

Fabrication and characterization of thin Delta E detectors for spectroscopic application

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Ultra-thin ΔE detectors for spectroscopic applications have been fabricated and characterized down to a thickness of $4.5 \mu\text{m}$. A common one-side mask aligner was used to fabricate the detectors. The detectors display low leakage current and the resulting capacitance is close to the detector window capacitance below a threshold voltage. The detector telescope needs to be slightly tilted to reduce the probability for channeling. However, even better control of the thickness uniformity is needed to improve the resolution in the ΔE - E detector telescope.