

Identification of multiple faulting of the Kuwana fault based on high-resolution sedimentological analysis

Toshimichi Nakanishi[1], Keiji Takemura[2], Nobuhiko Sugito[3], Yasuo Awata[4], Toshihiko Sugai[5], Akira Hayashida[6], Masanobu Nakamura[7], Yuuji Tazawa[7], Hiroshi Matsumoto[7], Masanori Hirose[7], Kouya Ogino[8]

[1] Earth and Planetary Sci., Kyoto Univ, [2] Dept.Geophysics, Grad. Sci., Kyoto Univ., [3] Dept. Geophysics, Kyoto Univ., [4] Geol. Surv. Japan, [5] Active Fault Lab., Geological Survey of JPN, [6] SERI, Doshisha Univ., [7] Physics, Kyoto Univ, [8] Nuclear Engineering, Kyoto Univ

High-resolution sedimentological analysis of core samples from the Nobi Plain enables us to identify evidence for multiple faulting of the Kuwana fault during Holocene time. This study consists of two steps: (1) continuous and close-interval analyses of lithology (cm-order), magnetic susceptibility (2cm-interval), analyses of grain size (10cm-interval) and composition of very fine sand fraction (20cm-interval); (2) close-interval AMS radiocarbon dating. Based on sedimentological analysis (1), we correlate specific horizons across the fault and divide the strata into some sedimentary units. These sedimentary units include some sediments that are thicker on the footwall side of the fault. These sediments have a possibility to record the displacement of faulting. And based on age data (2), we can estimate the age of the sedimentary units and the timing of faulting.