

## of Eruptions of Volcanoes Around Korean Peninsula: Simulation for Hypothetic Eruptions by Using LADAS-VA Model

A three-dimensional atmospheric dispersion model, Lagrangian Atmospheric Dose Assessment System (LADAS) has been developed by the Korea Atomic Energy Research Institute (KAERI) for the purpose of predicting and assessing atmospheric dispersion of radionuclides released into the air when a nuclear accident occurs elsewhere around the world. It was successfully employed to the environmental impact assessment for the Fukushima Daiichi nuclear disaster. Reflecting recent demand on the response system against potential volcanic risk around Korea, we have been developing LADAS-Volcanic Ash (LADAS-VA) model, a derivative of the LADAS in the form of a Volcanic Ash Transport and Dispersion Model (VATDM). The LADAS-VA model has been constructed based upon the LADAS-regional model so that it utilizes the Unified Model (UM) based Numerical Weather Prediction (NWP) product, which is provided by the Korea Meteorological Administration (KMA), as a primary meteorological data. By using the LADAS-VA model, we performed a series of simulations for (year-round) hypothetic eruptions of several representative volcanoes around Korea, such as Mt. Baekdu (Changbaishan), Asosan, Ulreung, Fujisan, and Shikotsu (Tarumaisan). Here we illustrate the analyzed result of their impacts.

**Primary author:** PARK, Kihyun (Korea Atomic Energy Research Institute)

**Presenter:** PARK, Kihyun (Korea Atomic Energy Research Institute)

**Track Classification:** 1. The Earth as a complex system