



Method and apparatus for measuring and analyzing radiation transmitted at plural angles

Abstract

In an apparatus for examining a body by means of penetrating radiation a source of the radiation and a detector are arranged to orbit about the body. Data obtained from the detector are used to provide a representation of the distribution of absorption in part of the body. To reduce patient movement artefacts in the reconstructed image some of the data are obtained for substantially the same radiation paths through the body, but at different times, and are combined after weighting by complementary factors.

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United States

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Images (3)



Worldwide applications

1974 GB 1975 [US](#) FR

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1974-02-15 Priority to I

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Classifications

- ▶ **A61B6/4071** Pencil beams

[View 3 more classifications](#)**Info:** Patent citations (9), 1 documents, Priority and R**External links:** USPTO, US Dossier, Discuss

Claims (6)

What I claim is:

1. An apparatus for examining a body by means of penetrating radiation such as X- or γ -radiation including source means arranged to irradiate the body, detector means responsive to said radiation and disposed to receive said radiation after passage through the body along a plurality of paths to provide corresponding output signals for processing to construct a representation of the distribution of the absorption of the radiation over the body, source and detector means around the body causing said source means to irradiate the slice from a plurality of directions and said detector means to receive said signals, relating to further substantially linear paths, and processing means arranged to multiply some of the output signals derived from said paths, substantially the same path through the body, but obtained at different times during said rotation, by complementary factors which vary with time thereafter to combine said signals.

2. An apparatus for examining a body by means of penetrating radiation such as X- or γ -radiation including source means arranged to irradiate the body, detector means responsive to said radiation and disposed to receive said radiation after passage through the body along a plurality of paths to provide corresponding output signals for processing to construct a representation of the distribution of the absorption of the radiation over the body, source and detector means around the body causing said source means to irradiate the slice from a plurality of directions and said detector means to receive said signals, relating to further substantially linear paths, and processing means arranged to combine some of the output signals provided by the