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Quantifying the Potential of Argon Detection Capabilities for Nuclear Explosion Monitoring

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lightning Talks
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- There is utility for ^{37}Ar as an additional signature for nuclear explosion monitoring.
- With a sufficiently low detection limit, a network of ^{37}Ar detectors would have a high probability of detecting ^{37}Ar produced from a UNE.
- ^{37}Ar can also be detected in coincidence with radioxenon isotopes, helping to increase confidence in signature analysis.

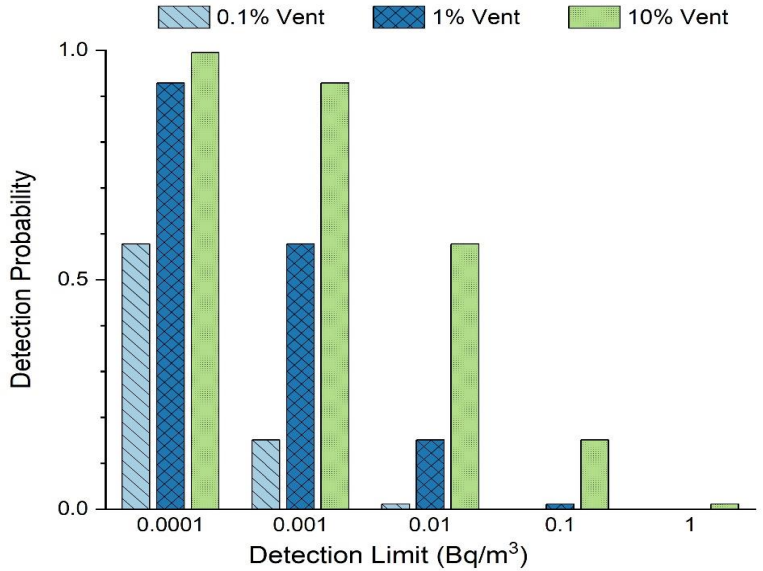

Fig 1. Probability that a release is detected in one or more samples.

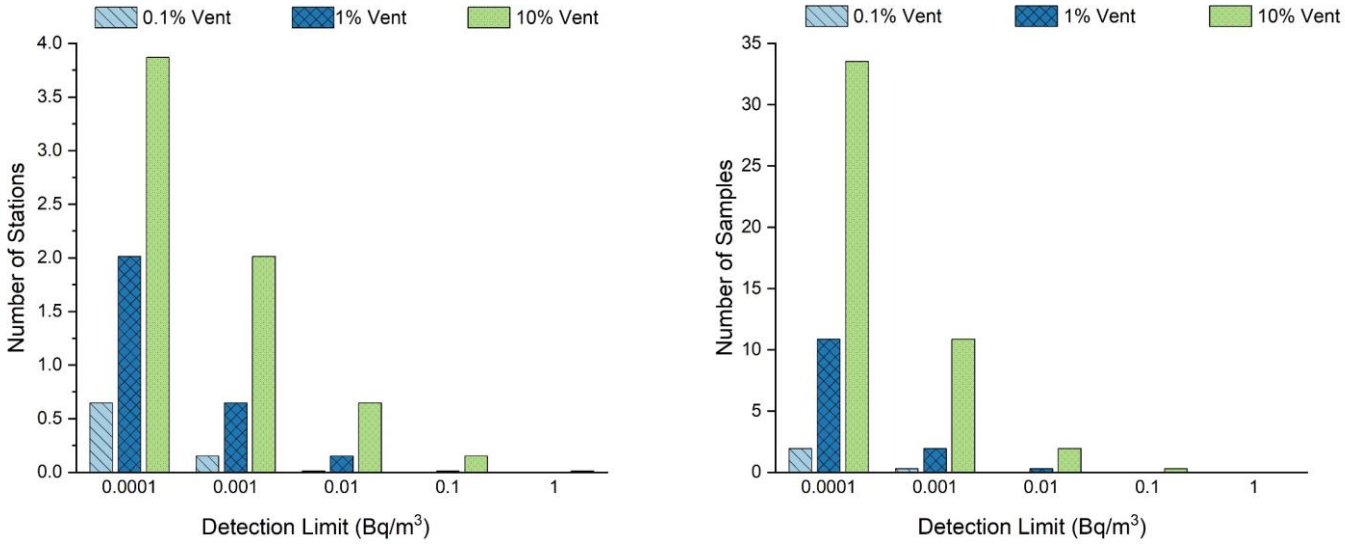

Fig 2. Average number of stations detecting each release and average number of samples with a detectable concentration.