



## **Model simulations of the radioactive material plumes in the Fukushima nuclear power station accident**

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We like to present an analysis of a model-simulated and observed data comparison for depiction of the atmospheric transportation of the  $^{137}\text{Cs}$  emitted from the Fukushima Daiichi Nuclear Power Station accident. This method employs a combination of the results of two aerosol model ensembles and the hourly observed atmospheric  $^{137}\text{Cs}$  concentration during 14–23 March 2011 at 90 sites in the Suspended Particulate Matter monitoring network. The result elucidates accurate transport routes and the distribution of the surface-level atmospheric  $^{137}\text{Cs}$  relevant to eight plume events that were previously identified. The model ensemble simulates the main features of the observed distribution of surface-level atmospheric  $^{137}\text{Cs}$ . However, significant differences were found in some cases. Through the analysis we discuss the important processes to control the characteristic shape and movement of each plume.

We also report the status of the 2nd international model intercomparison in progress.