

## Ion concentrations of winter precipitation in Japanese Central Alps

# Motoki Tanaka[1]; Keisuke Suzuki[1]

[1] Dept. Environ. Sci., Shinshu Univ.

The acid precipitation is observed in almost all parts of Japan, high mountainous areas are not exception. Precipitation in high mountainous area reflects wide areas of influences so that the neighborhood does not have the source of chemical substances. It is difficult to observe the chemical constituents of precipitation in high mountainous area throughout the year. The concentrations of chemical substances in snow cover remains the same level as in precipitation until snow melt begin.

The chemical constituents of winter precipitation in mountainous areas are greatly influenced by the climatic condition. In the Japanese Central Alps, snowfall is mainly generated at the time of wintry pressure and low pressure system passing along south coast of Japan. During the wintry pressure period, many anthropogenic and earth crust substances from the Asian Continent, and sea salt substances are included in the precipitation. In addition, the precipitation also uptake numbers of anthropogenic substances from the west and central part of Japan at the time of low pressure system. In the case of both climatic conditions, wind of west direction excels by the prevailing westerlies at high mountainous areas of Japan.

Some snow surveys have been done in the high mountainous areas. However, most of these surveys have not been at plurality of points performed within a mountain. There has not been particular record that snow survey crossed one mountain from west to east. The aim of this study is to grasp spatial distribution of chemical constituents concentrations in winter precipitation in Japanese Central Alps and to evidences the process that air mass is transported over a mountain through a change of chemistry of winter precipitation.