RELATION BETWEEN MESOZOIC-CENOZOIC TECTONO-MAGMATIC EVOLUTION AND MANTLE PLUME ACTIVITY IN SOUTHEAST CONTINENT OF CHINA

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Although relationship between Mesozoic-Cenozoic tectonic evolution and certain petrological records in southeast continent of China hase been established, the detail deep processes which play important role are unknown. The authors severally proposed that there is a significante tectonic conversion (i. e. lithosphere thinning) about 150Ma in southast continent of China, which is in accord with the time of superplume activity in the South Pacific. The authors propose a combined modal of oceanic subduction-asthenosphere uplifting-oceanic lithosphere delamination for southeast continent of China.

Ⅰ. Paleopacific plate gently subducted against the east margin of Euro-Asian continent(250-170Ma); Ⅱ. The oceanic lithosphere plate and overlapped continental lithosphere plate were superimposed to occur orogenic deformation (160-150Ma); Ⅲ. Asthenosphere uplifted,which related to the superplume activity in the whole world,and oceanic lithosphere ruptured and sank(150-50Ma):1.Ashenosphere uplifted to the base of continental lithosphere and resulted in ccontinental lithosphere thining in manner of the heat machanism-chemistry erosion;2.Basaltic magma underplating caused the voluminous intermediate-acid volcano-intrusion;3.Bimodal volcanic rocks, A-type granite and basic veins were occurred in local regions of rapid crustal extension.Ⅳ.New subduction zone toward the east was fromed, and south sea was opened(<32Ma): Some late alkali basaltic magma(<5Ma)of lower-mantle origin broke through the continental crust to form flood basalts and dike swarms.