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Event Analysis of CTBT Relevant Radionuclides Detected in the Nordic Region 2020

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A series of measurements of multiple anomalous treaty relevant radionuclides at several measurement stations in Sweden and Finland, including the Stockholm aerosol sampler (SEP63) in the International Monitoring System (IMS), occurred in the summer of 2020. The cause and source of these radionuclides is still unknown. The laboratory re-measurement of the split IMS sample revealed that one-half of the split sample contained the entirety of the anthropogenic radioactivity - a high degree of sample inhomogeneity due to hot aerosol particles. Using the IMS results and by performing some advanced laboratory coincident measurement techniques, an international, multidisciplinary team started to unravel the details on the nature of this event while also demonstrating the verification benefits of adopting new sample analysis techniques.

Promotional text

Detections of multiple treaty relevant radionuclides by the IMS and national monitoring networks in June 2020 initiated an event analysis. An international, multi-disciplinary team employed multiple techniques including an advanced laboratory system to characterize this event.

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