Japan Geoscience Union Meeting 2012
(May 20-25 2012 at Makuhari, Chiba, Japan)

SGL44-P03 Room:Convention Hall Time:May 23 17:30-18:30

Observation and analysis of the Median Tectonic Line subsidiary fault in Kada, Wakayama city, southwest Japan

IKAWA, Chiaki[1*], MIYATA, Takao[2], Hyeon-seon Ahn[2]

[1]Kobe University, [2]Graduate School of Science, Kobe University

The Median Tectonic Line (MTL) is the greatest fault, attained to 1,000 km long and more, in southwest Japan. The MTL is actually a fault zone, consisting of two boundary faults and many subsidiary faults in the west Kii Peninsula: One of the two faults is the main boundary fault between the Sambagawa belt (south) and the Cretaceous Izumi Group (north), and the other is a boundary fault between the Sennan belt (south) and the Ryoke main belt (north). The former main boundary fault is called MTL in a narrow sense. The Izumi Group (south) covers unconformably with the Sennan belt (north), or partly contacts with it by a fault. The subsidiary faults are well developed in the Izumi Group and the Sennan belt. The displacement history of the MTL changed from left-lateral strike slip in a very ancient time (late Cretaceous to early Eocene) to right-lateral strike slip in the late Quaternary.

Beneath the Kitan Strait between Kii Peninsula and Awajishima Island, some subsidiary faults of the MTL are presumed. We found one of them at the seashore of Kada Bay, Wakayama City. We made a careful observation and analysis about the subsidiary fault. (1) Its strike and dip are northeast-southwest and almost vertical. (2) Striation on the fault plane is nearly horizontal. (4) Its displacement is a predominant left-lateral strike slip, based on a correlation of the beds. (5) The fault has a fracture zone of 40 m wide. (6) In a fault core, there is not accompanied with a soft fault gauge. And (7) this displacement sense is in harmony with the orientation of sigma1, obtained from an inversion analysis of paleostress. Therefore we revealed the former left-lateral strike slip of the MTL subsidiary fault.

Keywords: Median Tectonic Line, subsidiary fault, left-lateral strike slip, Cretaceous Izumi Group, Kada (Wakayama city)