

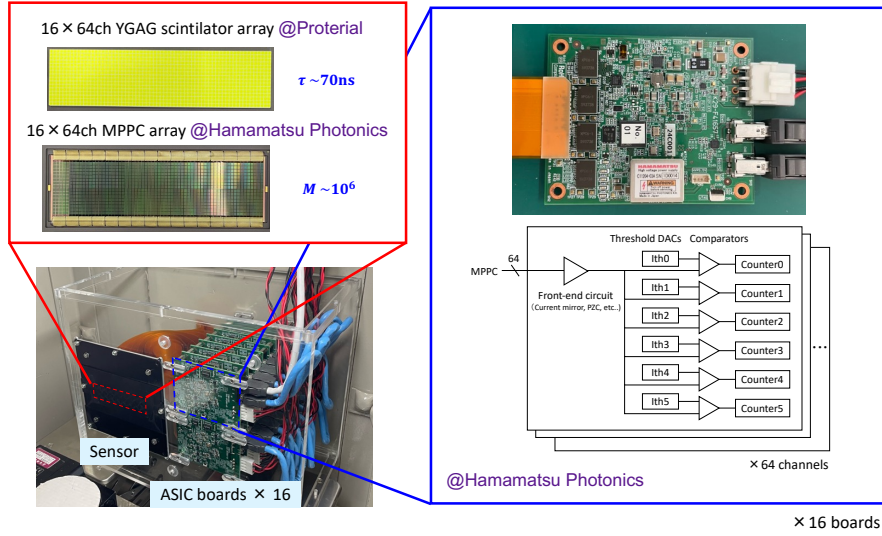


Fig. 1. Newly developed 2D-1024ch SiPM-based PCCT system (Lower left figure). Detector array consisting of a 2D-1024ch YGAG:Ce scintillator array and a 2D-1024ch MPPC array with a pixel pitch of $1 \times 1 \text{ mm}^2$ (Upper left figure). The X-ray signals are processed by a newly developed ASIC × 16 pieces (Right figure).

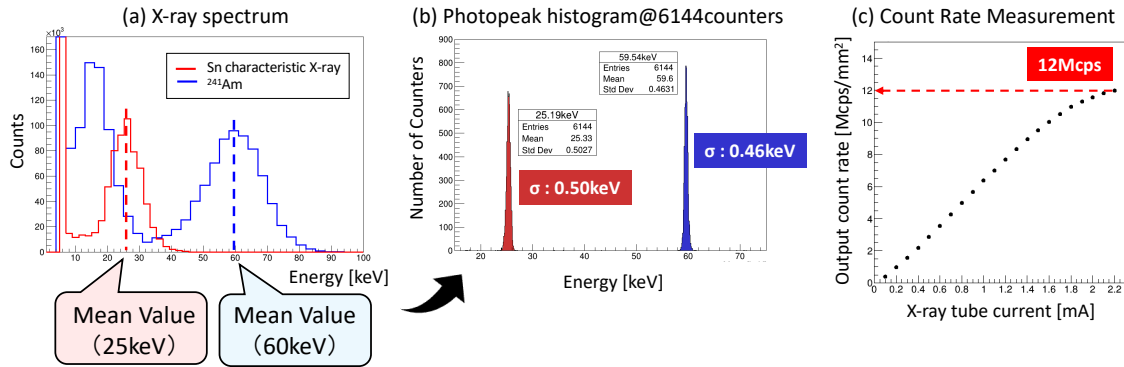


Fig. 2. Main Performance Features: (a) X-ray spectrum measurements using two types of sources, (b) Histogram of photopeak values in all threshold counters of all channels, (c) Detection count rate characteristics with increased X-ray tube current

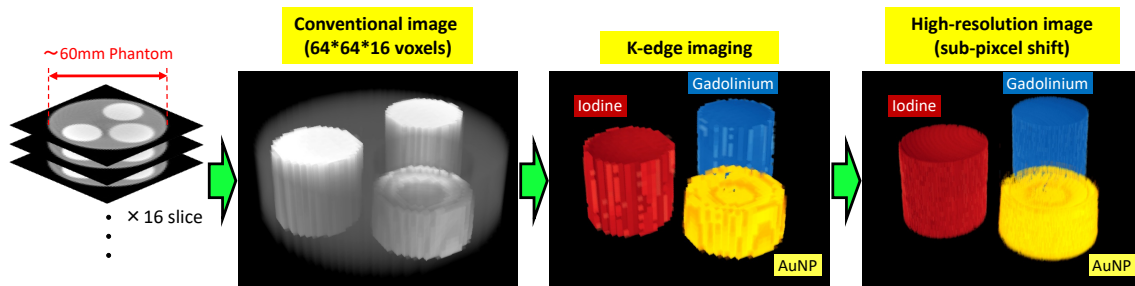


Fig. 3. 3D X-ray imaging results. Three distinct contrast agents were successfully visualized in 3D using only rotation control. Spatial resolution was further improved by applying sub-pixel shift imaging.