ID: Type: **Oral**

High Resolution stack data from fission based Mo-99 production

Monday 24 June 2019 16:45 (15 minutes)

The Source Term Analysis of Xenon (STAX) project is a new effort to better understand the radioxenon background in the environment. This project is using high resolution stack detectors to directly measure the radioxenon emissions from fission-based Mo-99 production facilities. Currently, two experimental high purity germanium (HPGe) based detector systems reside at the Institute for Radioelements (IRE) in Fleurus Belgium and at the Australian Nuclear Science and Technology Organisation (ANSTO) in Australia, which are two of the large suppliers of worldwide Mo-99 for medical uses. Direct measurement of the four treaty relevant radioxenon isotopes (Xe-131m, Xe-133, Xe-133m and Xe-135) is being measured every fifteen minutes using these HPGe detector systems. A discussion of the detector technology and example data sets will be presented.

Primary author: FRIESE, Judah (Pacific Northwest National Laboratory)

Presenter: FRIESE, Judah (Pacific Northwest National Laboratory)

Session Classification: T2.4 Atmospheric and Subsurface Radionuclide Background and Dispersion

Track Classification: Theme 2. Events and Nuclear Test Sites