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Depth of Interaction System in Nuclear Imaging

Technology Reference

R024

Keywords

Imaging
Diagnostic Tool

Contact

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Patent Status

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AREAS OF APPLICATION

Reduction of image reconstruction errors resulting from variations in the depth of interaction of gamma rays within the scintillation crystal of a gamma camera. .

- Single and dual-head gamma ray (Anger) cameras
- Positron emission cameras
- Multi-well gamma plate readers

ADVANTAGES

- Depth resolution is determined by device geometry
- Can be applied to existing cameras and scintillation crystals
- Allows for the correction of parallax-induced image degradation

THE TECHNOLOGY

This invention comprises a linear array of optical fibers applied to the entry face of the scintillation crystal of a gamma camera for the purpose of determining the interaction depth of a gamma ray within the crystal. The distribution of photons emitted by the scintillation crystal in the plane of the optical fibers is a function of the gamma ray interaction depth within the crystal.

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