

## Phenomenology 2019 Symposium



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# Resolving CP Confusion From Non-Standard Neutrino Interactions

*Tuesday 7 May 2019 17:30 (15 minutes)*

Non-standard neutrino interactions (NSI) can interfere with measurements of neutrino oscillation parameters at long-baseline experiments, in particular making determination of  $\delta_{13}$  ambiguous. Measurements at different baselines or energies may be combined to improve this situation, but it can be difficult to see the influence of individual parameters and determine when degeneracies may exist or be broken. In this talk I will show how the relationship between underlying parameters, degeneracies and their breaking may be represented in a convenient way in biprobability space. An application of particular interest is the experimental hints suggesting  $\delta_{13} \sim -\pi/2$ , which could be consistent with nonzero NSI but the absence of CP violation. I'll also present on-going work that applies this to understand the reach of upcoming experiments in distinguishing models.

## Summary

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**Session Classification:** Neutrinos III