プナルウエクスカーションにおける絶対古地磁気強度変動の研究

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Absolute paleointensity variation during the Punaruu geomagnetic excursion

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Precise paleomagnetic data of geomagnetic reversals and excursions are crucial for understanding the geomagnetic field and have been expected to constrain geodynamo models in the deep interior of the Earth. Chauvin et al. (1990) reported a reverse-transitional-reverse (R-T-R) geomagnetic excursion from about 30 lavas of a lava sequence in the Punaruu valley, Tahiti. This transitional field behavior was originally thought to be the Cobb Mountain normal subchron. Singer et al. (1999) obtained a mean 40 Ar/³⁹Ar age of 1.105 +/- 0.005 Ma for the transitional field behavior, indicating that this transitional field behavior occurred at about 76 kyr after the Cobb Mountain normal subchron and was designated the Punaruu event (excursion). Since the Punaruu excursion is recorded by 30 lavas of a lava sequence, it can provide a successive paleointensity variation during an excursion. In the present study, we conduct paleointensity determinations on the lava flows recording the Punaruu excursion. To date we conducted paleointensity experiments on 95 samples of 31 units using the LTD-DHT Shaw method (Tsunakawa-Shaw method). For 18 units, we obtained 1-3 accepted results. We report these preliminary results in this presentation.