# T1.3-P16. Validation of global atmospheric dispersion model using IMS data of CTBTO

Long-rang atmospheric dispersion model named LADAS has been developed to evaluate dispersion patterns of the radionuclides released into the air after a nuclear accident. The model was validated by using measurements of the ETEX experiments, and it was also applied to assess the behavior of radionuclides released into the air from the Fukushima accident. After the Fukushima accident, radionuclides were detected through air monitoring positions of CTBTO around the world. Calculated concentrations were compared with the measurements at IMS of CTBTO. From the comparisons of simulations and measurements, the developed model was successfully validated then it could be used to understand the overall dispersion patterns of radionuclides spreading out in the world after the Fukushima accident. The radioactive plume was transported to the east part off the Fukushima site by the Westerly jet stream. And it was detected in North America during March 17-21, in European countries during March 23-24, and in Asia during March 24 to April 6, 2011. This event was well represented in the numerical model and the simulation results showed generally good agreement with the observations at IMS of CTBTO

**Primary author:** SUH, Kyung-Suk (Korea Atomic Energy Research Institute)

**Presenter:** SUH, Kyung-Suk (Korea Atomic Energy Research Institute)

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