

## Revised Pre-Cretaceous Terrane map around western Seto Inland Sea area using detrital zircon chronology

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Pre-Cretaceous clastic rocks scattered in the Seto Inland Sea area do not yield any fossils due to Ryoke metamorphism and contact metamorphism by Cretaceous granite. Therefore, their attribution has only been estimated from their lithofacies so far. We confirmed their attribution using detrital zircon chronology. The Akiyoshi, Maizuru and Ultra-Tamba terranes are difficult to distinguish from each other because they all contain Permian sandstones. In this study, from the data of the type area, we judged that those containing Early Triassic zircon are of Ultra-Tamba Terrane. The Akiyoshi Terrane does not contain the zircon grains of 400 to 500 Ma. In addition, Permian sandstones with zircon age peak of 400 to 500 Ma were allocated to Maizuru Terrane on the north side and Ultra-Tamba Terrane on the south side of the southern end distribution of Yakuno Ophiolite. The location of the sandstone samples and estimated attribution by detrital zircon chronology are listed below.

1) IW-SS02: biotite schist from Iwai-shima Island, Yamaguchi Prefecture at N33.77669444 E131.9846944, Akiyoshi Terrane

2) IW-SS04: ditto, N33.790111 E131.985083, Akiyoshi Terrane

3) KMG-Gm1: biotite schist from Kami-Kamagari Island, Kure City, Hiroshima Prefecture at N34.196491 E132.689589, Ultra-Tamba Terrane

4) SNO-SS02: sandstone from Kamiseno, Akiku, Hiroshima City at N34.413109 E132.631609, Tamba Terrane

5) MHR-SS1: sandstone from Yahata, Mihara City, Hiroshima Prefecture at N34.480287 E133.096143, Ultra-Tamba Terrane

6) ONM-SS1: sandstone from Mitsugi, Onomichi City, Hiroshima Prefecture at N34.509986 E133.098596, Maizuru Terrane

7) NMK-SS02: sandstone from Numakuma Peninsula, Fukuyama City, Hiroshima Prefecture at N34.378093 E133.321205, Ultra-Tamba Terrane

8) INS-SS01: sandstone from Inno-shima Island, Onomichi City, Hiroshima Prefecture at N34.329205 E133.198469, Ultra-Tamba Terrane

Together with the previous data, the above results show that the Ultra-Tamba Terrane is widely distributed from the Geiyo Islands to the Numakuma Peninsula area in Hiroshima Prefecture. These were previously considered as Tamba Terrane of the Jurassic accretionary complex. The 400-500 Ma age peak of zircon characteristic of Ultra Tamba Terrane gradually decreases in the west and becomes age spectrum similar to that of the Akiyoshi Terrane. Akiyoshi Terrane and Ultra-Tamba Terrane seems to be originally a series of the same Terrane because Akiyoshi Terrane is distributed to Iwai-shima Island,

Yamaguchi Prefecture in the west. Majority of the original rocks of the Ryoke metamorphic rocks are of Jurassic accretionary complex, but some of the Permian complexes shown above are obviously underwent the Ryoke metamorphism and became biotite schist.

Keywords: Detrital zircon chronology, Inner Zone of SW Japan, Pre-Cretaceous Terrane, Akiyoshi Terrane, Maizuru Terrane, Ultra-Tamba Terrane