

THEORETICAL LIMITATIONS ON ELEMENTS
OF THE YUKAWA MATRIX IN THE ν MSM MODEL

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The system of equations which couples elements of the Yukawa and active neutrino mass matrices in the ν MSM theory (an extension of the Standard Model by three right-handed neutrinos which are singlets of the weak isospin) has been analyzed and solved. On the basis of the solution obtained, more accurate constraints on the model parameters have been determined. The obtained results were also used to study the CP-violating phase in the case where the elements of the active neutrino mass matrix are real-valued. The generation of a baryon asymmetry has been demonstrated to occur in this case as well.