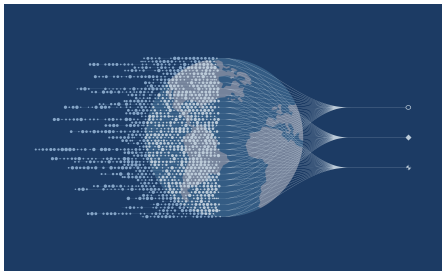

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the potential for detecting simultaneous noble gas and particulate samples in the IMS RN network

Given the existing radioxenon and radioaerosol backgrounds encountered by the IMS, detections of multiple isotopes are useful for screening purposes. We examined this issue by using six UNE release scenarios, including fractionated ones based on the literature, and subsequent atmospheric transport to IMS stations. The study identifies those radioisotopes (radioxenon and particulate) that are most likely to be detected on their own and as part of simultaneous noble gas and particulate detections, thus informing radionuclide data fusion efforts on the types of events that might be expected. Methodology will be described and results presented.

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