

G124-001

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Unspiked K-Ar dating for submarine lavas around Kauai volcano, Hawaii

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We measured unspiked K-Ar ages for 18 submarine lavas from cone-shaped seamounts and flows on South/Southeast Kauai in order to help constrain its origin. The samples were collected using JASON2 ROV during 2007 Kilo Moana cruise. New K-Ar ages for submarine tholeiitic basalts are 4.8-3.9 Ma that coincide with the main- to late-shield stage of Kauai volcano, and do not support a landslide origin. The ages for alkalic basalts from three localities are 1.9-0.2 Ma, overlapped with Koloa volcanism, the rejuvenated stage of Kauai volcano. The results indicate that offshore young volcanism occurred on more than 500 km downstream from the center of Hawaiian plume.