Acoustic record and sequence of the late Pleistocene to Holocene marine sediment in the Seto Inland Sea

Yoshio Inouchi[1]; takahiko inoue[2]; Naoya Iwamoto[3]; Atsuko Amano[3]; Fujihiko Shioya[4]

[1] CMES, Ehime Univ.; [2] Graduate School of Sci. and Eng., Ehime Univ.; [3] Earth Sci., Ehime Univ; [4] Environ. Sci., Ehime Univ

Since the introduction of Sequence stratigraphy, many Japanese strata with varying ages have been checked based on this point of view. On the other hand, late Pleistocene to Holocene strata called Chuseki-sou is not well examined and can be said its study has just started.

The authors have started studying Chuseki-sou in the Seto Inland Sea, based on acoustic records which were formerly obtained and recently obtained using Uniboom. This paper describes 1. results of comparison between acoustic record of Osaka Bay and faces of nearby drilling and 2. comparison between acoustic record of Osaka Bay and that of Iyo Nada, off Matsuyama city.

Description of acoustic record in Osaka Bay is shown in Inouchi et al.(2004). Based on the comparison of acoustic record and drilling data, back-stepping transgressive systems tract which means relatively rapid sea level rise is comparable to estuary faces and prograding systems tract which means high stand systems tract is comparable to inner bay muddy faces. Maximum Flooding Surface is supposed to the horizon with many fossil fragments which lie underneath Kikai-Akahoya tephra. Back-steppings can be observed at depths 48, 46, 44 and 38 meters below sea level.

Description of acoustic record in Iyo Nada is shown in Inouchi et al.(2005). Back-steppings can be observed at 46.5, 44 and 40.5 meters below sea level which are in good correlation with those of Osaka Bay.

Consequently, back-stepping ages can be correlated between Osaka Bay and Iyo Nada sea and in Osaka Bay, transgressive systems tract can be correlated to estuary sediment and high stand systems tract to inner bay muddy faces. The age of Maximum flooding surface is supposed to be older than that of Kikai-Akahoya tephra.