

# Thermal anomaly of the Nojima fault as detected by the zircon fission-track thermochronology of the University Group 500m borehole

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Fission-track (FT) thermochronologic analysis is a valuable method to know thermal history of rocks, because FT is annealed at relatively low temperatures, and because temperature is the only environmental factor to cause FT annealing. By applying this method to faults, it becomes possible to understand the heat generation and transfer along faults. About Nojima fault, Awajishima Island, Japan, which was activated during the 1995 Kobe earthquake (Hyogo-ken Nanbu earthquake), there are already some researches of FT thermochronologic analysis using borehole samples (Tagami et al., 2001; Murakami et al., 2002; Tagami and Murakami, 2004). These researches reported that the mean FT length is significantly reduced at nearby the fault, and they suggested that it reflects the frictional heating of fault motion and/or heat transfer via fluids from the deep interior of crust. This research presents additional zircon FT data from the University Group 500 m (UG 500) borehole sample of Nojima fault to reveal more details of spatial and temporal variations of the thermal effect.