

Generalised CP Symmetry and Texture Zero in Trimaximal Mixing Matrix

In this study, we explore the impact of texture zero on the neutrino mass matrix, focusing on their ability to constrain unknown parameters such as mixing angles, Dirac and Majorana phases, and mass eigenstates. We investigate one-zero texture within the framework of generalized CP symmetry associated with the complex tribimaximal matrix. By combining these approaches, we derive predictive neutrino mass matrices and neutrinoless double beta decay in the context of texture zero, considering the implications for current and future experimental searches. Our findings highlights the enhanced predictability and testability of neutrino mass models that incorporate generalized CP symmetry.

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