

Acquisition and demagnetization of VRM in pyroclastic-flow deposits - contribution to the low-temperature magnetic components -

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The Ikeshiro pyroclastic-flow deposit at Yufu volcano, Kyushu Island, was found to have the low-temperature magnetic component that is parallel to the present Earth's magnetic field (Saito et al., 2000). It is possible for the component to originate not from TRM but from VRM. In order to examine the origin of the component, we carried out experiments on acquisition and demagnetization of VRM.

We have previously classified samples from the Ikeshiro pyroclastic-flow deposit into two types, based upon the paleomagnetic and rock magnetic results: type A is carried by titanomagnetite, while type B is carried by magnetite, hematite and titanohematite.

As a result of VRM experiments, both samples acquired VRM almost logarithmically with time and type A sample acquired much stronger than type B sample. Acquired VRMs were almost completely demagnetized up to 40 mT. This indicates the Ikeshiro samples cannot acquire hard VRM (Dunlop and Stirling, 1977). In conclusion, the low-temperature magnetic component of type B originates not from VRM but from TRM, whereas we cannot reject the possibility that type A originates from VRM.