



Coseismic slip distribution of the second main event (Mw 6.0) of the April 2006 Taitung crisis (SE Taiwan)

Laetitia Mozziconacci (1), Bertrand Delouis (2), Nicole Béthoux (2), and Bor-Shouh Huang (1)

(1) Institute of Earth Sciences, Academia Sinica, Taipei, Taiwan (laetitia@earth.sinica.edu.tw), (2) Géoazur, Bât 4, 250 rue Albert Einstein, Les Lucioles 1, Sophia Antipolis 06560 Valbonne, France

Taiwan is an ongoing orogen that emerges east of the Pacific seaside of Mainland China. It is the result of the active collision between the Eurasian Plate to the west and the Philippine Sea Plate to the east, the plate boundary laying inside a narrow north-south valley, the Longitudinal Valley. On both sides of the valley and parallel to it run the Central Range Fault (CNF) to the west and the Longitudinal Valley Fault (LVF) to the east. Whereas the CNF is poorly active the LVF on the other side is one of the main active structures of Taiwan that makes up the effective plate boundary.

In this convergent context a seismic crisis took place in the southern part of the Longitudinal Valley during the entire month of April 2006. This sequence is the result of two successive large events of MW 6.1 and 6.0 respectively, generated at close time interval by the two main structures of the Valley. This crisis began to the west on April 1st, 2006 with a strike-slip event linked to the CNF. In a previous study we demonstrated for this structure a listric geometry. A second large earthquake was then generated by a structure near the LVF family 15 days after the first one, this last event being under the scope of this study.

For the second large event we conduct a joint inversion of teleseismic and strong motion data in order to retrieve the co-seismic fault slip distribution and its evolution with time. We already employed the same method and identical kind of data for the first large event of the crisis. Consequently we have access to comparable images of the coseismic rupture of the two main events of the sequence.