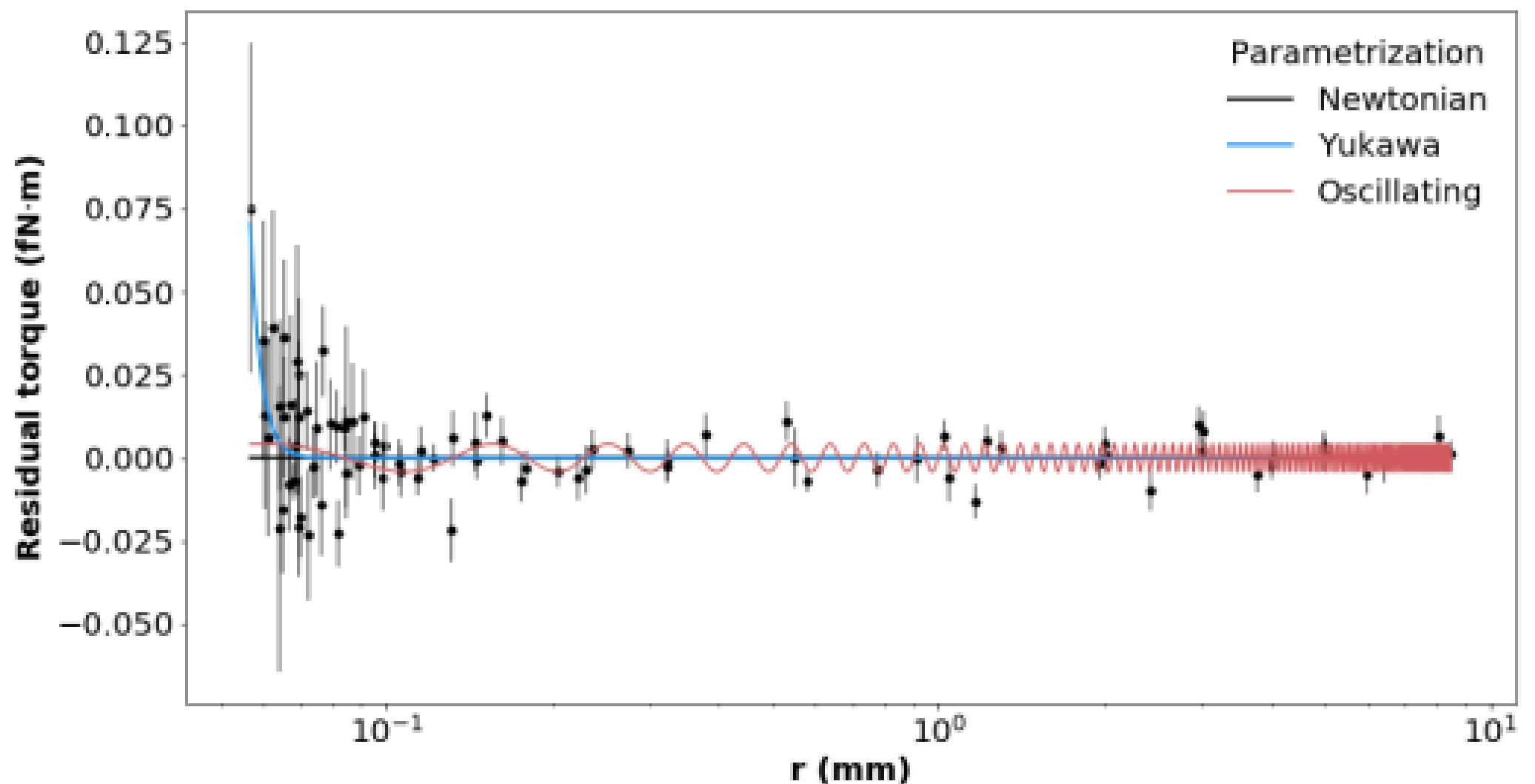


Figure 8: Residual Torque Variation