

of Xe-127 Measurements

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Recent reports have shown that unusual xenon radionuclides can show up in ground based xenon detection systems that lead to false hits on all four of the regularly monitored radionuclides (Xe-135, Xe-133, Xe-133m, Xe-131m). Potential sources of these unusual radionuclides could be high flux neutron sources or spallation neutron sources that are operated in the vicinity of current ground based collection systems. The development of detection algorithms for these unusual xenon radionuclides is needed to prevent false positive detections from diverting analyst time and resources away from potential legitimate radionuclide detections. The Idaho National Laboratory Noble Gas Laboratory has developed the capability to produce Xe-127. This radionuclide has never been utilized in an interlaboratory comparison exercise. This work carries out a limited interlaboratory comparison exercise to demonstrate the potential for introducing Xe-127 and other unusual xenon radionuclides into future laboratory comparison exercises.

Promotional text

Comparison of independent laboratories measuring Xe-127.

E-mail

matthew.watrous@inl.gov

Oral preference format

Primary author: Mr ROBINSON, Troy (Idaho National Laboratory)

Co-authors: Dr GOODWIN, Matthew (Atomic Weapons Establishment (AWE) Aldermaston); WATROUS, Matthew (Idaho National Laboratory)

Presenter: Mr ROBINSON, Troy (Idaho National Laboratory)

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