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## Xenon Gas to Identify DPRK's Nuclear Tests

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The presence of radioactive xenon in the atmosphere is a unique signature that nuclear fission occurred. The last decade, sensitive radioxenon measurement systems and analysis techniques intended to detect and locate underground nuclear tests have developed rapidly. The new methods were used to detect and analyze airborne xenon isotopes from DPRK's first and third nuclear tests, conducted in 2006 and 2013. The analysis of these events consists of several parts, including analysis of measured activity concentrations in relation to historical data, comparison of isotopic ratios with calculated release scenarios, as well as atmospheric transport modelling. Using the DPRK detections as examples, these methods will be presented and discussed.

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