



## **Active Tectonic Uplift of the Danba Area in the Eastern Tibetan Plateau, China**

Hou-Ping Ho (1), Chung-Pai Chang (1,2), Chorng-Shern Horng (3), Yi-Chun Hsu (1,2)

(1) Institute of Geophysics, National Central University, Taoyuan, Taiwan (ian\_0128@hotmail.com.tw), (2) Center for Space and Remote Sensing Research, National Central University, Taoyuan, Taiwan (cpchang@csrr.ncu.edu.tw), (3) Institute of Earth Sciences, Academia Sinica, Taipei, Taiwan

Danba, an area with extreme exhumation, locates between Longmenshan orogen and Xianshuihe sinistral fault zone in the eastern Tibetan Plateau. The Tibetan plateau was built by the convergence between Indo-Australian plate and Eurasian plate since early Cenozoic. However, the eastward lower crustal flow under the plateau obstructed by the Yangtze craton soon after this convergence and generated a very complex structural phenomenon. We make use of two methods, stress analysis and magnetic measurement, to understand the processes and mechanisms of this structural complexity. First, to be aware of the principle compressive stress in this area, we measure slickensides in the field from Danba area to the middle segment of Xianshuihe fault zone to carry out a series of analysis. We then obtain the stress field of this area. In addition, due to comprehend the magnetic characteristics of low-grade metamorphic rocks and volcanic rocks in this area, we process the rock magnetic measurement of hysteresis loop and X-ray diffraction analysis. The occurrence of pyrrhotite can be taken as an important isograd in low-grade metamorphic rocks, which is helpful for stratigraphic and structural studies. Based on our preliminary results, we propose a structural evolution model to explain the rapid uplift of this area.