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## Exploring the effects of leptoquarks in the LFV muon decays

Neutrino oscillation in the matter could be affected by the sub-dominant, yet unknown, non-standard interactions (NSI). The observed shift in  $\delta_{CP}$  value observed for NOvA in case of standard model (SM) and NSIs arising simultaneously from two different off-diagonal sectors,  $e-\mu$  and  $e-\tau$  could be attributed to the beyond standard model physics. We derive constraints on the NSI sectors using the combined datasets of NOvA and T2K. Our analysis reveals a significant impact that dual NSIs may have on the sensitivity of standard CP phase  $\delta_{CP}$  and atmospheric mixing angle  $\theta_{23}$ . Here we assume that the presence of leptoquarks ( $U_3$ ) to account for the apparent difference in the experimental observations of  $\delta_{CP}$  measurement by NOvA and T2K using  $\epsilon_{e\mu}$ . Furthermore, using this input we obtain the Lepton Flavour violation (LFV) muon decay branching ratios:  $B(\mu \rightarrow e\gamma) \leq 10^{-18}$ ,  $B(\mu \rightarrow eee) \leq 10^{-21}$  and  $B(\mu \rightarrow e)\tau_i \leq 10^{-19}$  which could be probed in the future experiments.

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