

Trace elements and ionic components in snow samples collected at mountain areas in Akita, Japan

Osamu Kiguchi (1), Yousuke Yamashita (2), Makoto Inoue (1), and Takashi Kobayashi (3)

(1) Department of Biological Environment, Akita Prefectural University, Akita, Japan, (2) Japan Agency for Marine-Earth Science and Technology (JAMSTEC), Project Team for HPC Advanced Predictions utilizing Big Data, Yokohama, Japan (yyousuke@jamstec.go.jp), (3) Akita Research Center for Public Health and Environment, Akita, Japan

Japan is located downwind of Asian continent, and air pollutants from the continent reach Japan due to long-range transport by the westerlies. In general, northwesterly wind prevails during winter and brings heavy snow in several regions along the Japan Sea side of northern Japan. After that, the pollutants originating in the Asian continent can be dissolved and conserved in snow cover at elevated mountain areas. To investigate the contamination levels at mountain areas in Akita, we collected the surface snow samples from Mt. Moriyoshi situated in Akita, northern Japan, and analyzed them for the trace elements and the major water-soluble ions. In addition, principal component analysis and trajectory analysis were conducted to clarify the source of the pollutants. In the presentation, we will show the results in 2011 and 2012.