

Problems on the paleoearthquake reconstruction based on geological evidences

--View from active fault and paleotsunami studies--

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It is essential to evaluate geomorphological and geological data for the reconstruction of paleoearthquake, and for the estimation of the future seismicities. In this presentation, I will talk about the problems on 1) active fault study and 2) paleotsunami study, based on my recent works. Firstly, I wish to discuss the problems of recognition of active fault, evaluation of fault length, comparison of fault activities between the short term and long term, taking the Chaochou fault and Kaouping River fault, Touhuanping fault as examples. 2) Then, some review on the study of paleotsunami deposits. This is a new field in Taiwan, just has started several years ago. Two ways for the identification of paleotsunami is introduced; One is an abrupt facies changes of deposits, identified from the excavation of Holocene deposits and the other is the presence of huge boulders on the coastal zone. I wish to introduce the works on Chengong marine terrace excavation and observation of coral boulders from Lanyu Island and others, with special reference to the distinction of tsunami deposits and storm deposits or other environmental changes.