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Muon-Induced Background Mitigation in the RELICS Experiment

Poster Abstruct

Precise measurement of Coherent elastic neutrino-nucleus scattering (CEvNS) is crucial for constraining the Standard Model and probing neutrino non-standard interactions. The Liquid Xenon Time Projection Chamber (LXeTPC) achieves enhanced signal amplification and lower energy thresholds, making it an ideal technology for CEvNS detection. The RELICS experiment in Taizhou, China, utilizes the LXeTPC technology to detect neutrinos from a nuclear reactor. One of the key challenges in this new scenario is suppressing the dominant delayed-electron background from cosmic muons. This poster will present the main background mitigation strategy and the latest progress of the RELICS experiment.

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