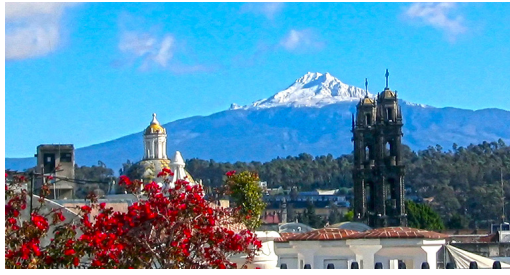


Triggering Discoveries in High Energy Physics II



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Lepton CP violation in $\nu 2\text{HDM} \times S3$

Tuesday, 30 January 2018 12:20 (40 minutes)

In the theoretical framework of Two Higgs Doublet Model type-III plus neutrinos and the horizontal flavor symmetry $S3$ ($\nu 2\text{HDM} \times S3$), we compare the theoretical expressions of the flavor mixing angles with the current experimental data on masses and flavor mixing of leptons, through a chi-squared likelihood test. The results obtained in this chi-squared analysis are in very good agreement with the current experimental data. We also obtained an allowed value ranges for the “Dirac-like” phase factor, as well as for the two Majorana phase factors. Furthermore, we study the phenomenological implications of these numerical values of the CP-violation phases on the neutrinoless double beta decay, and for Long Base-Line neutrino oscillation experiments such as T2K, NOvA and DUNE.

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Session Classification: Physics motivation, trigger and results