About the Mixing and CP Violation in Neutrino System

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Abstract

Suppose the geometrical explanation to the weak CP phase in quark sector is also valid for neutrinos, the mixing and CP violation in neutrino system are discussed. We find a larger $J_{CP}$ than $3 \times 10^{-3}$ implies the large-mixing solution for solar neutrino problem. In case of bi-maximal mixing, we predict relative large CP violation with $J_{CP}$ larger than $10^{-3}$ in neutrino system, except the third mixing angle approaches to 0 or $\pi/2$ very closely.

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