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# on the Use of IMS Radionuclide Observations for Scientific Studies Related to the Fukushima Daiichi Nuclear Power Plant Accident

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In the months following the Fukushima Daiichi nuclear power plant accident, the IMS radionuclide stations observed elevated concentrations of anthropogenic radionuclides throughout the northern hemisphere. These data are available for scientific research through the virtual Data Exploitation Centre (vDEC) after signing a cost-free confidentiality agreement with the CTBTO. Part of these radionuclide concentrations were given to UNSCEAR for inclusion in their 2013 report. These data are highlighted in its scientific Annex on "Levels and effects of radiation exposure due to the nuclear accident after the 2011 great east-Japan earthquake and tsunami" as being unique in terms of the global coverage and the broader range of radionuclides than reported elsewhere, including four radioxenon isotopes. This presentation reviews the use of these data in dozens of peer-reviewed scientific papers. The most frequent application is the reconstruction of the source term for 137Cs, 131I, and 133Xe. Further applications include studies of wet deposition rates, enhancements for atmospheric transport modelling methods, reconstruction of release patterns, assessment of reactor damage, and environmental impact.

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## Promotional text

This presentation reviews the use of IMS radionuclide observations following the Fukushima Daiichi NPP accident in dozens of peer-reviewed scientific papers. The most frequent application is the reconstruction of the source term for 137Cs, 131I, and 133Xe.

## Oral preference format

in-person

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