

Alpha Particle Detection in Associated Particle Imaging

Disclosure Number

201002493

Technology Summary

The present invention provides improved spatial resolution (100 microns or less) for charge particle detection and/or cold neutron detection with extremely low sensitivity to other radiation such as x-rays or gamma rays. The instrument and method of the present invention defines the time of the event within ~1 nanosecond. Depending on how the invention is implemented the spatial resolution can be larger or smaller than 100 microns as desired. The invention is simpler than existing methods for corresponding applications, and has a higher signal to noise ratio, resulting in lower false detections and higher real detections. Technology necessary to make prototypes is already in place at ORNL.

Inventor

MIHALCZO, JOHN T

Global Nuclear Security Technology 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.