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The New PHOTON III Detector with Photon Counting in Mixed-Mode Detection

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The best crystal structures for publication require X-ray detectors with high signal-to-noise ratios and accurate intensities. The new PHOTON III detector family matches these requirements perfectly, offering mixed mode detection for the first time. Mixed mode detection simultaneously combines photon counting and integration, providing data of ultimate quality for both strong and weak reflections. Conventional photon counting detectors, like HPC or HPADs, suffer from poor linearity and count rate limitations for strong reflections, significantly degrading data quality. The mixed mode PHOTON III detector eliminates all detector noise, delivering the highest linearity and guaranteeing the highest quality data for the most challenging samples. The PHOTON III is available in three different sizes to ensure the best performance for your application needs. Users admire the detectors'ultimate sensitivity over a wide energy range (from In-Kα to Ga-Kα), low point-spread, and parallax-free diffraction data. The PHOTON III also features high-energy event discrimination (HEED) that eliminates ubiquitous cosmic radiation artefacts making it the best detector ever developed.

Details on the function principle of the PHOTON III detector and latest application examples will be discussed.

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