

Portable Fast-Neutron Radiography with the Nuclear Materials Identification System

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The Nuclear Materials Identification System (NMIS) has historically been used with a ^{252}Cf source for bulk interrogation of highly enriched uranium and plutonium. Recently, a portable associated particle sealed-tube neutron generator (APSTNG) has been added as an interrogation source. This paper reports results from using the NMIS with the neutron generator to perform transmission radiography. In particular, the use of associated particle techniques allows low-dose imaging to be performed simultaneously with traditional measurements, without physical collimation, and in high background environments.