

## Reexamination of historical eruptions of Fuji volcano based on paleomagnetism

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Eruption age of the products of Fuji volcano were recently determined using <sup>14</sup>C datings and tephrochronology. However, those of some units differ in dating from historical records. Therefore, we investigated paleomagnetic study in order to reexam eruption age of historical eruption of Fuji volcano. Paleomagnetic age determination is based upon similarity to secular variation model of the Japan Archeomagnetism Database (JRFM2k.1) reconstructed from archeological sites in southwestern Japan. Samples for paleomagnetic measurements were collected from 32 units of lavas and pyroclastic deposits. At each site, we collected 6 to 12 samples using core-drill. The samples were oriented by a sun compass to eliminate local magnetic anomalies.

Based on eruptive sequence and historical records, Koyama (2007) identified that Hoei pyroclastic cone, Kenmarubi 1 lava flow, Aokigaharamarubi lava flow and Takamarubi lava flow were eruption products in A.D.1707, A.D.937, A.D.864-866 and A.D.800-802, respectively. As a result of our study, paleomagnetic directions of Hoei pyroclastic cone fit for the expected age deduced from the secular variation curve. The directions of Kenmarubi 1 lava flow imply age range of 1000-1030 A.D. indicating simultaneous eruption with Fudosawa lava flow. It requires careful consideration for the result of Aokigaharamarubi lava flow, which shows unexpected directions. The directions of Takamarubi lava flow imply age range of 600-640 A.D. Our findings suggest that paleomagnetic method can improve eruption history of Fuji volcano.

Keywords: Fuji volcano, historical eruptions, dating