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Five texture zeros for Dirac neutrino mass matrices

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In this work, we propose new five texture zeros for the mass matrices in the lepton sector in order to predict neutrino masses. In our approach, we extend beyond the standard model (SM) by assuming Dirac masses for the neutrinos, a feature which allows us to make a theoretical prediction for the lightest neutrino mass in the normal ordering. The textures that were analyzed have enough free parameters to adjust the VPMNS mixing matrix including the CP-violating phase, the neutrino mass squared differences, and the three charged lepton masses. we used two different procedures, the first method was based on a least-squares analysis and the second approach was algebraic.

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