ERRATA

Erratum to: *CP* Properties of Leptons within the Mirror Mechanism

I. T. Dyatlov*

Petersburg Nuclear Physics Institute, National Research Center Kurchatov Institute, Gatchina, 188300 Russia

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In the author's papers on the mirror mechanism, the properties of the lepton weak mixing matrix (PMNS matrix) are reproduced at zero Majorana parts of masses of light ν_{SM} neutrinos. For heavy mirror neutrinos considered in the papers and produced by Majorana fermions whose masses have equal moduli, this approach is not correct. In this case, light ν_{SM} include both the Dirac (μ_D) and Majorana (μ_M) parts of the mass matrices (again, with equal mass moduli):

$$\begin{aligned}(\mu_M)_{a,b} &\approx \sum_{n=0}^2 A_{an} \frac{\mu_n}{|M_n|^2} A_{nb}^+; \\(\mu_M)_{ab} &\approx \pm \sum_{n=0}^2 A_{an} \frac{1}{M_n} A_{nb}^T; \\A &\ll \mu \ll |M|, \quad a, b = 1, 2, 3.\end{aligned}\quad (1)$$

The notation is the same as in the above-mentioned papers. M_n may be complex when the Majorana phases are present. A is a real symmetric matrix.

Diagonalization of both parts of Eq. (1) (with $UU^T = 1$) conserves all PMNS natural properties found in the papers under the same assumption on the inverse ν_{SM} spectrum. The reproduction stems from the general properties of the mirror symmetry model. But Dirac ν_{SM} neutrino mass allows now the lepton number breaking (similarly to heavy neutrinos in the above-mentioned papers).

Other choices of the coefficients, e.g. various Majorana masses and complex A , do not provide simple reproduction of the light neutrino mass spectra and of the properties of the PMNS matrix.

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*E-mail: dyatlov@thd.pnpi.spb.ru