

Tertiary paleomagnetic data from northwestern Yunnan, China

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Eocene red sandstone were collected at 15 sites for paleomagnetic study from two areas (Lanping and Yunlong) of western part of Yunnan province, China, in the northern part of Indochina. The high-temperature component magnetization with unblocking temperature of above 670 degree celsius is isolated after stepwise thermal demagnetization.

Characteristic directions from 9 sites show positive fold test at 99 onfidence limit, indicating that the high temperature component magnetization is primary for the Eocene formations. A tilt-corrected mean direction from 9 sites is $D = 266.1$ degree, $I = -39.8$ degree with $a95 = 11.2$ degree.

The Indian continent collided with Asia at 52Ma and continued penetration into it. Crustal thickening of the Asian lithosphere along with latitudinal shortening in front of India and tectonic rotation along both sides are anticipated.

Several paleomagnetic results from Cretaceous rocks have been reported from the Simao Terrane, northern part of the Indochina block in the last decade. Paleomagnetic evidence on clockwise rotation ranging between 36 degree and 112 degree has been observed from these Cretaceous results. Tertiary paleomagnetic data is, however, still scarce in the Simao Terrane. In order to establish the tectonic evolution model of the Simao Terrane during Cenozoic time, much more Tertiary paleomagnetic data are required in this terrane.

We present new paleomagnetic results from Tertiary redbeds on the northern part of the Simao Terrane. Our paleomagnetic study focuses on the Eocene formations, in order to find out further evidence of tectonic deformation of the Simao Terrane in Cenozoic time from paleomagnetic view points.

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