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The Pacific-type orogeny and exhumation model of regional metamorphic belt

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Pacific-type orogeny model has been proposed by Dewey and Bird (1970) right after the establishment of plate tectonics. Since then, critical data have been accumulated mainly in Japan Islands and the revised model was proposed by Maruyama (1997). By these models, Pacific-type orogen has been considered to have grown continuously oceanward through time, ca. 100km per 100 m.y. Yet, a new concept of tectonic erosion was proposed along the active continental margin (von Hunene and Scholl, 2002), and it occurred more extensively in the past, and close relationship with the formation and exhumation of regional metamorphic belt seems to be present. Here, I propose a revised model of the Pacific-type orogeny, based mainly on geology of Japan islands and modern analogs over the world.