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## CP Violation Sensitivity in Future Long-Baseline Experiments

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Our pursuit of novel physics may be advanced significantly by neutrinos. Neutrino oscillations have so far provided the only particle physics evidence for new physics beyond the standard model (BSM), making it an ideal area to investigate new physics scenarios. Recently, there have been a lot of interests in situations such as Non-Standard Neutrino Interactions (NSI) with matter and the existence of a fourth sterile neutrino. Leptonic CP violation is quite crucial in addition to the CP violation coming from the quark sector. Many ongoing and future long-baseline (LBL) experiments are going to determine the leptonic CP phase. Latest results show slight tension between T2K and  $\text{NO}\nu\text{A}$  in the measurement of standard model (SM) CP phase. We get tantalizing hint that BSM phase could severely impact the clean determination of SM CP phase. In fact from our analysis, we were able to resolve this discrepancy in T2K and  $\text{NO}\nu\text{A}$  with NSI. Next, we studied the CP phase for two of the futuristic LBL experiments: T2HK and DUNE in presence of dual NSIs arising from  $e - \mu$  and  $e - \tau$  sectors. In addition to that we also discuss the mass hierarchy in presence of both the NSI constraints.

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