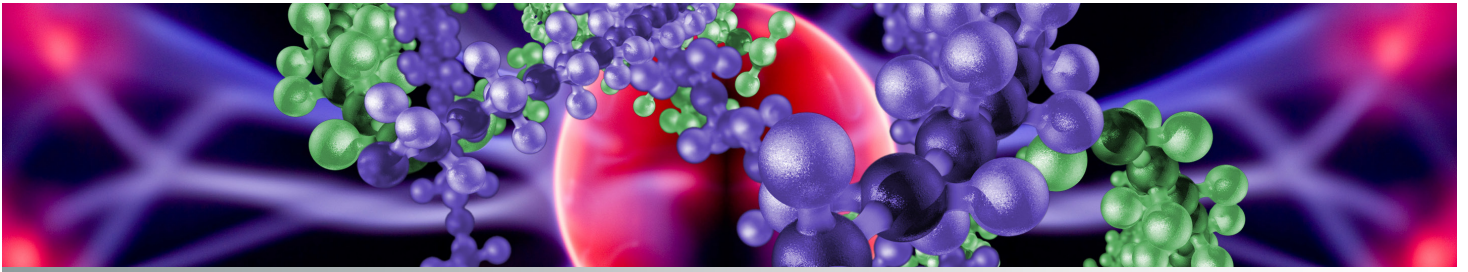


Neutron-Sensitive Anger Camera



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Technology Summary

With the worldwide shortage of ^3He , used in most neutron detectors, people have been scrambling to find safe, effective, inexpensive alternatives. The current invention modifies the Anger camera, developed for gamma detection, for use as a neutron detector. This modified Anger camera retains the desirable characteristics of ^3He detectors and thus fulfills the requirements for neutron scattering applications such as materials characterization and nuclear materials detection. The invention incorporates unique fabrication techniques such as a precision mounting system for the photomultiplier tubes and custom-designed summer boards as well as novel signal processing techniques. The resulting improved Anger camera achieves very high efficiency, high resolution, and low background noise at reduced cost.

Patent

Richard A. Riedel; Theodore, Visscher; Lloyd G. Clonts; Yacouba Diawara; Cornelius Donahue, Jr.; Christopher A. Montcalm; and Darren Ellis. *Neutron-Sensitive Anger Camera*, U.S. Provisional Patent Application 61/592,785, filed January 31, 2012.

Inventor Point of Contact

Richard A. Riedel
Instrument and Source Design Division
Oak Ridge National Laboratory

Licensing Contact

Mark Reeves
Group Leader, Sponsored Research
UT-Battelle, LLC
Oak Ridge National Laboratory
Office Phone: 865.576.2577
E-mail: reevesme@ornl.gov