



ID: P2.3-190

Type: E-poster

background interference sources of Argon-37

Argon-37, due to its 35-day half-life, is a potential noble gas signature for detection of an underground nuclear explosion (UNE) for up to ~1 year after the event. This half-life also allows Ar-37 from background sources to persist in the environment. Argon-37 has been examined as a soil gas signature, and some exploration as a signature in air samples, although the background of argon-37 in air is less well-known. This work examines the potential background sources of argon-37, from reactors, accelerators, and other possible pathways to understand the limitations of detecting argon-37 in air samples for nuclear explosion monitoring.

E-mail

james.ely@pnnl.gov

In-person or online preference

Primary authors: Ms GARLAND, Heather (Pacific Northwest National Laboratory (PNNL)); Mr ELY, James (Pacific Northwest National Laboratory (PNNL)); Mr HAYES, James (Pacific Northwest National Laboratory (PNNL)); Mr LOWREY, Justin (Pacific Northwest National Laboratory (PNNL))

Presenter: Mr ELY, James (Pacific Northwest National Laboratory (PNNL))

Session Classification: P2.3 Atmospheric and Subsurface Radionuclide Background and Dispersion

Track Classification: Theme 2. Monitoring events and Nuclear Test Sites: T2.3 Atmospheric and Subsurface Radionuclide Background and Dispersion