



## **Geochronological study of the Gaolingong Shear Zone and its implications for extrusion tectonics in the eastern Himalayan syntaxis**

C.-H. Lo (1), F.-R. Hsu (1), S.-L. Chung (1), and T.-Y. Lee (2)

(1) Department of Geosciences, National Taiwan University, Taipei, Taiwan, (2) Department of Earth Sciences, National Taiwan Normal University, Taipei, Taiwan

Thermochronological investigation of the Gaolingong Fault and its adjacent branch faults, provides constraints to the Cenozoic extrusion tectonics of Indochina and the tectonic evolution in the eastern Himalayan syntaxis. The present results show that the main phase of the right-lateral shearing along the Gaolingong fault occurred in the period of  $\sim 18$  to 12 Ma, which is synchronous with that of the Karakoram-Jiali Fault in southern Tibet and the Sagaing Fault in western Indochina. This evidently indicates that the Karakoram-Jiali Fault, the Gaolingong Fault and the Sagaing Fault form a long series of right-lateral shear zones that southerly bound for the eastward extrusion of northern Tibet. It is also suggested that the present-day dextral deformation along this deformation boundary may have a prolonged history starting from early Miocene in response to the continuing India-Asia collision. However, the synchronous timing for shearing of the adjacent fault zones may also indicate that the clockwise rotation of continental blocks may have played an important role in local scale despite of the long continuity of fault systems in board.