

Paleomagnetic experiments in Misasa (ISEI laboratory)

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The paleomagnetic laboratory of the Institute for Study of the Earth's Interior (ISEI), Okayama University in Misasa was initiated in 1999. In the five years since its start, the laboratory has been implemented by various experimental equipments acquired mainly by Grant-in-aid from Ministry of Education (Kakenhi). However, this laboratory will be closed at the end of March 2005. Accordingly, the experimental apparatuses in the paleomagnetic laboratory will be transferred within the next 12 months to other laboratory in Japan belonging to paleomagnetism community. In this presentation, I will briefly describe the hardware in the laboratory as well as some of the software developed in Misasa.

The main experimental set up of Misasa paleomagnetism laboratory is as follows.

- (1) Vibration magnetometer (Princeton Measurements Micromag 3900)
- (2) Spinner magnetometer with AF demagnetizer (Natsuhara giken) x 2
- (3) Spinner magnetometer with thermal demagnetizer (Natsuhara giken)
- (4) Electric furnace for thermal demagnetization (Natsuhara giken)
- (5) Susceptibility meter (Bartington)
- (6) Tri-axial fluxgate magnetometer (Applied Physics)

These apparatuses were obtained with the main aim of measurement of materials with thermoremanent magnetisation. Accordingly, there is no instrument which can measure the weak remanent magnetization of sedimentary materials. However, almost all the desired experiments can be carried out on materials such as volcanic rocks.

In view of the transfer of these instruments, it is hoped that some laboratory be found which can take ALL of them to install at one place. However, in case that this wish cannot be realized, they will be donated to institutions on the criterion that the transfer will be beneficial to the future of the community. For this purpose, the joint-use system of ISEI will be utilized, and the hopeful candidates will be invited to visit the Misasa laboratory. Specifically, a workshop is planned for September 30 (Thu) -- October 1 (Fri) in Misasa, to which the wishfuls will be invited to give presentation. (For the past Misasa Geodynamics Workshops held in 2001, 2002, and 2003, please visit <http://www.misasa.okayama-u.ac.jp/~mkono/workshop/>).