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## Low-Scale Seesaw and the CP Violation in Neutrino Oscillations

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We consider a version of the low-scale type I seesaw mechanism for generating small neutrino masses, as an alternative to the standard seesaw scenario. It involves two right-handed (RH) neutrinos  $\nu_{1R}$  and  $\nu_{2R}$  having a Majorana mass term with mass M, which conserves the lepton charge L. The RH neutrino  $\nu_{2R}$  has lepton-charge conserving Yukawa couplings  $g_{\ell 2}$  to the lepton and Higgs doublet fields, while small lepton-charge breaking effects are assumed to induce tiny lepton-charge violating Yukawa couplings  $g_{\ell 1}$  for  $\nu_{1R}$ ,  $l = e, \mu, \tau$ . In this approach the smallness of neutrino masses is related to the smallness of the Yukawa coupling of  $\nu_{1R}$  and not to the large value of M: the RH neutrinos can have masses in the few GeV to a few TeV range. The Yukawa couplings  $|g_{\ell 2}|$  can be much larger than  $|g_{\ell 1}|$ , of the order  $|g_{\ell 2}| \sim 10^{-4} - 10^{-2}$ , leading to interesting low-energy phenomenology. We consider a specific realisation of this scenario within the Froggatt-Nielsen approach to fermion masses. In this model the Dirac CP violation phase  $\delta$  is predicted to have approximately one of the values  $\delta \simeq \pi/4$ ,  $3\pi/4$ , or  $5\pi/4$ ,  $7\pi/4$ , or to lie in a narrow interval around one of these values. The low-energy phenomenology of the considered low-scale seesaw scenario of neutrino mass generation is also briefly discussed.

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