

Accepted Manuscript

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Evidence for fluid migration and magmatic activity

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PII: S1367-9120(17)30608-9
DOI: <https://doi.org/10.1016/j.jseaes.2017.10.033>
Reference: JAES 3283

To appear in: *Journal of Asian Earth Sciences*

Received Date: 22 July 2017
Revised Date: 13 October 2017
Accepted Date: 27 October 2017

Please cite this article as: Yu, Z., Zhao, D., Niu, X., Li, J., Spatiotemporal distribution of low-frequency earthquakes in Southwest Japan: Evidence for fluid migration and magmatic activity, *Journal of Asian Earth Sciences* (2017), doi: <https://doi.org/10.1016/j.jseaes.2017.10.033>

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**Spatiotemporal distribution of low-frequency earthquakes in Southwest Japan:
Evidence for fluid migration and magmatic activity**

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Abstract

Low-frequency earthquakes (LFEs) in the lower crust and uppermost mantle are widely observed in Southwest Japan, and they occur not only along the subducting Philippine Sea (PHS) slab interface but also beneath active arc volcanoes. The volcanic LFEs are still not well understood because of their limited quantities and less reliable hypocenter locations. In this work, seismic tomography is used to determine detailed 3-D P and S wave velocity (V_p and V_s) models of the crust and upper mantle beneath Southwest Japan, and then the obtained 3-D V_p and V_s models are used to relocate the volcanic LFEs precisely. The results show that the volcanic LFEs can be

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