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-term Radioxenon Efficiency Calibration Study of Beta-Gamma Detectors

This study investigates the long-term variations in radioxenon efficiency calibrations by conducting nearly monthly calibration experiments over an extended period on a single system. Historically, radioxenon detection systems are calibrated infrequently, often only once or very rarely, raising concerns about the long-term accuracy and reliability of the detectors. Accurate and consistent calibrations is vital for reliable data interpretation. In this research, multiple efficiency calibrations were performed to track changes in detector performance and to assess whether more frequent calibrations are necessary. The study's primary objective was to discern any trends or anomalies in calibration efficiency over time, which could impact the precision of radioxenon measurements. The results of the long-term study will be presented.

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