

Deformation due to the Collision between South China Block and North China Block

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Middle Triassic red sandstones and Early Triassic limestone were sampled at 37 sites at two locations in the north margin (108.18E, 31.82N) of South China Block (SCB) to detect regional deformational features due to the collision between SCB and NCB. Most of the samples indicate characteristic remanent magnetization with unblocking temperature up to 590 centigrade or 690 centigrade. Thermal demagnetization isolated low temperature component (LTC) of 25 centigrade to 450 centigrade and high temperature component of 530 centigrade to 590 centigrade, or 560 centigrade to 690 centigrade. LTC shows a direction towards present earth field, while the HTC shows a NE-down-towards direction or SE-up-towards direction. Based on the direction of HTC, it is expected that a clear clock-wise rotation around study area, which indicates a significant constructural deformation due to the collision between NCB and SCB. It is also possible that the study area was subjected to the same mechanical motion of Yangtze belt, which is located to the south of the NCB-SCB boundary, and received the same regional deformation within the area of Yangtze fold belt.

The details of the deformation will be presented in the presentation.