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Development of a fast neutron assay system

Systems based on fast neutron detectors have the potential to significantly reduce the time required to assay items containing SNM when compared with thermal, He3 based, systems. This poster will give an overview of a prototype fast neutron assay system being developed by AWE. The system uses an array of EJ309 liquid scintillator detectors and XIA Pixie4express electronics to carry out pulse shape discrimination required to separate the gamma-ray and neutron signals, in real time. Preliminary results from recent measurements on bulk quantities of material will also be presented.

Primary author: KELSALL, Nigel (AWE)

Co-author: JONES, Lawrence (AWE)

Presenter: KELSALL, Nigel (AWE)

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