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Abstract for an Invited Paper for the DNP20 Meeting of the American Physical Society

Effective Field Theory Truncation Errors and Why They Matter

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All models are wrong, but some are useful. Still fewer are wrong in a way that is useful. I will discuss how—through a Bayesian formalism—effective field theories (EFTs) are not only powerful predictive tools, but also contain the ingredients necessary to estimate their own imperfection. Applications of this formalism are discussed, including its impact on the design of experiments, and uncertainty quantification for the nuclear matter equation of state.