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easyPET –a new approach for axial preclinical PET

easyPET is a new concept of PET scanner using an innovative acquisition method based on two rotation axes for the movement of detector modules. The concept allows high position resolution and spatial uniformity over the whole field of view (FOV) due to its capacity to eliminate (when operating in 2D acquisition mode) the parallax error due to depth of interaction (DOI), characteristic of ring based PET systems.The immunity of easyPET to DOI effects does not impose limitations on the proximity of the detector elements to the FOV and thus favours the system sensitivity. Furthermore, full axial imaging is possible with only a small number of detector elements, e.g. 256 scintillator crystal pairs.
A scaled up version of the easyPET concept for high resolution and good sensitivity for preclinical purposes will be presented and discussed. Patent pending by the Aveiro University, PCT/IB2016/051487

Summary

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