Docket #: S11-309

Dual panel PET scanner

Researchers at Stanford University have developed a high-performance PET scanner optimized for focal imaging. The scanner uses an optimized, sized, curved, dual-panel configuration that incorporates both photon depth-of-interaction and time-of-flight technologies for a limited angle tomography geometry. This scanner takes advantage of the unique geometry to focus response lines on specific parts of the body to create higher resolution images, with greater sensitivity, but at a lower cost than using a traditional whole body PET scanner.

Applications

- Cancer imaging of the head-neck region
- Neurological imaging of the brain
- Cardiovascular imaging

Advantages

- Higher resolution – afforded by the unique focal geometry of the system.
- Greater sensitivity – gained by being able to bring the detector panels in close proximity to the patient contours
- Lower cost – dual panel PET scanner has much less detectors and thus costs less than a whole body PET scanner. The limited angle tomography geometry is addressed by incorporating both depth-of-interaction and time of flight technology.

Publications

- PCT Patent Application, Serial No. US2012/065465

Patents

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