Paleomagnetic study on the transitionally magnetized volcanic rocks from the Tahaa Island, French Polynesia

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Volcanic rocks collected from the Society Islands, French Polynesia, were systematically investigated in terms of paleomagnetism and geochronology (Yamamoto et al., 2002; Yamamoto and Tsunakawa, 2005; Uto et al., 2007). Some sites were found to be transitionally magnetized, and the follow-up laser-heating 40 Ar/ 39 Ar dating and additional palaeomagnetic measurements were conducted on samples from these sites in Yamamoto et al. (2007): a lava sequence in the Tahaa Island consisting of the four consecutive lava flows (TA04, 05, 06 and 07) gave the average virtual dipole moments (VDMs) of $^{\sim}$ 5 ZAm2 and the Ar/Ar age of 3.20 +/- 0.03 Ma. This age is consistent with the upper boundary age of the Mammoth reversed subchron in GPTS2012 (3.207 Ma; Ogg et al., 2012).

To further characterize the paleomagnetic behavior recorded in the lava sequence, a follow-up sampling was done in 2014. We collected \sim 50 new mini-core samples from the sequence, and in addition, 10 new mini-core samples were drilled from a single lava flow of a vicinity lava sequence, which corresponds to the site TA01 in the previous study (K-Ar age of 3.14 + /-0.06 Ma; Uto et al., 2007). These mini-core samples were cut into specimens and they were subjected to paleomagnetic measurements including the Tsunakawa-Shaw absolute paleointensity experiments. We will report these results together with the previous results which are reanalyzed by a latest scheme.