OAK RIDGE NATIONAL LABORATORY
Managed by UT-Battelle for the Department of Energy

Multi-Particle Inspection Using Associate Particle Sources

Disclosure Number

201002418

Technology Summary

This disclosure describes a potential improvement the neutron/gamma inspection systems being developed for inspection of air cargo containers. These current systems use neutrons and gammas together to help isolate materials such as explosives within a container. Scattering of the neutrons and gammas within the cargo requires the systems to use slit collimators. This disclosure introduces the notion of using associated particle sources to provide electronic collimation based on initial time and/or direction of the particle leaving the source. Electronic collimation will reduce shielding material required and speed inspection by allowing imaging with cone beams instead of with fan beams.

Inventor

BINGHAM, PHILIP R

Measurement Science & Systems Engr Div

Licensing Contact

SPEIGHT II, MELVIN D
UT-Battelle, LLC
Oak Ridge National Laboratory
Room 143, 4500N, MS: 6196
1 Bethel Valley Road
Oak Ridge, TN 37831

Office Phone: (865) 241-6564
E-mail: DSPEIGHT@ORNL.GOV

Note: The technology described above is an early stage opportunity. Licensing rights to this intellectual property may be limited or unavailable. Patent applications directed towards this invention may not have been filed with any patent office.