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## **P1.69: Probability distribution maps of deposited energy with sub-pixel resolution for Timepix3 detectors**

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The data driven mode of Timepix3 allows for energy bins, which can be adaptively re-binned during material reconstruction with spectroscopic X-ray imaging. This work aims to generate probability maps for the initial interaction position and energy for detected clusters with Timepix3 detectors. The correction maps are calculated for various cluster shapes, energies and subpixel center of mass position. Using these probability maps to correct measured X-ray datasets should lead to higher energy and spatial resolution spectroscopic X-ray imaging. The simulations using the simulation tool of Allpix2 are compared with experimental data.

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