



量子物理学・ナノサイエンス第 287 回セミナー

Electron Scattering Constraints on Neutrino Interactions and Oscillation Analyses

- 講師** : Professor Or Hen
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- 日程** : 2020 年 1 月 27 日 (月) 10:30–12:00
- 場所** : 本館 1 階 156 物理学系輪講室

概要

Precision accelerator-based neutrino oscillation measurements rely on precise and accurate modeling of the interaction of neutrinos with atomic nuclei. At the moment our insufficient understanding of such interactions is a dominant systematic uncertainty in extraction of neutrino oscillation parameters and can stand as a significant challenge for achieving the goals of next-generation neutrino oscillation experiments such as T2-HyperK and DUNE.

In this talk I will present new results from novel experimental constraints on neutrino-nucleus interactions from measurements of wide phase-space neutrino and electron exclusive scattering reactions using the MicroBooNe (Fermilab) and CLAS (JLab) detectors. I will also show how such data allow addressing outstanding issues in neutrino physics such as the accuracy of incident neutrino energy reconstruction for oscillation analyses and constraints on searches for physics beyond the standard model.

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