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## Considering the Suitability of X-Ray Detectors for Medical Imaging and Accelerator Applications

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Digital tomography (DT) is an x-ray scanning modality that creates 3D images similarly to Computed Tomography, but over a lower angular range. Recent innovation by company Adaptix have revised this technology to allow for the development of portable DT devices that retain the low dose benefit of this technique.

The detector is a key component of this device. For medical imaging, detectors require a fast read-out time to optimise patient comfort with sufficient pixel resolution to see details of interest, such as tumours. This compares to detectors used in synchrotrons, for example, which similarly must have a suitably fast read-out time for the pulse spacing with resolution adequate for a range of objects of interest.

Therefore, this work aims to focus on the role of detectors as a key hardware component in both accelerator and medical imaging research. Two detectors with distinct parameters each, the DRTech1624 and DRTech3643, will be compared to inform discussion as to their usefulness for DT imaging as well as relating how applicable these findings might be in other modern x-ray contexts, such as within XFEL technology.

### Footnotes

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