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# Calibrating DUNE LArTPC Detectors Using Low-Energy Radioactive Decays

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The Deep Underground Neutrino Experiment (DUNE) at the Long-Baseline Neutrino Facility (LBNF) is an international project that will be the largest particle physics experiment ever built in North America. The DUNE project will use massive liquid argon time projection chambers (LArTPCs) to provide insight on fundamental questions such as the origin of the matter/antimatter asymmetry in the universe, the nature of astrophysical sources of neutrinos (e.g. stellar core-collapse supernovae), and the prospective occurrence of baryon number violation. In order to answer such questions, DUNE will make measurements that probe the nature of neutrino oscillation with unprecedented precision. DUNE relies on precise measurements of neutrino-argon interactions, necessitating an extensive calibration program for the LArTPC detectors recording these interactions. Given the detectors will be located underground with significant overburden, the low cosmic ray rate greatly limits calibration capabilities using cosmogenic activity. Low-energy decays of radioactive isotopes naturally present in the (atmospheric) argon can provide a handle on calibrations that complements what can be done with limited statistics of cosmogenic activity in the detectors. Such decays can also provide a unique calibration source for astrophysical neutrino interactions in the detector. In this talk, the prospect of calibrating DUNE's LArTPC detectors using low-energy radioactive decays is presented, including preliminary results obtained using data from DUNE's prototype detectors.

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