

台湾チェルンプ断層掘削によって明らかになった地震時の物理化学的描像 Physicochemical process during earthquake slip: An example from the TCDP

廣野 哲朗^{1*}

HIRONO, Tetsuro^{1*}

¹ 大阪大学 理学研究科 宇宙地球科学専攻

¹Department of Earth and Space Science, Graduate School of Science, Osaka University

Several fault-drilling projects have been conducted with the common aim of seeking direct access to zones of active faulting and understanding the fundamental processes governing earthquakes and fault behavior, as well as the factors that control their natural variability. Here, we review recent scientific drilling project on the the Chelungpu Fault which slipped during the 1999 Taiwan Chi-Chi earthquake. One of the main findings of fault-drilling research is a better understanding of the physicochemical processes of the primary slip zone during an earthquake, which is closely related to the mechanism of dynamic fault weakening. In the case of the Chelungpu fault, integrated research with borehole experiments, core sample analyses, and numerical simulations were performed, and the results indicate that thermal pressurization occurred during the 1999 earthquake, explain ing the peculiar seismic behavior during the earthquake. Such fault-drilling project related to active fault certainly improve our knowledge and understanding of earthquakes.

キーワード: 陸上断層掘削, 活断層

Keywords: Onland fault drilling, Active fault