ID: Type: **Poster**

Learned from Fukushima: Improving Aerosol Systems for the IMS

The U.S.-designed Radionuclide Aerosol Sampler/Analyzer (RASA) was a key aerosol system of the Comprehensive Nuclear-Test-Ban Treaty (CTBT) International Monitoring System (IMS) in the path of debris from the Fukushima-Daiichi reactor disaster. The releases from the reactor in some ways mimic the possible releases from a nuclear explosion that was partially contained, and operational issues observed in RASA systems likely represent real-world behavior in the scenario in which they are intended to function. Key findings include uncertainty about the arrival time of the plume, the leakage of contaminated room air into the detector, and behavior of the RASA during power interruptions caused by the great East Tohoku earthquake. The authors will present short, medium, and long timeline research activities to improve RASA or any aerosol system for the purpose of verification following a nuclear explosion on the surface or partially contained underground. Forrester et al, "Engineering upgrades to the Radionuclide Aerosol Sampler/Analyzer for the CTBT International Monitoring System" Journal of Radioanalytical and Nuclear Chemistry DOI 10.1007/s10967-012-2199-7

Primary author: MILEY, Harry (Pacific Northwest National Laboratory)

Presenter: MILEY, Harry (Pacific Northwest National Laboratory)

Track Classification: Theme 3: Advances in Sensors, Networks and Processing