1, What we have done, and Purpose of MIPs

What we have done?: Conduct two model intercomparison projects (MIPs) targeting on $^{137}\text{Cs}$ emitted from FDNPP (Sato et al., 2018, 2020)

Purpose: Understand the variability of the results of the atmospheric dispersion models originated from internal element of the model (i.e., cloud physics, radionuclide physics, diffusion, and so on)

2, Strategy of MIPs, Participants and Experimental setup

Strategy: Use the same Meteorological data, Resolution, and Emission for excluding uncertainties originated from external data

3, Results

Total deposition (Observation and multimodel ensemble)

Experimental setup

Calculation Domain

4, Advantage of multimodel ensemble (shade: model, circle: Obs.)

Geographical distribution of the concentration of atmospheric $^{137}\text{Cs}$ at 1st layer of the model

Advantage of using fine grid spacing (3 km v.s. 1 km)

Most of the models well reproduced plumes arrival time with 2–3 hours delay from measured plumes at SPM sites during March 2011.

The wind field affected by the topography was improved by using fine grid spacing, due to improvement of the topography in the model, and improve performance.