

New Technologies for Discovery IV: The 2018 CPAD Instrumentation
Frontier Workshop

Contribution ID: 48

Type: **Oral Presentation**

Internal Calibration Source Injection Hardware for LZ

Tuesday, 11 December 2018 08:00 (15 minutes)

Self-shielding in ton-scale liquid noble detectors presents a unique challenge for calibrating the detector's innermost volume. Calibration isotopes must be injected directly into the active material to reach the central volume, and they must either decay away with a short half life or be purified out. I present a summary of the LUX-ZEPLIN (LZ) calibration hardware effort at UMass Amherst in which we are refining techniques for the injection and removal of precise activities of various calibration isotopes. This technology is generalizable to the liquid noble field as a whole.

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Session Classification: Parallel Session: Noble Element Detectors

Track Classification: Nobel Element Detectors