

SSS017-04

Room: Exhibition hall 7 subroom 1

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Fission-track ages of pseudotachylyte along the Atotsugawa Fault

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Fission-track (FT) zircon ages for pseudotachylyte along the Atotsugawa Fault at the Makawa outcrop and their protolith (granite) ages were determined, and the results are as follows:

FT ages:

Pseudotachylyte (AT-A): 48.6±2.4 Ma

Protolith granite (AT-3 60 m apart from AT-A): 56.1±1.6 Ma

K-Ar muscovite age:

Protolith granite (AT-7 300m apart from AT-A): 149.0±3.2 Ma

The unimodal track-length analyses suggest that the result of FT age for pseudotachylyte must be its formation age. The mismatch ages between FT and K-Ar for protolith granite might be due to difference in closure temperatures and rejuvenation effect by possible existence of Late Cretaceous granitoid at depth.

The result of FT age of the pseudotachylyte from the Atotsugawa Fault is similar to the FT ages of pseudotachylytes (60-50 Ma) from the Nojima Fault, MTL and the Asuke Shear Zone, and also to the K-Ar ages (60-50 Ma) of fault gouges from the Atotsugawa Fault, the Atera Fault and the MTL in Shikoku.

Keywords: pseudotachylyte, fission-track age, Atotsugawa Fault