

SEM036-P02

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## Paleomagnetic and rock magnetic records of 90-150ka obtained from sediment core BIW08-B in Lake Biwa.

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We obtained a series of core sample (BIW08-B) from central part of Lake Biwa (water depth 53 m) in 2008, intending to reveal detailed records of paleoenvironmental and paleomagnetic variations.

Among core samples of BIW08-B of 100 m long in total, we conducted paleomagnetic and rock magnetic analysis of an interval from 25.48 m to 45.10 m. This interval corresponds to a time period from 90 ka to 150 ka, which is expected to include the Blake excursion (Smith and Foster, 1969; etc). It is also suggested that this interval holds environmental record of rapid warming which is represented by variations of oxygen isotope ratio (e.g., Imbrie et al., 1984).

Low and high temperature magnetic measurement show the existence of the maghemitized magnetite and the hematite. The experiment of progressive thermal demagnetization (PTHD) of the anhysteretic remanent magnetization (ARM) indicates that the main ferromagnetic mineral is maghemitized magnetite.

Assessment of stability of natural remanent magnetization (NRM) was made with progressive alternating field demagnetization (PAFD) experiments. Inclination values change from about 30 to 60 through the core, and the average inclination was lower than the expected value (54.7) at the drilling position. Deviations of NRM directions occurring in low intensity interval in about 93ka, 104-108ka, and 133ka may correspond to excursion.

The downcore variation in  $X_{ARM} / X$  values, except for volcanic ash, was similar to that of the  $X_{ARM}$  ones. It was found that the increase (decrease) in the amount of magnetic minerals was accompanied with their grain re?ning (coarsening) in the grain size of magnetic minerals. The characteristic minimum boundaries were observed at 101-105 ka, 122-125 ka and 132-136 ka. These periods are corresponding to warm and humid interval.

Keywords: Environmental magnetism, paleomagnetism, lake sediment