



Contribution ID: 60

Type: **Poster session**

A simplified framework to explain neutrino oscillations

This presentation will present an alternative interpretation and derivation of neutrino oscillations via a simplified mass model and well-known dynamical system methods. The derivation appears to resolve many well known experimental anomalies such as the short baseline anomaly and the LSND/MiniBoone results without requiring a fourth neutrino. A new measurable quantity defined as the Flavon mass replaces the concept of mixing angles in this model. The model shows agreement with current reactor antineutrino and solar neutrino sectors (with flavon masses $f_{\mu} = 3.31 \times 10^{-14}$ eV and $f_{\tau} = 2.49 \times 10^{-11}$ eV). The model has clear predictions that may be easily verified with future medium baseline experiments such as JUNO. Finally, a discussion on possible future experiments to test this model and the status of the work will be presented.

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Session Classification: Neutrino Physics Session 2

Track Classification: Neutrino Physics