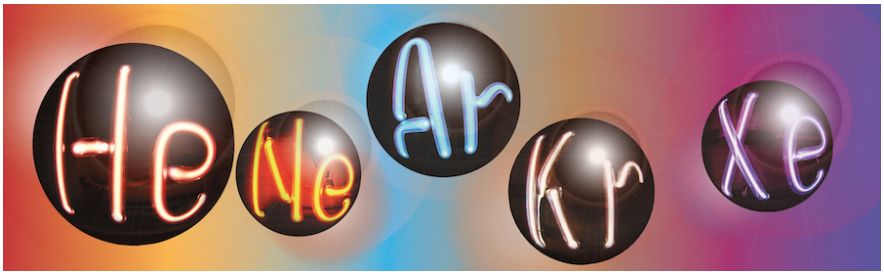

Contribution ID: **27** Type: **Oral Presentation**

The RELICS Experiment: Measuring Coherent Neutrino-Nucleus Scattering Utilizing Dual-Phase Xenon TPC

Tuesday, 21 October 2025 15:00 (20 minutes)

The measurement of Coherent Elastic Neutrino-Nucleus Scattering (CEvNS) cross-sections is crucial for advancing neutrino physics and probing for new phenomena beyond the Standard Model. A major challenge lies in mitigating low-energy backgrounds that mimic the CEvNS signal. Liquid Xenon Time Projection Chambers (LXeTPCs), having demonstrated sub-keV energy sensitivity in dark matter searches, present a suitable technology for this challenge. The RELICS experiment utilizes a LXeTPC to detect CEvNS events induced by reactor neutrinos in the ˜MeV energy range. This talk will give recent progress in the RELICS experiment, focusing on advancements in detector design, background suppression, and sensitivity optimization.

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Session Classification: Applications

Track Classification: Applications (dark matter, neutrino, precision frontier, medicine, etc.)