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RELICS: A liquid xenon time projection chamber for reactor CEvNS

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The neutrino-nucleus coherent scattering (CEvNS) has the largest cross-section among all interaction channels for MeV neutrinos, making it a promising way to monitor nuclear reactors remotely. Liquid xenon time projection chamber (LXeTPC) is a promising technology for CEvNS search, thanks to its low background and low energy threshold. The RELICS (REactor neutrino LIquid xenon Coherent Scattering) experiment aims at reactor CENS detection using an LXeTPC. At a baseline of 25 meters, RELICS will precisely measure the CEvNS cross-section to understand fundamental properties of neutrinos, and search for new physics beyond the Standard Model, such as axions. In this talk, I will introduce the status of the RELICS experiment and discuss its physics potential.

Author

Auteur: LI, Shengchao (Westlake University)

Orateur: LI, Shengchao (Westlake University)

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