

# LES analysis of the effect of source heights on the longitudinal distribution of plume concentration in the convective boundary layer capped by a temperature inversion

Hiromasa Nakayama (nakayama.hiromasa@jaea.go.jp)

Japan Atomic Energy Agency, Research Group for Environmental Sciences

In this study, we performed LESs of plume dispersion in the convective boundary layer (CBL) capped by a temperature inversion and clarified the mechanism of the longitudinal distribution of concentration depending on different source heights. The model used here is LOcal-scale High-resolution atmospheric DIspersion Model using LES (LOHDIM-LES) developed by Japan Atomic Energy Agency (Nakayama et al., 2016). The longitudinal distribution patterns depending on the different source heights were clarified in conjunction with the turbulence characteristics of the inversion-capped CBL flow by the LES.