

## Zircon geochemistry of Mid-Miocene granites in Okueyama and Yakushoma: Evidence of slab melting

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Archaean juvenile continental crust has been mostly characterized in TTG (Tonalite, Trondhjemite Granodiorite), of which geochemical signature shows high Sr concentration, high Sr/Y and La/Yb ratios with non-Eu anomaly on REE pattern normalized to chondrite value (e.g., Martin, 1986, Defant and Drummond, 1990). The experimental petrological results suggest that this geochemical signature can produce partial melting of tholeiitic rocks transformed into garnet bearing amphibolite or eclogite (e.g., Rapp et al., 1991). On the Cenozoic arc volcanic fields, adakitic rocks, which are very similar geochemical signature to TTG, occur in subduction of young oceanic crust or young subduction zone, i.e., Alutians, Austral Chile, Cascade, and so on (e.g., Martin, 1999). Study of these adakitic magmatism is very important key to understand not only generation of slab melting and interaction process between mantle wedge and slab melting, but also formation and growth of the Archaean juvenile continental crust.

On the other hand, Mid-Miocene granites in outer zone of southwestern Japan, related to subduction of Shikoku basin were characterized by typical arc magmatism. This suggests that felsic magma produced by slab melting does not always show adakitic signature. Because of these, we have determined major and trace element abundances and U-Pb ages for about 50 zircon crystals each in Yakushima and Okueyama granites. Using this result, in this presentation, petrogenesis of the felsic magma would be discussed.