

Re-examination on Remanent Magnetization of Central and Southern Parts of the Kumano Acidic Rocks

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Paleomagnetic and rock magnetic experiments were carried out on samples of the middle Miocene Kumano Acidic Rocks (KARs) in the southeastern part of Kii Peninsula in order to re-examine the stability of remanent magnetization of the KARs and confirm a paleomagnetic direction. The KARs are volcano-plutonic complex, and consist of Konoki rhyolite, acidic tuff, and granite porphyry in ascending order. Sumii et al. (1998) gave new age constrain on the activity of the KARs by K-Ar ages of 14.4 ± 0.1 Ma (granite porphyry), 14.2 ± 0.2 Ma (Konoki rhyolite).

Progressive demagnetization experiments using thermal and alternating-field methods revealed that rhyolite samples from five sites and granite porphyry samples from four sites had stable magnetic components carried by magnetite. The site-mean directions of rhyolite samples showed easterly declination and positive inclination; a mean was $D=68.3$, $I=50.9$, and $\alpha_{95}=11.6$. Those of granite porphyry samples from four sites showed westerly declination and negative inclination; a mean was $D=-135.2$, $I=-65.0$, and $\alpha_{95}=9.7$.

The site-mean directions from the two rock units clearly showed an antipodal relationship, and provided a mean direction; $D=61.8$, $I=59.4$, and $\alpha_{95}=8.6$. The mean direction of the KARs considerably deviated from the axial dipole field direction.