

Quaternary tilting rate of the northwest part of Hida Mountains inferred from fluvial terraces

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Fluvial terrace surfaces are well developed along Rivers Kurobe, Katakai, and Hayatsuki at the northwest part of Hida Mountains. These terrace surfaces are dated by relationship with tephra stratigraphy. The surfaces are inclined seaward (westward) and the older surfaces are steeper than the younger surfaces. Therefore, the terrace surfaces intersect the younger ones or alluvial surface. This shows that crustal tilting has accumulated at the northwestern part of Hida Mountains. Crustal tilting rate is calculated as 4-8 degree per million years. This rate agrees with dip of Pliocene deposits such as the base of Kurehayama gravel bed (dip: 15-20, age: ca. 3Ma). However, the base of Kurehayama gravel bed is uplifted by a blind fault at coastal area. Thus, geological section across the northwestern part of Hida Mountains records local-scale fault displacement and regional-scale crustal tilting.