

Japan Geoscience Union Meeting 2011

(May 22-27 2011 at Makuhari, Chiba, Japan)

©2011. Japan Geoscience Union. All Rights Reserved.



APE031-04

Room:104

Time:May 25 15:00-15:15

Constraints on the early Pleistocene eustatic sea level changes from the Japan shallow-marine sediment record

Akihisa Kitamura^{1*}

¹Shizuoka Univ.

Eustatic sea level change during Quaternary has been inferred from oxygen isotope records of foraminifera in deep-marine sediments, although these records are also influenced by regional temperature changes. Shallow-marine sediment records only provide constraints on the inferred early Pleistocene sea-level changes, because the age is beyond the range of dating of coral-terrace sequences by the U-Th method. The Omma Formation exposed on the Japan Sea coast of Japan consists of 19 depositional sequences that represent alluvial plain to offshore environments, and correlate with marine isotope stages 56 to 21.3 during 41-kyr glaciations and the following Mid-Pleistocene Climate Transition (MPT). The reconstructed water depth change, based on analyses of lithofacies and fossil records, shows the following constraints on the sea level changes during MIS 55 to 21: (1) the sea level was lowest at MIS 22, (2) the sea level at MIS 34 and 26 were lower than the other glacial stages except for MIS 22 and (3) the sea level at MIS 23 was lower than those of other interglacial stages.

Keywords: early Pleistocene, sea-level changes