

Abstract Submitted
for the DNP17 Meeting of
The American Physical Society

Probing Fundamental Symmetries: Questioning the Very Basics of Conservation Laws¹ PRAJWAL MOHANMURTHY², Massachusetts Inst of Tech-MIT — Is the Lorentz-CPT symmetry, a core component of the standard model, valid? To what extent are the CP and T symmetries broken in the strong sector? What are we doing about the existing strong-CP problem? Do neutrons oscillate (like neutral kaons) or break the (Baryon - Lepton) number conservation? In this presentation, we will go over some of the experiments probing fundamental symmetries trying to answer the above questions. I will, very briefly, introduce the CompEx & nEx experiments probing the Lorentz symmetry in the electromagnetic (EM) sector, the nEDM experiment probing CP and T symmetries in the strong sector, NStar experiment searching for neutron oscillations, MASS & BDX experiments searching for axion like particles & dark matter. We will then briefly touch upon the highlights of these experiments and focus on the path we are taking towards answering those questions while also connecting the dots [experiments] with CEU.

¹PM would like to acknowledge support from SERI SNSF grant 2015.0594

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Date submitted: 21 Jun 2017

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