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Earthquake fault associated with the 921 Chi-Chi earthquake, central Taiwan

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The 921 Chi-Chi earthquake in central Taiwan resulted in a very remarkable surface faulting with terrible disasters over about 80-km distance, along the Chelungpu Fault as the seismogenetic fault. The amount of vertical slip reaches to ca. 10m. Meny research groups engaged the field investigation on this earthquake fault. However, different opinions exist on the significance of this earthquake fault.

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We studied the earthquake fault at many sites, and mapped the pre-existing active faults based on the aerial photographs of 1:15,000. The main results are summarized as follows; (1) the earthquake fault is a lower angle reverse fault with upthrown side at east, (2) the location of the earthquake fault exactly coincides with the pre-existing active fault at many places, (3) destroyed buildings are found just on the fault traces and within 20-30m from the trace on the upthrown side, and nearly no damages on the downthrown side.