Grain size composition and Paleomagnetism about the Takizawa Pyroclastic Flows,Northeast Slope of the Fuji volcano.

Naoko Taki[1], Yasuhisa Tajima[2], Tatsuro Chiba[3], Kunihiko Endo[4]

[1] Integrated Basic Sci.,Nihon Univ., [2] NIPPON KOEI CO.,LTD, [3] Asia air survey, [4] Geosystem Sci., Nihon Univ

Pyroclastic flow-like deposits were found on the NE slope of the Fuji volcano. Those were named as Takizawa pyroclastic flow deposits B, A, A' (Tajima et al,2002). The purpose of this study is to investigate transport process and emplacement temperature of the Takizawa pyroclastic flow deposits based on paleomagnetism and sedimentological properties.

Stratigraphic position of these pyroclastic flow deposits B, A and A', from lower to upper is just above the soil layer of Yu-2 scoria fall (2200y.BP.). Takizawa pyroclastic flow B deposit (Tkzpfl-B) is composed of mainly black scoria and volcanic bombs including few accessory rock fragments. On the other hand, the Takizawa pyroclastic flow A deposit (Tkzpfl-A) includes a lot of essential and accessory rock fragments and partly resemble to the facies of secondary deposit.

The grain size composition was analyzed for 10 samples of matrix part of Tkzpfl-A and B, and one sample of Tkzpfl-B with 125 kg in weight. The results are plotted around the boundary area in Walker's Md/sigma diagram. Fine ash content is a little scarce compared with typical pyroclastic flow deposits.

Magnetic samples were collected at 5 locations between 1350 and 1600 meter. More than five oriented samples were taken from each outcrops (total 21 sample in Tkzpfl-A and total 18 samples in Tkzpfl-B) by hand sampling. The progressive thermal demagnetization and the progressive alternating field demagnetization were tested for these samples.

From the result of the progressive thermal demagnetization, the remanent magnetization of Tkzpfl-A showed the almost single ingredient although a few samples marked an unstable magnetic ingredient or a double ingredient. On the other hand, in Tkzpfl-B, all remanent magnetization data converged the single ingredient.

The mean magnetization direction of Tkzpfl-A showed Dec=13.3 degree, Inc=30.4 degree and alpha95=29.0, and Tkzpfl-B showed Dec=-0.4 degree, Inc=51.1 degree and alpha 95=8.2. Comparing the alpha values between both flows, Tkzpfl-A tends to be scattered more than Tkzpfl-B.

The result of magnetization intensity, three trends were recognized in Tkzpfl-A,; a) the magnetization intensity decreased abruptly between 300 and 580 degrees C.; b) started to decrease gradually at room temperature or 100 degrees C., and c) passed through the double decreasing stage, one was between 200 and 400 degrees C., and the other was between 500 and 580 degrees C. Two trends were recognized in Tkzpfl-B,; a) it decreased abruptly between 350 and 620 degrees C., and b) started to decrease gadually at room temperature or 100 degrees C. From these tendencies, it is thought that it is high temperature at the time of deposition.