

## Tectonic erosion in Pacific-type orogenic belt: zircon response to Cretaceous tectonics in Japan

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The U-Pb chronological analysis of detrital zircons for the Lower Cretaceous Sanbagawa and Upper Cretaceous Shimanto HP metamorphic rocks in Japan showed the abundant occurrence of Precambrian (ca. 1500-2000 Ma) grains. In contrast, the coeval non- to weakly metamorphosed accretionary complex and fore-arc basin sediments completely lack these older remnants that are common in the older Jurassic accretionary complexes that tectonically superpose above the Cretaceous accretionary complexes. This remarkable contrast in age spectrum likely indicates that tectonic erosion has occurred to recycle older detrital material twice along the active margin of Cretaceous East Asia; i.e. the first in the Early Cretaceous to tectonically remove the Jurassic accretionary complex from the sole of the hanging wall of the subduction zone, and the second in the Late Cretaceous to erode Lower Cretaceous accretionary complex together with the Sanbagawa high-pressure metamorphic rocks