

Paleomagnetic secular variation of 3–4 ka from lava flows around the post-caldera cones of Aso Volcano and its contribution to the volcanic stratigraphy

*望月 伸竜¹、宮縁 育夫²、渋谷 秀敏³

*Nobutatsu Mochizuki¹, Yasuo Miyabuchi², Hidetoshi Shibuya³

1. 熊本大学大学院先導機構、2. 熊本大学教育学部、3. 熊本大学大学院先端科学研究部

1. Priority Organization for Innovation and Excellence, Kumamoto University, 2. Faculty of Education, Kumamoto University, 3. Department of Earth and Environmental Science, Kumamoto University

We have conducted a paleomagnetic study on Holocene lava flows around the post-caldera cones of Aso Volcano, central Kyushu, Japan. On the basis of the paleomagnetic directions, combined with geological evidences, we have refined the stratigraphic relationship of the lava flows and the distribution of them. In the previous studies, lava flows distributed around a cone (volcanic center) were described as a single geological unit corresponding to each cone. Paleomagnetic directions obtained in this study are useful to recognize temporal correlation or distinction between the studied sites. It is also noted that the paleomagnetic directions obtained from 22 sites around three cones and a scoria cone are distributed on a simple curve, which is considered to record paleomagnetic secular variation (PSV) during the period between 4 and 3 ka. This PSV curve contributes to an improved volcanic stratigraphy including temporal gaps of the order of 10–100 years.

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