

Chemical dynamics of snow in the Japanese Alps region

KURAMOTO, Takayuki^{1*} ; SASAKI, Akihiko¹ ; SUZUKI, Keisuke¹

¹IMS, Shinshu University

The Japanese Alps region is one of the heaviest snowy regions in Japan. In this area, winter precipitation is observed mainly two patterns such as winter monsoon pattern and low pressure pattern. Therefore, the chemical characteristics of the snowpack are different by snowfall types. In this study we aimed to clarify chemical dynamics of snowpack in the Japanese Alps region. We conducted a snow pit studies in the Japanese Alps region. We collected snow samples at the large flat place without obstruct by trees and the impact of human activities. The samples were melted, then pH, electric conductivity and major ions (Na^+ , K^+ , Mg^{2+} , Ca^{2+} , Cl^- , NO_3^- and SO_4^{2-}) were analyzed in clean room. The Na^+ concentration correlates well with Cl^- concentration. These ions are considered to be sea-salt components. On the other hand, SO_4^{2-} concentrations included non-sea-salt components.