

# Long-distance transportation of contaminants from the Asian Continent in snow cover of central Japan high mountain region.

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The chemical and isotopic compositions has been measured in vertical snow samples collected at Mt.Nishi-Hodakadake (2,200 m a.s.l.), central Japan, to study long-distance transportation of contaminants from the Asian Continent in winter season.

The d-parameter ( $d = \delta D - 8\delta^{18}O$ ) of the samples ranges from 13 to 39. There is a tendency that artificial contaminants ( $nss\text{-SO}_4^{2-}$ ,  $\text{NO}_3^-$ ) increased in the period of higher d-parameter ( $>35$ ), suggested that the chemical materials transportation from the Asian Continent is active, and decreased in the period of lower d-parameter ( $< 20$ ).

When the relationship between  $nss\text{-SO}_4^{2-}$  and  $\text{NO}_3^-$  (**Figure**) was examined, the most of samples plotted between the line of Asian continental value (4.8) and the domestic value (1.4). It is clear that there are transportations of the chemical materials from the Asian continent at high mountain region, in 70 km inland from the coastline of the Sea of Japan.

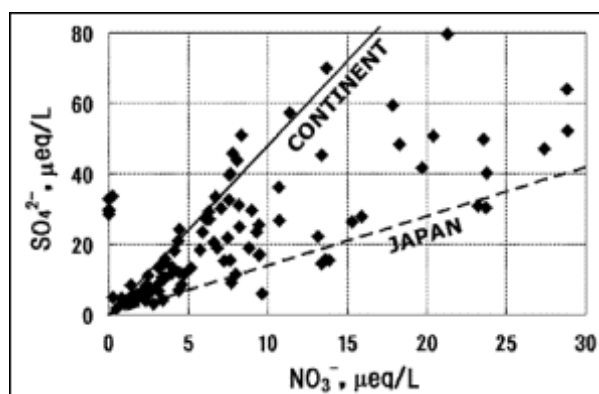


Figure : A plots of  $\text{SO}_4^{2-}$  vs.  $\text{NO}_3^-$  concentrations in snow cover at Mt.Nishi-Hodakadake. The solid line shows the ratio of Asian Continent, and the broken line shows Japan.