

Constraining BSM neutrino physics with CEvNS

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Observing neutral-current coherent elastic neutrino-nucleus scattering (CEvNS) at the COHERENT experiment has opened a new window to search for new physics beyond the Standard model. In this talk, I will present the constraints on BSM neutrino physics searches obtained from a detailed statistical analysis of the COHERENT CsI and LAr data. In particular, I will focus on neutrino electromagnetic properties, neutrino nonstandard interactions, and the most general case of neutrino generalized interactions or the presence of light mediators or sterile neutrino states. I will also discuss the potential of upcoming reactor and accelerator CEvNS experiments to constrain nuclear properties and BSM neutrino physics simultaneously.

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Session Classification: Talks