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The first evidence for M-theory: fractal nearly tri-bimaximal neutrino mixing and CP violation[1] HUI-BIN QIU, Strong-field and Ultrafast Photonics Lab, Institute of Laser Engineering, Beijing University of Technology, Beijing 100124, China, STRONG-FIELD AND ULTRAFAST PHOTONICS LAB COLLABORATION — Finding the final theory that can describe everything in the universe is of great interests, which is closely relevant to neutrino oscillation, M-theory and CP violation. We propose an instructive possibility to generalize the tri-bimaximal neutrino mixing ansatz, such that leptonic CP violation and the fractal feature of the universe can naturally be incorporated into the resultant scenario of fractal nearly tri-bimaximal flavor mixing. The consequences of this new ansatze on the latest experimental data of neutrino oscillations are analyzed. This theory perfectly matches the current experimental data, and surprisingly, we find that the existing neutrino oscillation experimental data is the first experimental evidence supporting one kind of high dimensional unified theories, such as M-theory. Furthermore, an interesting approach to construct lepton mass matrices in fractal universe under permutation symmetry is discussed. The proposed theory opens an unexpected window on the physics beyond the Standard Model.

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