

Coh Miyao "Neutrino models based on the $U(1)_{\mu-\tau}$ gauge symmetry"

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Recently precise experiments have suggested that there is a discrepancy between theoretical and experimental values of muon $g-2$ based on the Standard Model (SM). It is known that the $U(1)_{\mu-\tau}$ gauge model can solve this. There are also studies based on the $U(1)_{\mu-\tau}$ gauge model. For example, an analytical method has been proposed to give predictions for neutrino masses and Majorana phases for right-handed neutrinos and a scalar field with $U(1)_{\mu-\tau}$ charge are added to the SM when the model has two zero components in the right-handed neutrino + $SU(2)$ doublet scalar model, which was excluded in the previous study. On the other hand, focusing on the right-handed neutrino + $SU(2)$ doublet scalar model is excluded due to Atomic Parity Violation, meson decay, and other limitations. Whether to add a $SU(2)$ singlet scalar to this model which relaxes

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