

The effect of possible time shift of emission from F1NPP on spatial deposition pattern of ^{137}Cs

Hiroaki Kondo^{1*}

¹National Institute of Advanced Industrial Science and Technology

Spatial deposition patterns of ^{137}Cs in east Japan hind-casted by some numerical models so far reported are not always agreed with the monitoring results by the MEXT. There are many unknown processes from the release of radionuclides at the power plant to deposition in the field. In this paper, the source emission estimated by Chino et al. (2011) and by Katata et al. (2012) are shifted at most two hours before and after from the original emission data and results are discussed. The used numerical model is AIST-MM (Kondo et al., 2001), which is a hydrostatic dry-model. The precipitation intensity was introduced with radar-AMeDAS analysis; however, it was not well calibrated due to the destruction of in-situ stations by the earthquake.

The calculated results suggested the earlier release of huge amount of radionuclides in the morning on 15th gave better results.

Reference

- Chino, M. et al. 2011, J. Nuclear Sci. Tech., 48, 1129-1134.
- Katata, G. et al., 2012, J. Environ. Radioactivity, 109, 103-113.
- Kondo, H. et al., 2001, J. Meteor. Soc. Japan, 79, 11-21.

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