

# Depositional structures of Historical Kanto Earthquake Tsunami Deposits from SW coast of Boso Peninsula, Central Japan

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AD1703 and 1923 Kanto Earthquakes centered around Sagami Trough, off central Japan, made emerged terraces and large tsunamis on the Pacific coast of central Japan.

Fujiwara et al. (2005) reported the tsunami deposits by these tsunamis from the geoslicer cores (about 3.5m long and 35cm wide) excavated in the Tateyama Plain on the southern Boso Peninsula, Kanto District. AD1703 Tsunami deposit has clear depositional structures and provides important information to the understanding of depositional process of the tsunami. These data will contribute to the identification of tsunami deposits from storm deposits. AD1703 Tsunami deposit is interacted in the shoreface and lagoon sequence. It erosionally covers the upper shoreface sand and is overlain by foreshore sand or lagoon sand. Abrupt change of depositional environments bounded by the AD1703 surface indicates the coseismic uplift. The tsunami deposit is composed of at least six depositional units (Unit 1 to 6, in ascending order). Each unit overlies lower deposit with a scoured surface and forms megaripple or antidune. They show upward fining sequence and are covered by plant debris rich mud drapes. Landward paleocurrents were reconstructed from the depositional structures in many units. Finer and thinner units pile upward from the unit 2 to unit 6.

Mud drapes separating each unit indicate the long stagnant stages of waves and evidence the very long wave period of the tsunami. Storm waves has too short wave period (several to 10 seconds) to make the mud drapes. The stacking pattern of sand units in the tsunami deposit shows the repeated occurrence and waning process of a tsunami wave train. These data support the tsunami depositional model considering the tsunami waveform that was proposed by Fujiwara et al. (2003).

Fujiwara, O. et al. (2003) *The Quart. Res.*, 42, 67.

Fujiwara, O. et al. (2005) *Abst. Hokudan Int. Sym. On Active Fault*, 31.