

Grain size feature and there origin of 3.11 Tsunami deposit at Hirota bay, Iwate pref.

*Yuka Yokoyama¹, Izumi Sakamoto¹, Kosuke Tsutsumi¹, Rihoko Saito¹, Naoki Haramiishi¹

1. School of Marine Science and Technology, Tokai University

The recent 2011 Tohoku earthquake affected Tohoku area and coastal area of Pacific coast were strongly damaged by Tsunami. A lot of bay of Sanriku coast became deposited new sediment composed by coarse-grained material (sand to sandy gravel sediments), and estimate of the sedimentation model about Tsunami deposit are carried out at coastal area. But, we didn't understand about origin of Tsunami deposits at coastal area. So, in this study we will try to estimate the origin of Tsunami deposits using by grain size features.

We took the columnar core samples at water depth from 8 to 30 m. The columnar core samples were able to sectionalize into mainly two units by lithofacies, Unit1 (sand layer) and Unit2 (muddy layer) from the top, and some core have sand layer under the Unit3. Yokoyama et al. (2014) estimated Unit1 were 2011 Tsunami deposit, Unit2 were normal sediment in this bay, and Unit3 were paleo-event sediment. Unit1 were able to sectionalize into some sub-units by lithofacies and grain size analysis.

Correlation diagram of median diameter and sorting value show that Unit1 is different from Unit2 in distribution, and Unit1 distribute between Unit2 and coast sand. So, Unit1 are estimated to origin in Unit2 and coast sand. Especially, most coastal area core distribute at coastal sand area, it's origin in coastal sand. Correlation diagram of median diameter and sorting value have possibility about estimate the source of supply field of Tsunami deposits. In presentation time, we will show about chemical analysis data about Tsunami deposit in addition to grain size feature.

Keywords: Tsunami deposit, Sanriku coast, 2011Tohoku earthquake