

## Review of the Manuscript:

Hu X., Li D., Hong H., Shifei S., Bou-Zeid E. (2014) "Modeling and Sensitivity Analysis of Transport and Deposition of Radionuclides from the Fukushima Daiichi Accident". *Atmospheric Chemistry and Physics Discussions*, 14 (2), 2113-2173, 2014

The authors' response to the questions is very much appreciated. However, some minor questions are still raised based on the answers by the authors. Details are given below.

1. (Chapter 3.2.1.) The authors answered that "there is no size distribution information during the period from 3/11 to 4/28 to use as input data for the simulation in this study." Thus, the authors assumed that the average size of  $^{131}\text{I}$  and  $^{137}\text{Cs}$  is  $0.48\ \mu\text{m}$  and  $0.67\ \mu\text{m}$  (sampling location: Tsukuba, Japan) and then answered that "the size distribution will not affect the total deposition significantly." In addition, the average size of  $^{131}\text{I}$  was quoted from the Chernobyl case. However, some data obtained from 4/11 to 4/21 are available in the reference listed below. The average size of  $^{131}\text{I}$  and  $^{137}\text{Cs}$  was  $0.7\ \mu\text{m}$  and  $1.0\text{-}1.5\ \mu\text{m}$  (sampling location: Tsukuba, Japan), which may increase the dry deposition rate. Is it possible for the authors to check if the findings of this study are still valid by using the values of Masson et al. (2013)? If not, please state that one could also use particle size values from the Masson et al. (2013) to perform similar simulations.

Masson, O., et al. (2013). "Size distributions of airborne radionuclides from the Fukushima nuclear accident at several places in Europe." *Environ. Sci. Technol.*

2. (Chapter 3.2.1.) I suggest to the authors to state all the assumptions they made to choose parameter values as input data for the simulation.

3. (Line 336) The authors mentioned that they corrected the order of the references from Kaneyasu et al., 2012; Sportisse, 2007 to Sportisse, 2007; Kaneyasu et al., 2012, but I cannot see the changes.

4. (Line 598-601) Please check the sentence: "However, the TOCHIGI, the comparison of the different runs does indicate that the parameterizations of the two methods of deposition have comparable influence on the results when their relative contributions to total deposition are comparable."