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Status of RELICS experiment for reactor CEvNS detection

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The coherent elastic neutrino-nucleus scattering (CEvNS) process is a promising approach for investigating neutrino properties and exploring physics beyond the Standard Model. The REactor neutrino LIquid xenon Coherent elastic Scattering experiment (RELICS) plans to deploy a 50-kilogram-scale two-phase liquid xenon time projection chamber (LXeTPC) near the reactor at China's Sanmen Nuclear Power Plant. The project aims to detect CEvNS with xenon nuclei using ultra-low background, low threshold, and large exposure techniques. This report will focus on the detector design, background control, and anticipated sensitivity of the RELICS experiment.

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