

## Estimation of tephra hazard using tephra GIS

# Mamoru Koarai[1]; Takehiko Suzuki[2]; Daichi Nakayama[3]; Takeshi Wachi[4]; Akihiko Fujinawa[5]

[1] GSI; [2] Dept. of Geography, Tokyo Metropolitan Univ.; [3] Geography, Tokyo Metropolitan Univ.; [4] ISS; [5] Earth Sciences, Ibaraki Univ.

There are many data of tephra in Japan such as 'The tephra atlas, however, less database of tephra in Japan, compared with Quaternary Volcanoes, active faults and land slides and so on.

As the database of tephra is produced with location information in GIS, it is possible to identify each tephra easily in field works, for the researchers of Quaternary field such as geomorphology, geology, volcanology and archeology. In addition, it is expected the governmental utilization for disaster prevention such as the production of hazard maps and the estimation of environmental impact, because it is easy to analysis the distribution data of tephra combined with other spatial data such as DEM, NSDI and land condition map of volcano.

In this research, the authors have developed the tephra GIS data about the tephtras originated from Tohoku District, North East Japan, and middle and upper Pleistocene wide area tephtras. In this presentation, the authors introduce the concept of tephra GIS and the results of case study for hazard map use in Kitakami Plain, Tohoku District, Japan.

In additionally, the authors introduce the plan to open the tephra GIS homepage using Denshi-Kokudo web system. Now they are developing the web GIS system about Akita-Komagatake Volcano and Bandai Volcano.