

Shifting Scintillator Neutron Detector

Disclosure Number

200902331

Technology Summary

The Shifting Scintillator Neutron Detector is used to detect thermal neutrons while rejecting gamma radiation events. The current detector has a resolution that can be altered to meet the requirements of the application. The detector has high neutron capture efficiency and microsecond time resolution for neutron events. The position and time of each neutron capture can be stored in event mode or in a histogram. Gamma rejection is based on pulse shape discrimination and is orders of magnitude better than typical scintillation detectors. Each detector is designed to be tiled into large arrays with minimal gap area. This detector is an inexpensive alternative to helium-3 detectors which are no longer available.

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